FINAL

REMEDIAL INVESTIGATION REPORT FOR SITE FTMM-18

FORT MONMOUTH, OCEANPORT, MONMOUTH COUNTY, NEW JERSEY

BRAC 05 Facility
Contract W912DY-09-D-0062
Task Order: 0012, Project No. 369857

Submitted To:

U.S. Army Engineering and Support Center
Huntsville, Alabama



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Revision No. 0
October 2015

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Contract Name:	**Remedial Investigation/Feasibility Study/Decision Documents, Fort Monmouth, Oceanport, Monmouth County, New Jersey**
Client Name:	**U.S. Army Engineering & Support Center (USAESCH)**
Contract Number:	**W912DY-09-D-0062, Task Order 0012, Project No. 369857**
Contractor:	**Parsons Government Services, Inc.**
Period of Performance:	**30 September 2012 to 30 September 2017**
Date of Original:	**October 2015**
Revision:	**0**

October 2015

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LIST OF ACRONYMS

ACRONYM	DEFINITION
µg/L	Microgram(s) per liter
AFCEE	Air Force Center for Environmental Excellence
API	American Petroleum Institute
ARARs	Applicable or Relevant and Appropriate Requirements
ATSDR	Agency for Toxic Substances and Disease Registry
BEE	baseline ecological evaluation
bgs	below ground surface
BRAC	Base Realignment and Closure
Brinkerhoff	Brinkerhoff Environmental Services, Inc.
CEA	Classification Exception Area
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COCs	constituents of concern
COPC	constituent of potential concern
COPEC	contaminant of potential ecological concern
CSM	conceptual site model
CWA	Charles Wood Area
DCA	dichloroethane
DD	Decision Document
DPW	Directorate of Public Works
EA	Evans Area
ECP	Environmental Condition of Property
EPC	exposure point concentration
FMETL	Fort Monmouth Environmental Testing Laboratory
FS	feasibility study
ft^2	square feet
ft/day	feet per day
FTMM	Fort Monmouth
GES	Groundwater & Environmental Services, Inc.
gpd/ft^2	gallons per day per square foot
gpm	gallons per minute
GWQS	Ground Water Quality Standard(s)
HHRA	human health risk assessment
HSDB	Hazardous Substances Data Bank
HTRW	hazardous, toxic, and radiological waste
IRP	Installation Restoration Program
IGW	impact to groundwater
LUC	land use controls
MCL	maximum contaminant level
mg/kg	milligram(s) per kilogram
MP	Main Post
NCP	National Contingency Plan

ACRONYM	DEFINITION
NFA	no further action
N.J.A.C.	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NJPDES	New Jersey Pollutant Discharge Elimination System
NRDCSRS	Non-Residential Direct Contact Soil Remediation Standard
NRWQC	National Recommended Water Quality Criterion
ORP	oxidation-reduction potential
PAH	polynuclear aromatic hydrocarbon
Parsons	Parsons Government Services, Inc.
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PDBS	passive diffusion bag sampler
ppt	parts per thousand
R&D	research and development
RAGS	Risk Assessment Guidance for Superfund
RCRA	Resource Conservation and Recovery Act
RDCSCC	Residential Direct Contact Soil Cleanup Criterion
RDCSRS	Residential Direct Contact Soil Remediation Standard
RI/FS	remedial investigation/feasibility study
RIRA	Remedial Investigation Report Addendum
RSL	regional screening level
SE	saline
SI	site investigation
SL	screening level
SVOC	semivolatile organic compound
SWQS	surface water quality standard
TAL	target analyte list
TCE	trichloroethene
THQ	target hazard quotient
TIC	tentatively identified compound
TO	task order
TPV	total present value
TR	target risk
TRSR	Technical Requirements for Site Remediation
USACE	U.S. Army Corps of Engineers
USAEHA	U.S. Army Environmental Hygiene Agency
USAESCH	U.S. Army Engineering and Support Center, Huntsville
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound
WERS	Worldwide Environmental Restoration Services

EXECUTIVE SUMMARY

E.1 SITE DESCRIPTION

Fort Monmouth Landfill 18 (FTMM-18) is in the northern portion of the Main Post (MP) in the area between Parkers Creek and Sherrill Avenue. The approximate area of FTMM-18 as originally defined is 209,000 square feet or 4.8 acres. Beginning in 1919, FTMM-18 was used as a training area for the U.S. Army Signal School. During a 1993 site inspection, a suspected building demolition debris disposal area was identified in the area north of Building 289. FTMM-18 is located directly north of Site FTMM-54, a former fuel storage and distribution facility that has also been referred to historically as Building 296 or Site 296. Fuel distribution piping (removed in December 1993) from the former fuel storage USTs adjacent to Building 296 extended to the north, beneath the western portion of FTMM-18, presumably to support training activities. The former fuel distribution piping is considered part of FTMM-54. A review of aerial photographs taken in 1969 indicated that FTMM-18 had a new small fill area, but by 1971 there was no aerial photograph evidence that FTMM-18 was in use. Since that time a stable vegetative cover has developed on the surface of the landfill. The FTMM Reuse and Redevelopment plan indicates that the anticipated future land use at FTMM-18 is passive open space (EDAW, Inc., 2008). FTMM (MP and Charles Wood Area [CWA]) was selected for closure by the Base Realignment and Closure (BRAC) Commission in 2005, and officially closed on September 15, 2011.

E.2 GEOLOGY AND HYDROGEOLOGY

The landfill soil cover material ranges in thickness from 0 to 60 inches and averages 27.8 inches. The soil cover is composed primarily of topsoil, silty sand, and olive-brown-gray clay. Deeper soil is primarily composed of gray to dark gray, silty sand and green clay. Fill material encountered during intrusive investigation activities has consisted of asphalt, cement, concrete rubble, brick, floor tiles, wood, ash, wire, steel pipes, rebar, paint cans, and scrap metal sometimes intermixed with silty, coarse to fine sand. The depth to groundwater at FTMM-18 ranges from 4 to 8 feet below ground surface (bgs). Groundwater beneath the site migrates toward the adjacent Parkers Creek; the calculated average advective groundwater seepage velocity is 0.16-0.19 foot per day (58-69 feet per year).

E.3 SOIL SAMPLING RESULTS

Results of soil sampling performed during removal of the fuel distribution piping associated with FTMM-54 will be described in a separate report for FTMM-54. However, the results of more widespread, near-surface, soil sampling performed at FTMM-18 in 1999 are described in this report. Samples collected at approximately 24 inches bgs were analyzed for volatile organic compounds (VOCs), and soil samples collected between 6 and 12 inches bgs were analyzed for metals, semivolatile organic compounds (SVOCs), pesticides, and polychlorinated biphenyls (PCBs). Detected analyte concentrations were compared to Federal and State residential, non-residential, and impact to groundwater screening criteria as well as FTMM-specific background concentrations for metals. Residential criteria were used to support identification of constituents of potential concern (COPCs), but were not used to evaluate risk (Section E.8).

Concentrations of six SVOCs (all of which are polynuclear aromatic hydrocarbons [PAHs]) and six metals exceeded their current New Jersey Department of Environmental Protection

(NJDEP) Residential Direct Contact Soil Remediation Standard (RDCSRS) and/or U.S. Environmental Protection Agency (USEPA) Residential Regional Screening Level (RSL) in at least one soil sample. Concentrations of four PAHs, and one metal exceeded their NJDEP Non-Residential Direct Contact Soil Remediation Standard (NRDCSRS) and/or USEPA Industrial RSL in at least one soil sample. Concentrations of one VOC (a probable laboratory contaminant), 15 SVOCs (mostly PAHs), 8 pesticides, and 17 metals exceeded their NJDEP Impact To Groundwater (IGW) Screening Level and/or USEPA Protection of Groundwater RSL in at least one soil sample.

The maximum-detected concentrations of 20 metals targeted for analysis in soil samples exceeded their respective maximum background concentrations for the MP presented by Weston (1995). Maximum-detected concentrations of manganese and chromium were less than the maximum background concentrations of these metals, and thallium was not detected in any sample.

E.4 GROUNDWATER SAMPLING RESULTS

Quarterly groundwater monitoring occurred at FTMM-18 from June 1997 to August 2011, using a network of up to 10 monitoring wells. Eight quarters of groundwater monitoring data, and the August 2013 and December 2014 monitoring events, were evaluated as being representative of recent conditions. Detected analyte concentrations were compared to Federal and State screening criteria for potable water, as well as FTMM-specific background concentrations for metals to identify COPCs. Concentrations of six VOCs and 17 metals exceeded the NJDEP Ground Water Quality Standard (GWQS) and/or the USEPA Tapwater RSL in at least one sample.

The metals detected at concentrations exceeding their NJDEP GWQS and/or USEPA Tapwater RSL and also the maximum background concentration for the MP established by Weston (1995) include antimony, arsenic, barium, beryllium, cadmium, cobalt, manganese, silver, sodium, and zinc. Given the small number of background exceedances, detected concentrations of arsenic are considered to be representative of background conditions. Antimony, cadmium, silver, and zinc were detected above screening criteria in select wells, but in each case were followed by multiple rounds of non-detect results or detected concentrations less than the screening criteria; therefore the exceedances were determined to be isolated and not representative of the larger data set. Exceedances of barium, beryllium, and cobalt were only slightly above background at a well upgradient of FTMM-18. Sodium is an essential human nutrient.

E.5 SURFACE WATER SAMPLING RESULTS

Surface water samples were collected in Parkers Creek, Lafetra Creek, and Mill Creek from October 1996 to September 2010. Five of these sampling stations have historically been associated with FTMM-18 and are located upstream, adjacent to, and downstream of FTMM-18.

During the most recent eight quarters of surface water sampling, only one VOC (tetrachloroethene [PCE]) was detected at concentrations exceeding NJDEP Saline Surface Water Quality Standards (SWQS). All of the detected PCE concentrations that exceeded the NJDEP SWQS were located upstream of FTMM-18. In addition, arsenic, lead, mercury, and thallium were detected adjacent to FTMM-18 at concentrations that exceeded their respective NJDEP SWQS and/or USEPA human health criterion. The lack of upstream metals data closer to

FTMM-18 makes it difficult to discern any site-related impacts. Furthermore, there are multiple storm sewer outlets at Parkers Creek and near FTMM-18 that could impact surface water quality. In general, similar concentrations of these metals were detected at upstream locations during the eight most recent sampling events. The data indicate that FTMM-18 is not significantly impacting metal concentrations in the reach of Parkers Creek that borders this site.

E.6 SEDIMENT SAMPLING RESULTS

Sediment sampling was conducted in April 2000 in Parkers Creek to evaluate PCB-related impacts to stream sediments associated with FTMM-18. In the absence of sediment-specific screening criteria, soil criteria were used. One PCB (Aroclor 1254) was detected in two of eight samples collected, with one sample having a concentration that is slightly greater than the NJDEP RDCSRS for total PCBs and the USEPA Residential RSL for Aroclor 1254. There are multiple storm sewer outlets at Parkers Creek upstream of these two sample locations that may be a source of PCBs. However, this detection cannot be definitively attributed to upstream sources, and therefore is potentially site-related.

E.7 CONTAMINANT FATE AND TRANSPORT

SVOCs and metals in near-surface soil at FTMM-18 and PCBs in sediment adjacent to FTMM-18 are expected to be persistent and immobile. This observation is supported by the fact that SVOCs were eliminated from the groundwater sampling program in 2004 after groundwater concentrations were determined to be in compliance with NJDEP GWQS, and most metal concentrations in groundwater are representative of natural background conditions. Manganese is a notable exception; as the mass of bioavailable organic carbon (e.g., fuel hydrocarbons, landfilled organic waste) in the reaction zone becomes depleted, the groundwater system will likely become more oxidizing, and concentrations of manganese in groundwater should decrease.

Benzene is readily degradable in groundwater. A previous modeling study indicated that some migration of benzene at FTMM-18 to nearby Parkers Creek may occur within the time period that it was predicted to degrade to concentrations compliant with the NJDEP GWQS. However, the likelihood of significant migration was judged to be minimal. This conclusion is supported by the fact that benzene was not detected in surface water samples collected in Parkers Creek adjacent to FTMM-18.

E.8 RISK ASSESSMENT

According to the Baseline Ecological Evaluation (BEE), exceedances of ecological screening criteria have been sufficiently evaluated and addressed for ecological consideration, and no additional ecological evaluation is necessary. Therefore, further ecological risk evaluation was not conducted for FTMM-18.

An evaluation of the potential risk resulting from human exposure to soil, surface water, sediment, and groundwater was conducted as part of this RI. No COPCs were identified in surface water. Therefore, further evaluation of surface water in the risk assessment was not conducted and no unacceptable risks associated with exposure to surface water is expected. The human health risk assessment (HHRA) evaluates exposure of current/future outdoor workers, future utility workers, and future recreational users to COPCs in soil, groundwater, and sediment through dermal contact, incidental ingestion, and inhalation of particulates. The HHRA used an

exposure point concentration based on the maximum detected concentration of analytes in soil, groundwater, and sediment.

For outdoor workers exposed to soil at FTMM-18, the cumulative carcinogenic risk of 2×10^{-5} is within the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for soil. The cumulative non-carcinogenic hazard is 0.1, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to outdoor workers are expected from exposure to soil at FTMM-18.

For utility workers exposed to soil at FTMM-18, the cumulative carcinogenic risk of 3×10^{-7} is less than the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for soil. The cumulative non-carcinogenic hazard is 0.04, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to utility workers are expected from exposure to soil at FTMM-18.

For recreational users exposed to soil at FTMM-18, the cumulative carcinogenic risk of 7×10^{-6} is within the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for soil. The cumulative non-carcinogenic hazard is 0.02, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to recreational users are expected from exposure to soil at FTMM-18.

For utility workers exposed to groundwater, the cumulative carcinogenic risks for all wells of 2×10^{-7} is less than the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for groundwater. The cumulative non-carcinogenic hazard for all wells is 0.09, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to utility workers are expected from exposure to groundwater at FTMM-18.

For outdoor workers exposed to sediment, the cumulative carcinogenic risk of 2×10^{-7} is below the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for sediment. The cumulative non-carcinogenic hazard is 0.01, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to outdoor workers are expected from exposure to sediment at FTMM-18.

For recreational users exposed to sediment, the cumulative carcinogenic risk of 3×10^{-8} is below the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for sediment. The cumulative non-carcinogenic hazard of 0.002 does not exceed the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to recreational users are expected from exposure to sediment at FTMM-18.

E.9 CONCLUSIONS

The RI concluded that risks to human health and the environment from soil are within acceptable ranges for current and future intended land use. A feasibility study (FS) was not be performed for FTMM-18. No further action is required at FTMM-18 under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

To address safety concerns, a vegetated soil cover will be placed over the landfill area to provide safety protection for future non-residential use and improve drainage. The soil cover will be placed consistent with the NJDEP Solid Waste regulations (New Jersey Administrative Code [N.J.A.C.] 7:26-2A). Additional clean soil will be added to the existing soil cover to provide a minimum of two feet of soil between the ground surface and landfill debris.

Prior to designing and placing the cap, refinement of the landfill boundary will be performed to investigate the data gaps identified in this RI. The refinement of landfill boundaries is on-going, field work was completed in September 2015, and the results will be presented under separate cover. The existing landfill surface will be clear cut and regraded prior to the installation of a vegetated native soil cover. The vegetated cover will offer safety protection to non-residents from future exposure to solid waste at the landfill and control surface water runoff and erosion.

Institutional Controls (ICs) to maintain the soil cover and prevent residential land use will also be implemented at FTMM-18. The Army will prepare a Land Use Control Implementation Plan during the remedial design phase to document the location of the engineering control and identify procedural responsibilities including landfill cover inspections, monitoring and reporting, and long-term management requirements, etc. The Army will be responsible for documenting and implementing the ICs through the filing of a deed notice, and will also be responsible to conduct biennial reviews to ensure that the ICs remain protective of human health and the environment. However, the Army will not be responsible for obtaining a remedial action permit under New Jersey Technical Requirements for Site Remediation (TRSR). When the property is transferred to private ownership, the ICs will be incorporated into the title and the new owner will be responsible for complying with the ICs. Although the Army may later transfer its procedural responsibilities to another party by contract, property transfer agreement, or through other means, the Army shall retain ultimate responsibility for remedial integrity.

In addition, a Classification Exception Area (CEA) will be established pursuant to NJDEP's TRSR (N.J.A.C. 7:26E) and Administrative Requirements for the Remediation of Contaminated Sites (N.J.A.C. 7:26C). The CEA is a groundwater use restriction to protect a hypothetical residential user from potential risk associated with groundwater as a potable water source. The CEA will remain in place until NJDEP GWQS are achieved at the Site.

SECTION 1
INTRODUCTION

1.1 PROJECT AUTHORIZATION

Parsons Government Services, Inc. (Parsons) is serving as the prime contractor to the Corps of Engineers, New York District and the U.S. Army Engineering and Support Center, Huntsville (USAESCH) for preparation of Remedial Investigations (RI) and/or Remedial Investigation/Feasibility Study (RI/FS) reports to achieve acceptance of Decision Documents (DDs) at Fort Monmouth (FTMM) in Oceanport, Monmouth County, New Jersey. This project is being performed under task order (TO) 0012 issued under the Worldwide Environmental Restoration Services (WERS) contract number W912DY-09-D-0062.

This TO was issued to address a number of environmental sites at FTMM that are in various stages of hazardous, toxic, and radiological waste (HTRW) investigation and remediation. Specific activities that will be performed under this TO include:

1. Performance of RIs and FSs and preparation of RI and RI/FS reports to achieve acceptance of DDs in compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), National Contingency Plan (NCP), and 40 Code of Federal Regulations (CFR) Part 300, and to the extent possible to meet the substantive remedial requirements of New Jersey Administrative Code (N.J.A.C.) 7:26E Technical Requirements for Site Remediation (TRSR); and
2. Supporting the closure of environmental sites to facilitate the efficient transfer of real property to other parties.

1.2 PURPOSE AND SCOPE

Parsons has prepared this RI report for landfill site FTMM-18 based on historical site characterization activities performed from 1993 to 2013 by others. This report provides relevant site background information, characterizes the nature and extent of site-related contamination, and evaluates the potential risk to human health and the environment and if needed evaluates remedial alternatives, and provides a comparative analysis of remedial alternatives. The overall goal of this process is to obtain stakeholder concurrence on a final report for each site, and if appropriate, provide sufficient data to facilitate future remedial action or administrative closure. The New Jersey Department of Environmental Protection (NJDEP) is the lead regulatory agency for FTMM and will provide regulatory review of this document.

1.3 SITE BACKGROUND INFORMATION

The following sections describe the site background. Included is a description of the site location, site history, background investigations, and summary of previous technical reports.

1.3.1 Site Location and Description

FTMM is located in the central-eastern portion of New Jersey in Monmouth County, approximately 45 miles south of New York City, New York, 70 miles northeast of Philadelphia, Pennsylvania, and 40 miles east of Trenton, New Jersey. The Atlantic Ocean is approximately 3 miles to the east. FTMM was comprised of three areas: the Main Post (MP), the Charles Wood Area (CWA) and the Evans Area (EA) (**Figure 1.1**). The areas of the MP and CWA are 637

acres and 489 acres, respectively. FTMM's MP and CWA were selected for closure by the Base Realignment and Closure (BRAC) Commission in 2005, and officially closed on September 15, 2011. The EA (not shown on **Figure 1.1**) was located approximately 8 miles south of the MP and CWA and was formerly used for administrative, research and development (R&D), and training purposes. The EA was closed under BRAC 1998 and has been transferred from FTMM. FTMM falls within the Boroughs of Eatontown, Oceanport, and Tinton Falls. The MP is in the Eatontown and Oceanport Boroughs. The CWA is in the Eatontown and Tinton Falls Boroughs.

Figure 1.2 shows the location of FTMM-18, which is in the north-central portion of the MP adjacent to Parkers Creek and north of Sherrill Avenue. The approximate area of the site as originally defined is 209,000 square feet (ft^2), or 4.8 acres. The site layout is depicted on **Figure 1.3**. FTMM-18 has also been referred to as Landfill 18 and Landfill M-18 in historical documents. Fuel distribution piping related to adjacent site FTMM-54, a former fuel distribution facility, was present within the footprint of FTMM-18, near the southwest corner (**Figure 1.3**). This piping was removed in December 1993, and fuel-contaminated soil in the vicinity of the former piping was excavated. Information on the former fuel distribution facility, including soil sampling associated with excavation of fuel-contaminated soil in the vicinity of the former fuel distribution piping, will be documented in a separate report prepared for FTMM-54.

1.3.2 Site History

The history of FTMM-18 indicates that this site consists of both landfill and non-landfill-related components. Beginning in 1919, the FTMM-18 area was used as a training area for the U.S. Army Signal School. Diesel and gasoline generators, situated approximately 490 feet from Parkers Creek, were used to support field exercises. Fuel products from gasoline and/or diesel fuel underground storage tanks (USTs) at Building 296 (FTMM-54), located south of FTMM-18, were reportedly distributed from pumping islands near Parkers Creek (U.S. Army BRAC, 2008). Based on the former location of fuel distribution piping extending northward into FTMM-18 from Building 296 (**Figure 1.3**), these pumping islands were located near the southwestern corner of FTMM-18, and were presumably used to support training exercises. It was suspected that numerous fuel spills occurred in the area of the generators. A riot control agent was also used in this area for troop protective mask training (Versar, 2003). The former fuel distribution piping that extended northward from Building 296 beneath FTMM-18 is considered part of FTMM-54.

During a 1993 site inspection, a suspected building demolition debris disposal area was identified in the area north of Building 289 (Weston, 1995). A review of aerial photographs taken in 1969 indicated that FTMM-18 had a new small fill area, but by 1971 there was no aerial photograph evidence that FTMM-18 was in use, and revegetation had started to occur (U.S. Army, 2012). The location of this new fill area (labeled "FA") is shown on a 1969 aerial photograph contained in Appendix G of the Remedial Investigation Report Addendum (RIRA; U.S. Army, 2012) that is contained in **Appendix A** of this RI report. The fill area was located in the southern portion of FTMM-18, just north of Building 293 and former Building 289. The period of operation of the fill area is unknown (Versar, 2004b). A chronological summary of events related to the environmental characterization and remediation of FTMM-18 is provided in **Table 1.1** and detailed in this subsection.

Suspected hazardous waste sites were initially identified at FTMM in a report prepared by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA, 1980). The purpose of

the report was to assess the environmental quality of FTMM with regard to the use, storage, treatment, and disposal of toxic and hazardous materials. Thirty-seven sites at the MP, CWA, and EA were identified as having known or suspected waste material, including FTMM-18. The report recommended that FTMM perform surface water and groundwater sampling at the installation's landfills and report the results to USATHAMA.

A study conducted by USATHAMA (1980) identified five locations that were considered to be major landfill areas. One of the five locations, Area E, is adjacent to but does not include FTMM-18. Monitoring wells were installed and groundwater and surface water samples were collected and analyzed for compliance with National Interim Primary Potable Water Standards and National Secondary Potable Water Regulations. The study concluded that the targeted parameters were not found at sufficient concentrations to cause degradation to groundwater or surface water, but it was recommended that FTMM submit a landfill registration statement to the NJDEP (USATHAMA, 1988).

A U.S. Army Environmental Hygiene Agency (USAEHA) water quality engineering study was conducted in 1984 to determine if landfill leachate was forming and entering streams. Surface water samples were collected in Parkers Creek adjacent to FTMM-18. The sampling results indicated that the landfill's impacts to the stream were minimal (USATHAMA, 1988). It was recommended that the results be presented to the NJDEP in compliance with the New Jersey Pollutant Discharge Elimination System (NJPDES).

A follow-up evaluation was completed by USATHAMA (1988) to determine if environmental/hazardous waste disposal conditions at FTMM (including the landfills) had changed since the assessment in 1980 (USATHAMA, 1980). Based on an assessment of available data it was recommended that surface water and groundwater sampling at the MP landfill areas should be continued (USATHAMA, 1988).

An investigation of 45 suspected hazardous waste sites at FTMM was conducted in 1993. FTMM-18 was identified as a former training area with diesel and gasoline generators used on site in support of these field exercises. A suspected debris disposal area for building rubble was identified in the area north of Building 289. Soil and groundwater sampling were conducted (Weston, 1993).

Gasoline and/or diesel fuel USTs were removed from the immediate vicinities of Buildings 290 (site FTMM-55), 296 (site FTMM-54), and 283 (site FTMM-61) in 1993, 1994, and 1997, and fuel-contaminated soil was excavated at Buildings 296 in 1993, and Buildings 283 and 290 in 1997 (Versar, 2003; Shaw, 2012). These buildings are located south of (hydraulically upgradient from) FTMM-18 (**Figure 1.3**). UST closure reports (dated 2000 and 2001) and a soil excavation report (dated 1999) are contained in Appendices B through E of the RI report prepared by Versar (2003). Versar's (2003) RI report is provided in **Appendix A** of this document. As described in Section 1.3.1, fuel distribution piping related to FTMM-54 that was present within the footprint of FTMM-18 was removed in December 1993, and fuel-contaminated soil in the vicinity of the former piping was excavated. Information on the former fuel distribution facility, including soil sampling associated with excavation of fuel-contaminated soil in the vicinity of the former fuel distribution piping, will be documented in a separate report prepared for FTMM-54.

A site investigation (SI) was performed by Roy F. Weston, Inc. (Weston, 1995; report provided in **Appendix A**) at FTMM-18 which included the installation of two shallow groundwater monitoring wells in 1995 (M18MW24 and M18MW25), and performance of two rounds of groundwater sampling in February and May 1995. The results of the groundwater sampling were presented in the SI report (Weston, 1995). The SI report presented a proposal for long-term groundwater and surface water monitoring that utilized the existing groundwater monitoring wells and surface water sampling locations to monitor and document surface water and groundwater quality conditions over time.

Quarterly groundwater sampling was performed from 1997 to 2011. Groundwater samples were collected from eight previously installed wells (290MW02, 296MW03, 296MW04, 296MW06, 296MW07, 296MW08, M18MW24, M18MW25) located at or near FTMM-18. Two additional wells (M18MW22, M18MW23) were installed in 2010 (U.S. Army, 2012; provided in **Appendix A**). In 2006, 290MW02 was damaged and removed from the groundwater sampling program. A baseline groundwater sampling event was conducted in August 2013 to reestablish baseline site conditions following the temporary suspension of the groundwater sampling program in 2011. **Figure 1.3** shows the locations of groundwater monitoring wells at and near FTMM-18.

Quarterly surface water sampling was recommended (Weston, 1995) and conducted at three to five locations in Lafetra, Mill, and Parkers Creeks associated with FTMM-18 from October 1996 through September 2010.

Versar (2003) prepared a RI Report to document groundwater and surface water conditions at FTMM-18. The Versar report addresses the RI activities performed at this site to investigate groundwater and surface water conditions from October 1996 through March 2001.

Near-surface soils were characterized in 1998 by analyzing soil samples collected on a grid pattern within the boundaries of FTMM-18. The results of soil sampling were documented in an RI Report (Versar, 2004b; provided in **Appendix A**).

Other studies conducted at MP landfill sites FTMM-18 and FTMM-08 found polychlorinated biphenyl (PCB)-containing materials disposed of in each landfill. Therefore, assuming other landfills on the MP had received similar waste materials, sediment sampling was conducted in Parkers Creek in 2000 to evaluate potential PCB impacts to stream sediments from FTMM-18. Four borings were installed at irregularly-spaced intervals in Parkers Creek. Distances between each boring ranged from approximately 50 to 130 feet. The results of the sediment sampling were documented in a RI Report (Versar 2004a; provided in **Appendix A**).

A classification exception area (CEA) report for FTMM-18 was prepared by Versar (2004c) due to detected concentrations of benzene, arsenic, cadmium, chromium, and lead in groundwater samples that exceeded NJDEP Ground Water Quality Standards (GWQS). (A copy of the CEA is included in **Appendix A).** The CEA extended to depth of 125 feet below ground surface (bgs) (i.e., to the Navesink-Hornerstown Confining Unit), and encompassed an area of 4.1 acres. The projected duration of the CEA was more than 1,000 years. However, the CEA was never approved by the NJDEP.

In a letter to the NJDEP dated November 10, 2004, the FTMM Directorate of Public Works (DPW) proposed a revision to the groundwater sampling program at FTMM-18 and nearby Buildings 290 (FTMM-55) and 296 (FTMM-54). According to the DPW letter, initial

groundwater sampling at these three sites had consisted of a comprehensive analytical program including volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and target analyte list (TAL) metals. Based on (1) evaluation of the contaminant occurrence/magnitude, (2) transport modeling, and (3) evaluation of risk to human and ecological receptors, DPW proposed reducing the groundwater sampling program to sampling quarterly for VOCs and TAL metals only. The NJDEP approved DPW's revision to the groundwater sampling program via email on November 12, 2004 (NJDEP, 2004).

The FTMM-18 landfill boundary was initially determined through review of aerial photographs of the MP from 1940 to 1974; the boundary was reassessed during a 2009 study that consisted of excavating 14 test pits and advancing 10 auger borings to determine the presence or absence of landfill debris and the thickness of the cover material. The investigation was undertaken in order to more precisely delineate the perimeter of the landfill. Test pit depths ranged from 1 to 8 feet bgs. The thickness of cover material at 79 locations ranged from 0 to 60 inches and averaged 27.8 inches (see Table 5/Cover Material Summary for the Landfill Delineation Project in **Appendix A**). Waste material observed in test pits included mainly building and construction materials (i.e., asphalt, cement, concrete rubble, brick, floor tiles, wood, ash, wire, steel pipes, rebar, paint cans, and scrap metal). Test pits were advanced towards the perimeter until landfill debris was no longer encountered. The landfill boundary delineation activities did not result in significant changes to the boundary of FTMM-18 and remained unchanged to the original boundaries.

The landfill boundary was reexamined by Parsons in 2015 using the available test pit and soil boring data, as well as historical aerial photographs (**Appendix A**). Following the reexamination in 2015, the boundary of FTMM-18 was refined as shown on **Figure 1.3**. The southwestern boundary of the landfill where FTMM-54 overlaps with FTMM-18 was refined based on the test pit logs. A previous (2009) review of the logs for Test Pits 9 and 9A determined that landfill debris was present at these locations; however, a review of these logs indicates that there was backfill material and petroleum staining in these test pits related to the excavation of fuel transmission piping and fuel-contaminated soil rather than materials related to the landfill. Similar material was seen in test pits 11 and 13 (note: test pit locations are shown on **Figure 2.1**). The subsurface materials described in the logs of monitoring wells 296MW03, 296MW04, and 296MW06 are similar to surrounding test pits, and also contained no landfill debris. Also, no landfill material was found in test pits 1 or 12.

A 2015 review of the aerial photographs (**Appendix A**) shows a packed surface or pavement in the southwestern area (at the former Fuel Distribution Area) as early as 1947, prior to landfilling, and the packed surface or pavement remained through at least 1979. Therefore, the 2010 revised boundary of the landfill was moved slightly to the north and east in this area, aligning with both the test pit logs and aerial photographs. The photographs provided in **Appendix A** depict the progression of suspected filling activities that occurred to produce the FTMM-18 landfill. Based on the aerial photographic evidence, the landfilling activities began between 1957 and 1963, and do not appear to have extended to Parkers Creek in this area (see 1970 and 1979 aerials). Additionally, because the test pit data confirm the presence of landfill material in the same areas indicated by the aerial photographs, the northern boundary of FTMM-18 was aligned with the northern extent of apparent landfilling based on the aerial photos; the landfill does not appear to extend to the Parkers Creek shoreline in this area as previously shown. Because the aerials do provide clear evidence of consistent tree coverage on the east side of

FTMM-18, the eastern boundary of the landfill was moved farther west. The 2015 revised landfill boundary is shown on **Figure 1.3**. Data gaps in the landfill boundary remain on the northern and eastern sides of the site because test pit data from what are currently mapped as non-landfill areas are not available. Field work was performed for the refinement of landfill boundaries in September 2015 and results will be documented under separate cover.

A second CEA report was prepared by Brinkerhoff Environmental Services, Inc. (Brinkerhoff, 2011a) to address concentrations of benzene, lead, and tentatively identified compounds (TICs) in groundwater. Due to their interconnected site history, location, and common contaminants, a combined CEA was generated for FTMM-61/FTMM-55/FTMM-54/FTMM-18. Subsequent to filing the CEA, it was withdrawn by the Army and it was never reviewed or approved by NJDEP.

Environmental investigations performed at FTMM-18 are summarized in greater detail in Section 2, and the nature and extent of contamination detected during the environmental investigations are summarized in Section 4.

1.4 REPORT ORGANIZATION

This RI report is organized to be compliant with relevant portions of the outline presented in the *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (U.S. Environmental Protection Agency [USEPA], 1988).

- Introduction: Section 1 details the overall scope and objective of the project, presents the organization of the report, and presents an overview of the site and its history, including previous investigations;
- Previous Investigations and Interim Remedial Actions: Section 2 details the site characterization field activities that have been performed;
- Physical Characteristics of the Site: Section 3 describes the physical setting of the site, including surface features, surface water hydrology, geology and hydrogeology, land use, and ecological setting;
- Nature and Extent of Contamination: Section 4 summarizes the degree to which sampled media have been impacted by site-related contamination, and identifies those constituents that were detected above applicable cleanup criteria but are believed to be representative of natural background concentrations;
- Contaminant Fate and Transport: Section 5 describes the migration and fate of selected constituents present in the subsurface based upon site-specific data, the geologic and hydrogeologic characteristics of the site, and the physicochemical properties of the constituents;
- Baseline Risk Assessment: Section 6 provides a quantitative assessment of the risk posed by site-related constituents of potential concern (COPCs) to potential human receptors;
- Remedial Investigation Summary: Section 7 summarizes the main findings of the RI;
- Conclusions: Section 8 presents overall conclusions and provides rationale why a FS is not necessary; and

- References: Section 9 includes a list of references used in the preparation of this report.

Additional information is attached to this report as appendices:

- **Appendix A** – Key historical reports and background information (included electronically on CD);
- **Appendix B** – Utility Worker and Recreational User Screening Level Equations and Calculations; ProUCL Output (included electronically on CD); and
- **Appendix C** – Cost estimate.

SECTION 2
PREVIOUS INVESTIGATIONS

2.1 GEOLOGIC/HYDROGEOLOGIC INVESTIGATIONS

The geologic and hydrogeologic characteristics of FTMM have been investigated during numerous historical installation-wide and site-specific environmental studies conducted by others. The primary methods of geologic/hydrogeologic investigation at FTMM-18 have consisted of describing soils encountered during monitoring well drilling, measuring water levels in monitoring wells and constructing potentiometric surface (i.e., groundwater surface elevation contour) maps indicating the direction and magnitude of the horizontal hydraulic gradient, and performing slug tests in monitoring wells to estimate the hydraulic conductivities of the screened zones.

2.2 SOIL AND VADOSE ZONE INVESTIGATIONS

Results of soil sampling performed during removal of the fuel distribution piping associated with FTMM-54 will be described in a separate report for FTMM-54. However, the results of more widespread, near-surface, soil sampling performed at FTMM-18 in 1999 are described in this report. The Army advanced 62 soil borings within the historical boundary of FTMM-18 in January and February 1999, and collected soil samples from each boring (**Figure 2.1**). Each of the soil samples, except those collected for VOC analysis, were collected between approximately 6 and 12 inches bgs. VOC samples were collected at approximately 24 inches bgs since surface soils would not be expected to retain volatile constituents over time. A total of 65 soil samples (62 primary samples plus 3 field duplicate samples) were analyzed for VOCs, SVOCs, pesticides, PCBs, and TAL metals. Laboratory analyses were conducted at the Fort Monmouth Environmental Testing Laboratory (FMETL), a New Jersey certified laboratory (Certification No. 13461). The *Remedial Investigation Report for Near-Surface Soils, M-18 Landfill Site* (Versar, 2004b) presents the results of the FTMM-18 soil investigation. **Figure 2.1** depicts (1) the current understanding of the FTMM-18 landfill boundary as described in Section 1.3.2, (2) the locations of soil borings advanced in 1999, and (3) the locations of test pits and auger borings advanced in 2009 to better delineate the landfill boundary.

2.3 GROUNDWATER INVESTIGATIONS

Groundwater monitoring wells were installed at and near FTMM-18 to determine if contamination associated with the site was impacting groundwater quality. Well construction details are provided in **Table 2.1**, and the scope of the quarterly groundwater monitoring program from 1997 to 2014 is summarized in **Table 2.2**. Well locations are shown on **Figure 1.3**.

The quarterly groundwater monitoring program conducted at FTMM-18 included monitoring wells that were installed as part of the closure and removal of USTs at Buildings 296 (FTMM-54) and 290 (FTMM-55). Due to the observation of visibly stained soil after the removal of USTs at Buildings 290 and 296 in 1993-1994, four monitoring wells (296MW03, 296MW06, 296MW07, 296MW08) were installed in July 1994. An additional well (290MW02) was installed in August 1994, and another well (296MW04) was installed in September 1995. Although the “296-series” wells listed above were originally installed to characterize potential fuel contamination related to FTMM-54 (including the fuel distribution piping that extended

beneath the western portion of FTMM-18), they provide useful information on groundwater quality within and upgradient of FTMM-18; therefore, these wells have historically been sampled in association with FTMM-18 and groundwater quality data from these wells have been included in reports prepared for FTMM-18 (including this RI report).

In January 1995, as part of a SI, two shallow groundwater monitoring wells (M18MW24 and M18MW25) were installed at FTMM-18, and two rounds of groundwater sampling were conducted in February and May 1995 (Weston, 1995). Groundwater samples were analyzed for TAL metals, VOCs, SVOCs, pesticides, PCBs, and cyanide. The results of the groundwater sampling were presented in the SI report (Weston, 1995). Based on the findings of the SI, the Army implemented a long-term groundwater monitoring program.

Groundwater samples collected from the eight monitoring wells installed in 1994 and 1995 were analyzed for VOCs, SVOCs, pesticides, PCBs, and TAL metals from June 1997 to November 2004 (**Table 2.2**). Starting in February 2005, the target analytes included only VOCs and TAL metals; SVOCs and pesticides/PCBs were removed from the monitoring program. As described in Section 1.3.2, the NJDEP approved DPW's revision to the groundwater sampling program via email on November 12, 2004 (NJDEP, 2004).

In 2006, one monitoring well (290MW02) was damaged and was consequently removed from the groundwater monitoring program and abandoned. Two additional monitoring wells (M18MW22 and M18MW23) were installed in 2010 (U.S. Army, 2012) and were initially sampled in October 2010; target analytes included VOCs and TAL metals.

In August 2013, groundwater samples were collected from three wells at FTMM-18 (M18MW22, M18MW24, and M18MW25) and analyzed for VOCs to re-establish baseline conditions following the temporary suspension of the sampling program in 2011. In addition, groundwater samples were also collected from seven wells associated with adjacent site FTMM-54 (296MW01 through 296MW04 and 296MW06 through 296MW08) and analyzed for VOCs and lead. NJDEP accepted the recommendation of the August 2013 Baseline Sampling Report to continue monitoring for VOCs in select wells annually and discontinue TAL metals sampling at FTMM-18 (NJDEP 2015).

2.4 SURFACE WATER INVESTIGATIONS

The surface water in Parkers Creek at FTMM-18 is tidally-influenced, and high tide salinity measurements presented in the Baseline Ecological Evaluation (BEE) report (Shaw, 2012) indicate that the reach of Parkers Creek from sampling locations SS-27 to SS-21(**Figure 2.2**) has an overall site average high tide salinity of 20.2 parts per thousand (ppt), which classifies it as saline. Surface water samples have been collected from four upstream sampling locations, including one on Lafetra Creek where it enters FTMM (SS-14), one on Mill Creek where it enters FTMM (SS-15), and two on Parkers Creek at and near FTMM-18 (SS-27 and SS-28). Samples have also been collected at one distant downstream sampling location on Parkers Creek (SS-21) (**Figure 2.2**). Samples were analyzed at FMETL for various combinations of VOCs, pesticides, PCBs, and metals as summarized in **Table 2.3**. Sampling results have been summarized by Versar (2003) and U.S. Army (2012).

2.5 SEDIMENT INVESTIGATIONS

Studies conducted at MP landfill sites FTMM-18 and FTMM-08 found PCB-containing materials (e.g., electrical ballasts) disposed of in each landfill. In addition, PCBs were detected in soil and/or groundwater at both FTMM-18 and FTMM-08. Therefore, assuming that other landfills on the MP had received similar waste materials, the FTMM DPW initiated a sediment sampling investigation in the second quarter of 2000 to evaluate potential impacts to stream sediments adjacent to the MP landfill sites. FTMM-18 was included in the sediment sampling program to supplement previous characterization results for soil, surface water, and groundwater (Versar, 2004a).

To determine potential PCB-related impacts to sediments in Parkers Creek associated with FTMM-18, the Army collected four surface (0-6 inches bgs) and four near-surface (6-12 inches bgs) sediment samples in Parkers Creek in April 2000. The eight sediment samples (two depth intervals sampled per location) were collected along a 300-foot section of Parkers Creek adjacent to the western perimeter of FTMM-18. Sediment sample locations are shown on **Figure 2.3**. The eight sediment samples were analyzed for PCBs and compared by Versar (2004a) to sediment sampling guidance concentrations defined in the NJDEP's (1998) *Guidance for Sediment Quality Evaluations*.

2.6 ECOLOGICAL INVESTIGATIONS

A Baseline Ecological Evaluation (BEE; Shaw, 2012; provided in **Appendix A**) was performed at the MP and CWA to fulfill requirements set forth in NJDEP's TRSR (N.J.A.C. 7:26E-5.3 as cited in a previous version of the TRSR). The BEE is Tier I of the ecological evaluation and ecological risk assessment process as developed by the Site Remediation Program, and is defined in the TRSR and Site Remediation News (NJDEP, 1997). The objective of the BEE at FTMM was to examine each of 23 identified sites (eight Environmental Condition of Property [ECP] parcels and 15 Installation Restoration Program [IRP] sites). The BEE was developed to be an efficient and cost-effective screening process. As such, the results of a BEE are used to determine whether potential ecological impacts are negligible or whether more site-specific ecological evaluation is warranted.

In an August 27, 2012 letter, the NJDEP accepted the 2012 BEE report's recommendations and conclusions and concurred that no further evaluation of ecological risk was required. Therefore, based on the recommendation of the BEE report (Shaw, 2012), no further ecological risk assessment was conducted for FTMM-18 as part of this RI. Additional ecological information pertinent to this site was obtained from the BEE report and is summarized in Section 3.5.

2.7 PREVIOUS INVESTIGATIONS OF BACKGROUND SOIL, GROUNDWATER, AND SURFACE WATER QUALITY

2.7.1 Weston (1995) Background Investigation

Weston (1995) collected 10 soil and 10 groundwater samples on both the CWA and MP to determine concentrations of constituents that occur naturally or as a result of activities unrelated to FTMM. Background sampling locations were selected as specified in the document *Investigations of Suspected Hazardous Waste Sites at Fort Monmouth, New Jersey* (Weston, 1993), which was approved by NJDEP. The resulting background data set was found to be

neither normally or log-normally distributed; therefore, the tolerance interval method for determining representative background concentrations described in the then-current version of the USEPA document *Statistical Analysis of Groundwater Monitoring Activities at RCRA Facilities* (USEPA, 2009) was not used. Weston (1995) states that nonparametric methods that are similar to the tolerance interval method involve selecting the data value that is at the 95th percentile of the data set. Because there were 10 data points, the equivalent method for the FTMM background data set was to use the maximum value. An outlier screening was conducted to identify background concentrations that were inconsistent with the rest of the data set. Based on the screening, outliers were identified for beryllium, chromium, cobalt, lead, vanadium, and zinc in MP groundwater, and manganese in CWA soil. These outliers were eliminated from the data set.

In addition, Weston (1995) identified maximum background values for Monmouth County based on published data. The Monmouth County background concentrations for soils were based on analyses of samples from the vicinity of FTMM.

Weston (1995) also provides results for two background surface water and sediment samples that were collected at the MP in areas not expected to be affected by base activities. These samples were collected from Mill and Lafetra Creeks at the western (upstream) edge of the MP.

2.7.2 Brinkerhoff (2011b) Background Evaluation

Brinkerhoff Environmental Services, Inc. (Brinkerhoff, 2011b) performed an evaluation to achieve the following objectives:

- Document the presence of naturally occurring metals in groundwater;
- Identify various conditions which are likely to have resulted in exceedances of NJDEP GWQS by concentrations of various metals detected in groundwater at FTMM; and
- Develop a strategy for determining which sites contain metal concentrations in groundwater that represent site-related contamination.

For FTMM-18, Brinkerhoff (2011b; provided in **Appendix A**) calculated the 90th percentile values for metals using groundwater quality data collected from February 2005 to August 2010, and determined that the 90th percentile values for barium, beryllium, chromium, copper, and nickel were less than the GWQS for these metals. In addition, the adjusted mean values for cadmium and lead were below their respective GWQS. Due to possible laboratory inaccuracies affecting selenium and/or thallium results, the 90th percentile analysis was not used to determine compliance with the GWQS for these metals. Based on this calculation, Brinkerhoff (2011b) recommended no further sampling of groundwater for metals with 90th percentile values less than the GWQS. In conjunction with the background groundwater study, a CEA report was prepared (Brinkerhoff, 2011a). The CEA report concluded that arsenic, antimony, and cadmium at FTMM-18 were attributed to naturally occurring background conditions, and these metals were not included in the CEA application. The CEA report and application was subsequently withdrawn by FTMM and was never reviewed or approved by NJDEP.

2.7.3 Base-Wide Glauconitic Soil Sampling Report

Previous studies have documented the presence of naturally-occurring metal concentrations (e.g., arsenic, beryllium, lead) in glauconitic soils such as those present within the New Jersey

Coastal Plain physiographic province (Dooley, 2001; United States Geological Survey [USGS], 1984). In an effort to confirm and document that select metals detected in groundwater on the MP are naturally associated with glauconitic soils, the FTMM DPW (FTMM, 2011) conducted a soil and groundwater sampling investigation to determine whether naturally occurring metals in soil are causing metal concentrations in groundwater to exceed the NJDEP GWQS. According to Jablonski (1968) the Red Bank and Tinton Sands that outcrop at the MP contain glauconite. Minard (1969) states that glauconite may comprise 60 to 80 percent of the sand fraction in the upper portion of the Tinton Sand.

Six co-located soil and groundwater samples were collected at three sites and analyzed for TAL metals. The study concluded that arsenic and lead co-exist as naturally occurring metals that are unrelated to any documented source at any of the sampled sites. The study also concluded that arsenic in groundwater, which was detected at concentrations exceeding the NJDEP GWQS of 3 micrograms per liter (µg/L) in three of the six samples, is due to natural conditions rather than man-made/anthropogenic sources (FTMM, 2011).

SECTION 3
PHYSICAL CHARACTERISTICS OF THE SITE

3.1 SURFACE FEATURES

No evidence of the former training area utilized by the Army Signal School or the former debris disposal area remains at the ground surface, The site is unpaved and covered with trees or other types of vegetation (see Section 3.5 for additional information). A tidal marsh adjoins the site (Brinkerhoff, 2011a). The ground surface topography is flat with elevations of less than 20 feet above mean sea level (amsl).

3.2 SURFACE-WATER HYDROLOGY

Lafetra Creek initially forms the northern boundary of the MP and joins Mill Creek to form Parkers Creek. Downstream of the confluence of Lafetra and Mill Creeks, Parkers Creek flows eastward along the northern boundary of the MP. Both Mill Creek and Lafetra Creek originate off-post. Most of Parkers Creek, Lafetra Creek, and Mill Creek are tidally influenced (Weston, 1995). Surface water runoff at FTMM-18 is transported via overland flow toward Parkers Creek (**Figure 2.2**). FTMM-18 is located adjacent and south of Parkers Creek, which empties into the Shrewsbury River downstream of the MP.

3.3 GEOLOGY AND HYDROGEOLOGY

3.3.1 Regional Geology and Hydrogeology

The MP and CWA are situated on coastal plain deposits that thicken to the southeast. The regional geologic and hydrogeologic framework for the New Jersey coastal plain is described by Zapecza (1989), who identified 15 regional hydrogeologic units, including nine aquifers and six confining units. An early regional geologic cross-section for the FTMM vicinity based on the work of Zapecza (1989), and presented in Versar (2005), is provided in **Appendix A**. This cross-section indicates that the depth to crystalline bedrock at FTMM is approximately 1,000 feet. In 2010, the understanding of the geology in the area around FTMM was refined by Sanford and Sugarman of the New Jersey Geological Survey. They describe the unconsolidated material in the coastal plain as consisting of sand, silt, clay, and glauconitic clay laid down in coastal, nearshore-marine, and continental shelf settings between 95 and 10 million years ago. The sediments are grouped into 19 formations and members.

The geology of the Long Branch Quadrangle (Stanford and Sugarman, 2010) indicates that the Hornerstown, Vincentown, and Tinton formations are the unconsolidated units that outcrop or occur close to the ground surface in the area of FTMM. There is a relatively thin veneer of surficial deposits that covers most of the unconsolidated material, according to the Surficial Geology of the Long Branch Quadrangle (Stanford, 2000). The 2010 geologic map provides a geologic cross-section (A-A') through FTMM that is more refined than the one developed by Zapecza (1989); this refined cross-section is also included in **Appendix A**. Regressive, upward-coarsening deposits are usually aquifers (e.g., Englishtown and Kirkwood Formations and the Cohansey Sand), while the transgressive deposits act as confining units (e.g., Merchantville, Marshalltown, Navesink, and Hornerstown Formations). The individual thicknesses for these units varies greatly from several tens of feet to several hundred feet.

The Hornerstown Formation, which underlies much of the MP and the northern portion of the CWA, consists of glauconitic (>50%) clay and silty clay. This unstratified formation is olive, dark green and black where unweathered and olive-brown with brown to reddish-brown mottles where weathered (Stanford and Sugarman, 2010). The Hornerstown Formation is 25 to 30 feet thick. The Vincentown Formation, which unconformably overlies the Hornerstown Formation, consists of glauconitic (5-20%), silty, medium-to-coarse, quartz sand; some fine-to-medium sand; and some very coarse sand to very fine pebbles. This formation is yellow, reddish-yellow, olive yellow, or olive-brown in color and has a total thickness of 180 feet.

The Tinton (Sand) Formation unconformably underlies the Hornerstown Formation and conformably overlies the Red Bank Sand and consists of glauconitic (5-30%), silty, medium-to-coarse and fine-to-medium, quartz sand. The color is reddish-brown, reddish-yellow, and yellowish-brown where weathered, and grayish-brown, brown, and olive-brown where unweathered. It is commonly iron-cemented into beds and masses as much as 15 feet thick. The uppermost 4 to 6 feet, just below the contact with the Hornerstown Formation, is a brown to olive-gray, glauconitic, clayey silt to sandy or silty clay (Stanford and Sugarman, 2010).

The water table aquifer in the MP and CWA areas is identified as part of the "Navesink-Hornerstown Confining Units," or minor aquifers. The minor aquifers include the Navesink Formation, Red Bank Sand, Tinton Sand, Hornerstown Sand, Vincentown Formation, Manasquan Formation, Shark River Formation, Piney Point Formation, and the basal clay of the Kirkwood Formation. These geologic formations comprise a "Composite Confining Bed" for the underlying Wenonah Mount Laurel Aquifer (Zapecza, 1989 as reported by Versar, 2005) (see regional geologic cross-section in **Appendix A**). The Composite Confining Bed is estimated to be approximately 125 feet thick at FTMM (Versar, 2005). Wells installed in the Red Bank and Tinton Sands produce 2 to 25 gallons per minute (gpm) (Jablonski, 1968). The shallow water table conditions in the Tinton and Red Bank Sands, and the similar composition of these sands within the Kirkwood Formation, suggest that the Tinton-Red Bank-Kirkwood sequence forms a single, laterally continuous aquifer. Regionally, groundwater in this water table aquifer flows east towards the Atlantic Ocean. However, local topography tends to deflect the flow toward local depressions (Versar, 2005).

A pumping test performed at FTMM in 1992 yielded a hydraulic conductivity of 32 gallons per day per square foot (gpd/ft^2) (4.3 feet per day [ft/day]) (Groundwater & Environmental Services, Inc., [GES] 1999). The location of the pumping test and the geologic unit tested are not known. Additional hydraulic conductivity information for the MP area is provided in Appendix IV of the *MODFLOW Groundwater Modeling Report* prepared by Brinkerhoff (2010). Twenty-one hydraulic conductivity values derived from slug tests performed in monitoring wells installed at various areas throughout FTMM ranged from 0.3 ft/day to 31.7 ft/day with a geometric mean value of 3.2 ft/day.

3.3.2 Site-Specific Geology and Hydrogeology

Soil types identified to a depth of 8 feet bgs during excavation of the test pits in 2009 included brown and gray sand and silty sand, and gray and orange clay. Debris encountered in the test pits to a depth of 8 feet bgs included floor tiles, asphalt, concrete, ash, wood, gravel, metal paint cans, utility poles, wire, brick, rebar, scrap metal, and steel bars. Monitoring wells at FTMM-18 were installed to depths ranging from 10 to 20 feet bgs (**Table 2.1**). The borehole logs for these wells indicate that shallow soil down to approximately 4 feet bgs is composed of

silty sand and olive-brown-gray clay intermixed with gravel, asphalt, and roof shingles. Deeper soil from approximately 4 to 20 feet bgs is composed of gray to dark gray, silty sand and green clay. Versar (2004b) describes the lithology at FTMM-18 as being composed of asphalt, wood fragments, and roof shingles intermixed with poorly sorted, gray-olive-brown, silty, fine- to coarse-grained sand with trace amounts of clay.

The depth to groundwater at the MP typically ranges from approximately 2 to 9 feet bgs. At the FTMM-18 site, the groundwater depth ranges from 4 to 8 feet bgs based on water level depth measurements collected in 2010 and reported by the U.S. Army (2012). Versar (2003) reports that groundwater migrates toward the north (i.e., toward Parkers Creek, **Figure 1.3**). The horizontal hydraulic gradient is approximately 0.013 to 0.015 foot per foot based on potentiometric surface maps prepared by Versar (2003).

Versar (2003) conducted slug tests in 11 monitoring wells located at and near FTMM-18 in February 2001. The slug tests were performed to estimate the hydraulic conductivity of the shallow soils at this site, to be used for contaminant transport modeling. The hydraulic conductivity values derived from the slug tests ranged from 0.3 to 14.3 ft/day with a geometric mean value of 2.5 ft/day.

An average advective groundwater seepage velocity for FTMM-18 was calculated using the following equation:

$$V = Ki/n_e$$

Where:

V = seepage velocity

K = hydraulic conductivity = 2.5 ft/day (the geometric mean value determined from slug tests at and near FTMM-18)

i = hydraulic gradient = 0.013-0.015 ft/ft (measured from the site-specific potentiometric surface maps for January 2001 prepared by Versar [2003] [see **Appendix A** of this report])

n_e = effective porosity = 0.20 or 20% (estimated value for a fine to coarse sand with minor silt and clay)

The calculated average advective groundwater seepage velocity is 0.16-0.19 ft/day (58-69 feet per year).

3.4 LAND USE

The FTMM-18 landfill has been inactive since approximately 1971 and a vegetative cover has developed across the site. The anticipated future land use of FTMM-18 is "open space" (EDAW, Inc., 2008). Land planned for use as "open space" is expected to remain undeveloped, with only occasional maintenance activities (e.g., grounds keeping), utility work associated with underground or overhead utilities that may be present within the site boundary, and recreational activity (e.g., hiking and biking on established trails).

3.5 ECOLOGY

Major vegetation zones at FTMM consist of landscaped areas, estuarine and fresh water wetlands, riparian areas, upland forests, and old field habitats. Much of the upland areas of the

MP and CWA consist of extensive areas of regularly mowed lawns and landscaped areas (Shaw, 2012). The western and central portions of FTMM-18 consist of grassy areas with some hardwoods and small pockets of emergent wetlands (Shaw, 2012). The northeastern and eastern portions of the site contain forested wetlands sloping sharply to emergent wetlands. The BEE report (Shaw, 2012) indicates that a tidal marsh adjoins the site, and the wetland areas along Parkers Creek are Rank 1, which is assigned to patches that meet suitability requirements for endangered, threatened, or priority wildlife species, but do not have confirmed occurrences. Parkers Creek, as well as the associated wetlands, is listed as Conservation Rank 4, indicating that open water and adjacent emergent wetlands could be used for foraging by bald eagles. However, the presence of bald eagles has not been documented for this site.

Except for occasional transient species, no federally-listed or proposed threatened or endangered flora or fauna are known to exist at FTMM. There was one observance in 1992 of a New Jersey-listed endangered species, the clustered sedge. No federal- or state-listed species were observed during the BEE site visit conducted on the MP and CWA in September 2009.

SECTION 4
NATURE AND EXTENT OF CONTAMINATION

Environmental sampling results for soil, groundwater, surface water, and sediment at and adjacent to the FTMM-18 site are described in this section.

4.1 SOIL QUALITY

Soil quality results obtained during the near-surface soil characterization (Versar, 2004b) are summarized in the following subsections. Sample locations are shown on **Figure 2.1**. **Tables 4.1 and 4.2** show the sampling results for detected analytes and also show selected NJDEP and background comparison criteria (**Table 4.1**) and USEPA comparison criteria (**Table 4.2**), including:

- NJDEP Residential Direct Contact Soil Remediation Standards (RDCSRS), Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS), and Impact to Ground Water (IGW) Screening Levels (SLs);
- USEPA Regional Screening Levels (RSLs; target risk [TR] = 1 x 10^{-6} and target hazard quotient [THQ] = 0.1) for residential and industrial soil and protection of groundwater (the latter being analogous to the NJDEP IGW SLs); and
- Maximum MP background concentrations presented by Weston (1995).

The Army is the lead agency for investigation and remediation of FTMM under CERCLA; NJDEP is the support agency. Therefore, site concentrations were compared to NJDEP criteria. Both residential and non-residential criteria are used to provide context for NJDEP to evaluate potential future land use.

USEPA RSLs were used for comparison purposes because the U.S Army is tasked with completing a CERCLA-compliant RI (including risk assessment). Therefore, RSLs are used to identify those chemicals that are present at a sufficient concentration to justify inclusion as constituents of potential concern (COPCs) and consideration in the quantitative baseline risk assessment. Any analyte present at a concentration greater than both the residential soil RSL based on a target risk of 1 x 10^{-6} or a THQ of 0.1 and the range of FTMM-specific background concentrations for metals (Weston, 1995) is considered a COPC (except for metals considered essential human nutrients) and included for further evaluation in the baseline risk assessment. Any analyte present at concentrations less than the residential soil RSL is not expected to pose a risk to human receptors under any future land use, and so are not included in the baseline risk assessment. A comparison to residential criteria is not meant to imply that residential land use is expected or planned at the site. Residential criteria are simply used as a tool to identify COPCs.

Table 4.3 summarizes the number of times detected analyte concentrations were greater than one or more NJDEP or USEPA comparison criteria, and the number of times that detected metal concentrations were greater than maximum background concentrations presented by Weston (1995). This table also identifies COPCs for inclusion in the risk assessment, and accompanying rationale.

4.1.1 Summary of Comparison Criteria Exceedances in Soil

Concentrations of VOCs, SVOCs, and metals were detected that exceed NJDEP and/or USEPA comparison criteria. Versar (2004b) reported that analysis of the soil sampling results did not define a source area or level of contamination that necessitated the identification and evaluation of potential remedial actions. For many of the analytical results that exceeded the then-current residential direct contact soil cleanup criteria (RDCSCC), the "compliance averaging" approach was used by Versar (2004b) to determine compliance with NJDEP technical requirements. Compliance averaging uses the average contaminant concentration in an area of concern rather than the concentration in individual samples for comparison to applicable soil cleanup criteria. In most cases, either the calculated compliance average was below the respective RDCSCC or the exceedance was considered marginal (Versar, 2004b). For the analytes that were not eliminated based on compliance averaging, Versar (2004b) recommended that a document equivalent to a Declaration of Environmental Restriction be incorporated into the FTMM Master Plan for soils containing these exceedances, and recommended no further action (NFA) for near-surface soil at FTMM-18. A Declaration of Environmental Restriction is substantively similar to the current "Deed Notice" in the NJDEP regulations.

4.1.1.1 Summary of Exceedances of Residential Direct Contact Comparison Criteria

Concentrations of the following constituents exceeded the current NJDEP RDCSRS and/or USEPA Residential Soil RSL in at least 1 of the 65 soil samples analyzed for VOCs, SVOCs, pesticides/PCBs, and metals (**Tables 4.1 through 4.3**).

- The SVOCs (classified as PAHs) benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene; and
- The metals aluminum, arsenic, cadmium, cobalt, iron, and vanadium.

4.1.1.2 Summary of Exceedances of Non-Residential Direct Contact Comparison Criteria

Concentrations of the following constituents exceeded the current NJDEP NRDCSRS and/or USEPA Industrial Soil RSL in at least 1 of the 65 soil samples analyzed for VOCs, SVOCs, pesticides/PCBs, and metals (**Tables 4.1 through 4.3**).

- The SVOCs (classified as PAHs) benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, and dibenz(a,h)anthracene; and
- The metal arsenic.

4.1.1.3 Summary of Exceedances of Impact to Groundwater Comparison Criteria

Concentrations of the following constituents exceeded the current NJDEP IGW SL and/or USEPA Groundwater Protection RSL in at least 1 of the 65 soil samples analyzed for VOCs, SVOCs, pesticides/PCBs and metals (**Tables 4.1 through 4.3**).

- The VOC methylene chloride;
- The SVOCs naphthalene, 2-methylnapthalene, acenaphthene, dibenzofuran, fluorene, di-n-butylphthalate, fluoranthene, pyrene, benzo(a)anthracene, chrysene,

benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene;

- The pesticides alpha chlordane, gamma chlordane, heptachlor, 4,4'-DDE, 4,4'-DDD, 4,4'-DDT, dieldrin, and endrin aldehyde; and
- The metals aluminum, antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, vanadium, and zinc.

Methylene chloride is a common laboratory contaminant and detected concentrations of this analyte may be representative of laboratory-derived contamination.

4.1.1.4 Identification of Background Constituents

Metal concentrations in soil were compared to maximum background concentrations presented by Weston (1995) (**Tables 4.1 through 4.3**). The maximum-detected concentrations of aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, cobalt, copper, iron, lead, magnesium, mercury, nickel, potassium, selenium, silver, sodium, vanadium, and zinc exceeded the maximum background concentrations for the MP presented in Weston (1995).

4.1.2 COPCs in Soil

Following USEPA (1989) guidance, data with J, E or ER, and D qualifiers were treated as valid detections and usable for COPC identification purposes. U- and UJ-qualified data were considered to be nondetects but usable for COPC identification. B- and BJ-qualified data were treated as nondetects because the analyte was detected in the associated blank and the estimated chemical concentration in the sample was not five or ten times greater than the concentration in the associated blank (USEPA, 1989). Detections flagged with a B and BJ are not otherwise usable for COPC identification purposes as the detections may be associated with laboratory contamination.

COPCs in soil were identified by comparing the maximum detected concentration of each analyte to the USEPA Residential Soil RSL (TR = 1 x 10^{-6} and THQ = 0.1). If organic chemicals were detected at concentrations greater than USEPA residential RSLs in at least one sample, they were considered COPCs. Metals detected at concentrations exceeding the Residential Soil RSL were then compared to the maximum background concentration (Weston, 1995). If the maximum concentration of a metal was greater than both the USEPA Residential Soil RSL and the maximum background concentration in at least one sample, that metal was considered to be a COPC. If the maximum concentration was greater than the USEPA Residential Soil RSL but less than the maximum background concentration, it was not considered a COPC. However, metals that are considered to be essential human nutrients (calcium, iron, magnesium, potassium, and sodium) were not considered to be COPCs. This decision logic is presented on **Figure 4.1.**

COPCs in soil (**Table 4.3**) include benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, aluminum, arsenic, cadmium, cobalt, and vanadium.

4.2 GROUNDWATER QUALITY

The scope of the groundwater monitoring program implemented from 1997 to 2014 is summarized in **Table 2.2**. Sampling of TAL metals was discontinued and select wells continued to be sampled annually for VOC analysis following the 2013 Baseline Sampling Event, with the

concurrence of the NJDEP as stated in an approval letter "Re: November 26, 2014 Response to Comments – on the Final Baseline Ground Water Sampling Report (August 2013)" dated February 5, 2015 (provided in **Appendix A)**. Monitoring well locations are shown on **Figure 1.3**.

Groundwater sampling results are summarized in this subsection. Information was obtained from the following sources:

- *M-18 Landfill (FTMM-18) Remedial Investigation Report Addendum (2nd Quarter 2001 through 3rd Quarter 2010)* (U.S. Army, 2012);
- Laboratory data reports for 4th Quarter 2010 through 3rd quarter 2011;
- *Final August 2013 Baseline Groundwater Sampling Report* (Parsons, 2014a); and
- *Laboratory data for December 2014 monitoring event.*

Quarterly sampling of site monitoring wells was conducted from June 1997 through the 3rd Quarter 2011, and additional sampling was performed in August 2013 and December 2014. Groundwater sampling results obtained from March 2008 to August 2011 are presented in **Table 4.4**; results from the August 2013 and December 2014 sampling events are provided in **Table 4.5**. More comprehensive summary tables that provide groundwater quality data from June 1997 through September 2010 are provided in **Appendix A**. **Tables 4.4 and 4.5** also show the NJDEP GWQS and USEPA Tapwater RSLs to facilitate comparison of sampling results to criteria developed to be protective of use of groundwater as a potable water source. Maximum background concentrations for metals in groundwater as presented by Weston (1995) are also provided in **Table 4.4**.

4.2.1 Summary of Historical Groundwater Sampling Results

Sixteen rounds of groundwater samples were collected from June 1997 to January 2001; samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and TAL metals. Groundwater samples collected during two additional rounds of sampling using low-flow methodology were analyzed for TAL metals. As summarized by Versar (2003), groundwater concentrations of benzene, arsenic, cadmium, chromium, and lead exceeded NJDEP GWQS. Groundwater modeling indicated that the impact of metals in groundwater was minimal due to the low hydraulic conductivity of the geologic formations beneath FTMM-18, sorption of the metals to the soil, and the correspondingly low potential for contaminant migration (U.S. Army, 2012). The benzene detected at two monitoring well locations was predicted to biodegrade to concentrations below the NJDEP GWQS within 5 years, and the potential for migration of benzene to Parkers Creek was estimated to be low. Based on the results of groundwater sampling conducted from June 1997 to January 2001, Versar (2003) concluded that no constituents of concern were present in groundwater at FTMM-18, and recommended NFA for groundwater (U.S. Army, 2012).

Quarterly groundwater sampling results for permanent monitoring wells obtained from 2nd Quarter 2001 to 3rd Quarter 2010 are reported by the U.S. Army (2012). One VOC (benzene) was detected at concentrations greater than the NJDEP GWQS. The benzene plume appeared to follow the general groundwater flow direction, which is northward towards Parkers Creek. Metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, and thallium) were detected at concentrations greater than the GWQS, but were considered by the U.S. Army

(2012) to be naturally occurring within FTMM soils. Furthermore, no source areas were identified. Metal detections in general, and lead specifically, were concluded to be the direct result of acid leaching of suspended solids in groundwater samples (U.S. Army, 2012). In addition, due to the extremely slow migration rates of metals in groundwater, it was concluded that they pose little potential for significant impact by migration..

4.2.2 Summary of Results from Eight Quarterly Sampling Events and 2013-2014 Events

During more recent groundwater monitoring, detected concentrations of select VOCs and metals exceeded NJDEP GWQS and/or USEPA Tapwater RSLs (**Tables 4.4 and 4.5**). Both NJDEP and USEPA comparison criteria were used for the reasons described for soil in Section 4.1. USEPA Tapwater RSLs incorporate a TR of 1 x 10^{-6} and a THQ of 0.1. **Table 4.6** presents a summary of comparison criteria exceedances for the groundwater monitoring events that were evaluated for the risk assessment (Section 6), defined as eight quarters of long-term monitoring (November 2009 through August 2011), the August 2013 Baseline Sampling Event, and the December 2014 monitoring event. This table presents the number of times concentrations of a detected analyte were greater than the NJDEP GWQS and/or USEPA Tapwater RSL, and the number of times detected metal concentrations exceeded the maximum background concentration presented by Weston (1995).

4.2.2.1 Summary of Exceedances of NJDEP and USEPA Comparison Criteria

As summarized in **Table 4.6**, concentrations of the following constituents exceeded their current NJDEP GWQS and/or USEPA Tapwater RSL in at least 1 of the 94 samples collected during eight quarters of groundwater monitoring (**Table 4.4**) and the August 2013 and December 2014 sampling events (**Table 4.5**):

- The VOCs benzene, carbon tetrachloride, ethylbenzene, 1,2-dichlorethane (1,2-DCA), naphthalene, trichloroethene (TCE), and total TICs; and
- The metals aluminum, antimony, arsenic, barium, beryllium, cadmium, cobalt, iron, lead, manganese, mercury, nickel, selenium, silver, sodium, vanadium, and zinc.

VOC concentrations exceeded their current NJDEP GWQS and/or USEPA Tapwater RSL at wells M18MW22, M18MW23, and 296MW06, as summarized in the following paragraphs.

Concentrations of benzene, 1,2-DCA, and TCE exceeded the NJDEP GWQS and/or USEPA RSL at well M18MW22; this well is located at the southeast corner of the updated FTMM-18 landfill boundary, hydraulically upgradient to crossgradient of the landfill and downgradient of Building 283 (FTMM-61) where a leaking gasoline UST was removed in 1997 (**Figure 1.3**). Concentrations of benzene in M18MW22 are assumed to be sourced at FTMM-61 based on historical detections of this compound in upgradient well 283MW02. Benzene was detected in most groundwater samples collected at 283MW02 from July 2007 through November 2010 at concentrations ranging from 0.83 µg/L in November 2010 to 76.07 µg/L in August 2008, although a significant decreasing trend in concentrations is evident. 1,2-DCA concentrations exceeded the NJDEP GWQS and USEPA RSL for this compound in all samples collected from well M18MW22 in 2010, 2011, and 2013. Concentrations of 1,2-DCA in the two 2013 samples from M18MW22 were higher in the deeper sample (19 feet bgs) than in the shallower sample (12 feet bgs). 1,2-DCA was added to leaded automotive gasoline since the 1920s. This compound served as a "lead scavenger" to prevent the formation of solid lead oxide and lead sulfate

deposits in the engine combustion chamber (Jacobs, 1980). Therefore, FTMM-61 is the likely source of 1,2-DCA detected at M18MW22. The TCE detected in this well at concentrations exceeding the NJDEP GWQS and/or USEPA Tapwater RSL are assumed to be related to Building 283 (part of the Squier Laboratory Complex) where TCE was historically used (U.S. Army BRAC, 2008). Well M18MW23 is located crossgradient (east) of the updated FTMM-18 landfill boundary, and hydraulically downgradient (north) of Building 288, which was also part of the Squier Laboratory Complex (**Figure 1.3**). According to the SI Report prepared by the U.S. Army (2008), this building contained a workshop to repair and perform experimental work on photographic equipment in which carbon tetrachloride was used. Therefore, carbon tetrachloride detected in well M18MW23 at concentrations exceeding the NJDEP GWQS and/or USEPA Tapwater RSL is assumed to be related to Building 288. This building is also the presumed source of benzene historically detected in M18MW23.

Well 296MW06 is located downgradient of Building 296 (FTMM-54), where nine gasoline USTs were removed in 1993. This well is also located near former fuel distribution piping (also considered to be part of FTMM-54) that extended from Building 296 into the southwestern portion of the FTMM-18 site prior to its removal in 1993 (**Figure 1.3**). Although fuel distribution piping from the former Building 296 USTs extended beneath FTMM-18, (most likely to support former training exercises at FTMM-18), it is suspected that numerous fuel spills occurred at FTMM-18 during use of diesel and gasoline generators to support field exercises (Section 1.3.2). Since the exceedances of NJDEP GWQS and/or USEPA Tapwater RSLs for benzene and ethylbenzene at well 296MW06 were limited to the vicinity of FTMM-18 and did not also occur farther upgradient (i.e., closer to Building 296), these VOCs are attributed to FTMM-18 and not to FTMM-54. The naphthalene concentrations in the primary and duplicate samples collected from well 296MW06 in August 2013 (both 1.1 µg/L) and December 2014 (0.66 and 0.37 µg/L) exceeded the USEPA Tapwater RSL (0.14 µg/L). However, the August 2013 detections are flagged with a "B" qualifier indicating that they were also detected in a blank sample, and are therefore associated with non-site-related contamination (i.e., contamination introduced at the laboratory or during field sampling). VOC concentrations at wells 296MW03 and 296MW04, located closer to Parkers Creek and downgradient of 296MW06 (**Figure 1.3**), did not exceed NJDEP GWQS or USEPA Tapwater RSLs, indicating that the VOC plume has not migrated to Parkers Creek.

According to the U.S. Army (2012), volatile organic TIC concentrations in groundwater samples collected from 2nd Quarter 2001 through 3rd Quarter 2010 did not exceed the NJDEP GWQS of 100 µg/L for individual compounds or 500 µg/L for total estimated TIC concentrations. However, the CEA report prepared by Brinkerhoff (2011a) identified TICs as a component of the CEA due to a total TIC concentration of 566 µg/L in well 283MW02 during the September 2010 sampling event. As shown on **Figure 1.3**, this well is located adjacent to Building 283, approximately 290 feet south (hydraulically upgradient) of FTMM-18 and the detected TIC concentration is not related to FTMM-18. One TIC (isobutene) was detected in the sample from M18MW22 in August 2013 at an estimated concentration of 6.9 µg/L, indane was detected in the primary and duplicate samples from 296MW06 in August 2013 (23.9 JN to 24.3 JN µg/L), and an unknown TIC was detected in the December 2014 sample from 296MW06 at two different depths (24.3 JN and 6.9 JN µg/L).

4.2.2.2 Identification of Background Constituents

The metals detected at concentrations exceeding their NJDEP GWQS and/or USEPA Tapwater RSL and also the maximum background concentration for the MP established by Weston (1995) included antimony, arsenic, barium, beryllium, cadmium, cobalt, manganese, silver, sodium, and zinc. Exceedances of background levels for these metals are evaluated below:

- The maximum background exceedances for antimony all occurred in samples collected in September 2010 from six different monitoring wells (including upgradient well 296MW07), and were followed by three to four events where the concentration was less than the maximum background level or (more commonly) were non-detect; therefore, they are isolated occurrences that are not representative of antimony conditions in groundwater.
- Exceedances of the maximum background concentration for arsenic occurred in only 1 of 77 samples. It is an anomalous occurrence and arsenic concentrations are considered to be representative of background conditions.
- Exceedances of the maximum background concentrations for barium, beryllium, and cobalt occurred in 3 of 77 samples, 6 of 77 samples, and 3 of 77 samples, respectively. These exceedances all occurred in groundwater from M18MW22, which is upgradient to crossgradient of FTMM-18. Therefore, barium, beryllium, and cobalt concentrations at M18MW22 are not considered to be site-related.
- Exceedances of the maximum background concentration for cadmium occurred in only 3 of 77 samples and are outliers that are not representative of the data set. These exceedances occurred in the September and November (primary and duplicate) 2010 samples from well 296MW03 and were followed by three non-detects during the three subsequent sampling events.
- Exceedances of the maximum background concentration for manganese occurred in 25 of 77 samples. Maximum background exceedances occurred in six wells. Given this number of exceedances, manganese concentrations cannot be assumed to represent natural background conditions in all instances.
- Exceedances of the maximum background concentration for silver occurred in 19 of 77 samples. Given this number of exceedances, silver concentrations cannot be assumed to represent natural background conditions in all instances. Silver concentrations are evaluated further in Section 4.2.3 to determine whether silver should be identified as a COPC.
- Exceedances of the maximum background concentration for sodium occurred in 65 of 77 samples. Sodium is considered an essential human nutrient and is not considered a COPC.
- Exceedances of the maximum background concentration for zinc occurred in 14 of 77 samples. Given this number of exceedances, zinc concentrations cannot be assumed to represent natural background conditions in all instances. Zinc concentrations are evaluated further in Section 4.2.3 to determine whether zinc should be identified as a COPC.

4.2.3 COPCs in Groundwater

As shown on **Figure 4.1**, COPCs in groundwater were identified by comparing detected concentrations during the recent sampling events (November 2009 to August 2011, August 2013, and December 2014) to the USEPA Tapwater RSL (TR = 1 x 10^{-6} and THQ = 0.1). Organic chemicals that were detected at concentrations greater than USEPA Tapwater RSLs were considered COPCs unless they were determined to be associated with non-site-related contamination (i.e., contamination introduced during field sampling or emanating from an upgradient source unrelated to FTMM-18). Metals that were detected at concentrations exceeding the Tapwater RSL were then compared to the maximum detected background concentration (Weston, 1995). Detected analytes that also exceeded the maximum background concentration (Weston, 1995) were then assessed more holistically to determine whether background exceedances were representative of site-related contamination, or were due to other factors such as turbidity or upgradient sources. Metals exceeding background were exempted from being identified as COPCs as a result of this holistic assessment if any of the following conditions were met:

- There were only a small number of background exceedances during the most recent sampling events such that the exceedances were anomalous outliers and not representative of the vast majority of the data;
- The background exceedances occurred early in the time period encompassed by the most recent sampling events, and concentrations in subsequent samples were below the maximum background concentration;
- The background exceedances only occurred in an upgradient or crossgradient monitoring well;
- Background exceedances cannot be plausibly related to potential site-related sources of contamination, and/or
- The metal is classified as an essential human nutrient (i.e., calcium, iron, magnesium, potassium, and sodium).

SVOCs, pesticides, and PCBs were eliminated from the sampling program in 2004 (**Table 2.2**). As summarized by the U.S. Army (2012), groundwater concentrations of SVOCs, pesticides, and PCBs were determined by Versar (2003) to be in compliance with NJDEP GWQS. Therefore, no SVOCs, pesticides, or PCBs were identified as COPCs in groundwater at FTMM-18.

Based on the COPC identification decision logic described above, COPCs in groundwater include the VOCs benzene and naphthalene and the metal manganese. With the exception of manganese, metals identified in Section 4.2.2.2 as potentially not being representative of background concentrations in all instances (i.e., silver, sodium, zinc) were not identified as COPCs based on being an essential nutrient (sodium) or the outcome of the Tapwater RSL comparison (silver, zinc). Additional details and rationale are provided in **Table 4.6**. The reducing groundwater environment induced by the presence of organic carbon in the saturated zone (e.g. fuel hydrocarbons, landfilled organic waste) may increase the concentrations of manganese dissolved in groundwater (Air Force Center for Environmental Excellence [AFCEE], 2007). In this scenario, solid-phase, bioavailable manganese (Mn^{+4}) may be used by microbes as

an electron acceptor during anaerobic biodegradation of organic carbon. During this process, Mn^{+4} is reduced to soluble manganese (Mn^{+2}), resulting in increased concentrations of dissolved manganese in groundwater.

4.3 SURFACE WATER

The scope of the surface water monitoring program implemented from October 1996 to September 2010 is summarized in **Table 2.3**, and sampling locations historically associated with FTMM-18 are shown on **Figure 2.2**.

Table 4.7 shows NJDEP saline water (SE) surface water quality standards (SWQS) and USEPA criteria protective of human health for VOCs, metals, and select wet chemistry constituents for comparison purposes. Both NJDEP and USEPA comparison criteria were used for the reasons described for soil in Section 4.1. A hierarchy of USEPA human health criteria were used in the priority shown below. For example, if the highest priority criterion was not available for a particular analyte, the second priority criterion was used, and so on down the line.

1. National Recommended Water Quality Criteria (NRWQC) (organism only)
2. NRWQC (water + organism)
3. Tapwater RSLs
4. Maximum Contaminant Levels (MCLs)

Three sampling locations (SS-14, SS-15, and SS-28) are located upstream of FTMM-18, one location (SS-27) is located adjacent to the site, and one location (SS-21) is located far downstream of FTMM-18. Although five surface water sampling locations have been historically associated with FTMM-18, results for all five locations are not summarized in reports prepared by Versar (2003) and the U.S. Army (2012). Quarterly surface water sampling results for locations SS-14, SS-15, and SS-27 from 3rd Quarter 1996 to 1st Quarter 2001 are reported by Versar (2003). Quarterly surface water sampling results for locations SS-21, SS-27, and SS-28 from 2nd Quarter 2001 to 3rd Quarter 2010 are reported by the U.S. Army (2012).

Based on high tide salinity measurements presented in the BEE (Shaw, 2012), saline conditions are present at SS-21 (20 to 23 ppt), SS-27 (9 to 21 ppt), SS-28 (8 to 19 ppt), and SS-15 (4 to 7 ppt). Since the mean high tide salinity in the reach extending from SS-21 to upstream of SS-28 is greater than 3.5 ppt, the reach is considered saline per N.J.A.C. 7:9B *et seq*. (Shaw, 2012). The high tide salinity measurements for the most distant upstream location on Lafetra Creek (SS-14) were all 0 ppt, indicating fresh water. Surface water sampling results are summarized in the following subsections.

4.3.1 Summary of Surface Water Sampling Results From 1996 to 2010

Surface water samples were collected from two upstream sampling points (SS-14 and SS-15) and one sampling point adjacent to the FTMM-18 site (SS-27) (**Figure 2.2**) from the 3rd Quarter 1996 to the 1st Quarter 2001. Three VOCs (methylene chloride, tetrachloroethene [PCE], and TCE) at SS-15 exceeded NJDEP SWQS. Since all exceedances of NJDEP SWQS were detected at an upstream location, these VOCs were not considered to be COPCs in surface water at FTMM-18 (Versar, 2003).

Surface water samples were collected from three locations along Parkers Creek from 2nd Quarter 2001 to 3rd Quarter 2010, including at SS-28 (upstream of FTMM-18), SS-27 (adjacent to FTMM-18), and SS-21 (downstream of FTMM-18). One VOC (PCE) was detected at SS-27

and SS-28 at concentrations exceeding the NJDEP SWQS. PCE concentrations at the downstream location (SS-21) were in compliance with the NJDEP SWQS. PCE has historically been identified upstream of FTMM-18 and upstream (offsite) of the FTMM MP (U.S. Army, 2012). Thus, PCE was not considered to be a COPC in surface water at FTMM-18. Five metals (antimony, arsenic, lead, mercury, and thallium) were detected at concentrations exceeding their respective NJDEP SWQS. However, metals were not considered to be COPC at FTMM as their widespread occurrence in soil, groundwater, and surface water and the lack of discernible trends suggested they are of background origin (U.S. Army, 2012).

4.3.2 Summary of Results from Most Recent Eight Quarterly Sampling Events

Table 4.7 presents surface water sampling results obtained from March 2007 to September 2010. This table shows NJDEP saline SWQS and USEPA water quality criteria for protection of Human Health for detected VOCs, metals, and selected wet chemistry constituents for comparison purposes. NJDEP saline SWQS are used as comparison criteria because the reach of Parkers Creek adjacent to the FTMM-18 site is saline based on high tide salinity measurements presented in the BEE (Shaw, 2012) and summarized in Section 4.3.

The most recent eight quarters of surface water monitoring data (December 2008 through September 2010) are evaluated in greater detail as being representative of recent conditions (total of 47 samples). **Table 4.8** summarizes the number of times a detected analyte was greater than NJDEP saline (SE) SWQS and/or USEPA Human Health criteria. During the most recent eight quarterly sampling events, no VOCs were detected adjacent to the site at concentrations exceeding USEPA human health criteria. All PCE concentrations that exceeded the NJDEP SWQS were detected at upstream location SS-15 (**Table 4.7** and **Figure 2.2**). PCE concentrations detected adjacent to FTMM-18 at SS-27 did not exceed NJDEP SWQS; therefore, PCE is not a COPC in surface water at FTMM-18. Based on the historical surface water quality data, FTMM-18 is not significantly impacting VOC concentrations in the reach of Parkers Creek that borders the site, and VOCs are not evaluated as COPCs in the risk assessment (Section 6).

During the most recent eight quarters of sampling, arsenic, lead, mercury, and thallium were detected at concentrations that exceeded their respective NJDEP SWQS and/or USEPA Human Health criterion (**Table 4.7**). Metal detections and concentrations at SS-14, SS-15, and SS-27 during the most recent eight quarterly sampling events are summarized below to provide a comparison of upstream results with results near FTMM-18. Non-detect results were assigned a value of zero (0) to calculate average concentrations.

Both SS-14 and SS-15 are located approximately one mile upstream of FTMM-18. SS-14 is located where Lafetra Creek enters the FTMM MP, and SS-15 is located where Mill Creek enters the FTMM MP (**Figure 2.2**). The lack of upstream metals data closer to FTMM-18 makes it difficult to discern any site-related impacts. Furthermore, there are multiple storm sewer outlets at Parkers Creek and near FTMM-18 that could impact metal concentrations in surface water (**Figure 1.3**). In general, metal concentrations detected at upstream locations during the eight most recent sampling events are similar to those detected adjacent to FTMM-18 at SS-27. The calculated average concentration of lead at SS-27 is biased high due to a single anomalous detection of 18.2 µg/L in December 2009; the highest lead concentration detected during the other seven quarters was 3.59 µg/L, and lead was not detected during five of the eight quarterly sampling events. The data indicate that FTMM-18 is not significantly impacting metal

concentrations in the reach of Parkers Creek that borders this site, and metals are not evaluated as COPCs in the risk assessment (Section 6).

Analyte	# Detects / Maximum Concentration / Average Concentration (µg/L)		
	SS-14	SS-15	SS-27
	Upstream	Upstream	FTMM-18
Antimony	7 / 28.6 / 8.5	6 / 17.8 / 6.6	7 / 27.1 / 14.4
Arsenic	7 / 76.1 /14.1	5 / 66.6 / 12.8	7 / 56 / 14.6
Barium	8 / 40.7 / 38.2	8 / 61.4 / 57.0	8 / 63.0 / 46.2
Beryllium	1 / 0.21 / 0.03	3 / 0.3 / 0.06	2 / 0.20 / 0.03
Cadmium	1 / 0.37 / 0.05	3 / 0. / 0.20	1 / 0.5 / 0.06
Chromium	2 / 1.5 /0.22	5 / 3.9 / 1.2	4 / 7.1 / 1.5
Copper	4 / 6.7 /1.3	5 / 4.6 / 1.6	6 / 7.6 / 3.6
Lead	3 / 5.8 / 1.0	2 / 5.7 / 1.0	3 / 18.2 / 3.11
Mercury	2 / 0.2 / 0.03	1 / 0.18 / 0.02	2 / 0.2 / 0.03
Nickel	8 / 11.4 / 4.89	8 / 11.9 / 10.7	8 / 10.1 / 7.1
Selenium	4 / 108 / 25.9	3 / 104 / 23.5	4 / 119 / 28.2
Thallium	1 / 3.1 / 0.38	Not Analyzed or Not Detected	1/1.8/0.22

4.4 SEDIMENT

Sediment sampling was conducted in April 2000. Four borings were advanced along the 300-foot portion of Parkers Creek that flows adjacent to the western perimeter of the FTMM-18 site; boring locations are shown on **Figures 2.2 and 2.3**.

Eight sediment samples were collected, including four from 0 to 6 inches below grade and four from 6 to 12 inches. PCBs (specifically Aroclor 1254) were detected in 2 of 8 samples collected at a concentration of 0.22 mg/kg at B-1 (0-6 inches) and 0.055 mg/kg at B-2 (0-6 inches). Sediment sampling results were compared to both NJDEP and USEPA criteria for the reasons described for soil in Section 4.1. Human health-based criteria for soil are used for comparison purposes to support identification of COPCs. The concentration at B-1 is slightly greater than both the NJDEP RDCSRS of 0.2 mg/kg for total PCBs (**Table 4.9**) and the USEPA Residential RSL for Aroclor 1254 of 0.11 mg/kg. The detected PCB concentrations do not exceed the NJDEP NRDCSRS or USEPA Industrial RSL. Boring B-1 is the farthest downstream sampling location, and PCBs were not detected upstream at B-3 or B-4. Despite the presence of a storm sewer outlet near B-3, approximately 135 feet upstream of sample location B-2 (**Figure 2.3**), the detected concentrations of Aroclor 1254 cannot be confidently related to an upstream source, and they may be associated with FTMM-18. As a result, this PCB is evaluated as a COPC in the risk assessment (Section 6).

A total of five sediment samples were collected from Parkers Creek adjacent to FTMM-18 as part of the 2010 BEE (Shaw, 2012). The samples were analyzed for VOCs, SVOCs, PCBs, pesticides, and metals. Sampling results were compared to ecological screening criteria that are intentionally conservative. The results of the comparisons were used to identify contaminants of

potential ecological concern (COPECs). COPECs identified in sediment included SVOCs (classified as PAHs), pesticides, a PCB, and metals. The BEE (Shaw, 2012) concluded that constituents in sediment at FTMM-18 were unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments were not warranted or recommended.

SECTION 5
CONTAMINANT FATE AND TRANSPORT

This section addresses the fate and transport of VOCs, SVOCs, PCBs, and metals detected in soil, groundwater, and/or sediment at FTMM-18 at concentrations exceeding one or more NJDEP or USEPA comparison criteria and (in the case of metals) maximum background concentrations reported in Weston (1995). The fate and transport of detected constituents in surface water are not addressed because sampling data indicate that surface water quality has not been significantly impacted by FTMM-18.

The environmental fate and transport of a contaminant is controlled by the contaminant's physical and chemical properties and the nature of the subsurface media through which the contaminant is migrating (USEPA, 1998).

Unless otherwise indicated in the text, the fate and transport information presented in this section was derived from three primary sources:

1. The online Toxnet Hazardous Substances Data Bank (HSDB; http://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm);
2. Toxicological profiles prepared by the Agency for Toxic Substances and Disease Registry (ATSDR) (http://www.atsdr.cdc.gov/toxprofiles/index.asp); and
3. The Framework for Metals Risk Assessment (USEPA, 2007).

5.1 POTENTIAL ROUTES OF MIGRATION

Potential migration routes for constituents detected in soil, groundwater, and sediment at or (in the case of sediment) adjacent to FTMM-18 include the following:

1. Dissolution of soluble residual constituents in vadose zone soil into infiltrating precipitation that percolates through the vadose zone to the water table;
2. Primarily lateral migration of constituents dissolved in groundwater toward Parkers Creek;
3. Desorption from sediment particles and transport in surface water as a dissolved constituent; and
4. Entrainment of sediment particles in flowing surface water and transport as suspended particles.

5.2 CONTAMINANT PERSISTENCE IN SOIL

5.2.1 VOCs

VOCs are not significant contaminants in near-surface soil at FTMM-18. The most widely-detected VOC (methylene chloride) is a common laboratory contaminant and may be indicative of laboratory-derived contamination. This observation is supported by the fact that methylene chloride concentrations were similar and fall in a fairly narrow range. Therefore, the persistence of VOCs in soil is not addressed further in this section.

5.2.2 SVOCs

The SVOCs identified as COPCs in soil are all PAHs. Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a.h)anthracene, and indeno(1,2,3-cd)pyrene are long-chained hydrocarbons having 18 to 22 carbon atoms. As the chain lengths of the hydrocarbons approach a size of approximately 15 - 20 carbon atoms, their vapor pressures and water solubilities become negligible, and partitioning to air or dissolution in water is unimportant (American Petroleum Institute [API], 2011). API (2011) generally classifies petroleum substances in the C9 to C25 range as "not readily biodegradable" because their biodegradation rates are typically slower than lighter, more volatile fuels, such as gasoline or jet fuel. Therefore, PAHs are expected to be persistent in vadose zone soil at FTMM-18.

5.2.3 Pesticides

Pesticides that are classified as persistent organic pollutants (including most of those detected at FTMM-18: heptachlor, dieldrin, endrin aldehyde, and DDT) are compounds that are only slightly soluble in water, adsorb strongly to soil particles, and are resistant to biodegradation. This is also true for DDD and DDE. However, some volatilization may occur, enabling them to move long distances before atmospheric deposition occurs. Overall, organic pesticides are expected to be persistent in vadose zone soil at FTMM-18. However, none of the detected pesticide concentrations exceed the NJDEP RDCSRS or USEPA Residential Soil RSL and they are not considered COPCs in soil.

5.2.4 Metals

Metals are subject to various transformation processes in soil. For example, metals can exist in the environment in several valence forms, and they can also exist as organometallic compounds that have a metal-carbon bond. Metal transformation processes, such as metal methylation, occur through interactions with other chemicals and biota in the environment. In general however, metals are resistant to natural degradation in the environment and therefore are expected to be persistent in vadose zone soil at FTMM-18.

5.3 CONTAMINANT PERSISTENCE IN GROUNDWATER

5.3.1 VOCs

Benzene was identified as the primary constituent above the NJDEP GWQS in groundwater (Versar 2003; U.S. Army, 2012). The biodegradation rates of the low- to moderate-weight aliphatic, alicyclic, and aromatic compounds (including benzene) can be very high, especially under aerobic conditions (AFCEE, 1995). First-order degradation rates for benzene range from 0.1 to 28 per year (Suarez and Rifai, 1999; Reinhard et al., 2005), with an average "default" rate for fate and transport modeling purposes of 1.1 per year (Falta et al., 2012). This range of rates corresponds to benzene half lives of 0.02 to 6.9 years, with an average "default" half-life of 0.6 years. Therefore, benzene tends to have a low degree of persistence in groundwater unless concentrations are replenished over time due to a continuing primary or secondary source.

Groundwater impacted by fuel hydrocarbons such as benzene is expected to be anaerobic, while conditions outside fuel hydrocarbon plumes are likely aerobic. Therefore, a mixture of dissolved oxygen conditions (and degradation processes and rates) is anticipated to be present in groundwater at FTMM-18.

5.3.2 Metals

Metals including manganese in groundwater are subject to retardation processes. Retardation processes depend on a number of factors including sorption (attachment of metals species to mineral surfaces), speciation (particularly metals complexes which have differing tendencies to be adsorbed or desorbed), precipitation (metals precipitate out of solution when solubility limits are reached), colloid formation (formation of colloids and association of metal species within them), biofixation (binding of metals to solid surfaces through the actions of microorganisms or plants) and natural organic matter interactions. The processes may be affected at least by pH, oxidation-reduction potential (ORP), salinity, and concentrations of competing ions. In general, metals in groundwater are sorbed to particles or retained in solution, and are expected to be persistent in shallow groundwater at FTMM-18. As the mass of bioavailable organic carbon (e.g., fuel hydrocarbons) in the reaction zone becomes depleted, the groundwater system will likely become more oxidizing, and concentrations of redox-sensitive metals such as manganese dissolved in groundwater should decrease.

5.4 CONTAMINANT PERSISTENCE IN SEDIMENT

PCBs are very stable compounds and do not decompose readily. This is due to their chemical inability to oxidize and reduce in the natural environment. Furthermore, PCBs have a long half life (8 to 15 years) and are insoluble in water, which contributes to their stability. Therefore, PCBs are expected to be persistent in sediment in Parkers Creek adjacent to FTMM-18.

5.5 CONTAMINANT MIGRATION IN SOIL

5.5.1 VOCs

As described in Section 5.2.1, VOCs are not significant contaminants in near-surface soil at FTMM-18. Therefore, the migration of VOCs in soil is not addressed further in this section.

5.5.2 SVOCs

For the reasons described in Section 5.2.2, PAHs identified in near-surface soil at FTMM-18 are expected to be immobile and will not readily leach to groundwater. This observation is supported by the fact that long-chained PAHs identified as COPCs in near-surface soil are not also COPCs in groundwater.

5.5.3 Pesticides

For the reasons described in Section 5.2.3, the organic pollutant pesticides present at FTMM-18 are expected to be strongly sorbed to soil particles and have little to no mobility in soil. Therefore, they will not readily leach to groundwater.

5.5.4 Metals

Because the behavior of metals in the environment defies simple generalities, understanding the chemistry of the particular metal and the environment of concern is necessary to assess the metal's behavior in the environment in a detailed fashion. However, the factors that control metal chemistry and the environmental characteristics used to produce estimates of metal fate and effects can be generalized. The pH of the host medium is an important variable that influences the behavior of metals in the environment; most complexation and precipitation reactions are pH dependent.

Movement of metals through soils is dependent on the chemical properties controlling speciation, the presence of ligands that control complexation of metals within pore water and adsorption onto mineral surfaces, and the rate of water flux through the soil. Metals are lost from the soil by leaching into groundwater and through metal-specific uptake by plants. As metals age in soils, they decrease in bioavailability.

In the soil environment, metals can exist as cations (having a positive charge), anions (having a negative charge), or neutral species (having a zero charge). Their form significantly affects their sorption, solubility, and mobility. For example, most soils are chiefly negatively charged; thus, metal cations have a higher propensity to be sorbed by soil particles than do metal anions. For most soils in the U.S., negatively charged sites are more plentiful; less than 5% of the total available charge on the soil surface is positively charged. Metals existing as cationic species have a greater propensity to associate with such soils, making them less bioavailable. Anionic metals generally move into pore water—and so are more bioavailable—but leach out of the system much more rapidly. In summary, soil pH and availability of charged sites on soil surfaces are the primary soil factors controlling release of metals to pore water and, subsequently, bioavailability.

Metals are usually cations, including those identified as COPCs in FTMM-18 soil (Section 4.1.2). Therefore, metals in vadose zone soil at FTMM-18 are expected to be relatively immobile.

5.6 CONTAMINANT MIGRATION IN GROUNDWATER

5.6.1 VOCs

Groundwater modeling results presented in the remedial action report prepared by Versar (2003) indicated that benzene at wells 296MW04 and 296MW06 would degrade within approximately 5 years. However, the model predicted that some migration of benzene to nearby Parkers Creek may occur within the time period that it was predicted to degrade to concentrations compliant with the NJDEP GWQS. However, the likelihood of significant migration was judged to be minimal. This conclusion is supported by the fact that benzene was not detected in surface water samples collected in Parkers Creek adjacent to FTMM-18. It is further supported by the most recent sampling events for downgradient wells 296MW03 and 296MW04, where benzene was not detected in groundwater.

5.6.2 Metals

As with soils, the behavior of metals in groundwater cannot readily be generalized. Under some conditions metals in groundwater can be mobile as colloidal-sized particles, even though the metal is in an insoluble form. Although not soluble, colloidal particles are so small they may approach the size of ionized species within an order of magnitude. As such they are transportable in the pore spaces of tight aquifer formations (Vance, 1993). Metals in groundwater will interact with and adsorb to components of the soil matrix. Clays, other mineral components, and carbonaceous material (especially humic and fulvic substances) can act in this manner. However in the case of metals, the dominant adsorptive component of the soil matrix is iron. Iron oxides (particularly of Ferric [Fe^{+3}] iron) have a very high adsorptive affinity and total capacity for metal ions and oxyanionic metal complexes (Vance, 1993).

USEPA (1992) states that transport of metals may be enhanced due to formation of organic and inorganic metal complexes that do not sorb to soil surfaces, and concludes that evaluating

the extent of metal retention by a soil (and by extension, in an unconsolidated aquifer) is site-, soil-, and waste-specific due to the wide range of soil characteristics and various forms that metals can take in the subsurface. Predicting the migration of metals in shallow groundwater at FTMM-18 is further complicated by the presence of landfill debris that may extend below the water table, at least seasonally.

While manganese is more soluble under reducing conditions, migration of this metal out of the reactive zone where anaerobic biodegradation of organic carbon (e.g., fuel hydrocarbons) is occurring is often substantially retarded by adsorption to the aquifer matrix and/or precipitation as insoluble manganese sulfides (e.g., Butler and Hayes, 1999). In naturally oxidizing groundwater systems, the mobilized Mn^{+2} is typically precipitated/immobilized downgradient of the reactive zone when the groundwater conditions return to a more oxidizing state closer to background conditions.

5.7 CONTAMINANT MIGRATION IN SEDIMENT

PCBs can be immobilized for long periods of time in aquatic sediments. The adsorption of dissolved PCBs onto solids (suspended particulates and sediments) is greatest for solids composed primarily of organic matter and clay. Therefore, the primary mechanism of PCB migration in Parkers Creek is expected to be entrainment of sediment particles in flowing surface water during periods of higher-volume, more rapid flow.

5.8 SUMMARY

The contaminant fate and transport information presented above indicates that SVOCs and metals in near-surface soil and PCBs in sediment at or adjacent to FTMM-18 are expected to be persistent and immobile, limiting their impact on groundwater quality. This observation is supported by the fact that most concentrations of TAL metals in groundwater are representative of natural background conditions, and SVOCs were eliminated from the groundwater sampling program in 2004 after groundwater concentrations were determined by Versar (2003) to be in compliance with NJDEP GWQS. Manganese is a notable exception; as the mass of bioavailable organic carbon (e.g., fuel hydrocarbons) in the reaction zone becomes depleted, the groundwater system will likely become more oxidizing, and concentrations of manganese in groundwater should decrease.

Benzene is readily degradable in groundwater. A previous modeling study indicated that some migration of benzene at FTMM-18 to nearby Parkers Creek may occur within the time period that it was predicted to degrade to concentrations compliant with the NJDEP GWQS. However, the likelihood of significant migration was judged to be minimal. This conclusion is supported by the fact that benzene was not detected in surface water samples collected in Parkers Creek adjacent to FTMM-18. It is further supported by the most recent sampling events for downgradient wells 296MW03 and 296MW04, where benzene was not detected in groundwater.

SECTION 6
BASELINE RISK ASSESSMENT

The objective of this baseline human health risk assessment (HHRA) is to provide a quantitative evaluation of the risk associated with exposure to soil, surface water, sediment, and groundwater at FTMM-18. The HHRA will determine if there is potential unacceptable risk to human health associated with exposure to contaminants present in these environmental media. The streamlined method to assess human health risk at FTMM-18 was developed as a component of a presumptive remedial strategy for the landfills at FTMM. The streamlined method was developed without consultation with the U.S. Army Public Health Command. However, as discussed below, the resulting quantitative risk estimates are comparable to those resulting from conventional risk assessment methods defined in the *Risk Assessment Guidance for Superfund* (RAGS; USEPA, 1989) and U.S. Army Corps of Engineers' (USACE) *Risk Assessment Handbook* (EM 200-1-4) (USACE, 1999) for the purpose of evaluating risk at a landfill site where a presumptive remedy will be implemented.

In a letter to Ms. Wanda Green, BRAC Environmental Coordinator at FTMM, dated August 27, 2012, NJDEP (2012) accepted the revised BEE submittal (Shaw, 2012), agreed that "all exceedances have been sufficiently evaluated and addressed for ecological receptor considerations", and stated that "no additional ecological evaluation or assessment is necessary for the Main Post and Charles Wood Area." Therefore, additional ecological risk evaluation was not performed for FTMM-18.

6.1 RISK ASSESSMENT PROCESS

6.1.1 Summary of Available Data for FTMM-18

This quantitative HHRA for FTMM-18 used the data collected in the investigations summarized in Section 2 of this RI. As described in Section 2, environmental sampling at the site included surface soil, sediment, surface water, and groundwater.

The analytical results for chemicals detected in each environmental medium at FTMM-18 are provided in data summary tables in Section 4 of this RI (**Tables 4.1 and 4.2** [soil]**, Tables 4.4 and 4.5** [groundwater], **4.7** [surface water], and **Table 4.9** [sediment]). COPCs are identified in soil (**Table 4.3**), groundwater (**Table 4.6**), and sediment (**Table 4.9**). No COPCs were identified in surface water (**Table 4.8**).

6.1.2 General HHRA Approach and Guidance Documents

Techniques and methods developed or recognized by the USACE and the USEPA were modified for use for this HHRA. This quantitative HHRA uses a risk ratio approach (which is further described in Section 6.2.1 below) to quantify potential carcinogenic risk and non-carcinogenic hazards. This streamlined approach, rather than the traditional risk assessment approach, was selected for use at the landfill sites because there is already a presumptive remedy of containment that will be implemented. Use of the streamlined approach will reduce costs associated with the risk assessment process by reducing the risk assessment effort, rapidly identifying the need for corrective action, and supporting property transfer and redevelopment plans. In the case of the landfill sites at FTMM, where a presumptive remedy of containment will be implemented, the streamlined risk assessment is appropriate. See *Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites* (USEPA, 1991).

Additionally, USEPA guidance states "One method for establishing risk using a streamlined approach is to compare contaminant concentration levels (if available) to standards that are potential chemical-specific applicable or relevant and appropriate requirements (ARARs) for the given action." (USEPA, 2015. *Presumptive Remedy for CERCLA Municipal Landfill Sites*, viewed at: http://www.epa.gov/superfund/policy/remedy/presump/clms.htm (last accessed January 30, 2015).

The risk ratio approach is a useful surrogate for the RAGS analysis because, as discussed in detail below, there is a direct relationship between the COPC concentration and risk, and therefore cancer risk and non-cancer hazard can be estimated as the ratio of site concentrations to RSLs. The risk ratio approach encompasses the principles and procedures included in USEPA guidance, while streamlining them for evaluating risk and determining the need for corrective action at FTMM landfill sites. The risk assessment process used in this document incorporates the four steps that define a human health risk assessment according to USEPA (1989) (i.e., data evaluation and identification of COPCs, exposure assessment, toxicity assessment, and risk evaluation), as summarized below.

Data Evaluation and Identification of COPCs: This step of the risk assessment process was conducted in a manner consistent with RAGS and the Risk Assessment Handbook. COPCs were identified in environmental media following comparison to published medium-specific screening values and FTMM-specific background concentrations. Those analytes that were detected at the site at concentrations greater than appropriate screening values and that are attributable to site activities were identified as COPCs and included in the risk assessment.

Exposure Assessment: This step of the risk assessment includes identification of relevant receptors and potential exposure pathways. Once relevant receptors and exposure pathways and a potential source of contamination are identified, a conceptual site model (CSM) is developed to define the potential for exposure. Exposure pathways for various media and exposure routes (i.e., ingestion, dermal contact, inhalation) that coincide are determined to be potentially complete and are evaluated in the risk assessment. In this case, exposure pathways may be complete for current and future outdoor workers, future utility workers, and potential future recreational users (as defined by project stakeholders).

The USEPA RSLs are risk-based concentrations that were developed by USEPA to rapidly identify chemicals that have the potential to present human health risks as a result of exposure. The exposures of concern for FTMM-18 include inhalation, ingestion, and dermal contact of outdoor workers, utility workers, and recreational users to COPCs. Site-specific screening levels for exposure of utility workers and recreational users to soil were calculated to support this risk evaluation.

The streamlined risk assessment approach for the FTMM landfills incorporates exposure parameters and toxicity values inherent to the RSLs, along with observed site concentrations, to calculate risks or hazards associated with identified COPCs at the site. The intent is for the conclusions of the risk assessment to represent likely future land use at FTMM.

Toxicity Assessment: This step of the risk assessment identifies toxicity factors that will be used when calculating the risk or hazard associated with exposure to COPCs at the site. In this case the toxicity factors are those either established or used by USEPA to calculate risk estimates and RSLs. Therefore, there are no differences in the toxicity values used in a conventional

RAGS-based approach and the USEPA risk ratio approach conducted for FTMM-18 as described in this report.

Risk Characterization: Cancer risk estimates and noncancer hazard quotients are calculated based on site concentrations, exposure assumptions, and toxicity factors. The RSLs for a given exposure scenario can be used to rapidly determine site-specific cancer risks or hazard estimates for that scenario. RSLs are medium-specific concentrations corresponding to predetermined cancer risk or noncancer hazard estimates (see RSL supporting documentation for further details on calculation of RSLs). A COPC concentration in soil equal to the USEPA RSL will result in a 1 x 10^{-6} cancer risk and/or a HQ of 1. Because there is a direct relationship between COPC concentrations and risk, cancer risks and/or noncancer hazard quotients can be estimated as the ratio of site concentrations to RSLs. This approach is extended to calculated receptor specific screening levels (i.e., recreational user and utility worker screening levels). Cumulative cancer risk and hazard index estimates resulting from multiple COPCs may then be resolved by summing the ratios. As a streamlined approach, the risk ratio approach does not specifically express the contribution of specific routes of exposure (e.g., ingestion, dermal contact, inhalation) to overall risk, and the risk estimates are limited to the inherent exposure parameters (such as days per year exposed) used in calculating the screening values that are used in calculating the risk ratios. This approach can limit the flexibility of the risk manager in making risk management decisions. The resulting risk estimates do, however, incorporate the noted multiple exposure routes, and are appropriate for making health-based determinations for the landfills.

Comparison of Traditional and Streamlined Risk Assessment Approach

Streamlined Risk Assessment Approach	Traditional Risk Assessment Approach
• Appropriate for simple sites, when generic exposure assumptions are appropriate, and summary risk estimates are sufficient	• Appropriate for complex sites, when site-specific exposure assumptions, and exposure-route specific risk estimates are needed for risk management decisions
• Provides chemical-specific risk estimates that are identical to traditional calculations, when exposure assumptions are the same, and all exposure routes are combined	• Exposure routes (i.e., ingestion, inhalation, dermal) can be evaluated separately
• Streamlined, using simple calculations requiring minimal documentation to support the calculations	• Calculations are more complex and require a greater amount of supporting documentation. However, there is greater flexibility to calculate risk only for those scenarios that are directly applicable to the site
• Exposure assumptions used in the calculations are consistent with those favored by USEPA	• Allows the use of site-specific exposure assumptions allowing the risk calculations to be tailored to the exact exposure scenarios expected at the site

6.1.3 Organization of the HHRA

The overall risk assessment process consists of four key steps: data evaluation and identification of COPCs, exposure assessment, toxicity assessment, and risk characterization. These four steps of risk assessment provide the general outline of a quantitative risk assessment report. Because this HHRA uses the risk ratio approach, the outline and overall format is slightly modified from the traditional HHRA. This HHRA is still consistent with USEPA guidelines as presented in RAGS (USEPA, 1989) and supporting supplemental guidance including the Standard Scopes of Work for HTRW Risk Assessments (USACE, 2001). This HHRA is organized into five sections (including this one), as outlined below.

6.1 Risk Assessment Process;

6.2 Data Evaluation and Identification of Constituents of Potential Concern;

6.3 Exposure Assessment;

6.4 Risk Ratio and Screening Criteria Assessment; and

6.5 Risk Assessment Results and Uncertainties.

6.2 DATA EVALUATION AND IDENTIFICATION OF CONSTITUENTS OF POTENTIAL CONCERN

Soil data included in the risk assessment were collected between February 1999 and February 2000 (Versar, 2004b). Groundwater data are included from eight quarters of groundwater monitoring data collected from November 2009 through August 2011, as well as the August 2013 and December 2014 sampling events. The scope of the surface water monitoring program implemented from October 1996 to September 2010 is summarized in **Table 2.3**, and sampling locations historically associated with FTMM-18 are shown on **Figure 2.3**. Sediment sampling was conducted in April 2000 (Versar, 2004a). The validated data were evaluated for the selection of COPCs. Data validation classified the data through the use of several qualifiers. Data without qualifiers were considered appropriate for risk assessment purposes. Following USEPA guidance (1989), data with J, E or ER, and D qualifiers were treated as detected concentrations and used for risk assessment purposes. U and UJ qualified data were considered to be non-detected, but usable for risk assessment purposes. B and BJ qualified data were treated as non-detected concentrations because the chemical was detected in the associated blank and the estimated chemical concentration in the sample was not five or ten times greater than the concentration in the associated blank (USEPA, 1989).

Calcium, iron, magnesium, potassium, and sodium were not evaluated in the HHRA because they are essential nutrients and are not expected to pose a risk to human health.

COPCs at FTMM-18 are those site-related contaminants for which there is evidence of a potential release due to historical site activities. COPCs are then evaluated for their potential to pose a risk to human health. Soil, surface water, sediment, and groundwater have been sampled at the site. Sampling results for the chemicals detected in each environmental medium are summarized in **Tables 4.1 and 4.2** (soil)**, Tables 4.4 and 4.5** (groundwater), **4.7** (surface water), **and Table 4.9** (sediment). The COPCs identified in soil are presented in **Table 4.3**. The COPCs identified in groundwater are presented in **Table 4.6**. The COPCs identified in sediment are presented in **Table 4.9**. No COPCs were identified in surface water (**Table 4.8**). Therefore, surface water exposure is not evaluated further in the risk assessment.

6.2.1 Risk Ratio Approach

The quantitative HHRA uses a risk ratio approach to quantify potential cumulative carcinogenic risk and non-carcinogenic hazard for COPCs in each contaminated medium. The general risk assessment process for FTMM-18 is summarized in **Figure 6.1**.

EPC are the concentrations of chemicals in a given medium to which a receptor may be exposed at a specific location known as the "exposure point." The maximum detected concentration from each environmental medium was used as the EPC. Use of maximum concentrations provides a conservative (i.e., health-protective) estimate of exposure to that chemical. However, the use of maximum detected concentrations can also provide an overestimate of the potential exposure, if elevated concentrations of a contaminant are limited to a small portion of a potential exposure area.

To calculate a risk ratio, the EPC is divided by the appropriate screening level for the environmental medium to determine the ratio of the site concentration to a risk-based health protective concentration. Risk ratios are calculated for outdoor workers, utility workers, and recreational users exposed to soil (Section 6.5.1), for utility workers exposed to groundwater (Section 6.5.2), and for outdoor workers and recreational users exposed to sediment (Section 6.5.3). The criteria used to calculate the risk ratios for outdoor worker exposure to soil and sediment were the USEPA Industrial Soil RSLs (TR = 1 x 10^{-6}; THQ = 1.0), while site-specific soil screening levels calculated in support of this project were used to calculate the risk ratios for utility worker and recreational user exposure to soil and recreational user exposure to sediment. The criteria used to calculate risk ratios for groundwater were site-specific screening levels calculated in support of this project for utility workers exposed to groundwater. The site-specific screening levels for utility workers and recreational users are presented in (**Appendix B**).

After calculating the risk ratios for individual COPCs, the ratios are then summed to determine the cumulative risk to each receptor for all samples collected at the site. Cumulative non-carcinogenic risk ratios greater than 1 indicate a potentially unacceptable non-carcinogenic hazard. Cumulative carcinogenic risk ratios greater than the upper end of USEPA's acceptable risk range of 1 x 10^{-4} to 1 x 10^{-6} indicate a potentially unacceptable carcinogenic risk.

For groundwater, the cumulative risk at FTMM-18 is calculated using the maximum detected concentration from any well. If the cumulative carcinogenic risk for all groundwater samples was within or less than the USEPA acceptable range of 1 x 10^{-4} to 1 x 10^{-6} or if the non-carcinogenic hazard quotient was less than 1, no further evaluation was conducted. If the carcinogenic risk and/or hazard quotient was outside the USEPA acceptable ranges, the risk estimate is further refined to calculate the risk at individual wells. Evaluation of risk for individual wells provides a more accurate representation of exposure, since potential future exposure to groundwater would assume that a utility worker would excavate and encounter groundwater at a specific point, represented by a single well.

6.2.2 Soil Samples

This HHRA evaluated constituents identified as COPCs, which includes those analytes attributed to site activities for which there is evidence of a release to environmental media. Organic compounds detected at concentrations greater than screening levels, and metals detected at concentrations greater than screening levels and greater than background concentrations, were identified as COPCs and included in the risk assessment. Surface soil at the site is defined as soil

collected at depths less than two feet from the surface and would include exposure pathways with no, or very minor, soil disturbance (e.g., wind dispersion of surface soil, landscaping/grounds keeping activities in surface soil). All soil samples were collected between February 1999 and February 2000 (Versar, 2004b). Each of the soil samples, except those prepared for VOC analysis, were collected between approximately 6 and 12 inches bgs. VOC samples were collected at approximately 24 inches bgs since surface soil would not be expected to retain volatile constituents over time. **Tables 4.1 and 4.2** provide the sampling depths and analytical results, and **Figure 2.1** shows the soil sampling locations. **Table 4.3** identifies the COPCs in soil that are evaluated in the HHRA.

6.2.3 Groundwater Samples

Multiple rounds of groundwater samples were collected from monitoring wells at and near FTMM-18 (**Figure 1.3**). Eight quarters of groundwater monitoring data collected from November 2009 through August 2011, and the August 2013 and December 2014 data were also included in the HHRA. **Figure 1.3** shows the location of groundwater monitoring wells, and **Table 4.4** provides the groundwater samples results collected between November 2009 through August 2011. **Tables 4.5** provides the groundwater samples results collected in August 2013 and December 2014; and **Table 4.6** identifies the COPCs in groundwater that are evaluated in the HHRA.

6.2.4 Sediment Samples

Sediment sampling was conducted in April 2000. Eight sediment samples were collected along the 300-foot portion of Parkers Creek that flows adjacent to the western perimeter of FTMM-18; boring locations are shown on **Figure 2.3**. **Table 4.9** summarizes the sediment sample analytical results collected in April 2000, and identifies the COPCs in sediment that are evaluated in the HHRA.

6.2.5 Surface Water Samples

Eight quarters of surface water monitoring data collected from December 2008 through September 2010 were evaluated for the HHRA (**Table 4.7**). Sampling locations historically associated with FTMM-18 are shown on **Figure 2.3**. No site-related COPCs were identified in surface water at FTMM-18 (**Table 4.8**). Therefore, exposure to surface water at FTMM-12 is considered an incomplete pathway, and no unacceptable risks due to exposure to surface water are expected.

6.3 EXPOSURE ASSESSMENT

The objective of the exposure assessment is to estimate the type and magnitude of potential exposures to COPCs at the site. The exposure assessment includes identification of potential exposure pathways, receptors, and exposure scenarios, as well as quantification of exposure. Characterization of the exposure setting and identification of potentially exposed receptors and exposure pathways are discussed in this section. A CSM showing results of the exposure assessment is shown on **Figure 6.2**. Quantification of exposure involves quantifying the magnitude, frequency, and duration of exposure for the receptors and exposure pathways of concern.

Soil, groundwater, and sediment were evaluated as the environmental media of concern at FTMM-18. The exposure pathways relevant to the site are described in this exposure assessment of the HHRA and shown in the CSM.

6.3.1 Conceptual Site Model

A CSM is an effective tool for defining site dynamics, streamlining risk assessments, establishing exposure hypotheses, and developing appropriate corrective actions. The CSM diagram for FTMM-18 is provided as **Figure 6.2**. CSMs are useful for identifying complete exposure pathways between contaminated media and potential receptors. The purpose of the CSM is to aid in understanding and describing a site and presents the assumptions regarding:

- Suspected sources and types of contaminants present;
- Contaminant release and transport mechanisms;
- Affected media;
- Potential receptors that could come in contact with site-related contaminants in affected media under current and future land use scenarios; and
- Potential routes of exposure.

An overall description of contaminant sources, affected media, and removal actions has been provided in previous Sections. Potential receptors and exposure pathways are discussed in the following subsections.

6.3.2 Potential Receptors and Exposure Pathways

Potential human receptors are defined as individuals who may be exposed to site-related contaminants in environmental media. Consistent with USEPA RAGS (1989) guidance, current and reasonably anticipated land uses were considered in the receptor selection process.

USEPA (1989) defines an exposure pathway as: "The course a chemical or physical agent takes from a source to an exposed organism. An exposure pathway describes a unique mechanism by which an individual or population is exposed to chemicals or physical agents at or originating from a site. Each exposure pathway includes a source or release from a source, an exposure point, and an exposure route. If the exposure point differs from the source, a transport/exposure medium (e.g., air) or media (in cases of intermedia transfer) is also included."

A review of potential exposure pathways links the sources, locations, and types of environmental releases with receptor locations and activity patterns to determine the significant pathways of concern.

Observations and reasonable assumptions for the potential human receptors for FTMM-18 are listed below, and summarized in **Figure 6.2**.

- **Current Receptors** – FTMM-18 is a landfill that was used for the disposal of building demolition debris and a portion was also used for training by the Army's Signal School. The Fort Monmouth Economic Redevelopment Planning Authority (FMERPA) reuse plan calls for FTMM-18 to be designated as passive open space (Edaw, Inc., 2008). It is currently vacant and unused. There are no new development activities occurring. Current activities at the site include infrequent visits, such as those that would be performed during routine landscaping/mowing, resulting in

exposure of outdoor workers to COPCs in soil through incidental ingestion of soil, dermal contact, and inhalation of volatiles and particulates. Exposure to soil by a current outdoor worker is assumed for this current land use scenario. This calculation assumes an exposure frequency of 225 days per year and an exposure duration of 25 years. Thus, it provides a conservative evaluation for a potential current outdoor worker who would be expected to have less frequent exposure at this particular site. Outdoor workers may be exposed to COPCs in sediment through incidental ingestion, dermal contact, and inhalation of volatiles and particulates. The calculation assumes the same values as for soil, but actual exposure to sediment is expected to be much less than the assumed exposure to soil. For example, exposure of outdoor workers to sediment is expected to be at most 50 events per year, and likely much less, compared to the assumed exposure frequency of 225 days per year for soil. Surface water runoff from the western part of the MP flows into the Lafetra Creek to the north or into Mill Creek to the south. Surface water runoff at FTMM-18 is transported via overland flow towards Parkers Creek. The surface water is not used as a potable water supply. Incidental ingestion of surface water/sediment, inhalation of volatiles and particulates from surface water and dermal contact with surface water/sediment were hypothetically assumed for this current land use scenario. However, no COPCs were identified in surface water at FTMM-18. Therefore, current exposure to surface water is an incomplete pathway;

- **Future Receptors –** Evaluation of the outdoor worker as a current receptor would be protective of future outdoor workers as well and is not re-evaluated for the future scenario. There are no current plans to develop commercial buildings at the site, but if commercial buildings are constructed in the future, then indoor workers would potentially be exposed to soil. Evaluation of the current outdoor worker would also protect the hypothetical future indoor commercial worker, because indoor commercial worker exposure to soil would be much less than the outdoor worker. Thus, the indoor worker exposure scenario was considered to be conservatively evaluated by the above current outdoor worker scenario. Future utility workers may be present on the site, involved in single short-term excavation projects at a given location, such as would be expected to be associated with repair or installation of utility lines. The calculation of the exposure of a utility worker to soil assumes that the utility crew would not return to the same location to conduct additional repairs, installation, or maintenance of underground utility lines. Utility workers are assumed to be on-site for 30 days of the year, over the course of one year and would be expected to come in contact with soil and shallow groundwater during excavation activities. Utility workers may also come in contact with surface water and sediment. However, surface water and sediment pathways are evaluated for the outdoor worker, which would be protective of the utility worker, since the exposure duration for outdoor workers is longer than for utility workers. No COPCs were identified in surface water at the site. Therefore, future exposure to surface water is an incomplete pathway for utility workers. FMERPA reuse plan calls for FTMM-18 to be designated as passive open space. Because the site is planned to be passive open space, a future recreational user could be exposed to COPCs in the soil. The calculation of the exposure of a recreational user to soil assumed that the person is onsite once a week for 50 weeks of

the year, for 24 years. Further, the site-specific screening value for the recreational user assumes that a portion of the time is spent on the site as an adolescent (age 6 to 16) and a portion as an adult (age 17 to 30). This provides a conservative evaluation for a future recreational user that is not likely to be onsite every week of the year. The site is not residential and no plans are in place to convert it to residential use. Therefore, the future residential scenario was not further evaluated;

- **Current Exposure to Groundwater –** Site groundwater is not used by current outdoor workers or indoor workers, because municipal water is provided for use. Therefore, there are no current exposures to groundwater; and
- **Future Exposure to Groundwater** – In areas with shallow groundwater (i.e., groundwater present at depths less than 15 ft bgs), utility workers may also be exposed to contaminants present in groundwater. Future utility workers may be present on the site, involved in single short-term excavation projects at a given location, such as would be expected to be associated with repair or installation of utility lines. The calculation of the exposure of a utility worker to groundwater assumes that the utility crew would not return in subsequent years to the same location to conduct additional repairs, installation, or maintenance of underground utility lines. Utility workers are assumed to be on-site for 30 days of the year, over the course of one year. The risk ratio analysis for utility workers provides a conservative estimate of risk, using onsite groundwater data. Outdoor workers, indoor workers, and recreational users are not exposed to groundwater. Therefore, the outdoor worker, indoor worker, and recreational user groundwater exposure pathways are incomplete. The site is not planned for future residential use. Therefore, future residential exposure to groundwater is an incomplete exposure pathway.

6.3.3 Exposure Pathways

6.3.3.1 Soil Exposure Pathways

Exposure to site soil occurs by direct contact (ingestion and dermal contact) with site soil and wind dispersion of soil resulting in inhalation of contaminants. The receptors and pathways evaluated for soil are listed below.

- Incidental ingestion of soil, inhalation of volatiles and particulates from soil, and dermal contact with soil by a current outdoor worker. This calculation assumes an exposure frequency of 225 days per year and an exposure duration of 25 years (USEPA, 2013b). Thus, it provides a very conservative evaluation for a potential current outdoor worker who would be expected to have much less exposure at this particular site;
- Incidental ingestion of soil, inhalation of volatiles and particulates from soil, and dermal contact with soil by a future outdoor worker. This is a potentially complete exposure pathway but is not included in the risk ratio analysis because it is assumed to be conservatively evaluated under the current outdoor worker scenario (based on the exposure frequency and exposure duration);

- Incidental ingestion of soil, inhalation of volatiles and particulates from soil, and dermal contact with soil by a future utility worker. This calculation assumes an exposure frequency of 30 days per year, and an exposure duration of one year; and,
- Incidental ingestion of soil, inhalation of volatiles and particulates from soil, and dermal contact with soil by a future recreational user. This calculation assumes an exposure frequency of 50 days per year (one time per week), for 24 years. Further the calculation assumes that a portion of the recreational user exposure occurs as an adolescent (age 6 to <16) and a portion as an adult (age 16 to 30). Thus, it provides a conservative evaluation for a future recreational user that is expected to be onsite less frequently than one time per week.

6.3.3.2 Groundwater Exposure Pathways

Exposure to groundwater can occur through direct contact (ingestion and dermal contact) and through inhalation of volatile COPCs present in groundwater. However, FTMM-18 is currently vacant and unused and the future land use is planned as "open space" and expected to remain undeveloped, with occasional maintenance activities. There are no supply wells present on-site and none are planned. All potable water is provided through municipal water supplies. However, if future utility workers encountered groundwater during construction activities, exposure to contaminants in groundwater may occur through incidental ingestion, dermal contact, and inhalation of volatiles. This calculation assumes an exposure frequency of 30 days per year, and an exposure duration of one year.

6.3.3.3 Surface Water Exposure Pathways

No COPCs were identified in surface water, so the surface water exposure pathway is incomplete.

6.3.3.4 Sediment Exposure Pathways

Exposure to site sediment occurs by direct contact (ingestion and dermal contact) with site sediment and inhalation of volatile contaminants in sediment. The receptors and pathways evaluated for sediment are listed below.

- Incidental ingestion, inhalation of volatiles, and dermal contact by a current outdoor worker. This calculation assumes an exposure frequency of 225 days per year and exposure duration of 25 years (USEPA, 2013b). Thus, it provides a very conservative evaluation for a potential current outdoor worker who would be expected to have much less exposure at this particular site;
- Incidental ingestion, inhalation of volatiles, and dermal contact by a future outdoor worker. This is a potentially complete exposure pathway but is not included in the risk ratio analysis because it is assumed to be conservatively evaluated under the current outdoor worker scenario (based on the exposure frequency and exposure duration); and
- Incidental ingestion, inhalation of volatiles, and dermal contact by a future recreational user. This calculation assumes an exposure frequency of 50 days per year (one time per week), for 24 years. Further the calculation assumes that a portion of the recreational user exposure occurs as an adolescent (age 6 to 16) and a portion as

an adult (age 17-30). Thus, it provides a conservative evaluation for a future recreational user that is expected to be onsite less frequently than one time per week.

6.4 RISK RATIO AND SCREENING CRITERIA ASSESSMENT

This HHRA used a risk ratio approach to quantify potential carcinogenic risk and non-carcinogenic hazard for each constituent identified as a COPC. This section describes the risk ratio assessment used in this HHRA.

6.4.1 Risk Ratio Assessment

The risk ratio method considered risk due to exposure to soil, groundwater, and sediment at FTMM-18. For the risk ratio assessment, the EPC (as defined in Section 6.2.1) was used to calculate risk.

In the risk ratio analysis, the EPC was divided by the appropriate screening level (as described in Section 6.2.1) for the environmental medium to calculate the risk ratio. The risk ratio for soil was calculated for outdoor workers, utility workers, and recreational users. The risk ratio screening levels for outdoor workers exposed to soil and sediment are the USEPA Industrial Soil RSLs (TR = 1 x 10^{-6}; THQ = 1.0), while site-specific screening levels calculated in support of this project were used to calculate the risk ratios for utility worker and recreational user exposure to soil and recreational user exposure to sediment. The criteria used to calculate risk ratios for utility workers exposed to groundwater were site-specific screening levels calculated in support of this project.

Following calculation of the risk ratios for individual chemicals, the ratios were then summed to determine the cumulative risk due to exposure to each medium. Cumulative non-carcinogenic hazard quotients greater than 1 indicate a potential unacceptable non-carcinogenic risk. Cumulative carcinogenic risk ratios greater than the upper end of USEPA's acceptable risk range of 1 x 10^{-4} to 1 x 10^{-6} indicate a potential unacceptable carcinogenic risk.

6.4.2 Risk Ratio Equations

Carcinogenic risks were estimated using the following equation.

$$\text{Cumulative Risk} = \sum (TR)\frac{(EPC_i)}{SL_{c-i}}$$

where:

Cumulative Risk = Cumulative risk for carcinogenic COPCs one through "i" (unitless), where $(TR)\frac{(EPC_i)}{SL_{c-i}}$ is the chemical-specific carcinogenic risk for chemical "i";

TR = Target lifetime excess carcinogenic risk of 10^{-6} (unitless);

EPC_i = Exposure point concentration for chemical "i" (mg/kg for soil and sediment or µg/L for water);

SL_{c-i} = Medium–specific human health screening level (mg/kg for soil and sediment or µg/L for water) for carcinogenic chemical "i".

Non-carcinogenic hazards were estimated using the following equation.

$$HI = \sum (THQ) \frac{(EPC_i)}{SL_{nc-i}}$$

where:

HI = Cumulative hazard index for non-carcinogenic COPCs one through "i" (unitless), where $(THQ)\frac{(EPC_i)}{SL_{nc-i}}$ is the chemical-specific non-carcinogenic hazard quotient (HQ) for chemical "i";

THQ = Target hazard quotient of one (unitless);

EPC_i = Exposure point concentration for chemical "i" (mg/kg for soil and sediment or µg/L for water);

SL_{nc-i} = Medium-specific human health screening level (mg/kg for soil and sediment or µg/L for water) for non-carcinogenic chemical "i".

6.4.3 Screening Criteria

6.4.3.1 Soil Screening Criteria

The soil results were evaluated using USEPA Industrial Soil RSLs for outdoor workers, site-specific screening levels for utility workers, and site-specific screening values for recreational users. The USEPA RSLs are based on combined exposure (i.e., incidental ingestion of soil, dermal contact and inhalation of particulates and volatiles). The utility worker and recreational user screening levels were calculated using the USEPA RSL calculator, based on site-specific exposure parameters (USEPA, 2013b). The equations and inputs used in the calculator are provided in **Appendix B**. The calculated utility worker and recreational user screening levels are based on combined exposure (i.e., incidental ingestion, dermal contact, and inhalation of particulates and volatiles). The exposure parameters for utility workers assumed exposure of 30 days per year, over the course of one year. The utility worker is assumed to be an adult. The exposure parameters for recreational users assumed exposure of one time per week. Thus, there are 50 exposure events per year for 24 years. Further, the recreational user is expected to be onsite partially as an adolescent (age 6 to 16 years) and partially as an adult (age 17 to 30). The exposure parameters used in the utility worker and recreational user screening levels calculations are shown in **Appendix B**. The outdoor worker screening levels are provided in the USEPA Industrial RSL tables, but for comparison, the exposure parameters for the outdoor worker are also shown in **Appendix B**. The USEPA RSL table indicates whether a chemical is carcinogenic, non-carcinogenic, or both. If a chemical is considered both carcinogenic and non-carcinogenic, it will be included in the cumulative cancer risk calculation and the cumulative hazard quotient calculation.

6.4.3.2 Groundwater Screening Levels

The site-specific screening levels calculated in support of this project used exposure parameters for utility workers which assumed exposure of 30 days within one year. The utility worker is assumed to be an adult. The exposure parameters and equations used in the utility

worker screening level calculations are shown in **Appendix B**. The USEPA RSL table indicates whether a chemical is carcinogenic, non-carcinogenic, or both. If a chemical is considered both carcinogenic and non-carcinogenic, it will be included in the cumulative cancer risk calculation as well as the cumulative hazard quotient calculation.

6.4.3.3 Sediment Screening Levels

The sediment results were evaluated using USEPA RSLs for industrial soil for outdoor workers and site-specific screening levels for recreational users. The USEPA RSLs are based on combined exposure (i.e., incidental ingestion of soil, dermal contact and inhalation of particulates and volatiles). The recreational user screening levels were calculated using the USEPA RSL calculator, based on site-specific exposure parameters (USEPA, 2013b) (**Appendix B**). The exposure parameters for recreational users assumed exposure for 2 hours per day, one day per week, for 50 weeks of the year, for 24 years. Therefore, there are 50 exposure events per year. Further, the recreational user is expected to be onsite partially as an adolescent (age 6 to 16 years) and partially as an adult (age 17 to 30). The exposure parameters used in recreational user screening level calculations are shown in **Appendix B**. The USEPA RSL table indicates whether a chemical is carcinogenic, non-carcinogenic, or both. If a chemical is considered both carcinogenic and non-carcinogenic, it will be included in the cumulative cancer risk calculation and the cumulative hazard quotient calculation.

6.5 RISK ASSESSMENT RESULTS AND UNCERTAINTIES

The primary objective of this HHRA was to quantitatively characterize the human health risk associated with current and reasonably expected future exposure to contaminated media at FTMM-18. As discussed in Section 6.3, potentially complete exposure pathways for the site were evaluated. The exposure pathways were outlined in Section 6.3 and were also shown on the CSM (**Figure 6.2**). The results of the risk ratio quantification are presented in this section.

6.5.1 Estimated Risks for Soil

The risk ratio calculations for potential exposure to soil by a current and future outdoor worker are shown in **Table 6.1**, by a future utility worker are shown in **Table 6.2**, and by a future recreational user are shown in **Table 6.3**.

No unacceptable hazards are calculated for the non-carcinogenic COPCs in soil at FTMM-18. The cumulative hazard for outdoor workers is 0.1 (**Table 6.1**), the cumulative hazard for utility workers is 0.04 (**Table 6.2**), and the cumulative hazard for future recreational users is 0.02 (**Table 6.3**). The cumulative hazards are less than 1, indicating that an unacceptable non-carcinogenic risk to outdoor workers, utility workers, utility workers, or recreational users exposed to soil is unlikely.

The cumulative carcinogenic risk ratio for outdoor workers is 2×10^{-5} (**Table 6.1**) which is within the USEPA acceptable range of carcinogenic risk of 1×10^{-4} to 1×10^{-6}. The cumulative carcinogenic risk ratio for future utility workers is 3×10^{-7}(**Table 6.2**), which is less than the USEPA acceptable range of carcinogenic risk of 1×10^{-4} to 1×10^{-6}. The cumulative carcinogenic risk ratio for future recreational users is 7×10^{-6} which is within the USEPA acceptable range of carcinogenic risk of 1×10^{-4} to 1×10^{-6} (**Table 6.3**). Therefore, unacceptable carcinogenic risk associated with exposure to soil for outdoor workers, utility workers, and recreational users is unlikely.

6.5.2 Estimated Risks for Groundwater

The calculated risk ratios for exposure of a utility worker to COPCs detected in groundwater from any well on site are shown in **Table 6.4**.

No unacceptable hazards are calculated for the non-carcinogenic COPCs analyzed in groundwater at FTMM-18. The cumulative hazard for utility workers is 0.09 (**Table 6.4**). Cumulative hazards for potential future receptors are less than 1, indicating that unacceptable non-carcinogenic hazards associated with exposure to groundwater for future utility workers are unlikely.

The cumulative carcinogenic risk ratio for utility workers is 2×10^{-7}(**Table 6.4**), which is less than the USEPA acceptable range of carcinogenic risk of 1×10^{-4} to 1×10^{-6}. Therefore, unacceptable carcinogenic risk associated with exposure to groundwater for future utility workers is unlikely.

6.5.3 Estimated Risks for Sediment

The risk ratio calculations for potential exposure to sediment by a current and future outdoor worker are shown in **Table 6.5** and by a future recreational user are shown in **Table 6.6**.

No unacceptable hazards are calculated for the non-carcinogenic COPCs analyzed in sediment at FTMM-18. The cumulative hazard for outdoor workers is 0.01 (**Table 6.5**) and the cumulative hazard future recreational users is 0.002 (**Table 6.6**). Cumulative hazards for all potential current and future receptors are less than 1, indicating that unacceptable non-carcinogenic hazards associated with exposure to sediment for current and future outdoor workers or future recreational users are unlikely.

The cumulative carcinogenic risk ratio for outdoor workers is 2×10^{-7}(**Table 6.5**), which is less than the USEPA acceptable range of carcinogenic risk of 1×10^{-4} to 1×10^{-6}. The cumulative carcinogenic risk ratio for future recreational users is 3×10^{-8}, which is less than the USEPA acceptable range of carcinogenic risk of 1×10^{-4} to 1×10^{-6} (**Table 6.6**). Therefore, unacceptable carcinogenic risk associated with exposure to soil for current and future outdoor workers and future recreational users is unlikely.

6.5.4 Risk Assessment Uncertainties

All risk assessments involve use of assumptions, professional judgments, and imperfect data to varying degrees, which result in uncertainly in the final estimates of risk. Risk assessment in general is often based on conservative assumptions and scenarios. Uncertainty can be introduced into a risk assessment at every step of the process outlined in this document. Uncertainties are present in a risk assessment because it requires integration of the following:

- Release of constituents into the environment, and the areal and vertical distribution of these materials in soil, sediment, and groundwater;
- Fate and transport of constituents in a variety of different and variable environments by processes that are often poorly understood or too complex to quantify accurately;
- Potential for adverse health effects in humans based on extrapolations from animal studies; and

- Probability of adverse effects in a human population that is highly variable with respect to genetics, age, activity level, and lifestyle.

This section qualitatively describes the inherent and site-specific uncertainties of the assessments process.

6.5.4.1 Uncertainty in Data Collection and Evaluation

The analysis of uncertainties focuses on determining whether the available data are representative of contaminant concentrations and site conditions, and whether features of sampling, analyses, or statistical treatment of the data result in an over- or underestimation of potential risk.

Constituents detected in soil, sediment, or groundwater at the site and included in the risk assessment were retained regardless of how frequently they had been detected. The maximum detected concentration was used as the EPC for all media. The use of the maximum detected concentration introduces uncertainty into the risk assessment, since the use of one analytical result likely does not accurately represent the concentration of the constituent in the volume of soil that is being evaluated. In cases where the analyte is infrequently detected, the use of the maximum concentration will likely overestimate the actual EPC, resulting in an overestimate of the risk. In cases with few total samples, the use of the maximum detected concentration can either over- or underestimate the EPC depending on the distribution of the actual concentrations in the medium of concern.

Detected analytes that do not have screening values are not identified as COPCs. If these analytes are present in environmental media, not including them in the risk assessment may underestimate the risk for exposure to that medium.

Chemicals that were never detected in any samples were eliminated from the HHRA. It is possible that some chemicals may have been present in samples below the sample quantitation limit and not retained in the risk assessment. However, because samples were collected from areas where concentrations were expected to be high and because maximum detected concentrations were used in the HHRA comparisons, it is very unlikely that chemicals were present at health-significant levels and not detected in at least one sample.

6.5.4.2 Uncertainty in Exposure Assessment

The risk assessment estimates are conditional on actual and potential exposure pathways identified at the site. If exposure does not occur, no risks are present. Furthermore, the risk assessment process does not factor in the probability of exposure occurring. For example, there may not be a reason for an outdoor worker to be present on site 225 days per year. The actual exposure for the potential landscaper/groundskeeper is likely to be less often than 225 days per year. Current land uses and characterization of the site's current physical setting provided the basis for predicting future land use at and in the vicinity of the site. Steady-state conditions were assumed for evaluation of potential future exposures. The assumption of steady-state conditions may tend to overestimate long-term exposure and health risk because contaminant concentrations may decline over time due to natural dissipation processes. In some cases, depending on the contaminant and / or the release mechanisms involved, steady-state assumptions could potentially underestimate risk (e.g., a continuous source contributing to contamination in another medium).

There is also some concern as to how well an exposure scenario approximates the actual conditions that a receptor may be exposed to at a given site. Potential human exposures could deviate from those used in the risk assessment through differences in exposure frequency, contact rates, exposure durations, body weight, and life span. Each of these factors has a degree of uncertainty associated with it that could over- or underestimate risk.

Evaluation of risk for recreational user exposure to soil includes calculation of the risk to adolescents. Other sensitive subpopulations such as children, elderly people, pregnant or nursing women, and people with chronic illnesses were not specifically evaluated in this risk assessment. These subpopulations may be more sensitive to certain chemical exposures. However, USEPA generally considers sensitive subpopulations when developing toxicity factors. Additionally, there are no daycare or school facilities, healthcare facilities onsite, nursing homes, retirement communities, or residential areas with children or adolescents onsite currently.

The USEPA RSLs for soil, or the site-specific calculated soil screening values, were used to evaluate risk due to exposure to sediment. The soil screening values have more conservative exposure assumptions than would be consistent with exposure to sediment. For example, the outdoor worker exposure frequency is 225 days per year. However, it is expected that receptors would be exposed to sediment 50 or fewer days per year. Thus, the use of soil screening values to evaluate sediment will overestimate the risk for exposure to sediment.

Exposure to groundwater was evaluated for utility workers that may encounter shallow groundwater at the site during trenching activities. The calculated screening levels for exposure to groundwater assume that the utility worker has contact with groundwater 30 days within one year. If groundwater is encountered, it is likely that workers will utilize safe working practices that may include dewatering trenches prior to activities within trenches. Risk estimates for groundwater are likely overestimated.

6.5.4.3 Uncertainty in Toxicity Assessment

Some uncertainty is also inherent in the toxicity values used in the risk assessment. Carcinogenic slope factors and route-specific values were derived only for compounds that have been shown to cause an increased incidence of tumors in either human or animal studies. This dose-response curve is then assumed to be linear at low doses (e.g., those found in situations of environmental contamination) and is used to predict tumor incidence at low exposure levels. When an animal study is used, the final slope factor is adjusted to account for extrapolation of animal data to humans. If the studies used to derive the slope factor were conducted for less than the life span of the test organism, the final slope factor had also been adjusted to reflect risk associated with lifetime exposure. The chronic reference dose (RfD) for a compound is based on studies where either human or animal populations were exposed to a given compound by a given route of exposure for a major portion of the life span (as a USEPA guideline, seven years to a lifetime; USEPA, 1989). RfDs are derived by determining dose-specific effect levels from available quantitative studies and applying uncertainty factors to the most appropriate effect level to determine a RfD for humans. The slope factors and RfD are used to calculate the USEPA RSLs and the calculated site-specific screening levels. Because the screening levels are based on conservative assumptions, their use tends to overestimate risk.

6.5.4.4 Uncertainty in Estimating Chemical Risk

The expression of the potential risk associated with contaminants detected at the site is a result of the combined steps of data evaluation, exposure assessment, and toxicity assessment. This combination can magnify the uncertainties present in these steps of the HHRA process.

Screening criteria are developed using very conservative (health-protective) exposure and intake assumptions. The HHRA comparisons also use conservative concentrations of the chemicals detected at the site. In addition, screening criteria used in the HHRA are considered health-protective for carcinogenic and non-carcinogenic chemical mixtures. Carcinogenic chemicals correspond to the conservative 1×10^{-6} (one in a million) excess cancer risk level, providing a very protective screening value. Non-carcinogens use a target HQ of 1 and also account for the cumulative non-cancer risk for chemicals with the same toxic endpoint or mechanism of action.

6.5.5 Conclusions

The HHRA was conducted to evaluate the potential for human health impacts as a result of potential exposures to chemicals in soil, groundwater, and sediment at FTMM-18.

The cumulative carcinogenic risks and non-carcinogenic hazards estimated for current and future outdoor worker, future utility workers, and future recreational user exposure to soil, future utility worker exposure to groundwater, and current and future outdoor worker and future recreational user exposure to sediment are as follows:

- Current / future outdoor worker exposed to surface soil: The cumulative carcinogenic risk of 2×10^{-5} is within the cumulative risk goal of 1×10^{-4} to 1×10^{-6}. The cumulative non-carcinogenic hazard of 0.1 does not exceed the cumulative hazard goal of 1;
- Future utility worker exposed to surface soil: The cumulative carcinogenic risk of 3×10^{-7} is below the cumulative risk goal of 1×10^{-4} to 10^{-6}. The cumulative non-carcinogenic hazard is 0.04, which is less than the cumulative hazard goal of 1;
- Future recreational user exposed to surface soil: The cumulative carcinogenic risk of 7×10^{-6} is within the cumulative risk goal of 1×10^{-4} to 1×10^{-6}. The cumulative non-carcinogenic hazard is 0.02, which is less than the cumulative hazard goal of 1;
- Future utility worker exposure to groundwater: The cumulative carcinogenic risk for all wells is 2×10^{-7}, less than the cumulative risk goal of 1×10^{-4} to 1×10^{-6}. The cumulative non-carcinogenic hazard for all wells is 0.09, which is less than the cumulative hazard goal of 1;
- Current / future outdoor worker exposure to sediment. The cumulative carcinogenic risk of 2×10^{-7} is below the cumulative risk goal of 1×10^{-4} to 1×10^{-6}. The cumulative non-carcinogenic hazard of 0.01 does not exceed the cumulative hazard goal of 1; and
- Future recreational user exposure to sediment. The cumulative carcinogenic risk of 3×10^{-8} is below the cumulative risk goal of 1×10^{-4} to 1×10^{-6}. The cumulative non-carcinogenic hazard of 0.002 does not exceed the cumulative hazard goal of 1.

SECTION 7
REMEDIAL INVESTIGATION SUMMARY

7.1 NATURE AND EXTENT OF CONTAMINATION

The nature and extent of targeted constituents exceeding NJDEP and/or USEPA comparison criteria in sampled media at FTMM-18 are summarized below.

7.1.1 Soil

Soil samples were collected at FTMM-18 during RI sampling activities in 1999. Concentrations of the following constituents exceeded the current NJDEP RDCSRS and/or USEPA Residential Soil RSL in at least one soil sample:

- The SVOCs (classified as PAHs) benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene; and
- The metals aluminum, arsenic, cadmium, cobalt, iron, and vanadium

Concentrations of the following constituents exceeded the current NJDEP NRDCSRS and/or USEPA Industrial Soil RSL in at least one soil sample:

- The SVOCs (classified as PAHs) benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, and dibenz(a,h)anthracene; and,
- The metal arsenic.

Concentrations of the following constituents exceeded the current NJDEP IGW SL and/or USEPA Groundwater Protection RSL in at least one soil sample:

- The VOC methylene chloride;
- The SVOCs naphthalene, 2-methylnapthalene, acenaphthene, dibenzofuran, fluorene, di-n-butylphthalate, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno (1,2,3-cd)pyrene, and dibenz(a,h)anthracene;
- The pesticides alpha chlordane, gamma chlordane, heptachlor, 4,4'-DDE, 4,4'-DDD, 4,4'-DDT, dieldrin, and endrin aldehyde; and
- The metals aluminum, antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, vanadium, and zinc.

Except for methylene chloride which was detected at a depth of 24 inches bgs, these exceedances occurred in samples collected at depths of 6 to 12 inches bgs.

The maximum-detected concentrations of all but three of the metals targeted for analysis in soil samples exceed the maximum background concentrations for the MP presented in Weston (1995). Maximum-detected concentrations of manganese and chromium were less than the maximum background concentrations of these metals, and thallium was not detected in any sample. Based on decision logic described in Section 4, COPCs in soil that were evaluated in the risk assessment include the PAHs benzo(a)anthracene, benzo(b)fluoranthene,

benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene and the metals aluminum, arsenic, cadmium, cobalt, and vanadium.

7.1.2 Groundwater

Previous reports identified benzene as the primary constituent of concern in FTMM-18 groundwater. During the most recent 10 sampling events at FTMM-18, including the eight quarterly events (2009-2011) and two additional events performed in August 2013 and December 2014, concentrations of the following constituents exceeded the current NJDEP GWQS and/or USEPA Tapwater RSL in at least one sample:

- The VOCs benzene, carbon tetrachloride, ethylbenzene, 1,2-DCA, naphthalene, TCE, and total TICs; and
- The metals aluminum, antimony, arsenic, barium, beryllium, cadmium, cobalt, iron, lead, manganese, mercury, nickel, selenium, silver, sodium, vanadium, and zinc.

Based on COPC identification decision logic described in Section 4, COPCs in groundwater that were evaluated in the risk assessment include the VOCs benzene and naphthalene and the metal manganese.

7.1.3 Surface Water

The RIRA (U.S. Army, 2012) identified one VOC (PCE) and five metals (antimony, arsenic, lead, mercury, and thallium) as being detected at concentrations greater than NJDEP SWQS in surface water samples associated with FTMM-18. However, PCE was attributed to upstream sources, and metals were considered to be representative of natural background conditions with some potential high bias due to sample turbidity.

During the most recent eight quarters of surface water sampling, no VOCs were detected adjacent to the site at concentrations exceeding USEPA Human Health criteria. PCE concentrations that exceeded the NJDEP SWQS were detected upstream of the site. During the same period arsenic, lead, mercury, and thallium were detected at concentrations that exceeded their respective NJDEP SWQS and/or USEPA Human Health criterion. However, metal concentrations detected at upstream locations are similar to those detected adjacent to FTMM-18. The surface water data indicate that FTMM-18 is not significantly impacting VOC or metal concentrations in the reach of Parkers Creek that borders the site, and VOCs and metals are not evaluated as COPCs in the risk assessment.

7.1.4 Sediment

Sediment sampling was conducted in April 2000 in Parkers Creek to evaluate PCB-related impacts to stream sediments associated with FTMM-18. One PCB (Aroclor 1254) was detected in two of eight samples collected, with one sample having a concentration that is slightly greater than the NJDEP RDCSRS for total PCBs and the USEPA residential RSL for Aroclor 1254. This detection cannot be definitively attributed to upstream sources, and therefore is potentially site-related. Aroclor 1254 was therefore identified as a COPC in sediment for further evaluation in the risk assessment.

Additional sediment samples were collected from Parkers Creek adjacent to FTMM-18 during the 2010 BEE and analyzed for VOCs, SVOCs, PCBs, pesticides, and metals. The BEE concluded that constituents in sediment at FTMM-18 were unlikely to have a deleterious effect

on sensitive ecological receptors or habitats, and additional ecological assessments were not warranted or recommended.

7.2 CONTAMINANT FATE AND TRANSPORT

Detected constituents of primary interest in terms of contaminant fate and transport at FTMM-18 include SVOCs and metals in near-surface soil, benzene and manganese in groundwater, and PCBs in Parkers Creek sediment. The migration routes of interest are dissolution of soluble residual contamination in near-surface soil into infiltrating precipitation that percolates through the vadose zone to the water table, lateral migration of contaminants dissolved in groundwater toward Parkers Creek, desorption of PCBs from sediment particles and subsequent transport in surface water, and entrainment/transport of sediment particles in surface water.

SVOCs and metals in near-surface soil at FTMM-18 and PCBs in sediment adjacent to FTMM-18 are expected to be persistent and relatively immobile. This observation is supported by the fact that there were no exceedances of NJDEP or USEPA comparison criteria for long-chained PAHs in groundwater, and most metal concentrations in groundwater are representative of natural background conditions. Manganese is a notable exception; as the mass of bioavailable organic carbon (e.g., fuel hydrocarbons, landfilled organic material) in the reaction zone becomes depleted, the groundwater system will likely become more oxidizing, and concentrations of manganese in groundwater should decrease.

Benzene is readily degradable in groundwater. A previous modeling study indicated that some migration of benzene at FTMM-18 to nearby Parkers Creek may occur within the time period that it was predicted to degrade to concentrations compliant with the NJDEP GWQS. However, the likelihood of significant migration was judged to be minimal. This conclusion is supported by the fact that benzene was not detected in surface water samples collected in Parkers Creek adjacent to FTMM-18. It is further supported by the most recent sampling events for downgradient wells 296MW03 and 296MW04, where benzene was not detected in groundwater.

As the mass of bioavailable organic carbon (e.g., fuel hydrocarbons) at FTMM-18 becomes depleted, the groundwater system will likely become more oxidizing, and concentrations of manganese dissolved in groundwater should decrease.

7.3 BASELINE RISK ASSESSMENT

An evaluation of the potential risk resulting from human exposure to soil, surface water, sediment, and groundwater was conducted as part of this RI. No COPCs were identified in surface water. Therefore, further evaluation of surface water in the baseline risk assessment was not conducted and no unacceptable risks are expected from human exposure to surface water. The human health risk assessment utilized a conservative approach that assumed exposure to the maximum detected concentration of analytes in soil, groundwater, and sediment.

For outdoor workers exposed to soil at FTMM-18, the cumulative carcinogenic risk of 2×10^{-5} is within the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for soil. The cumulative non-carcinogenic hazard is 0.1, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to outdoor workers are expected from exposure to soil at FTMM-18.

For utility workers exposed to surface soil at FTMM-18, the cumulative carcinogenic risk of 3×10^{-7} is less than the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for soil. The cumulative non-carcinogenic hazard is 0.04, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to utility workers are expected from exposure to soil at FTMM-18.

For recreational users exposed to surface soil at FTMM-18, the cumulative carcinogenic risk of 7×10^{-6} is within the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for soil. The cumulative non-carcinogenic hazard is 0.02, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to recreational users are expected from exposure to soil at FTMM-18.

For utility workers exposed to groundwater, the cumulative carcinogenic risks for all wells of 2×10^{-7} is less than the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for groundwater. The cumulative non-carcinogenic hazard for all wells is 0.09, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to utility workers are expected from exposure to groundwater at FTMM-18.

For outdoor workers exposed to sediment, the cumulative carcinogenic risk of 2×10^{-7} is below the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for sediment. The cumulative non-carcinogenic hazard is 0.01, which is less than the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to outdoor workers are expected from exposure to sediment at FTMM-18.

For recreational users exposed to sediment, the cumulative carcinogenic risk of 3×10^{-8} is below the cumulative risk goal of 1×10^{-4} to 1×10^{-6} for sediment. The cumulative non-carcinogenic hazard of 0.002 does not exceed the cumulative hazard goal of 1. Therefore, no potential non-carcinogenic or carcinogenic effects to recreational users are expected from exposure to sediment at FTMM-18.

SECTION 8
CONCLUSION

The RI concluded that risks to human health and the environment from soil are within acceptable ranges for current and future intended land use. A FS will not be performed because the RI concluded that NFA is required at FTMM-18 under CERCLA.

To address safety concerns, a vegetated soil cover will be placed over the landfill area after the landfill is regraded to provide safety protection for future non-residential use**.** The soil cap will be placed consistent with the NJDEP Solid Waste regulations (N.J.A.C. 7:26-2A). Additional clean soil will be added to the existing soil cover to provide a minimum of two feet of soil between the ground surface and landfilled debris. The use of a vegetated native soil cover will offer safety protection to non-residents from future exposure to solid waste at the landfill and will control surface water runoff and erosion.

Institutional Controls (ICs) to maintain the soil cover and prevent residential land use will also be implemented at FTMM-18. The Army will prepare a Land Use Control (LUC) Implementation Plan during the remedy design phase to document the location of the engineering control and identify the procedural responsibilities including landfill cover inspections, monitoring and reporting, and long-term management requirements, etc. In addition, as part of LUC implementation, and prior to designing and placing the vegetated soil cover, refinement of the landfill boundary will be performed to investigate the data gaps identified in Section 1.3.2. The landfill boundary refinement investigation is ongoing; field work was performed in September 2015 and will be documented in a future report.

The Army will be responsible for documenting and implementing the ICs through the filing of a deed notice, and will also be responsible to conduct biennial reviews to ensure that the ICs remain protective of human health and the environment. However, the Army will not be responsible for obtaining a remedial action permit under New Jersey TRSR. When the property is transferred to private ownership, the ICs will be incorporated into the title and the new owner will be responsible for complying with the ICs. Although the Army may later transfer its procedural responsibilities to another party by contract, property transfer agreement, or through other means, the Army shall retain ultimate responsibility for remedial integrity.

In addition, a CEA will be established pursuant to NJDEP's TRSR (N.J.A.C. 7:26E) and Administrative Requirements for the Remediation of Contaminated Sites (N.J.A.C. 7:26C). The CEA is a groundwater use restriction to protect a hypothetical residential user from potential risk associated with groundwater as a potable water source. The CEA will remain in place until NJDEP GWQS are achieved at the Site.

The estimated total present value (TPV) of the soil cover and ICs is approximately $1,258,000. Costs associated with ICs is $376,000, and include preparation of a LUC Implementation Plan (including the CEA), refinement of landfill boundaries, long term monitoring of the groundwater as part of the CEA, and IC inspection and reporting for a 30-year duration. Costs associated with the vegetative cover is $882,000, and include advancement of two geotechnical borings, placement of 18 inches of a soil cover, followed by six inches of a vegetative cover, grading for runoff, and seeding. The cost estimate is provided in **Appendix C**.

SECTION 9
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TABLE 1.1
CHRONOLOGY OF EVENTS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

1918 – Fort Monmouth (FTMM) was established.
1919 – Area now referred to as FTMM-18 started to be used as a training area for U.S. Army Signal School.
1980 – Installation Assessment of Fort Monmouth. Report 71. U.S. Army Toxic and Hazardous Materials Agency (USATHAMA, 1980). Conducted a records search to assess the environmental quality of FTMM.
1980 – William F. Cosulich performed a landfill study which identified major areas on the base where landfill activities occurred. FTMM-18 was not part of the study, but the area to the west of the landfill was included. Surface water samples were collected from Parkers Creek, Lafetra Creek, and Mill Creek (USATHAMA, 1988).
1984 – A water quality engineering study was performed to determine if landfill leachate was forming and entering streams. Surface water samples were collected in Parkers Creek adjacent to FTMM-18 (USATHAMA 1988).
1988 – Update of the Initial Installation Assessment of Fort Monmouth and Subinstallations: Charles Wood Area and Evans Area. A survey was conducted to determine if any environmental/hazardous waste disposal conditions had changed since the Installation Assessment conducted in 1980 (USATHAMA, 1988).
1993 – An investigation of suspected hazardous waste sites at FTMM was conducted. FTMM-18 was identified, and quarterly surface water sampling results were summarized (Weston, 1993).
1994 – Six monitoring wells were installed in July and August. All monitoring wells were installed within or just south of the boundary of FTMM-18 during underground storage tank (UST) closure activities performed at Buildings 290 and 296.
1995 – Weston (1995) performed additional site investigation (SI) activities which included advancement of nine soil borings and collection of soil samples and the installation and sampling of two monitoring wells in 1995.
1996 – Initiation of surface water sampling to evaluate the surface water quality in Parkers Creek. Initially, samples were collected from four locations along Parkers Creek, Lafetra Creek, and Mill Creek. The program was expanded when an additional two locations were added. Results are presented in Versar (2003). Monitoring continued until March 2001.
1997 – Initiation of quarterly groundwater sampling program. Initially, samples were collected from four wells, and the program was later expanded when additional wells were installed. Results are presented in Versar (2003). Monitoring continued until February 2001.
1998 – Groundwater and surface water sampling conducted. Results are presented in Versar (2003).
1999 – Groundwater, surface water, and near-surface soil sampling conducted. Groundwater and surface water results are presented in Versar (2003). Soil results are presented in Versar (2004a).
2000 – Groundwater, surface water, and sediment sampling conducted. Groundwater and surface water results are presented in Versar (2003). Sediment results are presented in Versar (2004b).
2001 – Groundwater and surface water sampling conducted. Results are presented in Versar (2003) and U.S. Army (2012).
2002 – Groundwater and surface water sampling conducted. Results are presented in U.S. Army (2012).
2003 – Groundwater and surface water sampling conducted. Results are presented in U.S. Army (2012).
2003 – A Remedial Investigation (RI) Report was completed (Versar, 2003)
2004 – A RI Report for Near-Surface Soils was completed to demonstrate the compliance equivalence of the existing soil cover over the FTMM-18 landfill (Versar, 2004a).
2004 – A RI Report and Sediment Quality Evaluation was completed to determine potential PCB-related impacts to sediments in Parkers Creek (Versar, 2004b).

2004 – A groundwater Classification Exception Area (CEA) Information report for benzene, arsenic, cadmium, chromium, and lead in groundwater at FTMM-18 was finalized (Versar, 2004).
2004 – Groundwater and surface water sampling conducted. Results are presented in U.S. Army (2012).
2005 – FTMM (MP and Charles Wood Area [CWA]) was selected for closure by the Base Realignment and Closure (BRAC) Commission.
2005 – Groundwater and surface water sampling conducted. Results are presented in U.S. Army (2012).
2006 – Groundwater and surface water sampling conducted. Results are presented in U.S. Army (2012).
2007 – Groundwater and surface water sampling conducted. Results are presented in U.S. Army (2012).
2008 – Groundwater and surface water sampling conducted. Results are presented in U.S. Army (2012).
2009 – Groundwater and surface water sampling conducted. Results are presented in U.S. Army (2012).
2009 – Landfill boundary delineation study performed using test pits and soil borings (NJDEP 2007)
2010 – Groundwater and surface water sampling conducted. Results are presented in U.S. Army (2012).
2010 – Between June-October 2010, Shaw Environmental, Inc. conducted a Baseline Ecological Evaluation (BEE).
2011 – The base was officially closed on September 15.
2011 – A groundwater CEA Information report for benzene, lead, and tentatively identified compounds in groundwater at FTMM-18 was completed (Brinkerhoff, 2011a).
2012 April – RI Report Addendum presents results of 38 quarterly rounds of groundwater sampling conducted from April 2001 through September 2010, and 38 quarterly rounds of surface water sampling conducted from May 2001 through September 2010 (U.S. Army, 2012).
2012 August – In an August 27th letter, the NJDEP approved "no additional ecological evaluation or assessment for the Main Post and Charles Wood Area."
2013 – Groundwater sampling was conducted at 21 FTMM sites, including FTMM-18, in August 2013 to re-establish baseline groundwater conditions following temporary suspension of groundwater sampling in late 2011 (Parsons, 2013).
2015 – In a February 5th letter, the NJDEP approved the recommendations of the 2013 Baseline Sampling Report for FTMM-18 to continue annual monitoring for VOCs for select wells and discontinue TAL metal sampling.

TABLE 2.1
WELL CONSTRUCTION SUMMARY
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Site	Well Permit #	Y Coord. (Northing)	X Coord. (Easting)	Installation Date	Depth (ft bgs)	Casing Length (ft)	Screen Length (ft)	Top of Casing (ft amsl)	Slot Size (inches)
290MW02 (1)	29-33761	540324.589	618571.184	8/16/1994	11.50	1.50	10.00	**7.92**	0.02
296MW03	29-30975	540535.822	618291.322	7/14/1994	12.50	2.00	10.50	7.92	0.02
296MW04	29-33989	540596.930	618368.467	9/12/1995	10.00	0.50	9.50	4.18	0.02
296MW06	29-30978	540526.258	618399.811	7/14/1994	12.50	2.00	10.50	7.97	0.02
296MW07	29-30973	540363.845	618299.947	7/12/1994	12.50	2.00	10.50	7.37	0.02
296MW08	29-30974	540344.638	518501.435	7/12/1994	12.50	2.00	10.50	7.61	0.02
M18MW22	E201011280	540589.800	618872.200	10/14/2010	20.00	5.00	15.00	12.54	0.01
M18MW23	E201010529	540624.200	619169.500	10/14/2010	20.00	5.00	15.00	12.58	0.01
M18MW24	29-32565	540648.276	618515.373	1/13/1995	14.50	4.50	10.00	7.04	0.01
M18MW25	29-32566	540648.911	618639.300	1/13/1995	14.50	4.50	10.00	7.06	0.01

Notes:
ft = feet
bgs = below ground surface
amsl = above mean sea level
Bolded top of casing elevations represent a mathematical adjustment between earlier North American Datum (NAD) systems and the NAD 88 Spatial System. The adjusted monitoring wells will be resurveyed. The wells were reducted 1.09 feet to reflect the changes in the NAD systems.
(1) Well was damaged and subsequently abandoned in 2006.

TABLE 2.2
GROUNDWATER SAMPLING SUMMARY
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

	Well ID									
Date	**290MW02**	**0296MW03**	**0296MW04**	**0296MW06**	**0296MW07**	**0296MW08**	**M18MW22**	**M18MW23**	**M18MW24**	**M18MW25**
6/13/1997	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
8/19/1997	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
11/12/1997	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
2/23/1998	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
5/18/1998	--	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	--	--
6/2/1998	V, S, P, M	--	--	--	--	--	--	--	V,S,P,M	V,S,P,M
8/4/1998	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
10/29/1998	--	--	--	--	--	--	--	--	V,S,P,M	V,S,P,M
11/24/1998	V, S, P, M	--	--	--	--	--	--	--	--	--
12/2/1998	--	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	--	--
1/29/1999	--	--	--	--	--	--	--	--	V,S,P,M	V,S,P,M
2/19/1999	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	--	--
06/14/99	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
1/29/1999	--	--	--	--	--	--	--	--	V,S,P,M	V,S,P,M
9/20/1999	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
12/27/1999	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
3/23/2000	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
6/28/2000	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
8/11/2000	V, S, P, M	M	M	M	M	M	--	--	V,S,P,M	V,S,P,M
8/11/2000	--	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	M	M
9/15/2000	V, S, P, M	M	M	M	M	M	--	--	M	M
10/17/2000	V, S, P, M	--	--	--	--	--	--	--	V,S,P,M	V,S,P,M
11/13/2000	--	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	--	--
1/5/2001	V, S, P, M	--	--	--	--	--	--	--	V,S,P,M	V,S,P,M
2/22/2001	--	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	--	--
4/4/2001	V, S, P, M	--	--	--	--	--	--	--	V,S,P,M	V,S,P,M
5/29/2001	--	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	--	--
8/2/2001	V, S, P, M	--	--	--	--	--	--	--	V,S,P,M	V,S,P,M
8/23/2001	--	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	--	--
12/11/2001	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
3/8/2002	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
5/16/2002	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
9/10/2002	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
12/3/2002	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
3/4/2003	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
5/19/2003	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
8/4/2003	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
11/14/2003	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
2/5/2004	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
5/11/2004	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
7/21/2004	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
11/8/2004	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	V, S, P, M	--	--	V,S,P,M	V,S,P,M
2/2/2005	V, M	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
5/3/2005	V, M	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
8/12/2005	V, M	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
11/10/2005	V, M	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
1/19/2006	V, M	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
4/19/2006	V, M	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
8/11/2006	Well damaged	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
12/13/2006	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
3/5/2007	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
6/7/2007	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
9/7/2007	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
11/14/2007	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
3/4/2008	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
5/14/2008	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
8/13/2008	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
10/24/2008	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
3/25/2009	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
6/2/2009	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
9/17/2009	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
11/23/2009	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
2/2/2010	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
5/14/2010	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M
9/14/2010	--	V, M	V, M	V, M	V, M	V, M	--	--	V,M	V,M

TABLE 2.2
GROUNDWATER SAMPLING SUMMARY
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

	Well ID									
Date	**290MW02**	**0296MW03**	**0296MW04**	**0296MW06**	**0296MW07**	**0296MW08**	**M18MW22**	**M18MW23**	**M18MW24**	**M18MW25**
10/29/2010	--	--	--	--	--	--	V,M	V,M	--	--
11/12/2010	--	V, M	V, M	V, M	V, M	V, M	V,M	V,M	V,M	V,M
2/24/2011	--	V, M	V, M	V, M	V, M	V, M	V,M	V,M	V,M	V,M
4/20/2011	--	V, M	V, M	V, M	V, M	V, M	V,M	V,M	V,M	V,M
8/9/2011	--	V, M	V, M	V, M	V, M	V, M	--	--	--	--
8/19/2013	--	V	--	V	V	V	--	--	--	--
8/20/2013	--	--	V	--	--	--	--	--	--	--
8/21/2013	--	--	--	--	--	--	V	--	V	V
12/19/2014	--	--	--	V	--	--	V	V	--	--

V = volatile organic compounds + tentatively-identified compounds (TICs)
S = semivolatile organic compounds + TICs
M = metals
P = pesticides and polychlorinated biphenyls (PCBs),
dash (--) = not sampled
NJDEP approved in the Feb 2015 letter (provided in **Appendix A**) to discontinue long-term monitoring of the groundwater following the 2013 Baseline Sampling Event.

TABLE 2.3
SURFACE WATER SAMPLING SUMMARY
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

	Location				
Date	**SS-14**	**SS-15**	**SS-21**	**SS-27**	**SS-28**
Oct-96	V	V	V	--	--
Nov-96	V	V	V	--	--
Dec-96	V	V	V	--	--
Jan-97	V	V	V	--	--
Feb-97	V	V	V	--	--
Mar-97	V	V	V	--	--
Apr-97	V	V	V	--	--
Jul-97	V	V	V	--	--
Oct-97	V	V	V	--	--
Feb-98	V	V	V	--	--
Apr-98	V	V	V	--	--
Aug-98	V	V	V	--	--
Nov-98	V	V	V	--	--
Feb-99	V	V	V	--	--
Jun-99	V	V	V	--	--
Sep-99	V	V	V	--	--
Dec-99	V	V	V	--	--
Mar-00	V	V	V	--	--
Jun-00	V,P	V,P	V	V,P	V
Aug-00	V,P	V,P	V	V,P	V
Nov-00	V,P	V,P	V	V,P	V
Mar-01	V,P	V,P	V	V,P	V
May-01	V,P	V,P	V	V,P	V
Sep-01	V,P	V,P	V	V,P	V
Nov-01	V,P	V,P	V	V,P	V
Feb-02	V,P	V,P	V	V,P	V
Jun-02	V,P	V,P	V	V,P	V
Sep-02	V,P	V,P	V	V,P	V
Nov-02	V,P	V,P	V	V,P	V
Mar-03	V,P	V,P	V	V,P	V
May-03	V,P	V,P	V	V,P	V
Sep-03	V,P	V,P	V	V,P	V
Nov-03	V,P	V,P	V	V,P	V
Mar-04	V,P	V,P	V	V,P	V
Jun-04	V,P	V,P	V	V,P	V
Aug-04	V,P	V,P	V	V,P	V
Nov-04	V,P,M	V,P,M	V	V,P,M	V
Mar-05	V,P,M	V,P,M	V	V,P,M	V
Jun-05	V,P,M	V,P,M	V	V,P,M	V
Sep-05	V,P,M	V,P,M	V	V,P,M	V
Nov-05	V,P,M	V,P,M	V	V,P,M	V

TABLE 2.3
SURFACE WATER SAMPLING SUMMARY
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

	Location				
Date	**SS-14**	**SS-15**	**SS-21**	**SS-27**	**SS-28**
Feb-06	V,P,M	V,P,M	V	V,P,M	V
May-06	V,P,M	V,P,M	V	V,P,M	V
Sep-06	V,P,M	V,P,M	V	V,P,M	V
Dec-06	V,P,M	V,P,M	V	V,P,M	V
Mar-07	V,P,M	V,P,M	V	V,P,M	V
Jun-07	V,P,M	V,P,M	V	V,P,M	V
Sep-07	V,P,M	V,P,M	V	V,P,M	V
Dec-07	V,P,M	V,P,M	V	V,P,M	V
Mar-08	V,P,M	V,P,M	V	V,P,M	V
Jun-08	V,P,M	V,P,M	V	V,P,M	V
Sep-08	V,P,M	V,P,M	V	V,P,M	V
Dec-08	V,P,M	V,P,M	V	V,P,M	V
Mar-09	V,M	V,M	V	V,M	V
Jun-09	V,M	V,M	V	V,M	V
Sep-09	V,M	V,M	V	V,M	V
Dec-09	V,M	V,M	V	V,M	V
Mar-10	V,M	V,M	V	V,M	V
Jun-10	V,M	V,M	V	V,M	V
Sep-10	V,M	V,M	V	V,M	V

V = volatile organic compounds + tentatively-identified compounds (TICs)
M = metals
P = pesticides and polychlorinated biphenyls (PCBs)
dash (--) = not sampled

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-1		B-2		B-3		B-4		B-5		B-6		B-7		B-8		B-9		B-10		B-11		B-12		B-13		B-14		B-15	
Sample Date					01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99		01/20/99	
Volatile Organic Compounds (µg/kg)																																
Lab Sample ID (VOCs only collected 24 in. bgs)					4199.03		4199.05		4199.07		4199.09		4199.11		4199.13		4199.15		4199.17		4199.19		4199.21		4199.23		4199.25		4199.27		4199.29		4199.31	
Methylene Chloride	34000	97,000	10	--	< 660		< 780		< 580		< 560		< 590		< 750		< 660		< 550		< 590		< 570		< 550		< 610		**470**	J	**460**	J	**500**	J
Toluene	6,300,000	91,000,000	7,000	--	**0.33**	J	< 390		< 290		< 280		< 300		< 370		< 330		< 280		< 290		< 280		< 270		< 310		< 280		< 300		< 310	
TICs	NLE	NLE	NLE	--	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Semi-Volatile Organic Compounds (µg/kg)																																
Lab Sample ID (All analysis except VOCs - collected 0 to 12 in. bgs)					4199.02		4199.04		4199.06		4199.08		4199.10		4199.12		4199.14		4199.16		4199.18		4199.20		4199.22		4199.24		4199.26		4199.28		4199.30	
Naphthalene	6,000	17,000	25,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
2-Methylnaphthalene	2.30E+05	2.40E+06	8,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Acenaphthylene	NLE	3.00E+08	NLE	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Acenaphthene	3.40E+06	3.70E+07	110,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Dibenzofuran	NLE	NLE	NLE	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Diethylphthalate	4.90E+07	5.50E+08	88,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Fluorene	2.30E+06	2.40E+07	170,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Phenanthrene	NLE	3.00E+08	NLE	--	< 1100		< 1200		< 1000		**170**	J	< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Anthracene	1.70E+07	3.00E+07	2,400,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Di-n-butylphthalate	6.10E+06	6.80E+07	760,000	--	**1700**	B	**630**	JB	**480**	JB	**360**	JB	**370**	JB	**370**	JB	**1100**	JB	**960**	JB	**2500**	B	**1300**	B	**1000**	JB	**1100**	JB	**1100**	JB	**1400**	B	**260**	JB
Fluoranthene	2.30E+06	2.40E+07	1,300,000	--	< 1100		< 1200		< 1000		**520**	J	< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Pyrene	1.70E+06	1.80E+07	840,000	--	< 1100		< 1200		< 1000		**280**	J	< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Butylbenzylphthalate	1.20E+06	1.40E+07	230,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Benzo(a)anthracene	600	2,000	800	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Chrysene	62,000	230,000	80,000	--	< 1100		< 1200		< 1000		**120**	J	< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
bis(2-Ethylhexyl)phthalate	35,000	140,000	1,200,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		**110**	J	< 1000		< 1100		< 1100		< 1100		< 1100	
Benzo(b)fluoranthene	600	2,000	2,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Benzo(k)fluoranthene	6,000	23,000	25,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Benzo(a)pyrene	200	200	200	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Indeno(1,2,3-cd)pyrene	600	2000	7,000	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Dibenz(a,h)anthracene	200	200	800	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
Benzo(g,h,i)perylene	3.80E+08	3.00E+07	NLE	--	< 1100		< 1200		< 1000		< 1000		< 1000		< 1100		< 1100		< 1100		< 1100		< 1100		< 1000		< 1100		< 1100		< 1100		< 1100	
TICs	NLE	NLE	NLE	--	**4900**		**3700**		**3670**		**2400**		**2500**		**2000**		**3700**		**3800**		**7390**		**5800**		**1700**		**1800**		**1600**		**9900**		**18300**	
Pesticides/PCBs (mg/kg)																																
Heptachlor	0.1	0.7	0.5	--	< 0.0003		**0.001**		< 0.0003		< 0.0003		**0.002**		< 0.0003		< 0.0003		< 0.0003		< 0.0003		< 0.0003		**0.002**		< 0.0003		< 0.0003		< 0.0003		< 0.0003	
4,4'-DDE	2	9	18	--	**0.066**		**0.001**		< 0.0004		< 0.0004		**0.002**		**0.022**		< 0.0004		< 0.0004		< 0.0004		< 0.0004		**0.001**		< 0.0005		< 0.0004		**0.002**		< 0.0005	
Dieldrin	0.04	0.2	0.003	--	**0.002**		< 0.0006		< 0.0005		< 0.0005		< 0.0005		< 0.0006		< 0.0006		< 0.0005		< 0.0005		< 0.0005		< 0.0005		< 0.0006		< 0.0005		< 0.0006		< 0.0006	
Endosulfan II	470	6,800	4	--	< 0.0004		< 0.0005		< 0.0004		< 0.0004		< 0.0004		< 0.0004		< 0.0004		< 0.0004		< 0.0004		< 0.0004		< 0.0004		< 0.0005		< 0.0004		< 0.0004		< 0.0005	
4,4'-DDD	3	13	4	--	**0.011**		< 0.0007		< 0.0006		< 0.0006		< 0.0006		< 0.0007		< 0.0007		< 0.0006		< 0.0006		< 0.0006		< 0.0007		< 0.0007		< 0.0007		< 0.0007		< 0.0007	
Endrin Aldehyde	NLE	NLE	1	--	< 0.0005		< 0.0006		< 0.0005		< 0.0005		< 0.0005		< 0.0006		< 0.0006		< 0.0005		< 0.0005		< 0.0005		< 0.0005		< 0.0006		< 0.0005		< 0.0006		< 0.0006	
4,4'-DDT	2	8	11	--	**0.111**		**0.003**		< 0.0012		< 0.0011		< 0.0011		**0.033**		< 0.0012		< 0.0012		< 0.0012		< 0.0012		**0.012**		< 0.0012		**0.002**		**0.006**		< 0.0013	
gamma-Chlordane	0.2	1	0.05	--	**0.003**		< 0.0006		< 0.0005		< 0.0005		< 0.0005		**0.003**		< 0.0006		< 0.0005		< 0.0005		< 0.0005		< 0.0006		< 0.0005		**0.003**		< 0.0006	
alpha-Chlordane	0.2	1	0.05	--	< 0.0005		< 0.0006		< 0.0005		< 0.0005		< 0.0005		< 0.0006		< 0.0006		< 0.0005		< 0.0005		< 0.0005		< 0.0005		< 0.0006		< 0.0005		< 0.0006		< 0.0006	

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15
Sample Date					01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99
Metals (mg/kg)																			
Aluminum	78,000	NA	6000	15200	**2140**	**15700**	**3060**	**2000**	**756**	**2750**	**5220**	**3830**	**4680**	**3100**	**1520**	**2650**	**5590**	**5210**	**3740**
Antimony	31	450	6	ND	**0.866**	**0.6**	< 0.375	**0.568**	**0.528**	< 0.433	< 0.349	**0.445**	< 0.354	**0.351**	**0.739**	**0.597**	< 0.443	< 0.457	**0.752**
Arsenic	19	19	19	22.9	**2.58**	**12.9**	**3.58**	**2.48**	**1.16**	**3.04**	**4.9**	**4.51**	**5.2**	**2.9**	**3.63**	**4.88**	**5.83**	**6.77**	**9.03**
Barium	16,000	59,000	2100	32.3	**5.29**	**17.6**	**16.7**	**2.98**	**3.33**	**3.4**	**17.6**	**10.1**	**10**	**9.4**	**3.67**	**4.84**	**17.3**	**20.4**	**26.4**
Beryllium	16	140	0.7	2	**0.325**	**1.84**	**0.648**	**0.446**	**0.147**	**0.499**	**0.952**	**0.698**	**0.983**	**0.323**	**0.257**	**0.444**	**1.26**	**1.04**	**0.84**
Cadmium	78	78	2	ND	**0.356**	**1.22**	**0.374**	**0.443**	**0.414**	**0.463**	**0.602**	**0.59**	**0.539**	**0.538**	**0.322**	**2.27**	**0.648**	**0.646**	**0.515**
Calcium	NLE	NLE	NLE	921	**143**	**324**	**102**	**98.5**	**81.8**	**155**	**719**	**153**	**410**	**132**	**121**	**230**	**489**	**441**	**939**
Chromium	NLE	NLE	NLE	269	**21.9**	**136**	**37**	**29.6**	**13.6**	**33.9**	**49.7**	**44.6**	**59.9**	**28.8**	**20.2**	**35.5**	**57.2**	**61.2**	**39.1**
Cobalt	1,600	590	90	2.5	**0.379**	**1.4**	**0.388**	**0.483**	**0.22**	**0.561**	**0.762**	**0.638**	**0.772**	**0.657**	**0.416**	**0.454**	**0.979**	**1.05**	**0.708**
Copper	3,100	45,000	11,000	8	< 0.618	< 0.717	< 0.563	< 0.621	< 0.611	< 0.649	< 0.524	**5.43**	**3.26**	**3.8**	**4.58**	**3.11**	**2.03**	**5.86**	**11**
Iron	NLE	NLE	NLE	55800	**10600**	**58800**	**17700**	**14100**	**6700**	**19800**	**23100**	**21500**	**28200**	**14500**	**11400**	**18200**	**30900**	**31200**	**26200**
Lead	400	800	90	19.5	**5.38**	**13.6**	**1.87**	**1.35**	**1.21**	**14.4**	**5.82**	**2.3**	**2.04**	**10.6**	**12.1**	**9.3**	**3.36**	**9.76**	**54.3**
Magnesium	NLE	NLE	NLE	7230	**587**	**3470**	**818**	**836**	**271**	**1540**	**1450**	**1270**	**1870**	**1000**	**645**	**1110**	**1920**	**1920**	**1100**
Manganese	11,000	5,900	65	90.7	**7.2**	**29**	**8.54**	**6.58**	**3.07**	**13**	**26.6**	**11.7**	**9.6**	**18.5**	**9.68**	**9.91**	**21.3**	**27**	**33.2**
Mercury	23	65	0.1	ND	**0.064**	**0.081**	< 0.021	< 0.019	< 0.019	< 0.021	**0.086**	**0.068**	**0.028**	**0.036**	**0.025**	**0.031**	**0.04**	**0.044**	**0.062**
Nickel	1,600	23,000	48	8.4	**2.48**	**6.57**	**2.1**	**1.88**	**1.4**	**2.56**	**3.57**	**3.24**	**3.57**	**2.49**	**1.62**	**2.37**	**4.94**	**4.93**	**3.89**
Potassium	NLE	NLE	NLE	15400	**1040**	**6960**	**2040**	**2280**	**732**	**4030**	**2920**	**2980**	**4680**	**2350**	**1560**	**2720**	**4170**	**4850**	**2300**
Selenium	390	5,700	11	1.9	< 0.618	**1.3**	**0.617**	< 0.621	< 0.611	< 0.649	**0.892**	< 0.668	**0.678**	< 0.514	< 0.583	< 0.547	< 0.665	**0.763**	**0.834**
Silver	390	5,700	1	1.1	< 0.618	< 0.717	< 0.563	< 0.621	< 0.611	< 0.649	< 0.524	< 0.668	< 0.531	< 0.514	< 0.583	< 0.547	< 0.665	< 0.685	< 0.687
Sodium	NLE	NLE	NLE	51.6	**74.4**	**115**	**72.5**	**99**	**76.1**	**197**	**108**	**79.6**	**89.3**	**86.8**	**89.6**	**90.2**	**99.5**	**108**	**101**
Thallium	5	79	3	ND	< 0.618	< 0.717	< 0.563	< 0.621	< 0.611	< 0.649	< 0.524	< 0.668	< 0.531	< 0.514	< 0.583	< 0.547	< 0.665	< 0.685	< 0.687
Vanadium	78	1,100	NA	94.1	**19**	**92**	**24.8**	**16.4**	**12.2**	**23.4**	**33.3**	**33.3**	**41.2**	**23.5**	**16.4**	**29.4**	**38.6**	**41.9**	**31.9**
Zinc	23,000	110,000	930	81.4	**25.2**	**173**	**23**	**18**	**11.2**	**30**	**33.9**	**26.9**	**28.3**	**18.7**	**19.5**	**24.1**	**46**	**46.5**	**38.7**

(1) New Jersey Department of Environmental Protection (NJDEP) Residential Direct Contact Soil Remediation Standards (RDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. Based on a risk of $1x10E^{6}$ and HQ = 0.1

(2) New Jersey Department of Environmental Protection (NJDEP) Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. NJDEP Non-residential standard is based on a risk of $1x10E^{6}$ and HQ = 0.1

(3) NJDEP Impact to Ground Water (NJDEP guidance document; Nov 2013).

(4) Weston, 1995. Final Site Investigation - Main Post, Fort Monmouth, New Jersey, December

NJDEP criteria for total xylenes are used for xylene isomers (m+p, o)
NJDEP criteria for endrin is used for endrin aldehyde
NJDEP criteria for 4,4'-DDD and 4,4'-DDT are for total DDD and total DDT, respectively
NJDEP criteria for chloradane is used for alpha and gamma chloradane.
Dash (--) = only background concentrations for metals are being used as comparison criteria
B = Analyte detected in both sample and associated laboratory blank
D = Result from dilution of sample
DUP = field duplicate sample
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = not analyzed
ND = not detected
NLE = No limit established
< = analyte not detected above method detection limit (MDL)
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
VOCs = volatile organic compounds
in. = inches
bgs = below ground surface

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SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15
Sample Date					01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99	01/20/99

Detections are bolded
Shaded cells = concentration exceeds NJDEP Impact to Groundwater Criterion
Shaded cells = concentration exceeds one or both NJDEP Direct Contact Criteria
Shaded cells = concentration exceeds all NJDEP criteria
Shaded cells = concentration exceeds Weston (1995) background concentration.

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SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
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FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-16		B-17		B-18		B-19		B-20		B-21		B-22		B-23		B-23 Dup		B-24		B-25		B-26		B-27		B-28		B-29	
Sample Date					01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99		01/21/99	
Volatile Organic Compounds (µg/kg)																																
Lab Sample ID (VOCs only collected 24 in. bgs)					4201.03		4201.05		4201.07		4201.09		4201.11		4201.13		4201.15		4201.17		4201.33		4201.19		4201.21		4201.23		4201.25		4201.27		4201.29	
Methylene Chloride	34000	97,000	10	--	< 570		**400**	J	**470**	J	< 540		**470**	J	< 610		**460**	J	**350**	J	< 550		< 580		**590**	J	**480**	J	< 630		**390**	J	< 540	
Toluene	6,300,000	91,000,000	7,000	--	< 280		< 300		< 290		< 270		< 280		< 300		< 280		< 270		< 280		< 290		< 360		< 340		< 310		< 300		< 270	
TICs	NLE	NLE	NLE	--	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
Semi-Volatile Organic Compounds (µg/kg)																																
Lab Sample ID (All analysis except VOCs - collected 0 to 12 in. bgs)					4201.02		4201.04		4201.06		4201.08		4201.10		4201.12		4201.14		4201.16		4201.32		4201.18		4201.20		4201.22		4201.24		4201.26		4201.28	
Naphthalene	6,000	17,000	25,000	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		< 1000		< 1200	
2-Methylnaphthalene	2.30E+05	2.40E+06	8,000	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		< 1000		< 1200	
Acenaphthylene	NLE	3.00E+08	NLE	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		< 1000		< 1200	
Acenaphthene	3.40E+06	3.70E+07	110,000	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		< 1000		< 1200	
Dibenzofuran	NLE	NLE	NLE	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		< 1000		< 1200	
Diethylphthalate	4.90E+07	5.50E+08	88,000	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		**180**	J	**120**	J	< 1300		< 1100		< 1100		< 1100		< 1000		< 1200	
Fluorene	2.30E+06	2.40E+07	170,000	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		< 1000		< 1200	
Phenanthrene	NLE	3.00E+08	NLE	--	< 1000		< 1100		**300**	J	< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**310**	J	**160**	J
Anthracene	1.70E+07	3.00E+07	2,400,000	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**110**	J	< 1200	
Di-n-butylphthalate	6.10E+06	6.80E+07	760,000	--	**300**	JB	**1400**	B	**760**	JB	**650**	JB	**680**	JB	**340**	JB	**270**	JB	**270**	JB	**420**	JB	**900**	JB	**380**	JB	**290**	JB	**270**	JB	**870**	JB	**790**	JB
Fluoranthene	2.30E+06	2.40E+07	1,300,000	--	< 1000		< 1100		**310**	J	< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**750**	J	**310**	J
Pyrene	1.70E+06	1.80E+07	840,000	--	< 1000		< 1100		**440**	J	< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**710**	J	**340**	J
Butylbenzylphthalate	1.20E+06	1.40E+07	230,000	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		< 1000		< 1200	
Benzo(a)anthracene	600	2,000	800	--	< 1000		< 1100		**140**	J	< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**390**	J	**190**	J
Chrysene	62,000	230,000	80,000	--	< 1000		< 1100		**360**	J	< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**600**	J	**240**	J
bis(2-Ethylhexyl)phthalate	35,000	140,000	1,200,000	--	**190**	JB	< 1100		**140**	JB	< 1000		< 1100		< 1000		< 1000		**130**	JB	< 1100		< 1300		**450**	JB	< 1100		< 1100		**240**	JB	< 1200	
Benzo(b)fluoranthene	600	2,000	2,000	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**440**	J	**150**	J
Benzo(k)fluoranthene	6,000	23,000	25,000	--	< 1000		< 1100		**110**	J	< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**450**	J	**140**	J
Benzo(a)pyrene	200	200	200	--	< 1000		< 1100		**130**	J	< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**480**	J	**220**	J
Indeno(1,2,3-cd)pyrene	600	2000	7,000	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**260**	J	**140**	J
Dibenz(a,h)anthracene	200	200	800	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		< 1000		< 1200	
Benzo(g,h,i)perylene	3.80E+08	3.00E+07	NLE	--	< 1000		< 1100		< 1000		< 1000		< 1100		< 1000		< 1000		< 1100		< 1100		< 1300		< 1100		< 1100		< 1100		**340**	J	**180**	J
TICs	NLE	NLE	NLE	--	**8970**		**5960**		**11990**		**6880**		**4900**		**6500**		**5900**		**15320**		**9900**		**8500**		**6100**		**1000**		**1400**		**3620**		**3540**	
Pesticides/PCBs (mg/kg)																																
Heptachlor	0.1	0.7	0.5	--	**0.001**		< 0.0003		< 0.0003		**0.001**		< 0.0003		< 0.0003		**0.001**		< 0.0003		< 0.0003		< 0.0004		**0.001**		< 0.0003		**0.001**		< 0.0003		< 0.0003	
4,4'-DDE	2	9	18	--	< 0.0004		< 0.0004		< 0.0005		< 0.0004		< 0.0004		< 0.0005		**0.002**		< 0.0004		< 0.0004		< 0.0005		**0.003**		< 0.0004		< 0.0004		**0.005**		**0.015**	
Dieldrin	0.04	0.2	0.003	--	< 0.0005		< 0.0006		< 0.0006		< 0.0006		< 0.0005		< 0.0006		< 0.0005		< 0.0006		< 0.0005		< 0.0006		< 0.0006		< 0.0006		< 0.0006		< 0.0006		**0.001**	
Endosulfan II	470	6,800	4	--	< 0.0004		< 0.0004		< 0.0005		< 0.0004		< 0.0004		< 0.0005		< 0.0004		< 0.0004		< 0.0004		< 0.0005		< 0.0004		< 0.0004		< 0.0004		< 0.0005		< 0.0004	
4,4'-DDD	3	13	4	--	< 0.0007		< 0.0007		< 0.0007		< 0.0007		< 0.0007		< 0.0007		< 0.0006		< 0.0007		< 0.0006		< 0.0008		**0.002**		< 0.0007		< 0.0007		**0.013**		**0.01**	
Endrin Aldehyde	NLE	NLE	1	--	< 0.0005		< 0.0006		< 0.0006		< 0.0006		< 0.0005		< 0.0006		< 0.0005		< 0.0006		< 0.0005		< 0.0006		< 0.0006		< 0.0006		< 0.0006		< 0.0006		< 0.0006	
4,4'-DDT	2	8	11	--	< 0.0012		< 0.0012		< 0.0012		< 0.0012		**0.002**		< 0.0012		**0.002**		< 0.0012		< 0.0012		< 0.0014		**0.007**		< 0.0012		< 0.0012		**0.02**		**0.005**	
gamma-Chlordane	0.2	1	0.05	--	< 0.0005		< 0.0006		< 0.0006		< 0.0006		< 0.0005		< 0.0006		< 0.0005		< 0.0006		< 0.0005		< 0.0006		**0.002**		< 0.0006		< 0.0006		< 0.0006		< 0.0006	
alpha-Chlordane	0.2	1	0.05	--	< 0.0005		< 0.0006		< 0.0006		< 0.0006		< 0.0005		< 0.0006		< 0.0005		< 0.0006		< 0.0005		< 0.0006		**0.002**		< 0.0006		< 0.0006		< 0.0006		< 0.0006	

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-16	B-17	B-18	B-19	B-20	B-21	B-22	B-23	B-23 Dup	B-24	B-25	B-26	B-27	B-28	B-29
Sample Date					01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99
Metals (mg/kg)																			
Aluminum	78,000	NA	6000	15200	**2980**	**3370**	**7120**	**3740**	**3140**	**9430**	**3680**	**7040**	**9910**	**8260**	**5020**	**5130**	**4970**	**9170**	**6560**
Antimony	31	450	6	ND	< 0.430	**0.892**	< 0.428	< 0.445	**0.838**	**0.715**	**0.721**	< 0.489	< 0.440	< 0.507	**0.768**	**0.675**	**0.965**	**0.527**	**0.431**
Arsenic	19	19	19	22.9	**4.31**	**4.3**	**6.31**	**4.88**	**3.03**	**9.41**	**4.05**	**9.16**	**9.47**	**8.73**	**4.93**	**4.58**	**4.24**	**9.5**	**4.72**
Barium	16,000	59,000	2100	32.3	**7.48**	**3.66**	**20.9**	**11**	**3.53**	**6.27**	**5.13**	**19.1**	**17.9**	**12.3**	**23.7**	**3.75**	**4.95**	**70.8**	**28.9**
Beryllium	16	140	0.7	2	**0.58**	**0.412**	**1.36**	**0.903**	**0.292**	**0.97**	**0.416**	**1.01**	**1.67**	**1.55**	**0.443**	**0.6**	**0.582**	**1.31**	**0.581**
Cadmium	78	78	2	ND	**0.372**	**0.252**	**0.654**	**0.423**	**0.325**	**0.516**	**0.267**	**0.983**	**1.14**	**0.742**	**0.79**	**0.328**	**0.412**	**1.16**	**0.568**
Calcium	NLE	NLE	NLE	921	**102**	**592**	**333**	**577**	**469**	**835**	**500**	**759**	**625**	**335**	**15000**	**148**	**385**	**2880**	**19500**
Chromium	NLE	NLE	NLE	269	**37.4**	**70.1**	**70.4**	**42**	**53.1**	**129**	**61.6**	**63.4**	**99.1**	**97.3**	**38.2**	**87.5**	**97.5**	**110**	**46.3**
Cobalt	1,600	590	90	2.5	**0.598**	**0.541**	**1.23**	**0.616**	**0.413**	**0.764**	**0.775**	**1.53**	**1.99**	**1.46**	**2.09**	**0.48**	**0.971**	**2.08**	**3.83**
Copper	3,100	45,000	11,000	8	**3.25**	**2.08**	**1.99**	**1.35**	**1.82**	**2.1**	**3.3**	**6.15**	**5.21**	**0.834**	**20**	**1.48**	**2.47**	**9.29**	**10**
Iron	NLE	NLE	NLE	55800	**20500**	**12300**	**35100**	**25400**	**9310**	**30900**	**13300**	**33700**	**50700**	**46000**	**15000**	**19200**	**17600**	**28700**	**16500**
Lead	400	800	90	19.5	**15.6**	**1.33**	**4.63**	**3.08**	**1.33**	**2.47**	**4.94**	**12.2**	**9.95**	**4.12**	**40.8**	**1.3**	**2.59**	**15.6**	**16**
Magnesium	NLE	NLE	NLE	7230	**1240**	**874**	**2560**	**1080**	**601**	**2430**	**1100**	**1880**	**4020**	**3030**	**1930**	**1520**	**1590**	**3450**	**2050**
Manganese	11,000	5,900	65	90.7	**9.99**	**3.94**	**18.7**	**17.6**	**6.45**	**9.4**	**14.1**	**37.1**	**30.8**	**24.9**	**52.9**	**4.16**	**7.69**	**41.5**	**67.2**
Mercury	23	65	0.1	ND	< 0.023	< 0.024	< 0.025	< 0.023	< 0.024	< 0.025	**0.031**	**0.062**	**0.068**	< 0.026	**0.864**	**0.041**	< 0.023	**0.318**	**0.09**
Nickel	1,600	23,000	48	8.4	**2.73**	**2.23**	**5.26**	**3.12**	**1.8**	**4.15**	**2.64**	**5.85**	**7.66**	**5.91**	**6.78**	**4.62**	**3.62**	**10.5**	**8.27**
Potassium	NLE	NLE	NLE	15400	**3160**	**2510**	**5870**	**2010**	**1730**	**6940**	**2680**	**4280**	**10600**	**7990**	**2100**	**4310**	**4190**	**7720**	**3370**
Selenium	390	5,700	11	1.9	< 0.646	< 0.678	**0.732**	**0.672**	< 0.585	**0.77**	< 0.589	**0.833**	**0.885**	**1.13**	**0.714**	< 0.600	< 0.650	**1.46**	**0.795**
Silver	390	5,700	1	1.1	< 0.646	< 0.678	< 0.642	< 0.667	< 0.686	< 0.741	< 0.589	< 0.734	< 0.660	< 0.761	< 0.685	< 0.600	< 0.650	< 0.700	< 0.597
Sodium	NLE	NLE	NLE	51.6	**85.3**	**111**	**103**	**96.1**	**79.4**	**139**	**89.6**	**108**	**96.3**	**58**	**144**	**44.8**	**65**	**149**	**130**
Thallium	5	79	3	ND	< 0.646	< 0.678	< 0.642	< 0.667	< 0.585	< 0.741	< 0.589	< 0.734	< 0.660	< 0.761	< 0.685	< 0.600	< 0.650	< 0.700	< 0.597
Vanadium	78	1,100	NA	94.1	**29.7**	**66.1**	**44.2**	**34.1**	**48.1**	**116**	**51.8**	**48.4**	**63.2**	**54.2**	**26.3**	**81.6**	**83.1**	**47.8**	**25.5**
Zinc	23,000	110,000	930	81.4	**22.8**	**13.8**	**43.2**	**25**	**12.9**	**22.8**	**19.5**	**46**	**58.3**	**42.4**	**90.4**	**18.3**	**20.7**	**67**	**91**

(1) New Jersey Department of Environmental Protection (NJDEP) Residential Direct Contact Soil Remediation Standards (RDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. Based on a risk of $1x10E^{6}$ and HQ = 0.1

(2) New Jersey Department of Environmental Protection (NJDEP) Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. NJDEP Non-residential standard is based on a risk of $1x10E^{6}$ and HQ = 0.1

(3) NJDEP Impact to Ground Water (NJDEP guidance document; Nov 2013).

(4) Weston, 1995. Final Site Investigation - Main Post, Fort Monmouth, New Jersey, December

NJDEP criteria for total xylenes are used for xylene isomers (m+p, o)
NJDEP criteria for endrin is used for endrin aldehyde
NJDEP criteria for 4,4'-DDD and 4,4'-DDT are for total DDD and total DDT, respectively
NJDEP criteria for chloradane is used for alpha and gamma chloradane.
Dash (--) = only background concentrations for metals are being used as comparison criteria
B = Analyte detected in both sample and associated laboratory blank
D = Result from dilution of sample
DUP = field duplicate sample
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = not analyzed
ND = not detected
NLE = No limit established
< = analyte not detected above method detection limit (MDL)
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
VOCs = volatile organic compounds
in. = inches
bgs = below ground surface

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-16	B-17	B-18	B-19	B-20	B-21	B-22	B-23	B-23 Dup	B-24	B-25	B-26	B-27	B-28	B-29
Sample Date					01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99	01/21/99

Detections are bolded
Shaded cells = concentration exceeds NJDEP Impact to Groundwater Criterion
Shaded cells = concentration exceeds one or both NJDEP Direct Contact Criteria
Shaded cells = concentration exceeds all NJDEP criteria
Shaded cells = concentration exceeds Weston (1995) background concentration.

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SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
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FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-30	B-31	B-32	B-33	B-34	B-35	B-36	B-37	B-38	B-39	B-40	B-41	B-42	B-43	B-44
Sample Date					01/21/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99
Volatile Organic Compounds (µg/kg)																			
Lab Sample ID (VOCs only collected 24 in. bgs)					4201.31	4224.03	4224.05	4224.07	4224.09	4224.11	4224.13	4224.15	4224.17	4224.19	4224.21	4224.23	4224.25	4224.27	4224.29
Methylene Chloride	34000	97,000	10	--	< 610	**400** J	< 600	**400** J	**670**	< 420	< 590	< 600	< 600	< 640	< 590	< 590	< 600	< 600	< 580
Toluene	6,300,000	91,000,000	7,000	--	< 300	< 290	< 300	< 320	< 300	< 320	< 290	< 300	< 300	< 320	< 290	< 300	< 300	< 300	< 290
TICs	NLE	NLE	NLE	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Semi-Volatile Organic Compounds (µg/kg)																			
Lab Sample ID (All analysis except VOCs - collected 0 to 12 in. bgs)					4201.30	4224.02	4224.04	4224.06	4224.08	4224.10	4224.12	4224.14	4224.16	4224.18	4224.20	4224.22	4224.24	4224.26	4224.28
Naphthalene	6,000	17,000	25,000	--	< 1200	< 1100	< 1100	< 1100	< 1200	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	**150** J	< 1100	< 1200	< 1100
2-Methylnaphthalene	2.30E+05	2.40E+06	8,000	--	< 1200	< 1100	< 1100	< 1100	< 1200	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	< 1100	< 1100	< 1200	< 1100
Acenaphthylene	NLE	3.00E+08	NLE	--	< 1200	< 1100	< 1100	< 1100	< 1200	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	**330** J	< 1100	< 1200	< 1100
Acenaphthene	3.40E+06	3.70E+07	110,000	--	< 1200	< 1100	< 1100	< 1100	< 1200	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	< 1100	< 1100	< 1200	< 1100
Dibenzofuran	NLE	NLE	NLE	--	< 1200	< 1100	< 1100	< 1100	< 1200	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	< 1100	< 1100	< 1200	< 1100
Diethylphthalate	4.90E+07	5.50E+08	88,000	--	< 1200	< 1100	< 1100	< 1100	< 1200	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	< 1100	< 1100	< 1200	< 1100
Fluorene	2.30E+06	2.40E+07	170,000	--	< 1200	**200** J	< 1100	< 1100	< 1200	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	< 1100	< 1100	< 1200	< 1100
Phenanthrene	NLE	3.00E+08	NLE	--	**140** J	**2700**	**170** J	< 1100	**1800**	< 1000	**140** J	< 1100	< 1100	< 1000	< 1100	**230** J	< 1100	**190** J	< 1100
Anthracene	1.70E+07	3.00E+07	2,400,000	--	< 1200	**470** J	< 1100	< 1100	**350** J	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	**590** J	< 1100	**120** J	< 1100
Di-n-butylphthalate	6.10E+06	6.80E+07	760,000	--	**1500** B	**210** JB	**600** JB	**420** JB	**891** JB	**140** JB	**210** JB	**440** JB	**160** JB	**1400** B	**490** JB	**1200** B	**230** JB	**210** JB	**110** JB
Fluoranthene	2.30E+06	2.40E+07	1,300,000	--	**210** J	**2900**	**410** J	**240** J	**2100**	< 1000	**260** J	**160** J	< 1100	< 1000	**140** J	**370** J	**170** J	**650** J	**160** J
Pyrene	1.70E+06	1.80E+07	840,000	--	**190** J	**3200**	**360** J	**200** J	**1600**	< 1000	**290** J	**150** J	< 1100	< 1000	**120** J	**600** J	**250** J	**630** J	**170** J
Butylbenzylphthalate	1.20E+06	1.40E+07	230,000	--	< 1200	< 1100	< 1100	< 1100	< 1200	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	< 1100	< 1100	< 1200	< 1100
Benzo(a)anthracene	600	2,000	800	--	< 1200	< 1100	**230** J	**120** J	**750** J	< 1000	**150** J	< 1100	< 1100	< 1000	< 1100	**540** J	< 1100	**390** J	< 1100
Chrysene	62,000	230,000	80,000	--	**130** J	**1800**	**290** J	**130** J	**850** J	< 1000	**230** J	< 1100	< 1100	< 1000	< 1100	**1900**	**220** J	**450** J	**130** J
bis(2-Ethylhexyl)phthalate	35,000	140,000	1,200,000	--	**150** JB	**230** J	**110** J	< 1100	< 1200	< 1000	**140** J	< 1100	< 1100	**130** J	< 1100	< 1100	< 1100	< 1200	< 1100
Benzo(b)fluoranthene	600	2,000	2,000	--	< 1200	**1200**	**220** J	< 1100	**440** J	< 1000	**140** J	< 1100	< 1100	< 1000	< 1100	**2400**	< 1100	**410** J	< 1100
Benzo(k)fluoranthene	6,000	23,000	25,000	--	< 1200	**970** J	**260** J	< 1100	**530** J	< 1000	**170** J	< 1100	< 1100	< 1000	< 1100	**1900**	< 1100	**440** J	< 1100
Benzo(a)pyrene	200	200	200	--	< 1200	**980** J	**270** J	**110** J	**580** J	< 1000	**160** J	< 1100	< 1100	< 1000	< 1100	**1800**	< 1100	**490** J	< 1100
Indeno(1,2,3-cd)pyrene	600	2000	7,000	--	< 1200	**320** J	**160** J	< 1100	**270** J	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	**680** J	< 1100	**200** J	< 1100
Dibenz(a,h)anthracene	200	200	800	--	< 1200	< 1100	< 1100	< 1100	< 1200	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	< 1100	< 1100	< 1200	< 1100
Benzo(g,h,i)perylene	3.80E+08	3.00E+07	NLE	--	< 1200	**320** J	**210** J	< 1100	**330** J	< 1000	< 1100	< 1100	< 1100	< 1000	< 1100	**520** J	< 1100	**240** J	< 1100
TICs	NLE	NLE	NLE	--	**4300**	**10800**	**2690**	**1300**	**4300**	**2100**	ND	**1600**	**4200**	**5400**	**2400**	**24500**	**18000**	**8100**	**1700**
Pesticides/PCBs (mg/kg)																			
Heptachlor	0.1	0.7	0.5	--	< 0.0004	< 0.0064	< 0.0060	< 0.0065	< 0.0067	< 0.0063	< 0.0064	< 0.0064	< 0.0061	< 0.0056	< 0.0066	< 0.0068	< 0.0069	< 0.0069	< 0.0066
4,4'-DDE	2	9	18	--	**0.023**	**0.011**	**0.013**	< 0.0087	**0.035**	< 0.0084	**0.012**	**0.017**	< 0.0082	< 0.0074	**0.01**	**0.018**	**0.03**	< 0.0091	**0.011**
Dieldrin	0.04	0.2	0.003	--	< 0.0006	< 0.0107	< 0.0100	< 0.0108	< 0.0112	< 0.0105	< 0.0106	< 0.0107	< 0.0102	< 0.0093	< 0.0111	< 0.0113	< 0.0114	< 0.0114	< 0.0109
Endosulfan II	470	6,800	4	--	< 0.0005	< 0.0085	< 0.0080	< 0.0087	< 0.0090	< 0.0084	< 0.0085	< 0.0086	< 0.0082	< 0.0074	< 0.0088	< 0.0091	< 0.0091	< 0.0091	< 0.0087
4,4'-DDD	3	13	4	--	**0.018**	**0.014**	**0.027**	< 0.0130	**0.057**	< 0.0126	**0.017**	**0.029**	< 0.0123	< 0.0111	**0.014**	**0.061**	**0.053**	**0.021**	**0.014**
Endrin Aldehyde	NLE	NLE	1	--	< 0.0006	< 0.0107	< 0.0100	< 0.0108	< 0.0112	< 0.0105	< 0.0106	< 0.0107	< 0.0102	< 0.0093	< 0.0111	< 0.0113	< 0.0114	< 0.0114	< 0.0109
4,4'-DDT	2	8	11	--	**0.012**	< 0.0234	< 0.0220	< 0.0238	< 0.0247	< 0.0232	< 0.0233	< 0.0236	< 0.0225	< 0.0204	< 0.0243	**0.034**	< 0.0252	< 0.0251	< 0.0240
gamma-Chlordane	0.2	1	0.05	--	< 0.0006	< 0.0107	< 0.0100	< 0.0108	< 0.0112	< 0.0105	**0.026**	< 0.0107	< 0.0102	< 0.0093	< 0.0111	< 0.0113	< 0.0114	< 0.0114	< 0.0109
alpha-Chlordane	0.2	1	0.05	--	< 0.0006	< 0.0107	< 0.0100	< 0.0108	< 0.0112	< 0.0105	**0.023**	< 0.0107	< 0.0102	< 0.0093	< 0.0111	< 0.0113	< 0.0114	< 0.0114	< 0.0109

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-30	B-31	B-32	B-33	B-34	B-35	B-36	B-37	B-38	B-39	B-40	B-41	B-42	B-43	B-44
Sample Date					01/21/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99
Metals (mg/kg)																			
Aluminum	78,000	NA	6000	15200	**5520**	**8760**	**14000**	**9770**	**7690**	**6640**	**10100**	**10200**	**10100**	**9100**	**9870**	**11500**	**9190**	**14100**	**12100**
Antimony	31	450	6	ND	**0.771**	**0.973**	**1.09**	**0.754**	**0.748**	**0.774**	**0.866**	**1.04**	**0.605**	< 0.425	**0.556**	**0.91**	**1.14**	**0.933**	**0.665**
Arsenic	19	19	19	22.9	**8.29**	**9.83**	**14**	**16.6**	**8.95**	**3.51**	**4.86**	**13.8**	**3.29**	**5.76**	**11.1**	**10.4**	**12**	**14.5**	**10.7**
Barium	16,000	59,000	2100	32.3	**52.6**	**50.3**	**75.5**	**41.3**	**47.9**	**14.2**	**22.7**	**54.2**	**18.2**	**23.8**	**23.5**	**48.8**	**63.1**	**58.4**	**20.2**
Beryllium	16	140	0.7	2	**0.846**	**1.2**	**2.19**	**1.39**	**1.27**	**0.268**	**0.534**	**1.36**	**0.256**	**0.524**	**1.5**	**1.38**	**1.53**	**1.76**	**1.12**
Cadmium	78	78	2	ND	**0.725**	< 0.112	< 0.117	< 0.111	< 0.127	**0.496**	< 0.109	**0.184**	< 0.109	< 0.106	**17.4**	< 0.101	< 0.120	**0.127**	< 0.104
Calcium	NLE	NLE	NLE	921	**3830**	**5170**	**11800**	**2170**	**2540**	**518**	**589**	**2700**	**422**	**947**	**2630**	**2100**	**2140**	**3530**	**2010**
Chromium	NLE	NLE	NLE	269	**77.7**	**132**	**258**	**122**	**100**	**32.2**	**55.4**	**124**	**29**	**51.3**	**117**	**126**	**138**	**180**	**98.5**
Cobalt	1,600	590	90	2.5	**1.22**	**1.63**	**1.08**	**1.98**	**1.38**	**1.83**	**2.28**	**2.26**	**2.14**	**2**	**2.41**	**2.62**	**1.62**	**2.92**	**3.44**
Copper	3,100	45,000	11,000	8	**8.32**	**7.27**	**5.82**	**8.31**	**8.69**	**4.67**	**12.1**	**29.9**	**6**	**7.15**	**13.7**	**9.38**	**12.6**	**12.3**	**16.5**
Iron	NLE	NLE	NLE	55800	**18800**	**28600**	**56700**	**34900**	**20700**	**12200**	**18600**	**38300**	**10600**	**17000**	**40100**	**34200**	**36000**	**47700**	**36000**
Lead	400	800	90	19.5	**39.8**	**21.2**	**6.36**	**20.5**	**31.1**	**6.94**	**23.2**	**59.2**	**5.66**	**11.8**	**91**	**36.5**	**37.8**	**36.7**	**6.12**
Magnesium	NLE	NLE	NLE	7230	**2780**	**4110**	**8590**	**4050**	**2710**	**800**	**1900**	**4360**	**760**	**1540**	**4290**	**4110**	**4330**	**6170**	**4070**
Manganese	11,000	5,900	65	90.7	**31.5**	**27**	**33.3**	**24.5**	**15.5**	**40.6**	**42.4**	**51.5**	**49**	**38.4**	**36.2**	**53.9**	**28.6**	**78.5**	**55.9**
Mercury	23	65	0.1	ND	**0.055**	**0.06**	**0.1**	**0.09**	**0.08**	**0.04**	**0.04**	**0.32**	**0.05**	**0.06**	**0.05**	**0.1**	**0.11**	**0.19**	**0.06**
Nickel	1,600	23,000	48	8.4	**5.44**	**7.44**	**8.23**	**9.44**	**5.24**	**4.05**	**6.23**	**9.54**	**5.24**	**6.12**	**8.44**	**10.8**	**8.54**	**13.3**	**5.88**
Potassium	NLE	NLE	NLE	15400	**4800**	**8280**	**18800**	**8190**	**5540**	**1200**	**3250**	**8940**	**1170**	**2760**	**9410**	**8550**	**9200**	**12700**	**7550**
Selenium	390	5,700	11	1.9	**1.11**	**1.64**	**1.86**	**1.13**	**1.67**	< 0.602	< 0.655	**0.98**	< 0.656	< 0.637	**0.889**	**1.23**	**2.19**	**1.85**	< 0.625
Silver	390	5,700	1	1.1	< 0.665	< 0.674	< 0.700	< 0.666	< 0.765	< 0.602	< 0.655	< 0.740	< 0.656	< 0.637	< 0.708	< 0.603	< 0.722	< 0.713	< 0.625
Sodium	NLE	NLE	NLE	51.6	**151**	**183**	**328**	**118**	**266**	**81.2**	**102**	**174**	**96.2**	**107**	**124**	**118**	**189**	**239**	**275**
Thallium	5	79	3	ND	< 0.665	< 0.674	< 0.700	< 0.666	< 0.765	< 0.602	< 0.655	< 0.740	< 0.656	< 0.637	< 0.708	< 0.603	< 0.722	< 0.713	< 0.625
Vanadium	78	1,100	NA	94.1	**30.8**	**57.3**	**92.5**	**54.3**	**45**	**27.2**	**37.4**	**54.5**	**24.2**	**32**	**59.3**	**61.9**	**54.8**	**80.7**	**65.5**
Zinc	23,000	110,000	930	81.4	**45.5**	**65.6**	**71.2**	**65.6**	**42.6**	**19.1**	**36.8**	**109**	**17.8**	**31.3**	**1970**	**90**	**74.4**	**126**	**42.7**

(1) New Jersey Department of Environmental Protection (NJDEP) Residential Direct Contact Soil Remediation Standards (RDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. Based on a risk of $1x10E^{6}$ and HQ = 0.1

(2) New Jersey Department of Environmental Protection (NJDEP) Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. NJDEP Non-residential standard is based on a risk of $1x10E^{6}$ and HQ = 0.1

(3) NJDEP Impact to Ground Water (NJDEP guidance document; Nov 2013).

(4) Weston, 1995. Final Site Investigation - Main Post, Fort Monmouth, New Jersey, December

NJDEP criteria for total xylenes are used for xylene isomers (m+p, o)
NJDEP criteria for endrin is used for endrin aldehyde
NJDEP criteria for 4,4'-DDD and 4,4'-DDT are for total DDD and total DDT, respectively
NJDEP criteria for chloradane is used for alpha and gamma chloradane.
Dash (--) = only background concentrations for metals are being used as comparison criteria
B = Analyte detected in both sample and associated laboratory blank
D = Result from dilution of sample
DUP = field duplicate sample
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = not analyzed
ND = not detected
NLE = No limit established
< = analyte not detected above method detection limit (MDL)
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
VOCs = volatile organic compounds
in. = inches
bgs = below ground surface

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-30	B-31	B-32	B-33	B-34	B-35	B-36	B-37	B-38	B-39	B-40	B-41	B-42	B-43	B-44
Sample Date					01/21/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99	01/27/99

Detections are bolded
Shaded cells = concentration exceeds NJDEP Impact to Groundwater Criterion
Shaded cells = concentration exceeds one or both NJDEP Direct Contact Criteria
Shaded cells = concentration exceeds all NJDEP criteria
Shaded cells = concentration exceeds Weston (1995) background concentration.

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-45		B-46		B-46 Dup		B-47		B-48		B-49		B-50		B-51		B-52		B-53		B-54		B-55		B-56		B-57		B-58	
Sample Date					01/27/99		01/28/99		01/28/99		01/28/99		01/28/99		01/28/99		01/28/99		01/28/99		01/28/99		01/28/99		01/28/99		01/28/99		02/09/99		02/09/99		02/09/99	
Volatile Organic Compounds (µg/kg)																																
Lab Sample ID (VOCs only collected 24 in. bgs)					4224.31		4229.03		4229.23		4229.05		4229.07		4229.09		4229.11		4229.13		4229.15		4229.17		4229.19		4229.21		4261.03		4261.05		4261.07	
Methylene Chloride	34000	97,000	10	--	< 620		< 590		< 630		< 610		< 620		< 590		< 640		< 600		< 630		< 570		< 570		< 600		**440**	J	< 590		< 630	
Toluene	6,300,000	91,000,000	7,000	--	< 310		< 300		< 320		< 300		< 310		< 300		< 320		< 300		< 310		< 290		< 290		< 300		< 300		< 300		< 310	
TICs	NLE	NLE	NLE	--	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		**2600**		**2900**	
Semi-Volatile Organic Compounds (µg/kg)																																
Lab Sample ID (All analysis except VOCs - collected 0 to 12 in. bgs)					4224.30		4229.02		4229.22		4229.04		4229.06		4229.08		4229.10		4229.12		4229.14		4229.16		4229.18		4229.20		4261.02		4261.04		4261.06	
Naphthalene	6,000	17,000	25,000	--	< 1100		**220**	J	< 1000		< 1100		**480**	J	< 1000		< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		< 1100	
2-Methylnaphthalene	2.30E+05	2.40E+06	8,000	--	< 1100		**210**	J	< 1000		< 1100		**130**	J	< 1000		< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		< 1100	
Acenaphthylene	NLE	3.00E+08	NLE	--	< 1100		**160**	J	< 1000		< 1100		< 1100		**210**	J	< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		< 1100	
Acenaphthene	3.40E+06	3.70E+07	110,000	--	< 1100		**410**	J	< 1000		< 1100		**640**	J	< 1000		< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		< 1100	
Dibenzofuran	NLE	NLE	NLE	--	< 1100		**460**	J	< 1000		< 1100		**1100**		< 1000		< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		< 1100	
Diethylphthalate	4.90E+07	5.50E+08	88,000	--	< 1100		< 1100		< 1000		< 1100		< 1100		< 1000		< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		< 1100	
Fluorene	2.30E+06	2.40E+07	170,000	--	< 1100		**1100**	J	< 1000		< 1100		**910**	J	< 1000		< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		< 1100	
Phenanthrene	NLE	3.00E+08	NLE	--	< 1100		**12000**		**690**	J	**580**	J	**1200**		**280**	J	< 1000		< 1100		**170**	J	**310**	J	< 1100		< 1100		< 5700		**210**	J	**230**	J
Anthracene	1.70E+07	3.00E+07	2,400,000	--	< 1100		**2200**		**210**	J	< 1100		**650**	J	**180**	J	< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		**120**	J
Di-n-butylphthalate	6.10E+06	6.80E+07	760,000	--	**450**	JB	**1200**	B	**360**	J	**1500**	B	**780**	JB	**430**	JB	**800**	JB	**2000**	B	**390**	JB	**400**	JB	**400**	JB	**350**	JB	< 5700		**1800**	B	**1100**	JB
Fluoranthene	2.30E+06	2.40E+07	1,300,000	--	**120**	J	**12000**		**1500**		**520**	J	**1900**		**560**	J	< 1000		< 1100		**170**	J	**640**	J	< 1100		**210**	J	< 5700		**430**	J	**630**	J
Pyrene	1.70E+06	1.80E+07	840,000	--	**180**	J	**8700**		**1200**		**620**	J	**1500**		**770**	J	< 1000		< 1100		**180**	J	**610**	J	< 1100		**200**	J	< 5700		**450**	J	**600**	J
Butylbenzylphthalate	1.20E+06	1.40E+07	230,000	--	< 1100		< 1100		< 1000		< 1100		< 1100		< 1000		< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		**120**	J
Benzo(a)anthracene	600	2,000	800	--	< 1100		**4000**		**610**	J	**230**	J	**460**	J	**370**	J	< 1000		< 1100		< 1000		**350**	J	< 1100		**130**	J	< 5700		**270**	J	**310**	J
Chrysene	62,000	230,000	80,000	--	**140**	J	**4500**		**960**	J	**360**	J	**520**	J	**750**	J	< 1000		< 1100		**200**	J	**590**	J	< 1100		**240**	J	**650**	JD	**550**	J	**680**	J
bis(2-Ethylhexyl)phthalate	35,000	140,000	1,200,000	--	**110**	J	**130**	J	**140**	J	**150**	J	**140**	J	**160**	J	< 1000		**150**	J	**160**	J	< 1100		**120**	J	**180**	J	< 5700		**230**	JB	**620**	JB
Benzo(b)fluoranthene	600	2,000	2,000	--	< 1100		**2900**		**600**	J	**160**	J	**320**	J	**460**	J	< 1000		< 1100		< 1000		**350**	J	< 1100		**150**	J	< 5700		**310**	J	**350**	J
Benzo(k)fluoranthene	6,000	23,000	25,000	--	< 1100		**2500**		**630**	J	**150**	J	**290**	J	**420**	J	< 1000		< 1100		< 1000		**390**	J	< 1100		**150**	J	< 5700		**320**	J	**360**	J
Benzo(a)pyrene	200	200	200	--	< 1100		**3100**		**660**	J	**200**	J	**350**	J	**510**	J	< 1000		< 1100		< 1000		**360**	J	< 1100		**140**	J	< 5700		**340**	J	**350**	J
Indeno(1,2,3-cd)pyrene	600	2000	7,000	--	< 1100		**1500**		**260**	J	< 1100		**140**	J	**250**	J	< 1000		< 1100		< 1000		**190**	J	< 1100		< 1100		< 5700		**170**	J	**190**	J
Dibenz(a,h)anthracene	200	200	800	--	< 1100		**490**	J	< 1000		< 1100		< 1100		**190**	J	< 1000		< 1100		< 1000		< 1100		< 1100		< 1100		< 5700		< 1100		< 1100	
Benzo(g,h,i)perylene	3.80E+08	3.00E+07	NLE	--	< 1100		**1900**		**240**	J	**120**	J	**170**	J	**290**	J	< 1000		< 1100		< 1000		**190**	J	< 1100		< 1100		< 5700		**190**	J	**200**	J
TICs	NLE	NLE	NLE	--	**4100**		**9600**		**33300**		**4800**		**3800**		**9100**		**2600**		**5000**		**8760**		**28800**		**2300**		**9640**		ND		**5400**		**6800**	
Pesticides/PCBs (mg/kg)																																
Heptachlor	0.1	0.7	0.5	--	< 0.0063		< 0.0066		< 0.0067		< 0.0065		< 0.0066		< 0.0065		< 0.0066		< 0.0068		< 0.0066		< 0.0067		< 0.0063		< 0.0066		< 0.0066		< 0.0064		< 0.0065	
4,4'-DDE	2	9	18	--	**0.011**		**0.018**		**0.018**		**0.051**		**0.032**		**0.009**		**0.018**		**0.023**		**0.038**		**0.026**		< 0.0084		**0.037**		**0.043**		**0.02**		**0.032**	
Dieldrin	0.04	0.2	0.003	--	< 0.0105		< 0.0110		< 0.0111		< 0.0109		< 0.0111		< 0.0108		< 0.0110		< 0.0113		< 0.0110		< 0.0111		< 0.0106		< 0.0110		< 0.0110		< 0.0107		< 0.0108	
Endosulfan II	470	6,800	4	--	< 0.0084		< 0.0088		< 0.0089		< 0.0087		< 0.0088		< 0.0087		< 0.0088		< 0.0091		**0.013**		**0.014**		**0.01**		< 0.0088		< 0.0088		< 0.0086		< 0.0087	
4,4'-DDD	3	13	4	--	**0.016**		**0.026**		**0.04**		**0.138**		**0.079**		**0.016**		**0.039**		**0.023**		**0.048**		**0.079**		< 0.0127		**0.114**		**0.084**		**0.074**		**0.106**	
Endrin Aldehyde	NLE	NLE	1	--	< 0.0105		< 0.0110		< 0.0111		< 0.0109		< 0.0111		< 0.0108		< 0.0110		< 0.0113		< 0.0110		< 0.0111		**0.011**		< 0.0110		< 0.0110		< 0.0107		< 0.0108	
4,4'-DDT	2	8	11	--	< 0.0230		< 0.0243		< 0.0245		**0.052**		**0.03**		< 0.0238		< 0.0242		< 0.0250		**0.073**		**0.027**		< 0.0232		< 0.0242		**0.094**		< 0.0235		**0.03**	
gamma-Chlordane	0.2	1	0.05	--	< 0.0105		< 0.0110		< 0.0111		< 0.0109		< 0.0111		< 0.0108		< 0.0110		< 0.0113		< 0.0110		**0.013**		< 0.0106		< 0.0110		< 0.0110		< 0.0107		< 0.0108	
alpha-Chlordane	0.2	1	0.05	--	< 0.0105		< 0.0110		< 0.0111		< 0.0109		< 0.0111		< 0.0108		< 0.0110		< 0.0113		< 0.0110		< 0.0111		< 0.0106		< 0.0110		< 0.0110		< 0.0107		< 0.0108	

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-45	B-46	B-46 Dup	B-47	B-48	B-49	B-50	B-51	B-52	B-53	B-54	B-55	B-56	B-57	B-58
Sample Date					01/27/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	02/09/99	02/09/99	02/09/99
Metals (mg/kg)																			
Aluminum	78,000	NA	6000	15200	**7360**	**12400**	**11100**	**10700**	**7930**	**11200**	**13600**	**12200**	**8510**	**11200**	**9050**	**14200**	**11500**	**11600**	**12600**
Antimony	31	450	6	ND	**0.547**	**1.02**	**1.01**	**0.837**	**1.03**	< 0.464	**0.997**	**1.1**	**1.56**	**1.41**	< 0.365	**1.43**	**1.08**	**0.903**	**1.31**
Arsenic	19	19	19	22.9	**5.77**	**15.3**	**11.5**	**21.5**	**11.1**	**8.33**	**11.7**	**12.4**	**27.2**	**14.3**	**2.95**	**13.9**	**12.8**	**10.5**	**13.2**
Barium	16,000	59,000	2100	32.3	**17.7**	**31.2**	**29.4**	**48.9**	**36.2**	**20.7**	**33.3**	**42.3**	**63.2**	**47.7**	**13.2**	**65.7**	**52.9**	**51.5**	**53.9**
Beryllium	16	140	0.7	2	**0.496**	**1.15**	**1.04**	**1.44**	**0.873**	**0.87**	**1.55**	**1.34**	**1.19**	**1.52**	**0.179**	**1.73**	**1.51**	**1.23**	**1.45**
Cadmium	78	78	2	ND	**0.218**	< 0.123	< 0.125	< 0.114	**0.338**	< 0.116	< 0.113	**0.668**	< 0.128	**0.294**	**0.194**	< 0.120	**0.235**	**0.174**	< 0.120
Calcium	NLE	NLE	NLE	921	**3280**	**1600**	**1310**	**1660**	**2070**	**3210**	**1880**	**1200**	**2140**	**1760**	**266**	**1750**	**1970**	**2370**	**2030**
Chromium	NLE	NLE	NLE	269	**48.2**	**110**	**98.5**	**157**	**81.4**	**85.9**	**150**	**117**	**131**	**151**	**27.1**	**151**	**143**	**115**	**136**
Cobalt	1,600	590	90	2.5	**1.98**	**2.35**	**2.23**	**1.88**	**2.1**	**3.94**	**2.37**	**2.48**	**1.46**	**1.96**	**1.4**	**3.1**	**1.84**	**2.63**	**2.91**
Copper	3,100	45,000	11,000	8	**8.03**	**12.3**	**19**	**16.6**	**14**	**18.3**	**8.62**	**14.2**	**8.44**	**10.9**	**4.52**	**18.3**	**10.6**	**18.7**	**18.7**
Iron	NLE	NLE	NLE	55800	**16900**	**30300**	**30100**	**40400**	**24600**	**28000**	**45100**	**36200**	**38400**	**37900**	**8710**	**50400**	**34400**	**34200**	**40600**
Lead	400	800	90	19.5	**10.9**	**18.3**	**18.6**	**33**	**30**	**15.4**	**16.2**	**64.3**	**28.4**	**25.1**	**18.4**	**58**	**43.5**	**66.2**	**53.7**
Magnesium	NLE	NLE	NLE	7230	**1670**	**3850**	**3320**	**4590**	**2730**	**3320**	**5360**	**4430**	**4010**	**4560**	**515**	**5990**	**4130**	**3940**	**4690**
Manganese	11,000	5,900	65	90.7	**45.5**	**52.4**	**49.4**	**45.9**	**34.9**	**73.3**	**55.8**	**40.4**	**31.4**	**30.3**	**26.7**	**36.6**	**33.1**	**47.2**	**49.5**
Mercury	23	65	0.1	ND	**0.09**	**0.08**	**0.09**	**0.08**	**0.04**	**0.25**	**0.11**	**0.69**	**0.1**	**0.14**	**0.03**	**0.76**	**0.08**	**1.24**	**0.53**
Nickel	1,600	23,000	48	8.4	**5.63**	**8.01**	**6.82**	**9.17**	**8.24**	**11**	**7.8**	**9.15**	**8.01**	**10.9**	**4.61**	**10.6**	**9.75**	**10.8**	**11.5**
Potassium	NLE	NLE	NLE	15400	**2600**	**7180**	**6330**	**9630**	**5300**	**5320**	**10500**	**9560**	**8340**	**9530**	**843**	**12700**	**8140**	**7890**	**9500**
Selenium	390	5,700	11	1.9	**0.84**	**1.09**	**1.09**	**1.47**	**1.13**	< 0.696	**1.13**	**1.07**	**2.96**	**2.12**	< 0.547	**1.38**	**1.68**	**1.44**	**1.13**
Silver	390	5,700	1	1.1	< 0.703	< 0.738	< 0.749	< 0.687	< 0.710	< 0.696	< 0.676	**2.56**	< 0.768	< 0.635	< 0.547	**1.31**	< 0.731	**4.22**	**2.3**
Sodium	NLE	NLE	NLE	51.6	**171**	**269**	**210**	**182**	**161**	**132**	**178**	**161**	**274**	**104**	**208**	**258**	**151**	**283**	**257**
Thallium	5	79	3	ND	< 0.703	< 0.738	< 0.749	< 0.687	< 0.710	< 0.696	< 0.676	< 0.762	< 0.768	< 0.635	< 0.547	< 0.718	< 0.731	< 0.716	< 0.720
Vanadium	78	1,100	NA	94.1	**32.7**	**58.7**	**52.4**	**65.9**	**41.7**	**53.9**	**80.2**	**60.3**	**55.4**	**63.4**	**20.2**	**71.1**	**66.9**	**61.9**	**66.6**
Zinc	23,000	110,000	930	81.4	**37.9**	**66.5**	**60**	**76.7**	**84.2**	**51.2**	**76**	**186**	**63.6**	**82.8**	**13.5**	**109**	**99.6**	**134**	**277**

(1) New Jersey Department of Environmental Protection (NJDEP) Residential Direct Contact Soil Remediation Standards (RDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. Based on a risk of $1x10E^{6}$ and HQ = 0.1

(2) New Jersey Department of Environmental Protection (NJDEP) Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. NJDEP Non-residential standard is based on a risk of $1x10E^{6}$ and HQ = 0.1

(3) NJDEP Impact to Ground Water (NJDEP guidance document; Nov 2013).

(4) Weston, 1995. Final Site Investigation - Main Post, Fort Monmouth, New Jersey, December

NJDEP criteria for total xylenes are used for xylene isomers (m+p, o)
NJDEP criteria for endrin is used for endrin aldehyde
NJDEP criteria for 4,4'-DDD and 4,4'-DDT are for total DDD and total DDT, respectively
NJDEP criteria for chloradane is used for alpha and gamma chloradane.
Dash (--) = only background concentrations for metals are being used as comparison criteria
B = Analyte detected in both sample and associated laboratory blank
D = Result from dilution of sample
DUP = field duplicate sample
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = not analyzed
ND = not detected
NLE = No limit established
< = analyte not detected above method detection limit (MDL)
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
VOCs = volatile organic compounds
in. = inches
bgs = below ground surface

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-45	B-46	B-46 Dup	B-47	B-48	B-49	B-50	B-51	B-52	B-53	B-54	B-55	B-56	B-57	B-58
Sample Date					01/27/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	01/28/99	02/09/99	02/09/99	02/09/99

Detections are bolded
Shaded cells = concentration exceeds NJDEP Impact to Groundwater Criterion
Shaded cells = concentration exceeds one or both NJDEP Direct Contact Criteria
Shaded cells = concentration exceeds all NJDEP criteria
Shaded cells = concentration exceeds Weston (1995) background concentration.

TABLE 4.1
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO NJDEP STANDARDS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	**NJDEP Residential Direct Contact Soil Remediation Standard [1]**	**NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]**	**NJDEP Impact to Groundwater Screening Level[3]**	**Weston 1995 Background (Main Post)[4]**	B-59		B-59 Dup		B-60		B-61		B-62	
Sample Date					02/09/99		02/09/99		02/09/99		02/09/99		02/09/99	
Volatile Organic Compounds (µg/kg)														
Lab Sample ID (VOCs only collected 24 in. bgs)					4261.09		4261.17		4261.11		4261.13		4261.15	
Methylene Chloride	34000	97,000	10	--	**450**	J	< 610		**360**	J	< 660		< 510	
Toluene	6,300,000	91,000,000	7,000	--	< 320		< 310		< 290		< 330		< 250	
TICs	NLE	NLE	NLE	--	ND		ND		ND		**2900**		ND	
Semi-Volatile Organic Compounds (µg/kg)														
Lab Sample ID (All analysis except VOCs - collected 0 to 12 in. bgs)					4261.08		4261.16		4261.10		4261.12		4261.14	
Naphthalene	6,000	17,000	25,000	--	< 1100		< 1000		< 1100		< 1100		< 1200	
2-Methylnaphthalene	2.30E+05	2.40E+06	8,000	--	< 1100		< 1000		< 1100		< 1100		< 1200	
Acenaphthylene	NLE	3.00E+08	NLE	--	**410**	J	**350**	J	< 1100		< 1100		< 1200	
Acenaphthene	3.40E+06	3.70E+07	110,000	--	< 1100		< 1000		< 1100		< 1100		< 1200	
Dibenzofuran	NLE	NLE	NLE	--	< 1100		< 1000		< 1100		< 1100		< 1200	
Diethylphthalate	4.90E+07	5.50E+08	88,000	--	< 1100		< 1000		< 1100		**140**	J	< 1200	
Fluorene	2.30E+06	2.40E+07	170,000	--	< 1100		< 1000		< 1100		< 1100		< 1200	
Phenanthrene	NLE	3.00E+08	NLE	--	**280**	J	**360**	J	< 1100		**230**	J	< 1200	
Anthracene	1.70E+07	3.00E+07	2,400,000	--	**190**	J	**180**	J	< 1100		**120**	J	< 1200	
Di-n-butylphthalate	6.10E+06	6.80E+07	760,000	--	**280**	JB	**260**	JB	**260**	JB	**790**	JB	< 1200	
Fluoranthene	2.30E+06	2.40E+07	1,300,000	--	**790**	J	**860**	J	**220**	J	**610**	J	< 1200	
Pyrene	1.70E+06	1.80E+07	840,000	--	**1200**		**1100**		**230**	J	**620**	J	< 1200	
Butylbenzylphthalate	1.20E+06	1.40E+07	230,000	--	< 1100		< 1000		< 1100		< 1100		< 1200	
Benzo(a)anthracene	600	2,000	800	--	**740**	J	**640**	J	**140**	J	**370**	J	< 1200	
Chrysene	62,000	230,000	80,000	--	**1600**		**1400**		**290**	J	**730**	J	< 1200	
bis(2-Ethylhexyl)phthalate	35,000	140,000	1,200,000	--	**210**	JB	**230**	JB	**230**	JB	**220**	JB	< 1200	
Benzo(b)fluoranthene	600	2,000	2,000	--	**660**	J	**610**	J	**140**	J	**360**	J	< 1200	
Benzo(k)fluoranthene	6,000	23,000	25,000	--	**670**	J	**690**	J	**150**	J	**380**	J	< 1200	
Benzo(a)pyrene	200	200	200	--	**810**	J	**800**	J	**150**	J	**420**	J	< 1200	
Indeno(1,2,3-cd)pyrene	600	2000	7,000	--	**330**	J	**320**	J	**120**	J	**280**	J	< 1200	
Dibenz(a,h)anthracene	200	200	800	--	**200**	J	**190**	J	< 1100		**140**	J	< 1200	
Benzo(g,h,i)perylene	3.80E+08	3.00E+07	NLE	--	**380**	J	**340**	J	**130**	J	**300**	J	< 1200	
TICs	NLE	NLE	NLE	--	**4600**		**5200**		**7800**		**8680**		NA	
Pesticides/PCBs (mg/kg)														
Heptachlor	0.1	0.7	0.5	--	< 0.0064		< 0.0064		< 0.0067		< 0.0067		< 0.0069	
4,4'-DDE	2	9	18	--	**0.024**		**0.019**		**0.019**		**0.022**		**0.029**	
Dieldrin	0.04	0.2	0.003	--	< 0.0107		< 0.0106		< 0.0112		< 0.0111		< 0.0115	
Endosulfan II	470	6,800	4	--	< 0.0086		< 0.0085		< 0.0090		< 0.0089		< 0.0092	
4,4'-DDD	3	13	4	--	**0.032**		**0.025**		**0.031**		**0.053**		**0.074**	
Endrin Aldehyde	NLE	NLE	1	--	< 0.0107		< 0.0106		< 0.0112		< 0.0111		< 0.0115	
4,4'-DDT	2	8	11	--	**0.089**		**0.081**		**0.053**		**0.027**		**0.033**	
gamma-Chlordane	0.2	1	0.05	--	< 0.0107		< 0.0106		< 0.0112		< 0.0111		< 0.0115	
alpha-Chlordane	0.2	1	0.05	--	< 0.0107		< 0.0106		< 0.0112		< 0.0111		< 0.0115	

TABLE 4.1
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SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Field Sample Location	NJDEP Residential Direct Contact Soil Remediation Standard [1]	NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]	NJDEP Impact to Groundwater Screening Level[3]	Weston 1995 Background (Main Post)[4]	B-59	B-59 Dup	B-60	B-61	B-62
Sample Date					02/09/99	02/09/99	02/09/99	02/09/99	02/09/99
Metals (mg/kg)									
Aluminum	78,000	NA	6000	15200	**9750**	**8760**	**8030**	**7710**	**7120**
Antimony	31	450	6	ND	**0.939**	**0.669**	**1.04**	**1.03**	**0.676**
Arsenic	19	19	19	22.9	**13.4**	**12.8**	**17.8**	**10.2**	**8.97**
Barium	16,000	59,000	2100	32.3	**39.7**	**33.9**	**58.1**	**28.8**	**30.5**
Beryllium	16	140	0.7	2	**1.35**	**1.23**	**1.24**	**0.827**	**0.814**
Cadmium	78	78	2	ND	**0.344**	**0.521**	< 0.111	**0.249**	**0.268**
Calcium	NLE	NLE	NLE	921	**1520**	**1310**	**1220**	**1610**	**1730**
Chromium	NLE	NLE	NLE	269	**112**	**101**	**123**	**74.4**	**67.7**
Cobalt	1,600	590	90	2.5	**2.85**	**2.4**	**0.867**	**1.84**	**1.93**
Copper	3,100	45,000	11,000	8	**13.2**	**11**	**5.9**	**14.6**	**13.1**
Iron	NLE	NLE	NLE	55800	**35300**	**32400**	**34300**	**25600**	**21500**
Lead	400	800	90	19.5	**36.6**	**35.1**	**6.12**	**39.2**	**40.8**
Magnesium	NLE	NLE	NLE	7230	**4000**	**3630**	**3600**	**2360**	**2120**
Manganese	11,000	5,900	65	90.7	**80.5**	**41.9**	**19.1**	**37.8**	**24.5**
Mercury	23	65	0.1	ND	**0.3**	**0.21**	**0.05**	**0.29**	**0.15**
Nickel	1,600	23,000	48	8.4	**11.3**	**9.81**	**4.89**	**7.6**	**7.42**
Potassium	NLE	NLE	NLE	15400	**8020**	**7560**	**8160**	**4730**	**4260**
Selenium	390	5,700	11	1.9	**1.77**	**1.36**	**2.85**	**1.37**	**0.973**
Silver	390	5,700	1	1.1	**0.972**	< 0.759	< 0.668	< 0.681	< 0.724
Sodium	NLE	NLE	NLE	51.6	**192**	**114**	**236**	**90.4**	**109**
Thallium	5	79	3	ND	< 0.726	< 0.759	< 0.668	< 0.681	< 0.724
Vanadium	78	1,100	NA	94.1	**49.3**	**39.9**	**40**	**39.9**	**34.7**
Zinc	23,000	110,000	930	81.4	**119**	**118**	**50.6**	**107**	**95.7**

(1) New Jersey Department of Environmental Protection (NJDEP) Residential Direct Contact Soil Remediation Standards (RDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. Based on a risk of $1x10E^{6}$ and HQ = 0.1

(2) New Jersey Department of Environmental Protection (NJDEP) Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS) (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/. NJDEP Non-residential standard is based on a risk of $1x10E^{6}$ and HQ = 0.1

(3) NJDEP Impact to Ground Water (NJDEP guidance document; Nov 2013).

(4) Weston, 1995. Final Site Investigation - Main Post, Fort Monmouth, New Jersey, December

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FORT MONMOUTH, NEW JERSEY

Field Sample Location	**NJDEP Residential Direct Contact Soil Remediation Standard [1]**	**NJDEP Non-Residential Direct Contact Soil Remediation Standard [2]**	**NJDEP Impact to Groundwater Screening Level[3]**	**Weston 1995 Background (Main Post)[4]**	B-59	B-59 Dup	B-60	B-61	B-62
Sample Date					02/09/99	02/09/99	02/09/99	02/09/99	02/09/99

Detections are bolded
Shaded cells = concentration exceeds NJDEP Impact to Groundwater Criterion
Shaded cells = concentration exceeds one or both NJDEP Direct Contact Criteria
Shaded cells = concentration exceeds all NJDEP criteria
Shaded cells = concentration exceeds Weston (1995) background concentration.

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-1		B-2		B-3		B-4		B-5		B-6	
Sample Date					1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	< 660	NA	< 780	NA	< 580	NA	< 560	NA	< 590	NA	< 750
Toluene	490,000	4,500,000	76	-	NA	**0.33 J**	NA	< 390	NA	< 290	NA	< 280	NA	< 300	NA	< 370
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Acenaphthene	350,000	3,300,000	550	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Benzo(a)anthracene	150	2,100	12	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Benzo(a)pyrene	15	210	4	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Benzo(b)fluoranthene	150	2,100	41	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Chrysene	15,000	210,000	1,200	-	< 1100	NA	< 1200	NA	< 1000	NA	**120 J**	NA	< 1000	NA	< 1100	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Dibenzofuran	7,200	100,000	15	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**1,700 B**	NA	**630 JB**	NA	**480 JB**	NA	**360 JB**	NA	**370 JB**	NA	**370 JB**	NA
Fluoranthene	230,000	2,200,000	8,900	-	< 1100	NA	< 1200	NA	< 1000	NA	**520 J**	NA	< 1000	NA	< 1100	NA
Fluorene	230,000	2,200,000	540	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Naphthalene	3,800	18,000	0.54	-	< 1100	NA	< 1200	NA	< 1000	NA	< 1000	NA	< 1000	NA	< 1100	NA
Phenanthrene	NLE	NLE	NLE	-	< 1100	NA	< 1200	NA	< 1000	NA	**170 J**	NA	< 1000	NA	< 1100	NA
Pyrene	170,000	1,700,000	1,300	-	< 1100	NA	< 1200	NA	< 1000	NA	**280 J**	NA	< 1000	NA	< 1100	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**4,900**	NA	**3,700**	NA	**3,670**	NA	**2,400**	NA	**2,500**	NA	**2,000**	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	**0.011**	NA	< 0.0007	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	< 0.0007	NA
4,4'-DDE	1.6	5.1	0.054	-	**0.066**	NA	**0.001**	NA	< 0.0004	NA	< 0.0004	NA	**0.002**	NA	**0.022**	NA
4,4'-DDT	1.9	7	0.077	-	**0.111**	NA	**0.003**	NA	< 0.0012	NA	< 0.0011	NA	< 0.0011	NA	**0.033**	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0005	NA	< 0.0006	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0006	NA
Dieldrin	0.033	0.11	0.000069	-	**0.002**	NA	< 0.0006	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0006	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0004	NA	< 0.0005	NA	< 0.0004	NA	< 0.0004	NA	< 0.0004	NA	< 0.0004	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0005	NA	< 0.0006	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0006	NA
Gamma-Chlordane	1.8	NLE	0.015	-	**0.003**	NA	< 0.0006	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	**0.003**	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0003	NA	**0.001**	NA	< 0.0003	NA	< 0.0003	NA	**0.002**	NA	< 0.0003	NA

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-1		B-2		B-3		B-4		B-5		B-6	
Sample Date					1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**2,140**	NA	**15,700**	NA	**3,060**	NA	**2,000**	NA	**756**	NA	**2,750**	NA
Antimony	3.1	41	0.035	ND	**0.866**	NA	**0.6**	NA	< 0.375	NA	**0.568**	NA	**0.528**	NA	< 0.433	NA
Arsenic	0.67	2.4	0.0015	22.9	**2.58**	NA	**12.9**	NA	**3.58**	NA	**2.48**	NA	**1.16**	NA	**3.04**	NA
Barium	1,500	19,000	16	32.3	**5.29**	NA	**17.6**	NA	**16.7**	NA	**2.98**	NA	**3.33**	NA	**3.4**	NA
Beryllium	16	200	1.9	2	**0.325**	NA	**1.84**	NA	**0.648**	NA	**0.446**	NA	**0.147**	NA	**0.499**	NA
Cadmium	7	80	0.069	ND	**0.356**	NA	**1.22**	NA	**0.374**	NA	**0.443**	NA	**0.414**	NA	**0.463**	NA
Calcium	NLE	NLE	NLE	921	**143**	NA	**324**	NA	**102**	NA	**98.5**	NA	**81.8**	NA	**155**	NA
Chromium	12,000	NLE	4,000,000	269	**21.9**	NA	**136**	NA	**37**	NA	**29.6**	NA	**13.6**	NA	**33.9**	NA
Cobalt	2.3	30	0.027	2.5	**0.379**	NA	**1.4**	NA	**0.388**	NA	**0.483**	NA	**0.22**	NA	**0.561**	NA
Copper	310	4,100	2.8	8	< 0.618	NA	< 0.717	NA	< 0.563	NA	< 0.621	NA	< 0.611	NA	< 0.649	NA
Iron	5,500	72,000	35	55,800	**10,600**	NA	**58,800**	NA	**17,700**	NA	**14,100**	NA	**6,700**	NA	**19,800**	NA
Lead	400	800	NLE	19.5	**5.38**	NA	**13.6**	NA	**1.87**	NA	**1.35**	NA	**1.21**	NA	**14.4**	NA
Magnesium	NLE	NLE	NLE	7,230	**587**	NA	**3,470**	NA	**818**	NA	**836**	NA	**271**	NA	**1,540**	NA
Manganese	180	2,300	2.8	90.7	**7.2**	NA	**29**	NA	**8.54**	NA	**6.58**	NA	**3.07**	NA	**13**	NA
Mercury	2.3	4.3	0.0033	ND	**0.064**	NA	**0.081**	NA	< 0.021	NA	< 0.019	NA	< 0.019	NA	< 0.021	NA
Nickel	150	2,000	2.6	8.4	**2.48**	NA	**6.57**	NA	**2.1**	NA	**1.88**	NA	**1.4**	NA	**2.56**	NA
Potassium	NLE	NLE	NLE	15,400	**1,040**	NA	**6,960**	NA	**2,040**	NA	**2,280**	NA	**732**	NA	**4,030**	NA
Selenium	39	510	0.052	1.9	< 0.618	NA	**1.3**	NA	**0.617**	NA	< 0.621	NA	< 0.611	NA	< 0.649	NA
Silver	39	510	0.08	1.1	< 0.618	NA	< 0.717	NA	< 0.563	NA	< 0.621	NA	< 0.611	NA	< 0.649	NA
Sodium	NLE	NLE	NLE	51.6	**74.4**	NA	**115**	NA	**72.5**	NA	**99**	NA	**76.1**	NA	**197**	NA
Thallium	0.078	1	0.0014	ND	< 0.618	NA	< 0.717	NA	< 0.563	NA	< 0.621	NA	< 0.611	NA	< 0.649	NA
Vanadium	39	510	8.6	94.1	**19**	NA	**92**	NA	**24.8**	NA	**16.4**	NA	**12.2**	NA	**23.4**	NA
Zinc	2,300	31,000	37	81.4	**25.2**	NA	**173**	NA	**23**	NA	**18**	NA	**11.2**	NA	**30**	NA

(1) The 2014-05 USEPA RSL Residential Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
< = analyte not detected above method detection limit (MDL).
Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
bgs = below ground surface.
Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
Shaded cells = concentration exceeds USEPA Residential and/or Industrial RSL.
Shaded cells = concentration exceeds all three USEPA comparison criteria.
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-7		B-8		B-9		B-10		B-11		B-12	
Sample Date					1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	< 660	NA	< 550	NA	< 590	NA	< 570	NA	< 550	NA	< 610
Toluene	490,000	4,500,000	76	-	NA	< 330	NA	< 280	NA	< 290	NA	< 280	NA	< 270	NA	< 310
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Acenaphthene	350,000	3,300,000	550	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Benzo(a)anthracene	150	2,100	12	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Benzo(a)pyrene	15	210	4	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Benzo(b)fluoranthene	150	2,100	41	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	< 1100	NA	< 1100	NA	< 1100	NA	**110 J**	NA	< 1000	NA	< 1100	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Chrysene	15,000	210,000	1,200	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Dibenzofuran	7,200	100,000	15	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**1,100 JB**	NA	**960 JB**	NA	**2,500 B**	NA	**1,300 B**	NA	**1,000 JB**	NA	**1,100 JB**	NA
Fluoranthene	230,000	2,200,000	8,900	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Fluorene	230,000	2,200,000	540	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Naphthalene	3,800	18,000	0.54	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Phenanthrene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
Pyrene	170,000	1,700,000	1,300	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**3,700**	NA	**3,800**	NA	**7,390**	NA	**5,800**	NA	**1,700**	NA	**1,800**	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	< 0.0007	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	< 0.0007	NA	< 0.0007	NA
4,4'-DDE	1.6	5.1	0.054	-	< 0.0004	NA	< 0.0004	NA	< 0.0004	NA	< 0.0004	NA	**0.001**	NA	< 0.0005	NA
4,4'-DDT	1.9	7	0.077	-	< 0.0012	NA	< 0.0012	NA	< 0.0012	NA	< 0.0012	NA	**0.012**	NA	< 0.0012	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0006	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0006	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0006	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0006	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0004	NA	< 0.0004	NA	< 0.0004	NA	< 0.0004	NA	< 0.0004	NA	< 0.0005	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0006	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0006	NA
Gamma-Chlordane	1.8	NLE	0.015	-	< 0.0006	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0005	NA	< 0.0006	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0003	NA	< 0.0003	NA	< 0.0003	NA	< 0.0003	NA	**0.002**	NA	< 0.0003	NA

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-7		B-8		B-9		B-10		B-11		B-12	
Sample Date					1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**5,220**	NA	**3,830**	NA	**4,680**	NA	**3,100**	NA	**1,520**	NA	**2,650**	NA
Antimony	3.1	41	0.035	ND	< 0.349	NA	**0.445**	NA	< 0.354	NA	**0.351**	NA	**0.739**	NA	**0.597**	NA
Arsenic	0.67	2.4	0.0015	22.9	**4.9**	NA	**4.51**	NA	**5.2**	NA	**2.9**	NA	**3.63**	NA	**4.88**	NA
Barium	1,500	19,000	16	32.3	**17.6**	NA	**10.1**	NA	**10**	NA	**9.4**	NA	**3.67**	NA	**4.84**	NA
Beryllium	16	200	1.9	2	**0.952**	NA	**0.698**	NA	**0.983**	NA	**0.323**	NA	**0.257**	NA	**0.444**	NA
Cadmium	7	80	0.069	ND	**0.602**	NA	**0.59**	NA	**0.539**	NA	**0.538**	NA	**0.322**	NA	**2.27**	NA
Calcium	NLE	NLE	NLE	921	**719**	NA	**153**	NA	**410**	NA	**132**	NA	**121**	NA	**230**	NA
Chromium	12,000	NLE	4,000,000	269	**49.7**	NA	**44.6**	NA	**59.9**	NA	**28.8**	NA	**20.2**	NA	**35.5**	NA
Cobalt	2.3	30	0.027	2.5	**0.762**	NA	**0.638**	NA	**0.772**	NA	**0.657**	NA	**0.416**	NA	**0.454**	NA
Copper	310	4,100	2.8	8	< 0.524	NA	**5.43**	NA	**3.26**	NA	**3.8**	NA	**4.58**	NA	**3.11**	NA
Iron	5,500	72,000	35	55,800	**23,100**	NA	**21,500**	NA	**28,200**	NA	**14,500**	NA	**11,400**	NA	**18,200**	NA
Lead	400	800	NLE	19.5	**5.82**	NA	**2.3**	NA	**2.04**	NA	**10.6**	NA	**12.1**	NA	**9.3**	NA
Magnesium	NLE	NLE	NLE	7,230	**1,450**	NA	**1,270**	NA	**1,870**	NA	**1,000**	NA	**645**	NA	**1,110**	NA
Manganese	180	2,300	2.8	90.7	**26.6**	NA	**11.7**	NA	**9.6**	NA	**18.5**	NA	**9.68**	NA	**9.91**	NA
Mercury	2.3	4.3	0.0033	ND	**0.086**	NA	**0.068**	NA	**0.028**	NA	**0.036**	NA	**0.025**	NA	**0.031**	NA
Nickel	150	2,000	2.6	8.4	**3.57**	NA	**3.24**	NA	**3.57**	NA	**2.49**	NA	**1.62**	NA	**2.37**	NA
Potassium	NLE	NLE	NLE	15,400	**2,920**	NA	**2,980**	NA	**4,680**	NA	**2,350**	NA	**1,560**	NA	**2,720**	NA
Selenium	39	510	0.052	1.9	**0.892**	NA	< 0.668	NA	**0.678**	NA	< 0.514	NA	< 0.583	NA	< 0.547	NA
Silver	39	510	0.08	1.1	< 0.524	NA	< 0.668	NA	< 0.531	NA	< 0.514	NA	< 0.583	NA	< 0.547	NA
Sodium	NLE	NLE	NLE	51.6	**108**	NA	**79.6**	NA	**89.3**	NA	**86.8**	NA	**89.6**	NA	**90.2**	NA
Thallium	0.078	1	0.0014	ND	< 0.524	NA	< 0.668	NA	< 0.531	NA	< 0.514	NA	< 0.583	NA	< 0.547	NA
Vanadium	39	510	8.6	94.1	**33.3**	NA	**33.3**	NA	**41.2**	NA	**23.5**	NA	**16.4**	NA	**29.4**	NA
Zinc	2,300	31,000	37	81.4	**33.9**	NA	**26.9**	NA	**28.3**	NA	**18.7**	NA	**19.5**	NA	**24.1**	NA

(1) The 2014-05 USEPA RSL Residential Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
< = analyte not detected above method detection limit (MDL).
Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
bgs = below ground surface.
Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
Shaded cells = concentration exceeds USEPA Residential and/or Industrial RSL.
Shaded cells = concentration exceeds all three USEPA comparison criteria.
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-13		B-14		B-15		B-16		B-17		B-18	
Sample Date					1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	**470 J**	NA	**460 J**	NA	**500 J**	NA	< 570	NA	**400 J**	NA	**470 J**
Toluene	490,000	4,500,000	76	-	NA	< 280	NA	< 300	NA	< 310	NA	< 280	NA	< 300	NA	< 290
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Acenaphthene	350,000	3,300,000	550	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Benzo(a)anthracene	150	2,100	12	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**140 J**	NA
Benzo(a)pyrene	15	210	4	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**130 J**	NA
Benzo(b)fluoranthene	150	2,100	41	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**110 J**	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	< 1100	NA	< 1100	NA	< 1100	NA	**190 JB**	NA	< 1100	NA	**140 JB**	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Chrysene	15,000	210,000	1,200	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**360 J**	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Dibenzofuran	7,200	100,000	15	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**1,100 JB**	NA	**1,400 B**	NA	**260 JB**	NA	**300 JB**	NA	**1,400 B**	NA	**760 JB**	NA
Fluoranthene	230,000	2,200,000	8,900	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**310 J**	NA
Fluorene	230,000	2,200,000	540	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Naphthalene	3,800	18,000	0.54	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1000	NA
Phenanthrene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**300 J**	NA
Pyrene	170,000	1,700,000	1,300	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**440 J**	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**1,600**	NA	**9,900**	NA	**18,300**	NA	**8,970**	NA	**5,960**	NA	**11,990**	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	< 0.0007	NA	< 0.0007	NA	< 0.0007	NA	< 0.0007	NA	< 0.0007	NA	< 0.0007	NA
4,4'-DDE	1.6	5.1	0.054	-	< 0.0004	NA	**0.002**	NA	< 0.0005	NA	< 0.0004	NA	< 0.0004	NA	< 0.0005	NA
4,4'-DDT	1.9	7	0.077	-	**0.002**	NA	**0.006**	NA	< 0.0013	NA	< 0.0012	NA	< 0.0012	NA	< 0.0012	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0005	NA	< 0.0006	NA	< 0.0006	NA	< 0.0005	NA	< 0.0006	NA	< 0.0006	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0005	NA	< 0.0006	NA	< 0.0006	NA	< 0.0005	NA	< 0.0006	NA	< 0.0006	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0004	NA	< 0.0004	NA	< 0.0005	NA	< 0.0004	NA	< 0.0004	NA	< 0.0005	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0005	NA	< 0.0006	NA	< 0.0006	NA	< 0.0005	NA	< 0.0006	NA	< 0.0006	NA
Gamma-Chlordane	1.8	NLE	0.015	-	< 0.0005	NA	**0.003**	NA	< 0.0006	NA	< 0.0005	NA	< 0.0006	NA	< 0.0006	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0003	NA	< 0.0003	NA	< 0.0003	NA	**0.001**	NA	< 0.0003	NA	< 0.0003	NA

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-13		B-14		B-15		B-16		B-17		B-18	
Sample Date					1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/20/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**5,590**	NA	**5,210**	NA	**3,740**	NA	**2,980**	NA	**3,370**	NA	**7,120**	NA
Antimony	3.1	41	0.035	ND	< 0.443	NA	< 0.457	NA	**0.752**	NA	< 0.43	NA	**0.892**	NA	< 0.428	NA
Arsenic	0.67	2.4	0.0015	22.9	**5.83**	NA	**6.77**	NA	**9.03**	NA	**4.31**	NA	**4.3**	NA	**6.31**	NA
Barium	1,500	19,000	16	32.3	**17.3**	NA	**20.4**	NA	**26.4**	NA	**7.48**	NA	**3.66**	NA	**20.9**	NA
Beryllium	16	200	1.9	2	**1.26**	NA	**1.04**	NA	**0.84**	NA	**0.58**	NA	**0.412**	NA	**1.36**	NA
Cadmium	7	80	0.069	ND	**0.648**	NA	**0.646**	NA	**0.515**	NA	**0.372**	NA	**0.252**	NA	**0.654**	NA
Calcium	NLE	NLE	NLE	921	**489**	NA	**441**	NA	**939**	NA	**102**	NA	**592**	NA	**333**	NA
Chromium	12,000	NLE	4,000,000	269	**57.2**	NA	**61.2**	NA	**39.1**	NA	**37.4**	NA	**70.1**	NA	**70.4**	NA
Cobalt	2.3	30	0.027	2.5	**0.979**	NA	**1.05**	NA	**0.708**	NA	**0.598**	NA	**0.541**	NA	**1.23**	NA
Copper	310	4,100	2.8	8	**2.03**	NA	**5.86**	NA	**11**	NA	**3.25**	NA	**2.08**	NA	**1.99**	NA
Iron	5,500	72,000	35	55,800	**30,900**	NA	**31,200**	NA	**26,200**	NA	**20,500**	NA	**12,300**	NA	**35,100**	NA
Lead	400	800	NLE	19.5	**3.36**	NA	**9.76**	NA	**54.3**	NA	**15.6**	NA	**1.33**	NA	**4.63**	NA
Magnesium	NLE	NLE	NLE	7,230	**1,920**	NA	**1,920**	NA	**1,100**	NA	**1,240**	NA	**874**	NA	**2,560**	NA
Manganese	180	2,300	2.8	90.7	**21.3**	NA	**27**	NA	**33.2**	NA	**9.99**	NA	**3.94**	NA	**18.7**	NA
Mercury	2.3	4.3	0.0033	ND	**0.04**	NA	**0.044**	NA	**0.062**	NA	< 0.023	NA	< 0.024	NA	< 0.025	NA
Nickel	150	2,000	2.6	8.4	**4.94**	NA	**4.93**	NA	**3.89**	NA	**2.73**	NA	**2.23**	NA	**5.26**	NA
Potassium	NLE	NLE	NLE	15,400	**4,170**	NA	**4,850**	NA	**2,300**	NA	**3,160**	NA	**2,510**	NA	**5,870**	NA
Selenium	39	510	0.052	1.9	< 0.665	NA	**0.763**	NA	**0.834**	NA	< 0.646	NA	< 0.678	NA	**0.732**	NA
Silver	39	510	0.08	1.1	< 0.665	NA	< 0.685	NA	< 0.687	NA	< 0.646	NA	< 0.678	NA	< 0.642	NA
Sodium	NLE	NLE	NLE	51.6	**99.5**	NA	**108**	NA	**101**	NA	**85.3**	NA	**111**	NA	**103**	NA
Thallium	0.078	1	0.0014	ND	< 0.665	NA	< 0.685	NA	< 0.687	NA	< 0.646	NA	< 0.678	NA	< 0.642	NA
Vanadium	39	510	8.6	94.1	**38.6**	NA	**41.9**	NA	**31.9**	NA	**29.7**	NA	**66.1**	NA	**44.2**	NA
Zinc	2,300	31,000	37	81.4	**46**	NA	**46.5**	NA	**38.7**	NA	**22.8**	NA	**13.8**	NA	**43.2**	NA

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(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
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NLE = No limit established.
< = analyte not detected above method detection limit (MDL).
Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
bgs = below ground surface.
Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
Shaded cells = concentration exceeds USEPA Residential and/or Industrial RSL.
Shaded cells = concentration exceeds all three USEPA comparison criteria.
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-19		B-20		B-21		B-22		B-23			
Sample Date					1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	< 540	NA	**470 J**	NA	< 610	NA	**460 J**	NA	NA	**350 J**	< 550
Toluene	490,000	4,500,000	76	-	NA	< 270	NA	< 280	NA	< 300	NA	< 280	NA	NA	< 270	< 280
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	NA	ND	ND
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Acenaphthene	350,000	3,300,000	550	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Benzo(a)anthracene	150	2,100	12	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Benzo(a)pyrene	15	210	4	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Benzo(b)fluoranthene	150	2,100	41	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	**130 JB**	< 1100	NA	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Chrysene	15,000	210,000	1,200	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Dibenzofuran	7,200	100,000	15	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	**180 J**	**120 J**	NA	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**650 JB**	NA	**680 JB**	NA	**340 JB**	NA	**270 JB**	NA	**270 JB**	**420 JB**	NA	NA
Fluoranthene	230,000	2,200,000	8,900	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Fluorene	230,000	2,200,000	540	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Naphthalene	3,800	18,000	0.54	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Phenanthrene	NLE	NLE	NLE	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
Pyrene	170,000	1,700,000	1,300	-	< 1000	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	< 1100	NA	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**6,880**	NA	**4,900**	NA	**6,500**	NA	**5,900**	NA	**15,320**	**9,900**	NA	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	< 0.0007	NA	< 0.0007	NA	< 0.0007	NA	< 0.0006	NA	< 0.0007	< 0.0006	NA	NA
4,4'-DDE	1.6	5.1	0.054	-	< 0.0004	NA	< 0.0004	NA	< 0.0005	NA	**0.002**	NA	< 0.0004	< 0.0004	NA	NA
4,4'-DDT	1.9	7	0.077	-	< 0.0012	NA	**0.002**	NA	< 0.0012	NA	**0.002**	NA	< 0.0012	< 0.0012	NA	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0006	NA	< 0.0005	NA	< 0.0006	NA	< 0.0005	NA	< 0.0006	< 0.0005	NA	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0006	NA	< 0.0005	NA	< 0.0006	NA	< 0.0005	NA	< 0.0006	< 0.0005	NA	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0004	NA	< 0.0004	NA	< 0.0005	NA	< 0.0004	NA	< 0.0004	< 0.0004	NA	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0006	NA	< 0.0005	NA	< 0.0006	NA	< 0.0005	NA	< 0.0006	< 0.0005	NA	NA
Gamma-Chlordane	1.8	NLE	0.015	-	< 0.0006	NA	< 0.0005	NA	< 0.0006	NA	< 0.0005	NA	< 0.0006	< 0.0005	NA	NA
Heptachlor	0.12	0.38	0.00016	-	**0.001**	NA	< 0.0003	NA	< 0.0003	NA	**0.001**	NA	< 0.0003	< 0.0003	NA	NA

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-19		B-20		B-21		B-22		B-23			
Sample Date					1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**3,740**	NA	**3,140**	NA	**9,430**	NA	**3,680**	NA	**7,040**	**9,910**	NA	NA
Antimony	3.1	41	0.035	ND	< 0.445	NA	**0.838**	NA	**0.715**	NA	**0.721**	NA	< 0.489	< 0.44	NA	NA
Arsenic	0.67	2.4	0.0015	22.9	**4.88**	NA	**3.03**	NA	**9.41**	NA	**4.05**	NA	**9.16**	**9.47**	NA	NA
Barium	1,500	19,000	16	32.3	**11**	NA	**3.53**	NA	**6.27**	NA	**5.13**	NA	**19.1**	**17.9**	NA	NA
Beryllium	16	200	1.9	2	**0.903**	NA	**0.292**	NA	**0.97**	NA	**0.416**	NA	**1.01**	**1.67**	NA	NA
Cadmium	7	80	0.069	ND	**0.423**	NA	**0.325**	NA	**0.516**	NA	**0.267**	NA	**0.983**	**1.14**	NA	NA
Calcium	NLE	NLE	NLE	921	**577**	NA	**469**	NA	**835**	NA	**500**	NA	**759**	**625**	NA	NA
Chromium	12,000	NLE	4,000,000	269	**42**	NA	**53.1**	NA	**129**	NA	**61.6**	NA	**63.4**	**99.1**	NA	NA
Cobalt	2.3	30	0.027	2.5	**0.616**	NA	**0.413**	NA	**0.764**	NA	**0.775**	NA	**1.53**	**1.99**	NA	NA
Copper	310	4,100	2.8	8	**1.35**	NA	**1.82**	NA	**2.1**	NA	**3.3**	NA	**6.15**	**5.21**	NA	NA
Iron	5,500	72,000	35	55,800	**25,400**	NA	**9,310**	NA	**30,900**	NA	**13,300**	NA	**33,700**	**50,700**	NA	NA
Lead	400	800	NLE	19.5	**3.08**	NA	**1.33**	NA	**2.47**	NA	**4.94**	NA	**12.2**	**9.95**	NA	NA
Magnesium	NLE	NLE	NLE	7,230	**1,080**	NA	**601**	NA	**2,430**	NA	**1,100**	NA	**1,880**	**4,020**	NA	NA
Manganese	180	2,300	2.8	90.7	**17.6**	NA	**6.45**	NA	**9.4**	NA	**14.1**	NA	**37.1**	**30.8**	NA	NA
Mercury	2.3	4.3	0.0033	ND	< 0.023	NA	< 0.024	NA	< 0.025	NA	**0.031**	NA	**0.062**	**0.068**	NA	NA
Nickel	150	2,000	2.6	8.4	**3.12**	NA	**1.8**	NA	**4.15**	NA	**2.64**	NA	**5.85**	**7.66**	NA	NA
Potassium	NLE	NLE	NLE	15,400	**2,010**	NA	**1,730**	NA	**6,940**	NA	**2,680**	NA	**4,280**	**10,600**	NA	NA
Selenium	39	510	0.052	1.9	**0.672**	NA	< 0.585	NA	**0.77**	NA	< 0.589	NA	**0.833**	**0.885**	NA	NA
Silver	39	510	0.08	1.1	< 0.667	NA	< 0.686	NA	< 0.741	NA	< 0.589	NA	< 0.734	< 0.66	NA	NA
Sodium	NLE	NLE	NLE	51.6	**96.1**	NA	**79.4**	NA	**139**	NA	**89.6**	NA	**108**	**96.3**	NA	NA
Thallium	0.078	1	0.0014	ND	< 0.667	NA	< 0.585	NA	< 0.741	NA	< 0.589	NA	< 0.734	< 0.66	NA	NA
Vanadium	39	510	8.6	94.1	**34.1**	NA	**48.1**	NA	**116**	NA	**51.8**	NA	**48.4**	**63.2**	NA	NA
Zinc	2,300	31,000	37	81.4	**25**	NA	**12.9**	NA	**22.8**	NA	**19.5**	NA	**46**	**58.3**	NA	NA

(1) The 2014-05 USEPA RSL Residential Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
< = analyte not detected above method detection limit (MDL).
Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
bgs = below ground surface.
Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
Shaded cells = concentration exceeds USEPA Residential and/or Industrial RSL.
Shaded cells = concentration exceeds all three USEPA comparison criteria.
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-24		B-25		B-26		B-27		B-28		B-29	
Sample Date					1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	< 580	NA	**590 J**	NA	**480 J**	NA	< 630	NA	**390 J**	NA	< 540
Toluene	490,000	4,500,000	76	-	NA	< 290	NA	< 360	NA	< 340	NA	< 310	NA	< 300	NA	< 270
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1200	NA
Acenaphthene	350,000	3,300,000	550	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1200	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1200	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**110 J**	NA	< 1200	NA
Benzo(a)anthracene	150	2,100	12	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**390 J**	NA	**190 J**	NA
Benzo(a)pyrene	15	210	4	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**480 J**	NA	**220 J**	NA
Benzo(b)fluoranthene	150	2,100	41	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**440 J**	NA	**150 J**	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**340 J**	NA	**180 J**	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**450 J**	NA	**140 J**	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	< 1300	NA	**450 JB**	NA	< 1100	NA	< 1100	NA	**240 JB**	NA	< 1200	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1200	NA
Chrysene	15,000	210,000	1,200	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**600 J**	NA	**240 J**	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1200	NA
Dibenzofuran	7,200	100,000	15	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1200	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1200	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**900 JB**	NA	**380 JB**	NA	**290 JB**	NA	**270 JB**	NA	**870 JB**	NA	**790 JB**	NA
Fluoranthene	230,000	2,200,000	8,900	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**750 J**	NA	**310 J**	NA
Fluorene	230,000	2,200,000	540	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1200	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**260 J**	NA	**140 J**	NA
Naphthalene	3,800	18,000	0.54	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1200	NA
Phenanthrene	NLE	NLE	NLE	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**310 J**	NA	**160 J**	NA
Pyrene	170,000	1,700,000	1,300	-	< 1300	NA	< 1100	NA	< 1100	NA	< 1100	NA	**710 J**	NA	**340 J**	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**8,500**	NA	**6,100**	NA	**1,000**	NA	**1,400**	NA	**3,620**	NA	**3,540**	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	< 0.0008	NA	**0.002**	NA	< 0.0007	NA	< 0.0007	NA	**0.013**	NA	**0.01**	NA
4,4'-DDE	1.6	5.1	0.054	-	< 0.0005	NA	**0.003**	NA	< 0.0004	NA	< 0.0004	NA	**0.005**	NA	**0.015**	NA
4,4'-DDT	1.9	7	0.077	-	< 0.0014	NA	**0.007**	NA	< 0.0012	NA	< 0.0012	NA	**0.02**	NA	**0.005**	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0006	NA	**0.002**	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	**0.001**	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0005	NA	< 0.0004	NA	< 0.0004	NA	< 0.0004	NA	< 0.0005	NA	< 0.0004	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA
Gamma-Chlordane	1.8	NLE	0.015	-	< 0.0006	NA	**0.002**	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA	< 0.0006	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0004	NA	**0.001**	NA	< 0.0003	NA	**0.001**	NA	< 0.0003	NA	< 0.0003	NA

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-24		B-25		B-26		B-27		B-28		B-29	
Sample Date					1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999	1/21/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**8,260**	NA	**5,020**	NA	**5,130**	NA	**4,970**	NA	**9,170**	NA	**6,560**	NA
Antimony	3.1	41	0.035	ND	< 0.507	NA	**0.768**	NA	**0.675**	NA	**0.965**	NA	**0.527**	NA	**0.431**	NA
Arsenic	0.67	2.4	0.0015	22.9	**8.73**	NA	**4.93**	NA	**4.58**	NA	**4.24**	NA	**9.5**	NA	**4.72**	NA
Barium	1,500	19,000	16	32.3	**12.3**	NA	**23.7**	NA	**3.75**	NA	**4.95**	NA	**70.8**	NA	**28.9**	NA
Beryllium	16	200	1.9	2	**1.55**	NA	**0.443**	NA	**0.6**	NA	**0.582**	NA	**1.31**	NA	**0.581**	NA
Cadmium	7	80	0.069	ND	**0.742**	NA	**0.79**	NA	**0.328**	NA	**0.412**	NA	**1.16**	NA	**0.568**	NA
Calcium	NLE	NLE	NLE	921	**335**	NA	**15,000**	NA	**148**	NA	**385**	NA	**2,880**	NA	**19,500**	NA
Chromium	12,000	NLE	4,000,000	269	**97.3**	NA	**38.2**	NA	**87.5**	NA	**97.5**	NA	**110**	NA	**46.3**	NA
Cobalt	2.3	30	0.027	2.5	**1.46**	NA	**2.09**	NA	**0.48**	NA	**0.971**	NA	**2.08**	NA	**3.83**	NA
Copper	310	4,100	2.8	8	**0.834**	NA	**20**	NA	**1.48**	NA	**2.47**	NA	**9.29**	NA	**10**	NA
Iron	5,500	72,000	35	55,800	**46,000**	NA	**15,000**	NA	**19,200**	NA	**17,600**	NA	**28,700**	NA	**16,500**	NA
Lead	400	800	NLE	19.5	**4.12**	NA	**40.8**	NA	**1.3**	NA	**2.59**	NA	**15.6**	NA	**16**	NA
Magnesium	NLE	NLE	NLE	7,230	**3,030**	NA	**1,930**	NA	**1,520**	NA	**1,590**	NA	**3,450**	NA	**2,050**	NA
Manganese	180	2,300	2.8	90.7	**24.9**	NA	**52.9**	NA	**4.16**	NA	**7.69**	NA	**41.5**	NA	**67.2**	NA
Mercury	2.3	4.3	0.0033	ND	< 0.026	NA	**0.864**	NA	**0.041**	NA	< 0.023	NA	**0.318**	NA	**0.09**	NA
Nickel	150	2,000	2.6	8.4	**5.91**	NA	**6.78**	NA	**4.62**	NA	**3.62**	NA	**10.5**	NA	**8.27**	NA
Potassium	NLE	NLE	NLE	15,400	**7,990**	NA	**2,100**	NA	**4,310**	NA	**4,190**	NA	**7,720**	NA	**3,370**	NA
Selenium	39	510	0.052	1.9	**1.13**	NA	**0.714**	NA	< 0.6	NA	< 0.65	NA	**1.46**	NA	**0.795**	NA
Silver	39	510	0.08	1.1	< 0.761	NA	< 0.685	NA	< 0.6	NA	< 0.65	NA	< 0.7	NA	< 0.597	NA
Sodium	NLE	NLE	NLE	51.6	**58**	NA	**144**	NA	**44.8**	NA	**65**	NA	**149**	NA	**130**	NA
Thallium	0.078	1	0.0014	ND	< 0.761	NA	< 0.685	NA	< 0.6	NA	< 0.65	NA	< 0.7	NA	< 0.597	NA
Vanadium	39	510	8.6	94.1	**54.2**	NA	**26.3**	NA	**81.6**	NA	**83.1**	NA	**47.8**	NA	**25.5**	NA
Zinc	2,300	31,000	37	81.4	**42.4**	NA	**90.4**	NA	**18.3**	NA	**20.7**	NA	**67**	NA	**91**	NA

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(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
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Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
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Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
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SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-30		B-31		B-32		B-33		B-34		B-35	
Sample Date					1/21/1999	1/21/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	< 610	NA	**400 J**	NA	< 600	NA	**400 J**	NA	**670**	NA	< 420
Toluene	490,000	4,500,000	76	-	NA	< 300	NA	< 290	NA	< 300	NA	< 320	NA	< 300	NA	< 320
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1200	NA	< 1000	NA
Acenaphthene	350,000	3,300,000	550	-	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1200	NA	< 1000	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1200	NA	< 1000	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1200	NA	**470 J**	NA	< 1100	NA	< 1100	NA	**350 J**	NA	< 1000	NA
Benzo(a)anthracene	150	2,100	12	-	< 1200	NA	< 1100	NA	**230 J**	NA	**120 J**	NA	**750 J**	NA	< 1000	NA
Benzo(a)pyrene	15	210	4	-	< 1200	NA	**980 J**	NA	**270 J**	NA	**110 J**	NA	**580 J**	NA	< 1000	NA
Benzo(b)fluoranthene	150	2,100	41	-	< 1200	NA	**1,200**	NA	**220 J**	NA	< 1100	NA	**440 J**	NA	< 1000	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	< 1200	NA	**320 J**	NA	**210 J**	NA	< 1100	NA	**330 J**	NA	< 1000	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	< 1200	NA	**970 J**	NA	**260 J**	NA	< 1100	NA	**530 J**	NA	< 1000	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	**150 JB**	NA	**230 J**	NA	**110 J**	NA	< 1100	NA	< 1200	NA	< 1000	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1200	NA	< 1000	NA
Chrysene	15,000	210,000	1,200	-	**130 J**	NA	**1,800**	NA	**290 J**	NA	**130 J**	NA	**850 J**	NA	< 1000	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1200	NA	< 1000	NA
Dibenzofuran	7,200	100,000	15	-	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1200	NA	< 1000	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1200	NA	< 1000	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**1,500 B**	NA	**210 JB**	NA	**600 JB**	NA	**420 JB**	NA	**891 JB**	NA	**140 JB**	NA
Fluoranthene	230,000	2,200,000	8,900	-	**210 J**	NA	**2,900**	NA	**410 J**	NA	**240 J**	NA	**2,100**	NA	< 1000	NA
Fluorene	230,000	2,200,000	540	-	< 1200	NA	**200 J**	NA	< 1100	NA	< 1100	NA	< 1200	NA	< 1000	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	< 1200	NA	**320 J**	NA	**160 J**	NA	< 1100	NA	**270 J**	NA	< 1000	NA
Naphthalene	3,800	18,000	0.54	-	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	NA	< 1200	NA	< 1000	NA
Phenanthrene	NLE	NLE	NLE	-	**140 J**	NA	**2,700**	NA	**170 J**	NA	< 1100	NA	**1,800**	NA	< 1000	NA
Pyrene	170,000	1,700,000	1,300	-	**190 J**	NA	**3,200**	NA	**360 J**	NA	**200 J**	NA	**1,600**	NA	< 1000	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**4,300**	NA	**10,800**	NA	**2,690**	NA	**1,300**	NA	**4,300**	NA	**2,100**	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	**0.018**	NA	**0.014**	NA	**0.027**	NA	< 0.013	NA	**0.057**	NA	< 0.0126	NA
4,4'-DDE	1.6	5.1	0.054	-	**0.023**	NA	**0.011**	NA	**0.013**	NA	< 0.0087	NA	**0.035**	NA	< 0.0084	NA
4,4'-DDT	1.9	7	0.077	-	**0.012**	NA	< 0.0234	NA	< 0.022	NA	< 0.0238	NA	< 0.0247	NA	< 0.0232	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0006	NA	< 0.0107	NA	< 0.01	NA	< 0.0108	NA	< 0.0112	NA	< 0.0105	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0006	NA	< 0.0107	NA	< 0.01	NA	< 0.0108	NA	< 0.0112	NA	< 0.0105	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0005	NA	< 0.0085	NA	< 0.008	NA	< 0.0087	NA	< 0.009	NA	< 0.0084	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0006	NA	< 0.0107	NA	< 0.01	NA	< 0.0108	NA	< 0.0112	NA	< 0.0105	NA
Gamma-Chlordane	1.8	NLE	0.015	-	< 0.0006	NA	< 0.0107	NA	< 0.01	NA	< 0.0108	NA	< 0.0112	NA	< 0.0105	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0004	NA	< 0.0064	NA	< 0.006	NA	< 0.0065	NA	< 0.0067	NA	< 0.0063	NA

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SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-30		B-31		B-32		B-33		B-34		B-35	
Sample Date					1/21/1999	1/21/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**5,520**	NA	**8,760**	NA	**14,000**	NA	**9,770**	NA	**7,690**	NA	**6,640**	NA
Antimony	3.1	41	0.035	ND	**0.771**	NA	**0.973**	NA	**1.09**	NA	**0.754**	NA	**0.748**	NA	**0.774**	NA
Arsenic	0.67	2.4	0.0015	22.9	**8.29**	NA	**9.83**	NA	**14**	NA	**16.6**	NA	**8.95**	NA	**3.51**	NA
Barium	1,500	19,000	16	32.3	**52.6**	NA	**50.3**	NA	**75.5**	NA	**41.3**	NA	**47.9**	NA	**14.2**	NA
Beryllium	16	200	1.9	2	**0.846**	NA	**1.2**	NA	**2.19**	NA	**1.39**	NA	**1.27**	NA	**0.268**	NA
Cadmium	7	80	0.069	ND	**0.725**	NA	< 0.112	NA	< 0.117	NA	< 0.111	NA	< 0.127	NA	**0.496**	NA
Calcium	NLE	NLE	NLE	921	**3,830**	NA	**5,170**	NA	**11,800**	NA	**2,170**	NA	**2,540**	NA	**518**	NA
Chromium	12,000	NLE	4,000,000	269	**77.7**	NA	**132**	NA	**258**	NA	**122**	NA	**100**	NA	**32.2**	NA
Cobalt	2.3	30	0.027	2.5	**1.22**	NA	**1.63**	NA	**1.08**	NA	**1.98**	NA	**1.38**	NA	**1.83**	NA
Copper	310	4,100	2.8	8	**8.32**	NA	**7.27**	NA	**5.82**	NA	**8.31**	NA	**8.69**	NA	**4.67**	NA
Iron	5,500	72,000	35	55,800	**18,800**	NA	**28,600**	NA	**56,700**	NA	**34,900**	NA	**20,700**	NA	**12,200**	NA
Lead	400	800	NLE	19.5	**39.8**	NA	**21.2**	NA	**6.36**	NA	**20.5**	NA	**31.1**	NA	**6.94**	NA
Magnesium	NLE	NLE	NLE	7,230	**2,780**	NA	**4,110**	NA	**8,590**	NA	**4,050**	NA	**2,710**	NA	**800**	NA
Manganese	180	2,300	2.8	90.7	**31.5**	NA	**27**	NA	**33.3**	NA	**24.5**	NA	**15.5**	NA	**40.6**	NA
Mercury	2.3	4.3	0.0033	ND	**0.055**	NA	**0.06**	NA	**0.1**	NA	**0.09**	NA	**0.08**	NA	**0.04**	NA
Nickel	150	2,000	2.6	8.4	**5.44**	NA	**7.44**	NA	**8.23**	NA	**9.44**	NA	**5.24**	NA	**4.05**	NA
Potassium	NLE	NLE	NLE	15,400	**4,800**	NA	**8,280**	NA	**18,800**	NA	**8,190**	NA	**5,540**	NA	**1,200**	NA
Selenium	39	510	0.052	1.9	**1.11**	NA	**1.64**	NA	**1.86**	NA	**1.13**	NA	**1.67**	NA	< 0.602	NA
Silver	39	510	0.08	1.1	< 0.665	NA	< 0.674	NA	< 0.7	NA	< 0.666	NA	< 0.765	NA	< 0.602	NA
Sodium	NLE	NLE	NLE	51.6	**151**	NA	**183**	NA	**328**	NA	**118**	NA	**266**	NA	**81.2**	NA
Thallium	0.078	1	0.0014	ND	< 0.665	NA	< 0.674	NA	< 0.7	NA	< 0.666	NA	< 0.765	NA	< 0.602	NA
Vanadium	39	510	8.6	94.1	**30.8**	NA	**57.3**	NA	**92.5**	NA	**54.3**	NA	**45**	NA	**27.2**	NA
Zinc	2,300	31,000	37	81.4	**45.5**	NA	**65.6**	NA	**71.2**	NA	**65.6**	NA	**42.6**	NA	**19.1**	NA

(1) The 2014-05 USEPA RSL Residential Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
< = analyte not detected above method detection limit (MDL).
Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
bgs = below ground surface.
Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
Shaded cells = concentration exceeds USEPA Residential and/or Industrial RSL.
Shaded cells = concentration exceeds all three USEPA comparison criteria.
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-36		B-37		B-38		B-39		B-40		B-41	
Sample Date					1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	< 590	NA	< 600	NA	< 600	NA	< 640	NA	< 590	NA	< 590
Toluene	490,000	4,500,000	76	-	NA	< 290	NA	< 300	NA	< 300	NA	< 320	NA	< 290	NA	< 300
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1100	NA
Acenaphthene	350,000	3,300,000	550	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1100	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**330 J**	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**590 J**	NA
Benzo(a)anthracene	150	2,100	12	-	**150 J**	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**540 J**	NA
Benzo(a)pyrene	15	210	4	-	**160 J**	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**1,800**	NA
Benzo(b)fluoranthene	150	2,100	41	-	**140 J**	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**2,400**	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**520 J**	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	**170 J**	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**1,900**	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	**140 J**	NA	< 1100	NA	< 1100	NA	**130 J**	NA	< 1100	NA	< 1100	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1100	NA
Chrysene	15,000	210,000	1,200	-	**230 J**	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**1,900**	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1100	NA
Dibenzofuran	7,200	100,000	15	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1100	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1100	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**210 JB**	NA	**440 JB**	NA	**160 JB**	NA	**1,400 B**	NA	**490 JB**	NA	**1,200 B**	NA
Fluoranthene	230,000	2,200,000	8,900	-	**260 J**	NA	**160 J**	NA	< 1100	NA	< 1000	NA	**140 J**	NA	**370 J**	NA
Fluorene	230,000	2,200,000	540	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	< 1100	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**680 J**	NA
Naphthalene	3,800	18,000	0.54	-	< 1100	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**150 J**	NA
Phenanthrene	NLE	NLE	NLE	-	**140 J**	NA	< 1100	NA	< 1100	NA	< 1000	NA	< 1100	NA	**230 J**	NA
Pyrene	170,000	1,700,000	1,300	-	**290 J**	NA	**150 J**	NA	< 1100	NA	< 1000	NA	**120 J**	NA	**600 J**	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	ND	NA	**1,600**	NA	**4,200**	NA	**5,400**	NA	**2,400**	NA	**24,500**	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	**0.017**	NA	**0.029**	NA	< 0.0123	NA	< 0.0111	NA	**0.014**	NA	**0.061**	NA
4,4'-DDE	1.6	5.1	0.054	-	**0.012**	NA	**0.017**	NA	< 0.0082	NA	< 0.0074	NA	**0.01**	NA	**0.018**	NA
4,4'-DDT	1.9	7	0.077	-	< 0.0233	NA	< 0.0236	NA	< 0.0225	NA	< 0.0204	NA	< 0.0243	NA	**0.034**	NA
Alpha-Chlordane	1.8	NLE	0.015	-	**0.023**	NA	< 0.0107	NA	< 0.0102	NA	< 0.0093	NA	< 0.0111	NA	< 0.0113	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0106	NA	< 0.0107	NA	< 0.0102	NA	< 0.0093	NA	< 0.0111	NA	< 0.0113	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0085	NA	< 0.0086	NA	< 0.0082	NA	< 0.0074	NA	< 0.0088	NA	< 0.0091	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0106	NA	< 0.0107	NA	< 0.0102	NA	< 0.0093	NA	< 0.0111	NA	< 0.0113	NA
Gamma-Chlordane	1.8	NLE	0.015	-	**0.026**	NA	< 0.0107	NA	< 0.0102	NA	< 0.0093	NA	< 0.0111	NA	< 0.0113	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0064	NA	< 0.0064	NA	< 0.0061	NA	< 0.0056	NA	< 0.0066	NA	< 0.0068	NA

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SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-36		B-37		B-38		B-39		B-40		B-41	
Sample Date					1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**10,100**	NA	**10,200**	NA	**10,100**	NA	**9,100**	NA	**9,870**	NA	**11,500**	NA
Antimony	3.1	41	0.035	ND	**0.866**	NA	**1.04**	NA	**0.605**	NA	< 0.425	NA	**0.556**	NA	**0.91**	NA
Arsenic	0.67	2.4	0.0015	22.9	**4.86**	NA	**13.8**	NA	**3.29**	NA	**5.76**	NA	**11.1**	NA	**10.4**	NA
Barium	1,500	19,000	16	32.3	**22.7**	NA	**54.2**	NA	**18.2**	NA	**23.8**	NA	**23.5**	NA	**48.8**	NA
Beryllium	16	200	1.9	2	**0.534**	NA	**1.36**	NA	**0.256**	NA	**0.524**	NA	**1.5**	NA	**1.38**	NA
Cadmium	7	80	0.069	ND	< 0.109	NA	**0.184**	NA	< 0.109	NA	< 0.106	NA	**17.4**	NA	< 0.101	NA
Calcium	NLE	NLE	NLE	921	**589**	NA	**2,700**	NA	**422**	NA	**947**	NA	**2,630**	NA	**2,100**	NA
Chromium	12,000	NLE	4,000,000	269	**55.4**	NA	**124**	NA	**29**	NA	**51.3**	NA	**117**	NA	**126**	NA
Cobalt	2.3	30	0.027	2.5	**2.28**	NA	**2.26**	NA	**2.14**	NA	**2**	NA	**2.41**	NA	**2.62**	NA
Copper	310	4,100	2.8	8	**12.1**	NA	**29.9**	NA	**6**	NA	**7.15**	NA	**13.7**	NA	**9.38**	NA
Iron	5,500	72,000	35	55,800	**18,600**	NA	**38,300**	NA	**10,600**	NA	**17,000**	NA	**40,100**	NA	**34,200**	NA
Lead	400	800	NLE	19.5	**23.2**	NA	**59.2**	NA	**5.66**	NA	**11.8**	NA	**91**	NA	**36.5**	NA
Magnesium	NLE	NLE	NLE	7,230	**1,900**	NA	**4,360**	NA	**760**	NA	**1,540**	NA	**4,290**	NA	**4,110**	NA
Manganese	180	2,300	2.8	90.7	**42.4**	NA	**51.5**	NA	**49**	NA	**38.4**	NA	**36.2**	NA	**53.9**	NA
Mercury	2.3	4.3	0.0033	ND	**0.04**	NA	**0.32**	NA	**0.05**	NA	**0.06**	NA	**0.05**	NA	**0.1**	NA
Nickel	150	2,000	2.6	8.4	**6.23**	NA	**9.54**	NA	**5.24**	NA	**6.12**	NA	**8.44**	NA	**10.8**	NA
Potassium	NLE	NLE	NLE	15,400	**3,250**	NA	**8,940**	NA	**1,170**	NA	**2,760**	NA	**9,410**	NA	**8,550**	NA
Selenium	39	510	0.052	1.9	< 0.655	NA	**0.98**	NA	< 0.656	NA	< 0.637	NA	**0.889**	NA	**1.23**	NA
Silver	39	510	0.08	1.1	< 0.655	NA	< 0.74	NA	< 0.656	NA	< 0.637	NA	< 0.708	NA	< 0.603	NA
Sodium	NLE	NLE	NLE	51.6	**102**	NA	**174**	NA	**96.2**	NA	**107**	NA	**124**	NA	**118**	NA
Thallium	0.078	1	0.0014	ND	< 0.655	NA	< 0.74	NA	< 0.656	NA	< 0.637	NA	< 0.708	NA	< 0.603	NA
Vanadium	39	510	8.6	94.1	**37.4**	NA	**54.5**	NA	**24.2**	NA	**32**	NA	**59.3**	NA	**61.9**	NA
Zinc	2,300	31,000	37	81.4	**36.8**	NA	**109**	NA	**17.8**	NA	**31.3**	NA	**1,970**	NA	**90**	NA

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D = Results from dilution of sample.
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µg/kg = micrograms per kilogram.
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Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
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SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-42		B-43		B-44		B-45		B-46			
Sample Date					1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	< 600	NA	< 600	NA	< 580	NA	< 620	NA	NA	< 590	< 630
Toluene	490,000	4,500,000	76	-	NA	< 300	NA	< 300	NA	< 290	NA	< 310	NA	NA	< 300	< 320
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	NA	ND	ND
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1100	NA	< 1200	NA	< 1100	NA	< 1100	NA	**210 J**	< 1000	NA	NA
Acenaphthene	350,000	3,300,000	550	-	< 1100	NA	< 1200	NA	< 1100	NA	< 1100	NA	**410 J**	< 1000	NA	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1100	NA	< 1200	NA	< 1100	NA	< 1100	NA	**160 J**	< 1000	NA	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1100	NA	**120 J**	NA	< 1100	NA	< 1100	NA	**2,200**	**210 J**	NA	NA
Benzo(a)anthracene	150	2,100	12	-	< 1100	NA	**390 J**	NA	< 1100	NA	< 1100	NA	**4,000**	**610 J**	NA	NA
Benzo(a)pyrene	15	210	4	-	< 1100	NA	**490 J**	NA	< 1100	NA	< 1100	NA	**3,100**	**660 J**	NA	NA
Benzo(b)fluoranthene	150	2,100	41	-	< 1100	NA	**410 J**	NA	< 1100	NA	< 1100	NA	**2,900**	**600 J**	NA	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	< 1100	NA	**240 J**	NA	< 1100	NA	< 1100	NA	**1,900**	**240 J**	NA	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	< 1100	NA	**440 J**	NA	< 1100	NA	< 1100	NA	**2,500**	**630 J**	NA	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	< 1100	NA	< 1200	NA	< 1100	NA	**110 J**	NA	**130 J**	**140 J**	NA	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1100	NA	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	< 1000	NA	NA
Chrysene	15,000	210,000	1,200	-	**220 J**	NA	**450 J**	NA	**130 J**	NA	**140 J**	NA	**4,500**	**960 J**	NA	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1100	NA	< 1200	NA	< 1100	NA	< 1100	NA	**490 J**	< 1000	NA	NA
Dibenzofuran	7,200	100,000	15	-	< 1100	NA	< 1200	NA	< 1100	NA	< 1100	NA	**460 J**	< 1000	NA	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1100	NA	< 1200	NA	< 1100	NA	< 1100	NA	< 1100	< 1000	NA	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**230 JB**	NA	**210 JB**	NA	**110 JB**	NA	**450 JB**	NA	**1,200 B**	**360 J**	NA	NA
Fluoranthene	230,000	2,200,000	8,900	-	**170 J**	NA	**650 J**	NA	**160 J**	NA	**120 J**	NA	**12,000**	**1,500**	NA	NA
Fluorene	230,000	2,200,000	540	-	< 1100	NA	< 1200	NA	< 1100	NA	< 1100	NA	**1,100 J**	< 1000	NA	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	< 1100	NA	**200 J**	NA	< 1100	NA	< 1100	NA	**1,500**	**260 J**	NA	NA
Naphthalene	3,800	18,000	0.54	-	< 1100	NA	< 1200	NA	< 1100	NA	< 1100	NA	**220 J**	< 1000	NA	NA
Phenanthrene	NLE	NLE	NLE	-	< 1100	NA	**190 J**	NA	< 1100	NA	< 1100	NA	**12,000**	**690 J**	NA	NA
Pyrene	170,000	1,700,000	1,300	-	**250 J**	NA	**630 J**	NA	**170 J**	NA	**180 J**	NA	**8,700**	**1,200**	NA	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**18,000**	NA	**8,100**	NA	**1,700**	NA	**4,100**	NA	**9,600**	**33,300**	NA	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	**0.053**	NA	**0.021**	NA	**0.014**	NA	**0.016**	NA	**0.026**	**0.04**	NA	NA
4,4'-DDE	1.6	5.1	0.054	-	**0.03**	NA	< 0.0091	NA	**0.011**	NA	**0.011**	NA	**0.018**	**0.018**	NA	NA
4,4'-DDT	1.9	7	0.077	-	< 0.0252	NA	< 0.0251	NA	< 0.024	NA	< 0.023	NA	< 0.0243	< 0.0245	NA	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0114	NA	< 0.0114	NA	< 0.0109	NA	< 0.0105	NA	< 0.011	< 0.0111	NA	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0114	NA	< 0.0114	NA	< 0.0109	NA	< 0.0105	NA	< 0.011	< 0.0111	NA	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0091	NA	< 0.0091	NA	< 0.0087	NA	< 0.0084	NA	< 0.0088	< 0.0089	NA	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0114	NA	< 0.0114	NA	< 0.0109	NA	< 0.0105	NA	< 0.011	< 0.0111	NA	NA
Gamma-Chlordane	1.8	NLE	0.015	-	< 0.0114	NA	< 0.0114	NA	< 0.0109	NA	< 0.0105	NA	< 0.011	< 0.0111	NA	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0069	NA	< 0.0069	NA	< 0.0066	NA	< 0.0063	NA	< 0.0066	< 0.0067	NA	NA

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-42		B-43		B-44		B-45		B-46			
Sample Date					1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/27/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**9,190**	NA	**14,100**	NA	**12,100**	NA	**7,360**	NA	**12,400**	**11,100**	NA	NA
Antimony	3.1	41	0.035	ND	**1.14**	NA	**0.933**	NA	**0.665**	NA	**0.547**	NA	**1.02**	**1.01**	NA	NA
Arsenic	0.67	2.4	0.0015	22.9	**12**	NA	**14.5**	NA	**10.7**	NA	**5.77**	NA	**15.3**	**11.5**	NA	NA
Barium	1,500	19,000	16	32.3	**63.1**	NA	**58.4**	NA	**20.2**	NA	**17.7**	NA	**31.2**	**29.4**	NA	NA
Beryllium	16	200	1.9	2	**1.53**	NA	**1.76**	NA	**1.12**	NA	**0.496**	NA	**1.15**	**1.04**	NA	NA
Cadmium	7	80	0.069	ND	< 0.12	NA	**0.127**	NA	< 0.104	NA	**0.218**	NA	< 0.123	< 0.125	NA	NA
Calcium	NLE	NLE	NLE	921	**2,140**	NA	**3,530**	NA	**2,010**	NA	**3,280**	NA	**1,600**	**1,310**	NA	NA
Chromium	12,000	NLE	4,000,000	269	**138**	NA	**180**	NA	**98.5**	NA	**48.2**	NA	**110**	**98.5**	NA	NA
Cobalt	2.3	30	0.027	2.5	**1.62**	NA	**2.92**	NA	**3.44**	NA	**1.98**	NA	**2.35**	**2.23**	NA	NA
Copper	310	4,100	2.8	8	**12.6**	NA	**12.3**	NA	**16.5**	NA	**8.03**	NA	**12.3**	**19**	NA	NA
Iron	5,500	72,000	35	55,800	**36,000**	NA	**47,700**	NA	**36,000**	NA	**16,900**	NA	**30,300**	**30,100**	NA	NA
Lead	400	800	NLE	19.5	**37.8**	NA	**36.7**	NA	**6.12**	NA	**10.9**	NA	**18.3**	**18.6**	NA	NA
Magnesium	NLE	NLE	NLE	7,230	**4,330**	NA	**6,170**	NA	**4,070**	NA	**1,670**	NA	**3,850**	**3,320**	NA	NA
Manganese	180	2,300	2.8	90.7	**28.6**	NA	**78.5**	NA	**55.9**	NA	**45.5**	NA	**52.4**	**49.4**	NA	NA
Mercury	2.3	4.3	0.0033	ND	**0.11**	NA	**0.19**	NA	**0.06**	NA	**0.09**	NA	**0.08**	**0.09**	NA	NA
Nickel	150	2,000	2.6	8.4	**8.54**	NA	**13.3**	NA	**5.88**	NA	**5.63**	NA	**8.01**	**6.82**	NA	NA
Potassium	NLE	NLE	NLE	15,400	**9,200**	NA	**12,700**	NA	**7,550**	NA	**2,600**	NA	**7,180**	**6,330**	NA	NA
Selenium	39	510	0.052	1.9	**2.19**	NA	**1.85**	NA	< 0.625	NA	**0.84**	NA	**1.09**	**1.09**	NA	NA
Silver	39	510	0.08	1.1	< 0.722	NA	< 0.713	NA	< 0.625	NA	< 0.703	NA	< 0.738	< 0.749	NA	NA
Sodium	NLE	NLE	NLE	51.6	**189**	NA	**239**	NA	**275**	NA	**171**	NA	**269**	**210**	NA	NA
Thallium	0.078	1	0.0014	ND	< 0.722	NA	< 0.713	NA	< 0.625	NA	< 0.703	NA	< 0.738	< 0.749	NA	NA
Vanadium	39	510	8.6	94.1	**54.8**	NA	**80.7**	NA	**65.5**	NA	**32.7**	NA	**58.7**	**52.4**	NA	NA
Zinc	2,300	31,000	37	81.4	**74.4**	NA	**126**	NA	**42.7**	NA	**37.9**	NA	**66.5**	**60**	NA	NA

(1) The 2014-05 USEPA RSL Residential Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
< = analyte not detected above method detection limit (MDL).
Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
bgs = below ground surface.
Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
Shaded cells = concentration exceeds USEPA Residential and/or Industrial RSL.
Shaded cells = concentration exceeds all three USEPA comparison criteria.
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-47		B-48		B-49		B-50		B-51		B-52	
Sample Date					1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	< 610	NA	< 620	NA	< 590	NA	< 640	NA	< 600	NA	< 630
Toluene	490,000	4,500,000	76	-	NA	< 300	NA	< 310	NA	< 300	NA	< 320	NA	< 300	NA	< 310
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1100	NA	**130 J**	NA	< 1000	NA	< 1000	NA	< 1100	NA	< 1000	NA
Acenaphthene	350,000	3,300,000	550	-	< 1100	NA	**640 J**	NA	< 1000	NA	< 1000	NA	< 1100	NA	< 1000	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	**210 J**	NA	< 1000	NA	< 1100	NA	< 1000	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1100	NA	**650 J**	NA	**180 J**	NA	< 1000	NA	< 1100	NA	< 1000	NA
Benzo(a)anthracene	150	2,100	12	-	**230 J**	NA	**460 J**	NA	**370 J**	NA	< 1000	NA	< 1100	NA	< 1000	NA
Benzo(a)pyrene	15	210	4	-	**200 J**	NA	**350 J**	NA	**510 J**	NA	< 1000	NA	< 1100	NA	< 1000	NA
Benzo(b)fluoranthene	150	2,100	41	-	**160 J**	NA	**320 J**	NA	**460 J**	NA	< 1000	NA	< 1100	NA	< 1000	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	**120 J**	NA	**170 J**	NA	**290 J**	NA	< 1000	NA	< 1100	NA	< 1000	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	**150 J**	NA	**290 J**	NA	**420 J**	NA	< 1000	NA	< 1100	NA	< 1000	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	**150 J**	NA	**140 J**	NA	**160 J**	NA	< 1000	NA	**150 J**	NA	**160 J**	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1100	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	NA	< 1000	NA
Chrysene	15,000	210,000	1,200	-	**360 J**	NA	**520 J**	NA	**750 J**	NA	< 1000	NA	< 1100	NA	**200 J**	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1100	NA	< 1100	NA	**190 J**	NA	< 1000	NA	< 1100	NA	< 1000	NA
Dibenzofuran	7,200	100,000	15	-	< 1100	NA	**1,100**	NA	< 1000	NA	< 1000	NA	< 1100	NA	< 1000	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1100	NA	< 1100	NA	< 1000	NA	< 1000	NA	< 1100	NA	< 1000	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**1,500 B**	NA	**780 JB**	NA	**430 JB**	NA	**800 JB**	NA	**2,000 B**	NA	**390 JB**	NA
Fluoranthene	230,000	2,200,000	8,900	-	**520 J**	NA	**1,900**	NA	**560 J**	NA	< 1000	NA	< 1100	NA	**170 J**	NA
Fluorene	230,000	2,200,000	540	-	< 1100	NA	**910 J**	NA	< 1000	NA	< 1000	NA	< 1100	NA	< 1000	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	< 1100	NA	**140 J**	NA	**250 J**	NA	< 1000	NA	< 1100	NA	< 1000	NA
Naphthalene	3,800	18,000	0.54	-	< 1100	NA	**480 J**	NA	< 1000	NA	< 1000	NA	< 1100	NA	< 1000	NA
Phenanthrene	NLE	NLE	NLE	-	**580 J**	NA	**1,200**	NA	**280 J**	NA	< 1000	NA	< 1100	NA	**170 J**	NA
Pyrene	170,000	1,700,000	1,300	-	**620 J**	NA	**1,500**	NA	**770 J**	NA	< 1000	NA	< 1100	NA	**180 J**	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**4,800**	NA	**3,800**	NA	**9,100**	NA	**2,600**	NA	**5,000**	NA	**8,760**	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	**0.138**	NA	**0.079**	NA	**0.016**	NA	**0.039**	NA	**0.023**	NA	**0.048**	NA
4,4'-DDE	1.6	5.1	0.054	-	**0.051**	NA	**0.032**	NA	**0.009**	NA	**0.018**	NA	**0.023**	NA	**0.038**	NA
4,4'-DDT	1.9	7	0.077	-	**0.052**	NA	**0.03**	NA	< 0.0238	NA	< 0.0242	NA	< 0.025	NA	**0.073**	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0109	NA	< 0.0111	NA	< 0.0108	NA	< 0.011	NA	< 0.0113	NA	< 0.011	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0109	NA	< 0.0111	NA	< 0.0108	NA	< 0.011	NA	< 0.0113	NA	< 0.011	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0087	NA	< 0.0088	NA	< 0.0087	NA	< 0.0088	NA	< 0.0091	NA	**0.013**	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0109	NA	< 0.0111	NA	< 0.0108	NA	< 0.011	NA	< 0.0113	NA	< 0.011	NA
Gamma-Chlordane	1.8	NLE	0.015	-	< 0.0109	NA	< 0.0111	NA	< 0.0108	NA	< 0.011	NA	< 0.0113	NA	< 0.011	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0065	NA	< 0.0066	NA	< 0.0065	NA	< 0.0066	NA	< 0.0068	NA	< 0.0066	NA

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-47		B-48		B-49		B-50		B-51		B-52	
Sample Date					1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**10,700**	NA	**7,930**	NA	**11,200**	NA	**13,600**	NA	**12,200**	NA	**8,510**	NA
Antimony	3.1	41	0.035	ND	**0.837**	NA	**1.03**	NA	< 0.464	NA	**0.997**	NA	**1.1**	NA	**1.56**	NA
Arsenic	0.67	2.4	0.0015	22.9	**21.5**	NA	**11.1**	NA	**8.33**	NA	**11.7**	NA	**12.4**	NA	**27.2**	NA
Barium	1,500	19,000	16	32.3	**48.9**	NA	**36.2**	NA	**20.7**	NA	**33.3**	NA	**42.3**	NA	**63.2**	NA
Beryllium	16	200	1.9	2	**1.44**	NA	**0.873**	NA	**0.87**	NA	**1.55**	NA	**1.34**	NA	**1.19**	NA
Cadmium	7	80	0.069	ND	< 0.114	NA	**0.338**	NA	< 0.116	NA	< 0.113	NA	**0.668**	NA	< 0.128	NA
Calcium	NLE	NLE	NLE	921	**1,660**	NA	**2,070**	NA	**3,210**	NA	**1,880**	NA	**1,200**	NA	**2,140**	NA
Chromium	12,000	NLE	4,000,000	269	**157**	NA	**81.4**	NA	**85.9**	NA	**150**	NA	**117**	NA	**131**	NA
Cobalt	2.3	30	0.027	2.5	**1.88**	NA	**2.1**	NA	**3.94**	NA	**2.37**	NA	**2.48**	NA	**1.46**	NA
Copper	310	4,100	2.8	8	**16.6**	NA	**14**	NA	**18.3**	NA	**8.62**	NA	**14.2**	NA	**8.44**	NA
Iron	5,500	72,000	35	55,800	**40,400**	NA	**24,600**	NA	**28,000**	NA	**45,100**	NA	**36,200**	NA	**38,400**	NA
Lead	400	800	NLE	19.5	**33**	NA	**30**	NA	**15.4**	NA	**16.2**	NA	**64.3**	NA	**28.4**	NA
Magnesium	NLE	NLE	NLE	7,230	**4,590**	NA	**2,730**	NA	**3,320**	NA	**5,360**	NA	**4,430**	NA	**4,010**	NA
Manganese	180	2,300	2.8	90.7	**45.9**	NA	**34.9**	NA	**73.3**	NA	**55.8**	NA	**40.4**	NA	**31.4**	NA
Mercury	2.3	4.3	0.0033	ND	**0.08**	NA	**0.04**	NA	**0.25**	NA	**0.11**	NA	**0.69**	NA	**0.1**	NA
Nickel	150	2,000	2.6	8.4	**9.17**	NA	**8.24**	NA	**11**	NA	**7.8**	NA	**9.15**	NA	**8.01**	NA
Potassium	NLE	NLE	NLE	15,400	**9,630**	NA	**5,300**	NA	**5,320**	NA	**10,500**	NA	**9,560**	NA	**8,340**	NA
Selenium	39	510	0.052	1.9	**1.47**	NA	**1.13**	NA	< 0.696	NA	**1.13**	NA	**1.07**	NA	**2.96**	NA
Silver	39	510	0.08	1.1	< 0.687	NA	< 0.71	NA	< 0.696	NA	< 0.676	NA	**2.56**	NA	< 0.768	NA
Sodium	NLE	NLE	NLE	51.6	**182**	NA	**161**	NA	**132**	NA	**178**	NA	**161**	NA	**274**	NA
Thallium	0.078	1	0.0014	ND	< 0.687	NA	< 0.71	NA	< 0.696	NA	< 0.676	NA	< 0.762	NA	< 0.768	NA
Vanadium	39	510	8.6	94.1	**65.9**	NA	**41.7**	NA	**53.9**	NA	**80.2**	NA	**60.3**	NA	**55.4**	NA
Zinc	2,300	31,000	37	81.4	**76.7**	NA	**84.2**	NA	**51.2**	NA	**76**	NA	**186**	NA	**63.6**	NA

(1) The 2014-05 USEPA RSL Residential Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
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NLE = No limit established.
< = analyte not detected above method detection limit (MDL).
Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
bgs = below ground surface.
Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
Shaded cells = concentration exceeds USEPA Residential and/or Industrial RSL.
Shaded cells = concentration exceeds all three USEPA comparison criteria.
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-53		B-54		B-55		B-56		B-57		B-58	
Sample Date					1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999
Volatile Organic Compounds (µg/kg)																
Methylene Chloride	35,000	310,000	2.7	-	NA	< 570	NA	< 570	NA	< 600	NA	**440 J**	NA	< 590	NA	< 630
Toluene	490,000	4,500,000	76	-	NA	< 290	NA	< 290	NA	< 300	NA	< 300	NA	< 300	NA	< 310
TIC VOCs (µg/kg)																
Total TIC, Volatile	NLE	NLE	NLE	-	NA	ND	NA	ND	NA	ND	NA	ND	NA	**2,600**	NA	**2,900**
Semivolatile Organic Compounds (µg/kg)																
2-Methylnaphthalene	23,000	220,000	19	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	< 1100	NA
Acenaphthene	350,000	3,300,000	550	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	< 1100	NA
Acenaphthylene	NLE	NLE	NLE	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	< 1100	NA
Anthracene	1,700,000	17,000,000	5,800	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	**120 J**	NA
Benzo(a)anthracene	150	2,100	12	-	**350 J**	NA	< 1100	NA	**130 J**	NA	< 5700	NA	**270 J**	NA	**310 J**	NA
Benzo(a)pyrene	15	210	4	-	**360 J**	NA	< 1100	NA	**140 J**	NA	< 5700	NA	**340 J**	NA	**350 J**	NA
Benzo(b)fluoranthene	150	2,100	41	-	**350 J**	NA	< 1100	NA	**150 J**	NA	< 5700	NA	**310 J**	NA	**350 J**	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	**190 J**	NA	< 1100	NA	< 1100	NA	< 5700	NA	**190 J**	NA	**200 J**	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	**390 J**	NA	< 1100	NA	**150 J**	NA	< 5700	NA	**320 J**	NA	**360 J**	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	< 1100	NA	**120 J**	NA	**180 J**	NA	< 5700	NA	**230 JB**	NA	**620 JB**	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	**120 J**	NA
Chrysene	15,000	210,000	1,200	-	**590 J**	NA	< 1100	NA	**240 J**	NA	**650 JD**	NA	**550 J**	NA	**680 J**	NA
Dibenz(a,h)anthracene	15	210	13	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	< 1100	NA
Dibenzofuran	7,200	100,000	15	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	< 1100	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	< 1100	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**400 JB**	NA	**400 JB**	NA	**350 JB**	NA	< 5700	NA	**1,800 B**	NA	**1,100 JB**	NA
Fluoranthene	230,000	2,200,000	8,900	-	**640 J**	NA	< 1100	NA	**210 J**	NA	< 5700	NA	**430 J**	NA	**630 J**	NA
Fluorene	230,000	2,200,000	540	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	< 1100	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	**190 J**	NA	< 1100	NA	< 1100	NA	< 5700	NA	**170 J**	NA	**190 J**	NA
Naphthalene	3,800	18,000	0.54	-	< 1100	NA	< 1100	NA	< 1100	NA	< 5700	NA	< 1100	NA	< 1100	NA
Phenanthrene	NLE	NLE	NLE	-	**310 J**	NA	< 1100	NA	< 1100	NA	< 5700	NA	**210 J**	NA	**230 J**	NA
Pyrene	170,000	1,700,000	1,300	-	**610 J**	NA	< 1100	NA	**200 J**	NA	< 5700	NA	**450 J**	NA	**600 J**	NA
TIC SVOCs (µg/kg)																
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**28,800**	NA	**2,300**	NA	**9,640**	NA	ND	NA	**5,400**	NA	**6,800**	NA
Pesticides & PCBs (mg/kg)																
4,4'-DDD	2.2	7.2	0.0072	-	**0.079**	NA	< 0.0127	NA	**0.114**	NA	**0.084**	NA	**0.074**	NA	**0.106**	NA
4,4'-DDE	1.6	5.1	0.054	-	**0.026**	NA	< 0.0084	NA	**0.037**	NA	**0.043**	NA	**0.02**	NA	**0.032**	NA
4,4'-DDT	1.9	7	0.077	-	**0.027**	NA	< 0.0232	NA	< 0.0242	NA	**0.094**	NA	< 0.0235	NA	**0.03**	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0111	NA	< 0.0106	NA	< 0.011	NA	< 0.011	NA	< 0.0107	NA	< 0.0108	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0111	NA	< 0.0106	NA	< 0.011	NA	< 0.011	NA	< 0.0107	NA	< 0.0108	NA
Endosulfan II	NLE	NLE	NLE	-	**0.014**	NA	**0.01**	NA	< 0.0088	NA	< 0.0088	NA	< 0.0086	NA	< 0.0087	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0111	NA	**0.011**	NA	< 0.011	NA	< 0.011	NA	< 0.0107	NA	< 0.0108	NA
Gamma-Chlordane	1.8	NLE	0.015	-	**0.013**	NA	< 0.0106	NA	< 0.011	NA	< 0.011	NA	< 0.0107	NA	< 0.0108	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0067	NA	< 0.0063	NA	< 0.0066	NA	< 0.0066	NA	< 0.0064	NA	< 0.0065	NA

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-53		B-54		B-55		B-56		B-57		B-58	
Sample Date					1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	1/28/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999
Inorganics (mg/kg)																
Aluminum	7,700	99,000	3,000	15,200	**11,200**	NA	**9,050**	NA	**14,200**	NA	**11,500**	NA	**11,600**	NA	**12,600**	NA
Antimony	3.1	41	0.035	ND	**1.41**	NA	< 0.365	NA	**1.43**	NA	**1.08**	NA	**0.903**	NA	**1.31**	NA
Arsenic	0.67	2.4	0.0015	22.9	**14.3**	NA	**2.95**	NA	**13.9**	NA	**12.8**	NA	**10.5**	NA	**13.2**	NA
Barium	1,500	19,000	16	32.3	**47.7**	NA	**13.2**	NA	**65.7**	NA	**52.9**	NA	**51.5**	NA	**53.9**	NA
Beryllium	16	200	1.9	2	**1.52**	NA	**0.179**	NA	**1.73**	NA	**1.51**	NA	**1.23**	NA	**1.45**	NA
Cadmium	7	80	0.069	ND	**0.294**	NA	**0.194**	NA	< 0.12	NA	**0.235**	NA	**0.174**	NA	< 0.12	NA
Calcium	NLE	NLE	NLE	921	**1,760**	NA	**266**	NA	**1,750**	NA	**1,970**	NA	**2,370**	NA	**2,030**	NA
Chromium	12,000	NLE	4,000,000	269	**151**	NA	**27.1**	NA	**151**	NA	**143**	NA	**115**	NA	**136**	NA
Cobalt	2.3	30	0.027	2.5	**1.96**	NA	**1.4**	NA	**3.1**	NA	**1.84**	NA	**2.63**	NA	**2.91**	NA
Copper	310	4,100	2.8	8	**10.9**	NA	**4.52**	NA	**18.3**	NA	**10.6**	NA	**18.7**	NA	**18.7**	NA
Iron	5,500	72,000	35	55,800	**37,900**	NA	**8,710**	NA	**50,400**	NA	**34,400**	NA	**34,200**	NA	**40,600**	NA
Lead	400	800	NLE	19.5	**25.1**	NA	**18.4**	NA	**58**	NA	**43.5**	NA	**66.2**	NA	**53.7**	NA
Magnesium	NLE	NLE	NLE	7,230	**4,560**	NA	**515**	NA	**5,990**	NA	**4,130**	NA	**3,940**	NA	**4,690**	NA
Manganese	180	2,300	2.8	90.7	**30.3**	NA	**26.7**	NA	**36.6**	NA	**33.1**	NA	**47.2**	NA	**49.5**	NA
Mercury	2.3	4.3	0.0033	ND	**0.14**	NA	**0.03**	NA	**0.76**	NA	**0.08**	NA	**1.24**	NA	**0.53**	NA
Nickel	150	2,000	2.6	8.4	**10.9**	NA	**4.61**	NA	**10.6**	NA	**9.75**	NA	**10.8**	NA	**11.5**	NA
Potassium	NLE	NLE	NLE	15,400	**9,530**	NA	**843**	NA	**12,700**	NA	**8,140**	NA	**7,890**	NA	**9,500**	NA
Selenium	39	510	0.052	1.9	**2.12**	NA	< 0.547	NA	**1.38**	NA	**1.68**	NA	**1.44**	NA	**1.13**	NA
Silver	39	510	0.08	1.1	< 0.635	NA	< 0.547	NA	**1.31**	NA	< 0.731	NA	**4.22**	NA	**2.3**	NA
Sodium	NLE	NLE	NLE	51.6	**104**	NA	**208**	NA	**258**	NA	**151**	NA	**283**	NA	**257**	NA
Thallium	0.078	1	0.0014	ND	< 0.635	NA	< 0.547	NA	< 0.718	NA	< 0.731	NA	< 0.716	NA	< 0.72	NA
Vanadium	39	510	8.6	94.1	**63.4**	NA	**20.2**	NA	**71.1**	NA	**66.9**	NA	**61.9**	NA	**66.6**	NA
Zinc	2,300	31,000	37	81.4	**82.8**	NA	**13.5**	NA	**109**	NA	**99.6**	NA	**134**	NA	**277**	NA

(1) The 2014-05 USEPA RSL Residential Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
< = analyte not detected above method detection limit (MDL).
Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
bgs = below ground surface.
Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
Shaded cells = concentration exceeds USEPA Residential and/or Industrial RSL.
Shaded cells = concentration exceeds all three USEPA comparison criteria.
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-59				B-60		B-61		B-62	
Sample Date					2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999
Volatile Organic Compounds (µg/kg)														
Methylene Chloride	35,000	310,000	2.7	-	NA	NA	**450 J**	< 610	NA	**360 J**	NA	< 660	NA	< 510
Toluene	490,000	4,500,000	76	-	NA	NA	< 320	< 310	NA	< 290	NA	< 330	NA	< 250
TIC VOCs (µg/kg)														
Total TIC, Volatile	NLE	NLE	NLE	-	NA	NA	ND	ND	NA	ND	NA	**2,900**	NA	ND
Semivolatile Organic Compounds (µg/kg)														
2-Methylnaphthalene	23,000	220,000	19	-	< 1100	< 1000	NA	NA	< 1100	NA	< 1100	NA	< 1200	NA
Acenaphthene	350,000	3,300,000	550	-	< 1100	< 1000	NA	NA	< 1100	NA	< 1100	NA	< 1200	NA
Acenaphthylene	NLE	NLE	NLE	-	**410 J**	**350 J**	NA	NA	< 1100	NA	< 1100	NA	< 1200	NA
Anthracene	1,700,000	17,000,000	5,800	-	**190 J**	**180 J**	NA	NA	< 1100	NA	**120 J**	NA	< 1200	NA
Benzo(a)anthracene	150	2,100	12	-	**740 J**	**640 J**	NA	NA	**140 J**	NA	**370 J**	NA	< 1200	NA
Benzo(a)pyrene	15	210	4	-	**810 J**	**800 J**	NA	NA	**150 J**	NA	**420 J**	NA	< 1200	NA
Benzo(b)fluoranthene	150	2,100	41	-	**660 J**	**610 J**	NA	NA	**140 J**	NA	**360 J**	NA	< 1200	NA
Benzo(ghi)perylene	NLE	NLE	NLE	-	**380 J**	**340 J**	NA	NA	**130 J**	NA	**300 J**	NA	< 1200	NA
Benzo(k)fluoranthene	1,500	21,000	400	-	**670 J**	**690 J**	NA	NA	**150 J**	NA	**380 J**	NA	< 1200	NA
Bis(2-Ethylhexyl)phthalate	38,000	120,000	1,300	-	**210 JB**	**230 JB**	NA	NA	**230 JB**	NA	**220 JB**	NA	< 1200	NA
Butyl benzyl phthalate	280,000	910,000	230	-	< 1100	< 1000	NA	NA	< 1100	NA	< 1100	NA	< 1200	NA
Chrysene	15,000	210,000	1,200	-	**1,600**	**1,400**	NA	NA	**290 J**	NA	**730 J**	NA	< 1200	NA
Dibenz(a,h)anthracene	15	210	13	-	**200 J**	**190 J**	NA	NA	< 1100	NA	**140 J**	NA	< 1200	NA
Dibenzofuran	7,200	100,000	15	-	< 1100	< 1000	NA	NA	< 1100	NA	< 1100	NA	< 1200	NA
Diethyl phthalate	4,900,000	49,000,000	610	-	< 1100	< 1000	NA	NA	< 1100	NA	**140 J**	NA	< 1200	NA
Di-n-butylphthalate	620,000	6,200,000	230	-	**280 JB**	**260 JB**	NA	NA	**260 JB**	NA	**790 JB**	NA	< 1200	NA
Fluoranthene	230,000	2,200,000	8,900	-	**790 J**	**860 J**	NA	NA	**220 J**	NA	**610 J**	NA	< 1200	NA
Fluorene	230,000	2,200,000	540	-	< 1100	< 1000	NA	NA	< 1100	NA	< 1100	NA	< 1200	NA
Indeno(1,2,3-cd)pyrene	150	2,100	240	-	**330 J**	**320 J**	NA	NA	**120 J**	NA	**280 J**	NA	< 1200	NA
Naphthalene	3,800	18,000	0.54	-	< 1100	< 1000	NA	NA	< 1100	NA	< 1100	NA	< 1200	NA
Phenanthrene	NLE	NLE	NLE	-	**280 J**	**360 J**	NA	NA	< 1100	NA	**230 J**	NA	< 1200	NA
Pyrene	170,000	1,700,000	1,300	-	**1,200**	**1,100**	NA	NA	**230 J**	NA	**620 J**	NA	< 1200	NA
TIC SVOCs (µg/kg)														
Total TIC, Semi-Volatile	NLE	NLE	NLE	-	**4,600**	**5,200**	NA	NA	**7,800**	NA	**8,680**	NA	NA	NA
Pesticides & PCBs (mg/kg)														
4,4'-DDD	2.2	7.2	0.0072	-	**0.032**	**0.025**	NA	NA	**0.031**	NA	**0.053**	NA	**0.074**	NA
4,4'-DDE	1.6	5.1	0.054	-	**0.024**	**0.019**	NA	NA	**0.019**	NA	**0.022**	NA	**0.029**	NA
4,4'-DDT	1.9	7	0.077	-	**0.089**	**0.081**	NA	NA	**0.053**	NA	**0.027**	NA	**0.033**	NA
Alpha-Chlordane	1.8	NLE	0.015	-	< 0.0107	< 0.0106	NA	NA	< 0.0112	NA	< 0.0111	NA	< 0.0115	NA
Dieldrin	0.033	0.11	0.000069	-	< 0.0107	< 0.0106	NA	NA	< 0.0112	NA	< 0.0111	NA	< 0.0115	NA
Endosulfan II	NLE	NLE	NLE	-	< 0.0086	< 0.0085	NA	NA	< 0.009	NA	< 0.0089	NA	< 0.0092	NA
Endrin aldehyde	1.8	18	0.0092	-	< 0.0107	< 0.0106	NA	NA	< 0.0112	NA	< 0.0111	NA	< 0.0115	NA
Gamma-Chlordane	1.8	NLE	0.015	-	< 0.0107	< 0.0106	NA	NA	< 0.0112	NA	< 0.0111	NA	< 0.0115	NA
Heptachlor	0.12	0.38	0.00016	-	< 0.0064	< 0.0064	NA	NA	< 0.0067	NA	< 0.0067	NA	< 0.0069	NA

TABLE 4.2
SOIL SAMPLING SUMMARY RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Loc ID	2014-05 USEPA RSL Residential Soil (HQ=0.1)[1]	2013-11 USEPA RSL Industrial Soil (HQ=0.1) [2]	2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1)[3]	Weston 1995 Background (Main Post)	B-59				B-60		B-61		B-62	
Sample Date					2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999	2/9/1999
Inorganics (mg/kg)														
Aluminum	7,700	99,000	3,000	15,200	**9,750**	**8,760**	NA	NA	**8,030**	NA	**7,710**	NA	**7,120**	NA
Antimony	3.1	41	0.035	ND	**0.939**	**0.669**	NA	NA	**1.04**	NA	**1.03**	NA	**0.676**	NA
Arsenic	0.67	2.4	0.0015	22.9	**13.4**	**12.8**	NA	NA	**17.8**	NA	**10.2**	NA	**8.97**	NA
Barium	1,500	19,000	16	32.3	**39.7**	**33.9**	NA	NA	**58.1**	NA	**28.8**	NA	**30.5**	NA
Beryllium	16	200	1.9	2	**1.35**	**1.23**	NA	NA	**1.24**	NA	**0.827**	NA	**0.814**	NA
Cadmium	7	80	0.069	ND	**0.344**	**0.521**	NA	NA	< 0.111	NA	**0.249**	NA	**0.268**	NA
Calcium	NLE	NLE	NLE	921	**1,520**	**1,310**	NA	NA	**1,220**	NA	**1,610**	NA	**1,730**	NA
Chromium	12,000	NLE	4,000,000	269	**112**	**101**	NA	NA	**123**	NA	**74.4**	NA	**67.7**	NA
Cobalt	2.3	30	0.027	2.5	**2.85**	**2.4**	NA	NA	**0.867**	NA	**1.84**	NA	**1.93**	NA
Copper	310	4,100	2.8	8	**13.2**	**11**	NA	NA	**5.9**	NA	**14.6**	NA	**13.1**	NA
Iron	5,500	72,000	35	55,800	**35,300**	**32,400**	NA	NA	**34,300**	NA	**25,600**	NA	**21,500**	NA
Lead	400	800	NLE	19.5	**36.6**	**35.1**	NA	NA	**6.12**	NA	**39.2**	NA	**40.8**	NA
Magnesium	NLE	NLE	NLE	7,230	**4,000**	**3,630**	NA	NA	**3,600**	NA	**2,360**	NA	**2,120**	NA
Manganese	180	2,300	2.8	90.7	**80.5**	**41.9**	NA	NA	**19.1**	NA	**37.8**	NA	**24.5**	NA
Mercury	2.3	4.3	0.0033	ND	**0.3**	**0.21**	NA	NA	**0.05**	NA	**0.29**	NA	**0.15**	NA
Nickel	150	2,000	2.6	8.4	**11.3**	**9.81**	NA	NA	**4.89**	NA	**7.6**	NA	**7.42**	NA
Potassium	NLE	NLE	NLE	15,400	**8,020**	**7,560**	NA	NA	**8,160**	NA	**4,730**	NA	**4,260**	NA
Selenium	39	510	0.052	1.9	**1.77**	**1.36**	NA	NA	**2.85**	NA	**1.37**	NA	**0.973**	NA
Silver	39	510	0.08	1.1	**0.972**	< 0.759	NA	NA	< 0.668	NA	< 0.681	NA	< 0.724	NA
Sodium	NLE	NLE	NLE	51.6	**192**	**114**	NA	NA	**236**	NA	**90.4**	NA	**109**	NA
Thallium	0.078	1	0.0014	ND	< 0.726	< 0.759	NA	NA	< 0.668	NA	< 0.681	NA	< 0.724	NA
Vanadium	39	510	8.6	94.1	**49.3**	**39.9**	NA	NA	**40**	NA	**39.9**	NA	**34.7**	NA
Zinc	2,300	31,000	37	81.4	**119**	**118**	NA	NA	**50.6**	NA	**107**	NA	**95.7**	NA

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(2) The 2013-11 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 11/30/2013 http://www.epa.gov/region9/superfund/prg/

(3) The 2014-05 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Region 9 Regional Screening Levels (HQ=0.1) - 5/31/2014 (Last revised) http://www.epa.gov/region9/superfund/prg/

B = Analyte detected in both sample and blank.
D = Results from dilution of sample.
DUP = field duplicate sample.
J = Analyte detected between MDL and practical quantitation limit (PQL).
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
< = analyte not detected above method detection limit (MDL).
Dash (--) = only background concentrations for metals are being used as comparison criteria.
µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram.
VOCs = volatile organic compounds.
in. = inches.
bgs = below ground surface.
Shaded cells = concentration exceeds USEPA Groundwater Protection RSL.
Shaded cells = concentration exceeds USEPA Residential and/or Industrial RSL.
Shaded cells = concentration exceeds all three USEPA comparison criteria.
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.3
SOIL SAMPLING SUMMARY OF EXCEEDANCES
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Analyte	Maximum Detected Concentration		Location of Maximum Concentration	Number of Samples	Number of Detections	Number of Exceedances							Evaluated as COPC in Risk Assessment?	Rationale
						Residential Direct Contact		Non-Residential Direct Contact		Impact to Groundwater		Background		
						NJDEP RDCSRS [1]	USEPEA Residential RSL [2]	NJDEP NRDCSRS	USEPA Industrial RSL	NJDEP Impact to Groundwater [3]	USEPA Groundwater Protection RSL	Maximum Background (Weston, 1995) [4]		
Volatile Organic Compounds (µg/kg)														
Methylene Chloride	670		B-34	65	17	0	0	0	0	17	17	--	No	No Residential RSL exceedances
Toluene	0.33		B-1	65	1	0	0	0	0	0	0	--	No	No Residential RSL exceedances
TICs	2900		B-58	65	3	NLE	NLE	NLE	NLE	NLE	NLE	--	No	No RSLs established
Semi-Volatile Organic Compounds (µg/kg)														
Naphthalene	480	J	B-48	65	3	0	0	0	0	0	3	--	No	No Residential RSL exceedances
2-Methylnaphthalene	210	J	B-46	65	2	0	0	0	0	0	2	--	No	No Residential RSL exceedances
Acenaphthylene	410	J	B-59	65	5	NLE	NLE	0	NLE	NLE	NLE	--	No	No Residential RSL established
Acenaphthene	640	J	B-48	65	2	0	0	0	0	0	1	--	No	No Residential RSL exceedances
Dibenzofuran	1,100		B-48	65	2	NLE	0	NLE	0	NLE	2	--	No	No Residential RSL exceedances
Diethylphthalate	180	J	B-23	65	3	0	0	0	0	0	0	--	No	No Residential RSL exceedances
Fluorene	1,100	J	B-46	65	3	0	0	0	0	0	2	--	No	No Residential RSL exceedances
Phenanthrene	12,000		B-46	65	23	NLE	NLE	0	NLE	NLE	NLE	--	No	No Residential RSL established
Anthracene	2,200		B-46	65	13	0	0	0	0	0	0	--	No	No Residential RSL exceedances
Di-n-butylphthalate	2,500	B	B-9	65	63	0	0	0	0	0	56	--	No	No Residential RSL exceedances
Fluoranthene	12,000		B-46	65	31	0	0	0	0	0	1	--	No	No Residential RSL exceedances
Pyrene	8,700		B-46	65	31	0	0	0	0	0	4	--	No	No Residential RSL exceedances
Butylbenzylphthalate	120	J	B-58	65	1	0	0	0	0	0	0	--	No	No Residential RSL exceedances
Benzo(a)anthracene	4,000		B-46	65	22	5	17	1	1	1	22	--	**Yes**	Exceeds USEPA Residential RSL at 17 locations
Chrysene	4,500		B-46	65	30	0	0	0	0	0	5	--	No	No Residential RSL exceedances
bis(2-Ethylhexyl)phthalate	620	JB	B-58	65	27	0	0	0	0	0	0	--	No	No Residential RSL exceedances
Benzo(b)fluoranthene	2,900		B-46	65	21	5	17	2	0	2	21	--	**Yes**	Exceeds USEPA Residential RSL at 17 locations
Benzo(k)fluoranthene	2,500		B-46	65	22	0	2	0	0	0	10	--	**Yes**	Exceeds USEPA Residential RSL at 2 locations
Benzo(a)pyrene	3,100		B-46	65	23	17	23	17	15	17	23	--	**Yes**	Exceeds USEPA Residential RSL at 23 locations
Indeno(1,2,3-cd)pyrene	1,500		B-46	65	18	2	15	0	0	0	10	--	**Yes**	Exceeds USEPA Residential RSL at 15 locations
Dibenz(a,h)anthracene	490	J	B-46	65	5	1	5	1	1	0	5	--	**Yes**	Exceeds USEPA Residential RSL at 5 locations
Benzo(g,h,i)perylene	1,900		B-46	65	19	0	NLE	0	NLE	NLE	NLE	--	No	No Residential RSL established
TICs	33,300		B-46 DUP	65	62	NLE	NLE	NLE	NLE	NLE	NLE	--	No	No Residential RSL established
Pesticides/PCBs (mg/kg)														
Heptachlor	0.002		B-5	65	8	0	0	0	0	0	8	--	No	No Residential RSL exceedances
4,4'-DDE	0.066		B-5	65	39	0	0	0	0	0	1	--	No	No Residential RSL exceedances
Dieldrin	0.002		B-1	65	2	0	0	0	0	0	2	--	No	No Residential RSL exceedances
Endosulfan II	0.014		B-53	65	3	0	NLE	0	NLE	0	NLE	--	No	No Residential RSL established and <NJDEP RDCSRS
4,4'-DDD	0.138		B-47	65	34	0	0	0	0	0	33	--	No	No Residential RSL exceedances
Endrin Aldehyde	0.011		B-54	65	1	NLE	0	NLE	0	0	1	--	No	No Residential RSL exceedances
4,4'-DDT	0.111		B-1	65	24	0	0	0	0	0	4	--	No	No Residential RSL exceedances
gamma-Chlordane	0.026		B-36	65	6	0	0	0	NLE	0	1	--	No	No Residential RSL exceedances
alpha-Chlordane	0.023		B-36	65	2	0	0	0	NLE	0	1	--	No	No Residential RSL exceedances

TABLE 4.3
SOIL SAMPLING SUMMARY OF EXCEEDANCES
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Analyte	Maximum Detected Concentration		Location of Maximum Concentration	Number of Samples	Number of Detections	Number of Exceedances							Evaluated as COPC in Risk Assessment?	Rationale
						Residential Direct Contact		Non-Residential Direct Contact		Impact to Groundwater		Background		
						NJDEP RDCSRS (1)	USEPEA Residential RSL (2)	NJDEP NRDCSRS	USEPA Industrial RSL	NJDEP Impact to Groundwater (3)	USEPA Groundwater Protection RSL	Maximum Background (Weston, 1995) (4)		
Metals (mg/kg)														
Aluminum	15700		B-2	65	65	0	35	NA	0	42	58	1	**Yes**	Exceeds USEPA Residential RSL at 35 locations and max background at 1 location
Antimony	1.56		B-52	65	50	0	0	0	0	0	50	50	No	No Residential RSL exceedances
Arsenic	27.2		B-52	65	65	2	65	2	60	2	65	1	**Yes**	Exceeds USEPA Residential RSL at 65 locations and max background at 1 location
Barium	75.5		B-32	65	65	0	0	0	0	0	45	23	No	No Residential RSL exceedances
Beryllium	2.19		B-32	65	65	0	0	0	0	42	1	1	No	No Residential RSL exceedances
Cadmium	17.4		B-40	65	46	0	1	0	0	2	46	46	**Yes**	Exceeds USEPA Residential RSL at 1 location and max background at 46 locations
Calcium	19500		B-29	65	65	0	NLE	NLE	NLE	0	NLE	35	No	Essential nutrient
Chromium	258		B-32	65	65	0	0	NLE	NLE	0	0	0	No	No Residential RSL exceedances
Cobalt	3.94		B-49	65	65	0	14	0	0	0	65	9	**Yes**	Exceeds USEPA Residential RSL at 14 locations and max background at 9 locations
Copper	29.9		B-37	65	58	0	0	0	0	0	49	32	No	No Residential RSL exceedances
Iron	58800		B-2	65	65	0	65	NLE	0	0	65	2	No	Essential nutrient
Lead	91		B-40	65	65	0	0	0	0	1	NLE	25	No	No Residential RSL exceedances
Magnesium	8590		B-32	65	65	0	NLE	NLE	NLE	0	NLE	1	No	Essential nutrient
Manganese	80.5		B-59	65	65	0	0	0	0	4	65	0	No	No Residential RSL exceedances
Mercury	1.24		B-57	65	53	0	0	0	0	16	53	53	No	No Residential RSL exceedances
Nickel	13.3		B-43	65	65	0	0	0	0	0	55	17	No	No Residential RSL exceedances
Potassium	18800		B-32	65	65	0	NLE	NLE	NLE	0	NLE	1	No	Essential nutrient
Selenium	2.96		B-52	65	43	0	0	0	0	0	43	4	No	No Residential RSL exceedances
Silver	4.22		B-57	65	5	0	0	0	0	4	5	4	No	No Residential RSL exceedances
Sodium	328		B-32	65	65	0	NLE	NLE	NLE	0	NLE	64	No	Essential nutrient
Thallium	ND		n/a	65	0	0	0	0	0	0	0	0	No	No Residential RSL exceedances
Vanadium	116		B-21	65	65	7	41	0	0	0	65	1	**Yes**	Exceeds USEPA Residential RSL at 41 locations and max background at 1 location
Zinc	1970		B-40	65	65	0	0	0	0	1	41	18	No	No Residential RSL exceedances

Notes:
(1) New Jersey Department of Environmental Protection (NJDEP) Residential and Non-Residential Direct Contact Remediation Standards (N.J.A.C 7:26D; amended May 7, 2012). Available at: http://www.state.nj.us/dep/srp/regs/rs/.
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). Residential Soil (TR=1E-06, HQ = 0.1). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.
(3) NJDEP Impact to Groundwater Standard (NJDEP guidance document; Nov 2013).
(4) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December.
µg/kg = micrograms per kilogram; mg/kg = milligrams per kilogram.
RSL values were current at the time the screening was conducted.
Dash (--) = only bckground concentrations for metals are being used as comparison criteria.
B = Analyte detected in both sample and blank.
Dup = Field duplicate sample.
J = Estimated concentration exceeds the method detection limit (MDL) and is less than the reporting limit (RL).
n/a = all concentrations were less than the detection limit, therefore, no location of maximum value identified.
ND = not detected in any background sample, no background concentration available.
NLE = no limit established.

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW03													
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	46	46 Dup	47	48	49	50	50 Dup	51	52	53	54	55	55 Dup	56
Date Collected				3/4/2008	3/4/2008	5/14/2008	8/13/2008	10/24/2008	3/25/2009	3/26/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/21/2010	5/21/2010	9/13/2010
Study ID															Low Flow	Low Flow	Low Flow
Volatile Organic Compounds (µg/L)																	
1,2-Dichloroethane	2	0.17	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	0.44	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	6,000	1,400	-	ND	NA	ND	ND	**6.89**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	0.45	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	1	0.45	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl benzene	700	1.5	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Meta/Para Xylene	1,000	NLE	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tertbutyl Ether	70	14	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ortho Xylene	1,000	19	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Butyl Alcohol	100	NLE	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	600	110	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	1	0.28	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs*	500	NLE	-	ND	NA	ND	ND	**9** **J**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics (µg/L)																	
Aluminum	200	2,000	121,000	**242**	**231**	**131**	**372**	**166**	**274**	**196**	**166**	**263**	**174**	**157**	**30.6**	**22.3**	**3,920**
Antimony	6	0.78	20.7	ND	ND	ND	ND	ND	**9.1**	**9.54**	**3.05**	**6.05**	ND	ND	ND	ND	**26.6**
Arsenic	3	0.052	89.3	ND	ND	ND	ND	**3.55**	**21.9**	**19**	ND	**8.49**	**0.71**	**0.72**	ND	ND	**7.05**
Barium	6,000	380	699	**3.53**	**4.29**	**4.77**	**10.4**	**5.71**	**3.55**	**3.42**	**2.09**	**6.91**	**6.64**	**4.73**	**2.1**	**2.33**	**102**
Beryllium	1	2.5	2.1	ND	**0.108**	**0.214**	**0.167**	ND	ND	ND	ND	**0.122**	ND	ND	ND	ND	**0.946**
Cadmium	4	0.92	9.5	**1.22**	**1.5**	**1.86**	**3.91**	**1.71**	**1.39**	**1.41**	**0.689**	**3.53**	**1.63**	**1.18**	ND	**0.874**	**46.2**
Calcium	NLE	NLE	45,400	**5,050**	**4,970**	**4,980**	**28,400**	**15,900**	**8,460**	**7,800**	**4,120**	**19,500**	**20,400**	**9,810**	**5,940**	**6,020**	**488,000**
Chromium	70	2,200	191	**1.76**	**1.56**	**0.98**	**1.46**	**1.85**	**2.3**	**1.57**	**1.98**	**1.45**	ND	**1.93**	ND	ND	ND
Cobalt	100 [4]	0.6	18.3	ND	NA	**0.672** **ER**	**0.721**	**0.59** **ER**	ND	ND	ND	**1.03** **ER**	**0.586** **ER**	ND	ND	ND	**8.19**
Copper	1,300	80	65.6	**1.31**	**2**	ND	ND	ND	ND	ND	ND	ND	ND	**1.4**	ND	ND	**3.84**
Iron	300	1,400	431,000	**3,110**	**2,620**	**151**	**1,760**	**3,160**	**3,780**	**1,870**	**668**	**1,530**	**1,590**	**1,220**	**119**	ND	**25,700**
Lead	5	15[4]	22.7	ND	ND	ND	ND	ND	**5.51**	**7.33**	**2.56**	ND	ND	ND	ND	ND	ND
Magnesium	NLE	NLE	62,700	**1,800**	**1,740**	**1,650**	**11,100**	**6,400**	**3,520**	**3,210**	**1,630**	**7,350**	**8,000**	**3,880**	**2,470**	**2,490**	**209,000**
Manganese	50	43	331	**14.8**	**16.6**	**22.9**	**27.9**	**27**	**16.4**	**15.6**	**7.53**	**37.8**	**30.4**	**20.1**	**6.65**	**6.81**	**680**
Mercury	2	0.063	0.26	ND	ND	ND	ND	ND	ND	ND	ND	**0.15**	ND	ND	ND	ND	ND
Nickel	100	39	187	**5.61**	**6.87**	**4**	**5.59**	**2.81**	**1.31**	**2.01**	**2.1**	**5.51**	**4.52**	**4.17**	**0.974**	**1.46**	**56.7**
Potassium	NLE	NLE	137,000	**1,560**	**1,380**	**2,040**	**5,570**	**4,370**	**2,130**	**2,050**	**1,830**	**5,350**	**3,650**	**4,190**	**2,390**	**2,430**	**22,700**
Selenium	40	10	29.6	ND	ND	**4.83**	ND	ND	**46.8**	**51.5**	ND	**22.1**	ND	ND	NA	NA	**1.93**
Silver	40	9.4	ND	ND	ND	ND	**0.564**	**0.707**	ND	ND	ND	ND	ND	**0.659**	**0.58**	ND	ND
Sodium	50,000	NLE	21,500	**12,200**	**11,100**	**9,990**	**99,400**	**53,200**	**37,400**	**34,300**	**21,500**	**36,400**	**83,700**	**36,200**	**45,300**	**44,400**	**739,000** E
Thallium	2	0.02	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NLE	8.6	108	**1.7**	**1.32**	ND	**2.13**	**0.971**	**3.3**	**2.28**	**1.22**	**1.09**	**1.64**	**1.57**	ND	ND	ND
Zinc	2,000	600	233	**48.2**	**60.8**	**57.3**	**147**	**97**	**59.8**	**59.1**	**33.5**	**151**	**91.7**	**59.9**	**38.1**	**39.3**	**1,580**

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW03												
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	46	46 Dup	47	48	49	50	50 Dup	51	52	53	54	55	55 Dup	56
Date Collected				3/4/2008	3/4/2008	5/14/2008	8/13/2008	10/24/2008	3/25/2009	3/26/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/21/2010	5/21/2010	9/13/2010
Study ID															Low Flow	Low Flow	Low Flow

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December

(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)

RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as comparison criteria
Detections are bolded

Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW03					296MW04					
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	57	57 Dup	58	59	60	46	47	48	49	50	51
Date Collected				11/24/2010	11/24/2010	2/24/2011	4/21/2011	8/9/2011	3/4/2008	5/14/2008	8/13/2008	10/24/2008	3/26/2009	6/2/2009
Study ID				Low Flow	Low Flow	Low Flow	Low Flow	Low Flow						
Volatile Organic Compounds (µg/L)														
1,2-Dichloroethane	2	0.17	-	< 0.11	NA	< 0.11	< 0.11	< 1	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	0.44	-	< 0.12	NA	< 0.12	< 0.12	< 1	ND	ND	ND	ND	ND	ND
Acetone	6,000	1,400	-	< 0.32	ND	< 0.32	< 0.32	< 10	ND	ND	**2.93**	ND	ND	ND
Benzene	1	0.45	-	< 0.12	ND	< 0.12	< 0.12	< 1	ND	**0.18**	ND	ND	**0.39**	**0.38**
Carbon tetrachloride	1	0.45	-	< 0.12	NA	< 0.12	< 0.12	< 1	ND	ND	ND	ND	ND	ND
Ethyl benzene	700	1.5	-	< 0.12	ND	< 0.12	< 0.12	< 1	ND	ND	ND	ND	ND	ND
Meta/Para Xylene	1,000	NLE	-	< 0.3	ND	< 0.3	< 0.3	< 1	ND	ND	ND	ND	ND	ND
Methyl Tertbutyl Ether	70	14	-	< 0.11	ND	< 0.11	< 0.11	< 1	ND	ND	ND	ND	ND	ND
Ortho Xylene	1,000	19	-	< 0.14	ND	< 0.14	< 0.14	< 1	ND	ND	ND	ND	ND	ND
Tert Butyl Alcohol	100	NLE	-	< 1.64	NA	< 1.64	< 1.64	NA	ND	ND	ND	ND	ND	ND
Toluene	600	110	-	< 0.12	ND	< 0.12	< 0.12	< 1	ND	ND	ND	ND	ND	ND
Trichloroethene	1	0.28	-	< 0.11	NA	< 0.11	< 0.11	< 1	ND	ND	ND	ND	ND	ND
TICs*	500	NLE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics (µg/L)														
Aluminum	200	2,000	121,000	**1,310**	**1,240**	< 200	**222**	< 200	**103**	**83.4**	ND	**251**	**57**	**10.3**
Antimony	6	0.78	20.7	**5.59**	**9.76**	< 6	< 6	< 6	ND	**1.29**	ND	ND	**19.4**	**4.06**
Arsenic	3	0.052	89.3	**2.1**	**1.3**	< 3	< 3	< 3	ND	ND	**2.57**	ND	**67**	**20.3**
Barium	6,000	380	699	**115**	**115**	< 200	< 200	< 200	**11.2**	**27**	**112**	**180**	**26.5**	**33.3**
Beryllium	1	2.5	2.1	**0.485**	**0.434**	< 1	< 1	< 1	ND	ND	ND	ND	ND	ND
Cadmium	4	0.92	9.5	**13.7**	**13.5**	< 3	< 3	< 3	**0.59**	**0.579**	**0.94**	**0.725**	ND	ND
Calcium	NLE	NLE	45,400	**250,000**	**242,000**	**11,200**	< 5000	**14,700**	**28,000**	**35,100**	**119,000**	**190,000**	**49,300**	**46,300**
Chromium	70	2,200	191	ND	ND	< 10	< 10	< 10	**0.609**	**0.758**	ND	ND	**1.38**	ND
Cobalt	100 [4]	0.6	18.3	**5.41**	NA	< 50	< 50	< 50	ND	ND	ND	ND	ND	ND
Copper	1,300	80	65.6	ND	ND	< 10	< 10	< 10	**1.19**	**1.4**	ND	**1.71**	**2.23**	ND
Iron	300	1,400	431,000	**557**	**486**	**903**	**737**	**1,120**	**3,690**	**3,120**	**9,210**	**16,600**	**8,810**	**8,500**
Lead	5	15[(4)]	22.7	ND	ND	< 3	< 3	< 3	**1.1**	**4.2**	ND	ND	**7.39**	**3.92**
Magnesium	NLE	NLE	62,700	**114,000**	**113,000**	< 5000	< 5000	**6,660**	**14,500**	**29,700**	**108,000**	**251,000**	**35,000**	**38,900**
Manganese	50	43	331	**279**	**273**	< 15	< 15	**24.5**	**70.7**	**129**	**166**	**225**	**173**	**189**
Mercury	2	0.063	0.26	ND	ND	< 0.2	< 0.2	< 0.2	ND	ND	ND	ND	ND	ND
Nickel	100	39	187	**25.6**	**25.6**	< 10	< 10	< 10	**4.03**	**1.49**	**2.01**	**1.69**	ND	**1.91**
Potassium	NLE	NLE	137,000	**25,900**	**21,000**	< 10000	< 10000	< 10000	**3,190**	**7,540**	**25,100**	**57,500**	**6,800**	**9,610**
Selenium	40	10	29.6	ND	**1.4**	< 10	< 10	< 10	ND	ND	**10.6**	ND	**117**	**4.8**
Silver	40	9.4	ND	ND	ND	< 10	< 10	< 10	ND	ND	**0.662**	ND	ND	ND
Sodium	50,000	NLE	21,500	**694,000** E	**679,000** E	**60,400**	**16,600**	**111,000**	**119,000**	**232,000**	**796,000** E	**1,830,000**	**272,000**	**314,000**
Thallium	2	0.02	5.5	ND	ND	< 2	< 2	< 2	ND	ND	ND	ND	ND	ND
Vanadium	NLE	8.6	108	**1.03**	**1.23**	< 50	< 50	< 50	**2.28**	**4.28**	**3.08**	**3.19**	**6.15**	**2.46**
Zinc	2,000	600	233	**833**	**812**	**54.5**	**35.2**	**75**	**35.6**	**16.7**	ND	**55.6**	**19**	**9.49**

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW03					296MW04					
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	57	57 Dup	58	59	60	46	47	48	49	50	51
Date Collected				11/24/2010	11/24/2010	2/24/2011	4/21/2011	8/9/2011	3/4/2008	5/14/2008	8/13/2008	10/24/2008	3/26/2009	6/2/2009
Study ID				Low Flow	Low Flow	Low Flow	Low Flow	Low Flow						

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December
(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)
RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW04									
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	52	53	54	55 (LF)	56 (LF)	57 (LF)	58 (LF)	58 Dup (LF)	59 (LF)	60
Date Collected				9/17/2009	11/23/2009	2/2/2010	5/21/2010	9/13/2010	11/23/2010	2/24/2011	2/24/2011	4/21/2011	8/9/2011
Study ID							Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Volatile Organic Compounds (µg/L)													
1,2-Dichloroethane	2	0.17	-	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	< 0.11	< 1
1,2-Dichloropropane	1	0.44	-	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1
Acetone	6,000	1,400	-	ND	ND	ND	ND	ND	< 0.32	< 0.32	< 0.32	< 0.32	< 10
Benzene	1	0.45	-	ND	ND	**0.27** J	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1
Carbon tetrachloride	1	0.45	-	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1
Ethyl benzene	700	1.5	-	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1
Meta/Para Xylene	1,000	NLE	-	ND	ND	ND	ND	ND	< 0.3	< 0.3	< 0.3	< 0.3	< 1
Methyl Tertbutyl Ether	70	14	-	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	< 0.11	< 1
Ortho Xylene	1,000	19	-	ND	ND	ND	ND	ND	< 0.14	< 0.14	< 0.14	< 0.14	< 1
Tert Butyl Alcohol	100	NLE	-	ND	ND	ND	ND	ND	< 1.64	< 1.64	< 1.64	< 1.64	NA
Toluene	600	110	-	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1
Trichloroethene	1	0.28	-	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	< 0.11	< 1
TICs*	500	NLE	-	ND	**2**	ND	ND	ND	ND	ND	ND	**11**	ND
Inorganics (µg/L)													
Aluminum	200	2,000	121,000	**126**	ND	**441**	**511**	ND	ND	< 200	< 200	**653**	< 200
Antimony	6	0.78	20.7	**7.82**	ND	ND	ND	**40.1**	ND	< 6	< 6	< 6	< 6
Arsenic	3	0.052	89.3	**28**	**1.76**	**1.48**	**13.59**	**13.46**	ND	< 3	< 3	< 3	< 3
Barium	6,000	380	699	**62.8**	**71.2**	**21.1**	**5.8**	**379**	**48.9**	< 200	< 200	< 200	< 200
Beryllium	1	2.5	2.1	ND	ND	ND	**0.048**	ND	ND	< 1	< 1	< 1	< 1
Cadmium	4	0.92	9.5	ND	ND	ND	ND	**2.63**	**0.789**	< 3	< 3	< 3	< 3
Calcium	NLE	NLE	45,400	**77,800**	**10,000**	**34,200**	**12,400**	**667,000** E	**66,600**	**41,700**	**56,200**	**11,900**	**131,000**
Chromium	70	2,200	191	ND	ND	**2.1**	**5.79**	**6.61**	ND	< 10	< 10	< 10	< 10
Cobalt	100 [4]	0.6	18.3	ND	ND	ND	ND	ND	< 2	< 50	< 50	< 50	< 50
Copper	1,300	80	65.6	ND	ND	ND	**1.17**	**4.92**	ND	< 10	< 10	< 10	< 10
Iron	300	1,400	431,000	**6,390**	**15,300**	**11,500**	**3,450**	**54,100**	**13,200**	**11,000**	**8,430**	**4,000**	**14,700**
Lead	5	15[4]	22.7	ND	ND	**2.4**	ND	**7.24**	ND	< 3	< 3	**8.3**	< 3
Magnesium	NLE	NLE	62,700	**71,900**	**99,100**	**31,300**	**6,870**	**830,000** E	**82,300**	**41,700**	**44,300**	**7,140**	**191,000**
Manganese	50	43	331	**342**	**484**	**182**	**49.7**	**1,780**	**347**	**204**	**185**	**31.9**	**441**
Mercury	2	0.063	0.26	**0.18**	ND	ND	ND	**0.11**	ND	< 0.2	< 0.2	< 0.2	< 0.2
Nickel	100	39	187	**0.642**	**1.78**	**3.05**	**0.716**	**14**	ND	< 10	< 10	< 10	< 10
Potassium	NLE	NLE	137,000	**17,100**	**15,100**	**10,600**	**2,930**	**148,000**	**33,400**	**11,300**	**11,400**	< 10000	**44,000**
Selenium	40	10	29.6	**63.2**	ND	ND	NA	**4.72**	ND	< 10	< 10	< 10	< 10
Silver	40	9.4	ND	ND	ND	ND	**0.733**	ND	**2.08**	< 10	< 10	< 10	< 10
Sodium	50,000	NLE	21,500	**483,000**	**688,000**	**268,000**	**82,400**	**5,610,000** E	**814,000** E	**461,000**	**472,000**	**119,000**	**1,420,000**
Thallium	2	0.02	5.5	ND	ND	ND	ND	ND	ND	< 2	< 2	< 2	< 2
Vanadium	NLE	8.6	108	**4.5**	**5.03**	**7.09**	**5.39**	ND	**2.12**	< 50	< 50	< 50	< 50
Zinc	2,000	600	233	**12**	**9.38**	**39**	**12.7**	**3.82**	ND	< 20	**35.5**	< 20	< 20

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW04								
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	52	53	54	55 (LF)	56 (LF)	57 (LF)	58 (LF)	58 Dup (LF)	59 (LF)	60
Date Collected				9/17/2009	11/23/2009	2/2/2010	5/21/2010	9/13/2010	11/23/2010	2/24/2011	2/24/2011	4/21/2011	8/9/2011
Study ID							Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December
(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)
RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW06												
Round No.	**NJ Ground Water Quality Criteria** [1]	**2014-05 USEPA RSL Tap Water (HQ=0.1)** [2]	**Weston 1995 Background (Main Post)**[3]	46	47	47	48	49	50	51	52	53	54	55	56	57
Date Collected				3/4/2008	5/14/2008	5/14/2008	8/13/2008	10/24/2008	3/25/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/21/2010	9/13/2010	11/24/2010
Study ID														Low Flow	Low Flow	Low Flow
Volatile Organic Compounds (µg/L)																
1,2-Dichloroethane	2	0.17	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.11
1,2-Dichloropropane	1	0.44	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12
Acetone	6,000	1,400	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.32
Benzene	1	0.45	-	**0.56**	**0.51**	**0.55**	**0.48**	**1.74**	ND	ND	ND	ND	ND	**27.45**	**12.81**	**61.13**
Carbon tetrachloride	1	0.45	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12
Ethyl benzene	700	1.5	-	ND	ND	ND	ND	**4.98**	ND	ND	ND	ND	ND	**2.94**	**1.25**	**7.5**
Meta/Para Xylene	1,000	NLE	-	ND	ND	ND	ND	**0.68**	ND	ND	ND	ND	ND	**2.43**	**1.04**	**6.81**
Methyl Tertbutyl Ether	70	14	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.11
Ortho Xylene	1,000	19	-	ND	ND	ND	ND	**1.24**	ND	ND	ND	ND	ND	**1.24**	**0.66**	**3.72**
Tert Butyl Alcohol	100	NLE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.64
Toluene	600	110	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.58**
Trichloroethene	1	0.28	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.11
TICs*	500	NLE	-	ND	ND	ND	**3**	**11**	ND	ND	ND	ND	ND	**110**	**71**	**225**
Inorganics (µg/L)																
Aluminum	200	2,000	121,000	**76.3**	**146**	**142**	**391**	**126**	**70.6**	**237**	**226**	**240**	**150**	**58.9**	**327**	ND
Antimony	6	0.78	20.7	ND	ND	**1.85**	ND	ND	**38.1**	**2.94**	**11**	ND	ND	**10.7**	**24.6**	ND
Arsenic	3	0.052	89.3	ND	ND	ND	**2.51**	ND	**67.6**	**6.66**	**35.2**	**1.34**	ND	**22.9**	**2.38**	**4.06**
Barium	6,000	380	699	**8.19**	**3.09**	**3.18**	**4.73**	**49.6**	**102**	**4.97**	**102**	**10**	**7.39**	**0.73**	**82.1**	**325**
Beryllium	1	2.5	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.044**	ND	ND
Cadmium	4	0.92	9.5	ND	**0.265**	**0.239**	**0.395**	ND	ND	ND	**1.41**	ND	ND	**2.04**	**1.19**	**4.74**
Calcium	NLE	NLE	45,400	**19,900**	**7,720**	**7,620**	**10,900**	**62,600**	**182,000**	**8,800**	**150,000**	**18,400**	**16,900**	**133,000**	**147,000**	**386,000**
Chromium	70	2,200	191	**0.587**	**1.04**	**1.42**	**4.35**	ND	ND	**2.24**	**1.13**	**3.21**	ND	ND	ND	ND
Cobalt	100 [4]	0.6	18.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 2
Copper	1,300	80	65.6	**2.35**	**7.03**	**7.33**	**3.06**	**0.959**	ND	**17.6**	**4.17**	ND	**1.22**	ND	**6.8**	ND
Iron	300	1,400	431,000	**3,050**	**1,350**	**1,320**	**3,540**	**20,600**	**56,800**	**1,740**	**49,400**	**6,130**	**4,310**	**39,700**	**41,200**	**98,500**
Lead	5	15[4]	22.7	ND	ND	ND	ND	ND	**7.43**	**1.81**	**6.43**	ND	ND	**4.5**	ND	**12.1**
Magnesium	NLE	NLE	62,700	**4,550**	**1,640**	**1,620**	**3,050**	**21,900**	**59,100**	**2,280**	**48,700**	**5,850**	**4,630**	**47,400**	**55,800**	**145,000**
Manganese	50	43	331	**103**	**41.4**	**40.7**	**89.3**	**460**	**1,560**	**65.9**	**1,310**	**151**	**137**	**1,090**	**1,240**	**2,700**
Mercury	2	0.063	0.26	ND	ND	ND	ND	ND	ND	ND	**0.39**	**0.06**	ND	ND	**0.08**	ND
Nickel	100	39	187	**5.33**	**1.48**	**1.56**	**1.56**	ND	ND	**2.44**	**1.68**	**1.21**	**2.66**	ND	**1.59**	**1.27**
Potassium	NLE	NLE	137,000	**1,030**	**990**	**1,560**	**1,850**	**4,920**	**7,110**	**903**	**11,300**	**1,500**	**3,040**	**7,090**	**10,200**	**28,200**
Selenium	40	10	29.6	ND	**3.13**	ND	ND	ND	**68.9**	ND	**60.3**	ND	ND	NA	**1.98**	ND
Silver	40	9.4	ND	ND	ND	ND	**1.08**	ND	ND	ND	ND	ND	ND	**4.34**	**5.07**	**20.7**
Sodium	50,000	NLE	21,500	**58,400**	**31,200**	**31,000**	**42,200**	**4,920**	**258,000**	**46,100**	**218,000**	**48,500**	**66,800**	**232,000**	**254,000**	**697,000** E
Thallium	2	0.02	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	NLE	8.6	108	**2.06**	**2.28**	**2.38**	**8.35**	**3.27**	**7.68**	**6.43**	**9.85**	**5.14**	**2.28**	ND	ND	**1.09**
Zinc	2,000	600	233	**8.39**	**3.84**	**3.77**	ND	**5.37**	**16.6**	**5.24**	ND	ND	**2.39**	ND	ND	ND

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW06												
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	46	47	47	48	49	50	51	52	53	54	55	56	57
Date Collected				3/4/2008	5/14/2008	5/14/2008	8/13/2008	10/24/2008	3/25/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/21/2010	9/13/2010	11/24/2010
Study ID														Low Flow	Low Flow	Low Flow

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December

(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)

RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
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< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
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Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW06				296MW07									
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	58	59	59 Dup	60	46	47	48	49	50	51	52	52 Dup	53	53 Dup
Date Collected				2/24/2011	4/21/2011	4/21/2011	8/9/2011	3/4/2008	5/14/2008	8/13/2008	10/24/2008	3/26/2009	6/2/2009	9/17/2009	9/17/2009	11/23/2009	11/23/2009
Study ID				Low Flow	Low Flow	Low Flow	Low Flow										
Volatile Organic Compounds (µg/L)																	
1,2-Dichloroethane	2	0.17	-	< 0.11	< 0.11	< 0.11	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	0.44	-	< 0.12	< 0.12	< 0.12	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	6,000	1,400	-	< 0.32	< 0.32	< 0.32	< 10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	0.45	-	**75.98**	< 0.12	< 0.12	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	1	0.45	-	< 0.12	< 0.12	< 0.12	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl benzene	700	1.5	-	**7.24**	< 0.12	< 0.12	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Meta/Para Xylene	1,000	NLE	-	**5.16**	< 0.3	< 0.3	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tertbutyl Ether	70	14	-	< 0.11	< 0.11	< 0.11	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ortho Xylene	1,000	19	-	**2.5**	< 0.14	< 0.14	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Butyl Alcohol	100	NLE	-	< 1.64	< 1.64	< 1.64	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	600	110	-	**0.53**	< 0.12	< 0.12	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	1	0.28	-	< 0.11	< 0.11	< 0.11	< 1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs*	500	NLE	-	**259**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics (µg/L)																	
Aluminum	200	2,000	121,000	**294**	**1,880**	**1,590**	**3,050**	**165**	**63**	**104**	**145**	**175**	**271**	**225**	**263**	**109**	**118**
Antimony	6	0.78	20.7	< 6	< 6	< 6	< 6	ND	ND	ND	ND	**21.2**	**2.3**	ND	ND	ND	ND
Arsenic	3	0.052	89.3	< 3	< 3	< 3	**4**	ND	**4.24**	**5.22**	**3.82**	**33.1**	**15.1**	**11.1**	**16.3**	**2.91**	**3.28**
Barium	6,000	380	699	**299**	< 200	< 200	< 200	**7.29**	**7.83**	**22.3**	**41.6**	**57.7**	**114**	**14.4**	**17.3**	**37.4**	**36.7**
Beryllium	1	2.5	2.1	< 1	< 1	< 1	< 1	ND	**0.132**	ND	ND	ND	**0.103**	ND	ND	ND	ND
Cadmium	4	0.92	9.5	< 3	< 3	< 3	< 3	**0.819**	**1**	**1.05**	**0.773**	**0.962**	**2.02**	**0.524**	**0.808**	**0.556**	ND
Calcium	NLE	NLE	45,400	**360,000**	< 5000	**7,360**	**8,080**	**12,800**	**14,000**	**12,400**	**13,600**	**15,300**	**18,900**	**19,200**	**18,200**	**31,200**	**33,000**
Chromium	70	2,200	191	< 10	**23.2**	**19.4**	**43.5**	**1.35**	**1.24**	**0.973**	ND	**0.848**	**0.365**	**2.33**	**2.56**	ND	ND
Cobalt	100 [4]	0.6	18.3	< 50	< 50	< 50	< 50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	1,300	80	65.6	< 10	**25.4**	**30.5**	**31.1**	**1.75**	ND	ND	ND	ND	**4.55**	ND	ND	ND	ND
Iron	300	1,400	431,000	**111,000**	**6,360**	**25,700**	**11,100**	**6,720**	**8,850**	**7,690**	**11,200**	**25,500**	**28,300**	**7,990**	**8,730**	**13,700**	**14,100**
Lead	5	15[(4)]	22.7	< 3	< 3	< 3	**3.5**	ND	ND	ND	ND	**8.39**	**1.56**	ND	ND	ND	ND
Magnesium	NLE	NLE	62,700	**146,000**	< 5000	< 5000	< 5000	**2,690**	**3,180**	**2,450**	**2,800**	**2,960**	**2,580**	**4,680**	**4,400**	**7,370**	**7,730**
Manganese	50	43	331	**3,130**	**28.1**	**63.8**	**70.4**	**101**	**79.8**	**49.8**	**62.1**	**72.8**	**92.8**	**83.2**	**79.9**	**128**	**134**
Mercury	2	0.063	0.26	< 0.2	< 0.2	< 0.2	< 0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	39	187	< 10	< 10	< 10	< 10	**5.22**	**1.88**	**0.989**	**0.874**	ND	**1.14**	**0.925**	**1.41**	**3.12**	**3.5**
Potassium	NLE	NLE	137,000	**16,400**	< 10000	< 10000	< 10000	**5,910**	**5,860**	**7,330**	**7,690**	**6,570**	**9,340**	**8,340**	**7,860**	**8,240**	**8,460**
Selenium	40	10	29.6	< 10	< 10	< 10	< 10	ND	ND	ND	ND	**39.9**	ND	**13.4**	ND	ND	ND
Silver	40	9.4	ND	< 10	< 10	< 10	< 10	ND	ND	**1.67**	ND	ND	ND	ND	ND	ND	ND
Sodium	50,000	NLE	21,500	**616,000**	**28,700**	**32,400**	**55,600**	**7,820**	**13,600**	**7,520**	**10,300**	**12,200**	**5,650**	**15,400**	**13,400**	**34,100**	**34,900**
Thallium	2	0.02	5.5	< 2	< 2	< 2	< 2	ND	ND	ND	ND	ND	**2.41**	ND	ND	ND	ND
Vanadium	NLE	8.6	108	< 50	< 50	< 50	< 50	**0.626**	**1.09**	**1.31**	ND	**4.41**	**1.81**	**4.07**	**3.64**	**3.02**	**3**
Zinc	2,000	600	233	< 20	**26**	**27.6**	< 20	**61.8**	**26.5**	**12.5**	**44.9**	**85.5**	**178**	**58.5**	**56.7**	**84.7**	**90.1**

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW06				296MW07									
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	58	59	59 Dup	60	46	47	48	49	50	51	52	52 Dup	53	53 Dup
Date Collected				2/24/2011	4/21/2011	4/21/2011	8/9/2011	3/4/2008	5/14/2008	8/13/2008	10/24/2008	3/26/2009	6/2/2009	9/17/2009	9/17/2009	11/23/2009	11/23/2009
Study ID				Low Flow	Low Flow	Low Flow	Low Flow										

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December

(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)

RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW07										296MW08			
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	54	54 Dup	55	56	56 Dup	57	58	59	59 Dup	60	46	47	48	49
Date Collected				2/2/2010	2/2/2010	5/20/2010	9/13/2010	9/13/2010	11/22/2010	2/24/2011	4/19/2011	4/19/2011	8/9/2011	3/4/2008	5/14/2008	8/13/2008	10/24/2008
Study ID						Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow				
Volatile Organic Compounds (µg/L)																	
1,2-Dichloroethane	2	0.17	-	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	< 0.11	< 1	ND	ND	ND	ND
1,2-Dichloropropane	1	0.44	-	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	ND	ND	ND	ND
Acetone	6,000	1,400	-	ND	ND	ND	ND	ND	< 0.32	< 0.32	< 0.32	< 0.32	< 10	ND	ND	ND	ND
Benzene	1	0.45	-	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	ND	ND	ND	ND
Carbon tetrachloride	1	0.45	-	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	ND	ND	ND	ND
Ethyl benzene	700	1.5	-	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	ND	ND	ND	ND
Meta/Para Xylene	1,000	NLE	-	ND	ND	ND	ND	ND	< 0.3	< 0.3	< 0.3	< 0.3	< 1	ND	ND	ND	ND
Methyl Tertbutyl Ether	70	14	-	ND	ND	ND	ND	ND	< 0.11	< 0.11	**0.21** J	**0.2** J	< 1	ND	**1.24**	ND	ND
Ortho Xylene	1,000	19	-	ND	ND	ND	ND	ND	< 0.14	< 0.14	< 0.14	< 0.14	< 1	ND	ND	ND	ND
Tert Butyl Alcohol	100	NLE	-	ND	ND	ND	ND	ND	< 1.64	< 1.64	< 1.64	< 1.64	NA	ND	ND	ND	ND
Toluene	600	110	-	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	ND	ND	ND	ND
Trichloroethene	1	0.28	-	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	< 0.11	< 1	ND	ND	ND	ND
TICs*	500	NLE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6**	**8**
Inorganics (µg/L)																	
Aluminum	200	2,000	121,000	**382**	**409**	**48.4**	**45.8**	**46.5**	**14.8**	< 200	**315**	**306**	**902**	**419**	**88.1**	ND	**273**
Antimony	6	0.78	20.7	ND	ND	ND	ND	**37.5**	ND	< 6	< 6	< 6	< 6	ND	ND	ND	**3.06**
Arsenic	3	0.052	89.3	**2.61**	**2.69**	**3.01**	**2.29**	**2.68**	**1.52**	< 3	< 3	< 3	**7.2**	**18.7**	**48.8**	**135**	**42.3**
Barium	6,000	380	699	**24.8**	**29**	**7.47**	**7.79**	**7.6**	**5.78**	< 200	< 200	< 200	< 200	**56.3**	**40.6**	**23.7**	**30.9**
Beryllium	1	2.5	2.1	ND	ND	ND	ND	ND	ND	< 1	< 1	< 1	< 1	**0.109**	**0.193**	ND	ND
Cadmium	4	0.92	9.5	ND	ND	ND	ND	ND	ND	< 3	< 3	< 3	< 3	**1.01**	**10.1**	**14.2**	ND
Calcium	NLE	NLE	45,400	**14,100**	**14,200**	**14,500**	**12,900**	**13,100**	**15,200**	**13,900**	**30,300**	**29,900**	**13,500**	**35,800**	**29,100**	**27,300**	**19,800**
Chromium	70	2,200	191	**3.2**	**3.58**	ND	ND	ND	ND	< 10	< 10	< 10	< 10	ND	ND	ND	ND
Cobalt	100 [4]	0.6	18.3	ND	ND	ND	ND	ND	< 2	< 50	< 50	< 50	< 50	ND	ND	ND	ND
Copper	1,300	80	65.6	ND	ND	**1.52**	**1.11**	**1.44**	**3.95**	< 10	< 10	< 10	< 10	**2.08**	ND	ND	**2.35**
Iron	300	1,400	431,000	**10,600**	**11,700**	**2,950**	**4,180**	**4,040**	**2,200**	**6,830**	**5,450**	**6,840**	**47,100**	**96,700**	**96,700**	**124,000**	**77,100**
Lead	5	15[4]	22.7	ND	ND	ND	ND	ND	ND	< 3	< 3	< 3	< 3	ND	**11.8**	**11.9**	ND
Magnesium	NLE	NLE	62,700	**3,130**	**3,120**	**3,520**	**2,830**	**2,870**	**3,390**	< 5000	**8,750**	**8,690**	< 5000	**25,400**	**18,700**	**15,600**	**14,300**
Manganese	50	43	331	**69.6**	**68.1**	**46.7**	**51.9**	**53.5**	**50.4**	**47.1**	**93.8**	**91.7**	**67**	**302**	**285**	**289**	**167**
Mercury	2	0.063	0.26	ND	**0.09**	ND	**0.08**	ND	ND	< 0.2	< 0.2	< 0.2	< 0.2	ND	ND	ND	ND
Nickel	100	39	187	**3.01**	**2.72**	**0.61**	**1.78**	**1.23**	**1.31**	< 10	< 10	< 10	< 10	**19.6**	**11.2**	**7.24**	**8.24**
Potassium	NLE	NLE	137,000	**7,720**	**7,880**	**6,590**	**7,460**	**7,580**	**8,050**	< 10000	< 10000	< 10000	< 10000	**3,540**	**4,180**	**3,980**	**4,040**
Selenium	40	10	29.6	ND	ND	NA	**1.57**	**1.37**	ND	< 10	< 10	< 10	< 10	ND	ND	ND	ND
Silver	40	9.4	ND	ND	ND	ND	**1.7**	**1.57**	ND	< 10	< 10	< 10	< 10	ND	**9.67**	**18.5**	ND
Sodium	50,000	NLE	21,500	**23,400**	**22,200**	**21,200**	**8,110**	**7,720**	**15,700**	**28,800**	**105,000**	**103,000**	**10,800**	**168,000**	**148,000**	**157,000**	**119,000**
Thallium	2	0.02	5.5	ND	ND	ND	ND	ND	ND	< 2	< 2	< 2	< 2	ND	ND	ND	ND
Vanadium	NLE	8.6	108	**3.99**	**3.69**	**1.11**	**0.64**	**0.673**	**1.28**	< 50	< 50	< 50	< 50	ND	**0.348**	**0.525**	**0.261**
Zinc	2,000	600	233	**36.9**	**372**	**55.2**	**24.5**	**24.9**	**44.1**	**71.5**	**177**	**182**	**115**	**122**	**69.1**	**17.4**	**58.1**

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW07										296MW08			
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	54	54 Dup	55	56	56 Dup	57	58	59	59 Dup	60	46	47	48	49
Date Collected				2/2/2010	2/2/2010	5/20/2010	9/13/2010	9/13/2010	11/22/2010	2/24/2011	4/19/2011	4/19/2011	8/9/2011	3/4/2008	5/14/2008	8/13/2008	10/24/2008
Study ID						Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow				

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December

(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)

RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW08												M18MW22	
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	50	51	52	53	54	55	56	57	57 Dup	58	59	60	1	
Date Collected				3/26/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/21/2010	9/13/2010	11/23/2010	11/23/2010	2/24/2011	4/19/2011	8/9/2011	10/29/2010	
Study ID									Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	
Volatile Organic Compounds (µg/L)																	
1,2-Dichloroethane	2	0.17	-	ND	ND	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	< 0.11	< 1	**53**	
1,2-Dichloropropane	1	0.44	-	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	**0.27**	**J**
Acetone	6,000	1,400	-	ND	ND	ND	ND	ND	ND	ND	< 0.32	< 0.32	< 0.32	< 0.32	< 10	< 0.32	
Benzene	1	0.45	-	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	**1.99**	
Carbon tetrachloride	1	0.45	-	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	< 0.12	
Ethyl benzene	700	1.5	-	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	< 0.12	
Meta/Para Xylene	1,000	NLE	-	ND	ND	ND	ND	ND	ND	ND	< 0.3	< 0.3	< 0.3	< 0.3	< 1	< 0.3	
Methyl Tertbutyl Ether	70	14	-	ND	**0.45**	ND	ND	ND	**0.81**	**0.46**	**J** < 0.11	< 0.11	**0.39**	**J** **0.79**	< 1	< 0.11	
Ortho Xylene	1,000	19	-	ND	ND	ND	ND	ND	ND	ND	< 0.14	< 0.14	< 0.14	< 0.14	< 1	< 0.14	
Tert Butyl Alcohol	100	NLE	-	ND	ND	ND	ND	ND	ND	ND	< 1.64	< 1.64	< 1.64	< 1.64	NA	**43.4**	
Toluene	600	110	-	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	< 0.12	< 1	< 0.12	
Trichloroethene	1	0.28	-	ND	ND	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	< 0.11	< 1	**0.46**	**J**
TICs*	500	NLE	-	**4**	ND	**5**	**6**	**5**	**22**	**12**	**49**	**48**	**7**	**4**	ND	**276**	**J**
Inorganics (µg/L)																	
Aluminum	200	2,000	121,000	**372**	**399**	**1,040**	**452**	**1,230**	**998**	**567**	**286**	**322**	**1,140**	**1,330**	**648**	**1,970**	
Antimony	6	0.78	20.7	**25**	**2.53**	ND	ND	ND	**10**	**9.95**	ND	ND	< 6	< 6	< 6	< 4.7	
Arsenic	3	0.052	89.3	**54.3**	**57.1**	**81.1**	**23.8**	**22.53**	**8.84**	**19.4**	**9.18**	**9.54**	**6.1**	**3.4**	**97.1**	**1.16**	**ER**
Barium	6,000	380	699	**56.2**	**64.5**	**63.5**	**53**	**107**	**133**	**73.2**	**38.5**	**40**	< 200	< 200	< 200	**521**	
Beryllium	1	2.5	2.1	ND	**0.178**	**0.083**	**0.051**	**0.11**	**0.297**	**0.181**	ND	ND	< 1	< 1	< 1	**2.56**	
Cadmium	4	0.92	9.5	ND	**1.03**	**3.88**	ND	**2.57**	**4.02**	**3.1**	**2.65**	**2.95**	< 3	< 3	**3**	**4.57**	
Calcium	NLE	NLE	45,400	**27,200**	**30,400**	**27,900**	**23,600**	**41,300**	**44,700**	**25,700**	**17,600**	**18,000**	**41,800**	**46,000**	**48,000**	**21,800**	
Chromium	70	2,200	191	ND	ND	**2.63**	ND	ND	ND	ND	**1.28**	**1.18**	< 10	< 10	< 10	< 0.6	
Cobalt	100 [4]	0.6	18.3	ND	ND	ND	ND	ND	ND	ND	< 2	< 2	< 50	< 50	< 50	**26.1**	
Copper	1,300	80	65.6	ND	**0.921**	ND	ND	ND	ND	**4.02**	ND	ND	< 10	< 10	< 10	< 0.8	
Iron	300	1,400	431,000	**47,400**	**60,200**	**83,600**	**53,400**	**59,300**	**31,700**	**56,600**	**45,100**	**46,100**	**24,900**	**25,700**	**158,000**	**499**	**ER**
Lead	5	15[4]	22.7	**13.2**	**4.25**	**10**	**6.1**	**8.58**	ND	**3.38**	**8.27**	**6.51**	< 3	< 3	< 3	< 2.1	
Magnesium	NLE	NLE	62,700	**20,400**	**21,000**	**20,000**	**17,500**	**31,900**	**37,700**	**20,000**	**12,200**	**12,600**	**35,100**	**38,700**	**28,500**	**9,930**	
Manganese	50	43	331	**196**	**234**	**254**	**185**	**293**	**316**	**215**	**150**	**154**	**329**	**357**	**556**	**94.1**	
Mercury	2	0.063	0.26	ND	ND	**0.09**	ND	ND	ND	**0.11**	ND	ND	< 0.2	< 0.2	< 0.2	< 0.254	
Nickel	100	39	187	**17.2**	**22.6**	**16.7**	**15.3**	**38.4**	**46.7**	**20.6**	**12.5**	**12.5**	**49.2**	**56.6**	**24**	**94.6**	
Potassium	NLE	NLE	137,000	**3,790**	**4,530**	**5,650**	**4,170**	**7,390**	**5,670**	**5,540**	**6,120**	**5,770**	< 10000	< 10000	< 10000	**11,300**	
Selenium	40	10	29.6	**45.1**	**4.46**	ND	ND	ND	NA	**1.57**	ND	ND	< 10	< 10	< 10	< 1.36	
Silver	40	9.4	ND	ND	ND	ND	ND	ND	**4.73**	**8.12**	**9.61**	**9.35**	< 10	< 10	< 10	< 0.6	
Sodium	50,000	NLE	21,500	**129,000**	**127,000**	**148,000**	**121,000**	**148,000**	**136,000**	**131,000**	**105,000**	**107,000**	**135,000**	**124,000**	**300,000**	**23,700**	
Thallium	2	0.02	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 2	< 2	< 2	< 0.53	
Vanadium	NLE	8.6	108	**5.24**	**0.683**	**13.2**	**9.72**	**11.1**	ND	ND	**0.78**	**1.14**	< 50	< 50	< 50	< 0.5	
Zinc	2,000	600	233	**128**	**121**	**122**	**99.4**	**232**	**262**	**122**	**71.4**	**73.6**	**309**	**390**	**183**	**271**	

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				296MW08												M18MW22
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	50	51	52	53	54	55	56	57	57 Dup	58	59	60	1
Date Collected				3/26/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/21/2010	9/13/2010	11/23/2010	11/23/2010	2/24/2011	4/19/2011	8/9/2011	10/29/2010
Study ID									Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December
(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)
RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				M18MW22					M18MW23						M18MW24	
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	2	2 Dup	3	4	5	1	2	2 Dup	3	4	4 Dup	46	47
Date Collected				11/12/2010	11/12/2010	2/24/2011	4/28/2011	10/29/2011	10/29/2010	11/16/2010	11/16/2010	2/24/2011	4/28/2011	4/28/2011	3/4/2008	5/14/2008
Study ID				Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow		
Volatile Organic Compounds (µg/L)																
1,2-Dichloroethane	2	0.17	-	**53.99**	**52.29**	**58.58**	**43.48**	**55.24**	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	ND	ND
1,2-Dichloropropane	1	0.44	-	**0.24 J**	**0.25 J**	< 0.12	< 0.12	**0.32 J**	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	ND	ND
Acetone	6,000	1,400	-	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	ND	ND
Benzene	1	0.45	-	**1.7**	**1.58**	**1.81**	**1.65**	**2.08**	**1,023 D**	**1,067 D**	**1,079 D**	**775.67 D**	**664.44 D**	**688.03 D**	ND	ND
Carbon tetrachloride	1	0.45	-	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	**0.6**	**0.58**	< 0.12	**0.95**	**1.02**	ND	ND
Ethyl benzene	700	1.5	-	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	ND	ND
Meta/Para Xylene	1,000	NLE	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	ND	ND
Methyl Tertbutyl Ether	70	14	-	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	ND	ND
Ortho Xylene	1,000	19	-	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	< 0.14	ND	ND
Tert Butyl Alcohol	100	NLE	-	**51.98**	**49.67**	< 1.64	< 1.64	**46.24**	< 1.64	< 1.64	< 1.64	< 1.64	< 1.64	< 1.64	ND	ND
Toluene	600	110	-	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	ND	ND
Trichloroethene	1	0.28	-	**0.41 J**	**0.43 J**	**0.49 J**	**0.4 J**	**0.48 J**	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	ND	ND
TICs*	500	NLE	-	**339 J**	**320 J**	**175 J**	**106 J**	**276 J**	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics (µg/L)																
Aluminum	200	2,000	121,000	**2,120**	**2,050**	**2,160**	**2,350**	**2,010**	**551**	**461**	**421**	**656**	**2,390**	**1,990**	**233**	ND
Antimony	6	0.78	20.7	< 4.7	< 4.7	< 6	< 6	< 10	< 4.7	**4.78 ER**	< 4.7	< 6	< 6	< 6	ND	ND
Arsenic	3	0.052	89.3	**1.39 ER**	**1.22 ER**	< 3	< 3	**1.19**	**5.2**	**7.85**	**7.79**	**11.3**	**7.8**	**6.9**	ND	**6.41**
Barium	6,000	380	699	**757**	**737**	**664**	**734**	**539**	**125**	**114**	**108**	< 200	< 200	< 200	**108**	**115**
Beryllium	1	2.5	2.1	**2.85**	**2.77**	**2.3**	**2.3**	**2.59**	**0.53**	< 0.4	< 0.4	< 1	< 1	< 1	ND	**0.195 ER**
Cadmium	4	0.92	9.5	**6.36**	**6.42**	**5.5**	**5.7**	**4.47**	**0.457 ER**	< 0.4	< 0.4	< 3	< 3	< 3	**0.519 ER**	ND
Calcium	NLE	NLE	45,400	**31,600**	**30,700**	**25,300**	**27,200**	**22,400**	**23,800**	**27,400**	**26,100**	**25,000**	**16,600**	**17,400**	**334,000**	**348,000 E**
Chromium	70	2,200	191	< 0.6	< 0.6	< 10	< 10	**0.756**	< 0.6	< 0.6	< 0.6	< 10	< 10	< 10	**1.2 ER**	**0.942 ER**
Cobalt	100 [4]	0.6	18.3	**35.3**	**34**	< 50	< 50	**26.5**	**5.65**	**5.34**	**5.13**	< 50	< 50	< 50	**1.97 ER**	ND
Copper	1,300	80	65.6	< 0.8	< 0.8	< 10	< 10	< 0.8	< 0.8	< 0.8	< 0.8	< 10	< 10	< 10	**1.93 ER**	ND
Iron	300	1,400	431,000	**834**	**787**	**200**	**693**	**510**	**1,060**	**756**	**658**	**647**	**10,200**	**8,070**	**1,810**	**2,820**
Lead	5	15[4]	22.7	< 2.1	< 2.1	< 3	< 3	< 2.1	< 2.1	< 2.1	< 2.1	< 3	**4.5**	**3.4**	**2.48 ER**	**3.01 ER**
Magnesium	NLE	NLE	62,700	**15,100**	**14,800**	**12,400**	**15,900**	**10,300**	**10,200**	**10,600**	**10,100**	**10,500**	**9,700**	**10,300**	**17,600**	**20,200**
Manganese	50	43	331	**121**	**117**	**107**	**97**	**97.4**	**66.7**	**73.6**	**70.3**	**76.5**	**56.6**	**57.6**	**152**	**155**
Mercury	2	0.063	0.26	< 0.254	< 0.254	< 0.2	< 0.2	< 0.254	< 0.254	< 0.254	< 0.254	< 0.2	< 0.2	< 0.2	ND	ND
Nickel	100	39	187	**121**	**115**	**109**	**99.2**	**97.5**	**16.9**	**18.1**	**17.7**	**17.7**	**16**	**17**	**11.2**	**5.25**
Potassium	NLE	NLE	137,000	**15,500**	**15,100**	**11,100**	< 10000	**11,500**	**9,440**	**11,600**	**11,000**	< 10000	< 10000	< 10000	**13,000**	**12,500**
Selenium	40	10	29.6	< 1.36	< 1.36	< 10	< 10	< 1.36	< 1.36	< 1.36	< 1.36	< 10	< 10	< 10	ND	**24.2**
Silver	40	9.4	ND	< 0.6	< 0.6	< 10	< 10	< 0.6	< 0.6	< 0.6	< 0.6	< 10	< 10	< 10	ND	ND
Sodium	50,000	NLE	21,500	**67,200**	**66,200**	**44,900**	**104,000**	**24,500**	**11,300**	**13,100**	**13,500**	**12,900**	**12,900**	**13,700**	**17,800**	**21,000**
Thallium	2	0.02	5.5	< 0.53	< 0.53	< 2	< 2	< 0.53	< 0.53	< 0.53	< 0.53	< 2	< 2	< 2	**5.8 ER**	ND
Vanadium	NLE	8.6	108	< 0.5	< 0.5	< 50	< 50	< 0.5	< 0.5	**0.838 ER**	**0.73 ER**	< 50	< 50	< 50	**3.71 ER**	**1.42 ER**
Zinc	2,000	600	233	**374**	**361**	**374**	**405**	**278**	**106**	**93.6**	**88.4**	**136**	**142**	**151**	**28.7**	ND

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				M18MW22					M18MW23						M18MW24	
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	2	2 Dup	3	4	5	1	2	2 Dup	3	4	4 Dup	46	47
Date Collected				11/12/2010	11/12/2010	2/24/2011	4/28/2011	10/29/2011	10/29/2010	11/16/2010	11/16/2010	2/24/2011	4/28/2011	4/28/2011	3/4/2008	5/14/2008
Study ID				Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	Low Flow		

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December

(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)

RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				M18MW24												M18MW25	
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	48	49	50	51	52	53	54	55	56	57	58	59	46	
Date Collected				8/13/2008	10/24/2008	3/25/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/14/2010	9/14/2010	11/12/2010	2/24/2011	4/20/2011	3/4/2008	
Study ID											Low Flow	Low Flow	Low Flow	Low Flow	Low Flow		
Volatile Organic Compounds (µg/L)																	
1,2-Dichloroethane	2	0.17	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	ND	
1,2-Dichloropropane	1	0.44	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	ND	
Acetone	6,000	1,400	-	**2.88**	**4.04**	ND	ND	ND	ND	ND	ND	ND	< 0.32	< 0.32	< 0.32	ND	
Benzene	1	0.45	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	ND	
Carbon tetrachloride	1	0.45	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	ND	
Ethyl benzene	700	1.5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	ND	
Meta/Para Xylene	1,000	NLE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.3	< 0.3	< 0.3	ND	
Methyl Tertbutyl Ether	70	14	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	ND	
Ortho Xylene	1,000	19	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.14	< 0.14	< 0.14	ND	
Tert Butyl Alcohol	100	NLE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.64	< 1.64	< 1.64	ND	
Toluene	600	110	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12	< 0.12	< 0.12	ND	
Trichloroethene	1	0.28	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.11	< 0.11	< 0.11	ND	
TICs*	500	NLE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5** **JN**	ND	ND	ND	
Inorganics (µg/L)																	
Aluminum	200	2,000	121,000	ND	**624**	**250**	**21.1**	**166**	**41.7** **ER**	**179**	ND	**69.2** **ER**	< 13	< 200	< 200	**130**	
Antimony	6	0.78	20.7	ND	ND	**28.2**	**8** **ER**	ND	ND	ND	**15.9**	**24.5**	< 4.7	< 6	< 6	ND	
Arsenic	3	0.052	89.3	**13.2**	ND	**140**	ND	**42.9**	**1.33** **ER**	**1.86**	**1.25**	**1.64** **ER**	**3.44** **ER**	< 3	< 3	**4.61** **ER**	
Barium	6,000	380	699	**243**	**310**	**279**	**225**	**289**	**460**	**182**	**158**	**312**	**294**	< 200	< 200	**43.9**	
Beryllium	1	2.5	2.1	**0.269** **ER**	ND	ND	**0.113** **ER**	ND	ND	ND	ND	ND	**0.449** **ER**	< 1	< 1	ND	
Cadmium	4	0.92	9.5	**5.04**	**0.568** **ER**	ND	ND	**3.17**	ND	ND	**0.942** **ER**	**3.99**	**0.786** **ER**	< 3	< 3	**0.262** **ER**	
Calcium	NLE	NLE	45,400	**519,000** **E**	**595,000**	**495,000**	**491,000**	**539,000** **E**	**943,000**	**495,000**	**383,000**	**623,000** **E**	**975,000** **E**	**523,000**	**260,000**	**117,000**	
Chromium	70	2,200	191	**1.61** **ER**	**2** **ER**	**3.9** **ER**	**1.85** **ER**	ND	ND	ND	ND	**1.89** **ER**	< 0.6	< 10	< 10	ND	
Cobalt	100 [4]	0.6	18.3	ND	**3.69**	**1.27** **ER**	**0.735** **ER**	**1.06** **ER**	**0.562** **ER**	**0.776** **ER**	ND	ND	**16.9**	< 50	< 50	**2.66**	
Copper	1,300	80	65.6	ND	ND	**25.5**	ND	ND	ND	ND	ND	**3.45** **ER**	< 0.8	< 10	< 10	**9.21**	
Iron	300	1,400	431,000	**49,100**	**46,400**	**23,700**	**49,300**	**81,400**	**18,900**	**3,540**	**25,400**	**78,700**	**13,900**	**11,300**	**11,000**	**19,100**	
Lead	5	15 [4]	22.7	**3.11** **ER**	ND	**5.87**	**3.07** **ER**	ND	ND	ND	**3.58** **ER**	**8.89**	< 2.1	**3.6**	**9.1**	ND	
Magnesium	NLE	NLE	62,700	**39,000**	**44,100**	**30,100**	**39,100**	**48,200**	**60,300**	**30,300**	**27,100**	**55,500**	**63,900**	**35,400**	**14,300**	**20,100**	
Manganese	50	43	331	**396**	**429**	**339**	**420**	**335**	**422**	**296**	**345**	**392**	**499**	**453**	**288**	**966**	
Mercury	2	0.063	0.26	ND	ND	ND	ND	ND	ND	ND	ND	**0.09** **ER**	< 0.254	< 0.2	< 0.2	ND	
Nickel	100	39	187	ND	**3.6** **ER**	ND	ND	ND	ND	**1.88** **ER**	**0.898** **ER**	**2.19** **ER**	**58.9**	< 10	< 10	**20.8**	
Potassium	NLE	NLE	137,000	**16,500**	**20,300**	**14,700**	**15,400**	**18,700**	**30,200**	**16,000**	**13,700**	**19,400**	**40,300**	**18,500**	**10,400**	**5,790**	
Selenium	40	10	29.6	**17.9**	ND	**36.7**	ND	ND	ND	**15**	NA	**1.91** **ER**	< 1.36	< 10	< 10	ND	
Silver	40	9.4	ND	**6.18**	ND	ND	ND	ND	**35.6**	**26.2**	ND	**2.56** **ER**	< 0.6	< 10	< 10	ND	
Sodium	50,000	NLE	21,500	**46,300**	**63,200**	**34,600**	**42,400**	**68,800**	**256,000**	**59,900**	**62,300**	**113,000**	**238,000**	**88,500**	**21,900**	**58,200**	
Thallium	2	0.02	5.5	ND	**7.19** **ER**	**36.5**	ND	ND	ND	ND	ND	ND	< 0.53	< 2	< 2	**3.31** **ER**	
Vanadium	NLE	8.6	108	**3.04** **ER**	**2.41** **ER**	**7.6**	**2.27** **ER**	**14.4**	**7.2**	**4.95** **ER**	ND	ND	< 0.5	< 50	< 50	ND	
Zinc	2,000	600	233	ND	**99.9**	**82.1**	**6.88** **ER**	**10.7** **ER**	**4.69** **ER**	**5.45** **ER**	ND	ND	**532**	< 20	< 20	**25.8**	

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				M18MW24												M18MW25
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	48	49	50	51	52	53	54	55	56	57	58	59	46
Date Collected				8/13/2008	10/24/2008	3/25/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/14/2010	9/14/2010	11/12/2010	2/24/2011	4/20/2011	3/4/2008
Study ID											Low Flow	Low Flow	Low Flow	Low Flow	Low Flow	

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December

(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)

RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				M18MW25												
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	47	48	49	50	51	52	53	54	55	55 Dup	56	57	58
Date Collected				5/14/2008	8/13/2008	10/24/2008	3/25/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/14/2010	5/14/2010	9/14/2010	9/14/2010	11/12/2010
Study ID												Low Flow	Low Flow	Low Flow	Low Flow	Low Flow
Volatile Organic Compounds (µg/L)																
1,2-Dichloroethane	2	0.17	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.11
1,2-Dichloropropane	1	0.44	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12
Acetone	6,000	1,400	-	ND	ND	ND	**6.86**	ND	ND	ND	ND	ND	ND	ND	ND	< 0.32
Benzene	1	0.45	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12
Carbon tetrachloride	1	0.45	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12
Ethyl benzene	700	1.5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12
Meta/Para Xylene	1,000	NLE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.3
Methyl Tertbutyl Ether	70	14	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.11
Ortho Xylene	1,000	19	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.14
Tert Butyl Alcohol	100	NLE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.64
Toluene	600	110	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.12
Trichloroethene	1	0.28	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.11
TICs*	500	NLE	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4 JN**	ND	ND
Inorganics (µg/L)																
Aluminum	200	2,000	121,000	ND	ND	**745**	**81 ER**	ND	**136**	ND	**46.7 ER**	ND	ND	ND	ND	< 13
Antimony	6	0.78	20.7	ND	ND	**11.7**	**22.7**	**6.19 ER**	ND	ND	**6.43 ER**	**16.3**	**14.7**	**33.1**	**31.7**	< 4.7
Arsenic	3	0.052	89.3	**7**	**13.5**	ND	**112**	**15.4**	**52**	**2.98 ER**	**8.11**	**2.15**	**1.28 ER**	**7.58**	**4.82 ER**	< 0.62
Barium	6,000	380	699	**39.3**	**295**	**376**	**147**	**133**	**352**	**170**	**44**	**118**	**109**	**459**	**441**	**526**
Beryllium	1	2.5	2.1	**0.1 ER**	**0.12 ER**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.4
Cadmium	4	0.92	9.5	**2.4**	**8.83**	ND	ND	ND	**2.05**	ND	ND	**1.2 ER**	**0.953 ER**	**2.09**	**2.32 ER**	**2.65**
Calcium	NLE	NLE	45,400	**97,700**	**429,000**	**325,000**	**211,000**	ND	**506,000**	**295,000 E**	**112,000**	**214,000**	**198,000**	**640,000 E**	**612,000 E**	**661,000 E**
Chromium	70	2,200	191	**2.2 ER**	ND	**4.29 ER**	**0.923 ER**	ND	ND	ND	ND	ND	ND	ND	ND	< 0.6
Cobalt	100 [4]	0.6	18.3	**1.8 ER**	ND	**2.68**	**0.416**	**0.561 ER**	**0.495 ER**	ND	ND	ND	ND	ND	ND	< 0.3
Copper	1,300	80	65.6	ND	ND	**3.43 ER**	**2.37 ER**	ND	ND	ND	ND	ND	ND	**4.09 ER**	**3.9 ER**	< 0.8
Iron	300	1,400	431,000	**25,500**	**82,600**	**150,000**	**47,500**	**48,600**	**60,400**	**30,200**	ND	**31,400**	**28,500**	**48,600**	**47,700**	**42,400**
Lead	5	15[(4)]	22.7	**3 ER**	**6.89**	ND	**11.5**	ND	ND	ND	ND	**3.31 ER**	**3.08 ER**	ND	**3.56 ER**	**2.8 ER**
Magnesium	NLE	NLE	62,700	**16,500**	**116,000**	**151,000**	**909,000**	**153,000**	**155,000**	**64,100**	**18,700**	**39,700**	**36,900**	**181,000**	**175,000**	**177,000**
Manganese	50	43	331	**1,090**	**694**	**477**	**451**	**419**	**1,130**	**819**	**594**	**610**	**569**	**1,120**	**1,090**	**1,120**
Mercury	2	0.063	0.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.07 ER**	**0.09 ER**	< 0.254
Nickel	100	39	187	**3 ER**	ND	ND	ND	ND	**0.824 ER**	ND	**2.2 ER**	ND	ND	**1.33 ER**	**1.03 ER**	< 0.7
Potassium	NLE	NLE	137,000	**5,600**	**41,500**	**58,300**	**33,000**	**50,400**	**51,500**	**17,800**	**6,750**	**14,700**	**13,100**	**42,000**	**40,600**	**67,500**
Selenium	40	10	29.6	ND	**7.79 ER**	ND	**73.4**	**6.19 ER**	**24.6**	ND	ND	NA	NA	**1.61 ER**	**2.34 ER**	< 1.36
Silver	40	9.4	ND	**2 ER**	**11.1**	ND	ND	ND	ND	ND	ND	**1.37 ER**	**1.07 ER**	ND	ND	**2.38 ER**
Sodium	50,000	NLE	21,500	**30,700**	**774,000 E**	**1,090,000**	**647,000**	**1,040,000**	**948,000 E**	**347,000**	**45,500**	**232,000**	**214,000**	**1,060,000 E**	**1,020,000 E**	**118,000 E**
Thallium	2	0.02	5.5	ND	ND	**2.21 ER**	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.53
Vanadium	NLE	8.6	108	**0.9 ER**	**3.35 ER**	**12.9**	**10.7**	**3.59 ER**	**12.7**	**7**	**3.46 ER**	ND	ND	ND	ND	< 0.5
Zinc	2,000	600	233	ND	ND	**38.6**	**16.6 ER**	ND	**3.81 ER**	ND	**2.28 ER**	ND	ND	ND	ND	< 2.5

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				M18MW25											
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	47	48	49	50	51	52	53	54	55	55 Dup	56	57	58
Date Collected				5/14/2008	8/13/2008	10/24/2008	3/25/2009	6/2/2009	9/17/2009	11/23/2009	2/2/2010	5/14/2010	5/14/2010	9/14/2010	9/14/2010	11/12/2010
Study ID												Low Flow	Low Flow	Low Flow	Low Flow	Low Flow

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December
(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)
RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				M18MW25			
Round No.	**NJ Ground Water Quality Criteria** [1]	**2014-05 USEPA RSL Tap Water (HQ=0.1)** [2]	**Weston 1995 Background (Main Post)**[3]	59		60	
Date Collected				2/24/2011		4/20/2011	
Study ID				Low Flow		Low Flow	
Volatile Organic Compounds (µg/L)							
1,2-Dichloroethane	2	0.17	-	< 0.11		< 0.11	
1,2-Dichloropropane	1	0.44	-	< 0.12		< 0.12	
Acetone	6,000	1,400	-	< 0.32		< 0.32	
Benzene	1	0.45	-	**0.29**	**J**	< 0.12	
Carbon tetrachloride	1	0.45	-	< 0.12		< 0.12	
Ethyl benzene	700	1.5	-	< 0.12		< 0.12	
Meta/Para Xylene	1,000	NLE	-	< 0.3		< 0.3	
Methyl Tertbutyl Ether	70	14	-	< 0.11		< 0.11	
Ortho Xylene	1,000	19	-	< 0.14		< 0.14	
Tert Butyl Alcohol	100	NLE	-	< 1.64		< 1.64	
Toluene	600	110	-	< 0.12		< 0.12	
Trichloroethene	1	0.28	-	< 0.11		< 0.11	
TICs*	500	NLE	-	ND		ND	
Inorganics (µg/L)							
Aluminum	200	2,000	121,000	< 200		< 200	
Antimony	6	0.78	20.7	< 6		< 6	
Arsenic	3	0.052	89.3	< 3		**10.8**	
Barium	6,000	380	699	**230**		< 200	
Beryllium	1	2.5	2.1	< 1		< 1	
Cadmium	4	0.92	9.5	< 3		< 3	
Calcium	NLE	NLE	45,400	**367,000**		**71,800**	
Chromium	70	2,200	191	< 10		< 10	
Cobalt	100 [4]	0.6	18.3	< 50		< 50	
Copper	1,300	80	65.6	< 10		< 10	
Iron	300	1,400	431,000	**4,860**		**7,950**	
Lead	5	15[4]	22.7	< 3		< 3	
Magnesium	NLE	NLE	62,700	**100,000**		**11,600**	
Manganese	50	43	331	**912**		**543**	
Mercury	2	0.063	0.26	< 0.2		< 0.2	
Nickel	100	39	187	< 10		< 10	
Potassium	NLE	NLE	137,000	**28,600**		< 10000	
Selenium	40	10	29.6	< 10		< 10	
Silver	40	9.4	ND	< 10		< 10	
Sodium	50,000	NLE	21,500	**608,000**		**23,200**	
Thallium	2	0.02	5.5	< 2		< 2	
Vanadium	NLE	8.6	108	< 50		< 50	
Zinc	2,000	600	233	< 20		< 20	

TABLE 4.4
GROUNDWATER SAMPLING SUMMARY RESULTS FOR MARCH 2008 TO AUGUST 2011
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				M18MW25	
Round No.	**NJ Ground Water Quality Criteria [1]**	**2014-05 USEPA RSL Tap Water (HQ=0.1) [2]**	**Weston 1995 Background (Main Post)[3]**	59	60
Date Collected				2/24/2011	4/20/2011
Study ID				Low Flow	Low Flow

(1) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.

(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December

(4) NJDEP Interim Ground Water Quality Criteria (http://www.nj.gov/dep/wms/bwqsa/gwqs_interim_criteria_table.htm)

RSL values were current at the time the screening was conducted.
D = Results from dilution of sample.
DUP = field duplicate sample
E or ER = Estimated result
J = Analyte detected between MDL and practical quantitation limit (PQL)
NA = Not analyzed
ND = Not detected
NLE = No limit established
NR = Not reported
< = the analyte was not detected above the method detection limit (MDL)
Dash (--) = only background concentrations for metals are being used as compari
Detections are bolded
Shaded cells = concentration exceeds NJDEP GWQS.
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA Tapwater RSL
Shaded cells = concentration exceeds Weston 1995 background

TABLE 4.5
GROUNDWATER SAMPLING SUMMARY RESULTS FOR AUGUST 2013
AND DECEMBER 2014
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

WELL ID:	NJDEP GWQS[1]	USEPA RSL Tapwater[2]	Weston (1995) Background (Main Post) [3]	296MW03		296MW04		296MW04		296MW06		296MW06*		296MW06		296MW06		296MW07		296MW08		M18MW22		M18MW22*		M18MW22		M18MW23		M18MW23		M18MW24		M18MW25		M18MW25	
DATE SAMPLED:				19-Aug-2013		20-Aug-2013		19-Dec-2014		19-Aug-2013		19-Aug-2013		19-Dec-2014		19-Dec-2014		19-Aug-2013		19-Aug-2013		21-Aug-2013		21-Aug-2013		19-Dec-2014		19-Dec-2014		19-Dec-2014		21-Aug-2013		21-Aug-2013		21-Aug-2013	
SAMPLE DEPTH (ft bgs):				11.48		7.5		6.35		10.0		10.0		10.1		5.07		8.63		7.17		12.33		18.98		18.91		16.22		9.28		10.9		8.81		13.81	
Volatile Organics - SW8260C (µg/L)																																					
1,2-Dichloroethane	2	0.17	--	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**13.0**		**26.0**		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,3,5-Trimethylbenzene	NLE	12.00	--	1.0	U	1.0	U	1.0	U	1.0	U	**0.20**	J	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,4-Dichlorobenzene	75	0.48	--	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**0.23**	J	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Acetone	6,000	1,400	--	5.0	U	5.0	UJ	**2.0**	J	**2.2**	BJ	**2.4**	BJ	5.0	U	1.9	J	**2.1**	BJ	**4.9**	BJ	2.4	**BJ**	3.5	**BJ**	**2.6**	**J**	5.0	U	5.0	U	**3.00**	**BJ**	2.3	**BJ**	2.1	**BJ**
Benzene	1	0.45	--	1.0	U	1.0	U	1.0	U	**11.0**		**12.0**		**15.0**		**1.6**	J	1.0	U	1.0	U	1.0	U	**0.37**	**J**	1.0	U	**6.5**		**9.1**		**1.00**	U	1.0	U	1.0	U
Ethylbenzene	700	1.5	--	1.0	U	1.0	U	1.0	U	**0.72**	J	**0.72**	J	**0.2**	J	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Isopropylbenzene	700	45	--	1.0	U	1.0	U	1.0	U	**0.80**	J	**0.85**	J	**0.76**	J	**0.34**	J	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Naphthalene	300	0.17	--	1.0	U	1.0	U	1.0	U	**1.1**	BJ	**1.1**	BJ	**0.66**	J	**0.37**	J	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
n-Propylbenzene	NLE	66	--	1.0	U	1.0	U	1.0	U	**0.27**	J	**0.26**	J	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene	600	110		1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	**0.26**	J	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Xylene (Total)	1000	19	--	3.0	U	3.0	U	3.0	U	**0.70**	J	**0.74**	J	**0.73**	J	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
VOC-TICS																																					
Isobutane	500 [4]	NLE	--																					**6.900**	JN												
Indane	NLE	NLE	--							**23.9**	JN	**24.3**	JN																								
Unknown	NLE	NLE												**24.3**	JN	**6.9**	JN																				

(1) New Jersey Department of Environmental Protection Ground Water Quality Standards Specific Ground Water Quality Criteria - Class IIA and Practical Quantitation Levels. (http://www.state.nj.us/dep/wms/bwqsa/Appendix_Table_1.htm)
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.
(3) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December.
(4) Interim generic groundwater quality criterion.
RSL values were current at the time the screening was conducted.
Dash (--) = only background concentrations for metals are being used as comparison criteria.
BJ = Analyte detected, estimated concentration. Analyte also found in an associated blank at concentration above one half the LOQ.
* = field duplicate sample
J = Analyte detected, estimated concentration.
JN = Tentatively identified compound, estimated concentration.
NLE = No screening level established.
U = Analyte was not detected above the indicated limit of detection (LOD).
Detections are bolded.
Shaded cells = concentration exceeds NJDEP GWQS
Shaded cells = concentration exceeds USEPA Tapwater RSL
Shaded cells = concentration exceeds NJDEP GWQS and USEPA RSL
Shaded cells = concentration exceeds Weston (1995) background

TABLE 4.6
GROUNDWATER SAMPLING SUMMARY OF EXCEEDANCES
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Analyte	Maximum Concentration		Location of Maximum Concentration	Date of Maximum Concentration	Number of Samples [1]	Number of Detections	Number of Exceedances			Evaluated as COPC in Risk Assessment?	Rationale
							NJDEP GWQS [2]	USEPA Tapwater RSL[3]	Weston 1995 Background (Main Post) [4]		
Volatile Organic Compounds (µg/L)											
1,2-Dichloroethane	58.58		M18MW22	2/24/2011	93	8	8	8	n/a	No	M18MW22 is upgradient of FTMM-18 and downgradient of former gasoline UST at Bldg 283 (FTMM-61) and 1,2-DCA was used as an additive in leaded gasoline. Considered to be related to FTMM-61
1,2-Dichloropropane	0.32	J	M18MW22	10/29/2011	93	4	0	0	n/a	No	Less than Tapwater RSL
1,4 Dichlorobenzene	0.23	J	296MW08	8/19/2013	17	1	0	0	n/a	No	Less than Tapwater RSL
1,3,5-Trimethylbenzene	0.20	J	296MW06	8/20/2013	17	1	NLE	0	n/a	No	Less than Tapwater RSL
Acetone	4.90	BJ	296MW08	8/19/2013	94	12	0	0	n/a	No	Less than Tapwater RSL
Benzene	1,079	D	M18MW23	11/16/2010	94	25	22	22	n/a	**Yes**	Exceeded Tapwater RSL in 296MW06. Other RSL exceedances are related to upgradient sources.
Carbon Tetrachloride	1.02		M18MW23	4/28/2011	93	4	1	4	n/a	No	M18MW23 is upgradient of FTMM-18 and downgradient Bldg 288 where carbon tetrachloride was historically used.
Ethylbenzene	7.50		296MW06	11/24/2010	94	7	0	3	n/a	No	Less than Tapwater RSL during most recent 3 events (Apr 2011 to Dec 2014)
Isopropylbenzene	0.85	J	296MW06 DUP	8/19/2013	17	4	0	0	n/a	No	Less than Tapwater RSL
m+p-xylenes	6.81		296MW06	11/24/2010	94	7	0	NLE	n/a	No	No RSL; less than GWQS
Methyl tert butyl ether	0.81		296MW08	5/21/2010	94	6	0	0	n/a	No	Less than Tapwater RSL
Naphthalene	0.66	J	296MW06	8/19/2013	17	4	0	4	n/a	**Yes**	Exceeded Tapwater RSL in 296MW06 in 2014.
n-Propylbenzene	0.27	J	296MW06	8/19/2013	17	2	0	0	n/a	No	Less than Tapwater RSL
o-xylene	3.72		296MW06	11/24/2010	94	7	0	0	n/a	No	Less than Tapwater RSL
tert-Butyl alcohol	51.98		M18MW22	11/12/2010	77	4	0	NLE	n/a	No	No RSL; less than GWQS
Toluene	0.58		296MW06	11/24/2010	94	3	0	0	n/a	No	Less than Tapwater RSL
Total Xylenes	0.74	J	296MW06 DUP	8/19/2013	11	2	0	0	n/a	No	Less than Tapwater RSL
Trichloroethene	0.49	J	M18MW22	2/24/2011	93	6	0	6	n/a	No	M18MW22 is upgradient of FTMM-18 downgradient of Bldg 288 where trichloroethane was historically used.
TICs*	24.3	J	296MW06	12/18/2014	93	25	3	NLE	n/a	No	No RSL

TABLE 4.6
GROUNDWATER SAMPLING SUMMARY OF EXCEEDANCES
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Analyte	Maximum Concentration		Location of Maximum Concentration	Date of Maximum Concentration	Number of Samples [1]	Number of Detections	Number of Exceedances			Evaluated as COPC in Risk Assessment?	Rationale
							NJDEP GWQS [2]	USEPA Tapwater RSL[3]	Weston 1995 Background (Main Post) [4]		
Metals (µg/L)											
Aluminum	3,920		296MW03	9/13/2010	77	55	39	8	0	No	Anomalous occurrence; exceeded RSL in 8 samples but no background exceedances. Considered to be representative of background conditions.
Antimony	40.10		296MW04	9/13/2010	77	17	15	17	7	No	All exceedances of RSL+max background occurred in Sept 2010 (single exceedance in each of 6 wells, including 1 primary/duplicate sample pair); exceedances not representative of data set. Considered to be representative of background conditions.
Arsenic	97.10		296MW08	8/9/2011	77	54	29	54	1	No	Anomalous occurrence; exceeded RSL in 55 samples but only one background exceedance. Considered to be representative of background conditions.
Barium	757		M18MW22	11/12/2010	77	54	0	10	3	No	Exceeded RSL and max background during 2 of 4 events at M18MW22; All elevated in a single well (located at upgradient site boundary) so not representative of the larger data set.
Beryllium	2.85		M18MW22	11/12/2010	77	17	6	4	6	No	Exceeded RSL and max background during 2 of 4 events at M18MW22 at concentrations only slightly exceeding background conditions.
Cadmium	46.20		296MW03	9/13/2010	77	33	11	28	3	No	Only exceeded max background in 1 well during 2 of most recent 8 events; exceedances are anomalous and unrepresentative, and were followed by 3 consecutive non-detects
Calcium	975,000	E	M18MW24	11/12/2010	77	75	NLE	NLE	29	No	Essential Nutrient
Chromium	43.50		296MW06	8/9/2011	77	14	0	0	0	No	No RSL; less than GWQS
Cobalt	35.30		M18MW22	11/12/2010	77	13	0	11	4	No	Exceeded RSL and max background during 2 of 4 events at M18MW22 at concentrations only slightly exceeding background conditions.
Copper	31.10		296MW06	8/9/2011	77	17	0	0	0	No	Less than Tapwater RSL
Iron	158,000		296MW08	8/9/2011	77	75	73	58	0	No	Essential Nutrient
Lead	12.10		296MW06	11/24/2010	77	21	9	0	0	No	Less than Tapwater RSL
Magnesium	830,000		296MW04	9/13/2010	77	70	NLE	NLE	15	No	Essential Nutrient
Manganese	3130.00		296MW06	2/24/2011	77	75	65	68	25	**Yes**	Multiple RSL and max background exceedances in 4 wells located within FTMM-18 footprint
Mercury	0.11			9/13/2010	77	9	0	8	0	No	Anomalous occurrence; exceeded RSL in 6 wells, all during the Sept 2010 sampling event, but in each case was followed by multiple sample events where not detected. No exceedances of maximum background, considered to be representative of background conditions.
Nickel	121		M18MW22	11/12/2010	77	51	3	11	0	No	Anomalous occurrence; exceeded RSL in 11 samples but no background exceedances. Considered to be representative of background conditions.
Potassium	148,000		296MW04	9/13/2010	77	58	NLE	NLE	1	No	Essential Nutrient
Selenium	15		M18MW24	2/2/2010	77	11	0	1	0	No	Anomalous occurrence; exceeded RSL in 2 wells for 1 sampling event each, followed by non-detects or detected concentrations less than the RSL; no exceedances of maximum background, considered to be representative of background conditions.
Silver	35.60		M18MW24	11/23/2009	77	19	0	4	19	No	Anomalous occurrence; exceeded RSL in 2 wells for 1 sampling event and 1 well for 2 sampling events, followed by 3 to 5 events with non-detects or detected concentrations less than the RSL
Sodium	5,610,000	E	296MW04	9/13/2010	77	77	48	NLE	65	No	Essential Nutrient
Thallium	0		n/a	n/a	77	0	0	0	0	No	Less than Tapwater RSL
Vanadium	11.10		296MW08	2/2/2010	77	29	NLE	2	0	No	Anomalous occurrence; exceeded RSL in 1 well for 2 sampling events and 2 wells for 1 sampling event, followed by detected concentrations less than the RSL; no exceedances of maximum background, considered to be representative of background conditions.
Zinc	1,580		296MW03	9/13/2010	77	55	0	3	14	No	Anomalous occurrence; exceeded RSL in 1 well for 2 sampling events, followed by 3 sample events less than the RSL

TABLE 4.6
GROUNDWATER SAMPLING SUMMARY OF EXCEEDANCES
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Analyte	Maximum Concentration	Location of Maximum Concentration	Date of Maximum Concentration	Number of Samples (1)	Number of Detections	Number of Exceedances			Evaluated as COPC in Risk Assessment?	Rationale
						NJDEP GWQS (2)	USEPA Tapwater RSL(3)	Weston 1995 Background (Main Post) (4)		

(1) Data from the most recent 8 quarters of groundwater sampling are included here, and data from August, 2013 and December 2014.
(2) New Jersey Department of Environmental Protection (NJDEP) groundwater quality standards (GWQS), Ground Water Quality Criteria as per N.J.A.C. 7:9-6 (July 22, 2010). Available at: http://www.nj.gov/dep/wms/bwqsa/gwqs.htm.
(2) U.S. Environmental Protection Agency, Regional Screening Levels (RSLs). (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm). Revised May 2014.
(4) Weston, 1995. Final Site Investigation - Main Post and Charles Wood Areas, Fort Monmouth, New Jersey, December.
(5) B and BJ qualified data were treated as nondetected chemicals and are not considered COPCs.
(6) Essential nutrients (calcium, iron, magnesium, potassium, and sodium) are not considered COPCs.
RSL values were current at the time screening was conducted.
µg/L = micrograms/liter
*TICs - Tentatively identified compounds, cannot exceed 500 µg/L for VOCs and SVOCs. No individual compound can exceed 100 µg/L.
BJ = Analyte detected, estimated concentration. Analyte also found in an associated blank at concentration above one half the LOQ.
J = Estimated concentration exceeds the method detection limit (MDL) and is less than the reporting limit (RL)
D = results from dilution of sample
Dup = Field duplicate sample
E or ER = Estimated Result
n/a = not applicable
ND = not detected
NLE= No Limit Established

TABLE 4.7
SURFACE WATER SAMPLING SUMMARY RESULTS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				SS-14													
Round Number	**NJDEP Surface Water Quality Standards – Human Health (Saline)** [1]	**USEPA Human Health Criterion**	**USEPA Human Health Criterion Type** [2]	49	49 Dup	50	50 Dup	51	52	52 Dup	53	53 Dup	54	54 Dup	55	55 Dup	56	56 Dup
Date Collected				12/29/2008	12/29/2008	3/24/2009	3/24/2009	6/26/2009	9/25/2009	9/25/2009	12/7/2009	12/7/2009	3/28/2010	3/28/2010	6/22/2010	6/22/2010	9/21/2010	9/21/2010
Inorganics (µg/l)																		
Antimony	640	640	a	ND	ND	**23.1**	**28.6**	**3.68**	**5.92**	**7.99**	ND	**4.8 ER**	**8.48 ER**	**9.49 ER**	**7.76 ER**	**7.76 ER**	**10.7 ER**	**8.5 ER**
Arsenic	0.061	0.14	a	**2.72 ER**	ND	**64.5**	**76.1**	**22.1**	**17.6**	**20.1**	**1.39 ER**	**1.68 ER**	ND	ND	**1.15 ER**	**0.85 ER**	**2.12 ER**	**1.91 ER**
Barium	NLE	1,000	b	**37.7**	**38.7**	**40.2**	**40.1**	**40.7**	**38.4**	**39.2**	**29.9**	**30.8**	**53.1**	**39.7**	**33.8**	**35**	**38.6**	**36.4**
Beryllium	42	2.5	c	**0.193 ER**	**0.214 ER**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	16	0.92	c	**0.362 ER**	**0.372 ER**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	750	2,200	c	ND	ND	**0.497 ER**	ND	ND	ND	ND	**1.4 ER**	**1.46 ER**	ND	ND	ND	ND	ND	ND
Copper	NLE	1,300	b	ND	ND	**1.17 ER**	**1.26 ER**	**6.65**	ND	ND	ND	ND	ND	ND	**3.2 ER**	**3.51 ER**	**1.65 ER**	**1.4 ER**
Lead	NLE	15	e	ND	**1.3 ER**	**5.78**	**5.55**	ND	ND	ND	ND	**3 ER**	ND	ND	ND	ND	ND	ND
Mercury	0.051	0.57 [3]	c	ND	ND	ND	ND	ND	ND	ND	**0.18 ER**	**0.16 ER**	ND	ND	ND	ND	**0.08 ER**	**0.1 ER**
Nickel	1,700	4,600	a	**4.59 ER**	**4.69 ER**	**3.66 ER**	**3.73 ER**	**7.94**	**4.33**	**4.6**	**4.24 ER**	**3.93 ER**	**11.4**	**8.1**	**3.53 ER**	**3.52 ER**	**3.3 ER**	**2.3 ER**
Selenium	4,200	4,200	a	ND	ND	**108**	**97.1**	**22.8**	**29.8**	**36.8**	ND	**12.6 ER**	**50.3**	**31.1**	NA	NA	ND	ND
Thallium	0.47	0.47	a	**2.56 ER**	**3.07 ER**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Historic Wet Chemistry																		
Ammonia (mg/L)	NLE	NLE	--	ND	NA	ND	NA	**1.44**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (mg/L)	NLE	NLE	--	**6.52**	NA	**2.87**	NA	**7.93**	**8.22**	NA	**4.88**	NA	**4.03**	**4.03**	**6.87**	**6.87**	**6.79**	**6.79**
Fecal Coliform (cfu/100ml)	NLE	NLE	--	**80**	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrates (mg/L)	NLE	10.0	b	ND	NA	ND	NA	**0.525**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (su)	NLE	5-9	b	**6.94**	NA	**6.54**	NA	**7.07**	**7.36**	NA	**7.13**	NA	**6.98**	**6.98**	**6.88**	**6.88**	**6.14**	**6.14**
Phosphate (mg/L)	NLE	NLE	--	ND	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (mg/L)	NLE	NLE	--	**21.6**	NA	**30**	NA	**21.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature (°C)	NLE	NLE	--	**6.56**	NA	**3.57**	NA	**18.81**	**17.01**	NA	**4.85**	NA	**5.23**	**5.23**	**17.89**	**17.89**	**13.34**	**13.34**
Total Coliform (cfu/100ml)	NLE	NLE	--	**600**	NA	**20**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

(1) New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Standards (SWQS) for saline (SE) waters as per N.J.A.C. 7:9B effective 4-4-11. Available at: http://www.nj.gov/dep/wms/bwqsa/swqs.htm.
(2) **a** = U.S. Environmental Protection Agency (USEPA) National Recommended Water Quality Criterion (NRWQC), Human Health Criteria, Organism Only; **b** = USEPA NRWQC Human Health Criteria, Water+Organism; **c** = May 2013 USEPA Regional Screening Level, target hazard quotient = 0.1); **d** = USEPA Maximum Contaminant Level (MCL); **e** = USEPA Action Level.
(3) USEPA RSL for mercuric chloride (and other mercury salts).

RSL values were current at the time the screening was conducted.
mg/L = milligrams/liter.
µg/L = micrograms/liter.
cfu/100 mL = colony-forming units/100 milliliters.
< = analyte not detected above method detection limit (MDL).
B = Compound detected in the sample and its associated blank sample.
DUP = field duplicate sample.
ER = Estimated result.
J = Analyte detected between method detection limit (MDL) and practical quantitation limit (PQL).
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
Detections are bolded.
Shaded cells = concentration exceeds NJDEP Saline criterion.
Shaded cells = concentration exceeds USEPA Human Health criterion.
Shaded cells = concentration exceeds NJDEP and USEPA criteria.

TABLE 4.7
SURFACE WATER SAMPLING SUMMARY RESULTS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				SS-15								SS-21							
Round Number	**NJDEP Surface Water Quality Standards – Human Health (Saline)** [1]	**USEPA Human Health Criterion**	**USEPA Human Health Criterion Type** [2]	49	50	51	52	53	54	55	56	49	50	51	52	53	54	55	56
Date Collected				12/29/2008	3/24/2009	6/29/2009	9/25/2009	12/7/2009	3/28/2010	6/22/2010	9/21/2010	12/29/2008	3/24/2009	6/29/2009	9/25/2009	12/7/2009	3/28/2010	6/22/2010	9/21/2010
Inorganics (µg/l)																			
Antimony	640	640	a	ND	**17.8 ER**	**5.52**	**6.06**	ND	**6.44 ER**	**6.18 ER**	**10.8 ER**	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.061	0.14	a	ND	**66.6**	**14.1**	**19.6**	ND	**1.45 ER**	ND	**1.13 ER**	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NLE	1,000	b	**58.3**	**60.1**	**58.3**	**61.2**	**47.5**	**59.6**	**61.4**	**49.8**	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	42	2.5	c	**0.336 ER**	ND	ND	ND	**0.0702 ER**	**0.082 ER**	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	16	0.92	c	**0.471 ER**	ND	ND	ND	**0.608 ER**	ND	ND	**0.512 ER**	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	750	2,200	c	**3.37 ER**	**0.838 ER**	**0.628**	ND	**3.85 ER**	**1.07 ER**	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NLE	1,300	b	ND	**1.45 ER**	**2.49**	**4.6**	ND	ND	**2.49 ER**	**1.4 ER**	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NLE	15	e	**5.74**	**2.59 ER**	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.051	0.57 [3]	c	ND	ND	ND	ND	**0.18 ER**	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	1,700	4,600	a	**11.9**	**11.2**	**12**	**9.18**	**8.05**	**16**	**8.07**	**8.88**	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	4,200	4,200	a	ND	**104**	**24.3**	**24.5**	ND	**34.8**	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.47	0.47	a	NA	ND	ND	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Historic Wet Chemistry																			
Ammonia (mg/L)	NLE	NLE	--	ND	ND	ND	NA	NA	NA	NA	NA	**6.74**	**4.74**	**26.2**	**21.81**	**4.25**	**7.22**	**26.45**	**25.49**
Dissolved Oxygen (mg/L)	NLE	NLE	--	**6.99**	**7.85**	**8.08**	**8.61**	**4.65**	**4.45**	**7.86**	**4.67**	ND	ND	ND	NA	NA	NA	NA	NA
Fecal Coliform (cfu/100ml)	NLE	NLE	--	**20**	ND	NA	NA	NA	NA	NA	NA	**6.79**	**6.36**	**6.22**	**7.25**	**5.84**	**5.61**	**5.92**	**6.02**
Nitrates (mg/L)	NLE	10.0	b	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA
pH (su)	NLE	5-9	b	**7.09**	**7.11**	**7.42**	**7.05**	**7.21**	**6.96**	**7.34**	**5.92**	**3.88**	**4.18**	**5.86**	**3.96**	**4.98**	**4.64**	**5.58**	**3.42**
Phosphate (mg/L)	NLE	NLE	--	ND	**0.03**	ND	NA	NA	NA	NA	NA	ND	**0.18**	ND	NA	NA	NA	NA	NA
Sulfate (mg/L)	NLE	NLE	--	**19.1**	**29**	**18.9**	NA	NA	NA	NA	NA	**1,334**	**1,772**	**960**	NA	NA	NA	NA	NA
Temperature (°C)	NLE	NLE	--	**8.33**	**6.59**	**23.58**	**18.31**	**4.79**	**7.5**	**22.74**	**16.01**	ND	ND	NA	NA	NA	NA	NA	NA
Total Coliform (cfu/100ml)	NLE	NLE	--	**600**	**1,460**	NA	NA	NA	NA	NA	NA	**260**	**800**	NA	NA	NA	NA	NA	NA

(1) New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Standards (SWQS) for saline (SE) waters as per N.J.A.C. 7:9B effective 4-4-11. Available at: http://www.nj.gov/dep/wms/bwqsa/swqs.htm.
(2) **a** = U.S. Environmental Protection Agency (USEPA) National Recommended Water Quality Criterion (NRWQC), Human Health Criteria, Organism Only; **b** = USEPA NRWQC Human Health Criteria, Water+Organism; **c** = May 2013 USEPA Regional Screening Level, target hazard quotient = 0.1); **d** = USEPA Maximum Contaminant Level (MCL); **e** = USEPA Action Level.
(3) USEPA RSL for mercuric chloride (and other mercury salts).

RSL values were current at the time the screening was conducted.
mg/L = milligrams/liter.
µg/L = micrograms/liter.
cfu/100 mL = colony-forming units/100 milliliters.
< = analyte not detected above method detection limit (MDL).
B = Compound detected in the sample and its associated blank sample.
DUP = field duplicate sample.
ER = Estimated result.
J = Analyte detected between method detection limit (MDL) and practical quantitation li
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
Detections are bolded.
Shaded cells = concentration exceeds NJDEP Saline criterion.
Shaded cells = concentration exceeds USEPA Human Health criterion.
Shaded cells = concentration exceeds NJDEP and USEPA criteria.

TABLE 4.7
SURFACE WATER SAMPLING SUMMARY RESULTS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

				SS-27								SS-28							
Round Number	**NJDEP Surface Water Quality Standards – Human Health (Saline) [1]**	**USEPA Human Health Criterion**	**USEPA Human Health Criterion Type [2]**	35	36	37	38	39	40	41	42	35	36	37	38	39	40	41	42
Date Collected				12/29/2008	3/24/2009	6/29/2009	9/25/2009	12/7/2009	3/28/2010	6/22/2010	9/21/2010	12/29/2008	3/24/2009	6/29/2009	9/25/2009	12/7/2009	3/28/2010	6/22/2010	9/21/2010
Inorganics (µg/l)																			
Antimony	640	640	a	ND	**26.6**	**8.53**	**19**	**7.2 ER**	**9.71 ER**	**17.4 ER**	**27.1**	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	0.061	0.14	a	ND	**56**	**19.2**	**33**	**1.79 ER**	**0.95 ER**	**2.67 ER**	**3.53 ER**	NA	NA	NA	NA	NA	NA	NA	NA
Barium	NLE	1,000	b	**45.3**	**44.8**	**50.6**	**31.2**	**32.6**	**50.5**	**63**	**51.6**	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	42	2.5	c	**0.203 ER**	ND	ND	ND	ND	ND	**0.094 ER**	ND	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	16	0.92	c	**0.515 ER**	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	750	2,200	c	**2.33 ER**	ND	ND	**7.1**	ND	ND	**1.22 ER**	**1.04 ER**	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NLE	1,300	b	ND	**6.17**	**2.97**	**6**	**2.25 ER**	ND	**7.56**	**3.79 ER**	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NLE	15	e	**3.59 ER**	ND	ND	ND	**18.2**	ND	ND	**3.09 ER**	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.051	0.57 [3]	c	ND	ND	ND	ND	**0.1 ER**	ND	ND	**0.17 ER**	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	1,700	4,600	a	**8.03**	**6.12**	**9.12**	**5**	**6.55**	**10.1**	**5.72**	**6.21**	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	4,200	4,200	a	**4.76 ER**	**119**	**30.9**	ND	**13.6 ER**	**55**	NA	**2.66**	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	0.47	0.47	a	NA	ND	ND	ND	ND	**1.75**	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
Historic Wet Chemistry																			
Ammonia (mg/L)	NLE	NLE	--	ND	ND	**0.581**	NA	NA	NA	NA	NA	**7.89**	**6.44**	**20.96**	**23.04**	**4.29**	**6.37**	**25.39**	**21.61**
Dissolved Oxygen (mg/L)	NLE	NLE	--	**5.67**	**5.75**	**6.11**	**6.49**	**3.63**	**4.07**	**6.02**	**5.24**	ND	ND	ND	NA	NA	NA	NA	NA
Fecal Coliform (cfu/100ml)	NLE	NLE	--	**120**	ND	NA	NA	NA	NA	NA	NA	**7.21**	**7.61**	**6.69**	**7.5**	**6.49**	**6.44**	**6.43**	**6.63**
Nitrates (mg/L)	NLE	10.0	b	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA
pH (su)	NLE	5-9	b	**7.14**	**7.39**	**6.5**	**7.93**	**6.35**	**6.8**	**5.9**	**6.59**	**8.76**	**6.98**	**6.37**	**6.81**	**3.52**	**4.38**	**6.98**	**4.22**
Phosphate (mg/L)	NLE	NLE	--	ND	**0.03**	ND	NA	NA	NA	NA	NA	ND	ND	ND	NA	NA	NA	NA	NA
Sulfate (mg/L)	NLE	NLE	--	**72.2**	**239**	**140**	NA	NA	NA	NA	NA	**27.1**	**124**	**93.1**	NA	NA	NA	NA	NA
Temperature (°C)	NLE	NLE	--	**7.56**	**5.67**	**21.11**	**22.35**	**4.17**	**5.78**	**23.01**	**21.78**	**80**	ND	NA	NA	NA	NA	NA	NA
Total Coliform (cfu/100ml)	NLE	NLE	--	**540**	**580**	NA	NA	NA	NA	NA	NA	**780**	**420**	NA	NA	NA	NA	NA	NA

(1) New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Standards (SWQS) for saline (SE) waters as per N.J.A.C. 7:9B effective 4-4-11. Available at: http://www.nj.gov/dep/wms/bwqsa/swqs.htm.
(2) **a** = U.S. Environmental Protection Agency (USEPA) National Recommended Water Quality Criterion (NRWQC), Human Health Criteria, Organism Only; **b** = USEPA NRWQC Human Health Criteria, Water+Organism; **c** = May 2013 USEPA Regional Screening Level, target hazard quotient = 0.1); **d** = USEPA Maximum Contaminant Level (MCL); **e** = USEPA Action Level.
(3) USEPA RSL for mercuric chloride (and other mercury salts).

RSL values were current at the time the screening was conducted.
mg/L = milligrams/liter.
µg/L = micrograms/liter.
cfu/100 mL = colony-forming units/100 milliliters.
< = analyte not detected above method detection limit (MDL).
B = Compound detected in the sample and its associated blank sample.
DUP = field duplicate sample.
ER = Estimated result.
J = Analyte detected between method detection limit (MDL) and practical quantitation li
NA = Not analyzed.
ND = Not detected.
NLE = No limit established.
Detections are bolded.
Shaded cells = concentration exceeds NJDEP Saline criterion.
Shaded cells = concentration exceeds USEPA Human Health criterion.
Shaded cells = concentration exceeds NJDEP and USEPA criteria.

TABLE 4.8
SURFACE WATER SAMPLING SUMMARY OF EXCEEDANCES
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

							Number of Exceedances			
Analyte/Lab ID	**Maximum Concentration**		**Location of Maximum Concentration**	**Date of Maximum Concentration**	**Number of Samples [1]**	**Number of Detections**	**NJDEP Saline Criterion (SE) [2]**	**USEPA Human Health Criterion [3]**	**Evaluated as COPC in Risk Assessment?**	**Rationale**
Volatile Organic Compounds (µg/L)										
Acetone	ND		n/a	n/a	47	0	NLE	0	No	Less than USEPA Human Health Criterion
Bromodichloromethane	0.27	J	SS-27	6/22/2010	44	1	0	0	No	Less than USEPA Human Health Criterion
Chloroform	0.61		SS-27	6/22/2010	46	2	0	0	No	Less than USEPA Human Health Criterion
Cis-1,2-Dichloroethene	2.81		SS-15	9/21/2010	47	21	NLE	0	No	Less than USEPA Human Health Criterion
Methyl *tert* -butyl ether	0.24	J	SS-15	3/28/2010	47	2	NLE	0	No	Less than USEPA Human Health Criterion
Methylene chloride	ND		n/a	n/a	47	0	0	0	No	Less than USEPA Human Health Criterion
Tert Butyl Alcohol	9.16		SS-15	12/7/2009	46	1	NLE	NLE	No	No USEPA Human Health Criterion
Tetrachloroethene	3.03		SS-15	3/24/2009	45	21	5	0	No	Less than USEPA Human Health Criterion
Total Xylenes	ND		n/a	n/a	47	0	NLE	0	No	Less than USEPA Human Health Criterion
Trichloroethene	1.26	J	SS-15	3/24/2009	47	13	0	0	No	Less than USEPA Human Health Criterion
TIC VOCs (µg/L)										
Total TIC, Volatile	19		SS-21, SS-27	12/7/2009 9/25/2009	47	7	NLE	NLE	No	No USEPA Human Health Criterion
Inorganics (µg/L)										
Antimony	28.6		SS-14	3/24/2009	31	25	0	0	No	Less than USEPA Human Health Criterion
Arsenic	76.1		SS-14	3/24/2009	31	24	24	24	No	Detected upstream at similar concentrations
Barium	63		SS-27	6/22/2010	31	31	NLE	0	No	Less than USEPA Human Health Criterion
Beryllium	0.336	ER	SS-15	12/29/2008	31	7	0	0	No	Less than USEPA Human Health Criterion
Cadmium	0.608	ER	SS-15	12/7/2009	31	6	0	0	No	Less than USEPA Human Health Criterion
Chromium	7.1		SS-27	9/25/2009	31	12	0	0	No	Less than USEPA Human Health Criterion
Copper	7.56		SS-27	6/22/2010	31	18	NLE	NLE	No	Less than USEPA Human Health Criterion
Lead	18.2		SS-27	12/7/2009	31	9	NLE	1	No	Anomalous occurrence; exceeded human health criterion at 1 sampling location during 1 sampling event, followed by non-detects
Mercury	0.18	E	SS-14	12/7/2009	31	7	7	0	No	No USEPA Human Health Criterion
Nickel	16		SS-15	3/28/2010	31	31	0	0	No	Less than USEPA Human Health Criterion
Selenium	119		SS-27	3/24/2009	27	18	0	0	No	Less than USEPA Human Health Criterion
Thallium	3.07	ER	SS-14	12/29/2008	28	3	3	3	No	Detected upstream at similar concentrations
Wet Chemistry										
Ammonia (mg/L)	26.45		SS-21	6/22/2010	25	18	NLE	NLE	No	No USEPA Human Health Criterion
Dissolved Oxygen (mg/L)	8.61		SS-15	9/25/2009	33	27	NLE	NLE	No	No USEPA Human Health Criterion
Fecal Coliform (CFU/100ML)	120		SS-27	12/29/2008	22	19	NLE	NLE	No	No USEPA Human Health Criterion
Nitrates (mg/L)	0.525		SS-14	6/26/2009	15	1	NLE	0	No	Less than USEPA Human Health Criterion
pH (SU)	8.76		SS-28	12/29/2008	43	43	NLE	9	No	Low pH values recorded for SS-21 (Table 4.7) from 2007 to 2010 were measured distant from FTMM-18, are unrelated to the site, and are likely indicative of meter malfunction or inaccurate meter calibration
Phosphate (mg/L)	0.18		SS-21	3/24/2009	15	3	NLE	NLE	No	No USEPA Human Health Criterion
Salinity (%)	0.24		SS-21	9/25/2009	74	43	NLE	NLE	No	No USEPA Human Health Criterion
Sulfate (mg/L)	1,772		SS-21	3/24/2009	15	15	NLE	NLE	No	No USEPA Human Health Criterion
Temperature (°C)	80		SS-28	12/29/2008	31	28	NLE	NLE	No	No USEPA Human Health Criterion
Total Coliform (CFU/100ML)	1,460		SS-15	3/24/2009	10	10	NLE	n/a	No	USEPA human health criterion based on monthly or more frequent sampling; comparison of historical quarterly data to criterion is not possible

(1) The samples from the most recent 8 quarters of surface water sampling are included here. Plus, the August 2013 and December 2014 sampling events.

(2) New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Standards (SWQS) for saline (SE) waters as per N.J.A.C. 7:9B effective 4-4-11. Available at: http://www.nj.gov/dep/wms/bwqsa/swqs.htm.

(3) See Table 4.7 for listing of U.S. Environmental Protection Agency (USEPA) Human Health Criteria used as comparison criteria.

cfu/100 mL = colony-forming units/100 milliliters

ER = estimated result

J = Estimated concentration exceeds the method detection limit (MDL) and is less than the reporting limit (RL)

mg/L = milligrams/liter; µg/L = micrograms per liter; SU = standard units; % = percent; °C = degrees celcius.

n/a = all concentrations were less than the detection limit, therefore, no location of maximum value identified.

NLE = no limit established

TABLE 4.9
SEDIMENT PCB RESULTS
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Boring ID	Sample Depth (bgs)	Date Collected	Total PCBs (mg/kg)	Aroclor 1254 (mg/kg)[1]
B-1	0-6"	4/12/2000	**0.22**	0.22
	6"-12"	4/12/2000	< 0.0199	< 0.0010
B-2	0-6"	4/12/2000	**0.055**	**0.055**
	6"-12"	4/12/2000	< 0.0202	< 0.0011
B-3	0-6"	4/12/2000	< 0.0121	< 0.0006
	6"-12"	4/12/2000	< 0.012	< 0.0006
B-4	0-6"	4/12/2000	< 0.022	< 0.0012
	6"-12"	4/12/2000	< 0.0207	< 0.0011

NJDEP RDCSRS	0.2	0.2
NJDEP NRDCSRS	1	1
USEPA RSL - Residential	0.24	0.11
USEPA RSL - Non-Residential	1	1

[1] There are no NJDEP soil standards for individual PCB Aroclors, therefore the total PCB NJDEP standards were used for individual Aroclors

PCBs = Polychlorinated Biphenyls
bgs = below ground surface
mg/kg = milligram per kilogram
NLE = No limit established
NJDEP = New Jersey Department of Environmental Protection
USEPA = United States Environmental Protection Agency
Shaded cells = concentration exceeds NJDEP RDCSRS.
Shaded cells = concentration exceeds NJDEP NRDCSRS.
Shaded cells = concentration exceeds USEPA RSL.
Shaded cells = concentration exceeds NJDEP RDCSRS and USEPA RSL.

TABLE 6.1
RISK RATIO CALCULATIONS FOR POTENTIAL EXPOSURE TO SOIL BY A CURRENT/FUTURE OUTDOOR WORKER
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

CAS No.	Compound	Exposure Point Concentration (EPC) (mg/kg) [1]		USEPA Regional Screening Level Industrial Soil (HQ = 1.0) (mg/kg) [2]		Carcinogenic? [3]	Percent of cumulative non-carcinogenic risk?	Percent of cumulative carcinogenic risk?	Outdoor worker Non-Carcinogenic Risk Ratio (EPC/USEPA RSL)	Outdoor worker Carcinogenic Risk Ratio (EPC/USEPA RSL)
				non-carcinogenic	carcinogenic					
Semivolatile Organic Compounds										
56-55-3	Benzo[a]anthracene	4.0	Max	--	2.9	yes	--	5.6%	--	1.4E-06
50-32-8	Benzo[a]pyrene	3.1	Max	--	0.29	yes	--	44%	--	1.1E-05
205-99-2	Benzo[b]fluoranthene	2.9	Max	--	2.9	yes	--	4.1%	--	1.0E-06
207-08-9	Benzo[k]fluoranthene	2.5	Max	--	29	yes	--	0.35%	--	8.6E-08
53-70-3	Dibenz[a,h]anthracene	0.49 J	Max	--	0.29	yes	--	6.9%	--	1.7E-06
193-39-5	Indeno[1,2,3-cd]pyrene	1.5	Max	--	2.9	yes	--	2.1%	--	5.2E-07
Metals										
7429-90-5	Aluminum	15700	Max	1100000	--	no	12%	--	0.014	--
7440-38-2	Arsenic	27	Max	480	3	both	47%	37%	0.057	9.1E-06
7440-43-9	Cadmium	17	Max	980	9300	both	15%	0.0077%	0.018	1.9E-09
7440-48-4	Cobalt	3.9	Max	350	1900	both	9.4%	0.0085%	0.011	2.1E-09
7440-62-2	Vanadium	116	Max	5800	--	no	17%	--	0.020	--
							Cumulative Risk Ratio		**0.1**	**2E-05**

(1) Exposure point concentration (EPC) is the maximum detected concentration for all soil samples combined.

(2) USEPA Regional Screening Level (RSL) for Industrial soil, Target Risk (TR) = 1 x 10^{-6} and Target Hazard Quotient (THQ) = 1.0. Revised January 2015.
http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/indsoil_sl_table_run_JAN2015.pdf

(3) "yes" indicates that the chemical exerts carcinogenic effects; "no" indicates that the chemical exerts non-carcinogenic effects; and "both" indicates that the chemical exerts both carcinogenic and non-carcinogenic effects

mg/kg = milligrams per kilogram

Max = Maximum detected concentration

J = Estimated concentration exceeds the method detection limit (MDL) and is less than the reporting limit (RL)

-- = not applicable

TABLE 6.2
RISK RATIO CALCULATIONS FOR POTENTIAL EXPOSURE TO SOIL BY A FUTURE UTILITY WORKER
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

CAS No.	Compound	Exposure Point Concentration (EPC) (mg/kg) [1]		Utility Worker Calculated Screening Level (SL) (HQ = 1.0) (mg/kg) [2]		Carcinogenic? [3]	Percent of cumulative non-carcinogenic risk?	Percent of cumulative carcinogenic risk?	Utility Worker Non-Carcinogenic Risk Ratio (EPC/SL)	Utility Worker Carcinogenic Risk Ratio (EPC/SL)
				non-carcinogenic	carcinogenic					
Semivolatile Organic Compounds										
56-55-3	Benzo[a]anthracene	4.0	Max	--	243	yes	--	5.3%	--	1.6E-08
50-32-8	Benzo[a]pyrene	3.1	Max	--	24	yes	--	41%	--	1.3E-07
205-99-2	Benzo[b]fluoranthene	2.9	Max	--	243	yes	--	3.9%	--	1.2E-08
207-08-9	Benzo[k]fluoranthene	2.5	Max	--	2430	yes	--	0.33%	--	1.0E-09
53-70-3	Dibenz[a,h]anthracene	0.49 J	Max	--	24	yes	--	6.5%	--	2.0E-08
193-39-5	Indeno[1,2,3-cd]pyrene	1.5	Max	--	243	yes	--	2.0%	--	6.2E-09
Metals										
7429-90-5	Aluminum	15700	Max	2930000	--	no	12%	--	0.0054	--
7440-38-2	Arsenic	27	Max	1390	216	both	45%	41%	0.020	1.3E-07
7440-43-9	Cadmium	17	Max	2800	4590000	both	14%	0.0012%	0.0062	3.8E-12
7440-48-4	Cobalt	3.9	Max	884	918000	both	10%	0.0014%	0.0045	4.3E-12
7440-62-2	Vanadium	116	Max	14800	--	no	18%	--	0.0078	--
								Cumulative Risk Ratio	**0.04**	**3E-07**

(1) Exposure point concentration (EPC) is the maximum detected concentration for all soil samples combined.

(2) Calculated screening level for utility worker using the USEPA RSL calculator for outdoor worker, substituting site-specific and receptor-specific exposure parameters for utility workers. The calculations and exposure parameters are provided in Appendix B.

(3) "yes" indicates that the chemical exerts carcinogenic effects; "no" indicates that the chemical exerts non-carcinogenic effects; and "both" indicates that the chemical exerts both carcinogenic and non-carcinogenic effects

mg/kg = milligrams per kilogram

Max = Maximum detected concentration

J = Estimated concentration exceeds the method detection limit (MDL) and is less than the reporting limit (RL)

-- = not applicable

TABLE 6.3
RISK RATIO CALCULATIONS FOR POTENTIAL EXPOSURE TO SOIL BY A FUTURE RECREATIONAL USER
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

CAS No.	Compound	Exposure Point Concentration (EPC) (mg/kg) [1]		Recreational User Soil Calculated Screening Level (SL) (HQ = 1.0) (mg/kg) [2]		Carcinogenic? [3]	Percent of cumulative non-carcinogenic risk?	Percent of cumulative carcinogenic risk?	Recreational User Non-Carcinogenic Risk Ratio (EPC/SL)	Recreational User Carcinogenic Risk Ratio (EPC/SL)
				non-carcinogenic	carcinogenic					
Semivolatile Organic Compounds										
56-55-3	Benzo[a]anthracene	4.0	Max	--	7.6	yes	--	7.2%	--	5.2E-07
50-32-8	Benzo[a]pyrene	3.1	Max	--	0.76	yes	--	56%	--	4.1E-06
205-99-2	Benzo[b]fluoranthene	2.9	Max	--	7.6	yes	--	5.2%	--	3.8E-07
207-08-9	Benzo[k]fluoranthene	2.5	Max	--	76	yes	--	0.45%	--	3.3E-08
53-70-3	Dibenz[a,h]anthracene	0.49 J	Max	--	0.76	yes	--	8.8%	--	6.4E-07
193-39-5	Indeno[1,2,3-cd]pyrene	1.5	Max	--	7.6	yes	--	2.7%	--	2.0E-07
Metals										
7429-90-5	Aluminum	15700	Max	6670000	--	no	12%	--	0.0024	--
7440-38-2	Arsenic	27	Max	2930	19	both	47%	20%	0.0093	1.4E-06
7440-43-9	Cadmium	17	Max	6000	459000	both	15%	0.00052%	0.0029	3.8E-11
7440-48-4	Cobalt	3.9	Max	2010	91800	both	10%	0.00059%	0.0020	4.3E-11
7440-62-2	Vanadium	116	Max	33700	--	no	17%	--	0.0034	--
						Cumulative Risk Ratio			**0.02**	**7E-06**

(1) Exposure point concentration (EPC) is the maximum detected concentration for all soil samples combined.

(2) Calculated screening level for recreational users using the USEPA RSL calculator for recreator, substituting site-specific and receptor-specific exposure parameters for recreational users. The calculations and exposure parameters are provided in Appendix B.

(3) "yes" indicates that the chemical exerts carcinogenic effects; "no" indicates that the chemical exerts non-carcinogenic effects; and "both" indicates that the chemical exerts both carcinogenic and non-carcinogenic effects

mg/kg = milligrams per kilogram

Max = Maximum detected concentration

J = Estimated concentration exceeds the method detection limit (MDL) and is less than the reporting limit (RL)

-- = not applicable

TABLE 6.4
RISK RATIO CALCULATIONS FOR POTENTIAL EXPOSURE TO GROUNDWATER BY A FUTURE UTILITY WORKER
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

CAS No.	Compound	Exposure Point Concentration (EPC) (µg/L) [1]		Utility Worker Calculated Screening Level (SL) (HQ = 1.0) (µg/L) [2]		Carcinogenic?	Percent of cumulative non-carcinogenic risk?	Percent of cumulative carcinogenic risk?	Utility worker Non-Carcinogenic Risk Ratio (EPC/SL)	Utility Worker Carcinogenic Risk Ratio (EPC/SL)
				non-carcinogenic	carcinogenic					
Volatile Organic Compounds										
71-43-2	Benzene	1079 D	Max	19400	6130	both	61%	100%	0.056	1.8E-07
91-20-3	Naphthalene	0.66 J	Max	28200	--	no	0.026%	--	0.000023	--
Metals										
7439-96-5	Manganese	3130	Max	89200	--	no	39%	--	0.035	--
								Cumulative Risk Ratio	**0.09**	**2E-07**

(1) Exposure Point Concentration is the maximum detected concentration for all groundwater samples combined.

(2) Calculated screening level for utility workers calculated using the USEPA RSL calculator for recreator; substituting site-specific and receptor-specific exposure parameters for utility workers. The calculations and exposure parameters are provided in Appendix B.

(3) "yes" indicates that the chemical exerts carcinogenic effects; "no" indicates that the chemical exerts non-carcinogenic effects; and "both" indicates that the chemical exerts both carcinogenic and non-carcinogenic effects

µg/L = micrograms per liter

Max = Maximum detected concentration

J = Estimated concentration exceeds the method detection limit (MDL) and is less than the reporting limit (RL)

D = results from dilution of sample

TABLE 6.5
RISK RATIO CALCULATIONS FOR POTENTIAL EXPOSURE TO SEDIMENT BY A CURRENT/FUTURE OUTDOOR WORKER
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

CAS No.	Compound	Exposure Point Concentration (EPC) (mg/kg) [1]		USEPA Regional Screening Level Industrial Soil (mg/kg) (HQ = 1.0)[2]		Carcinogenic? [3]	Percent of cumulative non-carcinogenic risk?	Percent of cumulative carcinogenic risk?	Outdoor worker Non-Carcinogenic Risk Ratio (EPC/USEPA RSL)	Outdoor worker Carcinogenic Risk Ratio (EPC/USEPA RSL)
				non-carcinogenic	carcinogenic					
PCBs										
11097-69-1	Aroclor 1254	0.22	Max	15	1	both	100%	100%	0.015	2.2E-07
								Cumulative Risk Ratio	**0.01**	**2E-07**

(1) Exposure point concentration (EPC) is the maximum detected concentration for all soil samples combined.

(2) USEPA Regional Screening Level (RSL) for Industrial soil, Target Risk (TR) = 1 x 10^{-6} and Target Hazard Quotient (THQ) = 1.0. Revised January 2015.
http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/indsoil_sl_table_run_JAN2015.pdf

(3) "yes" indicates that the chemical exerts carcinogenic effects; "no" indicates that the chemical exerts non-carcinogenic effects; and "both" indicates that the chemical exerts both carcinogenic and non-carcinogenic effects
mg/kg = milligrams per kilogram
Max = Maximum detected concentration
-- = not applicable

TABLE 6.6
RISK RATIO CALCULATIONS FOR POTENTIAL EXPOSURE TO SEDIMENT BY A FUTURE RECREATIONAL USER
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

CAS No.	Compound	Exposure Point Concentration (EPC) (mg/kg) [1]		Recreational User Soil Calculated Screening Level (SL) (HQ = 1.0) (mg/kg) [2]		Carcinogenic? [3]	Percent of cumulative non-carcinogenic risk?	Percent of cumulative carcinogenic risk?	Recreational User Non-Carcinogenic Risk Ratio (EPC/SL)	Recreational User Carcinogenic Risk Ratio (EPC/SL)
				non-carcinogenic	carcinogenic					
PCBs										
11097-69-1	Aroclor 1254	0.22	Max	96	6.9	both	100%	100%	0.0023	3.2E-08
								Cumulative Risk Ratio	**0.002**	**3E-08**

(1) Exposure point concentration (EPC) is the maximum detected concentration for all soil samples combined.

(2) Calculated screening level for recreational users calculated using the USEPA RSL calculator for recreator; substituting site-specific and receptor-specific exposure parameters for recreational users. The calculations and exposure parameters are provided in Appendix B.

(3) "yes" indicates that the chemical exerts carcinogenic effects; "no" indicates that the chemical exerts non-carcinogenic effects; and "both" indicates that the chemical exerts both carcinogenic and non-carcinogenic effects
mg/kg = milligrams per kilogram
Max = Maximum detected concentration
-- = not applicable

FIGURES

Figure 1.1 Fort Monmouth Location
Figure 1.2 FTMM-18 Location
Figure 1.3 Layout of FTMM-18
Figure 2.1 FTMM-18 Soil Sample Locations
Figure 2.2 FTMM-18 Sediment and Surface Water Sample Locations
Figure 2.3 FTMM-18 Sediment Sample Locations
Figure 4.1 Summary of Methods to Determine COPCs
Figure 6.1 Evaluation of Risk to Human Receptors
Figure 6.2 Human Health Conceptual Site Model



Legend

Installation Boundary

Site Description:
Fort Monmouth
Main Post & Charles Wood Area
Monmouth County, NJ
Longitude: 74˚ 2' 33.39" W
Latitude: 40˚ 18' 49.33" N
Longitude and Latitude represent the center point of Main Post.

N

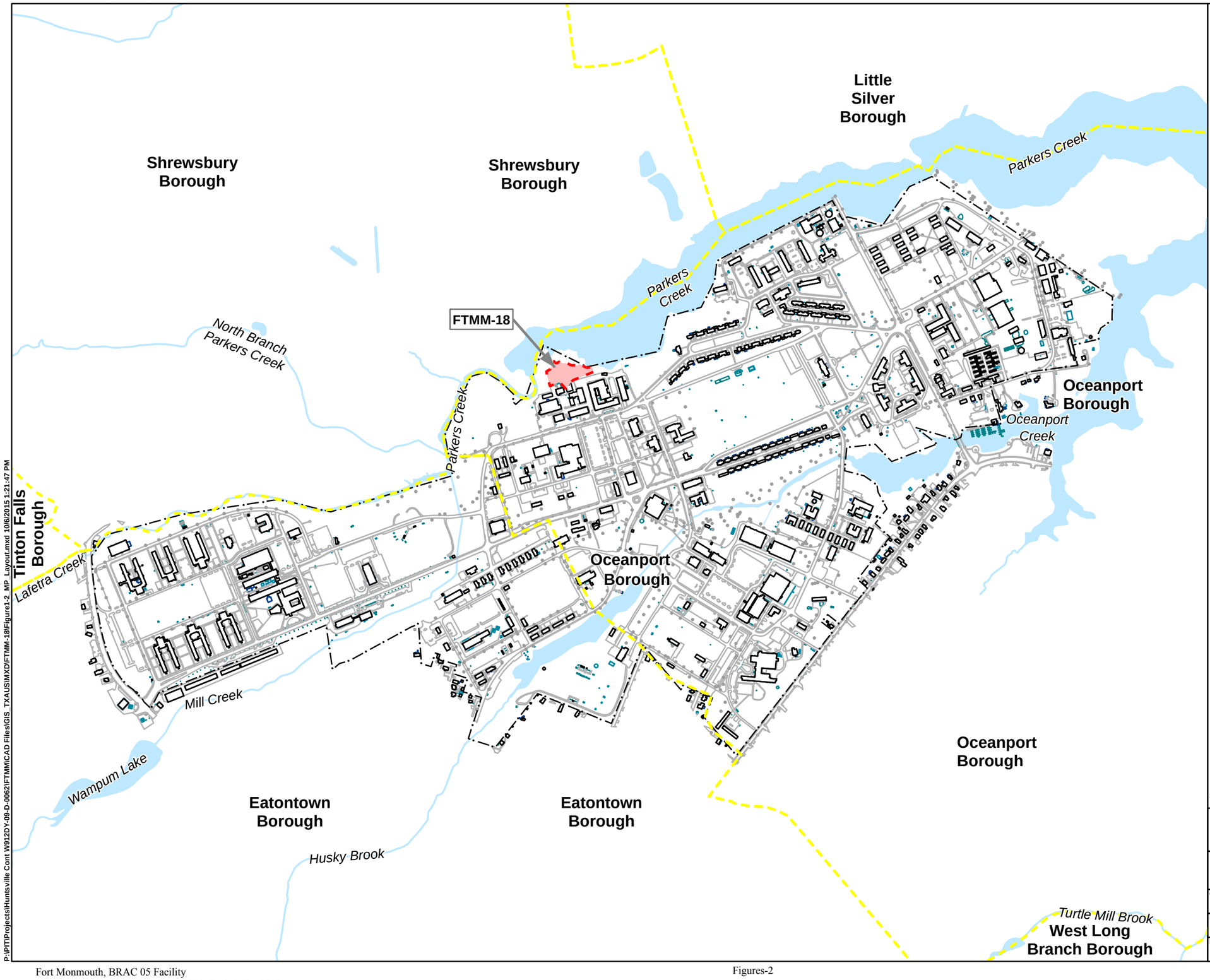
1 inch = 2,500 feet

0 0.5 1 Miles

Source: ESRI online imagery; ESRI Data and Maps, 2011.

PARSONS 401 Diamond Drive NW, Huntsville AL	Fort Monmouth New Jersey
Fort Monmouth Location	
CREATED BY: TS	REVIEWED BY: JH
DATE: October 2014	FIGURE NUMBER: Figure 1.1
PROJECT NUMBER: 748810.02080	FILE: Figure1-1_Location.mxd

J:\748\748810 Fort Monmouth\GIS\MXD\FTMM-18\Figure1-1_Location.mxd 10/1/2014 12:19:37 PM



LEGEND:

- FTMM-18 Landfill Revised Boundary (2015)
- Surface Water Feature
- Municipal Boundary
- Installation Boundary

N

1 inch = 1,000 feet

0 500 1,000 2,000 Feet

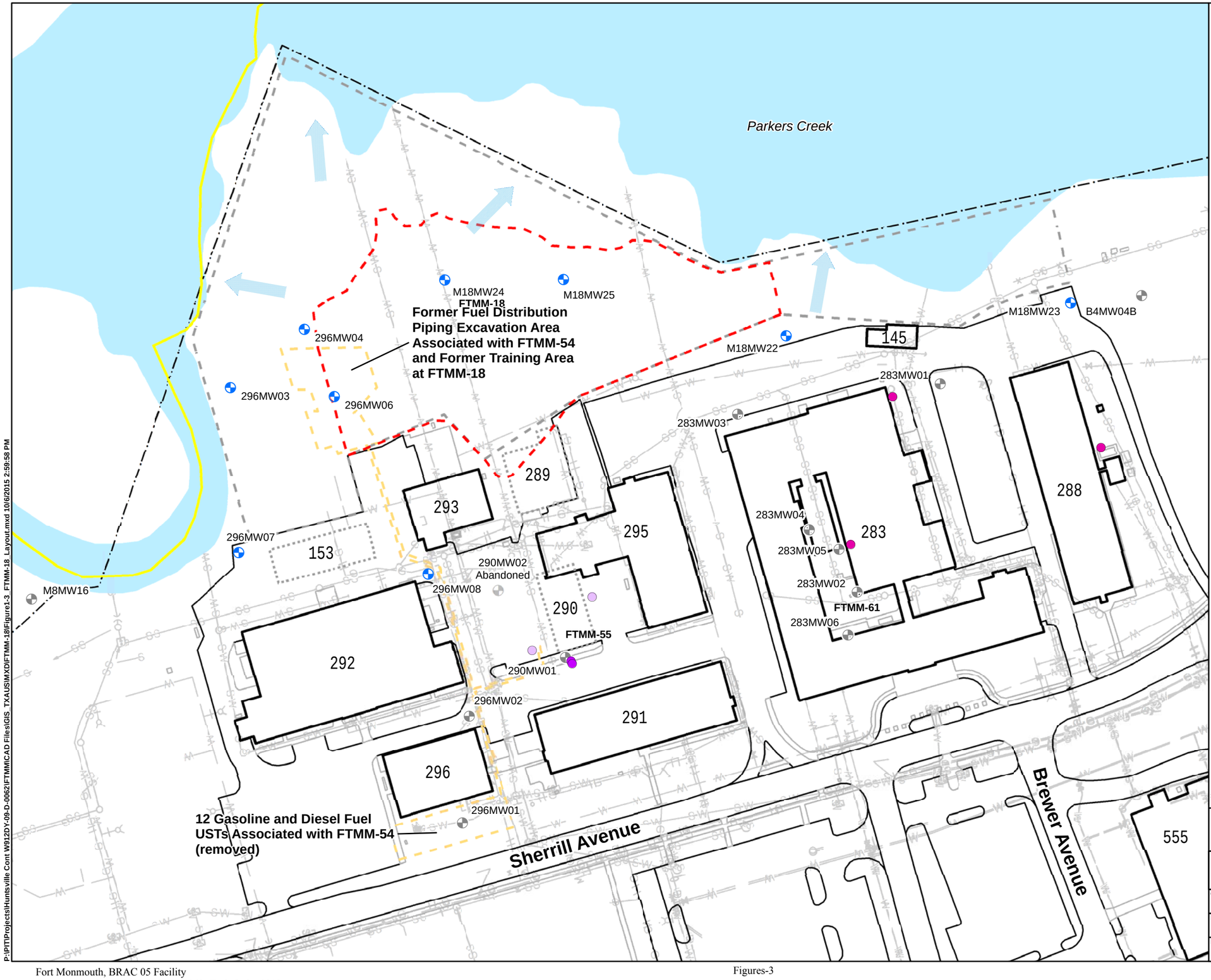
Source: FTMM Supplied CAD, 2013; ESRI Data and Maps, 2011; USGS NHD, 2012.

PARSONS 401 Diamond Drive NW, Huntsville AL	Fort Monmouth New Jersey

FTMM-18 LOCATION

CREATED BY: RR	REVIEWED BY: JH
DATE: OCT. 2015	FIGURE NUMBER: FIGURE 1.2
PROJECT NUMBER: 748810-02080	FILE: Figure1-2_MP_Layout.mxd

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LEGEND:

- Shallow Monitoring Well
- Shallow Monitoring Well Associated with FTMM-54 / FTMM-55 / FTMM-61
- Abandoned Shallow Monitoring Well
- Removed Fiberglass UST associated with FTMM-55 (Building 290)
- Removed Steel UST associated with FTMM-55 (Building 290)
- Removed Steel UST associated with FTMM-61 (Building 283)
- FTMM-18 Original Boundary
- FTMM-18 Landfill Revised Boundary (2015)
- FTMM-08 Landfill Revised Boundary (2015)
- FTMM-54 Boundary
- Municipal Boundary
- Installation Boundary
- W Water Line
- S Sanitary Sewer Line
- SW Storm Sewer Line
- G Gas Line
- Estimated Groundwater Flow Direction
- Former Building (Demolished)

N

1 inch = 100 feet

0 50 100 200 Feet

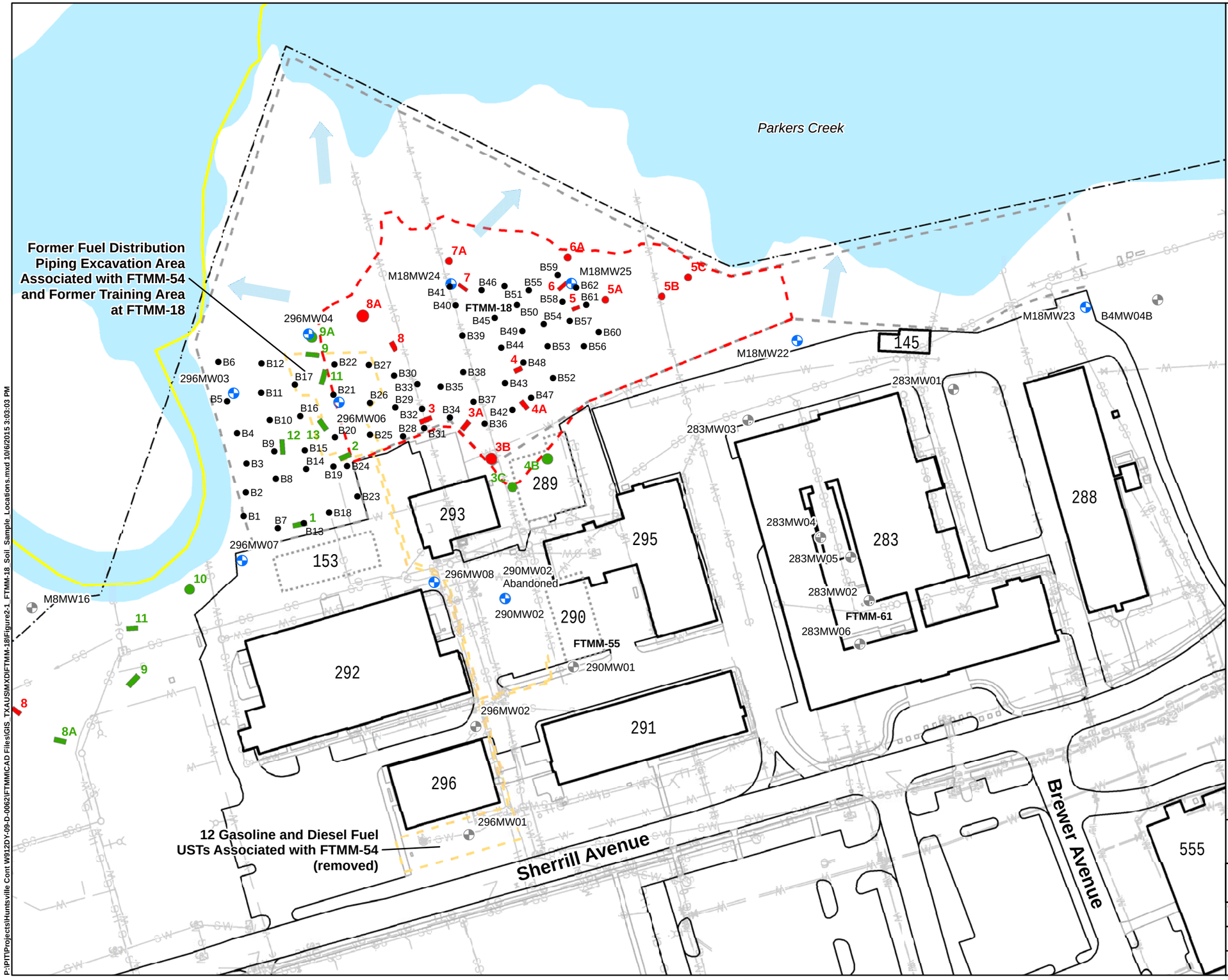
Source: FTMM Supplied CAD, 2013.

PARSONS 401 Diamond Drive NW, Huntsville AL	Fort Monmouth New Jersey

LAYOUT OF FTMM-18

CREATED BY: RR	REVIEWED BY: RF
DATE: OCT. 2015	FIGURE NUMBER: FIGURE 1.3
PROJECT NUMBER: 748810-02080	FILE: Figure1-3_FTMM-18_Layout.mxd

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LEGEND:

- Soil Boring Location
- FTMM-18 Shallow Monitoring Well
- Shallow Monitoring Well Associated with Other Sites
- Abandoned Shallow Monitoring Well
- Landfill Delineation Test Pit Location - Debris Not Present
- Landfill Delineation Test Pit Location - Debris Present
- Landfill Delineation Auger Boring Location - Debris Not Present
- Landfill Delineation Auger Boring Location - Debris Present
- FTMM-18 Original Boundary
- FTMM-18 Landfill Revised Boundary (2015)
- FTMM-08 Landfill Revised Boundary (2015)
- FTMM-54 Boundary
- Municipal Boundary
- Installation Boundary
- W Water Line
- S Sanitary Sewer Line
- SW Storm Sewer Line
- G Gas Line
- Estimated Groundwater Flow Direction
- Former Building (Demolished)

N

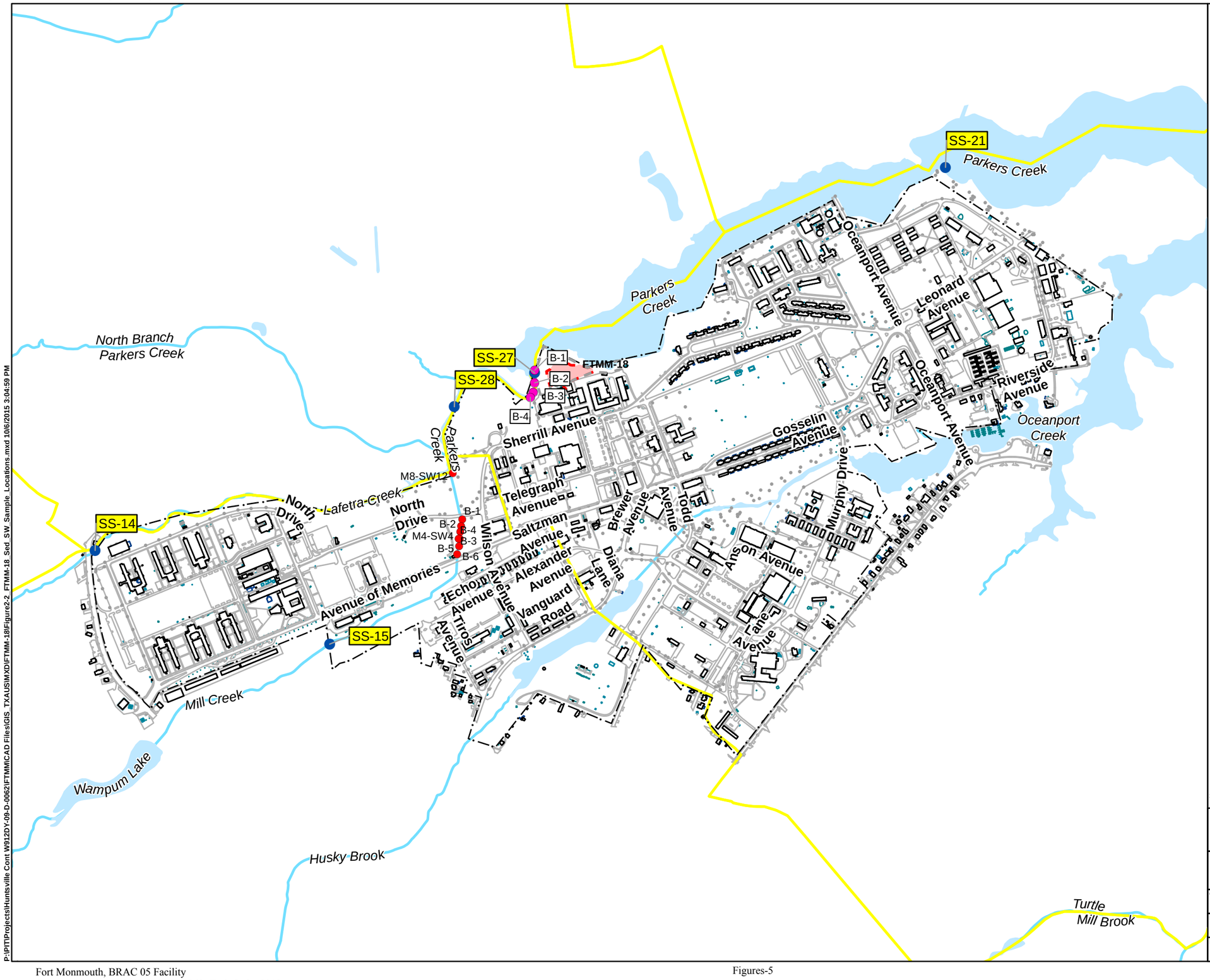
1 inch = 100 feet

0 50 100 200 Feet

Source: FTMM Supplied CAD, 2013.

PARSONS 401 Diamond Drive NW, Huntsville AL	Fort Monmouth New Jersey
FTMM-18 SOIL SAMPLE LOCATIONS	
CREATED BY: RR	REVIEWED BY: RF
DATE: OCT. 2015	FIGURE NUMBER: FIGURE 2.1
PROJECT NUMBER: 748810-02080	FILE: Figure2-1_FTMM-18_Soil_Sample_Locations.mxd

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LEGEND:

- Soil Boring Location
- Sediment Sample Location
- Surface Water Sample Location
- FTMM-18 Original Boundary
- FTMM-18 Landfill Revised Boundary (2015)
- Installation Boundary
- Municipal Boundary

SS-7 Surface Water Sample Location Associated with FTMM-18

N

1 inch = 1,000 feet

0 1,000 2,000 Feet

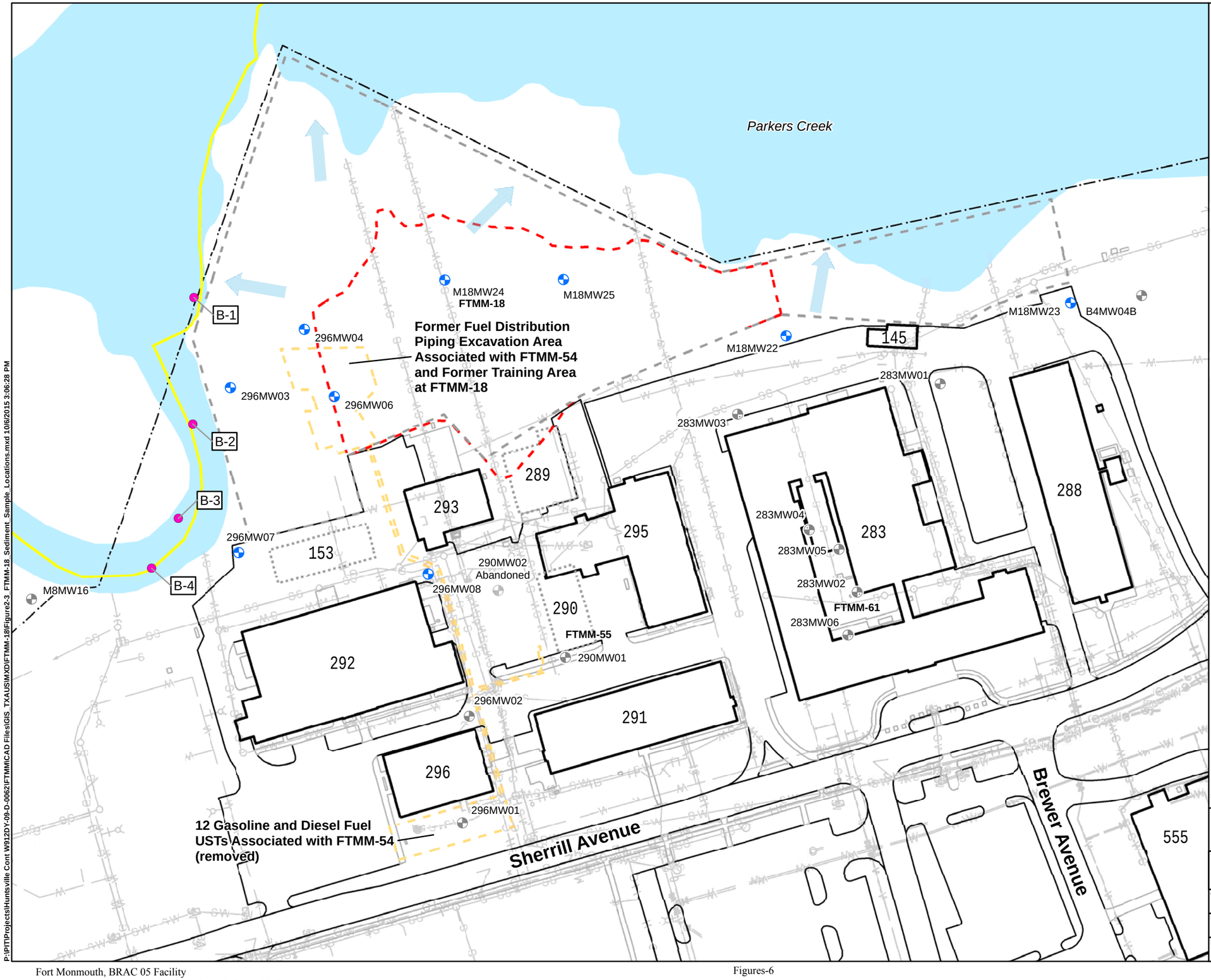
Source: FTMM Supplied CAD, 2013.

PARSONS 401 Diamond Drive NW, Huntsville AL	Fort Monmouth New Jersey

FTMM-18 SEDIMENT AND SURFACE WATER SAMPLE LOCATIONS

CREATED BY: RR	REVIEWED BY: RF
DATE: OCT. 2015	FIGURE NUMBER: FIGURE 2.2
PROJECT NUMBER: 748810-02080	FILE: Figure2-2_FTMM-18_Sed_SW_Sample_Locations.mxd

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LEGEND:

- Sediment Sample Location
- Shallow Monitoring Well
- Shallow Monitoring Well Associated with FTMM-54 / FTMM-55 / FTMM-61
- Abandoned Shallow Monitoring Well
- FTMM-18 Original Boundary
- FTMM-18 Landfill Revised Boundary (2015)
- FTMM-08 Landfill Revised Boundary (2015)
- FTMM-54 Boundary
- Municipal Boundary
- Installation Boundary
- W Water Line
- S Sanitary Sewer Line
- SW Storm Sewer Line
- G Gas Line
- Estimated Groundwater Flow Direction
- Former Building (Demolished)

N

1 inch = 100 feet

0 50 100 200 Feet

Source: FTMM Supplied CAD, 2013.

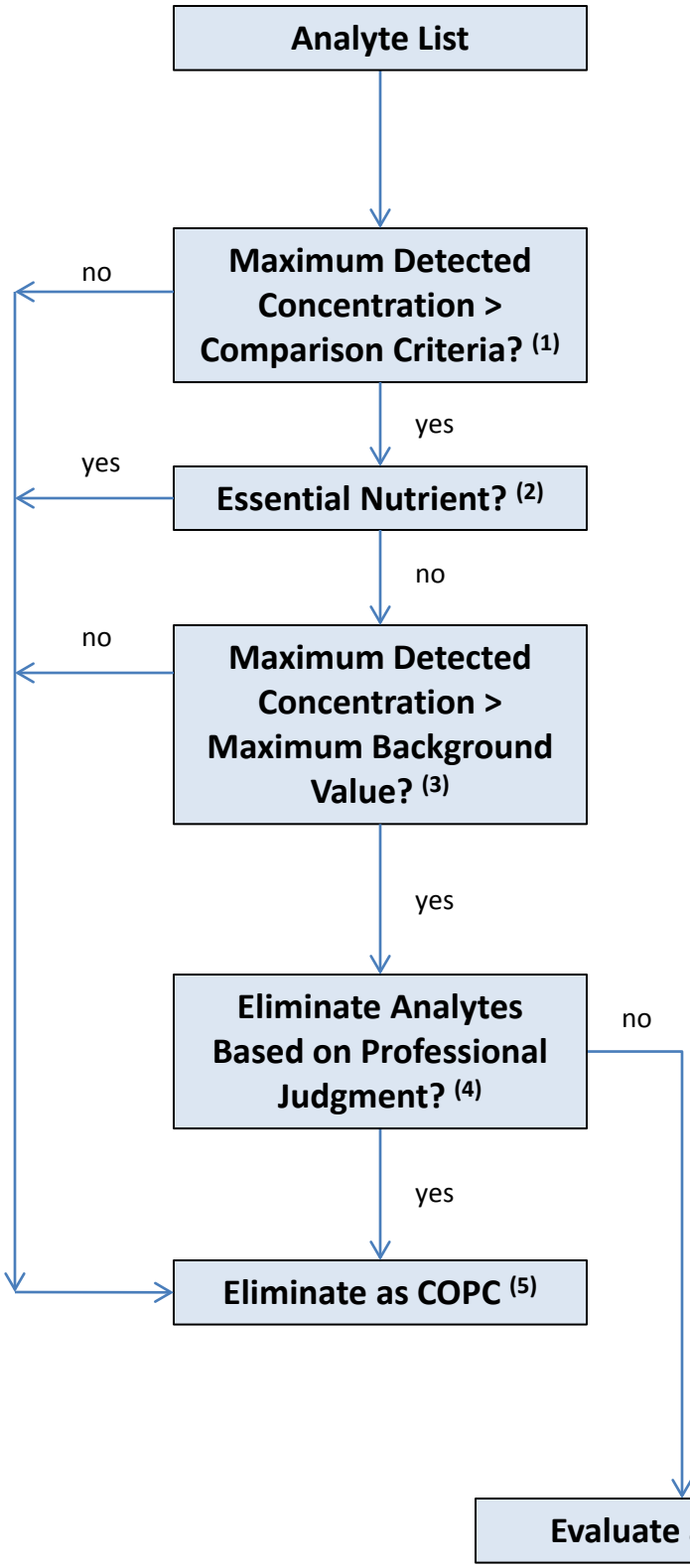
PARSONS 401 Diamond Drive NW, Huntsville AL	Fort Monmouth New Jersey

FTMM-18 SEDIMENT SAMPLE LOCATIONS

CREATED BY: RR	REVIEWED BY: RF
DATE: OCT. 2015	FIGURE NUMBER: FIGURE 2.3
PROJECT NUMBER: 748810-02080	FILE: Figure2-3_FTMM-18_Sediment_Sample_Locations.mxd

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FIGURE 4.1
Summary of Method to Determine COPCs



(1) Preliminary Comparison Criteria are:

a. Soil: USEPA Residential Regional Screening Levels (RSLs) (Target Risk [TR] = 1 X 10^{-6} and Target Hazard Quotient [THQ] = 0.1)
b. Groundwater: USEPA Tapwater RSLs (TR = 1 X 10^{-6} and THQ = 0.1)
c. Surface Water: A hierarchy of USEPA human health criteria was used in the priority shown below.
    1. National Recommended Water Quality Criteria (NRWQC) (organism only),
    2. NRWQC (water + organism),
    3. Tapwater RSLs, and
    4. Maximum Contaminant Levels (MCLs)
d. Sediment: USEPA Residential RSLs for Soil (TR = 1 X 10^{-6} and THQ = 0.1)

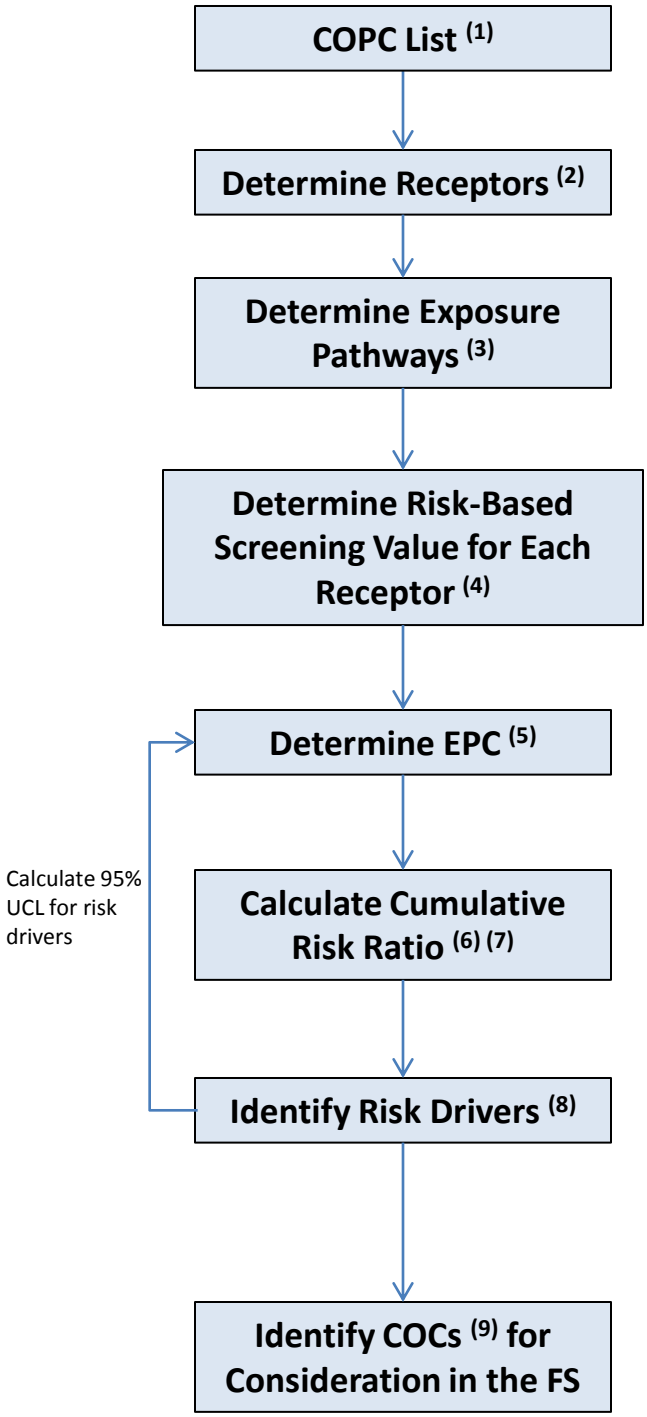
(2) Essential nutrients: calcium, iron, magnesium, sodium, and potassium

(3) Maximum background concentrations for metals were used because background data set was small (10 data points) and did not follow a parametric distribution. Weston (1995) concluded that the maximum background was approximately equivalent to a 95% Upper Tolerance Limit (UTL) for metals.

(4) Assessment (primarily for groundwater and surface water) as to whether exceedances of comparison criteria are representative of site-related contamination or are due to turbidity, upstream/upgradient sources, laboratory contamination, natural background conditions, etc.

(5) Constituent of potential concern

Figure 6.1
Evaluation of Risk to Human Receptors



(1) COPCs determined from comparison to screening criteria (see previous flow chart)

(2) Receptors include current and future outdoor workers, utility workers, and future recreational users

(3) Soil: incidental ingestion, dermal contact and inhalation of particulates and volatiles
Groundwater: ingestion as drinking water and dermal contact
Surface water/sediment: incidental ingestion and dermal contact

(4) The screening values used in the risk ratio will be:
- Soil: USEPA Industrial worker regional screening level (RSL) (Target Risk (TR) = 1 X 10^{-6} and Target Hazard Quotient (THQ) = 1.0); site-specific recreational user screening level calculated for each analyte
- Groundwater: USEPA tap water RSL (TR = 1 X 10^{-6} and THQ=1.0) (which includes outdoor workers and recreational users)
- Surface water: USEPA National Recommended Water Quality Criteria, Human Health Criteria, Organism Only
- Sediment: USEPA Industrial worker RSL (TR = 1 X 10^{-6} and THQ=1.0)

(5) Exposure Point Concentration, initially the maximum detected concentration

(6) Risk ratio calculated for carcinogens as:
Cumulative risk = Σ(Target Risk) x (EPC/Screening level)
For non-carcinogens as:
HI = Σ(Target Hazard Index) x (EPC/Screening level)

(7) Lead is evaluated based on the potential for exposure to increase blood lead levels. Therefore, lead is not included in the cumulative non-carcinogenic and carcinogenic risk estimates. The risk ratio for lead is calculated as: lead risk = (EPC/Screening level)

(8) Risk drivers are the individual analytes that contribute more than 25% to the cumulative risk ratio. For risk drivers a 95% Upper Confidence Limit (UCL) will be calculated.

(9) Constituent of Concern

Figure 6.2
Human Health Conceptual Site Model
Site FTMM-18
Fort Monmouth, New Jersey

Potential Medium of Concern	Potential Route of Exposure	Potentially Exposed Population	Pathway Completeness and Assumptions
Soil	• Incidental ingestion of soil • Inhalation of volatiles and particulates from soil • Dermal contact with soil	• Current outdoor worker • Future outdoor worker • Future indoor worker • Future utility worker • Future recreational user	• FTMM-18 consists of a former training area utilized by the Army Signal School. The landfill used for the disposal of building demolition debris has been inactive since approximately 1971. Revegetation has started to occur (U.S. Army, 2012); the anticipated future land use at FTMM-18 is passive open space (EDAW, 2008). • There are potentially complete exposure pathways associated with the current outdoor worker. An exposure frequency of 225 days per year and an exposure duration of 25 years are assumed for this scenario. Thus, it is a very conservative evaluation for a potential current outdoor worker who would have much less exposure (*e.g.*, current worker that visits the site to perform mowing and landscaping activities). • There are potentially complete exposure pathways associated with the future outdoor worker. This pathway is not included in the risk ratio analysis because it is assumed to be conservatively evaluated under the current outdoor industrial worker scenario (based on the exposure frequency and exposure duration). • There are potentially complete exposure pathways associated with the future indoor worker, if commercial buildings were constructed on the site. This pathway is not included in the risk ratio analysis because it is assumed to be conservatively evaluated under the current outdoor worker scenario (future indoor workers would have much less exposure to soil). • Future utility workers may be present on the site, involved in single short-term excavation projects at a given location, such as would be

Figure 6.2
Human Health Conceptual Site Model
Site FTMM-18
Fort Monmouth, New Jersey

Potential Medium of Concern	Potential Route of Exposure	Potentially Exposed Population	Pathway Completeness and Assumptions
			expected to be associated with repair or installation of utility lines. The calculation of the exposure of a utility worker to soil assumes that the utility crew would not return to the same location to conduct additional repairs, installation, or maintenance of underground utility lines. Utility workers are assumed to be on-site for 30 days of the year, within one year and would be expected to have complete exposure pathways to soil via incidental ingestion, inhalation of volatiles and particulates, and dermal contact. • Future recreational users have a complete exposure pathway to soil via incidental ingestion, inhalation of volatiles and particulates, and dermal contact, in part as an adolescent (aged 6-<16) and in part as an adult (aged 16-30 for non carcinogens). An exposure frequency of 50 days per year and an exposure duration of 24 years are assumed for this scenario. This potentially exposed population also includes persons who may be trespassing at the site, as they are expected to be on-site no more frequently than recreational users. • The site is not residential and is not planned for residential use. Therefore, residential exposure pathways are incomplete.

Figure 6.2
Human Health Conceptual Site Model
Site FTMM-18
Fort Monmouth, New Jersey

Potential Medium of Concern	Potential Route of Exposure	Potentially Exposed Population	Pathway Completeness and Assumptions
Sediment	• Ingestion of aquatic organisms (e.g., fish and shellfish) • Incidental ingestion of surface water/sediment • Inhalation of volatiles from surface water/sediment • Dermal contact with surface water/sediment	• Current outdoor worker • Future outdoor worker • Future utility workers • Future recreational user	• Surface water runoff at FTMM-18 is transported via overland flow towards Parkers Creek (**Figure 1.3**). FTMM-18 is adjacent to Parkers Creek, which empties into the Shrewsbury River downstream of the MP. • Current outdoor workers may have a complete exposure pathway to sediment through incidental ingestion, inhalation of volatiles and particulates, and dermal contact based on assumptions for this current land use scenario. • Future outdoor worker exposure to sediment is not evaluated because it is assumed to be conservatively evaluated under the current outdoor outdoor worker scenario. • Future utility workers may have a complete exposure pathway to sediment through incidental ingestion, inhalation of volatiles and particulates, and dermal contact. • Future recreational users may have a complete exposure pathway to sediment through incidental ingestion, inhalation of volatiles and particulates, and dermal contact. • No COPCs were identified in surface water. There are no complete exposure pathways for current and future receptors associated with surface water.

Figure 6.2
Human Health Conceptual Site Model
Site FTMM-18
Fort Monmouth, New Jersey

Potential Medium of Concern	Potential Route of Exposure	Potentially Exposed Population	Pathway Completeness and Assumptions
Groundwater	• Incidental ingestion of groundwater • Inhalation of volatiles in groundwater • Inhalation of volatiles due to vapor intrusion of VOCs from shallow groundwater into indoor air • Dermal contact with groundwater	• Current outdoor worker • Future outdoor worker • Future indoor worker • Future utility workers	• The FTMM-18 landfill site consists of a former training area utilized by the Army Signal School. The landfill used for disposal of building demolition debris has been inactive since approximately 1971. Revegetation has started to occur (U.S. Army, 2012); the anticipated future land use at FTMM-18 is passive open space (EDAW, 2008). • Current outdoor workers are not exposed to groundwater. Therefore, there are no current exposures to groundwater. • There are no supply wells present on-site and none are planned. All potable water is provided through municipal water supplies. However, if future utility workers encounter groundwater during excavation activities, exposure to contaminants in groundwater may occur through incidental ingestion, dermal contact, and inhalation of volatiles. This calculation assumes an exposure frequency of 30 days per year, and an exposure duration of one year. • The site is not residential and is not planned for residential use. Therefore, residential exposure pathways are incomplete.

APPENDICES

Appendix A Key Historical Reports and Background Information (included electronically on CD)

Appendix B Utility Worker and Recreational User Screening Level Equations and Calculations; ProUCL Output (included electronically on CD)

Appendix C Cost Estimate

APPENDIX A
KEY HISTORICAL REPORTS AND BACKGROUND INFORMATION

(Appendix A is included separately on the CD of this report)

APPENDIX B

UTILITY WORKER AND RECREATIONAL USER SCREENING LEVEL EQUATIONS AND CALCULATIONS; PROUCL OUTPUT

Exposure Equations for Utility Workers and Recreational Users

The equations used to calculate screening values for utility workers are shown below.

The following abbreviations are used:

- SL = Screening Level
- nc = noncarcinogenic
- ing = ingestion
- der = dermal
- inh = inhalation
- ca = carcinogenic

Units definitions:

- mg = milligrams
- kg = kilograms
- cm = centimeters
- cm^2 = square centimeters
- cm^3 = cubic centimeters
- m^3 = cubic meters
- m^2 = square meter
- s = seconds
- g = gram
- L = liter
- µg = microgram

SOIL:

Utility Worker. The utility workers would be exposed to surface soil and subsurface soil (e.g. during trenching activities) through incidental ingestion of soil, dermal contact with soil, and inhalation of volatiles and particulates from soil.

The default parameters for the utility worker are shown in Table 1. The inhalation default parameters are shown in Table 2. The soil screening levels for the utility worker, in mg/kg, are calculated as:

Noncarcinogenic - adult

Ingestion

$$SL_{nc-ing} = \frac{(THQ)\ (AT_{nc})\ (BW_{adult})}{(EF_{adult})\ (ED_{adult})\ \left(\frac{1}{RfD_O}\right)\ (IRS_{adult})\ (CF_{soil})}$$

Dermal

$$SL_{nc-der} = \frac{(THQ)\ (AT_{nc})\ (BW_{adult})}{(EF_{adult})\ (ED_{adult})\ \left(\frac{1}{(RfD_O)\ (GIABS)}\right)\ (SA_{adult})\ (AF_{adult})\ (ABS_d)\ (CF_{soil})}$$

Inhalation

$$SL_{nc-inh} = \frac{(THQ)\,(AT_{nc})}{(EF_{adult})\,(ED_{adult})\,(ET)\left(\frac{1}{RfC}\right)\left(\frac{1}{VF_s} + \frac{1}{PEF}\right)}$$

Total

$$SL_{nc-total} = \frac{1}{\left(\frac{1}{SL_{nc-ing}} + \frac{1}{SL_{nc-der}} + \frac{1}{SL_{nc-inh}}\right)}$$

Carcinogenic - adult

Ingestion

$$SL_{ca-ing} = \frac{(TR)\,(AT_c)\,(BW_{adult})}{(EF_{adult})\,(ED_{adult})\,(CSF_o)\,(IRS_{adult})\,(CF_{soil})}$$

Dermal

$$SL_{ca-der} = \frac{(TR)\,(AT_c)\,(BW_{adult})}{(EF_{adult})\,(ED_{adult})\left(\frac{CSF_O}{GIABS}\right)(SA_{adult})\,(AF_{adult})\,(ABS_d)\,(CF_{soil})}$$

Inhalation

$$SL_{ca-inh} = \frac{(TR)\,(AT_c)}{(EF_{adult})\,(ED_{adult})\,(ET)\;\;(IUR)\,(CF_{air})\left(\frac{1}{VF_s} + \frac{1}{PEF}\right)}$$

Total

$$SL_{ca-total} = \frac{1}{\left(\frac{1}{SL_{ca-ing}} + \frac{1}{SL_{ca-der}} + \frac{1}{SL_{ca-inh}}\right)}$$

Supporting Equations

Particulate Emission Factor, in m^3 air / kg soil

$$PEF = \left({}^{Q}/_{C}\right)\left(\frac{3{,}600\ {}^{seconds}/_{hour}}{(0.036)\ (1-V)\ \left(\left(\frac{U_m}{U_t}\right)^3\right)[F(x)]}\right)$$

Volatilization Factor, in m^3 air / kg soil

$$VF_s = \left({}^{Q}/_{C}\right)\left(\frac{\left((3.14)\ (D_A)\ (T)\right)^{1/2}\ (CF_{vol})}{\left((2\ )\ (\rho_b)\ \ (D_A)\right)}\right)$$

Where:

$$D_A = \frac{\left(\left(\theta_a^{\,10/3}\right)\ (D_i)\ \left(H'\right)\right) + \left(\left(\theta_w^{\,10/3}\right)\ (D_w)\right)}{(n^2)\ \left(\left((\rho_b)\ (K_d)\right) + \ \theta_w + \ \left((\theta_a)\ (H')\right)\right)}$$

GROUNDWATER:

Utility Worker. The utility worker would be exposed to groundwater encountered during trenching activities through incidental ingestion of water, dermal contact with water, and inhalation of volatiles from water.

The default exposure parameters for groundwater are shown in Table 3. The groundwater screening levels for the utility worker, in µg/L, are calculated as:

Noncarcinogenic – adult

Ingestion

$$SL_{nc-ing} = \frac{(THQ)\ (AT_{nc})\ (BW_{adult})\left(\frac{1000\mu g}{mg}\right)}{(EF_{adult})\ (ED_{adult})\ \left(\frac{1}{RfD_O}\right)\ (IRW_{adult})}$$

Dermal

For Inorganics:

$$SL_{nc-der} = \frac{(DA_{event})\ \left(\frac{1000cm^3}{L}\right)}{\left(K_p\right)\ (t_{event})}$$

For Organics:

$$If\ t_{event}\ \leq\ t^*, then\ SL_{nc-der} = \frac{(DA_{event})\ \left(\frac{1000cm^3}{L}\right)}{(2)\ (FA)\ \left(K_p\right)\sqrt{\frac{\left((6)\ (\tau_{event})\ (t_{event})\right)}{\pi}}}$$

$$If\ t_{event} >\ t^*, then\ SL_{nc-der} = \frac{(DA_{event})\ \left(\frac{1000cm^3}{L}\right)}{(FA)\ \left(K_p\right)\left[\frac{t_{event}}{(1+B)} + \left((2)\ (\tau_{event})\left(\frac{1+3B+\ 3B^2}{(1+B)^2}\right)\right)\right]}$$

Where DA_{event}, in µg/cm^2-event

$$DA_{event} = \frac{(THQ)\ (AT_{nc})\ (BW_{adult})\ \left(\frac{1000\mu g}{mg}\right)}{\left(\frac{1}{(RfD_O)\ (GIABS)}\right)\ (ED_{adult})\ (EV)\ (EF_{adult})\ (SA_{adult})}$$

Inhalation

$$SL_{nc-inh} = \frac{(THQ)\,(AT_{nc})\left(\frac{1000\mu g}{mg}\right)}{(EF_{adult})\,(ED_{adult})\,(t_{event})\left(\frac{1}{RfC}\right)\,(K)}$$

Total

$$SL_{nc-total} = \frac{1}{\left(\frac{1}{SL_{nc-ing}} + \frac{1}{SL_{nc-der}} + \frac{1}{SL_{nc-inh}}\right)}$$

Carcinogenic – adult

Ingestion

$$SL_{ca-ing} = \frac{(TR)\,(AT_c)\,(BW_{adult})\left(\frac{1000\mu g}{mg}\right)}{(IRW_{adult})\,(EF_{adult})\,(ED_{adult})\,(CSF_O)}$$

Dermal

For Inorganics:

$$SL_{ca-der} = \frac{(DA_{event})\left(\frac{1000cm^3}{L}\right)}{(K_p)\,(t_{event})}$$

For Organics:

$$If\ t_{event} \leq t^*, then\ SL_{ca-der} = \frac{(DA_{event})\left(\frac{1000cm^3}{L}\right)}{(2)\,(FA)\,(K_p)\sqrt{\frac{((6)\,(\tau_{event})\,(t_{event}))}{\pi}}}$$

$$If\ t_{event} > t^*, then\ SL_{ca-der} = \frac{(DA_{event})\left(\frac{1000cm^3}{L}\right)}{(FA)\left(K_p\right)\left[\frac{t_{event}}{(1+B)} + \left((2)\ (\tau_{event})\ \left(\frac{1+3B+\ 3B^2}{(1+B)^2}\right)\right)\right]}$$

Where DA_{event} is µg/cm^2-event:

$$DA_{event} = \frac{(TR)\ (AT_c)\ (BW_{adult})\left(\frac{1000\mu g}{mg}\right)}{\left(\frac{CSF_o}{GIABS}\right)\ (EF_{adult})\ (EV)\ (ED_{adult})\ (SA_{adult})}$$

Inhalation

$$SL_{ca-inh} = \frac{(TR)\ (AT_c)}{(EF_{adult})\ (ED_{adult})\ (t_{event})\left(\frac{1\ day}{24\ hours}\right)(IUR)\ (K)}$$

Total

$$SL_{ca-total} = \frac{1}{\left(\frac{1}{SL_{ca-ing}} + \frac{1}{SL_{ca-der}} + \frac{1}{SL_{ca-inh}}\right)}$$

The equations to calculate screening values for recreational users are shown below.

The following abbreviations are used:

- nc = non-carcinogenic
- ing = ingestion
- der = dermal
- inh = inhalation
- ca = carcinogenic
- mu = mutagenic
- adl = adolescent
- adjust = adjusted

SOIL

Non-carcinogenic adolescent

Ingestion

$$SL_{nc-ing} = \frac{(THQ)\,(AT)\,(ED_{adl})\,(BW_{adl})}{(EF)\,(ED)\left(\frac{1}{RfD_O}\right)\,(IR_{adl})\left(\frac{10^{-6}kg}{1\,mg}\right)}$$

Dermal

$$SL_{nc-der} = \frac{(THQ)\,(AT)(ED_{adl})\,(BW_{adl})}{(EF)\,(ED)\left(\frac{1}{RfD_O\,\times GIABS}\right)\,(SA_{adl})\,(AF_{adl})\,(\,ABS_d\,)\left(\frac{10^{-6}kg}{1\,mg}\right)}$$

Inhalation

$$SL_{nc-inh} = \frac{(THQ)\,(AT)\,(ED_{adl})}{(EF)\,(ED_{adl})\,(ET_{adl})\left(\frac{1}{RfC}\right)\left(\frac{1}{VF_s} + \frac{1}{PEF_w}\right)}$$

Total

$$SL_{nc-total} = \frac{1}{\frac{1}{SL_{nc-ing}} + \frac{1}{SL_{nc-der}} + \frac{1}{SL_{nc-inh}}}$$

Non-carcinogenic adult

Ingestion

$$SL_{nc-ing} = \frac{(THQ)\,(AT)\,(ED_{adult})\,(BW_{adult})}{(EF)\,(ED)\left(\frac{1}{RfD_O}\right)(IR_{adult})\left(\frac{10^{-6}kg}{1\,mg}\right)}$$

Dermal

$$SL_{nc-der} = \frac{(THQ\,)\,(AT)\,(ED_{adult})\,(BW_{adult})}{(EF)\,(ED)\left(\frac{1}{RfD_O \times GIABS}\right)(SA_{adult})\,(AF_{adult})\,(ABS_d\,)\left(\frac{10^{-6}kg}{1\,mg}\right)}$$

Inhalation

$$SL_{nc-inh} = \frac{(THQ)\,(AT)\,(ED_{adult})}{(EF)\,(ED_{adult})\,(ET_{adult})\left(\frac{1}{RfC}\right)\left(\frac{1}{VF_s} + \frac{1}{PEF_w}\right)}$$

Total

$$SL_{nc-total} = \frac{1}{\frac{1}{SL_{nc-ing}} + \frac{1}{SL_{nc-der}} + \frac{1}{SL_{nc-inh}}}$$

Carcinogenic

Ingestion

$$SL_{ca-ing} = \frac{(TR)\,(AT)\,(LT)}{(CfS_O)\,(IFS_{adj})\left(\frac{10^{-6}kg}{1\,mg}\right)}$$

Where:

$$IFS_{adjust} = \frac{(ED_{adl}\,)\,(EF_{adl}\,)\,(IRS_{adl})}{BW_{adl}} + \frac{(ED_{adult}\,)\,(EF_{adult}\,)\,(IRS_{adult})}{BW_{adult}}$$

Dermal

$$SL_{ca-der} = \frac{(TR)\,(AT)\,(LT)}{\left(\frac{CsF_O}{GIABS}\right)(DFS_{adj})\,(ABS_d)\left(\frac{10^{-6}kg}{1\,mg}\right)}$$

Where:

$$DFS_{adjust} = \frac{(ED_{adl})(EF_{adl})(SA_{adl})(AF_{adl})}{BW_{adl}} + \frac{(ED_{adult})(EF_{adult})(SA_{adult})(AF_{adult})}{BW_{adult}}$$

Inhalation

$$SL_{ca-inh} = \frac{(TR)(AT)(LT)}{(EF_{rec})(ED_{rec})(ET_{rec})\left(\frac{1\ day}{24\ hours}\right)(IUR)\left(\frac{1000\mu g}{mg}\right)\left(\frac{1}{VF_s} + \frac{1}{PEF}\right)}$$

Total

$$SL_{ca-total} = \frac{1}{\frac{1}{SL_{ca-ing}} + \frac{1}{SL_{ca-der}} + \frac{1}{SL_{ca-inh}}}$$

Supporting Equations

Particulate Emission Factor

$$PEF = \left(\frac{Q}{C}\right)\left(\frac{3{,}600\ {seconds}/{hour}}{(0.036)(1-V)\left(\frac{U_m}{U_t}\right)^3 [F(x)]}\right)$$

Volatilization Factor

$$VF = \left(\frac{Q}{C}\right)\left(\frac{\left((3.14)(D_A)(T)\right)^{1/2}(CF_{vol})}{\left((2)(\rho_b)(D_A)\right)}\right)$$

Where:

$$\left(\left(\left(\theta_a^{10/3}\right)(D_i)(H')\right) + \left(\left(\theta_w^{10/3}\right)(D_w)\right)\right) \Big/ n^2$$

$$D_A = \frac{}{\left((\rho_b)(K_d)\right) + \theta_w + \left((\theta_a)(H')\right)}$$

Summary of Exposure Assumptions for all Receptors

Summary of Exposure Assumptions for Soil for each Potential Receptor

Abbreviation	Parameter	Units	Outdoor Worker	Sources	Rationale	Utility Worker	Sources	Rationale	Recreational User	Sources	Rationale
THQ	Target Hazard Quotient	unitless	1	USEPA, 2014b	USEPA RSL Users Guide, Table 1	1	USEPA, 2014b	USEPA RSL Users Guide, Table 1	1	USEPA, 2014b	USEPA RSL Users Guide, Table 1
AT_{nc}	Averaging Time – noncarcinogens	days	9,125	USEPA, 1989	Exhibit 6-9; Period over which exposure is averaged; ED expressed in days (25 years x 365 days)	365	USEPA, 2014c	Source references USEPA, 1989, page 6-23; ED expressed in days (1 year x 365 days)	5,110 (adult) 3,650 (adl)	USEPA, 1989	Exhibit 6-9; Period over which exposure is averaged; ED expressed in days (14 years adult x 365 days or 10 years adl x 365 days)
AT_c	Averaging Time – carcinogens	days	25,550	USEPA, 2014c as "lifetime"	70-year lifetime expressed in days (70 years x 365 days)	25,550	USEPA, 2014c as "lifetime"	70-year lifetime expressed in days (70 years x 365 days)	25,550	USEPA, 2014c as "lifetime"	70-year lifetime expressed in days (70 years x 365 days)
ED	Exposure Duration	years	25	USEPA, 2014c	Source references USEPA, 1991a, Page 15; RME scenario for industrial worker	1	USEPA, 2002	Exhibit 5-1; USEPA, default value for construction workers	14 (adult) 10 (adl)	Professional judgment	Adult: Represents the number of years returning to the same location as an adult, assumes 16 to <30 years of age Adl: Represents the number of years returning to the same location as an adolescent; assumes 6 to <16 years of age
BW	Body Weight	kg	80	USEPA, 2014c	Source references USEPA, 2011, Table 8-3; weighted mean values for adults 21 – 78	80	USEPA, 2014c	Source references USEPA, 2011, Table 8-3; weighted mean values for adults 21 – 78	80 (adult) 44 (adl)	Adult: USEPA, 2014c Adl: USEPA, 2011	Adult: Source references USEPA, 2011, Table 8-3; weighted mean values for adults 21 to 78 years of age Adl: Table 8-3, mean of body weights for 6 to <11 and 11 to <16 years
EF	Exposure Frequency	days/year	225	USEPA, 2014c	Source references USEPA, 1991, page 15, outdoor worker RME scenario	30	Professional judgment	Assumes project of one month duration	50	Professional judgment	Assumes recreational user on site once per week every week of the year, except for 2 weeks vacation
IRS	Soil Ingestion Rate	mg/day	100	USEPA, 2014c	Source references USEPA, 1991, page 15, same as adult resident	330	USEPA, 2014b	Source references USEPA, 2002, Exhibit 5-1, USEPA recommended value for construction worker	50 (adult) 100 (adl)	USEPA, 2011	Adult: Table 5-1, General Population Central Tendency, Adult soil and dust ingestion Adl: Table 5-1, General Population Central Tendency, soil and dust ingestion for 6 to <21 years of age
EV	Event Frequency	events/day	1	USEPA, 2004a	Exhibit 3-5, industrial RME scenario	1	USEPA, 2004a	Exhibit 3-5, industrial RME scenario	1	Professional judgment	Recreational users are expected to be onsite one event per day
FI	Fraction Ingested	unitless	1	USEPA, 1989, page 6-39	Assumes that all of contaminated soil contacted is from the site	1	USEPA, 1989, page 6-39	Assumes that all of contaminated soil contacted is from the site	1	USEPA, 1989, page 6-39	Assumes that all of contaminated soil contacted is from the site
CF_s	Conversion Factor-soil	kg/mg	1E-06	USEPA, 1989	Exhibit 6-14	1E-06	USEPA, 1989	Exhibit 6-14	1E-06	USEPA, 1989	Exhibit 6-14

Summary of Exposure Assumptions for Soil for each Potential Receptor (Continued)

Abbreviation	Parameter	Units	Outdoor Worker	Sources	Rationale	Utility Worker	Sources	Rationale	Recreational User	Sources	Rationale
GIABS	Gastrointestinal Absorption Factor (also, OAF = Oral Absorption Factor)	unitless	Chemical-specific	USEPA, 2015b	Fraction of contaminant absorbed in gastrointestinal tract	Chemical-specific	USEPA, 2015b	Fraction of contaminant absorbed in gastrointestinal tract	Chemical-specific	USEPA, 2015b	Fraction of contaminant absorbed in gastrointestinal tract
SA	Exposed Skin Surface Area	cm^2	3,470	USEPA, 2014c	Source references USEPA, 2011, Table 7-2; weighted average of mean values for head, hands, and forearms (male and female adults); assumes wearing shoes and long pants	3,470	USEPA, 2014c	Source references USEPA, 2011, Table 7-2; weighted average of mean values for head, hands, and forearms (male and female adults); assumes wearing shoes and long pants	3,470 (adult) 2,160 (adl)	USEPA, 2014c; USEPA, 2011	Adult: Source references USEPA, 2011, Table 7-2; weighted average of mean values for head, hands, and forearms (male and female adults); assume wearing shoes and long pants Adl: Table 7-2, weighted average of mean values for head, hands, and arms (mean value for arm times 45% to account for forearm) (Age 6 to <16 years of age); assume wearing shoes and long pants
AF	Adherence Factor	mg/cm^2	0.12 (1)	USEPA, 2014c	Source references USEPA, 2011, Table 7-2, Table 7-20 and Section 7.2.2; arithmetic mean of weighted average of body part-specific (hands, forearms, and face) mean adherence factors for adult commercial/ industrial activities	0.20	USEPA, 2011	Table 7-2, Table 7-20 and Section 7.2.2; arithmetic mean of weighted average of body part-specific (hands, forearms, and face) mean adherence factors for adult utility worker number 1	0.09 (adult) 0.04 (adl) (1)	USEPA, 2011	Adult: Table 7-2, Table 7-20 and Section 7.2.2; arithmetic mean of weighted average of body part-specific (hands, forearms, and face) mean adherence factors for adult Gardener number 1 Adl: Table 7-2, Table 7-4, and Section 7.2.2; arithmetic mean of weighted average of body part-specific (hands, forearms, face, mean adherence factors for child playing outdoor sports
ABS_d	Dermal Absorption Factor	unitless	Chemical-specific	USEPA, 2015b	Fraction of contaminant absorbed dermally; USPEA RSL Summary Table-	Chemical-specific	USEPA, 2015b	Fraction of contaminant absorbed dermally; USPEA RSL Summary Table -	Chemical-specific	USEPA, 2015b	Fraction of contaminant absorbed dermally; USPEA RSL Summary Table -
ET	Exposure Time	hour/day	8	USEPA, 2014c	The work day	8	USEPA, 2014c	The work day	2	Professional judgment	Assumes recreational users on site for two hours each event
VF	Volatilization Factor-soil	m^3/kg	Chemical Specific	USEPA, 2002, 2014b	Calculated using inputs in Table 4 of this document	Chemical Specific	USEPA, 2002, 2014b	Calculated using inputs in Table 4 of this document	Chemical specific	USEPA, 2002, 2014b	Calculated using inputs in Table 4 of this document
PEF	Particulate Emission Factor	m^3/kg	3.23E+09	USEPA, 2002, 2014b	Calculated using inputs in Table 4 of this document	3.23E+09	USEPA, 2002, 2014b	Calculated using inputs in Table 4 of this document	3.23E+09	USEPA, 2002, 2014b	Calculated using inputs in Table 4 of this document

1
2
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Summary of Exposure Parameters for VF / PEF

Abbreviation	Parameter	Units	All Receptors	Sources	Rationale
Q/C	Inverse of mean concentration at center of square source area for Philadelphia, Pennsylvania	g/m^2-s per kg/m^3	87.36898	USEPA, 2014b	Source references USEPA, 2002, Exhibit D-2
V	Fraction of vegetative cover	unitless	0.5 (50%)	USEPA, 2014b	Source references USEPA, 2002, Equation 4-5
U_m	Mean annual wind speed	m/s	4.69	USEPA, 2014b	Source references USEPA, 2002, Equation 4-5
U_t	Equivalent threshold value of wind speed at 7m	m/s	11.32	USEPA, 2014b	Source references USEPA, 2002, Equation 4-5
F(x)	Function Dependent on U_m /U_t	unitless	0.194	USEPA, 2014b, Cowherd et. al. 1985	Source references USEPA, 2002, Equation 4-5

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Summary of Exposure Parameters for VF / PEF (Continued)					
Abbreviation	**Parameter**	**Units**	**All Receptors**	**Sources**	**Rationale**
D_A	Apparent diffusivity	cm^2/s	Chemical-specific	USEPA, 2014b	Source references USEPA, 2002, Equation 4-8
C_{sat}	Soil saturation concentration	mg/kg	Chemical-specific	USEPA, 2014b	Source references USEPA, 2002, Equation 4-8
T	Exposure interval	seconds	9.5E+08	USEPA, 2002	USEPA, 2002, Equation 4-8
ρ_b	Dry soil bulk density	g/cm^3	1.5	USEPA, 2014b	Source references USEPA, 2002, Equation 4-8
θ_a	Air-filled Soil Porosity	L_{air}/L_{soil}, calculated as $n - \theta_w$	0.28	USEPA, 2014b	Source references USEPA, 2002, Equation 4-8
n	Total Soil Porosity	L_{pore}/L_{soil}	0.43	USEPA, 2014b	Source references USEPA, 2002, Equation 4-8
θ_w	Water-filled Soil Porosity	L_{water}/L_{soil}	0.15	USEPA, 2014b	Source references USEPA, 2002, Equation 4-8

1

Summary of Exposure Parameters for VF / PEF (Continued)					
Abbreviation	**Parameter**	**Units**	**All Receptors**	**Sources**	**Rationale**
ρ_s	Soil particle density	g/cm^3	2.65	USEPA, 2014b	Source references USEPA, 2002, Equation 4-8
D_i	Diffusivity in Air	cm^2/second	Chemical-specific	USEPA, 2015c	--
H'	Henry's law constant	Dimensionless	Chemical-specific	USEPA, 2015c	--
D_w	Diffusivity in Water	cm^2/second	Chemical-specific	USEPA, 2015c	--
K_d	Soil-water Partition Coefficient	L/kg	Chemical-specific	USEPA, 2015c	Calculated as K_{OC} X f_{OC}
K_{OC}	Soil organic carbon-water Partition Coefficient	L/kg	Chemical-specific	USEPA, 2015c	--
f_{OC}	Organic Carbon Content of Soil	g/g	0.006 (0.006%)	USEPA, 2014b	Source references USEPA, 2002, Equation 5-14
S	Water Solubility	mg/L	Chemical-specific	USEPA, 2015c	--

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Summary of Exposure Parameters for Groundwater or Surface Water

Abbreviation	Parameter	Units	Outdoor Worker	Sources	Rationale	Utility Worker	Sources	Rational	Recreational User	Sources	Rationale
IRW	Groundwater or Surface Water Ingestion	L/day	0.02	USEPA, 2014d	Section 4.5; During wading activities, water ingestion of 10 ml/hour for adults, converted to L/day assuming the outdoor worker is in contact with surface water for 2 hours per day	0.02	USEPA, 2014d	Section 4.5; During wading activities, water ingestion of 10 ml/hour for adults, converted to L/day assuming the utility worker is in contact with groundwater in a trench for 2 hours per day	0.02 (adult) 0.02(adl)	USEPA, 2014d	Section 4-5; During wading activities, water ingestion of 10 ml/hour for adolescents and adults, converted to L/day assuming the recreational user is in contact with surface water for 2 hours per day
K_p	Permeability Constant	cm/hour	Chemical-specific	USEPA, 2015c	Dermal permeability coefficient of compound in water	Chemical-specific	USEPA, 2015c	Dermal permeability coefficient of compound in water	Chemical-specific	USEPA, 2015c	Dermal permeability coefficient of compound in water
SA	Skin Surface Area	cm^2	4,835	USEPA, 2011	Table 7-2; weighted average of mean values for hands, feet, and lower legs (mean value for legs times 40% to account for lower leg) (male and female, 21+years)	4,840	USEPA, 2011	Table 7-2; weighted average of mean values for hands, feet, and lower legs (mean value for legs times 40% to account for lower leg) (male and female, 21+years)	4,835 (adult) 3093 (adl)	USEPA, 2011	Adult: Table 7-2; weighted average of mean values for hands, feet, and lower legs (mean value for legs times 40% to account for lower leg) (male and female, 21+years). Adl: Table 7-2; weighted average of mean values for hands, feet, and lower legs (mean value for legs times 40% to account for lower leg) (6 to <16 years of age)
VF_{air}	Volatilization Factor	L/m^3	0.5	USEPA, 2014b	Source references USEPA, 1991b, page 20	0.5	USEPA, 2014b	Source references USEPA, 1991b, page 20	0.5	USEPA, 2014b	Source references USEPA, 1991b, page 20
EV	Event Frequency	events/day	1	Professional judgment	Assumes an outdoor worker may come into contact with surface water during routine maintenance activities, for one event per day.	1	USEPA, 2002	Exhibit 1-2. Assumes a worker may come into contact with groundwater during excavation or trenching activities, for one event per day.	1	Professional judgment	Assumes a recreational user may come into contact with surface water during wading activities, for one event per day.
ET	Exposure time as a fraction of the day spent at the site	unitless	0.083 (2 hours/day)	Professional judgment	Assumes an outdoor worker may come into contact with surface water during work activities, for one event per day, 2 hours per event.	0.083 (2 hours/day)	Professional judgment	Assumes an utility worker may come into contact with groundwater during work activities, for one event per day, 2 hours per event.	0.083 (2 hours/day)	Professional judgment	Assumes a recreational user may come into contact with surface water during wading activities, for one event per day, 2 hours per event.

Summary of Exposure Parameters for Groundwater or Surface Water (Continued)

Abbreviation	Parameter	Units	Outdoor Worker	Sources	Rationale	Utility Worker	Sources	Rational	Recreational User	Sources	Rationale
t_{event}	Event Duration	hours/event	2	Professional judgment	Assumes an outdoor worker may come into contact with surface water during work activities, for one event per day, 2 hours per event.	2	Professional judgment	Assumes an utility worker may come into contact with groundwater during work activities, for one event per day, 2 hours per event.	2	Professional judgment	Assumes a recreational user may come into contact with surface water during wading activities, for one event per day, 2 hours per event.
EF	Exposure Frequency	days/year	225	USEPA, 2014c	Source references USEPA, 1991aa, page 15, outdoor worker RME scenario	30	Professional judgment	Assumes project of one month duration	50	Professional judgment	Assumes recreational user on site once per week every week of the year, except for 2 weeks vacation
ED	Exposure Duration	year	25	USEPA, 2014c	Source references USEPA, 1991a, Page 15; RME scenario for industrial worker	1	USEPA, 2002	Exhibit 5-1; USEPA, default value for construction workers	14 (adult) 10 (adl)	Professional judgment	Adult: Represents the number of years returning to the same location as an adult, age 16 to <30 years of age Adl: Represents the number of years returning to the same location as an adolescent; assumes adolescent recreational user 6 to <16 years of age
ED	Exposure Duration-for inhalation	year	--	--	--	--	--	--	23	Professional judgment	Combined 10 years as adolescent and 14 years as adult
BW	Body Weight	kg	80	USEPA, 2014c	Source references USEPA, 2011, Table 8-3; weighted mean values for adults 21 – 78	80	USEPA, 2014c	Source references USEPA, 2011, Table 8-3; weighted mean values for adults 21 – 78	80 (adult) 44 (adl)	USEPA, 2014c, USEPA, 2011	Adult: Source references USEPA, 2011, Table 8-3; weighted mean values for adults 21 – 78 Adl: Table 8-3, weighted mean value for adolescent age 6 to <16 years of age
AT_{nc}	Averaging Time – noncarcinogens	days	9,125	USEPA, 1989	Exhibit 6-9; Period over which exposure is averaged; ED expressed in days (25 years x 365 days)	365	USEPA, 2014c	Source references USEPA, 1989, page 6-23; ED expressed in days (1 year x 365 days)	5,110 (adult) 3,650 (adl)	USEPA, 1989	Exhibit 6-9; Period over which exposure is averaged; ED expressed in days (14 years adult x 365 days or 10 years adl x 365 days)
AT_c	Averaging Time – carcinogens	days	25,550	USEPA, 2014c as “lifetime”	70-year lifetime expressed in days (70 years x 365 days)	25,550	USEPA, 2014c as “lifetime”	70-year lifetime expressed in days (70 years x 365 days)	25,550	USEPA, 2014c as “lifetime”	70-year lifetime expressed in days (70 years x 365 days)

Summary of Exposure Parameters for Groundwater or Surface Water (Continued)

Abbreviation	Parameter	Units	Outdoor Worker	Sources	Rationale	Utility Worker	Sources	Rational	Recreational User	Sources	Rationale
FA	Fraction absorbed	unitless	Chemical-specific	USEPA, 2004	Exhibit B-3	Chemical-specific	USEPA, 2004	Exhibit B-3	Chemical-specific	USEPA, 2004	Exhibit B-3
B	Relative contribution of permeability coefficient	unitless	Chemical-specific	USEPA, 2015c	--	Chemical-specific	USEPA, 2015c	--	Chemical-specific	USEPA, 2015c	--
t^*	Time it takes to reach steady state	hours	Chemical-specific	USEPA, 2004	Exhibit B-3	Chemical-specific	USEPA, 2004	Exhibit B-3	Chemical-specific	USEPA, 2004	Exhibit B-3
τ_{event}	Lag Time per Event	hr/event	Chemical-specific	USEPA, 2015c	--	Chemical-specific	USEPA, 2015c	--	Chemical-specific	USEPA, 2015c	--

Utility Worker Soil Exposure Parameters from USEPA Calculator

Site-specific
Outdoor Worker Equation Inputs for Soil
MODIFIED FOR UTILITY WORKER

Variable	Value
TR (target cancer risk) unitless	0.000001
THQ (target hazard quotient) unitless	1
AT_{ow} (averaging time)	365
EF_{ow} (exposure frequency) d/yr	30
ED_{ow} (exposure duration) yr	1
ET_{ow} (exposure time) hr	8
LT (lifetime) yr	70
BW_{ow} (body weight)	80
IR_{ow} (soil ingestion rate) mg/day	330
SA_{ow} (surface area) cm^2/day	3470
AF_{ow} (skin adherence factor) mg/cm^2	0.12
City (Climate Zone) PEF Selection	Philadelphia, P
A_s (acres) PEF Selection	0.5
Q/C_{wp} (g/m^2-s per kg/m^3) PEF Selection	87.36898
PEF (particulate emission factor) m^3/kg	3232997857
A (PEF Dispersion Constant)	14.0111
B (PEF Dispersion Constant)	19.6154
C (PEF Dispersion Constant)	225.3397
V (fraction of vegetative cover) unitless	0.5
U_m (mean annual wind speed) m/s	4.29
U_t (equivalent threshold value)	11.32
F(x) (function dependant on U_m/U_t) unitless	0.0993
City (Climate Zone) VF Selection	Philadelphia, P
A_s (acres) VF Selection	0.5
Q/C_{wp} (g/m^2-s per kg/m^3) VF Selection	87.36898
foc (fraction organic carbon in soil) g/g	0.006

ρ$_b$ (dry soil bulk density) g/cm^3	1.5
ρ$_s$ (soil particle density) g/cm^3	2.65
θ$_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15
T (exposure interval) s	950000000
A (VF Dispersion Constant)	14.0111
B (VF Dispersion Constant)	19.6154
C (VF Dispersion Constant)	225.3397

Output generated 18MAY2015:09:10:02

Utility Worker Soil Screening Levels from USEPA Calculator

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
ALAR	1596-84-5	No	No	1.80E-02	U	5.10E-06	U	1.50E-01	U	-		1
Acenaphthene	83-32-9	No	Yes	-		-		6.00E-02	U	-		1
Acenaphthylene	208-96-8	No	Yes	-		-		-		-		1
Acephate	30560-19-1	No	No	8.70E-03	U	-		4.00E-03	U	-		1
Acetaldehyde	75-07-0	No	Yes	-		2.20E-06	U	-		9.00E-03	U	1
Acetochlor	34256-82-1	No	No	-		-		2.00E-02	U	-		1
Acetone	67-64-1	No	Yes	-		-		9.00E-01	U	3.09E+01	U	1
Acetone Cyanohydrin	75-86-5	No	Yes	-		-		-		2.00E-03	U	1
Acetonitrile	75-05-8	No	Yes	-		-		-		6.00E-02	U	1
Acetophenone	98-86-2	No	Yes	-		-		1.00E-01	U	-		1
Acetylaminofluorene, 2-	53-96-3	No	No	3.80E+00	U	1.30E-03	U	-		-		1
Acifluorofen	50594-66-6	No	No	-		-		-		-		1
Acridine	260-94-6	No	No	-		-		-		-		1
Acrolein	107-02-8	No	Yes	-		-		5.00E-04	U	2.00E-05	U	1
Acrylamide	79-06-1	Yes	No	5.00E-01	U	1.00E-04	U	2.00E-03	U	6.00E-03	U	1
Acrylic Acid	79-10-7	No	Yes	-		-		5.00E-01	U	1.00E-03	U	1
Acrylonitrile	107-13-1	No	Yes	5.40E-01	U	6.80E-05	U	4.00E-02	U	2.00E-03	U	1
Adiponitrile	111-69-3	No	No	-		-		-		6.00E-03	U	1
Alachlor	15972-60-8	No	No	5.60E-02	U	-		1.00E-02	U	-		1
Aldicarb	116-06-3	No	No	-		-		1.00E-03	U	-		1
Aldicarb Sulfone	1646-88-4	No	No	-		-		1.00E-03	U	-		1
Aldicarb sulfoxide	1646-87-3	No	No	-		-		-		-		1
Aldrin	309-00-2	No	Yes	1.70E+01	U	4.90E-03	U	3.00E-05	U	-		1
Aliphatic Chlorinated Hydrocarbons (each)	NA	No	No	-		-		-		-		1
Aliphatic Chlorinated Hydrocarbons (total)	NA	No	No	-		-		-		-		1
Alizarin Red Compounds	NA	No	No	-		-		-		-		1
Ally	74223-64-6	No	No	-		-		2.50E-01	U	-		1
Allyl Alcohol	107-18-6	No	Yes	-		-		5.00E-03	U	1.00E-04	U	1
Allyl Chloride	107-05-1	No	Yes	2.10E-02	U	6.00E-06	U	-		1.00E-03	U	1
Aluminum	7429-90-5	No	No	-		-		1.00E+00	U	5.00E-03	U	1
Aluminum Phosphide	20859-73-8	No	No	-		-		4.00E-04	U	-		1
Aluminum metaphosphate	13776-88-0	No	No	-		-		4.86E+01	U	-		1
Amdro	67485-29-4	No	No	-		-		3.00E-04	U	-		1
Ametryn	834-12-8	No	No	-		-		9.00E-03	U	-		1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
ALAR	1596-84-5	0.1	1	-	-	3.23E+09	1.15E+04	9.09E+04	1.62E+09	1.02E+04	4.42E+05
Acenaphthene	83-32-9	0.13	1	1.94E+05	-	3.23E+09	-	-	-	-	1.77E+05
Acenaphthylene	208-96-8	0.13	1	2.61E+05	-	3.23E+09	-	-	-	-	-
Acephate	30560-19-1	0.1	1	-	-	3.23E+09	2.37E+04	1.88E+05	-	2.11E+04	1.18E+04
Acetaldehyde	75-07-0	-	1	1.20E+04	1.07E+05	3.23E+09	-	-	1.39E+04	1.39E+04	-
Acetochlor	34256-82-1	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Acetone	67-64-1	-	1	1.88E+04	1.14E+05	3.23E+09	-	-	-	-	2.65E+06
Acetone Cyanohydrin	75-86-5	-	1	3.28E+04	1.06E+05	3.23E+09	-	-	-	-	-
Acetonitrile	75-05-8	-	1	1.79E+04	1.28E+05	3.23E+09	-	-	-	-	-
Acetophenone	98-86-2	-	1	8.24E+04	2.52E+03	3.23E+09	-	-	-	-	2.95E+05
Acetylaminofluorene, 2-	53-96-3	0.1	1	-	-	3.23E+09	5.43E+01	4.31E+02	6.35E+06	4.82E+01	-
Acifluorofen	50594-66-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Acridine	260-94-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Acrolein	107-02-8	-	1	9.52E+03	2.27E+04	3.23E+09	-	-	-	-	1.47E+03
Acrylamide	79-06-1	0.1	1	-	-	3.23E+09	4.13E+02	3.27E+03	8.26E+07	3.67E+02	5.90E+03
Acrylic Acid	79-10-7	-	1	1.31E+05	1.09E+05	3.23E+09	-	-	-	-	1.47E+06
Acrylonitrile	107-13-1	-	1	1.06E+04	1.13E+04	3.23E+09	3.82E+02	-	3.98E+02	1.95E+02	1.18E+05
Adiponitrile	111-69-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Alachlor	15972-60-8	0.1	1	-	-	3.23E+09	3.69E+03	2.92E+04	-	3.27E+03	2.95E+04
Aldicarb	116-06-3	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Aldicarb Sulfone	1646-88-4	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Aldicarb sulfoxide	1646-87-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Aldrin	309-00-2	-	1	2.37E+06	-	3.23E+09	1.21E+01	-	1.23E+03	1.20E+01	8.85E+01
Aliphatic Chlorinated Hydrocarbons (each)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Aliphatic Chlorinated Hydrocarbons (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Alizarin Red Compounds	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Ally	74223-64-6	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+05
Allyl Alcohol	107-18-6	-	1	4.71E+04	1.11E+05	3.23E+09	-	-	-	-	1.47E+04
Allyl Chloride	107-05-1	-	1	2.18E+03	1.42E+03	3.23E+09	9.83E+03	-	9.30E+02	8.49E+02	-
Aluminum	7429-90-5	-	1	-	-	3.23E+09	-	-	-	-	2.95E+06
Aluminum Phosphide	20859-73-8	-	1	-	-	3.23E+09	-	-	-	-	1.18E+03
Aluminum metaphosphate	13776-88-0	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Amdro	67485-29-4	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Ametryn	834-12-8	0.1	1	-	-	3.23E+09	-	-	-	-	2.65E+04

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
ALAR	1596-84-5	3.51E+06	-	3.93E+05	1.02E+04 ca*
Acenaphthene	83-32-9	1.08E+06	-	1.52E+05	1.52E+05 max
Acenaphthylene	208-96-8	-	-	-	
Acephate	30560-19-1	9.35E+04	-	1.05E+04	1.05E+04 nc
Acetaldehyde	75-07-0	-	3.94E+03	3.94E+03	3.94E+03 nc
Acetochlor	34256-82-1	4.67E+05	-	5.24E+04	5.24E+04 nc
Acetone	67-64-1	-	2.13E+07	2.36E+06	2.36E+06 sat
Acetone Cyanohydrin	75-86-5	-	2.39E+03	2.39E+03	2.39E+03 nc
Acetonitrile	75-05-8	-	3.92E+04	3.92E+04	3.92E+04 nc
Acetophenone	98-86-2	-	-	2.95E+05	2.95E+05 sat
Acetylaminofluorene, 2-	53-96-3	-	-	-	4.82E+01 ca
Acifluorofen	50594-66-6	-	-	-	
Acridine	260-94-6	-	-	-	
Acrolein	107-02-8	-	6.95E+00	6.92E+00	6.92E+00 nc
Acrylamide	79-06-1	4.67E+04	7.08E+08	5.24E+03	3.67E+02 ca*
Acrylic Acid	79-10-7	-	4.80E+03	4.78E+03	4.78E+03 nc
Acrylonitrile	107-13-1	-	7.73E+02	7.68E+02	1.95E+02 ca**
Adiponitrile	111-69-3	-	7.08E+08	7.08E+08	7.08E+08 max
Alachlor	15972-60-8	2.34E+05	-	2.62E+04	3.27E+03 ca**
Aldicarb	116-06-3	2.34E+04	-	2.62E+03	2.62E+03 nc
Aldicarb Sulfone	1646-88-4	2.34E+04	-	2.62E+03	2.62E+03 nc
Aldicarb sulfoxide	1646-87-3	-	-	-	
Aldrin	309-00-2	-	-	8.85E+01	1.20E+01 ca**
Aliphatic Chlorinated Hydrocarbons (each)	NA	-	-	-	
Aliphatic Chlorinated Hydrocarbons (total)	NA	-	-	-	
Alizarin Red Compounds	NA	-	-	-	
Ally	74223-64-6	5.84E+06	-	6.55E+05	6.55E+05 max
Allyl Alcohol	107-18-6	-	1.72E+02	1.70E+02	1.70E+02 nc
Allyl Chloride	107-05-1	-	7.97E+01	7.97E+01	7.97E+01 nc
Aluminum	7429-90-5	-	5.90E+08	2.93E+06	2.93E+06 max
Aluminum Phosphide	20859-73-8	-	-	1.18E+03	1.18E+03 nc
Aluminum metaphosphate	13776-88-0	-	-	1.43E+08	1.43E+08 max
Amdro	67485-29-4	7.01E+03	-	7.86E+02	7.86E+02 nc
Ametryn	834-12-8	2.10E+05	-	2.36E+04	2.36E+04 nc

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Amino-4-chlorobenzotrifluoride, 3-	121-50-6	No	Yes	-		-		-		-		1
Aminoazobenzene, p-	60-09-3	No	No	-		-		-		-		1
Aminobiphenyl, 4-	92-67-1	No	No	2.10E+01	U	6.00E-03	U	-		-		1
Aminophenol, m-	591-27-5	No	No	-		-		8.00E-02	U	-		1
Aminophenol, o-	95-55-6	No	No	-		-		-		-		1
Aminophenol, p-	123-30-8	No	No	-		-		2.00E-02	U	-		1
Aminopyridine, 4-	504-24-5	No	No	-		-		-		-		1
Amitraz	33089-61-1	No	No	-		-		2.50E-03	U	-		1
Ammonium Perchlorate	7790-98-9	No	No	-		-		7.00E-04	U	-		1
Ammonium Sulfamate	7773-06-0	No	No	-		-		2.00E-01	U	-		1
Ammonium polyphosphate	68333-79-9	No	No	-		-		4.86E+01	U	-		1
Amyl Alcohol, tert-	75-85-4	No	Yes	-		-		-		3.00E-03	U	1
Aniline	62-53-3	No	No	5.70E-03	U	1.60E-06	U	7.00E-03	U	1.00E-03	U	1
Anilinobenzothiazole	1843-21-6	No	No	-		-		-		-		1
Anthracene	120-12-7	No	Yes	-		-		3.00E-01	U	-		1
Anthraquinone, 9,10-	84-65-1	No	No	4.00E-02	U	-		2.00E-03	U	-		1
Antimony (metallic)	7440-36-0	No	No	-		-		4.00E-04	U	-		0.15
Antimony Pentoxide	1314-60-9	No	No	-		-		5.00E-04	U	-		0.15
Antimony Potassium Tartrate	11071-15-1	No	No	-		-		9.00E-04	U	-		0.15
Antimony Tetroxide	1332-81-6	No	No	-		-		4.00E-04	U	-		0.15
Antimony Trichloride	10025-91-9	No	No	-		-		-		-		1
Antimony Trioxide	1309-64-4	No	No	-		-		-		2.00E-04	U	0.15
Apollo	74115-24-5	No	No	-		-		1.30E-02	U	-		1
Aramite	140-57-8	No	No	2.50E-02	U	7.10E-06	U	5.00E-02	U	-		1
Aroclor 1016	12674-11-2	No	Yes	7.00E-02	U	2.00E-05	U	7.00E-05	U	-		1
Aroclor 1221	11104-28-2	No	Yes	2.00E+00	U	5.71E-04	U	-		-		1
Aroclor 1232	11141-16-5	No	Yes	2.00E+00	U	5.71E-04	U	-		-		1
Aroclor 1242	53469-21-9	No	Yes	2.00E+00	U	5.71E-04	U	-		-		1
Aroclor 1248	12672-29-6	No	Yes	2.00E+00	U	5.71E-04	U	-		-		1
Aroclor 1254	11097-69-1	No	Yes	2.00E+00	U	5.71E-04	U	2.00E-05	U	-		1
Aroclor 1260	11096-82-5	No	Yes	2.00E+00	U	5.71E-04	U	-		-		1
Aroclor 5460	11126-42-4	No	Yes	-		-		6.00E-04	U	-		1
Arsenic Salts	NA	No	No	-		-		-		-		1
Arsenic, Inorganic	7440-38-2	No	No	1.50E+00	U	4.30E-03	U	3.00E-04	U	1.50E-05	U	1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Amino-4-chlorobenzotrifluoride, 3-	121-50-6	-	1	3.69E+05	-	3.23E+09	-	-	-	-	-
Aminoazobenzene, p-	60-09-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Aminobiphenyl, 4-	92-67-1	0.1	1	-	-	3.23E+09	9.83E+00	7.79E+01	1.38E+06	8.73E+00	-
Aminophenol, m-	591-27-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+05
Aminophenol, o-	95-55-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Aminophenol, p-	123-30-8	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Aminopyridine, 4-	504-24-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Amitraz	33089-61-1	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+03
Ammonium Perchlorate	7790-98-9	-	1	-	-	3.23E+09	-	-	-	-	2.06E+03
Ammonium Sulfamate	7773-06-0	-	1	-	-	3.23E+09	-	-	-	-	5.90E+05
Ammonium polyphosphate	68333-79-9	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Amyl Alcohol, tert-	75-85-4	-	1	3.62E+04	1.37E+04	3.23E+09	-	-	-	-	-
Aniline	62-53-3	0.1	1	-	-	3.23E+09	3.62E+04	2.87E+05	5.16E+09	3.22E+04	2.06E+04
Anilinobenzothiazole	1843-21-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Anthracene	120-12-7	0.13	1	7.23E+05	-	3.23E+09	-	-	-	-	8.85E+05
Anthraquinone, 9,10-	84-65-1	0.1	1	-	-	3.23E+09	5.16E+03	4.09E+04	-	4.58E+03	5.90E+03
Antimony (metallic)	7440-36-0	-	1	-	-	3.23E+09	-	-	-	-	1.18E+03
Antimony Pentoxide	1314-60-9	-	1	-	-	3.23E+09	-	-	-	-	1.47E+03
Antimony Potassium Tartrate	11071-15-1	-	1	-	-	3.23E+09	-	-	-	-	2.65E+03
Antimony Tetroxide	1332-81-6	-	1	-	-	3.23E+09	-	-	-	-	1.18E+03
Antimony Trichloride	10025-91-9	-	1	-	-	3.23E+09	-	-	-	-	-
Antimony Trioxide	1309-64-4	-	1	-	-	3.23E+09	-	-	-	-	-
Apollo	74115-24-5	0.1	1	-	-	3.23E+09	-	-	-	-	3.83E+04
Aramite	140-57-8	0.1	1	-	-	3.23E+09	8.26E+03	6.54E+04	1.16E+09	7.33E+03	1.47E+05
Aroclor 1016	12674-11-2	0.14	1	8.07E+05	-	3.23E+09	2.95E+03	1.67E+04	1.03E+05	2.45E+03	2.06E+02
Aroclor 1221	11104-28-2	0.14	1	1.57E+05	-	3.23E+09	1.03E+02	5.84E+02	7.00E+02	7.80E+01	-
Aroclor 1232	11141-16-5	0.14	1	1.54E+05	-	3.23E+09	1.03E+02	5.84E+02	6.91E+02	7.78E+01	-
Aroclor 1242	53469-21-9	0.14	1	1.09E+06	-	3.23E+09	1.03E+02	5.84E+02	4.89E+03	8.62E+01	-
Aroclor 1248	12672-29-6	0.14	1	7.08E+05	-	3.23E+09	1.03E+02	5.84E+02	3.17E+03	8.54E+01	-
Aroclor 1254	11097-69-1	0.14	1	1.16E+06	-	3.23E+09	1.03E+02	5.84E+02	5.21E+03	8.63E+01	5.90E+01
Aroclor 1260	11096-82-5	0.14	1	1.82E+06	-	3.23E+09	1.03E+02	5.84E+02	8.13E+03	8.68E+01	-
Aroclor 5460	11126-42-4	0.14	1	9.89E+05	-	3.23E+09	-	-	-	-	1.77E+03
Arsenic Salts	NA	0.03	0.6	-	-	3.23E+09	-	-	-	-	-
Arsenic, Inorganic	7440-38-2	0.03	0.6	-	-	3.23E+09	2.29E+02	3.64E+03	1.92E+06	2.16E+02	1.47E+03

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Amino-4-chlorobenzotrifluoride, 3-	121-50-6	-	-	-	
Aminoazobenzene, p-	60-09-3	-	-	-	
Aminobiphenyl, 4-	92-67-1	-	-	-	8.73E+00 ca
Aminophenol, m-	591-27-5	1.87E+06	-	2.10E+05	2.10E+05 max
Aminophenol, o-	95-55-6	-	-	-	
Aminophenol, p-	123-30-8	4.67E+05	-	5.24E+04	5.24E+04 nc
Aminopyridine, 4-	504-24-5	-	-	-	
Amitraz	33089-61-1	5.84E+04	-	6.55E+03	6.55E+03 nc
Ammonium Perchlorate	7790-98-9	-	-	2.06E+03	2.06E+03 nc
Ammonium Sulfamate	7773-06-0	-	-	5.90E+05	5.90E+05 max
Ammonium polyphosphate	68333-79-9	-	-	1.43E+08	1.43E+08 max
Amyl Alcohol, tert-	75-85-4	-	3.96E+03	3.96E+03	3.96E+03 nc
Aniline	62-53-3	1.64E+05	1.18E+08	1.83E+04	1.83E+04 nc
Anilinobenzothiazole	1843-21-6	-	-	-	
Anthracene	120-12-7	5.39E+06	-	7.60E+05	7.60E+05 max
Anthraquinone, 9,10-	84-65-1	4.67E+04	-	5.24E+03	4.58E+03 ca**
Antimony (metallic)	7440-36-0	-	-	1.18E+03	1.18E+03 nc
Antimony Pentoxide	1314-60-9	-	-	1.47E+03	1.47E+03 nc
Antimony Potassium Tartrate	11071-15-1	-	-	2.65E+03	2.65E+03 nc
Antimony Tetroxide	1332-81-6	-	-	1.18E+03	1.18E+03 nc
Antimony Trichloride	10025-91-9	-	-	-	
Antimony Trioxide	1309-64-4	-	2.36E+07	2.36E+07	2.36E+07 max
Apollo	74115-24-5	3.04E+05	-	3.40E+04	3.40E+04 nc
Aramite	140-57-8	1.17E+06	-	1.31E+05	7.33E+03 ca*
Aroclor 1016	12674-11-2	1.17E+03	-	1.75E+02	1.75E+02 nc
Aroclor 1221	11104-28-2	-	-	-	7.80E+01 ca
Aroclor 1232	11141-16-5	-	-	-	7.78E+01 ca
Aroclor 1242	53469-21-9	-	-	-	8.62E+01 ca
Aroclor 1248	12672-29-6	-	-	-	8.54E+01 ca
Aroclor 1254	11097-69-1	3.34E+02	-	5.01E+01	5.01E+01 nc
Aroclor 1260	11096-82-5	-	-	-	8.68E+01 ca
Aroclor 5460	11126-42-4	1.00E+04	-	1.50E+03	1.50E+03 nc
Arsenic Salts	NA	-	-	-	
Arsenic, Inorganic	7440-38-2	2.34E+04	1.77E+06	1.39E+03	2.16E+02 ca**

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Arsine	7784-42-1	No	No	-		-		3.50E-06	U	5.00E-05	U	1
Assure	76578-14-8	No	No	-		-		9.00E-03	U	-		1
Asulam	3337-71-1	No	No	-		-		5.00E-02	U	-		1
Atrazine	1912-24-9	No	No	2.30E-01	U	-		3.50E-02	U	-		1
Auramine	492-80-8	No	No	8.80E-01	U	2.50E-04	U	-		-		1
Avermectin B1	65195-55-3	No	No	-		-		4.00E-04	U	-		1
Azobenzene	103-33-3	No	Yes	1.10E-01	U	3.10E-05	U	-		-		1
Azodicarbonamide	123-77-3	No	No	-		-		1.00E+00	U	7.00E-06	U	1
Barium	7440-39-3	No	No	-		-		2.00E-01	U	5.00E-04	U	0.07
Barium Chromate	10294-40-3	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Barium Cyanide	542-62-1	No	No	-		-		-		-		0.07
Baygon	114-26-1	No	No	-		-		4.00E-03	U	-		1
Bayleton	43121-43-3	No	No	-		-		3.00E-02	U	-		1
Baythroid	68359-37-5	No	No	-		-		2.50E-02	U	-		1
Benefin	1861-40-1	No	Yes	-		-		3.00E-01	U	-		1
Benomyl	17804-35-2	No	No	-		-		5.00E-02	U	-		1
Bentazon	25057-89-0	No	No	-		-		3.00E-02	U	-		1
Benz[a]anthracene	56-55-3	Yes	Yes	7.30E-01	U	1.10E-04	U	-		-		1
Benzaldehyde	100-52-7	No	Yes	-		-		1.00E-01	U	-		1
Benzene	71-43-2	No	Yes	5.50E-02	U	7.80E-06	U	4.00E-03	U	3.00E-02	U	1
Benzene, Ethyldimethyl	29224-55-3	No	Yes	-		-		-		-		1
Benzene, Ethylmethyl	25550-14-5	No	Yes	-		-		-		-		1
Benzene, Methylpropenyl	768-00-3	No	Yes	-		-		-		-		1
Benzene, Methylpropyl	28729-54-6	No	No	-		-		-		-		1
Benzene, Trimethyl	25551-13-7	No	Yes	-		-		-		-		1
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	No	No	1.00E-01	U	-		3.00E-04	U	-		1
Benzenethiol	108-98-5	No	Yes	-		-		1.00E-03	U	-		1
Benzidine	92-87-5	Yes	No	2.30E+02	U	6.70E-02	U	3.00E-03	U	-		1
Benzo(j)fluoranthene	205-82-3	No	No	1.20E+00	U	1.10E-04	U	-		-		1
Benzo[a]pyrene	50-32-8	Yes	No	7.30E+00	U	1.10E-03	U	-		-		1
Benzo[b]fluoranthene	205-99-2	Yes	No	7.30E-01	U	1.10E-04	U	-		-		1
Benzo[g,h,i]perylene	191-24-2	No	No	-		-		-		-		1
Benzo[k]fluoranthene	207-08-9	Yes	No	7.30E-02	U	1.10E-04	U	-		-		1
Benzofluoranthenes, total	NA	No	No	-		-		-		-		1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Arsine	7784-42-1	-	1	-	-	3.23E+09	-	-	-	-	1.03E+01
Assure	76578-14-8	0.1	1	-	-	3.23E+09	-	-	-	-	2.65E+04
Asulam	3337-71-1	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Atrazine	1912-24-9	0.1	1	-	-	3.23E+09	8.98E+02	7.11E+03	-	7.97E+02	1.03E+05
Auramine	492-80-8	0.1	1	-	-	3.23E+09	2.35E+02	1.86E+03	3.30E+07	2.08E+02	-
Avermectin B1	65195-55-3	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+03
Azobenzene	103-33-3	-	1	7.21E+05	-	3.23E+09	1.88E+03	-	5.94E+04	1.82E+03	-
Azodicarbonamide	123-77-3	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+06
Barium	7440-39-3	-	1	-	-	3.23E+09	-	-	-	-	5.90E+05
Barium Chromate	10294-40-3	-	1	-	-	3.23E+09	4.13E+02	-	5.51E+04	4.10E+02	5.90E+04
Barium Cyanide	542-62-1	-	1	-	-	3.23E+09	-	-	-	-	-
Baygon	114-26-1	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+04
Bayleton	43121-43-3	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Baythroid	68359-37-5	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
Benefin	1861-40-1	-	1	4.23E+05	-	3.23E+09	-	-	-	-	8.85E+05
Benomyl	17804-35-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Bentazon	25057-89-0	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Benz[a]anthracene	56-55-3	0.13	1	6.09E+06	-	3.23E+09	2.83E+02	1.72E+03	1.41E+05	2.43E+02	-
Benzaldehyde	100-52-7	-	1	3.10E+04	1.16E+03	3.23E+09	-	-	-	-	2.95E+05
Benzene	71-43-2	-	1	4.88E+03	1.82E+03	3.23E+09	3.75E+03	-	1.60E+03	1.12E+03	1.18E+04
Benzene, Ethyldimethyl	29224-55-3	-	1	1.26E+04	1.31E+02	3.23E+09	-	-	-	-	-
Benzene, Ethylmethyl	25550-14-5	-	1	1.30E+04	3.30E+02	3.23E+09	-	-	-	-	-
Benzene, Methylpropenyl	768-00-3	-	1	1.58E+04	4.90E+02	3.23E+09	-	-	-	-	-
Benzene, Methylpropyl	28729-54-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Benzene, Trimethyl	25551-13-7	-	1	9.03E+03	1.82E+02	3.23E+09	-	-	-	-	-
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	0.1	1	-	-	3.23E+09	2.06E+03	1.64E+04	-	1.83E+03	8.85E+02
Benzenethiol	108-98-5	-	1	2.67E+04	1.26E+03	3.23E+09	-	-	-	-	2.95E+03
Benzidine	92-87-5	0.1	1	-	-	3.23E+09	8.98E-01	7.11E+00	1.23E+05	7.97E-01	8.85E+03
Benzo(j)fluoranthene	205-82-3	0.13	1	-	-	3.23E+09	1.72E+02	1.05E+03	7.51E+07	1.48E+02	-
Benzo[a]pyrene	50-32-8	0.13	1	-	-	3.23E+09	2.83E+01	1.72E+02	7.51E+06	2.43E+01	-
Benzo[b]fluoranthene	205-99-2	0.13	1	-	-	3.23E+09	2.83E+02	1.72E+03	7.51E+07	2.43E+02	-
Benzo[g,h,i]perylene	191-24-2	0.13	1	-	-	3.23E+09	-	-	-	-	-
Benzo[k]fluoranthene	207-08-9	0.13	1	-	-	3.23E+09	2.83E+03	1.72E+04	7.51E+07	2.43E+03	-
Benzofluoranthenes, total	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Arsine	7784-42-1	-	5.90E+06	1.03E+01	1.03E+01 nc
Assure	76578-14-8	2.10E+05	-	2.36E+04	2.36E+04 nc
Asulam	3337-71-1	1.17E+06	-	1.31E+05	1.31E+05 max
Atrazine	1912-24-9	8.18E+05	-	9.17E+04	7.97E+02 ca
Auramine	492-80-8	-	-	-	2.08E+02 ca
Avermectin B1	65195-55-3	9.35E+03	-	1.05E+03	1.05E+03 nc
Azobenzene	103-33-3	-	-	-	1.82E+03 ca
Azodicarbonamide	123-77-3	2.34E+07	8.26E+05	6.28E+05	6.28E+05 max
Barium	7440-39-3	-	5.90E+07	5.84E+05	5.84E+05 max
Barium Chromate	10294-40-3	-	2.36E+07	5.88E+04	4.10E+02 ca
Barium Cyanide	542-62-1	-	-	-	
Baygon	114-26-1	9.35E+04	-	1.05E+04	1.05E+04 nc
Bayleton	43121-43-3	7.01E+05	-	7.86E+04	7.86E+04 nc
Baythroid	68359-37-5	5.84E+05	-	6.55E+04	6.55E+04 nc
Benefin	1861-40-1	-	-	8.85E+05	8.85E+05 max
Benomyl	17804-35-2	1.17E+06	-	1.31E+05	1.31E+05 max
Bentazon	25057-89-0	7.01E+05	-	7.86E+04	7.86E+04 nc
Benz[a]anthracene	56-55-3	-	-	-	2.43E+02 ca
Benzaldehyde	100-52-7	-	-	2.95E+05	2.95E+05 sat
Benzene	71-43-2	-	5.34E+03	3.68E+03	1.12E+03 ca**
Benzene, Ethyldimethyl	29224-55-3	-	-	-	
Benzene, Ethylmethyl	25550-14-5	-	-	-	
Benzene, Methylpropenyl	768-00-3	-	-	-	
Benzene, Methylpropyl	28729-54-6	-	-	-	
Benzene, Trimethyl	25551-13-7	-	-	-	
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	7.01E+03	-	7.86E+02	7.86E+02 nc
Benzenethiol	108-98-5	-	-	2.95E+03	2.95E+03 sat
Benzidine	92-87-5	7.01E+04	-	7.86E+03	7.97E-01 ca
Benzo(j)fluoranthene	205-82-3	-	-	-	1.48E+02 ca
Benzo[a]pyrene	50-32-8	-	-	-	2.43E+01 ca
Benzo[b]fluoranthene	205-99-2	-	-	-	2.43E+02 ca
Benzo[g,h,i]perylene	191-24-2	-	-	-	
Benzo[k]fluoranthene	207-08-9	-	-	-	2.43E+03 ca
Benzofluoranthenes, total	NA	-	-	-	

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Benzofluorene, 2,3-	243-17-4	No	No	-		-		-		-		1
Benzoic Acid	65-85-0	No	No	-		-		4.00E+00	U	-		1
Benzoic acid, 3,5-dichloro-	51-36-5	No	No	-		-		-		-		1
Benzoic acid, 4-hydroxy-, methyl ester	99-76-3	No	No	-		-		-		-		1
Benzothiazole	95-16-9	No	No	-		-		-		-		1
Benzotrichloride	98-07-7	No	Yes	1.30E+01	U	-		-		-		1
Benzyl Alcohol	100-51-6	No	No	-		-		1.00E-01	U	-		1
Benzyl Chloride	100-44-7	No	Yes	1.70E-01	U	4.90E-05	U	2.00E-03	U	1.00E-03	U	1
Beryllium and compounds	7440-41-7	No	No	-		2.40E-03	U	2.00E-03	U	2.00E-05	U	0.007
Bidrin	141-66-2	No	No	-		-		1.00E-04	U	-		1
Bifenox	42576-02-3	No	No	-		-		9.00E-03	U	-		1
Biphenthrin	82657-04-3	No	No	-		-		1.50E-02	U	-		1
Biphenyl, 1,1'-	92-52-4	No	Yes	8.00E-03	U	-		5.00E-01	U	4.00E-04	U	1
Bis(2-chloro-1-methylethyl) ether	108-60-1	No	Yes	7.00E-02	U	1.00E-05	U	4.00E-02	U	-		1
Bis(2-chloroethoxy)methane	111-91-1	No	No	-		-		3.00E-03	U	-		1
Bis(2-chloroethyl)ether	111-44-4	No	Yes	1.10E+00	U	3.30E-04	U	-		-		1
Bis(2-ethylhexyl)phthalate	117-81-7	No	No	1.40E-02	U	2.40E-06	U	2.00E-02	U	-		1
Bis(Octanoyloxy)Di-N-Butyl Stannane	4731-77-5	No	Yes	-		-		-		-		1
Bis(chloromethyl)ether	542-88-1	No	Yes	2.20E+02	U	6.20E-02	U	-		-		1
Bis(oleoyloxy)dibutyl tin	13323-62-1	No	Yes	-		-		-		-		1
Bisphenol A	80-05-7	No	No	-		-		5.00E-02	U	-		1
Boron And Borates Only	7440-42-8	No	No	-		-		2.00E-01	U	2.00E-02	U	1
Boron Trichloride	10294-34-5	No	Yes	-		-		2.00E+00	U	2.00E-02	U	1
Boron Trifluoride	7637-07-2	No	Yes	-		-		4.00E-02	U	1.30E-02	U	1
Bromacil	314-40-9	No	No	-		-		-		-		1
Bromate	15541-45-4	No	No	7.00E-01	U	-		4.00E-03	U	-		1
Bromine	7726-95-6	No	Yes	-		-		-		-		1
Bromo-2-chloroethane, 1-	107-04-0	No	Yes	2.00E+00	U	6.00E-04	U	-		-		1
Bromo-3-fluorobenzene, 1-	1073-06-9	No	Yes	-		-		-		-		1
Bromo-4-Ethylbenzene, 1-	1585-07-5	No	Yes	-		-		-		-		1
Bromoacetic acid	79-08-3	No	No	-		-		-		-		1
Bromoacetophenone, 3-	2142-63-4	No	No	-		-		-		-		1
Bromobenzene	108-86-1	No	Yes	-		-		8.00E-03	U	6.00E-02	U	1
Bromochloromethane	74-97-5	No	Yes	-		-		-		4.00E-02	U	1

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Benzofluorene, 2,3-	243-17-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Benzoic Acid	65-85-0	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+07
Benzoic acid, 3,5-dichloro-	51-36-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Benzoic acid, 4-hydroxy-, methyl ester	99-76-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Benzothiazole	95-16-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Benzotrichloride	98-07-7	-	1	9.33E+04	3.23E+02	3.23E+09	1.59E+01	-	-	1.59E+01	-
Benzyl Alcohol	100-51-6	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Benzyl Chloride	100-44-7	-	1	3.52E+04	1.46E+03	3.23E+09	1.21E+03	-	1.83E+03	7.31E+02	5.90E+03
Beryllium and compounds	7440-41-7	-	1	-	-	3.23E+09	-	-	3.44E+06	3.44E+06	5.90E+03
Bidrin	141-66-2	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+02
Bifenox	42576-02-3	0.1	1	-	-	3.23E+09	-	-	-	-	2.65E+04
Biphenthrin	82657-04-3	0.1	1	-	-	3.23E+09	-	-	-	-	4.42E+04
Biphenyl, 1,1'-	92-52-4	-	1	1.57E+05	-	3.23E+09	2.58E+04	-	-	2.58E+04	1.47E+06
Bis(2-chloro-1-methylethyl) ether	108-60-1	-	1	4.83E+04	1.02E+03	3.23E+09	2.95E+03	-	1.23E+04	2.38E+03	1.18E+05
Bis(2-chloroethoxy)methane	111-91-1	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+03
Bis(2-chloroethyl)ether	111-44-4	-	1	5.87E+04	5.05E+03	3.23E+09	1.88E+02	-	4.54E+02	1.33E+02	-
Bis(2-ethylhexyl)phthalate	117-81-7	0.1	1	-	-	3.23E+09	1.47E+04	1.17E+05	3.44E+09	1.31E+04	5.90E+04
Bis(Octanoyloxy)Di-N-Butyl Stannane	4731-77-5	-	1	8.48E+04	-	3.23E+09	-	-	-	-	-
Bis(chloromethyl)ether	542-88-1	-	1	2.59E+03	4.22E+03	3.23E+09	9.38E-01	-	1.07E-01	9.58E-02	-
Bis(oleoyloxy)dibutyl tin	13323-62-1	-	1	2.64E+06	-	3.23E+09	-	-	-	-	-
Bisphenol A	80-05-7	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Boron And Borates Only	7440-42-8	-	1	-	-	3.23E+09	-	-	-	-	5.90E+05
Boron Trichloride	10294-34-5	-	1	-	-	3.23E+09	-	-	-	-	5.90E+06
Boron Trifluoride	7637-07-2	-	1	-	-	3.23E+09	-	-	-	-	1.18E+05
Bromacil	314-40-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Bromate	15541-45-4	-	1	-	-	3.23E+09	2.95E+02	-	-	2.95E+02	1.18E+04
Bromine	7726-95-6	-	1	-	-	3.23E+09	-	-	-	-	-
Bromo-2-chloroethane, 1-	107-04-0	-	1	8.17E+03	2.38E+03	3.23E+09	1.03E+02	-	3.48E+01	2.60E+01	-
Bromo-3-fluorobenzene, 1-	1073-06-9	-	1	9.79E+03	9.07E+02	3.23E+09	-	-	-	-	-
Bromo-4-Ethylbenzene, 1-	1585-07-5	-	1	1.96E+04	2.06E+02	3.23E+09	-	-	-	-	-
Bromoacetic acid	79-08-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Bromoacetophenone, 3-	2142-63-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Bromobenzene	108-86-1	-	1	1.15E+04	6.79E+02	3.23E+09	-	-	-	-	2.36E+04
Bromochloromethane	74-97-5	-	1	4.94E+03	4.03E+03	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Benzofluorene, 2,3-	243-17-4	-	-	-	
Benzoic Acid	65-85-0	9.35E+07	-	1.05E+07	1.05E+07 max
Benzoic acid, 3,5-dichloro-	51-36-5	-	-	-	
Benzoic acid, 4-hydroxy-, methyl ester	99-76-3	-	-	-	
Benzothiazole	95-16-9	-	-	-	
Benzotrichloride	98-07-7	-	-	-	1.59E+01 ca
Benzyl Alcohol	100-51-6	2.34E+06	-	2.62E+05	2.62E+05 max
Benzyl Chloride	100-44-7	-	1.28E+03	1.05E+03	7.31E+02 ca**
Beryllium and compounds	7440-41-7	-	2.36E+06	5.88E+03	5.88E+03 nc
Bidrin	141-66-2	2.34E+03	-	2.62E+02	2.62E+02 nc
Bifenox	42576-02-3	2.10E+05	-	2.36E+04	2.36E+04 nc
Biphenthrin	82657-04-3	3.51E+05	-	3.93E+04	3.93E+04 nc
Biphenyl, 1,1'-	92-52-4	-	2.29E+03	2.29E+03	2.29E+03 nc
Bis(2-chloro-1-methylethyl) ether	108-60-1	-	-	1.18E+05	2.38E+03 sat
Bis(2-chloroethoxy)methane	111-91-1	7.01E+04	-	7.86E+03	7.86E+03 nc
Bis(2-chloroethyl)ether	111-44-4	-	-	-	1.33E+02 ca
Bis(2-ethylhexyl)phthalate	117-81-7	4.67E+05	-	5.24E+04	1.31E+04 ca**
Bis(Octanoyloxy)Di-N-Butyl Stannane	4731-77-5	-	-	-	
Bis(chloromethyl)ether	542-88-1	-	-	-	9.58E-02 ca
Bis(oleoyloxy)dibutyl tin	13323-62-1	-	-	-	
Bisphenol A	80-05-7	1.17E+06	-	1.31E+05	1.31E+05 max
Boron And Borates Only	7440-42-8	-	2.36E+09	5.90E+05	5.90E+05 max
Boron Trichloride	10294-34-5	-	2.36E+09	5.88E+06	5.88E+06 max
Boron Trifluoride	7637-07-2	-	1.53E+09	1.18E+05	1.18E+05 max
Bromacil	314-40-9	-	-	-	
Bromate	15541-45-4	-	-	1.18E+04	2.95E+02 ca*
Bromine	7726-95-6	-	-	-	
Bromo-2-chloroethane, 1-	107-04-0	-	-	-	2.60E+01 ca
Bromo-3-fluorobenzene, 1-	1073-06-9	-	-	-	
Bromo-4-Ethylbenzene, 1-	1585-07-5	-	-	-	
Bromoacetic acid	79-08-3	-	-	-	
Bromoacetophenone, 3-	2142-63-4	-	-	-	
Bromobenzene	108-86-1	-	2.53E+04	1.22E+04	1.22E+04 sat
Bromochloromethane	74-97-5	-	7.21E+03	7.21E+03	7.21E+03 sat

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Bromodichloromethane	75-27-4	No	Yes	6.20E-02	U	3.70E-05	U	2.00E-02	U	-		1
Bromodiphenyl Ether, p-	101-55-3	No	Yes	-		-		-		-		1
Bromofluorobenzene, p-	460-00-4	No	Yes	-		-		-		-		1
Bromoform	75-25-2	No	Yes	7.90E-03	U	1.10E-06	U	2.00E-02	U	-		1
Bromomethane	74-83-9	No	Yes	-		-		1.40E-03	U	5.00E-03	U	1
Bromophenol, p-	106-41-2	No	No	-		-		-		-		1
Bromophenyl-phenyl phthalate, 4-	NA	No	No	-		-		-		-		1
Bromophos	2104-96-3	No	Yes	-		-		5.00E-03	U	-		1
Bromopyridine, 2-	109-04-6	No	No	-		-		-		-		1
Bromotrichloromethane	75-62-7	No	Yes	-		-		-		-		1
Bromoxynil	1689-84-5	No	No	-		-		2.00E-02	U	-		1
Bromoxynil Octanoate	1689-99-2	No	Yes	-		-		2.00E-02	U	-		1
Butadiene, 1,3-	106-99-0	No	Yes	3.40E+00	U	3.00E-05	U	-		2.00E-03	U	1
Butanediol, 2,3-	513-85-9	No	No	-		-		-		-		1
Butanol	35296-72-1	No	Yes	-		-		-		-		1
Butanol, N-	71-36-3	No	Yes	-		-		1.00E-01	U	-		1
Butanone-2, 4-chloro-4,4-difluoro	NA	No	No	-		-		-		-		1
Butyl Alcohol, t-	75-65-0	No	Yes	-		-		-		-		1
Butyl Benzyl Phthlate	85-68-7	No	No	1.90E-03	U	-		2.00E-01	U	-		1
Butyl Formate, tert-	762-75-4	No	Yes	-		-		-		-		1
Butyl alcohol, sec-	78-92-2	No	Yes	-		-		2.00E+00	U	3.00E+01	U	1
Butylacetate	123-86-4	No	Yes	-		-		-		-		1
Butylate	2008-41-5	No	Yes	-		-		5.00E-02	U	-		1
Butylated hydroxyanisole	25013-16-5	No	No	2.00E-04	U	5.70E-08	U	-		-		1
Butylated hydroxytoluene	128-37-0	No	No	3.60E-03	U	-		3.00E-01	U	-		1
Butylbenzene, n-	104-51-8	No	Yes	-		-		5.00E-02	U	-		1
Butylbenzene, sec-	135-98-8	No	Yes	-		-		1.00E-01	U	-		1
Butylbenzene, tert-	98-06-6	No	Yes	-		-		1.00E-01	U	-		1
Butylchloride, t-	507-20-0	No	Yes	-		-		-		-		1
Butylphthalyl Butylglycolate	85-70-1	No	No	-		-		1.00E+00	U	-		1
Butyltin	NA	No	No	-		-		-		-		1
Cacodylic Acid	75-60-5	No	No	-		-		2.00E-02	U	-		1
Cadmium (Diet)	7440-43-9	No	No	-		1.80E-03	U	1.00E-03	U	1.00E-05	U	0.025
Calcium	7440-70-2	No	No	-		-		-		-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Bromodichloromethane	75-27-4	-	1	5.47E+03	9.31E+02	3.23E+09	3.33E+03	-	3.77E+02	3.39E+02	5.90E+04
Bromodiphenyl Ether, p-	101-55-3	-	1	2.57E+05	1.06E+02	3.23E+09	-	-	-	-	-
Bromofluorobenzene, p-	460-00-4	-	1	9.95E+03	1.06E+03	3.23E+09	-	-	-	-	-
Bromoform	75-25-2	-	1	1.34E+04	9.14E+02	3.23E+09	2.61E+04	-	3.11E+04	1.42E+04	5.90E+04
Bromomethane	74-83-9	-	1	1.93E+03	3.59E+03	3.23E+09	-	-	-	-	4.13E+03
Bromophenol, p-	106-41-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Bromophenyl-phenyl phthalate, 4-	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Bromophos	2104-96-3	-	1	1.71E+05	-	3.23E+09	-	-	-	-	1.47E+04
Bromopyridine, 2-	109-04-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Bromotrichloromethane	75-62-7	-	1	1.80E+04	4.25E+02	3.23E+09	-	-	-	-	-
Bromoxynil	1689-84-5	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Bromoxynil Octanoate	1689-99-2	-	1	6.55E+05	-	3.23E+09	-	-	-	-	5.90E+04
Butadiene, 1,3-	106-99-0	-	1	1.20E+03	6.67E+02	3.23E+09	6.07E+01	-	1.02E+02	3.81E+01	-
Butanediol, 2,3-	513-85-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Butanol	35296-72-1	-	1	4.02E+04	1.47E+04	3.23E+09	-	-	-	-	-
Butanol, N-	71-36-3	-	1	4.13E+04	7.64E+03	3.23E+09	-	-	-	-	2.95E+05
Butanone-2, 4-chloro-4,4-difluoro	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Butyl Alcohol, t-	75-65-0	-	1	3.96E+04	-	3.23E+09	-	-	-	-	-
Butyl Benzyl Phthlate	85-68-7	0.1	1	-	-	3.23E+09	1.09E+05	8.61E+05	-	9.65E+04	5.90E+05
Butyl Formate, tert-	762-75-4	-	1	6.00E+03	2.99E+03	3.23E+09	-	-	-	-	-
Butyl alcohol, sec-	78-92-2	-	1	4.03E+04	2.13E+04	3.23E+09	-	-	-	-	5.90E+06
Butylacetate	123-86-4	-	1	1.18E+04	1.79E+03	3.23E+09	-	-	-	-	-
Butylate	2008-41-5	-	1	1.19E+05	-	3.23E+09	-	-	-	-	1.47E+05
Butylated hydroxyanisole	25013-16-5	0.1	1	-	-	3.23E+09	1.03E+06	8.18E+06	1.45E+11	9.17E+05	-
Butylated hydroxytoluene	128-37-0	0.1	1	-	-	3.23E+09	5.74E+04	4.55E+05	-	5.09E+04	8.85E+05
Butylbenzene, n-	104-51-8	-	1	1.12E+04	1.07E+02	3.23E+09	-	-	-	-	1.47E+05
Butylbenzene, sec-	135-98-8	-	1	1.01E+04	1.45E+02	3.23E+09	-	-	-	-	2.95E+05
Butylbenzene, tert-	98-06-6	-	1	1.01E+04	1.83E+02	3.23E+09	-	-	-	-	2.95E+05
Butylchloride, t-	507-20-0	-	1	2.34E+03	1.33E+03	3.23E+09	-	-	-	-	-
Butylphthalyl Butylglycolate	85-70-1	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+06
Butyltin	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Cacodylic Acid	75-60-5	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Cadmium (Diet)	7440-43-9	0.001	1	-	-	3.23E+09	-	-	4.59E+06	4.59E+06	2.95E+03
Calcium	7440-70-2	-	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Bromodichloromethane	75-27-4	-	-	5.90E+04	3.39E+02 ca
Bromodiphenyl Ether, p-	101-55-3	-	-	-	
Bromofluorobenzene, p-	460-00-4	-	-	-	
Bromoform	75-25-2	-	-	5.90E+04	1.42E+04 sat
Bromomethane	74-83-9	-	3.53E+02	3.25E+02	3.25E+02 nc
Bromophenol, p-	106-41-2	-	-	-	
Bromophenyl-phenyl phthalate, 4-	NA	-	-	-	
Bromophos	2104-96-3	-	-	1.47E+04	1.47E+04 nc
Bromopyridine, 2-	109-04-6	-	-	-	
Bromotrichloromethane	75-62-7	-	-	-	
Bromoxynil	1689-84-5	4.67E+05	-	5.24E+04	5.24E+04 nc
Bromoxynil Octanoate	1689-99-2	-	-	5.90E+04	5.90E+04 nc
Butadiene, 1,3-	106-99-0	-	8.73E+01	8.73E+01	3.81E+01 ca**
Butanediol, 2,3-	513-85-9	-	-	-	
Butanol	35296-72-1	-	-	-	
Butanol, N-	71-36-3	-	-	2.95E+05	2.95E+05 sat
Butanone-2, 4-chloro-4,4-difluoro	NA	-	-	-	
Butyl Alcohol, t-	75-65-0	-	-	-	
Butyl Benzyl Phthlate	85-68-7	4.67E+06	-	5.24E+05	9.65E+04 ca**
Butyl Formate, tert-	762-75-4	-	-	-	
Butyl alcohol, sec-	78-92-2	-	4.41E+07	5.20E+06	5.20E+06 sat
Butylacetate	123-86-4	-	-	-	
Butylate	2008-41-5	-	-	1.47E+05	1.47E+05 max
Butylated hydroxyanisole	25013-16-5	-	-	-	9.17E+05 max
Butylated hydroxytoluene	128-37-0	7.01E+06	-	7.86E+05	5.09E+04 ca*
Butylbenzene, n-	104-51-8	-	-	1.47E+05	1.47E+05 sat
Butylbenzene, sec-	135-98-8	-	-	2.95E+05	2.95E+05 sat
Butylbenzene, tert-	98-06-6	-	-	2.95E+05	2.95E+05 sat
Butylchloride, t-	507-20-0	-	-	-	
Butylphthalyl Butylglycolate	85-70-1	2.34E+07	-	2.62E+06	2.62E+06 max
Butyltin	NA	-	-	-	
Cacodylic Acid	75-60-5	4.67E+05	-	5.24E+04	5.24E+04 nc
Cadmium (Diet)	7440-43-9	5.84E+04	1.18E+06	2.80E+03	2.80E+03 nc
Calcium	7440-70-2	-	-	-	

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Calcium Chlorate	10137-74-3	No	No	-		-		-		-		1
Calcium Chromate	13765-19-0	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Calcium Cyanide	592-01-8	No	No	-		-		1.00E-03	U	-		1
Calcium pyrophosphate	7790-76-3	No	No	-		-		4.86E+01	U	-		1
Caprolactam	105-60-2	No	No	-		-		5.00E-01	U	2.20E-03	U	1
Captafol	2425-06-1	No	No	1.50E-01	U	4.30E-05	U	2.00E-03	U	-		1
Captan	133-06-2	No	No	2.30E-03	U	6.60E-07	U	1.30E-01	U	-		1
Carbaryl	63-25-2	No	No	-		-		1.00E-01	U	-		1
Carbazole	86-74-8	No	No	-		-		-		-		1
Carbofuran	1563-66-2	No	No	-		-		5.00E-03	U	-		1
Carbon Disulfide	75-15-0	No	Yes	-		-		1.00E-01	U	7.00E-01	U	1
Carbon Tetrachloride	56-23-5	No	Yes	7.00E-02	U	6.00E-06	U	4.00E-03	U	1.00E-01	U	1
Carbosulfan	55285-14-8	No	No	-		-		1.00E-02	U	-		1
Carboxin	5234-68-4	No	No	-		-		1.00E-01	U	-		1
Catechol	120-80-9	No	No	-		-		-		-		1
Ceric oxide	1306-38-3	No	No	-		-		-		9.00E-04	U	1
Cerium, Stable	7440-45-1	No	No	-		-		-		-		1
Chloral	75-87-6	No	Yes	-		-		-		-		1
Chloral Hydrate	302-17-0	No	Yes	-		-		1.00E-01	U	-		1
Chloramben	133-90-4	No	No	-		-		1.50E-02	U	-		1
Chloramine	127-65-1	No	No	-		-		-		-		1
Chloranil	118-75-2	No	No	4.03E-01	U	-		-		-		1
Chlorate (ClO3) as	14866-68-3	No	No	-		-		-		-		1
Chlordane	12789-03-6	No	Yes	3.50E-01	U	1.00E-04	U	5.00E-04	U	7.00E-04	U	1
Chlordane (alpha)	5103-71-9	No	Yes	-		-		-		-		1
Chlordane (gamma)	5103-74-2	No	Yes	-		-		-		-		1
Chlordecone (Kepone)	143-50-0	No	No	1.00E+01	U	4.60E-03	U	3.00E-04	U	-		1
Chlorfenvinphos	470-90-6	No	No	-		-		7.00E-04	U	-		1
Chloride	16887-00-6	No	No	-		-		-		-		1
Chlorimuron, Ethyl-	90982-32-4	No	No	-		-		2.00E-02	U	-		1
Chlorinated Hydrocarbons (total)	NA	No	No	-		-		-		-		1
Chlorine	7782-50-5	No	Yes	-		-		1.00E-01	U	1.45E-04	U	1
Chlorine Dioxide	10049-04-4	No	Yes	-		-		3.00E-02	U	2.00E-04	U	1
Chlorite	14998-27-7	No	No	-		-		-		-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Calcium Chlorate	10137-74-3	-	1	-	-	3.23E+09	-	-	-	-	-
Calcium Chromate	13765-19-0	-	1	-	-	3.23E+09	4.13E+02	-	5.51E+04	4.10E+02	5.90E+04
Calcium Cyanide	592-01-8	-	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Calcium pyrophosphate	7790-76-3	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Caprolactam	105-60-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+06
Captafol	2425-06-1	0.1	1	-	-	3.23E+09	1.38E+03	1.09E+04	1.92E+08	1.22E+03	5.90E+03
Captan	133-06-2	0.1	1	-	-	3.23E+09	8.98E+04	7.11E+05	1.25E+10	7.97E+04	3.83E+05
Carbaryl	63-25-2	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Carbazole	86-74-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Carbofuran	1563-66-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Carbon Disulfide	75-15-0	-	1	1.61E+03	7.38E+02	3.23E+09	-	-	-	-	2.95E+05
Carbon Tetrachloride	56-23-5	-	1	2.06E+03	4.58E+02	3.23E+09	2.95E+03	-	8.78E+02	6.76E+02	1.18E+04
Carbosulfan	55285-14-8	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Carboxin	5234-68-4	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Catechol	120-80-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Ceric oxide	1306-38-3	-	1	-	-	3.23E+09	-	-	-	-	-
Cerium, Stable	7440-45-1	-	1	-	-	3.23E+09	-	-	-	-	-
Chloral	75-87-6	-	1	2.14E+05	3.39E+03	3.23E+09	-	-	-	-	-
Chloral Hydrate	302-17-0	-	1	2.02E+05	-	3.23E+09	-	-	-	-	2.95E+05
Chloramben	133-90-4	0.1	1	-	-	3.23E+09	-	-	-	-	4.42E+04
Chloramine	127-65-1	-	1	-	-	3.23E+09	-	-	-	-	-
Chloranil	118-75-2	0.1	1	-	-	3.23E+09	5.12E+02	4.06E+03	-	4.55E+02	-
Chlorate (ClO3) as	14866-68-3	-	1	-	-	3.23E+09	-	-	-	-	-
Chlordane	12789-03-6	0.04	1	1.49E+06	-	3.23E+09	5.90E+02	1.17E+04	3.81E+04	5.53E+02	1.47E+03
Chlordane (alpha)	5103-71-9	-	1	2.05E+06	-	3.23E+09	-	-	-	-	-
Chlordane (gamma)	5103-74-2	-	1	2.05E+06	-	3.23E+09	-	-	-	-	-
Chlordecone (Kepone)	143-50-0	0.1	1	-	-	3.23E+09	2.06E+01	1.64E+02	1.80E+06	1.83E+01	8.85E+02
Chlorfenvinphos	470-90-6	0.1	1	-	-	3.23E+09	-	-	-	-	2.06E+03
Chloride	16887-00-6	-	1	-	-	3.23E+09	-	-	-	-	-
Chlorimuron, Ethyl-	90982-32-4	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Chlorinated Hydrocarbons (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chlorine	7782-50-5	-	1	1.69E+03	2.78E+03	3.23E+09	-	-	-	-	2.95E+05
Chlorine Dioxide	10049-04-4	-	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Chlorite	14998-27-7	-	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Calcium Chlorate	10137-74-3	-	-	-	
Calcium Chromate	13765-19-0	-	2.36E+07	5.88E+04	4.10E+02 ca
Calcium Cyanide	592-01-8	-	-	2.95E+03	2.95E+03 nc
Calcium pyrophosphate	7790-76-3	-	-	1.43E+08	1.43E+08 max
Caprolactam	105-60-2	1.17E+07	2.60E+08	1.30E+06	1.30E+06 max
Captafol	2425-06-1	4.67E+04	-	5.24E+03	1.22E+03 ca**
Captan	133-06-2	3.04E+06	-	3.40E+05	7.97E+04 ca**
Carbaryl	63-25-2	2.34E+06	-	2.62E+05	2.62E+05 max
Carbazole	86-74-8	-	-	-	
Carbofuran	1563-66-2	1.17E+05	-	1.31E+04	1.31E+04 nc
Carbon Disulfide	75-15-0	-	4.12E+04	3.61E+04	3.61E+04 sat
Carbon Tetrachloride	56-23-5	-	7.52E+03	4.59E+03	6.76E+02 sat
Carbosulfan	55285-14-8	2.34E+05	-	2.62E+04	2.62E+04 nc
Carboxin	5234-68-4	2.34E+06	-	2.62E+05	2.62E+05 max
Catechol	120-80-9	-	-	-	
Ceric oxide	1306-38-3	-	1.06E+08	1.06E+08	1.06E+08 max
Cerium, Stable	7440-45-1	-	-	-	
Chloral	75-87-6	-	-	-	
Chloral Hydrate	302-17-0	-	-	2.95E+05	2.95E+05 max
Chloramben	133-90-4	3.51E+05	-	3.93E+04	3.93E+04 nc
Chloramine	127-65-1	-	-	-	
Chloranil	118-75-2	-	-	-	4.55E+02 ca
Chlorate (ClO3) as	14866-68-3	-	-	-	
Chlordane	12789-03-6	2.92E+04	3.81E+04	1.35E+03	5.53E+02 ca**
Chlordane (alpha)	5103-71-9	-	-	-	
Chlordane (gamma)	5103-74-2	-	-	-	
Chlordecone (Kepone)	143-50-0	7.01E+03	-	7.86E+02	1.83E+01 ca*
Chlorfenvinphos	470-90-6	1.64E+04	-	1.83E+03	1.83E+03 nc
Chloride	16887-00-6	-	-	-	
Chlorimuron, Ethyl-	90982-32-4	4.67E+05	-	5.24E+04	5.24E+04 nc
Chlorinated Hydrocarbons (total)	NA	-	-	-	
Chlorine	7782-50-5	-	8.92E+00	8.92E+00	8.92E+00 nc
Chlorine Dioxide	10049-04-4	-	2.36E+07	8.82E+04	8.82E+04 nc
Chlorite	14998-27-7	-	-	-	

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Chlorite (Sodium Salt)	7758-19-2	No	No	-		-		3.00E-02	U	-		1
Chloro-1,1-difluoroethane, 1-	75-68-3	No	Yes	-		-		-		5.00E+01	U	1
Chloro-1,3-butadiene, 2-	126-99-8	No	Yes	-		3.00E-04	U	2.00E-02	U	2.00E-02	U	1
Chloro-2-methylaniline HCl, 4-	3165-93-3	No	No	4.60E-01	U	-		-		-		1
Chloro-2-methylaniline, 4-	95-69-2	No	No	1.00E-01	U	7.70E-05	U	3.00E-03	U	-		1
Chloro-2-methylphenol, 4-	1570-64-5	No	No	-		-		-		-		1
Chloro-4-methylphenol	35421-08-0	No	No	-		-		-		-		1
Chloro-6-fluorophenol, 2-	2040-90-6	No	No	-		-		-		-		1
Chloroacetaldehyde, 2-	107-20-0	No	Yes	2.70E-01	U	-		-		-		1
Chloroacetamide	79-07-2	No	No	-		-		-		-		1
Chloroacetic Acid	79-11-8	No	No	-		-		2.00E-03	U	-		1
Chloroacetophenone, 2-	532-27-4	No	No	-		-		-		3.00E-05	U	1
Chloroaniline	27134-26-5	No	No	-		-		-		-		1
Chloroaniline, 3-	108-42-9	No	No	-		-		-		-		1
Chloroaniline, p-	106-47-8	No	No	2.00E-01	U	-		4.00E-03	U	-		1
Chlorobenzene	108-90-7	No	Yes	-		-		2.00E-02	U	5.00E-02	U	1
Chlorobenzene sulfonic acid, p-	98-66-8	No	No	-		-		-		-		1
Chlorobenzenes (total)	NA	No	No	-		-		-		-		1
Chlorobenzilate	510-15-6	No	No	1.10E-01	U	3.10E-05	U	2.00E-02	U	-		1
Chlorobenzoic Acid, p-	74-11-3	No	No	-		-		3.00E-02	U	-		1
Chlorobenzotrifluoride, 3-nitro-4-	121-17-5	No	Yes	-		-		-		-		1
Chlorobenzotrifluoride, 4-	98-56-6	No	Yes	-		-		3.00E-03	U	3.00E-01	U	1
Chlorobiphenyl, p-	2051-62-9	No	Yes	-		-		-		-		1
Chlorobutane, 1-	109-69-3	No	Yes	-		-		4.00E-02	U	-		1
Chlorobutane, 2-	78-86-4	No	Yes	-		-		-		-		1
Chlorocyclopentadiene	41851-50-7	No	Yes	-		-		-		-		1
Chlorodibromoethane	73506-94-2	No	No	-		-		-		-		1
Chlorodifluoromethane	75-45-6	No	Yes	-		-		-		5.00E+01	U	1
Chloroethanol, 2-	107-07-3	No	Yes	-		-		2.00E-02	U	-		1
Chloroethylvinyl ether, 2-	110-75-8	No	Yes	-		-		-		-		1
Chloroform	67-66-3	No	Yes	3.10E-02	U	2.30E-05	U	1.00E-02	U	9.77E-02	U	1
Chloromethane	74-87-3	No	Yes	-		-		-		9.00E-02	U	1
Chloromethyl Methyl Ether	107-30-2	No	Yes	2.40E+00	U	6.90E-04	U	-		-		1
Chloronaphthalene, Beta-	91-58-7	No	Yes	-		-		8.00E-02	U	-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Chlorite (Sodium Salt)	7758-19-2	-	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Chloro-1,1-difluoroethane, 1-	75-68-3	-	1	1.42E+03	1.14E+03	3.23E+09	-	-	-	-	-
Chloro-1,3-butadiene, 2-	126-99-8	-	1	1.49E+03	7.51E+02	3.23E+09	-	-	1.27E+01	1.27E+01	5.90E+04
Chloro-2-methylaniline HCl, 4-	3165-93-3	0.1	1	-	-	3.23E+09	4.49E+02	3.56E+03	-	3.99E+02	-
Chloro-2-methylaniline, 4-	95-69-2	0.1	1	-	-	3.23E+09	2.06E+03	1.64E+04	1.07E+08	1.83E+03	8.85E+03
Chloro-2-methylphenol, 4-	1570-64-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chloro-4-methylphenol	35421-08-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chloro-6-fluorophenol, 2-	2040-90-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chloroacetaldehyde, 2-	107-20-0	-	1	2.56E+04	2.83E+04	3.23E+09	7.65E+02	-	-	7.65E+02	-
Chloroacetamide	79-07-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chloroacetic Acid	79-11-8	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Chloroacetophenone, 2-	532-27-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chloroaniline	27134-26-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chloroaniline, 3-	108-42-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chloroaniline, p-	106-47-8	0.1	1	-	-	3.23E+09	1.03E+03	8.18E+03	-	9.17E+02	1.18E+04
Chlorobenzene	108-90-7	-	1	8.90E+03	7.61E+02	3.23E+09	-	-	-	-	5.90E+04
Chlorobenzene sulfonic acid, p-	98-66-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chlorobenzenes (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chlorobenzilate	510-15-6	0.1	1	-	-	3.23E+09	1.88E+03	1.49E+04	2.66E+08	1.67E+03	5.90E+04
Chlorobenzoic Acid, p-	74-11-3	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Chlorobenzotrifluoride, 3-nitro-4-	121-17-5	-	1	2.14E+05	9.07E+01	3.23E+09	-	-	-	-	-
Chlorobenzotrifluoride, 4-	98-56-6	-	1	9.33E+03	1.17E+02	3.23E+09	-	-	-	-	8.85E+03
Chlorobiphenyl, p-	2051-62-9	-	1	1.78E+05	-	3.23E+09	-	-	-	-	-
Chlorobutane, 1-	109-69-3	-	1	2.42E+03	7.29E+02	3.23E+09	-	-	-	-	1.18E+05
Chlorobutane, 2-	78-86-4	-	1	2.01E+03	6.51E+02	3.23E+09	-	-	-	-	-
Chlorocyclopentadiene	41851-50-7	-	1	2.60E+03	9.88E+02	3.23E+09	-	-	-	-	-
Chlorodibromoethane	73506-94-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chlorodifluoromethane	75-45-6	-	1	1.30E+03	1.68E+03	3.23E+09	-	-	-	-	-
Chloroethanol, 2-	107-07-3	-	1	1.08E+05	1.11E+05	3.23E+09	-	-	-	-	5.90E+04
Chloroethylvinyl ether, 2-	110-75-8	-	1	2.21E+03	1.64E+03	3.23E+09	-	-	-	-	-
Chloroform	67-66-3	-	1	3.62E+03	2.54E+03	3.23E+09	6.66E+03	-	4.03E+02	3.80E+02	2.95E+04
Chloromethane	74-87-3	-	1	1.62E+03	1.32E+03	3.23E+09	-	-	-	-	-
Chloromethyl Methyl Ether	107-30-2	-	1	7.35E+03	2.58E+04	3.23E+09	8.60E+01	-	2.72E+01	2.07E+01	-
Chloronaphthalene, Beta-	91-58-7	0.13	1	1.10E+05	-	3.23E+09	-	-	-	-	2.36E+05

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Chlorite (Sodium Salt)	7758-19-2	-	-	8.85E+04	8.85E+04 nc
Chloro-1,1-difluoroethane, 1-	75-68-3	-	2.59E+06	2.59E+06	2.59E+06 sat
Chloro-1,3-butadiene, 2-	126-99-8	-	1.09E+03	1.07E+03	1.27E+01 ca*
Chloro-2-methylaniline HCl, 4-	3165-93-3	-	-	-	3.99E+02 ca
Chloro-2-methylaniline, 4-	95-69-2	7.01E+04	-	7.86E+03	1.83E+03 ca**
Chloro-2-methylphenol, 4-	1570-64-5	-	-	-	
Chloro-4-methylphenol	35421-08-0	-	-	-	
Chloro-6-fluorophenol, 2-	2040-90-6	-	-	-	
Chloroacetaldehyde, 2-	107-20-0	-	-	-	7.65E+02 ca
Chloroacetamide	79-07-2	-	-	-	
Chloroacetic Acid	79-11-8	4.67E+04	-	5.24E+03	5.24E+03 nc
Chloroacetophenone, 2-	532-27-4	-	3.54E+06	3.54E+06	3.54E+06 max
Chloroaniline	27134-26-5	-	-	-	
Chloroaniline, 3-	108-42-9	-	-	-	
Chloroaniline, p-	106-47-8	9.35E+04	-	1.05E+04	9.17E+02 ca*
Chlorobenzene	108-90-7	-	1.62E+04	1.27E+04	1.27E+04 sat
Chlorobenzene sulfonic acid, p-	98-66-8	-	-	-	
Chlorobenzenes (total)	NA	-	-	-	
Chlorobenzilate	510-15-6	4.67E+05	-	5.24E+04	1.67E+03 ca*
Chlorobenzoic Acid, p-	74-11-3	7.01E+05	-	7.86E+04	7.86E+04 nc
Chlorobenzotrifluoride, 3-nitro-4-	121-17-5	-	-	-	
Chlorobenzotrifluoride, 4-	98-56-6	-	1.02E+05	8.14E+03	8.14E+03 sat
Chlorobiphenyl, p-	2051-62-9	-	-	-	
Chlorobutane, 1-	109-69-3	-	-	1.18E+05	1.18E+05 sat
Chlorobutane, 2-	78-86-4	-	-	-	
Chlorocyclopentadiene	41851-50-7	-	-	-	
Chlorodibromoethane	73506-94-2	-	-	-	
Chlorodifluoromethane	75-45-6	-	2.37E+06	2.37E+06	2.37E+06 sat
Chloroethanol, 2-	107-07-3	-	-	5.90E+04	5.90E+04 nc
Chloroethylvinyl ether, 2-	110-75-8	-	-	-	
Chloroform	67-66-3	-	1.29E+04	8.99E+03	3.80E+02 ca*
Chloromethane	74-87-3	-	5.32E+03	5.32E+03	5.32E+03 sat
Chloromethyl Methyl Ether	107-30-2	-	-	-	2.07E+01 ca
Chloronaphthalene, Beta-	91-58-7	1.44E+06	-	2.03E+05	2.03E+05 max

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Chloronaphthalene, alpha-	90-13-1	No	Yes	-		-		-		-		1
Chloronitrobenzene, o-	88-73-3	No	No	3.00E-01	U	-		3.00E-03	U	1.00E-05	U	1
Chloronitrobenzene, p-	100-00-5	No	No	6.30E-03	U	-		1.00E-03	U	6.00E-04	U	1
Chlorophenol, 2-	95-57-8	No	Yes	-		-		5.00E-03	U	-		1
Chlorophenol, 3-	108-43-0	No	No	-		-		-		-		1
Chlorophenol, 4-	106-48-9	No	No	-		-		-		-		1
Chlorophenols (each)	NA	No	No	-		-		-		-		1
Chlorophenols (total)	NA	No	No	-		-		-		-		1
Chlorophenyl Methyl Sulfide, p-	123-09-1	No	Yes	-		-		-		-		1
Chlorophenyl Methyl Sulfoxide	934-73-6	No	No	-		-		-		-		1
Chlorophenyl phenyl ether, 4-	7005-72-3	No	Yes	-		-		-		-		1
Chloropicrin	76-06-2	No	Yes	-		-		-		4.00E-04	U	1
Chloropropane, 2-	75-29-6	No	Yes	-		-		-		-		1
Chlorothalonil	1897-45-6	No	No	3.10E-03	U	8.90E-07	U	1.50E-02	U	-		1
Chlorotoluene, o-	95-49-8	No	Yes	-		-		2.00E-02	U	-		1
Chlorotoluene, p-	106-43-4	No	Yes	-		-		2.00E-02	U	-		1
Chlorozotocin	54749-90-5	No	No	2.40E+02	U	6.90E-02	U	-		-		1
Chlorpropham	101-21-3	No	No	-		-		2.00E-01	U	-		1
Chlorpyrifos	2921-88-2	No	No	-		-		1.00E-03	U	-		1
Chlorpyrifos Methyl	5598-13-0	No	No	-		-		1.00E-02	U	-		1
Chlorsulfuron	64902-72-3	No	No	-		-		5.00E-02	U	-		1
Chlorthiophos	60238-56-4	No	No	-		-		8.00E-04	U	-		1
Chromium(III), Insoluble Salts	16065-83-1	No	No	-		-		1.50E+00	U	-		0.013
Chromium(VI)	18540-29-9	Yes	No	5.00E-01	U	8.40E-02	U	3.00E-03	U	1.00E-04	U	0.025
Chromium, Total	7440-47-3	No	No	-		-		-		-		0.013
Chrysene	218-01-9	Yes	No	7.30E-03	U	1.10E-05	U	-		-		1
Cobalt	7440-48-4	No	No	-		9.00E-03	U	3.00E-04	U	6.00E-06	U	1
Complex Mixtures of Aliphatic and Aromatic Hydrocarbons	NA	No	No	-		-		-		-		1
Copper	7440-50-8	No	No	-		-		4.00E-02	U	-		1
Copper Cyanide	544-92-3	No	No	-		-		5.00E-03	U	-		1
Coronene	191-07-1	No	No	-		-		-		-		1
Creosote	8001-58-9	No	No	-		-		-		-		1
Cresol, m-	108-39-4	No	No	-		-		5.00E-02	U	6.00E-01	U	1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Chloronaphthalene, alpha-	90-13-1	-	1	1.05E+05	2.66E+02	3.23E+09	-	-	-	-	-
Chloronitrobenzene, o-	88-73-3	0.1	1	-	-	3.23E+09	6.88E+02	5.45E+03	-	6.11E+02	8.85E+03
Chloronitrobenzene, p-	100-00-5	0.1	1	-	-	3.23E+09	3.28E+04	2.60E+05	-	2.91E+04	2.95E+03
Chlorophenol, 2-	95-57-8	-	1	1.71E+05	2.19E+04	3.23E+09	-	-	-	-	1.47E+04
Chlorophenol, 3-	108-43-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chlorophenol, 4-	106-48-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chlorophenols (each)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chlorophenols (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chlorophenyl Methyl Sulfide, p-	123-09-1	-	1	6.97E+04	2.73E+02	3.23E+09	-	-	-	-	-
Chlorophenyl Methyl Sulfoxide	934-73-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Chlorophenyl phenyl ether, 4-	7005-72-3	-	1	1.83E+05	-	3.23E+09	-	-	-	-	-
Chloropicrin	76-06-2	-	1	6.46E+03	6.17E+02	3.23E+09	-	-	-	-	-
Chloropropane, 2-	75-29-6	-	1	1.79E+03	1.32E+03	3.23E+09	-	-	-	-	-
Chlorothalonil	1897-45-6	0.1	1	-	-	3.23E+09	6.66E+04	5.28E+05	9.28E+09	5.91E+04	4.42E+04
Chlorotoluene, o-	95-49-8	-	1	1.12E+04	9.07E+02	3.23E+09	-	-	-	-	5.90E+04
Chlorotoluene, p-	106-43-4	-	1	1.01E+04	2.53E+02	3.23E+09	-	-	-	-	5.90E+04
Chlorozotocin	54749-90-5	0.1	1	-	-	3.23E+09	8.60E-01	6.82E+00	1.20E+05	7.64E-01	-
Chlorpropham	101-21-3	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+05
Chlorpyrifos	2921-88-2	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Chlorpyrifos Methyl	5598-13-0	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Chlorsulfuron	64902-72-3	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Chlorthiophos	60238-56-4	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+03
Chromium(III), Insoluble Salts	16065-83-1	-	1	-	-	3.23E+09	-	-	-	-	4.42E+06
Chromium(VI)	18540-29-9	-	1	-	-	3.23E+09	4.13E+02	-	9.83E+04	4.11E+02	8.85E+03
Chromium, Total	7440-47-3	-	1	-	-	3.23E+09	-	-	-	-	-
Chrysene	218-01-9	0.13	1	-	-	3.23E+09	2.83E+04	1.72E+05	7.51E+08	2.43E+04	-
Cobalt	7440-48-4	-	1	-	-	3.23E+09	-	-	9.18E+05	9.18E+05	8.85E+02
Complex Mixtures of Aliphatic and Aromatic Hydrocarbons	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Copper	7440-50-8	-	1	-	-	3.23E+09	-	-	-	-	1.18E+05
Copper Cyanide	544-92-3	-	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Coronene	191-07-1	0.13	1	-	-	3.23E+09	-	-	-	-	-
Creosote	8001-58-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Cresol, m-	108-39-4	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Chloronaphthalene, alpha-	90-13-1	-	-	-	
Chloronitrobenzene, o-	88-73-3	7.01E+04	1.18E+06	7.81E+03	6.11E+02 ca*
Chloronitrobenzene, p-	100-00-5	2.34E+04	7.08E+07	2.62E+03	2.62E+03 nc
Chlorophenol, 2-	95-57-8	-	-	1.47E+04	1.47E+04 nc
Chlorophenol, 3-	108-43-0	-	-	-	
Chlorophenol, 4-	106-48-9	-	-	-	
Chlorophenols (each)	NA	-	-	-	
Chlorophenols (total)	NA	-	-	-	
Chlorophenyl Methyl Sulfide, p-	123-09-1	-	-	-	
Chlorophenyl Methyl Sulfoxide	934-73-6	-	-	-	
Chlorophenyl phenyl ether, 4-	7005-72-3	-	-	-	
Chloropicrin	76-06-2	-	9.43E+01	9.43E+01	9.43E+01 nc
Chloropropane, 2-	75-29-6	-	-	-	
Chlorothalonil	1897-45-6	3.51E+05	-	3.93E+04	3.93E+04 nc
Chlorotoluene, o-	95-49-8	-	-	5.90E+04	5.90E+04 sat
Chlorotoluene, p-	106-43-4	-	-	5.90E+04	5.90E+04 sat
Chlorozotocin	54749-90-5	-	-	-	7.64E-01 ca
Chlorpropham	101-21-3	4.67E+06	-	5.24E+05	5.24E+05 max
Chlorpyrifos	2921-88-2	2.34E+04	-	2.62E+03	2.62E+03 nc
Chlorpyrifos Methyl	5598-13-0	2.34E+05	-	2.62E+04	2.62E+04 nc
Chlorsulfuron	64902-72-3	1.17E+06	-	1.31E+05	1.31E+05 max
Chlorthiophos	60238-56-4	1.87E+04	-	2.10E+03	2.10E+03 nc
Chromium(III), Insoluble Salts	16065-83-1	-	-	4.42E+06	4.42E+06 max
Chromium(VI)	18540-29-9	-	1.18E+07	8.84E+03	4.11E+02 ca*
Chromium, Total	7440-47-3	-	-	-	
Chrysene	218-01-9	-	-	-	2.43E+04 ca
Cobalt	7440-48-4	-	7.08E+05	8.84E+02	8.84E+02 nc
Complex Mixtures of Aliphatic and Aromatic Hydrocarbons	NA	-	-	-	
Copper	7440-50-8	-	-	1.18E+05	1.18E+05 max
Copper Cyanide	544-92-3	-	-	1.47E+04	1.47E+04 nc
Coronene	191-07-1	-	-	-	
Creosote	8001-58-9	-	-	-	
Cresol, m-	108-39-4	1.17E+06	7.08E+10	1.31E+05	1.31E+05 max

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Cresol, o-	95-48-7	No	No	-		-		5.00E-02	U	6.00E-01	U	1
Cresol, p-	106-44-5	No	No	-		-		1.00E-01	U	6.00E-01	U	1
Cresol, p-chloro-m-	59-50-7	No	No	-		-		1.00E-01	U	-		1
Cresols	1319-77-3	No	No	-		-		1.00E-01	U	6.00E-01	U	1
Crotonaldehyde	4170-30-3	No	Yes	-		-		-		-		1
Crotonaldehyde, trans-	123-73-9	No	Yes	1.90E+00	U	-		1.00E-03	U	-		1
Cumene	98-82-8	No	Yes	-		-		1.00E-01	U	4.00E-01	U	1
Cupferron	135-20-6	No	No	2.20E-01	U	6.30E-05	U	-		-		1
Cyanazine	21725-46-2	No	No	8.40E-01	U	-		2.00E-03	U	-		1
Cyanide (CN-)	57-12-5	No	Yes	-		-		6.00E-04	U	8.00E-04	U	1
Cyanide (total complex)	NA	No	No	-		-		-		-		1
Cyanogen	460-19-5	No	Yes	-		-		1.00E-03	U	-		1
Cyanogen Bromide	506-68-3	No	Yes	-		-		9.00E-02	U	-		1
Cyanogen Chloride	506-77-4	No	Yes	-		-		5.00E-02	U	-		1
Cyclohexane	110-82-7	No	Yes	-		-		-		6.00E+00	U	1
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	No	No	2.30E-02	U	-		-		-		1
Cyclohexanone	108-94-1	No	Yes	-		-		5.00E+00	U	7.00E-01	U	1
Cyclohexene	110-83-8	No	Yes	-		-		5.00E-03	U	1.00E+00	U	1
Cyclohexylamine	108-91-8	No	Yes	-		-		2.00E-01	U	-		1
Cyclopentadiene	542-92-7	No	Yes	-		-		-		-		1
Cyhalothrin/karate	68085-85-8	No	No	-		-		5.00E-03	U	-		1
Cypermethrin	52315-07-8	No	No	-		-		1.00E-02	U	-		1
Cyromazine	66215-27-8	No	No	-		-		7.50E-03	U	-		1
DDD	72-54-8	No	No	2.40E-01	U	6.90E-05	U	-		-		1
DDD, o,p'-	53-19-0	No	No	-		-		-		-		1
DDE, p,p'-	72-55-9	No	Yes	3.40E-01	U	9.70E-05	U	-		-		1
DDT	50-29-3	No	No	3.40E-01	U	9.70E-05	U	5.00E-04	U	-		1
DDT, o,p'-	789-02-6	No	No	-		-		-		-		1
DDT/DDE/DDD (total)	NA	No	No	-		-		-		-		1
Dacthal	1861-32-1	No	No	-		-		1.00E-02	U	-		1
Dalapon	75-99-0	No	No	-		-		3.00E-02	U	-		1
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	No	No	7.00E-04	U	-		7.00E-03	U	-		1
Decane	124-18-5	No	Yes	-		-		-		-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Cresol, o-	95-48-7	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Cresol, p-	106-44-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Cresol, p-chloro-m-	59-50-7	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Cresols	1319-77-3	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Crotonaldehyde	4170-30-3	-	1	2.61E+04	2.00E+04	3.23E+09	-	-	-	-	-
Crotonaldehyde, trans-	123-73-9	-	1	2.61E+04	1.66E+04	3.23E+09	1.09E+02	-	-	1.09E+02	2.95E+03
Cumene	98-82-8	-	1	8.56E+03	2.68E+02	3.23E+09	-	-	-	-	2.95E+05
Cupferron	135-20-6	0.1	1	-	-	3.23E+09	9.38E+02	7.44E+03	1.31E+08	8.33E+02	-
Cyanazine	21725-46-2	0.1	1	-	-	3.23E+09	2.46E+02	1.95E+03	-	2.18E+02	5.90E+03
Cyanide (CN-)	57-12-5	-	1	6.42E+04	1.00E+07	3.23E+09	-	-	-	-	1.77E+03
Cyanide (total complex)	NA	-	1	-	-	3.23E+09	-	-	-	-	-
Cyanogen	460-19-5	-	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Cyanogen Bromide	506-68-3	-	1	-	-	3.23E+09	-	-	-	-	2.65E+05
Cyanogen Chloride	506-77-4	-	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Cyclohexane	110-82-7	-	1	1.44E+03	1.18E+02	3.23E+09	-	-	-	-	-
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	0.1	1	-	-	3.23E+09	8.98E+03	7.11E+04	-	7.97E+03	-
Cyclohexanone	108-94-1	-	1	5.75E+04	5.11E+03	3.23E+09	-	-	-	-	1.47E+07
Cyclohexene	110-83-8	-	1	2.02E+03	2.83E+02	3.23E+09	-	-	-	-	1.47E+04
Cyclohexylamine	108-91-8	-	1	1.03E+05	2.93E+05	3.23E+09	-	-	-	-	5.90E+05
Cyclopentadiene	542-92-7	-	1	2.05E+03	1.34E+03	3.23E+09	-	-	-	-	-
Cyhalothrin/karate	68085-85-8	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Cypermethrin	52315-07-8	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Cyromazine	66215-27-8	0.1	1	-	-	3.23E+09	-	-	-	-	2.21E+04
DDD	72-54-8	0.1	1	-	-	3.23E+09	8.60E+02	6.82E+03	1.20E+08	7.64E+02	-
DDD, o,p'-	53-19-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
DDE, p,p'-	72-55-9	-	1	2.91E+06	-	3.23E+09	6.07E+02	-	7.65E+04	6.02E+02	-
DDT	50-29-3	0.03	1	-	-	3.23E+09	6.07E+02	1.60E+04	8.52E+07	5.85E+02	1.47E+03
DDT, o,p'-	789-02-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
DDT/DDE/DDD (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dacthal	1861-32-1	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Dalapon	75-99-0	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	0.1	1	-	-	3.23E+09	2.95E+05	2.34E+06	-	2.62E+05	2.06E+04
Decane	124-18-5	-	1	1.56E+03	2.53E+00	3.23E+09	-	-	-	-	-

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Cresol, o-	95-48-7	1.17E+06	7.08E+10	1.31E+05	1.31E+05 max
Cresol, p-	106-44-5	2.34E+06	7.08E+10	2.62E+05	2.62E+05 max
Cresol, p-chloro-m-	59-50-7	2.34E+06	-	2.62E+05	2.62E+05 max
Cresols	1319-77-3	2.34E+06	7.08E+10	2.62E+05	2.62E+05 max
Crotonaldehyde	4170-30-3	-	-	-	
Crotonaldehyde, trans-	123-73-9	-	-	2.95E+03	1.09E+02 ca*
Cumene	98-82-8	-	1.25E+05	8.78E+04	8.78E+04 sat
Cupferron	135-20-6	-	-	-	8.33E+02 ca
Cyanazine	21725-46-2	4.67E+04	-	5.24E+03	2.18E+02 ca*
Cyanide (CN-)	57-12-5	-	1.88E+03	9.11E+02	9.11E+02 nc
Cyanide (total complex)	NA	-	-	-	
Cyanogen	460-19-5	-	-	2.95E+03	2.95E+03 nc
Cyanogen Bromide	506-68-3	-	-	2.65E+05	2.65E+05 max
Cyanogen Chloride	506-77-4	-	-	1.47E+05	1.47E+05 max
Cyclohexane	110-82-7	-	3.15E+05	3.15E+05	3.15E+05 sat
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	-	-	-	7.97E+03 ca
Cyclohexanone	108-94-1	-	1.47E+06	1.34E+06	1.34E+06 sat
Cyclohexene	110-83-8	-	7.37E+04	1.23E+04	1.23E+04 sat
Cyclohexylamine	108-91-8	-	-	5.90E+05	5.90E+05 sat
Cyclopentadiene	542-92-7	-	-	-	
Cyhalothrin/karate	68085-85-8	1.17E+05	-	1.31E+04	1.31E+04 nc
Cypermethrin	52315-07-8	2.34E+05	-	2.62E+04	2.62E+04 nc
Cyromazine	66215-27-8	1.75E+05	-	1.96E+04	1.96E+04 nc
DDD	72-54-8	-	-	-	7.64E+02 ca
DDD, o,p'-	53-19-0	-	-	-	
DDE, p,p'-	72-55-9	-	-	-	6.02E+02 ca
DDT	50-29-3	3.90E+04	-	1.42E+03	5.85E+02 ca**
DDT, o,p'-	789-02-6	-	-	-	
DDT/DDE/DDD (total)	NA	-	-	-	
Dacthal	1861-32-1	2.34E+05	-	2.62E+04	2.62E+04 nc
Dalapon	75-99-0	7.01E+05	-	7.86E+04	7.86E+04 nc
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'-(BDE-209)	1163-19-5	1.64E+05	-	1.83E+04	1.83E+04 nc
Decane	124-18-5	-	-	-	

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Decanol, n-	112-30-1	No	Yes	-		-		-		-		1
Deltamethrin	52918-63-5	No	No	-		-		-		-		1
Demeton	8065-48-3	No	No	-		-		4.00E-05	U	-		1
Di(2-ethylhexyl)adipate	103-23-1	No	No	1.20E-03	U	-		6.00E-01	U	-		1
Di-n-butyltin bis(2-ethylhexanoate)	2781-10-4	No	Yes	-		-		-		-		1
Di-n-butyltin bis(methyl maleate)	15546-11-9	No	No	-		-		-		-		1
Di-n-butyltin bis(n-butyl maleate)	15546-16-4	No	No	-		-		-		-		1
Di-n-butyltin dilaurate	77-58-7	No	Yes	-		-		-		-		1
Di-n-butyltin distearate	5847-55-2	No	Yes	-		-		-		-		1
Di-n-hexylphthalate	84-75-3	No	Yes	-		-		-		-		1
Diallate	2303-16-4	No	No	6.10E-02	U	-		-		-		1
Diammonium phosphate	7783-28-0	No	No	-		-		4.86E+01	U	-		1
Diazinon	333-41-5	No	No	-		-		7.00E-04	U	-		1
Dibenz[a,h]anthracene	53-70-3	Yes	No	7.30E+00	U	1.20E-03	U	-		-		1
Dibenzo(a,e)pyrene	192-65-4	No	No	1.20E+01	U	1.10E-03	U	-		-		1
Dibenzofuran	132-64-9	No	Yes	-		-		1.00E-03	U	-		1
Dibenzothiophene	132-65-0	No	Yes	-		-		1.00E-02	U	-		1
Dibromo-3-chloropropane, 1,2-	96-12-8	Yes	Yes	8.00E-01	U	6.00E-03	U	2.00E-04	U	2.00E-04	U	1
Dibromoacetic acid	631-64-1	No	No	-		-		-		-		1
Dibromobenzene, 1,3-	108-36-1	No	Yes	-		-		4.00E-04	U	-		1
Dibromobenzene, 1,4-	106-37-6	No	Yes	-		-		1.00E-02	U	-		1
Dibromochloromethane	124-48-1	No	Yes	8.40E-02	U	2.70E-05	U	2.00E-02	U	-		1
Dibromodichloromethane	594-18-3	No	Yes	-		-		-		-		1
Dibromodiphenyl Ether, p,p'-	2050-47-7	No	Yes	-		-		-		-		1
Dibromoethane, 1,2-	106-93-4	No	Yes	2.00E+00	U	6.00E-04	U	9.00E-03	U	9.00E-03	U	1
Dibromomethane (Methylene Bromide)	74-95-3	No	Yes	-		-		1.00E-02	U	4.00E-03	U	1
Dibutoxy di-n-butyltin	3349-36-8	No	Yes	-		-		-		-		1
Dibutyl Phthalate	84-74-2	No	No	-		-		1.00E-01	U	-		1
Dibutylbis((1-oxoisooctyl)oxy)stannane	85702-74-5	No	No	-		-		-		-		1
Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2	No	Yes	-		-		-		-		1
Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3	No	No	-		-		-		-		1
Dibutylbis(palmitoyloxy)stannane	13323-63-2	No	Yes	-		-		-		-		1

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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Decanol, n-	112-30-1	-	1	8.71E+04	3.19E+01	3.23E+09	-	-	-	-	-
Deltamethrin	52918-63-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Demeton	8065-48-3	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+02
Di(2-ethylhexyl)adipate	103-23-1	0.1	1	-	-	3.23E+09	1.72E+05	1.36E+06	-	1.53E+05	1.77E+06
Di-n-butyltin bis(2-ethylhexanoate)	2781-10-4	-	1	1.29E+05	-	3.23E+09	-	-	-	-	-
Di-n-butyltin bis(methyl maleate)	15546-11-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Di-n-butyltin bis(n-butyl maleate)	15546-16-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Di-n-butyltin dilaurate	77-58-7	-	1	4.40E+05	-	3.23E+09	-	-	-	-	-
Di-n-butyltin distearate	5847-55-2	-	1	2.33E+06	-	3.23E+09	-	-	-	-	-
Di-n-hexylphthalate	84-75-3	-	1	1.33E+06	3.85E+00	3.23E+09	-	-	-	-	-
Diallate	2303-16-4	0.1	1	-	-	3.23E+09	3.38E+03	2.68E+04	-	3.01E+03	-
Diammonium phosphate	7783-28-0	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Diazinon	333-41-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.06E+03
Dibenz[a,h]anthracene	53-70-3	0.13	1	-	-	3.23E+09	2.83E+01	1.72E+02	6.88E+06	2.43E+01	-
Dibenzo(a,e)pyrene	192-65-4	0.13	1	-	-	3.23E+09	1.72E+01	1.05E+02	7.51E+06	1.48E+01	-
Dibenzofuran	132-64-9	0.03	1	2.70E+05	-	3.23E+09	-	-	-	-	2.95E+03
Dibenzothiophene	132-65-0	-	1	7.24E+05	-	3.23E+09	-	-	-	-	2.95E+04
Dibromo-3-chloropropane, 1,2-	96-12-8	-	1	4.42E+04	9.80E+02	3.23E+09	2.58E+02	-	1.88E+01	1.75E+01	5.90E+02
Dibromoacetic acid	631-64-1	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dibromobenzene, 1,3-	108-36-1	-	1	2.66E+04	1.59E+02	3.23E+09	-	-	-	-	1.18E+03
Dibromobenzene, 1,4-	106-37-6	-	1	3.03E+04	-	3.23E+09	-	-	-	-	2.95E+04
Dibromochloromethane	124-48-1	-	1	1.10E+04	8.02E+02	3.23E+09	2.46E+03	-	1.04E+03	7.30E+02	5.90E+04
Dibromodichloromethane	594-18-3	-	1	3.20E+04	-	3.23E+09	-	-	-	-	-
Dibromodiphenyl Ether, p,p'-	2050-47-7	-	1	5.22E+05	-	3.23E+09	-	-	-	-	-
Dibromoethane, 1,2-	106-93-4	-	1	1.19E+04	1.34E+03	3.23E+09	1.03E+02	-	5.08E+01	3.40E+01	2.65E+04
Dibromomethane (Methylene Bromide)	74-95-3	-	1	7.79E+03	2.82E+03	3.23E+09	-	-	-	-	2.95E+04
Dibutoxy di-n-butyltin	3349-36-8	-	1	8.25E+04	-	3.23E+09	-	-	-	-	-
Dibutyl Phthalate	84-74-2	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Dibutylbis((1-oxoisooctyl)oxy)stannane	85702-74-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2	-	1	3.40E+06	-	3.23E+09	-	-	-	-	-
Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dibutylbis(palmitoyloxy)stannane	13323-63-2	-	1	1.20E+06	-	3.23E+09	-	-	-	-	-

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Decanol, n-	112-30-1	-	-	-	
Deltamethrin	52918-63-5	-	-	-	
Demeton	8065-48-3	9.35E+02	-	1.05E+02	1.05E+02 nc
Di(2-ethylhexyl)adipate	103-23-1	1.40E+07	-	1.57E+06	1.53E+05 max
Di-n-butyltin bis(2-ethylhexanoate)	2781-10-4	-	-	-	
Di-n-butyltin bis(methyl maleate)	15546-11-9	-	-	-	
Di-n-butyltin bis(n-butyl maleate)	15546-16-4	-	-	-	
Di-n-butyltin dilaurate	77-58-7	-	-	-	
Di-n-butyltin distearate	5847-55-2	-	-	-	
Di-n-hexylphthalate	84-75-3	-	-	-	
Diallate	2303-16-4	-	-	-	3.01E+03 ca
Diammonium phosphate	7783-28-0	-	-	1.43E+08	1.43E+08 max
Diazinon	333-41-5	1.64E+04	-	1.83E+03	1.83E+03 nc
Dibenz[a,h]anthracene	53-70-3	-	-	-	2.43E+01 ca
Dibenzo(a,e)pyrene	192-65-4	-	-	-	1.48E+01 ca
Dibenzofuran	132-64-9	7.79E+04	-	2.84E+03	2.84E+03 nc
Dibenzothiophene	132-65-0	-	-	2.95E+04	2.95E+04 nc
Dibromo-3-chloropropane, 1,2-	96-12-8	-	3.22E+02	2.08E+02	1.75E+01 ca*
Dibromoacetic acid	631-64-1	-	-	-	
Dibromobenzene, 1,3-	108-36-1	-	-	1.18E+03	1.18E+03 sat
Dibromobenzene, 1,4-	106-37-6	-	-	2.95E+04	2.95E+04 nc
Dibromochloromethane	124-48-1	-	-	5.90E+04	7.30E+02 ca*
Dibromodichloromethane	594-18-3	-	-	-	
Dibromodiphenyl Ether, p,p'-	2050-47-7	-	-	-	
Dibromoethane, 1,2-	106-93-4	-	3.92E+03	3.41E+03	3.40E+01 ca
Dibromomethane (Methylene Bromide)	74-95-3	-	1.14E+03	1.09E+03	1.09E+03 nc
Dibutoxy di-n-butyltin	3349-36-8	-	-	-	
Dibutyl Phthalate	84-74-2	2.34E+06	-	2.62E+05	2.62E+05 max
Dibutylbis((1-oxoisooctyl)oxy)stannane	85702-74-5	-	-	-	
Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2	-	-	-	
Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3	-	-	-	
Dibutylbis(palmitoyloxy)stannane	13323-63-2	-	-	-	

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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Dibutyltin Compounds	NA	No	No	-		-		3.00E-04	U	-		1
Dibutyltin diacetate	1067-33-0	No	Yes	-		-		-		-		1
Dibutyltin dichloride	683-18-1	No	Yes	-		-		-		-		1
Dibutyltin oxide	818-08-6	No	Yes	-		-		-		-		1
Dicalcium phosphate	7757-93-9	No	No	-		-		4.86E+01	U	-		1
Dicamba	1918-00-9	No	No	-		-		3.00E-02	U	-		1
Dichloro-2-butene, 1,4-	764-41-0	No	Yes	-		4.20E-03	U	-		-		1
Dichloro-2-butene, cis-1,4-	1476-11-5	No	Yes	-		4.20E-03	U	-		-		1
Dichloro-2-butene, trans-1,4-	110-57-6	No	Yes	-		4.20E-03	U	-		-		1
Dichloroacetic Acid	79-43-6	No	No	5.00E-02	U	-		4.00E-03	U	-		1
Dichloroaniline, 2,4-	554-00-7	No	No	-		-		-		-		1
Dichloroaniline, 3,4-	95-76-1	No	Yes	-		-		-		-		1
Dichlorobenzene	25321-22-6	No	Yes	-		-		-		-		1
Dichlorobenzene, 1,2-	95-50-1	No	Yes	-		-		9.00E-02	U	2.00E-01	U	1
Dichlorobenzene, 1,3-	541-73-1	No	Yes	-		-		-		-		1
Dichlorobenzene, 1,4-	106-46-7	No	Yes	5.40E-03	U	1.10E-05	U	7.00E-02	U	8.00E-01	U	1
Dichlorobenzidine, 3,3'-	91-94-1	No	No	4.50E-01	U	3.40E-04	U	-		-		1
Dichlorobenzoic acid, -3,5	51-36-5	No	No	-		-		-		-		1
Dichlorobenzophenone, 4,4'-	90-98-2	No	No	-		-		9.00E-03	U	-		1
Dichlorobenzotrifluoride, 3,4-	328-84-7	No	Yes	-		-		-		-		1
Dichlorodifluoromethane	75-71-8	No	Yes	-		-		2.00E-01	U	1.00E-01	U	1
Dichlorodiisopropyl ether, 2,2'-	39638-32-9	No	Yes	-		-		-		-		1
Dichloroethane, 1,1-	75-34-3	No	Yes	5.70E-03	U	1.60E-06	U	2.00E-01	U	-		1
Dichloroethane, 1,2-	107-06-2	No	Yes	9.10E-02	U	2.60E-05	U	6.00E-03	U	7.00E-03	U	1
Dichloroethylene, 1,1-	75-35-4	No	Yes	-		-		5.00E-02	U	2.00E-01	U	1
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-		-		2.00E-03	U	-		1
Dichloroethylene, 1,2-trans-	156-60-5	No	Yes	-		-		2.00E-02	U	-		1
Dichlorophenol, 2,3-	576-24-9	Yes	No	-		-		-		-		1
Dichlorophenol, 2,4-	120-83-2	No	No	-		-		3.00E-03	U	-		1
Dichlorophenol, 2,5-	583-78-8	No	No	-		-		-		-		1
Dichlorophenol, 2,6-	87-65-0	No	No	-		-		-		-		1
Dichlorophenol, 3,4-	95-77-2	No	No	-		-		-		-		1
Dichlorophenols (total)	NA	No	No	-		-		-		-		1
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	No	No	-		-		1.00E-02	U	-		1

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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Dibutyltin Compounds	NA	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Dibutyltin diacetate	1067-33-0	-	1	1.75E+04	1.86E+00	3.23E+09	-	-	-	-	-
Dibutyltin dichloride	683-18-1	-	1	3.93E+04	-	3.23E+09	-	-	-	-	-
Dibutyltin oxide	818-08-6	-	1	-	-	3.23E+09	-	-	-	-	-
Dicalcium phosphate	7757-93-9	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Dicamba	1918-00-9	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Dichloro-2-butene, 1,4-	764-41-0	-	1	1.54E+04	5.20E+02	3.23E+09	-	-	9.35E+00	9.35E+00	-
Dichloro-2-butene, cis-1,4-	1476-11-5	-	1	1.54E+04	5.20E+02	3.23E+09	-	-	9.35E+00	9.35E+00	-
Dichloro-2-butene, trans-1,4-	110-57-6	-	1	1.54E+04	7.63E+02	3.23E+09	-	-	9.36E+00	9.36E+00	-
Dichloroacetic Acid	79-43-6	0.1	1	-	-	3.23E+09	4.13E+03	3.27E+04	-	3.67E+03	1.18E+04
Dichloroaniline, 2,4-	554-00-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dichloroaniline, 3,4-	95-76-1	-	1	1.39E+05	-	3.23E+09	-	-	-	-	-
Dichlorobenzene	25321-22-6	-	1	1.61E+04	1.93E+02	3.23E+09	-	-	-	-	-
Dichlorobenzene, 1,2-	95-50-1	-	1	1.61E+04	3.76E+02	3.23E+09	-	-	-	-	2.65E+05
Dichlorobenzene, 1,3-	541-73-1	-	1	1.37E+04	2.96E+02	3.23E+09	-	-	-	-	-
Dichlorobenzene, 1,4-	106-46-7	-	1	1.44E+04	-	3.23E+09	3.82E+04	-	3.35E+03	3.08E+03	2.06E+05
Dichlorobenzidine, 3,3'-	91-94-1	0.1	1	-	-	3.23E+09	4.59E+02	3.64E+03	2.43E+07	4.07E+02	-
Dichlorobenzoic acid, -3,5	51-36-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dichlorobenzophenone, 4,4'-	90-98-2	0.1	1	-	-	3.23E+09	-	-	-	-	2.65E+04
Dichlorobenzotrifluoride, 3,4-	328-84-7	-	1	1.59E+04	4.57E+01	3.23E+09	-	-	-	-	-
Dichlorodifluoromethane	75-71-8	-	1	1.16E+03	8.44E+02	3.23E+09	-	-	-	-	5.90E+05
Dichlorodiisopropyl ether, 2,2'-	39638-32-9	-	1	1.81E+04	2.35E+02	3.23E+09	-	-	-	-	-
Dichloroethane, 1,1-	75-34-3	-	1	2.87E+03	1.69E+03	3.23E+09	3.62E+04	-	4.59E+03	4.07E+03	5.90E+05
Dichloroethane, 1,2-	107-06-2	-	1	6.31E+03	2.98E+03	3.23E+09	2.27E+03	-	6.20E+02	4.87E+02	1.77E+04
Dichloroethylene, 1,1-	75-35-4	-	1	1.59E+03	1.19E+03	3.23E+09	-	-	-	-	1.47E+05
Dichloroethylene, 1,2-cis-	156-59-2	-	1	3.45E+03	2.37E+03	3.23E+09	-	-	-	-	5.90E+03
Dichloroethylene, 1,2-trans-	156-60-5	-	1	3.46E+03	1.67E+03	3.23E+09	-	-	-	-	5.90E+04
Dichlorophenol, 2,3-	576-24-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dichlorophenol, 2,4-	120-83-2	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+03
Dichlorophenol, 2,5-	583-78-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dichlorophenol, 2,6-	87-65-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dichlorophenol, 3,4-	95-77-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dichlorophenols (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	0.05	1	-	-	3.23E+09	-	-	-	-	2.95E+04

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Dibutyltin Compounds	NA	7.01E+03	-	7.86E+02	7.86E+02 nc
Dibutyltin diacetate	1067-33-0	-	-	-	
Dibutyltin dichloride	683-18-1	-	-	-	
Dibutyltin oxide	818-08-6	-	-	-	
Dicalcium phosphate	7757-93-9	-	-	1.43E+08	1.43E+08 max
Dicamba	1918-00-9	7.01E+05	-	7.86E+04	7.86E+04 nc
Dichloro-2-butene, 1,4-	764-41-0	-	-	-	9.35E+00 ca
Dichloro-2-butene, cis-1,4-	1476-11-5	-	-	-	9.35E+00 ca
Dichloro-2-butene, trans-1,4-	110-57-6	-	-	-	9.36E+00 ca
Dichloroacetic Acid	79-43-6	9.35E+04	-	1.05E+04	3.67E+03 ca**
Dichloroaniline, 2,4-	554-00-7	-	-	-	
Dichloroaniline, 3,4-	95-76-1	-	-	-	
Dichlorobenzene	25321-22-6	-	-	-	
Dichlorobenzene, 1,2-	95-50-1	-	1.18E+05	8.15E+04	8.15E+04 sat
Dichlorobenzene, 1,3-	541-73-1	-	-	-	
Dichlorobenzene, 1,4-	106-46-7	-	4.21E+05	1.38E+05	3.08E+03 ca*
Dichlorobenzidine, 3,3'-	91-94-1	-	-	-	4.07E+02 ca
Dichlorobenzoic acid, -3,5	51-36-5	-	-	-	
Dichlorobenzophenone, 4,4'-	90-98-2	2.10E+05	-	2.36E+04	2.36E+04 nc
Dichlorobenzotrifluoride, 3,4-	328-84-7	-	-	-	
Dichlorodifluoromethane	75-71-8	-	4.23E+03	4.20E+03	4.20E+03 sat
Dichlorodiisopropyl ether, 2,2'-	39638-32-9	-	-	-	
Dichloroethane, 1,1-	75-34-3	-	-	5.90E+05	4.07E+03 sat
Dichloroethane, 1,2-	107-06-2	-	1.61E+03	1.48E+03	4.87E+02 ca**
Dichloroethylene, 1,1-	75-35-4	-	1.16E+04	1.08E+04	1.08E+04 sat
Dichloroethylene, 1,2-cis-	156-59-2	-	-	5.90E+03	5.90E+03 sat
Dichloroethylene, 1,2-trans-	156-60-5	-	-	5.90E+04	5.90E+04 sat
Dichlorophenol, 2,3-	576-24-9	-	-	-	
Dichlorophenol, 2,4-	120-83-2	7.01E+04	-	7.86E+03	7.86E+03 nc
Dichlorophenol, 2,5-	583-78-8	-	-	-	
Dichlorophenol, 2,6-	87-65-0	-	-	-	
Dichlorophenol, 3,4-	95-77-2	-	-	-	
Dichlorophenols (total)	NA	-	-	-	
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	4.67E+05	-	2.77E+04	2.77E+04 nc

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	No	No	-		-		8.00E-03	U	-		1
Dichloropropane, 1,2-	78-87-5	No	Yes	3.60E-02	U	1.00E-05	U	9.00E-02	U	4.00E-03	U	1
Dichloropropane, 1,3-	142-28-9	No	Yes	-		-		2.00E-02	U	-		1
Dichloropropane, 2,2-	594-20-7	Yes	Yes	-		-		-		-		1
Dichloropropanol, 2,3-	616-23-9	No	No	-		-		3.00E-03	U	-		1
Dichloropropene, 1,3-	542-75-6	No	Yes	1.00E-01	U	4.00E-06	U	3.00E-02	U	2.00E-02	U	1
Dichloropropene, 2,3-	78-88-6	No	Yes	-		-		-		-		1
Dichloropropene, cis-1,3-	10061-01-5	No	Yes	-		-		-		-		1
Dichloropropene, trans-1,3-	10061-02-6	No	Yes	-		-		-		-		1
Dichlorvos	62-73-7	No	No	2.90E-01	U	8.30E-05	U	5.00E-04	U	5.00E-04	U	1
Diclofop-methyl	51338-27-3	No	No	-		-		-		-		1
Dicofol	115-32-2	No	No	-		-		-		-		1
Dicyclohexylamine	101-83-7	No	Yes	-		-		-		-		1
Dicyclopentadiene	77-73-6	No	Yes	-		-		8.00E-02	U	3.00E-04	U	1
Didecyl dimethyl ammonium chloride	7173-51-5	No	No	-		-		-		-		1
Dieldrin	60-57-1	No	No	1.60E+01	U	4.60E-03	U	5.00E-05	U	-		1
Diepoxybutane	1464-53-5	No	Yes	-		-		-		-		1
Diethanolamine	111-42-2	No	No	-		-		2.00E-03	U	2.00E-04	U	1
Diethyl Phthalate	84-66-2	No	No	-		-		8.00E-01	U	-		1
Diethyl sulfate	64-67-5	No	No	-		-		-		-		1
Diethyl-p-nitrophenylphosphate	311-45-5	No	No	-		-		-		-		1
Diethylene Glycol Dinitrate (DEGDN)	693-21-0	No	No	-		-		-		-		1
Diethylene Glycol Monobutyl Ether	112-34-5	No	No	-		-		3.00E-02	U	1.00E-04	U	1
Diethylene Glycol Monoethyl Ether	111-90-0	No	No	-		-		6.00E-02	U	3.00E-04	U	1
Diethylene-glycol	111-46-6	No	No	-		-		-		-		1
Diethylformamide	617-84-5	No	Yes	-		-		1.00E-03	U	-		1
Diethylphosphorodithioate	298-06-6	No	Yes	-		-		-		-		1
Diethylstilbestrol	56-53-1	No	No	3.50E+02	U	1.00E-01	U	-		-		1
Difenzoquat	43222-48-6	No	No	-		-		8.00E-02	U	-		1
Diflubenzuron	35367-38-5	No	No	-		-		2.00E-02	U	-		1
Difluoroethane, 1,1-	75-37-6	No	Yes	-		-		-		4.00E+01	U	1
Difluoropropane, 2,2-	420-45-1	No	Yes	-		-		-		-		1
Dihydrosafrole	94-58-6	No	Yes	4.40E-02	U	1.30E-05	U	-		-		1
Diisopropyl Ether	108-20-3	No	Yes	-		-		-		7.00E-01	U	1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+04
Dichloropropane, 1,2-	78-87-5	-	1	5.23E+03	1.36E+03	3.23E+09	5.74E+03	-	1.34E+03	1.08E+03	2.65E+05
Dichloropropane, 1,3-	142-28-9	-	1	9.33E+03	1.49E+03	3.23E+09	-	-	-	-	5.90E+04
Dichloropropane, 2,2-	594-20-7	-	1	2.21E+03	5.27E+02	3.23E+09	-	-	-	-	-
Dichloropropanol, 2,3-	616-23-9	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+03
Dichloropropene, 1,3-	542-75-6	-	1	4.91E+03	1.57E+03	3.23E+09	2.06E+03	-	3.13E+03	1.24E+03	8.85E+04
Dichloropropene, 2,3-	78-88-6	-	1	4.27E+03	1.07E+03	3.23E+09	-	-	-	-	-
Dichloropropene, cis-1,3-	10061-01-5	-	1	4.90E+03	1.22E+03	3.23E+09	-	-	-	-	-
Dichloropropene, trans-1,3-	10061-02-6	-	1	4.91E+03	1.57E+03	3.23E+09	-	-	-	-	-
Dichlorvos	62-73-7	0.1	1	-	-	3.23E+09	7.12E+02	5.64E+03	9.95E+07	6.32E+02	1.47E+03
Diclofop-methyl	51338-27-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dicofol	115-32-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dicyclohexylamine	101-83-7	-	1	8.62E+04	2.16E+03	3.23E+09	-	-	-	-	-
Dicyclopentadiene	77-73-6	-	1	5.67E+03	-	3.23E+09	-	-	-	-	2.36E+05
Didecyl dimethyl ammonium chloride	7173-51-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dieldrin	60-57-1	0.1	1	-	-	3.23E+09	1.29E+01	1.02E+02	1.80E+06	1.15E+01	1.47E+02
Diepoxybutane	1464-53-5	-	1	2.02E+05	1.15E+05	3.23E+09	-	-	-	-	-
Diethanolamine	111-42-2	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Diethyl Phthalate	84-66-2	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+06
Diethyl sulfate	64-67-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Diethyl-p-nitrophenylphosphate	311-45-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Diethylene Glycol Dinitrate (DEGDN)	693-21-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
Diethylene Glycol Monobutyl Ether	112-34-5	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Diethylene Glycol Monoethyl Ether	111-90-0	0.1	1	-	-	3.23E+09	-	-	-	-	1.77E+05
Diethylene-glycol	111-46-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Diethylformamide	617-84-5	-	1	1.91E+05	1.12E+05	3.23E+09	-	-	-	-	2.95E+03
Diethylphosphorodithioate	298-06-6	-	1	1.79E+04	2.15E-02	3.23E+09	-	-	-	-	-
Diethylstilbestrol	56-53-1	0.1	1	-	-	3.23E+09	5.90E-01	4.67E+00	8.26E+04	5.24E-01	-
Difenzoquat	43222-48-6	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+05
Diflubenzuron	35367-38-5	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Difluoroethane, 1,1-	75-37-6	-	1	1.59E+03	1.43E+03	3.23E+09	-	-	-	-	-
Difluoropropane, 2,2-	420-45-1	-	1	1.01E+03	4.63E+04	3.23E+09	-	-	-	-	-
Dihydrosafrole	94-58-6	-	1	2.08E+03	-	3.23E+09	4.69E+03	-	4.09E+02	3.76E+02	-
Diisopropyl Ether	108-20-3	-	1	4.21E+03	2.26E+03	3.23E+09	-	-	-	-	-

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	1.87E+05	-	2.10E+04	2.10E+04 nc
Dichloropropane, 1,2-	78-87-5	-	7.64E+02	7.62E+02	7.62E+02 nc
Dichloropropane, 1,3-	142-28-9	-	-	5.90E+04	5.90E+04 sat
Dichloropropane, 2,2-	594-20-7	-	-	-	
Dichloropropanol, 2,3-	616-23-9	7.01E+04	-	7.86E+03	7.86E+03 nc
Dichloropropene, 1,3-	542-75-6	-	3.58E+03	3.44E+03	1.24E+03 ca**
Dichloropropene, 2,3-	78-88-6	-	-	-	
Dichloropropene, cis-1,3-	10061-01-5	-	-	-	
Dichloropropene, trans-1,3-	10061-02-6	-	-	-	
Dichlorvos	62-73-7	1.17E+04	5.90E+07	1.31E+03	6.32E+02 ca**
Diclofop-methyl	51338-27-3	-	-	-	
Dicofol	115-32-2	-	-	-	
Dicyclohexylamine	101-83-7	-	-	-	
Dicyclopentadiene	77-73-6	-	6.21E+01	6.20E+01	6.20E+01 nc
Didecyl dimethyl ammonium chloride	7173-51-5	-	-	-	
Dieldrin	60-57-1	1.17E+03	-	1.31E+02	1.15E+01 ca*
Diepoxybutane	1464-53-5	-	-	-	
Diethanolamine	111-42-2	4.67E+04	2.36E+07	5.24E+03	5.24E+03 nc
Diethyl Phthalate	84-66-2	1.87E+07	-	2.10E+06	2.10E+06 max
Diethyl sulfate	64-67-5	-	-	-	
Diethyl-p-nitrophenylphosphate	311-45-5	-	-	-	
Diethylene Glycol Dinitrate (DEGDN)	693-21-0	-	-	-	
Diethylene Glycol Monobutyl Ether	112-34-5	7.01E+05	1.18E+07	7.81E+04	7.81E+04 nc
Diethylene Glycol Monoethyl Ether	111-90-0	1.40E+06	3.54E+07	1.56E+05	1.56E+05 max
Diethylene-glycol	111-46-6	-	-	-	
Diethylformamide	617-84-5	-	-	2.95E+03	2.95E+03 nc
Diethylphosphorodithioate	298-06-6	-	-	-	
Diethylstilbestrol	56-53-1	-	-	-	5.24E-01 ca
Difenzoquat	43222-48-6	1.87E+06	-	2.10E+05	2.10E+05 max
Diflubenzuron	35367-38-5	4.67E+05	-	5.24E+04	5.24E+04 nc
Difluoroethane, 1,1-	75-37-6	-	2.31E+06	2.31E+06	2.31E+06 sat
Difluoropropane, 2,2-	420-45-1	-	-	-	
Dihydrosafrole	94-58-6	-	-	-	3.76E+02 ca
Diisopropyl Ether	108-20-3	-	1.08E+05	1.08E+05	1.08E+05 sat

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Diisopropyl Methylphosphonate	1445-75-6	No	Yes	-		-		8.00E-02	U	-		1
Dimagnesium phosphate	7782-75-4	No	No	-		-		4.86E+01	U	-		1
Dimethipin	55290-64-7	No	No	-		-		2.00E-02	U	-		1
Dimethoate	60-51-5	No	No	-		-		2.00E-04	U	-		1
Dimethoxybenzidine, 3,3'-	119-90-4	No	No	1.60E+00	U	-		-		-		1
Dimethyl Sulfate	77-78-1	No	No	-		-		-		-		1
Dimethyl Sulfide	75-18-3	No	Yes	-		-		-		-		1
Dimethyl methylphosphonate	756-79-6	No	No	1.70E-03	U	-		6.00E-02	U	-		1
Dimethylamino azobenzene [p-]	60-11-7	No	No	4.60E+00	U	1.30E-03	U	-		-		1
Dimethylaniline HCl, 2,4-	21436-96-4	No	No	5.80E-01	U	-		-		-		1
Dimethylaniline, 2,4-	95-68-1	No	No	2.00E-01	U	-		2.00E-03	U	-		1
Dimethylaniline, N,N-	121-69-7	No	Yes	-		-		2.00E-03	U	-		1
Dimethylbenz(a)anthracene, 7,12-	57-97-6	Yes	No	2.50E+02	U	7.10E-02	U	-		-		1
Dimethylbenzidine, 3,3'-	119-93-7	No	No	1.10E+01	U	-		-		-		1
Dimethylcyclohexylamine, n,n-	98-94-2	No	Yes	-		-		-		-		1
Dimethylethyl Lead	107584-40-7	No	No	-		-		-		-		1
Dimethylformamide	68-12-2	No	Yes	-		-		1.00E-01	U	3.00E-02	U	1
Dimethylhydrazine, 1,1-	57-14-7	No	Yes	-		-		1.00E-04	U	2.00E-06	U	1
Dimethylhydrazine, 1,2-	540-73-8	No	Yes	5.50E+02	U	1.60E-01	U	-		-		1
Dimethylmercury	593-74-8	No	Yes	-		-		-		-		1
Dimethylphenethylamine	122-09-8	No	No	-		-		-		-		1
Dimethylphenol, 2,4-	105-67-9	No	No	-		-		2.00E-02	U	-		1
Dimethylphenol, 2,6-	576-26-1	No	No	-		-		6.00E-04	U	-		1
Dimethylphenol, 3,4-	95-65-8	No	No	-		-		1.00E-03	U	-		1
Dimethylphthalate	131-11-3	No	No	-		-		-		-		1
Dimethylterephthalate	120-61-6	No	Yes	-		-		1.00E-01	U	-		1
Dimethylvinylchloride	513-37-1	No	Yes	4.50E-02	U	1.30E-05	U	-		-		1
Dinitro-o-cresol, 4,6-	534-52-1	No	No	-		-		8.00E-05	U	-		1
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	No	No	-		-		2.00E-03	U	-		1
Dinitroaniline, 3,5-	618-87-1	No	No	-		-		-		-		1
Dinitrobenzene, 1,2-	528-29-0	No	No	-		-		1.00E-04	U	-		1
Dinitrobenzene, 1,3-	99-65-0	No	No	-		-		1.00E-04	U	-		1
Dinitrobenzene, 1,4-	100-25-4	No	No	-		-		1.00E-04	U	-		1
Dinitrophenol, 2,4-	51-28-5	No	No	-		-		2.00E-03	U	-		1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Diisopropyl Methylphosphonate	1445-75-6	-	1	5.26E+04	5.30E+02	3.23E+09	-	-	-	-	2.36E+05
Dimagnesium phosphate	7782-75-4	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Dimethipin	55290-64-7	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Dimethoate	60-51-5	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+02
Dimethoxybenzidine, 3,3'-	119-90-4	0.1	1	-	-	3.23E+09	1.29E+02	1.02E+03	-	1.15E+02	-
Dimethyl Sulfate	77-78-1	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dimethyl Sulfide	75-18-3	-	1	4.10E+03	5.34E+03	3.23E+09	-	-	-	-	-
Dimethyl methylphosphonate	756-79-6	0.1	1	-	-	3.23E+09	1.21E+05	9.62E+05	-	1.08E+05	1.77E+05
Dimethylamino azobenzene [p-]	60-11-7	0.1	1	-	-	3.23E+09	4.49E+01	3.56E+02	6.35E+06	3.99E+01	-
Dimethylaniline HCl, 2,4-	21436-96-4	0.1	1	-	-	3.23E+09	3.56E+02	2.82E+03	-	3.16E+02	-
Dimethylaniline, 2,4-	95-68-1	0.1	1	-	-	3.23E+09	1.03E+03	8.18E+03	-	9.17E+02	5.90E+03
Dimethylaniline, N,N-	121-69-7	-	1	4.32E+04	8.30E+02	3.23E+09	-	-	-	-	5.90E+03
Dimethylbenz(a)anthracene, 7,12-	57-97-6	0.13	1	-	-	3.23E+09	8.26E-01	5.03E+00	1.16E+05	7.09E-01	-
Dimethylbenzidine, 3,3'-	119-93-7	0.1	1	-	-	3.23E+09	1.88E+01	1.49E+02	-	1.67E+01	-
Dimethylcyclohexylamine, n,n-	98-94-2	-	1	5.23E+04	-	3.23E+09	-	-	-	-	-
Dimethylethyl Lead	107584-40-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dimethylformamide	68-12-2	-	1	1.76E+05	1.06E+05	3.23E+09	-	-	-	-	2.95E+05
Dimethylhydrazine, 1,1-	57-14-7	-	1	2.23E+05	1.72E+05	3.23E+09	-	-	-	-	2.95E+02
Dimethylhydrazine, 1,2-	540-73-8	-	1	2.31E+05	1.89E+05	3.23E+09	3.75E-01	-	3.69E+00	3.41E-01	-
Dimethylmercury	593-74-8	-	1	5.88E+03	4.14E+03	3.23E+09	-	-	-	-	-
Dimethylphenethylamine	122-09-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dimethylphenol, 2,4-	105-67-9	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Dimethylphenol, 2,6-	576-26-1	0.1	1	-	-	3.23E+09	-	-	-	-	1.77E+03
Dimethylphenol, 3,4-	95-65-8	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Dimethylphthalate	131-11-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dimethylterephthalate	120-61-6	-	1	2.95E+04	-	3.23E+09	-	-	-	-	2.95E+05
Dimethylvinylchloride	513-37-1	-	1	1.39E+03	1.09E+03	3.23E+09	4.59E+03	-	2.73E+02	2.58E+02	-
Dinitro-o-cresol, 4,6-	534-52-1	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+02
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Dinitroaniline, 3,5-	618-87-1	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dinitrobenzene, 1,2-	528-29-0	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+02
Dinitrobenzene, 1,3-	99-65-0	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+02
Dinitrobenzene, 1,4-	100-25-4	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+02
Dinitrophenol, 2,4-	51-28-5	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Diisopropyl Methylphosphonate	1445-75-6	-	-	2.36E+05	2.36E+05 sat
Dimagnesium phosphate	7782-75-4	-	-	1.43E+08	1.43E+08 max
Dimethipin	55290-64-7	4.67E+05	-	5.24E+04	5.24E+04 nc
Dimethoate	60-51-5	4.67E+03	-	5.24E+02	5.24E+02 nc
Dimethoxybenzidine, 3,3'-	119-90-4	-	-	-	1.15E+02 ca
Dimethyl Sulfate	77-78-1	-	-	-	
Dimethyl Sulfide	75-18-3	-	-	-	
Dimethyl methylphosphonate	756-79-6	1.40E+06	-	1.57E+05	1.08E+05 max
Dimethylamino azobenzene [p-]	60-11-7	-	-	-	3.99E+01 ca
Dimethylaniline HCl, 2,4-	21436-96-4	-	-	-	3.16E+02 ca
Dimethylaniline, 2,4-	95-68-1	4.67E+04	-	5.24E+03	9.17E+02 ca**
Dimethylaniline, N,N-	121-69-7	-	-	5.90E+03	5.90E+03 sat
Dimethylbenz(a)anthracene, 7,12-	57-97-6	-	-	-	7.09E-01 ca
Dimethylbenzidine, 3,3'-	119-93-7	-	-	-	1.67E+01 ca
Dimethylcyclohexylamine, n,n-	98-94-2	-	-	-	
Dimethylethyl Lead	107584-40-7	-	-	-	
Dimethylformamide	68-12-2	-	1.93E+05	1.16E+05	1.16E+05 sat
Dimethylhydrazine, 1,1-	57-14-7	-	1.63E+01	1.54E+01	1.54E+01 nc
Dimethylhydrazine, 1,2-	540-73-8	-	-	-	3.41E-01 ca
Dimethylmercury	593-74-8	-	-	-	
Dimethylphenethylamine	122-09-8	-	-	-	
Dimethylphenol, 2,4-	105-67-9	4.67E+05	-	5.24E+04	5.24E+04 nc
Dimethylphenol, 2,6-	576-26-1	1.40E+04	-	1.57E+03	1.57E+03 nc
Dimethylphenol, 3,4-	95-65-8	2.34E+04	-	2.62E+03	2.62E+03 nc
Dimethylphthalate	131-11-3	-	-	-	
Dimethylterephthalate	120-61-6	-	-	2.95E+05	2.95E+05 max
Dimethylvinylchloride	513-37-1	-	-	-	2.58E+02 ca
Dinitro-o-cresol, 4,6-	534-52-1	1.87E+03	-	2.10E+02	2.10E+02 nc
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	4.67E+04	-	5.24E+03	5.24E+03 nc
Dinitroaniline, 3,5-	618-87-1	-	-	-	
Dinitrobenzene, 1,2-	528-29-0	2.34E+03	-	2.62E+02	2.62E+02 nc
Dinitrobenzene, 1,3-	99-65-0	2.34E+03	-	2.62E+02	2.62E+02 nc
Dinitrobenzene, 1,4-	100-25-4	2.34E+03	-	2.62E+02	2.62E+02 nc
Dinitrophenol, 2,4-	51-28-5	4.67E+04	-	5.24E+03	5.24E+03 nc

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Dinitrophenols	25550-58-7	Yes	No	-		-		-		-		1
Dinitrosopentamethylenetetramine, N,N-	101-25-7	No	No	-		-		-		-		1
Dinitrotoluene Mixture, 2,4/2,6-	NA	No	No	6.80E-01	U	-		-		-		1
Dinitrotoluene, 2,4-	121-14-2	No	No	3.10E-01	U	8.90E-05	U	2.00E-03	U	-		1
Dinitrotoluene, 2,6-	606-20-2	No	No	1.50E+00	U	-		3.00E-04	U	-		1
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	No	No	-		-		2.00E-03	U	-		1
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	No	No	-		-		2.00E-03	U	-		1
Dinitrotoluene, Technical grade	25321-14-6	No	No	4.50E-01	U	-		9.00E-04	U	-		1
Dinoseb	88-85-7	No	No	-		-		1.00E-03	U	-		1
Dioxane, 1,4-	123-91-1	No	Yes	1.00E-01	U	5.00E-06	U	3.00E-02	U	3.00E-02	U	1
Diphenamid	957-51-7	No	No	-		-		3.00E-02	U	-		1
Diphenyl Sulfone	127-63-9	No	No	-		-		8.00E-04	U	-		1
Diphenylamine	122-39-4	No	No	-		-		2.50E-02	U	-		1
Diphenylhydrazine, 1,2-	122-66-7	No	No	8.00E-01	U	2.20E-04	U	-		-		1
Dipotassium phosphate	7758-11-4	No	No	-		-		4.86E+01	U	-		1
Diquat	85-00-7	No	No	-		-		2.20E-03	U	-		1
Direct Black 38	1937-37-7	No	No	7.10E+00	U	1.40E-01	U	-		-		1
Direct Blue 6	2602-46-2	No	No	7.40E+00	U	1.40E-01	U	-		-		1
Direct Brown 95	16071-86-6	No	No	6.70E+00	U	1.40E-01	U	-		-		1
Direct Sky Blue	2610-05-1	No	No	-		-		-		-		1
Disodium phosphate	7558-79-4	No	No	-		-		4.86E+01	U	-		1
Disulfoton	298-04-4	No	No	-		-		4.00E-05	U	-		1
Dithiane, 1,4-	505-29-3	No	Yes	-		-		1.00E-02	U	-		1
Diuron	330-54-1	No	No	-		-		2.00E-03	U	-		1
Dodecyl benzenesulfonic acid	27176-87-0	No	No	-		-		-		-		1
Dodine	2439-10-3	No	No	-		-		4.00E-03	U	-		1
EPTC	759-94-4	No	Yes	-		-		2.50E-02	U	-		1
Endosulfan	115-29-7	No	Yes	-		-		6.00E-03	U	-		1
Endosulfan I	959-98-8	No	Yes	-		-		-		-		1
Endosulfan II	33213-65-9	No	Yes	-		-		-		-		1
Endosulfan Sulfate	1031-07-8	No	No	-		-		-		-		1
Endothall	145-73-3	No	No	-		-		2.00E-02	U	-		1
Endrin	72-20-8	No	No	-		-		3.00E-04	U	-		1
Endrin aldehyde	7421-93-4	No	No	-		-		-		-		1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Dinitrophenols	25550-58-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dinitrosopentamethylenetetramine, N,N-	101-25-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dinitrotoluene Mixture, 2,4/2,6-	NA	0.1	1	-	-	3.23E+09	3.04E+02	2.41E+03	-	2.70E+02	-
Dinitrotoluene, 2,4-	121-14-2	0.102	1	-	-	3.23E+09	6.66E+02	5.17E+03	9.28E+07	5.90E+02	5.90E+03
Dinitrotoluene, 2,6-	606-20-2	0.099	1	-	-	3.23E+09	1.38E+02	1.10E+03	-	1.22E+02	8.85E+02
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	0.006	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	0.009	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Dinitrotoluene, Technical grade	25321-14-6	0.1	1	-	-	3.23E+09	4.59E+02	3.64E+03	-	4.07E+02	2.65E+03
Dinoseb	88-85-7	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Dioxane, 1,4-	123-91-1	-	1	5.47E+04	1.16E+05	3.23E+09	2.06E+03	-	2.80E+04	1.92E+03	8.85E+04
Diphenamid	957-51-7	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Diphenyl Sulfone	127-63-9	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+03
Diphenylamine	122-39-4	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
Diphenylhydrazine, 1,2-	122-66-7	0.1	1	-	-	3.23E+09	2.58E+02	2.05E+03	3.75E+07	2.29E+02	-
Dipotassium phosphate	7758-11-4	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Diquat	85-00-7	0.1	1	-	-	3.23E+09	-	-	-	-	6.49E+03
Direct Black 38	1937-37-7	0.1	1	-	-	3.23E+09	2.91E+01	2.30E+02	5.90E+04	2.58E+01	-
Direct Blue 6	2602-46-2	0.1	1	-	-	3.23E+09	2.79E+01	2.21E+02	5.90E+04	2.48E+01	-
Direct Brown 95	16071-86-6	0.1	1	-	-	3.23E+09	3.08E+01	2.44E+02	5.90E+04	2.74E+01	-
Direct Sky Blue	2610-05-1	0.1	1	-	-	3.23E+09	-	-	-	-	-
Disodium phosphate	7558-79-4	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Disulfoton	298-04-4	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+02
Dithiane, 1,4-	505-29-3	-	1	6.26E+04	-	3.23E+09	-	-	-	-	2.95E+04
Diuron	330-54-1	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Dodecyl benzenesulfonic acid	27176-87-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
Dodine	2439-10-3	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+04
EPTC	759-94-4	-	1	1.62E+05	-	3.23E+09	-	-	-	-	7.37E+04
Endosulfan	115-29-7	-	1	5.65E+05	-	3.23E+09	-	-	-	-	1.77E+04
Endosulfan I	959-98-8	-	1	5.65E+05	-	3.23E+09	-	-	-	-	-
Endosulfan II	33213-65-9	-	1	5.51E+05	-	3.23E+09	-	-	-	-	-
Endosulfan Sulfate	1031-07-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Endothall	145-73-3	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Endrin	72-20-8	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Endrin aldehyde	7421-93-4	0.1	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Dinitrophenols	25550-58-7	-	-	-	
Dinitrosopentamethylenetetramine, N,N-	101-25-7	-	-	-	
Dinitrotoluene Mixture, 2,4/2,6-	NA	-	-	-	2.70E+02 ca
Dinitrotoluene, 2,4-	121-14-2	4.58E+04	-	5.23E+03	5.90E+02 ca**
Dinitrotoluene, 2,6-	606-20-2	7.08E+03	-	7.87E+02	1.22E+02 ca**
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	7.79E+05	-	5.85E+03	5.85E+03 nc
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	5.19E+05	-	5.83E+03	5.83E+03 nc
Dinitrotoluene, Technical grade	25321-14-6	2.10E+04	-	2.36E+03	4.07E+02 ca**
Dinoseb	88-85-7	2.34E+04	-	2.62E+03	2.62E+03 nc
Dioxane, 1,4-	123-91-1	-	5.99E+04	3.57E+04	1.92E+03 ca*
Diphenamid	957-51-7	7.01E+05	-	7.86E+04	7.86E+04 nc
Diphenyl Sulfone	127-63-9	1.87E+04	-	2.10E+03	2.10E+03 nc
Diphenylamine	122-39-4	5.84E+05	-	6.55E+04	6.55E+04 nc
Diphenylhydrazine, 1,2-	122-66-7	-	-	-	2.29E+02 ca
Dipotassium phosphate	7758-11-4	-	-	1.43E+08	1.43E+08 max
Diquat	85-00-7	5.14E+04	-	5.76E+03	5.76E+03 nc
Direct Black 38	1937-37-7	-	-	-	2.58E+01 ca
Direct Blue 6	2602-46-2	-	-	-	2.48E+01 ca
Direct Brown 95	16071-86-6	-	-	-	2.74E+01 ca
Direct Sky Blue	2610-05-1	-	-	-	
Disodium phosphate	7558-79-4	-	-	1.43E+08	1.43E+08 max
Disulfoton	298-04-4	9.35E+02	-	1.05E+02	1.05E+02 nc
Dithiane, 1,4-	505-29-3	-	-	2.95E+04	2.95E+04 nc
Diuron	330-54-1	4.67E+04	-	5.24E+03	5.24E+03 nc
Dodecyl benzenesulfonic acid	27176-87-0	-	-	-	
Dodine	2439-10-3	9.35E+04	-	1.05E+04	1.05E+04 nc
EPTC	759-94-4	-	-	7.37E+04	7.37E+04 nc
Endosulfan	115-29-7	-	-	1.77E+04	1.77E+04 nc
Endosulfan I	959-98-8	-	-	-	
Endosulfan II	33213-65-9	-	-	-	
Endosulfan Sulfate	1031-07-8	-	-	-	
Endothall	145-73-3	4.67E+05	-	5.24E+04	5.24E+04 nc
Endrin	72-20-8	7.01E+03	-	7.86E+02	7.86E+02 nc
Endrin aldehyde	7421-93-4	-	-	-	

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Endrin ketone	53494-70-5	No	No	-		-		-		-		1
Epichlorohydrin	106-89-8	No	Yes	9.90E-03	U	1.20E-06	U	6.00E-03	U	1.00E-03	U	1
Epoxybutane, 1,2-	106-88-7	No	Yes	-		-		-		2.00E-02	U	1
Ethanol	64-17-5	No	Yes	-		-		-		-		1
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	No	No	-		-		-		-		1
Ethephon	16672-87-0	No	No	-		-		5.00E-03	U	-		1
Ethion	563-12-2	No	No	-		-		5.00E-04	U	-		1
Ethoxy Propanol	52125-53-8	No	Yes	-		-		-		-		1
Ethoxyethanol Acetate, 2-	111-15-9	No	Yes	-		-		1.00E-01	U	6.00E-02	U	1
Ethoxyethanol, 2-	110-80-5	No	Yes	-		-		9.00E-02	U	2.00E-01	U	1
Ethyl Acetate	141-78-6	No	Yes	-		-		9.00E-01	U	7.00E-02	U	1
Ethyl Acrylate	140-88-5	No	Yes	4.80E-02	U	-		5.00E-03	U	8.00E-03	U	1
Ethyl Chloride	75-00-3	No	Yes	-		-		-		1.00E+01	U	1
Ethyl Ether	60-29-7	No	Yes	-		-		2.00E-01	U	-		1
Ethyl Methacrylate	97-63-2	No	Yes	-		-		9.00E-02	U	3.00E-01	U	1
Ethyl methane sulfonate	62-50-0	No	No	-		-		-		-		1
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	No	No	-		-		1.00E-05	U	-		1
Ethylbenzene	100-41-4	No	Yes	1.10E-02	U	2.50E-06	U	1.00E-01	U	1.00E+00	U	1
Ethylene Cyanohydrin	109-78-4	No	No	-		-		7.00E-02	U	-		1
Ethylene Diamine	107-15-3	No	Yes	-		-		9.00E-02	U	-		1
Ethylene Glycol	107-21-1	No	No	-		-		2.00E+00	U	4.00E-01	U	1
Ethylene Glycol Monobutyl Ether	111-76-2	No	No	-		-		1.00E-01	U	1.60E+00	U	1
Ethylene Oxide	75-21-8	No	Yes	3.10E-01	U	8.80E-05	U	-		3.00E-02	U	1
Ethylene Thiourea	96-45-7	No	No	4.50E-02	U	1.30E-05	U	8.00E-05	U	-		1
Ethyleneimine	151-56-4	No	Yes	6.50E+01	U	1.90E-02	U	-		-		1
Ethylphenol, 4-	123-07-9	No	No	-		-		-		-		1
Ethylphthalyl Ethyl Glycolate	84-72-0	No	No	-		-		3.00E+00	U	-		1
Express	101200-48-0	No	No	-		-		8.00E-03	U	-		1
Famphur	52-85-7	No	No	-		-		-		-		1
Fenamiphos	22224-92-6	No	No	-		-		2.50E-04	U	-		1
Fenpropathrin	39515-41-8	No	No	-		-		2.50E-02	U	-		1
Fluometuron	2164-17-2	No	No	-		-		1.30E-02	U	-		1
Fluoranthene	206-44-0	No	No	-		-		4.00E-02	U	-		1
Fluorene	86-73-7	No	Yes	-		-		4.00E-02	U	-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Endrin ketone	53494-70-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Epichlorohydrin	106-89-8	-	1	2.61E+04	1.05E+04	3.23E+09	2.09E+04	-	5.55E+04	1.52E+04	1.77E+04
Epoxybutane, 1,2-	106-88-7	-	1	1.06E+04	1.53E+04	3.23E+09	-	-	-	-	-
Ethanol	64-17-5	-	1	4.34E+04	1.06E+05	3.23E+09	-	-	-	-	-
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Ethephon	16672-87-0	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Ethion	563-12-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+03
Ethoxy Propanol	52125-53-8	-	1	1.26E+05	8.55E+04	3.23E+09	-	-	-	-	-
Ethoxyethanol Acetate, 2-	111-15-9	-	1	8.47E+04	3.14E+04	3.23E+09	-	-	-	-	2.95E+05
Ethoxyethanol, 2-	110-80-5	-	1	1.36E+05	1.06E+05	3.23E+09	-	-	-	-	2.65E+05
Ethyl Acetate	141-78-6	-	1	1.19E+04	1.08E+04	3.23E+09	-	-	-	-	2.65E+06
Ethyl Acrylate	140-88-5	-	1	8.74E+03	2.50E+03	3.23E+09	4.30E+03	-	-	4.30E+03	1.47E+04
Ethyl Chloride	75-00-3	-	1	1.78E+03	2.12E+03	3.23E+09	-	-	-	-	-
Ethyl Ether	60-29-7	-	1	4.31E+03	1.01E+04	3.23E+09	-	-	-	-	5.90E+05
Ethyl Methacrylate	97-63-2	-	1	7.97E+03	1.11E+03	3.23E+09	-	-	-	-	2.65E+05
Ethyl methane sulfonate	62-50-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+01
Ethylbenzene	100-41-4	-	1	7.82E+03	4.79E+02	3.23E+09	1.88E+04	-	7.99E+03	5.60E+03	2.95E+05
Ethylene Cyanohydrin	109-78-4	0.1	1	-	-	3.23E+09	-	-	-	-	2.06E+05
Ethylene Diamine	107-15-3	-	1	2.48E+05	1.89E+05	3.23E+09	-	-	-	-	2.65E+05
Ethylene Glycol	107-21-1	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+06
Ethylene Glycol Monobutyl Ether	111-76-2	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Ethylene Oxide	75-21-8	-	1	8.40E+03	1.21E+05	3.23E+09	6.66E+02	-	2.44E+02	1.78E+02	-
Ethylene Thiourea	96-45-7	0.1	1	-	-	3.23E+09	4.59E+03	3.64E+04	6.35E+08	4.07E+03	2.36E+02
Ethyleneimine	151-56-4	-	1	3.29E+04	1.54E+05	3.23E+09	3.18E+00	-	4.43E+00	1.85E+00	-
Ethylphenol, 4-	123-07-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Ethylphthalyl Ethyl Glycolate	84-72-0	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+06
Express	101200-48-0	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+04
Famphur	52-85-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Fenamiphos	22224-92-6	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+02
Fenpropathrin	39515-41-8	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
Fluometuron	2164-17-2	0.1	1	-	-	3.23E+09	-	-	-	-	3.83E+04
Fluoranthene	206-44-0	0.13	1	-	-	3.23E+09	-	-	-	-	1.18E+05
Fluorene	86-73-7	0.13	1	3.88E+05	-	3.23E+09	-	-	-	-	1.18E+05

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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Endrin ketone	53494-70-5	-	-	-	
Epichlorohydrin	106-89-8	-	9.52E+02	9.03E+02	9.03E+02 nc
Epoxybutane, 1,2-	106-88-7	-	7.71E+03	7.71E+03	7.71E+03 nc
Ethanol	64-17-5	-	-	-	
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	-	-	-	
Ethephon	16672-87-0	1.17E+05	-	1.31E+04	1.31E+04 nc
Ethion	563-12-2	1.17E+04	-	1.31E+03	1.31E+03 nc
Ethoxy Propanol	52125-53-8	-	-	-	
Ethoxyethanol Acetate, 2-	111-15-9	-	1.86E+05	1.14E+05	1.14E+05 sat
Ethoxyethanol, 2-	110-80-5	-	9.91E+05	2.09E+05	2.09E+05 sat
Ethyl Acetate	141-78-6	-	3.04E+04	3.00E+04	3.00E+04 sat
Ethyl Acrylate	140-88-5	-	2.55E+03	2.18E+03	2.18E+03 nc
Ethyl Chloride	75-00-3	-	6.51E+05	6.51E+05	6.51E+05 sat
Ethyl Ether	60-29-7	-	-	5.90E+05	5.90E+05 sat
Ethyl Methacrylate	97-63-2	-	8.73E+04	6.57E+04	6.57E+04 sat
Ethyl methane sulfonate	62-50-0	-	-	-	
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	2.34E+02	-	2.62E+01	2.62E+01 nc
Ethylbenzene	100-41-4	-	2.85E+05	1.45E+05	5.60E+03 sat
Ethylene Cyanohydrin	109-78-4	1.64E+06	-	1.83E+05	1.83E+05 max
Ethylene Diamine	107-15-3	-	-	2.65E+05	2.65E+05 sat
Ethylene Glycol	107-21-1	4.67E+07	4.72E+10	5.24E+06	5.24E+06 max
Ethylene Glycol Monobutyl Ether	111-76-2	2.34E+06	1.89E+11	2.62E+05	2.62E+05 max
Ethylene Oxide	75-21-8	-	9.19E+03	9.19E+03	1.78E+02 ca*
Ethylene Thiourea	96-45-7	1.87E+03	-	2.10E+02	2.10E+02 nc
Ethyleneimine	151-56-4	-	-	-	1.85E+00 ca
Ethylphenol, 4-	123-07-9	-	-	-	
Ethylphthalyl Ethyl Glycolate	84-72-0	7.01E+07	-	7.86E+06	7.86E+06 max
Express	101200-48-0	1.87E+05	-	2.10E+04	2.10E+04 nc
Famphur	52-85-7	-	-	-	
Fenamiphos	22224-92-6	5.84E+03	-	6.55E+02	6.55E+02 nc
Fenpropathrin	39515-41-8	5.84E+05	-	6.55E+04	6.55E+04 nc
Fluometuron	2164-17-2	3.04E+05	-	3.40E+04	3.40E+04 nc
Fluoranthene	206-44-0	7.19E+05	-	1.01E+05	1.01E+05 max
Fluorene	86-73-7	7.19E+05	-	1.01E+05	1.01E+05 max

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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Fluoride	16984-48-8	No	No	-		-		4.00E-02	U	1.30E-02	U	1
Fluorine (Soluble Fluoride)	7782-41-4	No	No	-		-		6.00E-02	U	1.30E-02	U	1
Fluorobenzene	462-06-6	No	Yes	-		-		-		-		1
Fluorobiphenyl, 2-	321-60-8	No	Yes	-		-		-		-		1
Fluorophenol, 2-	367-12-4	No	Yes	-		-		-		-		1
Fluridone	59756-60-4	No	No	-		-		8.00E-02	U	-		1
Flurprimidol	56425-91-3	No	No	-		-		2.00E-02	U	-		1
Flutolanil	66332-96-5	No	No	-		-		6.00E-02	U	-		1
Fluvalinate	69409-94-5	No	No	-		-		1.00E-02	U	-		1
Folpet	133-07-3	No	No	3.50E-03	U	-		1.00E-01	U	-		1
Fomesafen	72178-02-0	No	No	1.90E-01	U	-		-		-		1
Fonofos	944-22-9	No	No	-		-		2.00E-03	U	-		1
Formaldehyde	50-00-0	No	Yes	-		1.30E-05	U	2.00E-01	U	9.83E-03	U	1
Formic Acid	64-18-6	No	Yes	-		-		9.00E-01	U	3.00E-04	U	1
Fosetyl-AL	39148-24-8	No	No	-		-		3.00E+00	U	-		1
Fuel Oil Number 2	68476-30-2	No	No	-		-		-		-		1
Furan	110-00-9	No	Yes	-		-		1.00E-03	U	-		1
Furazolidone	67-45-8	No	No	3.80E+00	U	-		-		-		1
Furfural	98-01-1	No	Yes	-		-		3.00E-03	U	5.00E-02	U	1
Furium	531-82-8	No	No	1.50E+00	U	4.30E-04	U	-		-		1
Furmecyclox	60568-05-0	No	No	3.00E-02	U	8.60E-06	U	-		-		1
Gadolinium	7440-54-2	No	No	-		-		-		-		1
Gallium	7440-55-3	No	No	-		-		-		-		1
Germanium	7440-56-4	No	No	-		-		-		-		1
Glufosinate, Ammonium	77182-82-2	No	No	-		-		4.00E-04	U	-		1
Glutaraldehyde	111-30-8	No	No	-		-		-		8.00E-05	U	1
Glycerol	56-81-5	No	No	-		-		-		-		1
Glycidyl	765-34-4	No	Yes	-		-		4.00E-04	U	1.00E-03	U	1
Glyphosate	1071-83-6	No	No	-		-		1.00E-01	U	-		1
Goal	42874-03-3	No	No	-		-		3.00E-03	U	-		1
Guanidine	113-00-8	No	Yes	-		-		1.00E-02	U	-		1
Guanidine Chloride	50-01-1	No	No	-		-		2.00E-02	U	-		1
Guanidine Nitrate	506-93-4	No	No	-		-		-		-		1
Guthion	86-50-0	No	No	-		-		3.00E-03	U	1.00E-02	U	1

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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Fluoride	16984-48-8	-	1	-	-	3.23E+09	-	-	-	-	1.18E+05
Fluorine (Soluble Fluoride)	7782-41-4	-	1	-	-	3.23E+09	-	-	-	-	1.77E+05
Fluorobenzene	462-06-6	-	1	6.49E+03	2.39E+03	3.23E+09	-	-	-	-	-
Fluorobiphenyl, 2-	321-60-8	-	1	1.08E+05	-	3.23E+09	-	-	-	-	-
Fluorophenol, 2-	367-12-4	-	1	2.93E+05	9.21E+04	3.23E+09	-	-	-	-	-
Fluridone	59756-60-4	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+05
Flurprimidol	56425-91-3	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Flutolanil	66332-96-5	0.1	1	-	-	3.23E+09	-	-	-	-	1.77E+05
Fluvalinate	69409-94-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Folpet	133-07-3	0.1	1	-	-	3.23E+09	5.90E+04	4.67E+05	-	5.24E+04	2.95E+05
Fomesafen	72178-02-0	0.1	1	-	-	3.23E+09	1.09E+03	8.61E+03	-	9.65E+02	-
Fonofos	944-22-9	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Formaldehyde	50-00-0	-	1	1.07E+05	4.24E+04	3.23E+09	-	-	2.11E+04	2.11E+04	5.90E+05
Formic Acid	64-18-6	-	1	1.28E+05	1.06E+05	3.23E+09	-	-	-	-	2.65E+06
Fosetyl-AL	39148-24-8	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+06
Fuel Oil Number 2	68476-30-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Furan	110-00-9	0.03	1	3.60E+03	6.22E+03	3.23E+09	-	-	-	-	2.95E+03
Furazolidone	67-45-8	0.1	1	-	-	3.23E+09	5.43E+01	4.31E+02	-	4.82E+01	-
Furfural	98-01-1	-	1	6.71E+04	1.01E+04	3.23E+09	-	-	-	-	8.85E+03
Furium	531-82-8	0.1	1	-	-	3.23E+09	1.38E+02	1.09E+03	1.92E+07	1.22E+02	-
Furmecyclox	60568-05-0	0.1	1	-	-	3.23E+09	6.88E+03	5.45E+04	9.61E+08	6.11E+03	-
Gadolinium	7440-54-2	-	1	-	-	3.23E+09	-	-	-	-	-
Gallium	7440-55-3	-	1	-	-	3.23E+09	-	-	-	-	-
Germanium	7440-56-4	-	1	-	-	3.23E+09	-	-	-	-	-
Glufosinate, Ammonium	77182-82-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+03
Glutaraldehyde	111-30-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Glycerol	56-81-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Glycidyl	765-34-4	-	1	1.01E+05	1.06E+05	3.23E+09	-	-	-	-	1.18E+03
Glyphosate	1071-83-6	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Goal	42874-03-3	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+03
Guanidine	113-00-8	-	1	2.00E+05	-	3.23E+09	-	-	-	-	2.95E+04
Guanidine Chloride	50-01-1	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Guanidine Nitrate	506-93-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Guthion	86-50-0	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+03

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Fluoride	16984-48-8	-	1.53E+09	1.18E+05	1.18E+05 max
Fluorine (Soluble Fluoride)	7782-41-4	-	1.53E+09	1.77E+05	1.77E+05 max
Fluorobenzene	462-06-6	-	-	-	
Fluorobiphenyl, 2-	321-60-8	-	-	-	
Fluorophenol, 2-	367-12-4	-	-	-	
Fluridone	59756-60-4	1.87E+06	-	2.10E+05	2.10E+05 max
Flurprimidol	56425-91-3	4.67E+05	-	5.24E+04	5.24E+04 nc
Flutolanil	66332-96-5	1.40E+06	-	1.57E+05	1.57E+05 max
Fluvalinate	69409-94-5	2.34E+05	-	2.62E+04	2.62E+04 nc
Folpet	133-07-3	2.34E+06	-	2.62E+05	5.24E+04 ca**
Fomesafen	72178-02-0	-	-	-	9.65E+02 ca
Fonofos	944-22-9	4.67E+04	-	5.24E+03	5.24E+03 nc
Formaldehyde	50-00-0	-	3.85E+04	3.61E+04	2.11E+04 ca**
Formic Acid	64-18-6	-	1.40E+03	1.40E+03	1.40E+03 nc
Fosetyl-AL	39148-24-8	7.01E+07	-	7.86E+06	7.86E+06 max
Fuel Oil Number 2	68476-30-2	-	-	-	
Furan	110-00-9	7.79E+04	-	2.84E+03	2.84E+03 nc
Furazolidone	67-45-8	-	-	-	4.82E+01 ca
Furfural	98-01-1	-	1.22E+05	8.25E+03	8.25E+03 nc
Furium	531-82-8	-	-	-	1.22E+02 ca
Furmecyclox	60568-05-0	-	-	-	6.11E+03 ca
Gadolinium	7440-54-2	-	-	-	
Gallium	7440-55-3	-	-	-	
Germanium	7440-56-4	-	-	-	
Glufosinate, Ammonium	77182-82-2	9.35E+03	-	1.05E+03	1.05E+03 nc
Glutaraldehyde	111-30-8	-	9.44E+06	9.44E+06	9.44E+06 max
Glycerol	56-81-5	-	-	-	
Glycidyl	765-34-4	-	3.70E+03	8.94E+02	8.94E+02 nc
Glyphosate	1071-83-6	2.34E+06	-	2.62E+05	2.62E+05 max
Goal	42874-03-3	7.01E+04	-	7.86E+03	7.86E+03 nc
Guanidine	113-00-8	-	-	2.95E+04	2.95E+04 nc
Guanidine Chloride	50-01-1	4.67E+05	-	5.24E+04	5.24E+04 nc
Guanidine Nitrate	506-93-4	-	-	-	
Guthion	86-50-0	7.01E+04	1.18E+09	7.86E+03	7.86E+03 nc

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
HCDD, 1,2,3,4,6,7,8,-	35822-46-9	No	Yes	1.30E+03	U	3.80E-01	U	1.00E-06	U	4.00E-06	U	1
Haloacetic acids	NA	No	No	-		-		-		-		1
Haloxyfop, Methyl	69806-40-2	No	No	-		-		5.00E-05	U	-		1
Harmony	79277-27-3	No	No	-		-		1.30E-02	U	-		1
Heptachlor	76-44-8	No	Yes	4.50E+00	U	1.30E-03	U	5.00E-04	U	-		1
Heptachlor Epoxide	1024-57-3	No	Yes	9.10E+00	U	2.60E-03	U	1.30E-05	U	-		1
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	No	Yes	1.30E+03	U	3.80E-01	U	7.00E-08	U	4.00E-06	U	1
Heptanal, n-	111-71-7	No	Yes	-		-		-		-		1
Heptane, N-	142-82-5	No	Yes	-		-		-		-		1
Heptanol, n-	111-70-6	No	Yes	-		-		-		-		1
Hexabromobenzene	87-82-1	No	Yes	-		-		2.00E-03	U	-		1
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	No	No	-		-		2.00E-04	U	-		1
Hexachlorobenzene	118-74-1	No	Yes	1.60E+00	U	4.60E-04	U	8.00E-04	U	-		1
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Hexachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 157)	69782-90-7	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	No	Yes	3.90E+03	U	1.14E+00	U	2.33E-08	U	1.33E-06	U	1
Hexachlorobutadiene	87-68-3	No	Yes	7.80E-02	U	2.20E-05	U	1.00E-03	U	-		1
Hexachlorocyclohexane, Alpha-	319-84-6	No	No	6.30E+00	U	1.80E-03	U	8.00E-03	U	-		1
Hexachlorocyclohexane, Beta-	319-85-7	No	No	1.80E+00	U	5.30E-04	U	-		-		1
Hexachlorocyclohexane, Delta-	319-86-8	No	No	-		-		-		-		1
Hexachlorocyclohexane, Epsilon	6108-10-7	No	No	-		-		-		-		1
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	No	No	1.10E+00	U	3.10E-04	U	3.00E-04	U	-		1
Hexachlorocyclohexane, Technical	608-73-1	No	No	1.80E+00	U	5.10E-04	U	-		-		1
Hexachlorocyclopentadiene	77-47-4	No	Yes	-		-		6.00E-03	U	2.00E-04	U	1
Hexachlorodibenzo-p-dioxin	34465-46-8	No	No	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Hexachlorodibenzo-p-dioxin, Mixture	NA	No	No	6.20E+03	U	1.30E+00	U	-		-		1
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Hexachloroethane	67-72-1	No	Yes	4.00E-02	U	1.10E-05	U	7.00E-04	U	3.00E-02	U	1
Hexachlorophene	70-30-4	No	No	-		-		3.00E-04	U	-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
HCDD, 1,2,3,4,6,7,8,-	35822-46-9	-	1	4.52E+06	-	3.23E+09	1.59E-01	-	3.04E+01	1.58E-01	2.95E+00
Haloacetic acids	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Haloxyfop, Methyl	69806-40-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+02
Harmony	79277-27-3	0.1	1	-	-	3.23E+09	-	-	-	-	3.83E+04
Heptachlor	76-44-8	-	1	6.62E+05	-	3.23E+09	4.59E+01	-	1.30E+03	4.43E+01	1.47E+03
Heptachlor Epoxide	1024-57-3	-	1	1.16E+06	-	3.23E+09	2.27E+01	-	1.14E+03	2.22E+01	3.83E+01
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	0.14	1	2.81E+06	-	3.23E+09	5.29E+01	3.00E+02	6.29E+03	4.47E+01	6.87E+01
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	0.03	1	1.15E+07	-	3.23E+09	1.59E-01	4.20E+00	7.74E+01	1.53E-01	2.06E-01
Heptanal, n-	111-71-7	-	1	1.08E+04	2.09E+02	3.23E+09	-	-	-	-	-
Heptane, N-	142-82-5	-	1	1.23E+03	5.79E+01	3.23E+09	-	-	-	-	-
Heptanol, n-	111-70-6	-	1	4.73E+04	3.78E+02	3.23E+09	-	-	-	-	-
Hexabromobenzene	87-82-1	-	1	5.24E+05	-	3.23E+09	-	-	-	-	5.90E+03
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+02
Hexachlorobenzene	118-74-1	-	1	9.37E+04	-	3.23E+09	1.29E+02	-	5.21E+02	1.03E+02	2.36E+03
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	0.14	1	1.98E+06	-	3.23E+09	5.29E+01	3.00E+02	4.43E+03	4.45E+01	6.87E+01
Hexachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 157)	69782-90-7	0.14	1	2.00E+06	-	3.23E+09	5.29E+01	3.00E+02	4.48E+03	4.45E+01	6.87E+01
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	0.14	1	2.13E+06	-	3.23E+09	5.29E+01	3.00E+02	4.77E+03	4.46E+01	6.87E+01
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	0.14	1	1.98E+06	-	3.23E+09	5.29E-02	3.00E-01	4.43E+00	4.45E-02	6.87E-02
Hexachlorobutadiene	87-68-3	-	1	1.49E+04	1.68E+01	3.23E+09	2.65E+03	-	1.73E+03	1.05E+03	2.95E+03
Hexachlorocyclohexane, Alpha-	319-84-6	0.1	1	-	-	3.23E+09	3.28E+01	2.60E+02	4.59E+06	2.91E+01	2.36E+04
Hexachlorocyclohexane, Beta-	319-85-7	0.1	1	-	-	3.23E+09	1.15E+02	9.09E+02	1.56E+07	1.02E+02	-
Hexachlorocyclohexane, Delta-	319-86-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Hexachlorocyclohexane, Epsilon	6108-10-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	0.04	1	-	-	3.23E+09	1.88E+02	3.72E+03	2.66E+07	1.79E+02	8.85E+02
Hexachlorocyclohexane, Technical	608-73-1	0.1	1	-	-	3.23E+09	1.15E+02	9.09E+02	1.62E+07	1.02E+02	-
Hexachlorocyclopentadiene	77-47-4	-	1	1.18E+04	1.57E+01	3.23E+09	-	-	-	-	1.77E+04
Hexachlorodibenzo-p-dioxin	34465-46-8	0.03	1	-	-	3.23E+09	1.59E-02	4.20E-01	2.17E+03	1.53E-02	2.06E-02
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	0.03	1	6.59E+06	-	3.23E+09	1.59E-02	4.20E-01	4.42E+00	1.52E-02	2.06E-02
Hexachlorodibenzo-p-dioxin, Mixture	NA	0.03	1	-	-	3.23E+09	3.33E-02	8.80E-01	6.35E+03	3.21E-02	-
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	0.03	1	5.38E+06	-	3.23E+09	1.59E-02	4.20E-01	3.61E+00	1.52E-02	2.06E-02
Hexachloroethane	67-72-1	-	1	1.10E+04	-	3.23E+09	5.16E+03	-	2.57E+03	1.71E+03	2.06E+03
Hexachlorophene	70-30-4	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
HCDD, 1,2,3,4,6,7,8,-	35822-46-9	-	6.59E+02	2.94E+00	1.58E-01 ca*
Haloacetic acids	NA	-	-	-	
Haloxyfop, Methyl	69806-40-2	1.17E+03	-	1.31E+02	1.31E+02 nc
Harmony	79277-27-3	3.04E+05	-	3.40E+04	3.40E+04 nc
Heptachlor	76-44-8	-	-	1.47E+03	4.43E+01 ca*
Heptachlor Epoxide	1024-57-3	-	-	3.83E+01	2.22E+01 ca**
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	3.89E+02	1.36E+05	5.84E+01	4.47E+01 ca**
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	5.45E+00	1.68E+03	1.99E-01	1.53E-01 ca**
Heptanal, n-	111-71-7	-	-	-	
Heptane, N-	142-82-5	-	-	-	
Heptanol, n-	111-70-6	-	-	-	
Hexabromobenzene	87-82-1	-	-	5.90E+03	5.90E+03 nc
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	4.67E+03	-	5.24E+02	5.24E+02 nc
Hexachlorobenzene	118-74-1	-	-	2.36E+03	1.03E+02 ca*
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	3.89E+02	9.59E+04	5.84E+01	4.45E+01 ca**
Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	3.89E+02	9.71E+04	5.84E+01	4.45E+01 ca**
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	3.89E+02	1.03E+05	5.84E+01	4.46E+01 ca**
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	3.89E-01	9.59E+01	5.84E-02	4.45E-02 ca**
Hexachlorobutadiene	87-68-3	-	-	2.95E+03	1.05E+03 sat
Hexachlorocyclohexane, Alpha-	319-84-6	1.87E+05	-	2.10E+04	2.91E+01 ca
Hexachlorocyclohexane, Beta-	319-85-7	-	-	-	1.02E+02 ca
Hexachlorocyclohexane, Delta-	319-86-8	-	-	-	
Hexachlorocyclohexane, Epsilon	6108-10-7	-	-	-	
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	1.75E+04	-	8.42E+02	1.79E+02 ca**
Hexachlorocyclohexane, Technical	608-73-1	-	-	-	1.02E+02 ca
Hexachlorocyclopentadiene	77-47-4	-	8.58E+01	8.54E+01	8.54E+01 sat
Hexachlorodibenzo-p-dioxin	34465-46-8	5.45E-01	4.72E+04	1.99E-02	1.53E-02 ca**
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	5.45E-01	9.61E+01	1.99E-02	1.52E-02 ca**
Hexachlorodibenzo-p-dioxin, Mixture	NA	-	-	-	3.21E-02 ca
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	5.45E-01	7.85E+01	1.99E-02	1.52E-02 ca**
Hexachloroethane	67-72-1	-	1.21E+04	1.76E+03	1.71E+03 ca**
Hexachlorophene	70-30-4	7.01E+03	-	7.86E+02	7.86E+02 nc

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Hexachloropropene	1888-71-7	No	Yes	-		-		-		-		1
Hexadecanoic Acid	57-10-3	No	Yes	-		-		-		-		1
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	No	No	1.10E-01	U	-		3.00E-03	U	-		1
Hexamethylene Diisocyanate, 1,6-	822-06-0	No	Yes	-		-		-		1.00E-05	U	1
Hexamethylphosphoramide	680-31-9	No	No	-		-		4.00E-04	U	-		1
Hexane, N-	110-54-3	No	Yes	-		-		6.00E-02	U	7.00E-01	U	1
Hexanedioic Acid	124-04-9	No	No	-		-		2.00E+00	U	-		1
Hexanol, n-	111-27-3	No	Yes	-		-		-		-		1
Hexanone, 2-	591-78-6	No	Yes	-		-		5.00E-03	U	3.00E-02	U	1
Hexazinone	51235-04-2	No	No	-		-		3.30E-02	U	-		1
HpCDD, 2,3,7,8-	37871-00-4	No	Yes	1.30E+03	U	3.80E-01	U	7.00E-08	U	4.00E-06	U	1
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	No	Yes	1.30E+03	U	3.80E-01	U	7.00E-08	U	4.00E-06	U	1
HpCDF, 2,3,7,8-	38998-75-3	No	Yes	1.30E+03	U	3.80E-01	U	7.00E-08	U	4.00E-06	U	1
HxCDD, 1,2,3,6,7,8-	57653-85-7	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDD, 1,2,3,7,8,9-	19408-74-3	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDF, 1,2,3,6,7,8-	57117-44-9	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDF, 1,2,3,7,8,9-	72918-21-9	No	No	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDF, 2,3,4,6,7,8-	60851-34-5	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDF, 2,3,7,8-	55684-94-1	No	No	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Hydrazine	302-01-2	No	Yes	3.00E+00	U	4.90E-03	U	-		3.00E-05	U	1
Hydrazine Sulfate	10034-93-2	No	No	3.00E+00	U	4.90E-03	U	-		-		1
Hydrogen Chloride	7647-01-0	No	Yes	-		-		-		2.00E-02	U	1
Hydrogen Cyanide	74-90-8	No	Yes	-		-		6.00E-04	U	8.00E-04	U	1
Hydrogen Fluoride	7664-39-3	No	Yes	-		-		4.00E-02	U	1.40E-02	U	1
Hydrogen Selenide	77830-70-5	No	No	-		-		-		-		1
Hydrogen Sulfate	12143-45-2	No	No	-		-		-		-		1
Hydrogen Sulfide	7783-06-4	No	Yes	-		-		-		2.00E-03	U	1
Hydroquinone	123-31-9	No	No	6.00E-02	U	-		4.00E-02	U	-		1
Imazalil	35554-44-0	No	No	-		-		1.30E-02	U	-		1
Imazaquin	81335-37-7	No	No	-		-		2.50E-01	U	-		1
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	No	7.30E-01	U	1.10E-04	U	-		-		1
Indium	7440-74-6	No	No	-		-		-		-		1
Iodide	20461-54-5	No	No	-		-		-		-		1
Iodine	7553-56-2	No	No	-		-		1.00E-02	U	-		1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Hexachloropropene	1888-71-7	-	1	1.48E+04	4.37E+01	3.23E+09	-	-	-	-	-
Hexadecanoic Acid	57-10-3	-	1	7.66E+05	-	3.23E+09	-	-	-	-	-
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	0.015	1	-	-	3.23E+09	1.88E+03	9.92E+04	-	1.84E+03	8.85E+03
Hexamethylene Diisocyanate, 1,6-	822-06-0	-	1	4.15E+05	5.19E+03	3.23E+09	-	-	-	-	-
Hexamethylphosphoramide	680-31-9	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+03
Hexane, N-	110-54-3	-	1	1.14E+03	1.41E+02	3.23E+09	-	-	-	-	1.77E+05
Hexanedioic Acid	124-04-9	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+06
Hexanol, n-	111-27-3	-	1	4.03E+04	9.98E+02	3.23E+09	-	-	-	-	-
Hexanone, 2-	591-78-6	-	1	1.83E+04	3.28E+03	3.23E+09	-	-	-	-	1.47E+04
Hexazinone	51235-04-2	0.1	1	-	-	3.23E+09	-	-	-	-	9.73E+04
HpCDD, 2,3,7,8-	37871-00-4	0.03	1	3.36E+06	-	3.23E+09	1.59E-01	4.20E+00	2.26E+01	1.52E-01	2.06E-01
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	0.03	1	1.15E+07	-	3.23E+09	1.59E-01	4.20E+00	7.74E+01	1.53E-01	2.06E-01
HpCDF, 2,3,7,8-	38998-75-3	0.03	1	1.15E+07	-	3.23E+09	1.59E-01	4.20E+00	7.74E+01	1.53E-01	2.06E-01
HxCDD, 1,2,3,6,7,8-	57653-85-7	0.03	1	6.59E+06	-	3.23E+09	1.59E-02	4.20E-01	4.42E+00	1.52E-02	2.06E-02
HxCDD, 1,2,3,7,8,9-	19408-74-3	0.03	1	6.59E+06	-	3.23E+09	1.59E-02	4.20E-01	4.42E+00	1.52E-02	2.06E-02
HxCDF, 1,2,3,6,7,8-	57117-44-9	0.03	1	5.38E+06	-	3.23E+09	1.59E-02	4.20E-01	3.61E+00	1.52E-02	2.06E-02
HxCDF, 1,2,3,7,8,9-	72918-21-9	0.03	1	-	-	3.23E+09	1.59E-02	4.20E-01	2.17E+03	1.53E-02	2.06E-02
HxCDF, 2,3,4,6,7,8-	60851-34-5	0.03	1	5.38E+06	-	3.23E+09	1.59E-02	4.20E-01	3.61E+00	1.52E-02	2.06E-02
HxCDF, 2,3,7,8-	55684-94-1	0.03	1	-	-	3.23E+09	1.59E-02	4.20E-01	2.17E+03	1.53E-02	2.06E-02
Hydrazine	302-01-2	-	1	-	-	3.23E+09	6.88E+01	-	1.69E+06	6.88E+01	-
Hydrazine Sulfate	10034-93-2	-	1	-	-	3.23E+09	6.88E+01	-	1.69E+06	6.88E+01	-
Hydrogen Chloride	7647-01-0	-	1	-	-	3.23E+09	-	-	-	-	-
Hydrogen Cyanide	74-90-8	-	1	7.20E+04	1.00E+07	3.23E+09	-	-	-	-	1.77E+03
Hydrogen Fluoride	7664-39-3	-	1	-	-	3.23E+09	-	-	-	-	1.18E+05
Hydrogen Selenide	77830-70-5	-	1	-	-	3.23E+09	-	-	-	-	-
Hydrogen Sulfate	12143-45-2	-	1	-	-	3.23E+09	-	-	-	-	-
Hydrogen Sulfide	7783-06-4	-	1	-	-	3.23E+09	-	-	-	-	-
Hydroquinone	123-31-9	0.1	1	-	-	3.23E+09	3.44E+03	2.73E+04	-	3.06E+03	1.18E+05
Imazalil	35554-44-0	0.1	1	-	-	3.23E+09	-	-	-	-	3.83E+04
Imazaquin	81335-37-7	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+05
Indeno[1,2,3-cd]pyrene	193-39-5	0.13	1	-	-	3.23E+09	2.83E+02	1.72E+03	7.51E+07	2.43E+02	-
Indium	7440-74-6	-	1	-	-	3.23E+09	-	-	-	-	-
Iodide	20461-54-5	-	1	-	-	3.23E+09	-	-	-	-	-
Iodine	7553-56-2	-	1	-	-	3.23E+09	-	-	-	-	2.95E+04

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Hexachloropropene	1888-71-7	-	-	-	
Hexadecanoic Acid	57-10-3	-	-	-	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	4.67E+05	-	8.68E+03	1.84E+03 ca**
Hexamethylene Diisocyanate, 1,6-	822-06-0	-	1.51E+02	1.51E+02	1.51E+02 nc
Hexamethylphosphoramide	680-31-9	9.35E+03	-	1.05E+03	1.05E+03 nc
Hexane, N-	110-54-3	-	2.92E+04	2.51E+04	2.51E+04 sat
Hexanedioic Acid	124-04-9	4.67E+07	-	5.24E+06	5.24E+06 max
Hexanol, n-	111-27-3	-	-	-	
Hexanone, 2-	591-78-6	-	2.01E+04	8.50E+03	8.50E+03 sat
Hexazinone	51235-04-2	7.71E+05	-	8.64E+04	8.64E+04 nc
HpCDD, 2,3,7,8-	37871-00-4	5.45E+00	4.90E+02	1.99E-01	1.52E-01 ca**
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	5.45E+00	1.68E+03	1.99E-01	1.53E-01 ca**
HpCDF, 2,3,7,8-	38998-75-3	5.45E+00	1.68E+03	1.99E-01	1.53E-01 ca**
HxCDD, 1,2,3,6,7,8-	57653-85-7	5.45E-01	9.61E+01	1.99E-02	1.52E-02 ca**
HxCDD, 1,2,3,7,8,9-	19408-74-3	5.45E-01	9.61E+01	1.99E-02	1.52E-02 ca**
HxCDF, 1,2,3,6,7,8-	57117-44-9	5.45E-01	7.85E+01	1.99E-02	1.52E-02 ca**
HxCDF, 1,2,3,7,8,9-	72918-21-9	5.45E-01	4.72E+04	1.99E-02	1.53E-02 ca**
HxCDF, 2,3,4,6,7,8-	60851-34-5	5.45E-01	7.85E+01	1.99E-02	1.52E-02 ca**
HxCDF, 2,3,7,8-	55684-94-1	5.45E-01	4.72E+04	1.99E-02	1.53E-02 ca**
Hydrazine	302-01-2	-	3.54E+06	3.54E+06	6.88E+01 ca
Hydrazine Sulfate	10034-93-2	-	-	-	6.88E+01 ca
Hydrogen Chloride	7647-01-0	-	2.36E+09	2.36E+09	2.36E+09 max
Hydrogen Cyanide	74-90-8	-	2.10E+03	9.61E+02	9.61E+02 nc
Hydrogen Fluoride	7664-39-3	-	1.65E+09	1.18E+05	1.18E+05 max
Hydrogen Selenide	77830-70-5	-	-	-	
Hydrogen Sulfate	12143-45-2	-	-	-	
Hydrogen Sulfide	7783-06-4	-	2.36E+08	2.36E+08	2.36E+08 max
Hydroquinone	123-31-9	9.35E+05	-	1.05E+05	3.06E+03 ca*
Imazalil	35554-44-0	3.04E+05	-	3.40E+04	3.40E+04 nc
Imazaquin	81335-37-7	5.84E+06	-	6.55E+05	6.55E+05 max
Indeno[1,2,3-cd]pyrene	193-39-5	-	-	-	2.43E+02 ca
Indium	7440-74-6	-	-	-	
Iodide	20461-54-5	-	-	-	
Iodine	7553-56-2	-	-	2.95E+04	2.95E+04 nc

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Iodomethane	74-88-4	No	Yes	-		-		-		-		1
Iodopropynyl Butylcarbamate (IPBC)	55406-53-6	No	No	-		-		-		-		1
Iprodione	36734-19-7	No	No	-		-		4.00E-02	U	-		1
Iron	7439-89-6	No	No	-		-		7.00E-01	U	-		1
Iron Sulfide	11126-12-8	No	No	-		-		-		-		1
Isobutyl Alcohol	78-83-1	No	Yes	-		-		3.00E-01	U	-		1
Isodrin	465-73-6	No	Yes	-		-		-		-		1
Isophorone	78-59-1	No	No	9.50E-04	U	-		2.00E-01	U	2.00E+00	U	1
Isopropalin	33820-53-0	No	Yes	-		-		1.50E-02	U	-		1
Isopropanol	67-63-0	No	Yes	-		-		2.00E+00	U	2.00E-01	U	1
Isopropyl Methyl Phosphonic Acid	1832-54-8	No	No	-		-		1.00E-01	U	-		1
Isopropyltoluene, p-	99-87-6	No	Yes	-		-		-		-		1
Isosafrole	120-58-1	No	Yes	-		-		-		-		1
Isoxaben	82558-50-7	No	No	-		-		5.00E-02	U	-		1
JP-4	50815-00-4	No	Yes	-		-		-		-		1
JP-5/JP-8	8002-20-6	No	Yes	-		-		-		-		1
JP-7	NA	No	Yes	-		-		-		3.00E-01	U	1
Kerb	23950-58-5	No	No	-		-		7.50E-02	U	-		1
Kerosene	8008-20-6	No	Yes	-		-		-		-		1
Lactofen	77501-63-4	No	No	-		-		2.00E-03	U	-		1
Lactonitrile	78-97-7	No	No	-		-		-		-		1
Lanthanum	7439-91-0	No	No	-		-		-		-		1
Lead Alkyls	NA	No	No	-		-		-		-		1
Lead Chromate	7758-97-6	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Lead Phosphate	7446-27-7	No	No	8.50E-03	U	1.20E-05	U	-		-		1
Lead acetate	301-04-2	No	No	2.80E-01	U	8.00E-05	U	-		-		1
Lead and Compounds	7439-92-1	No	No	-		-		-		-		1
Lead subacetate	1335-32-6	No	No	8.50E-03	U	1.20E-05	U	-		-		1
Linuron	330-55-2	No	No	-		-		2.00E-03	U	-		1
Lithium	7439-93-2	No	No	-		-		2.00E-03	U	-		1
Lithium Perchlorate	7791-03-9	No	No	-		-		7.00E-04	U	-		1
Londax	83055-99-6	No	No	-		-		2.00E-01	U	-		1
Lutetium	7439-94-3	No	No	-		-		-		-		1

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Iodomethane	74-88-4	-	1	2.55E+03	3.03E+03	3.23E+09	-	-	-	-	-
Iodopropynyl Butylcarbamate (IPBC)	55406-53-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Iprodione	36734-19-7	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+05
Iron	7439-89-6	-	1	-	-	3.23E+09	-	-	-	-	2.06E+06
Iron Sulfide	11126-12-8	-	1	-	-	3.23E+09	-	-	-	-	-
Isobutyl Alcohol	78-83-1	-	1	3.88E+04	1.00E+04	3.23E+09	-	-	-	-	8.85E+05
Isodrin	465-73-6	-	1	2.32E+06	-	3.23E+09	-	-	-	-	-
Isophorone	78-59-1	0.1	1	-	-	3.23E+09	2.17E+05	1.72E+06	-	1.93E+05	5.90E+05
Isopropalin	33820-53-0	-	1	5.78E+05	-	3.23E+09	-	-	-	-	4.42E+04
Isopropanol	67-63-0	-	1	3.83E+04	1.09E+05	3.23E+09	-	-	-	-	5.90E+06
Isopropyl Methyl Phosphonic Acid	1832-54-8	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Isopropyltoluene, p-	99-87-6	-	1	1.18E+04	1.62E+02	3.23E+09	-	-	-	-	-
Isosafrole	120-58-1	-	1	3.42E+03	2.04E+01	3.23E+09	-	-	-	-	-
Isoxaben	82558-50-7	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05
JP-4	50815-00-4	-	1	-	-	3.23E+09	-	-	-	-	-
JP-5/JP-8	8002-20-6	-	1	-	-	3.23E+09	-	-	-	-	-
JP-7	NA	-	1	-	-	3.23E+09	-	-	-	-	-
Kerb	23950-58-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.21E+05
Kerosene	8008-20-6	-	1	-	-	3.23E+09	-	-	-	-	-
Lactofen	77501-63-4	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Lactonitrile	78-97-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Lanthanum	7439-91-0	-	1	-	-	3.23E+09	-	-	-	-	-
Lead Alkyls	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Lead Chromate	7758-97-6	-	1	-	-	3.23E+09	4.13E+02	-	5.51E+04	4.10E+02	5.90E+04
Lead Phosphate	7446-27-7	-	1	-	-	3.23E+09	2.43E+04	-	6.88E+08	2.43E+04	-
Lead acetate	301-04-2	0.1	1	-	-	3.23E+09	7.37E+02	5.84E+03	1.03E+08	6.55E+02	-
Lead and Compounds	7439-92-1	-	1	-	-	3.23E+09	-	-	-	-	-
Lead subacetate	1335-32-6	0.1	1	-	-	3.23E+09	2.43E+04	1.92E+05	6.88E+08	2.16E+04	-
Linuron	330-55-2	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Lithium	7439-93-2	-	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Lithium Perchlorate	7791-03-9	-	1	-	-	3.23E+09	-	-	-	-	2.06E+03
Londax	83055-99-6	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+05
Lutetium	7439-94-3	-	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Iodomethane	74-88-4	-	-	-	
Iodopropynyl Butylcarbamate (IPBC)	55406-53-6	-	-	-	
Iprodione	36734-19-7	9.35E+05	-	1.05E+05	1.05E+05 max
Iron	7439-89-6	-	-	2.06E+06	2.06E+06 max
Iron Sulfide	11126-12-8	-	-	-	
Isobutyl Alcohol	78-83-1	-	-	8.85E+05	8.85E+05 sat
Isodrin	465-73-6	-	-	-	
Isophorone	78-59-1	4.67E+06	2.36E+11	5.24E+05	1.93E+05 max
Isopropalin	33820-53-0	-	-	4.42E+04	4.42E+04 nc
Isopropanol	67-63-0	-	2.79E+05	2.67E+05	2.67E+05 sat
Isopropyl Methyl Phosphonic Acid	1832-54-8	2.34E+06	-	2.62E+05	2.62E+05 max
Isopropyltoluene, p-	99-87-6	-	-	-	
Isosafrole	120-58-1	-	-	-	
Isoxaben	82558-50-7	1.17E+06	-	1.31E+05	1.31E+05 max
JP-4	50815-00-4	-	-	-	
JP-5/JP-8	8002-20-6	-	-	-	
JP-7	NA	-	3.54E+10	3.54E+10	3.54E+10 max
Kerb	23950-58-5	1.75E+06	-	1.96E+05	1.96E+05 max
Kerosene	8008-20-6	-	-	-	
Lactofen	77501-63-4	4.67E+04	-	5.24E+03	5.24E+03 nc
Lactonitrile	78-97-7	-	-	-	
Lanthanum	7439-91-0	-	-	-	
Lead Alkyls	NA	-	-	-	
Lead Chromate	7758-97-6	-	2.36E+07	5.88E+04	4.10E+02 ca
Lead Phosphate	7446-27-7	-	-	-	2.43E+04 ca
Lead acetate	301-04-2	-	-	-	6.55E+02 ca
Lead and Compounds	7439-92-1	-	-	8.00E+02	8.00E+02 nc
Lead subacetate	1335-32-6	-	-	-	2.16E+04 ca
Linuron	330-55-2	4.67E+04	-	5.24E+03	5.24E+03 nc
Lithium	7439-93-2	-	-	5.90E+03	5.90E+03 nc
Lithium Perchlorate	7791-03-9	-	-	2.06E+03	2.06E+03 nc
Londax	83055-99-6	4.67E+06	-	5.24E+05	5.24E+05 max
Lutetium	7439-94-3	-	-	-	

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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
MCPA	94-74-6	No	No	-		-		5.00E-04	U	-		1
MCPB	94-81-5	No	No	-		-		1.00E-02	U	-		1
MCPP	93-65-2	No	No	-		-		1.00E-03	U	-		1
Magnesium	7439-95-4	No	No	-		-		-		-		1
Magnesium Chlorate	10326-21-3	No	No	-		-		-		-		1
Malathion	121-75-5	No	No	-		-		2.00E-02	U	-		1
Maleic Anhydride	108-31-6	No	No	-		-		1.00E-01	U	7.00E-04	U	1
Maleic Hydrazide	123-33-1	No	No	-		-		5.00E-01	U	-		1
Malononitrile	109-77-3	No	No	-		-		1.00E-04	U	-		1
Mancozeb	8018-01-7	No	No	-		-		3.00E-02	U	-		1
Maneb	12427-38-2	No	No	-		-		5.00E-03	U	-		1
Manganese (Non-diet)	7439-96-5	No	No	-		-		2.40E-02	U	5.00E-05	U	0.04
Mechlorethamine	51-75-2	No	No	-		-		-		-		1
Mephosfolan	950-10-7	No	No	-		-		9.00E-05	U	-		1
Mepiquat Chloride	24307-26-4	No	No	-		-		3.00E-02	U	-		1
Mercuric Chloride	7487-94-7	No	No	-		-		3.00E-04	U	3.00E-04	U	0.07
Mercury (elemental)	7439-97-6	No	Yes	-		-		-		3.00E-04	U	1
Merphos	150-50-5	No	Yes	-		-		3.00E-05	U	-		1
Merphos Oxide	78-48-8	No	No	-		-		3.00E-05	U	-		1
Metalaxyl	57837-19-1	No	No	-		-		6.00E-02	U	-		1
Methacrylonitrile	126-98-7	No	Yes	-		-		1.00E-04	U	3.00E-02	U	1
Methamidophos	10265-92-6	No	No	-		-		5.00E-05	U	-		1
Methanol	67-56-1	No	Yes	-		-		2.00E+00	U	2.00E+01	U	1
Methapyrilene	91-80-5	No	No	-		-		-		-		1
Methidathion	950-37-8	No	No	-		-		1.00E-03	U	-		1
Methomyl	16752-77-5	No	No	-		-		2.50E-02	U	-		1
Methoxy-5-nitroaniline, 2-	99-59-2	No	No	4.90E-02	U	1.40E-05	U	-		-		1
Methoxychlor	72-43-5	No	No	-		-		5.00E-03	U	-		1
Methoxyethanol Acetate, 2-	110-49-6	No	Yes	-		-		8.00E-03	U	1.00E-03	U	1
Methoxyethanol, 2-	109-86-4	No	Yes	-		-		5.00E-03	U	2.00E-02	U	1
Methyl Acetate	79-20-9	No	Yes	-		-		1.00E+00	U	-		1
Methyl Acrylate	96-33-3	No	Yes	-		-		3.00E-02	U	2.00E-02	U	1
Methyl Ethyl Ketone (2-Butanone)	78-93-3	No	Yes	-		-		6.00E-01	U	5.00E+00	U	1
Methyl Hydrazine	60-34-4	No	Yes	-		1.00E-03	U	1.00E-03	U	2.00E-05	U	1

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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
MCPA	94-74-6	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+03
MCPB	94-81-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
MCPP	93-65-2	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Magnesium	7439-95-4	-	1	-	-	3.23E+09	-	-	-	-	-
Magnesium Chlorate	10326-21-3	-	1	-	-	3.23E+09	-	-	-	-	-
Malathion	121-75-5	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Maleic Anhydride	108-31-6	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Maleic Hydrazide	123-33-1	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+06
Malononitrile	109-77-3	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+02
Mancozeb	8018-01-7	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Maneb	12427-38-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Manganese (Non-diet)	7439-96-5	-	1	-	-	3.23E+09	-	-	-	-	7.08E+04
Mechlorethamine	51-75-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Mephosfolan	950-10-7	0.1	1	-	-	3.23E+09	-	-	-	-	2.65E+02
Mepiquat Chloride	24307-26-4	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Mercuric Chloride	7487-94-7	-	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Mercury (elemental)	7439-97-6	-	1	4.16E+04	3.13E+00	3.23E+09	-	-	-	-	-
Merphos	150-50-5	-	1	2.67E+06	-	3.23E+09	-	-	-	-	8.85E+01
Merphos Oxide	78-48-8	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+01
Metalaxyl	57837-19-1	0.1	1	-	-	3.23E+09	-	-	-	-	1.77E+05
Methacrylonitrile	126-98-7	-	1	9.38E+03	4.59E+03	3.23E+09	-	-	-	-	2.95E+02
Methamidophos	10265-92-6	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+02
Methanol	67-56-1	-	1	4.01E+04	1.06E+05	3.23E+09	-	-	-	-	5.90E+06
Methapyrilene	91-80-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Methidathion	950-37-8	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Methomyl	16752-77-5	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
Methoxy-5-nitroaniline, 2-	99-59-2	0.1	1	-	-	3.23E+09	4.21E+03	3.34E+04	5.90E+08	3.74E+03	-
Methoxychlor	72-43-5	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Methoxyethanol Acetate, 2-	110-49-6	-	1	1.71E+05	1.15E+05	3.23E+09	-	-	-	-	2.36E+04
Methoxyethanol, 2-	109-86-4	-	1	1.39E+05	1.06E+05	3.23E+09	-	-	-	-	1.47E+04
Methyl Acetate	79-20-9	-	1	1.12E+04	2.90E+04	3.23E+09	-	-	-	-	2.95E+06
Methyl Acrylate	96-33-3	-	1	9.62E+03	6.75E+03	3.23E+09	-	-	-	-	8.85E+04
Methyl Ethyl Ketone (2-Butanone)	78-93-3	-	1	1.68E+04	2.84E+04	3.23E+09	-	-	-	-	1.77E+06
Methyl Hydrazine	60-34-4	-	1	2.16E+05	1.80E+05	3.23E+09	-	-	5.51E+02	5.51E+02	2.95E+03

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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
MCPA	94-74-6	1.17E+04	-	1.31E+03	1.31E+03 nc
MCPB	94-81-5	2.34E+05	-	2.62E+04	2.62E+04 nc
MCPP	93-65-2	2.34E+04	-	2.62E+03	2.62E+03 nc
Magnesium	7439-95-4	-	-	-	
Magnesium Chlorate	10326-21-3	-	-	-	
Malathion	121-75-5	4.67E+05	-	5.24E+04	5.24E+04 nc
Maleic Anhydride	108-31-6	2.34E+06	8.26E+07	2.61E+05	2.61E+05 max
Maleic Hydrazide	123-33-1	1.17E+07	-	1.31E+06	1.31E+06 max
Malononitrile	109-77-3	2.34E+03	-	2.62E+02	2.62E+02 nc
Mancozeb	8018-01-7	7.01E+05	-	7.86E+04	7.86E+04 nc
Maneb	12427-38-2	1.17E+05	-	1.31E+04	1.31E+04 nc
Manganese (Non-diet)	7439-96-5	-	5.90E+06	6.99E+04	6.99E+04 nc
Mechlorethamine	51-75-2	-	-	-	
Mephosfolan	950-10-7	2.10E+03	-	2.36E+02	2.36E+02 nc
Mepiquat Chloride	24307-26-4	7.01E+05	-	7.86E+04	7.86E+04 nc
Mercuric Chloride	7487-94-7	-	3.54E+07	8.85E+02	8.85E+02 nc
Mercury (elemental)	7439-97-6	-	4.55E+02	4.55E+02	4.55E+02 sat
Merphos	150-50-5	-	-	8.85E+01	8.85E+01 nc
Merphos Oxide	78-48-8	7.01E+02	-	7.86E+01	7.86E+01 nc
Metalaxyl	57837-19-1	1.40E+06	-	1.57E+05	1.57E+05 max
Methacrylonitrile	126-98-7	-	1.03E+04	2.87E+02	2.87E+02 nc
Methamidophos	10265-92-6	1.17E+03	-	1.31E+02	1.31E+02 nc
Methanol	67-56-1	-	2.93E+07	4.91E+06	4.91E+06 sat
Methapyrilene	91-80-5	-	-	-	
Methidathion	950-37-8	2.34E+04	-	2.62E+03	2.62E+03 nc
Methomyl	16752-77-5	5.84E+05	-	6.55E+04	6.55E+04 nc
Methoxy-5-nitroaniline, 2-	99-59-2	-	-	-	3.74E+03 ca
Methoxychlor	72-43-5	1.17E+05	-	1.31E+04	1.31E+04 nc
Methoxyethanol Acetate, 2-	110-49-6	-	6.23E+03	4.93E+03	4.93E+03 nc
Methoxyethanol, 2-	109-86-4	-	1.02E+05	1.29E+04	1.29E+04 nc
Methyl Acetate	79-20-9	-	-	2.95E+06	2.95E+06 sat
Methyl Acrylate	96-33-3	-	7.02E+03	6.50E+03	6.50E+03 nc
Methyl Ethyl Ketone (2-Butanone)	78-93-3	-	3.07E+06	1.12E+06	1.12E+06 sat
Methyl Hydrazine	60-34-4	-	1.57E+02	1.49E+02	1.49E+02 nc

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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	No	Yes	-		-		8.00E-02	U	3.00E+00	U	1
Methyl Isocyanate	624-83-9	No	Yes	-		-		-		1.00E-03	U	1
Methyl Mercaptan	74-93-1	No	Yes	-		-		-		-		1
Methyl Mercury	22967-92-6	No	No	-		-		1.00E-04	U	-		1
Methyl Methacrylate	80-62-6	No	Yes	-		-		1.40E+00	U	7.00E-01	U	1
Methyl Parathion	298-00-0	No	No	-		-		2.50E-04	U	-		1
Methyl Phosphonic Acid	993-13-5	No	No	-		-		6.00E-02	U	-		1
Methyl Styrene (Mixed Isomers)	25013-15-4	No	Yes	-		-		6.00E-03	U	4.00E-02	U	1
Methyl dicyclohexylamine, n-	7560-83-0	No	Yes	-		-		-		-		1
Methyl methanesulfonate	66-27-3	No	No	9.90E-02	U	2.80E-05	U	-		-		1
Methyl tert-Butyl Ether (MTBE)	1634-04-4	No	Yes	1.80E-03	U	2.60E-07	U	-		3.00E+00	U	1
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	No	No	-		-		3.00E-04	U	-		1
Methyl-2-Pentanol, 4-	108-11-2	No	Yes	-		-		-		-		1
Methyl-5-Nitroaniline, 2-	99-55-8	No	No	9.00E-03	U	-		2.00E-02	U	-		1
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	No	No	8.30E+00	U	2.40E-03	U	-		-		1
Methylaniline Hydrochloride, 2-	636-21-5	No	No	1.30E-01	U	3.70E-05	U	-		-		1
Methylarsonic acid	124-58-3	No	No	-		-		1.00E-02	U	-		1
Methylaziridine, 2-	75-55-8	No	Yes	-		-		-		-		1
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	No	No	-		-		2.00E-04	U	-		1
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	No	No	1.00E-01	U	-		3.00E-04	U	-		1
Methylcholanthrene, 3-	56-49-5	Yes	No	2.20E+01	U	6.30E-03	U	-		-		1
Methylcyclohexane	108-87-2	No	Yes	-		-		-		-		1
Methylcyclohexylamine, n-	100-60-7	No	Yes	-		-		-		-		1
Methylcyclopentane	96-37-7	No	Yes	-		-		-		-		1
Methylene Chloride	75-09-2	Yes	Yes	2.00E-03	U	1.00E-08	U	6.00E-03	U	6.00E-01	U	1
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	Yes	No	1.00E-01	U	4.30E-04	U	2.00E-03	U	-		1
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	No	No	4.60E-02	U	1.30E-05	U	-		-		1
Methylenebisbenzenamine, 4,4'-	101-77-9	No	No	1.60E+00	U	4.60E-04	U	-		2.00E-02	U	1
Methylenediphenyl Diisocyanate	101-68-8	No	No	-		-		-		6.00E-04	U	1
Methylisothiocyanate	556-61-6	No	Yes	-		-		-		-		1
Methylnaphthalene	1321-94-4	No	Yes	-		-		-		-		1

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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	-	1	1.46E+04	3.36E+03	3.23E+09	-	-	-	-	2.36E+05
Methyl Isocyanate	624-83-9	-	1	6.08E+03	1.67E+04	3.23E+09	-	-	-	-	-
Methyl Mercaptan	74-93-1	-	1	2.46E+03	3.13E+03	3.23E+09	-	-	-	-	-
Methyl Mercury	22967-92-6	-	1	-	-	3.23E+09	-	-	-	-	2.95E+02
Methyl Methacrylate	80-62-6	-	1	8.75E+03	2.36E+03	3.23E+09	-	-	-	-	4.13E+06
Methyl Parathion	298-00-0	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+02
Methyl Phosphonic Acid	993-13-5	0.1	1	-	-	3.23E+09	-	-	-	-	1.77E+05
Methyl Styrene (Mixed Isomers)	25013-15-4	-	1	1.65E+04	3.93E+02	3.23E+09	-	-	-	-	1.77E+04
Methyl dicyclohexylamine, n-	7560-83-0	-	1	6.54E+04	-	3.23E+09	-	-	-	-	-
Methyl methanesulfonate	66-27-3	0.1	1	-	-	3.23E+09	2.09E+03	1.65E+04	2.95E+08	1.85E+03	-
Methyl tert-Butyl Ether (MTBE)	1634-04-4	-	1	6.76E+03	8.88E+03	3.23E+09	1.15E+05	-	6.65E+04	4.21E+04	-
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Methyl-2-Pentanol, 4-	108-11-2	-	1	2.37E+04	2.45E+03	3.23E+09	-	-	-	-	-
Methyl-5-Nitroaniline, 2-	99-55-8	0.1	1	-	-	3.23E+09	2.29E+04	1.82E+05	-	2.04E+04	5.90E+04
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	0.1	1	-	-	3.23E+09	2.49E+01	1.97E+02	3.44E+06	2.21E+01	-
Methylaniline Hydrochloride, 2-	636-21-5	0.1	1	-	-	3.23E+09	1.59E+03	1.26E+04	2.23E+08	1.41E+03	-
Methylarsonic acid	124-58-3	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Methylaziridine, 2-	75-55-8	-	1	4.41E+04	1.87E+05	3.23E+09	-	-	-	-	-
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+02
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	0.1	1	-	-	3.23E+09	2.06E+03	1.64E+04	-	1.83E+03	8.85E+02
Methylcholanthrene, 3-	56-49-5	0.1	1	-	-	3.23E+09	9.38E+00	7.44E+01	1.31E+06	8.33E+00	-
Methylcyclohexane	108-87-2	-	1	1.37E+03	6.77E+01	3.23E+09	-	-	-	-	-
Methylcyclohexylamine, n-	100-60-7	-	1	4.39E+04	2.81E+04	3.23E+09	-	-	-	-	-
Methylcyclopentane	96-37-7	-	1	1.22E+03	1.54E+02	3.23E+09	-	-	-	-	-
Methylene Chloride	75-09-2	-	1	3.02E+03	3.32E+03	3.23E+09	1.03E+05	-	7.72E+05	9.11E+04	1.77E+04
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	0.1	1	-	-	3.23E+09	2.06E+03	1.64E+04	1.92E+07	1.83E+03	5.90E+03
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	0.1	1	-	-	3.23E+09	4.49E+03	3.56E+04	6.35E+08	3.99E+03	-
Methylenebisbenzenamine, 4,4'-	101-77-9	0.1	1	-	-	3.23E+09	1.29E+02	1.02E+03	1.80E+07	1.15E+02	-
Methylenediphenyl Diisocyanate	101-68-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Methylisothiocyanate	556-61-6	-	1	2.04E+04	-	3.23E+09	-	-	-	-	-
Methylnaphthalene	1321-94-4	-	1	8.08E+04	-	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	-	1.60E+06	2.06E+05	2.06E+05 sat
Methyl Isocyanate	624-83-9	-	2.22E+02	2.22E+02	2.22E+02 nc
Methyl Mercaptan	74-93-1	-	-	-	
Methyl Mercury	22967-92-6	-	-	2.95E+02	2.95E+02 nc
Methyl Methacrylate	80-62-6	-	2.24E+05	2.12E+05	2.12E+05 sat
Methyl Parathion	298-00-0	5.84E+03	-	6.55E+02	6.55E+02 nc
Methyl Phosphonic Acid	993-13-5	1.40E+06	-	1.57E+05	1.57E+05 max
Methyl Styrene (Mixed Isomers)	25013-15-4	-	2.42E+04	1.02E+04	1.02E+04 sat
Methyl dicyclohexylamine, n-	7560-83-0	-	-	-	
Methyl methanesulfonate	66-27-3	-	-	-	1.85E+03 ca
Methyl tert-Butyl Ether (MTBE)	1634-04-4	-	7.41E+05	7.41E+05	4.21E+04 sat
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	7.01E+03	-	7.86E+02	7.86E+02 nc
Methyl-2-Pentanol, 4-	108-11-2	-	-	-	
Methyl-5-Nitroaniline, 2-	99-55-8	4.67E+05	-	5.24E+04	2.04E+04 ca**
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	-	-	-	2.21E+01 ca
Methylaniline Hydrochloride, 2-	636-21-5	-	-	-	1.41E+03 ca
Methylarsonic acid	124-58-3	2.34E+05	-	2.62E+04	2.62E+04 nc
Methylaziridine, 2-	75-55-8	-	-	-	
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	4.67E+03	-	5.24E+02	5.24E+02 nc
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	7.01E+03	-	7.86E+02	7.86E+02 nc
Methylcholanthrene, 3-	56-49-5	-	-	-	8.33E+00 ca
Methylcyclohexane	108-87-2	-	-	-	
Methylcyclohexylamine, n-	100-60-7	-	-	-	
Methylcyclopentane	96-37-7	-	-	-	
Methylene Chloride	75-09-2	-	6.62E+04	1.40E+04	1.40E+04 sat
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	4.67E+04	-	5.24E+03	1.83E+03 ca**
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	-	-	-	3.99E+03 ca
Methylenebisbenzenamine, 4,4'-	101-77-9	-	2.36E+09	2.36E+09	1.15E+02 ca
Methylenediphenyl Diisocyanate	101-68-8	-	7.08E+07	7.08E+07	7.08E+07 max
Methylisothiocyanate	556-61-6	-	-	-	
Methylnaphthalene	1321-94-4	-	-	-	

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Methylnaphthalene, 1-	90-12-0	No	Yes	2.90E-02	U	-		7.00E-02	U	-		1
Methylnaphthalene, 2-	91-57-6	No	Yes	-		-		4.00E-03	U	-		1
Methylstyrene, Alpha-	98-83-9	No	Yes	-		-		7.00E-02	U	-		1
Methyltriethyl Lead	1762-28-3	No	Yes	-		-		-		-		1
Metolachlor	51218-45-2	No	No	-		-		1.50E-01	U	-		1
Metribuzin	21087-64-9	No	No	-		-		2.50E-02	U	-		1
Mineral oils	8012-95-1	No	Yes	-		-		3.00E+00	U	-		1
Mirex	2385-85-5	No	Yes	1.80E+01	U	5.10E-03	U	2.00E-04	U	-		1
Molinate	2212-67-1	No	No	-		-		2.00E-03	U	-		1
Molybdenum	7439-98-7	No	No	-		-		5.00E-03	U	-		1
Monoaluminum phosphate	13530-50-2	No	No	-		-		4.86E+01	U	-		1
Monoammonium phosphate	7722-76-1	No	No	-		-		4.86E+01	U	-		1
Monobutyltin Compounds	NA	No	No	-		-		-		-		1
Monocalcium phosphate	7758-23-8	No	No	-		-		4.86E+01	U	-		1
Monochloramine	10599-90-3	No	No	-		-		1.00E-01	U	-		1
Monochlorobutanes	25154-42-1	No	No	-		-		-		-		1
Monochlorophenols (total)	NA	No	No	-		-		-		-		1
Monocyclic aromatic hydrocarbons (total)	NA	No	No	-		-		-		-		1
Monomagnesium phosphate	7757-86-0	No	No	-		-		4.86E+01	U	-		1
Monomethylaniline	100-61-8	No	No	-		-		2.00E-03	U	-		1
Monopotassium phosphate	7778-77-0	No	No	-		-		4.86E+01	U	-		1
Monosodium phosphate	7558-80-7	No	No	-		-		4.86E+01	U	-		1
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	No	No	-		-		3.00E-04	U	-		1
N-Methyl dithiocarbamate	137-42-8	No	No	-		-		-		-		1
Naled	300-76-5	No	Yes	-		-		2.00E-03	U	-		1
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	No	Yes	-		-		3.00E-02	U	1.00E-01	U	1
Naphthalene	91-20-3	No	Yes	-		3.40E-05	U	2.00E-02	U	3.00E-03	U	1
Naphthol, 2-	135-19-3	No	No	-		-		-		-		1
Naphthoquinone, 1,4-	130-15-4	No	No	-		-		-		-		1
Naphthylamine, 1-	134-32-7	No	No	-		-		-		-		1
Naphthylamine, 2-	91-59-8	No	No	1.80E+00	U	0.00E+00	U	-		-		1
Napropamide	15299-99-7	No	No	-		-		1.00E-01	U	-		1
Neodymium Chloride (Stable, Nonradioactive)	10024-93-8	No	No	-		-		-		-		1
Niagara Blue 4B	2429-74-5	No	No	-		-		-		-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Methylnaphthalene, 1-	90-12-0	0.13	1	8.09E+04	-	3.23E+09	7.12E+03	4.34E+04	-	6.12E+03	2.06E+05
Methylnaphthalene, 2-	91-57-6	0.13	1	8.00E+04	-	3.23E+09	-	-	-	-	1.18E+04
Methylstyrene, Alpha-	98-83-9	-	1	1.77E+04	5.00E+02	3.23E+09	-	-	-	-	2.06E+05
Methyltriethyl Lead	1762-28-3	-	1	2.24E+03	4.81E+03	3.23E+09	-	-	-	-	-
Metolachlor	51218-45-2	0.1	1	-	-	3.23E+09	-	-	-	-	4.42E+05
Metribuzin	21087-64-9	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
Mineral oils	8012-95-1	-	1	1.90E+03	3.41E-01	3.23E+09	-	-	-	-	8.85E+06
Mirex	2385-85-5	-	1	1.18E+06	-	3.23E+09	1.15E+01	-	5.92E+02	1.13E+01	5.90E+02
Molinate	2212-67-1	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Molybdenum	7439-98-7	-	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Monoaluminum phosphate	13530-50-2	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Monoammonium phosphate	7722-76-1	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Monobutyltin Compounds	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Monocalcium phosphate	7758-23-8	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Monochloramine	10599-90-3	-	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Monochlorobutanes	25154-42-1	0.1	1	-	-	3.23E+09	-	-	-	-	-
Monochlorophenols (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Monocyclic aromatic hydrocarbons (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Monomagnesium phosphate	7757-86-0	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Monomethylaniline	100-61-8	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Monopotassium phosphate	7778-77-0	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Monosodium phosphate	7558-80-7	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02
N-Methyl dithiocarbamate	137-42-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Naled	300-76-5	-	1	7.87E+04	-	3.23E+09	-	-	-	-	5.90E+03
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	-	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Naphthalene	91-20-3	0.13	1	6.38E+04	-	3.23E+09	-	-	4.79E+03	4.79E+03	5.90E+04
Naphthol, 2-	135-19-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Naphthoquinone, 1,4-	130-15-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Naphthylamine, 1-	134-32-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Naphthylamine, 2-	91-59-8	0.1	1	-	-	3.23E+09	1.15E+02	9.09E+02	-	1.02E+02	-
Napropamide	15299-99-7	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Neodymium Chloride (Stable, Nonradioactive)	10024-93-8	-	1	-	-	3.23E+09	-	-	-	-	-
Niagara Blue 4B	2429-74-5	0.1	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Methylnaphthalene, 1-	90-12-0	1.26E+06	-	1.77E+05	6.12E+03 ca*
Methylnaphthalene, 2-	91-57-6	7.19E+04	-	1.01E+04	1.01E+04 nc
Methylstyrene, Alpha-	98-83-9	-	-	2.06E+05	2.06E+05 sat
Methyltriethyl Lead	1762-28-3	-	-	-	
Metolachlor	51218-45-2	3.51E+06	-	3.93E+05	3.93E+05 max
Metribuzin	21087-64-9	5.84E+05	-	6.55E+04	6.55E+04 nc
Mineral oils	8012-95-1	-	-	8.85E+06	8.85E+06 sat
Mirex	2385-85-5	-	-	5.90E+02	1.13E+01 ca*
Molinate	2212-67-1	4.67E+04	-	5.24E+03	5.24E+03 nc
Molybdenum	7439-98-7	-	-	1.47E+04	1.47E+04 nc
Monoaluminum phosphate	13530-50-2	-	-	1.43E+08	1.43E+08 max
Monoammonium phosphate	7722-76-1	-	-	1.43E+08	1.43E+08 max
Monobutyltin Compounds	NA	-	-	-	
Monocalcium phosphate	7758-23-8	-	-	1.43E+08	1.43E+08 max
Monochloramine	10599-90-3	-	-	2.95E+05	2.95E+05 max
Monochlorobutanes	25154-42-1	-	-	-	
Monochlorophenols (total)	NA	-	-	-	
Monocyclic aromatic hydrocarbons (total)	NA	-	-	-	
Monomagnesium phosphate	7757-86-0	-	-	1.43E+08	1.43E+08 max
Monomethylaniline	100-61-8	4.67E+04	-	5.24E+03	5.24E+03 nc
Monopotassium phosphate	7778-77-0	-	-	1.43E+08	1.43E+08 max
Monosodium phosphate	7558-80-7	-	-	1.43E+08	1.43E+08 max
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	7.01E+03	-	7.86E+02	7.86E+02 nc
N-Methyl dithiocarbamate	137-42-8	-	-	-	
Naled	300-76-5	-	-	5.90E+03	5.90E+03 nc
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	-	1.18E+10	8.85E+04	8.85E+04 nc
Naphthalene	91-20-3	3.60E+05	6.99E+03	6.14E+03	4.79E+03 ca**
Naphthol, 2-	135-19-3	-	-	-	
Naphthoquinone, 1,4-	130-15-4	-	-	-	
Naphthylamine, 1-	134-32-7	-	-	-	
Naphthylamine, 2-	91-59-8	-	-	-	1.02E+02 ca
Napropamide	15299-99-7	2.34E+06	-	2.62E+05	2.62E+05 max
Neodymium Chloride (Stable, Nonradioactive)	10024-93-8	-	-	-	
Niagara Blue 4B	2429-74-5	-	-	-	

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Nickel Acetate	373-02-4	No	No	-		2.60E-04	U	1.10E-02	U	1.40E-05	U	1
Nickel Carbonate	3333-67-3	No	No	-		2.60E-04	U	1.10E-02	U	1.40E-05	U	1
Nickel Carbonyl	13463-39-3	No	Yes	-		2.60E-04	U	1.10E-02	U	1.40E-05	U	1
Nickel Hydroxide	12054-48-7	No	No	-		2.60E-04	U	1.10E-02	U	1.40E-05	U	0.04
Nickel Oxide	1313-99-1	No	No	-		2.60E-04	U	1.10E-02	U	2.00E-05	U	0.04
Nickel Refinery Dust	NA	No	No	-		2.40E-04	U	1.10E-02	U	1.40E-05	U	0.04
Nickel Soluble Salts	7440-02-0	No	No	-		2.60E-04	U	2.00E-02	U	9.00E-05	U	0.04
Nickel Subsulfide	12035-72-2	No	No	1.70E+00	U	4.80E-04	U	1.10E-02	U	1.40E-05	U	0.04
Nickelocene	1271-28-9	No	No	-		2.60E-04	U	1.10E-02	U	1.40E-05	U	1
Nicotinonitrile	100-54-9	No	No	-		-		-		-		1
Niobium	7440-03-1	No	No	-		-		-		-		1
Nitrapyrin	1929-82-4	No	Yes	-		-		-		-		1
Nitrate	14797-55-8	No	No	-		-		1.60E+00	U	-		1
Nitrate + Nitrite (as N)	NA	No	No	-		-		-		-		1
Nitric Acid	7697-37-2	No	No	-		-		-		-		1
Nitric Oxide	10102-43-9	No	Yes	-		-		-		-		1
Nitrite	14797-65-0	No	No	-		-		1.00E-01	U	-		1
Nitroaniline, 2-	88-74-4	No	No	-		-		1.00E-02	U	5.00E-05	U	1
Nitroaniline, 3-	99-09-2	No	No	-		-		-		-		1
Nitroaniline, 4-	100-01-6	No	No	2.00E-02	U	-		4.00E-03	U	6.00E-03	U	1
Nitrobenzene	98-95-3	No	Yes	-		4.00E-05	U	2.00E-03	U	9.00E-03	U	1
Nitrobiphenyl, 4-	92-93-3	No	No	-		-		-		-		1
Nitrocellulose	9004-70-0	No	No	-		-		3.00E+03	U	-		1
Nitrodiphenylamine, 2-	119-75-5	No	No	-		-		-		-		1
Nitrofurantoin	67-20-9	No	No	-		-		7.00E-02	U	-		1
Nitrofurazone	59-87-0	No	No	1.30E+00	U	3.70E-04	U	-		-		1
Nitrogen Dioxide	10102-44-0	No	Yes	-		-		-		-		1
Nitroglycerin	55-63-0	No	No	1.70E-02	U	-		1.00E-04	U	-		1
Nitroguanidine	556-88-7	No	No	-		-		1.00E-01	U	-		1
Nitromethane	75-52-5	No	Yes	-		8.80E-06	U	-		5.00E-03	U	1
Nitrophenol, 2-	88-75-5	No	Yes	-		-		-		-		1
Nitrophenol, 2-amino-4-	99-57-0	No	No	-		-		-		-		1
Nitrophenol, 3-	554-84-7	No	No	-		-		-		-		1
Nitrophenol, 4-	100-02-7	No	No	-		-		-		-		1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Nickel Acetate	373-02-4	0.1	1	-	-	3.23E+09	-	-	3.18E+07	3.18E+07	3.24E+04
Nickel Carbonate	3333-67-3	0.1	1	-	-	3.23E+09	-	-	3.18E+07	3.18E+07	3.24E+04
Nickel Carbonyl	13463-39-3	-	1	-	-	3.23E+09	-	-	3.18E+07	3.18E+07	3.24E+04
Nickel Hydroxide	12054-48-7	-	1	-	-	3.23E+09	-	-	3.18E+07	3.18E+07	3.24E+04
Nickel Oxide	1313-99-1	-	1	-	-	3.23E+09	-	-	3.18E+07	3.18E+07	3.24E+04
Nickel Refinery Dust	NA	-	1	-	-	3.23E+09	-	-	3.44E+07	3.44E+07	3.24E+04
Nickel Soluble Salts	7440-02-0	-	1	-	-	3.23E+09	-	-	3.18E+07	3.18E+07	5.90E+04
Nickel Subsulfide	12035-72-2	-	1	-	-	3.23E+09	1.21E+02	-	1.72E+07	1.21E+02	3.24E+04
Nickelocene	1271-28-9	0.1	1	-	-	3.23E+09	-	-	3.18E+07	3.18E+07	3.24E+04
Nicotinonitrile	100-54-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Niobium	7440-03-1	-	1	-	-	3.23E+09	-	-	-	-	-
Nitrapyrin	1929-82-4	-	1	3.05E+05	-	3.23E+09	-	-	-	-	-
Nitrate	14797-55-8	-	1	-	-	3.23E+09	-	-	-	-	4.72E+06
Nitrate + Nitrite (as N)	NA	-	1	-	-	3.23E+09	-	-	-	-	-
Nitric Acid	7697-37-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Nitric Oxide	10102-43-9	-	1	-	-	3.23E+09	-	-	-	-	-
Nitrite	14797-65-0	-	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Nitroaniline, 2-	88-74-4	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Nitroaniline, 3-	99-09-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Nitroaniline, 4-	100-01-6	0.1	1	-	-	3.23E+09	1.03E+04	8.18E+04	-	9.17E+03	1.18E+04
Nitrobenzene	98-95-3	-	1	1.01E+05	3.04E+03	3.23E+09	-	-	6.44E+03	6.44E+03	5.90E+03
Nitrobiphenyl, 4-	92-93-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Nitrocellulose	9004-70-0	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+09
Nitrodiphenylamine, 2-	119-75-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Nitrofurantoin	67-20-9	0.1	1	-	-	3.23E+09	-	-	-	-	2.06E+05
Nitrofurazone	59-87-0	0.1	1	-	-	3.23E+09	1.59E+02	1.26E+03	2.23E+07	1.41E+02	-
Nitrogen Dioxide	10102-44-0	-	1	-	-	3.23E+09	-	-	-	-	-
Nitroglycerin	55-63-0	0.1	1	-	-	3.23E+09	1.21E+04	9.62E+04	-	1.08E+04	2.95E+02
Nitroguanidine	556-88-7	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Nitromethane	75-52-5	-	1	2.34E+04	1.80E+04	3.23E+09	-	-	6.78E+03	6.78E+03	-
Nitrophenol, 2-	88-75-5	-	1	1.65E+05	-	3.23E+09	-	-	-	-	-
Nitrophenol, 2-amino-4-	99-57-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
Nitrophenol, 3-	554-84-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Nitrophenol, 4-	100-02-7	0.1	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Nickel Acetate	373-02-4	2.57E+05	1.65E+06	2.83E+04	2.83E+04 nc
Nickel Carbonate	3333-67-3	2.57E+05	1.65E+06	2.83E+04	2.83E+04 nc
Nickel Carbonyl	13463-39-3	-	1.65E+06	3.18E+04	3.18E+04 nc
Nickel Hydroxide	12054-48-7	-	1.65E+06	3.18E+04	3.18E+04 nc
Nickel Oxide	1313-99-1	-	2.36E+06	3.20E+04	3.20E+04 nc
Nickel Refinery Dust	NA	-	1.65E+06	3.18E+04	3.18E+04 nc
Nickel Soluble Salts	7440-02-0	-	1.06E+07	5.87E+04	5.87E+04 nc
Nickel Subsulfide	12035-72-2	-	1.65E+06	3.18E+04	1.21E+02 ca
Nickelocene	1271-28-9	2.57E+05	1.65E+06	2.83E+04	2.83E+04 nc
Nicotinonitrile	100-54-9	-	-	-	
Niobium	7440-03-1	-	-	-	
Nitrapyrin	1929-82-4	-	-	-	
Nitrate	14797-55-8	-	-	4.72E+06	4.72E+06 max
Nitrate + Nitrite (as N)	NA	-	-	-	
Nitric Acid	7697-37-2	-	-	-	
Nitric Oxide	10102-43-9	-	-	-	
Nitrite	14797-65-0	-	-	2.95E+05	2.95E+05 max
Nitroaniline, 2-	88-74-4	2.34E+05	5.90E+06	2.61E+04	2.61E+04 nc
Nitroaniline, 3-	99-09-2	-	-	-	
Nitroaniline, 4-	100-01-6	9.35E+04	7.08E+08	1.05E+04	9.17E+03 ca**
Nitrobenzene	98-95-3	-	3.31E+04	5.01E+03	5.01E+03 sat
Nitrobiphenyl, 4-	92-93-3	-	-	-	
Nitrocellulose	9004-70-0	7.01E+10	-	7.86E+09	7.86E+09 max
Nitrodiphenylamine, 2-	119-75-5	-	-	-	
Nitrofurantoin	67-20-9	1.64E+06	-	1.83E+05	1.83E+05 max
Nitrofurazone	59-87-0	-	-	-	1.41E+02 ca
Nitrogen Dioxide	10102-44-0	-	-	-	
Nitroglycerin	55-63-0	2.34E+03	-	2.62E+02	2.62E+02 nc
Nitroguanidine	556-88-7	2.34E+06	-	2.62E+05	2.62E+05 max
Nitromethane	75-52-5	-	4.26E+03	4.26E+03	4.26E+03 nc
Nitrophenol, 2-	88-75-5	-	-	-	
Nitrophenol, 2-amino-4-	99-57-0	-	-	-	
Nitrophenol, 3-	554-84-7	-	-	-	
Nitrophenol, 4-	100-02-7	-	-	-	

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Nitrophenol, 4-amino-2-	119-34-6	No	No	-		-		-		-		1
Nitropropane, 2-	79-46-9	No	Yes	-		2.70E-03	U	-		2.00E-02	U	1
Nitropyrene, 4-	57835-92-4	No	No	1.20E+00	U	1.10E-04	U	-		-		1
Nitroquinoline-1-oxide. 4-	56-57-5	No	No	-		-		-		-		1
Nitroso-N-ethylurea, N-	759-73-9	Yes	No	2.70E+01	U	7.70E-03	U	-		-		1
Nitroso-N-methylurea, N-	684-93-5	Yes	No	1.20E+02	U	3.40E-02	U	-		-		1
Nitroso-di-N-butylamine, N-	924-16-3	No	Yes	5.40E+00	U	1.60E-03	U	-		-		1
Nitroso-di-N-propylamine, N-	621-64-7	No	No	7.00E+00	U	2.00E-03	U	-		-		1
Nitrosodiethanolamine, N-	1116-54-7	No	No	2.80E+00	U	8.00E-04	U	-		-		1
Nitrosodiethylamine, N-	55-18-5	Yes	No	1.50E+02	U	4.30E-02	U	-		-		1
Nitrosodimethylamine, N-	62-75-9	Yes	Yes	5.10E+01	U	1.40E-02	U	8.00E-06	U	4.00E-05	U	1
Nitrosodiphenylamine, N-	86-30-6	No	No	4.90E-03	U	2.60E-06	U	-		-		1
Nitrosomethylethylamine, N-	10595-95-6	No	Yes	2.20E+01	U	6.30E-03	U	-		-		1
Nitrosomethylvinylamine, N-	4549-40-0	No	Yes	-		-		-		-		1
Nitrosomorpholine [N-]	59-89-2	No	No	6.70E+00	U	1.90E-03	U	-		-		1
Nitrosopiperidine [N-]	100-75-4	No	No	9.40E+00	U	2.70E-03	U	-		-		1
Nitrosopyrrolidine, N-	930-55-2	No	No	2.10E+00	U	6.10E-04	U	-		-		1
Nitrotoluene, 4-Amino-2-	119-32-4	No	No	-		-		-		-		1
Nitrotoluene, m-	99-08-1	No	No	-		-		1.00E-04	U	-		1
Nitrotoluene, o-	88-72-2	No	Yes	2.20E-01	U	-		9.00E-04	U	-		1
Nitrotoluene, p-	99-99-0	No	No	1.60E-02	U	-		4.00E-03	U	-		1
Nonachlor, trans-	39765-80-5	No	Yes	-		-		-		-		1
Nonane, n-	111-84-2	No	Yes	-		-		3.00E-04	U	2.00E-02	U	1
Nonanol, n-	143-08-8	No	Yes	-		-		-		-		1
Norflurazon	27314-13-2	No	No	-		-		4.00E-02	U	-		1
Nustar	85509-19-9	No	No	-		-		7.00E-04	U	-		1
OCDD	3268-87-9	No	No	3.90E+01	U	1.14E-02	U	2.33E-06	U	1.33E-04	U	1
OCDF	39001-02-0	No	No	3.90E+01	U	1.14E-02	U	2.33E-06	U	1.33E-04	U	1
Octabromodiphenyl Ether	32536-52-0	No	No	-		-		3.00E-03	U	-		1
Octachlorostyrene	29082-74-4	No	Yes	-		-		-		-		1
Octadecanoic Acid	57-11-4	No	No	-		-		-		-		1
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	No	No	-		-		5.00E-02	U	-		1
Octahydrotrimethylmethylethylphenanthrenol	511-15-9	No	No	-		-		-		-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Nitrophenol, 4-amino-2-	119-34-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Nitropropane, 2-	79-46-9	-	1	1.81E+04	4.86E+03	3.23E+09	-	-	1.71E+01	1.71E+01	-
Nitropyrene, 4-	57835-92-4	0.13	1	-	-	3.23E+09	1.72E+02	1.05E+03	7.51E+07	1.48E+02	-
Nitroquinoline-1-oxide. 4-	56-57-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Nitroso-N-ethylurea, N-	759-73-9	0.1	1	-	-	3.23E+09	7.65E+00	6.06E+01	1.07E+06	6.79E+00	-
Nitroso-N-methylurea, N-	684-93-5	0.1	1	-	-	3.23E+09	1.72E+00	1.36E+01	2.43E+05	1.53E+00	-
Nitroso-di-N-butylamine, N-	924-16-3	-	1	3.35E+05	-	3.23E+09	3.82E+01	-	5.35E+02	3.57E+01	-
Nitroso-di-N-propylamine, N-	621-64-7	0.1	1	-	-	3.23E+09	2.95E+01	2.34E+02	4.13E+06	2.62E+01	-
Nitrosodiethanolamine, N-	1116-54-7	0.1	1	-	-	3.23E+09	7.37E+01	5.84E+02	1.03E+07	6.55E+01	-
Nitrosodiethylamine, N-	55-18-5	0.1	1	-	-	3.23E+09	1.38E+00	1.09E+01	1.92E+05	1.22E+00	-
Nitrosodimethylamine, N-	62-75-9	-	1	1.14E+05	2.37E+05	3.23E+09	4.05E+00	-	2.07E+01	3.39E+00	2.36E+01
Nitrosodiphenylamine, N-	86-30-6	0.1	1	-	-	3.23E+09	4.21E+04	3.34E+05	3.18E+09	3.74E+04	-
Nitrosomethylethylamine, N-	10595-95-6	-	1	1.67E+05	1.08E+05	3.23E+09	9.38E+00	-	6.77E+01	8.24E+00	-
Nitrosomethylvinylamine, N-	4549-40-0	-	1	1.12E+05	1.08E+04	3.23E+09	-	-	-	-	-
Nitrosomorpholine [N-]	59-89-2	0.1	1	-	-	3.23E+09	3.08E+01	2.44E+02	4.35E+06	2.74E+01	-
Nitrosopiperidine [N-]	100-75-4	0.1	1	-	-	3.23E+09	2.20E+01	1.74E+02	3.06E+06	1.95E+01	-
Nitrosopyrrolidine, N-	930-55-2	0.1	1	-	-	3.23E+09	9.83E+01	7.79E+02	1.35E+07	8.73E+01	-
Nitrotoluene, 4-Amino-2-	119-32-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Nitrotoluene, m-	99-08-1	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+02
Nitrotoluene, o-	88-72-2	-	1	1.89E+05	1.51E+03	3.23E+09	9.38E+02	-	-	9.38E+02	2.65E+03
Nitrotoluene, p-	99-99-0	0.1	1	-	-	3.23E+09	1.29E+04	1.02E+05	-	1.15E+04	1.18E+04
Nonachlor, trans-	39765-80-5	-	1	3.73E+06	-	3.23E+09	-	-	-	-	-
Nonane, n-	111-84-2	-	1	1.44E+03	6.86E+00	3.23E+09	-	-	-	-	8.85E+02
Nonanol, n-	143-08-8	-	1	6.41E+04	7.27E+01	3.23E+09	-	-	-	-	-
Norflurazon	27314-13-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+05
Nustar	85509-19-9	0.1	1	-	-	3.23E+09	-	-	-	-	2.06E+03
OCDD	3268-87-9	0.03	1	-	-	3.23E+09	5.29E+00	1.40E+02	7.25E+05	5.10E+00	6.87E+00
OCDF	39001-02-0	0.03	1	-	-	3.23E+09	5.29E+00	1.40E+02	7.25E+05	5.10E+00	6.87E+00
Octabromodiphenyl Ether	32536-52-0	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+03
Octachlorostyrene	29082-74-4	-	1	8.40E+05	-	3.23E+09	-	-	-	-	-
Octadecanoic Acid	57-11-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	0.006	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Octahydrotrimethylmethylethylphenanthrenol	511-15-9	0.1	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Nitrophenol, 4-amino-2-	119-34-6	-	-	-	
Nitropropane, 2-	79-46-9	-	1.32E+04	1.32E+04	1.71E+01 ca
Nitropyrene, 4-	57835-92-4	-	-	-	1.48E+02 ca
Nitroquinoline-1-oxide. 4-	56-57-5	-	-	-	
Nitroso-N-ethylurea, N-	759-73-9	-	-	-	6.79E+00 ca
Nitroso-N-methylurea, N-	684-93-5	-	-	-	1.53E+00 ca
Nitroso-di-N-butylamine, N-	924-16-3	-	-	-	3.57E+01 ca
Nitroso-di-N-propylamine, N-	621-64-7	-	-	-	2.62E+01 ca
Nitrosodiethanolamine, N-	1116-54-7	-	-	-	6.55E+01 ca
Nitrosodiethylamine, N-	55-18-5	-	-	-	1.22E+00 ca
Nitrosodimethylamine, N-	62-75-9	-	1.66E+02	2.07E+01	3.39E+00 ca**
Nitrosodiphenylamine, N-	86-30-6	-	-	-	3.74E+04 ca
Nitrosomethylethylamine, N-	10595-95-6	-	-	-	8.24E+00 ca
Nitrosomethylvinylamine, N-	4549-40-0	-	-	-	
Nitrosomorpholine [N-]	59-89-2	-	-	-	2.74E+01 ca
Nitrosopiperidine [N-]	100-75-4	-	-	-	1.95E+01 ca
Nitrosopyrrolidine, N-	930-55-2	-	-	-	8.73E+01 ca
Nitrotoluene, 4-Amino-2-	119-32-4	-	-	-	
Nitrotoluene, m-	99-08-1	2.34E+03	-	2.62E+02	2.62E+02 nc
Nitrotoluene, o-	88-72-2	-	-	2.65E+03	9.38E+02 ca**
Nitrotoluene, p-	99-99-0	9.35E+04	-	1.05E+04	1.05E+04 nc
Nonachlor, trans-	39765-80-5	-	-	-	
Nonane, n-	111-84-2	-	1.05E+03	4.80E+02	4.80E+02 sat
Nonanol, n-	143-08-8	-	-	-	
Norflurazon	27314-13-2	9.35E+05	-	1.05E+05	1.05E+05 max
Nustar	85509-19-9	1.64E+04	-	1.83E+03	1.83E+03 nc
OCDD	3268-87-9	1.82E+02	1.57E+07	6.62E+00	5.10E+00 ca**
OCDF	39001-02-0	1.82E+02	1.57E+07	6.62E+00	5.10E+00 ca**
Octabromodiphenyl Ether	32536-52-0	7.01E+04	-	7.86E+03	7.86E+03 nc
Octachlorostyrene	29082-74-4	-	-	-	
Octadecanoic Acid	57-11-4	-	-	-	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	1.95E+07	-	1.46E+05	1.46E+05 max
Octahydrotrimethylmethylethylphenanthrenol	511-15-9	-	-	-	

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Octamethylpyrophosphoramide	152-16-9	No	No	-		-		2.00E-03	U	-		1
Octanol, n-	111-87-5	No	Yes	-		-		-		-		1
Octanone, 2-	111-13-7	No	Yes	-		-		-		-		1
Octanone, 3-	106-68-3	No	Yes	-		-		-		-		1
Octyl Phthalate, di-N-	117-84-0	No	No	-		-		1.00E-02	U	-		1
Oleic acid	112-80-1	No	Yes	-		-		-		-		1
Oleum	8014-95-7	Yes	No	-		-		-		-		1
Oryzalin	19044-88-3	No	No	-		-		5.00E-02	U	-		1
Oxadiazon	19666-30-9	No	No	-		-		5.00E-03	U	-		1
Oxamyl	23135-22-0	No	No	-		-		2.50E-02	U	-		1
Oxychlordane	27304-13-8	No	No	-		-		-		-		1
Ozone	10028-15-6	No	No	-		-		-		-		1
Paclobutrazol	76738-62-0	No	No	-		-		1.30E-02	U	-		1
Paraquat Dichloride	1910-42-5	No	No	-		-		4.50E-03	U	-		1
Parathion	56-38-2	No	No	-		-		6.00E-03	U	-		1
PeCDD, 2,3,7,8-	36088-22-9	No	No	1.30E+05	U	3.80E+01	U	7.00E-10	U	4.00E-08	U	1
PeCDF, 1,2,3,7,8-	57117-41-6	No	No	3.90E+03	U	1.14E+00	U	2.33E-08	U	1.33E-06	U	1
PeCDF, 2,3,4,7,8-	57117-31-4	No	No	3.90E+04	U	1.14E+01	U	2.33E-09	U	1.33E-07	U	1
Pebulate	1114-71-2	No	Yes	-		-		5.00E-02	U	-		1
Pendimethalin	40487-42-1	No	No	-		-		4.00E-02	U	-		1
Pentabromodiphenyl Ether	32534-81-9	No	No	-		-		2.00E-03	U	-		1
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	No	No	-		-		1.00E-04	U	-		1
Pentachloroaniline	527-20-8	No	No	-		-		-		-		1
Pentachlorobenzene	608-93-5	No	Yes	-		-		8.00E-04	U	-		1
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Pentachlorocyclopentadiene	25329-35-5	No	Yes	-		-		-		-		1
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	No	Yes	1.30E+05	U	3.80E+01	U	7.00E-10	U	4.00E-08	U	1
Pentachloroethane	76-01-7	No	Yes	9.00E-02	U	-		-		-		1
Pentachloronitrobenzene	82-68-8	No	Yes	2.60E-01	U	-		3.00E-03	U	-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Octamethylpyrophosphoramide	152-16-9	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Octanol, n-	111-87-5	-	1	5.35E+04	1.78E+02	3.23E+09	-	-	-	-	-
Octanone, 2-	111-13-7	-	1	2.12E+04	3.60E+02	3.23E+09	-	-	-	-	-
Octanone, 3-	106-68-3	-	1	2.60E+04	1.08E+03	3.23E+09	-	-	-	-	-
Octyl Phthalate, di-N-	117-84-0	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Oleic acid	112-80-1	-	1	1.43E+06	1.44E+00	3.23E+09	-	-	-	-	-
Oleum	8014-95-7	-	1	-	-	3.23E+09	-	-	-	-	-
Oryzalin	19044-88-3	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Oxadiazon	19666-30-9	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Oxamyl	23135-22-0	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
Oxychlordane	27304-13-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Ozone	10028-15-6	-	1	-	-	3.23E+09	-	-	-	-	-
Paclobutrazol	76738-62-0	0.1	1	-	-	3.23E+09	-	-	-	-	3.83E+04
Paraquat Dichloride	1910-42-5	0.1	1	-	-	3.23E+09	-	-	-	-	1.33E+04
Parathion	56-38-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.77E+04
PeCDD, 2,3,7,8-	36088-22-9	0.03	1	-	-	3.23E+09	1.59E-03	4.20E-02	2.17E+02	1.53E-03	2.06E-03
PeCDF, 1,2,3,7,8-	57117-41-6	0.03	1	-	-	3.23E+09	5.29E-02	1.40E+00	7.25E+03	5.10E-02	6.87E-02
PeCDF, 2,3,4,7,8-	57117-31-4	0.03	1	-	-	3.23E+09	5.29E-03	1.40E-01	7.25E+02	5.10E-03	6.87E-03
Pebulate	1114-71-2	-	1	6.20E+04	-	3.23E+09	-	-	-	-	1.47E+05
Pendimethalin	40487-42-1	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+05
Pentabromodiphenyl Ether	32534-81-9	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+02
Pentachloroaniline	527-20-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Pentachlorobenzene	608-93-5	-	1	1.12E+05	-	3.23E+09	-	-	-	-	2.36E+03
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	0.14	1	1.42E+06	-	3.23E+09	5.29E+01	3.00E+02	3.19E+03	4.44E+01	6.87E+01
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	0.14	1	1.14E+06	-	3.23E+09	5.29E+01	3.00E+02	2.56E+03	4.42E+01	6.87E+01
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	0.14	1	1.17E+06	-	3.23E+09	5.29E+01	3.00E+02	2.61E+03	4.42E+01	6.87E+01
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	0.14	1	1.42E+06	-	3.23E+09	5.29E+01	3.00E+02	3.19E+03	4.44E+01	6.87E+01
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	0.14	1	1.41E+06	-	3.23E+09	1.59E-02	8.99E-02	9.46E-01	1.33E-02	2.06E-02
Pentachlorocyclopentadiene	25329-35-5	-	1	1.95E+04	-	3.23E+09	-	-	-	-	-
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	0.03	1	4.61E+06	-	3.23E+09	1.59E-03	4.20E-02	3.10E-01	1.52E-03	2.06E-03
Pentachloroethane	76-01-7	-	1	1.33E+04	4.47E+02	3.23E+09	2.29E+03	-	-	2.29E+03	-
Pentachloronitrobenzene	82-68-8	-	1	5.95E+05	-	3.23E+09	7.94E+02	-	-	7.94E+02	8.85E+03

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Octamethylpyrophosphoramide	152-16-9	4.67E+04	-	5.24E+03	5.24E+03 nc
Octanol, n-	111-87-5	-	-	-	
Octanone, 2-	111-13-7	-	-	-	
Octanone, 3-	106-68-3	-	-	-	
Octyl Phthalate, di-N-	117-84-0	2.34E+05	-	2.62E+04	2.62E+04 nc
Oleic acid	112-80-1	-	-	-	
Oleum	8014-95-7	-	-	-	
Oryzalin	19044-88-3	1.17E+06	-	1.31E+05	1.31E+05 max
Oxadiazon	19666-30-9	1.17E+05	-	1.31E+04	1.31E+04 nc
Oxamyl	23135-22-0	5.84E+05	-	6.55E+04	6.55E+04 nc
Oxychlordane	27304-13-8	-	-	-	
Ozone	10028-15-6	-	-	-	
Paclobutrazol	76738-62-0	3.04E+05	-	3.40E+04	3.40E+04 nc
Paraquat Dichloride	1910-42-5	1.05E+05	-	1.18E+04	1.18E+04 nc
Parathion	56-38-2	1.40E+05	-	1.57E+04	1.57E+04 nc
PeCDD, 2,3,7,8-	36088-22-9	5.45E-02	4.72E+03	1.99E-03	1.53E-03 ca**
PeCDF, 1,2,3,7,8-	57117-41-6	1.82E+00	1.57E+05	6.62E-02	5.10E-02 ca**
PeCDF, 2,3,4,7,8-	57117-31-4	1.82E-01	1.57E+04	6.62E-03	5.10E-03 ca**
Pebulate	1114-71-2	-	-	1.47E+05	1.47E+05 max
Pendimethalin	40487-42-1	9.35E+05	-	1.05E+05	1.05E+05 max
Pentabromodiphenyl Ether	32534-81-9	4.67E+04	-	5.24E+03	5.24E+03 nc
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	2.34E+03	-	2.62E+02	2.62E+02 nc
Pentachloroaniline	527-20-8	-	-	-	
Pentachlorobenzene	608-93-5	-	-	2.36E+03	2.36E+03 nc
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	3.89E+02	6.91E+04	5.84E+01	4.44E+01 ca**
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	3.89E+02	5.55E+04	5.83E+01	4.42E+01 ca**
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	3.89E+02	5.66E+04	5.83E+01	4.42E+01 ca**
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	3.89E+02	6.91E+04	5.84E+01	4.44E+01 ca**
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	1.17E-01	2.05E+01	1.75E-02	1.33E-02 ca**
Pentachlorocyclopentadiene	25329-35-5	-	-	-	
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	5.45E-02	6.72E+00	1.99E-03	1.52E-03 ca**
Pentachloroethane	76-01-7	-	-	-	2.29E+03 sat
Pentachloronitrobenzene	82-68-8	-	-	8.85E+03	7.94E+02 ca*

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Pentachlorophenol	87-86-5	No	No	4.00E-01	U	5.10E-06	U	5.00E-03	U	-		1
Pentaerythritol tetranitrate (PETN)	78-11-5	No	No	4.00E-03	U	-		2.00E-03	U	-		1
Pentamethyl dipropylenetriamine	3855-32-1	No	No	-		-		-		-		1
Pentane, n-	109-66-0	No	Yes	-		-		-		1.00E+00	U	1
Pentyl Alcohol, N-	71-41-0	No	Yes	-		-		-		-		1
Perchlorate and Perchlorate Salts	14797-73-0	No	No	-		-		7.00E-04	U	-		1
Perfluorobutane Sulfonate	375-73-5	No	Yes	-		-		2.00E-02	U	-		1
Perfluorooctane Sulphonic Acid	1763-23-1	No	Yes	-		-		-		-		1
Perfluorooctanoic acid	335-67-1	No	Yes	-		-		-		-		1
Permethrin	52645-53-1	No	No	-		-		5.00E-02	U	-		1
Perylene	198-55-0	No	No	-		-		-		-		1
Pesticides (total)	NA	No	No	-		-		-		-		1
Pesticides, organochlorinated (each)	NA	No	No	-		-		-		-		1
Pesticides, organochlorinated (total)	NA	No	No	-		-		-		-		1
Phenacetin	62-44-2	No	No	2.20E-03	U	6.30E-07	U	-		-		1
Phenanthrene	85-01-8	No	Yes	-		-		-		-		1
Phenmedipham	13684-63-4	No	No	-		-		2.50E-01	U	-		1
Phenol	108-95-2	No	No	-		-		3.00E-01	U	2.00E-01	U	1
Phenothiazine	92-84-2	No	No	-		-		5.00E-04	U	-		1
Phenyl Isothiocyanate	103-72-0	No	Yes	-		-		-		-		1
Phenylenediamine, m-	108-45-2	No	No	-		-		6.00E-03	U	-		1
Phenylenediamine, o-	95-54-5	No	No	4.70E-02	U	-		-		-		1
Phenylenediamine, p-	106-50-3	No	No	-		-		1.90E-01	U	-		1
Phenylmercuric Acetate	62-38-4	No	No	-		-		8.00E-05	U	-		1
Phenylphenol, 2-	90-43-7	No	No	1.94E-03	U	-		-		-		1
Phorate	298-02-2	No	No	-		-		2.00E-04	U	-		1
Phosgene	75-44-5	No	Yes	-		-		-		3.00E-04	U	1
Phosmet	732-11-6	No	No	-		-		2.00E-02	U	-		1
Phosphine	7803-51-2	No	Yes	-		-		3.00E-04	U	3.00E-04	U	1
Phosphoric Acid	7664-38-2	No	No	-		-		4.86E+01	U	1.00E-02	U	1
Phosphorus (total)	NA	No	No	-		-		-		-		1
Phosphorus pentoxide	1314-56-3	No	No	-		-		-		-		1
Phosphorus, White	7723-14-0	No	Yes	-		-		2.00E-05	U	-		1
Phthalates (total)	NA	No	No	-		-		-		-		1

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Pentachlorophenol	87-86-5	0.25	1	-	-	3.23E+09	5.16E+02	1.64E+03	1.62E+09	3.92E+02	1.47E+04
Pentaerythritol tetranitrate (PETN)	78-11-5	0.1	1	-	-	3.23E+09	5.16E+04	4.09E+05	-	4.58E+04	5.90E+03
Pentamethyl dipropylenetriamine	3855-32-1	0.1	1	-	-	3.23E+09	-	-	-	-	-
Pentane, n-	109-66-0	-	1	1.07E+03	3.88E+02	3.23E+09	-	-	-	-	-
Pentyl Alcohol, N-	71-41-0	-	1	3.91E+04	3.04E+03	3.23E+09	-	-	-	-	-
Perchlorate and Perchlorate Salts	14797-73-0	-	1	-	-	3.23E+09	-	-	-	-	2.06E+03
Perfluorobutane Sulfonate	375-73-5	-	1	1.82E+05	-	3.23E+09	-	-	-	-	5.90E+04
Perfluorooctane Sulphonic Acid	1763-23-1	-	1	1.48E+05	-	3.23E+09	-	-	-	-	-
Perfluorooctanoic acid	335-67-1	-	1	3.00E+04	-	3.23E+09	-	-	-	-	-
Permethrin	52645-53-1	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Perylene	198-55-0	0.13	1	-	-	3.23E+09	-	-	-	-	-
Pesticides (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Pesticides, organochlorinated (each)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Pesticides, organochlorinated (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Phenacetin	62-44-2	0.1	1	-	-	3.23E+09	9.38E+04	7.44E+05	1.31E+10	8.33E+04	-
Phenanthrene	85-01-8	0.13	1	8.87E+05	-	3.23E+09	-	-	-	-	-
Phenmedipham	13684-63-4	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+05
Phenol	108-95-2	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+05
Phenothiazine	92-84-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+03
Phenyl Isothiocyanate	103-72-0	-	1	9.76E+03	1.29E+02	3.23E+09	-	-	-	-	-
Phenylenediamine, m-	108-45-2	0.1	1	-	-	3.23E+09	-	-	-	-	1.77E+04
Phenylenediamine, o-	95-54-5	0.1	1	-	-	3.23E+09	4.39E+03	3.48E+04	-	3.90E+03	-
Phenylenediamine, p-	106-50-3	0.1	1	-	-	3.23E+09	-	-	-	-	5.60E+05
Phenylmercuric Acetate	62-38-4	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+02
Phenylphenol, 2-	90-43-7	0.1	1	-	-	3.23E+09	1.06E+05	8.43E+05	-	9.45E+04	-
Phorate	298-02-2	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+02
Phosgene	75-44-5	-	1	1.35E+03	1.61E+03	3.23E+09	-	-	-	-	-
Phosmet	732-11-6	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Phosphine	7803-51-2	-	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Phosphoric Acid	7664-38-2	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Phosphorus (total)	NA	-	1	-	-	3.23E+09	-	-	-	-	-
Phosphorus pentoxide	1314-56-3	-	1	-	-	3.23E+09	-	-	-	-	-
Phosphorus, White	7723-14-0	-	1	9.55E+03	-	3.23E+09	-	-	-	-	5.90E+01
Phthalates (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Pentachlorophenol	87-86-5	4.67E+04	-	1.12E+04	3.92E+02 ca*
Pentaerythritol tetranitrate (PETN)	78-11-5	4.67E+04	-	5.24E+03	5.24E+03 nc
Pentamethyl dipropylenetriamine	3855-32-1	-	-	-	
Pentane, n-	109-66-0	-	3.92E+04	3.92E+04	3.92E+04 sat
Pentyl Alcohol, N-	71-41-0	-	-	-	
Perchlorate and Perchlorate Salts	14797-73-0	-	-	2.06E+03	2.06E+03 nc
Perfluorobutane Sulfonate	375-73-5	-	-	5.90E+04	5.90E+04 nc
Perfluorooctane Sulphonic Acid	1763-23-1	-	-	-	
Perfluorooctanoic acid	335-67-1	-	-	-	
Permethrin	52645-53-1	1.17E+06	-	1.31E+05	1.31E+05 max
Perylene	198-55-0	-	-	-	
Pesticides (total)	NA	-	-	-	
Pesticides, organochlorinated (each)	NA	-	-	-	
Pesticides, organochlorinated (total)	NA	-	-	-	
Phenacetin	62-44-2	-	-	-	8.33E+04 ca
Phenanthrene	85-01-8	-	-	-	
Phenmedipham	13684-63-4	5.84E+06	-	6.55E+05	6.55E+05 max
Phenol	108-95-2	7.01E+06	2.36E+10	7.86E+05	7.86E+05 max
Phenothiazine	92-84-2	1.17E+04	-	1.31E+03	1.31E+03 nc
Phenyl Isothiocyanate	103-72-0	-	-	-	
Phenylenediamine, m-	108-45-2	1.40E+05	-	1.57E+04	1.57E+04 nc
Phenylenediamine, o-	95-54-5	-	-	-	3.90E+03 ca
Phenylenediamine, p-	106-50-3	4.44E+06	-	4.98E+05	4.98E+05 max
Phenylmercuric Acetate	62-38-4	1.87E+03	-	2.10E+02	2.10E+02 nc
Phenylphenol, 2-	90-43-7	-	-	-	9.45E+04 ca
Phorate	298-02-2	4.67E+03	-	5.24E+02	5.24E+02 nc
Phosgene	75-44-5	-	1.48E+01	1.48E+01	1.48E+01 nc
Phosmet	732-11-6	4.67E+05	-	5.24E+04	5.24E+04 nc
Phosphine	7803-51-2	-	3.54E+07	8.85E+02	8.85E+02 nc
Phosphoric Acid	7664-38-2	-	1.18E+09	1.28E+08	1.28E+08 max
Phosphorus (total)	NA	-	-	-	
Phosphorus pentoxide	1314-56-3	-	-	-	
Phosphorus, White	7723-14-0	-	-	5.90E+01	5.90E+01 nc
Phthalates (total)	NA	-	-	-	

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Phthalic Acid, P-	100-21-0	No	No	-		-		1.00E+00	U	-		1
Phthalic Acid, m-	121-91-5	No	No	-		-		-		-		1
Phthalic Acid, o-	88-99-3	No	No	-		-		-		-		1
Phthalic Anhydride	85-44-9	No	No	-		-		2.00E+00	U	2.00E-02	U	1
Picloram	1918-02-1	No	No	-		-		7.00E-02	U	-		1
Picoline, 2-	109-06-8	No	Yes	-		-		-		-		1
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	No	No	-		-		1.00E-04	U	-		1
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	No	No	-		-		-		-		1
Piperidine	110-89-4	No	Yes	-		-		-		-		1
Pirimiphos, Methyl	29232-93-7	No	No	-		-		1.00E-02	U	-		1
Polybrominated Biphenyls	59536-65-1	No	No	3.00E+01	U	8.60E-03	U	7.00E-06	U	-		1
Polychlorinated Biphenyls (high risk)	1336-36-3	No	Yes	2.00E+00	U	5.71E-04	U	-		-		1
Polycyclic aromatic hydrocarbons (PAH), Total	NA	No	No	-		-		-		-		1
Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight)	NA	No	No	-		-		-		-		1
Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight)	NA	No	No	-		-		-		-		1
Polycyclic chlorinated hydrocarbons (total)	NA	No	No	-		-		-		-		1
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	No	No	-		-		-		6.00E-04	U	1
Polyphosphoric acid	8017-16-1	No	No	-		-		4.86E+01	U	-		1
Potassium	7440-09-7	No	No	-		-		-		-		1
Potassium Cyanide	151-50-8	No	No	-		-		2.00E-03	U	-		1
Potassium Perchlorate	7778-74-7	No	No	-		-		7.00E-04	U	-		1
Potassium Perfluorobutane Sulfonate	29420-49-3	No	No	-		-		2.00E-02	U	-		1
Potassium Silver Cyanide	506-61-6	No	No	-		-		5.00E-03	U	-		0.04
Potassium chlorate	3811-04-9	No	No	-		-		-		-		1
Potassium tripolyphosphate	13845-36-8	No	No	-		-		4.86E+01	U	-		1
Praseodymium	7440-10-0	No	No	-		-		-		-		1
Praseodymium Chloride (Stable, Nonradioactive)	10361-79-2	No	No	-		-		-		-		1
Prochloraz	67747-09-5	No	No	1.50E-01	U	-		9.00E-03	U	-		1
Profluralin	26399-36-0	No	Yes	-		-		6.00E-03	U	-		1
Promethium	7440-12-2	No	No	-		-		-		-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Phthalic Acid, P-	100-21-0	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+06
Phthalic Acid, m-	121-91-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Phthalic Acid, o-	88-99-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Phthalic Anhydride	85-44-9	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+06
Picloram	1918-02-1	0.1	1	-	-	3.23E+09	-	-	-	-	2.06E+05
Picoline, 2-	109-06-8	-	1	1.05E+05	7.90E+05	3.23E+09	-	-	-	-	-
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+02
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	0.1	1	-	-	3.23E+09	-	-	-	-	-
Piperidine	110-89-4	-	1	1.12E+05	1.96E+05	3.23E+09	-	-	-	-	-
Pirimiphos, Methyl	29232-93-7	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Polybrominated Biphenyls	59536-65-1	0.1	1	-	-	3.23E+09	6.88E+00	5.45E+01	9.61E+05	6.11E+00	2.06E+01
Polychlorinated Biphenyls (high risk)	1336-36-3	0.14	1	1.08E+06	-	3.23E+09	1.03E+02	5.84E+02	4.85E+03	8.62E+01	-
Polycyclic aromatic hydrocarbons (PAH), Total	NA	0.13	1	-	-	3.23E+09	-	-	-	-	-
Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight)	NA	0.13	1	-	-	3.23E+09	-	-	-	-	-
Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight)	NA	0.13	1	-	-	3.23E+09	-	-	-	-	-
Polycyclic chlorinated hydrocarbons (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	0.1	1	-	-	3.23E+09	-	-	-	-	-
Polyphosphoric acid	8017-16-1	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Potassium	7440-09-7	-	1	-	-	3.23E+09	-	-	-	-	-
Potassium Cyanide	151-50-8	-	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Potassium Perchlorate	7778-74-7	-	1	-	-	3.23E+09	-	-	-	-	2.06E+03
Potassium Perfluorobutane Sulfonate	29420-49-3	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Potassium Silver Cyanide	506-61-6	-	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Potassium chlorate	3811-04-9	-	1	-	-	3.23E+09	-	-	-	-	-
Potassium tripolyphosphate	13845-36-8	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Praseodymium	7440-10-0	-	1	-	-	3.23E+09	-	-	-	-	-
Praseodymium Chloride (Stable, Nonradioactive)	10361-79-2	-	1	-	-	3.23E+09	-	-	-	-	-
Prochloraz	67747-09-5	0.1	1	-	-	3.23E+09	1.38E+03	1.09E+04	-	1.22E+03	2.65E+04
Profluralin	26399-36-0	-	1	5.78E+05	-	3.23E+09	-	-	-	-	1.77E+04
Promethium	7440-12-2	-	1	-	-	3.23E+09	-	-	-	-	-

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Phthalic Acid, P-	100-21-0	2.34E+07	-	2.62E+06	2.62E+06 max
Phthalic Acid, m-	121-91-5	-	-	-	
Phthalic Acid, o-	88-99-3	-	-	-	
Phthalic Anhydride	85-44-9	4.67E+07	2.36E+09	5.23E+06	5.23E+06 max
Picloram	1918-02-1	1.64E+06	-	1.83E+05	1.83E+05 max
Picoline, 2-	109-06-8	-	-	-	
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	2.34E+03	-	2.62E+02	2.62E+02 nc
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	-	-	-	
Piperidine	110-89-4	-	-	-	
Pirimiphos, Methyl	29232-93-7	2.34E+05	-	2.62E+04	2.62E+04 nc
Polybrominated Biphenyls	59536-65-1	1.64E+02	-	1.83E+01	6.11E+00 ca**
Polychlorinated Biphenyls (high risk)	1336-36-3	-	-	-	8.62E+01 ca
Polycyclic aromatic hydrocarbons (PAH), Total	NA	-	-	-	
Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight)	NA	-	-	-	
Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight)	NA	-	-	-	
Polycyclic chlorinated hydrocarbons (total)	NA	-	-	-	
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	-	7.08E+07	7.08E+07	7.08E+07 max
Polyphosphoric acid	8017-16-1	-	-	1.43E+08	1.43E+08 max
Potassium	7440-09-7	-	-	-	
Potassium Cyanide	151-50-8	-	-	5.90E+03	5.90E+03 nc
Potassium Perchlorate	7778-74-7	-	-	2.06E+03	2.06E+03 nc
Potassium Perfluorobutane Sulfonate	29420-49-3	4.67E+05	-	5.24E+04	5.24E+04 nc
Potassium Silver Cyanide	506-61-6	-	-	1.47E+04	1.47E+04 nc
Potassium chlorate	3811-04-9	-	-	-	
Potassium tripolyphosphate	13845-36-8	-	-	1.43E+08	1.43E+08 max
Praseodymium	7440-10-0	-	-	-	
Praseodymium Chloride (Stable, Nonradioactive)	10361-79-2	-	-	-	
Prochloraz	67747-09-5	2.10E+05	-	2.36E+04	1.22E+03 ca*
Profluralin	26399-36-0	-	-	1.77E+04	1.77E+04 nc
Promethium	7440-12-2	-	-	-	

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Prometon	1610-18-0	No	No	-		-		1.50E-02	U	-		1
Prometryn	7287-19-6	No	No	-		-		4.00E-03	U	-		1
Propachlor	1918-16-7	No	No	-		-		1.30E-02	U	-		1
Propanil	709-98-8	No	No	-		-		5.00E-03	U	-		1
Propanoic acid, 2-(2,4-dichlorophenoxy)-	120-36-5	No	No	-		-		-		-		1
Propargite	2312-35-8	No	No	-		-		2.00E-02	U	-		1
Propargyl Alcohol	107-19-7	No	Yes	-		-		2.00E-03	U	-		1
Propazine	139-40-2	No	No	-		-		2.00E-02	U	-		1
Propham	122-42-9	No	No	-		-		2.00E-02	U	-		1
Propiconazole	60207-90-1	No	No	-		-		1.30E-02	U	-		1
Propionaldehyde	123-38-6	No	Yes	-		-		-		8.00E-03	U	1
Propionitrile	107-12-0	No	Yes	-		-		-		-		1
Propionitrile, 3-(NN-dimethylamino)	1738-25-6	No	Yes	-		-		-		-		1
Propyl Alcohol, n-	71-23-8	No	Yes	-		-		-		-		1
Propyl benzene	103-65-1	No	Yes	-		-		1.00E-01	U	1.00E+00	U	1
Propylene	115-07-1	No	Yes	-		-		-		3.00E+00	U	1
Propylene Glycol	57-55-6	No	No	-		-		2.00E+01	U	-		1
Propylene Glycol Dinitrate	6423-43-4	No	No	-		-		-		2.72E-04	U	1
Propylene Glycol Monoethyl Ether	1569-02-4	No	Yes	-		-		7.00E-01	U	-		1
Propylene Glycol Monomethyl Ether	107-98-2	No	Yes	-		-		7.00E-01	U	2.00E+00	U	1
Propylene Oxide	75-56-9	No	Yes	2.40E-01	U	3.70E-06	U	-		3.00E-02	U	1
Prussian Blue (Ferric Ferrocyanide)	14038-43-8	No	No	-		-		-		-		1
Pursuit	81335-77-5	No	No	-		-		2.50E-01	U	-		1
Pydrin	51630-58-1	No	No	-		-		2.50E-02	U	-		1
Pyrazinyl phosphorothioate, O,O-diethyl O-2-	297-97-2	No	No	-		-		-		-		1
Pyrene	129-00-0	No	Yes	-		-		3.00E-02	U	-		1
Pyridine	110-86-1	No	Yes	-		-		1.00E-03	U	-		1
Quinalphos	13593-03-8	No	No	-		-		5.00E-04	U	-		1
Quinoline	91-22-5	No	No	3.00E+00	U	-		-		-		1
Refractory Ceramic Fibers	NA	No	No	-		-		-		3.00E-02	U	1
Resmethrin	10453-86-8	No	No	-		-		3.00E-02	U	-		1
Resorcinol	108-46-3	No	No	-		-		-		-		1
Ronnel	299-84-3	No	Yes	-		-		5.00E-02	U	-		1
Rotenone	83-79-4	No	No	-		-		4.00E-03	U	-		1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Prometon	1610-18-0	0.1	1	-	-	3.23E+09	-	-	-	-	4.42E+04
Prometryn	7287-19-6	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+04
Propachlor	1918-16-7	0.1	1	-	-	3.23E+09	-	-	-	-	3.83E+04
Propanil	709-98-8	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Propanoic acid, 2-(2,4-dichlorophenoxy)-	120-36-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Propargite	2312-35-8	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Propargyl Alcohol	107-19-7	-	1	8.66E+04	1.11E+05	3.23E+09	-	-	-	-	5.90E+03
Propazine	139-40-2	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Propham	122-42-9	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Propiconazole	60207-90-1	0.1	1	-	-	3.23E+09	-	-	-	-	3.83E+04
Propionaldehyde	123-38-6	-	1	1.24E+04	3.26E+04	3.23E+09	-	-	-	-	-
Propionitrile	107-12-0	-	1	2.07E+04	1.56E+04	3.23E+09	-	-	-	-	-
Propionitrile, 3-(NN-dimethylamino)	1738-25-6	-	1	2.62E+05	1.60E+05	3.23E+09	-	-	-	-	-
Propyl Alcohol, n-	71-23-8	-	1	4.01E+04	1.11E+05	3.23E+09	-	-	-	-	-
Propyl benzene	103-65-1	-	1	9.64E+03	2.64E+02	3.23E+09	-	-	-	-	2.95E+05
Propylene	115-07-1	-	1	9.70E+02	3.49E+02	3.23E+09	-	-	-	-	-
Propylene Glycol	57-55-6	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+07
Propylene Glycol Dinitrate	6423-43-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Propylene Glycol Monoethyl Ether	1569-02-4	-	1	2.14E+05	8.52E+04	3.23E+09	-	-	-	-	2.06E+06
Propylene Glycol Monomethyl Ether	107-98-2	-	1	1.08E+05	1.06E+05	3.23E+09	-	-	-	-	2.06E+06
Propylene Oxide	75-56-9	-	1	1.42E+04	7.77E+04	3.23E+09	8.60E+02	-	9.77E+03	7.91E+02	-
Prussian Blue (Ferric Ferrocyanide)	14038-43-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Pursuit	81335-77-5	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+05
Pydrin	51630-58-1	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
Pyrazinyl phosphorothioate, O,O-diethyl O-2-	297-97-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Pyrene	129-00-0	0.13	1	3.28E+06	-	3.23E+09	-	-	-	-	8.85E+04
Pyridine	110-86-1	-	1	7.64E+04	5.30E+05	3.23E+09	-	-	-	-	2.95E+03
Quinalphos	13593-03-8	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+03
Quinoline	91-22-5	0.1	1	-	-	3.23E+09	6.88E+01	5.45E+02	-	6.11E+01	-
Refractory Ceramic Fibers	NA	-	1	-	-	3.23E+09	-	-	-	-	-
Resmethrin	10453-86-8	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Resorcinol	108-46-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Ronnel	299-84-3	-	1	6.40E+05	-	3.23E+09	-	-	-	-	1.47E+05
Rotenone	83-79-4	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+04

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Prometon	1610-18-0	3.51E+05	-	3.93E+04	3.93E+04 nc
Prometryn	7287-19-6	9.35E+04	-	1.05E+04	1.05E+04 nc
Propachlor	1918-16-7	3.04E+05	-	3.40E+04	3.40E+04 nc
Propanil	709-98-8	1.17E+05	-	1.31E+04	1.31E+04 nc
Propanoic acid, 2-(2,4-dichlorophenoxy)-	120-36-5	-	-	-	
Propargite	2312-35-8	4.67E+05	-	5.24E+04	5.24E+04 nc
Propargyl Alcohol	107-19-7	-	-	5.90E+03	5.90E+03 nc
Propazine	139-40-2	4.67E+05	-	5.24E+04	5.24E+04 nc
Propham	122-42-9	4.67E+05	-	5.24E+04	5.24E+04 nc
Propiconazole	60207-90-1	3.04E+05	-	3.40E+04	3.40E+04 nc
Propionaldehyde	123-38-6	-	3.61E+03	3.61E+03	3.61E+03 nc
Propionitrile	107-12-0	-	-	-	
Propionitrile, 3-(NN-dimethylamino)	1738-25-6	-	-	-	
Propyl Alcohol, n-	71-23-8	-	-	-	
Propyl benzene	103-65-1	-	3.52E+05	1.60E+05	1.60E+05 sat
Propylene	115-07-1	-	1.06E+05	1.06E+05	1.06E+05 sat
Propylene Glycol	57-55-6	4.67E+08	-	5.24E+07	5.24E+07 max
Propylene Glycol Dinitrate	6423-43-4	-	3.21E+07	3.21E+07	3.21E+07 max
Propylene Glycol Monoethyl Ether	1569-02-4	-	-	2.06E+06	2.06E+06 sat
Propylene Glycol Monomethyl Ether	107-98-2	-	7.89E+06	1.64E+06	1.64E+06 sat
Propylene Oxide	75-56-9	-	1.55E+04	1.55E+04	7.91E+02 ca*
Prussian Blue (Ferric Ferrocyanide)	14038-43-8	-	-	-	
Pursuit	81335-77-5	5.84E+06	-	6.55E+05	6.55E+05 max
Pydrin	51630-58-1	5.84E+05	-	6.55E+04	6.55E+04 nc
Pyrazinyl phosphorothioate, O,O-diethyl O-2-	297-97-2	-	-	-	
Pyrene	129-00-0	5.39E+05	-	7.60E+04	7.60E+04 nc
Pyridine	110-86-1	-	-	2.95E+03	2.95E+03 nc
Quinalphos	13593-03-8	1.17E+04	-	1.31E+03	1.31E+03 nc
Quinoline	91-22-5	-	-	-	6.11E+01 ca
Refractory Ceramic Fibers	NA	-	3.54E+09	3.54E+09	3.54E+09 max
Resmethrin	10453-86-8	7.01E+05	-	7.86E+04	7.86E+04 nc
Resorcinol	108-46-3	-	-	-	
Ronnel	299-84-3	-	-	1.47E+05	1.47E+05 max
Rotenone	83-79-4	9.35E+04	-	1.05E+04	1.05E+04 nc

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Safrole	94-59-7	Yes	No	2.20E-01	U	6.30E-05	U	-		-		1
Samarium Chloride (Stable, Nonradioactive)	10361-82-7	No	No	-		-		-		-		1
Samarium Nitrate (Stable, Nonradioactive)	10361-83-8	No	No	-		-		-		-		1
Savey	78587-05-0	No	No	-		-		2.50E-02	U	-		1
Scandium	7440-20-2	No	No	-		-		-		-		1
Selenious Acid	7783-00-8	No	No	-		-		5.00E-03	U	-		1
Selenite	14124-67-5	No	No	-		-		-		-		1
Selenium	7782-49-2	No	No	-		-		5.00E-03	U	2.00E-02	U	1
Selenium Sulfide	7446-34-6	No	No	-		-		5.00E-03	U	2.00E-02	U	1
Selenourea	630-10-4	No	No	-		-		-		-		1
Sethoxydim	74051-80-2	No	No	-		-		9.00E-02	U	-		1
Silica (crystalline, respirable)	7631-86-9	No	No	-		-		-		3.00E-03	U	1
Silicon	7440-21-3	No	No	-		-		-		-		1
Silver	7440-22-4	No	No	-		-		5.00E-03	U	-		0.04
Silver Cyanide	506-64-9	No	No	-		-		1.00E-01	U	-		0.04
Simazine	122-34-9	No	No	1.20E-01	U	-		5.00E-03	U	-		1
Sodium	7440-23-5	No	No	-		-		-		-		1
Sodium Acifluorfen	62476-59-9	No	No	-		-		1.30E-02	U	-		1
Sodium Azide	26628-22-8	No	No	-		-		4.00E-03	U	-		1
Sodium Chlorate	7775-09-9	No	No	-		-		-		-		1
Sodium Cyanide	143-33-9	No	No	-		-		1.00E-03	U	-		1
Sodium Dichromate	10588-01-9	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Sodium Diethyldithiocarbamate	148-18-5	No	No	2.70E-01	U	-		3.00E-02	U	-		1
Sodium Fluoride	7681-49-4	No	No	-		-		5.00E-02	U	1.30E-02	U	1
Sodium Fluoroacetate	62-74-8	No	No	-		-		2.00E-05	U	-		1
Sodium Hydroxide	1310-73-2	No	No	-		-		-		-		1
Sodium Metavanadate	13718-26-8	No	No	-		-		1.00E-03	U	-		1
Sodium Perchlorate	7601-89-0	No	No	-		-		7.00E-04	U	-		1
Sodium acid pyrophosphate	7758-16-9	No	No	-		-		4.86E+01	U	-		1
Sodium aluminum phosphate (acidic)	7785-88-8	No	No	-		-		4.86E+01	U	-		1
Sodium aluminum phosphate (anhydrous)	10279-59-1	No	No	-		-		4.86E+01	U	-		1
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	No	No	-		-		4.86E+01	U	-		1
Sodium hexametaphosphate	10124-56-8	No	No	-		-		4.86E+01	U	-		1
Sodium polyphosphate	68915-31-1	No	No	-		-		4.86E+01	U	-		1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Safrole	94-59-7	0.1	1	-	-	3.23E+09	9.38E+02	7.44E+03	1.31E+08	8.33E+02	-
Samarium Chloride (Stable, Nonradioactive)	10361-82-7	-	1	-	-	3.23E+09	-	-	-	-	-
Samarium Nitrate (Stable, Nonradioactive)	10361-83-8	-	1	-	-	3.23E+09	-	-	-	-	-
Savey	78587-05-0	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
Scandium	7440-20-2	-	1	-	-	3.23E+09	-	-	-	-	-
Selenious Acid	7783-00-8	-	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Selenite	14124-67-5	-	1	-	-	3.23E+09	-	-	-	-	-
Selenium	7782-49-2	-	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Selenium Sulfide	7446-34-6	-	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Selenourea	630-10-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Sethoxydim	74051-80-2	0.1	1	-	-	3.23E+09	-	-	-	-	2.65E+05
Silica (crystalline, respirable)	7631-86-9	-	1	-	-	3.23E+09	-	-	-	-	-
Silicon	7440-21-3	-	1	-	-	3.23E+09	-	-	-	-	-
Silver	7440-22-4	-	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Silver Cyanide	506-64-9	-	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Simazine	122-34-9	0.1	1	-	-	3.23E+09	1.72E+03	1.36E+04	-	1.53E+03	1.47E+04
Sodium	7440-23-5	-	1	-	-	3.23E+09	-	-	-	-	-
Sodium Acifluorfen	62476-59-9	0.1	1	-	-	3.23E+09	-	-	-	-	3.83E+04
Sodium Azide	26628-22-8	-	1	-	-	3.23E+09	-	-	-	-	1.18E+04
Sodium Chlorate	7775-09-9	-	1	-	-	3.23E+09	-	-	-	-	-
Sodium Cyanide	143-33-9	-	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Sodium Dichromate	10588-01-9	-	1	-	-	3.23E+09	4.13E+02	-	5.51E+04	4.10E+02	5.90E+04
Sodium Diethyldithiocarbamate	148-18-5	0.1	1	-	-	3.23E+09	7.65E+02	6.06E+03	-	6.79E+02	8.85E+04
Sodium Fluoride	7681-49-4	-	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Sodium Fluoroacetate	62-74-8	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+01
Sodium Hydroxide	1310-73-2	-	1	-	-	3.23E+09	-	-	-	-	-
Sodium Metavanadate	13718-26-8	-	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Sodium Perchlorate	7601-89-0	-	1	-	-	3.23E+09	-	-	-	-	2.06E+03
Sodium acid pyrophosphate	7758-16-9	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Sodium aluminum phosphate (acidic)	7785-88-8	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Sodium aluminum phosphate (anhydrous)	10279-59-1	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Sodium hexametaphosphate	10124-56-8	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Sodium polyphosphate	68915-31-1	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Safrole	94-59-7	-	-	-	8.33E+02 ca
Samarium Chloride (Stable, Nonradioactive)	10361-82-7	-	-	-	
Samarium Nitrate (Stable, Nonradioactive)	10361-83-8	-	-	-	
Savey	78587-05-0	5.84E+05	-	6.55E+04	6.55E+04 nc
Scandium	7440-20-2	-	-	-	
Selenious Acid	7783-00-8	-	-	1.47E+04	1.47E+04 nc
Selenite	14124-67-5	-	-	-	
Selenium	7782-49-2	-	2.36E+09	1.47E+04	1.47E+04 nc
Selenium Sulfide	7446-34-6	-	2.36E+09	1.47E+04	1.47E+04 nc
Selenourea	630-10-4	-	-	-	
Sethoxydim	74051-80-2	2.10E+06	-	2.36E+05	2.36E+05 max
Silica (crystalline, respirable)	7631-86-9	-	3.54E+08	3.54E+08	3.54E+08 max
Silicon	7440-21-3	-	-	-	
Silver	7440-22-4	-	-	1.47E+04	1.47E+04 nc
Silver Cyanide	506-64-9	-	-	2.95E+05	2.95E+05 max
Simazine	122-34-9	1.17E+05	-	1.31E+04	1.53E+03 ca**
Sodium	7440-23-5	-	-	-	
Sodium Acifluorfen	62476-59-9	3.04E+05	-	3.40E+04	3.40E+04 nc
Sodium Azide	26628-22-8	-	-	1.18E+04	1.18E+04 nc
Sodium Chlorate	7775-09-9	-	-	-	
Sodium Cyanide	143-33-9	-	-	2.95E+03	2.95E+03 nc
Sodium Dichromate	10588-01-9	-	2.36E+07	5.88E+04	4.10E+02 ca
Sodium Diethyldithiocarbamate	148-18-5	7.01E+05	-	7.86E+04	6.79E+02 ca
Sodium Fluoride	7681-49-4	-	1.53E+09	1.47E+05	1.47E+05 max
Sodium Fluoroacetate	62-74-8	4.67E+02	-	5.24E+01	5.24E+01 nc
Sodium Hydroxide	1310-73-2	-	-	-	
Sodium Metavanadate	13718-26-8	-	-	2.95E+03	2.95E+03 nc
Sodium Perchlorate	7601-89-0	-	-	2.06E+03	2.06E+03 nc
Sodium acid pyrophosphate	7758-16-9	-	-	1.43E+08	1.43E+08 max
Sodium aluminum phosphate (acidic)	7785-88-8	-	-	1.43E+08	1.43E+08 max
Sodium aluminum phosphate (anhydrous)	10279-59-1	-	-	1.43E+08	1.43E+08 max
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	-	-	1.43E+08	1.43E+08 max
Sodium hexametaphosphate	10124-56-8	-	-	1.43E+08	1.43E+08 max
Sodium polyphosphate	68915-31-1	-	-	1.43E+08	1.43E+08 max

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR UTILITY WORKER
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Sodium trimetaphosphate	7785-84-4	No	No	-		-		4.86E+01	U	-		1
Sodium tripolyphosphate	7758-29-4	No	No	-		-		4.86E+01	U	-		1
Stearyl Acetate	822-23-1	No	Yes	-		-		-		-		1
Stirofos (Tetrachlorovinphos)	961-11-5	No	No	2.40E-02	U	-		3.00E-02	U	-		1
Strontium Chromate	7789-06-2	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Strontium, Stable	7440-24-6	No	No	-		-		6.00E-01	U	-		1
Strychnine	57-24-9	No	No	-		-		3.00E-04	U	-		1
Styrene	100-42-5	No	Yes	-		-		2.00E-01	U	1.00E+00	U	1
Styrene-Acrylonitrile (SAN) Trimer	NA	No	No	-		-		3.00E-03	U	-		1
Sulfate	14808-79-8	No	No	-		-		-		-		1
Sulfide	18496-25-8	No	No	-		-		-		-		1
Sulfolane	126-33-0	No	No	-		-		1.00E-03	U	2.00E-03	U	1
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	No	No	-		-		8.00E-04	U	-		1
Sulfur	7704-34-9	No	No	-		-		-		-		1
Sulfur Dioxide	7446-09-5	No	Yes	-		-		-		-		1
Sulfur Mustard	505-60-2	No	Yes	-		-		-		-		1
Sulfur Trioxide	7446-11-9	No	Yes	-		-		-		1.00E-03	U	1
Sulfuric Acid	7664-93-9	No	No	-		-		-		1.00E-03	U	1
Systhane	88671-89-0	No	No	-		-		2.50E-02	U	-		1
TCDD, 2,3,7,8-	1746-01-6	No	Yes	1.30E+05	U	3.80E+01	U	7.00E-10	U	4.00E-08	U	1
TCDF, 2,3,7,8-	51207-31-9	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
TCMTB	21564-17-0	No	No	-		-		3.00E-02	U	-		1
Tebuthiuron	34014-18-1	No	No	-		-		7.00E-02	U	-		1
Technetium	7440-26-8	No	No	-		-		-		-		1
Tellurium	13494-80-9	No	No	-		-		-		-		1
Temephos	3383-96-8	No	No	-		-		2.00E-02	U	-		1
Terbacil	5902-51-2	No	No	-		-		1.30E-02	U	-		1
Terbufos	13071-79-9	No	Yes	-		-		2.50E-05	U	-		1
Terbutryn	886-50-0	No	No	-		-		1.00E-03	U	-		1
Tetrabutyl Lead	1920-90-7	No	Yes	-		-		-		-		1
Tetrachloroaniline, 2,3,5,6-	3481-20-7	No	No	-		-		-		-		1
Tetrachlorobenzene, 1,2,3,4-	634-66-2	No	Yes	-		-		-		-		1
Tetrachlorobenzene, 1,2,4,5-	95-94-3	No	Yes	-		-		3.00E-04	U	-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Sodium trimetaphosphate	7785-84-4	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Sodium tripolyphosphate	7758-29-4	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Stearyl Acetate	822-23-1	-	1	8.92E+04	-	3.23E+09	-	-	-	-	-
Stirofos (Tetrachlorovinphos)	961-11-5	0.1	1	-	-	3.23E+09	8.60E+03	6.82E+04	-	7.64E+03	8.85E+04
Strontium Chromate	7789-06-2	-	1	-	-	3.23E+09	4.13E+02	-	5.51E+04	4.10E+02	5.90E+04
Strontium, Stable	7440-24-6	-	1	-	-	3.23E+09	-	-	-	-	1.77E+06
Strychnine	57-24-9	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Styrene	100-42-5	-	1	1.29E+04	8.67E+02	3.23E+09	-	-	-	-	5.90E+05
Styrene-Acrylonitrile (SAN) Trimer	NA	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+03
Sulfate	14808-79-8	-	1	-	-	3.23E+09	-	-	-	-	-
Sulfide	18496-25-8	-	1	-	-	3.23E+09	-	-	-	-	-
Sulfolane	126-33-0	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+03
Sulfur	7704-34-9	-	1	-	-	3.23E+09	-	-	-	-	-
Sulfur Dioxide	7446-09-5	-	1	-	-	3.23E+09	-	-	-	-	-
Sulfur Mustard	505-60-2	-	1	1.21E+05	1.08E+03	3.23E+09	-	-	-	-	-
Sulfur Trioxide	7446-11-9	-	1	-	-	3.23E+09	-	-	-	-	-
Sulfuric Acid	7664-93-9	-	1	-	-	3.23E+09	-	-	-	-	-
Systhane	88671-89-0	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
TCDD, 2,3,7,8-	1746-01-6	0.03	1	2.71E+06	-	3.23E+09	1.59E-03	4.20E-02	1.82E-01	1.52E-03	2.06E-03
TCDF, 2,3,7,8-	51207-31-9	0.03	1	4.72E+06	-	3.23E+09	1.59E-02	4.20E-01	3.17E+00	1.52E-02	2.06E-02
TCMTB	21564-17-0	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Tebuthiuron	34014-18-1	0.1	1	-	-	3.23E+09	-	-	-	-	2.06E+05
Technetium	7440-26-8	-	1	-	-	3.23E+09	-	-	-	-	-
Tellurium	13494-80-9	-	1	-	-	3.23E+09	-	-	-	-	-
Temephos	3383-96-8	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Terbacil	5902-51-2	0.1	1	-	-	3.23E+09	-	-	-	-	3.83E+04
Terbufos	13071-79-9	-	1	3.64E+05	3.09E+01	3.23E+09	-	-	-	-	7.37E+01
Terbutryn	886-50-0	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+03
Tetrabutyl Lead	1920-90-7	-	1	6.41E+03	-	3.23E+09	-	-	-	-	-
Tetrachloroaniline, 2,3,5,6-	3481-20-7	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tetrachlorobenzene, 1,2,3,4-	634-66-2	-	1	8.26E+04	-	3.23E+09	-	-	-	-	-
Tetrachlorobenzene, 1,2,4,5-	95-94-3	-	1	6.99E+04	-	3.23E+09	-	-	-	-	8.85E+02

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Sodium trimetaphosphate	7785-84-4	-	-	1.43E+08	1.43E+08 max
Sodium tripolyphosphate	7758-29-4	-	-	1.43E+08	1.43E+08 max
Stearyl Acetate	822-23-1	-	-	-	
Stirofos (Tetrachlorovinphos)	961-11-5	7.01E+05	-	7.86E+04	7.64E+03 ca*
Strontium Chromate	7789-06-2	-	2.36E+07	5.88E+04	4.10E+02 ca
Strontium, Stable	7440-24-6	-	-	1.77E+06	1.77E+06 max
Strychnine	57-24-9	7.01E+03	-	7.86E+02	7.86E+02 nc
Styrene	100-42-5	-	4.71E+05	2.62E+05	2.62E+05 sat
Styrene-Acrylonitrile (SAN) Trimer	NA	7.01E+04	-	7.86E+03	7.86E+03 nc
Sulfate	14808-79-8	-	-	-	
Sulfide	18496-25-8	-	-	-	
Sulfolane	126-33-0	2.34E+04	2.36E+08	2.62E+03	2.62E+03 nc
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	1.87E+04	-	2.10E+03	2.10E+03 nc
Sulfur	7704-34-9	-	-	-	
Sulfur Dioxide	7446-09-5	-	-	-	
Sulfur Mustard	505-60-2	-	-	-	
Sulfur Trioxide	7446-11-9	-	1.18E+08	1.18E+08	1.18E+08 max
Sulfuric Acid	7664-93-9	-	1.18E+08	1.18E+08	1.18E+08 max
Systhane	88671-89-0	5.84E+05	-	6.55E+04	6.55E+04 nc
TCDD, 2,3,7,8-	1746-01-6	5.45E-02	3.95E+00	1.99E-03	1.52E-03 ca**
TCDF, 2,3,7,8-	51207-31-9	5.45E-01	6.88E+01	1.99E-02	1.52E-02 ca**
TCMTB	21564-17-0	7.01E+05	-	7.86E+04	7.86E+04 nc
Tebuthiuron	34014-18-1	1.64E+06	-	1.83E+05	1.83E+05 max
Technetium	7440-26-8	-	-	-	
Tellurium	13494-80-9	-	-	-	
Temephos	3383-96-8	4.67E+05	-	5.24E+04	5.24E+04 nc
Terbacil	5902-51-2	3.04E+05	-	3.40E+04	3.40E+04 nc
Terbufos	13071-79-9	-	-	7.37E+01	7.37E+01 sat
Terbutryn	886-50-0	2.34E+04	-	2.62E+03	2.62E+03 nc
Tetrabutyl Lead	1920-90-7	-	-	-	
Tetrachloroaniline, 2,3,5,6-	3481-20-7	-	-	-	
Tetrachlorobenzene, 1,2,3,4-	634-66-2	-	-	-	
Tetrachlorobenzene, 1,2,4,5-	95-94-3	-	-	8.85E+02	8.85E+02 nc

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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	No	No	1.30E+01	U	3.80E-03	U	7.00E-06	U	4.00E-04	U	1
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	No	Yes	3.90E+01	U	1.14E-02	U	2.33E-06	U	1.33E-04	U	1
Tetrachloroethane, 1,1,1,2-	630-20-6	No	Yes	2.60E-02	U	7.40E-06	U	3.00E-02	U	-		1
Tetrachloroethane, 1,1,2,2-	79-34-5	No	Yes	2.00E-01	U	5.80E-05	U	2.00E-02	U	-		1
Tetrachloroethylene	127-18-4	No	Yes	2.10E-03	U	2.60E-07	U	6.00E-03	U	4.00E-02	U	1
Tetrachlorophenol, 2,3,4,5-	4901-51-3	No	No	-		-		-		-		1
Tetrachlorophenol, 2,3,4,6-	58-90-2	No	No	-		-		3.00E-02	U	-		1
Tetrachlorophenols (total)	25167-83-3	No	No	-		-		-		-		1
Tetrachloroterephthalate, 2,3,5,6-	2136-79-0	No	No	-		-		-		-		1
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	No	Yes	2.00E+01	U	-		-		-		1
Tetraethyl Dithiopyrophosphate	3689-24-5	No	No	-		-		5.00E-04	U	-		1
Tetraethyl Lead	78-00-2	No	Yes	-		-		1.00E-07	U	-		1
Tetrafluoroethane, 1,1,1,2-	811-97-2	No	Yes	-		-		-		8.00E+01	U	1
Tetrahydrofuran	109-99-9	No	Yes	-		-		9.00E-01	U	2.00E+00	U	1
Tetrahydrothiophene	110-01-0	No	Yes	-		-		-		-		1
Tetramethyl Lead	75-74-1	No	Yes	-		-		-		-		1
Tetramethylcyclohexane	30501-43-0	No	Yes	-		-		-		-		1
Tetrapotassium phosphate	7320-34-5	No	No	-		-		4.86E+01	U	-		1
Tetrapropyl Lead	3440-75-3	No	Yes	-		-		-		-		1
Tetrasodium pyrophosphate	7722-88-5	No	No	-		-		4.86E+01	U	-		1
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	No	No	-		-		2.00E-03	U	-		1
Thallic Oxide	1314-32-5	No	No	-		-		-		-		1
Thallium (I) Nitrate	10102-45-1	No	No	-		-		7.00E-06	U	-		1
Thallium (Soluble Salts)	7440-28-0	No	No	-		-		1.00E-05	U	-		1
Thallium Acetate	563-68-8	No	No	-		-		6.00E-06	U	-		1
Thallium Carbonate	6533-73-9	No	No	-		-		2.00E-05	U	-		1
Thallium Chloride	7791-12-0	No	No	-		-		6.00E-06	U	-		1
Thallium Selenite	12039-52-0	No	No	-		-		-		-		1
Thallium Sulfate	7446-18-6	No	No	-		-		2.00E-05	U	-		1
Thiobencarb	28249-77-6	No	No	-		-		1.00E-02	U	-		1
Thiocyanates	NA	No	No	-		-		2.00E-04	U	-		1
Thiocyanic Acid	463-56-9	No	Yes	-		-		2.00E-04	U	-		1
Thiodiglycol	111-48-8	No	No	-		-		7.00E-02	U	-		1
Thiofanox	39196-18-4	No	No	-		-		3.00E-04	U	-		1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	0.14	1	-	-	3.23E+09	1.59E+01	8.99E+01	2.17E+06	1.35E+01	2.06E+01
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	0.14	1	1.00E+06	-	3.23E+09	5.29E+00	3.00E+01	2.24E+02	4.41E+00	6.87E+00
Tetrachloroethane, 1,1,1,2-	630-20-6	-	1	7.83E+03	6.80E+02	3.23E+09	7.94E+03	-	2.70E+03	2.02E+03	8.85E+04
Tetrachloroethane, 1,1,2,2-	79-34-5	-	1	2.08E+04	1.90E+03	3.23E+09	1.03E+03	-	9.18E+02	4.86E+02	5.90E+04
Tetrachloroethylene	127-18-4	-	1	3.24E+03	1.66E+02	3.23E+09	9.83E+04	-	3.18E+04	2.40E+04	1.77E+04
Tetrachlorophenol, 2,3,4,5-	4901-51-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tetrachlorophenol, 2,3,4,6-	58-90-2	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Tetrachlorophenols (total)	25167-83-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tetrachloroterephthalate, 2,3,5,6-	2136-79-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	-	1	1.46E+05	-	3.23E+09	1.03E+01	-	-	1.03E+01	-
Tetraethyl Dithiopyrophosphate	3689-24-5	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+03
Tetraethyl Lead	78-00-2	-	1	2.64E+03	2.43E+00	3.23E+09	-	-	-	-	2.95E-01
Tetrafluoroethane, 1,1,1,2-	811-97-2	-	1	1.68E+03	1.09E+03	3.23E+09	-	-	-	-	-
Tetrahydrofuran	109-99-9	0.03	1	1.69E+04	1.65E+05	3.23E+09	-	-	-	-	2.65E+06
Tetrahydrothiophene	110-01-0	-	1	1.81E+04	3.44E+03	3.23E+09	-	-	-	-	-
Tetramethyl Lead	75-74-1	-	1	1.89E+03	3.64E+01	3.23E+09	-	-	-	-	-
Tetramethylcyclohexane	30501-43-0	-	1	-	-	3.23E+09	-	-	-	-	-
Tetrapotassium phosphate	7320-34-5	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Tetrapropyl Lead	3440-75-3	-	1	3.65E+03	-	3.23E+09	-	-	-	-	-
Tetrasodium pyrophosphate	7722-88-5	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	0.00065	1	-	-	3.23E+09	-	-	-	-	5.90E+03
Thallic Oxide	1314-32-5	-	1	-	-	3.23E+09	-	-	-	-	-
Thallium (I) Nitrate	10102-45-1	-	1	-	-	3.23E+09	-	-	-	-	2.06E+01
Thallium (Soluble Salts)	7440-28-0	-	1	-	-	3.23E+09	-	-	-	-	2.95E+01
Thallium Acetate	563-68-8	0.1	1	-	-	3.23E+09	-	-	-	-	1.77E+01
Thallium Carbonate	6533-73-9	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+01
Thallium Chloride	7791-12-0	-	1	-	-	3.23E+09	-	-	-	-	1.77E+01
Thallium Selenite	12039-52-0	-	1	-	-	3.23E+09	-	-	-	-	-
Thallium Sulfate	7446-18-6	-	1	-	-	3.23E+09	-	-	-	-	5.90E+01
Thiobencarb	28249-77-6	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Thiocyanates	NA	-	1	-	-	3.23E+09	-	-	-	-	5.90E+02
Thiocyanic Acid	463-56-9	-	1	-	-	3.23E+09	-	-	-	-	5.90E+02
Thiodiglycol	111-48-8	0.0075	1	-	-	3.23E+09	-	-	-	-	2.06E+05
Thiofanox	39196-18-4	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	1.17E+02	4.72E+07	1.75E+01	1.35E+01 ca**
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	3.89E+01	4.86E+03	5.83E+00	4.41E+00 ca**
Tetrachloroethane, 1,1,1,2-	630-20-6	-	-	8.85E+04	2.02E+03 sat
Tetrachloroethane, 1,1,2,2-	79-34-5	-	-	5.90E+04	4.86E+02 ca
Tetrachloroethylene	127-18-4	-	4.73E+03	3.73E+03	3.73E+03 sat
Tetrachlorophenol, 2,3,4,5-	4901-51-3	-	-	-	
Tetrachlorophenol, 2,3,4,6-	58-90-2	7.01E+05	-	7.86E+04	7.86E+04 nc
Tetrachlorophenols (total)	25167-83-3	-	-	-	
Tetrachloroterephthalate, 2,3,5,6-	2136-79-0	-	-	-	
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	-	-	-	1.03E+01 ca
Tetraethyl Dithiopyrophosphate	3689-24-5	1.17E+04	-	1.31E+03	1.31E+03 nc
Tetraethyl Lead	78-00-2	-	-	2.95E-01	2.95E-01 nc
Tetrafluoroethane, 1,1,1,2-	811-97-2	-	4.92E+06	4.92E+06	4.92E+06 sat
Tetrahydrofuran	109-99-9	7.01E+07	1.23E+06	8.31E+05	8.31E+05 sat
Tetrahydrothiophene	110-01-0	-	-	-	
Tetramethyl Lead	75-74-1	-	-	-	
Tetramethylcyclohexane	30501-43-0	-	-	-	
Tetrapotassium phosphate	7320-34-5	-	-	1.43E+08	1.43E+08 max
Tetrapropyl Lead	3440-75-3	-	-	-	
Tetrasodium pyrophosphate	7722-88-5	-	-	1.43E+08	1.43E+08 max
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	7.19E+06	-	5.89E+03	5.89E+03 nc
Thallic Oxide	1314-32-5	-	-	-	
Thallium (I) Nitrate	10102-45-1	-	-	2.06E+01	2.06E+01 nc
Thallium (Soluble Salts)	7440-28-0	-	-	2.95E+01	2.95E+01 nc
Thallium Acetate	563-68-8	1.40E+02	-	1.57E+01	1.57E+01 nc
Thallium Carbonate	6533-73-9	4.67E+02	-	5.24E+01	5.24E+01 nc
Thallium Chloride	7791-12-0	-	-	1.77E+01	1.77E+01 nc
Thallium Selenite	12039-52-0	-	-	-	
Thallium Sulfate	7446-18-6	-	-	5.90E+01	5.90E+01 nc
Thiobencarb	28249-77-6	2.34E+05	-	2.62E+04	2.62E+04 nc
Thiocyanates	NA	-	-	5.90E+02	5.90E+02 nc
Thiocyanic Acid	463-56-9	-	-	5.90E+02	5.90E+02 nc
Thiodiglycol	111-48-8	2.18E+07	-	2.05E+05	2.05E+05 max
Thiofanox	39196-18-4	7.01E+03	-	7.86E+02	7.86E+02 nc

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Thiophanate, Methyl	23564-05-8	No	No	-		-		8.00E-02	U	-		1
Thiophene	110-02-1	No	Yes	-		-		-		-		1
Thiram	137-26-8	No	No	-		-		5.00E-03	U	-		1
Thorium	NA	No	No	-		-		-		-		1
Thymol	89-83-8	No	No	-		-		-		-		1
Tin	7440-31-5	No	No	-		-		6.00E-01	U	-		1
Titanium	7440-32-6	No	No	-		-		-		-		1
Titanium Tetrachloride	7550-45-0	No	Yes	-		-		-		1.00E-04	U	1
Toluene	108-88-3	No	Yes	-		-		8.00E-02	U	5.00E+00	U	1
Toluene-2,5-diamine	95-70-5	No	No	1.80E-01	U	-		2.00E-04	U	-		1
Toluenediamine, 2,3-	2687-25-4	No	No	-		-		-		-		1
Toluenediamine, 3,4-	496-72-0	No	No	-		-		-		-		1
Toluidine, p-	106-49-0	No	No	3.00E-02	U	-		4.00E-03	U	-		1
Total Petroleum Hydrocarbons (Aliphatic High)	NA	No	Yes	-		-		3.00E+00	U	-		1
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	No	Yes	-		-		-		6.00E-01	U	1
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	No	Yes	-		-		1.00E-02	U	1.00E-01	U	1
Total Petroleum Hydrocarbons (Aromatic High)	NA	No	No	-		-		4.00E-02	U	-		1
Total Petroleum Hydrocarbons (Aromatic Low)	NA	No	Yes	-		-		4.00E-03	U	3.00E-02	U	1
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	No	Yes	-		-		4.00E-03	U	3.00E-03	U	1
Toxaphene	8001-35-2	No	No	1.10E+00	U	3.20E-04	U	-		-		1
Tralomethrin	66841-25-6	No	No	-		-		7.50E-03	U	-		1
Tri-n-butyltin	688-73-3	No	Yes	-		-		3.00E-04	U	-		1
Triacetin	102-76-1	No	No	-		-		8.00E+01	U	-		1
Triallate	2303-17-5	No	Yes	-		-		1.30E-02	U	-		1
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	No	No	-		-		4.86E+01	U	-		1
Triasulfuron	82097-50-5	No	No	-		-		1.00E-02	U	-		1
Triaziquone	68-76-8	No	No	-		-		-		-		1
Tribromobenzene, 1,2,4-	615-54-3	No	Yes	-		-		5.00E-03	U	-		1
Tribromochloromethane	594-15-0	No	Yes	-		-		-		-		1

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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Thiophanate, Methyl	23564-05-8	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+05
Thiophene	110-02-1	-	1	5.77E+03	1.80E+03	3.23E+09	-	-	-	-	-
Thiram	137-26-8	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+04
Thorium	NA	-	1	-	-	3.23E+09	-	-	-	-	-
Thymol	89-83-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tin	7440-31-5	-	1	-	-	3.23E+09	-	-	-	-	1.77E+06
Titanium	7440-32-6	-	1	-	-	3.23E+09	-	-	-	-	-
Titanium Tetrachloride	7550-45-0	-	1	-	-	3.23E+09	-	-	-	-	-
Toluene	108-88-3	-	1	5.92E+03	8.18E+02	3.23E+09	-	-	-	-	2.36E+05
Toluene-2,5-diamine	95-70-5	0.1	1	-	-	3.23E+09	1.15E+03	9.09E+03	-	1.02E+03	5.90E+02
Toluenediamine, 2,3-	2687-25-4	0.1	1	-	-	3.23E+09	-	-	-	-	-
Toluenediamine, 3,4-	496-72-0	0.1	1	-	-	3.23E+09	-	-	-	-	-
Toluidine, p-	106-49-0	0.1	1	-	-	3.23E+09	6.88E+03	5.45E+04	-	6.11E+03	1.18E+04
Total Petroleum Hydrocarbons (Aliphatic High)	NA	-	1	1.46E+03	3.41E-01	3.23E+09	-	-	-	-	8.85E+06
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	-	1	1.14E+03	1.41E+02	3.23E+09	-	-	-	-	-
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	-	1	1.44E+03	6.86E+00	3.23E+09	-	-	-	-	2.95E+04
Total Petroleum Hydrocarbons (Aromatic High)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	1.18E+05
Total Petroleum Hydrocarbons (Aromatic Low)	NA	-	1	4.88E+03	1.82E+03	3.23E+09	-	-	-	-	1.18E+04
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	-	1	7.23E+04	-	3.23E+09	-	-	-	-	1.18E+04
Toxaphene	8001-35-2	0.1	1	-	-	3.23E+09	1.88E+02	1.49E+03	2.58E+07	1.67E+02	-
Tralomethrin	66841-25-6	0.1	1	-	-	3.23E+09	-	-	-	-	2.21E+04
Tri-n-butyltin	688-73-3	-	1	4.63E+03	-	3.23E+09	-	-	-	-	8.85E+02
Triacetin	102-76-1	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+08
Triallate	2303-17-5	-	1	5.00E+05	-	3.23E+09	-	-	-	-	3.83E+04
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Triasulfuron	82097-50-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Triaziquone	68-76-8	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tribromobenzene, 1,2,4-	615-54-3	-	1	6.24E+04	-	3.23E+09	-	-	-	-	1.47E+04
Tribromochloromethane	594-15-0	-	1	5.65E+04	-	3.23E+09	-	-	-	-	-

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Thiophanate, Methyl	23564-05-8	1.87E+06	-	2.10E+05	2.10E+05 max
Thiophene	110-02-1	-	-	-	
Thiram	137-26-8	1.17E+05	-	1.31E+04	1.31E+04 nc
Thorium	NA	-	-	-	
Thymol	89-83-8	-	-	-	
Tin	7440-31-5	-	-	1.77E+06	1.77E+06 max
Titanium	7440-32-6	-	-	-	
Titanium Tetrachloride	7550-45-0	-	1.18E+07	1.18E+07	1.18E+07 max
Toluene	108-88-3	-	1.08E+06	1.94E+05	1.94E+05 sat
Toluene-2,5-diamine	95-70-5	4.67E+03	-	5.24E+02	5.24E+02 nc
Toluenediamine, 2,3-	2687-25-4	-	-	-	
Toluenediamine, 3,4-	496-72-0	-	-	-	
Toluidine, p-	106-49-0	9.35E+04	-	1.05E+04	6.11E+03 ca**
Total Petroleum Hydrocarbons (Aliphatic High)	NA	-	-	8.85E+06	8.85E+06 sat
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	-	2.51E+04	2.51E+04	2.51E+04 sat
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	-	5.26E+03	4.46E+03	4.46E+03 sat
Total Petroleum Hydrocarbons (Aromatic High)	NA	9.35E+05	-	1.05E+05	1.05E+05 max
Total Petroleum Hydrocarbons (Aromatic Low)	NA	-	5.34E+03	3.68E+03	3.68E+03 sat
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	-	7.91E+03	4.74E+03	4.74E+03 nc
Toxaphene	8001-35-2	-	-	-	1.67E+02 ca
Tralomethrin	66841-25-6	1.75E+05	-	1.96E+04	1.96E+04 nc
Tri-n-butyltin	688-73-3	-	-	8.85E+02	8.85E+02 nc
Triacetin	102-76-1	1.87E+09	-	2.10E+08	2.10E+08 max
Triallate	2303-17-5	-	-	3.83E+04	3.83E+04 nc
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	-	-	1.43E+08	1.43E+08 max
Triasulfuron	82097-50-5	2.34E+05	-	2.62E+04	2.62E+04 nc
Triaziquone	68-76-8	-	-	-	
Tribromobenzene, 1,2,4-	615-54-3	-	-	1.47E+04	1.47E+04 nc
Tribromochloromethane	594-15-0	-	-	-	

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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Tribromodiphenyl Ether	49690-94-0	No	Yes	-		-		-		-		1
Tribromophenol, 2,4,6-	118-79-6	No	No	-		-		-		-		1
Tributyl Phosphate	126-73-8	No	No	9.00E-03	U	-		1.00E-02	U	-		1
Tributyltin	56573-85-4	No	Yes	-		-		-		-		1
Tributyltin Compounds	NA	No	No	-		-		3.00E-04	U	-		1
Tributyltin Oxide	56-35-9	No	No	-		-		3.00E-04	U	-		1
Tributyltin chloride	1461-22-9	No	Yes	-		-		-		-		1
Tributyltin fluoride	1983-10-4	No	Yes	-		-		-		-		1
Tributyltin linoleate	24124-25-2	No	Yes	-		-		-		-		1
Tributyltin methacrylate	2155-70-6	No	Yes	-		-		-		-		1
Tributyltin naphthenate	85409-17-2	No	No	-		-		-		-		1
Tricaine Methanesulfonate	886-86-2	No	No	-		-		-		-		1
Tricalcium phosphate	7758-87-4	No	No	-		-		4.86E+01	U	-		1
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	No	Yes	-		-		3.00E+01	U	3.00E+01	U	1
Trichloro-2'-hydroxydiphenylether	3380-34-5	No	No	-		-		-		-		1
Trichloroacetic Acid	76-03-9	No	No	7.00E-02	U	-		2.00E-02	U	-		1
Trichloroaniline HCl, 2,4,6-	33663-50-2	No	No	2.90E-02	U	-		-		-		1
Trichloroaniline, 2,4,5-	636-30-6	No	No	-		-		-		-		1
Trichloroaniline, 2,4,6-	634-93-5	No	No	7.00E-03	U	-		3.00E-05	U	-		1
Trichlorobenzene	12002-48-1	No	Yes	-		-		-		-		1
Trichlorobenzene, 1,2,3-	87-61-6	No	Yes	-		-		8.00E-04	U	-		1
Trichlorobenzene, 1,2,4-	120-82-1	No	Yes	2.90E-02	U	-		1.00E-02	U	2.00E-03	U	1
Trichloroethane, 1,1,1-	71-55-6	No	Yes	-		-		2.00E+00	U	5.00E+00	U	1
Trichloroethane, 1,1,2-	79-00-5	No	Yes	5.70E-02	U	1.60E-05	U	4.00E-03	U	2.00E-04	U	1
Trichloroethylene	79-01-6	Yes	Yes	4.60E-02	U	4.10E-06	U	5.00E-04	U	2.00E-03	U	1
Trichlorofluoromethane	75-69-4	No	Yes	-		-		3.00E-01	U	7.00E-01	U	1
Trichlorophenol, 2,4,5-	95-95-4	No	No	-		-		1.00E-01	U	-		1
Trichlorophenol, 2,4,6-	88-06-2	No	No	1.10E-02	U	3.10E-06	U	1.00E-03	U	-		1
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	No	No	-		-		1.00E-02	U	-		1
Trichlorophenoxyacetic acid, 2,4,5- Amine Salts, PARENT (2,4,5-T)	NA	Yes	No	-		-		-		-		1
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	No	No	-		-		8.00E-03	U	-		1
Trichloropropane, 1,1,2-	598-77-6	No	Yes	-		-		5.00E-03	U	-		1
Trichloropropane, 1,2,3-	96-18-4	Yes	Yes	3.00E+01	U	-		4.00E-03	U	3.00E-04	U	1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Tribromodiphenyl Ether	49690-94-0	-	1	1.07E+06	-	3.23E+09	-	-	-	-	-
Tribromophenol, 2,4,6-	118-79-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tributyl Phosphate	126-73-8	0.1	1	-	-	3.23E+09	2.29E+04	1.82E+05	-	2.04E+04	2.95E+04
Tributyltin	56573-85-4	-	1	4.95E+04	-	3.23E+09	-	-	-	-	-
Tributyltin Compounds	NA	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Tributyltin Oxide	56-35-9	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Tributyltin chloride	1461-22-9	-	1	5.94E+03	-	3.23E+09	-	-	-	-	-
Tributyltin fluoride	1983-10-4	-	1	8.59E+03	-	3.23E+09	-	-	-	-	-
Tributyltin linoleate	24124-25-2	-	1	1.67E+05	-	3.23E+09	-	-	-	-	-
Tributyltin methacrylate	2155-70-6	-	1	1.41E+04	-	3.23E+09	-	-	-	-	-
Tributyltin naphthenate	85409-17-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tricaine Methanesulfonate	886-86-2	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tricalcium phosphate	7758-87-4	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	-	1	1.77E+03	9.10E+02	3.23E+09	-	-	-	-	8.85E+07
Trichloro-2'-hydroxydiphenylether	3380-34-5	0.1	1	-	-	3.23E+09	-	-	-	-	-
Trichloroacetic Acid	76-03-9	0.1	1	-	-	3.23E+09	2.95E+03	2.34E+04	-	2.62E+03	5.90E+04
Trichloroaniline HCl, 2,4,6-	33663-50-2	0.1	1	-	-	3.23E+09	7.12E+03	5.64E+04	-	6.32E+03	-
Trichloroaniline, 2,4,5-	636-30-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Trichloroaniline, 2,4,6-	634-93-5	0.1	1	-	-	3.23E+09	2.95E+04	2.34E+05	-	2.62E+04	8.85E+01
Trichlorobenzene	12002-48-1	-	1	3.55E+04	-	3.23E+09	-	-	-	-	-
Trichlorobenzene, 1,2,3-	87-61-6	-	1	4.44E+04	-	3.23E+09	-	-	-	-	2.36E+03
Trichlorobenzene, 1,2,4-	120-82-1	-	1	4.13E+04	4.05E+02	3.23E+09	7.12E+03	-	-	7.12E+03	2.95E+04
Trichloroethane, 1,1,1-	71-55-6	-	1	2.27E+03	6.40E+02	3.23E+09	-	-	-	-	5.90E+06
Trichloroethane, 1,1,2-	79-00-5	-	1	9.95E+03	2.16E+03	3.23E+09	3.62E+03	-	1.59E+03	1.10E+03	1.18E+04
Trichloroethylene	79-01-6	-	1	3.04E+03	6.92E+02	3.23E+09	4.49E+03	-	1.90E+03	1.33E+03	1.47E+03
Trichlorofluoromethane	75-69-4	-	1	1.43E+03	1.23E+03	3.23E+09	-	-	-	-	8.85E+05
Trichlorophenol, 2,4,5-	95-95-4	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+05
Trichlorophenol, 2,4,6-	88-06-2	0.1	1	-	-	3.23E+09	1.88E+04	1.49E+05	2.66E+09	1.67E+04	2.95E+03
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Trichlorophenoxyacetic acid, 2,4,5- Amine Salts, PARENT (2,4,5-T)	NA	-	1	-	-	3.23E+09	-	-	-	-	-
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	0.1	1	-	-	3.23E+09	-	-	-	-	2.36E+04
Trichloropropane, 1,1,2-	598-77-6	-	1	2.07E+04	1.28E+03	3.23E+09	-	-	-	-	1.47E+04
Trichloropropane, 1,2,3-	96-18-4	-	1	2.17E+04	1.40E+03	3.23E+09	6.88E+00	-	-	6.88E+00	1.18E+04

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Tribromodiphenyl Ether	49690-94-0	-	-	-	
Tribromophenol, 2,4,6-	118-79-6	-	-	-	
Tributyl Phosphate	126-73-8	2.34E+05	-	2.62E+04	2.04E+04 ca**
Tributyltin	56573-85-4	-	-	-	
Tributyltin Compounds	NA	7.01E+03	-	7.86E+02	7.86E+02 nc
Tributyltin Oxide	56-35-9	7.01E+03	-	7.86E+02	7.86E+02 nc
Tributyltin chloride	1461-22-9	-	-	-	
Tributyltin fluoride	1983-10-4	-	-	-	
Tributyltin linoleate	24124-25-2	-	-	-	
Tributyltin methacrylate	2155-70-6	-	-	-	
Tributyltin naphthenate	85409-17-2	-	-	-	
Tricaine Methanesulfonate	886-86-2	-	-	-	
Tricalcium phosphate	7758-87-4	-	-	1.43E+08	1.43E+08 max
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	-	1.94E+06	1.90E+06	1.90E+06 sat
Trichloro-2'-hydroxydiphenylether	3380-34-5	-	-	-	
Trichloroacetic Acid	76-03-9	4.67E+05	-	5.24E+04	2.62E+03 ca*
Trichloroaniline HCl, 2,4,6-	33663-50-2	-	-	-	6.32E+03 ca
Trichloroaniline, 2,4,5-	636-30-6	-	-	-	
Trichloroaniline, 2,4,6-	634-93-5	7.01E+02	-	7.86E+01	7.86E+01 nc
Trichlorobenzene	12002-48-1	-	-	-	
Trichlorobenzene, 1,2,3-	87-61-6	-	-	2.36E+03	2.36E+03 nc
Trichlorobenzene, 1,2,4-	120-82-1	-	3.02E+03	2.74E+03	2.74E+03 sat
Trichloroethane, 1,1,1-	71-55-6	-	4.15E+05	3.88E+05	3.88E+05 sat
Trichloroethane, 1,1,2-	79-00-5	-	7.27E+01	7.22E+01	7.22E+01 nc
Trichloroethylene	79-01-6	-	2.22E+02	1.93E+02	1.93E+02 nc
Trichlorofluoromethane	75-69-4	-	3.65E+04	3.50E+04	3.50E+04 sat
Trichlorophenol, 2,4,5-	95-95-4	2.34E+06	-	2.62E+05	2.62E+05 max
Trichlorophenol, 2,4,6-	88-06-2	2.34E+04	-	2.62E+03	2.62E+03 nc
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	2.34E+05	-	2.62E+04	2.62E+04 nc
Trichlorophenoxyacetic acid, 2,4,5- Amine Salts, PARENT (2,4,5-T)	NA	-	-	-	
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	1.87E+05	-	2.10E+04	2.10E+04 nc
Trichloropropane, 1,1,2-	598-77-6	-	-	1.47E+04	1.47E+04 sat
Trichloropropane, 1,2,3-	96-18-4	-	2.38E+02	2.33E+02	6.88E+00 ca*

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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Trichloropropene, 1,2,3-	96-19-5	No	Yes	-		-		3.00E-03	U	3.00E-04	U	1
Trichlorotoluene, 2,3,6-	2077-46-5	No	Yes	-		-		-		-		1
Trichlorotoluene, alpha 2,6-	2014-83-7	No	Yes	-		-		-		-		1
Triclorophenols (total)	NA	No	No	-		-		-		-		1
Tricresyl Phosphate (TCP)	1330-78-5	No	No	-		-		2.00E-02	U	-		1
Tridiphane	58138-08-2	No	No	-		-		3.00E-03	U	-		1
Tridymite	15468-32-3	No	No	-		-		-		-		1
Triethyl Lead	5224-23-7	No	Yes	-		-		-		-		1
Triethyl phosphorothioate [O,O,O-]	126-68-1	No	Yes	-		-		-		-		1
Triethylamine	121-44-8	No	Yes	-		-		-		7.00E-03	U	1
Triethylene Glycol	112-27-6	No	No	-		-		2.00E+00	U	-		1
Trifluralin	1582-09-8	No	Yes	7.70E-03	U	-		7.50E-03	U	-		1
Trimagnesium phosphate	7757-87-1	No	No	-		-		4.86E+01	U	-		1
Trimethyl Lead	7442-13-9	No	Yes	-		-		-		-		1
Trimethyl Phosphate	512-56-1	No	No	2.00E-02	U	-		1.00E-02	U	-		1
Trimethyl-4-Propenylnaphthalene, 1,2,3-	26137-53-1	No	Yes	-		-		-		-		1
Trimethylbenzene, 1,2,3-	526-73-8	No	Yes	-		-		-		5.00E-03	U	1
Trimethylbenzene, 1,2,4-	95-63-6	No	Yes	-		-		-		7.00E-03	U	1
Trimethylbenzene, 1,3,5-	108-67-8	No	Yes	-		-		1.00E-02	U	-		1
Trimethylethyl Lead	1762-26-1	No	Yes	-		-		-		-		1
Trimethylpentane, 2,2,4-	540-84-1	No	Yes	-		-		-		-		1
Trinitrobenzene, 1,3,5-	99-35-4	No	No	-		-		3.00E-02	U	-		1
Trinitrotoluene, 2,4,6-	118-96-7	No	No	3.00E-02	U	-		5.00E-04	U	-		1
Triphenylphosphine Oxide	791-28-6	No	No	-		-		2.00E-02	U	-		1
Triphenyltin	668-34-8	No	Yes	-		-		-		-		1
Tripotassium phosphate	7778-53-2	No	No	-		-		4.86E+01	U	-		1
Tripropyl Lead	6618-03-7	No	Yes	-		-		-		-		1
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	No	No	-		-		2.00E-02	U	-		1
Tris(1-chloro-2-propyl)phosphate	13674-84-5	No	No	-		-		1.00E-02	U	-		1
Tris(2,3-dibromopropyl)phosphate	126-72-7	No	Yes	2.30E+00	U	6.60E-04	U	-		-		1
Tris(2-chloroethyl)phosphate	115-96-8	No	No	2.00E-02	U	-		7.00E-03	U	-		1
Tris(2-ethylhexyl)phosphate	78-42-2	No	No	3.20E-03	U	-		1.00E-01	U	-		1
Trisbutoxyethyl Phosphate	78-51-3	No	No	-		-		-		-		1
Trisodium phosphate	7601-54-9	No	No	-		-		4.86E+01	U	-		1

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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Trichloropropene, 1,2,3-	96-19-5	-	1	3.23E+03	4.51E+02	3.23E+09	-	-	-	-	8.85E+03
Trichlorotoluene, 2,3,6-	2077-46-5	-	1	5.83E+04	-	3.23E+09	-	-	-	-	-
Trichlorotoluene, alpha 2,6-	2014-83-7	-	1	9.70E+04	-	3.23E+09	-	-	-	-	-
Triclorophenols (total)	NA	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tricresyl Phosphate (TCP)	1330-78-5	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Tridiphane	58138-08-2	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+03
Tridymite	15468-32-3	-	1	-	-	3.23E+09	-	-	-	-	-
Triethyl Lead	5224-23-7	-	1	1.80E+03	5.67E+03	3.23E+09	-	-	-	-	-
Triethyl phosphorothioate [O,O,O-]	126-68-1	-	1	3.87E+04	4.67E+02	3.23E+09	-	-	-	-	-
Triethylamine	121-44-8	-	1	2.18E+04	2.78E+04	3.23E+09	-	-	-	-	-
Triethylene Glycol	112-27-6	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+06
Trifluralin	1582-09-8	-	1	7.07E+05	-	3.23E+09	2.68E+04	-	-	2.68E+04	2.21E+04
Trimagnesium phosphate	7757-87-1	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Trimethyl Lead	7442-13-9	-	1	1.54E+03	6.92E+04	3.23E+09	-	-	-	-	-
Trimethyl Phosphate	512-56-1	0.1	1	-	-	3.23E+09	1.03E+04	8.18E+04	-	9.17E+03	2.95E+04
Trimethyl-4-Propenylnaphthalene, 1,2,3-	26137-53-1	-	1	6.96E+05	-	3.23E+09	-	-	-	-	-
Trimethylbenzene, 1,2,3-	526-73-8	-	1	1.30E+04	2.93E+02	3.23E+09	-	-	-	-	-
Trimethylbenzene, 1,2,4-	95-63-6	-	1	1.09E+04	2.18E+02	3.23E+09	-	-	-	-	-
Trimethylbenzene, 1,3,5-	108-67-8	-	1	9.11E+03	1.82E+02	3.23E+09	-	-	-	-	2.95E+04
Trimethylethyl Lead	1762-26-1	-	1	1.98E+03	2.51E+04	3.23E+09	-	-	-	-	-
Trimethylpentane, 2,2,4-	540-84-1	-	1	1.29E+03	6.10E+01	3.23E+09	-	-	-	-	-
Trinitrobenzene, 1,3,5-	99-35-4	0.019	1	-	-	3.23E+09	-	-	-	-	8.85E+04
Trinitrotoluene, 2,4,6-	118-96-7	0.032	1	-	-	3.23E+09	6.88E+03	1.70E+05	-	6.62E+03	1.47E+03
Triphenylphosphine Oxide	791-28-6	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Triphenyltin	668-34-8	-	1	2.79E+06	-	3.23E+09	-	-	-	-	-
Tripotassium phosphate	7778-53-2	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08
Tripropyl Lead	6618-03-7	-	1	2.30E+03	5.57E+02	3.23E+09	-	-	-	-	-
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	0.1	1	-	-	3.23E+09	-	-	-	-	5.90E+04
Tris(1-chloro-2-propyl)phosphate	13674-84-5	0.1	1	-	-	3.23E+09	-	-	-	-	2.95E+04
Tris(2,3-dibromopropyl)phosphate	126-72-7	-	1	1.25E+06	4.67E+02	3.23E+09	8.98E+01	-	4.82E+03	8.81E+01	-
Tris(2-chloroethyl)phosphate	115-96-8	0.1	1	-	-	3.23E+09	1.03E+04	8.18E+04	-	9.17E+03	2.06E+04
Tris(2-ethylhexyl)phosphate	78-42-2	0.1	1	-	-	3.23E+09	6.45E+04	5.11E+05	-	5.73E+04	2.95E+05
Trisbutoxyethyl Phosphate	78-51-3	0.1	1	-	-	3.23E+09	-	-	-	-	-
Trisodium phosphate	7601-54-9	-	1	-	-	3.23E+09	-	-	-	-	1.43E+08

Site-specific
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Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Trichloropropene, 1,2,3-	96-19-5	-	3.53E+01	3.52E+01	3.52E+01 nc
Trichlorotoluene, 2,3,6-	2077-46-5	-	-	-	
Trichlorotoluene, alpha 2,6-	2014-83-7	-	-	-	
Triclorophenols (total)	NA	-	-	-	
Tricresyl Phosphate (TCP)	1330-78-5	4.67E+05	-	5.24E+04	5.24E+04 nc
Tridiphane	58138-08-2	7.01E+04	-	7.86E+03	7.86E+03 nc
Tridymite	15468-32-3	-	-	-	
Triethyl Lead	5224-23-7	-	-	-	
Triethyl phosphorothioate [O,O,O-]	126-68-1	-	-	-	
Triethylamine	121-44-8	-	5.57E+03	5.57E+03	5.57E+03 nc
Triethylene Glycol	112-27-6	4.67E+07	-	5.24E+06	5.24E+06 max
Trifluralin	1582-09-8	-	-	2.21E+04	2.21E+04 nc
Trimagnesium phosphate	7757-87-1	-	-	1.43E+08	1.43E+08 max
Trimethyl Lead	7442-13-9	-	-	-	
Trimethyl Phosphate	512-56-1	2.34E+05	-	2.62E+04	9.17E+03 ca**
Trimethyl-4-Propenylnaphthalene, 1,2,3-	26137-53-1	-	-	-	
Trimethylbenzene, 1,2,3-	526-73-8	-	2.38E+03	2.38E+03	2.38E+03 sat
Trimethylbenzene, 1,2,4-	95-63-6	-	2.79E+03	2.79E+03	2.79E+03 sat
Trimethylbenzene, 1,3,5-	108-67-8	-	-	2.95E+04	2.95E+04 sat
Trimethylethyl Lead	1762-26-1	-	-	-	
Trimethylpentane, 2,2,4-	540-84-1	-	-	-	
Trinitrobenzene, 1,3,5-	99-35-4	3.69E+06	-	8.64E+04	8.64E+04 nc
Trinitrotoluene, 2,4,6-	118-96-7	3.65E+04	-	1.42E+03	1.42E+03 nc
Triphenylphosphine Oxide	791-28-6	4.67E+05	-	5.24E+04	5.24E+04 nc
Triphenyltin	668-34-8	-	-	-	
Tripotassium phosphate	7778-53-2	-	-	1.43E+08	1.43E+08 max
Tripropyl Lead	6618-03-7	-	-	-	
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	4.67E+05	-	5.24E+04	5.24E+04 nc
Tris(1-chloro-2-propyl)phosphate	13674-84-5	2.34E+05	-	2.62E+04	2.62E+04 nc
Tris(2,3-dibromopropyl)phosphate	126-72-7	-	-	-	8.81E+01 ca
Tris(2-chloroethyl)phosphate	115-96-8	1.64E+05	-	1.83E+04	9.17E+03 ca**
Tris(2-ethylhexyl)phosphate	78-42-2	2.34E+06	-	2.62E+05	5.73E+04 ca**
Trisbutoxyethyl Phosphate	78-51-3	-	-	-	
Trisodium phosphate	7601-54-9	-	-	1.43E+08	1.43E+08 max

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Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Trithion	786-19-6	No	No	-		-		-		-		1
Tungsten	7440-33-7	No	No	-		-		-		-		1
Uranium (Soluble Salts)	NA	No	No	-		-		3.00E-03	U	4.00E-05	U	1
Urea	57-13-6	No	No	-		-		-		-		1
Urethane	51-79-6	Yes	No	1.00E+00	U	2.90E-04	U	-		-		1
Vanadium Pentoxide	1314-62-1	No	No	-		8.30E-03	U	9.00E-03	U	7.00E-06	U	0.026
Vanadium Sulfate	36907-42-3	No	No	-		-		-		-		0.026
Vanadium and Compounds	7440-62-2	No	No	-		-		5.04E-03	U	1.00E-04	U	0.026
Vanadyl Sulfate	27774-13-6	No	No	-		-		-		-		1
Vernolate	1929-77-7	No	Yes	-		-		1.00E-03	U	-		1
Vinclozolin	50471-44-8	No	No	-		-		2.50E-02	U	-		1
Vinyl Acetate	108-05-4	No	Yes	-		-		1.00E+00	U	2.00E-01	U	1
Vinyl Bromide	593-60-2	No	Yes	-		3.20E-05	U	-		3.00E-03	U	1
Vinyl Chloride	75-01-4	Yes	Yes	7.20E-01	U	4.40E-06	U	3.00E-03	U	1.00E-01	U	1
Warfarin	81-81-2	No	No	-		-		3.00E-04	U	-		1
Xylene, P-	106-42-3	No	Yes	-		-		2.00E-01	U	1.00E-01	U	1
Xylene, m-	108-38-3	No	Yes	-		-		2.00E-01	U	1.00E-01	U	1
Xylene, o-	95-47-6	No	Yes	-		-		2.00E-01	U	1.00E-01	U	1
Xylenes	1330-20-7	No	Yes	-		-		2.00E-01	U	1.00E-01	U	1
Ytterbium	7440-64-4	No	No	-		-		-		-		1
Yttrium	7440-65-5	No	No	-		-		-		-		1
Zinc Cyanide	557-21-1	No	No	-		-		5.00E-02	U	-		1
Zinc Phosphide	1314-84-7	No	No	-		-		3.00E-04	U	-		1
Zinc and Compounds	7440-66-6	No	No	-		-		3.00E-01	U	-		1
Zineb	12122-67-7	No	No	-		-		5.00E-02	U	-		1
Zirconium	7440-67-7	No	No	-		-		8.00E-05	U	-		1

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL HQ=1 (mg/kg)
Trithion	786-19-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Tungsten	7440-33-7	-	1	-	-	3.23E+09	-	-	-	-	-
Uranium (Soluble Salts)	NA	-	1	-	-	3.23E+09	-	-	-	-	8.85E+03
Urea	57-13-6	0.1	1	-	-	3.23E+09	-	-	-	-	-
Urethane	51-79-6	0.1	1	-	-	3.23E+09	2.06E+02	1.64E+03	2.85E+07	1.83E+02	-
Vanadium Pentoxide	1314-62-1	-	1	-	-	3.23E+09	-	-	9.95E+05	9.95E+05	2.65E+04
Vanadium Sulfate	36907-42-3	-	1	-	-	3.23E+09	-	-	-	-	-
Vanadium and Compounds	7440-62-2	-	1	-	-	3.23E+09	-	-	-	-	1.49E+04
Vanadyl Sulfate	27774-13-6	-	1	-	-	3.23E+09	-	-	-	-	-
Vernolate	1929-77-7	-	1	1.70E+05	-	3.23E+09	-	-	-	-	2.95E+03
Vinclozolin	50471-44-8	0.1	1	-	-	3.23E+09	-	-	-	-	7.37E+04
Vinyl Acetate	108-05-4	-	1	6.06E+03	2.75E+03	3.23E+09	-	-	-	-	2.95E+06
Vinyl Bromide	593-60-2	-	1	1.89E+03	3.38E+03	3.23E+09	-	-	1.51E+02	1.51E+02	-
Vinyl Chloride	75-01-4	-	1	1.32E+03	3.92E+03	3.23E+09	2.87E+02	-	7.65E+02	2.09E+02	8.85E+03
Warfarin	81-81-2	0.1	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Xylene, P-	106-42-3	-	1	7.70E+03	3.89E+02	3.23E+09	-	-	-	-	5.90E+05
Xylene, m-	108-38-3	-	1	7.54E+03	3.87E+02	3.23E+09	-	-	-	-	5.90E+05
Xylene, o-	95-47-6	-	1	8.90E+03	4.34E+02	3.23E+09	-	-	-	-	5.90E+05
Xylenes	1330-20-7	-	1	8.93E+03	2.58E+02	3.23E+09	-	-	-	-	5.90E+05
Ytterbium	7440-64-4	-	1	-	-	3.23E+09	-	-	-	-	-
Yttrium	7440-65-5	-	1	-	-	3.23E+09	-	-	-	-	-
Zinc Cyanide	557-21-1	-	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Zinc Phosphide	1314-84-7	-	1	-	-	3.23E+09	-	-	-	-	8.85E+02
Zinc and Compounds	7440-66-6	-	1	-	-	3.23E+09	-	-	-	-	8.85E+05
Zineb	12122-67-7	0.1	1	-	-	3.23E+09	-	-	-	-	1.47E+05
Zirconium	7440-67-7	-	1	-	-	3.23E+09	-	-	-	-	2.36E+02

Site-specific
Outdoor Worker Screening Levels (RSL) for Soil MODIFIED FOR U
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL HQ=1 (mg/kg)	Inhalation SL HQ=1 (mg/kg)	Noncarcinogenic SL HI=1 (mg/kg)	Screening Level (mg/kg)
Trithion	786-19-6	-	-	-	
Tungsten	7440-33-7	-	-	-	
Uranium (Soluble Salts)	NA	-	4.72E+06	8.83E+03	8.83E+03 nc
Urea	57-13-6	-	-	-	
Urethane	51-79-6	-	-	-	1.83E+02 ca
Vanadium Pentoxide	1314-62-1	-	8.26E+05	2.57E+04	2.57E+04 nc
Vanadium Sulfate	36907-42-3	-	-	-	
Vanadium and Compounds	7440-62-2	-	1.18E+07	1.48E+04	1.48E+04 nc
Vanadyl Sulfate	27774-13-6	-	-	-	
Vernolate	1929-77-7	-	-	2.95E+03	2.95E+03 nc
Vinclozolin	50471-44-8	5.84E+05	-	6.55E+04	6.55E+04 nc
Vinyl Acetate	108-05-4	-	4.43E+04	4.36E+04	4.36E+04 sat
Vinyl Bromide	593-60-2	-	2.07E+02	2.07E+02	1.51E+02 ca**
Vinyl Chloride	75-01-4	-	4.81E+03	3.12E+03	2.09E+02 ca*
Warfarin	81-81-2	7.01E+03	-	7.86E+02	7.86E+02 nc
Xylene, P-	106-42-3	-	2.81E+04	2.68E+04	2.68E+04 sat
Xylene, m-	108-38-3	-	2.75E+04	2.63E+04	2.63E+04 sat
Xylene, o-	95-47-6	-	3.25E+04	3.08E+04	3.08E+04 sat
Xylenes	1330-20-7	-	3.26E+04	3.09E+04	3.09E+04 sat
Ytterbium	7440-64-4	-	-	-	
Yttrium	7440-65-5	-	-	-	
Zinc Cyanide	557-21-1	-	-	1.47E+05	1.47E+05 max
Zinc Phosphide	1314-84-7	-	-	8.85E+02	8.85E+02 nc
Zinc and Compounds	7440-66-6	-	-	8.85E+05	8.85E+05 max
Zineb	12122-67-7	1.17E+06	-	1.31E+05	1.31E+05 max
Zirconium	7440-67-7	-	-	2.36E+02	2.36E+02 nc

Recreational User Soil Exposure Parameters from USEPA Calculator

Site-specific
Recreator Equation Inputs for Soil

Variable	Value
TR (target cancer risk) unitless	0.000001
SA_{recsc} (skin surface area - child) cm^2/day	0
SA_{recsa} (skin surface area - adult) cm^2/day	2924.2
SA_{0-2} (skin surface area - mutagenic) cm^2/day	0
SA_{2-6} (skin surface area - mutagenic) cm^2/day	0
SA_{6-16} (skin surface area - mutagenic) cm^2/day	2160
SA_{16-30} (skin surface area - mutagenic) cm^2/day	3470
SA_{recsa} (skin surface area - adult) cm^2/day	2924.2
THQ (target hazard quotient) unitless	1
LT (lifetime - recreator) year	70
$IFS_{rec-adj}$ (age-adjusted soil ingestion factor) mg/kg	1307.077
$DFS_{rec-adj}$ (age-adjusted soil dermal factor) mg/kg	3735.778
$IFSM_{rec-adj}$ (mutagenic age-adjusted soil ingestion factor) mg/kg	3846.591
$DFSM_{rec-adj}$ (mutagenic age-adjusted soil dermal factor) mg/kg	5678.08
EF_{0-2} (exposure frequency) day/year	0
EF_{2-6} (exposure frequency) day/year	0
EF_{6-16} (exposure frequency) day/year	50
EF_{16-30} (exposure frequency) day/year	50
EF_{recsc} (exposure frequency - child) day/year	0
EF_{recsa} (exposure frequency - adult) day/year	50
EF_{recsa} (exposure frequency - adult) day/year	50
EF_{recs} (exposure frequency - recreator) day/year	50
IRS_{0-2} (soil intake rate) mg/day	0
IRS_{2-6} (soil intake rate) mg/day	0
IRS_{6-16} (soil intake rate) mg/day	100
IRS_{16-30} (soil intake rate) mg/day	50

IRS_{recsc} (soil intake rate - child) mg/day	0
IRS_{recsa} (soil intake rate - adult) mg/day	70.8
IRS_{recsa} (soil intake rate - adult) mg/day	70.8
ED_{0-2} (exposure duration) year	0
ED_{2-6} (exposure duration) year	0
ED_{6-16} (exposure duration) year	10
ED_{16-30} (exposure duration) year	14
ED_{recsc} (exposure duration - child) year	0
ED_{recsa} (exposure duration - adult) year	24
ED_{recsa} (exposure duration - adult) year	24
ED_{recs} (exposure duration - recreator) year	24
ET_{0-2} (exposure time) hr/day	0
ET_{2-6} (exposure time) hr/day	0
ET_{6-16} (exposure time) hr/day	2
ET_{16-30} (exposure time) hr/day	2
ET_{recsc} (exposure time - child) hr/day	0
ET_{recsa} (exposure time - adult) hr/day	2
ET_{recsa} (exposure time - adult) hr/day	2
ET_{recs} (exposure time - recreator) hr/day	2
BW_{0-2} (body weight) kg	0
BW_{2-6} (body weight) kg	0
BW_{6-16} (body weight) kg	44
BW_{16-30} (body weight) kg	80
BW_{recsc} (body weight - child) kg	0
BW_{recsa} (body weight - adult) kg	65
BW_{recsa} (body weight - adult) kg	65
AF_{0-2} (skin adherence factor) mg/cm^2	0
AF_{2-6} (skin adherence factor) mg/cm^2	0
AF_{6-16} (skin adherence factor) mg/cm^2	0.04
AF_{16-30} (skin adherence factor) mg/cm^2	0.09
AF_{recsc} (skin adherence factor - child) mg/cm^2	0
AF_{recsa} (skin adherence factor - adult) mg/cm^2	0.0692

AF_{recsa} (skin adherence factor - adult) mg/cm^2	0.0692
City (Climate Zone) PEF Selection	Philadelphia, P
A_s (acres) PEF Selection	0.5
Q/C_{wp} (g/m^2-s per kg/m^3) PEF Selection	87.36898
PEF (particulate emission factor) m^3/kg	3232997857
A (PEF Dispersion Constant)	14.0111
B (PEF Dispersion Constant)	19.6154
C (PEF Dispersion Constant)	225.3397
V (fraction of vegetative cover) unitless	0.5
U_m (mean annual wind speed) m/s	4.29
U_t (equivalent threshold value)	11.32
F(x) (function dependant on U_m/U_t) unitless	0.0993
City (Climate Zone) VF Selection	Philadelphia, P
A_s (acres) VF Selection	0.5
Q/C_{wp} (g/m^2-s per kg/m^3) VF Selection	87.36898
foc (fraction organic carbon in soil) g/g	0.006
ρ$_b$ (dry soil bulk density) g/cm^3	1.5
ρ$_s$ (soil particle density) g/cm^3	2.65
θ$_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15
T (exposure interval) s	950000000
A (VF Dispersion Constant)	14.0111
B (VF Dispersion Constant)	19.6154
C (VF Dispersion Constant)	225.3397

Output generated 19MAY2015:09:40:18

Recreational User Soil Screening Levels from USEPA Calculator

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
ALAR	1596-84-5	No	No	1.80E-02	U	5.10E-06	U	1.50E-01	U			1
Acenaphthene	83-32-9	No	Yes					6.00E-02	U			1
Acenaphthylene	208-96-8	No	Yes									1
Acephate	30560-19-1	No	No	8.70E-03	U			4.00E-03	U			1
Acetaldehyde	75-07-0	No	Yes			2.20E-06	U			9.00E-03	U	1
Acetochlor	34256-82-1	No	No					2.00E-02	U			1
Acetone	67-64-1	No	Yes					9.00E-01	U	3.09E+01	U	1
Acetone Cyanohydrin	75-86-5	No	Yes							2.00E-03	U	1
Acetonitrile	75-05-8	No	Yes							6.00E-02	U	1
Acetophenone	98-86-2	No	Yes					1.00E-01	U			1
Acetylaminofluorene, 2-	53-96-3	No	No	3.80E+00	U	1.30E-03	U					1
Acifluorofen	50594-66-6	No	No									1
Acridine	260-94-6	No	No									1
Acrolein	107-02-8	No	Yes					5.00E-04	U	2.00E-05	U	1
Acrylamide	79-06-1	Yes	No	5.00E-01	U	1.00E-04	U	2.00E-03	U	6.00E-03	U	1
Acrylic Acid	79-10-7	No	Yes					5.00E-01	U	1.00E-03	U	1
Acrylonitrile	107-13-1	No	Yes	5.40E-01	U	6.80E-05	U	4.00E-02	U	2.00E-03	U	1
Adiponitrile	111-69-3	No	No							6.00E-03	U	1
Alachlor	15972-60-8	No	No	5.60E-02	U			1.00E-02	U			1
Aldicarb	116-06-3	No	No					1.00E-03	U			1
Aldicarb Sulfone	1646-88-4	No	No					1.00E-03	U			1
Aldicarb sulfoxide	1646-87-3	No	No									1
Aldrin	309-00-2	No	Yes	1.70E+01	U	4.90E-03	U	3.00E-05	U			1
Aliphatic Chlorinated Hydrocarbons (each)	NA	No	No									1
Aliphatic Chlorinated Hydrocarbons (total)	NA	No	No									1
Alizarin Red Compounds	NA	No	No									1
Ally	74223-64-6	No	No					2.50E-01	U			1
Allyl Alcohol	107-18-6	No	Yes					5.00E-03	U	1.00E-04	U	1
Allyl Chloride	107-05-1	No	Yes	2.10E-02	U	6.00E-06	U			1.00E-03	U	1
Aluminum	7429-90-5	No	No					1.00E+00	U	5.00E-03	U	1
Aluminum Phosphide	20859-73-8	No	No					4.00E-04	U			1
Aluminum metaphosphate	13776-88-0	No	No					4.86E+01	U			1
Amdro	67485-29-4	No	No					3.00E-04	U			1
Ametryn	834-12-8	No	No					9.00E-03	U			1
Amino-4-chlorobenzotrifluoride, 3-	121-50-6	No	Yes									1

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
ALAR	1596-84-5	0.1	1			3.23E+09	1.09E+03	3.80E+03	1.62E+08	8.45E+02	
Acenaphthene	83-32-9	0.13	1	1.94E+05		3.23E+09					
Acenaphthylene	208-96-8	0.13	1	2.61E+05		3.23E+09					
Acephate	30560-19-1	0.1	1			3.23E+09	2.25E+03	7.86E+03		1.75E+03	
Acetaldehyde	75-07-0		1	1.20E+04	1.07E+05	3.23E+09			1.39E+03	1.39E+03	
Acetochlor	34256-82-1	0.1	1			3.23E+09					
Acetone	67-64-1		1	1.88E+04	1.14E+05	3.23E+09					
Acetone Cyanohydrin	75-86-5		1	3.28E+04	1.06E+05	3.23E+09					
Acetonitrile	75-05-8		1	1.79E+04	1.28E+05	3.23E+09					
Acetophenone	98-86-2		1	8.24E+04	2.52E+03	3.23E+09					
Acetylaminofluorene, 2-	53-96-3	0.1	1			3.23E+09	5.14E+00	1.80E+01	6.35E+05	4.00E+00	
Acifluorofen	50594-66-6	0.1	1			3.23E+09					
Acridine	260-94-6	0.1	1			3.23E+09					
Acrolein	107-02-8		1	9.52E+03	2.27E+04	3.23E+09					
Acrylamide	79-06-1	0.1	1			3.23E+09	1.33E+01	9.00E+01	4.51E+06	1.16E+01	
Acrylic Acid	79-10-7		1	1.31E+05	1.09E+05	3.23E+09					
Acrylonitrile	107-13-1		1	1.06E+04	1.13E+04	3.23E+09	3.62E+01		3.98E+01	1.90E+01	
Adiponitrile	111-69-3	0.1	1			3.23E+09					
Alachlor	15972-60-8	0.1	1			3.23E+09	3.49E+02	1.22E+03		2.71E+02	
Aldicarb	116-06-3	0.1	1			3.23E+09					
Aldicarb Sulfone	1646-88-4	0.1	1			3.23E+09					
Aldicarb sulfoxide	1646-87-3	0.1	1			3.23E+09					
Aldrin	309-00-2		1	2.37E+06		3.23E+09	1.15E+00		1.23E+02	1.14E+00	
Aliphatic Chlorinated Hydrocarbons (each)	NA	0.1	1			3.23E+09					
Aliphatic Chlorinated Hydrocarbons (total)	NA	0.1	1			3.23E+09					
Alizarin Red Compounds	NA	0.1	1			3.23E+09					
Ally	74223-64-6	0.1	1			3.23E+09					
Allyl Alcohol	107-18-6		1	4.71E+04	1.11E+05	3.23E+09					
Allyl Chloride	107-05-1		1	2.18E+03	1.42E+03	3.23E+09	9.31E+02		9.30E+01	8.45E+01	
Aluminum	7429-90-5		1			3.23E+09					
Aluminum Phosphide	20859-73-8		1			3.23E+09					
Aluminum metaphosphate	13776-88-0		1			3.23E+09					
Amdro	67485-29-4	0.1	1			3.23E+09					
Ametryn	834-12-8	0.1	1			3.23E+09					
Amino-4-chlorobenzotrifluoride, 3-	121-50-6		1	3.69E+05		3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
ALAR	1596-84-5				1.01E+06	3.52E+06		7.82E+05	8.45E+02 ca
Acenaphthene	83-32-9				4.02E+05	1.08E+06		2.93E+05	2.93E+05 max
Acenaphthylene	208-96-8								
Acephate	30560-19-1				2.68E+04	9.38E+04		2.08E+04	1.75E+03 ca*
Acetaldehyde	75-07-0						9.46E+03	9.46E+03	1.39E+03 ca**
Acetochlor	34256-82-1				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Acetone	67-64-1				6.03E+06		5.10E+07	5.39E+06	5.39E+06 sat
Acetone Cyanohydrin	75-86-5						5.75E+03	5.75E+03	5.75E+03 nc
Acetonitrile	75-05-8						9.40E+04	9.40E+04	9.40E+04 nc
Acetophenone	98-86-2				6.70E+05			6.70E+05	6.70E+05 sat
Acetylaminofluorene, 2-	53-96-3								4.00E+00 ca
Acifluorofen	50594-66-6								
Acridine	260-94-6								
Acrolein	107-02-8				3.35E+03		1.67E+01	1.66E+01	1.66E+01 nc
Acrylamide	79-06-1				1.34E+04	4.69E+04	1.70E+09	1.04E+04	1.16E+01 ca
Acrylic Acid	79-10-7				3.35E+06		1.15E+04	1.15E+04	1.15E+04 nc
Acrylonitrile	107-13-1				2.68E+05		1.85E+03	1.84E+03	1.90E+01 ca*
Adiponitrile	111-69-3						1.70E+09	1.70E+09	1.70E+09 max
Alachlor	15972-60-8				6.70E+04	2.34E+05		5.21E+04	2.71E+02 ca
Aldicarb	116-06-3				6.70E+03	2.34E+04		5.21E+03	5.21E+03 nc
Aldicarb Sulfone	1646-88-4				6.70E+03	2.34E+04		5.21E+03	5.21E+03 nc
Aldicarb sulfoxide	1646-87-3								
Aldrin	309-00-2				2.01E+02			2.01E+02	1.14E+00 ca
Aliphatic Chlorinated Hydrocarbons (each)	NA								
Aliphatic Chlorinated Hydrocarbons (total)	NA								
Alizarin Red Compounds	NA								
Ally	74223-64-6				1.68E+06	5.86E+06		1.30E+06	1.30E+06 max
Allyl Alcohol	107-18-6				3.35E+04		4.12E+02	4.07E+02	4.07E+02 nc
Allyl Chloride	107-05-1						1.91E+02	1.91E+02	8.45E+01 ca**
Aluminum	7429-90-5				6.70E+06		1.42E+09	6.67E+06	6.67E+06 max
Aluminum Phosphide	20859-73-8				2.68E+03			2.68E+03	2.68E+03 nc
Aluminum metaphosphate	13776-88-0				3.26E+08			3.26E+08	3.26E+08 max
Amdro	67485-29-4				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Ametryn	834-12-8				6.03E+04	2.11E+05		4.69E+04	4.69E+04 nc
Amino-4-chlorobenzotrifluoride, 3-	121-50-6								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Aminoazobenzene, p-	60-09-3	No	No									1
Aminobiphenyl, 4-	92-67-1	No	No	2.10E+01	U	6.00E-03	U					1
Aminophenol, m-	591-27-5	No	No					8.00E-02	U			1
Aminophenol, o-	95-55-6	No	No									1
Aminophenol, p-	123-30-8	No	No					2.00E-02	U			1
Aminopyridine, 4-	504-24-5	No	No									1
Amitraz	33089-61-1	No	No					2.50E-03	U			1
Ammonium Perchlorate	7790-98-9	No	No					7.00E-04	U			1
Ammonium Sulfamate	7773-06-0	No	No					2.00E-01	U			1
Ammonium polyphosphate	68333-79-9	No	No					4.86E+01	U			1
Amyl Alcohol, tert-	75-85-4	No	Yes							3.00E-03	U	1
Aniline	62-53-3	No	No	5.70E-03	U	1.60E-06	U	7.00E-03	U	1.00E-03	U	1
Anilinobenzothiazole	1843-21-6	No	No									1
Anthracene	120-12-7	No	Yes					3.00E-01	U			1
Anthraquinone, 9,10-	84-65-1	No	No	4.00E-02	U			2.00E-03	U			1
Antimony (metallic)	7440-36-0	No	No					4.00E-04	U			0.15
Antimony Pentoxide	1314-60-9	No	No					5.00E-04	U			0.15
Antimony Potassium Tartrate	11071-15-1	No	No					9.00E-04	U			0.15
Antimony Tetroxide	1332-81-6	No	No					4.00E-04	U			0.15
Antimony Trichloride	10025-91-9	No	No									1
Antimony Trioxide	1309-64-4	No	No							2.00E-04	U	0.15
Apollo	74115-24-5	No	No					1.30E-02	U			1
Aramite	140-57-8	No	No	2.50E-02	U	7.10E-06	U	5.00E-02	U			1
Aroclor 1016	12674-11-2	No	Yes	7.00E-02	U	2.00E-05	U	7.00E-05	U			1
Aroclor 1221	11104-28-2	No	Yes	2.00E+00	U	5.71E-04	U					1
Aroclor 1232	11141-16-5	No	Yes	2.00E+00	U	5.71E-04	U					1
Aroclor 1242	53469-21-9	No	Yes	2.00E+00	U	5.71E-04	U					1
Aroclor 1248	12672-29-6	No	Yes	2.00E+00	U	5.71E-04	U					1
Aroclor 1254	11097-69-1	No	Yes	2.00E+00	U	5.71E-04	U	2.00E-05	U			1
Aroclor 1260	11096-82-5	No	Yes	2.00E+00	U	5.71E-04	U					1
Aroclor 5460	11126-42-4	No	Yes					6.00E-04	U			1
Arsenic Salts	NA	No	No									1
Arsenic, Inorganic	7440-38-2	No	No	1.50E+00	U	4.30E-03	U	3.00E-04	U	1.50E-05	U	1
Arsine	7784-42-1	No	No					3.50E-06	U	5.00E-05	U	1
Assure	76578-14-8	No	No					9.00E-03	U			1

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Aminoazobenzene, p-	60-09-3	0.1	1			3.23E+09					
Aminobiphenyl, 4-	92-67-1	0.1	1			3.23E+09	9.31E-01	3.26E+00	1.38E+05	7.24E-01	
Aminophenol, m-	591-27-5	0.1	1			3.23E+09					
Aminophenol, o-	95-55-6	0.1	1			3.23E+09					
Aminophenol, p-	123-30-8	0.1	1			3.23E+09					
Aminopyridine, 4-	504-24-5	0.1	1			3.23E+09					
Amitraz	33089-61-1	0.1	1			3.23E+09					
Ammonium Perchlorate	7790-98-9		1			3.23E+09					
Ammonium Sulfamate	7773-06-0		1			3.23E+09					
Ammonium polyphosphate	68333-79-9		1			3.23E+09					
Amyl Alcohol, tert-	75-85-4		1	3.62E+04	1.37E+04	3.23E+09					
Aniline	62-53-3	0.1	1			3.23E+09	3.43E+03	1.20E+04	5.16E+08	2.67E+03	
Anilinobenzothiazole	1843-21-6	0.1	1			3.23E+09					
Anthracene	120-12-7	0.13	1	7.23E+05		3.23E+09					
Anthraquinone, 9,10-	84-65-1	0.1	1			3.23E+09	4.89E+02	1.71E+03		3.80E+02	
Antimony (metallic)	7440-36-0		1			3.23E+09					
Antimony Pentoxide	1314-60-9		1			3.23E+09					
Antimony Potassium Tartrate	11071-15-1		1			3.23E+09					
Antimony Tetroxide	1332-81-6		1			3.23E+09					
Antimony Trichloride	10025-91-9		1			3.23E+09					
Antimony Trioxide	1309-64-4		1			3.23E+09					
Apollo	74115-24-5	0.1	1			3.23E+09					
Aramite	140-57-8	0.1	1			3.23E+09	7.82E+02	2.74E+03	1.16E+08	6.08E+02	
Aroclor 1016	12674-11-2	0.14	1	8.07E+05		3.23E+09	2.79E+02	6.98E+02	1.03E+04	1.96E+02	
Aroclor 1221	11104-28-2	0.14	1	1.57E+05		3.23E+09	9.77E+00	2.44E+01	7.00E+01	6.35E+00	
Aroclor 1232	11141-16-5	0.14	1	1.54E+05		3.23E+09	9.77E+00	2.44E+01	6.91E+01	6.34E+00	
Aroclor 1242	53469-21-9	0.14	1	1.09E+06		3.23E+09	9.77E+00	2.44E+01	4.89E+02	6.88E+00	
Aroclor 1248	12672-29-6	0.14	1	7.08E+05		3.23E+09	9.77E+00	2.44E+01	3.17E+02	6.83E+00	
Aroclor 1254	11097-69-1	0.14	1	1.16E+06		3.23E+09	9.77E+00	2.44E+01	5.21E+02	6.89E+00	
Aroclor 1260	11096-82-5	0.14	1	1.82E+06		3.23E+09	9.77E+00	2.44E+01	8.13E+02	6.92E+00	
Aroclor 5460	11126-42-4	0.14	1	9.89E+05		3.23E+09					
Arsenic Salts	NA	0.03	0.6			3.23E+09					
Arsenic, Inorganic	7440-38-2	0.03	0.6			3.23E+09	2.17E+01	1.52E+02	1.92E+05	1.90E+01	
Arsine	7784-42-1		1			3.23E+09					
Assure	76578-14-8	0.1	1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Aminoazobenzene, p-	60-09-3								
Aminobiphenyl, 4-	92-67-1								7.24E-01 ca
Aminophenol, m-	591-27-5				5.36E+05	1.88E+06		4.17E+05	4.17E+05 max
Aminophenol, o-	95-55-6								
Aminophenol, p-	123-30-8				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Aminopyridine, 4-	504-24-5								
Amitraz	33089-61-1				1.68E+04	5.86E+04		1.30E+04	1.30E+04 nc
Ammonium Perchlorate	7790-98-9				4.69E+03			4.69E+03	4.69E+03 nc
Ammonium Sulfamate	7773-06-0				1.34E+06			1.34E+06	1.34E+06 max
Ammonium polyphosphate	68333-79-9				3.26E+08			3.26E+08	3.26E+08 max
Amyl Alcohol, tert-	75-85-4						9.50E+03	9.50E+03	9.50E+03 nc
Aniline	62-53-3				4.69E+04	1.64E+05	2.83E+08	3.65E+04	2.67E+03 ca*
Anilinobenzothiazole	1843-21-6								
Anthracene	120-12-7				2.01E+06	5.41E+06		1.47E+06	1.47E+06 max
Anthraquinone, 9,10-	84-65-1				1.34E+04	4.69E+04		1.04E+04	3.80E+02 ca*
Antimony (metallic)	7440-36-0				2.68E+03			2.68E+03	2.68E+03 nc
Antimony Pentoxide	1314-60-9				3.35E+03			3.35E+03	3.35E+03 nc
Antimony Potassium Tartrate	11071-15-1				6.03E+03			6.03E+03	6.03E+03 nc
Antimony Tetroxide	1332-81-6				2.68E+03			2.68E+03	2.68E+03 nc
Antimony Trichloride	10025-91-9								
Antimony Trioxide	1309-64-4						5.66E+07	5.66E+07	5.66E+07 max
Apollo	74115-24-5				8.71E+04	3.05E+05		6.78E+04	6.78E+04 nc
Aramite	140-57-8				3.35E+05	1.17E+06		2.61E+05	6.08E+02 ca
Aroclor 1016	12674-11-2				4.69E+02	1.17E+03		3.35E+02	1.96E+02 ca**
Aroclor 1221	11104-28-2								6.35E+00 ca
Aroclor 1232	11141-16-5								6.34E+00 ca
Aroclor 1242	53469-21-9								6.88E+00 ca
Aroclor 1248	12672-29-6								6.83E+00 ca
Aroclor 1254	11097-69-1				1.34E+02	3.35E+02		9.57E+01	6.89E+00 ca*
Aroclor 1260	11096-82-5								6.92E+00 ca
Aroclor 5460	11126-42-4				4.02E+03	1.00E+04		2.87E+03	2.87E+03 nc
Arsenic Salts	NA								
Arsenic, Inorganic	7440-38-2				3.35E+03	2.34E+04	4.25E+06	2.93E+03	1.90E+01 ca
Arsine	7784-42-1				2.35E+01		1.42E+07	2.35E+01	2.35E+01 nc
Assure	76578-14-8				6.03E+04	2.11E+05		4.69E+04	4.69E+04 nc

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Asulam	3337-71-1	No	No					5.00E-02	U			1
Atrazine	1912-24-9	No	No	2.30E-01	U			3.50E-02	U			1
Auramine	492-80-8	No	No	8.80E-01	U	2.50E-04	U					1
Avermectin B1	65195-55-3	No	No					4.00E-04	U			1
Azobenzene	103-33-3	No	Yes	1.10E-01	U	3.10E-05	U					1
Azodicarbonamide	123-77-3	No	No					1.00E+00	U	7.00E-06	U	1
Barium	7440-39-3	No	No					2.00E-01	U	5.00E-04	U	0.07
Barium Chromate	10294-40-3	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Barium Cyanide	542-62-1	No	No									0.07
Baygon	114-26-1	No	No					4.00E-03	U			1
Bayleton	43121-43-3	No	No					3.00E-02	U			1
Baythroid	68359-37-5	No	No					2.50E-02	U			1
Benefin	1861-40-1	No	Yes					3.00E-01	U			1
Benomyl	17804-35-2	No	No					5.00E-02	U			1
Bentazon	25057-89-0	No	No					3.00E-02	U			1
Benz[a]anthracene	56-55-3	Yes	Yes	7.30E-01	U	1.10E-04	U					1
Benzaldehyde	100-52-7	No	Yes					1.00E-01	U			1
Benzene	71-43-2	No	Yes	5.50E-02	U	7.80E-06	U	4.00E-03	U	3.00E-02	U	1
Benzene, Ethyldimethyl	29224-55-3	No	Yes									1
Benzene, Ethylmethyl	25550-14-5	No	Yes									1
Benzene, Methylpropenyl	768-00-3	No	Yes									1
Benzene, Methylpropyl	28729-54-6	No	No									1
Benzene, Trimethyl	25551-13-7	No	Yes									1
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	No	No	1.00E-01	U			3.00E-04	U			1
Benzenethiol	108-98-5	No	Yes					1.00E-03	U			1
Benzidine	92-87-5	Yes	No	2.30E+02	U	6.70E-02	U	3.00E-03	U			1
Benzo(j)fluoranthene	205-82-3	No	No	1.20E+00	U	1.10E-04	U					1
Benzo[a]pyrene	50-32-8	Yes	No	7.30E+00	U	1.10E-03	U					1
Benzo[b]fluoranthene	205-99-2	Yes	No	7.30E-01	U	1.10E-04	U					1
Benzo[g,h,i]perylene	191-24-2	No	No									1
Benzo[k]fluoranthene	207-08-9	Yes	No	7.30E-02	U	1.10E-04	U					1
Benzofluoranthenes, total	NA	No	No									1
Benzofluorene, 2,3-	243-17-4	No	No									1
Benzoic Acid	65-85-0	No	No					4.00E+00	U			1
Benzoic acid, 3,5-dichloro-	51-36-5	No	No									1

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Asulam	3337-71-1	0.1	1			3.23E+09					
Atrazine	1912-24-9	0.1	1			3.23E+09	8.50E+01	2.97E+02		6.61E+01	
Auramine	492-80-8	0.1	1			3.23E+09	2.22E+01	7.77E+01	3.30E+06	1.73E+01	
Avermectin B1	65195-55-3	0.1	1			3.23E+09					
Azobenzene	103-33-3		1	7.21E+05		3.23E+09	1.78E+02		5.94E+03	1.73E+02	
Azodicarbonamide	123-77-3	0.1	1			3.23E+09					
Barium	7440-39-3		1			3.23E+09					
Barium Chromate	10294-40-3		1			3.23E+09	1.33E+01		3.00E+03	1.32E+01	
Barium Cyanide	542-62-1		1			3.23E+09					
Baygon	114-26-1	0.1	1			3.23E+09					
Bayleton	43121-43-3	0.1	1			3.23E+09					
Baythroid	68359-37-5	0.1	1			3.23E+09					
Benefin	1861-40-1		1	4.23E+05		3.23E+09					
Benomyl	17804-35-2	0.1	1			3.23E+09					
Bentazon	25057-89-0	0.1	1			3.23E+09					
Benz[a]anthracene	56-55-3	0.13	1	6.09E+06		3.23E+09	9.10E+00	4.74E+01	7.70E+03	7.63E+00	
Benzaldehyde	100-52-7		1	3.10E+04	1.16E+03	3.23E+09					
Benzene	71-43-2		1	4.88E+03	1.82E+03	3.23E+09	3.55E+02		1.60E+02	1.10E+02	
Benzene, Ethyldimethyl	29224-55-3		1	1.26E+04	1.31E+02	3.23E+09					
Benzene, Ethylmethyl	25550-14-5		1	1.30E+04	3.30E+02	3.23E+09					
Benzene, Methylpropenyl	768-00-3		1	1.58E+04	4.90E+02	3.23E+09					
Benzene, Methylpropyl	28729-54-6	0.1	1			3.23E+09					
Benzene, Trimethyl	25551-13-7		1	9.03E+03	1.82E+02	3.23E+09					
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	0.1	1			3.23E+09	1.95E+02	6.84E+02		1.52E+02	
Benzenethiol	108-98-5		1	2.67E+04	1.26E+03	3.23E+09					
Benzidine	92-87-5	0.1	1			3.23E+09	2.89E-02	1.96E-01	6.72E+03	2.52E-02	
Benzo(j)fluoranthene	205-82-3	0.13	1			3.23E+09	1.63E+01	4.38E+01	7.51E+06	1.19E+01	
Benzo[a]pyrene	50-32-8	0.13	1			3.23E+09	9.10E-01	4.74E+00	4.10E+05	7.63E-01	
Benzo[b]fluoranthene	205-99-2	0.13	1			3.23E+09	9.10E+00	4.74E+01	4.10E+06	7.63E+00	
Benzo[g,h,i]perylene	191-24-2	0.13	1			3.23E+09					
Benzo[k]fluoranthene	207-08-9	0.13	1			3.23E+09	9.10E+01	4.74E+02	4.10E+06	7.63E+01	
Benzofluoranthenes, total	NA	0.1	1			3.23E+09					
Benzofluorene, 2,3-	243-17-4	0.1	1			3.23E+09					
Benzoic Acid	65-85-0	0.1	1			3.23E+09					
Benzoic acid, 3,5-dichloro-	51-36-5	0.1	1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Asulam	3337-71-1				3.35E+05	1.17E+06		2.61E+05	2.61E+05 max
Atrazine	1912-24-9				2.35E+05	8.21E+05		1.82E+05	6.61E+01 ca
Auramine	492-80-8								1.73E+01 ca
Avermectin B1	65195-55-3				2.68E+03	9.38E+03		2.08E+03	2.08E+03 nc
Azobenzene	103-33-3								1.73E+02 ca
Azodicarbonamide	123-77-3				6.70E+06	2.34E+07	1.98E+06	1.44E+06	1.44E+06 max
Barium	7440-39-3				1.34E+06		1.42E+08	1.33E+06	1.33E+06 max
Barium Chromate	10294-40-3				1.34E+05		5.66E+07	1.34E+05	1.32E+01 ca
Barium Cyanide	542-62-1								
Baygon	114-26-1				2.68E+04	9.38E+04		2.08E+04	2.08E+04 nc
Bayleton	43121-43-3				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Baythroid	68359-37-5				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
Benefin	1861-40-1				2.01E+06			2.01E+06	2.01E+06 max
Benomyl	17804-35-2				3.35E+05	1.17E+06		2.61E+05	2.61E+05 max
Bentazon	25057-89-0				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Benz[a]anthracene	56-55-3								7.63E+00 ca
Benzaldehyde	100-52-7				6.70E+05			6.70E+05	6.70E+05 sat
Benzene	71-43-2				2.68E+04		1.28E+04	8.67E+03	1.10E+02 ca*
Benzene, Ethyldimethyl	29224-55-3								
Benzene, Ethylmethyl	25550-14-5								
Benzene, Methylpropenyl	768-00-3								
Benzene, Methylpropyl	28729-54-6								
Benzene, Trimethyl	25551-13-7								
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1				2.01E+03	7.03E+03		1.56E+03	1.52E+02 ca*
Benzenethiol	108-98-5				6.70E+03			6.70E+03	6.70E+03 sat
Benzidine	92-87-5				2.01E+04	7.03E+04		1.56E+04	2.52E-02 ca
Benzo(j)fluoranthene	205-82-3								1.19E+01 ca
Benzo[a]pyrene	50-32-8								7.63E-01 ca
Benzo[b]fluoranthene	205-99-2								7.63E+00 ca
Benzo[g,h,i]perylene	191-24-2								
Benzo[k]fluoranthene	207-08-9								7.63E+01 ca
Benzofluoranthenes, total	NA								
Benzofluorene, 2,3-	243-17-4								
Benzoic Acid	65-85-0				2.68E+07	9.38E+07		2.08E+07	2.08E+07 max
Benzoic acid, 3,5-dichloro-	51-36-5								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Benzoic acid, 4-hydroxy-, methyl ester	99-76-3	No	No									1
Benzothiazole	95-16-9	No	No									1
Benzotrichloride	98-07-7	No	Yes	1.30E+01	U							1
Benzyl Alcohol	100-51-6	No	No					1.00E-01	U			1
Benzyl Chloride	100-44-7	No	Yes	1.70E-01	U	4.90E-05	U	2.00E-03	U	1.00E-03	U	1
Beryllium and compounds	7440-41-7	No	No			2.40E-03	U	2.00E-03	U	2.00E-05	U	0.007
Bidrin	141-66-2	No	No					1.00E-04	U			1
Bifenox	42576-02-3	No	No					9.00E-03	U			1
Biphenthrin	82657-04-3	No	No					1.50E-02	U			1
Biphenyl, 1,1'-	92-52-4	No	Yes	8.00E-03	U			5.00E-01	U	4.00E-04	U	1
Bis(2-chloro-1-methylethyl) ether	108-60-1	No	Yes	7.00E-02	U	1.00E-05	U	4.00E-02	U			1
Bis(2-chloroethoxy)methane	111-91-1	No	No					3.00E-03	U			1
Bis(2-chloroethyl)ether	111-44-4	No	Yes	1.10E+00	U	3.30E-04	U					1
Bis(2-ethylhexyl)phthalate	117-81-7	No	No	1.40E-02	U	2.40E-06	U	2.00E-02	U			1
Bis(Octanoyloxy)Di-N-Butyl Stannane	4731-77-5	No	Yes									1
Bis(chloromethyl)ether	542-88-1	No	Yes	2.20E+02	U	6.20E-02	U					1
Bis(oleoyloxy)dibutyl tin	13323-62-1	No	Yes									1
Bisphenol A	80-05-7	No	No					5.00E-02	U			1
Boron And Borates Only	7440-42-8	No	No					2.00E-01	U	2.00E-02	U	1
Boron Trichloride	10294-34-5	No	Yes					2.00E+00	U	2.00E-02	U	1
Boron Trifluoride	7637-07-2	No	Yes					4.00E-02	U	1.30E-02	U	1
Bromacil	314-40-9	No	No									1
Bromate	15541-45-4	No	No	7.00E-01	U			4.00E-03	U			1
Bromine	7726-95-6	No	Yes									1
Bromo-2-chloroethane, 1-	107-04-0	No	Yes	2.00E+00	U	6.00E-04	U					1
Bromo-3-fluorobenzene, 1-	1073-06-9	No	Yes									1
Bromo-4-Ethylbenzene, 1-	1585-07-5	No	Yes									1
Bromoacetic acid	79-08-3	No	No									1
Bromoacetophenone, 3-	2142-63-4	No	No									1
Bromobenzene	108-86-1	No	Yes					8.00E-03	U	6.00E-02	U	1
Bromochloromethane	74-97-5	No	Yes							4.00E-02	U	1
Bromodichloromethane	75-27-4	No	Yes	6.20E-02	U	3.70E-05	U	2.00E-02	U			1
Bromodiphenyl Ether, p-	101-55-3	No	Yes									1
Bromofluorobenzene, p-	460-00-4	No	Yes									1
Bromoform	75-25-2	No	Yes	7.90E-03	U	1.10E-06	U	2.00E-02	U			1

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Benzoic acid, 4-hydroxy-, methyl ester	99-76-3	0.1	1			3.23E+09					
Benzothiazole	95-16-9	0.1	1			3.23E+09					
Benzotrichloride	98-07-7		1	9.33E+04	3.23E+02	3.23E+09	1.50E+00			1.50E+00	
Benzyl Alcohol	100-51-6	0.1	1			3.23E+09					
Benzyl Chloride	100-44-7		1	3.52E+04	1.46E+03	3.23E+09	1.15E+02		1.83E+02	7.07E+01	
Beryllium and compounds	7440-41-7		1			3.23E+09			3.44E+05	3.44E+05	
Bidrin	141-66-2	0.1	1			3.23E+09					
Bifenox	42576-02-3	0.1	1			3.23E+09					
Biphenthrin	82657-04-3	0.1	1			3.23E+09					
Biphenyl, 1,1'-	92-52-4		1	1.57E+05		3.23E+09	2.44E+03			2.44E+03	
Bis(2-chloro-1-methylethyl) ether	108-60-1		1	4.83E+04	1.02E+03	3.23E+09	2.79E+02		1.23E+03	2.28E+02	
Bis(2-chloroethoxy)methane	111-91-1	0.1	1			3.23E+09					
Bis(2-chloroethyl)ether	111-44-4		1	5.87E+04	5.05E+03	3.23E+09	1.78E+01		4.54E+01	1.28E+01	
Bis(2-ethylhexyl)phthalate	117-81-7	0.1	1			3.23E+09	1.40E+03	4.89E+03	3.44E+08	1.09E+03	
Bis(Octanoyloxy)Di-N-Butyl Stannane	4731-77-5		1	8.48E+04		3.23E+09					
Bis(chloromethyl)ether	542-88-1		1	2.59E+03	4.22E+03	3.23E+09	8.89E-02		1.07E-02	9.53E-03	
Bis(oleoyloxy)dibutyl tin	13323-62-1		1	2.64E+06		3.23E+09					
Bisphenol A	80-05-7	0.1	1			3.23E+09					
Boron And Borates Only	7440-42-8		1			3.23E+09					
Boron Trichloride	10294-34-5		1			3.23E+09					
Boron Trifluoride	7637-07-2		1			3.23E+09					
Bromacil	314-40-9	0.1	1			3.23E+09					
Bromate	15541-45-4		1			3.23E+09	2.79E+01			2.79E+01	
Bromine	7726-95-6		1			3.23E+09					
Bromo-2-chloroethane, 1-	107-04-0		1	8.17E+03	2.38E+03	3.23E+09	9.77E+00		3.48E+00	2.57E+00	
Bromo-3-fluorobenzene, 1-	1073-06-9		1	9.79E+03	9.07E+02	3.23E+09					
Bromo-4-Ethylbenzene, 1-	1585-07-5		1	1.96E+04	2.06E+02	3.23E+09					
Bromoacetic acid	79-08-3	0.1	1			3.23E+09					
Bromoacetophenone, 3-	2142-63-4	0.1	1			3.23E+09					
Bromobenzene	108-86-1		1	1.15E+04	6.79E+02	3.23E+09					
Bromochloromethane	74-97-5		1	4.94E+03	4.03E+03	3.23E+09					
Bromodichloromethane	75-27-4		1	5.47E+03	9.31E+02	3.23E+09	3.15E+02		3.77E+01	3.37E+01	
Bromodiphenyl Ether, p-	101-55-3		1	2.57E+05	1.06E+02	3.23E+09					
Bromofluorobenzene, p-	460-00-4		1	9.95E+03	1.06E+03	3.23E+09					
Bromoform	75-25-2		1	1.34E+04	9.14E+02	3.23E+09	2.47E+03		3.11E+03	1.38E+03	

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Benzoic acid, 4-hydroxy-, methyl ester	99-76-3								
Benzothiazole	95-16-9								
Benzotrichloride	98-07-7								1.50E+00 ca
Benzyl Alcohol	100-51-6				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Benzyl Chloride	100-44-7				1.34E+04		3.08E+03	2.51E+03	7.07E+01 ca*
Beryllium and compounds	7440-41-7				1.34E+04		5.66E+06	1.34E+04	1.34E+04 nc
Bidrin	141-66-2				6.70E+02	2.34E+03		5.21E+02	5.21E+02 nc
Bifenox	42576-02-3				6.03E+04	2.11E+05		4.69E+04	4.69E+04 nc
Biphenthrin	82657-04-3				1.01E+05	3.52E+05		7.82E+04	7.82E+04 nc
Biphenyl, 1,1'-	92-52-4				3.35E+06		5.50E+03	5.49E+03	2.44E+03 ca**
Bis(2-chloro-1-methylethyl) ether	108-60-1				2.68E+05			2.68E+05	2.28E+02 ca
Bis(2-chloroethoxy)methane	111-91-1				2.01E+04	7.03E+04		1.56E+04	1.56E+04 nc
Bis(2-chloroethyl)ether	111-44-4								1.28E+01 ca
Bis(2-ethylhexyl)phthalate	117-81-7				1.34E+05	4.69E+05		1.04E+05	1.09E+03 ca*
Bis(Octanoyloxy)Di-N-Butyl Stannane	4731-77-5								
Bis(chloromethyl)ether	542-88-1								9.53E-03 ca
Bis(oleoyloxy)dibutyl tin	13323-62-1								
Bisphenol A	80-05-7				3.35E+05	1.17E+06		2.61E+05	2.61E+05 max
Boron And Borates Only	7440-42-8				1.34E+06		5.66E+09	1.34E+06	1.34E+06 max
Boron Trichloride	10294-34-5				1.34E+07		5.66E+09	1.34E+07	1.34E+07 max
Boron Trifluoride	7637-07-2				2.68E+05		3.68E+09	2.68E+05	2.68E+05 max
Bromacil	314-40-9								
Bromate	15541-45-4				2.68E+04			2.68E+04	2.79E+01 ca
Bromine	7726-95-6								
Bromo-2-chloroethane, 1-	107-04-0								2.57E+00 ca
Bromo-3-fluorobenzene, 1-	1073-06-9								
Bromo-4-Ethylbenzene, 1-	1585-07-5								
Bromoacetic acid	79-08-3								
Bromoacetophenone, 3-	2142-63-4								
Bromobenzene	108-86-1				5.36E+04		6.07E+04	2.85E+04	2.85E+04 sat
Bromochloromethane	74-97-5						1.73E+04	1.73E+04	1.73E+04 sat
Bromodichloromethane	75-27-4				1.34E+05			1.34E+05	3.37E+01 ca
Bromodiphenyl Ether, p-	101-55-3								
Bromofluorobenzene, p-	460-00-4								
Bromoform	75-25-2				1.34E+05			1.34E+05	1.38E+03 sat

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Bromomethane	74-83-9	No	Yes					1.40E-03	U	5.00E-03	U	1
Bromophenol, p-	106-41-2	No	No									1
Bromophenyl-phenyl phthalate, 4-	NA	No	No									1
Bromophos	2104-96-3	No	Yes					5.00E-03	U			1
Bromopyridine, 2-	109-04-6	No	No									1
Bromotrichloromethane	75-62-7	No	Yes									1
Bromoxynil	1689-84-5	No	No					2.00E-02	U			1
Bromoxynil Octanoate	1689-99-2	No	Yes					2.00E-02	U			1
Butadiene, 1,3-	106-99-0	No	Yes	3.40E+00	U	3.00E-05	U			2.00E-03	U	1
Butanediol, 2,3-	513-85-9	No	No									1
Butanol	35296-72-1	No	Yes									1
Butanol, N-	71-36-3	No	Yes					1.00E-01	U			1
Butanone-2, 4-chloro-4,4-difluoro	NA	No	No									1
Butyl Alcohol, t-	75-65-0	No	Yes									1
Butyl Benzyl Phthlate	85-68-7	No	No	1.90E-03	U			2.00E-01	U			1
Butyl Formate, tert-	762-75-4	No	Yes									1
Butyl alcohol, sec-	78-92-2	No	Yes					2.00E+00	U	3.00E+01	U	1
Butylacetate	123-86-4	No	Yes									1
Butylate	2008-41-5	No	Yes					5.00E-02	U			1
Butylated hydroxyanisole	25013-16-5	No	No	2.00E-04	U	5.70E-08	U					1
Butylated hydroxytoluene	128-37-0	No	No	3.60E-03	U			3.00E-01	U			1
Butylbenzene, n-	104-51-8	No	Yes					5.00E-02	U			1
Butylbenzene, sec-	135-98-8	No	Yes					1.00E-01	U			1
Butylbenzene, tert-	98-06-6	No	Yes					1.00E-01	U			1
Butylchloride, t-	507-20-0	No	Yes									1
Butylphthalyl Butylglycolate	85-70-1	No	No					1.00E+00	U			1
Butyltin	NA	No	No									1
Cacodylic Acid	75-60-5	No	No					2.00E-02	U			1
Cadmium (Diet)	7440-43-9	No	No			1.80E-03	U	1.00E-03	U	1.00E-05	U	0.025
Calcium	7440-70-2	No	No									1
Calcium Chlorate	10137-74-3	No	No									1
Calcium Chromate	13765-19-0	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Calcium Cyanide	592-01-8	No	No					1.00E-03	U			1
Calcium pyrophosphate	7790-76-3	No	No					4.86E+01	U			1
Caprolactam	105-60-2	No	No					5.00E-01	U	2.20E-03	U	1

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Bromomethane	74-83-9		1	1.93E+03	3.59E+03	3.23E+09					
Bromophenol, p-	106-41-2	0.1	1			3.23E+09					
Bromophenyl-phenyl phthalate, 4-	NA	0.1	1			3.23E+09					
Bromophos	2104-96-3		1	1.71E+05		3.23E+09					
Bromopyridine, 2-	109-04-6	0.1	1			3.23E+09					
Bromotrichloromethane	75-62-7		1	1.80E+04	4.25E+02	3.23E+09					
Bromoxynil	1689-84-5	0.1	1			3.23E+09					
Bromoxynil Octanoate	1689-99-2		1	6.55E+05		3.23E+09					
Butadiene, 1,3-	106-99-0		1	1.20E+03	6.67E+02	3.23E+09	5.75E+00		1.02E+01	3.68E+00	
Butanediol, 2,3-	513-85-9	0.1	1			3.23E+09					
Butanol	35296-72-1		1	4.02E+04	1.47E+04	3.23E+09					
Butanol, N-	71-36-3		1	4.13E+04	7.64E+03	3.23E+09					
Butanone-2, 4-chloro-4,4-difluoro	NA	0.1	1			3.23E+09					
Butyl Alcohol, t-	75-65-0		1	3.96E+04		3.23E+09					
Butyl Benzyl Phthlate	85-68-7	0.1	1			3.23E+09	1.03E+04	3.60E+04		8.00E+03	
Butyl Formate, tert-	762-75-4		1	6.00E+03	2.99E+03	3.23E+09					
Butyl alcohol, sec-	78-92-2		1	4.03E+04	2.13E+04	3.23E+09					
Butylacetate	123-86-4		1	1.18E+04	1.79E+03	3.23E+09					
Butylate	2008-41-5		1	1.19E+05		3.23E+09					
Butylated hydroxyanisole	25013-16-5	0.1	1			3.23E+09	9.77E+04	3.42E+05	1.45E+10	7.60E+04	
Butylated hydroxytoluene	128-37-0	0.1	1			3.23E+09	5.43E+03	1.90E+04		4.22E+03	
Butylbenzene, n-	104-51-8		1	1.12E+04	1.07E+02	3.23E+09					
Butylbenzene, sec-	135-98-8		1	1.01E+04	1.45E+02	3.23E+09					
Butylbenzene, tert-	98-06-6		1	1.01E+04	1.83E+02	3.23E+09					
Butylchloride, t-	507-20-0		1	2.34E+03	1.33E+03	3.23E+09					
Butylphthalyl Butylglycolate	85-70-1	0.1	1			3.23E+09					
Butyltin	NA	0.1	1			3.23E+09					
Cacodylic Acid	75-60-5	0.1	1			3.23E+09					
Cadmium (Diet)	7440-43-9	0.001	1			3.23E+09			4.59E+05	4.59E+05	
Calcium	7440-70-2		1			3.23E+09					
Calcium Chlorate	10137-74-3		1			3.23E+09					
Calcium Chromate	13765-19-0		1			3.23E+09	1.33E+01		3.00E+03	1.32E+01	
Calcium Cyanide	592-01-8		1			3.23E+09					
Calcium pyrophosphate	7790-76-3		1			3.23E+09					
Caprolactam	105-60-2	0.1	1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Bromomethane	74-83-9				9.38E+03		8.47E+02	7.76E+02	7.76E+02 nc
Bromophenol, p-	106-41-2								
Bromophenyl-phenyl phthalate, 4-	NA								
Bromophos	2104-96-3				3.35E+04			3.35E+04	3.35E+04 nc
Bromopyridine, 2-	109-04-6								
Bromotrichloromethane	75-62-7								
Bromoxynil	1689-84-5				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Bromoxynil Octanoate	1689-99-2				1.34E+05			1.34E+05	1.34E+05 max
Butadiene, 1,3-	106-99-0						2.10E+02	2.10E+02	3.68E+00 ca*
Butanediol, 2,3-	513-85-9								
Butanol	35296-72-1								
Butanol, N-	71-36-3				6.70E+05			6.70E+05	6.70E+05 sat
Butanone-2, 4-chloro-4,4-difluoro	NA								
Butyl Alcohol, t-	75-65-0								
Butyl Benzyl Phthlate	85-68-7				1.34E+06	4.69E+06		1.04E+06	8.00E+03 ca
Butyl Formate, tert-	762-75-4								
Butyl alcohol, sec-	78-92-2				1.34E+07		1.06E+08	1.19E+07	1.19E+07 sat
Butylacetate	123-86-4								
Butylate	2008-41-5				3.35E+05			3.35E+05	3.35E+05 max
Butylated hydroxyanisole	25013-16-5								7.60E+04 ca
Butylated hydroxytoluene	128-37-0				2.01E+06	7.03E+06		1.56E+06	4.22E+03 ca
Butylbenzene, n-	104-51-8				3.35E+05			3.35E+05	3.35E+05 sat
Butylbenzene, sec-	135-98-8				6.70E+05			6.70E+05	6.70E+05 sat
Butylbenzene, tert-	98-06-6				6.70E+05			6.70E+05	6.70E+05 sat
Butylchloride, t-	507-20-0								
Butylphthalyl Butylglycolate	85-70-1				6.70E+06	2.34E+07		5.21E+06	5.21E+06 max
Butyltin	NA								
Cacodylic Acid	75-60-5				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Cadmium (Diet)	7440-43-9				6.70E+03	5.86E+04	2.83E+06	6.00E+03	6.00E+03 nc
Calcium	7440-70-2								
Calcium Chlorate	10137-74-3								
Calcium Chromate	13765-19-0				1.34E+05		5.66E+07	1.34E+05	1.32E+01 ca
Calcium Cyanide	592-01-8				6.70E+03			6.70E+03	6.70E+03 nc
Calcium pyrophosphate	7790-76-3				3.26E+08			3.26E+08	3.26E+08 max
Caprolactam	105-60-2				3.35E+06	1.17E+07	6.23E+08	2.60E+06	2.60E+06 max

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Captafol	2425-06-1	No	No	1.50E-01	U	4.30E-05	U	2.00E-03	U			1
Captan	133-06-2	No	No	2.30E-03	U	6.60E-07	U	1.30E-01	U			1
Carbaryl	63-25-2	No	No					1.00E-01	U			1
Carbazole	86-74-8	No	No									1
Carbofuran	1563-66-2	No	No					5.00E-03	U			1
Carbon Disulfide	75-15-0	No	Yes					1.00E-01	U	7.00E-01	U	1
Carbon Tetrachloride	56-23-5	No	Yes	7.00E-02	U	6.00E-06	U	4.00E-03	U	1.00E-01	U	1
Carbosulfan	55285-14-8	No	No					1.00E-02	U			1
Carboxin	5234-68-4	No	No					1.00E-01	U			1
Catechol	120-80-9	No	No									1
Ceric oxide	1306-38-3	No	No							9.00E-04	U	1
Cerium, Stable	7440-45-1	No	No									1
Chloral	75-87-6	No	Yes									1
Chloral Hydrate	302-17-0	No	Yes					1.00E-01	U			1
Chloramben	133-90-4	No	No					1.50E-02	U			1
Chloramine	127-65-1	No	No									1
Chloranil	118-75-2	No	No	4.03E-01	U							1
Chlorate (ClO3) as	14866-68-3	No	No									1
Chlordane	12789-03-6	No	Yes	3.50E-01	U	1.00E-04	U	5.00E-04	U	7.00E-04	U	1
Chlordane (alpha)	5103-71-9	No	Yes									1
Chlordane (gamma)	5103-74-2	No	Yes									1
Chlordecone (Kepone)	143-50-0	No	No	1.00E+01	U	4.60E-03	U	3.00E-04	U			1
Chlorfenvinphos	470-90-6	No	No					7.00E-04	U			1
Chloride	16887-00-6	No	No									1
Chlorimuron, Ethyl-	90982-32-4	No	No					2.00E-02	U			1
Chlorinated Hydrocarbons (total)	NA	No	No									1
Chlorine	7782-50-5	No	Yes					1.00E-01	U	1.45E-04	U	1
Chlorine Dioxide	10049-04-4	No	Yes					3.00E-02	U	2.00E-04	U	1
Chlorite	14998-27-7	No	No									1
Chlorite (Sodium Salt)	7758-19-2	No	No					3.00E-02	U			1
Chloro-1,1-difluoroethane, 1-	75-68-3	No	Yes							5.00E+01	U	1
Chloro-1,3-butadiene, 2-	126-99-8	No	Yes			3.00E-04	U	2.00E-02	U	2.00E-02	U	1
Chloro-2-methylaniline HCl, 4-	3165-93-3	No	No	4.60E-01	U							1
Chloro-2-methylaniline, 4-	95-69-2	No	No	1.00E-01	U	7.70E-05	U	3.00E-03	U			1
Chloro-2-methylphenol, 4-	1570-64-5	No	No									1

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Captafol	2425-06-1	0.1	1			3.23E+09	1.30E+02	4.56E+02	1.92E+07	1.01E+02	
Captan	133-06-2	0.1	1			3.23E+09	8.50E+03	2.97E+04	1.25E+09	6.61E+03	
Carbaryl	63-25-2	0.1	1			3.23E+09					
Carbazole	86-74-8	0.1	1			3.23E+09					
Carbofuran	1563-66-2	0.1	1			3.23E+09					
Carbon Disulfide	75-15-0		1	1.61E+03	7.38E+02	3.23E+09					
Carbon Tetrachloride	56-23-5		1	2.06E+03	4.58E+02	3.23E+09	2.79E+02		8.78E+01	6.68E+01	
Carbosulfan	55285-14-8	0.1	1			3.23E+09					
Carboxin	5234-68-4	0.1	1			3.23E+09					
Catechol	120-80-9	0.1	1			3.23E+09					
Ceric oxide	1306-38-3		1			3.23E+09					
Cerium, Stable	7440-45-1		1			3.23E+09					
Chloral	75-87-6		1	2.14E+05	3.39E+03	3.23E+09					
Chloral Hydrate	302-17-0		1	2.02E+05		3.23E+09					
Chloramben	133-90-4	0.1	1			3.23E+09					
Chloramine	127-65-1		1			3.23E+09					
Chloranil	118-75-2	0.1	1			3.23E+09	4.85E+01	1.70E+02		3.77E+01	
Chlorate (ClO3) as	14866-68-3		1			3.23E+09					
Chlordane	12789-03-6	0.04	1	1.49E+06		3.23E+09	5.58E+01	4.89E+02	3.81E+03	4.95E+01	
Chlordane (alpha)	5103-71-9		1	2.05E+06		3.23E+09					
Chlordane (gamma)	5103-74-2		1	2.05E+06		3.23E+09					
Chlordecone (Kepone)	143-50-0	0.1	1			3.23E+09	1.95E+00	6.84E+00	1.80E+05	1.52E+00	
Chlorfenvinphos	470-90-6	0.1	1			3.23E+09					
Chloride	16887-00-6		1			3.23E+09					
Chlorimuron, Ethyl-	90982-32-4	0.1	1			3.23E+09					
Chlorinated Hydrocarbons (total)	NA	0.1	1			3.23E+09					
Chlorine	7782-50-5		1	1.69E+03	2.78E+03	3.23E+09					
Chlorine Dioxide	10049-04-4		1			3.23E+09					
Chlorite	14998-27-7		1			3.23E+09					
Chlorite (Sodium Salt)	7758-19-2		1			3.23E+09					
Chloro-1,1-difluoroethane, 1-	75-68-3		1	1.42E+03	1.14E+03	3.23E+09					
Chloro-1,3-butadiene, 2-	126-99-8		1	1.49E+03	7.51E+02	3.23E+09			1.27E+00	1.27E+00	
Chloro-2-methylaniline HCl, 4-	3165-93-3	0.1	1			3.23E+09	4.25E+01	1.49E+02		3.30E+01	
Chloro-2-methylaniline, 4-	95-69-2	0.1	1			3.23E+09	1.95E+02	6.84E+02	1.07E+07	1.52E+02	
Chloro-2-methylphenol, 4-	1570-64-5	0.1	1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Captafol	2425-06-1				1.34E+04	4.69E+04		1.04E+04	1.01E+02 ca
Captan	133-06-2				8.71E+05	3.05E+06		6.78E+05	6.61E+03 ca
Carbaryl	63-25-2				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Carbazole	86-74-8								
Carbofuran	1563-66-2				3.35E+04	1.17E+05		2.61E+04	2.61E+04 nc
Carbon Disulfide	75-15-0				6.70E+05		9.89E+04	8.61E+04	8.61E+04 sat
Carbon Tetrachloride	56-23-5				2.68E+04		1.81E+04	1.08E+04	6.68E+01 ca
Carbosulfan	55285-14-8				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Carboxin	5234-68-4				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Catechol	120-80-9								
Ceric oxide	1306-38-3						2.55E+08	2.55E+08	2.55E+08 max
Cerium, Stable	7440-45-1								
Chloral	75-87-6								
Chloral Hydrate	302-17-0				6.70E+05			6.70E+05	6.70E+05 max
Chloramben	133-90-4				1.01E+05	3.52E+05		7.82E+04	7.82E+04 nc
Chloramine	127-65-1								
Chloranil	118-75-2								3.77E+01 ca
Chlorate (ClO3) as	14866-68-3								
Chlordane	12789-03-6				3.35E+03	2.93E+04	9.15E+04	2.91E+03	4.95E+01 ca*
Chlordane (alpha)	5103-71-9								
Chlordane (gamma)	5103-74-2								
Chlordecone (Kepone)	143-50-0				2.01E+03	7.03E+03		1.56E+03	1.52E+00 ca
Chlorfenvinphos	470-90-6				4.69E+03	1.64E+04		3.65E+03	3.65E+03 nc
Chloride	16887-00-6								
Chlorimuron, Ethyl-	90982-32-4				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Chlorinated Hydrocarbons (total)	NA								
Chlorine	7782-50-5				6.70E+05		2.14E+01	2.14E+01	2.14E+01 nc
Chlorine Dioxide	10049-04-4				2.01E+05		5.66E+07	2.00E+05	2.00E+05 max
Chlorite	14998-27-7								
Chlorite (Sodium Salt)	7758-19-2				2.01E+05			2.01E+05	2.01E+05 max
Chloro-1,1-difluoroethane, 1-	75-68-3						6.21E+06	6.21E+06	6.21E+06 sat
Chloro-1,3-butadiene, 2-	126-99-8				1.34E+05		2.61E+03	2.56E+03	1.27E+00 ca
Chloro-2-methylaniline HCl, 4-	3165-93-3								3.30E+01 ca
Chloro-2-methylaniline, 4-	95-69-2				2.01E+04	7.03E+04		1.56E+04	1.52E+02 ca
Chloro-2-methylphenol, 4-	1570-64-5								

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Chloro-4-methylphenol	35421-08-0	No	No									1
Chloro-6-fluorophenol, 2-	2040-90-6	No	No									1
Chloroacetaldehyde, 2-	107-20-0	No	Yes	2.70E-01	U							1
Chloroacetamide	79-07-2	No	No									1
Chloroacetic Acid	79-11-8	No	No					2.00E-03	U			1
Chloroacetophenone, 2-	532-27-4	No	No							3.00E-05	U	1
Chloroaniline	27134-26-5	No	No									1
Chloroaniline, 3-	108-42-9	No	No									1
Chloroaniline, p-	106-47-8	No	No	2.00E-01	U			4.00E-03	U			1
Chlorobenzene	108-90-7	No	Yes					2.00E-02	U	5.00E-02	U	1
Chlorobenzene sulfonic acid, p-	98-66-8	No	No									1
Chlorobenzenes (total)	NA	No	No									1
Chlorobenzilate	510-15-6	No	No	1.10E-01	U	3.10E-05	U	2.00E-02	U			1
Chlorobenzoic Acid, p-	74-11-3	No	No					3.00E-02	U			1
Chlorobenzotrifluoride, 3-nitro-4-	121-17-5	No	Yes									1
Chlorobenzotrifluoride, 4-	98-56-6	No	Yes					3.00E-03	U	3.00E-01	U	1
Chlorobiphenyl, p-	2051-62-9	No	Yes									1
Chlorobutane, 1-	109-69-3	No	Yes					4.00E-02	U			1
Chlorobutane, 2-	78-86-4	No	Yes									1
Chlorocyclopentadiene	41851-50-7	No	Yes									1
Chlorodibromoethane	73506-94-2	No	No									1
Chlorodifluoromethane	75-45-6	No	Yes							5.00E+01	U	1
Chloroethanol, 2-	107-07-3	No	Yes					2.00E-02	U			1
Chloroethylvinyl ether, 2-	110-75-8	No	Yes									1
Chloroform	67-66-3	No	Yes	3.10E-02	U	2.30E-05	U	1.00E-02	U	9.77E-02	U	1
Chloromethane	74-87-3	No	Yes							9.00E-02	U	1
Chloromethyl Methyl Ether	107-30-2	No	Yes	2.40E+00	U	6.90E-04	U					1
Chloronaphthalene, Beta-	91-58-7	No	Yes					8.00E-02	U			1
Chloronaphthalene, alpha-	90-13-1	No	Yes									1
Chloronitrobenzene, o-	88-73-3	No	No	3.00E-01	U			3.00E-03	U	1.00E-05	U	1
Chloronitrobenzene, p-	100-00-5	No	No	6.30E-03	U			1.00E-03	U	6.00E-04	U	1
Chlorophenol, 2-	95-57-8	No	Yes					5.00E-03	U			1
Chlorophenol, 3-	108-43-0	No	No									1
Chlorophenol, 4-	106-48-9	No	No									1
Chlorophenols (each)	NA	No	No									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Chloro-4-methylphenol	35421-08-0	0.1	1			3.23E+09					
Chloro-6-fluorophenol, 2-	2040-90-6	0.1	1			3.23E+09					
Chloroacetaldehyde, 2-	107-20-0		1	2.56E+04	2.83E+04	3.23E+09	7.24E+01			7.24E+01	
Chloroacetamide	79-07-2	0.1	1			3.23E+09					
Chloroacetic Acid	79-11-8	0.1	1			3.23E+09					
Chloroacetophenone, 2-	532-27-4	0.1	1			3.23E+09					
Chloroaniline	27134-26-5	0.1	1			3.23E+09					
Chloroaniline, 3-	108-42-9	0.1	1			3.23E+09					
Chloroaniline, p-	106-47-8	0.1	1			3.23E+09	9.77E+01	3.42E+02		7.60E+01	
Chlorobenzene	108-90-7		1	8.90E+03	7.61E+02	3.23E+09					
Chlorobenzene sulfonic acid, p-	98-66-8	0.1	1			3.23E+09					
Chlorobenzenes (total)	NA	0.1	1			3.23E+09					
Chlorobenzilate	510-15-6	0.1	1			3.23E+09	1.78E+02	6.22E+02	2.66E+07	1.38E+02	
Chlorobenzoic Acid, p-	74-11-3	0.1	1			3.23E+09					
Chlorobenzotrifluoride, 3-nitro-4-	121-17-5		1	2.14E+05	9.07E+01	3.23E+09					
Chlorobenzotrifluoride, 4-	98-56-6		1	9.33E+03	1.17E+02	3.23E+09					
Chlorobiphenyl, p-	2051-62-9		1	1.78E+05		3.23E+09					
Chlorobutane, 1-	109-69-3		1	2.42E+03	7.29E+02	3.23E+09					
Chlorobutane, 2-	78-86-4		1	2.01E+03	6.51E+02	3.23E+09					
Chlorocyclopentadiene	41851-50-7		1	2.60E+03	9.88E+02	3.23E+09					
Chlorodibromoethane	73506-94-2	0.1	1			3.23E+09					
Chlorodifluoromethane	75-45-6		1	1.30E+03	1.68E+03	3.23E+09					
Chloroethanol, 2-	107-07-3		1	1.08E+05	1.11E+05	3.23E+09					
Chloroethylvinyl ether, 2-	110-75-8		1	2.21E+03	1.64E+03	3.23E+09					
Chloroform	67-66-3		1	3.62E+03	2.54E+03	3.23E+09	6.31E+02		4.03E+01	3.79E+01	
Chloromethane	74-87-3		1	1.62E+03	1.32E+03	3.23E+09					
Chloromethyl Methyl Ether	107-30-2		1	7.35E+03	2.58E+04	3.23E+09	8.14E+00		2.72E+00	2.04E+00	
Chloronaphthalene, Beta-	91-58-7	0.13	1	1.10E+05		3.23E+09					
Chloronaphthalene, alpha-	90-13-1		1	1.05E+05	2.66E+02	3.23E+09					
Chloronitrobenzene, o-	88-73-3	0.1	1			3.23E+09	6.52E+01	2.28E+02		5.07E+01	
Chloronitrobenzene, p-	100-00-5	0.1	1			3.23E+09	3.10E+03	1.09E+04		2.41E+03	
Chlorophenol, 2-	95-57-8		1	1.71E+05	2.19E+04	3.23E+09					
Chlorophenol, 3-	108-43-0	0.1	1			3.23E+09					
Chlorophenol, 4-	106-48-9	0.1	1			3.23E+09					
Chlorophenols (each)	NA	0.1	1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Chloro-4-methylphenol	35421-08-0								
Chloro-6-fluorophenol, 2-	2040-90-6								
Chloroacetaldehyde, 2-	107-20-0								7.24E+01 ca
Chloroacetamide	79-07-2								
Chloroacetic Acid	79-11-8				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Chloroacetophenone, 2-	532-27-4						8.50E+06	8.50E+06	8.50E+06 max
Chloroaniline	27134-26-5								
Chloroaniline, 3-	108-42-9								
Chloroaniline, p-	106-47-8				2.68E+04	9.38E+04		2.08E+04	7.60E+01 ca
Chlorobenzene	108-90-7				1.34E+05		3.90E+04	3.02E+04	3.02E+04 sat
Chlorobenzene sulfonic acid, p-	98-66-8								
Chlorobenzenes (total)	NA								
Chlorobenzilate	510-15-6				1.34E+05	4.69E+05		1.04E+05	1.38E+02 ca
Chlorobenzoic Acid, p-	74-11-3				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Chlorobenzotrifluoride, 3-nitro-4-	121-17-5								
Chlorobenzotrifluoride, 4-	98-56-6				2.01E+04		2.45E+05	1.86E+04	1.86E+04 sat
Chlorobiphenyl, p-	2051-62-9								
Chlorobutane, 1-	109-69-3				2.68E+05			2.68E+05	2.68E+05 sat
Chlorobutane, 2-	78-86-4								
Chlorocyclopentadiene	41851-50-7								
Chlorodibromoethane	73506-94-2								
Chlorodifluoromethane	75-45-6						5.68E+06	5.68E+06	5.68E+06 sat
Chloroethanol, 2-	107-07-3				1.34E+05			1.34E+05	1.34E+05 sat
Chloroethylvinyl ether, 2-	110-75-8								
Chloroform	67-66-3				6.70E+04		3.10E+04	2.12E+04	3.79E+01 ca
Chloromethane	74-87-3						1.28E+04	1.28E+04	1.28E+04 sat
Chloromethyl Methyl Ether	107-30-2								2.04E+00 ca
Chloronaphthalene, Beta-	91-58-7				5.36E+05	1.44E+06		3.91E+05	3.91E+05 max
Chloronaphthalene, alpha-	90-13-1								
Chloronitrobenzene, o-	88-73-3				2.01E+04	7.03E+04	2.83E+06	1.56E+04	5.07E+01 ca
Chloronitrobenzene, p-	100-00-5				6.70E+03	2.34E+04	1.70E+08	5.21E+03	2.41E+03 ca**
Chlorophenol, 2-	95-57-8				3.35E+04			3.35E+04	3.35E+04 sat
Chlorophenol, 3-	108-43-0								
Chlorophenol, 4-	106-48-9								
Chlorophenols (each)	NA								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Chlorophenols (total)	NA	No	No									1
Chlorophenyl Methyl Sulfide, p-	123-09-1	No	Yes									1
Chlorophenyl Methyl Sulfoxide	934-73-6	No	No									1
Chlorophenyl phenyl ether, 4-	7005-72-3	No	Yes									1
Chloropicrin	76-06-2	No	Yes							4.00E-04	U	1
Chloropropane, 2-	75-29-6	No	Yes									1
Chlorothalonil	1897-45-6	No	No	3.10E-03	U	8.90E-07	U	1.50E-02	U			1
Chlorotoluene, o-	95-49-8	No	Yes					2.00E-02	U			1
Chlorotoluene, p-	106-43-4	No	Yes					2.00E-02	U			1
Chlorozotocin	54749-90-5	No	No	2.40E+02	U	6.90E-02	U					1
Chlorpropham	101-21-3	No	No					2.00E-01	U			1
Chlorpyrifos	2921-88-2	No	No					1.00E-03	U			1
Chlorpyrifos Methyl	5598-13-0	No	No					1.00E-02	U			1
Chlorsulfuron	64902-72-3	No	No					5.00E-02	U			1
Chlorthiophos	60238-56-4	No	No					8.00E-04	U			1
Chromium(III), Insoluble Salts	16065-83-1	No	No					1.50E+00	U			0.013
Chromium(VI)	18540-29-9	Yes	No	5.00E-01	U	8.40E-02	U	3.00E-03	U	1.00E-04	U	0.025
Chromium, Total	7440-47-3	No	No									0.013
Chrysene	218-01-9	Yes	No	7.30E-03	U	1.10E-05	U					1
Cobalt	7440-48-4	No	No			9.00E-03	U	3.00E-04	U	6.00E-06	U	1
Complex Mixtures of Aliphatic and Aromatic Hydrocarbons	NA	No	No									1
Copper	7440-50-8	No	No					4.00E-02	U			1
Copper Cyanide	544-92-3	No	No					5.00E-03	U			1
Coronene	191-07-1	No	No									1
Creosote	8001-58-9	No	No									1
Cresol, m-	108-39-4	No	No					5.00E-02	U	6.00E-01	U	1
Cresol, o-	95-48-7	No	No					5.00E-02	U	6.00E-01	U	1
Cresol, p-	106-44-5	No	No					1.00E-01	U	6.00E-01	U	1
Cresol, p-chloro-m-	59-50-7	No	No					1.00E-01	U			1
Cresols	1319-77-3	No	No					1.00E-01	U	6.00E-01	U	1
Crotonaldehyde	4170-30-3	No	Yes									1
Crotonaldehyde, trans-	123-73-9	No	Yes	1.90E+00	U			1.00E-03	U			1
Cumene	98-82-8	No	Yes					1.00E-01	U	4.00E-01	U	1
Cupferron	135-20-6	No	No	2.20E-01	U	6.30E-05	U					1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Chlorophenols (total)	NA	0.1	1			3.23E+09					
Chlorophenyl Methyl Sulfide, p-	123-09-1		1	6.97E+04	2.73E+02	3.23E+09					
Chlorophenyl Methyl Sulfoxide	934-73-6	0.1	1			3.23E+09					
Chlorophenyl phenyl ether, 4-	7005-72-3		1	1.83E+05		3.23E+09					
Chloropicrin	76-06-2		1	6.46E+03	6.17E+02	3.23E+09					
Chloropropane, 2-	75-29-6		1	1.79E+03	1.32E+03	3.23E+09					
Chlorothalonil	1897-45-6	0.1	1			3.23E+09	6.31E+03	2.21E+04	9.28E+08	4.90E+03	
Chlorotoluene, o-	95-49-8		1	1.12E+04	9.07E+02	3.23E+09					
Chlorotoluene, p-	106-43-4		1	1.01E+04	2.53E+02	3.23E+09					
Chlorozotocin	54749-90-5	0.1	1			3.23E+09	8.14E-02	2.85E-01	1.20E+04	6.33E-02	
Chlorpropham	101-21-3	0.1	1			3.23E+09					
Chlorpyrifos	2921-88-2	0.1	1			3.23E+09					
Chlorpyrifos Methyl	5598-13-0	0.1	1			3.23E+09					
Chlorsulfuron	64902-72-3	0.1	1			3.23E+09					
Chlorthiophos	60238-56-4	0.1	1			3.23E+09					
Chromium(III), Insoluble Salts	16065-83-1		1			3.23E+09					
Chromium(VI)	18540-29-9		1			3.23E+09	1.33E+01		5.36E+03	1.33E+01	
Chromium, Total	7440-47-3		1			3.23E+09					
Chrysene	218-01-9	0.13	1			3.23E+09	9.10E+02	4.74E+03	4.10E+07	7.63E+02	
Cobalt	7440-48-4		1			3.23E+09			9.18E+04	9.18E+04	
Complex Mixtures of Aliphatic and Aromatic Hydrocarbons	NA	0.1	1			3.23E+09					
Copper	7440-50-8		1			3.23E+09					
Copper Cyanide	544-92-3		1			3.23E+09					
Coronene	191-07-1	0.13	1			3.23E+09					
Creosote	8001-58-9	0.1	1			3.23E+09					
Cresol, m-	108-39-4	0.1	1			3.23E+09					
Cresol, o-	95-48-7	0.1	1			3.23E+09					
Cresol, p-	106-44-5	0.1	1			3.23E+09					
Cresol, p-chloro-m-	59-50-7	0.1	1			3.23E+09					
Cresols	1319-77-3	0.1	1			3.23E+09					
Crotonaldehyde	4170-30-3		1	2.61E+04	2.00E+04	3.23E+09					
Crotonaldehyde, trans-	123-73-9		1	2.61E+04	1.66E+04	3.23E+09	1.03E+01			1.03E+01	
Cumene	98-82-8		1	8.56E+03	2.68E+02	3.23E+09					
Cupferron	135-20-6	0.1	1			3.23E+09	8.89E+01	3.11E+02	1.31E+07	6.91E+01	

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Chlorophenols (total)	NA								
Chlorophenyl Methyl Sulfide, p-	123-09-1								
Chlorophenyl Methyl Sulfoxide	934-73-6								
Chlorophenyl phenyl ether, 4-	7005-72-3								
Chloropicrin	76-06-2						2.26E+02	2.26E+02	2.26E+02 nc
Chloropropane, 2-	75-29-6								
Chlorothalonil	1897-45-6				1.01E+05	3.52E+05		7.82E+04	4.90E+03 ca*
Chlorotoluene, o-	95-49-8				1.34E+05			1.34E+05	1.34E+05 sat
Chlorotoluene, p-	106-43-4				1.34E+05			1.34E+05	1.34E+05 sat
Chlorozotocin	54749-90-5								6.33E-02 ca
Chlorpropham	101-21-3				1.34E+06	4.69E+06		1.04E+06	1.04E+06 max
Chlorpyrifos	2921-88-2				6.70E+03	2.34E+04		5.21E+03	5.21E+03 nc
Chlorpyrifos Methyl	5598-13-0				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Chlorsulfuron	64902-72-3				3.35E+05	1.17E+06		2.61E+05	2.61E+05 max
Chlorthiophos	60238-56-4				5.36E+03	1.88E+04		4.17E+03	4.17E+03 nc
Chromium(III), Insoluble Salts	16065-83-1				1.01E+07			1.01E+07	1.01E+07 max
Chromium(VI)	18540-29-9				2.01E+04		2.83E+07	2.01E+04	1.33E+01 ca
Chromium, Total	7440-47-3								
Chrysene	218-01-9								7.63E+02 ca
Cobalt	7440-48-4				2.01E+03		1.70E+06	2.01E+03	2.01E+03 nc
Complex Mixtures of Aliphatic and Aromatic Hydrocarbons	NA								
Copper	7440-50-8				2.68E+05			2.68E+05	2.68E+05 max
Copper Cyanide	544-92-3				3.35E+04			3.35E+04	3.35E+04 nc
Coronene	191-07-1								
Creosote	8001-58-9								
Cresol, m-	108-39-4				3.35E+05	1.17E+06	1.70E+11	2.61E+05	2.61E+05 max
Cresol, o-	95-48-7				3.35E+05	1.17E+06	1.70E+11	2.61E+05	2.61E+05 max
Cresol, p-	106-44-5				6.70E+05	2.34E+06	1.70E+11	5.21E+05	5.21E+05 max
Cresol, p-chloro-m-	59-50-7				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Cresols	1319-77-3				6.70E+05	2.34E+06	1.70E+11	5.21E+05	5.21E+05 max
Crotonaldehyde	4170-30-3								
Crotonaldehyde, trans-	123-73-9				6.70E+03			6.70E+03	1.03E+01 ca
Cumene	98-82-8				6.70E+05		3.00E+05	2.07E+05	2.07E+05 sat
Cupferron	135-20-6								6.91E+01 ca

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Cyanazine	21725-46-2	No	No	8.40E-01	U			2.00E-03	U			1
Cyanide (CN-)	57-12-5	No	Yes					6.00E-04	U	8.00E-04	U	1
Cyanide (total complex)	NA	No	No									1
Cyanogen	460-19-5	No	Yes					1.00E-03	U			1
Cyanogen Bromide	506-68-3	No	Yes					9.00E-02	U			1
Cyanogen Chloride	506-77-4	No	Yes					5.00E-02	U			1
Cyclohexane	110-82-7	No	Yes							6.00E+00	U	1
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	No	No	2.30E-02	U							1
Cyclohexanone	108-94-1	No	Yes					5.00E+00	U	7.00E-01	U	1
Cyclohexene	110-83-8	No	Yes					5.00E-03	U	1.00E+00	U	1
Cyclohexylamine	108-91-8	No	Yes					2.00E-01	U			1
Cyclopentadiene	542-92-7	No	Yes									1
Cyhalothrin/karate	68085-85-8	No	No					5.00E-03	U			1
Cypermethrin	52315-07-8	No	No					1.00E-02	U			1
Cyromazine	66215-27-8	No	No					7.50E-03	U			1
DDD	72-54-8	No	No	2.40E-01	U	6.90E-05	U					1
DDD, o,p'-	53-19-0	No	No									1
DDE, p,p'-	72-55-9	No	Yes	3.40E-01	U	9.70E-05	U					1
DDT	50-29-3	No	No	3.40E-01	U	9.70E-05	U	5.00E-04	U			1
DDT, o,p'-	789-02-6	No	No									1
DDT/DDE/DDD (total)	NA	No	No									1
Dacthal	1861-32-1	No	No					1.00E-02	U			1
Dalapon	75-99-0	No	No					3.00E-02	U			1
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	No	No	7.00E-04	U			7.00E-03	U			1
Decane	124-18-5	No	Yes									1
Decanol, n-	112-30-1	No	Yes									1
Deltamethrin	52918-63-5	No	No									1
Demeton	8065-48-3	No	No					4.00E-05	U			1
Di(2-ethylhexyl)adipate	103-23-1	No	No	1.20E-03	U			6.00E-01	U			1
Di-n-butyltin bis(2-ethylhexanoate)	2781-10-4	No	Yes									1
Di-n-butyltin bis(methyl maleate)	15546-11-9	No	No									1
Di-n-butyltin bis(n-butyl maleate)	15546-16-4	No	No									1
Di-n-butyltin dilaurate	77-58-7	No	Yes									1
Di-n-butyltin distearate	5847-55-2	No	Yes									1
Di-n-hexylphthalate	84-75-3	No	Yes									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Cyanazine	21725-46-2	0.1	1			3.23E+09	2.33E+01	8.14E+01		1.81E+01	
Cyanide (CN-)	57-12-5		1	6.42E+04	1.00E+07	3.23E+09					
Cyanide (total complex)	NA		1			3.23E+09					
Cyanogen	460-19-5		1			3.23E+09					
Cyanogen Bromide	506-68-3		1			3.23E+09					
Cyanogen Chloride	506-77-4		1			3.23E+09					
Cyclohexane	110-82-7		1	1.44E+03	1.18E+02	3.23E+09					
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	0.1	1			3.23E+09	8.50E+02	2.97E+03		6.61E+02	
Cyclohexanone	108-94-1		1	5.75E+04	5.11E+03	3.23E+09					
Cyclohexene	110-83-8		1	2.02E+03	2.83E+02	3.23E+09					
Cyclohexylamine	108-91-8		1	1.03E+05	2.93E+05	3.23E+09					
Cyclopentadiene	542-92-7		1	2.05E+03	1.34E+03	3.23E+09					
Cyhalothrin/karate	68085-85-8	0.1	1			3.23E+09					
Cypermethrin	52315-07-8	0.1	1			3.23E+09					
Cyromazine	66215-27-8	0.1	1			3.23E+09					
DDD	72-54-8	0.1	1			3.23E+09	8.14E+01	2.85E+02	1.20E+07	6.33E+01	
DDD, o,p'-	53-19-0	0.1	1			3.23E+09					
DDE, p,p'-	72-55-9		1	2.91E+06		3.23E+09	5.75E+01		7.65E+03	5.71E+01	
DDT	50-29-3	0.03	1			3.23E+09	5.75E+01	6.71E+02	8.52E+06	5.30E+01	
DDT, o,p'-	789-02-6	0.1	1			3.23E+09					
DDT/DDE/DDD (total)	NA	0.1	1			3.23E+09					
Dacthal	1861-32-1	0.1	1			3.23E+09					
Dalapon	75-99-0	0.1	1			3.23E+09					
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'-(BDE-209)	1163-19-5	0.1	1			3.23E+09	2.79E+04	9.77E+04		2.17E+04	
Decane	124-18-5		1	1.56E+03	2.53E+00	3.23E+09					
Decanol, n-	112-30-1		1	8.71E+04	3.19E+01	3.23E+09					
Deltamethrin	52918-63-5	0.1	1			3.23E+09					
Demeton	8065-48-3	0.1	1			3.23E+09					
Di(2-ethylhexyl)adipate	103-23-1	0.1	1			3.23E+09	1.63E+04	5.70E+04		1.27E+04	
Di-n-butyltin bis(2-ethylhexanoate)	2781-10-4		1	1.29E+05		3.23E+09					
Di-n-butyltin bis(methyl maleate)	15546-11-9	0.1	1			3.23E+09					
Di-n-butyltin bis(n-butyl maleate)	15546-16-4	0.1	1			3.23E+09					
Di-n-butyltin dilaurate	77-58-7		1	4.40E+05		3.23E+09					
Di-n-butyltin distearate	5847-55-2		1	2.33E+06		3.23E+09					
Di-n-hexylphthalate	84-75-3		1	1.33E+06	3.85E+00	3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Cyanazine	21725-46-2				1.34E+04	4.69E+04		1.04E+04	1.81E+01 ca
Cyanide (CN-)	57-12-5				4.02E+03		4.50E+03	2.12E+03	2.12E+03 nc
Cyanide (total complex)	NA								
Cyanogen	460-19-5				6.70E+03			6.70E+03	6.70E+03 nc
Cyanogen Bromide	506-68-3				6.03E+05			6.03E+05	6.03E+05 max
Cyanogen Chloride	506-77-4				3.35E+05			3.35E+05	3.35E+05 max
Cyclohexane	110-82-7						7.56E+05	7.56E+05	7.56E+05 sat
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3								6.61E+02 ca
Cyclohexanone	108-94-1				3.35E+07		3.53E+06	3.19E+06	3.19E+06 sat
Cyclohexene	110-83-8				3.35E+04		1.77E+05	2.82E+04	2.82E+04 sat
Cyclohexylamine	108-91-8				1.34E+06			1.34E+06	1.34E+06 sat
Cyclopentadiene	542-92-7								
Cyhalothrin/karate	68085-85-8				3.35E+04	1.17E+05		2.61E+04	2.61E+04 nc
Cypermethrin	52315-07-8				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Cyromazine	66215-27-8				5.03E+04	1.76E+05		3.91E+04	3.91E+04 nc
DDD	72-54-8								6.33E+01 ca
DDD, o,p'-	53-19-0								
DDE, p,p'-	72-55-9								5.71E+01 ca
DDT	50-29-3				3.35E+03	3.91E+04		3.09E+03	5.30E+01 ca*
DDT, o,p'-	789-02-6								
DDT/DDE/DDD (total)	NA								
Dacthal	1861-32-1				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Dalapon	75-99-0				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'-(BDE-209)	1163-19-5				4.69E+04	1.64E+05		3.65E+04	2.17E+04 ca**
Decane	124-18-5								
Decanol, n-	112-30-1								
Deltamethrin	52918-63-5								
Demeton	8065-48-3				2.68E+02	9.38E+02		2.08E+02	2.08E+02 nc
Di(2-ethylhexyl)adipate	103-23-1				4.02E+06	1.41E+07		3.13E+06	1.27E+04 ca
Di-n-butyltin bis(2-ethylhexanoate)	2781-10-4								
Di-n-butyltin bis(methyl maleate)	15546-11-9								
Di-n-butyltin bis(n-butyl maleate)	15546-16-4								
Di-n-butyltin dilaurate	77-58-7								
Di-n-butyltin distearate	5847-55-2								
Di-n-hexylphthalate	84-75-3								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Diallate	2303-16-4	No	No	6.10E-02	U							1
Diammonium phosphate	7783-28-0	No	No					4.86E+01	U			1
Diazinon	333-41-5	No	No					7.00E-04	U			1
Dibenz[a,h]anthracene	53-70-3	Yes	No	7.30E+00	U	1.20E-03	U					1
Dibenzo(a,e)pyrene	192-65-4	No	No	1.20E+01	U	1.10E-03	U					1
Dibenzofuran	132-64-9	No	Yes					1.00E-03	U			1
Dibenzothiophene	132-65-0	No	Yes					1.00E-02	U			1
Dibromo-3-chloropropane, 1,2-	96-12-8	Yes	Yes	8.00E-01	U	6.00E-03	U	2.00E-04	U	2.00E-04	U	1
Dibromoacetic acid	631-64-1	No	No									1
Dibromobenzene, 1,3-	108-36-1	No	Yes					4.00E-04	U			1
Dibromobenzene, 1,4-	106-37-6	No	Yes					1.00E-02	U			1
Dibromochloromethane	124-48-1	No	Yes	8.40E-02	U	2.70E-05	U	2.00E-02	U			1
Dibromodichloromethane	594-18-3	No	Yes									1
Dibromodiphenyl Ether, p,p'-	2050-47-7	No	Yes									1
Dibromoethane, 1,2-	106-93-4	No	Yes	2.00E+00	U	6.00E-04	U	9.00E-03	U	9.00E-03	U	1
Dibromomethane (Methylene Bromide)	74-95-3	No	Yes					1.00E-02	U	4.00E-03	U	1
Dibutoxy di-n-butyltin	3349-36-8	No	Yes									1
Dibutyl Phthalate	84-74-2	No	No					1.00E-01	U			1
Dibutylbis((1-oxoisooctyl)oxy)stannane	85702-74-5	No	No									1
Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2	No	Yes									1
Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3	No	No									1
Dibutylbis(palmitoyloxy)stannane	13323-63-2	No	Yes									1
Dibutyltin Compounds	NA	No	No					3.00E-04	U			1
Dibutyltin diacetate	1067-33-0	No	Yes									1
Dibutyltin dichloride	683-18-1	No	Yes									1
Dibutyltin oxide	818-08-6	No	Yes									1
Dicalcium phosphate	7757-93-9	No	No					4.86E+01	U			1
Dicamba	1918-00-9	No	No					3.00E-02	U			1
Dichloro-2-butene, 1,4-	764-41-0	No	Yes			4.20E-03	U					1
Dichloro-2-butene, cis-1,4-	1476-11-5	No	Yes			4.20E-03	U					1
Dichloro-2-butene, trans-1,4-	110-57-6	No	Yes			4.20E-03	U					1
Dichloroacetic Acid	79-43-6	No	No	5.00E-02	U			4.00E-03	U			1
Dichloroaniline, 2,4-	554-00-7	No	No									1
Dichloroaniline, 3,4-	95-76-1	No	Yes									1

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Diallate	2303-16-4	0.1	1			3.23E+09	3.20E+02	1.12E+03		2.49E+02	
Diammonium phosphate	7783-28-0		1			3.23E+09					
Diazinon	333-41-5	0.1	1			3.23E+09					
Dibenz[a,h]anthracene	53-70-3	0.13	1			3.23E+09	9.10E-01	4.74E+00	3.75E+05	7.63E-01	
Dibenzo(a,e)pyrene	192-65-4	0.13	1			3.23E+09	1.63E+00	4.38E+00	7.51E+05	1.19E+00	
Dibenzofuran	132-64-9	0.03	1	2.70E+05		3.23E+09					
Dibenzothiophene	132-65-0		1	7.24E+05		3.23E+09					
Dibromo-3-chloropropane, 1,2-	96-12-8		1	4.42E+04	9.80E+02	3.23E+09	8.30E+00		1.03E+00	9.13E-01	
Dibromoacetic acid	631-64-1	0.1	1			3.23E+09					
Dibromobenzene, 1,3-	108-36-1		1	2.66E+04	1.59E+02	3.23E+09					
Dibromobenzene, 1,4-	106-37-6		1	3.03E+04		3.23E+09					
Dibromochloromethane	124-48-1		1	1.10E+04	8.02E+02	3.23E+09	2.33E+02		1.04E+02	7.18E+01	
Dibromodichloromethane	594-18-3		1	3.20E+04		3.23E+09					
Dibromodiphenyl Ether, p,p'-	2050-47-7		1	5.22E+05		3.23E+09					
Dibromoethane, 1,2-	106-93-4		1	1.19E+04	1.34E+03	3.23E+09	9.77E+00		5.08E+00	3.34E+00	
Dibromomethane (Methylene Bromide)	74-95-3		1	7.79E+03	2.82E+03	3.23E+09					
Dibutoxy di-n-butyltin	3349-36-8		1	8.25E+04		3.23E+09					
Dibutyl Phthalate	84-74-2	0.1	1			3.23E+09					
Dibutylbis((1-oxoisooctyl)oxy)stannane	85702-74-5	0.1	1			3.23E+09					
Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2		1	3.40E+06		3.23E+09					
Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3	0.1	1			3.23E+09					
Dibutylbis(palmitoyloxy)stannane	13323-63-2		1	1.20E+06		3.23E+09					
Dibutyltin Compounds	NA	0.1	1			3.23E+09					
Dibutyltin diacetate	1067-33-0		1	1.75E+04	1.86E+00	3.23E+09					
Dibutyltin dichloride	683-18-1		1	3.93E+04		3.23E+09					
Dibutyltin oxide	818-08-6		1			3.23E+09					
Dicalcium phosphate	7757-93-9		1			3.23E+09					
Dicamba	1918-00-9	0.1	1			3.23E+09					
Dichloro-2-butene, 1,4-	764-41-0		1	1.54E+04	5.20E+02	3.23E+09			9.35E-01	9.35E-01	
Dichloro-2-butene, cis-1,4-	1476-11-5		1	1.54E+04	5.20E+02	3.23E+09			9.35E-01	9.35E-01	
Dichloro-2-butene, trans-1,4-	110-57-6		1	1.54E+04	7.63E+02	3.23E+09			9.36E-01	9.36E-01	
Dichloroacetic Acid	79-43-6	0.1	1			3.23E+09	3.91E+02	1.37E+03		3.04E+02	
Dichloroaniline, 2,4-	554-00-7	0.1	1			3.23E+09					
Dichloroaniline, 3,4-	95-76-1		1	1.39E+05		3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Diallate	2303-16-4								2.49E+02 ca
Diammonium phosphate	7783-28-0				3.26E+08			3.26E+08	3.26E+08 max
Diazinon	333-41-5				4.69E+03	1.64E+04		3.65E+03	3.65E+03 nc
Dibenz[a,h]anthracene	53-70-3								7.63E-01 ca
Dibenzo(a,e)pyrene	192-65-4								1.19E+00 ca
Dibenzofuran	132-64-9				6.70E+03	7.82E+04		6.17E+03	6.17E+03 nc
Dibenzothiophene	132-65-0				6.70E+04			6.70E+04	6.70E+04 nc
Dibromo-3-chloropropane, 1,2-	96-12-8				1.34E+03		7.74E+02	4.91E+02	9.13E-01 ca
Dibromoacetic acid	631-64-1								
Dibromobenzene, 1,3-	108-36-1				2.68E+03			2.68E+03	2.68E+03 sat
Dibromobenzene, 1,4-	106-37-6				6.70E+04			6.70E+04	6.70E+04 nc
Dibromochloromethane	124-48-1				1.34E+05			1.34E+05	7.18E+01 ca
Dibromodichloromethane	594-18-3								
Dibromodiphenyl Ether, p,p'-	2050-47-7								
Dibromoethane, 1,2-	106-93-4				6.03E+04		9.40E+03	8.13E+03	3.34E+00 ca
Dibromomethane (Methylene Bromide)	74-95-3				6.70E+04		2.73E+03	2.62E+03	2.62E+03 nc
Dibutoxy di-n-butyltin	3349-36-8								
Dibutyl Phthalate	84-74-2				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Dibutylbis((1-oxoisooctyl)oxy)stannane	85702-74-5								
Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2								
Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3								
Dibutylbis(palmitoyloxy)stannane	13323-63-2								
Dibutyltin Compounds	NA				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Dibutyltin diacetate	1067-33-0								
Dibutyltin dichloride	683-18-1								
Dibutyltin oxide	818-08-6								
Dicalcium phosphate	7757-93-9				3.26E+08			3.26E+08	3.26E+08 max
Dicamba	1918-00-9				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Dichloro-2-butene, 1,4-	764-41-0								9.35E-01 ca
Dichloro-2-butene, cis-1,4-	1476-11-5								9.35E-01 ca
Dichloro-2-butene, trans-1,4-	110-57-6								9.36E-01 ca
Dichloroacetic Acid	79-43-6				2.68E+04	9.38E+04		2.08E+04	3.04E+02 ca*
Dichloroaniline, 2,4-	554-00-7								
Dichloroaniline, 3,4-	95-76-1								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Dichlorobenzene	25321-22-6	No	Yes									1
Dichlorobenzene, 1,2-	95-50-1	No	Yes					9.00E-02	U	2.00E-01	U	1
Dichlorobenzene, 1,3-	541-73-1	No	Yes									1
Dichlorobenzene, 1,4-	106-46-7	No	Yes	5.40E-03	U	1.10E-05	U	7.00E-02	U	8.00E-01	U	1
Dichlorobenzidine, 3,3'-	91-94-1	No	No	4.50E-01	U	3.40E-04	U					1
Dichlorobenzoic acid, -3,5	51-36-5	No	No									1
Dichlorobenzophenone, 4,4'-	90-98-2	No	No					9.00E-03	U			1
Dichlorobenzotrifluoride, 3,4-	328-84-7	No	Yes									1
Dichlorodifluoromethane	75-71-8	No	Yes					2.00E-01	U	1.00E-01	U	1
Dichlorodiisopropyl ether, 2,2'-	39638-32-9	No	Yes									1
Dichloroethane, 1,1-	75-34-3	No	Yes	5.70E-03	U	1.60E-06	U	2.00E-01	U			1
Dichloroethane, 1,2-	107-06-2	No	Yes	9.10E-02	U	2.60E-05	U	6.00E-03	U	7.00E-03	U	1
Dichloroethylene, 1,1-	75-35-4	No	Yes					5.00E-02	U	2.00E-01	U	1
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes					2.00E-03	U			1
Dichloroethylene, 1,2-trans-	156-60-5	No	Yes					2.00E-02	U			1
Dichlorophenol, 2,3-	576-24-9	No	No									1
Dichlorophenol, 2,4-	120-83-2	No	No					3.00E-03	U			1
Dichlorophenol, 2,5-	583-78-8	Yes	No									1
Dichlorophenol, 2,6-	87-65-0	No	No									1
Dichlorophenol, 3,4-	95-77-2	No	No									1
Dichlorophenols (total)	NA	No	No									1
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	No	No					1.00E-02	U			1
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	No	No					8.00E-03	U			1
Dichloropropane, 1,2-	78-87-5	No	Yes	3.60E-02	U	1.00E-05	U	9.00E-02	U	4.00E-03	U	1
Dichloropropane, 1,3-	142-28-9	No	Yes					2.00E-02	U			1
Dichloropropane, 2,2-	594-20-7	No	Yes									1
Dichloropropanol, 2,3-	616-23-9	No	No					3.00E-03	U			1
Dichloropropene, 1,3-	542-75-6	No	Yes	1.00E-01	U	4.00E-06	U	3.00E-02	U	2.00E-02	U	1
Dichloropropene, 2,3-	78-88-6	No	Yes									1
Dichloropropene, cis-1,3-	10061-01-5	No	Yes									1
Dichloropropene, trans-1,3-	10061-02-6	No	Yes									1
Dichlorvos	62-73-7	No	No	2.90E-01	U	8.30E-05	U	5.00E-04	U	5.00E-04	U	1
Diclofop-methyl	51338-27-3	No	No									1
Dicofol	115-32-2	No	No									1
Dicyclohexylamine	101-83-7	No	Yes									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Dichlorobenzene	25321-22-6		1	1.61E+04	1.93E+02	3.23E+09					
Dichlorobenzene, 1,2-	95-50-1		1	1.61E+04	3.76E+02	3.23E+09					
Dichlorobenzene, 1,3-	541-73-1		1	1.37E+04	2.96E+02	3.23E+09					
Dichlorobenzene, 1,4-	106-46-7		1	1.44E+04		3.23E+09	3.62E+03		3.35E+02	3.06E+02	
Dichlorobenzidine, 3,3'-	91-94-1	0.1	1			3.23E+09	4.34E+01	1.52E+02	2.43E+06	3.38E+01	
Dichlorobenzoic acid, -3,5	51-36-5	0.1	1			3.23E+09					
Dichlorobenzophenone, 4,4'-	90-98-2	0.1	1			3.23E+09					
Dichlorobenzotrifluoride, 3,4-	328-84-7		1	1.59E+04	4.57E+01	3.23E+09					
Dichlorodifluoromethane	75-71-8		1	1.16E+03	8.44E+02	3.23E+09					
Dichlorodiisopropyl ether, 2,2'-	39638-32-9		1	1.81E+04	2.35E+02	3.23E+09					
Dichloroethane, 1,1-	75-34-3		1	2.87E+03	1.69E+03	3.23E+09	3.43E+03		4.59E+02	4.05E+02	
Dichloroethane, 1,2-	107-06-2		1	6.31E+03	2.98E+03	3.23E+09	2.15E+02		6.20E+01	4.81E+01	
Dichloroethylene, 1,1-	75-35-4		1	1.59E+03	1.19E+03	3.23E+09					
Dichloroethylene, 1,2-cis-	156-59-2		1	3.45E+03	2.37E+03	3.23E+09					
Dichloroethylene, 1,2-trans-	156-60-5		1	3.46E+03	1.67E+03	3.23E+09					
Dichlorophenol, 2,3-	576-24-9	0.1	1			3.23E+09					
Dichlorophenol, 2,4-	120-83-2	0.1	1			3.23E+09					
Dichlorophenol, 2,5-	583-78-8	0.1	1			3.23E+09					
Dichlorophenol, 2,6-	87-65-0	0.1	1			3.23E+09					
Dichlorophenol, 3,4-	95-77-2	0.1	1			3.23E+09					
Dichlorophenols (total)	NA	0.1	1			3.23E+09					
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	0.05	1			3.23E+09					
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	0.1	1			3.23E+09					
Dichloropropane, 1,2-	78-87-5		1	5.23E+03	1.36E+03	3.23E+09	5.43E+02		1.34E+02	1.07E+02	
Dichloropropane, 1,3-	142-28-9		1	9.33E+03	1.49E+03	3.23E+09					
Dichloropropane, 2,2-	594-20-7		1	2.21E+03	5.27E+02	3.23E+09					
Dichloropropanol, 2,3-	616-23-9	0.1	1			3.23E+09					
Dichloropropene, 1,3-	542-75-6		1	4.91E+03	1.57E+03	3.23E+09	1.95E+02		3.13E+02	1.20E+02	
Dichloropropene, 2,3-	78-88-6		1	4.27E+03	1.07E+03	3.23E+09					
Dichloropropene, cis-1,3-	10061-01-5		1	4.90E+03	1.22E+03	3.23E+09					
Dichloropropene, trans-1,3-	10061-02-6		1	4.91E+03	1.57E+03	3.23E+09					
Dichlorvos	62-73-7	0.1	1			3.23E+09	6.74E+01	2.36E+02	9.95E+06	5.24E+01	
Diclofop-methyl	51338-27-3	0.1	1			3.23E+09					
Dicofol	115-32-2	0.1	1			3.23E+09					
Dicyclohexylamine	101-83-7		1	8.62E+04	2.16E+03	3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Dichlorobenzene	25321-22-6								
Dichlorobenzene, 1,2-	95-50-1				6.03E+05		2.82E+05	1.92E+05	1.92E+05 sat
Dichlorobenzene, 1,3-	541-73-1								
Dichlorobenzene, 1,4-	106-46-7				4.69E+05		1.01E+06	3.20E+05	3.06E+02 ca
Dichlorobenzidine, 3,3'-	91-94-1								3.38E+01 ca
Dichlorobenzoic acid, -3,5	51-36-5								
Dichlorobenzophenone, 4,4'-	90-98-2				6.03E+04	2.11E+05		4.69E+04	4.69E+04 nc
Dichlorobenzotrifluoride, 3,4-	328-84-7								
Dichlorodifluoromethane	75-71-8				1.34E+06		1.02E+04	1.01E+04	1.01E+04 sat
Dichlorodiisopropyl ether, 2,2'-	39638-32-9								
Dichloroethane, 1,1-	75-34-3				1.34E+06			1.34E+06	4.05E+02 ca
Dichloroethane, 1,2-	107-06-2				4.02E+04		3.87E+03	3.53E+03	4.81E+01 ca*
Dichloroethylene, 1,1-	75-35-4				3.35E+05		2.79E+04	2.58E+04	2.58E+04 sat
Dichloroethylene, 1,2-cis-	156-59-2				1.34E+04			1.34E+04	1.34E+04 sat
Dichloroethylene, 1,2-trans-	156-60-5				1.34E+05			1.34E+05	1.34E+05 sat
Dichlorophenol, 2,3-	576-24-9								
Dichlorophenol, 2,4-	120-83-2				2.01E+04	7.03E+04		1.56E+04	1.56E+04 nc
Dichlorophenol, 2,5-	583-78-8								
Dichlorophenol, 2,6-	87-65-0								
Dichlorophenol, 3,4-	95-77-2								
Dichlorophenols (total)	NA								
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7				6.70E+04	4.69E+05		5.86E+04	5.86E+04 nc
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6				5.36E+04	1.88E+05		4.17E+04	4.17E+04 nc
Dichloropropane, 1,2-	78-87-5				6.03E+05		1.83E+03	1.83E+03	1.07E+02 ca*
Dichloropropane, 1,3-	142-28-9				1.34E+05			1.34E+05	1.34E+05 sat
Dichloropropane, 2,2-	594-20-7								
Dichloropropanol, 2,3-	616-23-9				2.01E+04	7.03E+04		1.56E+04	1.56E+04 nc
Dichloropropene, 1,3-	542-75-6				2.01E+05		8.59E+03	8.24E+03	1.20E+02 ca*
Dichloropropene, 2,3-	78-88-6								
Dichloropropene, cis-1,3-	10061-01-5								
Dichloropropene, trans-1,3-	10061-02-6								
Dichlorvos	62-73-7				3.35E+03	1.17E+04	1.42E+08	2.61E+03	5.24E+01 ca*
Diclofop-methyl	51338-27-3								
Dicofol	115-32-2								
Dicyclohexylamine	101-83-7								

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Dicyclopentadiene	77-73-6	No	Yes					8.00E-02	U	3.00E-04	U	1
Didecyl dimethyl ammonium chloride	7173-51-5	No	No									1
Dieldrin	60-57-1	No	No	1.60E+01	U	4.60E-03	U	5.00E-05	U			1
Diepoxybutane	1464-53-5	No	Yes									1
Diethanolamine	111-42-2	No	No					2.00E-03	U	2.00E-04	U	1
Diethyl Phthalate	84-66-2	No	No					8.00E-01	U			1
Diethyl sulfate	64-67-5	No	No									1
Diethyl-p-nitrophenylphosphate	311-45-5	No	No									1
Diethylene Glycol Dinitrate (DEGDN)	693-21-0	No	No									1
Diethylene Glycol Monobutyl Ether	112-34-5	No	No					3.00E-02	U	1.00E-04	U	1
Diethylene Glycol Monoethyl Ether	111-90-0	No	No					6.00E-02	U	3.00E-04	U	1
Diethylene-glycol	111-46-6	No	No									1
Diethylformamide	617-84-5	No	Yes					1.00E-03	U			1
Diethylphosphorodithioate	298-06-6	No	Yes									1
Diethylstilbestrol	56-53-1	No	No	3.50E+02	U	1.00E-01	U					1
Difenzoquat	43222-48-6	No	No					8.00E-02	U			1
Diflubenzuron	35367-38-5	No	No					2.00E-02	U			1
Difluoroethane, 1,1-	75-37-6	No	Yes							4.00E+01	U	1
Difluoropropane, 2,2-	420-45-1	No	Yes									1
Dihydrosafrole	94-58-6	No	Yes	4.40E-02	U	1.30E-05	U					1
Diisopropyl Ether	108-20-3	No	Yes							7.00E-01	U	1
Diisopropyl Methylphosphonate	1445-75-6	No	Yes					8.00E-02	U			1
Dimagnesium phosphate	7782-75-4	No	No					4.86E+01	U			1
Dimethipin	55290-64-7	No	No					2.00E-02	U			1
Dimethoate	60-51-5	No	No					2.00E-04	U			1
Dimethoxybenzidine, 3,3'-	119-90-4	No	No	1.60E+00	U							1
Dimethyl Sulfate	77-78-1	No	No									1
Dimethyl Sulfide	75-18-3	No	Yes									1
Dimethyl methylphosphonate	756-79-6	No	No	1.70E-03	U			6.00E-02	U			1
Dimethylamino azobenzene [p-]	60-11-7	No	No	4.60E+00	U	1.30E-03	U					1
Dimethylaniline HCl, 2,4-	21436-96-4	No	No	5.80E-01	U							1
Dimethylaniline, 2,4-	95-68-1	No	No	2.00E-01	U			2.00E-03	U			1
Dimethylaniline, N,N-	121-69-7	No	Yes					2.00E-03	U			1
Dimethylbenz(a)anthracene, 7,12-	57-97-6	Yes	No	2.50E+02	U	7.10E-02	U					1
Dimethylbenzidine, 3,3'-	119-93-7	No	No	1.10E+01	U							1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Dicyclopentadiene	77-73-6		1	5.67E+03		3.23E+09					
Didecyl dimethyl ammonium chloride	7173-51-5	0.1	1			3.23E+09					
Dieldrin	60-57-1	0.1	1			3.23E+09	1.22E+00	4.27E+00	1.80E+05	9.50E-01	
Diepoxybutane	1464-53-5		1	2.02E+05	1.15E+05	3.23E+09					
Diethanolamine	111-42-2	0.1	1			3.23E+09					
Diethyl Phthalate	84-66-2	0.1	1			3.23E+09					
Diethyl sulfate	64-67-5	0.1	1			3.23E+09					
Diethyl-p-nitrophenylphosphate	311-45-5	0.1	1			3.23E+09					
Diethylene Glycol Dinitrate (DEGDN)	693-21-0	0.1	1			3.23E+09					
Diethylene Glycol Monobutyl Ether	112-34-5	0.1	1			3.23E+09					
Diethylene Glycol Monoethyl Ether	111-90-0	0.1	1			3.23E+09					
Diethylene-glycol	111-46-6	0.1	1			3.23E+09					
Diethylformamide	617-84-5		1	1.91E+05	1.12E+05	3.23E+09					
Diethylphosphorodithioate	298-06-6		1	1.79E+04	2.15E-02	3.23E+09					
Diethylstilbestrol	56-53-1	0.1	1			3.23E+09	5.58E-02	1.95E-01	8.26E+03	4.34E-02	
Difenzoquat	43222-48-6	0.1	1			3.23E+09					
Diflubenzuron	35367-38-5	0.1	1			3.23E+09					
Difluoroethane, 1,1-	75-37-6		1	1.59E+03	1.43E+03	3.23E+09					
Difluoropropane, 2,2-	420-45-1		1	1.01E+03	4.63E+04	3.23E+09					
Dihydrosafrole	94-58-6		1	2.08E+03		3.23E+09	4.44E+02		4.09E+01	3.74E+01	
Diisopropyl Ether	108-20-3		1	4.21E+03	2.26E+03	3.23E+09					
Diisopropyl Methylphosphonate	1445-75-6		1	5.26E+04	5.30E+02	3.23E+09					
Dimagnesium phosphate	7782-75-4		1			3.23E+09					
Dimethipin	55290-64-7	0.1	1			3.23E+09					
Dimethoate	60-51-5	0.1	1			3.23E+09					
Dimethoxybenzidine, 3,3'-	119-90-4	0.1	1			3.23E+09	1.22E+01	4.27E+01		9.50E+00	
Dimethyl Sulfate	77-78-1	0.1	1			3.23E+09					
Dimethyl Sulfide	75-18-3		1	4.10E+03	5.34E+03	3.23E+09					
Dimethyl methylphosphonate	756-79-6	0.1	1			3.23E+09	1.15E+04	4.02E+04		8.94E+03	
Dimethylamino azobenzene [p-]	60-11-7	0.1	1			3.23E+09	4.25E+00	1.49E+01	6.35E+05	3.30E+00	
Dimethylaniline HCl, 2,4-	21436-96-4	0.1	1			3.23E+09	3.37E+01	1.18E+02		2.62E+01	
Dimethylaniline, 2,4-	95-68-1	0.1	1			3.23E+09	9.77E+01	3.42E+02		7.60E+01	
Dimethylaniline, N,N-	121-69-7		1	4.32E+04	8.30E+02	3.23E+09					
Dimethylbenz(a)anthracene, 7,12-	57-97-6	0.13	1			3.23E+09	2.66E-02	1.38E-01	6.35E+03	2.23E-02	
Dimethylbenzidine, 3,3'-	119-93-7	0.1	1			3.23E+09	1.78E+00	6.22E+00		1.38E+00	

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Dicyclopentadiene	77-73-6				5.36E+05		1.49E+02	1.49E+02	1.49E+02 nc
Didecyl dimethyl ammonium chloride	7173-51-5								
Dieldrin	60-57-1				3.35E+02	1.17E+03		2.61E+02	9.50E-01 ca
Diepoxybutane	1464-53-5								
Diethanolamine	111-42-2				1.34E+04	4.69E+04	5.66E+07	1.04E+04	1.04E+04 nc
Diethyl Phthalate	84-66-2				5.36E+06	1.88E+07		4.17E+06	4.17E+06 max
Diethyl sulfate	64-67-5								
Diethyl-p-nitrophenylphosphate	311-45-5								
Diethylene Glycol Dinitrate (DEGDN)	693-21-0								
Diethylene Glycol Monobutyl Ether	112-34-5				2.01E+05	7.03E+05	2.83E+07	1.56E+05	1.56E+05 max
Diethylene Glycol Monoethyl Ether	111-90-0				4.02E+05	1.41E+06	8.50E+07	3.12E+05	3.12E+05 max
Diethylene-glycol	111-46-6								
Diethylformamide	617-84-5				6.70E+03			6.70E+03	6.70E+03 nc
Diethylphosphorodithioate	298-06-6								
Diethylstilbestrol	56-53-1								4.34E-02 ca
Difenzoquat	43222-48-6				5.36E+05	1.88E+06		4.17E+05	4.17E+05 max
Diflubenzuron	35367-38-5				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Difluoroethane, 1,1-	75-37-6						5.55E+06	5.55E+06	5.55E+06 sat
Difluoropropane, 2,2-	420-45-1								
Dihydrosafrole	94-58-6								3.74E+01 ca
Diisopropyl Ether	108-20-3						2.58E+05	2.58E+05	2.58E+05 sat
Diisopropyl Methylphosphonate	1445-75-6				5.36E+05			5.36E+05	5.36E+05 sat
Dimagnesium phosphate	7782-75-4				3.26E+08			3.26E+08	3.26E+08 max
Dimethipin	55290-64-7				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Dimethoate	60-51-5				1.34E+03	4.69E+03		1.04E+03	1.04E+03 nc
Dimethoxybenzidine, 3,3'-	119-90-4								9.50E+00 ca
Dimethyl Sulfate	77-78-1								
Dimethyl Sulfide	75-18-3								
Dimethyl methylphosphonate	756-79-6				4.02E+05	1.41E+06		3.13E+05	8.94E+03 ca*
Dimethylamino azobenzene [p-]	60-11-7								3.30E+00 ca
Dimethylaniline HCl, 2,4-	21436-96-4								2.62E+01 ca
Dimethylaniline, 2,4-	95-68-1				1.34E+04	4.69E+04		1.04E+04	7.60E+01 ca
Dimethylaniline, N,N-	121-69-7				1.34E+04			1.34E+04	1.34E+04 sat
Dimethylbenz(a)anthracene, 7,12-	57-97-6								2.23E-02 ca
Dimethylbenzidine, 3,3'-	119-93-7								1.38E+00 ca

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Dimethylcyclohexylamine, n,n-	98-94-2	No	Yes									1
Dimethylethyl Lead	107584-40-7	No	No									1
Dimethylformamide	68-12-2	No	Yes					1.00E-01	U	3.00E-02	U	1
Dimethylhydrazine, 1,1-	57-14-7	No	Yes					1.00E-04	U	2.00E-06	U	1
Dimethylhydrazine, 1,2-	540-73-8	No	Yes	5.50E+02	U	1.60E-01	U					1
Dimethylmercury	593-74-8	No	Yes									1
Dimethylphenethylamine	122-09-8	No	No									1
Dimethylphenol, 2,4-	105-67-9	No	No					2.00E-02	U			1
Dimethylphenol, 2,6-	576-26-1	No	No					6.00E-04	U			1
Dimethylphenol, 3,4-	95-65-8	No	No					1.00E-03	U			1
Dimethylphthalate	131-11-3	No	No									1
Dimethylterephthalate	120-61-6	No	Yes					1.00E-01	U			1
Dimethylvinylchloride	513-37-1	No	Yes	4.50E-02	U	1.30E-05	U					1
Dinitro-o-cresol, 4,6-	534-52-1	No	No					8.00E-05	U			1
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	No	No					2.00E-03	U			1
Dinitroaniline, 3,5-	618-87-1	No	No									1
Dinitrobenzene, 1,2-	528-29-0	No	No					1.00E-04	U			1
Dinitrobenzene, 1,3-	99-65-0	No	No					1.00E-04	U			1
Dinitrobenzene, 1,4-	100-25-4	No	No					1.00E-04	U			1
Dinitrophenol, 2,4-	51-28-5	No	No					2.00E-03	U			1
Dinitrophenols	25550-58-7	Yes	No									1
Dinitrosopentamethylenetetramine, N,N-	101-25-7	No	No									1
Dinitrotoluene Mixture, 2,4/2,6-	NA	No	No	6.80E-01	U							1
Dinitrotoluene, 2,4-	121-14-2	No	No	3.10E-01	U	8.90E-05	U	2.00E-03	U			1
Dinitrotoluene, 2,6-	606-20-2	No	No	1.50E+00	U			3.00E-04	U			1
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	No	No					2.00E-03	U			1
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	No	No					2.00E-03	U			1
Dinitrotoluene, Technical grade	25321-14-6	No	No	4.50E-01	U			9.00E-04	U			1
Dinoseb	88-85-7	No	No					1.00E-03	U			1
Dioxane, 1,4-	123-91-1	No	Yes	1.00E-01	U	5.00E-06	U	3.00E-02	U	3.00E-02	U	1
Diphenamid	957-51-7	No	No					3.00E-02	U			1
Diphenyl Sulfone	127-63-9	No	No					8.00E-04	U			1
Diphenylamine	122-39-4	No	No					2.50E-02	U			1
Diphenylhydrazine, 1,2-	122-66-7	No	No	8.00E-01	U	2.20E-04	U					1
Dipotassium phosphate	7758-11-4	No	No					4.86E+01	U			1

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Dimethylcyclohexylamine, n,n-	98-94-2		1	5.23E+04		3.23E+09					
Dimethylethyl Lead	107584-40-7	0.1	1			3.23E+09					
Dimethylformamide	68-12-2		1	1.76E+05	1.06E+05	3.23E+09					
Dimethylhydrazine, 1,1-	57-14-7		1	2.23E+05	1.72E+05	3.23E+09					
Dimethylhydrazine, 1,2-	540-73-8		1	2.31E+05	1.89E+05	3.23E+09	3.55E-02		3.69E-01	3.24E-02	
Dimethylmercury	593-74-8		1	5.88E+03	4.14E+03	3.23E+09					
Dimethylphenethylamine	122-09-8	0.1	1			3.23E+09					
Dimethylphenol, 2,4-	105-67-9	0.1	1			3.23E+09					
Dimethylphenol, 2,6-	576-26-1	0.1	1			3.23E+09					
Dimethylphenol, 3,4-	95-65-8	0.1	1			3.23E+09					
Dimethylphthalate	131-11-3	0.1	1			3.23E+09					
Dimethylterephthalate	120-61-6		1	2.95E+04		3.23E+09					
Dimethylvinylchloride	513-37-1		1	1.39E+03	1.09E+03	3.23E+09	4.34E+02		2.73E+01	2.57E+01	
Dinitro-o-cresol, 4,6-	534-52-1	0.1	1			3.23E+09					
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	0.1	1			3.23E+09					
Dinitroaniline, 3,5-	618-87-1	0.1	1			3.23E+09					
Dinitrobenzene, 1,2-	528-29-0	0.1	1			3.23E+09					
Dinitrobenzene, 1,3-	99-65-0	0.1	1			3.23E+09					
Dinitrobenzene, 1,4-	100-25-4	0.1	1			3.23E+09					
Dinitrophenol, 2,4-	51-28-5	0.1	1			3.23E+09					
Dinitrophenols	25550-58-7	0.1	1			3.23E+09					
Dinitrosopentamethylenetetramine, N,N-	101-25-7	0.1	1			3.23E+09					
Dinitrotoluene Mixture, 2,4/2,6-	NA	0.1	1			3.23E+09	2.87E+01	1.01E+02		2.24E+01	
Dinitrotoluene, 2,4-	121-14-2	0.102	1			3.23E+09	6.31E+01	2.16E+02	9.28E+06	4.88E+01	
Dinitrotoluene, 2,6-	606-20-2	0.099	1			3.23E+09	1.30E+01	4.61E+01		1.02E+01	
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	0.006	1			3.23E+09					
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	0.009	1			3.23E+09					
Dinitrotoluene, Technical grade	25321-14-6	0.1	1			3.23E+09	4.34E+01	1.52E+02		3.38E+01	
Dinoseb	88-85-7	0.1	1			3.23E+09					
Dioxane, 1,4-	123-91-1		1	5.47E+04	1.16E+05	3.23E+09	1.95E+02		2.80E+03	1.83E+02	
Diphenamid	957-51-7	0.1	1			3.23E+09					
Diphenyl Sulfone	127-63-9	0.1	1			3.23E+09					
Diphenylamine	122-39-4	0.1	1			3.23E+09					
Diphenylhydrazine, 1,2-	122-66-7	0.1	1			3.23E+09	2.44E+01	8.55E+01	3.75E+06	1.90E+01	
Dipotassium phosphate	7758-11-4		1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Dimethylcyclohexylamine, n,n-	98-94-2								
Dimethylethyl Lead	107584-40-7								
Dimethylformamide	68-12-2				6.70E+05		4.62E+05	2.74E+05	2.74E+05 sat
Dimethylhydrazine, 1,1-	57-14-7				6.70E+02		3.91E+01	3.69E+01	3.69E+01 nc
Dimethylhydrazine, 1,2-	540-73-8								3.24E-02 ca
Dimethylmercury	593-74-8								
Dimethylphenethylamine	122-09-8								
Dimethylphenol, 2,4-	105-67-9				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Dimethylphenol, 2,6-	576-26-1				4.02E+03	1.41E+04		3.13E+03	3.13E+03 nc
Dimethylphenol, 3,4-	95-65-8				6.70E+03	2.34E+04		5.21E+03	5.21E+03 nc
Dimethylphthalate	131-11-3								
Dimethylterephthalate	120-61-6				6.70E+05			6.70E+05	6.70E+05 max
Dimethylvinylchloride	513-37-1								2.57E+01 ca
Dinitro-o-cresol, 4,6-	534-52-1				5.36E+02	1.88E+03		4.17E+02	4.17E+02 nc
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Dinitroaniline, 3,5-	618-87-1								
Dinitrobenzene, 1,2-	528-29-0				6.70E+02	2.34E+03		5.21E+02	5.21E+02 nc
Dinitrobenzene, 1,3-	99-65-0				6.70E+02	2.34E+03		5.21E+02	5.21E+02 nc
Dinitrobenzene, 1,4-	100-25-4				6.70E+02	2.34E+03		5.21E+02	5.21E+02 nc
Dinitrophenol, 2,4-	51-28-5				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Dinitrophenols	25550-58-7								
Dinitrosopentamethylenetetramine, N,N-	101-25-7								
Dinitrotoluene Mixture, 2,4/2,6-	NA								2.24E+01 ca
Dinitrotoluene, 2,4-	121-14-2				1.34E+04	4.60E+04		1.04E+04	4.88E+01 ca
Dinitrotoluene, 2,6-	606-20-2				2.01E+03	7.11E+03		1.57E+03	1.02E+01 ca
Dinitrotoluene, 2-Amino-4,6-	35572-78-2				1.34E+04	7.82E+05		1.32E+04	1.32E+04 nc
Dinitrotoluene, 4-Amino-2,6-	19406-51-0				1.34E+04	5.21E+05		1.31E+04	1.31E+04 nc
Dinitrotoluene, Technical grade	25321-14-6				6.03E+03	2.11E+04		4.69E+03	3.38E+01 ca
Dinoseb	88-85-7				6.70E+03	2.34E+04		5.21E+03	5.21E+03 nc
Dioxane, 1,4-	123-91-1				2.01E+05		1.44E+05	8.38E+04	1.83E+02 ca
Diphenamid	957-51-7				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Diphenyl Sulfone	127-63-9				5.36E+03	1.88E+04		4.17E+03	4.17E+03 nc
Diphenylamine	122-39-4				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
Diphenylhydrazine, 1,2-	122-66-7								1.90E+01 ca
Dipotassium phosphate	7758-11-4				3.26E+08			3.26E+08	3.26E+08 max

Site-specific
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Diquat	85-00-7	No	No					2.20E-03	U			1
Direct Black 38	1937-37-7	No	No	7.10E+00	U	1.40E-01	U					1
Direct Blue 6	2602-46-2	No	No	7.40E+00	U	1.40E-01	U					1
Direct Brown 95	16071-86-6	No	No	6.70E+00	U	1.40E-01	U					1
Direct Sky Blue	2610-05-1	No	No									1
Disodium phosphate	7558-79-4	No	No					4.86E+01	U			1
Disulfoton	298-04-4	No	No					4.00E-05	U			1
Dithiane, 1,4-	505-29-3	No	Yes					1.00E-02	U			1
Diuron	330-54-1	No	No					2.00E-03	U			1
Dodecyl benzenesulfonic acid	27176-87-0	No	No									1
Dodine	2439-10-3	No	No					4.00E-03	U			1
EPTC	759-94-4	No	Yes					2.50E-02	U			1
Endosulfan	115-29-7	No	Yes					6.00E-03	U			1
Endosulfan I	959-98-8	No	Yes									1
Endosulfan II	33213-65-9	No	Yes									1
Endosulfan Sulfate	1031-07-8	No	No									1
Endothall	145-73-3	No	No					2.00E-02	U			1
Endrin	72-20-8	No	No					3.00E-04	U			1
Endrin aldehyde	7421-93-4	No	No									1
Endrin ketone	53494-70-5	No	No									1
Epichlorohydrin	106-89-8	No	Yes	9.90E-03	U	1.20E-06	U	6.00E-03	U	1.00E-03	U	1
Epoxybutane, 1,2-	106-88-7	No	Yes							2.00E-02	U	1
Ethanol	64-17-5	No	Yes									1
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	No	No									1
Ethephon	16672-87-0	No	No					5.00E-03	U			1
Ethion	563-12-2	No	No					5.00E-04	U			1
Ethoxy Propanol	52125-53-8	No	Yes									1
Ethoxyethanol Acetate, 2-	111-15-9	No	Yes					1.00E-01	U	6.00E-02	U	1
Ethoxyethanol, 2-	110-80-5	No	Yes					9.00E-02	U	2.00E-01	U	1
Ethyl Acetate	141-78-6	No	Yes					9.00E-01	U	7.00E-02	U	1
Ethyl Acrylate	140-88-5	No	Yes	4.80E-02	U			5.00E-03	U	8.00E-03	U	1
Ethyl Chloride	75-00-3	No	Yes							1.00E+01	U	1
Ethyl Ether	60-29-7	No	Yes					2.00E-01	U			1
Ethyl Methacrylate	97-63-2	No	Yes					9.00E-02	U	3.00E-01	U	1
Ethyl methane sulfonate	62-50-0	No	No									1

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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Diquat	85-00-7	0.1	1			3.23E+09					
Direct Black 38	1937-37-7	0.1	1			3.23E+09	2.75E+00	9.63E+00	5.90E+03	2.14E+00	
Direct Blue 6	2602-46-2	0.1	1			3.23E+09	2.64E+00	9.24E+00	5.90E+03	2.05E+00	
Direct Brown 95	16071-86-6	0.1	1			3.23E+09	2.92E+00	1.02E+01	5.90E+03	2.27E+00	
Direct Sky Blue	2610-05-1	0.1	1			3.23E+09					
Disodium phosphate	7558-79-4		1			3.23E+09					
Disulfoton	298-04-4	0.1	1			3.23E+09					
Dithiane, 1,4-	505-29-3		1	6.26E+04		3.23E+09					
Diuron	330-54-1	0.1	1			3.23E+09					
Dodecyl benzenesulfonic acid	27176-87-0	0.1	1			3.23E+09					
Dodine	2439-10-3	0.1	1			3.23E+09					
EPTC	759-94-4		1	1.62E+05		3.23E+09					
Endosulfan	115-29-7		1	5.65E+05		3.23E+09					
Endosulfan I	959-98-8		1	5.65E+05		3.23E+09					
Endosulfan II	33213-65-9		1	5.51E+05		3.23E+09					
Endosulfan Sulfate	1031-07-8	0.1	1			3.23E+09					
Endothall	145-73-3	0.1	1			3.23E+09					
Endrin	72-20-8	0.1	1			3.23E+09					
Endrin aldehyde	7421-93-4	0.1	1			3.23E+09					
Endrin ketone	53494-70-5	0.1	1			3.23E+09					
Epichlorohydrin	106-89-8		1	2.61E+04	1.05E+04	3.23E+09	1.97E+03		5.55E+03	1.46E+03	
Epoxybutane, 1,2-	106-88-7		1	1.06E+04	1.53E+04	3.23E+09					
Ethanol	64-17-5		1	4.34E+04	1.06E+05	3.23E+09					
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	0.1	1			3.23E+09					
Ethephon	16672-87-0	0.1	1			3.23E+09					
Ethion	563-12-2	0.1	1			3.23E+09					
Ethoxy Propanol	52125-53-8		1	1.26E+05	8.55E+04	3.23E+09					
Ethoxyethanol Acetate, 2-	111-15-9		1	8.47E+04	3.14E+04	3.23E+09					
Ethoxyethanol, 2-	110-80-5		1	1.36E+05	1.06E+05	3.23E+09					
Ethyl Acetate	141-78-6		1	1.19E+04	1.08E+04	3.23E+09					
Ethyl Acrylate	140-88-5		1	8.74E+03	2.50E+03	3.23E+09	4.07E+02			4.07E+02	
Ethyl Chloride	75-00-3		1	1.78E+03	2.12E+03	3.23E+09					
Ethyl Ether	60-29-7		1	4.31E+03	1.01E+04	3.23E+09					
Ethyl Methacrylate	97-63-2		1	7.97E+03	1.11E+03	3.23E+09					
Ethyl methane sulfonate	62-50-0	0.1	1			3.23E+09					

Site-specific
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ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Diquat	85-00-7				1.47E+04	5.16E+04		1.15E+04	1.15E+04 nc
Direct Black 38	1937-37-7								2.14E+00 ca
Direct Blue 6	2602-46-2								2.05E+00 ca
Direct Brown 95	16071-86-6								2.27E+00 ca
Direct Sky Blue	2610-05-1								
Disodium phosphate	7558-79-4				3.26E+08			3.26E+08	3.26E+08 max
Disulfoton	298-04-4				2.68E+02	9.38E+02		2.08E+02	2.08E+02 nc
Dithiane, 1,4-	505-29-3				6.70E+04			6.70E+04	6.70E+04 nc
Diuron	330-54-1				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Dodecyl benzenesulfonic acid	27176-87-0								
Dodine	2439-10-3				2.68E+04	9.38E+04		2.08E+04	2.08E+04 nc
EPTC	759-94-4				1.68E+05			1.68E+05	1.68E+05 max
Endosulfan	115-29-7				4.02E+04			4.02E+04	4.02E+04 nc
Endosulfan I	959-98-8								
Endosulfan II	33213-65-9								
Endosulfan Sulfate	1031-07-8								
Endothall	145-73-3				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Endrin	72-20-8				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Endrin aldehyde	7421-93-4								
Endrin ketone	53494-70-5								
Epichlorohydrin	106-89-8				4.02E+04		2.28E+03	2.16E+03	1.46E+03 ca**
Epoxybutane, 1,2-	106-88-7						1.85E+04	1.85E+04	1.85E+04 sat
Ethanol	64-17-5								
Ethanol, 2-(2-methoxyethoxy)-	111-77-3								
Ethephon	16672-87-0				3.35E+04	1.17E+05		2.61E+04	2.61E+04 nc
Ethion	563-12-2				3.35E+03	1.17E+04		2.61E+03	2.61E+03 nc
Ethoxy Propanol	52125-53-8								
Ethoxyethanol Acetate, 2-	111-15-9				6.70E+05		4.45E+05	2.68E+05	2.68E+05 sat
Ethoxyethanol, 2-	110-80-5				6.03E+05		2.38E+06	4.81E+05	4.81E+05 sat
Ethyl Acetate	141-78-6				6.03E+06		7.29E+04	7.20E+04	7.20E+04 sat
Ethyl Acrylate	140-88-5				3.35E+04		6.13E+03	5.18E+03	4.07E+02 ca*
Ethyl Chloride	75-00-3						1.56E+06	1.56E+06	1.56E+06 sat
Ethyl Ether	60-29-7				1.34E+06			1.34E+06	1.34E+06 sat
Ethyl Methacrylate	97-63-2				6.03E+05		2.10E+05	1.55E+05	1.55E+05 sat
Ethyl methane sulfonate	62-50-0								

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	No	No					1.00E-05	U			1
Ethylbenzene	100-41-4	No	Yes	1.10E-02	U	2.50E-06	U	1.00E-01	U	1.00E+00	U	1
Ethylene Cyanohydrin	109-78-4	No	No					7.00E-02	U			1
Ethylene Diamine	107-15-3	No	Yes					9.00E-02	U			1
Ethylene Glycol	107-21-1	No	No					2.00E+00	U	4.00E-01	U	1
Ethylene Glycol Monobutyl Ether	111-76-2	No	No					1.00E-01	U	1.60E+00	U	1
Ethylene Oxide	75-21-8	No	Yes	3.10E-01	U	8.80E-05	U			3.00E-02	U	1
Ethylene Thiourea	96-45-7	No	No	4.50E-02	U	1.30E-05	U	8.00E-05	U			1
Ethyleneimine	151-56-4	No	Yes	6.50E+01	U	1.90E-02	U					1
Ethylphenol, 4-	123-07-9	No	No									1
Ethylphthalyl Ethyl Glycolate	84-72-0	No	No					3.00E+00	U			1
Express	101200-48-0	No	No					8.00E-03	U			1
Famphur	52-85-7	No	No									1
Fenamiphos	22224-92-6	No	No					2.50E-04	U			1
Fenpropathrin	39515-41-8	No	No					2.50E-02	U			1
Fluometuron	2164-17-2	No	No					1.30E-02	U			1
Fluoranthene	206-44-0	No	No					4.00E-02	U			1
Fluorene	86-73-7	No	Yes					4.00E-02	U			1
Fluoride	16984-48-8	No	No					4.00E-02	U	1.30E-02	U	1
Fluorine (Soluble Fluoride)	7782-41-4	No	No					6.00E-02	U	1.30E-02	U	1
Fluorobenzene	462-06-6	No	Yes									1
Fluorobiphenyl, 2-	321-60-8	No	Yes									1
Fluorophenol, 2-	367-12-4	No	Yes									1
Fluridone	59756-60-4	No	No					8.00E-02	U			1
Flurprimidol	56425-91-3	No	No					2.00E-02	U			1
Flutolanil	66332-96-5	No	No					6.00E-02	U			1
Fluvalinate	69409-94-5	No	No					1.00E-02	U			1
Folpet	133-07-3	No	No	3.50E-03	U			1.00E-01	U			1
Fomesafen	72178-02-0	No	No	1.90E-01	U							1
Fonofos	944-22-9	No	No					2.00E-03	U			1
Formaldehyde	50-00-0	No	Yes			1.30E-05	U	2.00E-01	U	9.83E-03	U	1
Formic Acid	64-18-6	No	Yes					9.00E-01	U	3.00E-04	U	1
Fosetyl-AL	39148-24-8	No	No					3.00E+00	U			1
Fuel Oil Number 2	68476-30-2	No	No									1
Furan	110-00-9	No	Yes					1.00E-03	U			1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	0.1	1			3.23E+09					
Ethylbenzene	100-41-4		1	7.82E+03	4.79E+02	3.23E+09	1.78E+03		7.99E+02	5.51E+02	
Ethylene Cyanohydrin	109-78-4	0.1	1			3.23E+09					
Ethylene Diamine	107-15-3		1	2.48E+05	1.89E+05	3.23E+09					
Ethylene Glycol	107-21-1	0.1	1			3.23E+09					
Ethylene Glycol Monobutyl Ether	111-76-2	0.1	1			3.23E+09					
Ethylene Oxide	75-21-8		1	8.40E+03	1.21E+05	3.23E+09	6.31E+01		2.44E+01	1.76E+01	
Ethylene Thiourea	96-45-7	0.1	1			3.23E+09	4.34E+02	1.52E+03	6.35E+07	3.38E+02	
Ethyleneimine	151-56-4		1	3.29E+04	1.54E+05	3.23E+09	3.01E-01		4.43E-01	1.79E-01	
Ethylphenol, 4-	123-07-9	0.1	1			3.23E+09					
Ethylphthalyl Ethyl Glycolate	84-72-0	0.1	1			3.23E+09					
Express	101200-48-0	0.1	1			3.23E+09					
Famphur	52-85-7	0.1	1			3.23E+09					
Fenamiphos	22224-92-6	0.1	1			3.23E+09					
Fenpropathrin	39515-41-8	0.1	1			3.23E+09					
Fluometuron	2164-17-2	0.1	1			3.23E+09					
Fluoranthene	206-44-0	0.13	1			3.23E+09					
Fluorene	86-73-7	0.13	1	3.88E+05		3.23E+09					
Fluoride	16984-48-8		1			3.23E+09					
Fluorine (Soluble Fluoride)	7782-41-4		1			3.23E+09					
Fluorobenzene	462-06-6		1	6.49E+03	2.39E+03	3.23E+09					
Fluorobiphenyl, 2-	321-60-8		1	1.08E+05		3.23E+09					
Fluorophenol, 2-	367-12-4		1	2.93E+05	9.21E+04	3.23E+09					
Fluridone	59756-60-4	0.1	1			3.23E+09					
Flurprimidol	56425-91-3	0.1	1			3.23E+09					
Flutolanil	66332-96-5	0.1	1			3.23E+09					
Fluvalinate	69409-94-5	0.1	1			3.23E+09					
Folpet	133-07-3	0.1	1			3.23E+09	5.58E+03	1.95E+04		4.34E+03	
Fomesafen	72178-02-0	0.1	1			3.23E+09	1.03E+02	3.60E+02		8.00E+01	
Fonofos	944-22-9	0.1	1			3.23E+09					
Formaldehyde	50-00-0		1	1.07E+05	4.24E+04	3.23E+09			2.11E+03	2.11E+03	
Formic Acid	64-18-6		1	1.28E+05	1.06E+05	3.23E+09					
Fosetyl-AL	39148-24-8	0.1	1			3.23E+09					
Fuel Oil Number 2	68476-30-2	0.1	1			3.23E+09					
Furan	110-00-9	0.03	1	3.60E+03	6.22E+03	3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Ethyl-p-nitrophenyl Phosphonate	2104-64-5				6.70E+01	2.34E+02		5.21E+01	5.21E+01 nc
Ethylbenzene	100-41-4				6.70E+05		6.85E+05	3.39E+05	5.51E+02 sat
Ethylene Cyanohydrin	109-78-4				4.69E+05	1.64E+06		3.65E+05	3.65E+05 max
Ethylene Diamine	107-15-3				6.03E+05			6.03E+05	6.03E+05 sat
Ethylene Glycol	107-21-1				1.34E+07	4.69E+07	1.13E+11	1.04E+07	1.04E+07 max
Ethylene Glycol Monobutyl Ether	111-76-2				6.70E+05	2.34E+06	4.53E+11	5.21E+05	5.21E+05 max
Ethylene Oxide	75-21-8						2.21E+04	2.21E+04	1.76E+01 ca
Ethylene Thiourea	96-45-7				5.36E+02	1.88E+03		4.17E+02	3.38E+02 ca**
Ethyleneimine	151-56-4								1.79E-01 ca
Ethylphenol, 4-	123-07-9								
Ethylphthalyl Ethyl Glycolate	84-72-0				2.01E+07	7.03E+07		1.56E+07	1.56E+07 max
Express	101200-48-0				5.36E+04	1.88E+05		4.17E+04	4.17E+04 nc
Famphur	52-85-7								
Fenamiphos	22224-92-6				1.68E+03	5.86E+03		1.30E+03	1.30E+03 nc
Fenpropathrin	39515-41-8				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
Fluometuron	2164-17-2				8.71E+04	3.05E+05		6.78E+04	6.78E+04 nc
Fluoranthene	206-44-0				2.68E+05	7.22E+05		1.95E+05	1.95E+05 max
Fluorene	86-73-7				2.68E+05	7.22E+05		1.95E+05	1.95E+05 max
Fluoride	16984-48-8				2.68E+05		3.68E+09	2.68E+05	2.68E+05 max
Fluorine (Soluble Fluoride)	7782-41-4				4.02E+05		3.68E+09	4.02E+05	4.02E+05 max
Fluorobenzene	462-06-6								
Fluorobiphenyl, 2-	321-60-8								
Fluorophenol, 2-	367-12-4								
Fluridone	59756-60-4				5.36E+05	1.88E+06		4.17E+05	4.17E+05 max
Flurprimidol	56425-91-3				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Flutolanil	66332-96-5				4.02E+05	1.41E+06		3.13E+05	3.13E+05 max
Fluvalinate	69409-94-5				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Folpet	133-07-3				6.70E+05	2.34E+06		5.21E+05	4.34E+03 ca
Fomesafen	72178-02-0								8.00E+01 ca
Fonofos	944-22-9				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Formaldehyde	50-00-0				1.34E+06		9.23E+04	8.64E+04	2.11E+03 ca*
Formic Acid	64-18-6				6.03E+06		3.37E+03	3.37E+03	3.37E+03 nc
Fosetyl-AL	39148-24-8				2.01E+07	7.03E+07		1.56E+07	1.56E+07 max
Fuel Oil Number 2	68476-30-2								
Furan	110-00-9				6.70E+03	7.82E+04		6.17E+03	6.17E+03 nc

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Furazolidone	67-45-8	No	No	3.80E+00	U							1
Furfural	98-01-1	No	Yes					3.00E-03	U	5.00E-02	U	1
Furium	531-82-8	No	No	1.50E+00	U	4.30E-04	U					1
Furmecyclox	60568-05-0	No	No	3.00E-02	U	8.60E-06	U					1
Gadolinium	7440-54-2	No	No									1
Gallium	7440-55-3	No	No									1
Germanium	7440-56-4	No	No									1
Glufosinate, Ammonium	77182-82-2	No	No					4.00E-04	U			1
Glutaraldehyde	111-30-8	No	No							8.00E-05	U	1
Glycerol	56-81-5	No	No									1
Glycidyl	765-34-4	No	Yes					4.00E-04	U	1.00E-03	U	1
Glyphosate	1071-83-6	No	No					1.00E-01	U			1
Goal	42874-03-3	No	No					3.00E-03	U			1
Guanidine	113-00-8	No	Yes					1.00E-02	U			1
Guanidine Chloride	50-01-1	No	No					2.00E-02	U			1
Guanidine Nitrate	506-93-4	No	No									1
Guthion	86-50-0	No	No					3.00E-03	U	1.00E-02	U	1
HCDD, 1,2,3,4,6,7,8,-	35822-46-9	No	Yes	1.30E+03	U	3.80E-01	U	1.00E-06	U	4.00E-06	U	1
Haloacetic acids	NA	No	No									1
Haloxyfop, Methyl	69806-40-2	No	No					5.00E-05	U			1
Harmony	79277-27-3	No	No					1.30E-02	U			1
Heptachlor	76-44-8	No	Yes	4.50E+00	U	1.30E-03	U	5.00E-04	U			1
Heptachlor Epoxide	1024-57-3	No	Yes	9.10E+00	U	2.60E-03	U	1.30E-05	U			1
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	No	Yes	1.30E+03	U	3.80E-01	U	7.00E-08	U	4.00E-06	U	1
Heptanal, n-	111-71-7	No	Yes									1
Heptane, N-	142-82-5	No	Yes									1
Heptanol, n-	111-70-6	No	Yes									1
Hexabromobenzene	87-82-1	No	Yes					2.00E-03	U			1
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	No	No					2.00E-04	U			1
Hexachlorobenzene	118-74-1	No	Yes	1.60E+00	U	4.60E-04	U	8.00E-04	U			1
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1

Site-specific
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Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Furazolidone	67-45-8	0.1	1			3.23E+09	5.14E+00	1.80E+01		4.00E+00	
Furfural	98-01-1		1	6.71E+04	1.01E+04	3.23E+09					
Furium	531-82-8	0.1	1			3.23E+09	1.30E+01	4.56E+01	1.92E+06	1.01E+01	
Furmecyclox	60568-05-0	0.1	1			3.23E+09	6.52E+02	2.28E+03	9.61E+07	5.07E+02	
Gadolinium	7440-54-2		1			3.23E+09					
Gallium	7440-55-3		1			3.23E+09					
Germanium	7440-56-4		1			3.23E+09					
Glufosinate, Ammonium	77182-82-2	0.1	1			3.23E+09					
Glutaraldehyde	111-30-8	0.1	1			3.23E+09					
Glycerol	56-81-5	0.1	1			3.23E+09					
Glycidyl	765-34-4		1	1.01E+05	1.06E+05	3.23E+09					
Glyphosate	1071-83-6	0.1	1			3.23E+09					
Goal	42874-03-3	0.1	1			3.23E+09					
Guanidine	113-00-8		1	2.00E+05		3.23E+09					
Guanidine Chloride	50-01-1	0.1	1			3.23E+09					
Guanidine Nitrate	506-93-4	0.1	1			3.23E+09					
Guthion	86-50-0	0.1	1			3.23E+09					
HCDD, 1,2,3,4,6,7,8,-	35822-46-9		1	4.52E+06		3.23E+09	1.50E-02		3.04E+00	1.50E-02	
Haloacetic acids	NA	0.1	1			3.23E+09					
Haloxyfop, Methyl	69806-40-2	0.1	1			3.23E+09					
Harmony	79277-27-3	0.1	1			3.23E+09					
Heptachlor	76-44-8		1	6.62E+05		3.23E+09	4.34E+00		1.30E+02	4.20E+00	
Heptachlor Epoxide	1024-57-3		1	1.16E+06		3.23E+09	2.15E+00		1.14E+02	2.11E+00	
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	0.14	1	2.81E+06		3.23E+09	5.01E+00	1.25E+01	6.29E+02	3.56E+00	
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	0.03	1	1.15E+07		3.23E+09	1.50E-02	1.75E-01	7.74E+00	1.38E-02	
Heptanal, n-	111-71-7		1	1.08E+04	2.09E+02	3.23E+09					
Heptane, N-	142-82-5		1	1.23E+03	5.79E+01	3.23E+09					
Heptanol, n-	111-70-6		1	4.73E+04	3.78E+02	3.23E+09					
Hexabromobenzene	87-82-1		1	5.24E+05		3.23E+09					
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	0.1	1			3.23E+09					
Hexachlorobenzene	118-74-1		1	9.37E+04		3.23E+09	1.22E+01		5.21E+01	9.90E+00	
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	0.14	1	1.98E+06		3.23E+09	5.01E+00	1.25E+01	4.43E+02	3.55E+00	
Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	0.14	1	2.00E+06		3.23E+09	5.01E+00	1.25E+01	4.48E+02	3.55E+00	
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	0.14	1	2.13E+06		3.23E+09	5.01E+00	1.25E+01	4.77E+02	3.55E+00	

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Furazolidone	67-45-8								4.00E+00 ca
Furfural	98-01-1				2.01E+04		2.94E+05	1.88E+04	1.88E+04 sat
Furium	531-82-8								1.01E+01 ca
Furmecyclox	60568-05-0								5.07E+02 ca
Gadolinium	7440-54-2								
Gallium	7440-55-3								
Germanium	7440-56-4								
Glufosinate, Ammonium	77182-82-2				2.68E+03	9.38E+03		2.08E+03	2.08E+03 nc
Glutaraldehyde	111-30-8						2.27E+07	2.27E+07	2.27E+07 max
Glycerol	56-81-5								
Glycidyl	765-34-4				2.68E+03		8.88E+03	2.06E+03	2.06E+03 nc
Glyphosate	1071-83-6				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Goal	42874-03-3				2.01E+04	7.03E+04		1.56E+04	1.56E+04 nc
Guanidine	113-00-8				6.70E+04			6.70E+04	6.70E+04 nc
Guanidine Chloride	50-01-1				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Guanidine Nitrate	506-93-4								
Guthion	86-50-0				2.01E+04	7.03E+04	2.83E+09	1.56E+04	1.56E+04 nc
HCDD, 1,2,3,4,6,7,8,-	35822-46-9				6.70E+00		1.58E+03	6.67E+00	1.50E-02 ca
Haloacetic acids	NA								
Haloxyfop, Methyl	69806-40-2				3.35E+02	1.17E+03		2.61E+02	2.61E+02 nc
Harmony	79277-27-3				8.71E+04	3.05E+05		6.78E+04	6.78E+04 nc
Heptachlor	76-44-8				3.35E+03			3.35E+03	4.20E+00 ca
Heptachlor Epoxide	1024-57-3				8.71E+01			8.71E+01	2.11E+00 ca*
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9				1.56E+02	3.90E+02	3.27E+05	1.11E+02	3.56E+00 ca*
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4				4.69E-01	5.47E+00	4.03E+03	4.32E-01	1.38E-02 ca*
Heptanal, n-	111-71-7								
Heptane, N-	142-82-5								
Heptanol, n-	111-70-6								
Hexabromobenzene	87-82-1				1.34E+04			1.34E+04	1.34E+04 nc
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2				1.34E+03	4.69E+03		1.04E+03	1.04E+03 nc
Hexachlorobenzene	118-74-1				5.36E+03			5.36E+03	9.90E+00 ca
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6				1.56E+02	3.90E+02	2.30E+05	1.11E+02	3.55E+00 ca*
Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7				1.56E+02	3.90E+02	2.33E+05	1.11E+02	3.55E+00 ca*
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4				1.56E+02	3.90E+02	2.48E+05	1.11E+02	3.55E+00 ca*

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	No	Yes	3.90E+03	U	1.14E+00	U	2.33E-08	U	1.33E-06	U	1
Hexachlorobutadiene	87-68-3	No	Yes	7.80E-02	U	2.20E-05	U	1.00E-03	U			1
Hexachlorocyclohexane, Alpha-	319-84-6	No	No	6.30E+00	U	1.80E-03	U	8.00E-03	U			1
Hexachlorocyclohexane, Beta-	319-85-7	No	No	1.80E+00	U	5.30E-04	U					1
Hexachlorocyclohexane, Delta-	319-86-8	No	No									1
Hexachlorocyclohexane, Epsilon	6108-10-7	No	No									1
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	No	No	1.10E+00	U	3.10E-04	U	3.00E-04	U			1
Hexachlorocyclohexane, Technical	608-73-1	No	No	1.80E+00	U	5.10E-04	U					1
Hexachlorocyclopentadiene	77-47-4	No	Yes					6.00E-03	U	2.00E-04	U	1
Hexachlorodibenzo-p-dioxin	34465-46-8	No	No	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Hexachlorodibenzo-p-dioxin, Mixture	NA	No	No	6.20E+03	U	1.30E+00	U					1
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Hexachloroethane	67-72-1	No	Yes	4.00E-02	U	1.10E-05	U	7.00E-04	U	3.00E-02	U	1
Hexachlorophene	70-30-4	No	No					3.00E-04	U			1
Hexachloropropene	1888-71-7	No	Yes									1
Hexadecanoic Acid	57-10-3	No	Yes									1
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	No	No	1.10E-01	U			3.00E-03	U			1
Hexamethylene Diisocyanate, 1,6-	822-06-0	No	Yes							1.00E-05	U	1
Hexamethylphosphoramide	680-31-9	No	No					4.00E-04	U			1
Hexane, N-	110-54-3	No	Yes					6.00E-02	U	7.00E-01	U	1
Hexanedioic Acid	124-04-9	No	No					2.00E+00	U			1
Hexanol, n-	111-27-3	No	Yes									1
Hexanone, 2-	591-78-6	No	Yes					5.00E-03	U	3.00E-02	U	1
Hexazinone	51235-04-2	No	No					3.30E-02	U			1
HpCDD, 2,3,7,8-	37871-00-4	No	Yes	1.30E+03	U	3.80E-01	U	7.00E-08	U	4.00E-06	U	1
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	No	Yes	1.30E+03	U	3.80E-01	U	7.00E-08	U	4.00E-06	U	1
HpCDF, 2,3,7,8-	38998-75-3	No	Yes	1.30E+03	U	3.80E-01	U	7.00E-08	U	4.00E-06	U	1
HxCDD, 1,2,3,6,7,8-	57653-85-7	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDD, 1,2,3,7,8,9-	19408-74-3	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDF, 1,2,3,6,7,8-	57117-44-9	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDF, 1,2,3,7,8,9-	72918-21-9	No	No	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDF, 2,3,4,6,7,8-	60851-34-5	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
HxCDF, 2,3,7,8-	55684-94-1	No	No	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Hydrazine	302-01-2	No	Yes	3.00E+00	U	4.90E-03	U			3.00E-05	U	1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	0.14	1	1.98E+06		3.23E+09	5.01E-03	1.25E-02	4.43E-01	3.55E-03	
Hexachlorobutadiene	87-68-3		1	1.49E+04	1.68E+01	3.23E+09	2.51E+02		1.73E+02	1.02E+02	
Hexachlorocyclohexane, Alpha-	319-84-6	0.1	1			3.23E+09	3.10E+00	1.09E+01	4.59E+05	2.41E+00	
Hexachlorocyclohexane, Beta-	319-85-7	0.1	1			3.23E+09	1.09E+01	3.80E+01	1.56E+06	8.45E+00	
Hexachlorocyclohexane, Delta-	319-86-8	0.1	1			3.23E+09					
Hexachlorocyclohexane, Epsilon	6108-10-7	0.1	1			3.23E+09					
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	0.04	1			3.23E+09	1.78E+01	1.55E+02	2.66E+06	1.59E+01	
Hexachlorocyclohexane, Technical	608-73-1	0.1	1			3.23E+09	1.09E+01	3.80E+01	1.62E+06	8.45E+00	
Hexachlorocyclopentadiene	77-47-4		1	1.18E+04	1.57E+01	3.23E+09					
Hexachlorodibenzo-p-dioxin	34465-46-8	0.03	1			3.23E+09	1.50E-03	1.75E-02	2.17E+02	1.38E-03	
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	0.03	1	6.59E+06		3.23E+09	1.50E-03	1.75E-02	4.42E-01	1.38E-03	
Hexachlorodibenzo-p-dioxin, Mixture	NA	0.03	1			3.23E+09	3.15E-03	3.68E-02	6.35E+02	2.90E-03	
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	0.03	1	5.38E+06		3.23E+09	1.50E-03	1.75E-02	3.61E-01	1.38E-03	
Hexachloroethane	67-72-1		1	1.10E+04		3.23E+09	4.89E+02		2.57E+02	1.68E+02	
Hexachlorophene	70-30-4	0.1	1			3.23E+09					
Hexachloropropene	1888-71-7		1	1.48E+04	4.37E+01	3.23E+09					
Hexadecanoic Acid	57-10-3		1	7.66E+05		3.23E+09					
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	0.015	1			3.23E+09	1.78E+02	4.15E+03		1.70E+02	
Hexamethylene Diisocyanate, 1,6-	822-06-0		1	4.15E+05	5.19E+03	3.23E+09					
Hexamethylphosphoramide	680-31-9	0.1	1			3.23E+09					
Hexane, N-	110-54-3		1	1.14E+03	1.41E+02	3.23E+09					
Hexanedioic Acid	124-04-9	0.1	1			3.23E+09					
Hexanol, n-	111-27-3		1	4.03E+04	9.98E+02	3.23E+09					
Hexanone, 2-	591-78-6		1	1.83E+04	3.28E+03	3.23E+09					
Hexazinone	51235-04-2	0.1	1			3.23E+09					
HpCDD, 2,3,7,8-	37871-00-4	0.03	1	3.36E+06		3.23E+09	1.50E-02	1.75E-01	2.26E+00	1.38E-02	
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	0.03	1	1.15E+07		3.23E+09	1.50E-02	1.75E-01	7.74E+00	1.38E-02	
HpCDF, 2,3,7,8-	38998-75-3	0.03	1	1.15E+07		3.23E+09	1.50E-02	1.75E-01	7.74E+00	1.38E-02	
HxCDD, 1,2,3,6,7,8-	57653-85-7	0.03	1	6.59E+06		3.23E+09	1.50E-03	1.75E-02	4.42E-01	1.38E-03	
HxCDD, 1,2,3,7,8,9-	19408-74-3	0.03	1	6.59E+06		3.23E+09	1.50E-03	1.75E-02	4.42E-01	1.38E-03	
HxCDF, 1,2,3,6,7,8-	57117-44-9	0.03	1	5.38E+06		3.23E+09	1.50E-03	1.75E-02	3.61E-01	1.38E-03	
HxCDF, 1,2,3,7,8,9-	72918-21-9	0.03	1			3.23E+09	1.50E-03	1.75E-02	2.17E+02	1.38E-03	
HxCDF, 2,3,4,6,7,8-	60851-34-5	0.03	1	5.38E+06		3.23E+09	1.50E-03	1.75E-02	3.61E-01	1.38E-03	
HxCDF, 2,3,7,8-	55684-94-1	0.03	1			3.23E+09	1.50E-03	1.75E-02	2.17E+02	1.38E-03	
Hydrazine	302-01-2		1			3.23E+09	6.52E+00		1.69E+05	6.52E+00	

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6				1.56E-01	3.90E-01	2.30E+02	1.11E-01	3.55E-03 ca*
Hexachlorobutadiene	87-68-3				6.70E+03			6.70E+03	1.02E+02 sat
Hexachlorocyclohexane, Alpha-	319-84-6				5.36E+04	1.88E+05		4.17E+04	2.41E+00 ca
Hexachlorocyclohexane, Beta-	319-85-7								8.45E+00 ca
Hexachlorocyclohexane, Delta-	319-86-8								
Hexachlorocyclohexane, Epsilon	6108-10-7								
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9				2.01E+03	1.76E+04		1.80E+03	1.59E+01 ca
Hexachlorocyclohexane, Technical	608-73-1								8.45E+00 ca
Hexachlorocyclopentadiene	77-47-4				4.02E+04		2.06E+02	2.05E+02	2.05E+02 sat
Hexachlorodibenzo-p-dioxin	34465-46-8				4.69E-02	5.47E-01	1.13E+05	4.32E-02	1.38E-03 ca*
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6				4.69E-02	5.47E-01	2.31E+02	4.32E-02	1.38E-03 ca*
Hexachlorodibenzo-p-dioxin, Mixture	NA								2.90E-03 ca
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9				4.69E-02	5.47E-01	1.88E+02	4.32E-02	1.38E-03 ca*
Hexachloroethane	67-72-1				4.69E+03		2.90E+04	4.04E+03	1.68E+02 ca*
Hexachlorophene	70-30-4				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Hexachloropropene	1888-71-7								
Hexadecanoic Acid	57-10-3								
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4				2.01E+04	4.69E+05		1.93E+04	1.70E+02 ca
Hexamethylene Diisocyanate, 1,6-	822-06-0						3.63E+02	3.63E+02	3.63E+02 nc
Hexamethylphosphoramide	680-31-9				2.68E+03	9.38E+03		2.08E+03	2.08E+03 nc
Hexane, N-	110-54-3				4.02E+05		7.01E+04	5.97E+04	5.97E+04 sat
Hexanedioic Acid	124-04-9				1.34E+07	4.69E+07		1.04E+07	1.04E+07 max
Hexanol, n-	111-27-3								
Hexanone, 2-	591-78-6				3.35E+04		4.82E+04	1.98E+04	1.98E+04 sat
Hexazinone	51235-04-2				2.21E+05	7.74E+05		1.72E+05	1.72E+05 max
HpCDD, 2,3,7,8-	37871-00-4				4.69E-01	5.47E+00	1.18E+03	4.32E-01	1.38E-02 ca*
HpCDF, 1,2,3,4,7,8,9-	55673-89-7				4.69E-01	5.47E+00	4.03E+03	4.32E-01	1.38E-02 ca*
HpCDF, 2,3,7,8-	38998-75-3				4.69E-01	5.47E+00	4.03E+03	4.32E-01	1.38E-02 ca*
HxCDD, 1,2,3,6,7,8-	57653-85-7				4.69E-02	5.47E-01	2.31E+02	4.32E-02	1.38E-03 ca*
HxCDD, 1,2,3,7,8,9-	19408-74-3				4.69E-02	5.47E-01	2.31E+02	4.32E-02	1.38E-03 ca*
HxCDF, 1,2,3,6,7,8-	57117-44-9				4.69E-02	5.47E-01	1.88E+02	4.32E-02	1.38E-03 ca*
HxCDF, 1,2,3,7,8,9-	72918-21-9				4.69E-02	5.47E-01	1.13E+05	4.32E-02	1.38E-03 ca*
HxCDF, 2,3,4,6,7,8-	60851-34-5				4.69E-02	5.47E-01	1.88E+02	4.32E-02	1.38E-03 ca*
HxCDF, 2,3,7,8-	55684-94-1				4.69E-02	5.47E-01	1.13E+05	4.32E-02	1.38E-03 ca*
Hydrazine	302-01-2						8.50E+06	8.50E+06	6.52E+00 ca

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Hydrazine Sulfate	10034-93-2	No	No	3.00E+00	U	4.90E-03	U					1
Hydrogen Chloride	7647-01-0	No	Yes							2.00E-02	U	1
Hydrogen Cyanide	74-90-8	No	Yes					6.00E-04	U	8.00E-04	U	1
Hydrogen Fluoride	7664-39-3	No	Yes					4.00E-02	U	1.40E-02	U	1
Hydrogen Selenide	77830-70-5	No	No									1
Hydrogen Sulfate	12143-45-2	No	No									1
Hydrogen Sulfide	7783-06-4	No	Yes							2.00E-03	U	1
Hydroquinone	123-31-9	No	No	6.00E-02	U			4.00E-02	U			1
Imazalil	35554-44-0	No	No					1.30E-02	U			1
Imazaquin	81335-37-7	No	No					2.50E-01	U			1
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	No	7.30E-01	U	1.10E-04	U					1
Indium	7440-74-6	No	No									1
Iodide	20461-54-5	No	No									1
Iodine	7553-56-2	No	No					1.00E-02	U			1
Iodomethane	74-88-4	No	Yes									1
Iodopropynyl Butylcarbamate (IPBC)	55406-53-6	No	No									1
Iprodione	36734-19-7	No	No					4.00E-02	U			1
Iron	7439-89-6	No	No					7.00E-01	U			1
Iron Sulfide	11126-12-8	No	No									1
Isobutyl Alcohol	78-83-1	No	Yes					3.00E-01	U			1
Isodrin	465-73-6	No	Yes									1
Isophorone	78-59-1	No	No	9.50E-04	U			2.00E-01	U	2.00E+00	U	1
Isopropalin	33820-53-0	No	Yes					1.50E-02	U			1
Isopropanol	67-63-0	No	Yes					2.00E+00	U	2.00E-01	U	1
Isopropyl Methyl Phosphonic Acid	1832-54-8	No	No					1.00E-01	U			1
Isopropyltoluene, p-	99-87-6	No	Yes									1
Isosafrole	120-58-1	No	Yes									1
Isoxaben	82558-50-7	No	No					5.00E-02	U			1
JP-4	50815-00-4	No	Yes									1
JP-5/JP-8	8002-20-6	No	Yes									1
JP-7	NA	No	Yes							3.00E-01	U	1
Kerb	23950-58-5	No	No					7.50E-02	U			1
Kerosene	8008-20-6	No	Yes									1
Lactofen	77501-63-4	No	No					2.00E-03	U			1
Lactonitrile	78-97-7	No	No									1

Site-specific
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Hydrazine Sulfate	10034-93-2		1			3.23E+09	6.52E+00		1.69E+05	6.52E+00	
Hydrogen Chloride	7647-01-0		1			3.23E+09					
Hydrogen Cyanide	74-90-8		1	7.20E+04	1.00E+07	3.23E+09					
Hydrogen Fluoride	7664-39-3		1			3.23E+09					
Hydrogen Selenide	77830-70-5		1			3.23E+09					
Hydrogen Sulfate	12143-45-2		1			3.23E+09					
Hydrogen Sulfide	7783-06-4		1			3.23E+09					
Hydroquinone	123-31-9	0.1	1			3.23E+09	3.26E+02	1.14E+03		2.53E+02	
Imazalil	35554-44-0	0.1	1			3.23E+09					
Imazaquin	81335-37-7	0.1	1			3.23E+09					
Indeno[1,2,3-cd]pyrene	193-39-5	0.13	1			3.23E+09	9.10E+00	4.74E+01	4.10E+06	7.63E+00	
Indium	7440-74-6		1			3.23E+09					
Iodide	20461-54-5		1			3.23E+09					
Iodine	7553-56-2		1			3.23E+09					
Iodomethane	74-88-4		1	2.55E+03	3.03E+03	3.23E+09					
Iodopropynyl Butylcarbamate (IPBC)	55406-53-6	0.1	1			3.23E+09					
Iprodione	36734-19-7	0.1	1			3.23E+09					
Iron	7439-89-6		1			3.23E+09					
Iron Sulfide	11126-12-8		1			3.23E+09					
Isobutyl Alcohol	78-83-1		1	3.88E+04	1.00E+04	3.23E+09					
Isodrin	465-73-6		1	2.32E+06		3.23E+09					
Isophorone	78-59-1	0.1	1			3.23E+09	2.06E+04	7.20E+04		1.60E+04	
Isopropalin	33820-53-0		1	5.78E+05		3.23E+09					
Isopropanol	67-63-0		1	3.83E+04	1.09E+05	3.23E+09					
Isopropyl Methyl Phosphonic Acid	1832-54-8	0.1	1			3.23E+09					
Isopropyltoluene, p-	99-87-6		1	1.18E+04	1.62E+02	3.23E+09					
Isosafrole	120-58-1		1	3.42E+03	2.04E+01	3.23E+09					
Isoxaben	82558-50-7	0.1	1			3.23E+09					
JP-4	50815-00-4		1			3.23E+09					
JP-5/JP-8	8002-20-6		1			3.23E+09					
JP-7	NA		1			3.23E+09					
Kerb	23950-58-5	0.1	1			3.23E+09					
Kerosene	8008-20-6		1			3.23E+09					
Lactofen	77501-63-4	0.1	1			3.23E+09					
Lactonitrile	78-97-7	0.1	1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Hydrazine Sulfate	10034-93-2								6.52E+00 ca
Hydrogen Chloride	7647-01-0						5.66E+09	5.66E+09	5.66E+09 max
Hydrogen Cyanide	74-90-8				4.02E+03		5.05E+03	2.24E+03	2.24E+03 nc
Hydrogen Fluoride	7664-39-3				2.68E+05		3.96E+09	2.68E+05	2.68E+05 max
Hydrogen Selenide	77830-70-5								
Hydrogen Sulfate	12143-45-2								
Hydrogen Sulfide	7783-06-4						5.66E+08	5.66E+08	5.66E+08 max
Hydroquinone	123-31-9				2.68E+05	9.38E+05		2.08E+05	2.53E+02 ca
Imazalil	35554-44-0				8.71E+04	3.05E+05		6.78E+04	6.78E+04 nc
Imazaquin	81335-37-7				1.68E+06	5.86E+06		1.30E+06	1.30E+06 max
Indeno[1,2,3-cd]pyrene	193-39-5								7.63E+00 ca
Indium	7440-74-6								
Iodide	20461-54-5								
Iodine	7553-56-2				6.70E+04			6.70E+04	6.70E+04 nc
Iodomethane	74-88-4								
Iodopropynyl Butylcarbamate (IPBC)	55406-53-6								
Iprodione	36734-19-7				2.68E+05	9.38E+05		2.08E+05	2.08E+05 max
Iron	7439-89-6				4.69E+06			4.69E+06	4.69E+06 max
Iron Sulfide	11126-12-8								
Isobutyl Alcohol	78-83-1				2.01E+06			2.01E+06	2.01E+06 sat
Isodrin	465-73-6								
Isophorone	78-59-1				1.34E+06	4.69E+06	5.66E+11	1.04E+06	1.60E+04 ca*
Isopropalin	33820-53-0				1.01E+05			1.01E+05	1.01E+05 max
Isopropanol	67-63-0				1.34E+07		6.70E+05	6.38E+05	6.38E+05 sat
Isopropyl Methyl Phosphonic Acid	1832-54-8				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Isopropyltoluene, p-	99-87-6								
Isosafrole	120-58-1								
Isoxaben	82558-50-7				3.35E+05	1.17E+06		2.61E+05	2.61E+05 max
JP-4	50815-00-4								
JP-5/JP-8	8002-20-6								
JP-7	NA						8.50E+10	8.50E+10	8.50E+10 max
Kerb	23950-58-5				5.03E+05	1.76E+06		3.91E+05	3.91E+05 max
Kerosene	8008-20-6								
Lactofen	77501-63-4				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Lactonitrile	78-97-7								

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Lanthanum	7439-91-0	No	No									1
Lead Alkyls	NA	No	No									1
Lead Chromate	7758-97-6	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Lead Phosphate	7446-27-7	No	No	8.50E-03	U	1.20E-05	U					1
Lead acetate	301-04-2	No	No	2.80E-01	U	8.00E-05	U					1
Lead and Compounds	7439-92-1	No	No									1
Lead subacetate	1335-32-6	No	No	8.50E-03	U	1.20E-05	U					1
Linuron	330-55-2	No	No					2.00E-03	U			1
Lithium	7439-93-2	No	No					2.00E-03	U			1
Lithium Perchlorate	7791-03-9	No	No					7.00E-04	U			1
Londax	83055-99-6	No	No					2.00E-01	U			1
Lutetium	7439-94-3	No	No									1
MCPA	94-74-6	No	No					5.00E-04	U			1
MCPB	94-81-5	No	No					1.00E-02	U			1
MCPP	93-65-2	No	No					1.00E-03	U			1
Magnesium	7439-95-4	No	No									1
Magnesium Chlorate	10326-21-3	No	No									1
Malathion	121-75-5	No	No					2.00E-02	U			1
Maleic Anhydride	108-31-6	No	No					1.00E-01	U	7.00E-04	U	1
Maleic Hydrazide	123-33-1	No	No					5.00E-01	U			1
Malononitrile	109-77-3	No	No					1.00E-04	U			1
Mancozeb	8018-01-7	No	No					3.00E-02	U			1
Maneb	12427-38-2	No	No					5.00E-03	U			1
Manganese (Non-diet)	7439-96-5	No	No					2.40E-02	U	5.00E-05	U	0.04
Mechlorethamine	51-75-2	No	No									1
Mephosfolan	950-10-7	No	No					9.00E-05	U			1
Mepiquat Chloride	24307-26-4	No	No					3.00E-02	U			1
Mercuric Chloride	7487-94-7	No	No					3.00E-04	U	3.00E-04	U	0.07
Mercury (elemental)	7439-97-6	No	Yes							3.00E-04	U	1
Merphos	150-50-5	No	Yes					3.00E-05	U			1
Merphos Oxide	78-48-8	No	No					3.00E-05	U			1
Metalaxyl	57837-19-1	No	No					6.00E-02	U			1
Methacrylonitrile	126-98-7	No	Yes					1.00E-04	U	3.00E-02	U	1
Methamidophos	10265-92-6	No	No					5.00E-05	U			1
Methanol	67-56-1	No	Yes					2.00E+00	U	2.00E+01	U	1

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Lanthanum	7439-91-0		1			3.23E+09					
Lead Alkyls	NA	0.1	1			3.23E+09					
Lead Chromate	7758-97-6		1			3.23E+09	1.33E+01		3.00E+03	1.32E+01	
Lead Phosphate	7446-27-7		1			3.23E+09	2.30E+03		6.88E+07	2.30E+03	
Lead acetate	301-04-2	0.1	1			3.23E+09	6.98E+01	2.44E+02	1.03E+07	5.43E+01	
Lead and Compounds	7439-92-1		1			3.23E+09					
Lead subacetate	1335-32-6	0.1	1			3.23E+09	2.30E+03	8.05E+03	6.88E+07	1.79E+03	
Linuron	330-55-2	0.1	1			3.23E+09					
Lithium	7439-93-2		1			3.23E+09					
Lithium Perchlorate	7791-03-9		1			3.23E+09					
Londax	83055-99-6	0.1	1			3.23E+09					
Lutetium	7439-94-3		1			3.23E+09					
MCPA	94-74-6	0.1	1			3.23E+09					
MCPB	94-81-5	0.1	1			3.23E+09					
MCPP	93-65-2	0.1	1			3.23E+09					
Magnesium	7439-95-4		1			3.23E+09					
Magnesium Chlorate	10326-21-3		1			3.23E+09					
Malathion	121-75-5	0.1	1			3.23E+09					
Maleic Anhydride	108-31-6	0.1	1			3.23E+09					
Maleic Hydrazide	123-33-1	0.1	1			3.23E+09					
Malononitrile	109-77-3	0.1	1			3.23E+09					
Mancozeb	8018-01-7	0.1	1			3.23E+09					
Maneb	12427-38-2	0.1	1			3.23E+09					
Manganese (Non-diet)	7439-96-5		1			3.23E+09					
Mechlorethamine	51-75-2	0.1	1			3.23E+09					
Mephosfolan	950-10-7	0.1	1			3.23E+09					
Mepiquat Chloride	24307-26-4	0.1	1			3.23E+09					
Mercuric Chloride	7487-94-7		1			3.23E+09					
Mercury (elemental)	7439-97-6		1	4.16E+04	3.13E+00	3.23E+09					
Merphos	150-50-5		1	2.67E+06		3.23E+09					
Merphos Oxide	78-48-8	0.1	1			3.23E+09					
Metalaxyl	57837-19-1	0.1	1			3.23E+09					
Methacrylonitrile	126-98-7		1	9.38E+03	4.59E+03	3.23E+09					
Methamidophos	10265-92-6	0.1	1			3.23E+09					
Methanol	67-56-1		1	4.01E+04	1.06E+05	3.23E+09					

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Lanthanum	7439-91-0								
Lead Alkyls	NA								
Lead Chromate	7758-97-6				1.34E+05		5.66E+07	1.34E+05	1.32E+01 ca
Lead Phosphate	7446-27-7								2.30E+03 ca
Lead acetate	301-04-2								5.43E+01 ca
Lead and Compounds	7439-92-1			4.00E+02					4.00E+02 nc
Lead subacetate	1335-32-6								1.79E+03 ca
Linuron	330-55-2				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Lithium	7439-93-2				1.34E+04			1.34E+04	1.34E+04 nc
Lithium Perchlorate	7791-03-9				4.69E+03			4.69E+03	4.69E+03 nc
Londax	83055-99-6				1.34E+06	4.69E+06		1.04E+06	1.04E+06 max
Lutetium	7439-94-3								
MCPA	94-74-6				3.35E+03	1.17E+04		2.61E+03	2.61E+03 nc
MCPB	94-81-5				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
MCPP	93-65-2				6.70E+03	2.34E+04		5.21E+03	5.21E+03 nc
Magnesium	7439-95-4								
Magnesium Chlorate	10326-21-3								
Malathion	121-75-5				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Maleic Anhydride	108-31-6				6.70E+05	2.34E+06	1.98E+08	5.20E+05	5.20E+05 max
Maleic Hydrazide	123-33-1				3.35E+06	1.17E+07		2.61E+06	2.61E+06 max
Malononitrile	109-77-3				6.70E+02	2.34E+03		5.21E+02	5.21E+02 nc
Mancozeb	8018-01-7				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Maneb	12427-38-2				3.35E+04	1.17E+05		2.61E+04	2.61E+04 nc
Manganese (Non-diet)	7439-96-5				1.61E+05		1.42E+07	1.59E+05	1.59E+05 max
Mechlorethamine	51-75-2								
Mephosfolan	950-10-7				6.03E+02	2.11E+03		4.69E+02	4.69E+02 nc
Mepiquat Chloride	24307-26-4				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Mercuric Chloride	7487-94-7				2.01E+03		8.50E+07	2.01E+03	2.01E+03 nc
Mercury (elemental)	7439-97-6						1.09E+03	1.09E+03	1.09E+03 sat
Merphos	150-50-5				2.01E+02			2.01E+02	2.01E+02 nc
Merphos Oxide	78-48-8				2.01E+02	7.03E+02		1.56E+02	1.56E+02 nc
Metalaxyl	57837-19-1				4.02E+05	1.41E+06		3.13E+05	3.13E+05 max
Methacrylonitrile	126-98-7				6.70E+02		2.46E+04	6.52E+02	6.52E+02 nc
Methamidophos	10265-92-6				3.35E+02	1.17E+03		2.61E+02	2.61E+02 nc
Methanol	67-56-1				1.34E+07		7.02E+07	1.13E+07	1.13E+07 sat

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Methapyrilene	91-80-5	No	No									1
Methidathion	950-37-8	No	No					1.00E-03	U			1
Methomyl	16752-77-5	No	No					2.50E-02	U			1
Methoxy-5-nitroaniline, 2-	99-59-2	No	No	4.90E-02	U	1.40E-05	U					1
Methoxychlor	72-43-5	No	No					5.00E-03	U			1
Methoxyethanol Acetate, 2-	110-49-6	No	Yes					8.00E-03	U	1.00E-03	U	1
Methoxyethanol, 2-	109-86-4	No	Yes					5.00E-03	U	2.00E-02	U	1
Methyl Acetate	79-20-9	No	Yes					1.00E+00	U			1
Methyl Acrylate	96-33-3	No	Yes					3.00E-02	U	2.00E-02	U	1
Methyl Ethyl Ketone (2-Butanone)	78-93-3	No	Yes					6.00E-01	U	5.00E+00	U	1
Methyl Hydrazine	60-34-4	No	Yes			1.00E-03	U	1.00E-03	U	2.00E-05	U	1
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	No	Yes					8.00E-02	U	3.00E+00	U	1
Methyl Isocyanate	624-83-9	No	Yes							1.00E-03	U	1
Methyl Mercaptan	74-93-1	No	Yes									1
Methyl Mercury	22967-92-6	No	No					1.00E-04	U			1
Methyl Methacrylate	80-62-6	No	Yes					1.40E+00	U	7.00E-01	U	1
Methyl Parathion	298-00-0	No	No					2.50E-04	U			1
Methyl Phosphonic Acid	993-13-5	No	No					6.00E-02	U			1
Methyl Styrene (Mixed Isomers)	25013-15-4	No	Yes					6.00E-03	U	4.00E-02	U	1
Methyl dicyclohexylamine, n-	7560-83-0	No	Yes									1
Methyl methanesulfonate	66-27-3	No	No	9.90E-02	U	2.80E-05	U					1
Methyl tert-Butyl Ether (MTBE)	1634-04-4	No	Yes	1.80E-03	U	2.60E-07	U			3.00E+00	U	1
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	No	No					3.00E-04	U			1
Methyl-2-Pentanol, 4-	108-11-2	No	Yes									1
Methyl-5-Nitroaniline, 2-	99-55-8	No	No	9.00E-03	U			2.00E-02	U			1
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	No	No	8.30E+00	U	2.40E-03	U					1
Methylaniline Hydrochloride, 2-	636-21-5	No	No	1.30E-01	U	3.70E-05	U					1
Methylarsonic acid	124-58-3	No	No					1.00E-02	U			1
Methylaziridine, 2-	75-55-8	No	Yes									1
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	No	No					2.00E-04	U			1
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	No	No	1.00E-01	U			3.00E-04	U			1
Methylcholanthrene, 3-	56-49-5	Yes	No	2.20E+01	U	6.30E-03	U					1
Methylcyclohexane	108-87-2	No	Yes									1
Methylcyclohexylamine, n-	100-60-7	No	Yes									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Methapyrilene	91-80-5	0.1	1			3.23E+09					
Methidathion	950-37-8	0.1	1			3.23E+09					
Methomyl	16752-77-5	0.1	1			3.23E+09					
Methoxy-5-nitroaniline, 2-	99-59-2	0.1	1			3.23E+09	3.99E+02	1.40E+03	5.90E+07	3.10E+02	
Methoxychlor	72-43-5	0.1	1			3.23E+09					
Methoxyethanol Acetate, 2-	110-49-6		1	1.71E+05	1.15E+05	3.23E+09					
Methoxyethanol, 2-	109-86-4		1	1.39E+05	1.06E+05	3.23E+09					
Methyl Acetate	79-20-9		1	1.12E+04	2.90E+04	3.23E+09					
Methyl Acrylate	96-33-3		1	9.62E+03	6.75E+03	3.23E+09					
Methyl Ethyl Ketone (2-Butanone)	78-93-3		1	1.68E+04	2.84E+04	3.23E+09					
Methyl Hydrazine	60-34-4		1	2.16E+05	1.80E+05	3.23E+09			5.51E+01	5.51E+01	
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1		1	1.46E+04	3.36E+03	3.23E+09					
Methyl Isocyanate	624-83-9		1	6.08E+03	1.67E+04	3.23E+09					
Methyl Mercaptan	74-93-1		1	2.46E+03	3.13E+03	3.23E+09					
Methyl Mercury	22967-92-6		1			3.23E+09					
Methyl Methacrylate	80-62-6		1	8.75E+03	2.36E+03	3.23E+09					
Methyl Parathion	298-00-0	0.1	1			3.23E+09					
Methyl Phosphonic Acid	993-13-5	0.1	1			3.23E+09					
Methyl Styrene (Mixed Isomers)	25013-15-4		1	1.65E+04	3.93E+02	3.23E+09					
Methyl dicyclohexylamine, n-	7560-83-0		1	6.54E+04		3.23E+09					
Methyl methanesulfonate	66-27-3	0.1	1			3.23E+09	1.97E+02	6.91E+02	2.95E+07	1.54E+02	
Methyl tert-Butyl Ether (MTBE)	1634-04-4		1	6.76E+03	8.88E+03	3.23E+09	1.09E+04		6.65E+03	4.12E+03	
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	0.1	1			3.23E+09					
Methyl-2-Pentanol, 4-	108-11-2		1	2.37E+04	2.45E+03	3.23E+09					
Methyl-5-Nitroaniline, 2-	99-55-8	0.1	1			3.23E+09	2.17E+03	7.60E+03		1.69E+03	
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	0.1	1			3.23E+09	2.36E+00	8.24E+00	3.44E+05	1.83E+00	
Methylaniline Hydrochloride, 2-	636-21-5	0.1	1			3.23E+09	1.50E+02	5.26E+02	2.23E+07	1.17E+02	
Methylarsonic acid	124-58-3	0.1	1			3.23E+09					
Methylaziridine, 2-	75-55-8		1	4.41E+04	1.87E+05	3.23E+09					
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	0.1	1			3.23E+09					
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	0.1	1			3.23E+09	1.95E+02	6.84E+02		1.52E+02	
Methylcholanthrene, 3-	56-49-5	0.1	1			3.23E+09	3.02E-01	2.05E+00	7.15E+04	2.63E-01	
Methylcyclohexane	108-87-2		1	1.37E+03	6.77E+01	3.23E+09					
Methylcyclohexylamine, n-	100-60-7		1	4.39E+04	2.81E+04	3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Methapyrilene	91-80-5								
Methidathion	950-37-8				6.70E+03	2.34E+04		5.21E+03	5.21E+03 nc
Methomyl	16752-77-5				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
Methoxy-5-nitroaniline, 2-	99-59-2								3.10E+02 ca
Methoxychlor	72-43-5				3.35E+04	1.17E+05		2.61E+04	2.61E+04 nc
Methoxyethanol Acetate, 2-	110-49-6				5.36E+04		1.50E+04	1.17E+04	1.17E+04 nc
Methoxyethanol, 2-	109-86-4				3.35E+04		2.44E+05	2.95E+04	2.95E+04 nc
Methyl Acetate	79-20-9				6.70E+06			6.70E+06	6.70E+06 sat
Methyl Acrylate	96-33-3				2.01E+05		1.68E+04	1.55E+04	1.55E+04 sat
Methyl Ethyl Ketone (2-Butanone)	78-93-3				4.02E+06		7.36E+06	2.60E+06	2.60E+06 sat
Methyl Hydrazine	60-34-4				6.70E+03		3.78E+02	3.58E+02	5.51E+01 ca**
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1				5.36E+05		3.83E+06	4.70E+05	4.70E+05 sat
Methyl Isocyanate	624-83-9						5.32E+02	5.32E+02	5.32E+02 nc
Methyl Mercaptan	74-93-1								
Methyl Mercury	22967-92-6				6.70E+02			6.70E+02	6.70E+02 nc
Methyl Methacrylate	80-62-6				9.38E+06		5.36E+05	5.07E+05	5.07E+05 sat
Methyl Parathion	298-00-0				1.68E+03	5.86E+03		1.30E+03	1.30E+03 nc
Methyl Phosphonic Acid	993-13-5				4.02E+05	1.41E+06		3.13E+05	3.13E+05 max
Methyl Styrene (Mixed Isomers)	25013-15-4				4.02E+04		5.80E+04	2.37E+04	2.37E+04 sat
Methyl dicyclohexylamine, n-	7560-83-0								
Methyl methanesulfonate	66-27-3								1.54E+02 ca
Methyl tert-Butyl Ether (MTBE)	1634-04-4						1.78E+06	1.78E+06	4.12E+03 ca
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Methyl-2-Pentanol, 4-	108-11-2								
Methyl-5-Nitroaniline, 2-	99-55-8				1.34E+05	4.69E+05		1.04E+05	1.69E+03 ca*
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7								1.83E+00 ca
Methylaniline Hydrochloride, 2-	636-21-5								1.17E+02 ca
Methylarsonic acid	124-58-3				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Methylaziridine, 2-	75-55-8								
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7				1.34E+03	4.69E+03		1.04E+03	1.04E+03 nc
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9				2.01E+03	7.03E+03		1.56E+03	1.52E+02 ca*
Methylcholanthrene, 3-	56-49-5								2.63E-01 ca
Methylcyclohexane	108-87-2								
Methylcyclohexylamine, n-	100-60-7								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Methylcyclopentane	96-37-7	No	Yes									1
Methylene Chloride	75-09-2	Yes	Yes	2.00E-03	U	1.00E-08	U	6.00E-03	U	6.00E-01	U	1
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	Yes	No	1.00E-01	U	4.30E-04	U	2.00E-03	U			1
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	No	No	4.60E-02	U	1.30E-05	U					1
Methylenebisbenzenamine, 4,4'-	101-77-9	No	No	1.60E+00	U	4.60E-04	U			2.00E-02	U	1
Methylenediphenyl Diisocyanate	101-68-8	No	No							6.00E-04	U	1
Methylisothiocyanate	556-61-6	No	Yes									1
Methylnaphthalene	1321-94-4	No	Yes									1
Methylnaphthalene, 1-	90-12-0	No	Yes	2.90E-02	U			7.00E-02	U			1
Methylnaphthalene, 2-	91-57-6	No	Yes					4.00E-03	U			1
Methylstyrene, Alpha-	98-83-9	No	Yes					7.00E-02	U			1
Methyltriethyl Lead	1762-28-3	No	Yes									1
Metolachlor	51218-45-2	No	No					1.50E-01	U			1
Metribuzin	21087-64-9	No	No					2.50E-02	U			1
Mineral oils	8012-95-1	No	Yes					3.00E+00	U			1
Mirex	2385-85-5	No	Yes	1.80E+01	U	5.10E-03	U	2.00E-04	U			1
Molinate	2212-67-1	No	No					2.00E-03	U			1
Molybdenum	7439-98-7	No	No					5.00E-03	U			1
Monoaluminum phosphate	13530-50-2	No	No					4.86E+01	U			1
Monoammonium phosphate	7722-76-1	No	No					4.86E+01	U			1
Monobutyltin Compounds	NA	No	No									1
Monocalcium phosphate	7758-23-8	No	No					4.86E+01	U			1
Monochloramine	10599-90-3	No	No					1.00E-01	U			1
Monochlorobutanes	25154-42-1	No	No									1
Monochlorophenols (total)	NA	No	No									1
Monocyclic aromatic hydrocarbons (total)	NA	No	No									1
Monomagnesium phosphate	7757-86-0	No	No					4.86E+01	U			1
Monomethylaniline	100-61-8	No	No					2.00E-03	U			1
Monopotassium phosphate	7778-77-0	No	No					4.86E+01	U			1
Monosodium phosphate	7558-80-7	No	No					4.86E+01	U			1
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	No	No					3.00E-04	U			1
N-Methyl dithiocarbamate	137-42-8	No	No									1
Naled	300-76-5	No	Yes					2.00E-03	U			1
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	No	Yes					3.00E-02	U	1.00E-01	U	1
Naphthalene	91-20-3	No	Yes			3.40E-05	U	2.00E-02	U	3.00E-03	U	1

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Methylcyclopentane	96-37-7		1	1.22E+03	1.54E+02	3.23E+09					
Methylene Chloride	75-09-2		1	3.02E+03	3.32E+03	3.23E+09	3.32E+03		4.21E+04	3.08E+03	
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	0.1	1			3.23E+09	6.64E+01	4.50E+02	1.05E+06	5.79E+01	
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	0.1	1			3.23E+09	4.25E+02	1.49E+03	6.35E+07	3.30E+02	
Methylenebisbenzenamine, 4,4'-	101-77-9	0.1	1			3.23E+09	1.22E+01	4.27E+01	1.80E+06	9.50E+00	
Methylenediphenyl Diisocyanate	101-68-8	0.1	1			3.23E+09					
Methylisothiocyanate	556-61-6		1	2.04E+04		3.23E+09					
Methylnaphthalene	1321-94-4		1	8.08E+04		3.23E+09					
Methylnaphthalene, 1-	90-12-0	0.13	1	8.09E+04		3.23E+09	6.74E+02	1.81E+03		4.91E+02	
Methylnaphthalene, 2-	91-57-6	0.13	1	8.00E+04		3.23E+09					
Methylstyrene, Alpha-	98-83-9		1	1.77E+04	5.00E+02	3.23E+09					
Methyltriethyl Lead	1762-28-3		1	2.24E+03	4.81E+03	3.23E+09					
Metolachlor	51218-45-2	0.1	1			3.23E+09					
Metribuzin	21087-64-9	0.1	1			3.23E+09					
Mineral oils	8012-95-1		1	1.90E+03	3.41E-01	3.23E+09					
Mirex	2385-85-5		1	1.18E+06		3.23E+09	1.09E+00		5.92E+01	1.07E+00	
Molinate	2212-67-1	0.1	1			3.23E+09					
Molybdenum	7439-98-7		1			3.23E+09					
Monoaluminum phosphate	13530-50-2		1			3.23E+09					
Monoammonium phosphate	7722-76-1		1			3.23E+09					
Monobutyltin Compounds	NA	0.1	1			3.23E+09					
Monocalcium phosphate	7758-23-8		1			3.23E+09					
Monochloramine	10599-90-3		1			3.23E+09					
Monochlorobutanes	25154-42-1	0.1	1			3.23E+09					
Monochlorophenols (total)	NA	0.1	1			3.23E+09					
Monocyclic aromatic hydrocarbons (total)	NA	0.1	1			3.23E+09					
Monomagnesium phosphate	7757-86-0		1			3.23E+09					
Monomethylaniline	100-61-8	0.1	1			3.23E+09					
Monopotassium phosphate	7778-77-0		1			3.23E+09					
Monosodium phosphate	7558-80-7		1			3.23E+09					
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	0.1	1			3.23E+09					
N-Methyl dithiocarbamate	137-42-8	0.1	1			3.23E+09					
Naled	300-76-5		1	7.87E+04		3.23E+09					
Naphtha, High Flash Aromatic (HFAN)	64742-95-6		1			3.23E+09					
Naphthalene	91-20-3	0.13	1	6.38E+04		3.23E+09			4.79E+02	4.79E+02	

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Methylcyclopentane	96-37-7								
Methylene Chloride	75-09-2				4.02E+04		1.59E+05	3.21E+04	3.08E+03 ca*
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4				1.34E+04	4.69E+04		1.04E+04	5.79E+01 ca
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1								3.30E+02 ca
Methylenebisbenzenamine, 4,4'-	101-77-9						5.66E+09	5.66E+09	9.50E+00 ca
Methylenediphenyl Diisocyanate	101-68-8						1.70E+08	1.70E+08	1.70E+08 max
Methylisothiocyanate	556-61-6								
Methylnaphthalene	1321-94-4								
Methylnaphthalene, 1-	90-12-0				4.69E+05	1.26E+06		3.42E+05	4.91E+02 ca
Methylnaphthalene, 2-	91-57-6				2.68E+04	7.22E+04		1.95E+04	1.95E+04 nc
Methylstyrene, Alpha-	98-83-9				4.69E+05			4.69E+05	4.69E+05 sat
Methyltriethyl Lead	1762-28-3								
Metolachlor	51218-45-2				1.01E+06	3.52E+06		7.82E+05	7.82E+05 max
Metribuzin	21087-64-9				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
Mineral oils	8012-95-1				2.01E+07			2.01E+07	2.01E+07 sat
Mirex	2385-85-5				1.34E+03			1.34E+03	1.07E+00 ca
Molinate	2212-67-1				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Molybdenum	7439-98-7				3.35E+04			3.35E+04	3.35E+04 nc
Monoaluminum phosphate	13530-50-2				3.26E+08			3.26E+08	3.26E+08 max
Monoammonium phosphate	7722-76-1				3.26E+08			3.26E+08	3.26E+08 max
Monobutyltin Compounds	NA								
Monocalcium phosphate	7758-23-8				3.26E+08			3.26E+08	3.26E+08 max
Monochloramine	10599-90-3				6.70E+05			6.70E+05	6.70E+05 max
Monochlorobutanes	25154-42-1								
Monochlorophenols (total)	NA								
Monocyclic aromatic hydrocarbons (total)	NA								
Monomagnesium phosphate	7757-86-0				3.26E+08			3.26E+08	3.26E+08 max
Monomethylaniline	100-61-8				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Monopotassium phosphate	7778-77-0				3.26E+08			3.26E+08	3.26E+08 max
Monosodium phosphate	7558-80-7				3.26E+08			3.26E+08	3.26E+08 max
N,N'-Diphenyl-1,4-benzenediamine	74-31-7				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
N-Methyl dithiocarbamate	137-42-8								
Naled	300-76-5				1.34E+04			1.34E+04	1.34E+04 nc
Naphtha, High Flash Aromatic (HFAN)	64742-95-6				2.01E+05		2.83E+10	2.01E+05	2.01E+05 max
Naphthalene	91-20-3				1.34E+05	3.61E+05	1.68E+04	1.43E+04	4.79E+02 ca*

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Naphthol, 2-	135-19-3	No	No									1
Naphthoquinone, 1,4-	130-15-4	No	No									1
Naphthylamine, 1-	134-32-7	No	No									1
Naphthylamine, 2-	91-59-8	No	No	1.80E+00	U	0.00E+00	U					1
Napropamide	15299-99-7	No	No					1.00E-01	U			1
Neodymium Chloride (Stable, Nonradioactive)	10024-93-8	No	No									1
Niagara Blue 4B	2429-74-5	No	No									1
Nickel Acetate	373-02-4	No	No			2.60E-04	U	1.10E-02	U	1.40E-05	U	1
Nickel Carbonate	3333-67-3	No	No			2.60E-04	U	1.10E-02	U	1.40E-05	U	1
Nickel Carbonyl	13463-39-3	No	Yes			2.60E-04	U	1.10E-02	U	1.40E-05	U	1
Nickel Hydroxide	12054-48-7	No	No			2.60E-04	U	1.10E-02	U	1.40E-05	U	0.04
Nickel Oxide	1313-99-1	No	No			2.60E-04	U	1.10E-02	U	2.00E-05	U	0.04
Nickel Refinery Dust	NA	No	No			2.40E-04	U	1.10E-02	U	1.40E-05	U	0.04
Nickel Soluble Salts	7440-02-0	No	No			2.60E-04	U	2.00E-02	U	9.00E-05	U	0.04
Nickel Subsulfide	12035-72-2	No	No	1.70E+00	U	4.80E-04	U	1.10E-02	U	1.40E-05	U	0.04
Nickelocene	1271-28-9	No	No			2.60E-04	U	1.10E-02	U	1.40E-05	U	1
Nicotinonitrile	100-54-9	No	No									1
Niobium	7440-03-1	No	No									1
Nitrapyrin	1929-82-4	No	Yes									1
Nitrate	14797-55-8	No	No					1.60E+00	U			1
Nitrate + Nitrite (as N)	NA	No	No									1
Nitric Acid	7697-37-2	No	No									1
Nitric Oxide	10102-43-9	No	Yes									1
Nitrite	14797-65-0	No	No					1.00E-01	U			1
Nitroaniline, 2-	88-74-4	No	No					1.00E-02	U	5.00E-05	U	1
Nitroaniline, 3-	99-09-2	No	No									1
Nitroaniline, 4-	100-01-6	No	No	2.00E-02	U			4.00E-03	U	6.00E-03	U	1
Nitrobenzene	98-95-3	No	Yes			4.00E-05	U	2.00E-03	U	9.00E-03	U	1
Nitrobiphenyl, 4-	92-93-3	No	No									1
Nitrocellulose	9004-70-0	No	No					3.00E+03	U			1
Nitrodiphenylamine, 2-	119-75-5	No	No									1
Nitrofurantoin	67-20-9	No	No					7.00E-02	U			1
Nitrofurazone	59-87-0	No	No	1.30E+00	U	3.70E-04	U					1
Nitrogen Dioxide	10102-44-0	No	Yes									1
Nitroglycerin	55-63-0	No	No	1.70E-02	U			1.00E-04	U			1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Naphthol, 2-	135-19-3	0.1	1			3.23E+09					
Naphthoquinone, 1,4-	130-15-4	0.1	1			3.23E+09					
Naphthylamine, 1-	134-32-7	0.1	1			3.23E+09					
Naphthylamine, 2-	91-59-8	0.1	1			3.23E+09	1.09E+01	3.80E+01		8.45E+00	
Napropamide	15299-99-7	0.1	1			3.23E+09					
Neodymium Chloride (Stable, Nonradioactive)	10024-93-8		1			3.23E+09					
Niagara Blue 4B	2429-74-5	0.1	1			3.23E+09					
Nickel Acetate	373-02-4	0.1	1			3.23E+09			3.18E+06	3.18E+06	
Nickel Carbonate	3333-67-3	0.1	1			3.23E+09			3.18E+06	3.18E+06	
Nickel Carbonyl	13463-39-3		1			3.23E+09			3.18E+06	3.18E+06	
Nickel Hydroxide	12054-48-7		1			3.23E+09			3.18E+06	3.18E+06	
Nickel Oxide	1313-99-1		1			3.23E+09			3.18E+06	3.18E+06	
Nickel Refinery Dust	NA		1			3.23E+09			3.44E+06	3.44E+06	
Nickel Soluble Salts	7440-02-0		1			3.23E+09			3.18E+06	3.18E+06	
Nickel Subsulfide	12035-72-2		1			3.23E+09	1.15E+01		1.72E+06	1.15E+01	
Nickelocene	1271-28-9	0.1	1			3.23E+09			3.18E+06	3.18E+06	
Nicotinonitrile	100-54-9	0.1	1			3.23E+09					
Niobium	7440-03-1		1			3.23E+09					
Nitrapyrin	1929-82-4		1	3.05E+05		3.23E+09					
Nitrate	14797-55-8		1			3.23E+09					
Nitrate + Nitrite (as N)	NA		1			3.23E+09					
Nitric Acid	7697-37-2	0.1	1			3.23E+09					
Nitric Oxide	10102-43-9		1			3.23E+09					
Nitrite	14797-65-0		1			3.23E+09					
Nitroaniline, 2-	88-74-4	0.1	1			3.23E+09					
Nitroaniline, 3-	99-09-2	0.1	1			3.23E+09					
Nitroaniline, 4-	100-01-6	0.1	1			3.23E+09	9.77E+02	3.42E+03		7.60E+02	
Nitrobenzene	98-95-3		1	1.01E+05	3.04E+03	3.23E+09			6.44E+02	6.44E+02	
Nitrobiphenyl, 4-	92-93-3	0.1	1			3.23E+09					
Nitrocellulose	9004-70-0	0.1	1			3.23E+09					
Nitrodiphenylamine, 2-	119-75-5	0.1	1			3.23E+09					
Nitrofurantoin	67-20-9	0.1	1			3.23E+09					
Nitrofurazone	59-87-0	0.1	1			3.23E+09	1.50E+01	5.26E+01	2.23E+06	1.17E+01	
Nitrogen Dioxide	10102-44-0		1			3.23E+09					
Nitroglycerin	55-63-0	0.1	1			3.23E+09	1.15E+03	4.02E+03		8.94E+02	

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Naphthol, 2-	135-19-3								
Naphthoquinone, 1,4-	130-15-4								
Naphthylamine, 1-	134-32-7								
Naphthylamine, 2-	91-59-8								8.45E+00 ca
Napropamide	15299-99-7				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Neodymium Chloride (Stable, Nonradioactive)	10024-93-8								
Niagara Blue 4B	2429-74-5								
Nickel Acetate	373-02-4				7.37E+04	2.58E+05	3.96E+06	5.65E+04	5.65E+04 nc
Nickel Carbonate	3333-67-3				7.37E+04	2.58E+05	3.96E+06	5.65E+04	5.65E+04 nc
Nickel Carbonyl	13463-39-3				7.37E+04		3.96E+06	7.24E+04	7.24E+04 nc
Nickel Hydroxide	12054-48-7				7.37E+04		3.96E+06	7.24E+04	7.24E+04 nc
Nickel Oxide	1313-99-1				7.37E+04		5.66E+06	7.28E+04	7.28E+04 nc
Nickel Refinery Dust	NA				7.37E+04		3.96E+06	7.24E+04	7.24E+04 nc
Nickel Soluble Salts	7440-02-0				1.34E+05		2.55E+07	1.33E+05	1.33E+05 max
Nickel Subsulfide	12035-72-2				7.37E+04		3.96E+06	7.24E+04	1.15E+01 ca
Nickelocene	1271-28-9				7.37E+04	2.58E+05	3.96E+06	5.65E+04	5.65E+04 nc
Nicotinonitrile	100-54-9								
Niobium	7440-03-1								
Nitrapyrin	1929-82-4								
Nitrate	14797-55-8				1.07E+07			1.07E+07	1.07E+07 max
Nitrate + Nitrite (as N)	NA								
Nitric Acid	7697-37-2								
Nitric Oxide	10102-43-9								
Nitrite	14797-65-0				6.70E+05			6.70E+05	6.70E+05 max
Nitroaniline, 2-	88-74-4				6.70E+04	2.34E+05	1.42E+07	5.19E+04	5.19E+04 nc
Nitroaniline, 3-	99-09-2								
Nitroaniline, 4-	100-01-6				2.68E+04	9.38E+04	1.70E+09	2.08E+04	7.60E+02 ca*
Nitrobenzene	98-95-3				1.34E+04		7.95E+04	1.15E+04	6.44E+02 ca*
Nitrobiphenyl, 4-	92-93-3								
Nitrocellulose	9004-70-0				2.01E+10	7.03E+10		1.56E+10	1.56E+10 max
Nitrodiphenylamine, 2-	119-75-5								
Nitrofurantoin	67-20-9				4.69E+05	1.64E+06		3.65E+05	3.65E+05 max
Nitrofurazone	59-87-0								1.17E+01 ca
Nitrogen Dioxide	10102-44-0								
Nitroglycerin	55-63-0				6.70E+02	2.34E+03		5.21E+02	5.21E+02 nc

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Nitroguanidine	556-88-7	No	No					1.00E-01	U			1
Nitromethane	75-52-5	No	Yes			8.80E-06	U			5.00E-03	U	1
Nitrophenol, 2-	88-75-5	No	Yes									1
Nitrophenol, 2-amino-4-	99-57-0	No	No									1
Nitrophenol, 3-	554-84-7	No	No									1
Nitrophenol, 4-	100-02-7	No	No									1
Nitrophenol, 4-amino-2-	119-34-6	No	No									1
Nitropropane, 2-	79-46-9	No	Yes			2.70E-03	U			2.00E-02	U	1
Nitropyrene, 4-	57835-92-4	No	No	1.20E+00	U	1.10E-04	U					1
Nitroquinoline-1-oxide. 4-	56-57-5	No	No									1
Nitroso-N-ethylurea, N-	759-73-9	Yes	No	2.70E+01	U	7.70E-03	U					1
Nitroso-N-methylurea, N-	684-93-5	Yes	No	1.20E+02	U	3.40E-02	U					1
Nitroso-di-N-butylamine, N-	924-16-3	No	Yes	5.40E+00	U	1.60E-03	U					1
Nitroso-di-N-propylamine, N-	621-64-7	No	No	7.00E+00	U	2.00E-03	U					1
Nitrosodiethanolamine, N-	1116-54-7	No	No	2.80E+00	U	8.00E-04	U					1
Nitrosodiethylamine, N-	55-18-5	Yes	No	1.50E+02	U	4.30E-02	U					1
Nitrosodimethylamine, N-	62-75-9	Yes	Yes	5.10E+01	U	1.40E-02	U	8.00E-06	U	4.00E-05	U	1
Nitrosodiphenylamine, N-	86-30-6	No	No	4.90E-03	U	2.60E-06	U					1
Nitrosomethylethylamine, N-	10595-95-6	No	Yes	2.20E+01	U	6.30E-03	U					1
Nitrosomethylvinylamine, N-	4549-40-0	No	Yes									1
Nitrosomorpholine [N-]	59-89-2	No	No	6.70E+00	U	1.90E-03	U					1
Nitrosopiperidine [N-]	100-75-4	No	No	9.40E+00	U	2.70E-03	U					1
Nitrosopyrrolidine, N-	930-55-2	No	No	2.10E+00	U	6.10E-04	U					1
Nitrotoluene, 4-Amino-2-	119-32-4	No	No									1
Nitrotoluene, m-	99-08-1	No	No					1.00E-04	U			1
Nitrotoluene, o-	88-72-2	No	Yes	2.20E-01	U			9.00E-04	U			1
Nitrotoluene, p-	99-99-0	No	No	1.60E-02	U			4.00E-03	U			1
Nonachlor, trans-	39765-80-5	No	Yes									1
Nonane, n-	111-84-2	No	Yes					3.00E-04	U	2.00E-02	U	1
Nonanol, n-	143-08-8	No	Yes									1
Norflurazon	27314-13-2	No	No					4.00E-02	U			1
Nustar	85509-19-9	No	No					7.00E-04	U			1
OCDD	3268-87-9	No	No	3.90E+01	U	1.14E-02	U	2.33E-06	U	1.33E-04	U	1
OCDF	39001-02-0	No	No	3.90E+01	U	1.14E-02	U	2.33E-06	U	1.33E-04	U	1
Octabromodiphenyl Ether	32536-52-0	No	No					3.00E-03	U			1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Nitroguanidine	556-88-7	0.1	1			3.23E+09					
Nitromethane	75-52-5		1	2.34E+04	1.80E+04	3.23E+09			6.78E+02	6.78E+02	
Nitrophenol, 2-	88-75-5		1	1.65E+05		3.23E+09					
Nitrophenol, 2-amino-4-	99-57-0	0.1	1			3.23E+09					
Nitrophenol, 3-	554-84-7	0.1	1			3.23E+09					
Nitrophenol, 4-	100-02-7	0.1	1			3.23E+09					
Nitrophenol, 4-amino-2-	119-34-6	0.1	1			3.23E+09					
Nitropropane, 2-	79-46-9		1	1.81E+04	4.86E+03	3.23E+09			1.71E+00	1.71E+00	
Nitropyrene, 4-	57835-92-4	0.13	1			3.23E+09	1.63E+01	4.38E+01	7.51E+06	1.19E+01	
Nitroquinoline-1-oxide. 4-	56-57-5	0.1	1			3.23E+09					
Nitroso-N-ethylurea, N-	759-73-9	0.1	1			3.23E+09	2.46E-01	1.67E+00	5.85E+04	2.14E-01	
Nitroso-N-methylurea, N-	684-93-5	0.1	1			3.23E+09	5.54E-02	3.75E-01	1.33E+04	4.82E-02	
Nitroso-di-N-butylamine, N-	924-16-3		1	3.35E+05		3.23E+09	3.62E+00		5.35E+01	3.39E+00	
Nitroso-di-N-propylamine, N-	621-64-7	0.1	1			3.23E+09	2.79E+00	9.77E+00	4.13E+05	2.17E+00	
Nitrosodiethanolamine, N-	1116-54-7	0.1	1			3.23E+09	6.98E+00	2.44E+01	1.03E+06	5.43E+00	
Nitrosodiethylamine, N-	55-18-5	0.1	1			3.23E+09	4.43E-02	3.00E-01	1.05E+04	3.86E-02	
Nitrosodimethylamine, N-	62-75-9		1	1.14E+05	2.37E+05	3.23E+09	1.30E-01		1.13E+00	1.17E-01	
Nitrosodiphenylamine, N-	86-30-6	0.1	1			3.23E+09	3.99E+03	1.40E+04	3.18E+08	3.10E+03	
Nitrosomethylethylamine, N-	10595-95-6		1	1.67E+05	1.08E+05	3.23E+09	8.89E-01		6.77E+00	7.85E-01	
Nitrosomethylvinylamine, N-	4549-40-0		1	1.12E+05	1.08E+04	3.23E+09					
Nitrosomorpholine [N-]	59-89-2	0.1	1			3.23E+09	2.92E+00	1.02E+01	4.35E+05	2.27E+00	
Nitrosopiperidine [N-]	100-75-4	0.1	1			3.23E+09	2.08E+00	7.28E+00	3.06E+05	1.62E+00	
Nitrosopyrrolidine, N-	930-55-2	0.1	1			3.23E+09	9.31E+00	3.26E+01	1.35E+06	7.24E+00	
Nitrotoluene, 4-Amino-2-	119-32-4	0.1	1			3.23E+09					
Nitrotoluene, m-	99-08-1	0.1	1			3.23E+09					
Nitrotoluene, o-	88-72-2		1	1.89E+05	1.51E+03	3.23E+09	8.89E+01			8.89E+01	
Nitrotoluene, p-	99-99-0	0.1	1			3.23E+09	1.22E+03	4.27E+03		9.50E+02	
Nonachlor, trans-	39765-80-5		1	3.73E+06		3.23E+09					
Nonane, n-	111-84-2		1	1.44E+03	6.86E+00	3.23E+09					
Nonanol, n-	143-08-8		1	6.41E+04	7.27E+01	3.23E+09					
Norflurazon	27314-13-2	0.1	1			3.23E+09					
Nustar	85509-19-9	0.1	1			3.23E+09					
OCDD	3268-87-9	0.03	1			3.23E+09	5.01E-01	5.85E+00	7.25E+04	4.62E-01	
OCDF	39001-02-0	0.03	1			3.23E+09	5.01E-01	5.85E+00	7.25E+04	4.62E-01	
Octabromodiphenyl Ether	32536-52-0	0.1	1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Nitroguanidine	556-88-7				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Nitromethane	75-52-5						1.02E+04	1.02E+04	6.78E+02 ca*
Nitrophenol, 2-	88-75-5								
Nitrophenol, 2-amino-4-	99-57-0								
Nitrophenol, 3-	554-84-7								
Nitrophenol, 4-	100-02-7								
Nitrophenol, 4-amino-2-	119-34-6								
Nitropropane, 2-	79-46-9						3.17E+04	3.17E+04	1.71E+00 ca
Nitropyrene, 4-	57835-92-4								1.19E+01 ca
Nitroquinoline-1-oxide. 4-	56-57-5								
Nitroso-N-ethylurea, N-	759-73-9								2.14E-01 ca
Nitroso-N-methylurea, N-	684-93-5								4.82E-02 ca
Nitroso-di-N-butylamine, N-	924-16-3								3.39E+00 ca
Nitroso-di-N-propylamine, N-	621-64-7								2.17E+00 ca
Nitrosodiethanolamine, N-	1116-54-7								5.43E+00 ca
Nitrosodiethylamine, N-	55-18-5								3.86E-02 ca
Nitrosodimethylamine, N-	62-75-9				5.36E+01		3.98E+02	4.72E+01	1.17E-01 ca
Nitrosodiphenylamine, N-	86-30-6								3.10E+03 ca
Nitrosomethylethylamine, N-	10595-95-6								7.85E-01 ca
Nitrosomethylvinylamine, N-	4549-40-0								
Nitrosomorpholine [N-]	59-89-2								2.27E+00 ca
Nitrosopiperidine [N-]	100-75-4								1.62E+00 ca
Nitrosopyrrolidine, N-	930-55-2								7.24E+00 ca
Nitrotoluene, 4-Amino-2-	119-32-4								
Nitrotoluene, m-	99-08-1				6.70E+02	2.34E+03		5.21E+02	5.21E+02 nc
Nitrotoluene, o-	88-72-2				6.03E+03			6.03E+03	8.89E+01 ca*
Nitrotoluene, p-	99-99-0				2.68E+04	9.38E+04		2.08E+04	9.50E+02 ca*
Nonachlor, trans-	39765-80-5								
Nonane, n-	111-84-2				2.01E+03		2.52E+03	1.12E+03	1.12E+03 sat
Nonanol, n-	143-08-8								
Norflurazon	27314-13-2				2.68E+05	9.38E+05		2.08E+05	2.08E+05 max
Nustar	85509-19-9				4.69E+03	1.64E+04		3.65E+03	3.65E+03 nc
OCDD	3268-87-9				1.56E+01	1.82E+02	3.77E+07	1.44E+01	4.62E-01 ca*
OCDF	39001-02-0				1.56E+01	1.82E+02	3.77E+07	1.44E+01	4.62E-01 ca*
Octabromodiphenyl Ether	32536-52-0				2.01E+04	7.03E+04		1.56E+04	1.56E+04 nc

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Octachlorostyrene	29082-74-4	No	Yes									1
Octadecanoic Acid	57-11-4	No	No									1
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	No	No					5.00E-02	U			1
Octahydrotrimethylmethylethylphenanthrenol	511-15-9	No	No									1
Octamethylpyrophosphoramide	152-16-9	No	No					2.00E-03	U			1
Octanol, n-	111-87-5	No	Yes									1
Octanone, 2-	111-13-7	No	Yes									1
Octanone, 3-	106-68-3	No	Yes									1
Octyl Phthalate, di-N-	117-84-0	No	No					1.00E-02	U			1
Oleic acid	112-80-1	Yes	Yes									1
Oleum	8014-95-7	No	No									1
Oryzalin	19044-88-3	No	No					5.00E-02	U			1
Oxadiazon	19666-30-9	No	No					5.00E-03	U			1
Oxamyl	23135-22-0	No	No					2.50E-02	U			1
Oxychlordane	27304-13-8	No	No									1
Ozone	10028-15-6	No	No									1
Paclobutrazol	76738-62-0	No	No					1.30E-02	U			1
Paraquat Dichloride	1910-42-5	No	No					4.50E-03	U			1
Parathion	56-38-2	No	No					6.00E-03	U			1
PeCDD, 2,3,7,8-	36088-22-9	No	No	1.30E+05	U	3.80E+01	U	7.00E-10	U	4.00E-08	U	1
PeCDF, 1,2,3,7,8-	57117-41-6	No	No	3.90E+03	U	1.14E+00	U	2.33E-08	U	1.33E-06	U	1
PeCDF, 2,3,4,7,8-	57117-31-4	No	No	3.90E+04	U	1.14E+01	U	2.33E-09	U	1.33E-07	U	1
Pebulate	1114-71-2	No	Yes					5.00E-02	U			1
Pendimethalin	40487-42-1	No	No					4.00E-02	U			1
Pentabromodiphenyl Ether	32534-81-9	No	No					2.00E-03	U			1
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	No	No					1.00E-04	U			1
Pentachloroaniline	527-20-8	No	No									1
Pentachlorobenzene	608-93-5	No	Yes					8.00E-04	U			1
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	No	Yes	3.90E+00	U	1.14E-03	U	2.33E-05	U	1.33E-03	U	1
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
Pentachlorocyclopentadiene	25329-35-5	No	Yes									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Octachlorostyrene	29082-74-4		1	8.40E+05		3.23E+09					
Octadecanoic Acid	57-11-4	0.1	1			3.23E+09					
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	0.006	1			3.23E+09					
Octahydrotrimethylmethylethylphenanthrenol	511-15-9	0.1	1			3.23E+09					
Octamethylpyrophosphoramide	152-16-9	0.1	1			3.23E+09					
Octanol, n-	111-87-5		1	5.35E+04	1.78E+02	3.23E+09					
Octanone, 2-	111-13-7		1	2.12E+04	3.60E+02	3.23E+09					
Octanone, 3-	106-68-3		1	2.60E+04	1.08E+03	3.23E+09					
Octyl Phthalate, di-N-	117-84-0	0.1	1			3.23E+09					
Oleic acid	112-80-1		1	1.43E+06	1.44E+00	3.23E+09					
Oleum	8014-95-7		1			3.23E+09					
Oryzalin	19044-88-3	0.1	1			3.23E+09					
Oxadiazon	19666-30-9	0.1	1			3.23E+09					
Oxamyl	23135-22-0	0.1	1			3.23E+09					
Oxychlordane	27304-13-8	0.1	1			3.23E+09					
Ozone	10028-15-6		1			3.23E+09					
Paclobutrazol	76738-62-0	0.1	1			3.23E+09					
Paraquat Dichloride	1910-42-5	0.1	1			3.23E+09					
Parathion	56-38-2	0.1	1			3.23E+09					
PeCDD, 2,3,7,8-	36088-22-9	0.03	1			3.23E+09	1.50E-04	1.75E-03	2.17E+01	1.38E-04	
PeCDF, 1,2,3,7,8-	57117-41-6	0.03	1			3.23E+09	5.01E-03	5.85E-02	7.25E+02	4.62E-03	
PeCDF, 2,3,4,7,8-	57117-31-4	0.03	1			3.23E+09	5.01E-04	5.85E-03	7.25E+01	4.62E-04	
Pebulate	1114-71-2		1	6.20E+04		3.23E+09					
Pendimethalin	40487-42-1	0.1	1			3.23E+09					
Pentabromodiphenyl Ether	32534-81-9	0.1	1			3.23E+09					
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	0.1	1			3.23E+09					
Pentachloroaniline	527-20-8	0.1	1			3.23E+09					
Pentachlorobenzene	608-93-5		1	1.12E+05		3.23E+09					
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	0.14	1	1.42E+06		3.23E+09	5.01E+00	1.25E+01	3.19E+02	3.54E+00	
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	0.14	1	1.14E+06		3.23E+09	5.01E+00	1.25E+01	2.56E+02	3.53E+00	
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	0.14	1	1.17E+06		3.23E+09	5.01E+00	1.25E+01	2.61E+02	3.53E+00	
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	0.14	1	1.42E+06		3.23E+09	5.01E+00	1.25E+01	3.19E+02	3.54E+00	
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	0.14	1	1.41E+06		3.23E+09	1.50E-03	3.76E-03	9.46E-02	1.06E-03	
Pentachlorocyclopentadiene	25329-35-5		1	1.95E+04		3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Octachlorostyrene	29082-74-4								
Octadecanoic Acid	57-11-4								
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0				3.35E+05	1.95E+07		3.29E+05	3.29E+05 max
Octahydrotrimethylmethylethylphenanthrenol	511-15-9								
Octamethylpyrophosphoramide	152-16-9				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Octanol, n-	111-87-5								
Octanone, 2-	111-13-7								
Octanone, 3-	106-68-3								
Octyl Phthalate, di-N-	117-84-0				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Oleic acid	112-80-1								
Oleum	8014-95-7								
Oryzalin	19044-88-3				3.35E+05	1.17E+06		2.61E+05	2.61E+05 max
Oxadiazon	19666-30-9				3.35E+04	1.17E+05		2.61E+04	2.61E+04 nc
Oxamyl	23135-22-0				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
Oxychlordane	27304-13-8								
Ozone	10028-15-6								
Paclobutrazol	76738-62-0				8.71E+04	3.05E+05		6.78E+04	6.78E+04 nc
Paraquat Dichloride	1910-42-5				3.02E+04	1.06E+05		2.35E+04	2.35E+04 nc
Parathion	56-38-2				4.02E+04	1.41E+05		3.13E+04	3.13E+04 nc
PeCDD, 2,3,7,8-	36088-22-9				4.69E-03	5.47E-02	1.13E+04	4.32E-03	1.38E-04 ca*
PeCDF, 1,2,3,7,8-	57117-41-6				1.56E-01	1.82E+00	3.77E+05	1.44E-01	4.62E-03 ca*
PeCDF, 2,3,4,7,8-	57117-31-4				1.56E-02	1.82E-01	3.77E+04	1.44E-02	4.62E-04 ca*
Pebulate	1114-71-2				3.35E+05			3.35E+05	3.35E+05 max
Pendimethalin	40487-42-1				2.68E+05	9.38E+05		2.08E+05	2.08E+05 max
Pentabromodiphenyl Ether	32534-81-9				1.34E+04	4.69E+04		1.04E+04	1.04E+04 nc
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9				6.70E+02	2.34E+03		5.21E+02	5.21E+02 nc
Pentachloroaniline	527-20-8								
Pentachlorobenzene	608-93-5				5.36E+03			5.36E+03	5.36E+03 nc
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3				1.56E+02	3.90E+02	1.66E+05	1.11E+02	3.54E+00 ca*
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6				1.56E+02	3.90E+02	1.33E+05	1.11E+02	3.53E+00 ca*
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4				1.56E+02	3.90E+02	1.36E+05	1.11E+02	3.53E+00 ca*
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0				1.56E+02	3.90E+02	1.66E+05	1.11E+02	3.54E+00 ca*
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8				4.69E-02	1.17E-01	4.93E+01	3.35E-02	1.06E-03 ca*
Pentachlorocyclopentadiene	25329-35-5								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	No	Yes	1.30E+05	U	3.80E+01	U	7.00E-10	U	4.00E-08	U	1
Pentachloroethane	76-01-7	No	Yes	9.00E-02	U							1
Pentachloronitrobenzene	82-68-8	No	Yes	2.60E-01	U			3.00E-03	U			1
Pentachlorophenol	87-86-5	No	No	4.00E-01	U	5.10E-06	U	5.00E-03	U			1
Pentaerythritol tetranitrate (PETN)	78-11-5	No	No	4.00E-03	U			2.00E-03	U			1
Pentamethyl dipropylenetriamine	3855-32-1	No	No									1
Pentane, n-	109-66-0	No	Yes							1.00E+00	U	1
Pentyl Alcohol, N-	71-41-0	No	Yes									1
Perchlorate and Perchlorate Salts	14797-73-0	No	No					7.00E-04	U			1
Perfluorobutane Sulfonate	375-73-5	No	Yes					2.00E-02	U			1
Perfluorooctane Sulphonic Acid	1763-23-1	No	Yes									1
Perfluorooctanoic acid	335-67-1	No	Yes									1
Permethrin	52645-53-1	No	No					5.00E-02	U			1
Perylene	198-55-0	No	No									1
Pesticides (total)	NA	No	No									1
Pesticides, organochlorinated (each)	NA	No	No									1
Pesticides, organochlorinated (total)	NA	No	No									1
Phenacetin	62-44-2	No	No	2.20E-03	U	6.30E-07	U					1
Phenanthrene	85-01-8	No	Yes									1
Phenmedipham	13684-63-4	No	No					2.50E-01	U			1
Phenol	108-95-2	No	No					3.00E-01	U	2.00E-01	U	1
Phenothiazine	92-84-2	No	No					5.00E-04	U			1
Phenyl Isothiocyanate	103-72-0	No	Yes									1
Phenylenediamine, m-	108-45-2	No	No					6.00E-03	U			1
Phenylenediamine, o-	95-54-5	No	No	4.70E-02	U							1
Phenylenediamine, p-	106-50-3	No	No					1.90E-01	U			1
Phenylmercuric Acetate	62-38-4	No	No					8.00E-05	U			1
Phenylphenol, 2-	90-43-7	No	No	1.94E-03	U							1
Phorate	298-02-2	No	No					2.00E-04	U			1
Phosgene	75-44-5	No	Yes							3.00E-04	U	1
Phosmet	732-11-6	No	No					2.00E-02	U			1
Phosphine	7803-51-2	No	Yes					3.00E-04	U	3.00E-04	U	1
Phosphoric Acid	7664-38-2	No	No					4.86E+01	U	1.00E-02	U	1
Phosphorus (total)	NA	No	No									1
Phosphorus pentoxide	1314-56-3	No	No									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	0.03	1	4.61E+06		3.23E+09	1.50E-04	1.75E-03	3.10E-02	1.38E-04	
Pentachloroethane	76-01-7		1	1.33E+04	4.47E+02	3.23E+09	2.17E+02			2.17E+02	
Pentachloronitrobenzene	82-68-8		1	5.95E+05		3.23E+09	7.52E+01			7.52E+01	
Pentachlorophenol	87-86-5	0.25	1			3.23E+09	4.89E+01	6.84E+01	1.62E+08	2.85E+01	
Pentaerythritol tetranitrate (PETN)	78-11-5	0.1	1			3.23E+09	4.89E+03	1.71E+04		3.80E+03	
Pentamethyl dipropylenetriamine	3855-32-1	0.1	1			3.23E+09					
Pentane, n-	109-66-0		1	1.07E+03	3.88E+02	3.23E+09					
Pentyl Alcohol, N-	71-41-0		1	3.91E+04	3.04E+03	3.23E+09					
Perchlorate and Perchlorate Salts	14797-73-0		1			3.23E+09					
Perfluorobutane Sulfonate	375-73-5		1	1.82E+05		3.23E+09					
Perfluorooctane Sulphonic Acid	1763-23-1		1	1.48E+05		3.23E+09					
Perfluorooctanoic acid	335-67-1		1	3.00E+04		3.23E+09					
Permethrin	52645-53-1	0.1	1			3.23E+09					
Perylene	198-55-0	0.13	1			3.23E+09					
Pesticides (total)	NA	0.1	1			3.23E+09					
Pesticides, organochlorinated (each)	NA	0.1	1			3.23E+09					
Pesticides, organochlorinated (total)	NA	0.1	1			3.23E+09					
Phenacetin	62-44-2	0.1	1			3.23E+09	8.89E+03	3.11E+04	1.31E+09	6.91E+03	
Phenanthrene	85-01-8	0.13	1	8.87E+05		3.23E+09					
Phenmedipham	13684-63-4	0.1	1			3.23E+09					
Phenol	108-95-2	0.1	1			3.23E+09					
Phenothiazine	92-84-2	0.1	1			3.23E+09					
Phenyl Isothiocyanate	103-72-0		1	9.76E+03	1.29E+02	3.23E+09					
Phenylenediamine, m-	108-45-2	0.1	1			3.23E+09					
Phenylenediamine, o-	95-54-5	0.1	1			3.23E+09	4.16E+02	1.46E+03		3.23E+02	
Phenylenediamine, p-	106-50-3	0.1	1			3.23E+09					
Phenylmercuric Acetate	62-38-4	0.1	1			3.23E+09					
Phenylphenol, 2-	90-43-7	0.1	1			3.23E+09	1.01E+04	3.53E+04		7.84E+03	
Phorate	298-02-2	0.1	1			3.23E+09					
Phosgene	75-44-5		1	1.35E+03	1.61E+03	3.23E+09					
Phosmet	732-11-6	0.1	1			3.23E+09					
Phosphine	7803-51-2		1			3.23E+09					
Phosphoric Acid	7664-38-2		1			3.23E+09					
Phosphorus (total)	NA		1			3.23E+09					
Phosphorus pentoxide	1314-56-3		1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4				4.69E-03	5.47E-02	1.61E+01	4.32E-03	1.38E-04 ca*
Pentachloroethane	76-01-7								2.17E+02 ca
Pentachloronitrobenzene	82-68-8				2.01E+04			2.01E+04	7.52E+01 ca
Pentachlorophenol	87-86-5				3.35E+04	4.69E+04		1.95E+04	2.85E+01 ca
Pentaerythritol tetranitrate (PETN)	78-11-5				1.34E+04	4.69E+04		1.04E+04	3.80E+03 ca**
Pentamethyl dipropylenetriamine	3855-32-1								
Pentane, n-	109-66-0						9.42E+04	9.42E+04	9.42E+04 sat
Pentyl Alcohol, N-	71-41-0								
Perchlorate and Perchlorate Salts	14797-73-0				4.69E+03			4.69E+03	4.69E+03 nc
Perfluorobutane Sulfonate	375-73-5				1.34E+05			1.34E+05	1.34E+05 max
Perfluorooctane Sulphonic Acid	1763-23-1								
Perfluorooctanoic acid	335-67-1								
Permethrin	52645-53-1				3.35E+05	1.17E+06		2.61E+05	2.61E+05 max
Perylene	198-55-0								
Pesticides (total)	NA								
Pesticides, organochlorinated (each)	NA								
Pesticides, organochlorinated (total)	NA								
Phenacetin	62-44-2								6.91E+03 ca
Phenanthrene	85-01-8								
Phenmedipham	13684-63-4				1.68E+06	5.86E+06		1.30E+06	1.30E+06 max
Phenol	108-95-2				2.01E+06	7.03E+06	5.66E+10	1.56E+06	1.56E+06 max
Phenothiazine	92-84-2				3.35E+03	1.17E+04		2.61E+03	2.61E+03 nc
Phenyl Isothiocyanate	103-72-0								
Phenylenediamine, m-	108-45-2				4.02E+04	1.41E+05		3.13E+04	3.13E+04 nc
Phenylenediamine, o-	95-54-5								3.23E+02 ca
Phenylenediamine, p-	106-50-3				1.27E+06	4.46E+06		9.90E+05	9.90E+05 max
Phenylmercuric Acetate	62-38-4				5.36E+02	1.88E+03		4.17E+02	4.17E+02 nc
Phenylphenol, 2-	90-43-7								7.84E+03 ca
Phorate	298-02-2				1.34E+03	4.69E+03		1.04E+03	1.04E+03 nc
Phosgene	75-44-5						3.56E+01	3.56E+01	3.56E+01 nc
Phosmet	732-11-6				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Phosphine	7803-51-2				2.01E+03		8.50E+07	2.01E+03	2.01E+03 nc
Phosphoric Acid	7664-38-2				3.26E+08		2.83E+09	2.92E+08	2.92E+08 max
Phosphorus (total)	NA								
Phosphorus pentoxide	1314-56-3								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Phosphorus, White	7723-14-0	No	Yes					2.00E-05	U			1
Phthalates (total)	NA	No	No									1
Phthalic Acid, P-	100-21-0	No	No					1.00E+00	U			1
Phthalic Acid, m-	121-91-5	No	No									1
Phthalic Acid, o-	88-99-3	No	No									1
Phthalic Anhydride	85-44-9	No	No					2.00E+00	U	2.00E-02	U	1
Picloram	1918-02-1	No	No					7.00E-02	U			1
Picoline, 2-	109-06-8	No	Yes									1
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	No	No					1.00E-04	U			1
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	No	No									1
Piperidine	110-89-4	Yes	Yes									1
Pirimiphos, Methyl	29232-93-7	No	No					1.00E-02	U			1
Polybrominated Biphenyls	59536-65-1	No	No	3.00E+01	U	8.60E-03	U	7.00E-06	U			1
Polychlorinated Biphenyls (high risk)	1336-36-3	No	Yes	2.00E+00	U	5.71E-04	U					1
Polycyclic aromatic hydrocarbons (PAH), Total	NA	No	No									1
Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight)	NA	No	No									1
Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight)	NA	No	No									1
Polycyclic chlorinated hydrocarbons (total)	NA	No	No									1
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	No	No							6.00E-04	U	1
Polyphosphoric acid	8017-16-1	No	No					4.86E+01	U			1
Potassium	7440-09-7	No	No									1
Potassium Cyanide	151-50-8	No	No					2.00E-03	U			1
Potassium Perchlorate	7778-74-7	No	No					7.00E-04	U			1
Potassium Perfluorobutane Sulfonate	29420-49-3	No	No					2.00E-02	U			1
Potassium Silver Cyanide	506-61-6	No	No					5.00E-03	U			0.04
Potassium chlorate	3811-04-9	No	No									1
Potassium tripolyphosphate	13845-36-8	No	No					4.86E+01	U			1
Praseodymium	7440-10-0	No	No									1
Praseodymium Chloride (Stable, Nonradioactive)	10361-79-2	No	No									1
Prochloraz	67747-09-5	No	No	1.50E-01	U			9.00E-03	U			1
Profluralin	26399-36-0	No	Yes					6.00E-03	U			1

Site-specific
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ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Phosphorus, White	7723-14-0		1	9.55E+03		3.23E+09					
Phthalates (total)	NA	0.1	1			3.23E+09					
Phthalic Acid, P-	100-21-0	0.1	1			3.23E+09					
Phthalic Acid, m-	121-91-5	0.1	1			3.23E+09					
Phthalic Acid, o-	88-99-3	0.1	1			3.23E+09					
Phthalic Anhydride	85-44-9	0.1	1			3.23E+09					
Picloram	1918-02-1	0.1	1			3.23E+09					
Picoline, 2-	109-06-8		1	1.05E+05	7.90E+05	3.23E+09					
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	0.1	1			3.23E+09					
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	0.1	1			3.23E+09					
Piperidine	110-89-4		1	1.12E+05	1.96E+05	3.23E+09					
Pirimiphos, Methyl	29232-93-7	0.1	1			3.23E+09					
Polybrominated Biphenyls	59536-65-1	0.1	1			3.23E+09	6.52E-01	2.28E+00	9.61E+04	5.07E-01	
Polychlorinated Biphenyls (high risk)	1336-36-3	0.14	1	1.08E+06		3.23E+09	9.77E+00	2.44E+01	4.85E+02	6.88E+00	
Polycyclic aromatic hydrocarbons (PAH), Total	NA	0.13	1			3.23E+09					
Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight)	NA	0.13	1			3.23E+09					
Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight)	NA	0.13	1			3.23E+09					
Polycyclic chlorinated hydrocarbons (total)	NA	0.1	1			3.23E+09					
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	0.1	1			3.23E+09					
Polyphosphoric acid	8017-16-1		1			3.23E+09					
Potassium	7440-09-7		1			3.23E+09					
Potassium Cyanide	151-50-8		1			3.23E+09					
Potassium Perchlorate	7778-74-7		1			3.23E+09					
Potassium Perfluorobutane Sulfonate	29420-49-3	0.1	1			3.23E+09					
Potassium Silver Cyanide	506-61-6		1			3.23E+09					
Potassium chlorate	3811-04-9		1			3.23E+09					
Potassium tripolyphosphate	13845-36-8		1			3.23E+09					
Praseodymium	7440-10-0		1			3.23E+09					
Praseodymium Chloride (Stable, Nonradioactive)	10361-79-2		1			3.23E+09					
Prochloraz	67747-09-5	0.1	1			3.23E+09	1.30E+02	4.56E+02		1.01E+02	
Profluralin	26399-36-0		1	5.78E+05		3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Phosphorus, White	7723-14-0				1.34E+02			1.34E+02	1.34E+02 nc
Phthalates (total)	NA								
Phthalic Acid, P-	100-21-0				6.70E+06	2.34E+07		5.21E+06	5.21E+06 max
Phthalic Acid, m-	121-91-5								
Phthalic Acid, o-	88-99-3								
Phthalic Anhydride	85-44-9				1.34E+07	4.69E+07	5.66E+09	1.04E+07	1.04E+07 max
Picloram	1918-02-1				4.69E+05	1.64E+06		3.65E+05	3.65E+05 max
Picoline, 2-	109-06-8								
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3				6.70E+02	2.34E+03		5.21E+02	5.21E+02 nc
Picric Acid (2,4,6-Trinitrophenol)	88-89-1								
Piperidine	110-89-4								
Pirimiphos, Methyl	29232-93-7				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Polybrominated Biphenyls	59536-65-1				4.69E+01	1.64E+02		3.65E+01	5.07E-01 ca*
Polychlorinated Biphenyls (high risk)	1336-36-3								6.88E+00 ca
Polycyclic aromatic hydrocarbons (PAH), Total	NA								
Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight)	NA								
Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight)	NA								
Polycyclic chlorinated hydrocarbons (total)	NA								
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9						1.70E+08	1.70E+08	1.70E+08 max
Polyphosphoric acid	8017-16-1				3.26E+08			3.26E+08	3.26E+08 max
Potassium	7440-09-7								
Potassium Cyanide	151-50-8				1.34E+04			1.34E+04	1.34E+04 nc
Potassium Perchlorate	7778-74-7				4.69E+03			4.69E+03	4.69E+03 nc
Potassium Perfluorobutane Sulfonate	29420-49-3				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Potassium Silver Cyanide	506-61-6				3.35E+04			3.35E+04	3.35E+04 nc
Potassium chlorate	3811-04-9								
Potassium tripolyphosphate	13845-36-8				3.26E+08			3.26E+08	3.26E+08 max
Praseodymium	7440-10-0								
Praseodymium Chloride (Stable, Nonradioactive)	10361-79-2								
Prochloraz	67747-09-5				6.03E+04	2.11E+05		4.69E+04	1.01E+02 ca
Profluralin	26399-36-0				4.02E+04			4.02E+04	4.02E+04 nc

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Promethium	7440-12-2	No	No									1
Prometon	1610-18-0	No	No					1.50E-02	U			1
Prometryn	7287-19-6	No	No					4.00E-03	U			1
Propachlor	1918-16-7	No	No					1.30E-02	U			1
Propanil	709-98-8	No	No					5.00E-03	U			1
Propanoic acid, 2-(2,4-dichlorophenoxy)-	120-36-5	No	No									1
Propargite	2312-35-8	No	No					2.00E-02	U			1
Propargyl Alcohol	107-19-7	No	Yes					2.00E-03	U			1
Propazine	139-40-2	No	No					2.00E-02	U			1
Propham	122-42-9	No	No					2.00E-02	U			1
Propiconazole	60207-90-1	No	No					1.30E-02	U			1
Propionaldehyde	123-38-6	No	Yes							8.00E-03	U	1
Propionitrile	107-12-0	No	Yes									1
Propionitrile, 3-(NN-dimethylamino)	1738-25-6	No	Yes									1
Propyl Alcohol, n-	71-23-8	No	Yes									1
Propyl benzene	103-65-1	No	Yes					1.00E-01	U	1.00E+00	U	1
Propylene	115-07-1	No	Yes							3.00E+00	U	1
Propylene Glycol	57-55-6	No	No					2.00E+01	U			1
Propylene Glycol Dinitrate	6423-43-4	No	No							2.72E-04	U	1
Propylene Glycol Monoethyl Ether	1569-02-4	No	Yes					7.00E-01	U			1
Propylene Glycol Monomethyl Ether	107-98-2	No	Yes					7.00E-01	U	2.00E+00	U	1
Propylene Oxide	75-56-9	No	Yes	2.40E-01	U	3.70E-06	U			3.00E-02	U	1
Prussian Blue (Ferric Ferrocyanide)	14038-43-8	No	No									1
Pursuit	81335-77-5	No	No					2.50E-01	U			1
Pydrin	51630-58-1	No	No					2.50E-02	U			1
Pyrazinyl phosphorothioate, O,O-diethyl O-2-	297-97-2	No	No									1
Pyrene	129-00-0	No	Yes					3.00E-02	U			1
Pyridine	110-86-1	No	Yes					1.00E-03	U			1
Quinalphos	13593-03-8	No	No					5.00E-04	U			1
Quinoline	91-22-5	No	No	3.00E+00	U							1
Refractory Ceramic Fibers	NA	No	No							3.00E-02	U	1
Resmethrin	10453-86-8	No	No					3.00E-02	U			1
Resorcinol	108-46-3	No	No									1
Ronnel	299-84-3	No	Yes					5.00E-02	U			1
Rotenone	83-79-4	No	No					4.00E-03	U			1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Promethium	7440-12-2		1			3.23E+09					
Prometon	1610-18-0	0.1	1			3.23E+09					
Prometryn	7287-19-6	0.1	1			3.23E+09					
Propachlor	1918-16-7	0.1	1			3.23E+09					
Propanil	709-98-8	0.1	1			3.23E+09					
Propanoic acid, 2-(2,4-dichlorophenoxy)-	120-36-5	0.1	1			3.23E+09					
Propargite	2312-35-8	0.1	1			3.23E+09					
Propargyl Alcohol	107-19-7		1	8.66E+04	1.11E+05	3.23E+09					
Propazine	139-40-2	0.1	1			3.23E+09					
Propham	122-42-9	0.1	1			3.23E+09					
Propiconazole	60207-90-1	0.1	1			3.23E+09					
Propionaldehyde	123-38-6		1	1.24E+04	3.26E+04	3.23E+09					
Propionitrile	107-12-0		1	2.07E+04	1.56E+04	3.23E+09					
Propionitrile, 3-(NN-dimethylamino)	1738-25-6		1	2.62E+05	1.60E+05	3.23E+09					
Propyl Alcohol, n-	71-23-8		1	4.01E+04	1.11E+05	3.23E+09					
Propyl benzene	103-65-1		1	9.64E+03	2.64E+02	3.23E+09					
Propylene	115-07-1		1	9.70E+02	3.49E+02	3.23E+09					
Propylene Glycol	57-55-6	0.1	1			3.23E+09					
Propylene Glycol Dinitrate	6423-43-4	0.1	1			3.23E+09					
Propylene Glycol Monoethyl Ether	1569-02-4		1	2.14E+05	8.52E+04	3.23E+09					
Propylene Glycol Monomethyl Ether	107-98-2		1	1.08E+05	1.06E+05	3.23E+09					
Propylene Oxide	75-56-9		1	1.42E+04	7.77E+04	3.23E+09	8.14E+01		9.77E+02	7.52E+01	
Prussian Blue (Ferric Ferrocyanide)	14038-43-8	0.1	1			3.23E+09					
Pursuit	81335-77-5	0.1	1			3.23E+09					
Pydrin	51630-58-1	0.1	1			3.23E+09					
Pyrazinyl phosphorothioate, O,O-diethyl O-2-	297-97-2	0.1	1			3.23E+09					
Pyrene	129-00-0	0.13	1	3.28E+06		3.23E+09					
Pyridine	110-86-1		1	7.64E+04	5.30E+05	3.23E+09					
Quinalphos	13593-03-8	0.1	1			3.23E+09					
Quinoline	91-22-5	0.1	1			3.23E+09	6.52E+00	2.28E+01		5.07E+00	
Refractory Ceramic Fibers	NA		1			3.23E+09					
Resmethrin	10453-86-8	0.1	1			3.23E+09					
Resorcinol	108-46-3	0.1	1			3.23E+09					
Ronnel	299-84-3		1	6.40E+05		3.23E+09					
Rotenone	83-79-4	0.1	1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Promethium	7440-12-2								
Prometon	1610-18-0				1.01E+05	3.52E+05		7.82E+04	7.82E+04 nc
Prometryn	7287-19-6				2.68E+04	9.38E+04		2.08E+04	2.08E+04 nc
Propachlor	1918-16-7				8.71E+04	3.05E+05		6.78E+04	6.78E+04 nc
Propanil	709-98-8				3.35E+04	1.17E+05		2.61E+04	2.61E+04 nc
Propanoic acid, 2-(2,4-dichlorophenoxy)-	120-36-5								
Propargite	2312-35-8				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Propargyl Alcohol	107-19-7				1.34E+04			1.34E+04	1.34E+04 nc
Propazine	139-40-2				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Propham	122-42-9				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Propiconazole	60207-90-1				8.71E+04	3.05E+05		6.78E+04	6.78E+04 nc
Propionaldehyde	123-38-6						8.66E+03	8.66E+03	8.66E+03 nc
Propionitrile	107-12-0								
Propionitrile, 3-(NN-dimethylamino)	1738-25-6								
Propyl Alcohol, n-	71-23-8								
Propyl benzene	103-65-1				6.70E+05		8.45E+05	3.74E+05	3.74E+05 sat
Propylene	115-07-1						2.55E+05	2.55E+05	2.55E+05 sat
Propylene Glycol	57-55-6				1.34E+08	4.69E+08		1.04E+08	1.04E+08 max
Propylene Glycol Dinitrate	6423-43-4						7.70E+07	7.70E+07	7.70E+07 max
Propylene Glycol Monoethyl Ether	1569-02-4				4.69E+06			4.69E+06	4.69E+06 sat
Propylene Glycol Monomethyl Ether	107-98-2				4.69E+06		1.89E+07	3.76E+06	3.76E+06 sat
Propylene Oxide	75-56-9						3.72E+04	3.72E+04	7.52E+01 ca
Prussian Blue (Ferric Ferrocyanide)	14038-43-8								
Pursuit	81335-77-5				1.68E+06	5.86E+06		1.30E+06	1.30E+06 max
Pydrin	51630-58-1				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
Pyrazinyl phosphorothioate, O,O-diethyl O-2-	297-97-2								
Pyrene	129-00-0				2.01E+05	5.41E+05		1.47E+05	1.47E+05 max
Pyridine	110-86-1				6.70E+03			6.70E+03	6.70E+03 nc
Quinalphos	13593-03-8				3.35E+03	1.17E+04		2.61E+03	2.61E+03 nc
Quinoline	91-22-5								5.07E+00 ca
Refractory Ceramic Fibers	NA						8.50E+09	8.50E+09	8.50E+09 max
Resmethrin	10453-86-8				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Resorcinol	108-46-3								
Ronnel	299-84-3				3.35E+05			3.35E+05	3.35E+05 max
Rotenone	83-79-4				2.68E+04	9.38E+04		2.08E+04	2.08E+04 nc

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Safrole	94-59-7	Yes	No	2.20E-01	U	6.30E-05	U					1
Samarium Chloride (Stable, Nonradioactive)	10361-82-7	No	No									1
Samarium Nitrate (Stable, Nonradioactive)	10361-83-8	No	No									1
Savey	78587-05-0	No	No					2.50E-02	U			1
Scandium	7440-20-2	No	No									1
Selenious Acid	7783-00-8	No	No					5.00E-03	U			1
Selenite	14124-67-5	No	No									1
Selenium	7782-49-2	No	No					5.00E-03	U	2.00E-02	U	1
Selenium Sulfide	7446-34-6	No	No					5.00E-03	U	2.00E-02	U	1
Selenourea	630-10-4	No	No									1
Sethoxydim	74051-80-2	No	No					9.00E-02	U			1
Silica (crystalline, respirable)	7631-86-9	No	No							3.00E-03	U	1
Silicon	7440-21-3	No	No									1
Silver	7440-22-4	No	No					5.00E-03	U			0.04
Silver Cyanide	506-64-9	No	No					1.00E-01	U			0.04
Simazine	122-34-9	No	No	1.20E-01	U			5.00E-03	U			1
Sodium	7440-23-5	No	No									1
Sodium Acifluorfen	62476-59-9	No	No					1.30E-02	U			1
Sodium Azide	26628-22-8	No	No					4.00E-03	U			1
Sodium Chlorate	7775-09-9	No	No									1
Sodium Cyanide	143-33-9	No	No					1.00E-03	U			1
Sodium Dichromate	10588-01-9	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Sodium Diethyldithiocarbamate	148-18-5	No	No	2.70E-01	U			3.00E-02	U			1
Sodium Fluoride	7681-49-4	No	No					5.00E-02	U	1.30E-02	U	1
Sodium Fluoroacetate	62-74-8	No	No					2.00E-05	U			1
Sodium Hydroxide	1310-73-2	No	No									1
Sodium Metavanadate	13718-26-8	No	No					1.00E-03	U			1
Sodium Perchlorate	7601-89-0	No	No					7.00E-04	U			1
Sodium acid pyrophosphate	7758-16-9	No	No					4.86E+01	U			1
Sodium aluminum phosphate (acidic)	7785-88-8	No	No					4.86E+01	U			1
Sodium aluminum phosphate (anhydrous)	10279-59-1	No	No					4.86E+01	U			1
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	No	No					4.86E+01	U			1
Sodium hexametaphosphate	10124-56-8	No	No					4.86E+01	U			1
Sodium polyphosphate	68915-31-1	No	No					4.86E+01	U			1
Sodium trimetaphosphate	7785-84-4	No	No					4.86E+01	U			1

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Safrole	94-59-7	0.1	1			3.23E+09	3.02E+01	2.05E+02	7.15E+06	2.63E+01	
Samarium Chloride (Stable, Nonradioactive)	10361-82-7		1			3.23E+09					
Samarium Nitrate (Stable, Nonradioactive)	10361-83-8		1			3.23E+09					
Savey	78587-05-0	0.1	1			3.23E+09					
Scandium	7440-20-2		1			3.23E+09					
Selenious Acid	7783-00-8		1			3.23E+09					
Selenite	14124-67-5		1			3.23E+09					
Selenium	7782-49-2		1			3.23E+09					
Selenium Sulfide	7446-34-6		1			3.23E+09					
Selenourea	630-10-4	0.1	1			3.23E+09					
Sethoxydim	74051-80-2	0.1	1			3.23E+09					
Silica (crystalline, respirable)	7631-86-9		1			3.23E+09					
Silicon	7440-21-3		1			3.23E+09					
Silver	7440-22-4		1			3.23E+09					
Silver Cyanide	506-64-9		1			3.23E+09					
Simazine	122-34-9	0.1	1			3.23E+09	1.63E+02	5.70E+02		1.27E+02	
Sodium	7440-23-5		1			3.23E+09					
Sodium Acifluorfen	62476-59-9	0.1	1			3.23E+09					
Sodium Azide	26628-22-8		1			3.23E+09					
Sodium Chlorate	7775-09-9		1			3.23E+09					
Sodium Cyanide	143-33-9		1			3.23E+09					
Sodium Dichromate	10588-01-9		1			3.23E+09	1.33E+01		3.00E+03	1.32E+01	
Sodium Diethyldithiocarbamate	148-18-5	0.1	1			3.23E+09	7.24E+01	2.53E+02		5.63E+01	
Sodium Fluoride	7681-49-4		1			3.23E+09					
Sodium Fluoroacetate	62-74-8	0.1	1			3.23E+09					
Sodium Hydroxide	1310-73-2		1			3.23E+09					
Sodium Metavanadate	13718-26-8		1			3.23E+09					
Sodium Perchlorate	7601-89-0		1			3.23E+09					
Sodium acid pyrophosphate	7758-16-9		1			3.23E+09					
Sodium aluminum phosphate (acidic)	7785-88-8		1			3.23E+09					
Sodium aluminum phosphate (anhydrous)	10279-59-1		1			3.23E+09					
Sodium aluminum phosphate (tetrahydrate)	10305-76-7		1			3.23E+09					
Sodium hexametaphosphate	10124-56-8		1			3.23E+09					
Sodium polyphosphate	68915-31-1		1			3.23E+09					
Sodium trimetaphosphate	7785-84-4		1			3.23E+09					

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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Safrole	94-59-7								2.63E+01 ca
Samarium Chloride (Stable, Nonradioactive)	10361-82-7								
Samarium Nitrate (Stable, Nonradioactive)	10361-83-8								
Savey	78587-05-0				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
Scandium	7440-20-2								
Selenious Acid	7783-00-8				3.35E+04			3.35E+04	3.35E+04 nc
Selenite	14124-67-5								
Selenium	7782-49-2				3.35E+04		5.66E+09	3.35E+04	3.35E+04 nc
Selenium Sulfide	7446-34-6				3.35E+04		5.66E+09	3.35E+04	3.35E+04 nc
Selenourea	630-10-4								
Sethoxydim	74051-80-2				6.03E+05	2.11E+06		4.69E+05	4.69E+05 max
Silica (crystalline, respirable)	7631-86-9						8.50E+08	8.50E+08	8.50E+08 max
Silicon	7440-21-3								
Silver	7440-22-4				3.35E+04			3.35E+04	3.35E+04 nc
Silver Cyanide	506-64-9				6.70E+05			6.70E+05	6.70E+05 max
Simazine	122-34-9				3.35E+04	1.17E+05		2.61E+04	1.27E+02 ca
Sodium	7440-23-5								
Sodium Acifluorfen	62476-59-9				8.71E+04	3.05E+05		6.78E+04	6.78E+04 nc
Sodium Azide	26628-22-8				2.68E+04			2.68E+04	2.68E+04 nc
Sodium Chlorate	7775-09-9								
Sodium Cyanide	143-33-9				6.70E+03			6.70E+03	6.70E+03 nc
Sodium Dichromate	10588-01-9				1.34E+05		5.66E+07	1.34E+05	1.32E+01 ca
Sodium Diethyldithiocarbamate	148-18-5				2.01E+05	7.03E+05		1.56E+05	5.63E+01 ca
Sodium Fluoride	7681-49-4				3.35E+05		3.68E+09	3.35E+05	3.35E+05 max
Sodium Fluoroacetate	62-74-8				1.34E+02	4.69E+02		1.04E+02	1.04E+02 nc
Sodium Hydroxide	1310-73-2								
Sodium Metavanadate	13718-26-8				6.70E+03			6.70E+03	6.70E+03 nc
Sodium Perchlorate	7601-89-0				4.69E+03			4.69E+03	4.69E+03 nc
Sodium acid pyrophosphate	7758-16-9				3.26E+08			3.26E+08	3.26E+08 max
Sodium aluminum phosphate (acidic)	7785-88-8				3.26E+08			3.26E+08	3.26E+08 max
Sodium aluminum phosphate (anhydrous)	10279-59-1				3.26E+08			3.26E+08	3.26E+08 max
Sodium aluminum phosphate (tetrahydrate)	10305-76-7				3.26E+08			3.26E+08	3.26E+08 max
Sodium hexametaphosphate	10124-56-8				3.26E+08			3.26E+08	3.26E+08 max
Sodium polyphosphate	68915-31-1				3.26E+08			3.26E+08	3.26E+08 max
Sodium trimetaphosphate	7785-84-4				3.26E+08			3.26E+08	3.26E+08 max

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Inhalation Unit Risk (ug/m^3)$^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Sodium tripolyphosphate	7758-29-4	No	No					4.86E+01	U			1
Stearyl Acetate	822-23-1	No	Yes									1
Stirofos (Tetrachlorovinphos)	961-11-5	No	No	2.40E-02	U			3.00E-02	U			1
Strontium Chromate	7789-06-2	Yes	No	5.00E-01	U	1.50E-01	U	2.00E-02	U	2.00E-04	U	0.025
Strontium, Stable	7440-24-6	No	No					6.00E-01	U			1
Strychnine	57-24-9	No	No					3.00E-04	U			1
Styrene	100-42-5	No	Yes					2.00E-01	U	1.00E+00	U	1
Styrene-Acrylonitrile (SAN) Trimer	NA	No	No					3.00E-03	U			1
Sulfate	14808-79-8	No	No									1
Sulfide	18496-25-8	No	No									1
Sulfolane	126-33-0	No	No					1.00E-03	U	2.00E-03	U	1
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	No	No					8.00E-04	U			1
Sulfur	7704-34-9	No	No									1
Sulfur Dioxide	7446-09-5	No	Yes									1
Sulfur Mustard	505-60-2	No	Yes									1
Sulfur Trioxide	7446-11-9	No	Yes							1.00E-03	U	1
Sulfuric Acid	7664-93-9	No	No							1.00E-03	U	1
Systhane	88671-89-0	No	No					2.50E-02	U			1
TCDD, 2,3,7,8-	1746-01-6	No	Yes	1.30E+05	U	3.80E+01	U	7.00E-10	U	4.00E-08	U	1
TCDF, 2,3,7,8-	51207-31-9	No	Yes	1.30E+04	U	3.80E+00	U	7.00E-09	U	4.00E-07	U	1
TCMTB	21564-17-0	No	No					3.00E-02	U			1
Tebuthiuron	34014-18-1	No	No					7.00E-02	U			1
Technetium	7440-26-8	No	No									1
Tellurium	13494-80-9	No	No									1
Temephos	3383-96-8	No	No					2.00E-02	U			1
Terbacil	5902-51-2	No	No					1.30E-02	U			1
Terbufos	13071-79-9	No	Yes					2.50E-05	U			1
Terbutryn	886-50-0	No	No					1.00E-03	U			1
Tetrabutyl Lead	1920-90-7	No	Yes									1
Tetrachloroaniline, 2,3,5,6-	3481-20-7	No	No									1
Tetrachlorobenzene, 1,2,3,4-	634-66-2	No	Yes									1
Tetrachlorobenzene, 1,2,4,5-	95-94-3	No	Yes					3.00E-04	U			1
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	No	No	1.30E+01	U	3.80E-03	U	7.00E-06	U	4.00E-04	U	1
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	No	Yes	3.90E+01	U	1.14E-02	U	2.33E-06	U	1.33E-04	U	1
Tetrachloroethane, 1,1,1,2-	630-20-6	No	Yes	2.60E-02	U	7.40E-06	U	3.00E-02	U			1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Sodium tripolyphosphate	7758-29-4		1			3.23E+09					
Stearyl Acetate	822-23-1		1	8.92E+04		3.23E+09					
Stirofos (Tetrachlorovinphos)	961-11-5	0.1	1			3.23E+09	8.14E+02	2.85E+03		6.33E+02	
Strontium Chromate	7789-06-2		1			3.23E+09	1.33E+01		3.00E+03	1.32E+01	
Strontium, Stable	7440-24-6		1			3.23E+09					
Strychnine	57-24-9	0.1	1			3.23E+09					
Styrene	100-42-5		1	1.29E+04	8.67E+02	3.23E+09					
Styrene-Acrylonitrile (SAN) Trimer	NA	0.1	1			3.23E+09					
Sulfate	14808-79-8		1			3.23E+09					
Sulfide	18496-25-8		1			3.23E+09					
Sulfolane	126-33-0	0.1	1			3.23E+09					
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	0.1	1			3.23E+09					
Sulfur	7704-34-9		1			3.23E+09					
Sulfur Dioxide	7446-09-5		1			3.23E+09					
Sulfur Mustard	505-60-2		1	1.21E+05	1.08E+03	3.23E+09					
Sulfur Trioxide	7446-11-9		1			3.23E+09					
Sulfuric Acid	7664-93-9		1			3.23E+09					
Systhane	88671-89-0	0.1	1			3.23E+09					
TCDD, 2,3,7,8-	1746-01-6	0.03	1	2.71E+06		3.23E+09	1.50E-04	1.75E-03	1.82E-02	1.37E-04	
TCDF, 2,3,7,8-	51207-31-9	0.03	1	4.72E+06		3.23E+09	1.50E-03	1.75E-02	3.17E-01	1.38E-03	
TCMTB	21564-17-0	0.1	1			3.23E+09					
Tebuthiuron	34014-18-1	0.1	1			3.23E+09					
Technetium	7440-26-8		1			3.23E+09					
Tellurium	13494-80-9		1			3.23E+09					
Temephos	3383-96-8	0.1	1			3.23E+09					
Terbacil	5902-51-2	0.1	1			3.23E+09					
Terbufos	13071-79-9		1	3.64E+05	3.09E+01	3.23E+09					
Terbutryn	886-50-0	0.1	1			3.23E+09					
Tetrabutyl Lead	1920-90-7		1	6.41E+03		3.23E+09					
Tetrachloroaniline, 2,3,5,6-	3481-20-7	0.1	1			3.23E+09					
Tetrachlorobenzene, 1,2,3,4-	634-66-2		1	8.26E+04		3.23E+09					
Tetrachlorobenzene, 1,2,4,5-	95-94-3		1	6.99E+04		3.23E+09					
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	0.14	1			3.23E+09	1.50E+00	3.76E+00	2.17E+05	1.07E+00	
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	0.14	1	1.00E+06		3.23E+09	5.01E-01	1.25E+00	2.24E+01	3.52E-01	
Tetrachloroethane, 1,1,1,2-	630-20-6		1	7.83E+03	6.80E+02	3.23E+09	7.52E+02		2.70E+02	1.99E+02	

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Sodium tripolyphosphate	7758-29-4				3.26E+08			3.26E+08	3.26E+08 max
Stearyl Acetate	822-23-1								
Stirofos (Tetrachlorovinphos)	961-11-5				2.01E+05	7.03E+05		1.56E+05	6.33E+02 ca
Strontium Chromate	7789-06-2				1.34E+05		5.66E+07	1.34E+05	1.32E+01 ca
Strontium, Stable	7440-24-6				4.02E+06			4.02E+06	4.02E+06 max
Strychnine	57-24-9				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Styrene	100-42-5				1.34E+06		1.13E+06	6.14E+05	6.14E+05 sat
Styrene-Acrylonitrile (SAN) Trimer	NA				2.01E+04	7.03E+04		1.56E+04	1.56E+04 nc
Sulfate	14808-79-8								
Sulfide	18496-25-8								
Sulfolane	126-33-0				6.70E+03	2.34E+04	5.66E+08	5.21E+03	5.21E+03 nc
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9				5.36E+03	1.88E+04		4.17E+03	4.17E+03 nc
Sulfur	7704-34-9								
Sulfur Dioxide	7446-09-5								
Sulfur Mustard	505-60-2								
Sulfur Trioxide	7446-11-9						2.83E+08	2.83E+08	2.83E+08 max
Sulfuric Acid	7664-93-9						2.83E+08	2.83E+08	2.83E+08 max
Systhane	88671-89-0				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
TCDD, 2,3,7,8-	1746-01-6				4.69E-03	5.47E-02	9.48E+00	4.32E-03	1.37E-04 ca*
TCDF, 2,3,7,8-	51207-31-9				4.69E-02	5.47E-01	1.65E+02	4.32E-02	1.38E-03 ca*
TCMTB	21564-17-0				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Tebuthiuron	34014-18-1				4.69E+05	1.64E+06		3.65E+05	3.65E+05 max
Technetium	7440-26-8								
Tellurium	13494-80-9								
Temephos	3383-96-8				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Terbacil	5902-51-2				8.71E+04	3.05E+05		6.78E+04	6.78E+04 nc
Terbufos	13071-79-9				1.68E+02			1.68E+02	1.68E+02 sat
Terbutryn	886-50-0				6.70E+03	2.34E+04		5.21E+03	5.21E+03 nc
Tetrabutyl Lead	1920-90-7								
Tetrachloroaniline, 2,3,5,6-	3481-20-7								
Tetrachlorobenzene, 1,2,3,4-	634-66-2								
Tetrachlorobenzene, 1,2,4,5-	95-94-3				2.01E+03			2.01E+03	2.01E+03 nc
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3				4.69E+01	1.17E+02	1.13E+08	3.35E+01	1.07E+00 ca*
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4				1.56E+01	3.90E+01	1.17E+04	1.11E+01	3.52E-01 ca*
Tetrachloroethane, 1,1,1,2-	630-20-6				2.01E+05			2.01E+05	1.99E+02 ca

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Tetrachloroethane, 1,1,2,2-	79-34-5	No	Yes	2.00E-01	U	5.80E-05	U	2.00E-02	U			1
Tetrachloroethylene	127-18-4	No	Yes	2.10E-03	U	2.60E-07	U	6.00E-03	U	4.00E-02	U	1
Tetrachlorophenol, 2,3,4,5-	4901-51-3	No	No									1
Tetrachlorophenol, 2,3,4,6-	58-90-2	No	No					3.00E-02	U			1
Tetrachlorophenols (total)	25167-83-3	No	No									1
Tetrachloroterephthalate, 2,3,5,6-	2136-79-0	No	No									1
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	No	Yes	2.00E+01	U							1
Tetraethyl Dithiopyrophosphate	3689-24-5	No	No					5.00E-04	U			1
Tetraethyl Lead	78-00-2	No	Yes					1.00E-07	U			1
Tetrafluoroethane, 1,1,1,2-	811-97-2	No	Yes							8.00E+01	U	1
Tetrahydrofuran	109-99-9	No	Yes					9.00E-01	U	2.00E+00	U	1
Tetrahydrothiophene	110-01-0	No	Yes									1
Tetramethyl Lead	75-74-1	No	Yes									1
Tetramethylcyclohexane	30501-43-0	No	Yes									1
Tetrapotassium phosphate	7320-34-5	No	No					4.86E+01	U			1
Tetrapropyl Lead	3440-75-3	No	Yes									1
Tetrasodium pyrophosphate	7722-88-5	No	No					4.86E+01	U			1
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	No	No					2.00E-03	U			1
Thallic Oxide	1314-32-5	No	No									1
Thallium (I) Nitrate	10102-45-1	No	No					7.00E-06	U			1
Thallium (Soluble Salts)	7440-28-0	No	No					1.00E-05	U			1
Thallium Acetate	563-68-8	No	No					6.00E-06	U			1
Thallium Carbonate	6533-73-9	No	No					2.00E-05	U			1
Thallium Chloride	7791-12-0	No	No					6.00E-06	U			1
Thallium Selenite	12039-52-0	No	No									1
Thallium Sulfate	7446-18-6	No	No					2.00E-05	U			1
Thiobencarb	28249-77-6	No	No					1.00E-02	U			1
Thiocyanates	NA	No	No					2.00E-04	U			1
Thiocyanic Acid	463-56-9	No	Yes					2.00E-04	U			1
Thiodiglycol	111-48-8	No	No					7.00E-02	U			1
Thiofanox	39196-18-4	No	No					3.00E-04	U			1
Thiophanate, Methyl	23564-05-8	No	No					8.00E-02	U			1
Thiophene	110-02-1	No	Yes									1
Thiram	137-26-8	No	No					5.00E-03	U			1
Thorium	NA	No	No									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Tetrachloroethane, 1,1,2,2-	79-34-5		1	2.08E+04	1.90E+03	3.23E+09	9.77E+01		9.18E+01	4.73E+01	
Tetrachloroethylene	127-18-4		1	3.24E+03	1.66E+02	3.23E+09	9.31E+03		3.18E+03	2.37E+03	
Tetrachlorophenol, 2,3,4,5-	4901-51-3	0.1	1			3.23E+09					
Tetrachlorophenol, 2,3,4,6-	58-90-2	0.1	1			3.23E+09					
Tetrachlorophenols (total)	25167-83-3	0.1	1			3.23E+09					
Tetrachloroterephthalate, 2,3,5,6-	2136-79-0	0.1	1			3.23E+09					
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1		1	1.46E+05		3.23E+09	9.77E-01			9.77E-01	
Tetraethyl Dithiopyrophosphate	3689-24-5	0.1	1			3.23E+09					
Tetraethyl Lead	78-00-2		1	2.64E+03	2.43E+00	3.23E+09					
Tetrafluoroethane, 1,1,1,2-	811-97-2		1	1.68E+03	1.09E+03	3.23E+09					
Tetrahydrofuran	109-99-9	0.03	1	1.69E+04	1.65E+05	3.23E+09					
Tetrahydrothiophene	110-01-0		1	1.81E+04	3.44E+03	3.23E+09					
Tetramethyl Lead	75-74-1		1	1.89E+03	3.64E+01	3.23E+09					
Tetramethylcyclohexane	30501-43-0		1			3.23E+09					
Tetrapotassium phosphate	7320-34-5		1			3.23E+09					
Tetrapropyl Lead	3440-75-3		1	3.65E+03		3.23E+09					
Tetrasodium pyrophosphate	7722-88-5		1			3.23E+09					
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	0.00065	1			3.23E+09					
Thallic Oxide	1314-32-5		1			3.23E+09					
Thallium (I) Nitrate	10102-45-1		1			3.23E+09					
Thallium (Soluble Salts)	7440-28-0		1			3.23E+09					
Thallium Acetate	563-68-8	0.1	1			3.23E+09					
Thallium Carbonate	6533-73-9	0.1	1			3.23E+09					
Thallium Chloride	7791-12-0		1			3.23E+09					
Thallium Selenite	12039-52-0		1			3.23E+09					
Thallium Sulfate	7446-18-6		1			3.23E+09					
Thiobencarb	28249-77-6	0.1	1			3.23E+09					
Thiocyanates	NA		1			3.23E+09					
Thiocyanic Acid	463-56-9		1			3.23E+09					
Thiodiglycol	111-48-8	0.0075	1			3.23E+09					
Thiofanox	39196-18-4	0.1	1			3.23E+09					
Thiophanate, Methyl	23564-05-8	0.1	1			3.23E+09					
Thiophene	110-02-1		1	5.77E+03	1.80E+03	3.23E+09					
Thiram	137-26-8	0.1	1			3.23E+09					
Thorium	NA		1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Tetrachloroethane, 1,1,2,2-	79-34-5				1.34E+05			1.34E+05	4.73E+01 ca
Tetrachloroethylene	127-18-4				4.02E+04		1.13E+04	8.85E+03	2.37E+03 sat
Tetrachlorophenol, 2,3,4,5-	4901-51-3								
Tetrachlorophenol, 2,3,4,6-	58-90-2				2.01E+05	7.03E+05		1.56E+05	1.56E+05 max
Tetrachlorophenols (total)	25167-83-3								
Tetrachloroterephthalate, 2,3,5,6-	2136-79-0								
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1								9.77E-01 ca
Tetraethyl Dithiopyrophosphate	3689-24-5				3.35E+03	1.17E+04		2.61E+03	2.61E+03 nc
Tetraethyl Lead	78-00-2				6.70E-01			6.70E-01	6.70E-01 nc
Tetrafluoroethane, 1,1,1,2-	811-97-2						1.18E+07	1.18E+07	1.18E+07 sat
Tetrahydrofuran	109-99-9				6.03E+06	7.03E+07	2.95E+06	1.93E+06	1.93E+06 sat
Tetrahydrothiophene	110-01-0								
Tetramethyl Lead	75-74-1								
Tetramethylcyclohexane	30501-43-0								
Tetrapotassium phosphate	7320-34-5				3.26E+08			3.26E+08	3.26E+08 max
Tetrapropyl Lead	3440-75-3								
Tetrasodium pyrophosphate	7722-88-5				3.26E+08			3.26E+08	3.26E+08 max
Tetryl (Trinitrophenylmethylnitramine)	479-45-8				1.34E+04	7.22E+06		1.34E+04	1.34E+04 nc
Thallic Oxide	1314-32-5								
Thallium (I) Nitrate	10102-45-1				4.69E+01			4.69E+01	4.69E+01 nc
Thallium (Soluble Salts)	7440-28-0				6.70E+01			6.70E+01	6.70E+01 nc
Thallium Acetate	563-68-8				4.02E+01	1.41E+02		3.13E+01	3.13E+01 nc
Thallium Carbonate	6533-73-9				1.34E+02	4.69E+02		1.04E+02	1.04E+02 nc
Thallium Chloride	7791-12-0				4.02E+01			4.02E+01	4.02E+01 nc
Thallium Selenite	12039-52-0								
Thallium Sulfate	7446-18-6				1.34E+02			1.34E+02	1.34E+02 nc
Thiobencarb	28249-77-6				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Thiocyanates	NA				1.34E+03			1.34E+03	1.34E+03 nc
Thiocyanic Acid	463-56-9				1.34E+03			1.34E+03	1.34E+03 nc
Thiodiglycol	111-48-8				4.69E+05	2.19E+07		4.59E+05	4.59E+05 max
Thiofanox	39196-18-4				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Thiophanate, Methyl	23564-05-8				5.36E+05	1.88E+06		4.17E+05	4.17E+05 max
Thiophene	110-02-1								
Thiram	137-26-8				3.35E+04	1.17E+05		2.61E+04	2.61E+04 nc
Thorium	NA								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Thymol	89-83-8	No	No									1
Tin	7440-31-5	No	No					6.00E-01	U			1
Titanium	7440-32-6	No	No									1
Titanium Tetrachloride	7550-45-0	No	Yes							1.00E-04	U	1
Toluene	108-88-3	No	Yes					8.00E-02	U	5.00E+00	U	1
Toluene-2,5-diamine	95-70-5	No	No	1.80E-01	U			2.00E-04	U			1
Toluenediamine, 2,3-	2687-25-4	No	No									1
Toluenediamine, 3,4-	496-72-0	No	No									1
Toluidine, p-	106-49-0	No	No	3.00E-02	U			4.00E-03	U			1
Total Petroleum Hydrocarbons (Aliphatic High)	NA	No	Yes					3.00E+00	U			1
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	No	Yes							6.00E-01	U	1
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	No	Yes					1.00E-02	U	1.00E-01	U	1
Total Petroleum Hydrocarbons (Aromatic High)	NA	No	No					4.00E-02	U			1
Total Petroleum Hydrocarbons (Aromatic Low)	NA	No	Yes					4.00E-03	U	3.00E-02	U	1
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	No	Yes					4.00E-03	U	3.00E-03	U	1
Toxaphene	8001-35-2	No	No	1.10E+00	U	3.20E-04	U					1
Tralomethrin	66841-25-6	No	No					7.50E-03	U			1
Tri-n-butyltin	688-73-3	No	Yes					3.00E-04	U			1
Triacetin	102-76-1	No	No					8.00E+01	U			1
Triallate	2303-17-5	No	Yes					1.30E-02	U			1
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	No	No					4.86E+01	U			1
Triasulfuron	82097-50-5	No	No					1.00E-02	U			1
Triaziquone	68-76-8	No	No									1
Tribromobenzene, 1,2,4-	615-54-3	No	Yes					5.00E-03	U			1
Tribromochloromethane	594-15-0	No	Yes									1
Tribromodiphenyl Ether	49690-94-0	No	Yes									1
Tribromophenol, 2,4,6-	118-79-6	No	No									1
Tributyl Phosphate	126-73-8	No	No	9.00E-03	U			1.00E-02	U			1
Tributyltin	56573-85-4	No	Yes									1
Tributyltin Compounds	NA	No	No					3.00E-04	U			1
Tributyltin Oxide	56-35-9	No	No					3.00E-04	U			1
Tributyltin chloride	1461-22-9	No	Yes									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Thymol	89-83-8	0.1	1			3.23E+09					
Tin	7440-31-5		1			3.23E+09					
Titanium	7440-32-6		1			3.23E+09					
Titanium Tetrachloride	7550-45-0		1			3.23E+09					
Toluene	108-88-3		1	5.92E+03	8.18E+02	3.23E+09					
Toluene-2,5-diamine	95-70-5	0.1	1			3.23E+09	1.09E+02	3.80E+02		8.45E+01	
Toluenediamine, 2,3-	2687-25-4	0.1	1			3.23E+09					
Toluenediamine, 3,4-	496-72-0	0.1	1			3.23E+09					
Toluidine, p-	106-49-0	0.1	1			3.23E+09	6.52E+02	2.28E+03		5.07E+02	
Total Petroleum Hydrocarbons (Aliphatic High)	NA		1	1.46E+03	3.41E-01	3.23E+09					
Total Petroleum Hydrocarbons (Aliphatic Low)	NA		1	1.14E+03	1.41E+02	3.23E+09					
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA		1	1.44E+03	6.86E+00	3.23E+09					
Total Petroleum Hydrocarbons (Aromatic High)	NA	0.1	1			3.23E+09					
Total Petroleum Hydrocarbons (Aromatic Low)	NA		1	4.88E+03	1.82E+03	3.23E+09					
Total Petroleum Hydrocarbons (Aromatic Medium)	NA		1	7.23E+04		3.23E+09					
Toxaphene	8001-35-2	0.1	1			3.23E+09	1.78E+01	6.22E+01	2.58E+06	1.38E+01	
Tralomethrin	66841-25-6	0.1	1			3.23E+09					
Tri-n-butyltin	688-73-3		1	4.63E+03		3.23E+09					
Triacetin	102-76-1	0.1	1			3.23E+09					
Triallate	2303-17-5		1	5.00E+05		3.23E+09					
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5		1			3.23E+09					
Triasulfuron	82097-50-5	0.1	1			3.23E+09					
Triaziquone	68-76-8	0.1	1			3.23E+09					
Tribromobenzene, 1,2,4-	615-54-3		1	6.24E+04		3.23E+09					
Tribromochloromethane	594-15-0		1	5.65E+04		3.23E+09					
Tribromodiphenyl Ether	49690-94-0		1	1.07E+06		3.23E+09					
Tribromophenol, 2,4,6-	118-79-6	0.1	1			3.23E+09					
Tributyl Phosphate	126-73-8	0.1	1			3.23E+09	2.17E+03	7.60E+03		1.69E+03	
Tributyltin	56573-85-4		1	4.95E+04		3.23E+09					
Tributyltin Compounds	NA	0.1	1			3.23E+09					
Tributyltin Oxide	56-35-9	0.1	1			3.23E+09					
Tributyltin chloride	1461-22-9		1	5.94E+03		3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Thymol	89-83-8								
Tin	7440-31-5				4.02E+06			4.02E+06	4.02E+06 max
Titanium	7440-32-6								
Titanium Tetrachloride	7550-45-0						2.83E+07	2.83E+07	2.83E+07 max
Toluene	108-88-3				5.36E+05		2.59E+06	4.44E+05	4.44E+05 sat
Toluene-2,5-diamine	95-70-5				1.34E+03	4.69E+03		1.04E+03	8.45E+01 ca*
Toluenediamine, 2,3-	2687-25-4								
Toluenediamine, 3,4-	496-72-0								
Toluidine, p-	106-49-0				2.68E+04	9.38E+04		2.08E+04	5.07E+02 ca*
Total Petroleum Hydrocarbons (Aliphatic High)	NA				2.01E+07			2.01E+07	2.01E+07 sat
Total Petroleum Hydrocarbons (Aliphatic Low)	NA						6.01E+04	6.01E+04	6.01E+04 sat
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA				6.70E+04		1.26E+04	1.06E+04	1.06E+04 sat
Total Petroleum Hydrocarbons (Aromatic High)	NA				2.68E+05	9.38E+05		2.08E+05	2.08E+05 max
Total Petroleum Hydrocarbons (Aromatic Low)	NA				2.68E+04		1.28E+04	8.67E+03	8.67E+03 sat
Total Petroleum Hydrocarbons (Aromatic Medium)	NA				2.68E+04		1.90E+04	1.11E+04	1.11E+04 nc
Toxaphene	8001-35-2								1.38E+01 ca
Tralomethrin	66841-25-6				5.03E+04	1.76E+05		3.91E+04	3.91E+04 nc
Tri-n-butyltin	688-73-3				2.01E+03			2.01E+03	2.01E+03 nc
Triacetin	102-76-1				5.36E+08	1.88E+09		4.17E+08	4.17E+08 max
Triallate	2303-17-5				8.71E+04			8.71E+04	8.71E+04 nc
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5				3.26E+08			3.26E+08	3.26E+08 max
Triasulfuron	82097-50-5				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Triaziquone	68-76-8								
Tribromobenzene, 1,2,4-	615-54-3				3.35E+04			3.35E+04	3.35E+04 nc
Tribromochloromethane	594-15-0								
Tribromodiphenyl Ether	49690-94-0								
Tribromophenol, 2,4,6-	118-79-6								
Tributyl Phosphate	126-73-8				6.70E+04	2.34E+05		5.21E+04	1.69E+03 ca*
Tributyltin	56573-85-4								
Tributyltin Compounds	NA				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Tributyltin Oxide	56-35-9				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Tributyltin chloride	1461-22-9								

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Tributyltin fluoride	1983-10-4	No	Yes									1
Tributyltin linoleate	24124-25-2	No	Yes									1
Tributyltin methacrylate	2155-70-6	No	Yes									1
Tributyltin naphthenate	85409-17-2	No	No									1
Tricaine Methanesulfonate	886-86-2	No	No									1
Tricalcium phosphate	7758-87-4	No	No					4.86E+01	U			1
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	No	Yes					3.00E+01	U	3.00E+01	U	1
Trichloro-2'-hydroxydiphenylether	3380-34-5	No	No									1
Trichloroacetic Acid	76-03-9	No	No	7.00E-02	U			2.00E-02	U			1
Trichloroaniline HCl, 2,4,6-	33663-50-2	No	No	2.90E-02	U							1
Trichloroaniline, 2,4,5-	636-30-6	No	No									1
Trichloroaniline, 2,4,6-	634-93-5	No	No	7.00E-03	U			3.00E-05	U			1
Trichlorobenzene	12002-48-1	No	Yes									1
Trichlorobenzene, 1,2,3-	87-61-6	No	Yes					8.00E-04	U			1
Trichlorobenzene, 1,2,4-	120-82-1	No	Yes	2.90E-02	U			1.00E-02	U	2.00E-03	U	1
Trichloroethane, 1,1,1-	71-55-6	No	Yes					2.00E+00	U	5.00E+00	U	1
Trichloroethane, 1,1,2-	79-00-5	No	Yes	5.70E-02	U	1.60E-05	U	4.00E-03	U	2.00E-04	U	1
Trichloroethylene	79-01-6	Yes	Yes	4.60E-02	U	4.10E-06	U	5.00E-04	U	2.00E-03	U	1
Trichlorofluoromethane	75-69-4	No	Yes					3.00E-01	U	7.00E-01	U	1
Trichlorophenol, 2,4,5-	95-95-4	No	No					1.00E-01	U			1
Trichlorophenol, 2,4,6-	88-06-2	No	No	1.10E-02	U	3.10E-06	U	1.00E-03	U			1
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	No	No					1.00E-02	U			1
Trichlorophenoxyacetic acid, 2,4,5- Amine Salts, PARENT (2,4,5-T)	NA	No	No									1
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	No	No					8.00E-03	U			1
Trichloropropane, 1,1,2-	598-77-6	No	Yes					5.00E-03	U			1
Trichloropropane, 1,2,3-	96-18-4	Yes	Yes	3.00E+01	U			4.00E-03	U	3.00E-04	U	1
Trichloropropene, 1,2,3-	96-19-5	No	Yes					3.00E-03	U	3.00E-04	U	1
Trichlorotoluene, 2,3,6-	2077-46-5	No	Yes									1
Trichlorotoluene, alpha 2,6-	2014-83-7	No	Yes									1
Triclorophenols (total)	NA	No	No									1
Tricresyl Phosphate (TCP)	1330-78-5	No	No					2.00E-02	U			1
Tridiphane	58138-08-2	No	No					3.00E-03	U			1
Tridymite	15468-32-3	Yes	No									1
Triethyl Lead	5224-23-7	No	Yes									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Tributyltin fluoride	1983-10-4		1	8.59E+03		3.23E+09					
Tributyltin linoleate	24124-25-2		1	1.67E+05		3.23E+09					
Tributyltin methacrylate	2155-70-6		1	1.41E+04		3.23E+09					
Tributyltin naphthenate	85409-17-2	0.1	1			3.23E+09					
Tricaine Methanesulfonate	886-86-2	0.1	1			3.23E+09					
Tricalcium phosphate	7758-87-4		1			3.23E+09					
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1		1	1.77E+03	9.10E+02	3.23E+09					
Trichloro-2'-hydroxydiphenylether	3380-34-5	0.1	1			3.23E+09					
Trichloroacetic Acid	76-03-9	0.1	1			3.23E+09	2.79E+02	9.77E+02		2.17E+02	
Trichloroaniline HCl, 2,4,6-	33663-50-2	0.1	1			3.23E+09	6.74E+02	2.36E+03		5.24E+02	
Trichloroaniline, 2,4,5-	636-30-6	0.1	1			3.23E+09					
Trichloroaniline, 2,4,6-	634-93-5	0.1	1			3.23E+09	2.79E+03	9.77E+03		2.17E+03	
Trichlorobenzene	12002-48-1		1	3.55E+04		3.23E+09					
Trichlorobenzene, 1,2,3-	87-61-6		1	4.44E+04		3.23E+09					
Trichlorobenzene, 1,2,4-	120-82-1		1	4.13E+04	4.05E+02	3.23E+09	6.74E+02			6.74E+02	
Trichloroethane, 1,1,1-	71-55-6		1	2.27E+03	6.40E+02	3.23E+09					
Trichloroethane, 1,1,2-	79-00-5		1	9.95E+03	2.16E+03	3.23E+09	3.43E+02		1.59E+02	1.09E+02	
Trichloroethylene	79-01-6		1	3.04E+03	6.92E+02	3.23E+09	3.04E+02		1.58E+02	1.04E+02	
Trichlorofluoromethane	75-69-4		1	1.43E+03	1.23E+03	3.23E+09					
Trichlorophenol, 2,4,5-	95-95-4	0.1	1			3.23E+09					
Trichlorophenol, 2,4,6-	88-06-2	0.1	1			3.23E+09	1.78E+03	6.22E+03	2.66E+08	1.38E+03	
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	0.1	1			3.23E+09					
Trichlorophenoxyacetic acid, 2,4,5- Amine Salts, PARENT (2,4,5-T)	NA		1			3.23E+09					
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	0.1	1			3.23E+09					
Trichloropropane, 1,1,2-	598-77-6		1	2.07E+04	1.28E+03	3.23E+09					
Trichloropropane, 1,2,3-	96-18-4		1	2.17E+04	1.40E+03	3.23E+09	2.21E-01			2.21E-01	
Trichloropropene, 1,2,3-	96-19-5		1	3.23E+03	4.51E+02	3.23E+09					
Trichlorotoluene, 2,3,6-	2077-46-5		1	5.83E+04		3.23E+09					
Trichlorotoluene, alpha 2,6-	2014-83-7		1	9.70E+04		3.23E+09					
Triclorophenols (total)	NA	0.1	1			3.23E+09					
Tricresyl Phosphate (TCP)	1330-78-5	0.1	1			3.23E+09					
Tridiphane	58138-08-2	0.1	1			3.23E+09					
Tridymite	15468-32-3		1			3.23E+09					
Triethyl Lead	5224-23-7		1	1.80E+03	5.67E+03	3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Tributyltin fluoride	1983-10-4								
Tributyltin linoleate	24124-25-2								
Tributyltin methacrylate	2155-70-6								
Tributyltin naphthenate	85409-17-2								
Tricaine Methanesulfonate	886-86-2								
Tricalcium phosphate	7758-87-4				3.26E+08			3.26E+08	3.26E+08 max
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1				2.01E+08		4.66E+06	4.55E+06	4.55E+06 sat
Trichloro-2'-hydroxydiphenylether	3380-34-5								
Trichloroacetic Acid	76-03-9				1.34E+05	4.69E+05		1.04E+05	2.17E+02 ca
Trichloroaniline HCl, 2,4,6-	33663-50-2								5.24E+02 ca
Trichloroaniline, 2,4,5-	636-30-6								
Trichloroaniline, 2,4,6-	634-93-5				2.01E+02	7.03E+02		1.56E+02	1.56E+02 nc
Trichlorobenzene	12002-48-1								
Trichlorobenzene, 1,2,3-	87-61-6				5.36E+03			5.36E+03	5.36E+03 nc
Trichlorobenzene, 1,2,4-	120-82-1				6.70E+04		7.24E+03	6.53E+03	6.74E+02 sat
Trichloroethane, 1,1,1-	71-55-6				1.34E+07		9.96E+05	9.27E+05	9.27E+05 sat
Trichloroethane, 1,1,2-	79-00-5				2.68E+04		1.74E+02	1.73E+02	1.09E+02 ca**
Trichloroethylene	79-01-6				3.35E+03		5.33E+02	4.60E+02	1.04E+02 ca**
Trichlorofluoromethane	75-69-4				2.01E+06		8.76E+04	8.39E+04	8.39E+04 sat
Trichlorophenol, 2,4,5-	95-95-4				6.70E+05	2.34E+06		5.21E+05	5.21E+05 max
Trichlorophenol, 2,4,6-	88-06-2				6.70E+03	2.34E+04		5.21E+03	1.38E+03 ca**
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Trichlorophenoxyacetic acid, 2,4,5- Amine Salts, PARENT (2,4,5-T)	NA								
Trichlorophenoxypropionic acid, -2,4,5	93-72-1				5.36E+04	1.88E+05		4.17E+04	4.17E+04 nc
Trichloropropane, 1,1,2-	598-77-6				3.35E+04			3.35E+04	3.35E+04 sat
Trichloropropane, 1,2,3-	96-18-4				2.68E+04		5.70E+02	5.58E+02	2.21E-01 ca
Trichloropropene, 1,2,3-	96-19-5				2.01E+04		8.48E+01	8.44E+01	8.44E+01 nc
Trichlorotoluene, 2,3,6-	2077-46-5								
Trichlorotoluene, alpha 2,6-	2014-83-7								
Triclorophenols (total)	NA								
Tricresyl Phosphate (TCP)	1330-78-5				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Tridiphane	58138-08-2				2.01E+04	7.03E+04		1.56E+04	1.56E+04 nc
Tridymite	15468-32-3								
Triethyl Lead	5224-23-7								

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Triethyl phosphorothioate [O,O,O-]	126-68-1	No	Yes									1
Triethylamine	121-44-8	No	Yes							7.00E-03	U	1
Triethylene Glycol	112-27-6	No	No					2.00E+00	U			1
Trifluralin	1582-09-8	No	Yes	7.70E-03	U			7.50E-03	U			1
Trimagnesium phosphate	7757-87-1	No	No					4.86E+01	U			1
Trimethyl Lead	7442-13-9	No	Yes									1
Trimethyl Phosphate	512-56-1	No	No	2.00E-02	U			1.00E-02	U			1
Trimethyl-4-Propenylnaphthalene, 1,2,3-	26137-53-1	No	Yes									1
Trimethylbenzene, 1,2,3-	526-73-8	No	Yes							5.00E-03	U	1
Trimethylbenzene, 1,2,4-	95-63-6	No	Yes							7.00E-03	U	1
Trimethylbenzene, 1,3,5-	108-67-8	No	Yes					1.00E-02	U			1
Trimethylethyl Lead	1762-26-1	No	Yes									1
Trimethylpentane, 2,2,4-	540-84-1	No	Yes									1
Trinitrobenzene, 1,3,5-	99-35-4	No	No					3.00E-02	U			1
Trinitrotoluene, 2,4,6-	118-96-7	No	No	3.00E-02	U			5.00E-04	U			1
Triphenylphosphine Oxide	791-28-6	No	No					2.00E-02	U			1
Triphenyltin	668-34-8	No	Yes									1
Tripotassium phosphate	7778-53-2	No	No					4.86E+01	U			1
Tripropyl Lead	6618-03-7	No	Yes									1
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	No	No					2.00E-02	U			1
Tris(1-chloro-2-propyl)phosphate	13674-84-5	No	No					1.00E-02	U			1
Tris(2,3-dibromopropyl)phosphate	126-72-7	No	Yes	2.30E+00	U	6.60E-04	U					1
Tris(2-chloroethyl)phosphate	115-96-8	No	No	2.00E-02	U			7.00E-03	U			1
Tris(2-ethylhexyl)phosphate	78-42-2	No	No	3.20E-03	U			1.00E-01	U			1
Trisbutoxyethyl Phosphate	78-51-3	No	No									1
Trisodium phosphate	7601-54-9	No	No					4.86E+01	U			1
Trithion	786-19-6	No	No									1
Tungsten	7440-33-7	No	No									1
Uranium (Soluble Salts)	NA	No	No					3.00E-03	U	4.00E-05	U	1
Urea	57-13-6	No	No									1
Urethane	51-79-6	Yes	No	1.00E+00	U	2.90E-04	U					1
Vanadium Pentoxide	1314-62-1	No	No			8.30E-03	U	9.00E-03	U	7.00E-06	U	0.026
Vanadium Sulfate	36907-42-3	No	No									0.026
Vanadium and Compounds	7440-62-2	No	No					5.04E-03	U	1.00E-04	U	0.026
Vanadyl Sulfate	27774-13-6	No	No									1

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Triethyl phosphorothioate [O,O,O-]	126-68-1		1	3.87E+04	4.67E+02	3.23E+09					
Triethylamine	121-44-8		1	2.18E+04	2.78E+04	3.23E+09					
Triethylene Glycol	112-27-6	0.1	1			3.23E+09					
Trifluralin	1582-09-8		1	7.07E+05		3.23E+09	2.54E+03			2.54E+03	
Trimagnesium phosphate	7757-87-1		1			3.23E+09					
Trimethyl Lead	7442-13-9		1	1.54E+03	6.92E+04	3.23E+09					
Trimethyl Phosphate	512-56-1	0.1	1			3.23E+09	9.77E+02	3.42E+03		7.60E+02	
Trimethyl-4-Propenylnaphthalene, 1,2,3-	26137-53-1		1	6.96E+05		3.23E+09					
Trimethylbenzene, 1,2,3-	526-73-8		1	1.30E+04	2.93E+02	3.23E+09					
Trimethylbenzene, 1,2,4-	95-63-6		1	1.09E+04	2.18E+02	3.23E+09					
Trimethylbenzene, 1,3,5-	108-67-8		1	9.11E+03	1.82E+02	3.23E+09					
Trimethylethyl Lead	1762-26-1		1	1.98E+03	2.51E+04	3.23E+09					
Trimethylpentane, 2,2,4-	540-84-1		1	1.29E+03	6.10E+01	3.23E+09					
Trinitrobenzene, 1,3,5-	99-35-4	0.019	1			3.23E+09					
Trinitrotoluene, 2,4,6-	118-96-7	0.032	1			3.23E+09	6.52E+02	7.12E+03		5.97E+02	
Triphenylphosphine Oxide	791-28-6	0.1	1			3.23E+09					
Triphenyltin	668-34-8		1	2.79E+06		3.23E+09					
Tripotassium phosphate	7778-53-2		1			3.23E+09					
Tripropyl Lead	6618-03-7		1	2.30E+03	5.57E+02	3.23E+09					
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	0.1	1			3.23E+09					
Tris(1-chloro-2-propyl)phosphate	13674-84-5	0.1	1			3.23E+09					
Tris(2,3-dibromopropyl)phosphate	126-72-7		1	1.25E+06	4.67E+02	3.23E+09	8.50E+00		4.82E+02	8.35E+00	
Tris(2-chloroethyl)phosphate	115-96-8	0.1	1			3.23E+09	9.77E+02	3.42E+03		7.60E+02	
Tris(2-ethylhexyl)phosphate	78-42-2	0.1	1			3.23E+09	6.11E+03	2.14E+04		4.75E+03	
Trisbutoxyethyl Phosphate	78-51-3	0.1	1			3.23E+09					
Trisodium phosphate	7601-54-9		1			3.23E+09					
Trithion	786-19-6	0.1	1			3.23E+09					
Tungsten	7440-33-7		1			3.23E+09					
Uranium (Soluble Salts)	NA		1			3.23E+09					
Urea	57-13-6	0.1	1			3.23E+09					
Urethane	51-79-6	0.1	1			3.23E+09	6.64E+00	4.50E+01	1.55E+06	5.79E+00	
Vanadium Pentoxide	1314-62-1		1			3.23E+09			9.95E+04	9.95E+04	
Vanadium Sulfate	36907-42-3		1			3.23E+09					
Vanadium and Compounds	7440-62-2		1			3.23E+09					
Vanadyl Sulfate	27774-13-6		1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Gu
Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Triethyl phosphorothioate [O,O,O-]	126-68-1								
Triethylamine	121-44-8						1.34E+04	1.34E+04	1.34E+04 nc
Triethylene Glycol	112-27-6				1.34E+07	4.69E+07		1.04E+07	1.04E+07 max
Trifluralin	1582-09-8				5.03E+04			5.03E+04	2.54E+03 ca*
Trimagnesium phosphate	7757-87-1				3.26E+08			3.26E+08	3.26E+08 max
Trimethyl Lead	7442-13-9								
Trimethyl Phosphate	512-56-1				6.70E+04	2.34E+05		5.21E+04	7.60E+02 ca*
Trimethyl-4-Propenylnaphthalene, 1,2,3-	26137-53-1								
Trimethylbenzene, 1,2,3-	526-73-8						5.70E+03	5.70E+03	5.70E+03 sat
Trimethylbenzene, 1,2,4-	95-63-6						6.69E+03	6.69E+03	6.69E+03 sat
Trimethylbenzene, 1,3,5-	108-67-8				6.70E+04			6.70E+04	6.70E+04 sat
Trimethylethyl Lead	1762-26-1								
Trimethylpentane, 2,2,4-	540-84-1								
Trinitrobenzene, 1,3,5-	99-35-4				2.01E+05	3.70E+06		1.91E+05	1.91E+05 max
Trinitrotoluene, 2,4,6-	118-96-7				3.35E+03	3.66E+04		3.07E+03	5.97E+02 ca**
Triphenylphosphine Oxide	791-28-6				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Triphenyltin	668-34-8								
Tripotassium phosphate	7778-53-2				3.26E+08			3.26E+08	3.26E+08 max
Tripropyl Lead	6618-03-7								
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8				1.34E+05	4.69E+05		1.04E+05	1.04E+05 max
Tris(1-chloro-2-propyl)phosphate	13674-84-5				6.70E+04	2.34E+05		5.21E+04	5.21E+04 nc
Tris(2,3-dibromopropyl)phosphate	126-72-7								8.35E+00 ca
Tris(2-chloroethyl)phosphate	115-96-8				4.69E+04	1.64E+05		3.65E+04	7.60E+02 ca*
Tris(2-ethylhexyl)phosphate	78-42-2				6.70E+05	2.34E+06		5.21E+05	4.75E+03 ca
Trisbutoxyethyl Phosphate	78-51-3								
Trisodium phosphate	7601-54-9				3.26E+08			3.26E+08	3.26E+08 max
Trithion	786-19-6								
Tungsten	7440-33-7								
Uranium (Soluble Salts)	NA				2.01E+04		1.13E+07	2.01E+04	2.01E+04 nc
Urea	57-13-6								
Urethane	51-79-6								5.79E+00 ca
Vanadium Pentoxide	1314-62-1				6.03E+04		1.98E+06	5.85E+04	5.85E+04 nc
Vanadium Sulfate	36907-42-3								
Vanadium and Compounds	7440-62-2				3.38E+04		2.83E+07	3.37E+04	3.37E+04 nc
Vanadyl Sulfate	27774-13-6								

Site-specific
Recreator Screening Levels (RSL) for Soil
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	Chronic RfC (mg/m^3)	Chronic RfC Ref	GIABS
Vernolate	1929-77-7	No	Yes					1.00E-03	U			1
Vinclozolin	50471-44-8	No	No					2.50E-02	U			1
Vinyl Acetate	108-05-4	No	Yes					1.00E+00	U	2.00E-01	U	1
Vinyl Bromide	593-60-2	No	Yes			3.20E-05	U			3.00E-03	U	1
Vinyl Chloride	75-01-4	Yes	Yes	7.20E-01	U	4.40E-06	U	3.00E-03	U	1.00E-01	U	1
Warfarin	81-81-2	No	No					3.00E-04	U			1
Xylene, P-	106-42-3	No	Yes					2.00E-01	U	1.00E-01	U	1
Xylene, m-	108-38-3	No	Yes					2.00E-01	U	1.00E-01	U	1
Xylene, o-	95-47-6	No	Yes					2.00E-01	U	1.00E-01	U	1
Xylenes	1330-20-7	No	Yes					2.00E-01	U	1.00E-01	U	1
Ytterbium	7440-64-4	No	No									1
Yttrium	7440-65-5	No	No									1
Zinc Cyanide	557-21-1	No	No					5.00E-02	U			1
Zinc Phosphide	1314-84-7	No	No					3.00E-04	U			1
Zinc and Compounds	7440-66-6	No	No					3.00E-01	U			1
Zineb	12122-67-7	No	No					5.00E-02	U			1
Zirconium	7440-67-7	No	No					8.00E-05	U			1

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	ABS	rba	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL (Child) HQ=1 (mg/kg)
Vernolate	1929-77-7		1	1.70E+05		3.23E+09					
Vinclozolin	50471-44-8	0.1	1			3.23E+09					
Vinyl Acetate	108-05-4		1	6.06E+03	2.75E+03	3.23E+09					
Vinyl Bromide	593-60-2		1	1.89E+03	3.38E+03	3.23E+09			1.51E+01	1.51E+01	
Vinyl Chloride	75-01-4		1	1.32E+03	3.92E+03	3.23E+09	2.71E+01		2.98E-01	2.95E-01	
Warfarin	81-81-2	0.1	1			3.23E+09					
Xylene, P-	106-42-3		1	7.70E+03	3.89E+02	3.23E+09					
Xylene, m-	108-38-3		1	7.54E+03	3.87E+02	3.23E+09					
Xylene, o-	95-47-6		1	8.90E+03	4.34E+02	3.23E+09					
Xylenes	1330-20-7		1	8.93E+03	2.58E+02	3.23E+09					
Ytterbium	7440-64-4		1			3.23E+09					
Yttrium	7440-65-5		1			3.23E+09					
Zinc Cyanide	557-21-1		1			3.23E+09					
Zinc Phosphide	1314-84-7		1			3.23E+09					
Zinc and Compounds	7440-66-6		1			3.23E+09					
Zineb	12122-67-7	0.1	1			3.23E+09					
Zirconium	7440-67-7		1			3.23E+09					

Site-specific
Recreator Screening Levels (RSL) for Soil
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max valu
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Dermal SL (Child) HQ=1 (mg/kg)	Inhalation SL (Child) HQ=1 (mg/kg)	Noncarcinogenic SL (Child) HI=1 (mg/kg)	Ingestion SL (Adult) HQ=1 (mg/kg)	Dermal SL (Adult) HQ=1 (mg/kg)	Inhalation SL (Adult) HQ=1 (mg/kg)	Noncarcinogenic SL (Adult) HI=1 (mg/kg)	Screening Level (mg/kg)
Vernolate	1929-77-7				6.70E+03			6.70E+03	6.70E+03 nc
Vinclozolin	50471-44-8				1.68E+05	5.86E+05		1.30E+05	1.30E+05 max
Vinyl Acetate	108-05-4				6.70E+06		1.06E+05	1.05E+05	1.05E+05 sat
Vinyl Bromide	593-60-2						4.96E+02	4.96E+02	1.51E+01 ca*
Vinyl Chloride	75-01-4				2.01E+04		1.15E+04	7.33E+03	2.95E-01 ca
Warfarin	81-81-2				2.01E+03	7.03E+03		1.56E+03	1.56E+03 nc
Xylene, P-	106-42-3				1.34E+06		6.75E+04	6.42E+04	6.42E+04 sat
Xylene, m-	108-38-3				1.34E+06		6.60E+04	6.29E+04	6.29E+04 sat
Xylene, o-	95-47-6				1.34E+06		7.80E+04	7.37E+04	7.37E+04 sat
Xylenes	1330-20-7				1.34E+06		7.82E+04	7.39E+04	7.39E+04 sat
Ytterbium	7440-64-4								
Yttrium	7440-65-5								
Zinc Cyanide	557-21-1				3.35E+05			3.35E+05	3.35E+05 max
Zinc Phosphide	1314-84-7				2.01E+03			2.01E+03	2.01E+03 nc
Zinc and Compounds	7440-66-6				2.01E+06			2.01E+06	2.01E+06 max
Zineb	12122-67-7				3.35E+05	1.17E+06		2.61E+05	2.61E+05 max
Zirconium	7440-67-7				5.36E+02			5.36E+02	5.36E+02 nc

Utility Worker Groundwater Exposure Parameters from USEPA Calculator

Site-specific
Recreator Equation Inputs for Surface Water
MODIFIED FOR UTILITY WORKER

Variable	Value
TR (target cancer risk) unitless	0.000001
ED_{recw} (exposure duration - recreator) year	1
ED_{recwa} (exposure duration - adult) year	1
ED_{recwc} (exposure duration - child) year	0
ED_{0-2} (mutagenic exposure duration) year	0
ED_{2-6} (mutagenic exposure duration) year	0
ED_{6-16} (mutagenic exposure duration) year	0
ED_{16-30} (mutagenic exposure duration) year	1
THQ (target hazard quotient) unitless	1
LT (lifetime - recreator) year	70
EF (exposure frequency) day/year	30
EF_{recwa} (adult exposure frequency) day/year	30
EF_{recwc} (child exposure frequency) day/year	0
EF_{0-2} (mutagenic exposure frequency) day/year	
EF_{2-6} (mutagenic exposure frequency) day/year	
EF_{6-16} (mutagenic exposure frequency) day/year	0
EF_{16-30} (mutagenic exposure frequency) day/year	30
$ET_{recw-adj}$ (age-adjusted exposure time) hour/event	2
$ET_{recw-madj}$ (mutagenic age-adjusted exposure time) hour/event	2
ET_{recwa} (adult exposure time) hour/event	2
ET_{recwc} (child exposure time) hour/event	0
$ET_{recw0-2}$ (mutagenic exposure time) hour/event	
$ET_{recw2-6}$ (mutagenic exposure time) hour/event	
$ET_{recw6-16}$ (mutagenic exposure time) hour/event	0
$ET_{recw16-30}$ (mutagenic exposure time) hour/event	2
EV_{recwa} (adult) events/day	1
EV_{recwc} (child) events/day	0
EV_{0-2} (mutagenic) events/day	0

EV_{2-6} (mutagenic) events/day	0
EV_{6-16} (mutagenic) events/day	0
EV_{16-30} (mutagenic) events/day	1
BW_{recwc} (body weight - child) kg	0
BW_{recwa} (body weight - adult) kg	80
BW_{0-2} (mutagenic body weight) kg	15
BW_{2-6} (mutagenic body weight) kg	15
BW_{6-16} (mutagenic body weight) kg	80
BW_{16-30} (mutagenic body weight) kg	80
SA_{recwc} (skin surface area - child) cm^2	0
SA_{recwa} (skin surface area - adult) cm^2	4840
SA_{0-2} (skin surface area - mutagenic) cm^2	4840
SA_{2-6} (skin surface area - mutagenic) cm^2	4840
SA_{6-16} (skin surface area - mutagenic) cm^2	4840
SA_{16-30} (skin surface area - mutagenic) cm^2	4840
SA_{0-2} (mutagenic skin surface area) cm^2	4840
SA_{2-6} (mutagenic skin surface area) cm^2	4840
SA_{6-16} (mutagenic skin surface area) cm^2	4840
SA_{16-30} (mutagenic skin surface area) cm^2	4840
$IFW_{rec-adj}$ (age-adjusted water intake rate) L/kg	0.008
$IFWM_{rec-adj}$ (mutagenic age-adjusted water intake rate) L/kg	0.008
$DFW_{rec-adj}$ (age-adjusted dermal factor) cm^2-event/kg	1815
$DFWM_{rec-adj}$ (mutagenic age-adjusted dermal factor) cm^2-event/kg	1815
IRW_{recwa} (water intake rate - adult) L/hr	0.01
IRW_{recwc} (water intake rate - child) L/hr	0
IRW_{0-2} (mutagenic water intake rate) L/hr	0.05
IRW_{2-6} (mutagenic water intake rate) L/hr	0.05
IRW_{6-16} (mutagenic water intake rate) L/hr	0.05
IRW_{16-30} (mutagenic water intake rate) L/hr	0.01
l_{sc} (apparent thickness of stratum corneum) cm	0.001

Output generated 14MAY2015:16:28:41

Utility Worker Groundwater Screening Levels from USEPA Calculator

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
ALAR	1596-84-5	No	No	Organics	1.80E-02	U	1.50E-01	U	1	0.0000199	160.17	1
Acenaphthene	83-32-9	No	Yes	Organics			6.00E-02	U	1	0.086	154.21	1
Acenaphthylene	208-96-8	No	Yes	Organics					1	0.0911	152.2	1
Acephate	30560-19-1	No	No	Organics	8.70E-03	U	4.00E-03	U	1	0.00004	183.16	1
Acetaldehyde	75-07-0	No	Yes	Organics					1	0.000527	44.05	1
Acetochlor	34256-82-1	No	No	Organics			2.00E-02	U	1	0.00495	269.77	0.9
Acetone	67-64-1	No	Yes	Organics			9.00E-01	U	1	0.000512	58.08	1
Acetone Cyanohydrin	75-86-5	No	Yes	Organics					1	0.000495	85.11	1
Acetonitrile	75-05-8	No	Yes	Organics					1	0.000548	41.05	1
Acetophenone	98-86-2	No	Yes	Organics			1.00E-01	U	1	0.00372	120.15	1
Acetylaminofluorene, 2-	53-96-3	No	No	Organics	3.80E+00	U			1	0.0125	223.28	1
Acifluorofen	50594-66-6	No	No	Organics					1	0.00421	361.66	0.9
Acridine	260-94-6	No	No	Organics					1	0.0281	179.22	1
Acrolein	107-02-8	No	Yes	Organics			5.00E-04	U	1	0.000748	56.06	1
Acrylamide	79-06-1	Yes	No	Organics	5.00E-01	U	2.00E-03	U	1	0.000224	71.08	1
Acrylic Acid	79-10-7	No	Yes	Organics			5.00E-01	U	1	0.00105	72.06	1
Acrylonitrile	107-13-1	No	Yes	Organics	5.40E-01	U	4.00E-02	U	1	0.00116	53.06	1
Adiponitrile	111-69-3	No	No	Organics					1	0.000237	108.14	1
Alachlor	15972-60-8	No	No	Organics	5.60E-02	U	1.00E-02	U	1	0.0105	269.77	0.9
Aldicarb	116-06-3	No	No	Organics			1.00E-03	U	1	0.000755	190.26	1
Aldicarb Sulfone	1646-88-4	No	No	Organics			1.00E-03	U	1	0.0000371	222.26	1
Aldicarb sulfoxide	1646-87-3	No	No	Organics					1	0.0000329	206.26	1
Aldrin	309-00-2	No	Yes	Organics	1.70E+01	U	3.00E-05	U	1	0.293	364.92	1
Aliphatic Chlorinated Hydrocarbons (each)	NA	No	No	Organics					1			
Aliphatic Chlorinated Hydrocarbons (total)	NA	No	No	Organics					1			
Alizarin Red Compounds	NA	No	No	Organics					1			
Ally	74223-64-6	No	No	Organics			2.50E-01	U	1	0.000329	381.37	1
Allyl Alcohol	107-18-6	No	Yes	Organics			5.00E-03	U	1	0.000959	58.08	1
Allyl Chloride	107-05-1	No	Yes	Organics	2.10E-02	U			1	0.0112	76.53	1
Aluminum	7429-90-5	No	No	Inorganics			1.00E+00	U	1	0.001	26.982	1
Aluminum Phosphide	20859-73-8	No	No	Inorganics			4.00E-04	U	1	0.001	57.96	1
Aluminum metaphosphate	13776-88-0	No	No	Inorganics			4.86E+01	U	1	0.001	263.9	1
Amdro	67485-29-4	No	No	Organics			3.00E-04	U	1	0.0000902	494.49	1
Ametryn	834-12-8	No	No	Organics			9.00E-03	U	1	0.00794	227.33	1

Site-specific
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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
ALAR	1596-84-5	Yes	0.7820631		30.165289	1.77E+05	1.07E+07	1.75E+05			
Acenaphthene	83-32-9	Yes			12.066116						
Acenaphthylene	208-96-8	Yes									
Acephate	30560-19-1	Yes	1.6180615		0.8044077	3.67E+05	9.80E+06	3.54E+05			
Acetaldehyde	75-07-0	Yes									
Acetochlor	34256-82-1	Yes			4.0220386						
Acetone	67-64-1	Yes			180.99174						
Acetone Cyanohydrin	75-86-5	Yes									
Acetonitrile	75-05-8	Yes									
Acetophenone	98-86-2	Yes			20.110193						
Acetylaminofluorene, 2-	53-96-3	Yes	0.0037045			8.40E+02	5.54E+01	5.20E+01			
Acifluorofen	50594-66-6	Yes									
Acridine	260-94-6	Yes									
Acrolein	107-02-8	Yes			0.100551						
Acrylamide	79-06-1	Yes	0.0281543		0.4022039	6.39E+03	4.98E+04	5.66E+03			
Acrylic Acid	79-10-7	Yes			100.55096						
Acrylonitrile	107-13-1	Yes	0.0260688		8.0440771	5.91E+03	9.32E+03	3.62E+03			
Adiponitrile	111-69-3	Yes									
Alachlor	15972-60-8	Yes	0.2513774		2.0110193	5.70E+04	3.69E+03	3.46E+03			
Aldicarb	116-06-3	Yes			0.2011019						
Aldicarb Sulfone	1646-88-4	Yes			0.2011019						
Aldicarb sulfoxide	1646-87-3	Yes									
Aldrin	309-00-2	No				1.88E+02		1.88E+02			
Aliphatic Chlorinated Hydrocarbons (each)	NA	No									
Aliphatic Chlorinated Hydrocarbons (total)	NA	No									
Alizarin Red Compounds	NA	No									
Ally	74223-64-6	Yes			50.275482						
Allyl Alcohol	107-18-6	Yes			1.0055096						
Allyl Chloride	107-05-1	Yes	0.6703398			1.52E+05	2.38E+04	2.06E+04			
Aluminum	7429-90-5	Yes			201.10193						
Aluminum Phosphide	20859-73-8	Yes			0.0804408						
Aluminum metaphosphate	13776-88-0	Yes			9773.5537						
Amdro	67485-29-4	Yes			0.0603306						
Ametryn	834-12-8	Yes			1.8099174						

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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
ALAR	1596-84-5	7.30E+06	4.14E+08	7.17E+06	1.75E+05 ca*
Acenaphthene	83-32-9	2.92E+06	3.97E+04	3.92E+04	3.92E+04 nc
Acenaphthylene	208-96-8				
Acephate	30560-19-1	1.95E+05	4.87E+06	1.87E+05	1.87E+05 nc
Acetaldehyde	75-07-0				
Acetochlor	34256-82-1	9.73E+05	1.25E+05	1.11E+05	1.11E+05 nc
Acetone	67-64-1	4.38E+07	1.45E+08	3.36E+07	3.36E+07 nc
Acetone Cyanohydrin	75-86-5				
Acetonitrile	75-05-8				
Acetophenone	98-86-2	4.87E+06	1.82E+06	1.32E+06	1.32E+06 nc
Acetylaminofluorene, 2-	53-96-3				5.20E+01 ca
Acifluorofen	50594-66-6				
Acridine	260-94-6				
Acrolein	107-02-8	2.43E+04	5.53E+04	1.69E+04	1.69E+04 nc
Acrylamide	79-06-1	9.73E+04	7.11E+05	8.56E+04	5.66E+03 ca*
Acrylic Acid	79-10-7	2.43E+07	3.79E+07	1.48E+07	1.48E+07 nc
Acrylonitrile	107-13-1	1.95E+06	2.88E+06	1.16E+06	3.62E+03 ca
Adiponitrile	111-69-3				
Alachlor	15972-60-8	4.87E+05	2.95E+04	2.78E+04	3.46E+03 ca**
Aldicarb	116-06-3	4.87E+04	6.16E+04	2.72E+04	2.72E+04 nc
Aldicarb Sulfone	1646-88-4	4.87E+04	1.02E+06	4.65E+04	4.65E+04 nc
Aldicarb sulfoxide	1646-87-3				
Aldrin	309-00-2	1.46E+03		1.46E+03	1.88E+02 ca**
Aliphatic Chlorinated Hydrocarbons (each)	NA				
Aliphatic Chlorinated Hydrocarbons (total)	NA				
Alizarin Red Compounds	NA				
Ally	74223-64-6	1.22E+07	1.03E+07	5.58E+06	5.58E+06 nc
Allyl Alcohol	107-18-6	2.43E+05	4.30E+05	1.55E+05	1.55E+05 nc
Allyl Chloride	107-05-1				2.06E+04 ca
Aluminum	7429-90-5	4.87E+07	1.01E+08	3.28E+07	3.28E+07 nc
Aluminum Phosphide	20859-73-8	1.95E+04	4.02E+04	1.31E+04	1.31E+04 nc
Aluminum metaphosphate	13776-88-0	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Amdro	67485-29-4	1.46E+04	2.18E+04	8.74E+03	8.74E+03 nc
Ametryn	834-12-8	4.38E+05	4.15E+04	3.79E+04	3.79E+04 nc

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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Amino-4-chlorobenzotrifluoride, 3-	121-50-6	No	Yes	Organics					1	0.0135	195.57	1
Aminoazobenzene, p-	60-09-3	No	No	Organics					1	0.00677	197.24	1
Aminobiphenyl, 4-	92-67-1	No	No	Organics	2.10E+01	U			1	0.014	169.23	1
Aminophenol, m-	591-27-5	No	No	Organics			8.00E-02	U	1	0.000527	109.13	1
Aminophenol, o-	95-55-6	No	No	Organics					1	0.000988	109.13	1
Aminophenol, p-	123-30-8	No	No	Organics			2.00E-02	U	1	0.000407	109.13	1
Aminopyridine, 4-	504-24-5	No	No	Organics					1	0.000758	94.12	1
Amitraz	33089-61-1	No	No	Organics			2.50E-03	U	1	0.16	293.42	0.9
Ammonium Perchlorate	7790-98-9	No	No	Inorganics			7.00E-04	U	1	0.001	117.49	1
Ammonium Sulfamate	7773-06-0	No	No	Inorganics			2.00E-01	U	1	0.001	114.124	1
Ammonium polyphosphate	68333-79-9	No	No	Inorganics			4.86E+01	U	1	0.001		
Amyl Alcohol, tert-	75-85-4	No	Yes	Organics					1	0.00196	88.15	1
Aniline	62-53-3	No	No	Organics	5.70E-03	U	7.00E-03	U	1	0.00186	93.13	1
Anilinobenzothiazole	1843-21-6	No	No	Organics					1			
Anthracene	120-12-7	No	Yes	Organics			3.00E-01	U	1	0.142	178.24	1
Anthraquinone, 9,10-	84-65-1	No	No	Organics	4.00E-02	U	2.00E-03	U	1	0.019	208.22	0.9
Antimony (metallic)	7440-36-0	No	No	Inorganics			4.00E-04	U	0.15	0.001	121.76	1
Antimony Pentoxide	1314-60-9	No	No	Inorganics			5.00E-04	U	0.15	0.001	323.517	1
Antimony Potassium Tartrate	11071-15-1	No	No	Inorganics			9.00E-04	U	0.15	0.001	614.84	0.9
Antimony Tetroxide	1332-81-6	No	No	Inorganics			4.00E-04	U	0.15	0.001	307.52	1
Antimony Trichloride	10025-91-9	No	No	Inorganics					1	0.001	228.12	1
Antimony Trioxide	1309-64-4	No	No	Inorganics					0.15	0.001	291.52	1
Apollo	74115-24-5	No	No	Organics			1.30E-02	U	1	0.00358	303.15	0.9
Aramite	140-57-8	No	No	Organics	2.50E-02	U	5.00E-02	U	1	0.0328	334.86	0.8
Aroclor 1016	12674-11-2	No	Yes	Organics	7.00E-02	U	7.00E-05	U	1	0.305	257.55	0.9
Aroclor 1221	11104-28-2	No	Yes	Organics	2.00E+00	U			1	0.168	188.66	1
Aroclor 1232	11141-16-5	No	Yes	Organics	2.00E+00	U			1	0.168	188.66	1
Aroclor 1242	53469-21-9	No	Yes	Organics	2.00E+00	U			1	0.545	291.99	0.7
Aroclor 1248	12672-29-6	No	Yes	Organics	2.00E+00	U			1	0.475	291.99	0.7
Aroclor 1254	11097-69-1	No	Yes	Organics	2.00E+00	U	2.00E-05	U	1	0.751	326.44	0.5
Aroclor 1260	11096-82-5	No	Yes	Organics	2.00E+00	U			1	0.986	395.33	0
Aroclor 5460	11126-42-4	No	Yes	Organics			6.00E-04	U	1	0.584	291.99	0.7
Arsenic Salts	NA	No	No	Inorganics					1	0.001		
Arsenic, Inorganic	7440-38-2	No	No	Inorganics	1.50E+00	U	3.00E-04	U	1	0.001	74.922	1

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Amino-4-chlorobenzotrifluoride, 3-	121-50-6	Yes									
Aminoazobenzene, p-	60-09-3	Yes									
Aminobiphenyl, 4-	92-67-1	Yes	0.0006703			1.52E+02	1.27E+01	1.17E+01			
Aminophenol, m-	591-27-5	Yes			16.088154						
Aminophenol, o-	95-55-6	Yes									
Aminophenol, p-	123-30-8	Yes			4.0220386						
Aminopyridine, 4-	504-24-5	Yes									
Amitraz	33089-61-1	Yes			0.5027548						
Ammonium Perchlorate	7790-98-9	Yes			0.1407713						
Ammonium Sulfamate	7773-06-0	Yes			40.220386						
Ammonium polyphosphate	68333-79-9	Yes			9773.5537						
Amyl Alcohol, tert-	75-85-4	Yes									
Aniline	62-53-3	Yes	2.4696728		1.4077135	5.60E+05	4.94E+05	2.62E+05			
Anilinobenzothiazole	1843-21-6	No									
Anthracene	120-12-7	Yes			60.330579						
Anthraquinone, 9,10-	84-65-1	Yes	0.3519284		0.4022039	7.98E+04	4.24E+03	4.03E+03			
Antimony (metallic)	7440-36-0	Yes			0.0120661						
Antimony Pentoxide	1314-60-9	Yes			0.0150826						
Antimony Potassium Tartrate	11071-15-1	Yes			0.0271488						
Antimony Tetroxide	1332-81-6	Yes			0.0120661						
Antimony Trichloride	10025-91-9	Yes									
Antimony Trioxide	1309-64-4	Yes									
Apollo	74115-24-5	Yes			2.6143251						
Aramite	140-57-8	Yes	0.5630854		10.055096	1.28E+05	1.95E+03	1.93E+03			
Aroclor 1016	12674-11-2	No				4.56E+04		4.56E+04			
Aroclor 1221	11104-28-2	Yes	0.0070386			1.60E+03	9.79E+00	9.73E+00			
Aroclor 1232	11141-16-5	Yes	0.0070386			1.60E+03	9.79E+00	9.73E+00			
Aroclor 1242	53469-21-9	No				1.60E+03		1.60E+03			
Aroclor 1248	12672-29-6	No				1.60E+03		1.60E+03			
Aroclor 1254	11097-69-1	No				1.60E+03		1.60E+03			
Aroclor 1260	11096-82-5	No				1.60E+03		1.60E+03			
Aroclor 5460	11126-42-4	No									
Arsenic Salts	NA	Yes									
Arsenic, Inorganic	7440-38-2	Yes	0.0093848		0.0603306	2.13E+03	4.69E+03	1.46E+03			

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Amino-4-chlorobenzotrifluoride, 3-	121-50-6				
Aminoazobenzene, p-	60-09-3				
Aminobiphenyl, 4-	92-67-1				1.17E+01 ca
Aminophenol, m-	591-27-5	3.89E+06	1.07E+07	2.85E+06	2.85E+06 nc
Aminophenol, o-	95-55-6				
Aminophenol, p-	123-30-8	9.73E+05	3.46E+06	7.60E+05	7.60E+05 nc
Aminopyridine, 4-	504-24-5				
Amitraz	33089-61-1	1.22E+05	4.15E+02	4.14E+02	4.14E+02 nc
Ammonium Perchlorate	7790-98-9	3.41E+04	7.04E+04	2.30E+04	2.30E+04 nc
Ammonium Sulfamate	7773-06-0	9.73E+06	2.01E+07	6.56E+06	6.56E+06 nc
Ammonium polyphosphate	68333-79-9	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Amyl Alcohol, tert-	75-85-4				
Aniline	62-53-3	3.41E+05	2.81E+05	1.54E+05	1.54E+05 nc
Anilinobenzothiazole	1843-21-6				
Anthracene	120-12-7	1.46E+07	1.06E+05	1.05E+05	1.05E+05 nc
Anthraquinone, 9,10-	84-65-1	9.73E+04	4.85E+03	4.62E+03	4.03E+03 ca**
Antimony (metallic)	7440-36-0	1.95E+04	6.03E+03	4.61E+03	4.61E+03 nc
Antimony Pentoxide	1314-60-9	2.43E+04	7.54E+03	5.76E+03	5.76E+03 nc
Antimony Potassium Tartrate	11071-15-1	4.38E+04	1.36E+04	1.04E+04	1.04E+04 nc
Antimony Tetroxide	1332-81-6	1.95E+04	6.03E+03	4.61E+03	4.61E+03 nc
Antimony Trichloride	10025-91-9				
Antimony Trioxide	1309-64-4				
Apollo	74115-24-5	6.33E+05	9.07E+04	7.93E+04	7.93E+04 nc
Aramite	140-57-8	2.43E+06	3.49E+04	3.44E+04	1.93E+03 ca*
Aroclor 1016	12674-11-2	3.41E+03		3.41E+03	3.41E+03 nc
Aroclor 1221	11104-28-2				9.73E+00 ca
Aroclor 1232	11141-16-5				9.73E+00 ca
Aroclor 1242	53469-21-9				1.60E+03 ca
Aroclor 1248	12672-29-6				1.60E+03 ca
Aroclor 1254	11097-69-1	9.73E+02		9.73E+02	9.73E+02 nc
Aroclor 1260	11096-82-5				1.60E+03 ca
Aroclor 5460	11126-42-4	2.92E+04		2.92E+04	2.92E+04 nc
Arsenic Salts	NA				
Arsenic, Inorganic	7440-38-2	1.46E+04	3.02E+04	9.84E+03	1.46E+03 ca**

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Arsine	7784-42-1	No	No	Inorganics			3.50E-06	U	1	0.001	77.95	1
Assure	76578-14-8	No	No	Organics			9.00E-03	U	1	0.00886	372.81	0.9
Asulam	3337-71-1	No	No	Organics			5.00E-02	U	1	0.0000529	230.24	1
Atrazine	1912-24-9	No	No	Organics	2.30E-01	U	3.50E-02	U	1	0.00524	215.69	1
Auramine	492-80-8	No	No	Organics	8.80E-01	U			1	0.0111	267.38	0.9
Avermectin B1	65195-55-3	No	No	Organics			4.00E-04	U	1	0.0000181	875.12	1
Azobenzene	103-33-3	No	Yes	Organics	1.10E-01	U			1	0.0514	182.23	1
Azodicarbonamide	123-77-3	No	No	Organics			1.00E+00	U	1	0.0000259	116.08	1
Barium	7440-39-3	No	No	Inorganics			2.00E-01	U	0.07	0.001	137.33	1
Barium Chromate	10294-40-3	Yes	No	Inorganics	5.00E-01	U	2.00E-02	U	0.025	0.001	253.321	1
Barium Cyanide	542-62-1	No	No	Inorganics					0.07	0.001	189.36	1
Baygon	114-26-1	No	No	Organics			4.00E-03	U	1	0.00107	209.25	1
Bayleton	43121-43-3	No	No	Organics			3.00E-02	U	1	0.00244	293.76	1
Baythroid	68359-37-5	No	No	Organics			2.50E-02	U	1	0.0515	434.3	0.7
Benefin	1861-40-1	No	Yes	Organics			3.00E-01	U	1	0.0675	335.29	0.8
Benomyl	17804-35-2	No	No	Organics			5.00E-02	U	1	0.000943	290.32	1
Bentazon	25057-89-0	No	No	Organics			3.00E-02	U	1	0.00252	240.28	1
Benz[a]anthracene	56-55-3	Yes	Yes	Organics	7.30E-01	U			1	0.552	228.3	1
Benzaldehyde	100-52-7	No	Yes	Organics			1.00E-01	U	1	0.00383	106.13	1
Benzene	71-43-2	No	Yes	Organics	5.50E-02	U	4.00E-03	U	1	0.0149	78.11	1
Benzene, Ethyldimethyl	29224-55-3	No	Yes	Organics					1	0.212	134.22	1
Benzene, Ethylmethyl	25550-14-5	No	Yes	Organics					1	0.0857	120.2	1
Benzene, Methylpropenyl	768-00-3	No	Yes	Organics					1	0.103	132.21	1
Benzene, Methylpropyl	28729-54-6	No	No	Organics					1			
Benzene, Trimethyl	25551-13-7	No	Yes	Organics					1	0.0621	120.2	1
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	No	No	Organics	1.00E-01	U	3.00E-04	U	1	3.04E-07	220.24	1
Benzenethiol	108-98-5	No	Yes	Organics			1.00E-03	U	1	0.0178	110.17	1
Benzidine	92-87-5	Yes	No	Organics	2.30E+02	U	3.00E-03	U	1	0.00113	184.24	1
Benzo(j)fluoranthene	205-82-3	No	No	Organics	1.20E+00	U			1	0.69	252.32	0.9
Benzo[a]pyrene	50-32-8	Yes	No	Organics	7.30E+00	U			1	0.713	252.32	1
Benzo[b]fluoranthene	205-99-2	Yes	No	Organics	7.30E-01	U			1	0.417	252.32	1
Benzo[g,h,i]perylene	191-24-2	No	No	Organics					1	1.12	276.34	0.7
Benzo[k]fluoranthene	207-08-9	Yes	No	Organics	7.30E-02	U			1	0.691	252.32	0.9
Benzofluoranthenes, total	NA	No	No	Organics					1			

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Arsine	7784-42-1	Yes			0.0007039						
Assure	76578-14-8	Yes			1.8099174						
Asulam	3337-71-1	Yes			10.055096						
Atrazine	1912-24-9	Yes	0.0612049		7.0385675	1.39E+04	2.29E+03	1.97E+03			
Auramine	492-80-8	Yes	0.0159967			3.63E+03	2.25E+02	2.12E+02			
Avermectin B1	65195-55-3	No									
Azobenzene	103-33-3	Yes	0.127974			2.90E+04	6.07E+02	5.94E+02			
Azodicarbonamide	123-77-3	Yes			201.10193						
Barium	7440-39-3	Yes			2.815427						
Barium Chromate	10294-40-3	Yes	0.0007039		0.100551	6.39E+03	3.52E+02	3.34E+02			
Barium Cyanide	542-62-1	Yes									
Baygon	114-26-1	Yes			0.8044077						
Bayleton	43121-43-3	Yes			6.0330579						
Baythroid	68359-37-5	Yes			5.0275482						
Benefin	1861-40-1	Yes			60.330579						
Benomyl	17804-35-2	Yes			10.055096						
Bentazon	25057-89-0	Yes			6.0330579						
Benz[a]anthracene	56-55-3	No				4.38E+03		4.38E+03			
Benzaldehyde	100-52-7	Yes			20.110193						
Benzene	71-43-2	Yes	0.2559479		0.8044077	5.81E+04	6.85E+03	6.13E+03			
Benzene, Ethyldimethyl	29224-55-3	Yes									
Benzene, Ethylmethyl	25550-14-5	Yes									
Benzene, Methylpropenyl	768-00-3	Yes									
Benzene, Methylpropyl	28729-54-6	No									
Benzene, Trimethyl	25551-13-7	Yes									
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	No				3.19E+04		3.19E+04			
Benzenethiol	108-98-5	Yes			0.2011019						
Benzidine	92-87-5	Yes	0.0000612		0.6033058	1.39E+01	1.30E+01	6.72E+00			
Benzo(j)fluoranthene	205-82-3	No				2.66E+03		2.66E+03			
Benzo[a]pyrene	50-32-8	No				4.38E+02		4.38E+02			
Benzo[b]fluoranthene	205-99-2	No				4.38E+03		4.38E+03			
Benzo[g,h,i]perylene	191-24-2	No									
Benzo[k]fluoranthene	207-08-9	No				4.38E+04		4.38E+04			
Benzofluoranthenes, total	NA	No									

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)	
Arsine	7784-42-1	1.70E+02	3.52E+02	1.15E+02	1.15E+02	nc
Assure	76578-14-8	4.38E+05	1.62E+04	1.56E+04	1.56E+04	nc
Asulam	3337-71-1	2.43E+06	3.40E+07	2.27E+06	2.27E+06	nc
Atrazine	1912-24-9	1.70E+06	2.64E+05	2.28E+05	1.97E+03	ca
Auramine	492-80-8				2.12E+02	ca
Avermectin B1	65195-55-3	1.95E+04		1.95E+04	1.95E+04	nc
Azobenzene	103-33-3				5.94E+02	ca
Azodicarbonamide	123-77-3	4.87E+07	2.64E+09	4.78E+07	4.78E+07	nc
Barium	7440-39-3	9.73E+06	1.41E+06	1.23E+06	1.23E+06	nc
Barium Chromate	10294-40-3	9.73E+05	5.03E+04	4.78E+04	3.34E+02	ca
Barium Cyanide	542-62-1					
Baygon	114-26-1	1.95E+05	1.54E+05	8.59E+04	8.59E+04	nc
Bayleton	43121-43-3	1.46E+06	2.94E+05	2.44E+05	2.44E+05	nc
Baythroid	68359-37-5	1.22E+06	6.69E+03	6.65E+03	6.65E+03	nc
Benefin	1861-40-1	1.46E+07	1.01E+05	1.01E+05	1.01E+05	nc
Benomyl	17804-35-2	2.43E+06	1.29E+06	8.45E+05	8.45E+05	nc
Bentazon	25057-89-0	1.46E+06	4.01E+05	3.15E+05	3.15E+05	nc
Benz[a]anthracene	56-55-3				4.38E+03	ca
Benzaldehyde	100-52-7	4.87E+06	1.87E+06	1.35E+06	1.35E+06	nc
Benzene	71-43-2	1.95E+05	2.15E+04	1.94E+04	6.13E+03	ca**
Benzene, Ethyldimethyl	29224-55-3					
Benzene, Ethylmethyl	25550-14-5					
Benzene, Methylpropenyl	768-00-3					
Benzene, Methylpropyl	28729-54-6					
Benzene, Trimethyl	25551-13-7					
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	1.46E+04		1.46E+04	1.46E+04	nc
Benzenethiol	108-98-5	4.87E+04	4.04E+03	3.73E+03	3.73E+03	nc
Benzidine	92-87-5	1.46E+05	1.28E+05	6.83E+04	6.72E+00	ca
Benzo(j)fluoranthene	205-82-3				2.66E+03	ca
Benzo[a]pyrene	50-32-8				4.38E+02	ca
Benzo[b]fluoranthene	205-99-2				4.38E+03	ca
Benzo[g,h,i]perylene	191-24-2					
Benzo[k]fluoranthene	207-08-9				4.38E+04	ca
Benzofluoranthenes, total	NA					

Site-specific
Recreator Screening Levels (RSL) for Surface Water
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Benzofluorene, 2,3-	243-17-4	No	No	Organics					1	0.654	216.28	1
Benzoic Acid	65-85-0	No	No	Organics			4.00E+00	U	1	0.00565	122.12	1
Benzoic acid, 3,5-dichloro-	51-36-5	No	No	Organics					1	0.0131	191.01	1
Benzoic acid, 4-hydroxy-, methyl ester	99-76-3	No	No	Organics					1	0.0044	152.15	1
Benzothiazole	95-16-9	No	No	Organics					1	0.00592	135.18	1
Benzotrichloride	98-07-7	No	Yes	Organics	1.30E+01	U			1	0.0487	195.48	1
Benzyl Alcohol	100-51-6	No	No	Organics			1.00E-01	U	1	0.00209	108.14	1
Benzyl Chloride	100-44-7	No	Yes	Organics	1.70E-01	U	2.00E-03	U	1	0.0103	126.59	1
Beryllium and compounds	7440-41-7	No	No	Inorganics			2.00E-03	U	0.007	0.001	9.01	1
Bidrin	141-66-2	No	No	Organics			1.00E-04	U	1	0.0000731	237.19	1
Bifenox	42576-02-3	No	No	Organics			9.00E-03	U	1	0.0179	342.14	0.9
Biphenthrin	82657-04-3	No	No	Organics			1.50E-02	U	1	1.74	422.88	0
Biphenyl, 1,1'-	92-52-4	No	Yes	Organics	8.00E-03	U	5.00E-01	U	1	0.0943	154.21	1
Bis(2-chloro-1-methylethyl) ether	108-60-1	No	Yes	Organics	7.00E-02	U	4.00E-02	U	1	0.00764	171.07	1
Bis(2-chloroethoxy)methane	111-91-1	No	No	Organics			3.00E-03	U	1	0.00122	173.04	1
Bis(2-chloroethyl)ether	111-44-4	No	Yes	Organics	1.10E+00	U			1	0.00178	143.01	1
Bis(2-ethylhexyl)phthalate	117-81-7	No	No	Organics	1.40E-02	U	2.00E-02	U	1	1.13	390.57	0.8
Bis(Octanoyloxy)Di-N-Butyl Stannane	4731-77-5	No	Yes	Organics					1	0.0547	519.36	0.6
Bis(chloromethyl)ether	542-88-1	No	Yes	Organics	2.20E+02	U			1	0.000855	114.96	1
Bis(oleoyloxy)dibutyl tin	13323-62-1	No	Yes	Organics					1	2680	795.87	0
Bisphenol A	80-05-7	No	No	Organics			5.00E-02	U	1	0.0132	228.29	1
Boron And Borates Only	7440-42-8	No	No	Inorganics			2.00E-01	U	1	0.001	13.84	1
Boron Trichloride	10294-34-5	No	Yes	Inorganics			2.00E+00	U	1	0.001	117.17	1
Boron Trifluoride	7637-07-2	No	Yes	Inorganics			4.00E-02	U	1	0.001	67.81	1
Bromacil	314-40-9	No	No	Organics					1	0.00135	261.12	1
Bromate	15541-45-4	No	No	Inorganics	7.00E-01	U	4.00E-03	U	1	0.001	79.9	1
Bromine	7726-95-6	No	Yes	Inorganics					1	0.001	159.81	1
Bromo-2-chloroethane, 1-	107-04-0	No	Yes	Organics	2.00E+00	U			1	0.00464	143.41	1
Bromo-3-fluorobenzene, 1-	1073-06-9	No	Yes	Organics					1	0.0142	175	1
Bromo-4-Ethylbenzene, 1-	1585-07-5	No	Yes	Organics					1	0.0579	185.06	1
Bromoacetic acid	79-08-3	No	No	Organics					1	0.000487	138.95	1
Bromoacetophenone, 3-	2142-63-4	No	No	Organics					1	0.00524	199.05	1
Bromobenzene	108-86-1	No	Yes	Organics			8.00E-03	U	1	0.02	157.01	1
Bromochloromethane	74-97-5	No	Yes	Organics					1	0.00255	129.38	1

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Benzofluorene, 2,3-	243-17-4	No									
Benzoic Acid	65-85-0	Yes			804.40771						
Benzoic acid, 3,5-dichloro-	51-36-5	Yes									
Benzoic acid, 4-hydroxy-, methyl ester	99-76-3	Yes									
Benzothiazole	95-16-9	Yes									
Benzotrichloride	98-07-7	Yes	0.0010829			2.46E+02	4.97E+00	4.88E+00			
Benzyl Alcohol	100-51-6	Yes			20.110193						
Benzyl Chloride	100-44-7	Yes	0.0828067		0.4022039	1.88E+04	2.65E+03	2.32E+03			
Beryllium and compounds	7440-41-7	Yes			0.0028154						
Bidrin	141-66-2	Yes			0.0201102						
Bifenox	42576-02-3	Yes			1.8099174						
Biphenthrin	82657-04-3	No									
Biphenyl, 1,1'-	92-52-4	Yes	1.7596419		100.55096	3.99E+05	5.27E+03	5.20E+03			
Bis(2-chloro-1-methylethyl) ether	108-60-1	Yes	0.2011019		8.0440771	4.56E+04	6.89E+03	5.99E+03			
Bis(2-chloroethoxy)methane	111-91-1	Yes			0.6033058						
Bis(2-chloroethyl)ether	111-44-4	Yes	0.0127974			2.90E+03	2.16E+03	1.24E+03			
Bis(2-ethylhexyl)phthalate	117-81-7	No				2.28E+05		2.28E+05			
Bis(Octanoyloxy)Di-N-Butyl Stannane	4731-77-5	No									
Bis(chloromethyl)ether	542-88-1	Yes	0.000064			1.45E+01	2.56E+01	9.27E+00			
Bis(oleoyloxy)dibutyl tin	13323-62-1	No									
Bisphenol A	80-05-7	Yes			10.055096						
Boron And Borates Only	7440-42-8	Yes			40.220386						
Boron Trichloride	10294-34-5	Yes			402.20386						
Boron Trifluoride	7637-07-2	Yes			8.0440771						
Bromacil	314-40-9	Yes									
Bromate	15541-45-4	Yes	0.0201102		0.8044077	4.56E+03	1.01E+04	3.14E+03			
Bromine	7726-95-6	Yes									
Bromo-2-chloroethane, 1-	107-04-0	Yes	0.0070386			1.60E+03	4.56E+02	3.55E+02			
Bromo-3-fluorobenzene, 1-	1073-06-9	Yes									
Bromo-4-Ethylbenzene, 1-	1585-07-5	Yes									
Bromoacetic acid	79-08-3	Yes									
Bromoacetophenone, 3-	2142-63-4	Yes									
Bromobenzene	108-86-1	Yes			1.6088154						
Bromochloromethane	74-97-5	Yes									

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Benzofluorene, 2,3-	243-17-4				
Benzoic Acid	65-85-0	1.95E+08	4.76E+07	3.82E+07	3.82E+07 nc
Benzoic acid, 3,5-dichloro-	51-36-5				
Benzoic acid, 4-hydroxy-, methyl ester	99-76-3				
Benzothiazole	95-16-9				
Benzotrichloride	98-07-7				4.88E+00 ca
Benzyl Alcohol	100-51-6	4.87E+06	3.39E+06	2.00E+06	2.00E+06 nc
Benzyl Chloride	100-44-7	9.73E+04	1.29E+04	1.14E+04	2.32E+03 ca**
Beryllium and compounds	7440-41-7	9.73E+04	1.41E+03	1.39E+03	1.39E+03 nc
Bidrin	141-66-2	4.87E+03	4.70E+04	4.41E+03	4.41E+03 nc
Bifenox	42576-02-3	4.38E+05	9.76E+03	9.55E+03	9.55E+03 nc
Biphenthrin	82657-04-3	7.30E+05		7.30E+05	7.30E+05 nc
Biphenyl, 1,1'-	92-52-4	2.43E+07	3.01E+05	2.97E+05	5.20E+03 ca*
Bis(2-chloro-1-methylethyl) ether	108-60-1	1.95E+06	2.76E+05	2.41E+05	5.99E+03 ca*
Bis(2-chloroethoxy)methane	111-91-1	1.46E+05	1.28E+05	6.82E+04	6.82E+04 nc
Bis(2-chloroethyl)ether	111-44-4				1.24E+03 ca
Bis(2-ethylhexyl)phthalate	117-81-7	9.73E+05		9.73E+05	2.28E+05 ca**
Bis(Octanoyloxy)Di-N-Butyl Stannane	4731-77-5				
Bis(chloromethyl)ether	542-88-1				9.27E+00 ca
Bis(oleoyloxy)dibutyl tin	13323-62-1				
Bisphenol A	80-05-7	2.43E+06	1.38E+05	1.31E+05	1.31E+05 nc
Boron And Borates Only	7440-42-8	9.73E+06	2.01E+07	6.56E+06	6.56E+06 nc
Boron Trichloride	10294-34-5	9.73E+07	2.01E+08	6.56E+07	6.56E+07 nc
Boron Trifluoride	7637-07-2	1.95E+06	4.02E+06	1.31E+06	1.31E+06 nc
Bromacil	314-40-9				
Bromate	15541-45-4	1.95E+05	4.02E+05	1.31E+05	3.14E+03 ca*
Bromine	7726-95-6				
Bromo-2-chloroethane, 1-	107-04-0				3.55E+02 ca
Bromo-3-fluorobenzene, 1-	1073-06-9				
Bromo-4-Ethylbenzene, 1-	1585-07-5				
Bromoacetic acid	79-08-3				
Bromoacetophenone, 3-	2142-63-4				
Bromobenzene	108-86-1	3.89E+05	2.25E+04	2.13E+04	2.13E+04 nc
Bromochloromethane	74-97-5				

Site-specific
Recreator Screening Levels (RSL) for Surface Water
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Bromodichloromethane	75-27-4	No	Yes	Organics	6.20E-02	U	2.00E-02	U	1	0.00402	163.83	1
Bromodiphenyl Ether, p-	101-55-3	No	Yes	Organics					1	0.12	249.11	0.9
Bromofluorobenzene, p-	460-00-4	No	Yes	Organics					1	0.0182	175	1
Bromoform	75-25-2	No	Yes	Organics	7.90E-03	U	2.00E-02	U	1	0.00235	252.73	1
Bromomethane	74-83-9	No	Yes	Organics			1.40E-03	U	1	0.00284	94.94	1
Bromophenol, p-	106-41-2	No	No	Organics					1	0.00882	173.01	1
Bromophenyl-phenyl phthalate, 4-	NA	No	No	Organics					1			
Bromophos	2104-96-3	No	Yes	Organics			5.00E-03	U	1	0.0401	365.99	0.8
Bromopyridine, 2-	109-04-6	No	No	Organics					1	0.00179	158	1
Bromotrichloromethane	75-62-7	No	Yes	Organics					1	0.00582	198.27	1
Bromoxynil	1689-84-5	No	No	Organics			2.00E-02	U	1	0.00783	276.92	0.9
Bromoxynil Octanoate	1689-99-2	No	Yes	Organics			2.00E-02	U	1	0.0332	403.12	0.8
Butadiene, 1,3-	106-99-0	No	Yes	Organics	3.40E+00	U			1	0.0164	54.09	1
Butanediol, 2,3-	513-85-9	No	No	Organics					1	0.00012	90.12	1
Butanol	35296-72-1	No	Yes	Organics					1	0.00153	74.12	1
Butanol, N-	71-36-3	No	Yes	Organics			1.00E-01	U	1	0.00231	74.12	1
Butanone-2, 4-chloro-4,4-difluoro	NA	No	No	Organics					1			
Butyl Alcohol, t-	75-65-0	No	Yes	Organics					1	0.00103	74.12	1
Butyl Benzyl Phthlate	85-68-7	No	No	Organics	1.90E-03	U	2.00E-01	U	1	0.0385	312.37	0.9
Butyl Formate, tert-	762-75-4	No	Yes	Organics					1	0.00258	102.13	1
Butyl alcohol, sec-	78-92-2	No	Yes	Organics			2.00E+00	U	1	0.00153	74.12	1
Butylacetate	123-86-4	No	Yes	Organics					1	0.00532	116.16	1
Butylate	2008-41-5	No	Yes	Organics			5.00E-02	U	1	0.0541	217.37	1
Butylated hydroxyanisole	25013-16-5	No	No	Organics	2.00E-04	U			1	0.0325	180.25	1
Butylated hydroxytoluene	128-37-0	No	No	Organics	3.60E-03	U	3.00E-01	U	1	0.223	220.36	1
Butylbenzene, n-	104-51-8	No	Yes	Organics			5.00E-02	U	1	0.225	134.22	1
Butylbenzene, sec-	135-98-8	No	Yes	Organics			1.00E-01	U	1	0.301	134.22	1
Butylbenzene, tert-	98-06-6	No	Yes	Organics			1.00E-01	U	1	0.149	134.22	1
Butylchloride, t-	507-20-0	No	Yes	Organics					1	0.0201	92.57	1
Butylphthalyl Butylglycolate	85-70-1	No	No	Organics			1.00E+00	U	1	0.0116	336.39	0.9
Butyltin	NA	No	No	Organics					1			
Cacodylic Acid	75-60-5	No	No	Organics			2.00E-02	U	1	0.00046	138	1
Cadmium (Water)	7440-43-9	No	No	Inorganics			5.00E-04	U	0.05	0.001	112.41	1
Calcium	7440-70-2	No	No	Inorganics					1	0.001	40.078	1

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Bromodichloromethane	75-27-4	Yes	0.2270506		4.0220386	5.15E+04	1.55E+04	1.19E+04			
Bromodiphenyl Ether, p-	101-55-3	Yes									
Bromofluorobenzene, p-	460-00-4	Yes									
Bromoform	75-25-2	Yes	1.7819158		4.0220386	4.04E+05	1.17E+05	9.09E+04			
Bromomethane	74-83-9	Yes			0.2815427						
Bromophenol, p-	106-41-2	Yes									
Bromophenyl-phenyl phthalate, 4-	NA	No									
Bromophos	2104-96-3	Yes			1.0055096						
Bromopyridine, 2-	109-04-6	Yes									
Bromotrichloromethane	75-62-7	Yes									
Bromoxynil	1689-84-5	Yes			4.0220386						
Bromoxynil Octanoate	1689-99-2	Yes			4.0220386						
Butadiene, 1,3-	106-99-0	Yes	0.0041403			9.39E+02	1.07E+02	9.63E+01			
Butanediol, 2,3-	513-85-9	Yes									
Butanol	35296-72-1	Yes									
Butanol, N-	71-36-3	Yes			20.110193						
Butanone-2, 4-chloro-4,4-difluoro	NA	No									
Butyl Alcohol, t-	75-65-0	Yes									
Butyl Benzyl Phthlate	85-68-7	Yes	7.4090184		40.220386	1.68E+06	2.25E+04	2.22E+04			
Butyl Formate, tert-	762-75-4	Yes									
Butyl alcohol, sec-	78-92-2	Yes			402.20386						
Butylacetate	123-86-4	Yes									
Butylate	2008-41-5	Yes			10.055096						
Butylated hydroxyanisole	25013-16-5	Yes	70.385675			1.60E+07	5.34E+05	5.17E+05			
Butylated hydroxytoluene	128-37-0	Yes	3.9103153		60.330579	8.87E+05	3.34E+03	3.33E+03			
Butylbenzene, n-	104-51-8	No									
Butylbenzene, sec-	135-98-8	No									
Butylbenzene, tert-	98-06-6	Yes			20.110193						
Butylchloride, t-	507-20-0	Yes									
Butylphthalyl Butylglycolate	85-70-1	Yes			201.10193						
Butyltin	NA	No									
Cacodylic Acid	75-60-5	Yes			4.0220386						
Cadmium (Water)	7440-43-9	Yes			0.0050275						
Calcium	7440-70-2	Yes									

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Bromodichloromethane	75-27-4	9.73E+05	2.74E+05	2.14E+05	1.19E+04 ca*
Bromodiphenyl Ether, p-	101-55-3				
Bromofluorobenzene, p-	460-00-4				
Bromoform	75-25-2	9.73E+05	2.65E+05	2.08E+05	9.09E+04 ca**
Bromomethane	74-83-9	6.81E+04	3.67E+04	2.38E+04	2.38E+04 nc
Bromophenol, p-	106-41-2				
Bromophenyl-phenyl phthalate, 4-	NA				
Bromophos	2104-96-3	2.43E+05	2.34E+03	2.31E+03	2.31E+03 nc
Bromopyridine, 2-	109-04-6				
Bromotrichloromethane	75-62-7				
Bromoxynil	1689-84-5	9.73E+05	7.55E+04	7.01E+04	7.01E+04 nc
Bromoxynil Octanoate	1689-99-2	9.73E+05	8.88E+03	8.80E+03	8.80E+03 nc
Butadiene, 1,3-	106-99-0				9.63E+01 ca
Butanediol, 2,3-	513-85-9				
Butanol	35296-72-1				
Butanol, N-	71-36-3	4.87E+06	3.43E+06	2.01E+06	2.01E+06 nc
Butanone-2, 4-chloro-4,4-difluoro	NA				
Butyl Alcohol, t-	75-65-0				
Butyl Benzyl Phthlate	85-68-7	9.73E+06	1.22E+05	1.21E+05	2.22E+04 ca**
Butyl Formate, tert-	762-75-4				
Butyl alcohol, sec-	78-92-2	9.73E+07	1.04E+08	5.02E+07	5.02E+07 nc
Butylacetate	123-86-4				
Butylate	2008-41-5	2.43E+06	3.61E+04	3.56E+04	3.56E+04 nc
Butylated hydroxyanisole	25013-16-5				5.17E+05 ca
Butylated hydroxytoluene	128-37-0	1.46E+07	5.16E+04	5.14E+04	3.33E+03 ca*
Butylbenzene, n-	104-51-8	2.43E+06		2.43E+06	2.43E+06 nc
Butylbenzene, sec-	135-98-8	4.87E+06		4.87E+06	4.87E+06 nc
Butylbenzene, tert-	98-06-6	4.87E+06	4.48E+04	4.44E+04	4.44E+04 nc
Butylchloride, t-	507-20-0				
Butylphthalyl Butylglycolate	85-70-1	4.87E+07	1.74E+06	1.68E+06	1.68E+06 nc
Butyltin	NA				
Cacodylic Acid	75-60-5	9.73E+05	2.69E+06	7.15E+05	7.15E+05 nc
Cadmium (Water)	7440-43-9	2.43E+04	2.51E+03	2.28E+03	2.28E+03 nc
Calcium	7440-70-2				

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
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Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Calcium Chlorate	10137-74-3	No	No	Inorganics					1	0.001	206.98	1
Calcium Chromate	13765-19-0	Yes	No	Inorganics	5.00E-01	U	2.00E-02	U	0.025	0.001	156.072	1
Calcium Cyanide	592-01-8	No	No	Inorganics			1.00E-03	U	1	0.001	92.11	1
Calcium pyrophosphate	7790-76-3	No	No	Inorganics			4.86E+01	U	1	0.001	254.1	1
Caprolactam	105-60-2	No	No	Organics			5.00E-01	U	1	0.001	113.16	1
Captafol	2425-06-1	No	No	Organics	1.50E-01	U	2.00E-03	U	1	0.00577	349.06	0.9
Captan	133-06-2	No	No	Organics	2.30E-03	U	1.30E-01	U	1	0.00234	300.59	1
Carbaryl	63-25-2	No	No	Organics			1.00E-01	U	1	0.00431	201.23	1
Carbazole	86-74-8	No	No	Organics					1	0.0536	167.21	1
Carbofuran	1563-66-2	No	No	Organics			5.00E-03	U	1	0.00313	221.26	1
Carbon Disulfide	75-15-0	No	Yes	Organics			1.00E-01	U	1	0.0114	76.13	1
Carbon Tetrachloride	56-23-5	No	Yes	Organics	7.00E-02	U	4.00E-03	U	1	0.0163	153.82	1
Carbosulfan	55285-14-8	No	No	Organics			1.00E-02	U	1	0.0579	380.55	0.8
Carboxin	5234-68-4	No	No	Organics			1.00E-01	U	1	0.00198	235.3	1
Catechol	120-80-9	No	No	Organics					1	0.00145	110.11	1
Ceric oxide	1306-38-3	No	No	Inorganics					1	0.001	172.115	1
Cerium, Stable	7440-45-1	No	No	Inorganics					1	0.001	140.12	1
Chloral	75-87-6	No	Yes	Organics					1	0.00106	147.39	1
Chloral Hydrate	302-17-0	No	Yes	Organics			1.00E-01	U	1	0.000841	165.4	1
Chloramben	133-90-4	No	No	Organics			1.50E-02	U	1	0.00201	206.03	1
Chloramine	127-65-1	No	No	Inorganics					1	0.0000344	227.64	1
Chloranil	118-75-2	No	No	Organics	4.03E-01	U			1	0.00194	245.88	1
Chlorate (ClO3) as	14866-68-3	No	No	Inorganics					1	0.001		
Chlordane	12789-03-6	No	Yes	Organics	3.50E-01	U	5.00E-04	U	1	0.107	409.78	0.7
Chlordane (alpha)	5103-71-9	No	Yes	Organics					1	0.0338	409.78	0.7
Chlordane (gamma)	5103-74-2	No	Yes	Organics					1	0.0338	409.78	0.7
Chlordecone (Kepone)	143-50-0	No	No	Organics	1.00E+01	U	3.00E-04	U	1	0.0109	490.64	0.8
Chlorfenvinphos	470-90-6	No	No	Organics			7.00E-04	U	1	0.00512	359.58	0.9
Chloride	16887-00-6	No	No	Inorganics					1	0.001	35.45	1
Chlorimuron, Ethyl-	90982-32-4	No	No	Organics			2.00E-02	U	1	0.000338	414.82	1
Chlorinated Hydrocarbons (total)	NA	No	No	Organics					1			
Chlorine	7782-50-5	No	Yes	Inorganics			1.00E-01	U	1	0.001	70.91	1
Chlorine Dioxide	10049-04-4	No	Yes	Inorganics			3.00E-02	U	1	0.001	67.45	1
Chlorite	14998-27-7	No	No	Inorganics					1	0.001		

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Calcium Chlorate	10137-74-3	Yes									
Calcium Chromate	13765-19-0	Yes	0.0007039		0.100551	6.39E+03	3.52E+02	3.34E+02			
Calcium Cyanide	592-01-8	Yes			0.2011019						
Calcium pyrophosphate	7790-76-3	Yes			9773.5537						
Caprolactam	105-60-2	Yes			100.55096						
Captafol	2425-06-1	Yes	0.0938476		0.4022039	2.13E+04	1.50E+03	1.40E+03			
Captan	133-06-2	Yes	6.1204935		26.143251	1.39E+06	2.97E+05	2.45E+05			
Carbaryl	63-25-2	Yes			20.110193						
Carbazole	86-74-8	Yes									
Carbofuran	1563-66-2	Yes			1.0055096						
Carbon Disulfide	75-15-0	Yes			20.110193						
Carbon Tetrachloride	56-23-5	Yes	0.2011019		0.8044077	4.56E+04	3.52E+03	3.27E+03			
Carbosulfan	55285-14-8	Yes			2.0110193						
Carboxin	5234-68-4	Yes			20.110193						
Catechol	120-80-9	Yes									
Ceric oxide	1306-38-3	Yes									
Cerium, Stable	7440-45-1	Yes									
Chloral	75-87-6	Yes									
Chloral Hydrate	302-17-0	Yes			20.110193						
Chloramben	133-90-4	Yes			3.0165289						
Chloramine	127-65-1	Yes									
Chloranil	118-75-2	Yes	0.0349309			7.92E+03	2.91E+03	2.13E+03			
Chlorate (ClO3) as	14866-68-3	Yes									
Chlordane	12789-03-6	No				9.13E+03		9.13E+03			
Chlordane (alpha)	5103-71-9	Yes									
Chlordane (gamma)	5103-74-2	No									
Chlordecone (Kepone)	143-50-0	Yes	0.0014077		0.0603306	3.19E+02	5.39E+00	5.30E+00			
Chlorfenvinphos	470-90-6	Yes			0.1407713						
Chloride	16887-00-6	Yes									
Chlorimuron, Ethyl-	90982-32-4	Yes			4.0220386						
Chlorinated Hydrocarbons (total)	NA	No									
Chlorine	7782-50-5	Yes			20.110193						
Chlorine Dioxide	10049-04-4	Yes			6.0330579						
Chlorite	14998-27-7	Yes									

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Calcium Chlorate	10137-74-3				
Calcium Chromate	13765-19-0	9.73E+05	5.03E+04	4.78E+04	3.34E+02 ca
Calcium Cyanide	592-01-8	4.87E+04	1.01E+05	3.28E+04	3.28E+04 nc
Calcium pyrophosphate	7790-76-3	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Caprolactam	105-60-2	2.43E+07	3.47E+07	1.43E+07	1.43E+07 nc
Captafol	2425-06-1	9.73E+04	6.44E+03	6.04E+03	1.40E+03 ca**
Captan	133-06-2	6.33E+06	1.27E+06	1.06E+06	2.45E+05 ca**
Carbaryl	63-25-2	4.87E+06	1.01E+06	8.34E+05	8.34E+05 nc
Carbazole	86-74-8				
Carbofuran	1563-66-2	2.43E+05	6.09E+04	4.87E+04	4.87E+04 nc
Carbon Disulfide	75-15-0	4.87E+06	7.03E+05	6.14E+05	6.14E+05 nc
Carbon Tetrachloride	56-23-5	1.95E+05	1.41E+04	1.31E+04	3.27E+03 ca**
Carbosulfan	55285-14-8	4.87E+05	2.95E+03	2.93E+03	2.93E+03 nc
Carboxin	5234-68-4	4.87E+06	1.76E+06	1.29E+06	1.29E+06 nc
Catechol	120-80-9				
Ceric oxide	1306-38-3				
Cerium, Stable	7440-45-1				
Chloral	75-87-6				
Chloral Hydrate	302-17-0	4.87E+06	6.49E+06	2.78E+06	2.78E+06 nc
Chloramben	133-90-4	7.30E+05	3.14E+05	2.19E+05	2.19E+05 nc
Chloramine	127-65-1				
Chloranil	118-75-2				2.13E+03 ca
Chlorate (ClO3) as	14866-68-3				
Chlordane	12789-03-6	2.43E+04		2.43E+04	9.13E+03 ca**
Chlordane (alpha)	5103-71-9				
Chlordane (gamma)	5103-74-2				
Chlordecone (Kepone)	143-50-0	1.46E+04	2.31E+02	2.27E+02	5.30E+00 ca*
Chlorfenvinphos	470-90-6	3.41E+04	2.37E+03	2.22E+03	2.22E+03 nc
Chloride	16887-00-6				
Chlorimuron, Ethyl-	90982-32-4	9.73E+05	6.47E+05	3.89E+05	3.89E+05 nc
Chlorinated Hydrocarbons (total)	NA				
Chlorine	7782-50-5	4.87E+06	1.01E+07	3.28E+06	3.28E+06 nc
Chlorine Dioxide	10049-04-4	1.46E+06	3.02E+06	9.84E+05	9.84E+05 nc
Chlorite	14998-27-7				

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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Chlorite (Sodium Salt)	7758-19-2	No	No	Inorganics			3.00E-02	U	1	0.001	90.44	1
Chloro-1,1-difluoroethane, 1-	75-68-3	No	Yes	Organics					1	0.00989	100.5	1
Chloro-1,3-butadiene, 2-	126-99-8	No	Yes	Organics			2.00E-02	U	1	0.0238	88.54	1
Chloro-2-methylaniline HCl, 4-	3165-93-3	No	No	Organics	4.60E-01	U			1	0.000018	178.06	1
Chloro-2-methylaniline, 4-	95-69-2	No	No	Organics	1.00E-01	U	3.00E-03	U	1	0.00808	141.6	1
Chloro-2-methylphenol, 4-	1570-64-5	No	No	Organics					1	0.0175	142.59	1
Chloro-4-methylphenol	35421-08-0	No	No	Organics					1			
Chloro-6-fluorophenol, 2-	2040-90-6	No	No	Organics					1		146.55	
Chloroacetaldehyde, 2-	107-20-0	No	Yes	Organics	2.70E-01	U			1	0.00065	78.5	1
Chloroacetamide	79-07-2	No	No	Organics					1	0.000208	93.51	1
Chloroacetic Acid	79-11-8	No	No	Organics			2.00E-03	U	1	0.000647	94.5	1
Chloroacetophenone, 2-	532-27-4	No	No	Organics					1	0.00406	154.6	1
Chloroaniline	27134-26-5	No	No	Organics					1	0.00552	127.57	1
Chloroaniline, 3-	108-42-9	No	No	Organics					1	0.00535	127.57	1
Chloroaniline, p-	106-47-8	No	No	Organics	2.00E-01	U	4.00E-03	U	1	0.00496	127.57	1
Chlorobenzene	108-90-7	No	Yes	Organics			2.00E-02	U	1	0.0282	112.56	1
Chlorobenzene sulfonic acid, p-	98-66-8	No	No	Organics					1	0.0000586	192.62	1
Chlorobenzenes (total)	NA	No	No	Organics					1			
Chlorobenzilate	510-15-6	No	No	Organics	1.10E-01	U	2.00E-02	U	1	0.0331	325.19	0.8
Chlorobenzoic Acid, p-	74-11-3	No	No	Organics			3.00E-02	U	1	0.012	156.57	1
Chlorobenzotrifluoride, 3-nitro-4-	121-17-5	No	Yes	Organics					1	0.0159	225.56	0.9
Chlorobenzotrifluoride, 4-	98-56-6	No	Yes	Organics			3.00E-03	U	1	0.0375	180.56	1
Chlorobiphenyl, p-	2051-62-9	No	Yes	Organics					1	0.752	188.66	0.6
Chlorobutane, 1-	109-69-3	No	Yes	Organics			4.00E-02	U	1	0.0269	92.57	1
Chlorobutane, 2-	78-86-4	No	Yes	Organics					1	0.0167	92.57	1
Chlorocyclopentadiene	41851-50-7	No	Yes	Organics					1	0.0177	100.55	1
Chlorodibromoethane	73506-94-2	No	No	Organics					1			
Chlorodifluoromethane	75-45-6	No	Yes	Organics					1	0.00268	86.47	1
Chloroethanol, 2-	107-07-3	No	Yes	Organics			2.00E-02	U	1	0.000579	80.51	1
Chloroethylvinyl ether, 2-	110-75-8	No	Yes	Organics					1	0.00236	106.55	1
Chloroform	67-66-3	No	Yes	Organics	3.10E-02	U	1.00E-02	U	1	0.00683	119.38	1
Chloromethane	74-87-3	No	Yes	Organics					1	0.00328	50.49	1
Chloromethyl Methyl Ether	107-30-2	No	Yes	Organics	2.40E+00	U			1	0.000905	80.51	1
Chloronaphthalene, Beta-	91-58-7	No	Yes	Organics			8.00E-02	U	1	0.0749	162.62	1

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Chlorite (Sodium Salt)	7758-19-2	Yes			6.0330579						
Chloro-1,1-difluoroethane, 1-	75-68-3	Yes									
Chloro-1,3-butadiene, 2-	126-99-8	Yes			4.0220386						
Chloro-2-methylaniline HCl, 4-	3165-93-3	Yes	0.0306025			6.94E+03	4.26E+05	6.83E+03			
Chloro-2-methylaniline, 4-	95-69-2	Yes	0.1407713		0.6033058	3.19E+04	5.31E+03	4.55E+03			
Chloro-2-methylphenol, 4-	1570-64-5	Yes									
Chloro-4-methylphenol	35421-08-0	No									
Chloro-6-fluorophenol, 2-	2040-90-6	No									
Chloroacetaldehyde, 2-	107-20-0	Yes	0.0521375			1.18E+04	3.11E+04	8.57E+03			
Chloroacetamide	79-07-2	Yes									
Chloroacetic Acid	79-11-8	Yes			0.4022039						
Chloroacetophenone, 2-	532-27-4	Yes									
Chloroaniline	27134-26-5	Yes									
Chloroaniline, 3-	108-42-9	Yes									
Chloroaniline, p-	106-47-8	Yes	0.0703857		0.8044077	1.60E+04	4.62E+03	3.58E+03			
Chlorobenzene	108-90-7	Yes			4.0220386						
Chlorobenzene sulfonic acid, p-	98-66-8	Yes									
Chlorobenzenes (total)	NA	No									
Chlorobenzilate	510-15-6	Yes	0.127974		4.0220386	2.90E+04	4.68E+02	4.61E+02			
Chlorobenzoic Acid, p-	74-11-3	Yes			6.0330579						
Chlorobenzotrifluoride, 3-nitro-4-	121-17-5	Yes									
Chlorobenzotrifluoride, 4-	98-56-6	Yes			0.6033058						
Chlorobiphenyl, p-	2051-62-9	Yes									
Chlorobutane, 1-	109-69-3	Yes			8.0440771						
Chlorobutane, 2-	78-86-4	Yes									
Chlorocyclopentadiene	41851-50-7	Yes									
Chlorodibromoethane	73506-94-2	No									
Chlorodifluoromethane	75-45-6	Yes									
Chloroethanol, 2-	107-07-3	Yes			4.0220386						
Chloroethylvinyl ether, 2-	110-75-8	Yes									
Chloroform	67-66-3	Yes	0.4541011		2.0110193	1.03E+05	2.25E+04	1.85E+04			
Chloromethane	74-87-3	Yes									
Chloromethyl Methyl Ether	107-30-2	Yes	0.0058655			1.33E+03	2.50E+03	8.69E+02			
Chloronaphthalene, Beta-	91-58-7	Yes			16.088154						

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Chlorite (Sodium Salt)	7758-19-2	1.46E+06	3.02E+06	9.84E+05	9.84E+05 nc
Chloro-1,1-difluoroethane, 1-	75-68-3				
Chloro-1,3-butadiene, 2-	126-99-8	9.73E+05	6.61E+04	6.19E+04	6.19E+04 nc
Chloro-2-methylaniline HCl, 4-	3165-93-3				6.83E+03 ca
Chloro-2-methylaniline, 4-	95-69-2	1.46E+05	2.27E+04	1.97E+04	4.55E+03 ca**
Chloro-2-methylphenol, 4-	1570-64-5				
Chloro-4-methylphenol	35421-08-0				
Chloro-6-fluorophenol, 2-	2040-90-6				
Chloroacetaldehyde, 2-	107-20-0				8.57E+03 ca
Chloroacetamide	79-07-2				
Chloroacetic Acid	79-11-8	9.73E+04	2.30E+05	6.84E+04	6.84E+04 nc
Chloroacetophenone, 2-	532-27-4				
Chloroaniline	27134-26-5				
Chloroaniline, 3-	108-42-9				
Chloroaniline, p-	106-47-8	1.95E+05	5.28E+04	4.15E+04	3.58E+03 ca*
Chlorobenzene	108-90-7	9.73E+05	5.11E+04	4.85E+04	4.85E+04 nc
Chlorobenzene sulfonic acid, p-	98-66-8				
Chlorobenzenes (total)	NA				
Chlorobenzilate	510-15-6	9.73E+05	1.47E+04	1.45E+04	4.61E+02 ca*
Chlorobenzoic Acid, p-	74-11-3	1.46E+06	1.41E+05	1.29E+05	1.29E+05 nc
Chlorobenzotrifluoride, 3-nitro-4-	121-17-5				
Chlorobenzotrifluoride, 4-	98-56-6	1.46E+05	3.96E+03	3.86E+03	3.86E+03 nc
Chlorobiphenyl, p-	2051-62-9				
Chlorobutane, 1-	109-69-3	1.95E+06	1.16E+05	1.09E+05	1.09E+05 nc
Chlorobutane, 2-	78-86-4				
Chlorocyclopentadiene	41851-50-7				
Chlorodibromoethane	73506-94-2				
Chlorodifluoromethane	75-45-6				
Chloroethanol, 2-	107-07-3	9.73E+05	2.68E+06	7.14E+05	7.14E+05 nc
Chloroethylvinyl ether, 2-	110-75-8				
Chloroform	67-66-3	4.87E+05	9.97E+04	8.28E+04	1.85E+04 ca**
Chloromethane	74-87-3				
Chloromethyl Methyl Ether	107-30-2				8.69E+02 ca
Chloronaphthalene, Beta-	91-58-7	3.89E+06	5.94E+04	5.85E+04	5.85E+04 nc

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Chloronaphthalene, alpha-	90-13-1	No	Yes	Organics					1	0.0872	162.62	1
Chloronitrobenzene, o-	88-73-3	No	No	Organics	3.00E-01	U	3.00E-03	U	1	0.0063	157.56	1
Chloronitrobenzene, p-	100-00-5	No	No	Organics	6.30E-03	U	1.00E-03	U	1	0.00793	157.56	1
Chlorophenol, 2-	95-57-8	No	Yes	Organics			5.00E-03	U	1	0.00799	128.56	1
Chlorophenol, 3-	108-43-0	No	No	Organics					1	0.0136	128.56	1
Chlorophenol, 4-	106-48-9	No	No	Organics					1	0.0115	128.56	1
Chlorophenols (each)	NA	No	No	Organics					1			
Chlorophenols (total)	NA	No	No	Organics					1			
Chlorophenyl Methyl Sulfide, p-	123-09-1	No	Yes	Organics					1	0.0286	158.65	1
Chlorophenyl Methyl Sulfoxide	934-73-6	No	No	Organics					1	0.000849	174.65	1
Chlorophenyl phenyl ether, 4-	7005-72-3	No	Yes	Organics					1	0.148	204.66	1
Chloropicrin	76-06-2	No	Yes	Organics					1	0.00459	164.38	1
Chloropropane, 2-	75-29-6	No	Yes	Organics					1	0.0104	78.54	1
Chlorothalonil	1897-45-6	No	No	Organics	3.10E-03	U	1.50E-02	U	1	0.00537	265.91	0.9
Chlorotoluene, o-	95-49-8	No	Yes	Organics			2.00E-02	U	1	0.0572	126.59	1
Chlorotoluene, p-	106-43-4	No	Yes	Organics			2.00E-02	U	1	0.0498	126.59	1
Chlorozotocin	54749-90-5	No	No	Organics	2.40E+02	U			1	9.91E-06	313.7	1
Chlorpropham	101-21-3	No	No	Organics			2.00E-01	U	1	0.0213	213.67	0.9
Chlorpyrifos	2921-88-2	No	No	Organics			1.00E-03	U	1	0.0334	350.59	0.8
Chlorpyrifos Methyl	5598-13-0	No	No	Organics			1.00E-02	U	1	0.0178	322.53	0.9
Chlorsulfuron	64902-72-3	No	No	Organics			5.00E-02	U	1	0.000328	357.77	1
Chlorthiophos	60238-56-4	No	No	Organics			8.00E-04	U	1	0.106	361.24	0.8
Chromium(III), Insoluble Salts	16065-83-1	No	No	Inorganics			1.50E+00	U	0.013	0.001	52	1
Chromium(VI)	18540-29-9	Yes	No	Inorganics	5.00E-01	U	3.00E-03	U	0.025	0.002	52	1
Chromium, Total	7440-47-3	No	No	Inorganics					0.013	0.001	52	1
Chrysene	218-01-9	Yes	No	Organics	7.30E-03	U			1	0.596	228.3	1
Cobalt	7440-48-4	No	No	Inorganics			3.00E-04	U	1	0.0004	58.93	1
Complex Mixtures of Aliphatic and Aromatic Hydrocarbons	NA	No	No	Organics					1			
Copper	7440-50-8	No	No	Inorganics			4.00E-02	U	1	0.001	63.55	1
Copper Cyanide	544-92-3	No	No	Inorganics			5.00E-03	U	1	0.001	89.56	1
Coronene	191-07-1	No	No	Organics					1	3.86	300.36	0.3
Creosote	8001-58-9	No	No	Organics					1			
Cresol, m-	108-39-4	No	No	Organics			5.00E-02	U	1	0.00777	108.14	1

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Chloronaphthalene, alpha-	90-13-1	Yes									
Chloronitrobenzene, o-	88-73-3	Yes	0.0469238		0.6033058	1.06E+04	2.07E+03	1.73E+03			
Chloronitrobenzene, p-	100-00-5	Yes	2.2344659		0.2011019	5.07E+05	7.85E+04	6.79E+04			
Chlorophenol, 2-	95-57-8	Yes			1.0055096						
Chlorophenol, 3-	108-43-0	Yes									
Chlorophenol, 4-	106-48-9	Yes									
Chlorophenols (each)	NA	No									
Chlorophenols (total)	NA	No									
Chlorophenyl Methyl Sulfide, p-	123-09-1	Yes									
Chlorophenyl Methyl Sulfoxide	934-73-6	Yes									
Chlorophenyl phenyl ether, 4-	7005-72-3	Yes									
Chloropicrin	76-06-2	Yes									
Chloropropane, 2-	75-29-6	Yes									
Chlorothalonil	1897-45-6	Yes	4.5410113		3.0165289	1.03E+06	1.33E+05	1.18E+05			
Chlorotoluene, o-	95-49-8	Yes			4.0220386						
Chlorotoluene, p-	106-43-4	Yes			4.0220386						
Chlorozotocin	54749-90-5	Yes	0.0000587			1.33E+01	6.18E+02	1.30E+01			
Chlorpropham	101-21-3	Yes			40.220386						
Chlorpyrifos	2921-88-2	Yes			0.2011019						
Chlorpyrifos Methyl	5598-13-0	Yes			2.0110193						
Chlorsulfuron	64902-72-3	Yes			10.055096						
Chlorthiophos	60238-56-4	Yes			0.1608815						
Chromium(III), Insoluble Salts	16065-83-1	Yes			3.9214876						
Chromium(VI)	18540-29-9	Yes	0.0007039		0.0150826	6.39E+03	1.76E+02	1.71E+02			
Chromium, Total	7440-47-3	Yes									
Chrysene	218-01-9	No				4.38E+05		4.38E+05			
Cobalt	7440-48-4	Yes			0.0603306						
Complex Mixtures of Aliphatic and Aromatic Hydrocarbons	NA	No									
Copper	7440-50-8	Yes			8.0440771						
Copper Cyanide	544-92-3	Yes			1.0055096						
Coronene	191-07-1	No									
Creosote	8001-58-9	No									
Cresol, m-	108-39-4	Yes			10.055096						

Site-specific
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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Chloronaphthalene, alpha-	90-13-1				
Chloronitrobenzene, o-	88-73-3	1.46E+05	2.66E+04	2.25E+04	1.73E+03 ca*
Chloronitrobenzene, p-	100-00-5	4.87E+04	7.06E+03	6.17E+03	6.17E+03 nc
Chlorophenol, 2-	95-57-8	2.43E+05	4.09E+04	3.50E+04	3.50E+04 nc
Chlorophenol, 3-	108-43-0				
Chlorophenol, 4-	106-48-9				
Chlorophenols (each)	NA				
Chlorophenols (total)	NA				
Chlorophenyl Methyl Sulfide, p-	123-09-1				
Chlorophenyl Methyl Sulfoxide	934-73-6				
Chlorophenyl phenyl ether, 4-	7005-72-3				
Chloropicrin	76-06-2				
Chloropropane, 2-	75-29-6				
Chlorothalonil	1897-45-6	7.30E+05	8.87E+04	7.91E+04	7.91E+04 nc
Chlorotoluene, o-	95-49-8	9.73E+05	2.40E+04	2.34E+04	2.34E+04 nc
Chlorotoluene, p-	106-43-4	9.73E+05	2.74E+04	2.67E+04	2.67E+04 nc
Chlorozotocin	54749-90-5				1.30E+01 ca
Chlorpropham	101-21-3	9.73E+06	4.17E+05	4.00E+05	4.00E+05 nc
Chlorpyrifos	2921-88-2	4.87E+04	6.19E+02	6.12E+02	6.12E+02 nc
Chlorpyrifos Methyl	5598-13-0	4.87E+05	1.24E+04	1.21E+04	1.21E+04 nc
Chlorsulfuron	64902-72-3	2.43E+06	2.41E+06	1.21E+06	1.21E+06 nc
Chlorthiophos	60238-56-4	3.89E+04	1.46E+02	1.45E+02	1.45E+02 nc
Chromium(III), Insoluble Salts	16065-83-1	7.30E+07	1.96E+06	1.91E+06	1.91E+06 nc
Chromium(VI)	18540-29-9	1.46E+05	3.77E+03	3.68E+03	1.71E+02 ca*
Chromium, Total	7440-47-3				
Chrysene	218-01-9				4.38E+05 ca
Cobalt	7440-48-4	1.46E+04	7.54E+04	1.22E+04	1.22E+04 nc
Complex Mixtures of Aliphatic and Aromatic Hydrocarbons	NA				
Copper	7440-50-8	1.95E+06	4.02E+06	1.31E+06	1.31E+06 nc
Copper Cyanide	544-92-3	2.43E+05	5.03E+05	1.64E+05	1.64E+05 nc
Coronene	191-07-1				
Creosote	8001-58-9				
Cresol, m-	108-39-4	2.43E+06	4.60E+05	3.87E+05	3.87E+05 nc

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Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Cresol, o-	95-48-7	No	No	Organics			5.00E-02	U	1	0.00766	108.14	1
Cresol, p-	106-44-5	No	No	Organics			1.00E-01	U	1	0.00754	108.14	1
Cresol, p-chloro-m-	59-50-7	No	No	Organics			1.00E-01	U	1	0.0285	142.59	1
Cresols	1319-77-3	No	No	Organics			1.00E-01	U	1	0.00766	108.14	1
Crotonaldehyde	4170-30-3	No	Yes	Organics					1	0.00159	70.09	1
Crotonaldehyde, trans-	123-73-9	No	Yes	Organics	1.90E+00	U	1.00E-03	U	1	0.00159	70.09	1
Cumene	98-82-8	No	Yes	Organics			1.00E-01	U	1	0.0897	120.2	1
Cupferron	135-20-6	No	No	Organics	2.20E-01	U			1	1.67E-06	155.16	1
Cyanazine	21725-46-2	No	No	Organics	8.40E-01	U	2.00E-03	U	1	0.00209	240.7	1
Cyanide (CN-)	57-12-5	No	Yes	Inorganics			6.00E-04	U	1	0.001	26.018	1
Cyanide (total complex)	NA	No	No	Inorganics					1	0.001		
Cyanogen	460-19-5	No	Yes	Inorganics			1.00E-03	U	1	0.00089	52.04	1
Cyanogen Bromide	506-68-3	No	Yes	Inorganics			9.00E-02	U	1	0.000255	105.92	1
Cyanogen Chloride	506-77-4	No	Yes	Inorganics			5.00E-02	U	1	0.000394	61.47	1
Cyclohexane	110-82-7	No	Yes	Organics					1	0.102	84.16	1
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	No	No	Organics	2.30E-02	U			1	0.00283	513.09	0.9
Cyclohexanone	108-94-1	No	Yes	Organics			5.00E+00	U	1	0.00152	98.15	1
Cyclohexene	110-83-8	No	Yes	Organics			5.00E-03	U	1	0.0431	82.15	1
Cyclohexylamine	108-91-8	No	Yes	Organics			2.00E-01	U	1	0.00425	99.18	1
Cyclopentadiene	542-92-7	No	Yes	Organics					1	0.021	66.1	1
Cyhalothrin/karate	68085-85-8	No	No	Organics			5.00E-03	U	1	0.21	449.86	0.5
Cypermethrin	52315-07-8	No	No	Organics			1.00E-02	U	1	0.0769	416.31	0.7
Cyromazine	66215-27-8	No	No	Organics			7.50E-03	U	1	0.000797	166.19	1
DDD	72-54-8	No	No	Organics	2.40E-01	U			1	0.251	320.05	0.8
DDD, o,p'-	53-19-0	No	No	Organics					1	0.201	320.05	0.8
DDE, p,p'-	72-55-9	No	Yes	Organics	3.40E-01	U			1	0.545	318.03	0.8
DDT	50-29-3	No	No	Organics	3.40E-01	U	5.00E-04	U	1	0.628	354.49	0.7
DDT, o,p'-	789-02-6	No	No	Organics					1	0.526	354.49	0.4
DDT/DDE/DDD (total)	NA	No	No	Organics					1			
Dacthal	1861-32-1	No	No	Organics			1.00E-02	U	1	0.015	331.97	0.9
Dalapon	75-99-0	No	No	Organics			3.00E-02	U	1	0.000815	142.97	1
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	No	No	Organics	7.00E-04	U	7.00E-03	U	1	0.725	959.17	0
Decane	124-18-5	No	Yes	Organics					1	0.532	142.29	1

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Cresol, o-	95-48-7	Yes			10.055096						
Cresol, p-	106-44-5	Yes			20.110193						
Cresol, p-chloro-m-	59-50-7	Yes			20.110193						
Cresols	1319-77-3	Yes			20.110193						
Crotonaldehyde	4170-30-3	Yes									
Crotonaldehyde, trans-	123-73-9	Yes	0.007409		0.2011019	1.68E+03	1.86E+03	8.82E+02			
Cumene	98-82-8	Yes			20.110193						
Cupferron	135-20-6	No				1.45E+04		1.45E+04			
Cyanazine	21725-46-2	Yes	0.0167585		0.4022039	3.80E+03	1.34E+03	9.91E+02			
Cyanide (CN-)	57-12-5	Yes			0.1206612						
Cyanide (total complex)	NA	Yes									
Cyanogen	460-19-5	Yes			0.2011019						
Cyanogen Bromide	506-68-3	Yes			18.099174						
Cyanogen Chloride	506-77-4	Yes			10.055096						
Cyclohexane	110-82-7	Yes									
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	Yes	0.6120493			1.39E+05	6.94E+03	6.61E+03			
Cyclohexanone	108-94-1	Yes			1005.5096						
Cyclohexene	110-83-8	Yes			1.0055096						
Cyclohexylamine	108-91-8	Yes			40.220386						
Cyclopentadiene	542-92-7	Yes									
Cyhalothrin/karate	68085-85-8	No									
Cypermethrin	52315-07-8	No									
Cyromazine	66215-27-8	Yes			1.5082645						
DDD	72-54-8	Yes	0.0586547			1.33E+04	2.93E+01	2.92E+01			
DDD, o,p'-	53-19-0	Yes									
DDE, p,p'-	72-55-9	No				9.39E+03		9.39E+03			
DDT	50-29-3	No				9.39E+03		9.39E+03			
DDT, o,p'-	789-02-6	No									
DDT/DDE/DDD (total)	NA	No									
Dacthal	1861-32-1	Yes			2.0110193						
Dalapon	75-99-0	Yes			6.0330579						
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	No				4.56E+06		4.56E+06			
Decane	124-18-5	No									

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Cresol, o-	95-48-7	2.43E+06	4.66E+05	3.91E+05	3.91E+05 nc
Cresol, p-	106-44-5	4.87E+06	9.47E+05	7.93E+05	7.93E+05 nc
Cresol, p-chloro-m-	59-50-7	4.87E+06	2.16E+05	2.07E+05	2.07E+05 nc
Cresols	1319-77-3	4.87E+06	9.33E+05	7.83E+05	7.83E+05 nc
Crotonaldehyde	4170-30-3				
Crotonaldehyde, trans-	123-73-9	4.87E+04	5.04E+04	2.47E+04	8.82E+02 ca*
Cumene	98-82-8	4.87E+06	8.04E+04	7.91E+04	7.91E+04 nc
Cupferron	135-20-6				1.45E+04 ca
Cyanazine	21725-46-2	9.73E+04	3.22E+04	2.42E+04	9.91E+02 ca*
Cyanide (CN-)	57-12-5	2.92E+04	6.03E+04	1.97E+04	1.97E+04 nc
Cyanide (total complex)	NA				
Cyanogen	460-19-5	4.87E+04	1.13E+05	3.40E+04	3.40E+04 nc
Cyanogen Bromide	506-68-3	4.38E+06	3.55E+07	3.90E+06	3.90E+06 nc
Cyanogen Chloride	506-77-4	2.43E+06	1.28E+07	2.04E+06	2.04E+06 nc
Cyclohexane	110-82-7				
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3				6.61E+03 ca
Cyclohexanone	108-94-1	2.43E+08	2.42E+08	1.21E+08	1.21E+08 nc
Cyclohexene	110-83-8	2.43E+05	9.58E+03	9.22E+03	9.22E+03 nc
Cyclohexylamine	108-91-8	9.73E+06	3.46E+06	2.55E+06	2.55E+06 nc
Cyclopentadiene	542-92-7				
Cyhalothrin/karate	68085-85-8	2.43E+05		2.43E+05	2.43E+05 nc
Cypermethrin	52315-07-8	4.87E+05		4.87E+05	4.87E+05 nc
Cyromazine	66215-27-8	3.65E+05	5.11E+05	2.13E+05	2.13E+05 nc
DDD	72-54-8				2.92E+01 ca
DDD, o,p'-	53-19-0				
DDE, p,p'-	72-55-9				9.39E+03 ca
DDT	50-29-3	2.43E+04		2.43E+04	9.39E+03 ca**
DDT, o,p'-	789-02-6				
DDT/DDE/DDD (total)	NA				
Dacthal	1861-32-1	4.87E+05	1.38E+04	1.34E+04	1.34E+04 nc
Dalapon	75-99-0	1.46E+06	2.23E+06	8.82E+05	8.82E+05 nc
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	3.41E+05		3.41E+05	3.41E+05 nc
Decane	124-18-5				

Site-specific
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Decanol, n-	112-30-1	No	Yes	Organics					1	0.221	158.29	1
Deltamethrin	52918-63-5	No	No	Organics					1	0.0302	505.21	0.7
Demeton	8065-48-3	No	No	Organics			4.00E-05	U	1	0.00761	258.33	0.9
Di(2-ethylhexyl)adipate	103-23-1	No	No	Organics	1.20E-03	U	6.00E-01	U	1	3.23	370.58	0
Di-n-butyltin bis(2-ethylhexanoate)	2781-10-4	No	Yes	Organics					1	0.0772	533.39	0.5
Di-n-butyltin bis(methyl maleate)	15546-11-9	No	No	Organics					1	0.000125	491.13	1
Di-n-butyltin bis(n-butyl maleate)	15546-16-4	No	No	Organics					1	0.00382	575.29	0.8
Di-n-butyltin dilaurate	77-58-7	No	Yes	Organics					1	0.000053	631.57	1
Di-n-butyltin distearate	5847-55-2	No	Yes	Organics					1	4910	799.9	0
Di-n-hexylphthalate	84-75-3	No	Yes	Organics					1	0.709	334.46	0.4
Diallate	2303-16-4	No	No	Organics	6.10E-02	U			1	0.046	270.22	0.9
Diammonium phosphate	7783-28-0	No	No	Inorganics			4.86E+01	U	1	0.001	132.06	1
Diazinon	333-41-5	No	No	Organics			7.00E-04	U	1	0.0104	304.35	0.9
Dibenz[a,h]anthracene	53-70-3	Yes	No	Organics	7.30E+00	U			1	0.953	278.36	0.6
Dibenzo(a,e)pyrene	192-65-4	No	No	Organics	1.20E+01	U			1	4.19	302.38	0.3
Dibenzofuran	132-64-9	No	Yes	Organics			1.00E-03	U	1	0.0975	168.2	1
Dibenzothiophene	132-65-0	No	Yes	Organics			1.00E-02	U	1	0.118	184.26	1
Dibromo-3-chloropropane, 1,2-	96-12-8	Yes	Yes	Organics	8.00E-01	U	2.00E-04	U	1	0.00685	236.33	1
Dibromoacetic acid	631-64-1	No	No	Organics					1	0.000274	217.85	1
Dibromobenzene, 1,3-	108-36-1	No	Yes	Organics			4.00E-04	U	1	0.0231	235.91	0.9
Dibromobenzene, 1,4-	106-37-6	No	Yes	Organics			1.00E-02	U	1	0.0245	235.91	0.9
Dibromochloromethane	124-48-1	No	Yes	Organics	8.40E-02	U	2.00E-02	U	1	0.00289	208.28	1
Dibromodichloromethane	594-18-3	No	Yes	Organics					1	0.00376	242.73	1
Dibromodiphenyl Ether, p,p'-	2050-47-7	No	Yes	Organics					1	0.169	328	0.8
Dibromoethane, 1,2-	106-93-4	No	Yes	Organics	2.00E+00	U	9.00E-03	U	1	0.00278	187.86	1
Dibromomethane (Methylene Bromide)	74-95-3	No	Yes	Organics			1.00E-02	U	1	0.00223	173.84	1
Dibutoxy di-n-butyltin	3349-36-8	No	Yes	Organics					1	0.00144	379.17	0.9
Dibutyl Phthalate	84-74-2	No	No	Organics			1.00E-01	U	1	0.042	278.35	0.9
Dibutylbis((1-oxoisooctyl)oxy)stannane	85702-74-5	No	No	Organics					1			
Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2	No	Yes	Organics					1	797	787.8	0
Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3	No	No	Organics					1			
Dibutylbis(palmitoyloxy)stannane	13323-63-2	No	Yes	Organics					1	502	743.79	0

Site-specific
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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Decanol, n-	112-30-1	No									
Deltamethrin	52918-63-5	No									
Demeton	8065-48-3	Yes			0.0080441						
Di(2-ethylhexyl)adipate	103-23-1	No				2.66E+06		2.66E+06			
Di-n-butyltin bis(2-ethylhexanoate)	2781-10-4	No									
Di-n-butyltin bis(methyl maleate)	15546-11-9	Yes									
Di-n-butyltin bis(n-butyl maleate)	15546-16-4	No									
Di-n-butyltin dilaurate	77-58-7	Yes									
Di-n-butyltin distearate	5847-55-2	No									
Di-n-hexylphthalate	84-75-3	No									
Diallate	2303-16-4	Yes	0.2307727			5.24E+04	7.70E+02	7.59E+02			
Diammonium phosphate	7783-28-0	Yes			9773.5537						
Diazinon	333-41-5	Yes			0.1407713						
Dibenz[a,h]anthracene	53-70-3	No				4.38E+02		4.38E+02			
Dibenzo(a,e)pyrene	192-65-4	No				2.66E+02		2.66E+02			
Dibenzofuran	132-64-9	Yes			0.2011019						
Dibenzothiophene	132-65-0	Yes			2.0110193						
Dibromo-3-chloropropane, 1,2-	96-12-8	Yes	0.0175964		0.0402204	3.99E+03	4.42E+02	3.98E+02			
Dibromoacetic acid	631-64-1	Yes									
Dibromobenzene, 1,3-	108-36-1	Yes			0.0804408						
Dibromobenzene, 1,4-	106-37-6	Yes			2.0110193						
Dibromochloromethane	124-48-1	Yes	0.1675849		4.0220386	3.80E+04	1.19E+04	9.09E+03			
Dibromodichloromethane	594-18-3	Yes									
Dibromodiphenyl Ether, p,p'-	2050-47-7	Yes									
Dibromoethane, 1,2-	106-93-4	Yes	0.0070386		1.8099174	1.60E+03	5.95E+02	4.33E+02			
Dibromomethane (Methylene Bromide)	74-95-3	Yes			2.0110193						
Dibutoxy di-n-butyltin	3349-36-8	Yes									
Dibutyl Phthalate	84-74-2	Yes			20.110193						
Dibutylbis((1-oxoisooctyl)oxy)stannane	85702-74-5	No									
Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2	No									
Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3	No									
Dibutylbis(palmitoyloxy)stannane	13323-63-2	No									

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Decanol, n-	112-30-1				
Deltamethrin	52918-63-5				
Demeton	8065-48-3	1.95E+03	1.75E+02	1.61E+02	1.61E+02 nc
Di(2-ethylhexyl)adipate	103-23-1	2.92E+07		2.92E+07	2.66E+06 ca*
Di-n-butyltin bis(2-ethylhexanoate)	2781-10-4				
Di-n-butyltin bis(methyl maleate)	15546-11-9				
Di-n-butyltin bis(n-butyl maleate)	15546-16-4				
Di-n-butyltin dilaurate	77-58-7				
Di-n-butyltin distearate	5847-55-2				
Di-n-hexylphthalate	84-75-3				
Diallate	2303-16-4				7.59E+02 ca
Diammonium phosphate	7783-28-0	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Diazinon	333-41-5	3.41E+04	1.67E+03	1.59E+03	1.59E+03 nc
Dibenz[a,h]anthracene	53-70-3				4.38E+02 ca
Dibenzo(a,e)pyrene	192-65-4				2.66E+02 ca
Dibenzofuran	132-64-9	4.87E+04	5.50E+02	5.44E+02	5.44E+02 nc
Dibenzothiophene	132-65-0	4.87E+05	4.10E+03	4.06E+03	4.06E+03 nc
Dibromo-3-chloropropane, 1,2-	96-12-8	9.73E+03	1.01E+03	9.15E+02	3.98E+02 ca**
Dibromoacetic acid	631-64-1				
Dibromobenzene, 1,3-	108-36-1	1.95E+04	6.67E+02	6.45E+02	6.45E+02 nc
Dibromobenzene, 1,4-	106-37-6	4.87E+05	1.57E+04	1.52E+04	1.52E+04 nc
Dibromochloromethane	124-48-1	9.73E+05	2.87E+05	2.21E+05	9.09E+03 ca*
Dibromodichloromethane	594-18-3				
Dibromodiphenyl Ether, p,p'-	2050-47-7				
Dibromoethane, 1,2-	106-93-4	4.38E+05	1.53E+05	1.13E+05	4.33E+02 ca
Dibromomethane (Methylene Bromide)	74-95-3	4.87E+05	2.32E+05	1.57E+05	1.57E+05 nc
Dibutoxy di-n-butyltin	3349-36-8				
Dibutyl Phthalate	84-74-2	4.87E+06	6.98E+04	6.88E+04	6.88E+04 nc
Dibutylbis((1-oxoisooctyl)oxy)stannane	85702-74-5				
Dibutylbis(octadeca-9(Z),12(Z),15(Z)-trienoyloxy)stannane	95873-60-2				
Dibutylbis(octadeca-9(Z),12(Z)-dienoyloxy)stannane	85391-79-3				
Dibutylbis(palmitoyloxy)stannane	13323-63-2				

Site-specific
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Dibutyltin Compounds	NA	No	No	Organics			3.00E-04	U	1			
Dibutyltin diacetate	1067-33-0	No	Yes	Organics					1	0.0000583	351.03	1
Dibutyltin dichloride	683-18-1	No	Yes	Organics					1	0.000336	303.85	1
Dibutyltin oxide	818-08-6	No	Yes	Organics					1	0.219	248.94	0.9
Dicalcium phosphate	7757-93-9	No	No	Inorganics			4.86E+01	U	1	0.001	136.06	1
Dicamba	1918-00-9	No	No	Organics			3.00E-02	U	1	0.00265	221.04	1
Dichloro-2-butene, 1,4-	764-41-0	No	Yes	Organics					1	0.0166	125	1
Dichloro-2-butene, cis-1,4-	1476-11-5	No	Yes	Organics					1	0.0166	125	1
Dichloro-2-butene, trans-1,4-	110-57-6	No	Yes	Organics					1	0.0166	125	1
Dichloroacetic Acid	79-43-6	No	No	Organics	5.00E-02	U	4.00E-03	U	1	0.00121	128.94	1
Dichloroaniline, 2,4-	554-00-7	No	No	Organics					1	0.0136	162.02	1
Dichloroaniline, 3,4-	95-76-1	No	Yes	Organics					1	0.0118	162.02	1
Dichlorobenzene	25321-22-6	No	Yes	Organics					1	0.0446	147	1
Dichlorobenzene, 1,2-	95-50-1	No	Yes	Organics			9.00E-02	U	1	0.0446	147	1
Dichlorobenzene, 1,3-	541-73-1	No	Yes	Organics					1	0.052	147	1
Dichlorobenzene, 1,4-	106-46-7	No	Yes	Organics	5.40E-03	U	7.00E-02	U	1	0.0453	147	1
Dichlorobenzidine, 3,3'-	91-94-1	No	No	Organics	4.50E-01	U			1	0.0128	253.13	1
Dichlorobenzoic acid, -3,5	51-36-5	No	No	Organics					1	0.0131	191.01	1
Dichlorobenzophenone, 4,4'-	90-98-2	No	No	Organics			9.00E-03	U	1	0.0542	251.11	0.9
Dichlorobenzotrifluoride, 3,4-	328-84-7	No	Yes	Organics					1	0.0645	215	1
Dichlorodifluoromethane	75-71-8	No	Yes	Organics			2.00E-01	U	1	0.00895	120.91	1
Dichlorodiisopropyl ether, 2,2'-	39638-32-9	No	Yes	Organics					1	0.0515	171.07	1
Dichloroethane, 1,1-	75-34-3	No	Yes	Organics	5.70E-03	U	2.00E-01	U	1	0.00675	98.96	1
Dichloroethane, 1,2-	107-06-2	No	Yes	Organics	9.10E-02	U	6.00E-03	U	1	0.0042	98.96	1
Dichloroethylene, 1,1-	75-35-4	No	Yes	Organics			5.00E-02	U	1	0.0117	96.94	1
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	Organics			2.00E-03	U	1	0.011	96.94	1
Dichloroethylene, 1,2-trans-	156-60-5	No	Yes	Organics			2.00E-02	U	1	0.011	96.94	1
Dichlorophenol, 2,3-	576-24-9	Yes	No	Organics					1	0.0147	163	1
Dichlorophenol, 2,4-	120-83-2	No	No	Organics			3.00E-03	U	1	0.0206	163	1
Dichlorophenol, 2,5-	583-78-8	No	No	Organics					1	0.0206	163	1
Dichlorophenol, 2,6-	87-65-0	No	No	Organics					1	0.0128	163	1
Dichlorophenol, 3,4-	95-77-2	No	No	Organics					1	0.0311	163	1
Dichlorophenols (total)	NA	No	No	Organics					1			
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	No	No	Organics			1.00E-02	U	1	0.00664	221.04	1

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Dibutyltin Compounds	NA	No									
Dibutyltin diacetate	1067-33-0	Yes									
Dibutyltin dichloride	683-18-1	Yes									
Dibutyltin oxide	818-08-6	Yes									
Dicalcium phosphate	7757-93-9	Yes			9773.5537						
Dicamba	1918-00-9	Yes			6.0330579						
Dichloro-2-butene, 1,4-	764-41-0	Yes									
Dichloro-2-butene, cis-1,4-	1476-11-5	Yes									
Dichloro-2-butene, trans-1,4-	110-57-6	Yes									
Dichloroacetic Acid	79-43-6	Yes	0.2815427		0.8044077	6.39E+04	7.50E+04	3.45E+04			
Dichloroaniline, 2,4-	554-00-7	Yes									
Dichloroaniline, 3,4-	95-76-1	Yes									
Dichlorobenzene	25321-22-6	Yes									
Dichlorobenzene, 1,2-	95-50-1	Yes			18.099174						
Dichlorobenzene, 1,3-	541-73-1	Yes									
Dichlorobenzene, 1,4-	106-46-7	Yes	2.6068768		14.077135	5.91E+05	1.72E+04	1.68E+04			
Dichlorobenzidine, 3,3'-	91-94-1	Yes	0.0312825			7.10E+03	3.77E+02	3.58E+02			
Dichlorobenzoic acid, -3,5	51-36-5	Yes									
Dichlorobenzophenone, 4,4'-	90-98-2	Yes			1.8099174						
Dichlorobenzotrifluoride, 3,4-	328-84-7	Yes									
Dichlorodifluoromethane	75-71-8	Yes			40.220386						
Dichlorodiisopropyl ether, 2,2'-	39638-32-9	Yes									
Dichloroethane, 1,1-	75-34-3	Yes	2.4696728		40.220386	5.60E+05	1.34E+05	1.08E+05			
Dichloroethane, 1,2-	107-06-2	Yes	0.1546938		1.2066116	3.51E+04	1.35E+04	9.74E+03			
Dichloroethylene, 1,1-	75-35-4	Yes			10.055096						
Dichloroethylene, 1,2-cis-	156-59-2	Yes			0.4022039						
Dichloroethylene, 1,2-trans-	156-60-5	Yes			4.0220386						
Dichlorophenol, 2,3-	576-24-9	Yes									
Dichlorophenol, 2,4-	120-83-2	Yes			0.6033058						
Dichlorophenol, 2,5-	583-78-8	Yes									
Dichlorophenol, 2,6-	87-65-0	Yes									
Dichlorophenol, 3,4-	95-77-2	Yes									
Dichlorophenols (total)	NA	No									
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	Yes			2.0110193						

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Dibutyltin Compounds	NA	1.46E+04		1.46E+04	1.46E+04 nc
Dibutyltin diacetate	1067-33-0				
Dibutyltin dichloride	683-18-1				
Dibutyltin oxide	818-08-6				
Dicalcium phosphate	7757-93-9	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Dicamba	1918-00-9	1.46E+06	4.32E+05	3.33E+05	3.33E+05 nc
Dichloro-2-butene, 1,4-	764-41-0				
Dichloro-2-butene, cis-1,4-	1476-11-5				
Dichloro-2-butene, trans-1,4-	110-57-6				
Dichloroacetic Acid	79-43-6	1.95E+05	2.14E+05	1.02E+05	3.45E+04 ca**
Dichloroaniline, 2,4-	554-00-7				
Dichloroaniline, 3,4-	95-76-1				
Dichlorobenzene	25321-22-6				
Dichlorobenzene, 1,2-	95-50-1	4.38E+06	1.22E+05	1.18E+05	1.18E+05 nc
Dichlorobenzene, 1,3-	541-73-1				
Dichlorobenzene, 1,4-	106-46-7	3.41E+06	9.31E+04	9.06E+04	1.68E+04 ca**
Dichlorobenzidine, 3,3'-	91-94-1				3.58E+02 ca
Dichlorobenzoic acid, -3,5	51-36-5				
Dichlorobenzophenone, 4,4'-	90-98-2	4.38E+05	5.80E+03	5.72E+03	5.72E+03 nc
Dichlorobenzotrifluoride, 3,4-	328-84-7				
Dichlorodifluoromethane	75-71-8	9.73E+06	1.52E+06	1.31E+06	1.31E+06 nc
Dichlorodiisopropyl ether, 2,2'-	39638-32-9				
Dichloroethane, 1,1-	75-34-3	9.73E+06	2.19E+06	1.79E+06	1.08E+05 ca*
Dichloroethane, 1,2-	107-06-2	2.92E+05	1.05E+05	7.73E+04	9.74E+03 ca**
Dichloroethylene, 1,1-	75-35-4	2.43E+06	3.20E+05	2.83E+05	2.83E+05 nc
Dichloroethylene, 1,2-cis-	156-59-2	9.73E+04	1.36E+04	1.19E+04	1.19E+04 nc
Dichloroethylene, 1,2-trans-	156-60-5	9.73E+05	1.36E+05	1.19E+05	1.19E+05 nc
Dichlorophenol, 2,3-	576-24-9				
Dichlorophenol, 2,4-	120-83-2	1.46E+05	8.08E+03	7.65E+03	7.65E+03 nc
Dichlorophenol, 2,5-	583-78-8				
Dichlorophenol, 2,6-	87-65-0				
Dichlorophenol, 3,4-	95-77-2				
Dichlorophenols (total)	NA				
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	4.87E+05	5.75E+04	5.14E+04	5.14E+04 nc

Site-specific
Recreator Screening Levels (RSL) for Surface Water
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	No	No	Organics			8.00E-03	U	1	0.0139	249.1	0.9
Dichloropropane, 1,2-	78-87-5	No	Yes	Organics	3.60E-02	U	9.00E-02	U	1	0.00753	112.99	1
Dichloropropane, 1,3-	142-28-9	No	Yes	Organics			2.00E-02	U	1	0.00776	112.99	1
Dichloropropane, 2,2-	594-20-7	No	Yes	Organics					1	0.0316	112.99	1
Dichloropropanol, 2,3-	616-23-9	No	No	Organics			3.00E-03	U	1	0.000983	128.99	1
Dichloropropene, 1,3-	542-75-6	No	Yes	Organics	1.00E-01	U	3.00E-02	U	1	0.00834	110.97	1
Dichloropropene, 2,3-	78-88-6	No	Yes	Organics					1	0.0153	110.97	1
Dichloropropene, cis-1,3-	10061-01-5	No	Yes	Organics					1	0.00834	110.97	1
Dichloropropene, trans-1,3-	10061-02-6	No	Yes	Organics					1	0.00834	110.97	1
Dichlorvos	62-73-7	No	No	Organics	2.90E-01	U	5.00E-04	U	1	0.000804	220.98	1
Diclofop-methyl	51338-27-3	No	No	Organics					1	0.0224	341.19	0.8
Dicofol	115-32-2	No	No	Organics					1	0.0283	370.49	0.8
Dicyclohexylamine	101-83-7	No	Yes	Organics					1	0.12	181.32	1
Dicyclopentadiene	77-73-6	No	Yes	Organics			8.00E-02	U	1	0.036	132.21	1
Didecyl dimethyl ammonium chloride	7173-51-5	No	No	Organics					1	0.0181	362.09	0.8
Dieldrin	60-57-1	No	No	Organics	1.60E+01	U	5.00E-05	U	1	0.0326	380.91	0.8
Diepoxybutane	1464-53-5	No	Yes	Organics					1	0.0000308	86.09	1
Diethanolamine	111-42-2	No	No	Organics			2.00E-03	U	1	0.0000451	105.14	1
Diethyl Phthalate	84-66-2	No	No	Organics			8.00E-01	U	1	0.0036	222.24	1
Diethyl sulfate	64-67-5	No	No	Organics					1	0.00123	154.18	1
Diethyl-p-nitrophenylphosphate	311-45-5	No	No	Organics					1	0.000926	275.2	1
Diethylene Glycol Dinitrate (DEGDN)	693-21-0	No	No	Organics					1	0.000557	196.12	1
Diethylene Glycol Monobutyl Ether	112-34-5	No	No	Organics			3.00E-02	U	1	0.000454	162.23	1
Diethylene Glycol Monoethyl Ether	111-90-0	No	No	Organics			6.00E-02	U	1	0.000121	134.18	1
Diethylene-glycol	111-46-6	No	No	Organics					1	0.0000417	106.12	1
Diethylformamide	617-84-5	No	Yes	Organics			1.00E-03	U	1	0.000457	101.15	1
Diethylphosphorodithioate	298-06-6	No	Yes	Organics					1	0.00436	186.23	1
Diethylstilbestrol	56-53-1	No	No	Organics	3.50E+02	U			1	0.114	268.36	0.9
Difenzoquat	43222-48-6	No	No	Organics			8.00E-02	U	1	0.0000402	360.43	1
Diflubenzuron	35367-38-5	No	No	Organics			2.00E-02	U	1	0.0107	310.69	0.9
Difluoroethane, 1,1-	75-37-6	No	Yes	Organics					1	0.0021	66.05	1
Difluoropropane, 2,2-	420-45-1	No	Yes	Organics					1	0.0185	80.08	1
Dihydrosafrole	94-58-6	No	Yes	Organics	4.40E-02	U			1	0.0452	164.21	1
Diisopropyl Ether	108-20-3	No	Yes	Organics					1	0.00428	102.18	1

Site-specific
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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	Yes			1.6088154						
Dichloropropane, 1,2-	78-87-5	Yes	0.3910315		18.099174	8.87E+04	1.81E+04	1.50E+04			
Dichloropropane, 1,3-	142-28-9	Yes			4.0220386						
Dichloropropane, 2,2-	594-20-7	Yes									
Dichloropropanol, 2,3-	616-23-9	Yes			0.6033058						
Dichloropropene, 1,3-	542-75-6	Yes	0.1407713		6.0330579	3.19E+04	5.94E+03	5.00E+03			
Dichloropropene, 2,3-	78-88-6	Yes									
Dichloropropene, cis-1,3-	10061-01-5	Yes									
Dichloropropene, trans-1,3-	10061-02-6	Yes									
Dichlorvos	62-73-7	Yes	0.0485418		0.100551	1.10E+04	1.15E+04	5.62E+03			
Diclofop-methyl	51338-27-3	Yes									
Dicofol	115-32-2	Yes									
Dicyclohexylamine	101-83-7	Yes									
Dicyclopentadiene	77-73-6	Yes			16.088154						
Didecyl dimethyl ammonium chloride	7173-51-5	Yes									
Dieldrin	60-57-1	Yes	0.0008798		0.0100551	2.00E+02	2.28E+00	2.26E+00			
Diepoxybutane	1464-53-5	Yes									
Diethanolamine	111-42-2	Yes			0.4022039						
Diethyl Phthalate	84-66-2	Yes			160.88154						
Diethyl sulfate	64-67-5	Yes									
Diethyl-p-nitrophenylphosphate	311-45-5	Yes									
Diethylene Glycol Dinitrate (DEGDN)	693-21-0	Yes									
Diethylene Glycol Monobutyl Ether	112-34-5	Yes			6.0330579						
Diethylene Glycol Monoethyl Ether	111-90-0	Yes			12.066116						
Diethylene-glycol	111-46-6	Yes									
Diethylformamide	617-84-5	Yes			0.2011019						
Diethylphosphorodithioate	298-06-6	Yes									
Diethylstilbestrol	56-53-1	Yes	0.0000402			9.13E+00	5.48E-02	5.45E-02			
Difenzoquat	43222-48-6	Yes			16.088154						
Diflubenzuron	35367-38-5	Yes			4.0220386						
Difluoroethane, 1,1-	75-37-6	Yes									
Difluoropropane, 2,2-	420-45-1	Yes									
Dihydrosafrole	94-58-6	Yes	0.3199349			7.26E+04	1.94E+03	1.89E+03			
Diisopropyl Ether	108-20-3	Yes									

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	3.89E+05	2.04E+04	1.93E+04	1.93E+04 nc
Dichloropropane, 1,2-	78-87-5	4.38E+06	8.37E+05	7.03E+05	1.50E+04 ca*
Dichloropropane, 1,3-	142-28-9	9.73E+05	1.81E+05	1.52E+05	1.52E+05 nc
Dichloropropane, 2,2-	594-20-7				
Dichloropropanol, 2,3-	616-23-9	1.46E+05	1.98E+05	8.40E+04	8.40E+04 nc
Dichloropropene, 1,3-	542-75-6	1.46E+06	2.54E+05	2.17E+05	5.00E+03 ca*
Dichloropropene, 2,3-	78-88-6				
Dichloropropene, cis-1,3-	10061-01-5				
Dichloropropene, trans-1,3-	10061-02-6				
Dichlorvos	62-73-7	2.43E+04	2.37E+04	1.20E+04	5.62E+03 ca**
Diclofop-methyl	51338-27-3				
Dicofol	115-32-2				
Dicyclohexylamine	101-83-7				
Dicyclopentadiene	77-73-6	3.89E+06	1.46E+05	1.41E+05	1.41E+05 nc
Didecyl dimethyl ammonium chloride	7173-51-5				
Dieldrin	60-57-1	2.43E+03	2.61E+01	2.58E+01	2.26E+00 ca*
Diepoxybutane	1464-53-5				
Diethanolamine	111-42-2	9.73E+04	3.17E+06	9.44E+04	9.44E+04 nc
Diethyl Phthalate	84-66-2	3.89E+07	8.41E+06	6.92E+06	6.92E+06 nc
Diethyl sulfate	64-67-5				
Diethyl-p-nitrophenylphosphate	311-45-5				
Diethylene Glycol Dinitrate (DEGDN)	693-21-0				
Diethylene Glycol Monobutyl Ether	112-34-5	1.46E+06	3.68E+06	1.05E+06	1.05E+06 nc
Diethylene Glycol Monoethyl Ether	111-90-0	2.92E+06	3.13E+07	2.67E+06	2.67E+06 nc
Diethylene-glycol	111-46-6				
Diethylformamide	617-84-5	4.87E+04	1.59E+05	3.72E+04	3.72E+04 nc
Diethylphosphorodithioate	298-06-6				
Diethylstilbestrol	56-53-1				5.45E-02 ca
Difenzoquat	43222-48-6	3.89E+06	3.09E+07	3.46E+06	3.46E+06 nc
Diflubenzuron	35367-38-5	9.73E+05	4.45E+04	4.25E+04	4.25E+04 nc
Difluoroethane, 1,1-	75-37-6				
Difluoropropane, 2,2-	420-45-1				
Dihydrosafrole	94-58-6				1.89E+03 ca
Diisopropyl Ether	108-20-3				

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Diisopropyl Methylphosphonate	1445-75-6	No	Yes	Organics			8.00E-02	U	1	0.000738	180.19	1
Dimagnesium phosphate	7782-75-4	No	No	Inorganics			4.86E+01	U	1	0.001	174.33	1
Dimethipin	55290-64-7	No	No	Organics			2.00E-02	U	1	0.0000798	210.26	1
Dimethoate	60-51-5	No	No	Organics			2.00E-04	U	1	0.000267	229.25	1
Dimethoxybenzidine, 3,3'-	119-90-4	No	No	Organics	1.60E+00	U			1	0.00106	244.3	1
Dimethyl Sulfate	77-78-1	No	No	Organics					1	0.000392	126.13	1
Dimethyl Sulfide	75-18-3	No	Yes	Organics					1	0.00286	62.13	1
Dimethyl methylphosphonate	756-79-6	No	No	Organics	1.70E-03	U	6.00E-02	U	1	0.000124	124.08	1
Dimethylamino azobenzene [p-]	60-11-7	No	No	Organics	4.60E+00	U			1	0.0943	225.3	1
Dimethylaniline HCl, 2,4-	21436-96-4	No	No	Organics	5.80E-01	U			1	0.0000202	157.64	1
Dimethylaniline, 2,4-	95-68-1	No	No	Organics	2.00E-01	U	2.00E-03	U	1	0.00428	121.18	1
Dimethylaniline, N,N-	121-69-7	No	Yes	Organics			2.00E-03	U	1	0.0112	121.18	1
Dimethylbenz(a)anthracene, 7,12-	57-97-6	Yes	No	Organics	2.50E+02	U			1	0.408	256.35	0.9
Dimethylbenzidine, 3,3'-	119-93-7	No	No	Organics	1.10E+01	U			1	0.00362	212.3	1
Dimethylcyclohexylamine, n,n-	98-94-2	No	Yes	Organics					1	0.0103	127.23	1
Dimethylethyl Lead	107584-40-7	No	No	Organics					1			
Dimethylformamide	68-12-2	No	Yes	Organics			1.00E-01	U	1	0.00013	73.1	1
Dimethylhydrazine, 1,1-	57-14-7	No	Yes	Organics			1.00E-04	U	1	0.0000727	60.1	1
Dimethylhydrazine, 1,2-	540-73-8	No	Yes	Organics	5.50E+02	U			1	0.000317	60.1	1
Dimethylmercury	593-74-8	No	Yes	Organics					1	0.00419	230.66	1
Dimethylphenethylamine	122-09-8	No	No	Organics					1	0.00417	149.24	1
Dimethylphenol, 2,4-	105-67-9	No	No	Organics			2.00E-02	U	1	0.0109	122.17	1
Dimethylphenol, 2,6-	576-26-1	No	No	Organics			6.00E-04	U	1	0.012	122.17	1
Dimethylphenol, 3,4-	95-65-8	No	No	Organics			1.00E-03	U	1	0.0098	122.17	1
Dimethylphthalate	131-11-3	No	No	Organics					1	0.00147	194.19	1
Dimethylterephthalate	120-61-6	No	Yes	Organics			1.00E-01	U	1	0.00399	194.19	1
Dimethylvinylchloride	513-37-1	No	Yes	Organics	4.50E-02	U			1	0.0253	90.55	1
Dinitro-o-cresol, 4,6-	534-52-1	No	No	Organics			8.00E-05	U	1	0.00315	198.14	1
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	No	No	Organics			2.00E-03	U	1	0.0275	266.26	0.9
Dinitroaniline, 3,5-	618-87-1	No	No	Organics					1	0.00265	183.12	1
Dinitrobenzene, 1,2-	528-29-0	No	No	Organics			1.00E-04	U	1	0.00237	168.11	1
Dinitrobenzene, 1,3-	99-65-0	No	No	Organics			1.00E-04	U	1	0.00174	168.11	1
Dinitrobenzene, 1,4-	100-25-4	No	No	Organics			1.00E-04	U	1	0.00167	168.11	1
Dinitrophenol, 2,4-	51-28-5	No	No	Organics			2.00E-03	U	1	0.00187	184.11	1

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Diisopropyl Methylphosphonate	1445-75-6	Yes			16.088154						
Dimagnesium phosphate	7782-75-4	Yes			9773.5537						
Dimethipin	55290-64-7	Yes			4.0220386						
Dimethoate	60-51-5	Yes			0.0402204						
Dimethoxybenzidine, 3,3'-	119-90-4	Yes	0.0087982			2.00E+03	1.36E+03	8.07E+02			
Dimethyl Sulfate	77-78-1	Yes									
Dimethyl Sulfide	75-18-3	Yes									
Dimethyl methylphosphonate	756-79-6	Yes	8.2806676		12.066116	1.88E+06	2.20E+07	1.73E+06			
Dimethylamino azobenzene [p-]	60-11-7	Yes	0.0030602			6.94E+02	5.99E+00	5.94E+00			
Dimethylaniline HCl, 2,4-	21436-96-4	Yes	0.0242709			5.51E+03	3.33E+05	5.42E+03			
Dimethylaniline, 2,4-	95-68-1	Yes	0.0703857		0.4022039	1.60E+04	5.51E+03	4.10E+03			
Dimethylaniline, N,N-	121-69-7	Yes			0.4022039						
Dimethylbenz(a)anthracene, 7,12-	57-97-6	No				1.28E+01		1.28E+01			
Dimethylbenzidine, 3,3'-	119-93-7	Yes	0.0012797			2.90E+02	7.10E+01	5.70E+01			
Dimethylcyclohexylamine, n,n-	98-94-2	Yes									
Dimethylethyl Lead	107584-40-7	No									
Dimethylformamide	68-12-2	Yes			20.110193						
Dimethylhydrazine, 1,1-	57-14-7	Yes			0.0201102						
Dimethylhydrazine, 1,2-	540-73-8	Yes	0.0000256			5.81E+00	3.29E+01	4.94E+00			
Dimethylmercury	593-74-8	Yes									
Dimethylphenethylamine	122-09-8	Yes									
Dimethylphenol, 2,4-	105-67-9	Yes			4.0220386						
Dimethylphenol, 2,6-	576-26-1	Yes			0.1206612						
Dimethylphenol, 3,4-	95-65-8	Yes			0.2011019						
Dimethylphthalate	131-11-3	Yes									
Dimethylterephthalate	120-61-6	Yes			20.110193						
Dimethylvinylchloride	513-37-1	Yes	0.3128252			7.10E+04	4.81E+03	4.51E+03			
Dinitro-o-cresol, 4,6-	534-52-1	Yes			0.0160882						
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	Yes			0.4022039						
Dinitroaniline, 3,5-	618-87-1	Yes									
Dinitrobenzene, 1,2-	528-29-0	Yes			0.0201102						
Dinitrobenzene, 1,3-	99-65-0	Yes			0.0201102						
Dinitrobenzene, 1,4-	100-25-4	Yes			0.0201102						
Dinitrophenol, 2,4-	51-28-5	Yes			0.4022039						

Site-specific
Recreator Screening Levels (RSL) for Surface Water
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)	
Diisopropyl Methylphosphonate	1445-75-6	3.89E+06	5.38E+06	2.26E+06	2.26E+06	nc
Dimagnesium phosphate	7782-75-4	2.37E+09	4.89E+09	1.59E+09	1.59E+09	nc
Dimethipin	55290-64-7	9.73E+05	1.03E+07	8.89E+05	8.89E+05	nc
Dimethoate	60-51-5	9.73E+03	2.71E+04	7.16E+03	7.16E+03	nc
Dimethoxybenzidine, 3,3'-	119-90-4				8.07E+02	ca
Dimethyl Sulfate	77-78-1					
Dimethyl Sulfide	75-18-3					
Dimethyl methylphosphonate	756-79-6	2.92E+06	3.20E+07	2.68E+06	1.73E+06	ca**
Dimethylamino azobenzene [p-]	60-11-7				5.94E+00	ca
Dimethylaniline HCl, 2,4-	21436-96-4				5.42E+03	ca
Dimethylaniline, 2,4-	95-68-1	9.73E+04	3.15E+04	2.38E+04	4.10E+03	ca**
Dimethylaniline, N,N-	121-69-7	9.73E+04	1.21E+04	1.08E+04	1.08E+04	nc
Dimethylbenz(a)anthracene, 7,12-	57-97-6				1.28E+01	ca
Dimethylbenzidine, 3,3'-	119-93-7				5.70E+01	ca
Dimethylcyclohexylamine, n,n-	98-94-2					
Dimethylethyl Lead	107584-40-7					
Dimethylformamide	68-12-2	4.87E+06	6.09E+07	4.51E+06	4.51E+06	nc
Dimethylhydrazine, 1,1-	57-14-7	4.87E+03	1.13E+05	4.67E+03	4.67E+03	nc
Dimethylhydrazine, 1,2-	540-73-8				4.94E+00	ca
Dimethylmercury	593-74-8					
Dimethylphenethylamine	122-09-8					
Dimethylphenol, 2,4-	105-67-9	9.73E+05	1.24E+05	1.10E+05	1.10E+05	nc
Dimethylphenol, 2,6-	576-26-1	2.92E+04	3.38E+03	3.03E+03	3.03E+03	nc
Dimethylphenol, 3,4-	95-65-8	4.87E+04	6.89E+03	6.04E+03	6.04E+03	nc
Dimethylphthalate	131-11-3					
Dimethylterephthalate	120-61-6	4.87E+06	1.14E+06	9.22E+05	9.22E+05	nc
Dimethylvinylchloride	513-37-1				4.51E+03	ca
Dinitro-o-cresol, 4,6-	534-52-1	3.89E+03	1.12E+03	8.72E+02	8.72E+02	nc
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	9.73E+04	2.30E+03	2.25E+03	2.25E+03	nc
Dinitroaniline, 3,5-	618-87-1					
Dinitrobenzene, 1,2-	528-29-0	4.87E+03	2.26E+03	1.55E+03	1.55E+03	nc
Dinitrobenzene, 1,3-	99-65-0	4.87E+03	3.08E+03	1.89E+03	1.89E+03	nc
Dinitrobenzene, 1,4-	100-25-4	4.87E+03	3.21E+03	1.94E+03	1.94E+03	nc
Dinitrophenol, 2,4-	51-28-5	9.73E+04	5.18E+04	3.38E+04	3.38E+04	nc

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Dinitrophenols	25550-58-7	No	No	Organics					1	0.00118	184.11	1
Dinitrosopentamethylenetetramine, N,N-	101-25-7	No	No	Organics					1	0.0000104	186.17	1
Dinitrotoluene Mixture, 2,4/2,6-	NA	No	No	Organics	6.80E-01	U			1	0.00416	182.14	1
Dinitrotoluene, 2,4-	121-14-2	No	No	Organics	3.10E-01	U	2.00E-03	U	1	0.00308	182.14	1
Dinitrotoluene, 2,6-	606-20-2	No	No	Organics	1.50E+00	U	3.00E-04	U	1	0.0037	182.14	1
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	No	No	Organics			2.00E-03	U	1	0.00204	197.15	1
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	No	No	Organics			2.00E-03	U	1	0.00204	197.15	1
Dinitrotoluene, Technical grade	25321-14-6	No	No	Organics	4.50E-01	U	9.00E-04	U	1	0.00416	182.14	1
Dinoseb	88-85-7	No	No	Organics			1.00E-03	U	1	0.0163	240.22	0.9
Dioxane, 1,4-	123-91-1	No	Yes	Organics	1.00E-01	U	3.00E-02	U	1	0.000332	88.11	1
Diphenamid	957-51-7	No	No	Organics			3.00E-02	U	1	0.00563	239.32	1
Diphenyl Sulfone	127-63-9	No	No	Organics			8.00E-04	U	1	0.00367	218.27	1
Diphenylamine	122-39-4	No	No	Organics			2.50E-02	U	1	0.0373	169.23	1
Diphenylhydrazine, 1,2-	122-66-7	No	No	Organics	8.00E-01	U			1	0.013	184.24	1
Dipotassium phosphate	7758-11-4	No	No	Inorganics			4.86E+01	U	1	0.001	174.18	1
Diquat	85-00-7	No	No	Organics			2.20E-03	U	1	2.44E-07	344.05	1
Direct Black 38	1937-37-7	No	No	Organics	7.10E+00	U			1	0.000205	737.77	1
Direct Blue 6	2602-46-2	No	No	Organics	7.40E+00	U			1	1.73E-09	821.67	1
Direct Brown 95	16071-86-6	No	No	Organics	6.70E+00	U			1	3.87E-12	760.11	1
Direct Sky Blue	2610-05-1	No	No	Organics					1	3.69E-07	730.75	1
Disodium phosphate	7558-79-4	No	No	Inorganics			4.86E+01	U	1	0.001	141.96	1
Disulfoton	298-04-4	No	No	Organics			4.00E-05	U	1	0.0212	274.39	0.9
Dithiane, 1,4-	505-29-3	No	Yes	Organics			1.00E-02	U	1	0.00108	120.23	1
Diuron	330-54-1	No	No	Organics			2.00E-03	U	1	0.00466	233.1	1
Dodecyl benzenesulfonic acid	27176-87-0	No	No	Organics					1	0.0349	326.5	0.8
Dodine	2439-10-3	No	No	Organics			4.00E-03	U	1	0.000222	287.45	1
EPTC	759-94-4	No	Yes	Organics			2.50E-02	U	1	0.0184	189.32	1
Endosulfan	115-29-7	No	Yes	Organics			6.00E-03	U	1	0.00286	406.92	0.9
Endosulfan I	959-98-8	No	Yes	Organics					1	0.00286	406.92	0.9
Endosulfan II	33213-65-9	No	Yes	Organics					1	0.00286	406.92	0.9
Endosulfan Sulfate	1031-07-8	No	No	Organics					1	0.00179	422.92	0.9
Endothall	145-73-3	No	No	Organics			2.00E-02	U	1	0.00263	186.17	1
Endrin	72-20-8	No	No	Organics			3.00E-04	U	1	0.0326	380.91	0.8
Endrin aldehyde	7421-93-4	No	No	Organics					1	0.0178	380.91	0.8

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Dinitrophenols	25550-58-7	Yes									
Dinitrosopentamethylenetetramine, N,N-	101-25-7	Yes									
Dinitrotoluene Mixture, 2,4/2,6-	NA	Yes	0.0207017			4.70E+03	1.21E+03	9.64E+02			
Dinitrotoluene, 2,4-	121-14-2	Yes	0.0454101		0.4022039	1.03E+04	3.59E+03	2.66E+03			
Dinitrotoluene, 2,6-	606-20-2	Yes	0.0093848		0.0603306	2.13E+03	6.18E+02	4.79E+02			
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	Yes			0.4022039						
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	Yes			0.4022039						
Dinitrotoluene, Technical grade	25321-14-6	Yes	0.0312825		0.1809917	7.10E+03	1.83E+03	1.46E+03			
Dinoseb	88-85-7	Yes			0.2011019						
Dioxane, 1,4-	123-91-1	Yes	0.1407713		6.0330579	3.19E+04	1.60E+05	2.66E+04			
Diphenamid	957-51-7	Yes			6.0330579						
Diphenyl Sulfone	127-63-9	Yes			0.1608815						
Diphenylamine	122-39-4	Yes			5.0275482						
Diphenylhydrazine, 1,2-	122-66-7	Yes	0.0175964			3.99E+03	3.26E+02	3.01E+02			
Dipotassium phosphate	7758-11-4	Yes			9773.5537						
Diquat	85-00-7	No									
Direct Black 38	1937-37-7	No				4.50E+02		4.50E+02			
Direct Blue 6	2602-46-2	No				4.32E+02		4.32E+02			
Direct Brown 95	16071-86-6	No				4.77E+02		4.77E+02			
Direct Sky Blue	2610-05-1	No									
Disodium phosphate	7558-79-4	Yes			9773.5537						
Disulfoton	298-04-4	Yes			0.0080441						
Dithiane, 1,4-	505-29-3	Yes			2.0110193						
Diuron	330-54-1	Yes			0.4022039						
Dodecyl benzenesulfonic acid	27176-87-0	Yes									
Dodine	2439-10-3	Yes			0.8044077						
EPTC	759-94-4	Yes			5.0275482						
Endosulfan	115-29-7	Yes			1.2066116						
Endosulfan I	959-98-8	Yes									
Endosulfan II	33213-65-9	Yes									
Endosulfan Sulfate	1031-07-8	Yes									
Endothall	145-73-3	Yes			4.0220386						
Endrin	72-20-8	Yes			0.0603306						
Endrin aldehyde	7421-93-4	Yes									

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Dinitrophenols	25550-58-7				
Dinitrosopentamethylenetetramine, N,N-	101-25-7				
Dinitrotoluene Mixture, 2,4/2,6-	NA				9.64E+02 ca
Dinitrotoluene, 2,4-	121-14-2	9.73E+04	3.18E+04	2.40E+04	2.66E+03 ca**
Dinitrotoluene, 2,6-	606-20-2	1.46E+04	3.98E+03	3.12E+03	4.79E+02 ca**
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	9.73E+04	4.36E+04	3.01E+04	3.01E+04 nc
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	9.73E+04	4.36E+04	3.01E+04	3.01E+04 nc
Dinitrotoluene, Technical grade	25321-14-6	4.38E+04	1.06E+04	8.54E+03	1.46E+03 ca**
Dinoseb	88-85-7	4.87E+04	2.30E+03	2.19E+03	2.19E+03 nc
Dioxane, 1,4-	123-91-1	1.46E+06	6.85E+06	1.20E+06	2.66E+04 ca*
Diphenamid	957-51-7	1.46E+06	1.81E+05	1.61E+05	1.61E+05 nc
Diphenyl Sulfone	127-63-9	3.89E+04	8.47E+03	6.95E+03	6.95E+03 nc
Diphenylamine	122-39-4	1.22E+06	3.57E+04	3.47E+04	3.47E+04 nc
Diphenylhydrazine, 1,2-	122-66-7				3.01E+02 ca
Dipotassium phosphate	7758-11-4	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Diquat	85-00-7	1.07E+05		1.07E+05	1.07E+05 nc
Direct Black 38	1937-37-7				4.50E+02 ca
Direct Blue 6	2602-46-2				4.32E+02 ca
Direct Brown 95	16071-86-6				4.77E+02 ca
Direct Sky Blue	2610-05-1				
Disodium phosphate	7558-79-4	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Disulfoton	298-04-4	1.95E+03	5.67E+01	5.51E+01	5.51E+01 nc
Dithiane, 1,4-	505-29-3	4.87E+05	6.23E+05	2.73E+05	2.73E+05 nc
Diuron	330-54-1	9.73E+04	1.51E+04	1.31E+04	1.31E+04 nc
Dodecyl benzenesulfonic acid	27176-87-0				
Dodine	2439-10-3	1.95E+05	4.48E+05	1.36E+05	1.36E+05 nc
EPTC	759-94-4	1.22E+06	6.36E+04	6.04E+04	6.04E+04 nc
Endosulfan	115-29-7	2.92E+05	2.68E+04	2.46E+04	2.46E+04 nc
Endosulfan I	959-98-8				
Endosulfan II	33213-65-9				
Endosulfan Sulfate	1031-07-8				
Endothall	145-73-3	9.73E+05	3.63E+05	2.65E+05	2.65E+05 nc
Endrin	72-20-8	1.46E+04	1.57E+02	1.55E+02	1.55E+02 nc
Endrin aldehyde	7421-93-4				

Site-specific
Recreator Screening Levels (RSL) for Surface Water
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Endrin ketone	53494-70-5	No	No	Organics					1	0.0235	380.91	0.8
Epichlorohydrin	106-89-8	No	Yes	Organics	9.90E-03	U	6.00E-03	U	1	0.000944	92.53	1
Epoxybutane, 1,2-	106-88-7	No	Yes	Organics					1	0.00231	72.11	1
Ethanol	64-17-5	No	Yes	Organics					1	0.000538	46.07	1
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	No	No	Organics					1	0.000175	120.15	1
Ethephon	16672-87-0	No	No	Organics			5.00E-03	U	1	0.000173	144.5	1
Ethion	563-12-2	No	No	Organics			5.00E-04	U	1	0.0255	384.46	0.8
Ethoxy Propanol	52125-53-8	No	Yes	Organics					1	0.000409	104.15	1
Ethoxyethanol Acetate, 2-	111-15-9	No	Yes	Organics			1.00E-01	U	1	0.0007	132.16	1
Ethoxyethanol, 2-	110-80-5	No	Yes	Organics			9.00E-02	U	1	0.0003	90.12	1
Ethyl Acetate	141-78-6	No	Yes	Organics			9.00E-01	U	1	0.00153	88.11	1
Ethyl Acrylate	140-88-5	No	Yes	Organics	4.80E-02	U	5.00E-03	U	1	0.00324	100.12	1
Ethyl Chloride	75-00-3	No	Yes	Organics					1	0.00607	64.52	1
Ethyl Ether	60-29-7	No	Yes	Organics			2.00E-01	U	1	0.00235	74.12	1
Ethyl Methacrylate	97-63-2	No	Yes	Organics			9.00E-02	U	1	0.00698	114.15	1
Ethyl methane sulfonate	62-50-0	No	No	Organics					1	0.000244	124.16	1
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	No	No	Organics			1.00E-05	U	1	0.0361	323.31	0.8
Ethylbenzene	100-41-4	No	Yes	Organics	1.10E-02	U	1.00E-01	U	1	0.0493	106.17	1
Ethylene Cyanohydrin	109-78-4	No	No	Organics			7.00E-02	U	1	0.000148	71.08	1
Ethylene Diamine	107-15-3	No	Yes	Organics			9.00E-02	U	1	0.0000318	60.1	1
Ethylene Glycol	107-21-1	No	No	Organics			2.00E+00	U	1	0.0000877	62.07	1
Ethylene Glycol Monobutyl Ether	111-76-2	No	No	Organics			1.00E-01	U	1	0.00121	118.18	1
Ethylene Oxide	75-21-8	No	Yes	Organics	3.10E-01	U			1	0.00056	44.05	1
Ethylene Thiourea	96-45-7	No	No	Organics	4.50E-02	U	8.00E-05	U	1	0.000152	102.15	1
Ethyleneimine	151-56-4	No	Yes	Organics	6.50E+01	U			1	0.000581	43.07	1
Ethylphenol, 4-	123-07-9	No	No	Organics					1	0.0167	122.17	1
Ethylphthalyl Ethyl Glycolate	84-72-0	No	No	Organics			3.00E+00	U	1	0.00119	280.28	1
Express	101200-48-0	No	No	Organics			8.00E-03	U	1	0.000468	395.39	1
Famphur	52-85-7	No	No	Organics					1	0.00071	325.34	1
Fenamiphos	22224-92-6	No	No	Organics			2.50E-04	U	1	0.00436	303.36	0.9
Fenpropathrin	39515-41-8	No	No	Organics			2.50E-02	U	1	0.167	349.43	0.8
Fluometuron	2164-17-2	No	No	Organics			1.30E-02	U	1	0.00316	232.21	1
Fluoranthene	206-44-0	No	No	Organics			4.00E-02	U	1	0.308	202.26	1
Fluorene	86-73-7	No	Yes	Organics			4.00E-02	U	1	0.11	166.22	1

Site-specific
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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Endrin ketone	53494-70-5	Yes									
Epichlorohydrin	106-89-8	Yes	1.4219328		1.2066116	3.23E+05	5.60E+05	2.05E+05			
Epoxybutane, 1,2-	106-88-7	Yes									
Ethanol	64-17-5	Yes									
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	Yes									
Ethephon	16672-87-0	Yes			1.0055096						
Ethion	563-12-2	Yes			0.100551						
Ethoxy Propanol	52125-53-8	Yes									
Ethoxyethanol Acetate, 2-	111-15-9	Yes			20.110193						
Ethoxyethanol, 2-	110-80-5	Yes			18.099174						
Ethyl Acetate	141-78-6	Yes			180.99174						
Ethyl Acrylate	140-88-5	Yes	0.2932736		1.0055096	6.65E+04	3.29E+04	2.20E+04			
Ethyl Chloride	75-00-3	Yes									
Ethyl Ether	60-29-7	Yes			40.220386						
Ethyl Methacrylate	97-63-2	Yes			18.099174						
Ethyl methane sulfonate	62-50-0	Yes									
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	Yes			0.002011						
Ethylbenzene	100-41-4	Yes	1.2797395		20.110193	2.90E+05	9.77E+03	9.45E+03			
Ethylene Cyanohydrin	109-78-4	Yes			14.077135						
Ethylene Diamine	107-15-3	No									
Ethylene Glycol	107-21-1	Yes			402.20386						
Ethylene Glycol Monobutyl Ether	111-76-2	Yes			20.110193						
Ethylene Oxide	75-21-8	Yes	0.0454101			1.03E+04	3.42E+04	7.92E+03			
Ethylene Thiourea	96-45-7	Yes	0.3128252		0.0160882	7.10E+04	7.39E+05	6.48E+04			
Ethyleneimine	151-56-4	Yes	0.0002166			4.91E+01	1.58E+02	3.75E+01			
Ethylphenol, 4-	123-07-9	Yes									
Ethylphthalyl Ethyl Glycolate	84-72-0	Yes			603.30579						
Express	101200-48-0	Yes			1.6088154						
Famphur	52-85-7	Yes									
Fenamiphos	22224-92-6	Yes			0.0502755						
Fenpropathrin	39515-41-8	Yes			5.0275482						
Fluometuron	2164-17-2	Yes			2.6143251						
Fluoranthene	206-44-0	No									
Fluorene	86-73-7	Yes			8.0440771						

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Endrin ketone	53494-70-5				
Epichlorohydrin	106-89-8	2.92E+05	4.75E+05	1.81E+05	1.81E+05 nc
Epoxybutane, 1,2-	106-88-7				
Ethanol	64-17-5				
Ethanol, 2-(2-methoxyethoxy)-	111-77-3				
Ethephon	16672-87-0	2.43E+05	1.73E+06	2.13E+05	2.13E+05 nc
Ethion	563-12-2	2.43E+04	3.26E+02	3.22E+02	3.22E+02 nc
Ethoxy Propanol	52125-53-8				
Ethoxyethanol Acetate, 2-	111-15-9	4.87E+06	9.11E+06	3.17E+06	3.17E+06 nc
Ethoxyethanol, 2-	110-80-5	4.38E+06	2.26E+07	3.67E+06	3.67E+06 nc
Ethyl Acetate	141-78-6	4.38E+07	4.47E+07	2.21E+07	2.21E+07 nc
Ethyl Acrylate	140-88-5	2.43E+05	1.13E+05	7.71E+04	2.20E+04 ca**
Ethyl Chloride	75-00-3				
Ethyl Ether	60-29-7	9.73E+06	6.75E+06	3.99E+06	3.99E+06 nc
Ethyl Methacrylate	97-63-2	4.38E+06	8.98E+05	7.45E+05	7.45E+05 nc
Ethyl methane sulfonate	62-50-0				
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	4.87E+02	6.83E+00	6.74E+00	6.74E+00 nc
Ethylbenzene	100-41-4	4.87E+06	1.54E+05	1.49E+05	9.45E+03 ca*
Ethylene Cyanohydrin	109-78-4	3.41E+06	3.77E+07	3.12E+06	3.12E+06 nc
Ethylene Diamine	107-15-3	4.38E+06		4.38E+06	4.38E+06 nc
Ethylene Glycol	107-21-1	9.73E+07	1.86E+09	9.25E+07	9.25E+07 nc
Ethylene Glycol Monobutyl Ether	111-76-2	4.87E+06	5.61E+06	2.61E+06	2.61E+06 nc
Ethylene Oxide	75-21-8				7.92E+03 ca
Ethylene Thiourea	96-45-7	3.89E+03	3.80E+04	3.53E+03	3.53E+03 nc
Ethyleneimine	151-56-4				3.75E+01 ca
Ethylphenol, 4-	123-07-9				
Ethylphthalyl Ethyl Glycolate	84-72-0	1.46E+08	6.57E+07	4.53E+07	4.53E+07 nc
Express	101200-48-0	3.89E+05	2.12E+05	1.37E+05	1.37E+05 nc
Famphur	52-85-7				
Fenamiphos	22224-92-6	1.22E+04	1.43E+03	1.28E+03	1.28E+03 nc
Fenpropathrin	39515-41-8	1.22E+06	3.12E+03	3.11E+03	3.11E+03 nc
Fluometuron	2164-17-2	6.33E+05	1.46E+05	1.19E+05	1.19E+05 nc
Fluoranthene	206-44-0	1.95E+06		1.95E+06	1.95E+06 nc
Fluorene	86-73-7	1.95E+06	1.98E+04	1.96E+04	1.96E+04 nc

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Fluoride	16984-48-8	No	No	Inorganics			4.00E-02	U	1	0.001	38	1
Fluorine (Soluble Fluoride)	7782-41-4	No	No	Inorganics			6.00E-02	U	1	0.001	38	1
Fluorobenzene	462-06-6	No	Yes	Organics					1	0.0146	96.11	1
Fluorobiphenyl, 2-	321-60-8	No	Yes	Organics					1	0.0722	172.2	1
Fluorophenol, 2-	367-12-4	No	Yes	Organics					1	0.00504	112.1	1
Fluridone	59756-60-4	No	No	Organics			8.00E-02	U	1	0.0028	329.32	0.9
Flurprimidol	56425-91-3	No	No	Organics			2.00E-02	U	1	0.00459	312.29	0.9
Flutolanil	66332-96-5	No	No	Organics			6.00E-02	U	1	0.00691	323.32	0.9
Fluvalinate	69409-94-5	No	No	Organics			1.00E-02	U	1	0.0792	502.92	0.6
Folpet	133-07-3	No	No	Organics	3.50E-03	U	1.00E-01	U	1	0.00266	296.56	1
Fomesafen	72178-02-0	No	No	Organics	1.90E-01	U			1	0.000457	438.76	1
Fonofos	944-22-9	No	No	Organics			2.00E-03	U	1	0.027	246.32	0.9
Formaldehyde	50-00-0	No	Yes	Organics			2.00E-01	U	1	0.00182	30.03	1
Formic Acid	64-18-6	No	Yes	Organics			9.00E-01	U	1	0.000378	46.03	1
Fosetyl-AL	39148-24-8	No	No	Organics			3.00E+00	U	1	4.10E-07	354.11	1
Fuel Oil Number 2	68476-30-2	No	No	Organics					1			
Furan	110-00-9	No	Yes	Organics			1.00E-03	U	1	0.00505	68.08	1
Furazolidone	67-45-8	No	No	Organics	3.80E+00	U			1	0.0000803	225.16	1
Furfural	98-01-1	No	Yes	Organics			3.00E-03	U	1	0.000848	96.09	1
Furium	531-82-8	No	No	Organics	1.50E+00	U			1	0.000935	253.23	1
Furmecyclox	60568-05-0	No	No	Organics	3.00E-02	U			1	0.0499	251.33	0.9
Gadolinium	7440-54-2	No	No	Inorganics					1	0.001	157.25	1
Gallium	7440-55-3	No	No	Inorganics					1	0.001	69.72	1
Germanium	7440-56-4	No	No	Inorganics					1	0.001	72.64	1
Glufosinate, Ammonium	77182-82-2	No	No	Organics			4.00E-04	U	1	3.42E-08	198.16	1
Glutaraldehyde	111-30-8	No	No	Organics					1	0.000325	100.12	1
Glycerol	56-81-5	No	No	Organics					1	0.0000322	92.1	1
Glycidyl	765-34-4	No	Yes	Organics			4.00E-04	U	1	0.000516	72.06	1
Glyphosate	1071-83-6	No	No	Organics			1.00E-01	U	1	4.54E-08	169.07	1
Goal	42874-03-3	No	No	Organics			3.00E-03	U	1	0.0204	361.71	0.8
Guanidine	113-00-8	No	Yes	Organics			1.00E-02	U	1	0.0000603	59.07	1
Guanidine Chloride	50-01-1	No	No	Organics			2.00E-02	U	1	3.86E-08	95.53	1
Guanidine Nitrate	506-93-4	No	No	Organics					1	2.65E-08	122.08	1
Guthion	86-50-0	No	No	Organics			3.00E-03	U	1	0.00175	317.32	1

Site-specific
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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Fluoride	16984-48-8	Yes			8.0440771						
Fluorine (Soluble Fluoride)	7782-41-4	Yes			12.066116						
Fluorobenzene	462-06-6	Yes									
Fluorobiphenyl, 2-	321-60-8	Yes									
Fluorophenol, 2-	367-12-4	Yes									
Fluridone	59756-60-4	Yes			16.088154						
Flurprimidol	56425-91-3	Yes			4.0220386						
Flutolanil	66332-96-5	Yes			12.066116						
Fluvalinate	69409-94-5	No									
Folpet	133-07-3	Yes	4.0220386		20.110193	9.13E+05	1.76E+05	1.48E+05			
Fomesafen	72178-02-0	Yes	0.0740902			1.68E+04	7.56E+03	5.21E+03			
Fonofos	944-22-9	Yes			0.4022039						
Formaldehyde	50-00-0	Yes			40.220386						
Formic Acid	64-18-6	Yes			180.99174						
Fosetyl-AL	39148-24-8	No									
Fuel Oil Number 2	68476-30-2	No									
Furan	110-00-9	Yes			0.2011019						
Furazolidone	67-45-8	Yes	0.0037045			8.40E+02	8.52E+03	7.65E+02			
Furfural	98-01-1	Yes			0.6033058						
Furium	531-82-8	Yes	0.0093848			2.13E+03	1.55E+03	8.96E+02			
Furmecyclox	60568-05-0	Yes	0.4692378			1.06E+05	1.63E+03	1.61E+03			
Gadolinium	7440-54-2	Yes									
Gallium	7440-55-3	Yes									
Germanium	7440-56-4	Yes									
Glufosinate, Ammonium	77182-82-2	No									
Glutaraldehyde	111-30-8	Yes									
Glycerol	56-81-5	Yes									
Glycidyl	765-34-4	Yes			0.0804408						
Glyphosate	1071-83-6	No									
Goal	42874-03-3	Yes			0.6033058						
Guanidine	113-00-8	Yes			2.0110193						
Guanidine Chloride	50-01-1	No									
Guanidine Nitrate	506-93-4	No									
Guthion	86-50-0	Yes			0.6033058						

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Fluoride	16984-48-8	1.95E+06	4.02E+06	1.31E+06	1.31E+06 nc
Fluorine (Soluble Fluoride)	7782-41-4	2.92E+06	6.03E+06	1.97E+06	1.97E+06 nc
Fluorobenzene	462-06-6				
Fluorobiphenyl, 2-	321-60-8				
Fluorophenol, 2-	367-12-4				
Fluridone	59756-60-4	3.89E+06	6.03E+05	5.22E+05	5.22E+05 nc
Flurprimidol	56425-91-3	9.73E+05	1.03E+05	9.28E+04	9.28E+04 nc
Flutolanil	66332-96-5	2.92E+06	1.90E+05	1.79E+05	1.79E+05 nc
Fluvalinate	69409-94-5	4.87E+05		4.87E+05	4.87E+05 nc
Folpet	133-07-3	4.87E+06	8.81E+05	7.46E+05	1.48E+05 ca**
Fomesafen	72178-02-0				5.21E+03 ca
Fonofos	944-22-9	9.73E+04	2.67E+03	2.60E+03	2.60E+03 nc
Formaldehyde	50-00-0	9.73E+06	9.59E+06	4.83E+06	4.83E+06 nc
Formic Acid	64-18-6	4.38E+07	2.01E+08	3.60E+07	3.60E+07 nc
Fosetyl-AL	39148-24-8	1.46E+08		1.46E+08	1.46E+08 nc
Fuel Oil Number 2	68476-30-2				
Furan	110-00-9	4.87E+04	1.60E+04	1.21E+04	1.21E+04 nc
Furazolidone	67-45-8				7.65E+02 ca
Furfural	98-01-1	1.46E+05	2.61E+05	9.37E+04	9.37E+04 nc
Furium	531-82-8				8.96E+02 ca
Furmecyclox	60568-05-0				1.61E+03 ca
Gadolinium	7440-54-2				
Gallium	7440-55-3				
Germanium	7440-56-4				
Glufosinate, Ammonium	77182-82-2	1.95E+04		1.95E+04	1.95E+04 nc
Glutaraldehyde	111-30-8				
Glycerol	56-81-5				
Glycidyl	765-34-4	1.95E+04	6.16E+04	1.48E+04	1.48E+04 nc
Glyphosate	1071-83-6	4.87E+06		4.87E+06	4.87E+06 nc
Goal	42874-03-3	1.46E+05	2.83E+03	2.78E+03	2.78E+03 nc
Guanidine	113-00-8	4.87E+05	1.36E+07	4.70E+05	4.70E+05 nc
Guanidine Chloride	50-01-1	9.73E+05		9.73E+05	9.73E+05 nc
Guanidine Nitrate	506-93-4				
Guthion	86-50-0	1.46E+05	3.52E+04	2.83E+04	2.83E+04 nc

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
HCDD, 1,2,3,4,6,7,8,-	35822-46-9	No	Yes	Organics	1.30E+03	U	1.00E-06	U	1	1.33	425.31	0
Haloacetic acids	NA	No	No	Organics					1			
Haloxyfop, Methyl	69806-40-2	No	No	Organics			5.00E-05	U	1	0.006	375.73	0.9
Harmony	79277-27-3	No	No	Organics			1.30E-02	U	1	0.000114	387.39	1
Heptachlor	76-44-8	No	Yes	Organics	4.50E+00	U	5.00E-04	U	1	0.143	373.32	0.8
Heptachlor Epoxide	1024-57-3	No	Yes	Organics	9.10E+00	U	1.30E-05	U	1	0.0209	389.32	0.8
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	No	Yes	Organics	3.90E+00	U	2.33E-05	U	1	2.96	395.33	0
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	No	Yes	Organics	1.30E+03	U	7.00E-08	U	1	1.45	409.31	0
Heptanal, n-	111-71-7	No	Yes	Organics					1	0.0119	114.19	1
Heptane, N-	142-82-5	No	Yes	Organics					1	0.537	100.21	1
Heptanol, n-	111-70-6	No	Yes	Organics					1	0.0192	116.21	1
Hexabromobenzene	87-82-1	No	Yes	Organics			2.00E-03	U	1	0.0136	551.49	0.7
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	No	No	Organics			2.00E-04	U	1		643.58356	
Hexachlorobenzene	118-74-1	No	Yes	Organics	1.60E+00	U	8.00E-04	U	1	0.254	284.78	0.9
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	No	Yes	Organics	3.90E+00	U	2.33E-05	U	1	1.43	360.88	0
Hexachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 157)	69782-90-7	No	Yes	Organics	3.90E+00	U	2.33E-05	U	1	1.66	360.88	0
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	No	Yes	Organics	3.90E+00	U	2.33E-05	U	1	1.66	360.88	0
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	No	Yes	Organics	3.90E+03	U	2.33E-08	U	1	1.24	360.88	0.1
Hexachlorobutadiene	87-68-3	No	Yes	Organics	7.80E-02	U	1.00E-03	U	1	0.081	260.76	0.9
Hexachlorocyclohexane, Alpha-	319-84-6	No	No	Organics	6.30E+00	U	8.00E-03	U	1	0.0206	290.83	0.9
Hexachlorocyclohexane, Beta-	319-85-7	No	No	Organics	1.80E+00	U			1	0.0206	290.83	0.9
Hexachlorocyclohexane, Delta-	319-86-8	No	No	Organics					1	0.0206	290.83	0.9
Hexachlorocyclohexane, Epsilon	6108-10-7	No	No	Organics					1	0.0206	290.83	0.9
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	No	No	Organics	1.10E+00	U	3.00E-04	U	1	0.0206	290.83	0.9
Hexachlorocyclohexane, Technical	608-73-1	No	No	Organics	1.80E+00	U			1	0.0206	290.83	0.9
Hexachlorocyclopentadiene	77-47-4	No	Yes	Organics			6.00E-03	U	1	0.103	272.77	0.9
Hexachlorodibenzo-p-dioxin	34465-46-8	No	No	Organics	1.30E+04	U	7.00E-09	U	1	2.86	390.87	0
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	No	Yes	Organics	1.30E+04	U	7.00E-09	U	1	1.53	390.87	0
Hexachlorodibenzo-p-dioxin, Mixture	NA	No	No	Organics	6.20E+03	U			1	2.86	390.87	0
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	No	Yes	Organics	1.30E+04	U	7.00E-09	U	1	2.25	374.87	0
Hexachloroethane	67-72-1	No	Yes	Organics	4.00E-02	U	7.00E-04	U	1	0.0415	236.74	1
Hexachlorophene	70-30-4	No	No	Organics			3.00E-04	U	1	0.836	406.91	0

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
HCDD, 1,2,3,4,6,7,8,-	35822-46-9	No				2.46E+00		2.46E+00			
Haloacetic acids	NA	No									
Haloxyfop, Methyl	69806-40-2	Yes			0.0100551						
Harmony	79277-27-3	Yes			2.6143251						
Heptachlor	76-44-8	Yes	0.0031283		0.100551	7.10E+02	1.94E+00	1.94E+00			
Heptachlor Epoxide	1024-57-3	Yes	0.0015469		0.0026143	3.51E+02	5.93E+00	5.83E+00			
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	No				8.19E+02		8.19E+02			
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	No				2.46E+00		2.46E+00			
Heptanal, n-	111-71-7	Yes									
Heptane, N-	142-82-5	No									
Heptanol, n-	111-70-6	Yes									
Hexabromobenzene	87-82-1	No									
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	No									
Hexachlorobenzene	118-74-1	No				2.00E+03		2.00E+03			
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	No				8.19E+02		8.19E+02			
Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	No				8.19E+02		8.19E+02			
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	No				8.19E+02		8.19E+02			
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	No				8.19E-01		8.19E-01			
Hexachlorobutadiene	87-68-3	Yes	0.1804761		0.2011019	4.09E+04	3.64E+02	3.60E+02			
Hexachlorocyclohexane, Alpha-	319-84-6	Yes	0.0022345		1.6088154	5.07E+02	1.46E+01	1.42E+01			
Hexachlorocyclohexane, Beta-	319-85-7	Yes	0.0078206			1.77E+03	5.10E+01	4.96E+01			
Hexachlorocyclohexane, Delta-	319-86-8	Yes									
Hexachlorocyclohexane, Epsilon	6108-10-7	Yes									
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	Yes	0.0127974		0.0603306	2.90E+03	8.35E+01	8.12E+01			
Hexachlorocyclohexane, Technical	608-73-1	Yes	0.0078206			1.77E+03	5.10E+01	4.96E+01			
Hexachlorocyclopentadiene	77-47-4	Yes			1.2066116						
Hexachlorodibenzo-p-dioxin	34465-46-8	No				2.46E-01		2.46E-01			
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	No				2.46E-01		2.46E-01			
Hexachlorodibenzo-p-dioxin, Mixture	NA	No				5.15E-01		5.15E-01			
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	No				2.46E-01		2.46E-01			
Hexachloroethane	67-72-1	Yes	0.3519284		0.1407713	7.98E+04	1.45E+03	1.43E+03			
Hexachlorophene	70-30-4	No									

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
HCDD, 1,2,3,4,6,7,8,-	35822-46-9	4.87E+01		4.87E+01	2.46E+00 ca*
Haloacetic acids	NA				
Haloxyfop, Methyl	69806-40-2	2.43E+03	1.30E+02	1.24E+02	1.24E+02 nc
Harmony	79277-27-3	6.33E+05	1.49E+06	4.44E+05	4.44E+05 nc
Heptachlor	76-44-8	2.43E+04	6.25E+01	6.23E+01	1.94E+00 ca*
Heptachlor Epoxide	1024-57-3	6.33E+02	1.00E+01	9.87E+00	5.83E+00 ca**
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.13E+03		1.13E+03	8.19E+02 ca**
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	3.41E+00		3.41E+00	2.46E+00 ca**
Heptanal, n-	111-71-7				
Heptane, N-	142-82-5				
Heptanol, n-	111-70-6				
Hexabromobenzene	87-82-1	9.73E+04		9.73E+04	9.73E+04 nc
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	9.73E+03		9.73E+03	9.73E+03 nc
Hexachlorobenzene	118-74-1	3.89E+04		3.89E+04	2.00E+03 ca*
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.13E+03		1.13E+03	8.19E+02 ca**
Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.13E+03		1.13E+03	8.19E+02 ca**
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.13E+03		1.13E+03	8.19E+02 ca**
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.13E+00		1.13E+00	8.19E-01 ca**
Hexachlorobutadiene	87-68-3	4.87E+04	4.05E+02	4.02E+02	3.60E+02 ca**
Hexachlorocyclohexane, Alpha-	319-84-6	3.89E+05	1.05E+04	1.02E+04	1.42E+01 ca
Hexachlorocyclohexane, Beta-	319-85-7				4.96E+01 ca
Hexachlorocyclohexane, Delta-	319-86-8				
Hexachlorocyclohexane, Epsilon	6108-10-7				
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	1.46E+04	3.94E+02	3.83E+02	8.12E+01 ca**
Hexachlorocyclohexane, Technical	608-73-1				4.96E+01 ca
Hexachlorocyclopentadiene	77-47-4	2.92E+05	1.77E+03	1.76E+03	1.76E+03 nc
Hexachlorodibenzo-p-dioxin	34465-46-8	3.41E-01		3.41E-01	2.46E-01 ca**
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	3.41E-01		3.41E-01	2.46E-01 ca**
Hexachlorodibenzo-p-dioxin, Mixture	NA				5.15E-01 ca
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	3.41E-01		3.41E-01	2.46E-01 ca**
Hexachloroethane	67-72-1	3.41E+04	5.82E+02	5.72E+02	5.72E+02 nc
Hexachlorophene	70-30-4	1.46E+04		1.46E+04	1.46E+04 nc

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Hexachloropropene	1888-71-7	No	Yes	Organics					1	0.051	248.75	0.9
Hexadecanoic Acid	57-10-3	No	Yes	Organics					1	3.32	256.43	0.8
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	No	No	Organics	1.10E-01	U	3.00E-03	U	1	0.000336	222.12	1
Hexamethylene Diisocyanate, 1,6-	822-06-0	No	Yes	Organics					1	0.0237	168.2	1
Hexamethylphosphoramide	680-31-9	No	No	Organics			4.00E-04	U	1	0.000237	179.2	1
Hexane, N-	110-54-3	No	Yes	Organics			6.00E-02	U	1	0.201	86.18	1
Hexanedioic Acid	124-04-9	No	No	Organics			2.00E+00	U	1	0.000268	146.14	1
Hexanol, n-	111-27-3	No	Yes	Organics					1	0.00935	102.18	1
Hexanone, 2-	591-78-6	No	Yes	Organics			5.00E-03	U	1	0.00355	100.16	1
Hexazinone	51235-04-2	No	No	Organics			3.30E-02	U	1	0.00102	252.32	1
HpCDD, 2,3,7,8-	37871-00-4	No	Yes	Organics	1.30E+03	U	7.00E-08	U	1	1.33	425.31	0
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	No	Yes	Organics	1.30E+03	U	7.00E-08	U	1	1.45	409.31	0
HpCDF, 2,3,7,8-	38998-75-3	No	Yes	Organics	1.30E+03	U	7.00E-08	U	1	1.45	409.31	0
HxCDD, 1,2,3,6,7,8-	57653-85-7	No	Yes	Organics	1.30E+04	U	7.00E-09	U	1	2.86	390.87	0
HxCDD, 1,2,3,7,8,9-	19408-74-3	No	Yes	Organics	1.30E+04	U	7.00E-09	U	1	2.86	390.87	0
HxCDF, 1,2,3,6,7,8-	57117-44-9	No	Yes	Organics	1.30E+04	U	7.00E-09	U	1	2.25	374.87	0
HxCDF, 1,2,3,7,8,9-	72918-21-9	No	No	Organics	1.30E+04	U	7.00E-09	U	1	1.35	374.87	0
HxCDF, 2,3,4,6,7,8-	60851-34-5	No	Yes	Organics	1.30E+04	U	7.00E-09	U	1	2.25	374.87	0
HxCDF, 2,3,7,8-	55684-94-1	No	No	Organics	1.30E+04	U	7.00E-09	U	1	1.35	374.87	0
Hydrazine	302-01-2	No	Yes	Inorganics	3.00E+00	U			1	0.0000436	32.05	1
Hydrazine Sulfate	10034-93-2	No	No	Inorganics	3.00E+00	U			1	0.001	128.1	1
Hydrogen Chloride	7647-01-0	No	Yes	Inorganics					1	0.001	35.45	1
Hydrogen Cyanide	74-90-8	No	Yes	Inorganics			6.00E-04	U	1	0.001	27.03	1
Hydrogen Fluoride	7664-39-3	No	Yes	Inorganics			4.00E-02	U	1	0.001	20.006	1
Hydrogen Selenide	77830-70-5	No	No	Inorganics					1	0.001		
Hydrogen Sulfate	12143-45-2	No	No	Inorganics					1	0.001	128.1	1
Hydrogen Sulfide	7783-06-4	No	Yes	Inorganics					1	0.001	34.081	1
Hydroquinone	123-31-9	No	No	Organics	6.00E-02	U	4.00E-02	U	1	0.000931	110.11	1
Imazalil	35554-44-0	No	No	Organics			1.30E-02	U	1	0.0116	297.19	0.9
Imazaquin	81335-37-7	No	No	Organics			2.50E-01	U	1	0.000483	311.34	1
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	No	Organics	7.30E-01	U			1	1.04	276.34	0.6
Indium	7440-74-6	No	No	Inorganics					1	0.001	114.82	1
Iodide	20461-54-5	No	No	Inorganics					1	0.001	126.9	1
Iodine	7553-56-2	No	No	Inorganics			1.00E-02	U	1	0.001	253.81	1

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Hexachloropropene	1888-71-7	Yes									
Hexadecanoic Acid	57-10-3	No									
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	Yes	0.127974		0.6033058	2.90E+04	7.18E+04	2.07E+04			
Hexamethylene Diisocyanate, 1,6-	822-06-0	Yes									
Hexamethylphosphoramide	680-31-9	Yes			0.0804408						
Hexane, N-	110-54-3	Yes			12.066116						
Hexanedioic Acid	124-04-9	Yes			402.20386						
Hexanol, n-	111-27-3	Yes									
Hexanone, 2-	591-78-6	Yes			1.0055096						
Hexazinone	51235-04-2	Yes			6.6363636						
HpCDD, 2,3,7,8-	37871-00-4	No				2.46E+00		2.46E+00			
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	No				2.46E+00		2.46E+00			
HpCDF, 2,3,7,8-	38998-75-3	No				2.46E+00		2.46E+00			
HxCDD, 1,2,3,6,7,8-	57653-85-7	No				2.46E-01		2.46E-01			
HxCDD, 1,2,3,7,8,9-	19408-74-3	No				2.46E-01		2.46E-01			
HxCDF, 1,2,3,6,7,8-	57117-44-9	No				2.46E-01		2.46E-01			
HxCDF, 1,2,3,7,8,9-	72918-21-9	No				2.46E-01		2.46E-01			
HxCDF, 2,3,4,6,7,8-	60851-34-5	No				2.46E-01		2.46E-01			
HxCDF, 2,3,7,8-	55684-94-1	No				2.46E-01		2.46E-01			
Hydrazine	302-01-2	Yes	0.0046924			1.06E+03	5.38E+04	1.04E+03			
Hydrazine Sulfate	10034-93-2	Yes	0.0046924			1.06E+03	2.35E+03	7.32E+02			
Hydrogen Chloride	7647-01-0	Yes									
Hydrogen Cyanide	74-90-8	Yes			0.1206612						
Hydrogen Fluoride	7664-39-3	Yes			8.0440771						
Hydrogen Selenide	77830-70-5	Yes									
Hydrogen Sulfate	12143-45-2	Yes									
Hydrogen Sulfide	7783-06-4	Yes									
Hydroquinone	123-31-9	Yes	0.2346189		8.0440771	5.32E+04	8.79E+04	3.32E+04			
Imazalil	35554-44-0	Yes			2.6143251						
Imazaquin	81335-37-7	Yes			50.275482						
Indeno[1,2,3-cd]pyrene	193-39-5	No				4.38E+03		4.38E+03			
Indium	7440-74-6	Yes									
Iodide	20461-54-5	Yes									
Iodine	7553-56-2	Yes			2.0110193						

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Hexachloropropene	1888-71-7				
Hexadecanoic Acid	57-10-3				
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	1.46E+05	3.38E+05	1.02E+05	2.07E+04 ca**
Hexamethylene Diisocyanate, 1,6-	822-06-0				
Hexamethylphosphoramide	680-31-9	1.95E+04	8.43E+04	1.58E+04	1.58E+04 nc
Hexane, N-	110-54-3	2.92E+06	2.75E+04	2.73E+04	2.73E+04 nc
Hexanedioic Acid	124-04-9	9.73E+07	4.44E+08	7.98E+07	7.98E+07 nc
Hexanol, n-	111-27-3				
Hexanone, 2-	591-78-6	2.43E+05	1.03E+05	7.24E+04	7.24E+04 nc
Hexazinone	51235-04-2	1.61E+06	1.01E+06	6.20E+05	6.20E+05 nc
HpCDD, 2,3,7,8-	37871-00-4	3.41E+00		3.41E+00	2.46E+00 ca**
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	3.41E+00		3.41E+00	2.46E+00 ca**
HpCDF, 2,3,7,8-	38998-75-3	3.41E+00		3.41E+00	2.46E+00 ca**
HxCDD, 1,2,3,6,7,8-	57653-85-7	3.41E-01		3.41E-01	2.46E-01 ca**
HxCDD, 1,2,3,7,8,9-	19408-74-3	3.41E-01		3.41E-01	2.46E-01 ca**
HxCDF, 1,2,3,6,7,8-	57117-44-9	3.41E-01		3.41E-01	2.46E-01 ca**
HxCDF, 1,2,3,7,8,9-	72918-21-9	3.41E-01		3.41E-01	2.46E-01 ca**
HxCDF, 2,3,4,6,7,8-	60851-34-5	3.41E-01		3.41E-01	2.46E-01 ca**
HxCDF, 2,3,7,8-	55684-94-1	3.41E-01		3.41E-01	2.46E-01 ca**
Hydrazine	302-01-2				1.04E+03 ca
Hydrazine Sulfate	10034-93-2				7.32E+02 ca
Hydrogen Chloride	7647-01-0				
Hydrogen Cyanide	74-90-8	2.92E+04	6.03E+04	1.97E+04	1.97E+04 nc
Hydrogen Fluoride	7664-39-3	1.95E+06	4.02E+06	1.31E+06	1.31E+06 nc
Hydrogen Selenide	77830-70-5				
Hydrogen Sulfate	12143-45-2				
Hydrogen Sulfide	7783-06-4				
Hydroquinone	123-31-9	1.95E+06	3.02E+06	1.18E+06	3.32E+04 ca*
Imazalil	35554-44-0	6.33E+05	2.91E+04	2.78E+04	2.78E+04 nc
Imazaquin	81335-37-7	1.22E+07	1.10E+07	5.79E+06	5.79E+06 nc
Indeno[1,2,3-cd]pyrene	193-39-5				4.38E+03 ca
Indium	7440-74-6				
Iodide	20461-54-5				
Iodine	7553-56-2	4.87E+05	1.01E+06	3.28E+05	3.28E+05 nc

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Iodomethane	74-88-4	No	Yes	Organics					1	0.00252	141.94	1
Iodopropynyl Butylcarbamate (IPBC)	55406-53-6	No	No	Organics					1	0.00177	281.09	1
Iprodione	36734-19-7	No	No	Organics			4.00E-02	U	1	0.00217	330.17	0.9
Iron	7439-89-6	No	No	Inorganics			7.00E-01	U	1	0.001	55.85	1
Iron Sulfide	11126-12-8	No	No	Inorganics					1	0.001		
Isobutyl Alcohol	78-83-1	No	Yes	Organics			3.00E-01	U	1	0.00192	74.12	1
Isodrin	465-73-6	No	Yes	Organics					1	0.293	364.92	0.6
Isophorone	78-59-1	No	No	Organics	9.50E-04	U	2.00E-01	U	1	0.00354	138.21	1
Isopropalin	33820-53-0	No	Yes	Organics			1.50E-02	U	1	0.207	309.37	0.8
Isopropanol	67-63-0	No	Yes	Organics			2.00E+00	U	1	0.000778	60.1	1
Isopropyl Methyl Phosphonic Acid	1832-54-8	No	No	Organics			1.00E-01	U	1	0.000396	138.1	1
Isopropyltoluene, p-	99-87-6	No	Yes	Organics					1	0.147	134.22	1
Isosafrole	120-58-1	No	Yes	Organics					1	0.0334	162.19	1
Isoxaben	82558-50-7	No	No	Organics			5.00E-02	U	1	0.00887	332.4	0.9
JP-4	50815-00-4	No	Yes	Organics					1			
JP-5/JP-8	8002-20-6	No	Yes	Organics					1			
JP-7	NA	No	Yes	Organics					1			
Kerb	23950-58-5	No	No	Organics			7.50E-02	U	1	0.0109	256.13	0.9
Kerosene	8008-20-6	No	Yes	Organics					1			1
Lactofen	77501-63-4	No	No	Organics			2.00E-03	U	1	0.00631	461.78	0.9
Lactonitrile	78-97-7	No	No	Organics					1	0.000148	71.08	1
Lanthanum	7439-91-0	No	No	Inorganics					1	0.001	138.91	1
Lead Alkyls	NA	No	No	Organics					1			
Lead Chromate	7758-97-6	Yes	No	Inorganics	5.00E-01	U	2.00E-02	U	0.025	0.001	323.2	1
Lead Phosphate	7446-27-7	No	No	Inorganics	8.50E-03	U			1	0.001	811.5	0.8
Lead acetate	301-04-2	No	No	Organics	2.80E-01	U			1	0.0000208	325.29	1
Lead and Compounds	7439-92-1	No	No	Inorganics					1	0.0001	207.2	1
Lead subacetate	1335-32-6	No	No	Organics	8.50E-03	U			1	1.03E-10	805.7	1
Linuron	330-55-2	No	No	Organics			2.00E-03	U	1	0.00839	249.1	0.9
Lithium	7439-93-2	No	No	Inorganics			2.00E-03	U	1	0.001	6.94	1
Lithium Perchlorate	7791-03-9	No	No	Inorganics			7.00E-04	U	1	0.001	106.392	1
Londax	83055-99-6	No	No	Organics			2.00E-01	U	1	0.000219	410.4	1
Lutetium	7439-94-3	No	No	Inorganics					1	0.000237	174.97	1
MCPA	94-74-6	No	No	Organics			5.00E-04	U	1	0.0169	200.62	1

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Iodomethane	74-88-4	Yes									
Iodopropynyl Butylcarbamate (IPBC)	55406-53-6	Yes									
Iprodione	36734-19-7	Yes			8.0440771						
Iron	7439-89-6	Yes			140.77135						
Iron Sulfide	11126-12-8	Yes									
Isobutyl Alcohol	78-83-1	Yes			60.330579						
Isodrin	465-73-6	No									
Isophorone	78-59-1	Yes	14.818037		40.220386	3.36E+06	1.29E+06	9.34E+05			
Isopropalin	33820-53-0	Yes			3.0165289						
Isopropanol	67-63-0	Yes			402.20386						
Isopropyl Methyl Phosphonic Acid	1832-54-8	Yes			20.110193						
Isopropyltoluene, p-	99-87-6	Yes									
Isosafrole	120-58-1	Yes									
Isoxaben	82558-50-7	Yes			10.055096						
JP-4	50815-00-4	No									
JP-5/JP-8	8002-20-6	No									
JP-7	NA	No									
Kerb	23950-58-5	Yes			15.082645						
Kerosene	8008-20-6	No									
Lactofen	77501-63-4	Yes			0.4022039						
Lactonitrile	78-97-7	Yes									
Lanthanum	7439-91-0	Yes									
Lead Alkyls	NA	No									
Lead Chromate	7758-97-6	Yes	0.0007039		0.100551	6.39E+03	3.52E+02	3.34E+02			
Lead Phosphate	7446-27-7	Yes	1.6561335			3.76E+05	8.28E+05	2.58E+05			
Lead acetate	301-04-2	Yes	0.0502755			1.14E+04	2.34E+05	1.09E+04			
Lead and Compounds	7439-92-1	Yes									
Lead subacetate	1335-32-6	No				3.76E+05		3.76E+05			
Linuron	330-55-2	Yes			0.4022039						
Lithium	7439-93-2	Yes			0.4022039						
Lithium Perchlorate	7791-03-9	Yes			0.1407713						
Londax	83055-99-6	Yes			40.220386						
Lutetium	7439-94-3	Yes									
MCPA	94-74-6	Yes			0.100551						

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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Iodomethane	74-88-4				
Iodopropynyl Butylcarbamate (IPBC)	55406-53-6				
Iprodione	36734-19-7	1.95E+06	3.87E+05	3.23E+05	3.23E+05 nc
Iron	7439-89-6	3.41E+07	7.04E+07	2.30E+07	2.30E+07 nc
Iron Sulfide	11126-12-8				
Isobutyl Alcohol	78-83-1	1.46E+07	1.24E+07	6.70E+06	6.70E+06 nc
Isodrin	465-73-6				
Isophorone	78-59-1	9.73E+06	3.51E+06	2.58E+06	9.34E+05 ca**
Isopropalin	33820-53-0	7.30E+05	1.96E+03	1.95E+03	1.95E+03 nc
Isopropanol	67-63-0	9.73E+07	2.11E+08	6.66E+07	6.66E+07 nc
Isopropyl Methyl Phosphonic Acid	1832-54-8	4.87E+06	1.56E+07	3.71E+06	3.71E+06 nc
Isopropyltoluene, p-	99-87-6				
Isosafrole	120-58-1				
Isoxaben	82558-50-7	2.43E+06	1.17E+05	1.11E+05	1.11E+05 nc
JP-4	50815-00-4				
JP-5/JP-8	8002-20-6				
JP-7	NA				
Kerb	23950-58-5	3.65E+06	2.33E+05	2.19E+05	2.19E+05 nc
Kerosene	8008-20-6				
Lactofen	77501-63-4	9.73E+04	2.85E+03	2.77E+03	2.77E+03 nc
Lactonitrile	78-97-7				
Lanthanum	7439-91-0				
Lead Alkyls	NA				
Lead Chromate	7758-97-6	9.73E+05	5.03E+04	4.78E+04	3.34E+02 ca
Lead Phosphate	7446-27-7				2.58E+05 ca
Lead acetate	301-04-2				1.09E+04 ca
Lead and Compounds	7439-92-1				
Lead subacetate	1335-32-6				3.76E+05 ca
Linuron	330-55-2	9.73E+04	8.43E+03	7.76E+03	7.76E+03 nc
Lithium	7439-93-2	9.73E+04	2.01E+05	6.56E+04	6.56E+04 nc
Lithium Perchlorate	7791-03-9	3.41E+04	7.04E+04	2.30E+04	2.30E+04 nc
Londax	83055-99-6	9.73E+06	1.03E+07	5.00E+06	5.00E+06 nc
Lutetium	7439-94-3				
MCPA	94-74-6	2.43E+04	1.29E+03	1.22E+03	1.22E+03 nc

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
MCPB	94-81-5	No	No	Organics			1.00E-02	U	1	0.0173	228.68	0.9
MCPP	93-65-2	No	No	Organics			1.00E-03	U	1	0.0131	214.65	1
Magnesium	7439-95-4	No	No	Inorganics					1	0.001	24.305	1
Magnesium Chlorate	10326-21-3	No	No	Inorganics					1	0.001	191.21	1
Malathion	121-75-5	No	No	Organics			2.00E-02	U	1	0.000812	330.35	1
Maleic Anhydride	108-31-6	No	No	Organics			1.00E-01	U	1	0.00525	98.06	1
Maleic Hydrazide	123-33-1	No	No	Organics			5.00E-01	U	1	0.000102	112.09	1
Malononitrile	109-77-3	No	No	Organics			1.00E-04	U	1	0.000266	66.06	1
Mancozeb	8018-01-7	No	No	Organics			3.00E-02	U	1	0.000771	212.36	1
Maneb	12427-38-2	No	No	Organics			5.00E-03	U	1	0.000771	212.36	1
Manganese (Non-diet)	7439-96-5	No	No	Inorganics			2.40E-02	U	0.04	0.001	54.94	1
Mechlorethamine	51-75-2	No	No	Organics					1	0.00107	156.06	1
Mephosfolan	950-10-7	No	No	Organics			9.00E-05	U	1	0.000237	269.32	1
Mepiquat Chloride	24307-26-4	No	No	Organics			3.00E-02	U	1	3.03E-06	149.67	1
Mercuric Chloride	7487-94-7	No	No	Inorganics			3.00E-04	U	0.07	0.001	271.5	1
Mercury (elemental)	7439-97-6	No	Yes	Inorganics					1	0.001	200.59	1
Merphos	150-50-5	No	Yes	Organics			3.00E-05	U	1	4.15	298.5	0.3
Merphos Oxide	78-48-8	No	No	Organics			3.00E-05	U	1	0.165	314.5	0.9
Metalaxyl	57837-19-1	No	No	Organics			6.00E-02	U	1	0.00058	279.34	1
Methacrylonitrile	126-98-7	No	Yes	Organics			1.00E-04	U	1	0.00186	67.09	1
Methamidophos	10265-92-6	No	No	Organics			5.00E-05	U	1	0.0000744	141.13	1
Methanol	67-56-1	No	Yes	Organics			2.00E+00	U	1	0.000319	32.04	1
Methapyrilene	91-80-5	No	No	Organics					1	0.00432	261.39	1
Methidathion	950-37-8	No	No	Organics			1.00E-03	U	1	0.000913	302.32	1
Methomyl	16752-77-5	No	No	Organics			2.50E-02	U	1	0.000482	162.21	1
Methoxy-5-nitroaniline, 2-	99-59-2	No	No	Organics	4.90E-02	U			1	0.00169	168.15	1
Methoxychlor	72-43-5	No	No	Organics			5.00E-03	U	1	0.0428	345.66	0.8
Methoxyethanol Acetate, 2-	110-49-6	No	Yes	Organics			8.00E-03	U	1	0.000396	118.13	1
Methoxyethanol, 2-	109-86-4	No	Yes	Organics			5.00E-03	U	1	0.00018	76.1	1
Methyl Acetate	79-20-9	No	Yes	Organics			1.00E+00	U	1	0.000792	74.08	1
Methyl Acrylate	96-33-3	No	Yes	Organics			3.00E-02	U	1	0.00175	86.09	1
Methyl Ethyl Ketone (2-Butanone)	78-93-3	No	Yes	Organics			6.00E-01	U	1	0.000962	72.11	1
Methyl Hydrazine	60-34-4	No	Yes	Organics			1.00E-03	U	1	0.000173	46.07	1
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	No	Yes	Organics			8.00E-02	U	1	0.00319	100.16	1

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
MCPB	94-81-5	Yes			2.0110193						
MCPP	93-65-2	Yes			0.2011019						
Magnesium	7439-95-4	Yes									
Magnesium Chlorate	10326-21-3	Yes									
Malathion	121-75-5	Yes			4.0220386						
Maleic Anhydride	108-31-6	Yes			20.110193						
Maleic Hydrazide	123-33-1	Yes			100.55096						
Malononitrile	109-77-3	Yes			0.0201102						
Mancozeb	8018-01-7	Yes			6.0330579						
Maneb	12427-38-2	Yes			1.0055096						
Manganese (Non-diet)	7439-96-5	Yes			0.1930579						
Mechlorethamine	51-75-2	Yes									
Mephosfolan	950-10-7	Yes			0.0180992						
Mepiquat Chloride	24307-26-4	No									
Mercuric Chloride	7487-94-7	Yes			0.0042231						
Mercury (elemental)	7439-97-6	Yes									
Merphos	150-50-5	No									
Merphos Oxide	78-48-8	Yes			0.0060331						
Metalaxyl	57837-19-1	Yes			12.066116						
Methacrylonitrile	126-98-7	Yes			0.0201102						
Methamidophos	10265-92-6	Yes			0.0100551						
Methanol	67-56-1	Yes			402.20386						
Methapyrilene	91-80-5	Yes									
Methidathion	950-37-8	Yes			0.2011019						
Methomyl	16752-77-5	Yes			5.0275482						
Methoxy-5-nitroaniline, 2-	99-59-2	Yes	0.2872885			6.52E+04	4.54E+04	2.67E+04			
Methoxychlor	72-43-5	Yes			1.0055096						
Methoxyethanol Acetate, 2-	110-49-6	Yes			1.6088154						
Methoxyethanol, 2-	109-86-4	Yes			1.0055096						
Methyl Acetate	79-20-9	Yes			201.10193						
Methyl Acrylate	96-33-3	Yes			6.0330579						
Methyl Ethyl Ketone (2-Butanone)	78-93-3	Yes			120.66116						
Methyl Hydrazine	60-34-4	Yes			0.2011019						
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	Yes			16.088154						

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
MCPB	94-81-5	4.87E+05	2.33E+04	2.23E+04	2.23E+04 nc
MCPP	93-65-2	4.87E+04	3.03E+03	2.86E+03	2.86E+03 nc
Magnesium	7439-95-4				
Magnesium Chlorate	10326-21-3				
Malathion	121-75-5	9.73E+05	4.64E+05	3.14E+05	3.14E+05 nc
Maleic Anhydride	108-31-6	4.87E+06	1.41E+06	1.09E+06	1.09E+06 nc
Maleic Hydrazide	123-33-1	2.43E+07	3.41E+08	2.27E+07	2.27E+07 nc
Malononitrile	109-77-3	4.87E+03	3.03E+04	4.19E+03	4.19E+03 nc
Mancozeb	8018-01-7	1.46E+06	1.57E+06	7.57E+05	7.57E+05 nc
Maneb	12427-38-2	2.43E+05	2.62E+05	1.26E+05	1.26E+05 nc
Manganese (Non-diet)	7439-96-5	1.17E+06	9.65E+04	8.92E+04	8.92E+04 nc
Mechlorethamine	51-75-2				
Mephosfolan	950-10-7	4.38E+03	1.06E+04	3.10E+03	3.10E+03 nc
Mepiquat Chloride	24307-26-4	1.46E+06		1.46E+06	1.46E+06 nc
Mercuric Chloride	7487-94-7	1.46E+04	2.11E+03	1.84E+03	1.84E+03 nc
Mercury (elemental)	7439-97-6				
Merphos	150-50-5	1.46E+03		1.46E+03	1.46E+03 nc
Merphos Oxide	78-48-8	1.46E+03	4.22E+00	4.21E+00	4.21E+00 nc
Metalaxyl	57837-19-1	2.92E+06	2.71E+06	1.41E+06	1.41E+06 nc
Methacrylonitrile	126-98-7	4.87E+03	4.34E+03	2.29E+03	2.29E+03 nc
Methamidophos	10265-92-6	2.43E+03	4.10E+04	2.30E+03	2.30E+03 nc
Methanol	67-56-1	9.73E+07	5.44E+08	8.26E+07	8.26E+07 nc
Methapyrilene	91-80-5				
Methidathion	950-37-8	4.87E+04	2.47E+04	1.64E+04	1.64E+04 nc
Methomyl	16752-77-5	1.22E+06	2.89E+06	8.56E+05	8.56E+05 nc
Methoxy-5-nitroaniline, 2-	99-59-2				2.67E+04 ca
Methoxychlor	72-43-5	2.43E+05	2.49E+03	2.47E+03	2.47E+03 nc
Methoxyethanol Acetate, 2-	110-49-6	3.89E+05	1.37E+06	3.03E+05	3.03E+05 nc
Methoxyethanol, 2-	109-86-4	2.43E+05	2.18E+06	2.19E+05	2.19E+05 nc
Methyl Acetate	79-20-9	4.87E+07	9.99E+07	3.27E+07	3.27E+07 nc
Methyl Acrylate	96-33-3	1.46E+06	1.31E+06	6.91E+05	6.91E+05 nc
Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.92E+07	4.96E+07	1.84E+07	1.84E+07 nc
Methyl Hydrazine	60-34-4	4.87E+04	4.88E+05	4.43E+04	4.43E+04 nc
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	3.89E+06	1.83E+06	1.25E+06	1.25E+06 nc

Site-specific
Recreator Screening Levels (RSL) for Surface Water
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Methyl Isocyanate	624-83-9	No	Yes	Organics					1	0.0025	57.05	1
Methyl Mercaptan	74-93-1	No	Yes	Organics					1	0.00276	48.1	1
Methyl Mercury	22967-92-6	No	No	Inorganics			1.00E-04	U	1	0.001	216.6326	1
Methyl Methacrylate	80-62-6	No	Yes	Organics			1.40E+00	U	1	0.00355	100.12	1
Methyl Parathion	298-00-0	No	No	Organics			2.50E-04	U	1	0.00416	263.21	1
Methyl Phosphonic Acid	993-13-5	No	No	Organics			6.00E-02	U	1	0.0000984	96.02	1
Methyl Styrene (Mixed Isomers)	25013-15-4	No	Yes	Organics			6.00E-03	U	1	0.066	118.18	1
Methyl dicyclohexylamine, n-	7560-83-0	No	Yes	Organics					1	0.0367	195.35	1
Methyl methanesulfonate	66-27-3	No	No	Organics	9.90E-02	U			1	0.000138	110.13	1
Methyl tert-Butyl Ether (MTBE)	1634-04-4	No	Yes	Organics	1.80E-03	U			1	0.00211	88.15	1
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	No	No	Organics			3.00E-04	U	1	5.39E-06	195.09	1
Methyl-2-Pentanol, 4-	108-11-2	No	Yes	Organics					1	0.00544	102.18	1
Methyl-5-Nitroaniline, 2-	99-55-8	No	No	Organics	9.00E-03	U	2.00E-02	U	1	0.00384	152.15	1
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	No	No	Organics	8.30E+00	U			1	0.0000572	147.09	1
Methylaniline Hydrochloride, 2-	636-21-5	No	No	Organics	1.30E-01	U			1	0.00296	143.62	1
Methylarsonic acid	124-58-3	No	No	Organics			1.00E-02	U	1	0.0000419	139.97	1
Methylaziridine, 2-	75-55-8	No	Yes	Organics					1	0.000299	57.1	1
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	No	No	Organics			2.00E-04	U	1		158.62864	
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	No	No	Organics	1.00E-01	U	3.00E-04	U	1		220.25	
Methylcholanthrene, 3-	56-49-5	Yes	No	Organics	2.20E+01	U			1	0.903	268.36	0.8
Methylcyclohexane	108-87-2	No	Yes	Organics					1	0.11	98.19	1
Methylcyclohexylamine, n-	100-60-7	No	Yes	Organics					1	0.00898	113.2	1
Methylcyclopentane	96-37-7	No	Yes	Organics					1	0.0917	84.16	1
Methylene Chloride	75-09-2	Yes	Yes	Organics	2.00E-03	U	6.00E-03	U	1	0.00354	84.93	1
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	Yes	No	Organics	1.00E-01	U	2.00E-03	U	1	0.0197	267.16	0.9
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	No	No	Organics	4.60E-02	U			1	0.0844	254.38	1
Methylenebisbenzenamine, 4,4'-	101-77-9	No	No	Organics	1.60E+00	U			1	0.00138	198.27	1
Methylenediphenyl Diisocyanate	101-68-8	No	No	Organics					1	0.181	250.26	0.9
Methylisothiocyanate	556-61-6	No	Yes	Organics					1	0.00257	73.11	1
Methylnaphthalene	1321-94-4	No	Yes	Organics					1	0.0931	142.2	1
Methylnaphthalene, 1-	90-12-0	No	Yes	Organics	2.90E-02	U	7.00E-02	U	1	0.0931	142.2	1
Methylnaphthalene, 2-	91-57-6	No	Yes	Organics			4.00E-03	U	1	0.0917	142.2	1
Methylstyrene, Alpha-	98-83-9	No	Yes	Organics			7.00E-02	U	1	0.0699	118.18	1

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Methyl Isocyanate	624-83-9	Yes									
Methyl Mercaptan	74-93-1	Yes									
Methyl Mercury	22967-92-6	Yes			0.0201102						
Methyl Methacrylate	80-62-6	Yes			281.5427						
Methyl Parathion	298-00-0	Yes			0.0502755						
Methyl Phosphonic Acid	993-13-5	Yes			12.066116						
Methyl Styrene (Mixed Isomers)	25013-15-4	Yes			1.2066116						
Methyl dicyclohexylamine, n-	7560-83-0	Yes									
Methyl methanesulfonate	66-27-3	Yes	0.1421933			3.23E+04	3.59E+05	2.96E+04			
Methyl tert-Butyl Ether (MTBE)	1634-04-4	Yes	7.8206305			1.77E+06	1.40E+06	7.83E+05			
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	Yes			0.0603306						
Methyl-2-Pentanol, 4-	108-11-2	Yes									
Methyl-5-Nitroaniline, 2-	99-55-8	Yes	1.5641261		4.0220386	3.55E+05	1.17E+05	8.79E+04			
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	Yes	0.001696			3.85E+02	8.72E+03	3.69E+02			
Methylaniline Hydrochloride, 2-	636-21-5	Yes	0.1082857			2.46E+04	1.10E+04	7.59E+03			
Methylarsonic acid	124-58-3	Yes			2.0110193						
Methylaziridine, 2-	75-55-8	Yes									
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	No									
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	No				3.19E+04		3.19E+04			
Methylcholanthrene, 3-	56-49-5	No				1.45E+02		1.45E+02			
Methylcyclohexane	108-87-2	Yes									
Methylcyclohexylamine, n-	100-60-7	Yes									
Methylcyclopentane	96-37-7	Yes									
Methylene Chloride	75-09-2	Yes	7.0385675		1.2066116	1.60E+06	7.61E+05	5.16E+05			
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	Yes	0.1407713		0.4022039	3.19E+04	1.12E+03	1.08E+03			
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	Yes	0.3060247			6.94E+04	5.55E+02	5.50E+02			
Methylenebisbenzenamine, 4,4'-	101-77-9	Yes	0.0087982			2.00E+03	1.40E+03	8.23E+02			
Methylenediphenyl Diisocyanate	101-68-8	Yes									
Methylisothiocyanate	556-61-6	Yes									
Methylnaphthalene	1321-94-4	Yes									
Methylnaphthalene, 1-	90-12-0	Yes	0.4854184		14.077135	1.10E+05	1.61E+03	1.59E+03			
Methylnaphthalene, 2-	91-57-6	Yes			0.8044077						
Methylstyrene, Alpha-	98-83-9	Yes			14.077135						

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Methyl Isocyanate	624-83-9				
Methyl Mercaptan	74-93-1				
Methyl Mercury	22967-92-6	4.87E+03	1.01E+04	3.28E+03	3.28E+03 nc
Methyl Methacrylate	80-62-6	6.81E+07	2.89E+07	2.03E+07	2.03E+07 nc
Methyl Parathion	298-00-0	1.22E+04	1.75E+03	1.53E+03	1.53E+03 nc
Methyl Phosphonic Acid	993-13-5	2.92E+06	4.50E+07	2.74E+06	2.74E+06 nc
Methyl Styrene (Mixed Isomers)	25013-15-4	2.92E+05	6.56E+03	6.42E+03	6.42E+03 nc
Methyl dicyclohexylamine, n-	7560-83-0				
Methyl methanesulfonate	66-27-3				2.96E+04 ca
Methyl tert-Butyl Ether (MTBE)	1634-04-4				7.83E+05 ca
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	1.46E+04	2.51E+06	1.45E+04	1.45E+04 nc
Methyl-2-Pentanol, 4-	108-11-2				
Methyl-5-Nitroaniline, 2-	99-55-8	9.73E+05	3.00E+05	2.30E+05	8.79E+04 ca**
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7				3.69E+02 ca
Methylaniline Hydrochloride, 2-	636-21-5				7.59E+03 ca
Methylarsonic acid	124-58-3	4.87E+05	1.46E+07	4.71E+05	4.71E+05 nc
Methylaziridine, 2-	75-55-8				
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	9.73E+03		9.73E+03	9.73E+03 nc
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	1.46E+04		1.46E+04	1.46E+04 nc
Methylcholanthrene, 3-	56-49-5				1.45E+02 ca
Methylcyclohexane	108-87-2				
Methylcyclohexylamine, n-	100-60-7				
Methylcyclopentane	96-37-7				
Methylene Chloride	75-09-2	2.92E+05	1.31E+05	9.02E+04	9.02E+04 nc
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	9.73E+04	3.20E+03	3.10E+03	1.08E+03 ca**
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1				5.50E+02 ca
Methylenebisbenzenamine, 4,4'-	101-77-9				8.23E+02 ca
Methylenediphenyl Diisocyanate	101-68-8				
Methylisothiocyanate	556-61-6				
Methylnaphthalene	1321-94-4				
Methylnaphthalene, 1-	90-12-0	3.41E+06	4.68E+04	4.62E+04	1.59E+03 ca*
Methylnaphthalene, 2-	91-57-6	1.95E+05	2.72E+03	2.68E+03	2.68E+03 nc
Methylstyrene, Alpha-	98-83-9	3.41E+06	7.24E+04	7.09E+04	7.09E+04 nc

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Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Methyltriethyl Lead	1762-28-3	No	Yes	Organics					1	0.0238	309.42	0.9
Metolachlor	51218-45-2	No	No	Organics			1.50E-01	U	1	0.00339	283.8	1
Metribuzin	21087-64-9	No	No	Organics			2.50E-02	U	1	0.00132	214.29	1
Mineral oils	8012-95-1	No	Yes	Organics			3.00E+00	U	1	1.96	170.34	1
Mirex	2385-85-5	No	Yes	Organics	1.80E+01	U	2.00E-04	U	1	0.0516	545.55	0.5
Molinate	2212-67-1	No	No	Organics			2.00E-03	U	1	0.0189	187.3	1
Molybdenum	7439-98-7	No	No	Inorganics			5.00E-03	U	1	0.001	95.94	1
Monoaluminum phosphate	13530-50-2	No	No	Inorganics			4.86E+01	U	1	0.001	317.94	1
Monoammonium phosphate	7722-76-1	No	No	Inorganics			4.86E+01	U	1	0.001	115.03	1
Monobutyltin Compounds	NA	No	No	Organics					1			
Monocalcium phosphate	7758-23-8	No	No	Inorganics			4.86E+01	U	1	0.001	234.05	1
Monochloramine	10599-90-3	No	No	Inorganics			1.00E-01	U	1	0.001	51.48	1
Monochlorobutanes	25154-42-1	No	No	Organics					1			
Monochlorophenols (total)	NA	No	No	Organics					1			
Monocyclic aromatic hydrocarbons (total)	NA	No	No	Organics					1			
Monomagnesium phosphate	7757-86-0	No	No	Inorganics			4.86E+01	U	1	0.001	120.28	1
Monomethylaniline	100-61-8	No	No	Organics			2.00E-03	U	1	0.00498	107.16	1
Monopotassium phosphate	7778-77-0	No	No	Inorganics			4.86E+01	U	1	0.001	136.09	1
Monosodium phosphate	7558-80-7	No	No	Inorganics			4.86E+01	U	1	0.001	119.98	1
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	No	No	Organics			3.00E-04	U	1	0.0262	260.34	0.9
N-Methyl dithiocarbamate	137-42-8	No	No	Organics					1	5.32E-06	129.17	1
Naled	300-76-5	No	Yes	Organics			2.00E-03	U	1	0.0000944	380.79	1
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	No	Yes	Organics			3.00E-02	U	1			
Naphthalene	91-20-3	No	Yes	Organics			2.00E-02	U	1	0.0466	128.18	1
Naphthol, 2-	135-19-3	No	No	Organics					1	0.0188	144.17	1
Naphthoquinone, 1,4-	130-15-4	No	No	Organics					1	0.00278	158.16	1
Naphthylamine, 1-	134-32-7	No	No	Organics					1	0.0077	143.19	1
Naphthylamine, 2-	91-59-8	No	No	Organics	1.80E+00	U			1	0.00807	143.19	1
Napropamide	15299-99-7	No	No	Organics			1.00E-01	U	1	0.00804	271.36	0.9
Neodymium Chloride (Stable, Nonradioactive)	10024-93-8	No	No	Inorganics					1	0.001	250.6	1
Niagara Blue 4B	2429-74-5	No	No	Organics					1	3.69E-07	730.75	1
Nickel Acetate	373-02-4	No	No	Organics			1.10E-02	U	1		176.78	1
Nickel Carbonate	3333-67-3	No	No	Organics			1.10E-02	U	1		118.7	1
Nickel Carbonyl	13463-39-3	No	Yes	Organics			1.10E-02	U	1		170.734	1

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Methyltriethyl Lead	1762-28-3	Yes									
Metolachlor	51218-45-2	Yes			30.165289						
Metribuzin	21087-64-9	Yes			5.0275482						
Mineral oils	8012-95-1	No									
Mirex	2385-85-5	No				1.77E+02		1.77E+02			
Molinate	2212-67-1	Yes			0.4022039						
Molybdenum	7439-98-7	Yes			1.0055096						
Monoaluminum phosphate	13530-50-2	Yes			9773.5537						
Monoammonium phosphate	7722-76-1	Yes			9773.5537						
Monobutyltin Compounds	NA	No									
Monocalcium phosphate	7758-23-8	Yes			9773.5537						
Monochloramine	10599-90-3	Yes			20.110193						
Monochlorobutanes	25154-42-1	No									
Monochlorophenols (total)	NA	No									
Monocyclic aromatic hydrocarbons (total)	NA	No									
Monomagnesium phosphate	7757-86-0	Yes			9773.5537						
Monomethylaniline	100-61-8	Yes			0.4022039						
Monopotassium phosphate	7778-77-0	Yes			9773.5537						
Monosodium phosphate	7558-80-7	Yes			9773.5537						
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	Yes			0.0603306						
N-Methyl dithiocarbamate	137-42-8	No									
Naled	300-76-5	Yes			0.4022039						
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	No									
Naphthalene	91-20-3	Yes			4.0220386						
Naphthol, 2-	135-19-3	Yes									
Naphthoquinone, 1,4-	130-15-4	Yes									
Naphthylamine, 1-	134-32-7	Yes									
Naphthylamine, 2-	91-59-8	Yes	0.0078206			1.77E+03	2.93E+02	2.51E+02			
Napropamide	15299-99-7	Yes			20.110193						
Neodymium Chloride (Stable, Nonradioactive)	10024-93-8	Yes									
Niagara Blue 4B	2429-74-5	No									
Nickel Acetate	373-02-4	Yes			2.2121212						
Nickel Carbonate	3333-67-3	Yes			2.2121212						
Nickel Carbonyl	13463-39-3	Yes			2.2121212						

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Methyltriethyl Lead	1762-28-3				
Metolachlor	51218-45-2	7.30E+06	1.13E+06	9.76E+05	9.76E+05 nc
Metribuzin	21087-64-9	1.22E+06	7.55E+05	4.66E+05	4.66E+05 nc
Mineral oils	8012-95-1	1.46E+08		1.46E+08	1.46E+08 nc
Mirex	2385-85-5	9.73E+03		9.73E+03	1.77E+02 ca*
Molinate	2212-67-1	9.73E+04	5.02E+03	4.77E+03	4.77E+03 nc
Molybdenum	7439-98-7	2.43E+05	5.03E+05	1.64E+05	1.64E+05 nc
Monoaluminum phosphate	13530-50-2	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Monoammonium phosphate	7722-76-1	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Monobutyltin Compounds	NA				
Monocalcium phosphate	7758-23-8	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Monochloramine	10599-90-3	4.87E+06	1.01E+07	3.28E+06	3.28E+06 nc
Monochlorobutanes	25154-42-1				
Monochlorophenols (total)	NA				
Monocyclic aromatic hydrocarbons (total)	NA				
Monomagnesium phosphate	7757-86-0	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Monomethylaniline	100-61-8	9.73E+04	2.87E+04	2.22E+04	2.22E+04 nc
Monopotassium phosphate	7778-77-0	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Monosodium phosphate	7558-80-7	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	1.46E+04	3.77E+02	3.67E+02	3.67E+02 nc
N-Methyl dithiocarbamate	137-42-8				
Naled	300-76-5	9.73E+04	2.89E+05	7.28E+04	7.28E+04 nc
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	1.46E+06		1.46E+06	1.46E+06 nc
Naphthalene	91-20-3	9.73E+05	2.90E+04	2.82E+04	2.82E+04 nc
Naphthol, 2-	135-19-3				
Naphthoquinone, 1,4-	130-15-4				
Naphthylamine, 1-	134-32-7				
Naphthylamine, 2-	91-59-8				2.51E+02 ca
Napropamide	15299-99-7	4.87E+06	3.81E+05	3.53E+05	3.53E+05 nc
Neodymium Chloride (Stable, Nonradioactive)	10024-93-8				
Niagara Blue 4B	2429-74-5				
Nickel Acetate	373-02-4	5.35E+05		5.35E+05	5.35E+05 nc
Nickel Carbonate	3333-67-3	5.35E+05		5.35E+05	5.35E+05 nc
Nickel Carbonyl	13463-39-3	5.35E+05		5.35E+05	5.35E+05 nc

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Nickel Hydroxide	12054-48-7	No	No	Inorganics			1.10E-02	U	0.04	0.001	92.7081	1
Nickel Oxide	1313-99-1	No	No	Inorganics			1.10E-02	U	0.04	0.001	74.69	1
Nickel Refinery Dust	NA	No	No	Inorganics			1.10E-02	U	0.04	0.0002		
Nickel Soluble Salts	7440-02-0	No	No	Inorganics			2.00E-02	U	0.04	0.0002	58.69	1
Nickel Subsulfide	12035-72-2	No	No	Inorganics	1.70E+00	U	1.10E-02	U	0.04	0.0002	240.21	1
Nickelocene	1271-28-9	No	No	Organics			1.10E-02	U	1		188.879	1
Nicotinonitrile	100-54-9	No	No	Organics					1	0.000708	104.11	1
Niobium	7440-03-1	No	No	Inorganics					1	0.001	92.91	1
Nitrapyrin	1929-82-4	No	Yes	Organics					1	0.0146	230.91	0.9
Nitrate	14797-55-8	No	No	Inorganics			1.60E+00	U	1	0.001	62	1
Nitrate + Nitrite (as N)	NA	No	No	Inorganics					1	0.001		
Nitric Acid	7697-37-2	No	No	Inorganics					1	0.001	63.02	1
Nitric Oxide	10102-43-9	No	Yes	Inorganics					1	0.001	31.01	1
Nitrite	14797-65-0	No	No	Inorganics			1.00E-01	U	1	0.001	47.01	1
Nitroaniline, 2-	88-74-4	No	No	Organics			1.00E-02	U	1	0.00446	138.13	1
Nitroaniline, 3-	99-09-2	No	No	Organics					1	0.00214	138.13	1
Nitroaniline, 4-	100-01-6	No	No	Organics	2.00E-02	U	4.00E-03	U	1	0.00221	138.13	1
Nitrobenzene	98-95-3	No	Yes	Organics			2.00E-03	U	1	0.00541	123.11	1
Nitrobiphenyl, 4-	92-93-3	No	No	Organics					1	0.0382	199.21	1
Nitrocellulose	9004-70-0	No	No	Organics			3.00E+03	U	1	9.86E-09	387.3	1
Nitrodiphenylamine, 2-	119-75-5	No	No	Organics					1	0.0266	214.23	0.9
Nitrofurantoin	67-20-9	No	No	Organics			7.00E-02	U	1	0.0000352	238.16	1
Nitrofurazone	59-87-0	No	No	Organics	1.30E+00	U			1	0.000172	198.14	1
Nitrogen Dioxide	10102-44-0	No	Yes	Inorganics					1	0.001	46.01	1
Nitroglycerin	55-63-0	No	No	Organics	1.70E-02	U	1.00E-04	U	1	0.000994	227.09	1
Nitroguanidine	556-88-7	No	No	Organics			1.00E-01	U	1	0.000105	104.07	1
Nitromethane	75-52-5	No	Yes	Organics					1	0.000417	61.04	1
Nitrophenol, 2-	88-75-5	No	Yes	Organics					1	0.00402	139.11	1
Nitrophenol, 2-amino-4-	99-57-0	No	No	Organics					1	0.00171	154.13	1
Nitrophenol, 3-	554-84-7	No	No	Organics					1	0.00554	139.11	1
Nitrophenol, 4-	100-02-7	No	No	Organics					1	0.00483	139.11	1
Nitrophenol, 4-amino-2-	119-34-6	No	No	Organics					1	0.000929	154.13	1
Nitropropane, 2-	79-46-9	No	Yes	Organics					1	0.00206	89.09	1
Nitropyrene, 4-	57835-92-4	No	No	Organics	1.20E+00	U			1	0.0922	247.26	0.9

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Nickel Hydroxide	12054-48-7	Yes			0.0884848						
Nickel Oxide	1313-99-1	Yes			0.0884848						
Nickel Refinery Dust	NA	Yes			0.0884848						
Nickel Soluble Salts	7440-02-0	Yes			0.1608815						
Nickel Subsulfide	12035-72-2	Yes	0.0003312		0.0884848	1.88E+03	8.28E+02	5.75E+02			
Nickelocene	1271-28-9	Yes			2.2121212						
Nicotinonitrile	100-54-9	Yes									
Niobium	7440-03-1	Yes									
Nitrapyrin	1929-82-4	Yes									
Nitrate	14797-55-8	Yes			321.76309						
Nitrate + Nitrite (as N)	NA	Yes									
Nitric Acid	7697-37-2	Yes									
Nitric Oxide	10102-43-9	Yes									
Nitrite	14797-65-0	Yes			20.110193						
Nitroaniline, 2-	88-74-4	Yes			2.0110193						
Nitroaniline, 3-	99-09-2	Yes									
Nitroaniline, 4-	100-01-6	Yes	0.7038567		0.8044077	1.60E+05	9.83E+04	6.08E+04			
Nitrobenzene	98-95-3	Yes			0.4022039						
Nitrobiphenyl, 4-	92-93-3	Yes									
Nitrocellulose	9004-70-0	No									
Nitrodiphenylamine, 2-	119-75-5	Yes									
Nitrofurantoin	67-20-9	Yes			14.077135						
Nitrofurazone	59-87-0	Yes	0.0108286			2.46E+03	1.38E+04	2.09E+03			
Nitrogen Dioxide	10102-44-0	Yes									
Nitroglycerin	55-63-0	Yes	0.8280668		0.0201102	1.88E+05	1.52E+05	8.40E+04			
Nitroguanidine	556-88-7	Yes			20.110193						
Nitromethane	75-52-5	Yes									
Nitrophenol, 2-	88-75-5	Yes									
Nitrophenol, 2-amino-4-	99-57-0	Yes									
Nitrophenol, 3-	554-84-7	Yes									
Nitrophenol, 4-	100-02-7	Yes									
Nitrophenol, 4-amino-2-	119-34-6	Yes									
Nitropropane, 2-	79-46-9	Yes									
Nitropyrene, 4-	57835-92-4	Yes	0.0117309			2.66E+03	2.26E+01	2.25E+01			

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Nickel Hydroxide	12054-48-7	5.35E+05	4.42E+04	4.09E+04	4.09E+04 nc
Nickel Oxide	1313-99-1	5.35E+05	4.42E+04	4.09E+04	4.09E+04 nc
Nickel Refinery Dust	NA	5.35E+05	2.21E+05	1.57E+05	1.57E+05 nc
Nickel Soluble Salts	7440-02-0	9.73E+05	4.02E+05	2.85E+05	2.85E+05 nc
Nickel Subsulfide	12035-72-2	5.35E+05	2.21E+05	1.57E+05	5.75E+02 ca
Nickelocene	1271-28-9	5.35E+05		5.35E+05	5.35E+05 nc
Nicotinonitrile	100-54-9				
Niobium	7440-03-1				
Nitrapyrin	1929-82-4				
Nitrate	14797-55-8	7.79E+07	1.61E+08	5.25E+07	5.25E+07 nc
Nitrate + Nitrite (as N)	NA				
Nitric Acid	7697-37-2				
Nitric Oxide	10102-43-9				
Nitrite	14797-65-0	4.87E+06	1.01E+07	3.28E+06	3.28E+06 nc
Nitroaniline, 2-	88-74-4	4.87E+05	1.39E+05	1.08E+05	1.08E+05 nc
Nitroaniline, 3-	99-09-2				
Nitroaniline, 4-	100-01-6	1.95E+05	1.12E+05	7.12E+04	6.08E+04 ca**
Nitrobenzene	98-95-3	9.73E+04	2.47E+04	1.97E+04	1.97E+04 nc
Nitrobiphenyl, 4-	92-93-3				
Nitrocellulose	9004-70-0	1.46E+11		1.46E+11	1.46E+11 nc
Nitrodiphenylamine, 2-	119-75-5				
Nitrofurantoin	67-20-9	3.41E+06	6.79E+07	3.24E+06	3.24E+06 nc
Nitrofurazone	59-87-0				2.09E+03 ca
Nitrogen Dioxide	10102-44-0				
Nitroglycerin	55-63-0	4.87E+03	3.69E+03	2.10E+03	2.10E+03 nc
Nitroguanidine	556-88-7	4.87E+06	6.83E+07	4.54E+06	4.54E+06 nc
Nitromethane	75-52-5				
Nitrophenol, 2-	88-75-5				
Nitrophenol, 2-amino-4-	99-57-0				
Nitrophenol, 3-	554-84-7				
Nitrophenol, 4-	100-02-7				
Nitrophenol, 4-amino-2-	119-34-6				
Nitropropane, 2-	79-46-9				
Nitropyrene, 4-	57835-92-4				2.25E+01 ca

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Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Nitroquinoline-1-oxide. 4-	56-57-5	No	No	Organics					1	0.000712	190.16	1
Nitroso-N-ethylurea, N-	759-73-9	Yes	No	Organics	2.70E+01	U			1	0.00049	117.11	1
Nitroso-N-methylurea, N-	684-93-5	Yes	No	Organics	1.20E+02	U			1	0.000395	103.08	1
Nitroso-di-N-butylamine, N-	924-16-3	No	Yes	Organics	5.40E+00	U			1	0.0113	158.25	1
Nitroso-di-N-propylamine, N-	621-64-7	No	No	Organics	7.00E+00	U			1	0.00233	130.19	1
Nitrosodiethanolamine, N-	1116-54-7	No	No	Organics	2.80E+00	U			1	0.0000247	134.14	1
Nitrosodiethylamine, N-	55-18-5	Yes	No	Organics	1.50E+02	U			1	0.000872	102.14	1
Nitrosodimethylamine, N-	62-75-9	Yes	Yes	Organics	5.10E+01	U	8.00E-06	U	1	0.000251	74.08	1
Nitrosodiphenylamine, N-	86-30-6	No	No	Organics	4.90E-03	U			1	0.0145	198.23	1
Nitrosomethylethylamine, N-	10595-95-6	No	Yes	Organics	2.20E+01	U			1	0.000533	88.11	1
Nitrosomethylvinylamine, N-	4549-40-0	No	Yes	Organics					1	0.000515	86.09	1
Nitrosomorpholine [N-]	59-89-2	No	No	Organics	6.70E+00	U			1	0.000178	116.12	1
Nitrosopiperidine [N-]	100-75-4	No	No	Organics	9.40E+00	U			1	0.000622	114.15	1
Nitrosopyrrolidine, N-	930-55-2	No	No	Organics	2.10E+00	U			1	0.000321	100.12	1
Nitrotoluene, 4-Amino-2-	119-32-4	No	No	Organics					1	0.00482	152.15	1
Nitrotoluene, m-	99-08-1	No	No	Organics			1.00E-04	U	1	0.0113	137.14	1
Nitrotoluene, o-	88-72-2	No	Yes	Organics	2.20E-01	U	9.00E-04	U	1	0.00899	137.14	1
Nitrotoluene, p-	99-99-0	No	No	Organics	1.60E-02	U	4.00E-03	U	1	0.01	137.14	1
Nonachlor, trans-	39765-80-5	No	Yes	Organics					1	0.0836	444.23	0.6
Nonane, n-	111-84-2	No	Yes	Organics			3.00E-04	U	1	1.7	128.26	1
Nonanol, n-	143-08-8	No	Yes	Organics					1	0.0778	144.26	1
Norflurazon	27314-13-2	No	No	Organics			4.00E-02	U	1	0.00105	303.67	1
Nustar	85509-19-9	No	No	Organics			7.00E-04	U	1	0.00766	315.4	0.9
OCDD	3268-87-9	No	No	Organics	3.90E+01	U	2.33E-06	U	1	1.16	459.76	0
OCDF	39001-02-0	No	No	Organics	3.90E+01	U	2.33E-06	U	1	2.63	443.76	0
Octabromodiphenyl Ether	32536-52-0	No	No	Organics			3.00E-03	U	1	0.0306	801.38	0.3
Octachlorostyrene	29082-74-4	No	Yes	Organics					1	1.05	379.71	0
Octadecanoic Acid	57-11-4	No	No	Organics					1	11.7	284.49	0.3
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	No	No	Organics			5.00E-02	U	1	0.0000436	296.16	1
Octahydrotrimethylmethylethylphenanthrenol	511-15-9	No	No	Organics					1	2.66	286.46	0.5
Octamethylpyrophosphoramide	152-16-9	No	No	Organics			2.00E-03	U	1	8.30E-06	286.25	1
Octanol, n-	111-87-5	No	Yes	Organics					1	0.0274	130.23	1
Octanone, 2-	111-13-7	No	Yes	Organics					1	0.0112	128.22	1

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Nitroquinoline-1-oxide. 4-	56-57-5	Yes									
Nitroso-N-ethylurea, N-	759-73-9	Yes	0.0005214			1.18E+02	3.61E+02	8.91E+01			
Nitroso-N-methylurea, N-	684-93-5	Yes	0.0001173			2.66E+01	1.06E+02	2.13E+01			
Nitroso-di-N-butylamine, N-	924-16-3	Yes	0.0026069			5.91E+02	6.40E+01	5.78E+01			
Nitroso-di-N-propylamine, N-	621-64-7	Yes	0.002011			4.56E+02	2.77E+02	1.72E+02			
Nitrosodiethanolamine, N-	1116-54-7	Yes	0.0050275			1.14E+03	6.39E+04	1.12E+03			
Nitrosodiethylamine, N-	55-18-5	Yes	0.0000938			2.13E+01	3.87E+01	1.37E+01			
Nitrosodimethylamine, N-	62-75-9	Yes	0.000276		0.0016088	6.26E+01	4.32E+02	5.47E+01			
Nitrosodiphenylamine, N-	86-30-6	Yes	2.8728847			6.52E+05	4.35E+04	4.08E+04			
Nitrosomethylethylamine, N-	10595-95-6	Yes	0.0006399			1.45E+02	4.53E+02	1.10E+02			
Nitrosomethylvinylamine, N-	4549-40-0	Yes									
Nitrosomorpholine [N-]	59-89-2	Yes	0.0021011			4.77E+02	4.02E+03	4.26E+02			
Nitrosopiperidine [N-]	100-75-4	Yes	0.0014976			3.40E+02	8.26E+02	2.41E+02			
Nitrosopyrrolidine, N-	930-55-2	Yes	0.0067034			1.52E+03	7.56E+03	1.27E+03			
Nitrotoluene, 4-Amino-2-	119-32-4	Yes									
Nitrotoluene, m-	99-08-1	Yes			0.0201102						
Nitrotoluene, o-	88-72-2	Yes	0.063987		0.1809917	1.45E+04	2.22E+03	1.93E+03			
Nitrotoluene, p-	99-99-0	Yes	0.8798209		0.8044077	2.00E+05	2.75E+04	2.42E+04			
Nonachlor, trans-	39765-80-5	No									
Nonane, n-	111-84-2	No									
Nonanol, n-	143-08-8	Yes									
Norflurazon	27314-13-2	Yes			8.0440771						
Nustar	85509-19-9	Yes			0.1407713						
OCDD	3268-87-9	No				8.19E+01		8.19E+01			
OCDF	39001-02-0	No				8.19E+01		8.19E+01			
Octabromodiphenyl Ether	32536-52-0	No									
Octachlorostyrene	29082-74-4	No									
Octadecanoic Acid	57-11-4	No									
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	Yes			10.055096						
Octahydrotrimethylmethylethylphenanthrenol	511-15-9	No									
Octamethylpyrophosphoramide	152-16-9	Yes			0.4022039						
Octanol, n-	111-87-5	Yes									
Octanone, 2-	111-13-7	Yes									

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Nitroquinoline-1-oxide. 4-	56-57-5				
Nitroso-N-ethylurea, N-	759-73-9				8.91E+01 ca
Nitroso-N-methylurea, N-	684-93-5				2.13E+01 ca
Nitroso-di-N-butylamine, N-	924-16-3				5.78E+01 ca
Nitroso-di-N-propylamine, N-	621-64-7				1.72E+02 ca
Nitrosodiethanolamine, N-	1116-54-7				1.12E+03 ca
Nitrosodiethylamine, N-	55-18-5				1.37E+01 ca
Nitrosodimethylamine, N-	62-75-9	3.89E+02	2.52E+03	3.37E+02	5.47E+01 ca**
Nitrosodiphenylamine, N-	86-30-6				4.08E+04 ca
Nitrosomethylethylamine, N-	10595-95-6				1.10E+02 ca
Nitrosomethylvinylamine, N-	4549-40-0				
Nitrosomorpholine [N-]	59-89-2				4.26E+02 ca
Nitrosopiperidine [N-]	100-75-4				2.41E+02 ca
Nitrosopyrrolidine, N-	930-55-2				1.27E+03 ca
Nitrotoluene, 4-Amino-2-	119-32-4				
Nitrotoluene, m-	99-08-1	4.87E+03	5.56E+02	4.99E+02	4.99E+02 nc
Nitrotoluene, o-	88-72-2	4.38E+04	6.28E+03	5.49E+03	1.93E+03 ca**
Nitrotoluene, p-	99-99-0	1.95E+05	2.51E+04	2.23E+04	2.23E+04 nc
Nonachlor, trans-	39765-80-5				
Nonane, n-	111-84-2	1.46E+04		1.46E+04	1.46E+04 nc
Nonanol, n-	143-08-8				
Norflurazon	27314-13-2	1.95E+06	8.53E+05	5.93E+05	5.93E+05 nc
Nustar	85509-19-9	3.41E+04	2.11E+03	1.99E+03	1.99E+03 nc
OCDD	3268-87-9	1.13E+02		1.13E+02	8.19E+01 ca**
OCDF	39001-02-0	1.13E+02		1.13E+02	8.19E+01 ca**
Octabromodiphenyl Ether	32536-52-0	1.46E+05		1.46E+05	1.46E+05 nc
Octachlorostyrene	29082-74-4				
Octadecanoic Acid	57-11-4				
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	2.43E+06	2.70E+07	2.23E+06	2.23E+06 nc
Octahydrotrimethylmethylethylphenanthrenol	511-15-9				
Octamethylpyrophosphoramide	152-16-9	9.73E+04	6.04E+06	9.58E+04	9.58E+04 nc
Octanol, n-	111-87-5				
Octanone, 2-	111-13-7				

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Octanone, 3-	106-68-3	No	Yes	Organics					1	0.00894	128.22	1
Octyl Phthalate, di-N-	117-84-0	No	No	Organics			1.00E-02	U	1	2.43	390.57	0
Oleic acid	112-80-1	No	Yes	Organics					1	4.87	282.47	0.5
Oleum	8014-95-7	No	No	Inorganics					1	0.001		
Oryzalin	19044-88-3	No	No	Organics			5.00E-02	U	1	0.00537	346.36	0.9
Oxadiazon	19666-30-9	No	No	Organics			5.00E-03	U	1	0.028	345.23	0.8
Oxamyl	23135-22-0	No	No	Organics			2.50E-02	U	1	0.0000449	219.26	1
Oxychlordane	27304-13-8	No	No	Organics					1	0.029	423.77	0.8
Ozone	10028-15-6	No	No	Inorganics					1	0.001	48	1
Paclobutrazol	76738-62-0	No	No	Organics			1.30E-02	U	1	0.00471	293.8	0.9
Paraquat Dichloride	1910-42-5	No	No	Organics			4.50E-03	U	1	5.77E-08	257.16	1
Parathion	56-38-2	No	No	Organics			6.00E-03	U	1	0.0128	291.26	0.9
PeCDD, 2,3,7,8-	36088-22-9	No	No	Organics	1.30E+05	U	7.00E-10	U	1	0.241	356.42	0.7
PeCDF, 1,2,3,7,8-	57117-41-6	No	No	Organics	3.90E+03	U	2.33E-08	U	1	0.627	340.42	0.4
PeCDF, 2,3,4,7,8-	57117-31-4	No	No	Organics	3.90E+04	U	2.33E-09	U	1	0.627	340.42	0.4
Pebulate	1114-71-2	No	Yes	Organics			5.00E-02	U	1	0.0397	203.35	1
Pendimethalin	40487-42-1	No	No	Organics			4.00E-02	U	1	0.115	281.31	0.9
Pentabromodiphenyl Ether	32534-81-9	No	No	Organics			2.00E-03	U	1	0.0373	564.69	0.6
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	No	No	Organics			1.00E-04	U	1	0.0373	564.69	0.6
Pentachloroaniline	527-20-8	No	No	Organics					1	0.0811	265.35	0.9
Pentachlorobenzene	608-93-5	No	Yes	Organics			8.00E-04	U	1	0.168	250.34	0.9
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	No	Yes	Organics	3.90E+00	U	2.33E-05	U	1	1	326.44	0.4
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	No	Yes	Organics	3.90E+00	U	2.33E-05	U	1	1.24	326.44	0.3
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	No	Yes	Organics	3.90E+00	U	2.33E-05	U	1	0.751	326.44	0.5
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	No	Yes	Organics	3.90E+00	U	2.33E-05	U	1	1	326.44	0.4
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	No	Yes	Organics	1.30E+04	U	7.00E-09	U	1	1	326.44	0.4
Pentachlorocyclopentadiene	25329-35-5	No	Yes	Organics					1	0.0609	238.33	0.9
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	No	Yes	Organics	1.30E+05	U	7.00E-10	U	1	0.405	356.42	0.5
Pentachloroethane	76-01-7	No	Yes	Organics	9.00E-02	U			1	0.0158	202.3	1
Pentachloronitrobenzene	82-68-8	No	Yes	Organics	2.60E-01	U	3.00E-03	U	1	0.0418	295.34	0.9
Pentachlorophenol	87-86-5	No	No	Organics	4.00E-01	U	5.00E-03	U	1	0.127	266.34	0.9
Pentaerythritol tetranitrate (PETN)	78-11-5	No	No	Organics	4.00E-03	U	2.00E-03	U	1	0.00101	316.14	1
Pentamethyl dipropylenetriamine	3855-32-1	No	No	Organics					1	0.000219	201.36	1

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Octanone, 3-	106-68-3	Yes									
Octyl Phthalate, di-N-	117-84-0	No									
Oleic acid	112-80-1	No									
Oleum	8014-95-7	Yes									
Oryzalin	19044-88-3	Yes			10.055096						
Oxadiazon	19666-30-9	Yes			1.0055096						
Oxamyl	23135-22-0	Yes			5.0275482						
Oxychlordane	27304-13-8	Yes									
Ozone	10028-15-6	Yes									
Paclobutrazol	76738-62-0	Yes			2.6143251						
Paraquat Dichloride	1910-42-5	No									
Parathion	56-38-2	Yes			1.2066116						
PeCDD, 2,3,7,8-	36088-22-9	No				2.46E-02		2.46E-02			
PeCDF, 1,2,3,7,8-	57117-41-6	No				8.19E-01		8.19E-01			
PeCDF, 2,3,4,7,8-	57117-31-4	No				8.19E-02		8.19E-02			
Pebulate	1114-71-2	Yes			10.055096						
Pendimethalin	40487-42-1	Yes			8.0440771						
Pentabromodiphenyl Ether	32534-81-9	No									
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	No									
Pentachloroaniline	527-20-8	Yes									
Pentachlorobenzene	608-93-5	Yes			0.1608815						
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	No				8.19E+02		8.19E+02			
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	No				8.19E+02		8.19E+02			
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	No				8.19E+02		8.19E+02			
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	No				8.19E+02		8.19E+02			
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	No				2.46E-01		2.46E-01			
Pentachlorocyclopentadiene	25329-35-5	Yes									
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	No				2.46E-02		2.46E-02			
Pentachloroethane	76-01-7	Yes	0.1564126			3.55E+04	2.12E+03	2.00E+03			
Pentachloronitrobenzene	82-68-8	Yes	0.0541428		0.6033058	1.23E+04	1.69E+02	1.67E+02			
Pentachlorophenol	87-86-5	Yes	0.0351928		1.0055096	7.98E+03	4.36E+01	4.34E+01			
Pentaerythritol tetranitrate (PETN)	78-11-5	Yes	3.5192837		0.4022039	7.98E+05	3.58E+05	2.47E+05			
Pentamethyl dipropylenetriamine	3855-32-1	Yes									

Site-specific
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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Octanone, 3-	106-68-3				
Octyl Phthalate, di-N-	117-84-0	4.87E+05		4.87E+05	4.87E+05 nc
Oleic acid	112-80-1				
Oleum	8014-95-7				
Oryzalin	19044-88-3	2.43E+06	1.76E+05	1.64E+05	1.64E+05 nc
Oxadiazon	19666-30-9	2.43E+05	3.82E+03	3.76E+03	3.76E+03 nc
Oxamyl	23135-22-0	1.22E+06	2.15E+07	1.15E+06	1.15E+06 nc
Oxychlordane	27304-13-8				
Ozone	10028-15-6				
Paclobutrazol	76738-62-0	6.33E+05	7.32E+04	6.56E+04	6.56E+04 nc
Paraquat Dichloride	1910-42-5	2.19E+05		2.19E+05	2.19E+05 nc
Parathion	56-38-2	2.92E+05	1.26E+04	1.21E+04	1.21E+04 nc
PeCDD, 2,3,7,8-	36088-22-9	3.41E-02		3.41E-02	2.46E-02 ca**
PeCDF, 1,2,3,7,8-	57117-41-6	1.13E+00		1.13E+00	8.19E-01 ca**
PeCDF, 2,3,4,7,8-	57117-31-4	1.13E-01		1.13E-01	8.19E-02 ca**
Pebulate	1114-71-2	2.43E+06	5.39E+04	5.27E+04	5.27E+04 nc
Pendimethalin	40487-42-1	1.95E+06	1.00E+04	9.95E+03	9.95E+03 nc
Pentabromodiphenyl Ether	32534-81-9	9.73E+04		9.73E+04	9.73E+04 nc
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	4.87E+03		4.87E+03	4.87E+03 nc
Pentachloroaniline	527-20-8				
Pentachlorobenzene	608-93-5	3.89E+04	1.67E+02	1.66E+02	1.66E+02 nc
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.13E+03		1.13E+03	8.19E+02 ca**
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.13E+03		1.13E+03	8.19E+02 ca**
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.13E+03		1.13E+03	8.19E+02 ca**
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.13E+03		1.13E+03	8.19E+02 ca**
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	3.41E-01		3.41E-01	2.46E-01 ca**
Pentachlorocyclopentadiene	25329-35-5				
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	3.41E-02		3.41E-02	2.46E-02 ca**
Pentachloroethane	76-01-7				2.00E+03 ca
Pentachloronitrobenzene	82-68-8	1.46E+05	1.88E+03	1.86E+03	1.67E+02 ca*
Pentachlorophenol	87-86-5	2.43E+05	1.25E+03	1.24E+03	4.34E+01 ca*
Pentaerythritol tetranitrate (PETN)	78-11-5	9.73E+04	4.09E+04	2.88E+04	2.88E+04 nc
Pentamethyl dipropylenetriamine	3855-32-1				

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Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Pentane, n-	109-66-0	No	Yes	Organics					1	0.11	72.15	1
Pentyl Alcohol, N-	71-41-0	No	Yes	Organics					1	0.00506	88.15	1
Perchlorate and Perchlorate Salts	14797-73-0	No	No	Inorganics			7.00E-04	U	1	0.001	117.49	1
Perfluorobutane Sulfonate	375-73-5	No	Yes	Organics			2.00E-02	U	1	0.0013	300.1	1
Perfluorooctane Sulphonic Acid	1763-23-1	No	Yes	Organics					1	0.0362	500.13	0.6
Perfluorooctanoic acid	335-67-1	No	Yes	Organics					1	0.114	414.07	0.7
Permethrin	52645-53-1	No	No	Organics			5.00E-02	U	1	0.208	391.3	0.6
Perylene	198-55-0	No	No	Organics					1	0.856	252.32	0.9
Pesticides (total)	NA	No	No	Organics					1			
Pesticides, organochlorinated (each)	NA	No	No	Organics					1			
Pesticides, organochlorinated (total)	NA	No	No	Organics					1			
Phenacetin	62-44-2	No	No	Organics	2.20E-03	U			1	0.00173	179.22	1
Phenanthrene	85-01-8	No	Yes	Organics					1	0.144	178.24	1
Phenmedipham	13684-63-4	No	No	Organics			2.50E-01	U	1	0.00786	300.32	0.9
Phenol	108-95-2	No	No	Organics			3.00E-01	U	1	0.00434	94.11	1
Phenothiazine	92-84-2	No	No	Organics			5.00E-04	U	1	0.0683	199.27	1
Phenyl Isothiocyanate	103-72-0	No	Yes	Organics					1	0.0413	135.18	1
Phenylenediamine, m-	108-45-2	No	No	Organics			6.00E-03	U	1	0.000234	108.14	1
Phenylenediamine, o-	95-54-5	No	No	Organics	4.70E-02	U			1	0.000487	108.14	1
Phenylenediamine, p-	106-50-3	No	No	Organics			1.90E-01	U	1	0.000245	108.14	1
Phenylmercuric Acetate	62-38-4	No	No	Organics			8.00E-05	U	1	0.0000599	336.74	1
Phenylphenol, 2-	90-43-7	No	No	Organics	1.94E-03	U			1	0.0196	170.21	1
Phorate	298-02-2	No	No	Organics			2.00E-04	U	1	0.0126	260.37	0.9
Phosmet	732-11-6	No	No	Organics			2.00E-02	U	1	0.00183	317.32	1
Phosphine	7803-51-2	No	Yes	Inorganics			3.00E-04	U	1	0.001	34	1
Phosphoric Acid	7664-38-2	No	No	Inorganics			4.86E+01	U	1	0.001	98	1
Phosphorus (total)	NA	No	No	Inorganics					1	0.001		
Phosphorus pentoxide	1314-56-3	No	No	Inorganics					1	0.001	141.94	1
Phosphorus, White	7723-14-0	No	Yes	Inorganics			2.00E-05	U	1	0.001	30.974	1
Phthalates (total)	NA	No	No	Organics					1			
Phthalic Acid, P-	100-21-0	No	No	Organics			1.00E+00	U	1	0.00391	166.13	1
Phthalic Acid, m-	121-91-5	No	No	Organics					1	0.00232	166.13	1
Phthalic Acid, o-	88-99-3	No	No	Organics					1	0.000559	166.13	1
Phthalic Anhydride	85-44-9	No	No	Organics			2.00E+00	U	1	0.00267	148.12	1

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Pentane, n-	109-66-0	Yes									
Pentyl Alcohol, N-	71-41-0	Yes									
Perchlorate and Perchlorate Salts	14797-73-0	Yes			0.1407713						
Perfluorobutane Sulfonate	375-73-5	Yes			4.0220386						
Perfluorooctane Sulphonic Acid	1763-23-1	No									
Perfluorooctanoic acid	335-67-1	No									
Permethrin	52645-53-1	No									
Perylene	198-55-0	No									
Pesticides (total)	NA	No									
Pesticides, organochlorinated (each)	NA	No									
Pesticides, organochlorinated (total)	NA	No									
Phenacetin	62-44-2	Yes	6.3986977			1.45E+06	9.19E+05	5.63E+05			
Phenanthrene	85-01-8	Yes									
Phenmedipham	13684-63-4	Yes			50.275482						
Phenol	108-95-2	Yes			60.330579						
Phenothiazine	92-84-2	Yes			0.100551						
Phenyl Isothiocyanate	103-72-0	Yes									
Phenylenediamine, m-	108-45-2	Yes			1.2066116						
Phenylenediamine, o-	95-54-5	Yes	0.2995135			6.80E+04	2.16E+05	5.17E+04			
Phenylenediamine, p-	106-50-3	Yes			38.209366						
Phenylmercuric Acetate	62-38-4	Yes			0.0160882						
Phenylphenol, 2-	90-43-7	Yes	7.2562551			1.65E+06	9.75E+04	9.20E+04			
Phorate	298-02-2	Yes			0.0402204						
Phosmet	732-11-6	Yes			4.0220386						
Phosphine	7803-51-2	Yes			0.0603306						
Phosphoric Acid	7664-38-2	Yes			9773.5537						
Phosphorus (total)	NA	Yes									
Phosphorus pentoxide	1314-56-3	Yes									
Phosphorus, White	7723-14-0	Yes			0.004022						
Phthalates (total)	NA	No									
Phthalic Acid, P-	100-21-0	Yes			201.10193						
Phthalic Acid, m-	121-91-5	Yes									
Phthalic Acid, o-	88-99-3	Yes									
Phthalic Anhydride	85-44-9	Yes			402.20386						

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Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Pentane, n-	109-66-0				
Pentyl Alcohol, N-	71-41-0				
Perchlorate and Perchlorate Salts	14797-73-0	3.41E+04	7.04E+04	2.30E+04	2.30E+04 nc
Perfluorobutane Sulfonate	375-73-5	9.73E+05	3.53E+05	2.59E+05	2.59E+05 nc
Perfluorooctane Sulphonic Acid	1763-23-1				
Perfluorooctanoic acid	335-67-1				
Permethrin	52645-53-1	2.43E+06		2.43E+06	2.43E+06 nc
Perylene	198-55-0				
Pesticides (total)	NA				
Pesticides, organochlorinated (each)	NA				
Pesticides, organochlorinated (total)	NA				
Phenacetin	62-44-2				5.63E+05 ca
Phenanthrene	85-01-8				
Phenmedipham	13684-63-4	1.22E+07	8.09E+05	7.58E+05	7.58E+05 nc
Phenol	108-95-2	1.46E+07	5.17E+06	3.82E+06	3.82E+06 nc
Phenothiazine	92-84-2	2.43E+04	3.21E+02	3.17E+02	3.17E+02 nc
Phenyl Isothiocyanate	103-72-0				
Phenylenediamine, m-	108-45-2	2.92E+05	1.81E+06	2.51E+05	2.51E+05 nc
Phenylenediamine, o-	95-54-5				5.17E+04 ca
Phenylenediamine, p-	106-50-3	9.25E+06	5.48E+07	7.91E+06	7.91E+06 nc
Phenylmercuric Acetate	62-38-4	3.89E+03	2.42E+04	3.35E+03	3.35E+03 nc
Phenylphenol, 2-	90-43-7				9.20E+04 ca
Phorate	298-02-2	9.73E+03	5.22E+02	4.96E+02	4.96E+02 nc
Phosmet	732-11-6	9.73E+05	2.24E+05	1.82E+05	1.82E+05 nc
Phosphine	7803-51-2	1.46E+04	3.02E+04	9.84E+03	9.84E+03 nc
Phosphoric Acid	7664-38-2	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Phosphorus (total)	NA				
Phosphorus pentoxide	1314-56-3				
Phosphorus, White	7723-14-0	9.73E+02	2.01E+03	6.56E+02	6.56E+02 nc
Phthalates (total)	NA				
Phthalic Acid, P-	100-21-0	4.87E+07	1.39E+07	1.08E+07	1.08E+07 nc
Phthalic Acid, m-	121-91-5				
Phthalic Acid, o-	88-99-3				
Phthalic Anhydride	85-44-9	9.73E+07	4.41E+07	3.04E+07	3.04E+07 nc

Site-specific
Recreator Screening Levels (RSL) for Surface Water
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Picloram	1918-02-1	No	No	Organics			7.00E-02	U	1	0.00127	241.46	1
Picoline, 2-	109-06-8	No	Yes	Organics					1	0.00257	93.13	1
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	No	No	Organics			1.00E-04	U	1	0.000496	199.12	1
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	No	No	Organics					1	0.000621	229.11	1
Piperidine	110-89-4	No	Yes	Organics					1	0.00189	85.15	1
Pirimiphos, Methyl	29232-93-7	No	No	Organics			1.00E-02	U	1	0.0187	305.33	0.9
Polybrominated Biphenyls	59536-65-1	No	No	Organics	3.00E+01	U	7.00E-06	U	1			
Polychlorinated Biphenyls (low risk)	1336-36-3	No	Yes	Organics	4.00E-01	U			1	0.545	291.99	0.7
Polycyclic aromatic hydrocarbons (PAH), Total	NA	No	No	Organics					1			
Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight)	NA	No	No	Organics					1			
Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight)	NA	No	No	Organics					1			
Polycyclic chlorinated hydrocarbons (total)	NA	No	No	Organics					1			
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	No	No	Organics					1	18.6	512.53	0
Polyphosphoric acid	8017-16-1	No	No	Inorganics			4.86E+01	U	1	0.001	257.96	1
Potassium	7440-09-7	No	No	Inorganics					1	0.002	39.1	1
Potassium Cyanide	151-50-8	No	No	Inorganics			2.00E-03	U	1	0.002	65.12	1
Potassium Perchlorate	7778-74-7	No	No	Inorganics			7.00E-04	U	1	0.002	138.55	1
Potassium Perfluorobutane Sulfonate	29420-49-3	No	No	Organics			2.00E-02	U	1	0.0000297	338.19	1
Potassium Silver Cyanide	506-61-6	No	No	Inorganics			5.00E-03	U	0.04	0.002	199	1
Potassium chlorate	3811-04-9	No	No	Inorganics					1	0.001	122.55	1
Potassium tripolyphosphate	13845-36-8	No	No	Inorganics			4.86E+01	U	1	0.001	448.40679	0.9
Praseodymium	7440-10-0	No	No	Inorganics					1	0.001	140.91	1
Praseodymium Chloride (Stable, Nonradioactive)	10361-79-2	No	No	Inorganics					1	0.001	247.27	1
Prochloraz	67747-09-5	No	No	Organics	1.50E-01	U	9.00E-03	U	1	0.0064	376.67	0.9
Profluralin	26399-36-0	No	Yes	Organics			6.00E-03	U	1	0.09	347.3	0.8
Promethium	7440-12-2	No	No	Inorganics					1	0.001	145	1
Prometon	1610-18-0	No	No	Organics			1.50E-02	U	1	0.00827	225.3	1
Prometryn	7287-19-6	No	No	Organics			4.00E-03	U	1	0.0149	241.36	0.9
Propachlor	1918-16-7	No	No	Organics			1.30E-02	U	1	0.00286	211.69	1
Propanil	709-98-8	No	No	Organics			5.00E-03	U	1	0.0103	218.08	1

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Picloram	1918-02-1	Yes			14.077135						
Picoline, 2-	109-06-8	Yes									
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	Yes			0.0201102						
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	Yes									
Piperidine	110-89-4	Yes									
Pirimiphos, Methyl	29232-93-7	Yes			2.0110193						
Polybrominated Biphenyls	59536-65-1	No				1.06E+02		1.06E+02			
Polychlorinated Biphenyls (low risk)	1336-36-3	No				7.98E+03		7.98E+03			
Polycyclic aromatic hydrocarbons (PAH), Total	NA	No									
Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight)	NA	No									
Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight)	NA	No									
Polycyclic chlorinated hydrocarbons (total)	NA	No									
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	No									
Polyphosphoric acid	8017-16-1	Yes			9773.5537						
Potassium	7440-09-7	Yes									
Potassium Cyanide	151-50-8	Yes			0.4022039						
Potassium Perchlorate	7778-74-7	Yes			0.1407713						
Potassium Perfluorobutane Sulfonate	29420-49-3	Yes			4.0220386						
Potassium Silver Cyanide	506-61-6	Yes			0.0402204						
Potassium chlorate	3811-04-9	Yes									
Potassium tripolyphosphate	13845-36-8	Yes			9773.5537						
Praseodymium	7440-10-0	Yes									
Praseodymium Chloride (Stable, Nonradioactive)	10361-79-2	Yes									
Prochloraz	67747-09-5	Yes	0.0938476		1.8099174	2.13E+04	1.13E+03	1.08E+03			
Profluralin	26399-36-0	Yes			1.2066116						
Promethium	7440-12-2	Yes									
Prometon	1610-18-0	Yes			3.0165289						
Prometryn	7287-19-6	Yes			0.8044077						
Propachlor	1918-16-7	Yes			2.6143251						
Propanil	709-98-8	Yes			1.0055096						

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Picloram	1918-02-1	3.41E+06	1.84E+06	1.20E+06	1.20E+06 nc
Picoline, 2-	109-06-8				
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	4.87E+03	8.86E+03	3.14E+03	3.14E+03 nc
Picric Acid (2,4,6-Trinitrophenol)	88-89-1				
Piperidine	110-89-4				
Pirimiphos, Methyl	29232-93-7	4.87E+05	1.32E+04	1.28E+04	1.28E+04 nc
Polybrominated Biphenyls	59536-65-1	3.41E+02		3.41E+02	1.06E+02 ca**
Polychlorinated Biphenyls (low risk)	1336-36-3				7.98E+03 ca
Polycyclic aromatic hydrocarbons (PAH), Total	NA				
Polycyclic aromatic hydrocarbons (PAH), Total (high molecular weight)	NA				
Polycyclic aromatic hydrocarbons (PAH), Total (low molecular weight)	NA				
Polycyclic chlorinated hydrocarbons (total)	NA				
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9				
Polyphosphoric acid	8017-16-1	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Potassium	7440-09-7				
Potassium Cyanide	151-50-8	9.73E+04	1.01E+05	4.95E+04	4.95E+04 nc
Potassium Perchlorate	7778-74-7	3.41E+04	3.52E+04	1.73E+04	1.73E+04 nc
Potassium Perfluorobutane Sulfonate	29420-49-3	9.73E+05	1.21E+07	9.01E+05	9.01E+05 nc
Potassium Silver Cyanide	506-61-6	2.43E+05	1.01E+04	9.66E+03	9.66E+03 nc
Potassium chlorate	3811-04-9				
Potassium tripolyphosphate	13845-36-8	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Praseodymium	7440-10-0				
Praseodymium Chloride (Stable, Nonradioactive)	10361-79-2				
Prochloraz	67747-09-5	4.38E+05	2.19E+04	2.08E+04	1.08E+03 ca*
Profluralin	26399-36-0	2.92E+05	1.41E+03	1.40E+03	1.40E+03 nc
Promethium	7440-12-2				
Prometon	1610-18-0	7.30E+05	6.73E+04	6.16E+04	6.16E+04 nc
Prometryn	7287-19-6	1.95E+05	9.98E+03	9.50E+03	9.50E+03 nc
Propachlor	1918-16-7	6.33E+05	1.84E+05	1.43E+05	1.43E+05 nc
Propanil	709-98-8	2.43E+05	1.89E+04	1.75E+04	1.75E+04 nc

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Propanoic acid, 2-(2,4-dichlorophenoxy)-	120-36-5	No	No	Organics					1	0.0000512	235.07	1
Propargite	2312-35-8	No	No	Organics			2.00E-02	U	1	0.0356	350.48	0.8
Propargyl Alcohol	107-19-7	No	Yes	Organics			2.00E-03	U	1	0.000424	56.06	1
Propazine	139-40-2	No	No	Organics			2.00E-02	U	1	0.00713	229.71	1
Propham	122-42-9	No	No	Organics			2.00E-02	U	1	0.00826	179.22	1
Propiconazole	60207-90-1	No	No	Organics			1.30E-02	U	1	0.00558	342.23	0.9
Propionaldehyde	123-38-6	No	Yes	Organics					1	0.00182	58.08	1
Propionitrile	107-12-0	No	Yes	Organics					1	0.000982	55.08	1
Propionitrile, 3-(NN-dimethylamino)	1738-25-6	No	Yes	Organics					1	0.000222	98.15	1
Propyl Alcohol, n-	71-23-8	No	Yes	Organics					1	0.00106	60.1	1
Propyl benzene	103-65-1	No	Yes	Organics			1.00E-01	U	1	0.0939	120.2	1
Propylene	115-07-1	No	Yes	Organics					1	0.0136	42.08	1
Propylene Glycol	57-55-6	No	No	Organics			2.00E+01	U	1	0.000143	76.1	1
Propylene Glycol Dinitrate	6423-43-4	No	No	Organics					1	0.00208	166.09	1
Propylene Glycol Monoethyl Ether	1569-02-4	No	Yes	Organics			7.00E-01	U	1	0.000409	104.15	1
Propylene Glycol Monomethyl Ether	107-98-2	No	Yes	Organics			7.00E-01	U	1	0.000372	90.12	1
Propylene Oxide	75-56-9	No	Yes	Organics	2.40E-01	U			1	0.000774	58.08	1
Prussian Blue (Ferric Ferrocyanide)	14038-43-8	No	No	Organics					1		859.229	
Pursuit	81335-77-5	No	No	Organics			2.50E-01	U	1	0.002	289.34	1
Pydrin	51630-58-1	No	No	Organics			2.50E-02	U	1	0.0938	419.91	0.7
Pyrazinyl phosphorothioate, O,O-diethyl O-2-	297-97-2	No	No	Organics					1	0.00109	248.24	1
Pyrene	129-00-0	No	Yes	Organics			3.00E-02	U	1	0.201	202.26	1
Pyridine	110-86-1	No	Yes	Organics			1.00E-03	U	1	0.00152	79.1	1
Quinalphos	13593-03-8	No	No	Organics			5.00E-04	U	1	0.0296	298.3	0.9
Quinoline	91-22-5	No	No	Organics	3.00E+00	U			1	0.00659	129.16	1
Resmethrin	10453-86-8	No	No	Organics			3.00E-02	U	1	0.238	338.45	0.7
Resorcinol	108-46-3	No	No	Organics					1	0.00128	110.11	1
Ronnel	299-84-3	No	Yes	Organics			5.00E-02	U	1	0.043	321.54	0.8
Rotenone	83-79-4	No	No	Organics			4.00E-03	U	1	0.00509	394.43	0.9
Safrole	94-59-7	Yes	No	Organics	2.20E-01	U			1	0.0113	162.19	1
Samarium Chloride (Stable, Nonradioactive)	10361-82-7	No	No	Inorganics					1	0.001	256.72	1
Samarium Nitrate (Stable, Nonradioactive)	10361-83-8	No	No	Inorganics					1	0.001	336.38	1
Savey	78587-05-0	No	No	Organics			2.50E-02	U	1	0.0828	352.88	0.8
Scandium	7440-20-2	No	No	Inorganics					1	0.001	44.96	1

Site-specific
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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Propanoic acid, 2-(2,4-dichlorophenoxy)-	120-36-5	Yes									
Propargite	2312-35-8	Yes			4.0220386						
Propargyl Alcohol	107-19-7	Yes			0.4022039						
Propazine	139-40-2	Yes			4.0220386						
Propham	122-42-9	Yes			4.0220386						
Propiconazole	60207-90-1	Yes			2.6143251						
Propionaldehyde	123-38-6	Yes									
Propionitrile	107-12-0	Yes									
Propionitrile, 3-(NN-dimethylamino)	1738-25-6	Yes									
Propyl Alcohol, n-	71-23-8	Yes									
Propyl benzene	103-65-1	Yes			20.110193						
Propylene	115-07-1	Yes									
Propylene Glycol	57-55-6	Yes			4022.0386						
Propylene Glycol Dinitrate	6423-43-4	Yes									
Propylene Glycol Monoethyl Ether	1569-02-4	Yes			140.77135						
Propylene Glycol Monomethyl Ether	107-98-2	Yes			140.77135						
Propylene Oxide	75-56-9	Yes	0.0586547			1.33E+04	3.10E+04	9.31E+03			
Prussian Blue (Ferric Ferrocyanide)	14038-43-8	No									
Pursuit	81335-77-5	Yes			50.275482						
Pydrin	51630-58-1	No									
Pyrazinyl phosphorothioate, O,O-diethyl O-2-	297-97-2	Yes									
Pyrene	129-00-0	Yes			6.0330579						
Pyridine	110-86-1	Yes			0.2011019						
Quinalphos	13593-03-8	Yes			0.100551						
Quinoline	91-22-5	Yes	0.0046924			1.06E+03	2.31E+02	1.90E+02			
Resmethrin	10453-86-8	Yes			6.0330579						
Resorcinol	108-46-3	Yes									
Ronnel	299-84-3	Yes			10.055096						
Rotenone	83-79-4	Yes			0.8044077						
Safrole	94-59-7	Yes	0.063987			1.45E+04	1.57E+03	1.42E+03			
Samarium Chloride (Stable, Nonradioactive)	10361-82-7	Yes									
Samarium Nitrate (Stable, Nonradioactive)	10361-83-8	Yes									
Savey	78587-05-0	Yes			5.0275482						
Scandium	7440-20-2	Yes									

Site-specific
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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Propanoic acid, 2-(2,4-dichlorophenoxy)-	120-36-5				
Propargite	2312-35-8	9.73E+05	1.16E+04	1.15E+04	1.15E+04 nc
Propargyl Alcohol	107-19-7	9.73E+04	3.90E+05	7.79E+04	7.79E+04 nc
Propazine	139-40-2	9.73E+05	1.01E+05	9.17E+04	9.17E+04 nc
Propham	122-42-9	9.73E+05	1.21E+05	1.08E+05	1.08E+05 nc
Propiconazole	60207-90-1	6.33E+05	4.52E+04	4.22E+04	4.22E+04 nc
Propionaldehyde	123-38-6				
Propionitrile	107-12-0				
Propionitrile, 3-(NN-dimethylamino)	1738-25-6				
Propyl Alcohol, n-	71-23-8				
Propyl benzene	103-65-1	4.87E+06	7.69E+04	7.57E+04	7.57E+04 nc
Propylene	115-07-1				
Propylene Glycol	57-55-6	9.73E+08	1.10E+10	8.94E+08	8.94E+08 nc
Propylene Glycol Dinitrate	6423-43-4				
Propylene Glycol Monoethyl Ether	1569-02-4	3.41E+07	1.23E+08	2.67E+07	2.67E+07 nc
Propylene Glycol Monomethyl Ether	107-98-2	3.41E+07	1.42E+08	2.75E+07	2.75E+07 nc
Propylene Oxide	75-56-9				9.31E+03 ca
Prussian Blue (Ferric Ferrocyanide)	14038-43-8				
Pursuit	81335-77-5	1.22E+07	3.07E+06	2.45E+06	2.45E+06 nc
Pydrin	51630-58-1	1.22E+06		1.22E+06	1.22E+06 nc
Pyrazinyl phosphorothioate, O,O-diethyl O-2-	297-97-2				
Pyrene	129-00-0	1.46E+06	6.43E+03	6.40E+03	6.40E+03 nc
Pyridine	110-86-1	4.87E+04	5.14E+04	2.50E+04	2.50E+04 nc
Quinalphos	13593-03-8	2.43E+04	4.35E+02	4.28E+02	4.28E+02 nc
Quinoline	91-22-5				1.90E+02 ca
Resmethrin	10453-86-8	1.46E+06	3.22E+03	3.22E+03	3.22E+03 nc
Resorcinol	108-46-3				
Ronnel	299-84-3	2.43E+06	2.90E+04	2.87E+04	2.87E+04 nc
Rotenone	83-79-4	1.95E+05	1.09E+04	1.03E+04	1.03E+04 nc
Safrole	94-59-7				1.42E+03 ca
Samarium Chloride (Stable, Nonradioactive)	10361-82-7				
Samarium Nitrate (Stable, Nonradioactive)	10361-83-8				
Savey	78587-05-0	1.22E+06	6.15E+03	6.12E+03	6.12E+03 nc
Scandium	7440-20-2				

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Selenious Acid	7783-00-8	No	No	Inorganics			5.00E-03	U	1	0.001	128.97	1
Selenite	14124-67-5	No	No	Inorganics					1	0.001	128.97	1
Selenium	7782-49-2	No	No	Inorganics			5.00E-03	U	1	0.001	78.96	1
Selenium Sulfide	7446-34-6	No	No	Inorganics			5.00E-03	U	1	0.001	111.02	1
Selenourea	630-10-4	No	No	Organics					1		123.02	1
Sethoxydim	74051-80-2	No	No	Organics			9.00E-02	U	1	0.0185	327.49	0.9
Silica (crystalline, respirable)	7631-86-9	No	No	Inorganics					1	0.001	60.08	1
Silicon	7440-21-3	No	No	Inorganics					1	0.001	28.086	1
Silver	7440-22-4	No	No	Inorganics			5.00E-03	U	0.04	0.0006	107.87	1
Silver Cyanide	506-64-9	No	No	Inorganics			1.00E-01	U	0.04	0.001	133.89	1
Simazine	122-34-9	No	No	Organics	1.20E-01	U	5.00E-03	U	1	0.00325	201.66	1
Sodium	7440-23-5	No	No	Inorganics					1	0.001	22.99	1
Sodium Acifluorfen	62476-59-9	No	No	Organics			1.30E-02	U	1	0.0000195	383.65	1
Sodium Azide	26628-22-8	No	No	Inorganics			4.00E-03	U	1	0.001	65.01	1
Sodium Chlorate	7775-09-9	No	No	Inorganics					1	0.001	106.44	1
Sodium Cyanide	143-33-9	No	No	Inorganics			1.00E-03	U	1	0.001	49.01	1
Sodium Dichromate	10588-01-9	Yes	No	Inorganics	5.00E-01	U	2.00E-02	U	0.025	0.001	261.968	1
Sodium Diethyldithiocarbamate	148-18-5	No	No	Organics	2.70E-01	U	3.00E-02	U	1	0.0000192	171.25	1
Sodium Fluoride	7681-49-4	No	No	Inorganics			5.00E-02	U	1	0.001	41.99	1
Sodium Fluoroacetate	62-74-8	No	No	Organics			2.00E-05	U	1	1.32E-06	100.03	1
Sodium Hydroxide	1310-73-2	No	No	Inorganics					1	0.001	40	1
Sodium Metavanadate	13718-26-8	No	No	Inorganics			1.00E-03	U	1	0.001	121.93	1
Sodium Perchlorate	7601-89-0	No	No	Inorganics			7.00E-04	U	1	0.001	122.44	1
Sodium acid pyrophosphate	7758-16-9	No	No	Inorganics			4.86E+01	U	1	0.001	221.94	1
Sodium aluminum phosphate (acidic)	7785-88-8	No	No	Inorganics			4.86E+01	U	1	0.001	144.94267	1
Sodium aluminum phosphate (anhydrous)	10279-59-1	No	No	Inorganics			4.86E+01	U	1	0.001		
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	No	No	Inorganics			4.86E+01	U	1	0.001	949.88	0.8
Sodium hexametaphosphate	10124-56-8	No	No	Inorganics			4.86E+01	U	1	0.001	611.17	0.9
Sodium polyphosphate	68915-31-1	No	No	Inorganics			4.86E+01	U	1	0.001	359.92	1
Sodium trimetaphosphate	7785-84-4	No	No	Inorganics			4.86E+01	U	1	0.001	305.89	1
Sodium tripolyphosphate	7758-29-4	No	No	Inorganics			4.86E+01	U	1	0.001	367.86	1
Stearyl Acetate	822-23-1	No	Yes	Organics					1	17.3	312.54	0
Stirofos (Tetrachlorovinphos)	961-11-5	No	No	Organics	2.40E-02	U	3.00E-02	U	1	0.00307	365.97	0.9
Strontium Chromate	7789-06-2	Yes	No	Inorganics	5.00E-01	U	2.00E-02	U	0.025	0.001	203.61	1

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Selenious Acid	7783-00-8	Yes			1.0055096						
Selenite	14124-67-5	Yes									
Selenium	7782-49-2	Yes			1.0055096						
Selenium Sulfide	7446-34-6	Yes			1.0055096						
Selenourea	630-10-4	No									
Sethoxydim	74051-80-2	Yes			18.099174						
Silica (crystalline, respirable)	7631-86-9	Yes									
Silicon	7440-21-3	Yes									
Silver	7440-22-4	Yes			0.0402204						
Silver Cyanide	506-64-9	Yes			0.8044077						
Simazine	122-34-9	Yes	0.1173095		1.0055096	2.66E+04	7.76E+03	6.01E+03			
Sodium	7440-23-5	Yes									
Sodium Acifluorfen	62476-59-9	Yes			2.6143251						
Sodium Azide	26628-22-8	Yes			0.8044077						
Sodium Chlorate	7775-09-9	Yes									
Sodium Cyanide	143-33-9	Yes			0.2011019						
Sodium Dichromate	10588-01-9	Yes	0.0007039		0.100551	6.39E+03	3.52E+02	3.34E+02			
Sodium Diethyldithiocarbamate	148-18-5	Yes	0.0521375		6.0330579	1.18E+04	7.10E+05	1.16E+04			
Sodium Fluoride	7681-49-4	Yes			10.055096						
Sodium Fluoroacetate	62-74-8	No									
Sodium Hydroxide	1310-73-2	Yes									
Sodium Metavanadate	13718-26-8	Yes			0.2011019						
Sodium Perchlorate	7601-89-0	Yes			0.1407713						
Sodium acid pyrophosphate	7758-16-9	Yes			9773.5537						
Sodium aluminum phosphate (acidic)	7785-88-8	Yes			9773.5537						
Sodium aluminum phosphate (anhydrous)	10279-59-1	Yes			9773.5537						
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	Yes			9773.5537						
Sodium hexametaphosphate	10124-56-8	Yes			9773.5537						
Sodium polyphosphate	68915-31-1	Yes			9773.5537						
Sodium trimetaphosphate	7785-84-4	Yes			9773.5537						
Sodium tripolyphosphate	7758-29-4	Yes			9773.5537						
Stearyl Acetate	822-23-1	No									
Stirofos (Tetrachlorovinphos)	961-11-5	Yes	0.5865473		6.0330579	1.33E+05	1.58E+04	1.41E+04			
Strontium Chromate	7789-06-2	Yes	0.0007039		0.100551	6.39E+03	3.52E+02	3.34E+02			

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Selenious Acid	7783-00-8	2.43E+05	5.03E+05	1.64E+05	1.64E+05 nc
Selenite	14124-67-5				
Selenium	7782-49-2	2.43E+05	5.03E+05	1.64E+05	1.64E+05 nc
Selenium Sulfide	7446-34-6	2.43E+05	5.03E+05	1.64E+05	1.64E+05 nc
Selenourea	630-10-4				
Sethoxydim	74051-80-2	4.38E+06	1.04E+05	1.01E+05	1.01E+05 nc
Silica (crystalline, respirable)	7631-86-9				
Silicon	7440-21-3				
Silver	7440-22-4	2.43E+05	3.35E+04	2.95E+04	2.95E+04 nc
Silver Cyanide	506-64-9	4.87E+06	4.02E+05	3.72E+05	3.72E+05 nc
Simazine	122-34-9	2.43E+05	6.65E+04	5.22E+04	6.01E+03 ca**
Sodium	7440-23-5				
Sodium Acifluorfen	62476-59-9	6.33E+05	8.92E+06	5.91E+05	5.91E+05 nc
Sodium Azide	26628-22-8	1.95E+05	4.02E+05	1.31E+05	1.31E+05 nc
Sodium Chlorate	7775-09-9				
Sodium Cyanide	143-33-9	4.87E+04	1.01E+05	3.28E+04	3.28E+04 nc
Sodium Dichromate	10588-01-9	9.73E+05	5.03E+04	4.78E+04	3.34E+02 ca
Sodium Diethyldithiocarbamate	148-18-5	1.46E+06	8.22E+07	1.43E+06	1.16E+04 ca
Sodium Fluoride	7681-49-4	2.43E+06	5.03E+06	1.64E+06	1.64E+06 nc
Sodium Fluoroacetate	62-74-8	9.73E+02		9.73E+02	9.73E+02 nc
Sodium Hydroxide	1310-73-2				
Sodium Metavanadate	13718-26-8	4.87E+04	1.01E+05	3.28E+04	3.28E+04 nc
Sodium Perchlorate	7601-89-0	3.41E+04	7.04E+04	2.30E+04	2.30E+04 nc
Sodium acid pyrophosphate	7758-16-9	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Sodium aluminum phosphate (acidic)	7785-88-8	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Sodium aluminum phosphate (anhydrous)	10279-59-1	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Sodium hexametaphosphate	10124-56-8	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Sodium polyphosphate	68915-31-1	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Sodium trimetaphosphate	7785-84-4	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Sodium tripolyphosphate	7758-29-4	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Stearyl Acetate	822-23-1				
Stirofos (Tetrachlorovinphos)	961-11-5	1.46E+06	1.63E+05	1.46E+05	1.41E+04 ca*
Strontium Chromate	7789-06-2	9.73E+05	5.03E+04	4.78E+04	3.34E+02 ca

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Strontium, Stable	7440-24-6	No	No	Inorganics			6.00E-01	U	1	0.001	87.62	1
Strychnine	57-24-9	No	No	Organics			3.00E-04	U	1	0.000399	334.42	1
Styrene	100-42-5	No	Yes	Organics			2.00E-01	U	1	0.0372	104.15	1
Styrene-Acrylonitrile (SAN) Trimer	NA	No	No	Organics			3.00E-03	U	1	0.0119	210	1
Sulfate	14808-79-8	No	No	Inorganics					1	0.001	98.07	1
Sulfide	18496-25-8	No	No	Inorganics					1	0.001	34.08	1
Sulfolane	126-33-0	No	No	Organics			1.00E-03	U	1	0.000102	120.17	1
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	No	No	Organics			8.00E-04	U	1	0.0149	287.16	0.9
Sulfur	7704-34-9	No	No	Inorganics					1	0.001	32.065	1
Sulfur Dioxide	7446-09-5	No	Yes	Inorganics					1	0.001	64.06	1
Sulfur Mustard	505-60-2	No	Yes	Organics					1	0.00448	159.07	1
Sulfur Trioxide	7446-11-9	No	Yes	Inorganics					1	0.001	80.063	1
Sulfuric Acid	7664-93-9	No	No	Inorganics					1	0.001	98.07	1
Systhane	88671-89-0	No	No	Organics			2.50E-02	U	1	0.00337	288.78	0.9
TCDD, 2,3,7,8-	1746-01-6	No	Yes	Organics	1.30E+05	U	7.00E-10	U	1	0.808	321.98	0.5
TCDF, 2,3,7,8-	51207-31-9	No	Yes	Organics	1.30E+04	U	7.00E-09	U	1	0.657	305.98	0.6
TCMTB	21564-17-0	No	No	Organics			3.00E-02	U	1	0.0112	238.34	0.9
Tebuthiuron	34014-18-1	No	No	Organics			7.00E-02	U	1	0.00127	228.31	1
Technetium	7440-26-8	No	No	Inorganics					1	0.001	97.91	1
Tellurium	13494-80-9	No	No	Inorganics					1	0.001	127.6	1
Temephos	3383-96-8	No	No	Organics			2.00E-02	U	1	0.0345	466.46	0.7
Terbacil	5902-51-2	No	No	Organics			1.30E-02	U	1	0.00172	216.67	1
Terbufos	13071-79-9	No	Yes	Organics			2.50E-05	U	1	0.0358	288.42	0.9
Terbutryn	886-50-0	No	No	Organics			1.00E-03	U	1	0.0212	241.36	0.9
Tetrabutyl Lead	1920-90-7	No	Yes	Organics					1	4.04	435.67	0
Tetrachloroaniline, 2,3,5,6-	3481-20-7	No	No	Organics					1	0.0421	230.91	0.9
Tetrachlorobenzene, 1,2,3,4-	634-66-2	No	Yes	Organics					1	0.11	215.89	1
Tetrachlorobenzene, 1,2,4,5-	95-94-3	No	Yes	Organics			3.00E-04	U	1	0.117	215.89	1
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	No	No	Organics	1.30E+01	U	7.00E-06	U	1	0.917	291.99	0.6
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	No	Yes	Organics	3.90E+01	U	2.33E-06	U	1	0.584	291.99	0.7
Tetrachloroethane, 1,1,1,2-	630-20-6	No	Yes	Organics	2.60E-02	U	3.00E-02	U	1	0.0159	167.85	1
Tetrachloroethane, 1,1,2,2-	79-34-5	No	Yes	Organics	2.00E-01	U	2.00E-02	U	1	0.00694	167.85	1
Tetrachloroethylene	127-18-4	No	Yes	Organics	2.10E-03	U	6.00E-03	U	1	0.0334	165.83	1
Tetrachlorophenol, 2,3,4,5-	4901-51-3	No	No	Organics					1	0.0491	231.89	0.9

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Strontium, Stable	7440-24-6	Yes			120.66116						
Strychnine	57-24-9	Yes			0.0603306						
Styrene	100-42-5	Yes			40.220386						
Styrene-Acrylonitrile (SAN) Trimer	NA	Yes			0.6033058						
Sulfate	14808-79-8	Yes									
Sulfide	18496-25-8	Yes									
Sulfolane	126-33-0	Yes			0.2011019						
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	Yes			0.1608815						
Sulfur	7704-34-9	Yes									
Sulfur Dioxide	7446-09-5	Yes									
Sulfur Mustard	505-60-2	Yes									
Sulfur Trioxide	7446-11-9	Yes									
Sulfuric Acid	7664-93-9	Yes									
Systhane	88671-89-0	Yes			5.0275482						
TCDD, 2,3,7,8-	1746-01-6	No				2.46E-02		2.46E-02			
TCDF, 2,3,7,8-	51207-31-9	No				2.46E-01		2.46E-01			
TCMTB	21564-17-0	Yes			6.0330579						
Tebuthiuron	34014-18-1	Yes			14.077135						
Technetium	7440-26-8	Yes									
Tellurium	13494-80-9	Yes									
Temephos	3383-96-8	No									
Terbacil	5902-51-2	Yes			2.6143251						
Terbufos	13071-79-9	Yes			0.0050275						
Terbutryn	886-50-0	Yes			0.2011019						
Tetrabutyl Lead	1920-90-7	No									
Tetrachloroaniline, 2,3,5,6-	3481-20-7	Yes									
Tetrachlorobenzene, 1,2,3,4-	634-66-2	Yes									
Tetrachlorobenzene, 1,2,4,5-	95-94-3	Yes			0.0603306						
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	No				2.46E+02		2.46E+02			
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	No				8.19E+01		8.19E+01			
Tetrachloroethane, 1,1,1,2-	630-20-6	Yes	0.5414283		6.0330579	1.23E+05	9.10E+03	8.48E+03			
Tetrachloroethane, 1,1,2,2-	79-34-5	Yes	0.0703857		4.0220386	1.60E+04	2.71E+03	2.32E+03			
Tetrachloroethylene	127-18-4	Yes	6.7033976		1.2066116	1.52E+06	5.44E+04	5.25E+04			
Tetrachlorophenol, 2,3,4,5-	4901-51-3	Yes									

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Strontium, Stable	7440-24-6	2.92E+07	6.03E+07	1.97E+07	1.97E+07 nc
Strychnine	57-24-9	1.46E+04	1.38E+04	7.10E+03	7.10E+03 nc
Styrene	100-42-5	9.73E+06	4.05E+05	3.89E+05	3.89E+05 nc
Styrene-Acrylonitrile (SAN) Trimer	NA	1.46E+05	1.03E+04	9.65E+03	9.65E+03 nc
Sulfate	14808-79-8				
Sulfide	18496-25-8				
Sulfolane	126-33-0	4.87E+04	6.59E+05	4.53E+04	4.53E+04 nc
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	3.89E+04	1.49E+03	1.43E+03	1.43E+03 nc
Sulfur	7704-34-9				
Sulfur Dioxide	7446-09-5				
Sulfur Mustard	505-60-2				
Sulfur Trioxide	7446-11-9				
Sulfuric Acid	7664-93-9				
Systhane	88671-89-0	1.22E+06	2.03E+05	1.74E+05	1.74E+05 nc
TCDD, 2,3,7,8-	1746-01-6	3.41E-02		3.41E-02	2.46E-02 ca**
TCDF, 2,3,7,8-	51207-31-9	3.41E-01		3.41E-01	2.46E-01 ca**
TCMTB	21564-17-0	1.46E+06	1.02E+05	9.50E+04	9.50E+04 nc
Tebuthiuron	34014-18-1	3.41E+06	2.01E+06	1.26E+06	1.26E+06 nc
Technetium	7440-26-8				
Tellurium	13494-80-9				
Temephos	3383-96-8	9.73E+05		9.73E+05	9.73E+05 nc
Terbacil	5902-51-2	6.33E+05	2.97E+05	2.02E+05	2.02E+05 nc
Terbufos	13071-79-9	1.22E+03	1.92E+01	1.89E+01	1.89E+01 nc
Terbutryn	886-50-0	4.87E+04	1.75E+03	1.69E+03	1.69E+03 nc
Tetrabutyl Lead	1920-90-7				
Tetrachloroaniline, 2,3,5,6-	3481-20-7				
Tetrachlorobenzene, 1,2,3,4-	634-66-2				
Tetrachlorobenzene, 1,2,4,5-	95-94-3	1.46E+04	1.01E+02	1.00E+02	1.00E+02 nc
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	3.41E+02		3.41E+02	2.46E+02 ca**
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.13E+02		1.13E+02	8.19E+01 ca**
Tetrachloroethane, 1,1,1,2-	630-20-6	1.46E+06	1.01E+05	9.48E+04	8.48E+03 ca*
Tetrachloroethane, 1,1,2,2-	79-34-5	9.73E+05	1.55E+05	1.34E+05	2.32E+03 ca*
Tetrachloroethylene	127-18-4	2.92E+05	9.78E+03	9.47E+03	9.47E+03 nc
Tetrachlorophenol, 2,3,4,5-	4901-51-3				

Site-specific
Recreator Screening Levels (RSL) for Surface Water
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ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Tetrachlorophenol, 2,3,4,6-	58-90-2	No	No	Organics			3.00E-02	U	1	0.071	231.89	0.9
Tetrachlorophenols (total)	25167-83-3	No	No	Organics					1	0.071	231.89	0.9
Tetrachloroterephthalate, 2,3,5,6-	2136-79-0	No	No	Organics					1	0.000808	303.91	1
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	No	Yes	Organics	2.00E+01	U			1	0.0836	229.92	0.9
Tetraethyl Dithiopyrophosphate	3689-24-5	No	No	Organics			5.00E-04	U	1	0.0109	322.31	0.9
Tetraethyl Lead	78-00-2	No	Yes	Organics			1.00E-07	U	1	0.0137	323.45	0.9
Tetrafluoroethane, 1,1,1,2-	811-97-2	No	Yes	Organics					1	0.00548	102.03	1
Tetrahydrofuran	109-99-9	No	Yes	Organics			9.00E-01	U	1	0.00125	72.11	1
Tetrahydrothiophene	110-01-0	No	Yes	Organics					1	0.00775	88.17	1
Tetramethyl Lead	75-74-1	No	Yes	Organics					1	0.00466	267.34	1
Tetramethylcyclohexane	30501-43-0	No	Yes	Organics					1		140.2658	
Tetrapotassium phosphate	7320-34-5	No	No	Inorganics			4.86E+01	U	1	0.001	330.34	1
Tetrapropyl Lead	3440-75-3	No	Yes	Organics					1	0.412	379.56	0.4
Tetrasodium pyrophosphate	7722-88-5	No	No	Inorganics			4.86E+01	U	1	0.001	265.9	1
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	No	No	Organics			2.00E-03	U	1	0.000474	287.15	1
Thallic Oxide	1314-32-5	No	No	Inorganics					1	0.001	456.765	0.9
Thallium (I) Nitrate	10102-45-1	No	No	Inorganics			7.00E-06	U	1	0.001	266.39	1
Thallium (Soluble Salts)	7440-28-0	No	No	Inorganics			1.00E-05	U	1	0.001	204.38	1
Thallium Acetate	563-68-8	No	No	Organics			6.00E-06	U	1		263.427	1
Thallium Carbonate	6533-73-9	No	No	Organics			2.00E-05	U	1	0.001	468.78	0.9
Thallium Chloride	7791-12-0	No	No	Inorganics			6.00E-06	U	1	0.001	239.84	1
Thallium Selenite	12039-52-0	No	No	Inorganics					1	0.001	283.34	1
Thallium Sulfate	7446-18-6	No	No	Inorganics			2.00E-05	U	1	0.001	504.82	0.9
Thiobencarb	28249-77-6	No	No	Organics			1.00E-02	U	1	0.0102	257.78	0.9
Thiocyanates	NA	No	No	Inorganics			2.00E-04	U	1	0.001		
Thiocyanic Acid	463-56-9	No	Yes	Inorganics			2.00E-04	U	1	0.001	59.09	1
Thiodiglycol	111-48-8	No	No	Organics			7.00E-02	U	1	0.000123	122.18	1
Thiofanox	39196-18-4	No	No	Organics			3.00E-04	U	1	0.00627	218.32	1
Thiophanate, Methyl	23564-05-8	No	No	Organics			8.00E-02	U	1	0.00016	342.39	1
Thiophene	110-02-1	No	Yes	Organics					1	0.00843	84.14	1
Thiram	137-26-8	No	No	Organics			5.00E-03	U	1	0.00099	240.42	1
Thorium	NA	No	No	Inorganics					1	0.001	232.038	1
Thymol	89-83-8	No	No	Organics					1	0.0373	150.22	1
Tin	7440-31-5	No	No	Inorganics			6.00E-01	U	1	0.001	118.71	1

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Tetrachlorophenol, 2,3,4,6-	58-90-2	Yes			6.0330579						
Tetrachlorophenols (total)	25167-83-3	Yes									
Tetrachloroterephthalate, 2,3,5,6-	2136-79-0	Yes									
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	Yes	0.0007039			1.60E+02	1.68E+00	1.66E+00			
Tetraethyl Dithiopyrophosphate	3689-24-5	Yes			0.100551						
Tetraethyl Lead	78-00-2	Yes			0.0000201						
Tetrafluoroethane, 1,1,1,2-	811-97-2	Yes									
Tetrahydrofuran	109-99-9	Yes			180.99174						
Tetrahydrothiophene	110-01-0	Yes									
Tetramethyl Lead	75-74-1	Yes									
Tetramethylcyclohexane	30501-43-0	No									
Tetrapotassium phosphate	7320-34-5	Yes			9773.5537						
Tetrapropyl Lead	3440-75-3	No									
Tetrasodium pyrophosphate	7722-88-5	Yes			9773.5537						
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	Yes			0.4022039						
Thallic Oxide	1314-32-5	Yes									
Thallium (I) Nitrate	10102-45-1	Yes			0.0014077						
Thallium (Soluble Salts)	7440-28-0	Yes			0.002011						
Thallium Acetate	563-68-8	Yes			0.0012066						
Thallium Carbonate	6533-73-9	Yes			0.004022						
Thallium Chloride	7791-12-0	Yes			0.0012066						
Thallium Selenite	12039-52-0	Yes									
Thallium Sulfate	7446-18-6	Yes			0.004022						
Thiobencarb	28249-77-6	Yes			2.0110193						
Thiocyanates	NA	Yes			0.0402204						
Thiocyanic Acid	463-56-9	Yes			0.0402204						
Thiodiglycol	111-48-8	Yes			14.077135						
Thiofanox	39196-18-4	Yes			0.0603306						
Thiophanate, Methyl	23564-05-8	Yes			16.088154						
Thiophene	110-02-1	Yes									
Thiram	137-26-8	Yes			1.0055096						
Thorium	NA	Yes									
Thymol	89-83-8	Yes									
Tin	7440-31-5	Yes			120.66116						

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Tetrachlorophenol, 2,3,4,6-	58-90-2	1.46E+06	1.67E+04	1.65E+04	1.65E+04 nc
Tetrachlorophenols (total)	25167-83-3				
Tetrachloroterephthalate, 2,3,5,6-	2136-79-0				
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1				1.66E+00 ca
Tetraethyl Dithiopyrophosphate	3689-24-5	2.43E+04	1.01E+03	9.72E+02	9.72E+02 nc
Tetraethyl Lead	78-00-2	4.87E+00	1.60E-01	1.55E-01	1.55E-01 nc
Tetrafluoroethane, 1,1,1,2-	811-97-2				
Tetrahydrofuran	109-99-9	4.38E+07	5.73E+07	2.48E+07	2.48E+07 nc
Tetrahydrothiophene	110-01-0				
Tetramethyl Lead	75-74-1				
Tetramethylcyclohexane	30501-43-0				
Tetrapotassium phosphate	7320-34-5	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Tetrapropyl Lead	3440-75-3				
Tetrasodium pyrophosphate	7722-88-5	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	9.73E+04	1.05E+05	5.05E+04	5.05E+04 nc
Thallic Oxide	1314-32-5				
Thallium (I) Nitrate	10102-45-1	3.41E+02	7.04E+02	2.30E+02	2.30E+02 nc
Thallium (Soluble Salts)	7440-28-0	4.87E+02	1.01E+03	3.28E+02	3.28E+02 nc
Thallium Acetate	563-68-8	2.92E+02		2.92E+02	2.92E+02 nc
Thallium Carbonate	6533-73-9	9.73E+02	1.72E+02	1.46E+02	1.46E+02 nc
Thallium Chloride	7791-12-0	2.92E+02	6.03E+02	1.97E+02	1.97E+02 nc
Thallium Selenite	12039-52-0				
Thallium Sulfate	7446-18-6	9.73E+02	2.01E+03	6.56E+02	6.56E+02 nc
Thiobencarb	28249-77-6	4.87E+05	3.28E+04	3.07E+04	3.07E+04 nc
Thiocyanates	NA	9.73E+03	2.01E+04	6.56E+03	6.56E+03 nc
Thiocyanic Acid	463-56-9	9.73E+03	2.01E+04	6.56E+03	6.56E+03 nc
Thiodiglycol	111-48-8	3.41E+06	3.79E+07	3.13E+06	3.13E+06 nc
Thiofanox	39196-18-4	1.46E+04	1.86E+03	1.65E+03	1.65E+03 nc
Thiophanate, Methyl	23564-05-8	3.89E+06	8.72E+06	2.69E+06	2.69E+06 nc
Thiophene	110-02-1				
Thiram	137-26-8	2.43E+05	1.70E+05	1.00E+05	1.00E+05 nc
Thorium	NA				
Thymol	89-83-8				
Tin	7440-31-5	2.92E+07	6.03E+07	1.97E+07	1.97E+07 nc

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Titanium	7440-32-6	No	No	Inorganics					1	0.001	47.87	1
Titanium Tetrachloride	7550-45-0	No	Yes	Inorganics					1	0.001	189.679	1
Toluene	108-88-3	No	Yes	Organics			8.00E-02	U	1	0.0311	92.14	1
Toluene-2,5-diamine	95-70-5	No	No	Organics	1.80E-01	U	2.00E-04	U	1	0.00041	122.17	1
Toluenediamine, 2,3-	2687-25-4	No	No	Organics					1	0.000952	122.17	1
Toluenediamine, 3,4-	496-72-0	No	No	Organics					1	0.000887	122.17	1
Toluidine, p-	106-49-0	No	No	Organics	3.00E-02	U	4.00E-03	U	1	0.00329	107.16	1
Total Petroleum Hydrocarbons (Aliphatic High)	NA	No	Yes	Organics			3.00E+00	U	1	1.96	170.34	1
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	No	Yes	Organics					1	0.201	86.18	1
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	No	Yes	Organics			1.00E-02	U	1	1.7	128.26	1
Total Petroleum Hydrocarbons (Aromatic High)	NA	No	No	Organics			4.00E-02	U	1	0.308	202.26	1
Total Petroleum Hydrocarbons (Aromatic Low)	NA	No	Yes	Organics			4.00E-03	U	1	0.0149	78.11	1
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	No	Yes	Organics			4.00E-03	U	1	0.0692	135.19	1
Toxaphene	8001-35-2	No	No	Organics	1.10E+00	U			1	0.0518	413.82	0.8
Tralomethrin	66841-25-6	No	No	Organics			7.50E-03	U	1	0.0305	665.02	0.5
Tri-n-butyltin	688-73-3	No	Yes	Organics			3.00E-04	U	1	0.0193	291.07	0.9
Triacetin	102-76-1	No	No	Organics			8.00E+01	U	1	0.000137	218.21	1
Triallate	2303-17-5	No	Yes	Organics			1.30E-02	U	1	0.0349	304.66	0.9
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	No	No	Inorganics			4.86E+01	U	1	0.001	887.89584	0.8
Triasulfuron	82097-50-5	No	No	Organics			1.00E-02	U	1	0.0000469	401.83	1
Triaziquone	68-76-8	No	No	Organics					1	0.0000101	231.26	1
Tribromobenzene, 1,2,4-	615-54-3	No	Yes	Organics			5.00E-03	U	1	0.0337	314.8	0.9
Tribromochloromethane	594-15-0	No	Yes	Organics					1	0.00243	287.18	1
Tribromodiphenyl Ether	49690-94-0	No	Yes	Organics					1	0.0659	406.9	0.7
Tribromophenol, 2,4,6-	118-79-6	No	No	Organics					1	0.0121	330.8	0.9
Tributyl Phosphate	126-73-8	No	No	Organics	9.00E-03	U	1.00E-02	U	1	0.0228	266.32	0.9
Tributyltin	56573-85-4	No	Yes	Organics					1	0.034	325.51	0.8
Tributyltin Compounds	NA	No	No	Organics			3.00E-04	U	1			
Tributyltin Oxide	56-35-9	No	No	Organics			3.00E-04	U	1	0.000252	596.12	1
Tributyltin chloride	1461-22-9	No	Yes	Organics					1	0.034	325.51	0.8
Tributyltin fluoride	1983-10-4	No	Yes	Organics					1	0.0238	309.06	0.9

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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Titanium	7440-32-6	Yes									
Titanium Tetrachloride	7550-45-0	Yes									
Toluene	108-88-3	Yes			16.088154						
Toluene-2,5-diamine	95-70-5	Yes	0.0782063		0.0402204	1.77E+04	6.33E+04	1.39E+04			
Toluenediamine, 2,3-	2687-25-4	Yes									
Toluenediamine, 3,4-	496-72-0	Yes									
Toluidine, p-	106-49-0	Yes	0.4692378		0.8044077	1.06E+05	5.05E+04	3.43E+04			
Total Petroleum Hydrocarbons (Aliphatic High)	NA	No									
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	Yes									
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	No									
Total Petroleum Hydrocarbons (Aromatic High)	NA	No									
Total Petroleum Hydrocarbons (Aromatic Low)	NA	Yes			0.8044077						
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	Yes			0.8044077						
Toxaphene	8001-35-2	Yes	0.0127974			2.90E+03	1.69E+01	1.68E+01			
Tralomethrin	66841-25-6	No									
Tri-n-butyltin	688-73-3	Yes			0.0603306						
Triacetin	102-76-1	Yes			16088.154						
Triallate	2303-17-5	Yes			2.6143251						
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	Yes			9773.5537						
Triasulfuron	82097-50-5	Yes			2.0110193						
Triaziquone	68-76-8	Yes									
Tribromobenzene, 1,2,4-	615-54-3	Yes			1.0055096						
Tribromochloromethane	594-15-0	Yes									
Tribromodiphenyl Ether	49690-94-0	Yes									
Tribromophenol, 2,4,6-	118-79-6	Yes									
Tributyl Phosphate	126-73-8	Yes	1.5641261		2.0110193	3.55E+05	1.08E+04	1.05E+04			
Tributyltin	56573-85-4	Yes									
Tributyltin Compounds	NA	No									
Tributyltin Oxide	56-35-9	Yes			0.0603306						
Tributyltin chloride	1461-22-9	Yes									
Tributyltin fluoride	1983-10-4	Yes									

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Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Titanium	7440-32-6				
Titanium Tetrachloride	7550-45-0				
Toluene	108-88-3	3.89E+06	2.02E+05	1.92E+05	1.92E+05 nc
Toluene-2,5-diamine	95-70-5	9.73E+03	3.25E+04	7.49E+03	7.49E+03 nc
Toluenediamine, 2,3-	2687-25-4				
Toluenediamine, 3,4-	496-72-0				
Toluidine, p-	106-49-0	1.95E+05	8.66E+04	5.99E+04	3.43E+04 ca**
Total Petroleum Hydrocarbons (Aliphatic High)	NA	1.46E+08		1.46E+08	1.46E+08 nc
Total Petroleum Hydrocarbons (Aliphatic Low)	NA				
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	4.87E+05		4.87E+05	4.87E+05 nc
Total Petroleum Hydrocarbons (Aromatic High)	NA	1.95E+06		1.95E+06	1.95E+06 nc
Total Petroleum Hydrocarbons (Aromatic Low)	NA	1.95E+05	2.15E+04	1.94E+04	1.94E+04 nc
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	1.95E+05	3.77E+03	3.70E+03	3.70E+03 nc
Toxaphene	8001-35-2				1.68E+01 ca
Tralomethrin	66841-25-6	3.65E+05		3.65E+05	3.65E+05 nc
Tri-n-butyltin	688-73-3	1.46E+04	4.20E+02	4.08E+02	4.08E+02 nc
Triacetin	102-76-1	3.89E+09	2.27E+10	3.32E+09	3.32E+09 nc
Triallate	2303-17-5	6.33E+05	9.21E+03	9.08E+03	9.08E+03 nc
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Triasulfuron	82097-50-5	4.87E+05	2.54E+06	4.08E+05	4.08E+05 nc
Triaziquone	68-76-8				
Tribromobenzene, 1,2,4-	615-54-3	2.43E+05	3.44E+03	3.39E+03	3.39E+03 nc
Tribromochloromethane	594-15-0				
Tribromodiphenyl Ether	49690-94-0				
Tribromophenol, 2,4,6-	118-79-6				
Tributyl Phosphate	126-73-8	4.87E+05	1.39E+04	1.35E+04	1.05E+04 ca**
Tributyltin	56573-85-4				
Tributyltin Compounds	NA	1.46E+04		1.46E+04	1.46E+04 nc
Tributyltin Oxide	56-35-9	1.46E+04	4.05E+03	3.17E+03	3.17E+03 nc
Tributyltin chloride	1461-22-9				
Tributyltin fluoride	1983-10-4				

Site-specific
Recreator Screening Levels (RSL) for Surface Water
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Tributyltin linoleate	24124-25-2	No	Yes	Organics					1	12.2	569.51	0
Tributyltin methacrylate	2155-70-6	No	Yes	Organics					1	0.00693	375.14	0.9
Tributyltin naphthenate	85409-17-2	No	No	Organics					1			
Tricaine Methanesulfonate	886-86-2	No	No	Organics					1	0.0029	165.19	1
Tricalcium phosphate	7758-87-4	No	No	Inorganics			4.86E+01	U	1	0.001	310.18	1
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	No	Yes	Organics			3.00E+01	U	1	0.0175	187.38	1
Trichloro-2'-hydroxydiphenylether	3380-34-5	No	No	Organics					1	0.0541	289.55	0.9
Trichloroacetic Acid	76-03-9	No	No	Organics	7.00E-02	U	2.00E-02	U	1	0.00145	163.39	1
Trichloroaniline HCl, 2,4,6-	33663-50-2	No	No	Organics	2.90E-02	U			1	0.0000276	232.93	1
Trichloroaniline, 2,4,5-	636-30-6	No	No	Organics					1	0.0243	196.46	1
Trichloroaniline, 2,4,6-	634-93-5	No	No	Organics	7.00E-03	U	3.00E-05	U	1	0.027	196.46	1
Trichlorobenzene	12002-48-1	No	Yes	Organics					1	0.0915	181.45	1
Trichlorobenzene, 1,2,3-	87-61-6	No	Yes	Organics			8.00E-04	U	1	0.0738	181.45	1
Trichlorobenzene, 1,2,4-	120-82-1	No	Yes	Organics	2.90E-02	U	1.00E-02	U	1	0.0705	181.45	1
Trichloroethane, 1,1,1-	71-55-6	No	Yes	Organics			2.00E+00	U	1	0.0126	133.41	1
Trichloroethane, 1,1,2-	79-00-5	No	Yes	Organics	5.70E-02	U	4.00E-03	U	1	0.00504	133.41	1
Trichloroethylene	79-01-6	Yes	Yes	Organics	4.60E-02	U	5.00E-04	U	1	0.0116	131.39	1
Trichlorofluoromethane	75-69-4	No	Yes	Organics			3.00E-01	U	1	0.0127	137.37	1
Trichlorophenol, 2,4,5-	95-95-4	No	No	Organics			1.00E-01	U	1	0.0362	197.45	1
Trichlorophenol, 2,4,6-	88-06-2	No	No	Organics	1.10E-02	U	1.00E-03	U	1	0.0346	197.45	1
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	No	No	Organics			1.00E-02	U	1	0.00914	255.49	0.9
Trichlorophenoxyacetic acid, 2,4,5- Amine Salts, PARENT (2,4,5-T)	NA	No	No	Organics					1			
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	No	No	Organics			8.00E-03	U	1	0.0161	269.51	0.9
Trichloropropane, 1,1,2-	598-77-6	No	Yes	Organics			5.00E-03	U	1	0.0096	147.43	1
Trichloropropane, 1,2,3-	96-18-4	Yes	Yes	Organics	3.00E+01	U	4.00E-03	U	1	0.00752	147.43	1
Trichloropropene, 1,2,3-	96-19-5	No	Yes	Organics			3.00E-03	U	1	0.0169	145.42	1
Trichlorotoluene, 2,3,6-	2077-46-5	No	Yes	Organics					1	0.118	195.48	1
Trichlorotoluene, alpha 2,6-	2014-83-7	No	Yes	Organics					1	0.0648	195.48	1
Triclorophenols (total)	NA	No	No	Organics					1			
Tricresyl Phosphate (TCP)	1330-78-5	No	No	Organics			2.00E-02	U	1	0.0334	368.37	0.8
Tridiphane	58138-08-2	No	No	Organics			3.00E-03	U	1	0.0689	320.43	0.8
Tridymite	15468-32-3	Yes	No	Inorganics					1	0.001		
Triethyl Lead	5224-23-7	No	Yes	Organics					1	0.0125	294.39	0.9

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Tributyltin linoleate	24124-25-2	No									
Tributyltin methacrylate	2155-70-6	Yes									
Tributyltin naphthenate	85409-17-2	No									
Tricaine Methanesulfonate	886-86-2	Yes									
Tricalcium phosphate	7758-87-4	Yes			9773.5537						
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	Yes			6033.0579						
Trichloro-2'-hydroxydiphenylether	3380-34-5	Yes									
Trichloroacetic Acid	76-03-9	Yes	0.2011019		4.0220386	4.56E+04	3.82E+04	2.08E+04			
Trichloroaniline HCl, 2,4,6-	33663-50-2	Yes	0.4854184			1.10E+05	3.09E+06	1.06E+05			
Trichloroaniline, 2,4,5-	636-30-6	Yes									
Trichloroaniline, 2,4,6-	634-93-5	Yes	2.0110193		0.0060331	4.56E+05	1.66E+04	1.60E+04			
Trichlorobenzene	12002-48-1	Yes									
Trichlorobenzene, 1,2,3-	87-61-6	Yes			0.1608815						
Trichlorobenzene, 1,2,4-	120-82-1	Yes	0.4854184		2.0110193	1.10E+05	1.69E+03	1.66E+03			
Trichloroethane, 1,1,1-	71-55-6	Yes			402.20386						
Trichloroethane, 1,1,2-	79-00-5	Yes	0.2469673		0.8044077	5.60E+04	1.55E+04	1.22E+04			
Trichloroethylene	79-01-6	Yes	0.3041995		0.100551	6.90E+04	8.44E+03	7.52E+03			
Trichlorofluoromethane	75-69-4	Yes			60.330579						
Trichlorophenol, 2,4,5-	95-95-4	Yes			20.110193						
Trichlorophenol, 2,4,6-	88-06-2	Yes	1.2797395		0.2011019	2.90E+05	8.17E+03	7.95E+03			
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	Yes			2.0110193						
Trichlorophenoxyacetic acid, 2,4,5- Amine Salts, PARENT (2,4,5-T)	NA	No									
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	Yes			1.6088154						
Trichloropropane, 1,1,2-	598-77-6	Yes			1.0055096						
Trichloropropane, 1,2,3-	96-18-4	Yes	0.0004692		0.8044077	1.06E+02	1.84E+01	1.57E+01			
Trichloropropene, 1,2,3-	96-19-5	Yes			0.6033058						
Trichlorotoluene, 2,3,6-	2077-46-5	Yes									
Trichlorotoluene, alpha 2,6-	2014-83-7	Yes									
Triclorophenols (total)	NA	No									
Tricresyl Phosphate (TCP)	1330-78-5	Yes			4.0220386						
Tridiphane	58138-08-2	Yes			0.6033058						
Tridymite	15468-32-3	Yes									
Triethyl Lead	5224-23-7	Yes									

Site-specific
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Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Tributyltin linoleate	24124-25-2				
Tributyltin methacrylate	2155-70-6				
Tributyltin naphthenate	85409-17-2				
Tricaine Methanesulfonate	886-86-2				
Tricalcium phosphate	7758-87-4	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	1.46E+09	8.13E+07	7.70E+07	7.70E+07 nc
Trichloro-2'-hydroxydiphenylether	3380-34-5				
Trichloroacetic Acid	76-03-9	9.73E+05	7.63E+05	4.28E+05	2.08E+04 ca*
Trichloroaniline HCl, 2,4,6-	33663-50-2				1.06E+05 ca
Trichloroaniline, 2,4,5-	636-30-6				
Trichloroaniline, 2,4,6-	634-93-5	1.46E+03	4.97E+01	4.80E+01	4.80E+01 nc
Trichlorobenzene	12002-48-1				
Trichlorobenzene, 1,2,3-	87-61-6	3.89E+04	5.34E+02	5.27E+02	5.27E+02 nc
Trichlorobenzene, 1,2,4-	120-82-1	4.87E+05	6.99E+03	6.89E+03	1.66E+03 ca**
Trichloroethane, 1,1,1-	71-55-6	9.73E+07	1.02E+07	9.22E+06	9.22E+06 nc
Trichloroethane, 1,1,2-	79-00-5	1.95E+05	5.06E+04	4.01E+04	1.22E+04 ca**
Trichloroethylene	79-01-6	2.43E+04	2.79E+03	2.50E+03	2.50E+03 nc
Trichlorofluoromethane	75-69-4	1.46E+07	1.49E+06	1.35E+06	1.35E+06 nc
Trichlorophenol, 2,4,5-	95-95-4	4.87E+06	1.23E+05	1.20E+05	1.20E+05 nc
Trichlorophenol, 2,4,6-	88-06-2	4.87E+04	1.28E+03	1.25E+03	1.25E+03 nc
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	4.87E+05	3.71E+04	3.45E+04	3.45E+04 nc
Trichlorophenoxyacetic acid, 2,4,5- Amine Salts, PARENT (2,4,5-T)	NA				
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	3.89E+05	1.54E+04	1.48E+04	1.48E+04 nc
Trichloropropane, 1,1,2-	598-77-6	2.43E+05	3.09E+04	2.75E+04	2.75E+04 nc
Trichloropropane, 1,2,3-	96-18-4	1.95E+05	3.16E+04	2.72E+04	1.57E+01 ca
Trichloropropene, 1,2,3-	96-19-5	1.46E+05	1.07E+04	9.98E+03	9.98E+03 nc
Trichlorotoluene, 2,3,6-	2077-46-5				
Trichlorotoluene, alpha 2,6-	2014-83-7				
Triclorophenols (total)	NA				
Tricresyl Phosphate (TCP)	1330-78-5	9.73E+05	1.10E+04	1.09E+04	1.09E+04 nc
Tridiphane	58138-08-2	1.46E+05	1.09E+03	1.09E+03	1.09E+03 nc
Tridymite	15468-32-3				
Triethyl Lead	5224-23-7				

Site-specific
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Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF (mg/kg-day)$^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Triethyl phosphorothioate [O,O,O-]	126-68-1	No	Yes	Organics					1	0.00684	198.22	1
Triethylamine	121-44-8	No	Yes	Organics					1	0.0039	101.19	1
Triethylene Glycol	112-27-6	No	No	Organics			2.00E+00	U	1	0.0000155	150.18	1
Trifluralin	1582-09-8	No	Yes	Organics	7.70E-03	U	7.50E-03	U	1	0.0728	335.29	0.8
Trimagnesium phosphate	7757-87-1	No	No	Inorganics			4.86E+01	U	1	0.001	262.86	1
Trimethyl Lead	7442-13-9	No	Yes	Organics					1	0.00226	252.31	1
Trimethyl Phosphate	512-56-1	No	No	Organics	2.00E-02	U	1.00E-02	U	1	0.0000948	140.08	1
Trimethyl-4-Propenylnaphthalene, 1,2,3-	26137-53-1	No	Yes	Organics					1	1.22	210.32	1
Trimethylbenzene, 1,2,3-	526-73-8	No	Yes	Organics					1	0.0897	120.2	1
Trimethylbenzene, 1,2,4-	95-63-6	No	Yes	Organics					1	0.0857	120.2	1
Trimethylbenzene, 1,3,5-	108-67-8	No	Yes	Organics			1.00E-02	U	1	0.0621	120.2	1
Trimethylethyl Lead	1762-26-1	No	Yes	Organics					1	0.0157	281.37	0.9
Trimethylpentane, 2,2,4-	540-84-1	No	Yes	Organics					1	0.186	114.23	1
Trinitrobenzene, 1,3,5-	99-35-4	No	No	Organics			3.00E-02	U	1	0.000607	213.11	1
Trinitrotoluene, 2,4,6-	118-96-7	No	No	Organics	3.00E-02	U	5.00E-04	U	1	0.000963	227.13	1
Triphenylphosphine Oxide	791-28-6	No	No	Organics			2.00E-02	U	1	0.00327	278.29	1
Triphenyltin	668-34-8	No	Yes	Organics					1	0.00356	351.04	0.9
Tripotassium phosphate	7778-53-2	No	No	Inorganics			4.86E+01	U	1	0.001	212.27	1
Tripropyl Lead	6618-03-7	No	Yes	Organics					1	0.0693	336.47	0.8
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	No	No	Organics			2.00E-02	U	1	0.00159	430.91	0.9
Tris(1-chloro-2-propyl)phosphate	13674-84-5	No	No	Organics			1.00E-02	U	1	0.0012	327.57	1
Tris(2,3-dibromopropyl)phosphate	126-72-7	No	Yes	Organics	2.30E+00	U			1	0.000135	697.62	1
Tris(2-chloroethyl)phosphate	115-96-8	No	No	Organics	2.00E-02	U	7.00E-03	U	1	0.000355	285.49	1
Tris(2-ethylhexyl)phosphate	78-42-2	No	No	Organics	3.20E-03	U	1.00E-01	U	1	11.6	434.65	0
Trisbutoxyethyl Phosphate	78-51-3	No	No	Organics					1	0.00282	398.48	0.9
Trisodium phosphate	7601-54-9	No	No	Inorganics			4.86E+01	U	1	0.001	163.94	1
Trithion	786-19-6	No	No	Organics					1	0.065	342.86	0.8
Tungsten	7440-33-7	No	No	Inorganics					1	0.001	183.84	1
Uranium (Soluble Salts)	NA	No	No	Inorganics			3.00E-03	U	1	0.001	238.03	1
Urea	57-13-6	No	No	Organics					1	0.0000286	60.06	1
Urethane	51-79-6	Yes	No	Organics	1.00E+00	U			1	0.000394	89.09	1
Vanadium Pentoxide	1314-62-1	No	No	Inorganics			9.00E-03	U	0.026	0.001	181.88	1
Vanadium Sulfate	36907-42-3	No	No	Inorganics					0.026	0.001	273.111	1
Vanadium and Compounds	7440-62-2	No	No	Inorganics			5.04E-03	U	0.026	0.001	50.94	1

Site-specific
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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
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Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Triethyl phosphorothioate [O,O,O-]	126-68-1	Yes									
Triethylamine	121-44-8	Yes									
Triethylene Glycol	112-27-6	Yes			402.20386						
Trifluralin	1582-09-8	Yes	1.8281993		1.5082645	4.15E+05	2.85E+03	2.83E+03			
Trimagnesium phosphate	7757-87-1	Yes			9773.5537						
Trimethyl Lead	7442-13-9	Yes									
Trimethyl Phosphate	512-56-1	Yes	0.7038567		2.0110193	1.60E+05	2.26E+06	1.49E+05			
Trimethyl-4-Propenylnaphthalene, 1,2,3-	26137-53-1	No									
Trimethylbenzene, 1,2,3-	526-73-8	Yes									
Trimethylbenzene, 1,2,4-	95-63-6	Yes									
Trimethylbenzene, 1,3,5-	108-67-8	Yes			2.0110193						
Trimethylethyl Lead	1762-26-1	Yes									
Trimethylpentane, 2,2,4-	540-84-1	Yes									
Trinitrobenzene, 1,3,5-	99-35-4	Yes			6.0330579						
Trinitrotoluene, 2,4,6-	118-96-7	Yes	0.4692378		0.100551	1.06E+05	8.89E+04	4.84E+04			
Triphenylphosphine Oxide	791-28-6	Yes			4.0220386						
Triphenyltin	668-34-8	Yes									
Tripotassium phosphate	7778-53-2	Yes			9773.5537						
Tripropyl Lead	6618-03-7	Yes									
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	Yes			4.0220386						
Tris(1-chloro-2-propyl)phosphate	13674-84-5	Yes			2.0110193						
Tris(2,3-dibromopropyl)phosphate	126-72-7	No				1.39E+03		1.39E+03			
Tris(2-chloroethyl)phosphate	115-96-8	Yes	0.7038567		1.4077135	1.60E+05	2.48E+05	9.72E+04			
Tris(2-ethylhexyl)phosphate	78-42-2	No				9.98E+05		9.98E+05			
Trisbutoxyethyl Phosphate	78-51-3	Yes									
Trisodium phosphate	7601-54-9	Yes			9773.5537						
Trithion	786-19-6	Yes									
Tungsten	7440-33-7	Yes									
Uranium (Soluble Salts)	NA	Yes			0.6033058						
Urea	57-13-6	No									
Urethane	51-79-6	Yes	0.0140771			3.19E+03	1.34E+04	2.58E+03			
Vanadium Pentoxide	1314-62-1	Yes			0.0470579						
Vanadium Sulfate	36907-42-3	Yes									
Vanadium and Compounds	7440-62-2	Yes			0.0263524						

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Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Triethyl phosphorothioate [O,O,O-]	126-68-1				
Triethylamine	121-44-8				
Triethylene Glycol	112-27-6	9.73E+07	7.50E+09	9.61E+07	9.61E+07 nc
Trifluralin	1582-09-8	3.65E+05	2.35E+03	2.34E+03	2.34E+03 nc
Trimagnesium phosphate	7757-87-1	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Trimethyl Lead	7442-13-9				
Trimethyl Phosphate	512-56-1	4.87E+05	6.47E+06	4.53E+05	1.49E+05 ca**
Trimethyl-4-Propenylnaphthalene, 1,2,3-	26137-53-1				
Trimethylbenzene, 1,2,3-	526-73-8				
Trimethylbenzene, 1,2,4-	95-63-6				
Trimethylbenzene, 1,3,5-	108-67-8	4.87E+05	1.15E+04	1.12E+04	1.12E+04 nc
Trimethylethyl Lead	1762-26-1				
Trimethylpentane, 2,2,4-	540-84-1				
Trinitrobenzene, 1,3,5-	99-35-4	1.46E+06	1.98E+06	8.41E+05	8.41E+05 nc
Trinitrotoluene, 2,4,6-	118-96-7	2.43E+04	1.90E+04	1.07E+04	1.07E+04 nc
Triphenylphosphine Oxide	791-28-6	9.73E+05	1.61E+05	1.38E+05	1.38E+05 nc
Triphenyltin	668-34-8				
Tripotassium phosphate	7778-53-2	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Tripropyl Lead	6618-03-7				
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	9.73E+05	1.38E+05	1.21E+05	1.21E+05 nc
Tris(1-chloro-2-propyl)phosphate	13674-84-5	4.87E+05	1.60E+05	1.20E+05	1.20E+05 nc
Tris(2,3-dibromopropyl)phosphate	126-72-7				1.39E+03 ca
Tris(2-chloroethyl)phosphate	115-96-8	3.41E+05	4.97E+05	2.02E+05	9.72E+04 ca**
Tris(2-ethylhexyl)phosphate	78-42-2	4.87E+06		4.87E+06	9.98E+05 ca**
Trisbutoxyethyl Phosphate	78-51-3				
Trisodium phosphate	7601-54-9	2.37E+09	4.89E+09	1.59E+09	1.59E+09 nc
Trithion	786-19-6				
Tungsten	7440-33-7				
Uranium (Soluble Salts)	NA	1.46E+05	3.02E+05	9.84E+04	9.84E+04 nc
Urea	57-13-6				
Urethane	51-79-6				2.58E+03 ca
Vanadium Pentoxide	1314-62-1	4.38E+05	2.35E+04	2.23E+04	2.23E+04 nc
Vanadium Sulfate	36907-42-3				
Vanadium and Compounds	7440-62-2	2.45E+05	1.32E+04	1.25E+04	1.25E+04 nc

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Mutagen?	VOC?	Chemical Type	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Chronic RfD (mg/kg-day)	Chronic RfD Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	fa
Vanadyl Sulfate	27774-13-6	No	No	Inorganics					1	0.001	164.01	1
Vernolate	1929-77-7	No	Yes	Organics			1.00E-03	U	1	0.0403	203.35	1
Vinclozolin	50471-44-8	No	No	Organics			2.50E-02	U	1	0.00446	286.12	0.9
Vinyl Acetate	108-05-4	No	Yes	Organics			1.00E+00	U	1	0.00157	86.09	1
Vinyl Bromide	593-60-2	No	Yes	Organics					1	0.00435	106.95	1
Vinyl Chloride	75-01-4	Yes	Yes	Organics	7.20E-01	U	3.00E-03	U	1	0.00838	62.5	1
Warfarin	81-81-2	No	No	Organics			3.00E-04	U	1	0.00182	308.34	1
Xylene, P-	106-42-3	No	Yes	Organics			2.00E-01	U	1	0.0493	106.17	1
Xylene, m-	108-38-3	No	Yes	Organics			2.00E-01	U	1	0.0532	106.17	1
Xylene, o-	95-47-6	No	Yes	Organics			2.00E-01	U	1	0.0471	106.17	1
Xylenes	1330-20-7	No	Yes	Organics			2.00E-01	U	1	0.05	106.17	1
Ytterbium	7440-64-4	No	No	Inorganics					1	0.001	173.04	1
Yttrium	7440-65-5	No	No	Inorganics					1	0.001	88.91	1
Zinc Cyanide	557-21-1	No	No	Inorganics			5.00E-02	U	1	0.0006	117.43	1
Zinc Phosphide	1314-84-7	No	No	Inorganics			3.00E-04	U	1	0.0006	258.175	1
Zinc and Compounds	7440-66-6	No	No	Inorganics			3.00E-01	U	1	0.0006	65.38	1
Zineb	12122-67-7	No	No	Organics			5.00E-02	U	1	0.000325	275.74	1
Zirconium	7440-67-7	No	No	Inorganics			8.00E-05	U	1	0.001	91.22	1

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	In EPD?	DAeventc	DAeventnc	DAeventna	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL (Child) HQ=1 (µg/L)	Dermal SL (Child) HQ=1 (µg/L)	Noncarcinogenic SL (Child) HQ=1 µ(g/L)
Vanadyl Sulfate	27774-13-6	Yes									
Vernolate	1929-77-7	Yes			0.2011019						
Vinclozolin	50471-44-8	Yes			5.0275482						
Vinyl Acetate	108-05-4	Yes			201.10193						
Vinyl Bromide	593-60-2	Yes									
Vinyl Chloride	75-01-4	Yes	0.0195516		0.6033058		9.59E+02	9.59E+02			
Warfarin	81-81-2	Yes			0.0603306						
Xylene, P-	106-42-3	Yes			40.220386						
Xylene, m-	108-38-3	Yes			40.220386						
Xylene, o-	95-47-6	Yes			40.220386						
Xylenes	1330-20-7	Yes			40.220386						
Ytterbium	7440-64-4	Yes									
Yttrium	7440-65-5	Yes									
Zinc Cyanide	557-21-1	Yes			10.055096						
Zinc Phosphide	1314-84-7	Yes			0.0603306						
Zinc and Compounds	7440-66-6	Yes			60.330579						
Zineb	12122-67-7	Yes			10.055096						
Zirconium	7440-67-7	Yes			0.0160882						

Site-specific
Recreator Screening Levels (RSL) for Surface Water
ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat

Chemical	CAS Number	Ingestion SL (Adult) HQ=1 (µg/L)	Dermal SL (Adult) HQ=1 (µg/L)	Noncarcinogenic SL (Adult) HQ=1 (µg/L)	Screening Level (µg/L)
Vanadyl Sulfate	27774-13-6				
Vernolate	1929-77-7	4.87E+04	1.06E+03	1.04E+03	1.04E+03 nc
Vinclozolin	50471-44-8	1.22E+06	1.56E+05	1.38E+05	1.38E+05 nc
Vinyl Acetate	108-05-4	4.87E+07	4.87E+07	2.43E+07	2.43E+07 nc
Vinyl Bromide	593-60-2				
Vinyl Chloride	75-01-4	1.46E+05	2.96E+04	2.46E+04	9.59E+02 ca*
Warfarin	81-81-2	1.46E+04	3.58E+03	2.88E+03	2.88E+03 nc
Xylene, P-	106-42-3	9.73E+06	3.07E+05	2.98E+05	2.98E+05 nc
Xylene, m-	108-38-3	9.73E+06	2.86E+05	2.77E+05	2.77E+05 nc
Xylene, o-	95-47-6	9.73E+06	3.21E+05	3.10E+05	3.10E+05 nc
Xylenes	1330-20-7	9.73E+06	3.03E+05	2.94E+05	2.94E+05 nc
Ytterbium	7440-64-4				
Yttrium	7440-65-5				
Zinc Cyanide	557-21-1	2.43E+06	8.38E+06	1.89E+06	1.89E+06 nc
Zinc Phosphide	1314-84-7	1.46E+04	5.03E+04	1.13E+04	1.13E+04 nc
Zinc and Compounds	7440-66-6	1.46E+07	5.03E+07	1.13E+07	1.13E+07 nc
Zineb	12122-67-7	2.43E+06	4.13E+06	1.53E+06	1.53E+06 nc
Zirconium	7440-67-7	3.89E+03	8.04E+03	2.62E+03	2.62E+03 nc

APPENDIX C
COST ESTIMATE

APPENDIX C
COST ESTIMATE
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

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TABLE C.1A
COST SUMMARY
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Description	Capital Cost	Annual Operations and Maintenance Cost [a/]	Periodic Cost [b/]	Non-Discounted Constant Dollar Cost [c/]	TPV at 1.9% Discount Rate [d/]
Landfill Cover, ICs	$951,000	$4,000	$90,000	$1,072,000	$1,258,000

NOTES

[a/] Highest annual operations and maintenance (O&M) costs for remedial alternatives shown. Some costs decrease after a period of operation.

[b/] Highest annual periodic costs for remedial alternatives shown. Periodic costs may be less during a specific year.

[c/] Non-discounted constant dollar cost provided to show impact of discount rate on total present value (TPV).

[d/] TPV cost estimates are considered accurate to within -30% to +50% of actual costs. Discount rate and calculation is shown below.

Other Notes/Assumptions

1. Design and construction contingencies have been added to capital and O&M costs based on USEPA (2000) and professional judgment.
   USEPA. 2000. *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study.* USEPA 540-R-00-002. July.

		Source
Discount Rate	1.90%	30-Year, Real Discount Rate from White House Office of Management and Budget, Circular A-94 Appendix C, Revised December 2013

TABLE C.1B
RESPONSE ACTIONS COST SUMMARY
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Description	Capital Cost	Annual Operations and Maintenance Cost [a/]	Periodic Cost [b/]	Non-Discounted Constant Dollar Cost [c/]	TPV at 1.9% Discount Rate [d/]
Ics (30 Year Duration)	$69,000	$4,000	$90,000	$190,000	$376,000
Landfill Cover	$882,000	$0	$0	$882,000	$882,000

NOTES

[a/] Highest annual operations and maintenance (O&M) costs for remedial alternatives shown. Some costs decrease after a period of operation.

[b/] Highest annual periodic costs for remedial alternatives shown. Periodic costs may be less during a specific year.

[c/] Non-discounted constant dollar cost provided to show impact of discount rate on total present value (TPV).

[d/] TPV cost estimates are considered accurate to within -30% to +50% of actual costs.

Other Notes/Assumptions

1. Design and construction contingencies have been added to capital and O&M costs based on USEPA (2000) and professional judgment.

		Source
Discount Rate	1.90%	30-Year, Real Discount Rate from White House Office of Management and Budget, Circular A-94 Appendix C, Revised December 2013

TABLE C.2
LAND USE CONTROLS
COST BREAKDOWN
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Item	Units		Unit Cost	Extended
Capital				
Implementation of Land Use Controls	1	Lump Sum	$ 55,000	$ 55,000
			Sub-Total	$ 55,000
Contingency (design + construction)	25%			$ 13,800
			Capital Total	**$ 68,800**
Annual Operation and Maintenance				
Land Use Controls Inspection and Reporting (30 Years)	1	each	$ 3,200	$ 3,200
Contingency	25%			$ 800
			Annual Total	**$ 4,000**
Periodic Costs				
groundwater sampling, 6 wells, with QA/QC Samples - Table C.4, Attachment 2)	10	Well	$ 781	$ 7,814
Annual Reporting (Table C.4, Attachment 3)	1	Each	$ 9,360	$ 9,360

Asssumptions:
1) A 30-year duration is assumed for costs.
2) Groundwater will be sampled for 30 years
3) Four samples can be collected each day.
4) Wells will be sampled biannually until the 30th year, and then twice that year

TABLE C.3
LAND USE CONTROLS
PRESENT VALUE
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Year	Capital Cost ($)	Annual O&M ($) (LUCs)	Periodic Costs ($)	Total Cost	Discount Factor at 1.9%	Present Value at 1.9%
Annual Cost for for Anticipated 30-Year Duration						
0	$ 68,800	$ -	$ -	$ 68,800	1.000	$ 68,800
1	$ -	$ 4,000	$ 17,174	$ 21,174	0.981	$ 20,780
2	$ -	$ 4,000		$ 4,000	0.963	$ 3,853
3	$ -	$ 4,000	$ 17,174	$ 21,174	0.945	$ 20,012
4	$ -	$ 4,000		$ 4,000	0.927	$ 3,710
5	$ -	$ 4,000	$ 17,174	$ 21,174	0.910	$ 19,273
6	$ -	$ 4,000		$ 4,000	0.893	$ 3,573
7	$ -	$ 4,000	$ 17,174	$ 21,174	0.877	$ 18,561
8	$ -	$ 4,000		$ 4,000	0.860	$ 3,441
9	$ -	$ 4,000	$ 17,174	$ 21,174	0.844	$ 17,875
10	$ -	$ 4,000		$ 4,000	0.828	$ 3,314
11	$ -	$ 4,000	$ 17,174	$ 21,174	0.813	$ 17,215
12	$ -	$ 4,000	$ -	$ 4,000	0.798	$ 3,192
13	$ -	$ 4,000	$ 17,174	$ 21,174	0.783	$ 16,579
14	$ -	$ 4,000	$ -	$ 4,000	0.768	$ 3,074
15	$ -	$ 4,000	$ 17,174	$ 21,174	0.754	$ 15,966
16	$ -	$ 4,000		$ 4,000	0.740	$ 2,960
17	$ -	$ 4,000	$ 17,174	$ 21,174	0.726	$ 15,376
18	$ -	$ 4,000	$ -	$ 4,000	0.713	$ 2,851
19	$ -	$ 4,000	$ 17,174	$ 21,174	0.699	$ 14,808
20	$ -	$ 4,000	$ -	$ 4,000	0.686	$ 2,746
21	$ -	$ 4,000	$ 17,174	$ 21,174	0.674	$ 14,261
22	$ -	$ 4,000		$ 4,000	0.661	$ 2,644
23	$ -	$ 4,000	$ 17,174	$ 21,174	0.649	$ 13,734
24	$ -	$ 4,000	$ -	$ 4,000	0.637	$ 2,547
25	$ -	$ 4,000	$ 17,174	$ 21,174	0.625	$ 13,227
26	$ -	$ 4,000	$ -	$ 4,000	0.613	$ 2,453
27	$ -	$ 4,000	$ 17,174	$ 21,174	0.602	$ 12,738
28	$ -	$ 4,000		$ 4,000	0.590	$ 2,362
29	$ -	$ 4,000	$ 17,174	$ 21,174	0.579	$ 12,268
30	$ -	$ 4,000	$ 34,348	$ 38,348	0.569	$ 21,804
TOTALS	**$ 68,800**	**$ 40,000**	**$ 85,870**	**$ 194,700**		**$ 376,000**

TABLE C.4
ATTACHMENTS FOR ICs
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Attachment 1 - Implementation of Land Use Controls					
Subtask Description, Labor	**Quantity**	**Unit**	**Unit Cost**	**Cost**	**Source**
LUC Implementation Plan (including CEA)	1	Lump Sum	$ 30,000	$ 30,000	Prof. Judgement
Delineate Area onto Master Planning Maps/GIS	1	Lump Sum	$ 25,000	$ 25,000	Prof. Judgement
			Total	**$ 55,000**	

Attachment 2 - Groundwater Monitoring, Sample Collection, and Analysis (per well)					
Equipment / Laboratory / Rentals	**Quantity**	**Unit**	**Unit Cost**	**Cost**	**Source**
Pickup Truck	0.25	Day	$ 109	$ 27	Vendor Pricing
Water Level meter	0.25	Day	$ 31	$ 8	Vendor Pricing
Groundwater Pump	0.25	Day	$ 18	$ 5	Vendor Pricing
Groundwater Quality Meter	0.25	Day	$ 60	$ 15	Vendor Pricing
Turbidity Meter	0.25	Day	$ 16	$ 4	Vendor Pricing
Laboratory Analyses (includes 10% QC Samples)					
Metals Analysis (6020)	1	Sample	$ 135	$ 135	Lab Pricing
Pump	1	Sample	$ 8	$ 8	Vendor Pricing
Water Disposal (non-hazardous)	1	Drum	$ 125	$ 125	Vendor Pricing
Tubing	15	Feet	$ 1	$ 15	Vendor Pricing
Sample Shipping	0.25	Cooler	$ 200	$ 50	Vendor Pricing
Labor					
Env. Tech 1	3	Hour	$ 55	$ 165	Estimated
Env. Tech 2	3	Hour	$ 75	$ 225	Estimated
			Total	**$ 781**	

Attachment 3 - Reporting - Annual					
Labor	**Quantity**	**Unit**	**Unit Cost**	**Cost**	**Source**
Project Manager	4	Hour	$ 130	$ 520	Estimated
Engineer/Geologist	60	Hour	$ 110	$ 6,600	Estimated
CADD/GIS	8	Hour	$ 80	$ 640	Estimated
Chemist, Senior	16	Hour	$ 100	$ 1,600	Estimated
			Total	**$ 9,360**	

TABLE C.5
LANDFILL COVER
COST BREAKDOWN
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Item		Units		Unit Cost		Extended
Capital						
Soil Cover Installation						
(see Table C.6 Attachment 1)	1	Lump Sum	$	700,000	$	700,000
Geotechnical borings						
(see Table C.6 Attachment 2)	1	Lump Sum	$	5,756	$	5,756
				Sub-Total	$	705,756
Contingency (design + construction)	25%				$	176,400
				Capital Total	**$**	**882,157**

TABLE C.6
ATTACHMENTS FOR LANDFILL COVER
SITE FTMM-18
FORT MONMOUTH, NEW JERSEY

Attachment 1 - Landfill Cover					
Item	Quantity	Units	Unit Cost	Extended	Comments
Capital					
Landfill Soil Cover Installation					
Mobilization and site preparation	1	Lump Sum	$ 1,500.00	$ 1,500	contractor bid
Clearing and grubbing	4.1	acre	$ 2,900.00	$ 11,890	contractor bid
Subgrad preparation and compaction	4.1	acre	$ 4,250.00	$ 17,425	contractor bid
Soil Cover material	4.1	acre	$ 54,511	$ 223,495	contractor bid
Placement of soil cover material	4.1	acre	$ 10,865	$ 44,547	contractor bid
Placement of vegetative layer material	4.1	acre	$ 3,802	$ 15,588	contractor bid
Seeding of soil caps	4.1	acre	$ 4,845	$ 19,865	contractor bid
Temporary erosion and sediment controls	486.2	LF	$ 7	$ 3,403	contractor bid
Permanent stormwater features	486.2	LF	$ 31	$ 15,072	contractor bid
Demobilization	1	Lump Sum	$ 1,500	$ 1,500	contractor bid
Subgrade material	8283	tons	$ 14	$ 115,960	contractor bid
Placement of Subgrade material	8283	tons	$ 6	$ 49,697	contractor bid
			Sub-Total	**$ 519,942**	
Design & Construction Oversite					
Labor					
Design & Construction Oversite Labor	2000	Hour	$ 90	$ 180,000	professional judgment
				$ 180,000	
	Subtotal: Landfill Soil Cap Installation			**$ 700,000**	

Attachment 2 - Geotechnical Borings					
	Quantity	Unit	Unit Cost	Extended	Notes
Capital					
Geotechnical Borings -					
Mobilization	1	LS	$ 611.11	$ 611	contractor bid
Hand clearing	2	/boring	$ 50.00	$ 100	contractor bid
HAS Drilling	1	/rig/day	$ 1,850.00	$ 1,850	contractor bid
Geoprobe Drilling (Soil Boring)	1	/rig/day	$ 1,850.00	$ 1,850	contractor bid
Boring Abandonment	100	per foot	$ 3.00	$ 300	contractor bid
Drums	13	/drum	$ 65.00	$ 845	contractor bid
Shelby tube	2	each	$ 100.00	$ 200	contractor bid
	Subtotal: Geotechnical borings			**$5,756**	

Assumptions:
1) Area extent of impacted material is 4.1 acres
2) Area to reseed is 4.1 acres
3) Two geotechnical borings will be advanced at the site
4) Soil cover is 2' in thickness (18" soil with 6" vegetative layer)