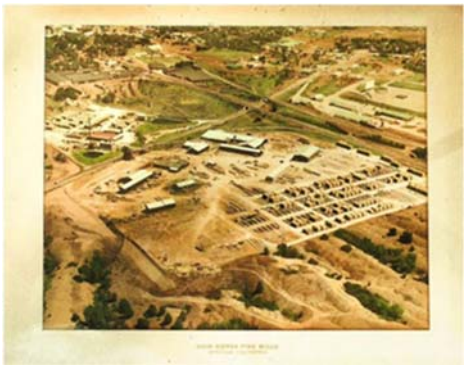
SCS ENGINEERS

Revised Field Sampling Plan

Seidenglanz Property
1245 Oro Dam Boulevard, Oroville
Butte County, California
(Assessor's Parcel No. 035-270-016)



Presented to:

CITY OF OROVILLE
1735 Montgomery Street
Oroville, California 95965
(530) 538-2433

Presented by:

SCS ENGINEERS
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Oroville, California 95965
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August 17, 2016
Project Number: 01215033.00

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APPROVAL PAGE

Approved by: _____ _____
Grant Manager, City of Oroville Date

Approved by: _____ _____
Program Manager, SCS Engineers Date

Approved by: _____ _____
Principal-in-Charge and QA/QC Officer Date
SCS Engineers

Approved by: _____ _____
Brownfields Project Manager, Date
USEPA Region IX

Approved by: _____ _____
Quality Assurance Manager, USEPA Region IX Date

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Materials
AST	Above Ground Storage Tank
ASTM	American Society for Testing and Materials
APN	Assessor Parcel Number
ARAR	Applicable or Relevant and Appropriate Requirement
BD	Blind Duplicate
bgs	below ground surface
BTEX	Benzene, toluene, ethylbenzene, and total xylenes
CAM	California Assessment Manual
CCR	California Code of Regulations
CDMG	California Department of Mines and Geology
CDPH	California Department of Public Health
CERCLA	Comprehensive Environmental Response, Cleanup, and Liability Act
CFR	Code of Federal Regulations
CHHSL	California Human Health Screening Levels
CLP	Contract Laboratory Program
COC	Chain-of-Custody
COPC	Constituents of Potential Concern
CWA	Clean Water Act
DLCs	Dioxins and Dioxin-Like Compounds
DOSH	Department of Occupational Safety and Health
DQA	Data Quality Assessment
DQI	Data Quality Indicators
DQO	Data Quality Objectives
DTSC	Department of Toxic Substances Control
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ESL	Environmental Screening Levels
FOPC	Feature of Potential Concern
FSP	Field Sampling Plan
GC/MS	Gas Chromatography/Mass Spectrometry
HASP	Health and Safety Plan
HPLC	High Performance Liquid Chromatography
HUD	Housing and Urban Development
IDW	Investigation-Derived Waste
LBP	Lead Based Paint
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
mg/cm^2	Milligrams per Square Centimeter
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per liter
MQO	Measurement Quality Objective
MRL	Method Reporting Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate

µg/L	Micrograms per Liter
µg/m^3	Micrograms per Cubic Meter
NCP	National Contingency Plan
NIST	National Institute of Standards and Technology
NVLAP	National Voluntary Laboratory Accreditation Program
OERR	Office of Emergency and Remedial Response
PAH	Polynuclear Aromatic Hydrocarbons
PARCCS	Precision, Accuracy, Representativeness, Completeness, Comparability, and Sensitivity
PCBs	Polychlorinated Biphenyls
PCP	Pentachlorophenol
PE	Performance Evaluation
PID	Photoionization Detector
PLM	Polarized Light Microscopy
PPE	Personal Protective Equipment
ppm	Parts per Million
PRG	Preliminary Remediation Goal
PRQL	Project-Required Quantitation Limit
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QC	Quality Control
QL	Quantitation Limit
QMS	Quality Management System
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RPD	Relative Percent Difference
RSL	Regional Screening Level
RWQCB	Regional Water Quality Control Board
%R	Percent Recovery
SAP	Sampling and Analysis Plan (an integrated FSP and Revised QAPP)
SCS	SCS Engineers
SOP	Standard Operating Procedures
SOW	Statement of Work
SVOCs	Semi-Volatile Organic Compounds
SWRCB	State Water Resources Control Board
TPHd	Total Petroleum Hydrocarbons as Diesel
TPHg	Total Petroleum Hydrocarbons as Gasoline
TPHmo	Total Petroleum Hydrocarbons as Motor Oil
TTLC	Total Threshold Limit Concentration
UN/DOT	United Nations/Department of Transportation
USEPA	United States Environmental Protection Agency
USGS	United States Geologic Survey
UST	Underground Storage Tank
VOA	Volatile Organic Analysis
VOCs	Volatile Organic Compounds
XRF	X-Ray Fluorescence

1.0 INTRODUCTION

The Site consists of a single parcel of land which formerly included 1255 Oro Dam Boulevard as an address, until the City consolidated the Site addresses to 1245 Oro Dam Boulevard in 2012.

Phase I Environmental Site Assessments (ESAs) were conducted at the Site in 1999 by A/C Industrial Services Corporation (A/C) (A/C, 1999), in 2012 by Brown and Caldwell (Brown and Caldwell, 2012), and in 2015 by SCS Engineers (SCS, 2015). These assessments have revealed that the Site was used extensively by several businesses over an approximately 75 year timeframe from the 1920s until 1997. Historical Site uses during this timeframe included: lumber milling and re-manufacturing, wood treatment and burning, trucking and truck servicing, vehicle and equipment fueling, materials recycling, real estate sales and investment services, prefabricated home construction, and wooden truss construction.

This Field Sampling Plan (FSP) has been prepared for approval by the Environmental Protection Agency (EPA) pursuant to the City of Oroville's EPA Site-Specific Brownfield Assessment Grant for Hazardous Substances and Petroleum Hydrocarbons, Grant No. R09-14-A-003. The purpose of the proposed Site investigation is to address the findings of the Phase I ESAs, through a series of tasks designed to provide subsurface information, upon which we can base recommendation(s) for further Site investigation and/or remediation, if necessary. This information can be used for redevelopment and cleanup planning. Although detailed redevelopment plans are unknown at this time, the Site may be redeveloped for continued commercial and/or industrial use. Pending approval by the EPA, the scope of work (SOW) described in the Work Plan and this FSP will be conducted in August and September of 2016.

1.1 SITE NAME OR SAMPLING AREA

The area to be sampled is referred to as the "Site" throughout this document.

1.2 SITE OR SAMPLING AREA LOCATION

The Site consists of Assessor's Parcel Number (APN) 035-270-016, and is comprised of 38.75 acres (1,687,950 square feet) of land positioned adjacent and to the south of Oro Dam Boulevard (Figure 1). As documented in the SCS Phase I ESA, the Site is bounded by the adjacent property uses listed in the following table.

Direction	Land Use
North	Oro Dam Boulevard, Automobile Dealership (Oro Dam Auto Center – 1250 Oro Dam Blvd), Automobile Parts (Oroville Chevrolet Parts – 1250 Oro Dam Blvd), Automobile Rental (Dollar Rent A Car– 1450 Oro Dam Blvd, Hertz Rent A Car – 1450 Oro Dam Blvd), and Automobile Servicing (Jiffy Lube– 1450 Oro Dam Blvd) (Figure 2)
East	Union Pacific Railroad corridor, vacant land
South	Vacant land, materials Storage

Direction	Land Use
West	Vacant land, commercial properties

The Site is largely paved with asphalt between five (5) Site buildings, as well as numerous sheds, outbuildings, and concrete foundations of former Site buildings that were demolished due to their poor condition (see Figure 2). Current and former buildings were constructed with concrete slab-on-grade foundations.

1.3 RESPONSIBLE AGENCY

The Responsible Agency is the City of Oroville located at 1735 Montgomery Street, Oroville, California 95965.

1.4 PROJECT ORGANIZATION

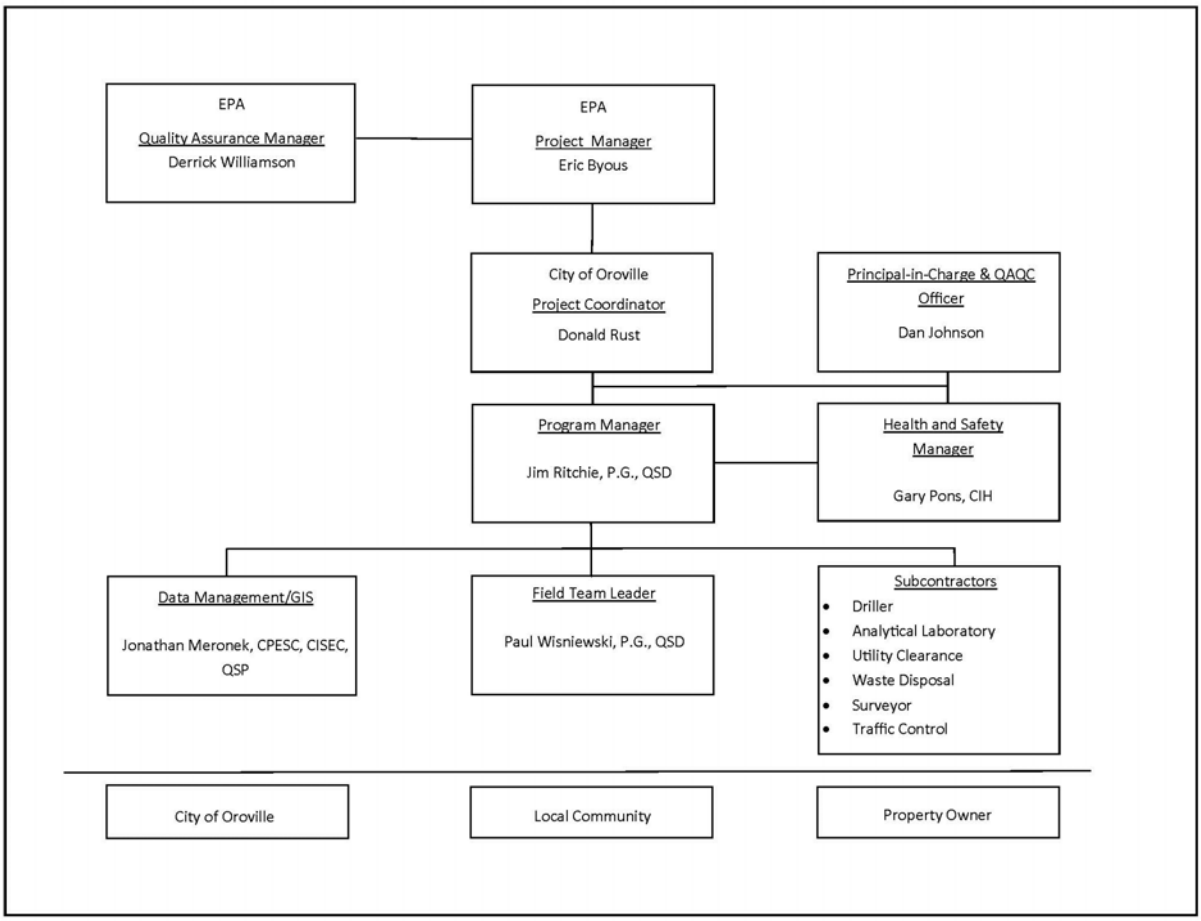
The following table summarizes contact information and responsibilities for key personnel.

Table 1-1 Key Project Personnel Contact Information and Responsibilities

Title	Name	Contact Information	Responsibilities
EPA Project Manager	Eric Byous US EPA Brownfields Coordinator	415-972-3531 byous.eric@epa.gov	Review and approve QA documents Provide technical assistance
EPA Quality Assurance Officer (QAO)	Eugenia McNaughton, PhD EPA, Region 9	415-972-3411 Mcnaughton.Eugenia@epa.gov	Coordinate preparation and review of QA documents Provide technical assistance
Grantee Project Manager	Don Rust City of Oroville	530-538-2408 rustdl@cityoforoville.org	Review and authorize implementation of the scope of work to be completed
Contractor Project Director/Program Manager	James Ritchie SCS Engineers	530-533-5898 jritchie@scsengineers.com	Prepare SAP and oversee overall project implementation
Contractor QAO	Daniel Johnson SCS Engineers	858-571-5500 djohnson@scsengineers.com	Oversee the implementation of the SAP in a QA role and peer reviewer
Contractor Field Team Leader	Paul Wisniewski SCS Engineers	530-533-5898 pwisniewski@scsengineers.com	Prepare Workplan and oversee field sampling and report preparation

Title	Name	Contact Information	Responsibilities
Laboratory QAO	Melanie Ollila Pace Analytical	612-607-6352 melanie.ollila@pacelabs.com	Oversee the implementation of the laboratory Quality Systems Manual

Project Organizational Chart



2.0 BACKGROUND

2.1 SITE OR SAMPLING AREA DESCRIPTION

The Site consists of one parcel of land (APN 035-270-016), with an address of 1245 Oro Dam Boulevard, Oroville, California 95965. The Site is comprised of 38.75 acres (1,687,950 square feet) and is currently used for commercial purposes.

APN	Address	Area	Description
035-270-016	1245 Oro Dam Boulevard	38.75	Land use described as a "commercial lot"

The Site is largely paved with asphalt between five (5) Site buildings, as well as numerous sheds, outbuildings, and concrete foundations of former Site buildings that were demolished due to their

poor condition (see Figure 2). Current and former buildings were constructed with concrete slab-on-grade foundations.

2.2 OPERATIONAL HISTORY

An approximate Site use chronology was developed by SCS, using available records such as topographic maps, aerial photographs, City Directories, building permits and information on file with the City of Oroville, and interviews with persons knowledgeable about the Site. The Site use chronology, as presented in the SCS Phase I ESA is shown below.

Year	Interpreted Site Tenants (Source)	Interpreted Site Use
2015	Used tires sales and service company; a marble and granite contractor	Automobile tire sales and installation; Marble/granite sales and installation
2014	Bettendorf Trucking; Mac's Quality Used Tires, Inc. (Site Owner) (Partner, 2014)	Trucking and truck servicing; sales and recycling of tires
2013	Bettendorf Trucking; Fair Street Recycling (EDR City Directory)	Trucking and truck servicing; materials recycling
2008-2013	Bettendorf Trucking ; Midwest USA, Inc. (EDR City Directory)	Trucking and truck servicing
2003	Better Homes Land of Gold Realty; Butte County Investment Real Estate; Harry Stroud; Midwest USA, Inc. (EDR City Directory)	Real estate sales and investment services
1997-1999	Endeavor Homes (A/C Phase I Report)	Prefabricated home construction
1997	Hampton Lumber (A/C Phase I Report)	Wholesale lumber "reload" business which stored and shipped packaged lumber units to retail outlets
1996-1997	North Valley Lumber and Truss (A/C Phase I Report)	Manufacturing pre-made trusses
1958-1995	Las Plumas Lumber Co. (EDR City Directory; EDR Certified Sanborn® Map Report; A/C Phase I Report) Note: 1968-1995 D'Georgio Corporation operated Site as Las Plumas Lumber	Lumber milling and treatment
1940-1958	High Sierra Pine Mills (A/C Phase I Report)	Lumber milling, re-manufacturing, wood treatment
1920s-1940	Swayne Lumber Company (A/C Phase I Report)	Lumber milling, re-manufacturing, wood treatment

2.3 PREVIOUS INVESTIGATIONS/REGULATORY INVOLVEMENT

Phase I ESAs were conducted at the Site in 1999, 2012 and 2015, however, there have been no subsurface investigations conducted at the Site.

The SCS 2015 Phase I concluded, *"With the possible exception(s) below, this Assessment has revealed no evidence of an REC in connection with the Site.*

- *Historical Site uses included trucking and truck servicing, lumber milling and remanufacturing, wood treatment and burning, vehicle and equipment fueling, materials recycling, real estate sales and investment services, prefabricated home construction, and wooden truss construction. Current Site uses are for tire sales and service, granite sales and installation, and for equipment and materials storage. In SCS's opinion, there is a low likelihood that a REC exists as a result of current Site use.*
- *Site reconnaissance revealed the presence of four ASTs that are reportedly empty and no longer in use, located in a former fueling area. One empty AST is also located in the approximately 7,500 square foot warehouse along with a concrete-lined vehicle and equipment service pit. There were no indications of releases or leaks from the ASTs or in the service pit area. In SCS's opinion, there is a low likelihood that a REC exists due to the presence of the ASTs and service pit.*
- *The Site was historically used extensively by several businesses for lumber milling and re-manufacturing over an approximately 75 year timeframe from the 1920s until 1997. Historical lumber and wood manufacturing Site operators included: Swayne Lumber Company, High Sierra Pine Mills, Las Plumas Lumber, and Endeavor Homes. Wood treatment potentially occurred at the Site over a maximum timeframe of approximately 30 years from the 1930s until the late 1950s, the era during which chlorophenols such as PCP were used as a wood preservative. A dip tank was reportedly used for wood treatment at the Site by these historical operations, but its use reportedly ceased in the late 1950s. The A/C Phase I Report indicated that PCP and/or creosote were used at the Site (A/C, 1999). Several lined and unlined pits and potential former pits were identified in the approximately 74,000 square foot warehouse; the potential former pits may have been dip tanks for wood treatment operations as part of a green chain. A linear pit was also located in the former planing mill, which may have been a machinery pit or a dip tank. A pit overgrown with vegetation was also located in the foundation of a demolished building, located in the northwest portion of the Site. The exact historical usage of these pits is unknown, but in SCS's opinion, due to the historical use of wood treatment chemicals (e.g., dip tanks), the pits should be further assessed. The historical presence of dip tank(s) and wood chemical treatment, potentially by PCP, at the Site would be considered an HREC that, in SCS's opinion, should be further assessed.*
- *Historical Sanborn maps reveal the presence of a "40' high steel burner" (wood waste incinerator or teepee burner) located at the north-central boundary of the Site, circa 1949through 1962 (See Appendix A). Historical aerial photographs of the Site confirm the presence of a teepee burner at the Site as a circular structure in the same approximate location as shown on Sanborn maps. Due to the often large volume of burned organics, teepee burners are known sources of dioxins and furans at historical lumber mill sites. Dioxins and furans are often concentrated in shallow soil beneath the*

teepee burner and in the downwind direction from the burner platform. The historical presence of a teepee burner at the former lumber mill at the Site is considered to be an HREC that, in SCS's opinion, should be further assessed.

- *According to the A/C Report, prior to 1985, three USTs were reportedly removed under oversight of the City of Oroville Fire Chief, but no soil samples were collected from the excavation. Based on an interview with the current Site owner, Mr. Seidenglanz, the former USTs were located to the north of the fueling area. The EDR HIST UST database lists five historical USTs on the Site at the Las Plumas Lumber facility whose sizes do not match those listed in the A/C Phase I report and therefore may represent a different set of USTs, possibly from a different era of operations at the Site. 1926 Sanborn maps also show a 1,000-gallon steel fuel oil tank, oil storage areas, and oil houses at various locations throughout the Site. The presence of historical USTs and oil storage areas constitutes a HREC that, in SCS's opinion, should be further assessed.*
  SCS therefore recommends assessing shallow soil and possibly groundwater in the immediate vicinity of the historical USTs and oil storage areas to evaluate the potential presence of COCs. The Brown and Caldwell Report also identified significant quantities of solvent in various tenant spaces. SCS therefore recommends assessing shallow soil vapor to preliminarily evaluate the potential presence of residual VOCs in the Site subsurface. The historical use of the Site (e.g., potential historical releases from USTs containing gasoline) and a review of nearby regulatory cases suggest a low to moderate likelihood of VI. This determination is based on the lack of evidence of a UST release and the distance of off-Site chemical releases that could cause VI on-Site. Based on the reported use of volatile compounds, which SCS was unable to confirm, we recommend a limited soil vapor survey.
- *According to the October 25, 2000 listing obtained by Partner, a facility formerly located at the Site generated several different types of California State and Federal RCRA wastes in 1999 (Partner, 2014). The Site is listed as a generator of wastes described as: "Contaminated Soils from Site Clean-Up," "Blank/Unknown," and "Halogenated Solvents." No records or reports were found showing that investigations were performed at the Site pertinent to the halogenated solvent spill and no history of releases were found. Due to the unknown nature of the contaminated soils and other unidentified substances, Mr. Tim Miller, former Site owner, was considered by Partner to be a potentially responsible party for the PCE contamination in CWS Well #05-01, which is located to the east of the Site. Mr. Tim Miller was ranked by Partner as 6 out of 7 PRPs for the chlorinated solvent impacts to CWS Well #05-01. In SCS's opinion, potential release(s)of halogenated solvents from the Site and lack of documentation regarding assessment or cleanup activities related to the release(s) constitutes a HREC that should be further assessed.*
- *The City provided a completed AAI Questionnaire as part of this Report with Question (6) "Obvious Indications of Contamination" checked with a "Yes" response, which was explained as follows: "There was a lack of regulatory handling and/or closure documentation for the former reported wood treatment tank, former teepee burner, former oil house, chemical cache, and former sump.*
- *There is direct evidence that the AST compound, mechanic's shop, area of former USTs, former electrical shop, former oil house, and former machine shop were associated with the use of regulated or unregulated hazardous substances with no closure reports found".*

The Phase I ESA for the Veatch Street Extension Easement, 1245 Oro Dam Boulevard, prepared by Brown and Caldwell and dated October 10, 2012 (Brown and Caldwell, 2012), contained the following conclusions and recommendations regarding the Site:

- *"Brown and Caldwell has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM Standard E 1527-05, of the site located at1245 Oroville Dam Boulevard, Oroville, California. For the purpose of the ESA, Brown and Caldwell evaluated a portion of the property currently being considered by the City of Oroville for a roadway expansion. The subject easement is located on the western portion of the property and transects the site in a north to south orientation, extending south from the intersection of Veatch Street and Oroville Dam Boulevard.*

- *A review of available Sanborn® maps revealed other historical operations outside of the site footprint included a former teepee burner (wood waste incinerator) and former oil house in the former box factory (main building). During the May 30, 2012 site reconnaissance, Brown and Caldwell observed significant quantities of solvent, other unknown chemicals, and an empty drum storage area in various leased spaces. A former sump was also observed in the green chain/planing mill. The former reported wood treatment tank, teepee burner, and oil house were not found during the site reconnaissance*

.

- *Due to a lack of regulatory handling and/or closure documentation for the former reported wood treatment tank, former teepee burner, former oil house, chemical cache, and former sump, these five findings are considered off-site recognized environmental conditions outside of the site, within the parcel.*

- *During the May 30, 2012 site reconnaissance, Brown and Caldwell observed a compound of ASTs for various fuels and mechanic's shop currently being leased by a trucking company, within the Site footprint. The ASTs are maintained by the leasee. The mechanic's shop contained various quantities of petroleum products used for semi-truck maintenance. According to background documentation and an interview with City staff, USTs were once located at the same location as the existing AST fueling compound. The USTs were reportedly removed under the oversight of City of Oroville Fire Department staff.*

- *There is direct evidence that the AST compound, mechanic's shop, area of former USTs, former electrical shop, former oil house, and former machine shop are associated with the use of regulated or unregulated hazardous substances and considered recognized environmental conditions. There are no closure reports found that indicate that these recognized environmental conditions were properly investigated for the presence or absence of soil or groundwater impacts. Brown and Caldwell advises that an additional environmental assessment is warranted for these areas."*

The Phase I ESA prepared by A/C and dated December 14, 1999 (A/C, 1999) concluded the following:

"This assessment has revealed no evidence of recognized environmental conditions in connection with the property, except for the following:

- *There is an area of the property which has been used in the past for wood treatment activities (i.e., a dip tank). It is unknown which type of preservative(s) were used in the dipping operations. It may be possible that contamination of subsurface soils has occurred from these historical operations which could present an environmental problem to current or future owners of the property. In order to meet full disclosure requirements, limited soil sampling via extraction of a core sample(s) from this area may wish to be considered. Dip tank operations ceased on this site in the late 1950's.*

- *It is unknown as to possible contamination of the soil in the area where the former UST's were located. In order to confirm or deny the presence of possible contamination, limited soil sampling via extraction of a core sample(s) from this area may wish to be considered. The tanks were legally removed to the then current standards in 1985.*

- *In the building identified as "Planing Mill No. 1' there is an area underneath the old machinery where the soil is exposed. Obvious staining of the soil by presumed lubricating oils is evident. This soil should be removed and the location remediated to acceptable clearance levels between buyer and seller.*

- *There are four locations where air compressors have been located in sheds. In these four areas, the ground has been contaminated by residues of oil. This should be cleaned of gross accumulations by scraping and subsequent pressure washing. Accumulated material should be properly disposed of.*

- *There are approximately (20) 55 gallon drums scattered around the property which are believed to contain hazardous wastes. These drums should be properly disposed of. There are also approximately (22) 5 gallon pails scattered around the property which are believed to contain hazardous wastes. These drums should be properly disposed of."*

SCS did not observe any 55-gallon drums, hazardous waste or other chemical waste containers at the Site at the time of our reconnaissance. Mr. Steven Seidenglanz indicated that hazardous wastes and chemicals generated and stored by previous Site owners and/or tenants at the Site were properly transported and disposed at approved off-Site facilities by the current Site owner after taking ownership. The historical locations of the drums were not documented and so specific potential impacts to the Site are unknown.

2.4 PROJECT SCOPING

Based upon the conclusions and recommendations in the SCS Phase I as well as the prior Phase I ESA documents, the Client agreed to proceed with a Phase II investigation at the Site and authorized SCS to prepare the SAP (combined Revised QAPP and FSP) on September 14, 2015. SCS submitted the Draft Revised QAPP, FSP, Work Plan and related documents to the EPA on March 8, 2016. The EPA subsequently provided comments on April 26, 2016.

2.5 GEOLOGICAL/HYDROGEOLOGICAL INFORMATION

The Work Plan contains a more detailed description of Site and vicinity Geology and Hydrogeology. However, the following is a summary of the Site subsurface conditions.

2.5.1 Geology and Soil Conditions

The Site is located on the northeastern edge of the Sacramento Valley, within the northern portion of the Great Valley Geomorphic Province of California. The Site gently slopes down to the northwest and ranges in elevation from approximately 164 to 190 feet above mean sea level (msl). The topography in the Site and vicinity were modified in the late 1800's early 1900s by gold mining dredge operations which removed materials from the nearby Feather River. The dredging resulted in placement of sand and gravel with cobbles and occasional boulders derived from the Feather River onto the adjacent flood plain, including the Site. As a result, the Site ground surface is approximately 20 to 30 feet higher than property located to the north, across Oro Dam Boulevard (California Department of Mines and Geology [CDMG], 1976).

The Site is underlain by fluvial deposits of the ancestral and modern Feather River flood plain about the foothills of the Sierra Nevada atop sediments composed of interbedded volcaniclastic deposits of gravel, sand, and tuff. Sediments of the Laguna Formation overlie the Mehrten Formation and are truncated by the Red Bluff formation above. Undivided Quaternary basin deposits from the Feather and ancestral Feather River systems are present in the Feather River flood plain, with thickly and thinly bedded and interbedded clay, sand, and gravel deposits of fluvial origin.

2.5.2 Hydrogeology

Data regarding depth to groundwater and flow direction for the Site are not readily available. The State Water Resources Control Board (SWRCB) GeoTracker database includes reported groundwater depths for a nearby property located at 890 Oro Dam Boulevard at 6 to 14 feet below ground surface (bgs) (E_2C Remediation, 2009), with a reported groundwater flow direction west-southwesterly, towards Feather River. This property is approximately 35 feet lower in elevation relative to the Site, which would result in depths to water beneath the Site ranging from approximately 41 to 49 feet bgs.

A shallow aquitard, consisting primarily of clay, is present in the Site vicinity at approximately 110 feet bgs. The Feather River is a groundwater discharge feature that is expected to impart a west-southwesterly flow influence on local groundwater.

2.5.3 Water Quality Survey

The Basin Plan prepared by the SWRCB and the Central Valley Regional Water Quality Control Board (CVRWQCB) describes current and future beneficial uses of groundwater beneath the Site and vicinity (CVRWQCB, 1998). The Site is located in the Upper Sacramento River Basin (5A) hydrologic area and Feather River (18020106) hydrologic unit. The Basin Plan designates

groundwater within the Site basin as having existing beneficial use for Municipal, Agricultural, Recreational, Freshwater and Wildlife Habitat.

2.6 IMPACT ON HUMAN HEALTH AND/OR THE ENVIRONMENT

Based on the available information, it is unclear whether residual concentrations of chemicals are present at the Site. The Site is currently used for commercial purposes, and the majority of the property is paved, so it is unlikely that there is an immediate risk to either human or ecological health. Site redevelopment for more productive commercial and light industrial use is desired.

Historical Site activities used hazardous constituents, which, if released to the environment, could threaten human and/or ecological health. To assess whether or not the historical Site activities present either a human health or ecological health risk, near surface and subsurface assessment should be conducted, and the results of sampling should be compared to applicable or relevant and appropriate requirements (ARARs) for the Site, which likely include commercial land use screening levels. The constituents of potential concern (COPC) associated with historical Site use, as well as the areas or features of potential concern (FOPC) are further discussed in the following text, as well as in the Work Plan for Phase II Subsurface Investigation (SCS, 2016).

3.0 PROJECT AND DATA QUALITY OBJECTIVES

3.1 PROJECT TASK AND PROBLEM DEFINITION

Historical Site operations may have resulted in the release of hazardous chemicals at the Site as identified in the Work Plan for Phase II Subsurface Investigation (SCS, 2016). In particular, the Phase I ESAs prepared for the Site identified the following FOPC associated with the Site including:

- Former Wood Treatment Areas (Dip Tanks and Green Chain Areas);
- Wood Waste Incinerator or "Teepee" Burner;
- Vehicle and Equipment Maintenance Areas;
- Above Ground and Underground Storage Tank (AST and UST) Areas;
- Electrical Transformers;
- Septic Systems;
- Miscellaneous Chemical Use and Storage Areas; and,
- Structures with Suspected Lead Based Paint (LBP) and Asbestos Containing Materials (ACM).

Although no subsurface investigations have been performed at the Site, SCS has identified the following COPC most commonly associated with the noted FOPC:

- Metals, particularly arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc. The presence of metals in the Site subsurface would most likely be associated with vehicle and equipment maintenance operations, wood treatment areas, and miscellaneous chemical use and storage areas;

- Petroleum compounds such as gasoline, diesel fuel, motor oil, fuel oil, and waste oil. The primary use or storage areas for these compounds include the former USTs, ASTs, vehicle and equipment maintenance operations, septic systems and miscellaneous chemical use and storage areas;

- Volatile organic compounds (VOCs) including chlorinated solvents, solvent stabilizers, and thinners. The presence of VOCs in the Site subsurface would most likely be associated with vehicle and equipment operations, septic systems, and miscellaneous chemical use and storage areas;

- Semi-volatile organic compounds (SVOCs), including polynuclear aromatic hydrocarbons (PAHs). The presence of SVOCs at the Site would most likely be associated with former wood treatment areas, vehicle and equipment maintenance operations, wood disposal/burning areas (Teepee Burner), and miscellaneous chemical use and storage areas;

- Creosote, pentachlorophenol (PCP), dioxins, and furans. The presence of creosote, PCP, dioxins and furans at the Site would most likely be associated with former wood treatment areas, vehicle and equipment maintenance operations, wood disposal/burning areas (Teepee Burner) and miscellaneous chemical use and storage areas;

- The presence of polychlorinated biphenyls (PCBs) at the Site would most likely be associated with electrical transformers present at the northern Site boundary.

- LBP and ACM would most likely be present on the surfaces, insulation, roofing tar, and as mastic on Site buildings.

Based upon the available information, SCS proposes a series of tasks, implemented in two primary phases, to evaluate the potential presence and extent of COPC in Site media including soil vapor, shallow and deeper soils and groundwater. Soil vapor, soil and/or shallow groundwater containing Site-related constituents of concern or COPC that pose a threat to human health or the environment must be appropriately characterized, and remediated.

Investigation is therefore proposed to characterize chemical use areas at the Site. Based upon the Investigation results, it may be necessary and advisable to then evaluate the potential risk(s) to human health and the environment, evaluate cleanup alternatives, and develop an approach toward mitigating unacceptable risks posed by residual COPC. As part of the Investigation, SCS will preliminarily evaluate risks posed by residual chemicals through comparison of analytical results with screening level, risk-based guidance criteria published by the USEPA (EPA, 2016), SFBRWQCB (SFBRWQCB, 2016), and/or the Office of Environmental Health Hazard Assessment (OEHHA, 2016), in the form of Regional Screening Levels (RSLs), Environmental Screening Levels (ESLs), and California Human Health Screening Levels (CHHSLs), respectively (see Appendix A).

In the event residual COPC are present at levels which exceed corresponding ESLs or CHHSLs for commercial/industrial Site use, SCS will then conduct further, specific evaluation of the potential risk(s) posed. Should soil vapor, soil, and/or groundwater impact(s) by residual COPC not exceed corresponding guidance criteria, SCS will recommend no further investigation or remediation occur. In either case, the recommended action will be presented to the City of Oroville, the USEPA and other involved regulatory agencies.

Based on the available data regarding historical Site activities and use, shallow soil vapor, surface and deeper soil sampling, and shallow groundwater sampling are planned for this investigation to evaluate whether surface or shallow releases of COPC have occurred. In addition, deeper soil and groundwater sampling is planned for areas of suspected use of more mobile chemicals, including the suspected/actual location(s) of ASTs, USTs, vehicle and machinery maintenance areas, and VOC and SVOC use areas.

All media sampling will be performed under the supervision of a California-licensed Professional Engineer or Professional Geologist.

3.1.1 Rationale

Table 3-1 below summarizes the sampling location, the rationale for sampling, the number of sample locations and samples to collect, and the intended analyses for each sample. The rationale is based on the identified FOPC, historical Site and/or chemical use, Site reconnaissance, and review of historical documents related to the Site. In some cases, additional information is needed to better evaluate the COPC associated with known or suspected use areas of concern, and this information will be ascertained during field visits for utility location and clearance.

Table 3-1: Site Areas or Features of Potential Concern, and Proposed Media Sampling Program

Site Location	Recommended Number of Sample Locations and Samples	Recommended Sample Depths	Sampling Media and Rationale	Recommended Analyses
Site-Wide VOC Survey	20 to 25 locations 22 to 27 Vapor Samples dependent upon initial sample results.	5 feet bgs	Soil Vapor – Direct push. Evaluate potential presence and extent of VOCs in shallow soil vapor. Use to help guide subsequent soil and groundwater investigation.	EPA Method 8260B, atmospheric gases, and leak detection compound
ASTs	2 locations Shallow and Deeper Soil and Groundwater Samples if	0.5 to 45 feet bgs	Soil – Hollow Stem Auger rig. Evaluate potential presence and vertical extent of	EPA Method 8015C with silica gel preparation and 8260B

	Warranted. Minimum of 3 soil Minimum of 1 groundwater (note, each deep boring may not have coincident grab water sample, depending upon field indicators)		TPH/VOCs. Water – Temporary Wells. Evaluate potential presence of TPH/VOCs in groundwater	
Former USTs	3 locations Shallow and Deeper Soil and Groundwater Samples if Warranted. Minimum of 6 soil Minimum of 2 groundwater (note, each deep boring may not have coincident grab water sample, depending upon field indicators)	5.0 to 45 feet bgs	Soil – Hollow Stem Auger rig. Evaluate potential presence and vertical extent of COPC. Water – Temporary Wells. Evaluate potential presence of COPC in groundwater	EPA Method 8015C with silica gel preparation and 8260B
Vehicle and Equipment Maintenance Areas	5 locations Shallow and Deeper Soil and Groundwater Samples if Warranted. Minimum of 10 soil Minimum of 2 groundwater	0.5 to 5.0 feet bgs.	Soil – Backhoe and Hollow Stem Auger rig as needed. Evaluate potential presence and vertical extent of COPC. Water – Temporary Well(s). Evaluate potential presence of COPC in groundwater.	EPA Method 8015C with silica gel preparation and 8260B, 8270, and 6010B/7400
Former Planing Mill Buildings and Lumber Storage Areas	5 locations Shallow and Deeper Soil and Groundwater Samples if Warranted. Minimum of 10 soil Minimum of 1 groundwater	0.5 to 5.0 feet bgs	Soil – Backhoe and Hollow Stem Auger rig as needed. Evaluate potential presence and vertical extent of COPC. Water – Temporary Well(s).	EPA Method 8015C with silica gel preparation and 8260B, 8270, and 6010B/7400

			Evaluate potential presence of SVOCs COPC in groundwater.	
Former "Teepee" Burner	4 locations Shallow Locations. Minimum of 4 soil	0.5 to 2.0 feet bgs	Soil - Backhoe or hand auger. Evaluate potential presence of residual dioxin and SVOCs.	EPA Methods 1613 and 8270
Former "Open" Electrical Transformers	2 locations Shallow Locations. Minimum of 2 soil	0.5 to 2.0 feet bgs	Soil - Backhoe or hand auger. Evaluate potential presence of residual PCBs and SVOCs.	EPA Methods 8082 and 8270
Former Wood Treatment and PCP Storage Areas	10 locations Shallow and Deeper Samples if Warranted. Minimum of 20 soil Minimum of 1 groundwater (note, one or more deep boring may be co-located with Oil House boring depending upon field indicators)	0.5 to 5.0 feet bgs.	Soil – Backhoe and Hollow Stem Auger rig as needed. Evaluate potential presence of residual PCBs, VOCs, and SVOCs. Water – Temporary Well(s). Evaluate potential presence and vertical extent of COPC in groundwater.	EPA Method 8015C with silica gel preparation and 8082, 8260B, 8270, and 6010B/7400
Former Electric Shop and Oil Houses	5 locations Shallow and Deeper Samples if Warranted. Minimum of 10 soil Minimum of 1 groundwater (note, one or more deep boring may be co-located with Wood Treatment boring depending upon field indicators)	0.5 to 45 feet bgs.	Soil – Backhoe and Hollow Stem Auger rig as needed. Evaluate potential presence and vertical extent of COPC. Water – Temporary Well(s). Evaluate potential presence of COPC in groundwater.	EPA Method 8015C with silica gel preparation and 8260B, 8270, and 6010B/7400
Hydraulically Up- and Downgradient Locations	2 locations Shallow and Deeper Samples if Warranted.	0.5 to 45 feet bgs	Soil – Hollow Stem Auger rig. Evaluate potential presence and vertical extent of	EPA Method 8015C with silica gel preparation and 8260B, 8270, and 6010B/7400

	Minimum of 6 soil Minimum of 2 groundwater		COPC. Water – Temporary Wells. Evaluate potential presence of COPC in groundwater.	
Structures with Suspected ACM and LBP; UW Survey	ACM: 200 LBP: 30 Universal Waste: observations only (no samples)	Surface and accessible building material sampling only	ACM: surfaces, insulation, roofing tar, mastic LBP: painted surfaces	ACM: PLM with Dispersion Staining. LBP: EPA Prep. Method 3050 and analysis by EPA Method 6010C

A minimum of 38 soil sample locations are proposed for this Investigation in the specific areas of interest mentioned above, with a minimum of 71 primary soil and 10 primary grab groundwater samples submitted for analysis (not including soil vapor and ACM/LBP samples). The work will also include analysis of approximately 27 soil vapor samples, 200 ACM samples, and 30 LBP samples. The sample program will also include collection and analysis of QA/QC samples in accordance with the protocol specified later in this FSP. IDW will also be sampled for disposal characterization purposes. The actual number of sample locations and collected samples will likely vary, based upon results from the shallow soils investigation and soil vapor survey, and the available budget for additional assessment work.

Soil vapor samples collected during this Investigation will be analyzed for the COPC identified in the above table. Each vapor sample will be chemically analyzed for:

- The complete suite of VOCs and TPHg by EPA Method 8260B using low method detection limits;
- Atmospheric gases including oxygen, carbon dioxide, and methane; and,
- The leak detection compound, 1,1-difluoroethane.

Soil samples will be analyzed as identified on the Sample Matrix Table above for one or more of the following analytes:

- CAM 17 metals by EPA Method 6010B/7400;
- VOCs including BTEX compounds by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B;
- TPHd and TPHmo by EPA Method 8015C with silica gel preparation;
- BTEX compounds and naphthalene by EPA Method 8260B;
- SVOCs, including PAHs and chlorophenols, by EPA Method 8270;
- DLCs by EPA Method 1613; and/or,
- PCBs by EPA Method 8082.

The first phase of soil sampling and analysis will be performed immediately following the soil vapor survey, and will target near surface and shallow soils, to maximum depths of five feet bgs. The results of these two tasks will be used to guide and/or modify the subsequent phase of deeper soil sampling work, and grab groundwater sample collection and analysis.

During the second phase of field work, grab groundwater samples will be collected and analyzed as identified on the Sample Matrix Table above for one or more of the following analytes:

- VOCs including BTEX compounds and naphthalene by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B; and
- TPHd and TPHmo by EPA Method 8015C with silica gel preparation.
-

Concurrent with the second phase of field work, grab building material samples will be collected and analyzed as identified Sample Matrix Table above for one or more of the following analytes:

- Lead by XRF using EPA preparation Method 3050B and EPA Method 6010C; and,
- Asbestos by PLM with Dispersion Staining.

3.2 DATA QUALITY OBJECTIVES

The purpose of the proposed sampling program is to assess the presence, or possible presence, and concentration of COPC associated with known and potential releases from historical Site use activities as noted in Section 3.1 above. The collected data will be used to facilitate Site redevelopment and cleanup planning.

Tables 3-2 through 3-4 include the lists of target soil vapor, soil and groundwater COPC to be analyzed and their respective laboratory analytical methods, laboratory reporting limits, and action levels. SCS identified and applied the following hierarchy to the appropriate matrix: ESLs, CHHSLs, California-modified RSLs (lower of cancer or non-cancer based value) then USEPA RSL (lower of cancer or non-cancer based value) will be used as screening criteria for suspected COPC for each medium. RSLs[1] may also be considered as screening criteria for potential VOCs in soil and for those COPC without a corresponding ESL or CHHSL value. Copies of ESL, CHHSL, California-modified RSL and US EPA RSL tables are included in Appendix A with a determination (in bold) spreadsheet for matrixes based on the aforementioned hierarchy and criteria.

In addition, Total Threshold Limit Concentration (TTLC) values may be used as a characterization tool in case soils must be exported from the Site for disposal. If one or more of the COPC are reported to be present at concentrations above their action levels, then recommendations for further action, including additional assessment or remediation, will be made.

[1] *Regional Screening Levels (RSLs) Summary Table*, by Environmental Protection Agency (EPA), dated May 2016

Table 3-2: Soil Vapor Matrix
Constituents of Potential Concern, Laboratory Reporting Limits, and Action Levels

Constituents of Concern	Analytical Method	Laboratory Reporting Limits (µg/m³)	Action Levels (CHHSLs/ESLs) (µg/m³)
Dichlorodifluoromethane	EPA Method 8260B	100	100[1]
Vinyl Chloride		100	44.8/160
Chloroethane		100	--/130,000,000
Trichlorofluoromethane		100	100[1]
1,1-Dichloroethene		100	--/880,000
1,1,2-Trichloro-trifluoroethane		100	100[1]
Methylene Chloride		100	--/26,000
trans-1,2-Dichloroethene		100	88,700 /260.000
1,1-Dichloroethane		100	--/7,700
cis-1,2-Dichloroethene		100	44,400/31,000
Chloroform		100	--/2,300
1,1,1-Trichloroethane		100	2,790,000/22,000,000
Carbon Tetrachloride		100	84.6/290
1,2-Dichloroethane		100	167/580
Benzene		80	122/420
Trichloroethene		100	1,770/3,000
Toluene		200	378,000/1,300,000
1,1,2-Trichloroethane		100	--/770
Tetrachloroethene		100	603/2,100
Ethylbenzene		100	--/4,900
1,1,1,2-Tetrachloroethane		100	-- /1,600
m,o,p-Xylene		200/100	879,000/440,000
1,1,2,2-Tetrachloroethane		100	--/210
Naphthalene		100	106/360
TPH as Gasoline		100	--/2,500,000
1,1-Difluoroethane (1, 1 DFA)		10,000	N/A

Notes:
[1] RL = Laboratory Reporting Limit
N/A = Not Applicable

Table 3-3: Soil Matrix
Constituents of Potential Concern, Laboratory Reporting Limits, and Action Levels

Constituents of Concern	Analytical Methods	Laboratory Reporting Limits (in mg/kg)	Action Levels (ESL[1]/ CHHSL[2]/ DTSC[3]/EPA RSL[4]/RL[5] (in mg/kg)
Antimony	EPA Method 6010B/7400	0.75	4.70E+02[1,4]
Arsenic		0.75* (MDL 0.3979205)	3.10E-01[1]
Barium		0.50	2.20E+05[1]
Beryllium		0.25	2.20E+03[1]
Cadmium		0.50	5.80E+02[1]
Chromium		0.25	*n/a*
Cobalt		0.25	3.50E+02[1,4]
Copper		0.50	4.70E+04[1,4]
Lead		0.50	3.20E+02[1,4]
Mercury		0.05	1.90E+02[1]
Molybdenum		0.25	5.80E+03[1]
Nickel		0.25	1.10E+04[1]
Selenium		0.75	5.80E+03[1,4]
Silver		0.25	5.8E+03[1,4]
Thallium		0.75	1.2E+01[1]
Vanadium		0.25	6.0E+05[1]
Zinc		1.00	3.5E+05[1]
TPH-Diesel Range Organics (C10-C28)		1	1.1E+03[1]
TPH (C10-C40)		1	*1.0+00*[5]
TPH-Motor Oil		10	1.4E+05[1]
1,2,4-Trichlorobenzene	EPA Method 8270	0.330	1.1E+02[1]
1,2-Dichlorobenzene		0.330	1.1E+04[1]
1,2-Diphenylhydrazine		0.330	2.9E+00[4]
1,3-Dichlorobenzene		0.330	3.3E-01[5]
1,4-Dichlorobenzene		0.330	1.3E+01[1]
1-Methylnaphthalene		0.330	3.3E-01[5]
2,4,5-Trichlorophenol		0.330	1.2E+05[1]
2,4,6-Trichlorophenol		0.330	4.7E+01[1]
2,4-Dichlorophenol		0.330	3.5E+03[1]
2,4-Dimethylphenol		0.330	2.3E+04[1]
2.4-Dinitrophenol		0.330	2.3E+03[1]

2,4-Dinitrotoluene		0.330	1.1E+01[1]
2.6-Dinitrotoluene		0.330	1.5E+00[4]
2-Chloronaphthalene		0.330	3.3E-01[5]
2-Chlorophenol		0.330	5.8E+03[1]
2-Methylnaphthalene		0.330	3.0E+03[1]
2-Methylphenol(o-Cresol)		0.330	3.3E-01[5]
2-Nitroaniline		0.330	8.0E+03[4]
2-Nitrophenol		0.330	3.3E-01[5]
3&4-Methylphenol		0.660	n/a6.6E-01[5]
3,3-Dichlorobenzidine		0.330	2.7E+00[1]
3-Nitroaniline		0.330	3.3E-01[5]
4,6-Dinitro-2-methylphenol		1.700	1.7E+00[5]
4-Bromophenylphenyl ether		0.330	3.3E-01[5]
4-Chloro-3-methylphenol		0.330	3.3E-01[5]
4-Chloroaniline		0.330	1.1E+01[4]
4-Chlorophenylphenyl ether		0.330	3.3E-01[5]
4-Nitroaniline		0.330	1.1E+02[4]
4-Nitrophenol		0.330	3.3E-01[5]
Acenaphthene		0.330	4.5E+04[1]
Acenaphthylene		0.330	3.3E-01[5]
Anthracene		0.330	2.3E+05[1]
Benzo(a)anthracene		0.330	2.9E+00[1]
Benzo(a)pyrene		0.330	1.30E-01[2]
Benzo(b)fluoranthene		0.330	2.9E+00[1]
Benzo(g,h,i)perylene		0.330	3.3E-01[5]
Benzo(k)fluoranthene		0.330	2.9E+01[1]
Butylbenzylphthalate		0.330	1.2E+03[4]
Carbazole		0.330	3.3E-01[5]
Chrysene		0.330	2.6E+02[1]
Di-n-butylphthalate		0.330	3.3E-01[5]
Di-n-octylphthalate		0.330	3.3E-01[5]
Dibenz(a,h)anthracene		0.330	2.9E-01[1]
Dibenzofuran		0.330	3.3E-01[5]
Diethylphthalate		0.330	6.6E+05[1]
Dimethylphthalate		0.330	3.3E-01[5]
Fluoranthene		0.330	3.0E+04[1]
Fluorene		0.330	3.0E+04[1]
Hexachloro-1,3-butadiene		0.330	5.3E+00[3]
Hexachlorobenzene		0.330	3.3E-01[5]

Hexachloroethane		0.330	3.3E-01[5]
Indeno(1,2,3-cd)pyrene		0.330	3.3E-01[5]
Isophorone		0.330	2.4E+03[4]
N-Nitroso-di-n-propylamine		0.330	3.3E-01[4]
N-Nitrosodimethylamine		0.330	3.4E-02[4]
N-Nitrosodiphenylamine		0.330	4.7E+02[4]
Naphthalene		0.330	7.9E+00[1]
Nitrobenzene		0.330	2.2E+01[4]
Pentachlorophenol		0.670	4.0E+00[1]
Phenanthrene		0.330	3.3E-01[5]
Phenol		0.330	3.5E+05[1]
Pyrene		0.330	2.3E+04[1]
bis(2-Chloroethoxy)methane		0.330	2.5E+03[4]
bis(2-Chloroethyl) ether		0.330	5.3E-01[1]
bis(2-Chloroisopropyl)ether		0.330	1.6E+01[1]
bis(2-Ethylhexyl)phthalate		0.330	1.6E+02[1]
1,1,1,2-Tetrachloroethane	EPA Method 8260B	0.25	1.8E+01[1]
1,1,1-Trichloroethane		0.25	8.9E+03[1]
1,1,2,2-Tetrachloroethane		0.25	2.3E+00[1]
1,1,2-Trichloroethane		0.25	4.2E+00[1]
1,1,2-Trichlorotrifluoroethane		0.25	2.5E-01[5]
1,1-Dichloroethane		0.25	1.7E+01[1]
1,1-Dichloroethene		0.25	4.0E+02[1]
1,1-Dichloropropene		0.25	1.2E+00[1]
1,2,3-Trichlorobenzene		0.25	3.1E+02[3]
1,2,3-Trichloropropane		0.25	2.1E-02[3]
1,2,4-Trichlorobenzene		0.25	1.1E+02[1]
1,2,4-Trimethylbenzene		0.25	2.1E+02[4]
1,2-Dibromo-3-chloropropane		0.25	7.2E-02[1]
1,2-Dibromoethane (EDB)		0.25	1.6E-01[1,4]
1,2-Dichlorobenzene		0.25	1.1E+04[1]
1,2-Dichloroethane		0.25	1.6E+00[1]
1,2-Dichloroethene (Total)		0.25	2.5E-01[5]
1,2-Dichloropropane		0.25	3.9E+00[1]
1,3,5-Trimethylbenzene		0.25	1.1E+03[3]
1,3-Dichlorobenzene		0.25	2.5E-01[5]
1,3-Dichloropropane		0.25	2.2E+03[3]

1,4-Dichlorobenzene		0.25	1.3E+01[1]
2,2-Dichloropropane		0.25	2.5E-01[5]
2-Butanone (MEK)		2.5	2.5E-01[5]
2-Chloroethylvinyl ether		1	1.0E+00[5]
2-Chlorotoluene		0.25	2.5E-01[5]
2-Hexanone		2.5	2.5E+00[5]
4-Chlorotoluene		0.25	2.5E-01[5]
4-Methyl-2-pentanone (MIBK)		2.5	1.0E+00[5]
Acetone		2.5	6.3E+05[1]
Acrolein		1	6.0E-01[4]
Acrylonitrile		2.5	3.0-01[3]
Benzene		0.25	1.0E+00[1]
Bromobenzene		0.25	1.8E+03[4]
Bromochloromethane		0.25	6.3E+02[4]
Bromodichloromethane		0.25	2.3E+00[1]
Bromoform		0.25	3.0E+02[1]
Bromomethane		1	3.6E+01[1]
Carbon tetrachloride		0.25	5.4E-01[1]
Chlorobenzene		0.25	1.2E+03[1]
Chloroethane		0.25	5.3E+04[1]
Chloroform		0.25	1.3E+00[1]
Chloromethane		0.25	4.3E+02[1]
cis-1,2-Dichloroethene		0.25	9.0E+01[1]
cis-1,3-Dichloropropene		0.25	2.5E-01[5]
Dibromochloromethane		0.25	3.9E+01[1]
Dibromomethane		0.25	2.5E-01[5]
Dichlorodifluoromethane		0.25	2.5E-01[5]
Diisopropyl ether		0.25	9.4E+03[4]
Ethanol		2.5	*2.5E+00*[5]
Ethyl-tert-butyl ether		0.25	2.5E-01[5]
Ethylbenzene		0.25	2.2E+01[1]
Gasoline Range Organics		50	*5.0E+01*[5]
Hexachloro-1,3-butadiene		0.25	5.3E+00[3]
Isopropylbenzene (Cumene)		0.25	2.5E-01[5]
m&p-Xylene		0.25	2.4E+03[4]
Methyl-tert-butyl ether		0.25	1.8E+02[1]
Methylene Chloride		0.25	2.5E+01[1]
Naphthalene		0.25	7.9E+00[1]

n-Butylbenzene		0.25	6.4E+03[4]
n-Propylbenzene		0.25	2.5E-01[5]
o-Xylene		0.25	2.8E+03[4]
p-Isopropyltoluene		0.25	2.5E-01[5]
sec-Butylbenzene		0.25	1.2E+04[4]
Styrene		0.25	4.0E+04[1]
tert-Amylmethyl ether		0.25	2.5E-01[5]
tert-Butyl Alcohol		0.25	2.5E-01[5]
tert-Butylbenzene		0.25	1.2E+05[4]
TPH as Gasoline		50	5.0E+01[5]
Tetrachloroethene		0.25	2.7E+00[1]
Tetrahydrofuran		5	5.0E+00[5]
Toluene		0.25	4.6E+03[1]
trans-1,2-Dichloroethene		0.25	2.5E-01[5]
trans-1,3-Dichloropropene		0.25	2.5E-01[5]
Trichloroethene		0.25	8.0E+00[1]
Trichlorofluoromethane		0.25	5.4E+03[3]
Vinyl acetate		1	3.8E+03[4]
Vinyl chloride		0.25	1.5E-01[1]
Xylene (Total)		0.5	2.4E+03[1]

Notes:

[1] ESL = Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), February 2016

[2] CHHSL = Soil- and Soil-Gas Screening Numbers (California Human Health Screening Levels or CHHSLs) Table 1 - Soil-Screening Numbers (mg/kg soil) for Nonvolatile Chemicals Based on Total Exposure to Contaminated Soil: Inhalation, Ingestion and Dermal Absorption; Table 3 - Soil-Gas-Screening Numbers for Volatile Chemicals below Buildings Constructed Without Engineered Fill below Sub-slab Gravel. Office of Environmental Health Hazard Assessment (OEHHA), accessed May, 2016.

[3] DTSC = California Department of Toxic Substances Control (DTSC) DTSC-Modified Screening (Lower of cancer/non-cancer endpoint values)(Levels (DTSC-SLs) for Commercial/Industrial Soils, Based on The Human and Ecological Risk Office (HERO) Human Health and Risk Assessment Levels used first (; if none listed then, then US EPA Region Screening Levels (May 2016) for Industrial Soil (Column 4).

[4] RSL = Environmental Protection Agency (EPA) Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2016, Industrial Soil Screening Levels

[5] RL = Laboratory Reporting Limit

* indicates that for those COPC for which the laboratory reporting limit exceeds the action level, SCS will request the laboratory use the MDL rather than the reporting limit in the final analytical report and "J" flag the result. Please note, even using the MDL, the arsenic results may still exceed the CHHSL.

Table 3-4: Water Matrix
Constituents of Potential Concern, Laboratory Reporting Limits and Action Levels

Constituents of Concern	Analytical Methods	Laboratory Reporting Limits (in µg/L)	Action Levels (ESL[1]/DTSC[2]/ RSL[3]/RL[4])
Antimony	EPA Method 6010B/7400	15	7.8E+00[3]
Arsenic		15	8.2E-03[2]
Barium		10	3.8E+03[3]
Beryllium		1	*1.0E+00*[4]
Cadmium		1	9.2E+00[3]
Chromium		5	*5.0E+00*[4]
Cobalt		5	6.0E+00[3]
Copper		5	8.0E+02[3]
Lead		5	1.5E+01[3]
Mercury		0.2	6.3E-01[3]
Molybdenum		5	1.0E+02[3]
Nickel		5	*5.0E+00*[4]
Selenium		15	1.0E+02[3]
Silver		5	9.4E+01[3]
Thallium		15	*1.5E+01*[4]
Vanadium		5	*5.0E+00*[4]
Zinc		10	6.0E+03[3]
TPH-Diesel Range Organics (C10-C28)	EPA Method 8015C	50	5.0E+01[4]
TPH (C10-C40)		50	5.0E+01[4]
TPH-Motor Oil		100	1.0E+02[4]
1,2,4-Trichlorobenzene	EPA Method 8270	10* (MDL=2.25E+00)	1.2E+00[3]
1,2-Dichlorobenzene		10	3.0E+02[3]
1,2-Diphenylhydrazine		10* (MDL=2.72E+00)	7.8E-02[3]
1,3-Dichlorobenzene		10	1.0E+01[4]
1,4-Dichlorobenzene		10* (MDL=2.15E+00)	4.8E-01[3]
1-Methylnaphthalene		10	1.0E+01[4]
2,4,5-Trichlorophenol		10	1.2E+05[3]
2,4,6-Trichlorophenol		10	6.3E-01[2]
2,4-Dichlorophenol		10	1.0E+01[4]
2,4-Dimethylphenol		10	3.6E+02[3]

2.4-Dinitrophenol		10	3.9E+00[3]
2,4-Dinitrotoluene		10	2.4E-01[3]
2.6-Dinitrotoluene		10	4.9E-02[3]
2-Chloronaphthalene		10	1.0E+01[4]
2-Chlorophenol		10	2.9+01[2]
2-Methylnaphthalene		10	1.0E+01[4]
2-Methylphenol(o-Cresol)		10	1.0E+01[4]
2-Nitroaniline		10	1.9E+02[3]
2-Nitrophenol		50	5.0E+01[4]
3&4-Methylphenol		10	1.0E+01[4]
3,3-Dichlorobenzidine		50	1.3E-01[3]
3-Nitroaniline		10	1.0E+01[4]
4,6-Dinitro-2-methylphenol		10	1.0E+01[4]
4-Bromophenylphenyl ether		10	1.0E+01[4]
4-Chloro-3-methylphenol		10	1.0E+01[4]
4-Chloroaniline		10	3.8E+00[4]
4-Chlorophenylphenyl ether		10	1.0E+01[4]
4-Nitroaniline		10	3.8E+00[3]
4-Nitrophenol		10	1.0E+01[4]
Acenaphthene		10	1.0E+01[4]
Acenaphthylene		10	1.0E+01[4]
Anthracene		10	1.0E+01[4]
Benzo(a)anthracene		10	1.0E+01[4]
Benzo(a)pyrene		10	1.0E+01[4]
Benzo(b)fluoranthene		10	1.0E+01[4]
Benzo(g,h,i)perylene		10	1.0E+01[4]
Benzo(k)fluoranthene		10	1.0E+01[4]
Butylbenzylphthalate		10	1.0E+01[4]
Carbazole		10	1.0E+01[4]
Chrysene		10	1.0E+01[4]
Di-n-butylphthalate		10	1.0E+01[4]
Di-n-octylphthalate		10	1.0E+01[4]
Dibenz(a,h)anthracene		10	1.0E+01[4]
Dibenzofuran		10	1.0E+01[4]
Diethylphthalate		10	1.0E+01[4]
Dimethylphthalate		10	1.0E+01[4]
Fluoranthene		10	1.0E+01[4]
Fluorene		10	1.2E+03[3]
Hexachloro-1,3-butadiene		10	1.0E+01[4]
Hexachlorobenzene		10	1.0E+01[4]
Hexachloroethane		10	1.0E+01[4]

Indeno(1,2,3-cd)pyrene		10	1.0E+01[4]
Isophorone		10	1.0E+01[4]
N-Nitroso-di-n-propylamine		10	1.1E-02[3]
N-Nitrosodimethylamine		10	1.1E-04[3]
N-Nitrosodiphenylamine		10	1.2E+01[3]
Naphthalene		10	1.0E+01[4]
Nitrobenzene		10	1.4E-01[3]
Pentachlorophenol		20	4.1E-02[3]
Phenanthrene		10	1.0E+01[4]
Phenol		10	5.8E+03[3]
Pyrene		10	1.2E+02[3]
bis(2-Chloroethoxy)methane		10	5.9E+01[3]
bis(2-Chloroethyl) ether		10	1.4E-02[3]
bis(2-Chloroisopropyl)ether		10	1.0E+01[4]
bis(2-Ethylhexyl)phthalate		10	5.6E+00[3]
1,1,1,2-Tetrachloroethane	EPA Method 8260B	0.50	5.7E-01
1,1,1-Trichloroethane		0.50	2.0E+03[2]
1,1,2,2-Tetrachloroethane		0.50	7.6E-02[3]
1,1,2-Trichloroethane		0.50	2.8E-01[3]
1,1,2-Trichlorotrifluoroethane		0.50	5.0E-01[4]
1,1-Dichloroethane		0.50	1.8E+02[1]
1,1-Dichloroethene		0.50	1.4E+03[1]
1,1-Dichloropropene		0.50	5.0E-01[4]
1,2,3-Trichlorobenzene		0.50	2.0E+03[1]
1,2,3-Trichloropropane		0.50	2.0E-04[2]
1,2,4-Trichlorobenzene		0.50	1.2E+00[3]
1,2,4-Trimethylbenzene		0.50	1.5E+01[3]
1,2-Dibromo-3-chloropropane		0.50	5.0E-01[4]
1,2-Dibromoethane (EDB)		0.50	7.4E+00[1]
1,2-Dichlorobenzene		0.50	1.0E+05[1]
1,2-Dichloroethane		0.50	5.3E+01[1]
1,2-Dichloroethene (Total)		0.50	5.0E-01[4]
1,2-Dichloropropane		0.50	5.0E-01[4]
1,3,5-Trimethylbenzene		0.50	1.2E+02[3]
1,3-Dichlorobenzene		0.50	5.0E-01[4]
1,3-Dichloropropane		0.50	3.7E+02[3]
1,4-Dichlorobenzene		0.50	4.8E-01[3]
2,2-Dichloropropane		0.50	5.0E-01[4]

2-Butanone (MEK)		5.0	5.0E+00[4]
2-Chloroethylvinyl ether		5.0	5.0E+00[4]
2-Chlorotoluene		1.0	1.0E+00[4]
2-Hexanone		5.0	3.8E+01[3]
4-Chlorotoluene		1.0	3.8E+01[3]
4-Methyl-2-pentanone (MIBK)		5.0	5.0E+00[4]
Acetone		5.0	2.90E+08[1]
Acrolein		5.0	4.2E-02[3]
Acrylonitrile		5.0	1.5E-02[2]
Benzene		0.50	9.7E+00[1]
Bromobenzene		0.50	6.2E+01[3]
Bromochloromethane		0.50	8.3E+01[3]
Bromodichloromethane		0.50	1.3E-01[3]
Bromoform		0.50	2.9E+00[2]
Bromomethane		20.0	3.0E+02[1]
Carbon tetrachloride		0.50	1.0E-01[2]
Chlorobenzene		0.50	1.2E+04[1]
Chloroethane		0.50	5.0E-01[4]
Chloroform		0.50	2.0E+01[1]
Chloromethane		0.50	3.7E+03[1]
cis-1,2-Dichloroethene		0.50	5.0E-01[4]
cis-1,3-Dichloropropene		0.50	5.0E-01[4]
Dibromochloromethane		0.50	2.0E-01[2]
Dibromomethane		0.50	5.0E-01[4]
Dichlorodifluoromethane		0.50	2.0E+02[3]
Diisopropyl ether		0.50	1.5E+03[3]
Ethanol		5.0	5.0E-01[4]
Ethyl-tert-butyl ether		0.50	5.0E-01[4]
Ethylbenzene		0.50	1.5E+00[3]
Gasoline Range Organics		50.0	5.0E+01[4]
Hexachloro-1,3-butadiene		0.50	5.0E-01[4]
Isopropylbenzene (Cumene)		0.50	5.0E-01[4]
m&p-Xylene		0.50	1.9E+02[3]
Methyl-tert-butyl ether		0.50	1.1E+04
Methylene Chloride		5.0	4.2E+02[1]
Naphthalene		0.50	1.7E+02[1]
n-Butylbenzene		0.50	5.0E-01[4]
n-Propylbenzene		0.50	6.6E+02[3]
o-Xylene		0.50	1.9E+02[3]
p-Isopropyltoluene		0.50	5.0E-01[4]
sec-Butylbenzene		0.50	5.9E+02[2]

Styrene		0.50	2.5E+05[1]
tert-Amylmethyl ether		0.50	5.0E-01[4]
tert-Butyl Alcohol		5.0	5.0E+00[4]
tert-Butylbenzene		0.50	6.9E+02[3]
TPH as Gas		50.0	5.0E+01[4]
Tetrachloroethene		0.50	2.6E+01[1]
Tetrahydrofuran		5.0	5.0E+01[4]
Toluene		0.50	3.0E+04[1]
trans-1,2-Dichloroethene		0.50	7.9E+03[1]
trans-1,3-Dichloropropene		0.50	5.0E-01[4]
Trichloroethene		0.50	4.9E+01[1]
Trichlorofluoromethane		0.50	1.7E+03[2]
Vinyl acetate		5.0	4.1E+02[3]
Vinyl chloride		0.50	5.3E-01[1]
Xylene (Total)		1.0	1.1E+04[1]

Notes:
[1] ESL = Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), February 2016
[2] DTSC = California Department of Toxic Substances Control (DTSC) Human and Ecological Risk (HERO) Human Health Risk Assessment (HHRA) Note, Number: 3. DTSC-modified Screening Levels (DTSC-SLs); Lower of cancer/non-cancer endpoint values, January 2016, Screening Levels for Tap Water.
[3] RSL = Environmental Protection Agency (EPA) Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2016, Tap Water Screening Levels
[4] RL = Laboratory Reporting Limit
* indicates that for those COPCs for which the laboratory reporting limit exceeds the action level, SCS will request the laboratory use the MDL rather than the reporting limit in the final analytical report and "J" flag the result

3.3 MEASUREMENT QUALITY OBJECTIVES

Measurement Quality Objectives or MQOs are criteria established to assess the viability and usability of data. These are based on both field and laboratory protocols that examine whether the data quality indicators (DQIs) (i.e., precision, accuracy, representativeness, completeness, comparability, and sensitivity [PARCCS]) meet criteria established for various aspects of data gathering, sampling, or analysis activity. In defining the MQOs, the level of uncertainty associated with each measurement is defined.

The values assigned to the quantitative data quality indicators (precision, accuracy, completeness and sensitivity) and statements concerning the qualitative indicators (representativeness and comparability) are based upon the DQOs established in Section 3.2. Project-specific requirements for PARCCS are discussed below. Laboratory standard operating procedures (SOPs) are also included in the QAPP and are referenced below.

3.3.1 Precision

Precision is a quantitative measure of how reproducible a specific set of data may be. Precision is addressed in Section 10.5 and in the Pace Quality Systems Manual that is included in the QAPP.

Also, refer to the SOPs in the Revised QAPP Appendix for each analytical procedure proposed for the specific Matrix Spike and Blank Spike/Laboratory Control Sample percent recovery acceptance limits and acceptable relative percent differences (RPD).

The following laboratory quality control (QC) samples are to be utilized:

- A method blank will be performed with each analytical batch of samples.
- At least one Matrix Spike (MS) and one Matrix Spike Duplicate (MSD) will be analyzed per analytical batch (if not enough sample is available for a matrix spike, then a Laboratory Control Sample or LCS and a Laboratory Control Sample Duplicate or LCSD will be used as QC samples).
- Surrogates will be run on all organic analysis including spikes and blanks. If surrogate recoveries are outside their specified control limits, corrective action will be implemented as specified in the individual method SOPs.

The following field QC samples are to be utilized:

- A blind duplicate sample will be collected for each media at a frequency of one blind duplicate (BD) for every 10 samples (each medium) submitted for chemical analysis. Blind duplicates will be labeled with a unique sample number.
- Equipment blanks will be collected at a frequency of one blank per matrix per day or one blank per matrix per 20 samples, whichever is more frequent.

3.3.2 Accuracy

Accuracy is quantitative measure of how well measurements reflect what is actually in the sample. Accuracy is addressed in the Pace Quality Systems Manual. Also, refer to the Pace SOPs in Appendix for each analytical procedure to be performed, including the specific Matrix Spike and Blank Spike/Laboratory Control Sample percent recovery acceptance limits. The laboratory QC samples to be utilized are discussed above.

QC samples to assess potential sample contamination from the field activities or laboratory contaminants will be addressed by the use of equipment blanks to be collected at the Site and a method blank will be analyzed with each batch of samples as discussed in the Pace Quality Systems Manual. The acceptance of the equipment blank and the method blank will be set at equal or less than the method reporting limit or MRL.

3.3.3 Representativeness

Representativeness is the measure that can be both qualitative and quantitative of how well the sample data reflect the environmental conditions. Because the Site is a former wood treatment facility, the potential presence of COPC associated with this use, if present, are expected to be present primarily in those historic use areas, rather than being distributed across the entire Site. Similarly, the other COPC associated with historical Site activities (Teepee Burner, transformers, septic system, USTs and ASTs and vehicle and machine maintenance areas), if present, are expected to be located near the historic use areas or FOPC.

The physical characteristics of each COPC also affects their likely distribution in the subsurface. The FOPC which historically stored or used gasoline and VOCs will be evaluated by first conducting soil vapor sampling, followed by soil and/or grab groundwater sampling as needed to characterize the potential presence of these constituents in deeper soil and groundwater. The methods for collecting soil vapor, shallow and deeper soil, and grab groundwater samples are described in the SOPs attached at the conclusion of the Revised QAPP.

Those FOPC which historically used or stored less mobile constituents will be evaluated through near surface and shallow soils investigations to depths of approximately three feet bgs, and only deeper as warranted by the resulting analytical data.

To collect samples representative of shallow Site soil conditions, SCS will collect soil samples will from four depths (0.5, 1.5, 3, and 4.5 feet bgs) from 21 locations and from depths of 0.5 to 2 feet from six locations in proximity to particular FOPC.

Those FOPC which represent areas of elevated residual COPC (based upon the first phase of field work) and/or which may have been subject to use and release of more mobile COPC will be investigated, assuming sufficient Grant funding is available, in a second phase of investigation targeting collection of soil and grab groundwater samples, to estimated depths of 45 feet bgs.

SCS did not observe stockpiled soil at the Site, and therefore does not anticipate conducting selecting systematic random sampling locations and depths. However, samples of IDW will be collected and chemically analyzed for waste profiling purposes to facilitate appropriate handling and disposal of IDW.

Soil vapor, shallow soil, deeper soil, grab groundwater, and IDW materials will be sampled as described in the SOPs included as part of the Revised QAPP. The SCS field personnel will follow COC procedures described in the SOP included in the Revised QAPP for sample preservation, handling and tracking.

As previously discussed, a blind duplicate sample will be collected at a frequency of one blind duplicate for every 10 samples, and equipment blanks will be collected at a frequency of one blank per matrix per day or one blank per matrix per twenty samples, whichever is more frequent.

Representativeness is addressed in the Pace Quality Systems Manual. Also, refer to the Pace SOPs for each proposed analysis for the method sample containers, preservation methods, and holding times.

3.3.4 Completeness

Completeness is a measure of the amount of data to be collected that is essential to meet the project objectives. Since there are no subsurface analytical data available for the Site, the proposed sampling will need to yield sufficient, useable data to adequately assess the presence, or possible presence, and concentration of COPC associated with potential releases from historical land use.

Given that no data are available to date for the Site, a completeness of 90 percent will be acceptable. No specific sample locations are considered more critical than any of the others; therefore, if for some reason a proposed location cannot be sampled and/or relocated to an area near the originally proposed locations, this will not require remobilization to the Site for additional sampling.

3.3.5 Comparability

Comparability is a qualitative measurement of how similar project data need to be to those collected from other studies, similar locations within the same study, same sampling locations at different times of the year, etc. The purpose of the proposed sampling is to assess the presence, or possible presence, and concentration of COPC associated with potential releases from historical land uses, and to collect sufficient data for redevelopment and cleanup planning. Since there are no available and useable data for the Site, the measure of comparability will be focused on the proposed sampling to yield sufficient, useable data necessary to meet the sampling objectives. Since all the samples will be collected over the course of a few weeks by SCS and analyses will be conducted by the same laboratories, the data will have a very high level of comparability.

3.3.6 Sensitivity

Sensitivity is a quantitative measure of field and/or laboratory methods used to assess if the resulting data are of a quality (low enough quantitation limits) that will be sensitive enough to quantify COPC at or below regulatory standards or action levels. Sensitivity is addressed in the Pace Quality Systems Manual. Also, refer to the Pace method sheets for each analytical procedure proposed for the method detection limits and reporting limits.

Where appropriate, COPC will be reported below the laboratory reporting limits, and these data will be "J Flagged" to note the results are below the reporting limit and above the MDLs. The previous Accuracy and Precision sections discuss QC samples to be collected and acceptance limits.

3.4 DATA REVIEW AND VALIDATION

Pursuant to the Pace Quality Systems Manual, data processing and validation within the analytical laboratory ensure that the reported results will correctly represent the analyses performed. This function has two primary activities:

- The processing of QC sample results to demonstrate that analyses are within laboratory prescribed bounds for accuracy, precision, and completeness.

- Sample reduction and validation to demonstrate that numerical computation of data is correct and that it is correctly reported.

Pace will review sample management, analysis, and reporting pursuant to the Pace Quality Systems Manual in order to meet the DQIs as presented in Section 3.3. Results and variances from the DQIs will be reported with the laboratory reports.

The SCS Program Manager and QA Officer will review staff field notes of field sampling methodologies and laboratory reports for compliance with SCS SOPs and those reviews will be documented in the project file.

Data that do not meet DQOs will be flagged and discussed in the Summary Report prepared at the conclusion of field work. The actions taken to address the data that do not meet DQOs will be presented, including the rejection of the data and exclusion from consideration during the preparation of the Summary Report; a description of reasoning why the data may still be used even though they do not meet DQOs; or steps taken to re-analyze samples or return to the Site to re-sample.

3.5 DATA MANAGEMENT

Pace will follow the procedures in the Pace Quality Systems Manual for proper data management from receipt of samples with a properly completed COC to reporting of final laboratory data and QA/QC control data in its final Report.

The SCS Program Manager and QA Officer will review staff field notes of field sampling methodologies, COC documentation, and laboratory reports for compliance with SCS SOPs. Reviews will be documented in the project file. Transfer of data from laboratory reports to tables, figures, and report text will be reviewed by the SCS technical editor for accuracy and documented on a standard SCS review form. A final review of the Phase II ESA Summary Report, including data, will be performed by the Program Manager and documented on a standard SCS review form.

3.6 ASSESSMENT OVERSIGHT

A pre-mobilization meeting will be held prior to fieldwork. During this meeting, the Program Manager, Field Team Leader and Field Team will review the Revised FSP, Revised QAPP, HASP, unanticipated discovery plan (UDP), and project objectives. The SCS Program Manager and Field Team Leader will both supervise field activities, while the Program Manager and QA Officer will review staff field notes of field sampling methodologies, COC documents, and laboratory reports for compliance with SCS SOPs. Reviews will be documented in the project file.

Transfer of data from laboratory reports to tables, figures, and Summary Report text will be reviewed by the SCS technical editor for accuracy and documented on a standard SCS review form. A final review of the Summary Report, including data, will be performed by the Program Manager and documented on a standard SCS review form. At any time during the project, the Program Manager or QA Officer has the authority to direct that corrective actions be taken if it is deemed necessary.

SCS has implemented a Quality Management System (QMS). As part of the QMS, selected completed projects are audited for compliance with SCS procedures, including health and safety procedures and quality control protocols. During the auditing process, the QA Officer or

designee randomly selects completed projects for a detailed review for adherence to the QMS. The following is a short description of the QMS.

3.6.1 SCS Quality Management System

SCS has implemented a QMS that conforms to *EPA Requirements for Quality Management Plans, EPA QA/R-2,* EPA/240/B-01/002, reissued May 2006 (EPA, 2006). The purpose of the QMS is to provide the framework to plan, implement, and assess the effectiveness of QA and QC operations within SCS. The QMS addresses all aspects of work performed by SCS and is fundamental to SCS' vision of being the environmental firm of choice for clients and employees.

Our overall objective is to provide quality solutions to environmental problems in an ethical manner. Briefly summarized, the QMS requires that SCS staff and subcontractors have the necessary training and skills, use the proper tools, and employ sound procedures to conduct work safely and appropriately. SCS continuously seeks to improve the quality of the services we deliver by checking our work, considering new technologies and work processes, and documenting compliance with the QMS.

In accordance with EPA guidance, the QMS specifies standards and procedures regarding the following quality management plan elements:

1. Quality Policy
2. Organization and Authority
3. Quality System Components
4. Personnel Qualifications and Training
5. Procurement of Items and Services
6. Documents and Records
7. Computer Hardware and Software
8. Planning
9. Implementation
10. Assessment and Response
11. Quality Improvement

A copy of the SCS 2015 QMS program description is included as Appendix A to this FSP.

4.0 SAMPLING DESIGN AND RATIONALE

The following sections describe the specifics of and rationale for the proposed media sampling.

4.1 SOIL VAPOR SAMPLING

The purpose of the proposed soil vapor sampling is to assess the presence, or possible presence, and concentration of COPC associated with historic Site use, which included the use, storage and

handling of VOCs. To accomplish this, SCS will collect shallow soil vapor samples from depths of five feet bgs across the Site to assess potential impacts from historical land use involving volatile compounds, primarily solvents and petroleum hydrocarbons. The proposed soil vapor sampling locations are shown on Figure 2.

Vapor samples will be analyzed for the following:

- The complete suite of VOCs and TPHg by EPA Method 8260B using low method detection limits;
- Atmospheric gases including oxygen, carbon dioxide, and methane; and,
- The leak detection compound, 1,1-difluoroethane.

The soil vapor sampling task will include analysis of collected vapor samples by an on-Site mobile laboratory, to allow assessment of shallow soil vapor conditions in real time. The resulting data will be used to evaluate the need for and location of possible additional or step-out vapor samples in areas where the primary soil vapor sample yields COPC at or above applicable human health risk-based screening levels.

Table 4-1: Soil Vapor Matrix
Sampling Design and Rationale

Sampling Location/ID Number	Depth (ft bgs)	COPC and Analytical Methods	Rationale
SVS-01 through SVS-27	5.0*	VOCs 8260B, oxygen, carbon dioxide, methane, 1,1-difluoroethane	To assess potential impacts from historical Site operations, soil vapor samples will be collected from FOPC. Results will be compared with risk based screening values to determine whether step out vapor sample locations are warranted.

Notes:
ft bgs = feet below ground surface
* = approximate target depth; actual depths may vary slightly due to soil pore water and pressure conditions.

4.2 SOIL SAMPLING

The purpose of the proposed soil sampling is to assess the presence, or possible presence, and concentration of COPC associated with historic Site activities. The work will include collecting near surface and shallow soil samples from FOPC, followed by collection and analysis of soil samples from greater depths, based upon the results of the shallow soil sampling and soil vapor sampling activities described in Section 4.1. The proposed shallow soil sampling locations are shown on Figure 2.

Near surface and shallow soil samples will be analyzed as identified on the Sample Matrix Table below for one or more of the following analytes:

- CAM 17 metals by EPA Method 6010B/7400;
- VOCs including BTEX compounds and naphthalene by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B;

- TPHd and TPHmo by EPA Method 8015C with silica gel preparation;
- SVOCs, including PAHs and chlorophenols, by EPA Method 8270;
- DLCs by EPA Method 1613; and/or,
- PCBs by EPA Method 8082.

The first phase of soil sampling and analysis will be performed immediately following the soil vapor survey, and will target near surface and shallow soils, to maximum depths of five feet bgs. The results of these two tasks will be used to guide and/or modify the subsequent phase of deeper soil sampling work, and grab groundwater sample collection and analysis.
Deeper soil samples will be collected for analysis based upon the results of the near surface and shallow soil sampling program, assuming sufficient Grant budget. The deeper soil samples will be analyzed as identified on the Sample Matrix Table below for one or more of the following analytes:

- CAM 17 metals by EPA Method 6010B/7400;
- VOCs including BTEX compounds and naphthalene by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B;
- TPHd and TPHmo by EPA Method 8015C with silica gel preparation;
- SVOCs, including PAHs and chlorophenols, by EPA Method 8270;
- DLCs by EPA Method 1613; and/or,
- PCBs by EPA Method 8082.

Table 4-2: Soil Matrix
Sampling Design and Rationale

FOPC	Sampling Location/ID Number of Primary Samples	Depth (ft bgs)	COPC and Analytical Methods	Rationale
Vehicle and Equipment Maintenance Areas	5 locations 10 soil Deeper Samples if warranted. MS1-01 MS2-01 MAS-01 MAS-02 MAS-03	0.5, 1.5, 3.0, and 4.5 feet bgs using backhoe with narrow bucket.	TPHd and TPHmo by EPA Method 8015C with silica gel preparation, VOCs by 8260B, SVOCs by EPA Method 8270, and CAM 17 metals by 6010B/7400.	To evaluate potential presence of residual metals, TPH, VOCs, SVOCs and metals from past vehicle and equipment use/maintenance operations. Initially, only the samples collected from 0.5-and 1.5-ft bgs will be analyzed, and the 3.0- and 4.5-ft bgs samples will be held. If the 0.5- and 1.5-foot samples from a location contain COPC concentrations above applicable screening values, then the 3.0- and 4.5-foot samples will be analyzed. In the event the 4.5-foot samples yield elevated COPC, then the Project Officer shall be consulted to discuss the feasibility of further investigation.
Former Planing Mill Buildings and Lumber	5 locations 10 soil Deeper Samples if	0.5, 1.5, 3.0, and 4.5 feet bgs using	TPHd and TPHmo by EPA Method 8015C with	To evaluate potential presence of residual metals, TPH, VOCs, SVOCs, and metals from past planning mill/wood treatment operations. Initially, only the samples collected from 0.5-and 1.5-ft bgs will be analyzed, and the 3.0- and

FOPC	Sampling Location/ID Number of Primary Samples	Depth (ft bgs)	COPC and Analytical Methods	Rationale
Storage Areas	warranted. PM1-01 PM1-02 PM1-03 PM2-01 LS1-01	backhoe with narrow bucket.	silica gel preparation, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270, and CAM 17 metals by EPA Method 6010B/7400 .	4.5-ft bgs samples will be held. If the 0.5- and 1.5-foot samples from a location contain COPC concentrations above applicable screening values, then the 3.0- and 4.5-foot samples will be analyzed. In the event the 4.5-foot samples yield elevated COPC, then the Project Officer shall be consulted to discuss the feasibility of further investigation.
Former "TeePee" Burner	4 locations 4 soil TPB-01 TPB-02 TPB-03 TPB-04	0.5 and 1.5 feet bgs using hand auger.	DLCs by EPA Method 1613 and SVOCs by EPA Method 8270.	To evaluate potential presence of residual dioxin, furans and PAH compounds from past wood disposal/burning operations. Initially, only the samples collected from 0.5-ft bgs will be analyzed, and the 1.5-ft bgs samples will be held. If the 0.5-foot sample from a location contains COPC concentrations above applicable screening values, then the 1.5-foot sample will be analyzed.
Former "Open" Electrical Transformers	2 locations 2 soil OTF-01 OTF-02	0.5 and 1.5 feet bgs using hand auger.	PCBs EPA Method 8082 and SVOCs by EPA Method 8270.	Evaluate potential presence of residual PCBs and PAH compounds from past transformer operation. Initially, only the samples collected from 0.5-ft bgs will be analyzed for the noted COPC, and the 1.5-ft bgs samples will be held. If the 0.5-foot sample from a location contains COPC concentrations above applicable screening values, then the 1.5-foot samples will be analyzed. In the event the 1.5 foot samples yield elevated COPC, then the Project Officer shall be consulted to discuss the feasibility of further investigation.
Former Wood Treatment and Lumber Storage Areas	10 locations 20 soil Deeper Samples if warranted. WTR-01 WTR-02 WTR-03 WTR-04 WTR-05 WTR-06 WTR-07 WTR-08	0.5, 1.5, 3.0, and 4.5 feet bgs using backhoe with a narrow bucket.	TPHd and TPHmo by EPA Method 8015C with silica gel preparation, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270, PCBs by EPA Method	To evaluate potential presence of residual metals, TPH, VOCs, SVOCs and metals from past wood treating operations. Initially, only the samples collected from 0.5- and 1.5-ft bgs will be analyzed, and the 3.0- and 4.5-ft bgs samples will be held. If the 0.5- and 1.5-foot samples from a location contain COPC concentrations above applicable screening values, then the 3.0- and 4.5-foot samples will be analyzed. In the event the 4.5-foot samples yield elevated COPC, then the Project Officer shall be consulted to discuss the feasibility of further investigation. ..

FOPC	Sampling Location/ID Number of Primary Samples	Depth (ft bgs)	COPC and Analytical Methods	Rationale
	WTR-09 WTR-10 LS1-01		8082, and CAM 17 metals by EPA Method 6010B/7400.	
Former Electric Shop and Oil Houses	5 locations 10 Soil Deeper Samples if Warranted ELS-01 ELS-02 OH1-01 OH2-01 OH3-01	0.5, 1.5,3.0, and 4.5 feet bgs using backhoe with a narrow bucket.	EPA Method 8015C with silica gel preparation, VOCs by EPA Method 8260B, SVOCs by EPA Method S8270, and CAM 17 metals by EPA Method 6010B/7400.	To evaluate potential presence of residual metals, TPH, VOCs, SVOCs, PCBs, and metals from past electric shop and oil house operations. Initially, only the samples collected from 0.5-and 1.5-ft bgs will be analyzed, and the 3.0- and 4.5-ft bgs samples will be held. If the 0.5- and 1.5-foot samples from a location contain COPC concentrations above applicable screening values, then the 3.0- and 4.5-foot samples will be analyzed. In the event the 4.5-foot samples yield elevated COPC, then the Project Officer shall be consulted to discuss the feasibility of further investigation..
ASTs	2 locations 3 soil Analyze Samples as Warranted. AST-01 AST-02	0.5, to 45 feet bgs.	TPHd and TPHmo by EPA Method 8015C with silica gel preparation and VOCs by EPA Method 8260B.	To evaluate the potential presence of residual hydrocarbons (TPHg, TPHd, TPHmo) from use of ASTs. Conduct investigation during second phase of work using Hollow Stem Auger Methods to assess soil and groundwater. Select soil samples for analysis based upon field indicators including soil staining, odors, and photoionization detector readings.
Former USTs	3 locations 6 soil samples Analyze Samples as Warranted. UST-01 UST-02 UST-03	5.0 to 45 feet bgs	TPHd and TPHmo by EPA Method 8015C with silica gel preparation and VOCs by EPA Method 8260B.	To evaluate the potential presence of residual hydrocarbons (TPHg, TPHd, TPHmo) from use of former USTs. Conduct investigation based upon results from soil vapor survey, during second phase of work. Select soil samples for analysis based upon field indicators including soil staining, odors, and photoionization detector readings. Perform deeper investigation using Hollow Stem Auger Methods to assess underlying soil and groundwater.

FOPC	Sampling Location/ID Number of Primary Samples	Depth (ft bgs)	COPC and Analytical Methods	Rationale
Hydraulically Up- and Downgradient Locations	2 locations 6 samples Analyze Samples as Warranted UG-01 DG-01	5.0 to 45 feet bgs	TPHd and TPHmo by EPA Method 8015C with silica gel cleanup, VOCs by EPA Method 8260, SVOCs by EPA Method 8270, CAM 17 by EPA Method 6010B/7400 ,	To evaluate the potential presence of residual COPC at hydraulically up- and downgradient on-Site locations. Conduct investigation based upon results from soil vapor survey, during second phase of work. Select soil samples for analysis based upon field indicators including soil staining, odors, and photoionization detector readings. Perform deeper investigation using Hollow Stem Auger Methods to assess underlying soil and groundwater.

Due to the potential for misidentification of TPHg with oxygenates, EPA Method 8206B is preferred over EPA Method 8015C for TPHg analysis. In addition, due to potential matrix interference from organic compounds, which are likely to occur in the subsurface of a former lumber mill site, EPA Method 8015C will be used for TPHd and TPHmo analysis in conjunction with silica gel cleanup.

4.3 SEDIMENT SAMPLING

Not applicable.

4.4 WATER SAMPLING

The purpose of the proposed grab groundwater sampling is to assess the presence, or possible presence, and concentration of COPC associated with historic Site activities. The work will be performed coincident with the deeper soil sampling activities, with locations selected based upon the results of the initial phase of Site investigation. The currently proposed grab groundwater sampling locations are shown on Figure 2.

During the second phase of field work grab groundwater samples will be collected and analyzed as identified on the Sample Matrix Table above for one or more of the following analytes:

- VOCs including BTEX compounds and naphthalene by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B;
- TPHd and TPHmo by EPA Method 8015C with silica gel preparation; and
- SVOCs, including PAHs and chlorophenols, by EPA Method 8270.

Table 4-3: Water Matrix
Sampling Design and Rationale

FOPC	Sampling Location/ID Number	Depth (ft bgs)	COPC and Analytical Methods	Rationale
Vehicle and Equipment Maintenance Areas	Minimum of 2 locations. Actual number of locations and samples determined based on field indicators and Vapor Survey. MS1-01W MS2-01W MAS-01W MAS-02W and/or MAS-03W.	Estimated at 45 feet bgs using Hollow Stem Auger Methods.	TPHd and TPHmo by EPA Method 8015C with silica gel preparation, VOCs by EPA Method 8260B, and/or SVOCs by EPA Method 8270 using Temporary Wells.	To evaluate potential presence of residual metals, TPH, VOCs, SVOCs, and metals from past vehicle and equipment use/maintenance operations if warranted based upon initial shallow soils investigation work and/or results from soil vapor survey.
Former Planing Mill Buildings and Lumber Storage Areas	Minimum of 1 location. Actual number of locations and samples to be determined based on field indicators and Vapor Survey PM1-01W PM1-02W PM1-03W PM2-01W and/or LS1-01W.	Estimated at 45 feet bgs using Hollow Stem Auger Methods.	EPA Method TPHd and TPHmo by EPA Method 8015C with silica gel preparation, VOCs by EPA Method 8260B and/or SVOCs by EPA Method 8270 using Temporary Wells.	To evaluate potential presence of residual TPH, VOCs, and SVOCs in groundwater if warranted based upon initial shallow soils investigation work and/or results from soil vapor survey.
Former Wood Treatment	Minimum of 1 location. Actual	Estimated at 45 feet bgs using	TPHd and TPHmo byEPA Method	To evaluate potential presence of residual TPH, VOCs, and SVOCs in groundwater if warranted based upon initial shallow soils investigation work and/or results from soil

FOPC	Sampling Location/ID Number	Depth (ft bgs)	COPC and Analytical Methods	Rationale
and PCP Storage Areas	number of locations and samples determined based on field indicators and Vapor Survey. WTR-01W WTR-02W WTR-03W WTR-04W WTR-05W WTR-06W WTR-07W WTR-08W WTR-09W and/or WTR-10W.	Hollow Stem Auger Methods.	8015C with silica gel preparation, VOCs by EPA Method 8260B and/or SVOCs by EPA Method 8270 using Temporary Wells.	vapor survey.
Former Electric Shop and Oil Houses	Minimum of 1 location. Actual number of locations and samples determined based on field indicators and Vapor Survey. ELS-01W ELS-02W OH1-01W OH2-01W and/or OH3-01W.	Estimated at 45 feet bgs using Hollow Stem Auger Methods.	TPHd and TPHmo by EPA Method 8015C with silica gel preparation, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270, PCBs by EPA Method 8082, and CAM 17 metals by EPA Method 6010B/7400 using Temporary Wells. Filter samples for metals analysis.	To evaluate potential presence of residual TPH, VOCs, SVOCs, PCBs and/or metals in groundwater if warranted based upon initial shallow soils investigation work and/or results from soil vapor survey.
ASTs	Minimum of 1 location. Actual	Estimated at 45 feet bgs using	TPHd and TPHmo by EPA Method	To evaluate potential presence of residual TPH, VOCs, and SVOCs in groundwater if warranted based upon initial shallow soils investigation work and/or results from soil

FOPC	Sampling Location/ID Number	Depth (ft bgs)	COPC and Analytical Methods	Rationale
	number of locations and samples determined based on field indicators and Vapor Survey.. AST-01W and/or AST-02W.	Hollow Stem Auger Methods.	8015C with silica gel preparation, VOCs by EPA Method 8260B, and SVOCS by EPA Method 8270 using Temporary Wells.	vapor survey.
Former USTs	Minimum of 2 locations. Actual number of locations and samples determined based on field indicators and Vapor Survey. UST-01W UST- 02W and/or UST-03W.	Estimated at 45 feet bgs using Hollow Stem Auger Methods.	TPHd and TPHmo by EPA Method 8015C with silica gel preparation and VOCs by EPA Method 8260B using Temporary Wells.	To evaluate potential presence of residual TPH, VOCs, and SVOCs in groundwater if warranted based upon initial shallow soils investigation work and/or results from soil vapor survey.
Hydraulicall y Up and Downgradie nt Locations	Minimum of 2 locations. Actual number of locations and samples determined based on field indicators and Vapor Survey. UG-01W and DG-01W.	Estimated at 45 feet bgs using Hollow Stem Auger Methods.	TPHd and TPHmo by EPA Method 8015C with silica gel preparation and VOCs by EPA Method 8260B using Temporary Wells.	To evaluate potential presence of residual COPC in groundwater from off-site locations and/or migrating off-site from on-site source areas.

4.5 ACM AND LBP SAMPLING

4.5.1 ACM Sampling

Bulk samples collected from the structures will be placed in plastic zip-loc bags, labeled, and transported under COC to Pace, a NVLAP accredited laboratory for analysis of asbestos content. Bulk samples will be analyzed using Polarized Light Microscopy (PLM) and Dispersion Staining in accordance with the EPA Interim Method for the Determination of Asbestos in Bulk Samples (40 CFR 763, Subpart F) (CFR, 2016a).

By Federal definition, any substance that contains more than one percent (1%) asbestos is classified as an ACM. Within the State of California, DOSH defines an ACM as any manufactured material which contains greater than one tenth of one percent (0.1%) asbestos by weight. Pace's Method Reporting Limit (MRL) is 0.005% asbestos based on a 0.25 gram sample. The designation of "trace" indicates the presence of asbestos below the MRL.

4.5.2 LBP Sampling

A limited lead survey will be conducted of the five major Site structures with an objective to identify and characterize major paint systems and suspect glazed components for the presence of lead. Only major paint systems and suspect glazed components at the time of the inspection will be targeted for sampling. Readily accessible painted surfaces of the interiors and exteriors of the structures, as well as other suspect glazed building components (like ceramic floor tile, ceramic wall tile, porcelain sinks, porcelain toilets, and porcelain urinals) will be tested for lead in general accordance with HUD Title 10, 40 CFR Part 745 and Title 24 Part 35 using an XRF instrument (CFR, 2016b).

XRF Readings Summary Logs will provide descriptions and identify locations of paint, ceramic tile, and porcelain fixture readings collected from the structures.

4.5.3 Universal Waste

A surveillance-level effort will be made to identify/quantify "universal wastes" (UW) (e.g., fluorescent tubes/bulbs, batteries, mercury switches/gauges, etc.) that may be present within the five (5) main Site structures. The effort will consist of an inspection of the interior and exterior of the structures and field logs detailing the approximate location and estimated quantities of suspected universal wastes.

Table 4-4: ACM, LBP, and UW Sampling Design and Rationale

Sampling Location/ID Number	COPC and Analytical Methods	Rationale
One sample per suspected ACM media, identified as ACM01, ACM02, ACM03, and so on. Approximately 200 samples will be collected for analysis.	ACM: EPA Method 600 by PLM with Dispersion Staining.	To evaluate each suspected ACM for asbestos content greater than 1%. Assume one sample per suspected ACM in each of the five structures.
One sample per suspected LBP media, identified as LBP01,	LBP: XRF as field screening tool and approximately. 10% of samples above MRL submitted for	To evaluate each suspected LBP surface or material for lead content greater than 0.5 percent by weight (or 1.0 mg/cm^2).

Sampling Location/ID Number	COPC and Analytical Methods	Rationale
LBP02, LBP03, and so on. Approximately 30 samples will be collected for analysis.	EPA Preparation Method 3050B and analysis by EPA Method 6010C.	Assume six samples in each of the five (5) structures.
Inventory only (no sampling)	UW: visual survey only (no analysis)	To identify and log suspected UW in each of the five structures.

4.6 STOCKPILE AND INVESTIGATION DERIVED WASTE SAMPLING

SCS does not anticipate that soil stockpiles will be generated during the proposed field activities. However, decontamination and field investigation may generate residual waste streams or IDW. These materials will be contained and secured in United Nations/Department of Transportation (UN/DOT)-approved 55 gallon drums.

The purpose of the proposed sampling is to assess the presence, or possible presence, and concentration of COPC and enable profiling for appropriate waste disposal. The anticipated analytical suite for decontamination and IDW solids and liquids includes:

- CAM 17 metals by EPA Method 6010B/7400;
- VOCs including BTEX compounds and naphthalene by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B;
- TPHd and TPHmo by EPA Method 8015C with silica gel preparation;
- SVOCs, including PAHs and chlorophenols, by EPA Method 8270;
- DLCs by EPA Method 1613; and/or,
- PCBs by EPA Method 8082.

The analytical suite for decontamination and IDW liquids may be modified based upon the findings of the two phases of assessment work, with approval from the EPA.

To accomplish this, SCS will collect soil and water samples from containment drums for analysis. The sample frequency and analytical suite(s) will be dictated by waste profiling and disposal requirements provided by the waste disposal facility or facilities. For the purpose of this FSP, SCS assumes collection of one sample per each drum of material for discreet sample analysis, unless composite sample analysis is approved by the contracted receiving facility.

Table 4-5: IDW
Sampling Design and Rationale

Sampling Location/ID Number	COPC and Analytical Methods	Rationale
One sample per drum,	Potential analytes include CAM 17	To evaluate each drum of residual

Sampling Location/ID Number	COPC and Analytical Methods	Rationale
identified as D01S, D02S, D03S, and so on for drums containing soil, and D01W, D02W, D03W, and so on for drums containing water.	metals by EPA Method 6010B/7400; VOCs by EPA Method 8260B; TPHg by EPA Method 8260B; TPHd and TPHmo by EPA Method 8015C with silica gel preparation; SVOCs by EPA Method 8270; DLCs by EPA Method 1613; and/or PCBs by EPA Method 8082.	materials from field investigation for disposal profiling, following analytical requirements issued by potential receiving facility/facilities. Assume one sample per drum.

5.0 REQUEST FOR ANALYSES

5.1 ANALYSES NARRATIVE

Soil and grab groundwater samples will be sent to Pace Analytical Services, LLC (Pace), a state-certified, fixed-based laboratory, for analysis. As previously noted, soil vapor samples will be analyzed on-Site by TEG's state-certified mobile laboratory. Building materials suspected of containing LBP will be sampled (for lead) in the field using a calibrated, hand-held XRF instrument and by Pace for any samples detected above RPLs using the XRF instrument. Approximately ten percent (10%) of all XRF samples will be sent to Pace for laboratory additional analysis. Suspected ACMs will be sampled and sent to Pace for analysis.

5.1.1 Soil Vapor Samples

Soil vapor samples collected from locations SVS-01 through SVS-20 will be collected using a syringe to withdraw vapor from Nylaflow tubing affixed to a Geoprobe drive rod. The soil vapor samples will be analyzed for the following:

- The complete suite of VOCs and TPHg by EPA Method 8260B using low method detection limits;
- Atmospheric gases including oxygen, carbon dioxide, and methane; and,
- The leak detection compound, 1,1-difluoroethane.

The first sample location will include samples collected following purging of one, three and ten sample train volumes of air. Those samples will be chemically analyzed, and the purge volume which yields the most elevated analytical results will be used in subsequent vapor sample collection locations. The results of the vapor sampling will be compared with risk based screening values (CHHSLs and ESLs), and those locations yielding elevated analytical results (COPC in excess of CHHSLs or ESLs) will be subject to step-out soil vapor sampling at approximate distances of 20 feet in each compass direction.

Table 5-1: Soil Vapor Matrix Analytical Services

Sample Number	Sample Location	Sample Depth (ft. bgs)	Special Designation	VOCs (EPA 8260B)	Atmospheric Gases (ASTM D-1946)	Leak Check Compound (EPA 8260B)
SVS-01-1*	SVS-01	5	---	X	X	X
SVS-01-3*	SVS-01	5	---	X	X	X
SVS-01-10*	SVS-01	5	---	X	X	X
SVS-02	SVS-02	5	---	X	X	X
SVS-03	SVS-03	5	---	X	X	X
SVS-04	SVS-04	5	---	X	X	X
SVS-05	SVS-05	5	---	X	X	X
SVS-06	SVS-06	5	---	X	X	X
SVS-07	SVS-07	5	---	X	X	X
SVS-08**	SVS-08	5	BD	X	X	X
SVS-09	SVS-09	5	---	X	X	X
SVS-10	SVS-10	5	---	X	X	X
SVS-11	SVS-11	5	---	X	X	X
SVS-12	SVS-12	5	---	X	X	X
SVS-13	SVS-13	5	---	X	X	X
SVS-14	SVS-14	5	---	X	X	X
SVS-15	SVS-15	5	---	X	X	X
SVS-16	SVS-16	5	---	X	X	X
SVS-17	SVS-17	5	---	X	X	X
SVS-18**	SVS-18	5	BD	X	X	X
SVS-19	SVS-19	5	---	X	X	X
SVS-20**	SVS-20	5	BD	X	X	X
SVS-21	SVS-08	5	Duplicate	X	X	X
SVS-22	SVS-18	5	Duplicate	X	X	X
SVS-23	SVS-20	5	Duplicate	X	X	X

Total estimated number of samples, excluding QC samples: 20*
Total estimated number of samples, including QC samples: 26
* - 3 samples will be analyzed from the first soil vapor sample collected, presumably SVS-01. The three samples analyzed will consist of 1, 3, and 10 purge volumes to determine the appropriate purge volume for the remaining soil vapor samples analyzed.
** - Blind Duplicate (BD) samples will be collected from the noted locations and analyzed by the on-Site mobile laboratory.

5.1.2 Near Surface, Shallow and Deeper Soil Samples

As noted earlier, the proposed field investigation will include two phases of work including collection of near surface and shallow soil samples during the first phase of work, followed by collection of deeper soil samples (and grab groundwater samples) during the second phase of work.

The near surface and shallow soil samples will be collected with a hand auger and/or drive sampler and analyzed for one or more of the following:

- CAM 17 metals by EPA Method 6010B/7400;
- VOCs including BTEX compounds and naphthalene by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B;
- TPHd and TPHmo by EPA Method 8015C with silica gel preparation;
- SVOCs, including PAHs and chlorophenols, by EPA Method 8270;
- DLCs by EPA Method 1613; and/or,
- PCBs by EPA Method 8082.

In all but the vicinity of the former Teepee Burner and Open Transformer areas, soil samples will be collected from each shallow soil sampling location at depths of 0.5, 1.5, 3, and 4.5 feet bgs. The 0.5- and 1.5-foot samples will be analyzed for analytes appropriate to each FOPC. The samples collected from 3.0 and 4.5 feet will be held pending the analytical results for the 1.5-foot sample, and the results of the analyses will be compared to corresponding CHHSL and ESL values. If detectable concentrations of COPC exceed the CHSSL or ESL, then the samples from 3.0 and 4.5 feet will be analyzed.

In the former TeePee Burner and Open Transformer areas, soil samples will be collected from each shallow soil sampling location at depths of 0.5 and 1.5 feet bgs. The 0.5-foot samples will be analyzed for analytes appropriate to each FOPC. The samples collected from 1.5 feet will be held pending the analytical results for the 0.5-foot sample, and the results of the analyses will be compared to corresponding CHHSL and ESL values. If detectable concentrations of COPC exceed the CHSSL or ESL, then the samples from 1.5 feet will be analyzed.

During the second phase of investigation, deeper soil samples will be collected for possible analysis from borings advanced to approximate depths of 45 feet bgs. Budget permitting, the samples will be collected in approximate five foot increments, and selected for possible chemical analysis based upon field observations (odors and staining), field screening results using a photoionization detector (PID), and following receipt of analytical results from the near surface and shallow soil sampling phase of work. As with the near surface and shallow soil sampling program, deeper soil samples may be analyzed for one or more of the following:

- CAM 17 metals by EPA Method 6010B/7400;
- VOCs including BTEX compounds and naphthalene by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B;
- TPHd and TPHmo by EPA Method 8015C with silica gel preparation;
- SVOCs, including PAHs and chlorophenols, by EPA Method 8270;
- DLCs by EPA Method 1613; and/or,
- PCBs by EPA Method 8082.

Table 5-2 presents a summary of the analytical program for soil samples, and Table 5-3 presents a summary of the containers, preservation, and holding times for each analytical method proposed for soil samples.

Table 5-2: Soil Matrix Analytical Services

Sample Area and Number		Sample Location	Depth (ft. bgs)	Special Designation	Analytical Methods					
					TPH-d and TPH-mo (EPA 8015CB)	VOCs;TPHg (EPA 8260B)	SVOCS (EPA 8270)	Dioxin (EPA 1613)	CAM 17 Metals (EPA 6010/7400)	PCBs (EPA 8082)
Maintenance Shop Areas*	MS1-01-0.5	MS1-01	0.5	---	X	X	X	---	X	---
	MS1-01-1.5	MS1-01	1.5	---	X	X	X	---	X	---
	MS1-01-3.0	MS1-01	3.0	BD	---	---	---	---	---	---
	MS1-01-4.5	MS1-01	4.5	---	---	---	---	---	---	---
	MS2-01-0.5	MS2-01	0.5	---	X	X	X	---	X	---
	MS2-01-1.5	MS2-01	1.5	---	X	X	X	---	X	---
	MS2-01-3.0	MS2-01	3.0	--	---	---	---	---	---	---
	MS2-01-4.5	MS2-01	4.5	---	---	---	---	---	---	---
	MAS-01-0.5	MAS-01	0.5	---	X	X	X	---	X	---
	MAS-01-1.5	MAS-01	1.5	---	X	X	X	---	X	---
	MAS-01-3.0	MAS-01	3.0	---	---	---	---	---	---	---
	MAS-01-4.5	MAS-01	4.5	---	---	---	---	---	---	---
	MAS-02-0.5	MAS-02	0.5	BD	X	X	X	---	X	---
	MAS-02-1.5	MAS-02	1.5	---	X	X	X	---	X	---
	MAS-02-3.0	MAS-02	3.0	---	---	---	---	---	---	---
	MAS-02-4.5	MAS-02	4.5	---	---	---	---	---	---	---
	MAS-03-0.5	MAS-03	0.5	---	X	X	X	---	X	---
	MAS-03-1.5	MAS-03	1.5	---	X	X	X	---	X	---
	MAS-03-3.0	MAS-03	3.0	---	---	---	---	---	---	---
	MAS-03-4.5	MAS-03	4.5	BD	---	---	---	---	---	---

Sample Area and Number		Sample Location	Depth (ft. bgs)	Special Designation	Analytical Methods					
					TPH-d and TPH-mo (EPA 8015CB)	VOCs;TPHg (EPA 8260B)	SVOCS (EPA 8270)	Dioxin (EPA 1613)	CAM 17 Metals (EPA 6010/7400)	PCBs (EPA 8082)
Planing Mill Building and Lumber Storage Areas*	PM1-01-0.5*	PM1-01	0.5	MS/MSD	X	X	X	---	X	---
	PM1-01-1.5	PM1-01	1.5	---	X	X	X	---	X	---
	PM1-01-3.0	PM1-01	3.0	---	---	---	---	---	---	---
	PM1-01-4.5	PM1-01	4.5	---	---	---	---	---	---	---
	PM1-02-0.5	PM1-02	0.5	---	X	X	X	---	X	---
	PM1-02-1.5	PM1-02	1.5	BD	X	X	X	---	X	---
	PM1-02-3.0	PM1-02	3.0	---	---	---	---	---	---	---
	PM1-02-4.5	PM1-02	4.5	---	---	---	---	---	---	---
	PM1-03-0.5	PM1-03	0.5	---	X	X	X	---	X	---
	PM1-03-1.5	PM1-03	1.5	---	X	X	X	---	X	---
	PM1-03-3.0	PM1-03	3.0	---	---	---	---	---	---	---
	PM1-03-4.5	PM1-03	4.5	---	---	---	---	---	---	---
	PM2-01-0.5	PM2-01	0.5	BD	X	X	X	---	X	---
	PM2-01-1.5	PM2-01	1.5	---	X	X	X	---	X	---
	PM2-01-3.0	PM2-01	3.0	---	---	---	---	---	---	---
	PM2-01-4.5	PM2-01	4.5	---	---	---	---	---	---	---
	LS1-01-0.5	LS-01	0.5	---	X	X	X	---	X	---
	LS1-01-1.5	LS-01	1.5	---	X	X	X	---	X	---
	LS1-01-3.0	LS-01	3.0	BD	---	---	---	---	---	---
	LS1-01-4.5	LS-01	4.5	---	---	---	---	---	---	---

Sample Area and Number		Sample Location	Depth (ft. bgs)	Special Designation	Analytical Methods					
					TPH-d and TPH-mo (EPA 8015CB)	VOCs;TPHg (EPA 8260B)	SVOCS (EPA 8270)	Dioxin (EPA 1613)	CAM 17 Metals (EPA 6010/7400)	PCBs (EPA 8082)
Teepee Burner	TPB-01-0.5	TPB-01	0.5	---	---	---	X	X	---	---
	TPB-01-1.5	TPB-01	1.5	---	---	---	---	---	---	---
	TPB-02-0.5	TPB-02	0.5	BD	---	---	X	X	---	---
	TPB-02-1.5	TPB-02	1.5	---	---	---	---	---	---	---
	TPB-03-0.5	TPB-03	0.5	---	---	---	X	X	---	---
	TPB-03-1.5	TPB-03	1.5	---	---	---	---	---	---	---
	TPB-04-0.5	TPB-04	0.5	---	---	---	X	X	---	---
	TPB-04-1.5	TPB-04	1.5	---	---	---	---	---	---	---
Open Transformers	OTF-01-0.5	OTF-01	0.5	---	---	---	X	---	---	X
	OTF-01-1.5	OTF-01	1.5	---	---	---	X	---	---	X
	OTF-01-3.0	OTF-01	3.0	---	---	---	---	---	---	---
	OTF-02-0.5	OTF-02	0.5	---	---	---	X	---	---	X
	OTF-02-1.5	OTF-02	1.5	---	---	---	X	---	---	X
	OTF-02-3.0	OTF-02	3.0	BD	---	---	---	---	---	---

Sample Area and Number		Sample Location	Depth (ft. bgs)	Special Designation	Analytical Methods					
					TPH-d and TPH-mo (EPA 8015CB)	VOCs;TPHg (EPA 8260B)	SVOCS (EPA 8270)	Dioxin (EPA 1613)	CAM 17 Metals (EPA 6010/7400)	PCBs (EPA 8082)
Wood Treatment Areas*	WTR-01-0.5	WTR-01	0.5	---	X	X	X	---	X	X
	WTR-01-1.5	WTR-01	1.5	---	X	X	X	---	X	X
	WTR-01-3.0	WTR-01	3.0	---	---	---	---	---	---	---
	WTR-01-4.5	WTR-01	4.5	---	---	---	---	---	---	---
	WTR-02-0.5	WTR-02	0.5	---	X	X	X	---	X	X
	WTR-02-1.5	WTR-02	1.5	---	X	X	X	---	X	X
	WTR-02-3.0	WTR-02	3.0	---	---	---	---	---	---	---
	WTR-02-4.5	WTR-02	4.5	---	---	---	---	---	---	---
	WTR-03-0.5	WTR-03	0.5	---	X	X	X	---	X	X
	WTR-03-1.5	WTR-03	1.5	---	X	X	X	---	X	X
	WTR-03-3.0	WTR-03	3.0	---	---	---	---	---	---	---
	WTR-03-4.5	WTR-03	4.5	---	---	---	---	---	---	---
	WTR-04-0.5	WTR-04	0.5	---	X	X	X	---	X	X
	WTR-04-1.5	WTR-04	1.5	---	X	X	X	---	X	X
	WTR-04-3.0	WTR-04	3.0	---	---	---	---	---	---	---
	WTR-04-4.5	WTR-04	4.5	BD	---	---	---	---	---	---
	WTR-05-0.5	WTR-05	0.5	---	X	X	X	---	X	X
	WTR-05-1.5	WTR-05	1.5	---	X	X	X	---	X	X
	WTR-05-3.0	WTR-05	3.0	---	---	---	---	---	---	---
	WTR-05-4.5	WTR-05	4.5	---	---	---	---	---	---	---
	WTR-06-0.5	WTR-06	0.5	BD	X	X	X	---	X	X
	WTR-06-1.5	WTR-06	1.5	---	X	X	X	---	X	X
	WTR-06-3.0	WTR-06	3.0	---	---	---	---	---	---	---

Sample Area and Number		Sample Location	Depth (ft. bgs)	Special Designation	Analytical Methods					
					TPH-d and TPH-mo (EPA 8015CB)	VOCs;TPHg (EPA 8260B)	SVOCS (EPA 8270)	Dioxin (EPA 1613)	CAM 17 Metals (EPA 6010/7400)	PCBs (EPA 8082)
Wood Treatment Areas*	WTR-06-4.5	WTR-06	4.5	---	---	---	---	---	---	---
	WTR-07-0.5	WTR-07	0.5	---	X	X	X	---	X	X
	WTR-07-1.5	WTR-07	1.5	BD	X	X	X	---	X	X
	WTR-07-3.0	WTR-07	3.0	---	---	---	---	---	---	---
	WTR-07-4.5	WTR-07	4.5	---	---	---	---	---	---	---
	WTR-08-0.5	WTR-08	0.5	---	X	X	X	---	X	X
	WTR-08-1.5	WTR-08	1.5	---	X	X	X	---	X	X
	WTR-08-3.0	WTR-08	3.0	---	---	---	---	---	---	---
	WTR-08-45.	WTR-08	4.5	---	---	---	---	---	---	---
	WTR-09-0.5	WTR-09	0.5	---	X	X	X	---	X	X
	WTR-09-1.5	WTR-09	1.5	---	X	X	X	---	X	X
	WTR-09-3.0	WTR-09	3.0	---	---	---	---	---	---	---
	WTR-09-4.5	WTR-09	4.5	---	---	---	---	---	---	---
	WTR-10-0.5	WTR-10	0.5	---	X	X	X	---	X	X
	WTR-10-1.5	WTR-10	1.5	---	X	X	X	---	X	X
	WTR-10-3.0	WTR-10	3.0	---	---	---	---	---	---	---
	WTR-10-4.5	WTR-10	4.5	---	---	---	---	---	---	---

Sample Area and Number		Sample Location	Depth (ft. bgs)	Special Designation	Analytical Methods					
					TPH-d and TPH-mo (EPA 8015CB)	VOCs;TPHg (EPA 8260B)	SVOCS (EPA 8270)	Dioxin (EPA 1613)	CAM 17 Metals (EPA 6010/7400)	PCBs (EPA 8082)
Oil Houses and Electrical Shops*	ELS-01-0.5	ELS-01	0.5	---	X	X	X	---	X	---
	ELS-01-1.5	ELS-01	1.5	---	X	X	X	---	X	---
	ELS-01-3.0	ELS-01	3.0	---	---	---	---	---	---	---
	ELS-01-4.5	ELS-01	4.5	---	---	---	---	---	---	---
	ELS-02-0.5	ELS-02	0.5	BD	X	X	X	---	X	---
	ELS-02-1.5	ELS-02	1.5	---	X	X	X	---	X	---
	ELS-02-3.0	ELS-02	3.0	---	---	---	---	---	---	---
	ELS-02-4.5	ELS-02	4.5	---	---	---	---	---	---	---
	OH1-01-0.5	OH1-01	0.5	---	X	X	X	---	X	---
	OH1-01-1.5	OH1-01	1.5	---	X	X	X	---	X	---
	OH1-01-3.0	OH1-01	3.0	---	---	---	---	---	---	---
	OH1-01-4.5	OH1-01	4.5	BD	---	---	---	---	---	---
	OH2-01-0.5	OH2-01	0.5	---	X	X	X	---	X	---
	OH2-01-1.5	OH2-01	1.5	---	X	X	X	---	X	---
	OH2-01-3.0	OH2-01	3.0	---	---	---	---	---	---	---
	OH2-01-4.5	OH2-01	4.5	---	---	---	---	---	---	---
	OH3-01-0.5	OH3-01	0.5	---	X	X	X	---	X	---
	OH3-01-1.5	OH3-01	1.5	---	X	X	X	---	X	---
	OH3-01-3.0	OH3-01	3.0	---	---	---	---	---	---	---
	OH3-01-4.5	OH3-01	4.50	---	---	---	---	---	---	---
	OH3-01-0.5	OH3-01	0.5	---	X	X	X	---	X	---

Sample Area and Number		Sample Location	Depth (ft. bgs)	Special Designation	Analytical Methods					
					TPH-d and TPH-mo (EPA 8015CB)	VOCs;TPHg (EPA 8260B)	SVOCS (EPA 8270)	Dioxin (EPA 1613)	CAM 17 Metals (EPA 6010/7400)	PCBs (EPA 8082)
ASTs*	AST-01-0.5 to AST-01-45 and/or AST-02-0.5 to AST-02-45	AST-01 and/or AST-02	0.5 to 45	---	Minimum of 3	Minimum of 3	--- --- ---	--- --- ---	--- --- ---	---
USTs*	UST-01-5 to UST-01-45 UST-02-5 to UST-02-45 and/or UST-03-5 to UST-03-45	UST-01 UST-02 and/or UST-03	5 to 45	BD	Minimum of 6	Minimum of 6	---	---	---	---
Up- and Downgradient	UG-01-0.5 to 45	UG-01	0.5 to 45	---	Minimum of 3	Minimum of 3	--- --- ---	--- --- ---	--- --- ---	---
	DG-01-0.5 to 45	DG-01	0.5 to 45	Duplicate	Minimum of 3	Minimum of 3	---	---	---	

Sample Area and Number		Sample Location	Depth (ft. bgs)	Special Designation	Analytical Methods					
					TPH-d and TPH-mo (EPA 8015CB)	VOCs;TPHg (EPA 8260B)	SVOCS (EPA 8270)	Dioxin (EPA 1613)	CAM 17 Metals (EPA 6010/7400)	PCBs (EPA 8082)
QA/QC*	ELS-03-0.5	ELS-02	0.5	Duplicate	X	X	X	---	X	
	PM1-04-1.5	PM1-02	1.5	Duplicate	X	X	X	---	X	---
	PM3-01-0.5	PM-02	1.5	Duplicate	X	X	X	---	X	---
	MAS-04-0.5	MAS-02	0.5	Duplicate	X	X	X	---	X	---
	TPB-05-0.5	TPB-02	0.5	Duplicate	---	---	X	X	---	---
	WTR-12-0.5	WTR-06	0.5	Duplicate	X	X	X	---	X	---
	WTR-13-1.5	WTR-07	1.5	Duplicate	X	X	X	---	X	---
	MS1-06-3.0	MS1-01	3.0	Duplicate Hold	---	---	---	---	---	---
	OTF-05-3.0	OTF-02	3.0	Duplicate Hold	---	---	---	---	---	---
	LS2-01-3.0	LS1-01	3.0	Duplicate Hold	---	---	---	---	---	---
	MAS-03-4.5	MAS-03	4.5	Duplicate Hold	---	---	---	---	---	---
	WTR-04-4.5	WTR-04	4.5	Duplicate Hold	---	---	---	---	---	---
	OH1-01-4.5	OH1-01	4.5	Duplicate Hold	---	---	---	---	---	---
	AST-01 and AST-02 various	AST-01 and AST-02	Various	Duplicate Hold	---	---	---	---	---	---
	UST-01, UST-02, and UST-3 various	UST-01, UST-02, and UST-3	Various	Duplicate Hold	---	---	---	---	---	---

Notes:
Estimated Total number of primary samples collected, excluding QC samples: 164
Estimated Total number of primary samples to be initially analyzed, excluding QC samples: 71
Note that additional QA/QC Samples will be analyzed according to number of subsequent Primary samples analyzed.
Duplicate samples will be collected from deep borings for USTs, ASTs, and other locations at a rate of 10% for analysis, with the actual duplicate sample depths determined by field observations.

*Deeper soils investigations of FOPC will depend upon results of Shallow soils investigation and Soil Vapor Survey, using 5 foot sampling intervals to total depth of each boring. Additional QA/QC Samples will be collected and analyzed accordingly.

In addition to the above, the laboratory will perform the following additional analyses:

- A method blank will be performed with each analytical batch of samples.
- Surrogates will be run on all organic analysis including spikes and blanks.
- A temperature blank will be included with the sample shipment for Pace to verify temperature upon acceptance of the samples.

Table 5-3: Soil Analytical Method, Containers, Preservation, and Holding Times Requirements

Parameter	Method	Matrix	Container	Preservative	Max Hold Time	Additional Volume for MS/MSD
Aromatic and Halogenated Volatiles (see note 1)	8021	Solid	5035 vial kit	See note 1	14 days	Yes
Acid Volatile Sulfide	Draft EPA 1629	Solid	8oz Glass	≤6°C	14 Days	No
Base/Neutrals and Acids and SVOCs	8270	Solid	8oz Glass	≤6°C	14/40 Days	No
Diesel Range Organics- TPHd	8015C	Solid	8oz Glass Jar	≤6°C	14/40 Days	No
Dioxins and Furans	1613B	Solid	8oz Glass	≤6°C	1 year	Yes
Dioxins and Furans	8290	Solid	8oz Glass	≤6°C	30/45 Days	Yes
Gasoline Range Organics – TPHg	8260B	Solid	5035 vial kit	See note 1	14 days	No
Hexavalent Chromium	7196 (with 3060A)	Solid		< 6°C	24 Hours after extraction	No
Mercury	7471	Solid	8oz Glass Jar	≤6°C	28 Days	No
Metals (ICP/ICPMS)	6010B/ 7400	Solid	8oz Glass Jar	None	180 Days	No
Oil and Grease/HEM	9071	Solid	Glass	≤6°C	28 Days	No
PCBs (Aroclors)	8082	Solid	8oz Glass Jar	≤6°C	1 Year/1 Year	No
PCB Congeners	1668A	Solid	4-8oz Glass Jar	< 6°C but above freezing	1 Year/1 Year	No
Oil Range Organics- ORO – TPHmo	8015C	Solid	8oz Glass Jar	≤6°C	14/40 Days	No
PAH (SVOCs)	8270 SIM	Solid	8oz Glass Jar	≤6°C	14/40 Days	No
VOCs	8260B	Solid	5035 vial kit	See note 1	14 days	Yes

Notes:

1 5035/5035A Note: 5035 vial kit typically contains 2 vials water, preserved by freezing or, 2 vials aqueous sodium bisulfate preserved at 4° C, and one vial methanol preserved at <6° C and one container of unpreserved sample stored at <6° C. Prior to use of this preservation method, an additional soil sample will be tested for reaction by calcareous soil with sodium bisulfate. In the event no reaction occurs, sodium

bisulfate preservative will be used. In the event a reaction occurs, three vials of methanol and one container of unpreserved sample will be stored at <6°C.

5.1.3 Grab Groundwater Samples

Grab groundwater samples will be collected from temporary wells installed during the second phase of investigation, with sample locations selected based upon the results of the initial phase of investigation (soil vapor survey and shallow soil sampling investigation).

The water samples will be collected using dedicated disposable bailers and analyzed for one or more of the following:

- CAM 17 metals by EPA Method 6010B/7400;
- VOCs including BTEX compounds and naphthalene by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B;
- TPHd and TPHmo by EPA Method 8015C with silica gel preparation;
- SVOCs, including PAHs and chlorophenols, by EPA Method 8270;
- DLCs by EPA Method 1613; and/or,
- PCBs by EPA Method 8082.

At present, SCS estimates collecting grab groundwater samples from a minimum of ten locations; however, the number and locations of grab groundwater samples is subject to revision, based upon field indicators, laboratory results, and availability of funding. In the event that grab groundwater samples are collected from each FOPC, the number of samples and proposed analytes would be as shown on Table 5-4 below, with sample containers, preservatives, and holding times as shown on Table 5 -5.

Table 5-4: Water Matrix Analytical Services
(actual sample selection subject to prior field investigation results)

Sample Number	Sample Location	Special Designation	Analytical Methods					
			TPH (EPA 8015C)	VOCs (EPA 8260B)	SVOCs (EPA 8270)	CAM 17 Metals (EPA 6010B/7400)	Dioxin (EPA1613) **	PCBs (EPA 8082) **
AST-01W and/or AST-02W (minimum of 1)	AST-01 and/or AST-02	---	X	X	---	---	---	---
UST-01W UST-02W and/or UST-03W (minimum of 2)	UST-01 UST-02 and/or UST-03	---	X	X	---	---	---	---
ELS-01W ELS-02W	ELS-01 ELS-02	Include 1 BD and 1	X	X	X	X	---	---

Sample Number	Sample Location	Special Designation	Analytical Methods					
			TPH (EPA 8015C)	VOCs (EPA 8260B)	SVOCs (EPA 8270)	CAM 17 Metals (EPA 6010B/7400)	Dioxin (EPA1613) **	PCBs (EPA 8082) **
OH1-01W OH2-01W and/or OH3-01W (minimum of 1)	OH1-01 OH2-01 and/or OH3-01	MS/MSD						
MS1-01W MS2-01W MAS-01W MAS-02W and/or MAS-03W (minimum of 2)	MS1-01 MS2-01 MAS-01 MAS-02 MAS-03	---	X	X	X	X	---	---
PM1-01-W PM1-02W PM1-03W PM2-01W and/or LS1-01W (minimum of 1)	PM1-01 PM1-02 PM1-03 PM2-01 and/or LS1-01	Include 1 BD and 1 MS/MSD	X	X	X	X	---	---
WTR-01W WTR-02W WTR-03W WTR-04W WTR-05W WTR-06W WTR-07W WTR-08W WTR-09W and/or WTR-10W (minimum of 1)	WTR-01 WTR-02 WTR-03 WTR-04 WTR-05 WTR-06 WTR-07 WTR-08 WTR-09 and/or WTR-10	Include 1 BD and 1 MS/MSD	X	X	X	X	---	---
UG-01W	UG-01	---	X	X	X	X	---	---
DG-01W	DG-01	---	X	X	X	X	---	---

Total number of samples, excluding QC samples:
minimum 10

Notes:
* indicates blind duplicate will be collected for respective sample
** Sample collection and analysis as warranted based upon shallow soils investigation results.

In addition to the above, the laboratory will perform the following additional analyses:

- A method blank will be performed with each analytical batch of samples.
- Surrogates will be run on all organic analysis including spikes and blanks.
- A temperature blank will be included with the sample shipment for Pace to verify temperature upon acceptance of the samples.

Table 5-5: Water Matrix
Analytical Method, Containers, Preservation, and Holding Times Requirements

Parameter	Method	Matrix	Container	Preservative	Max Hold Time	Additional Volume for MS/MSD
Aromatic and Halogenated Volatiles	602/8021	Water	40mL vials	pH<2 HCl; ≤6°C; $Na_2S_2O_3$ if Cl present	14 Days (7 Days for aromatics if unpreserved)	No
Base/Neutrals and Acids	625/8270	Water	1L Amber Glass	≤ 6°C; $Na_2S_2O_3$ if Cl present	7/40 Days	Yes
Base/Neutrals, Acids & Pesticides	525.2	Water	1L Amber Glass	pH<2 HCl; < 6°C; Na sulfite if Cl present	14/30 Days	Yes
Diesel Range Organics- TPH DRO	8015C	Water	1L Amber Glass	< 6°C; $Na_2S_2O_3$ if Cl present	7/40 Days	Yes
Dioxins and Furans	1613B	Water	1L Amber Glass	< 6°C; $Na_2S_2O_3$ if Cl present	1 year	No
Dioxins and Furans	8290	Water	1L Amber Glass	< 6°C; $Na_2S_2O_3$ if Cl present	30/45 Days	Yes
Gasoline Range Organics	8260B	Water	40mL vials	pH<2 HCl	14 Days	Yes
Parameter	**Method**	**Matrix**	**Container**	**Preservative**	**Max Hold Time**	**Additional Volume for MS/MSD**
Hexavalent Chromium	7196/218.6/ SM3500Cr-B, C, D	Water	Plastic/Glass	Ammonium Buffer pH 9.3-9.7	28 Days (see note 3)	Yes
Mercury	7470/245.1/ 245.2	Water	Plastic/Glass	pH<2 HNO_3	28 Days	Yes
Metals (GFAA)	7000/200.9	Water	Plastic/Glass	pH<2 HNO_3	180 Days	No
Metals (ICP/ICPMS)	6010B/6020/ 200.7/200.8	Water	Plastic/Glass	pH<2 HNO_3	180 Days	No

Oil and Grease/HEM	1664A/ SM5520B/ 9070	Water	Glass	pH<2 H_2SO_4 or HCl; ≤ 6°C	28 Days	Yes
PCBs and Pesticides, Organochlorine (OC)	608	Water	1L Amber Glass		Pest: 7/40 Days; PCB: 1 Year/1 Year	No
PCBs, Pesticides (OC), Herbicides	508.1	Water	Glass	Na_2S0_3;pH<2 HCL; < 6°C	14/30 Days	No
PCB Congeners	1668A	Water	1L Amber Glass	< 6°C but above freezing	1 Year/1 Year	Yes
PCBs (Aroclors)	8082	Water	1L Amber Glass	< 6°C; $Na_2S_2O_3$ if Cl present	1 Year/1 Year	Yes
Oil Range Organics-ORO		Water	1L Amber Glass	≤ 6°C; $Na_2S_2O_3$ if Cl present	7/40 Days	Yes
PAH (SVOCs)	8270 SIM	Water	1L Amber Glass	< 6°C; $Na_2S_2O_3$ if Cl present	7/40 Days	Yes
Volatiles (see note 1)	8260B	Water	40mL vials	pH<2 HCl; ≤6°C; $Na_2S_2O_3$ if Cl present	14 Days	Yes
Volatiles	624	Water	40mL vials	pH<2 HCl; ≤6°C; $Na_2S_2O_3$ if Cl present	14 Days (7 Days for aromatics if unpreserved)	Yes
Volatiles (see note 2)	524.2	Water	40mL vials (in duplicate)	pH<2 HCl; ≤6°C; Ascorbic acid or $Na_2S_2O_3$ if Cl present[2]	14 Days	Yes

Notes:
1 Acrolein, acrylonitrile, and 2-chloroethylvinyl ether must have the pH value documented to within one pH unit when preservation pH has not been met. Ensure case narrative of the laboratory reports properly identifies when a sample is received at a pH outside of that specified within SW-846.
2 Method 524.2 lists ascorbic acid as the preservative when residual chlorine is suspected, unless gases or Table 7 compounds are NOT compounds of interest and then sodium thiosulfate is the preservative recommended.
3 The holding time for hexavalent chromium may be extended by the addition of the ammonium buffer listed in EPA 218.6 per the 2012 EPA Method Update Rule. Although Method 218.6 stipulates a different pH range (9.0 to 9.5) for buffering, this method requirement was modified in the Method Update Rule to a pH range of 9.3 to 9.7. For non-potable waters, adjust the pH of the sample to 9.3 to 9.7 during collection with the method required ammonium sulfate buffer to extend the holding time to 28 days. For potable waters, addition of the buffer during collection will extend the holding time for 14 days per EPA 218.7 and the EPA UCMR3 program.

5.1.4 Stockpile and IDW Samples

SCS does not anticipate that soil stockpiles will be generated during the proposed field activities. Where possible, soils and materials removed from the subsurface during Site investigation

activities will be replaced into the excavated pit or borehole, followed by repair of the ground surface to match prior conditions. In the event materials replacement is not possible, and where groundwater, purge water, and decontamination fluid has been generated, those materials will be stored and secured in UN/DOT-approved 55-gallon drums, affixed with labels identifying the drum contents, date of generation, and indicating the contents are under analysis for possible disposal. SCS will collect representative samples of the investigation derived waste (IDW) for analysis to facilitate materials profiling and disposal.

The purpose of the proposed sampling is to assess the presence, or possible presence, and concentration of COPC and enable profiling for appropriate waste disposal. The anticipated analytical suite for decontamination and IDW solids and liquids includes:

- CAM 17 metals by EPA Method 6010B/7400;
- VOCs including BTEX compounds and naphthalene by full scan using EPA Method 8260B;
- TPHg by EPA Method 8260B;
- TPHd and TPHmo by EPA Method 8015C with silica gel preparation;
- SVOCs, including PAHs and chlorophenols, by EPA Method 8270;
- DLCs by EPA Method 1613; and/or,
- PCBs by EPA Method 8082.

The analytical suite for decontamination and IDW liquids may be modified based upon the findings of the two phases of assessment work, with approval from the EPA.

To accomplish this, SCS will collect soil and water samples from containment drums for analysis. The sample frequency and analytical suite(s) will be dictated by waste profiling and disposal requirements provided by the waste disposal facility or facilities. For the purpose of this FSP, SCS assumes collection of one sample per each drum of material for discreet sample analysis, unless composite sample analysis is approved by the contracted receiving facility.

The IDW sampling and analysis plan will be developed based upon the requirements of the receiving facility, with the analytical methods, sample containers, preservatives, and holding times following those identified in Tables 5-1 and 5-2 for IDW solids, and Tables 5-3 and 5-4 for IDW liquids.

5.2 ANALYTICAL LABORATORY

Vapor samples will be analyzed by TEG's on-Site mobile laboratory. Soil, grab groundwater and IDW samples will be sent to Pace, a state-certified, fixed-based laboratory. A copy of the Pace Quality Systems Manual is included in the Revised QAPP along with copies of the Pace SOPs for each proposed analytical method. MQOs for work performed by the laboratory can be found in the Pace Quality Systems Manual. The TEG SOPs and QMS may also be found in the Revised QAPP.

6.0 FIELD METHODS AND PROCEDURES

The field methods and procedures to be followed during each phase of subsurface investigation are described in the following sections, as well as in the SOPs provided in the Revised QAPP.

Personnel will wear disposable nitrile gloves and safety glasses while collecting samples and handling sample containers. Detailed information about sample containers, preservation, packaging, and shipping are provided in Section 7.0.

6.1 FIELD EQUIPMENT

6.1.1 List of Equipment Needed

The following equipment and supplies will be used at the Site for sample collection:

- PIDs
- XRF instrument
- Hand auger
- Drive sampler
- Stainless steel or brass sample sleeves with Teflon sheets and plastic end caps
- Shovel
- Single-use disposable trowels
- Glass jars
- UN/DOT 55-gallon drums and appropriate drum labels
- Decontamination kit (buckets, brushes, Alconox, and tap and deionized water)
- Camera
- Walking wheel and measuring tapes
- Scale
- Sharpies/pens
- Site plan
- Daily field log and boring log forms
- Labels
- COC forms
- Ice and Coolers
- Visqueen sheeting
- Paper towels
- PPE, including hard hat, boots, safety glasses, nitrile gloves, and ear plugs
- Sunscreen, sun hat, and water

In case of equipment failure, some supplies will be kept on hand to attempt fixes in the field (e.g., spare batteries, extra lamps and filters for the PID, etc.). In addition, two PIDs will be used at the Site, so in case of failure, at least one PID would still be available.

6.1.2 Calibration of Field Equipment

Initial calibration and maintenance are performed per the manufacturer's recommendations by Enviro Supply, a field supply and equipment provider. SCS will include copies of the calibration and maintenance records in the project field notes and placed in the project file.

The PIDs will be zeroed to ambient air and recalibrated with isobutylene standard gas at the beginning of each day. Documentation of calibration completed in the field will be included in the field notes for the project and placed in the project file.

The XRF will be calibrated according to manufacturer's instructions, a copy of which is provided in Appendix C.

6.2 FIELD SCREENING

Field screening of soil will be conducted with a PID. In addition to the soil samples collected in stainless steel sleeves, a portion of each soil sample will be placed in sealable plastic baggies. The sample will be left to sit in the baggie for at least 10 minutes, and then the PID will be used to take a headspace reading. If any soil samples have headspace readings that exceed ambient air measurements, these samples will also be analyzed for VOCs.

Field screening of building materials for LBP will be conducted with a XRF spectrometer. A portable XRF Spectrometer manufactured by Innov-X Systems, Inc. (Serial No. 11911) will be used to test for lead. The XRF analyzer is equipped with non-isotope x-ray tubes and was manufactured in March of 2012. The analyzer will be calibrated pursuant to the manufacturer's specifications against pre-determined lead paint samples produced by the National Institute of Standards and Testing (NIST). These quality control measures produce a 95% confidence level that XRF readings accurately reflect the actual level of lead in the tested surfaces. By conducting a random sampling of the building's interiors and exteriors, and statistically analyzing the results of the XRF data, the existence and location of lead (paint and glazed components with lead) in the building is identified.

It should be noted, due to interference from the painted substrate, paint thickness, the number of paint applications, etc., XRF analyzers do not provide results that are directly comparable to those from paint chip samples and the laboratory. XRF results are reported in milligrams of lead per square centimeter (mg/cm^2) of paint. Federal Housing and Urban Development (HUD) Guidelines define LBP as positive if: 1) XRF measurements are greater than or equal to 1.0 mg/cm^2, or 2) laboratory results for paint samples are greater than or equal to 5,000 ppm (parts per million) by weight or 0.5% by dry weight.

DOSH guidelines (Title 8, California Code of Regulations or CCR, Section 1532.1), are applicable to occupational exposures to potential lead-containing materials during renovation or demolition activities. DOSH guidelines indicate that coatings or materials containing lead may constitute a health hazard to employees engaged in lead-related construction work. Poisonings may occur if workers or visitors ingest or inhale lead-containing materials or paint.

6.3 SOIL VAPOR SAMPLING

Soil vapor samples will be collected by a C-57 licensed driller, using a hydraulically-driven probe equipped with detachable drive points. Once the drive point has reached the target sample depth, Nylaflow (or equivalent) tubing encased with polyethylene tubing will be inserted though the top of the geo rod and screwed into the bottom. A saturated bentonite seal will be placed around the geo rod at ground surface to prevent ambient air from entering the sample system. A leak test will be performed by spraying 1,1-difluoroethane (tracer gas) on top of the bentonite seal and underneath a container (e.g., 5-gallon polyethylene bucket) prior to purging the geo rod of vapor. After applying the tracer gas, the drive point will be retracted to provide a void space where soil vapor can accumulate. During the sampling of the first soil vapor boring, a purge test will be completed with one (1), three (3), and ten (10) tubing volumes of soil vapor sampled and analyzed. The purge test result yielding the most elevated VOC concentration will dictate the purge volume used for subsequent soil vapor samples.

Soil vapor samples will be collected through ¼-inch Nylaflow (or equivalent) tubing attached to the drive point using a calibrated syringe connected to a sampling port at the top end of the tubing. Immediately following sample collection, the sample containers (i.e., syringes) will be labeled with sample-point identification, date, and time of collection and recorded into a field log book as further described in the Revised QAPP. The collected samples will be immediately submitted to the TEG State of California certified on-Site mobile laboratory where they will be logged onto the COC form and assigned a laboratory identification number.

The samples will be analyzed for the complete suite of VOCs and TPHg by EPA Method 8260B using low method detection limits, as well as 1,1-difluoroethane and atmospheric gases (see Appendix A).

To minimize the potential for cross-contamination between sampling locations, soil vapor sampling equipment will be decontaminated prior to initiating work at each drilling location. The drop off point, nylon 1/8-inch tubing, and sampling syringes are all disposable, and new equipment will be used for each sample. The threaded point holder will be decontaminated by Liquinox (or similar) wash and potable water rinse.

6.4 SOIL SAMPLING

6.4.1 Near Surface Soil Sampling

Near surface soil samples (from sample locations OTF-1 and -2, TPB-01 through -04 as shown on Figure 2) will be collected with a hand auger and drive sampler at depths of 0.5 and 1.5 feet bgs. The drive sampler will be equipped with a 1½-inch diameter stainless steel sampling sleeve.

Upon sample collection, the sample and sleeve will be removed from the drive sampler, the ends will be covered with Teflon sheets and plastic ends caps, and the samples will be labeled. The samples will be placed in sealable plastic bags and placed in an ice-filled cooler pending pick-up by the Pace courier.

6.4.2 Shallow Subsurface Soil Sampling

Subsurface soil samples will be collected from the locations presented on Figure 2 using a backhoe equipped with a narrow bucket, hand auger and drive sampler. SCS field personnel will collect soil samples at depths of 0.5, 1.5, 3.0, and 4.5 feet bgs using a drive sampler equipped with a 1½-inch diameter stainless steel sampling sleeve. The shallow samples will be collected directly from the exposed soil, and the deeper samples will be collected from soils exposed by the backhoe bucket excavation.

Upon sample collection, the sample and sleeve will be removed from the drive sampler, the ends will be covered with Teflon sheets and plastic ends caps, and the samples will be labeled. The samples will be placed in sealable plastic bags and placed in an ice-filled cooler pending pick-up by the Pace courier.

Sample locations are shown on Figure 2 and were selected based on review of Site use history and identified FOPC. If any changes are made to sampling locations, in case of drilling refusal for instance, then the changed location will be measured and mapped on the Site plan. See Section 7.1 for preservation and shipping procedures.

6.4.3 Deeper Subsurface Soil Sampling

At the locations of proposed deeper soil sample collection and budget permitting, Clear Heart Drilling, Inc. (Clear Heart) will first use a hand auger to clear the upper five feet of soils with respect to utilities and collect soil samples for lithologic description. Clear Heart, a C-57 licensed driller will advance soil borings using a CME-75 hollow stem auger drilling rig equipped with a split-spoon sampler lined with stainless steel sleeves. Clear Heart will use a drive hammer or pneumatic air hammer to advance the split sampler in increments of 18 inches. Borings located inside Site buildings will be advanced using a DR-8K limited access drilling rig equipped as described above for sampling.

Undisturbed soil samples will be collected at five foot intervals from depths of between five and 45 feet bgs as part of the second phase of subsurface assessment. The proposed deeper sample locations are presented on Figure 2, subject to modification based upon the results of the first phase of subsurface investigation.

Following each sampler drive interval, Clear Heart will retrieve the sampler, and the SCS field staff will retrieve the sample tubes from the drive sampler, field screen and log the samples, and the cover each end with Teflon sheets and plastic ends caps, label the samples, and place the samples in sealable plastic bags in an ice-filled cooler pending pick-up by the Pace courier. Upon completion of sampling activities, the soil borings will be backfilled with soil cuttings and the ground surface grouted or repaired as needed to match surrounding conditions. See Section 7.1 for preservation and shipping procedures.

6.5 SEDIMENT SAMPLING

Sediment sampling is not proposed for the Site.

6.6 WATER SAMPLING

6.6.1 Surface Water Sampling

Surface water sampling is not proposed for the Site.

6.6.2 Grab Groundwater Sampling

At those locations of deeper soil sample collection, Clear Heart will advance each borehole to approximately five feet beyond the first encountered water, expected to occur at approximately 45 feet bgs. Upon reaching the target depth, Clear Heart will install temporary well screen in the borehole to facilitate groundwater sample collection. Clear Heart and SCS personnel will sound each borehole to gauge the depth to water using a water level indicator capable of measurements to an accuracy of 0.01 feet.

Each borehole and temporary screen will be purged of water to remove sediment laden water using a disposable bailer and/or downhole pump. Following purging, SCS will collect representative water samples using a disposable bailer. The collected water will be decanted into clean laboratory supplied containers according to the intended analytical suite, as presented on Table 5-5. After advancing each soil boring and collecting the soil and grab groundwater samples, Clear Heart will decommission each boring by backfilling with cuttings and cement grout to ground surface.

The collected grab groundwater samples will be labeled, recorded on a COC form and placed in and ice-chilled cooler for preservation during transport to Pace. See Section 7.1 for preservation and shipping procedures.

6.7 STOCKPILE AND IDW SAMPLING

Stockpile sampling is not anticipated for the Site.

However, IDW (other than PPE and used sampling equipment) generated during field activities will be sampled for chemical analysis to facilitate materials profiling and disposal.

IDW will be stored and secured in UN/DOT-approved 55 gallon drums. SCS will collect representative samples of materials stored in each drum. Soil samples will be collected using stainless steel tubes driven into the drum's contents with a slide hammer. Each tube will be retrieved from the drive sampler, screened using a PID, logged, and then covered at each end with Teflon sheets and plastic ends caps, labeled, and placed in sealable plastic bags in an ice-filled cooler pending pick-up by the Pace courier. See Section 7.1 for preservation and shipping procedures.

Drums containing water will be sampled by lowering a disposable bailer into each drum. The collected water will be decanted into clean laboratory supplied containers according to the intended analytical suite, as presented on Table 5-5. The collected water samples will be labeled, recorded on a COC form and placed in and ice-chilled cooler for preservation during transport to the Pace. See Section 7.1 for preservation and shipping procedures.

6.8 DECONTAMINATION PROCEDURES

Decontamination of sampling equipment must be conducted consistently to assure the quality of samples collected. All equipment that comes into contact with potentially contaminated soil will be decontaminated. Disposable equipment intended for one-time use will not be decontaminated but will be packaged for appropriate disposal.

Decontamination will occur prior to and after a piece of equipment is used. All sampling devices used (including hand augers and drive samplers) will be decontaminated according to EPA Region 9 recommended procedures. The following, to be carried out in sequence, is an EPA Region 9 recommended procedure for the decontamination of sampling equipment.

- Non-phosphate detergent and tap water wash, using a brush if necessary
- Tap-water rinse
- Deionized/distilled water rinse (first rinse)
- Deionized/distilled water rinse (second rinse)

Equipment will be decontaminated in a predesignated area on visqueen (plastic sheeting), and clean bulky equipment will be stored in their cases or on visqueen in uncontaminated areas. Cleaned small equipment will be stored in their cases or in plastic bags. Materials to be stored more than a few hours will also be covered. Liquids and solids resulting from the decontamination process will be stored and secured in UN/DOT-approved 55 gallon drums pending characterization sampling, analysis, and disposal profiling.

Table 6-1: Field and Sampling Equipment

Description of Equipment	Material (if applicable)	Dedicated (Yes/No)
Hand auger	NA	No
Drive sampler	NA	No
Stainless steel sleeves	Teflon sheets and end caps	Yes
Shovel	NA	No
PID(s)	NA	No
XRF	NA	No

Notes:
PID = photoionization detector
XRF = X-Ray fluorescence
NA = not applicable

7.0 SAMPLE CONTAINERS, PRESERVATION, PACKAGING, AND SHIPPING

The number and type of sample containers, volumes, and preservatives are listed in Tables 5-2 and 5-4. The containers are pre-cleaned and will not be rinsed prior to sample collection.

7.1 SOIL VAPOR SAMPLES

Soil vapor samples will be collected using clean syringes provided by TEG, a State-certified analytical laboratory. The vapor samples collected using syringes will be transferred immediately from each sample location to the on-Site mobile laboratory, without use of a preservative or special packaging. Each syringe (sample) will be logged at the mobile laboratory with sample identification number, date, and time of collection. Once delivered to the mobile laboratory, the contents of each syringe will be injected into the Gas Chromatograph/Mass Spectrometer (GC/MS) located in the mobile laboratory structure, and the syringe will be placed in a container for later appropriate disposal.

7.2 SOIL SAMPLES

Soil samples will be collected in stainless steel sampling sleeves or glass jars. The ends of sampling sleeves will be covered with Teflon sheets and plastic end caps. Those samples to be analyzed for VOCs will be collected in their sealed Encore samplers (or similar hermetically-sealed sampling devices). Samples for will be placed in an ice-filled cooler and chilled to 4 degrees Celsius immediately upon collection pending pickup by the Pace courier.

7.3 WATER SAMPLES

Grab groundwater samples will be collected using disposable bailers with the contents decanted into laboratory-supplied glassware. Depending upon the intended analysis, the containers may be prepared with preservatives such as acid. Smaller glassware, namely the volatile organic analysis (VOA) vials, will be placed in Ziploc baggies and then placed in an ice-filled cooler and chilled to 4 degrees Celsius immediately upon collection pending pickup by the Pace courier. All other containers will be placed directly into the ice-filled cooler upon collection and pending pickup by a Pace courier.

8.0 DISPOSAL OF IDW

In the process of collecting environmental samples, the sampling team will generate different types of potentially contaminated IDW that may include the following:

- Used PPE
- Disposable sampling equipment
- Decontamination fluids
- Soil cuttings from soil borings
- Water from temporary monitoring wells

The EPA's National Contingency Plan (NCP) requires that management of IDW generated during sampling comply with ARARs to the extent practicable. The FSP follows the *Office of*

Solid Waste and Emergency Response (OSWER) 9345.3-03FS, NTIS: PB92-963353INX Guide Management of Investigation-Derived Wastes (OSWER, 1992), which provides guidance for the management of IDW. In addition, other legal and practical considerations that may affect the handling of IDW will be considered.

Used PPE and disposable equipment will be double bagged and placed in a municipal refuse dumpster. These wastes are not considered hazardous and can be sent to a municipal landfill. Any PPE and disposable equipment that is to be disposed of and can still be reused will be rendered inoperable before disposal in the refuse dumpster.

Decontamination fluids generated from the activities will be stored and secured in UN/DOT 55-gallon drums, which will be properly labeled and left on Site pending receipt of analytical results and evaluation of disposal options. SCS shall perform all necessary testing and submit all necessary documentation to a licensed disposal facility to properly characterize the waste. The waste will be properly labeled as Hazardous Waste or Non-Hazardous Waste following state and federal regulations, as is appropriate, and will be transported according to the applicable federal, state, and local regulations.

Soil cuttings will be used to backfill the hand auger borings. If excess soil cuttings are generated during the subsurface sampling that cannot be put back into the borings, they will be stored and secured in UN/DOT 55-gallon drums and disposed of at a waste disposal facility licensed and approved to accept the waste.

9.0 SAMPLE DOCUMENTATION

9.1 FIELD NOTES

9.1.1 Field Log Forms

Daily field log forms will be used to document field activities. Each day's field log forms will be dated, and the pages will be consecutively numbered. The log forms will be completed in ink and signed by the individual recording the information. Field log forms will be supplemented with detailed boring logs and field-edited Site plans.

At a minimum, the following information will be recorded during the collection of each sample:

- Sample location and description
- Site plan showing sample location and measured distances
- Sampler's name(s)
- Date and time of sample collection
- Designation of sample as composite or grab
- Type of sample (soil, groundwater, or soil vapor)
- Type of sampling equipment used
- Field instrument readings and calibration

- Field observations and details related to analysis or integrity of samples (e.g., weather conditions, noticeable odors, colors, etc.)
- Preliminary sample descriptions (e.g., for soils: clay loam, very wet; for water: clear water with strong ammonia-like odor)
- Sample preservation
- Lot numbers of the sample containers, sample identification numbers and any explanatory codes, and COC form numbers
- Shipping arrangements (overnight air bill number)
- Name(s) of recipient laboratory(ies)

In addition to the sampling information, the following specific information will also be recorded in the field notes for each day of sampling:

- Team members and their responsibilities
- Time of arrival/entry on Site and time of Site departure
- Other personnel on Site
- Summary of any meetings or discussions Agency, contractor, or federal agency personnel
- Deviations from sampling plans, Site safety plans, and FSP procedures
- Changes in personnel and responsibilities with reasons for the changes
- Levels of safety protection
- Calibration readings for any equipment used and equipment model and serial number

9.1.2 Photographs

Photographs will be taken at the sampling locations and at other areas of interest on the Site. They will serve to verify information entered in the daily field log forms. For each photograph taken, the following information will be written in the daily field log forms:

- Time, date, location, and weather conditions
- Description of the subject photographed
- Name of person taking the photograph

9.2 SAMPLE LABELING

All samples collected will be labeled in a clear and precise way for proper identification in the field and for tracking in the laboratory. The samples will have pre-assigned, identifiable, and unique numbers. At a minimum, the sample labels will contain the following information: station location, date of collection, analytical parameter(s), and method of preservation, if any. Every sample will be assigned a unique sample number.

9.3 SAMPLE CHAIN-OF-CUSTODY FORMS AND CUSTODY SEALS

All sample shipments for analyses will be accompanied by a COC record. The COC records will be completed and provided to the laboratories along with the samples collected each day. If multiple coolers are sent to a single laboratory on a single day, form(s) will be completed and sent with the samples for each cooler.

The COC form will identify the contents of each shipment and maintain the custodial integrity of the samples. Generally, a sample is considered to be in someone's custody if it is either in someone's physical possession, in someone's view, locked up, or kept in a secured area that is restricted to authorized personnel. Until the samples are provided to the laboratory, the custody of the samples will be the responsibility SCS. The sampling team leader or designee will sign the COC form in the "relinquished by" box and note the date and time.

A self-adhesive custody seal will be placed across the lid of each sample. For VOC samples, if collected, the seal will be wrapped around the cap. The shipping containers in which samples are stored (usually a sturdy plastic cooler or ice chest) will be sealed with self-adhesive custody seals any time they are not in someone's possession or view before shipping. All custody seals will be signed and dated.

9.4 PACKAGING AND SHIPPING

Soil samples will be placed in a sturdy, ice-filled, plastic cooler pending pickup by the Pace courier. The following outlines the packaging procedures that will be followed for low concentration samples.

1 When ice is used, it will be packed in zip locked, double plastic bags. The drain plug of the cooler will be sealed with fiberglass tape to prevent melting ice from leaking out of the cooler.
2. The bottom of the cooler will be lined with bubble wrap to prevent breakage during shipment.
3. Screw caps of containers will be tested for tightness.
4. Container tops will be secured with clear tape and custody sealed.
5. Sample labels will be affixed onto the containers.
6. All glass sample containers will be wrapped in bubble wrap to prevent breakage..
7. Sample containers will be sealed in heavy duty plastic zip-lock bags, and the sample numbers will be written on the outside of the plastic bags with indelible ink.
8. Samples will be placed in a sturdy cooler(s). The appropriate COC documents will be enclosed in a zip-lock plastic bag affixed to the underside of the cooler lid.
9. Empty space in the cooler will be filled with bubble wrap or Styrofoam peanuts to prevent movement and breakage during shipment.
10. Ice used to cool samples will be double sealed in two zip lock plastic bags and placed on top and around the samples to chill them to the correct temperature.

10.0 QUALITY CONTROL

10.1 FIELD QUALITY CONTROL SAMPLES

10.1.1 Assessment of Field Contamination (Blanks)

10.1.1.1 Equipment Blanks

Equipment rinsate blanks will be collected to evaluate field sampling and decontamination procedures by pouring High Performance Liquid Chromatography (HPLC) organic-free (for organics) or deionized water (for inorganics) over the decontaminated sampling equipment. Equipment blanks will be collected at a frequency of one blank per matrix per day or one blank per matrix per twenty samples, whichever is more frequent. One equipment rinsate blank will be collected per matrix each day that sampling equipment is decontaminated in the field. Equipment rinsate blanks will be obtained by passing water through or over the decontaminated sampling devices used that day (the hand auger and drive sampler).

The equipment rinsate blanks will be preserved, packaged, and sealed in the manner described for the environmental samples. A separate sample number and station number will be assigned to each sample, and it will be submitted blind to the laboratory.

10.1.1.2 Field Blanks

To assess contamination from field conditions during sampling, field blanks will be collected when preservatives are used in the field. A sample of analyte free water will be poured into the container in the field, preserved, and shipped to the laboratory with field samples. Field blanks will be collected at a frequency of one blank per day per matrix or one blank per 20 samples per matrix, whichever is more frequent.

10.1.1.3 Trip Blanks

Trip blanks will be not be collected since equipment, field, and temperature blanks will be collected.

10.1.1.4 Temperature Blanks

For each cooler that is shipped or transported to an analytical laboratory, a 40 milliliter (ml) VOA vial will be included and marked “temperature blank.” This blank will be used by the sample custodian to check the temperature of samples upon receipt.

10.1.1.5 Assessment of Field Variability (Field Duplicate or Co-located Samples)

Duplicate near surface and shallow soil samples will be collected at select sample locations identified on Table 5-2, and analyzed. In addition, duplicate shallow soil samples will also be collected from 3 and 4.5 feet bgs in select locations for possible analysis. These duplicate samples will be held pending the results of the initial analyses of the 0.5- and 1.5-foot samples. If initial analyses contain detectable concentrations of pesticides or elevated concentrations of metals, and it is necessary to analyze the deeper samples (from 3 and 4.5 feet bgs), then a sufficient number of duplicate samples (to maintain a frequency of at least 1 duplicate per every 10 samples) will be analyzed.

Duplicate samples will be preserved, packaged, and sealed in the same manner as other samples of the same matrix. A separate sample number and station number will be assigned to each duplicate, and it will be submitted blind to the laboratory.

10.2 BACKGROUND SAMPLES

No background samples will be collected as part of this assessment.

10.3 FIELD SCREENING, INCLUDING CONFIRMATION SAMPLES AND SPLIT SAMPLES

10.3.1 Field Screening Samples

Not applicable to soil vapor, soil, or groundwater samples. However, paint chip samples will be field screened for LBP.

10.3.2 Confirmation Samples (Field Screening)

Not applicable to soil vapor, soil, or groundwater samples. However, paint chip samples will be field screened for LBP.

10.4 LABORATORY QUALITY CONTROL SAMPLES

A routinely collected soil sample (a full brass or stainless steel sampling sleeve or glass jar) for metals and pesticides analysis contains sufficient volume for both routine sample analysis and additional laboratory QC analyses. Therefore, a separate soil sample for laboratory QC purposes will not be collected.

At a minimum, one laboratory QC sample is required per 14 days or one per 20 samples (including blanks and duplicates), whichever is greater. If the sample event lasts longer than 14 days or involves collection of more than 20 samples per matrix, additional QC samples will be designated.

For this sampling event, samples collected at the following locations will be the designated laboratory QC samples:

- For shallow soil, sample PM1-01-0.5.
- For drum samples, sample D01S.

These sample locations have been selected based on geographic distribution, anticipated order of collection, and/or requirements for the number of duplicate samples collected.

11.0 FIELD VARIANCES

As conditions in the field may vary, it may become necessary to implement minor modifications to sampling as presented in this FSP. When appropriate, the QA Officer will be notified and a verbal approval will be obtained before implementing the changes. Modifications to the approved plan will be documented in the sampling project report.

The only modifications currently anticipated are the potential analysis of samples for additional COPC based on PID readings, staining, odors, etc.

12.0 FIELD HEALTH AND SAFETY PROCEDURES

A Site-Specific HASP for work conducted at the Site and workers within the "exclusion zone" is required pursuant to the regulations found in 29 CFR Part 1910.120, CCR, Title 8, Section 5192, and CCR, Title 22, Section 66261.24 (CCR, 2016a; CCR, 2016b; CFR, 2016c). Therefore, a HASP has been prepared for the proposed work scope and outlines the potential chemical and physical hazards that may be encountered during the sampling activities. The appropriate PPE and emergency response procedures for the anticipated Site-specific chemical and physical hazards are detailed in the HASP including the route to the nearest hospital emergency room. SCS and contracted personnel involved with the proposed field work will be required to read and sign this document in order to encourage proper health and safety practices.

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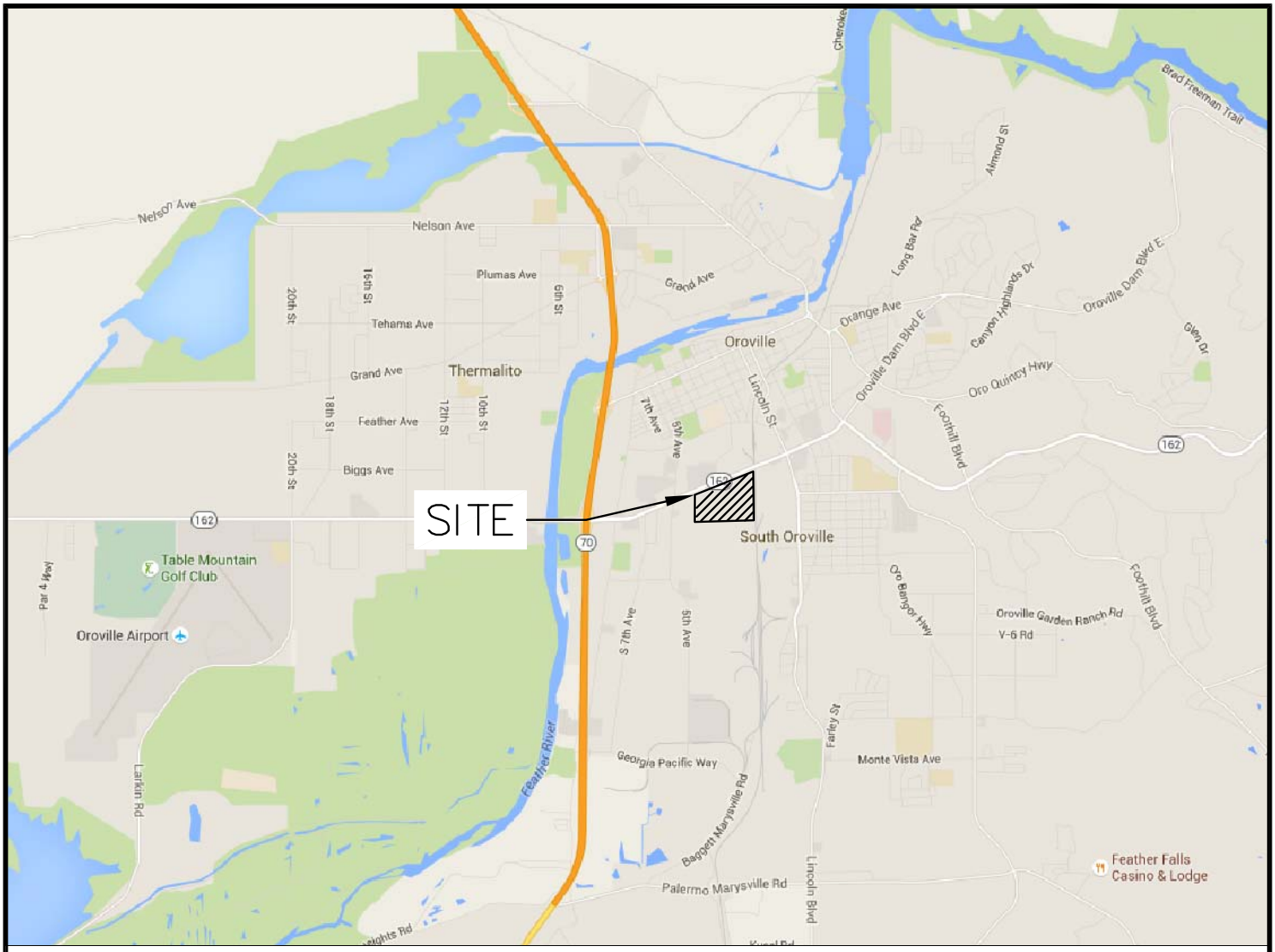
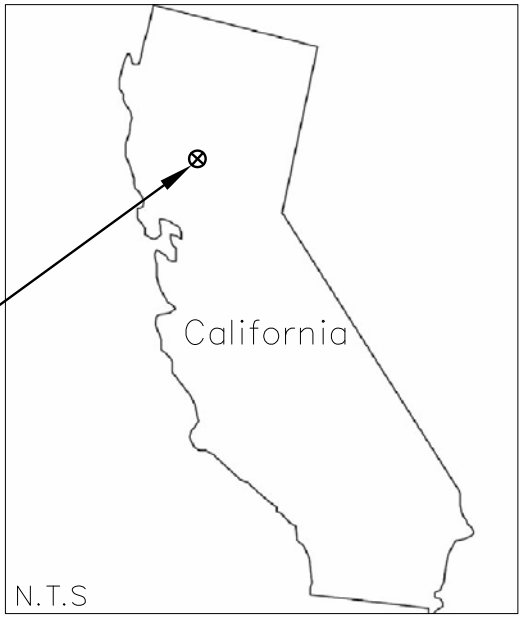
Partner, 2014. Potentially Responsible Party Report, California Water Service Company, Well No. 05-01, 1752 Fort Wayne Street, Oroville, California, 95966, March 3.

FIGURES





SOURCE OF BASE MAP: GOOGLE MAPS

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3843 BRICKWAY BOULEVARD SUITE 208
SANTA ROSA, CALIFORNIA 95403
PH. (707) 546-9461 FAX. (707) 544-5769

PROJ. NO.	DWN. BY:	ACAD FILE:
01215033.00	JH	01215033.00_ESA-5-15
DATE	CHK. BY:	APP. BY:
7/22/15	PAW	J. RITCHIE

SHEET TITLE: SITE LOCATION MAP

PROJECT TITLE: APN: 035-270-016
1245 ORO DAM BOULEVARD
OROVILLE, CALIFORNIA

SCALE: N.T.S

FIGURE NO. 1

SOURCE OF BASE AERIAL RASTER GOOGLE EARTH PRO 5-2-13
ALL LOCATIONS ARE APPROXIMATE; NOT A PRODUCT OF SURVEY

140 0 140 280
(IN FEET)
1" =140 Ft.

TOYOTA/CHEVROLET DEALERSHIP
ORO DAM BOULEVARD
TRI-COUNTY BANK
VEATCH STREET
SITE ENTRANCE/EXIT
RAIL SPUR
TIRE STORAGE
TIRE SHOP
UG-01
OPEN FIELD
A/C PAVEMENT
UNION PACIFIC RAILROAD CORRIDOR
VACANT LAND
OFFICES
FORMER WOOD TRANSFER RAILS
FORMER LOG DECK
(4) ASTS
(1) AST
DG-01

GENERAL SITE FEATURES:

- APPROXIMATE BUTTE COUNTY ASSESSOR'S PARCEL BOUNDARY
- PIT OR SUMP
- CHAIN LINK FENCE

SITE FEATURES AND EXPLANATION:

1. APPROX. 74,000 SQ. FT. WAREHOUSE (FORMER BOX FACILITY/ WOOD TRUSS PLANT)
2. FORMER PLANING MILL
3. VACANT ADMINISTRATIVE OFFICES
4. OPEN STORAGE SHED
5. BUILDING FOUNDATION (FORMER LUMBER STORAGE BUILDING)
6. ENCLOSED SHEDS
7. PG&E TRANSFORMERS
8. SEPTIC TANK(S)
9. FORMER TEEPEE BURNER
10. FORMER OIL HOUSE/STORAGE
11. BUILDING FOUNDATION (FORMER TRUCK REPAIR/MACHINE SHOP)
12. FORMER LUMBER STORAGE SHED
13. FORMER PCP STORAGE
14. APPROX. 10,000 SQ. FT. WAREHOUSE
15. APPROX. 7,500 SQ. FT. WAREHOUSE (VACANT)
16. FUELING AREA/ASTS
17. FORMER UST LOCATIONS (a) AND GAS PUMP (b)
18. ENCLOSED SHED
19. OPEN SHED
20. CONCRETE FOUNDATION
21. FORMER WAREHOUSE (FORMER LUMBER SHED)
22. TRUCK SCALE & SCALE HOUSE
23. BATHROOM
24. LUMBER MILLING MACHINERY
25. SHIPPING CONTAINER
26. MATERIALS STORAGE AREA
27. FORMER MECHANICS SHOP

HREC SAMPLING LOCATIONS:

- SVS = SOIL VAPOR SURVEY
- AST = ABOVEGROUND STORAGE TANK
- UST = UNDERGROUND STORAGE TANK
- MAS = MACHINE SHOP
- MS1 = MECHANIC'S SHOP 1
- MS2 = MECHANIC'S SHOP 2
- PM1 = PLANING MILL 1
- PM2 = PLANING MILL 2
- TPB = TEEPEE BURNER
- OTF = OPEN TRANSFORMER
- WTR = WOOD TREATMENT
- ELS = ELECTRIC SHOP
- OH1 = OIL HOUSE 1
- OH2 = OIL HOUSE 2
- OH3 = OIL HOUSE 3
- LS1 = LUMBER STORAGE 1

APPROXIMATE AREA DESIGNATED FOR POTENTIAL GROUNDWATER SAMPLING

NO.	REVISION	DATE

SHEET TITLE
SITE PLAN WITH PROPOSED SAMPLING LOCATIONS

PROJECT TITLE
APN: 035-270-016
1245 ORO DAM BOULEVARD
OROVILLE, CALIFORNIA

CLIENT:

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3843 BRICKWAY BOULEVARD SUITE 208
SANTA ROSA, CALIFORNIA
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PROJ. NO. 01215033.00 | DWN. BY: JJM | CAD FILE: 01215033.00-F125 | CHK. BY: PAW | APP. BY: J. RITCHIE | GSN. BY: PAW/JJM

DATE: 7/14/16

SCALE: (AS SHOWN)

FIGURE 2

APPENDIX A

RISK BASED SCREENING LEVEL TABLES

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information													Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
8.7E-03	I			4.0E-03	I					1	0.1		Acephate	30560-19-1	6.2E+01	c**	2.6E+02	c*					8.9E+00	c**		2.0E-03	c**	
		2.2E-06	I			9.0E-03	I	V		1		1.1E+05	Acetaldehyde	75-07-0	1.1E+01	c**	4.9E+01	c**	1.3E+00	c**	5.6E+00	c**	2.6E+00	c**		5.2E-04	c**	
				2.0E-02	I					1	0.1		Acetochlor	34256-82-1	1.3E+03	n	1.6E+04	n					3.5E+02	n		2.8E-01	n	
				9.0E-01	I	3.1E+01	A	V		1		1.1E+05	Acetone	67-64-1	6.1E+04	n	6.7E+05	nms	3.2E+04	n	1.4E+05	n	1.4E+04	n		2.9E+00	n	
						2.0E-03	X			1	0.1		Acetone Cyanohydrin	75-86-5	2.8E+06	nm	1.2E+07	nm	2.1E+00	n	8.8E+00	n						
						6.0E-02	I	V		1		1.3E+05	Acetonitrile	75-05-8	8.1E+02	n	3.4E+03	n	6.3E+01	n	2.6E+02	n	1.3E+02	n		2.6E-02	n	
				1.0E-01	I			V		1		2.5E+03	Acetophenone	98-86-2	7.8E+03	ns	1.2E+05	nms					1.9E+03	n		5.8E-01	n	
3.8E+00	C	1.3E-03	C							1	0.1		Acetylaminofluorene, 2-	53-96-3	1.4E-01	c	6.0E-01	c	2.2E-03	c	9.4E-03	c	1.6E-02	c		7.2E-05	c	
				5.0E-04	I	2.0E-05	I	V		1		2.3E+04	Acrolein	107-02-8	1.4E-01	n	6.0E-01	n	2.1E-02	n	8.8E-02	n	4.2E-02	n		8.4E-06	n	
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	1	0.1		Acrylamide	79-06-1	2.4E-01	c	4.6E+00	c	1.0E-02	c	1.2E-01	c	5.0E-02	c		1.1E-05	c	
				5.0E-01	I	1.0E-03	I	V		1		1.1E+05	Acrylic Acid	79-10-7	9.9E+01	n	4.2E+02	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		4.2E-04	n	
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		1		1.1E+04	Acrylonitrile	107-13-1	2.5E-01	c*	1.1E+00	c*	4.1E-02	c*	1.8E-01	c*	5.2E-02	c*		1.1E-05	c*	
						6.0E-03	P			1	0.1		Adiponitrile	111-69-3	8.5E+06	nm	3.6E+07	nm	6.3E+00	n	2.6E+01	n						
5.6E-02	C			1.0E-02	I					1	0.1		Alachlor	15972-60-8	9.7E+00	c*	4.1E+01	c					1.1E+00	c	2.0E+00	8.7E-04	c	1.6E-03
				1.0E-03	I					1	0.1		Aldicarb	116-06-3	6.3E+01	n	8.2E+02	n					2.0E+01	n	3.0E+00	4.9E-03	n	7.5E-04
				1.0E-03	I					1	0.1		Aldicarb Sulfone	1646-88-4	6.3E+01	n	8.2E+02	n					2.0E+01	n	2.0E+00	4.4E-03	n	4.4E-04
										1	0.1		Aldicarb sulfoxide	1646-87-3											4.0E+00			8.8E-04
1.7E+01	I	4.9E-03	I	3.0E-05	I			V		1			Aldrin	309-00-2	3.9E-02	c*	1.8E-01	c	5.7E-04	c	2.5E-03	c	9.2E-04	c		1.5E-04	c	
				5.0E-03	I	1.0E-04	X	V		1		1.1E+05	Allyl Alcohol	107-18-6	3.5E+00	n	1.5E+01	n	1.0E-01	n	4.4E-01	n	2.1E-01	n		4.2E-05	n	
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1		1.4E+03	Allyl Chloride	107-05-1	7.2E-01	c**	3.2E+00	c**	4.7E-01	c**	2.0E+00	c**	7.3E-01	c**		2.3E-04	c**	
				1.0E+00	P	5.0E-03	P			1			Aluminum	7429-90-5	7.7E+04	n	1.1E+06	nm	5.2E+00	n	2.2E+01	n	2.0E+04	n		3.0E+04	n	
				4.0E-04	I					1			Aluminum Phosphide	20859-73-8	3.1E+01	n	4.7E+02	n					8.0E+00	n			n	
				9.0E-03	I					1	0.1		Ametryn	834-12-8	5.7E+02	n	7.4E+03	n					1.5E+02	n		1.6E-01	n	
2.1E+01	C	6.0E-03	C							1	0.1		Aminobiphenyl, 4-	92-67-1	2.6E-02	c	1.1E-01	c	4.7E-04	c	2.0E-03	c	3.0E-03	c		1.5E-05	c	
				8.0E-02	P					1	0.1		Aminophenol, m-	591-27-5	5.1E+03	n	6.6E+04	n					1.6E+03	n		6.1E-01	n	
				2.0E-02	P					1	0.1		Aminophenol, p-	123-30-8	1.3E+03	n	1.6E+04	n					4.0E+02	n		1.5E-01	n	
				2.5E-03	I					1	0.1		Amitraz	33089-61-1	1.6E+02	n	2.1E+03	n					8.2E+00	n		4.2E+00	n	
						1.0E-01	I	V		1			Ammonia	7664-41-7					1.0E+02	n	4.4E+02	n						
				2.0E-01	I					1			Ammonium Sulfamate	7773-06-0	1.6E+04	n	2.3E+05	nm					4.0E+03	n			n	
						3.0E-03	X	V		1		1.4E+04	Amyl Alcohol, tert-	75-85-4	8.2E+01	n	3.4E+02	n	3.1E+00	n	1.3E+01	n	6.3E+00	n		1.3E-03	n	
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I			1	0.1		Aniline	62-53-3	9.5E+01	c**	4.0E+02	c*	1.0E+00	n	4.4E+00	n	1.3E+01	c*		4.6E-03	c*	
4.0E-02	P			2.0E-03	X					1	0.1		Anthraquinone, 9,10-	84-65-1	1.4E+01	c**	5.7E+01	c*					1.4E+00	c*		1.4E-02	c*	
				4.0E-04	I					0.15			Antimony (metallic)	7440-36-0	3.1E+01	n	4.7E+02	n					7.8E+00	n	6.0E+00	3.5E-01	n	2.7E-01
				5.0E-04	H					0.15			Antimony Pentoxide	1314-60-9	3.9E+01	n	5.8E+02	n					9.7E+00	n			n	
				4.0E-04	H					0.15			Antimony Tetroxide	1332-81-6	3.1E+01	n	4.7E+02	n					7.8E+00	n			n	
						2.0E-04	I			0.15			Antimony Trioxide	1309-64-4	2.8E+05	nm	1.2E+06	nm	2.1E-01	n	8.8E-01	n						
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C			1	0.03		Arsenic, Inorganic	7440-38-2	6.8E-01	c*R	3.0E+00	cR	6.5E-04	c*	2.9E-03	c*	5.2E-02	c	1.0E+01	1.5E-03	c	2.9E-01
				3.5E-06	C	5.0E-05	I			1			Arsine	7784-42-1	2.7E-01	n	4.1E+00	n	5.2E-02	n	2.2E-01	n	7.0E-02	n			n	
				5.0E-02	I					1	0.1		Asulam	3337-71-1	3.2E+03	n	4.1E+04	n					1.0E+03	n		2.6E-01	n	
2.3E-01	C			3.5E-02	I					1	0.1		Atrazine	1912-24-9	2.4E+00	c	1.0E+01	c					3.0E-01	c	3.0E+00	2.0E-04	c	1.9E-03
8.8E-01	C	2.5E-04	C							1	0.1		Auramine	492-80-8	6.2E-01	c	2.6E+00	c	1.1E-02	c	4.9E-02	c	6.7E-02	c		6.1E-04	c	
				4.0E-04	I					1	0.1		Avermectin B1	65195-55-3	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.4E+01	n	
				3.0E-03	A	1.0E-02	A			1	0.1		Azinphos-methyl	86-50-0	1.9E+02	n	2.5E+03	n	1.0E+01	n	4.4E+01	n	5.6E+01	n		1.7E-02	n	
1.1E-01	I	3.1E-05	I					V		1			Azobenzene	103-33-3	5.6E+00	c	2.6E+01	c	9.1E-02	c	4.0E-01	c	1.2E-01	c		9.3E-04	c	
				1.0E+00	P	7.0E-06	P			1	0.1		Azodicarbonamide	123-77-3	8.6E+03	n	4.0E+04	n	7.3E-03	n	3.1E-02	n	2.0E+04	n		6.8E+00	n	
				2.0E-01	I	5.0E-04	H			0.07			Barium	7440-39-3	1.5E+04	n	2.2E+05	nm	5.2E-01	n	2.2E+00	n	3.8E+03	n	2.0E+03	1.6E+02	n	8.2E+01
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			Barium Chromate	10294-40-3	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c	
				3.0E-01	I			V		1			Benfluralin	1861-40-1	2.3E+04	n	3.5E+05	nm					1.7E+03	n		5.6E+01	n	
				5.0E-02	I					1	0.1		Benomyl	17804-35-2	3.2E+03	n	4.1E+04	n					9.7E+02	n		8.5E-01	n	
				2.0E-01	I					1	0.1		Bensulfuron-methyl	83055-99-6	1.3E+04	n	1.6E+05	nm					3.9E+03	n		1.0E+00	n	
				3.0E-02	I					1	0.1		Bentazon	25057-89-0	1.9E+03	n	2.5E+04	n					5.7E+02	n		1.2E-01	n	
				1.0E-01	I			V		1		1.2E+03	Benzaldehyde	100-52-7	7.8E+03	ns	1.2E+05	nms					1.9E+03	n		4.3E-01	n	
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		1		1.8E+03	Benzene	71-43-2	1.2E+00	c*	5.1E+00	c*	3.6E-01	c*	1.6E+00	c*	4.6E-01	c*	5.0E+00	2.3E-04	c*	2.6E-03
1.0E-01	X			3.0E-04	X					1	0.1		Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	5.4E+00	c**	2.3E+01	c*					7.8E-01	c**		2.2E-04	c**	
				1.0E-03	P			V		1		1.3E+03	Benzenethiol	108-98-5	7.8E+01	n	1.2E+03	n					1.7E+01	n		1.1E-02	n	
2.3E+02	I	6.7E-02	I	3.0E-03	I				M	1	0.1		Benzidine	92-87-5	5.3E-04	c	1.0E-02	c	1.5E-05	c	1.8E-04	c	1.1E-04	c		2.8E-07	c	
				4.0E+00	I					1	0.1		Benzoic Acid	65-85-0	2.5E+05	nm	3.3E+06	nm					7.5E+04	n		1.8E+01	n	
1.3E+01	I							V		1		3.2E+02	Benzotrichloride	98-07-7	5.3E-02	c	2.5E-01	c					3.0E-03	c		6.6E-06	c	
				1.0E-01	P					1	0.1		Benzyl Alcohol	100-51-6	6.3E+03	n	8.2E+04	n					2.0E+03	n		4.8E-01	n	
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		1		1.5E+03	Benzyl Chloride	100-44-7	1.1E+00	c*	4.8E+00	c*	5.7E-02	c*	2.5E-01	c*	8.9E-02	c*		9.8E-05	c*	
		2.4E-03	I	2.0E-03	I	2.0E-05	I			0.007			Beryllium and compounds	7440-41-7	1.6E+02	n	2.3E+03	n	1.2E-03	c*	5.1E-03	c*	2.5E+01	n	4.0E+00	1.9E+01	n	3.2E+00
				9.0E-03	P					1	0.1		Bifenox	42576-02-3	5.7E+02	n	7.4E+03	n					1.0E+02	n		7.6E-01	n	
				1.5E-02	I					1	0.1		Biphenthrin	82657-04-3	9.5E+02	n	1.2E+04	n					3.0E+02	n		1.4E+03	n	
8.0E-03	I			5.0E-01	I	4.0E-04	X	V		1			Biphenyl, 1,1'-	92-52-4	4.7E+01	n	2.0E+02	n	4.2E-01	n	1.8E+00	n	8.3E-01	n		8.7E-03	n	
				4.0E-02	I			V		1		1.0E+03	Bis(2-chloro-1-methylethyl) ether	108-60-1	3.1E+03	ns	4.7E+04	ns					7.1E+02	n		2.6E-01	n	

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Toxicity and Chemical-specific Information															Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				3.0E-03	P					1	0.1		Bis(2-chloroethoxy)methane	111-91-1	1.9E+02	n	2.5E+03	n					5.9E+01	n		1.3E-02	n		
1.1E+00	I	3.3E-04	I					V		1		5.1E+03	Bis(2-chloroethyl)ether	111-44-4	2.3E-01	c	1.0E+00	c	8.5E-03	c	3.7E-02	c	1.4E-02	c		3.6E-06	c		
2.2E+02	I	6.2E-02	I					V		1		4.2E+03	Bis(chloromethyl)ether	542-88-1	8.3E-05	c	3.6E-04	c	4.5E-05	c	2.0E-04	c	7.2E-05	c		1.7E-08	c		
				5.0E-02	I					1	0.1		Bisphenol A	80-05-7	3.2E+03	n	4.1E+04	n					7.7E+02	n		5.8E+01	n		
				2.0E-01	I	2.0E-02	H			1			Boron And Borates Only	7440-42-8	1.6E+04	n	2.3E+05	nm	2.1E+01	n	8.8E+01	n	4.0E+03	n		1.3E+01	n		
				2.0E+00	P	2.0E-02	P	V		1			Boron Trichloride	10294-34-5	1.6E+05	nm	2.3E+06	nm	2.1E+01	n	8.8E+01	n	4.2E+01	n			n		
				4.0E-02	C	1.3E-02	C	V		1			Boron Trifluoride	7637-07-2	3.1E+03	n	4.7E+04	n	1.4E+01	n	5.7E+01	n	2.6E+01	n			n		
7.0E-01	I			4.0E-03	I					1			Bromate	15541-45-4	9.9E-01	c	4.7E+00	c					1.1E-01	c	1.0E+01	8.5E-04	c	7.7E-02	
2.0E+00	X	6.0E-04	X					V		1		2.4E+03	Bromo-2-chloroethane, 1-	107-04-0	2.6E-02	c	1.1E-01	c	4.7E-03	c	2.0E-02	c	7.4E-03	c		2.1E-06	c		
				8.0E-03	I	6.0E-02	I	V		1		6.8E+02	Bromobenzene	108-86-1	2.9E+02	n	1.8E+03	ns	6.3E+01	n	2.6E+02	n	6.2E+01	n		4.2E-02	n		
						4.0E-02	X	V		1		4.0E+03	Bromochloromethane	74-97-5	1.5E+02	n	6.3E+02	n	4.2E+01	n	1.8E+02	n	8.3E+01	n		2.1E-02	n		
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		1		9.3E+02	Bromodichloromethane	75-27-4	2.9E-01	c	1.3E+00	c	7.6E-02	c	3.3E-01	c	1.3E-01	c	8.0E+01(F)	3.6E-05	c	2.2E-02	
7.9E-03	I	1.1E-06	I	2.0E-02	I			V		1		9.2E+02	Bromoform	75-25-2	1.9E+01	c*	8.6E+01	c	2.6E+00	c	1.1E+01	c	3.3E+00	c	8.0E+01(F)	8.7E-04	c	2.1E-02	
				1.4E-03	I	5.0E-03	I	V		1		3.6E+03	Bromomethane	74-83-9	6.8E+00	n	3.0E+01	n	5.2E+00	n	2.2E+01	n	7.5E+00	n		1.9E-03	n		
				5.0E-03	H			V		1			Bromophos	2104-96-3	3.9E+02	n	5.8E+03	n					3.5E+01	n		1.5E-01	n		
				2.0E-02	I					1	0.1		Bromoxynil	1689-84-5	1.3E+03	n	1.6E+04	n					3.3E+02	n		2.8E-01	n		
				2.0E-02	I			V		1			Bromoxynil Octanoate	1689-99-2	1.6E+03	n	2.3E+04	n					1.4E+02	n		1.2E+00	n		
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1		6.7E+02	Butadiene, 1,3-	106-99-0	5.8E-02	c*	2.6E-01	c*	9.4E-02	c*	4.1E-01	c*	1.8E-02	c		9.9E-06	c		
				1.0E-01	I			V		1		7.6E+03	Butanol, N-	71-36-3	7.8E+03	ns	1.2E+05	nms					2.0E+03	n		4.1E-01	n		
1.9E-03	P			2.0E-01	I					1	0.1		Butyl Benzyl Phthalate	85-68-7	2.9E+02	c*	1.2E+03	c					1.6E+01	c		2.4E-01	c		
				2.0E+00	P	3.0E+01	P	V		1		2.1E+04	Butyl alcohol, sec-	78-92-2	1.3E+05	nms	1.5E+06	nms	3.1E+04	n	1.3E+05	n	2.4E+04	n		5.0E+00	n		
				5.0E-02	I			V		1			Butylate	2008-41-5	3.9E+03	n	5.8E+04	n					4.6E+02	n		4.5E-01	n		
2.0E-04	C	5.7E-08	C							1	0.1		Butylated hydroxyanisole	25013-16-5	2.7E+03	c	1.1E+04	c	4.9E+01	c	2.2E+02	c	1.5E+02	c		2.9E-01	c		
3.6E-03	P			3.0E-01	P					1	0.1		Butylated hydroxytoluene	128-37-0	1.5E+02	c	6.4E+02	c					3.4E+00	c		1.0E-01	c		
				5.0E-02	P			V		1		1.1E+02	Butylbenzene, n-	104-51-8	3.9E+03	ns	5.8E+04	ns					1.0E+03	n		3.2E+00	n		
				1.0E-01	X			V		1		1.5E+02	Butylbenzene, sec-	135-98-8	7.8E+03	ns	1.2E+05	nms					2.0E+03	n		5.9E+00	n		
				1.0E-01	X			V		1		1.8E+02	Butylbenzene, tert-	98-06-6	7.8E+03	ns	1.2E+05	nms					6.9E+02	n		1.6E+00	n		
				2.0E-02	A					1	0.1		Cacodylic Acid	75-60-5	1.3E+03	n	1.6E+04	n					4.0E+02	n		1.1E-01	n		
		1.8E-03	I	1.0E-03	I	1.0E-05	A			0.025	0.001		Cadmium (Diet)	7440-43-9	7.1E+01	n	9.8E+02	n											
		1.8E-03	I	5.0E-04	I	1.0E-05	A			0.05	0.001		Cadmium (Water)	7440-43-9					1.6E-03	c**	6.8E-03	c**	9.2E+00	n	5.0E+00	6.9E-01	n	3.8E-01	
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			Calcium Chromate	13765-19-0	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c		
				5.0E-01	I	2.2E-03	C			1	0.1		Caprolactam	105-60-2	3.1E+04	n	4.0E+05	nm	2.3E+00	n	9.6E+00	n	9.9E+03	n		2.5E+00	n		
1.5E-01	C	4.3E-05	C	2.0E-03	I					1	0.1		Captafol	2425-06-1	3.6E+00	c*	1.5E+01	c	6.5E-02	c	2.9E-01	c	4.0E-01	c*		7.1E-04	c*		
2.3E-03	C	6.6E-07	C	1.3E-01	I					1	0.1		Captan	133-06-2	2.4E+02	c*	1.0E+03	c	4.3E+00	c	1.9E+01	c	3.1E+01	c*		2.2E-02	c*		
				1.0E-01	I					1	0.1		Carbaryl	63-25-2	6.3E+03	n	8.2E+04	n					1.8E+03	n		1.7E+00	n		
				5.0E-03	I					1	0.1		Carbofuran	1563-66-2	3.2E+02	n	4.1E+03	n					9.4E+01	n	4.0E+01	3.7E-02	n	1.6E-02	
				1.0E-01	I	7.0E-01	I	V		1		7.4E+02	Carbon Disulfide	75-15-0	7.7E+02	ns	3.5E+03	ns	7.3E+02	n	3.1E+03	n	8.1E+02	n		2.4E-01	n		
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		1		4.6E+02	Carbon Tetrachloride	56-23-5	6.5E-01	c	2.9E+00	c	4.7E-01	c	2.0E+00	c	4.6E-01	c	5.0E+00	1.8E-04	c	1.9E-03	
						1.0E-01	P	V		1		5.9E+03	Carbonyl Sulfide	463-58-1	6.7E+01	n	2.8E+02	n	1.0E+02	n	4.4E+02	n	2.1E+02	n		5.1E-01	n		
				1.0E-02	I					1	0.1		Carbosulfan	55285-14-8	6.3E+02	n	8.2E+03	n					5.1E+01	n		1.2E+00	n		
				1.0E-01	I					1	0.1		Carboxin	5234-68-4	6.3E+03	n	8.2E+04	n					1.9E+03	n		1.0E+00	n		
						9.0E-04	I			1			Ceric oxide	1306-38-3	1.3E+06	nm	5.4E+06	nm	9.4E-01	n	3.9E+00	n							
				1.0E-01	I			V		1			Chloral Hydrate	302-17-0	7.8E+03	n	1.2E+05	nm					2.0E+03	n		4.0E-01	n		
				1.5E-02	I					1	0.1		Chloramben	133-90-4	9.5E+02	n	1.2E+04	n					2.9E+02	n		7.0E-02	n		
4.0E-01	H									1	0.1		Chloranil	118-75-2	1.3E+00	c	5.7E+00	c					1.8E-01	c		1.5E-04	c		
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V		1	0.04		Chlordane	12789-03-6	1.7E+00	c*	7.5E+00	c*	2.8E-02	c*	1.2E-01	c*	4.5E-02	c*	2.0E+00	3.0E-03	c*	1.4E-01	
1.0E+01	I	4.6E-03	C	3.0E-04	I					1	0.1		Chlordecone (Kepone)	143-50-0	5.4E-02	c	2.3E-01	c	6.1E-04	c	2.7E-03	c	3.5E-03	c		1.2E-04	c		
				7.0E-04	A					1	0.1		Chlorfenvinphos	470-90-6	4.4E+01	n	5.7E+02	n					1.1E+01	n		3.1E-02	n		
				2.0E-02	I					1	0.1		Chlorimuron, Ethyl-	90982-32-4	1.3E+03	n	1.6E+04	n					3.9E+02	n		1.3E-01	n		
				1.0E-01	I	1.5E-04	A	V		1		2.8E+03	Chlorine	7782-50-5	1.8E-01	n	7.8E-01	n	1.5E-01	n	6.4E-01	n	3.0E-01	n		1.4E-04	n		
				3.0E-02	I	2.0E-04	I	V		1			Chlorine Dioxide	10049-04-4	2.3E+03	n	3.4E+04	n	2.1E-01	n	8.8E-01	n	4.2E-01	n			n		
				3.0E-02	I					1			Chlorite (Sodium Salt)	7758-19-2	2.3E+03	n	3.5E+04	n					6.0E+02	n	1.0E+03		n		
						5.0E+01	I	V		1		1.2E+03	Chloro-1,1-difluoroethane, 1-	75-68-3	5.4E+04	ns	2.3E+05	nms	5.2E+04	n	2.2E+05	n	1.0E+05	n		5.2E+01	n		
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		1		7.9E+02	Chloro-1,3-butadiene, 2-	126-99-8	1.0E-02	c	4.4E-02	c	9.4E-03	c	4.1E-02	c	1.9E-02	c		9.8E-06	c		
4.6E-01	H									1	0.1		Chloro-2-methylaniline HCl, 4-	3165-93-3	1.2E+00	c	5.0E+00	c					1.7E-01	c		1.5E-04	c		
1.0E-01	P	7.7E-05	C	3.0E-03	X					1	0.1		Chloro-2-methylaniline, 4-	95-69-2	5.4E+00	c*	2.3E+01	c	3.6E-02	c	1.6E-01	c	7.0E-01	c*		4.0E-04	c*		
2.7E-01	X							V		1		1.2E+04	Chloroacetaldehyde, 2-	107-20-0	2.6E+00	c	1.2E+01	c					2.9E-01	c		5.8E-05	c		
										1	0.1		Chloroacetic Acid	79-11-8											6.0E+01			1.2E-02	
						3.0E-05	I			1	0.1		Chloroacetophenone, 2-	532-27-4	4.3E+04	n	1.8E+05	nm	3.1E-02	n	1.3E-01	n							
2.0E-01	P			4.0E-03	I					1	0.1		Chloroaniline, p-	106-47-8	2.7E+00	c*	1.1E+01	c					3.7E-01	c		1.6E-04	c		
				2.0E-02	I	5.0E-02	P	V		1		7.6E+02	Chlorobenzene	108-90-7	2.8E+02	n	1.3E+03	ns	5.2E+01	n	2.2E+02	n	7.8E+01	n	1.0E+02	5.3E-02	n	6.8E-02	
1.1E-01	C	3.1E-05	C	2.0E-02	I					1	0.1		Chlorobenzilate	510-15-6	4.9E+00	c	2.1E+01	c	9.1E-02	c	4.0E-01	c	3.1E-01	c		1.0E-03	c		
				3.0E-02	X					1	0.1		Chlorobenzoic Acid, p-	74-11-3	1.9E+03	n	2.5E+04	n					5.1E+02	n		1.3E-01	n		
				3.0E-03	P	3.0E-01	P	V		1		2.9E+02	Chlorobenzotrifluoride, 4-	98-56-6	2.1E+02	n	2.5E+03	ns	3.1E+02	n	1.3E+03	n	3.5E+01	n		1.2E-01	n		
				4.0E-02	P			V		1		7.3E+02	Chlorobutane, 1-	109-69-3	3.1E+03	ns	4.7E+04	ns					6.4E+02	n		2.6E-01	n		

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
						5.0E+01	I	V		1		1.7E+03	Chlorodifluoromethane	75-45-6	4.9E+04	ns	2.1E+05	nms	5.2E+04	n	2.2E+05	n	1.0E+05	n		4.3E+01	n		
				2.0E-02	P			V		1		1.1E+05	Chloroethanol, 2-	107-07-3	1.6E+03	n	2.3E+04	n					4.0E+02	n		8.1E-02	n		
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		1		2.5E+03	Chloroform	67-66-3	3.2E-01	c	1.4E+00	c	1.2E-01	c	5.3E-01	c	2.2E-01	c	8.0E+01(F)	6.1E-05	c	2.2E-02	
						9.0E-02	I	V		1		1.3E+03	Chloromethane	74-87-3	1.1E+02	n	4.6E+02	n	9.4E+01	n	3.9E+02	n	1.9E+02	n		4.9E-02	n		
2.4E+00	C	6.9E-04	C					V		1		9.3E+03	Chloromethyl Methyl Ether	107-30-2	2.0E-02	c	8.9E-02	c	4.1E-03	c	1.8E-02	c	6.5E-03	c		1.4E-06	c		
3.0E-01	P			3.0E-03	P	1.0E-05	X			1	0.1		Chloronitrobenzene, o-	88-73-3	1.8E+00	c	7.7E+00	c	1.0E-02	n	4.4E-02	n	2.4E-01	c		2.2E-04	c		
6.3E-03	P			1.0E-03	P	6.0E-04	P			1	0.1		Chloronitrobenzene, p-	100-00-5	6.3E+01	n	3.6E+02	c**	6.3E-01	n	2.6E+00	n	1.1E+01	c**		1.0E-02	c**		
				5.0E-03	I			V		1		2.2E+04	Chlorophenol, 2-	95-57-8	3.9E+02	n	5.8E+03	n					9.1E+01	n		7.4E-02	n		
						4.0E-04	C	V		1		6.2E+02	Chloropicrin	76-06-2	2.0E+00	n	8.2E+00	n	4.2E-01	n	1.8E+00	n	8.3E-01	n		2.5E-04	n		
3.1E-03	C	8.9E-07	C	1.5E-02	I					1	0.1		Chlorothalonil	1897-45-6	1.8E+02	c**	7.4E+02	c*	3.2E+00	c	1.4E+01	c	2.2E+01	c*		5.0E-02	c*		
				2.0E-02	I			V		1		9.1E+02	Chlorotoluene, o-	95-49-8	1.6E+03	ns	2.3E+04	ns					2.4E+02	n		2.3E-01	n		
				2.0E-02	X			V		1		2.5E+02	Chlorotoluene, p-	106-43-4	1.6E+03	ns	2.3E+04	ns					2.5E+02	n		2.4E-01	n		
2.4E+02	C	6.9E-02	C							1	0.1		Chlorozotocin	54749-90-5	2.3E-03	c	9.6E-03	c	4.1E-05	c	1.8E-04	c	3.2E-04	c		7.1E-08	c		
				2.0E-01	I					1	0.1		Chlorpropham	101-21-3	1.3E+04	n	1.6E+05	nm					2.8E+03	n		2.6E+00	n		
				1.0E-03	A					1	0.1		Chlorpyrifos	2921-88-2	6.3E+01	n	8.2E+02	n					8.4E+00	n		1.2E-01	n		
				1.0E-02	H					1	0.1		Chlorpyrifos Methyl	5598-13-0	6.3E+02	n	8.2E+03	n					1.2E+02	n		5.4E-01	n		
				5.0E-02	I					1	0.1		Chlorsulfuron	64902-72-3	3.2E+03	n	4.1E+04	n					9.9E+02	n		8.3E-01	n		
				1.0E-02	I					1	0.1		Chlorthal-dimethyl	1861-32-1	6.3E+02	n	8.2E+03	n					1.2E+02	n		1.5E-01	n		
				8.0E-04	H					1	0.1		Chlorthiophos	60238-56-4	5.1E+01	n	6.6E+02	n					2.8E+00	n		7.3E-02	n		
				1.5E+00	I					0.013			Chromium(III), Insoluble Salts	16065-83-1	1.2E+05	nm	1.8E+06	nm					2.2E+04	n		4.0E+07	n		
5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M	0.025			Chromium(VI)	18540-29-9	3.0E-01	c	6.3E+00	c	1.2E-05	c	1.5E-04	c	3.5E-02	c		6.7E-04	c		
										0.013			Chromium, Total	7440-47-3											1.0E+02			1.8E+05	
				1.3E-02	I					1	0.1		Clofentezine	74115-24-5	8.2E+02	n	1.1E+04	n					2.3E+02	n		1.4E+01	n		
		9.0E-03	P	3.0E-04	P	6.0E-06	P			1			Cobalt	7440-48-4	2.3E+01	n	3.5E+02	n	3.1E-04	c*	1.4E-03	c*	6.0E+00	n		2.7E-01	n		
		6.2E-04	I					V	M	1			Coke Oven Emissions	8007-45-2					1.6E-03	c	2.0E-02	c							
				4.0E-02	H					1			Copper	7440-50-8	3.1E+03	n	4.7E+04	n					8.0E+02	n	1.3E+03	2.8E+01	n	4.6E+01	
				5.0E-02	I	6.0E-01	C			1	0.1		Cresol, m-	108-39-4	3.2E+03	n	4.1E+04	n	6.3E+02	n	2.6E+03	n	9.3E+02	n		7.4E-01	n		
		5.0E-02	I	6.0E-01	C					1	0.1		Cresol, o-	95-48-7	3.2E+03	n	4.1E+04	n	6.3E+02	n	2.6E+03	n	9.3E+02	n		7.5E-01	n		
		1.0E-01	A	6.0E-01	C					1	0.1		Cresol, p-	106-44-5	6.3E+03	n	8.2E+04	n	6.3E+02	n	2.6E+03	n	1.9E+03	n		1.5E+00	n		
		1.0E-01	A							1	0.1		Cresol, p-chloro-m-	59-50-7	6.3E+03	n	8.2E+04	n					1.4E+03	n		1.7E+00	n		
		1.0E-01	A	6.0E-01	C					1	0.1		Cresols	1319-77-3	6.3E+03	n	8.2E+04	n	6.3E+02	n	2.6E+03	n	1.5E+03	n		1.3E+00	n		
1.9E+00	H			1.0E-03	P			V		1		1.7E+04	Crotonaldehyde, trans-	123-73-9	3.7E-01	c	1.7E+00	c					4.0E-02	c		8.2E-06	c		
				1.0E-01	I	4.0E-01	I	V		1		2.7E+02	Cumene	98-82-8	1.9E+03	ns	9.9E+03	ns	4.2E+02	n	1.8E+03	n	4.5E+02	n		7.4E-01	n		
2.2E-01	C	6.3E-05	C							1	0.1		Cupferron	135-20-6	2.5E+00	c	1.0E+01	c	4.5E-02	c	1.9E-01	c	3.5E-01	c		6.1E-04	c		
8.4E-01	H			2.0E-03	H					1	0.1		Cyanazine	21725-46-2	6.5E-01	c	2.7E+00	c					8.8E-02	c		4.1E-05	c		
													Cyanides																	
				1.0E-03	I					1			~Calcium Cyanide	592-01-8	7.8E+01	n	1.2E+03	n					2.0E+01	n			n		
				5.0E-03	I					1			~Copper Cyanide	544-92-3	3.9E+02	n	5.8E+03	n					1.0E+02	n			n		
				6.0E-04	I	8.0E-04	S	V		1		9.7E+05	~Cyanide (CN-)	57-12-5	2.7E+00	n	1.2E+01	n	8.3E-01	n	3.5E+00	n	1.5E+00	n	2.0E+02	1.5E-02	n	2.0E+00	
				1.0E-03	I			V		1			~Cyanogen	460-19-5	7.8E+01	n	1.2E+03	n					2.0E+01	n			n		
				9.0E-02	I			V		1			~Cyanogen Bromide	506-68-3	7.0E+03	n	1.1E+05	nm					1.8E+03	n			n		
				5.0E-02	I			V		1			~Cyanogen Chloride	506-77-4	3.9E+03	n	5.8E+04	n					1.0E+03	n			n		
				6.0E-04	I	8.0E-04	I	V		1		1.0E+07	~Hydrogen Cyanide	74-90-8	2.3E+01	n	1.5E+02	n	8.3E-01	n	3.5E+00	n	1.5E+00	n		1.5E-02	n		
				2.0E-03	I					1			~Potassium Cyanide	151-50-8	1.6E+02	n	2.3E+03	n					4.0E+01	n			n		
				5.0E-03	I					0.04			~Potassium Silver Cyanide	506-61-6	3.9E+02	n	5.8E+03	n					8.2E+01	n			n		
				1.0E-01	I					0.04			~Silver Cyanide	506-64-9	7.8E+03	n	1.2E+05	nm					1.8E+03	n			n		
				1.0E-03	I					1			~Sodium Cyanide	143-33-9	7.8E+01	n	1.2E+03	n					2.0E+01	n	2.0E+02		n		
				2.0E-04	P					1			~Thiocyanates	NA	1.6E+01	n	2.3E+02	n					4.0E+00	n			n		
				2.0E-04	X			V		1			~Thiocyanic Acid	463-56-9	1.6E+01	n	2.3E+02	n					4.0E+00	n			n		
				5.0E-02	I					1			~Zinc Cyanide	557-21-1	3.9E+03	n	5.8E+04	n					1.0E+03	n			n		
						6.0E+00	I	V		1		1.2E+02	Cyclohexane	110-82-7	6.5E+03	ns	2.7E+04	ns	6.3E+03	n	2.6E+04	n	1.3E+04	n		1.3E+01	n		
2.3E-02	H									1	0.1		Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	2.4E+01	c	1.0E+02	c					2.4E+00	c		1.4E-02	c		
				5.0E+00	I	7.0E-01	P	V		1		5.1E+03	Cyclohexanone	108-94-1	2.8E+04	ns	1.3E+05	nms	7.3E+02	n	3.1E+03	n	1.4E+03	n		3.4E-01	n		
				5.0E-03	P	1.0E+00	X	V		1		2.8E+02	Cyclohexene	110-83-8	3.1E+02	ns	3.1E+03	ns	1.0E+03	n	4.4E+03	n	7.0E+01	n		4.6E-02	n		
		2.0E-01	I					V		1		2.9E+05	Cyclohexylamine	108-91-8	1.6E+04	n	2.3E+05	nm					3.8E+03	n		1.0E+00	n		
		2.5E-02	I							1	0.1		Cyfluthrin	68359-37-5	1.6E+03	n	2.1E+04	n					1.2E+02	n		3.1E+01	n		
				5.0E-03	I					1	0.1		Cyhalothrin	68085-85-8	3.2E+02	n	4.1E+03	n					1.0E+02	n		6.8E+01	n		
				1.0E-02	I					1	0.1		Cypermethrin	52315-07-8	6.3E+02	n	8.2E+03	n					2.0E+02	n		3.2E+01	n		
				7.5E-03	I					1	0.1		Cyromazine	66215-27-8	4.7E+02	n	6.2E+03	n					1.5E+02	n		3.8E-02	n		
2.4E-01	I	6.9E-05	C							1	0.1		DDD	72-54-8	2.3E+00	c	9.6E+00	c	4.1E-02	c	1.8E-01	c	3.2E-02	c		7.5E-03	c		
3.4E-01	I	9.7E-05	C					V		1			DDE, p,p'-	72-55-9	2.0E+00	c	9.3E+00	c	2.9E-02	c	1.3E-01	c	4.6E-02	c		1.1E-02	c		
3.4E-01	I	9.7E-05	I	5.0E-04	I					1	0.03		DDT	50-29-3	1.9E+00	c*	8.5E+00	c*	2.9E-02	c	1.3E-01	c	2.3E-01	c*		7.7E-02	c*		
				3.0E-02	I					1	0.1		Dalapon	75-99-0	1.9E+03	n	2.5E+04	n					6.0E+02	n	2.0E+02	1.2E-01	n	4.1E-02	
1.8E-02	C	5.1E-06	C	1.5E-01	I					1	0.1		Daminozide	1596-84-5	3.0E+01	c	1.3E+02	c	5.5E-01	c	2.4E+00	c	4.3E+00	c		9.5E-04	c		
7.0E-04	I			7.0E-03	I					1	0.1		Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	4.4E+02	n	3.3E+03	c**					1.1E+02	c**		6.2E+01	c**		

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				4.0E-05	I					1	0.1		Demeton	8065-48-3	2.5E+00	n	3.3E+01	n					4.2E-01	n			n	
1.2E-03	I			6.0E-01	I					1	0.1		Di(2-ethylhexyl)adipate	103-23-1	4.5E+02	c*	1.9E+03	c					6.5E+01	c	4.0E+02	4.7E+00	c	2.9E+01
6.1E-02	H									1	0.1		Diallate	2303-16-4	8.9E+00	c	3.8E+01	c					5.4E-01	c		8.0E-04	c	
				7.0E-04	A					1	0.1		Diazinon	333-41-5	4.4E+01	n	5.7E+02	n					1.0E+01	n		6.5E-02	n	
				1.0E-02	X			V		1			Dibenzothiophene	132-65-0	7.8E+02	n	1.2E+04	n					6.5E+01	n		1.2E+00	n	
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	1		9.8E+02	Dibromo-3-chloropropane, 1,2-	96-12-8	5.3E-03	c	6.4E-02	c	1.7E-04	c	2.0E-03	c	3.3E-04	c	2.0E-01	1.4E-07	c	8.6E-05
				4.0E-04	X			V		1		1.6E+02	Dibromobenzene, 1,3-	108-36-1	3.1E+01	n	4.7E+02	ns					5.3E+00	n		5.1E-03	n	
				1.0E-02	I			V		1			Dibromobenzene, 1,4-	106-37-6	7.8E+02	n	1.2E+04	n					1.3E+02	n		1.2E-01	n	
8.4E-02	I			2.0E-02	I			V		1		8.0E+02	Dibromochloromethane	124-48-1	8.3E+00	c	3.9E+01	c					8.7E-01	c	8.0E+01(F)	2.3E-04	c	2.1E-02
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1		1.3E+03	Dibromoethane, 1,2-	106-93-4	3.6E-02	c	1.6E-01	c	4.7E-03	c	2.0E-02	c	7.5E-03	c	5.0E-02	2.1E-06	c	1.4E-05
						4.0E-03	X	V		1		2.8E+03	Dibromomethane (Methylene Bromide)	74-95-3	2.4E+01	n	9.9E+01	n	4.2E+00	n	1.8E+01	n	8.3E+00	n		2.1E-03	n	
				3.0E-04	P					1	0.1		Dibutyltin Compounds	NA	1.9E+01	n	2.5E+02	n					6.0E+00	n			n	
				3.0E-02	I					1	0.1		Dicamba	1918-00-9	1.9E+03	n	2.5E+04	n					5.7E+02	n		1.5E-01	n	
		4.2E-03	P					V		1		5.5E+02	Dichloro-2-butene, 1,4-	764-41-0	2.1E-03	c	9.4E-03	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.6E-07	c	
		4.2E-03	P					V		1		5.2E+02	Dichloro-2-butene, cis-1,4-	1476-11-5	7.4E-03	c	3.2E-02	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.2E-07	c	
		4.2E-03	P					V		1		7.6E+02	Dichloro-2-butene, trans-1,4-	110-57-6	7.4E-03	c	3.2E-02	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.2E-07	c	
5.0E-02	I			4.0E-03	I					1	0.1		Dichloroacetic Acid	79-43-6	1.1E+01	c*	4.6E+01	c*					1.5E+00	c*	6.0E+01	3.1E-04	c*	1.2E-02
				9.0E-02	I	2.0E-01	H	V		1		3.8E+02	Dichlorobenzene, 1,2-	95-50-1	1.8E+03	ns	9.3E+03	ns	2.1E+02	n	8.8E+02	n	3.0E+02	n	6.0E+02	3.0E-01	n	5.8E-01
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		1			Dichlorobenzene, 1,4-	106-46-7	2.6E+00	c	1.1E+01	c	2.6E-01	c	1.1E+00	c	4.8E-01	c	7.5E+01	4.6E-04	c	7.2E-02
4.5E-01	I	3.4E-04	C							1	0.1		Dichlorobenzidine, 3,3'-	91-94-1	1.2E+00	c	5.1E+00	c	8.3E-03	c	3.6E-02	c	1.3E-01	c		8.2E-04	c	
				9.0E-03	X					1	0.1		Dichlorobenzophenone, 4,4'-	90-98-2	5.7E+02	n	7.4E+03	n					7.8E+01	n		4.7E-01	n	
				2.0E-01	I	1.0E-01	X	V		1		8.5E+02	Dichlorodifluoromethane	75-71-8	8.7E+01	n	3.7E+02	n	1.0E+02	n	4.4E+02	n	2.0E+02	n		3.0E-01	n	
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1		1.7E+03	Dichloroethane, 1,1-	75-34-3	3.6E+00	c	1.6E+01	c	1.8E+00	c	7.7E+00	c	2.8E+00	c		7.8E-04	c	
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1		3.0E+03	Dichloroethane, 1,2-	107-06-2	4.6E-01	c*	2.0E+00	c*	1.1E-01	c*	4.7E-01	c*	1.7E-01	c*	5.0E+00	4.8E-05	c*	1.4E-03
				5.0E-02	I	2.0E-01	I	V		1		1.2E+03	Dichloroethylene, 1,1-	75-35-4	2.3E+02	n	1.0E+03	n	2.1E+02	n	8.8E+02	n	2.8E+02	n	7.0E+00	1.0E-01	n	2.5E-03
				2.0E-03	I			V		1		2.4E+03	Dichloroethylene, 1,2-cis-	156-59-2	1.6E+02	n	2.3E+03	n					3.6E+01	n	7.0E+01	1.1E-02	n	2.1E-02
				2.0E-02	I			V		1		1.9E+03	Dichloroethylene, 1,2-trans-	156-60-5	1.6E+03	n	2.3E+04	ns					3.6E+02	n	1.0E+02	1.1E-01	n	3.1E-02
				3.0E-03	I					1	0.1		Dichlorophenol, 2,4-	120-83-2	1.9E+02	n	2.5E+03	n					4.6E+01	n		5.4E-02	n	
				1.0E-02	I					1	0.05		Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	7.0E+02	n	9.6E+03	n					1.7E+02	n	7.0E+01	4.5E-02	n	1.8E-02
				8.0E-03	I					1	0.1		Dichlorophenoxybutyric Acid, 4-(2,4-	94-82-6	5.1E+02	n	6.6E+03	n					1.2E+02	n		1.1E-01	n	
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1		1.4E+03	Dichloropropane, 1,2-	78-87-5	1.0E+00	c*	4.4E+00	c*	2.8E-01	c*	1.2E+00	c*	4.4E-01	c*	5.0E+00	1.5E-04	c*	1.7E-03
				2.0E-02	P			V		1		1.5E+03	Dichloropropane, 1,3-	142-28-9	1.6E+03	ns	2.3E+04	ns					3.7E+02	n		1.3E-01	n	
				3.0E-03	I					1	0.1		Dichloropropanol, 2,3-	616-23-9	1.9E+02	n	2.5E+03	n					5.9E+01	n		1.3E-02	n	
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		1		1.6E+03	Dichloropropene, 1,3-	542-75-6	1.8E+00	c*	8.2E+00	c*	7.0E-01	c*	3.1E+00	c*	4.7E-01	c*		1.7E-04	c*	
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1	0.1		Dichlorvos	62-73-7	1.9E+00	c*	7.9E+00	c*	3.4E-02	c*	1.5E-01	c*	2.6E-01	c*		8.1E-05	c*	
				1.0E-04	I					1	0.1		Dicrotophos	141-66-2	6.3E+00	n	8.2E+01	n					2.0E+00	n		4.7E-04	n	
				8.0E-02	P	3.0E-04	X	V		1		2.6E+02	Dicyclopentadiene	77-73-6	1.3E+00	n	5.4E+00	n	3.1E-01	n	1.3E+00	n	6.3E-01	n		2.2E-03	n	
1.6E+01	I	4.6E-03	I	5.0E-05	I					1	0.1		Dieldrin	60-57-1	3.4E-02	c*	1.4E-01	c	6.1E-04	c	2.7E-03	c	1.8E-03	c		7.1E-05	c	
		3.0E-04	C			5.0E-03	I			1	0.1		Diesel Engine Exhaust	NA					9.4E-03	c	4.1E-02	c						
				2.0E-03	P	2.0E-04	P			1	0.1		Diethanolamine	111-42-2	1.3E+02	n	1.6E+03	n	2.1E-01	n	8.8E-01	n	4.0E+01	n		8.1E-03	n	
				3.0E-02	P	1.0E-04	P			1	0.1		Diethylene Glycol Monobutyl Ether	112-34-5	1.9E+03	n	2.4E+04	n	1.0E-01	n	4.4E-01	n	6.0E+02	n		1.3E-01	n	
				6.0E-02	P	3.0E-04	P			1	0.1		Diethylene Glycol Monoethyl Ether	111-90-0	3.8E+03	n	4.8E+04	n	3.1E-01	n	1.3E+00	n	1.2E+03	n		2.4E-01	n	
				1.0E-03	P			V		1		1.1E+05	Diethylformamide	617-84-5	7.8E+01	n	1.2E+03	n					2.0E+01	n		4.1E-03	n	
3.5E+02	C	1.0E-01	C							1	0.1		Diethylstilbestrol	56-53-1	1.6E-03	c	6.6E-03	c	2.8E-05	c	1.2E-04	c	5.1E-05	c		2.8E-05	c	
				8.0E-02	I					1	0.1		Difenzoquat	43222-48-6	5.1E+03	n	6.6E+04	n					1.6E+03	n			n	
				2.0E-02	I					1	0.1		Diflubenzuron	35367-38-5	1.3E+03	n	1.6E+04	n					2.9E+02	n		3.3E-01	n	
						4.0E+01	I	V		1		1.4E+03	Difluoroethane, 1,1-	75-37-6	4.8E+04	ns	2.0E+05	nms	4.2E+04	n	1.8E+05	n	8.3E+04	n		2.8E+01	n	
4.4E-02	C	1.3E-05	C					V		1			Dihydrosafrole	94-58-6	9.9E+00	c	4.5E+01	c	2.2E-01	c	9.4E-01	c	3.0E-01	c		1.9E-04	c	
						7.0E-01	P	V		1		2.3E+03	Diisopropyl Ether	108-20-3	2.2E+03	n	9.4E+03	ns	7.3E+02	n	3.1E+03	n	1.5E+03	n		3.7E-01	n	
				8.0E-02	I			V		1		5.3E+02	Diisopropyl Methylphosphonate	1445-75-6	6.3E+03	ns	9.3E+04	ns					1.6E+03	n		4.5E-01	n	
				2.0E-02	I					1	0.1		Dimethipin	55290-64-7	1.3E+03	n	1.6E+04	n					4.0E+02	n		8.8E-02	n	
				2.0E-04	I					1	0.1		Dimethoate	60-51-5	1.3E+01	n	1.6E+02	n					4.0E+00	n		9.0E-04	n	
1.6E+00	P									1	0.1		Dimethoxybenzidine, 3,3'-	119-90-4	3.4E-01	c	1.4E+00	c					4.7E-02	c		5.8E-05	c	
1.7E-03	P			6.0E-02	P					1	0.1		Dimethyl methylphosphonate	756-79-6	3.2E+02	c*	1.4E+03	c*					4.6E+01	c*		9.6E-03	c*	
4.6E+00	C	1.3E-03	C							1	0.1		Dimethylamino azobenzene [p-]	60-11-7	1.2E-01	c	5.0E-01	c	2.2E-03	c	9.4E-03	c	5.0E-03	c		2.1E-05	c	
5.8E-01	H									1	0.1		Dimethylaniline HCl, 2,4-	21436-96-4	9.4E-01	c	4.0E+00	c					1.3E-01	c		1.2E-04	c	
2.0E-01	P			2.0E-03	X					1	0.1		Dimethylaniline, 2,4-	95-68-1	2.7E+00	c*	1.1E+01	c					3.7E-01	c		2.1E-04	c	
				2.0E-03	I			V		1		8.3E+02	Dimethylaniline, N,N-	121-69-7	1.6E+02	n	2.3E+03	ns					3.5E+01	n		1.3E-02	n	
1.1E+01	P									1	0.1		Dimethylbenzidine, 3,3'-	119-93-7	4.9E-02	c	2.1E-01	c					6.5E-03	c		4.3E-05	c	
				1.0E-01	P	3.0E-02	I	V		1		1.1E+05	Dimethylformamide	68-12-2	2.6E+03	n	1.5E+04	n	3.1E+01	n	1.3E+02	n	6.1E+01	n		1.2E-02	n	
				1.0E-04	X	2.0E-06	X	V		1		1.7E+05	Dimethylhydrazine, 1,1-	57-14-7	5.7E-02	n	2.4E-01	n	2.1E-03	n	8.8E-03	n	4.2E-03	n		9.3E-07	n	
5.5E+02	C	1.6E-01	C					V		1		1.9E+05	Dimethylhydrazine, 1,2-	540-73-8	8.8E-04	c	4.1E-03	c	1.8E-05	c	7.7E-05	c	2.8E-05	c		6.5E-09	c	
				2.0E-02	I					1	0.1		Dimethylphenol, 2,4-	105-67-9	1.3E+03	n	1.6E+04	n					3.6E+02	n		4.2E-01	n	
				6.0E-04	I					1	0.1		Dimethylphenol, 2,6-	576-26-1	3.8E+01	n	4.9E+02	n					1.1E+01	n		1.3E-02	n	
				1.0E-03	I					1	0.1		Dimethylphenol, 3,4-	95-65-8	6.3E+01	n	8.2E+02	n					1.8E+01	n		2.1E-02	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
4.5E-02	C	1.3E-05	C					V		1		1.3E+03	Dimethylvinylchloride	513-37-1	2.0E-01	c	8.9E-01	c	2.2E-01	c	9.4E-01	c	3.3E-01	c		2.4E-04	c	
				8.0E-05	X					1	0.1		Dinitro-o-cresol, 4,6-	534-52-1	5.1E+00	n	6.6E+01	n					1.5E+00	n		2.6E-03	n	
				2.0E-03	I					1	0.1		Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	1.3E+02	n	1.6E+03	n					2.3E+01	n		7.7E-01	n	
				1.0E-04	P					1	0.1		Dinitrobenzene, 1,2-	528-29-0	6.3E+00	n	8.2E+01	n					1.9E+00	n		1.8E-03	n	
				1.0E-04	I					1	0.1		Dinitrobenzene, 1,3-	99-65-0	6.3E+00	n	8.2E+01	n					2.0E+00	n		1.8E-03	n	
				1.0E-04	P					1	0.1		Dinitrobenzene, 1,4-	100-25-4	6.3E+00	n	8.2E+01	n					2.0E+00	n		1.8E-03	n	
				2.0E-03	I					1	0.1		Dinitrophenol, 2,4-	51-28-5	1.3E+02	n	1.6E+03	n					3.9E+01	n		4.4E-02	n	
6.8E-01	I									1	0.1		Dinitrotoluene Mixture, 2,4/2,6-	NA	8.0E-01	c	3.4E+00	c					1.1E-01	c		1.5E-04	c	
3.1E-01	C	8.9E-05	C	2.0E-03	I					1	0.102		Dinitrotoluene, 2,4-	121-14-2	1.7E+00	c*	7.4E+00	c	3.2E-02	c	1.4E-01	c	2.4E-01	c		3.2E-04	c	
1.5E+00	P			3.0E-04	X					1	0.099		Dinitrotoluene, 2,6-	606-20-2	3.6E-01	c*	1.5E+00	c					4.9E-02	c		6.7E-05	c	
				2.0E-03	S					1	0.006		Dinitrotoluene, 2-Amino-4,6-	35572-78-2	1.5E+02	n	2.3E+03	n					3.9E+01	n		3.0E-02	n	
				2.0E-03	S					1	0.009		Dinitrotoluene, 4-Amino-2,6-	19406-51-0	1.5E+02	n	2.3E+03	n					3.9E+01	n		3.0E-02	n	
4.5E-01	X			9.0E-04	X					1	0.1		Dinitrotoluene, Technical grade	25321-14-6	1.2E+00	c*	5.1E+00	c					1.0E-01	c		1.4E-04	c	
				1.0E-03	I					1	0.1		Dinoseb	88-85-7	6.3E+01	n	8.2E+02	n					1.5E+01	n	7.0E+00	1.3E-01	n	6.2E-02
1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		1		1.2E+05	Dioxane, 1,4-	123-91-1	5.3E+00	c	2.4E+01	c	5.6E-01	c*	2.5E+00	c*	4.6E-01	c		9.4E-05	c	
													Dioxins																
6.2E+03	I	1.3E+00	I							1	0.03		~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.0E-04	c	4.7E-04	c	2.2E-06	c	9.4E-06	c	1.3E-05	c		1.7E-05	c	
1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V		1	0.03		~TCDD, 2,3,7,8-	1746-01-6	4.8E-06	c*	2.2E-05	c*	7.4E-08	c	3.2E-07	c	1.2E-07	c	3.0E-05	5.9E-08	c	1.5E-05
				3.0E-02	I					1	0.1		Diphenamid	957-51-7	1.9E+03	n	2.5E+04	n					5.3E+02	n		5.2E+00	n	
				8.0E-04	X					1	0.1		Diphenyl Sulfone	127-63-9	5.1E+01	n	6.6E+02	n					1.5E+01	n		3.6E-02	n	
				2.5E-02	I					1	0.1		Diphenylamine	122-39-4	1.6E+03	n	2.1E+04	n					3.1E+02	n		5.8E-01	n	
8.0E-01	I	2.2E-04	I							1	0.1		Diphenylhydrazine, 1,2-	122-66-7	6.8E-01	c	2.9E+00	c	1.3E-02	c	5.6E-02	c	7.8E-02	c		2.5E-04	c	
				2.2E-03	I					1	0.1		Diquat	85-00-7	1.4E+02	n	1.8E+03	n					4.4E+01	n	2.0E+01	8.3E-01	n	3.7E-01
7.1E+00	C	1.4E-01	C							1	0.1		Direct Black 38	1937-37-7	7.6E-02	c	3.2E-01	c	2.0E-05	c	8.8E-05	c	1.1E-02	c		5.3E+00	c	
7.4E+00	C	1.4E-01	C							1	0.1		Direct Blue 6	2602-46-2	7.3E-02	c	3.1E-01	c	2.0E-05	c	8.8E-05	c	1.1E-02	c		1.7E+01	c	
6.7E+00	C	1.4E-01	C							1	0.1		Direct Brown 95	16071-86-6	8.1E-02	c	3.4E-01	c	2.0E-05	c	8.8E-05	c	1.2E-02	c			c	
				4.0E-05	I					1	0.1		Disulfoton	298-04-4	2.5E+00	n	3.3E+01	n					5.0E-01	n		9.4E-04	n	
				1.0E-02	I			V		1			Dithiane, 1,4-	505-29-3	7.8E+02	n	1.2E+04	n					2.0E+02	n		9.7E-02	n	
				2.0E-03	I					1	0.1		Diuron	330-54-1	1.3E+02	n	1.6E+03	n					3.6E+01	n		1.5E-02	n	
				4.0E-03	I					1	0.1		Dodine	2439-10-3	2.5E+02	n	3.3E+03	n					8.0E+01	n		4.1E-01	n	
				2.5E-02	I			V		1			EPTC	759-94-4	2.0E+03	n	2.9E+04	n					3.8E+02	n		2.0E-01	n	
				6.0E-03	I			V		1			Endosulfan	115-29-7	4.7E+02	n	7.0E+03	n					1.0E+02	n		1.4E+00	n	
				2.0E-02	I					1	0.1		Endothall	145-73-3	1.3E+03	n	1.6E+04	n					3.8E+02	n	1.0E+02	9.1E-02	n	2.4E-02
				3.0E-04	I					1	0.1		Endrin	72-20-8	1.9E+01	n	2.5E+02	n					2.3E+00	n	2.0E+00	9.2E-02	n	8.1E-02
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1		1.1E+04	Epichlorohydrin	106-89-8	1.9E+01	n	8.2E+01	n	1.0E+00	n	4.4E+00	n	2.0E+00	n		4.5E-04	n	
						2.0E-02	I	V		1		1.5E+04	Epoxybutane, 1,2-	106-88-7	1.6E+02	n	6.7E+02	n	2.1E+01	n	8.8E+01	n	4.2E+01	n		9.2E-03	n	
				4.0E-02	P					1	0.1		Ethanol, 2-(2-methoxyethoxy)-	111-77-3	2.5E+03	n	3.3E+04	n					8.0E+02	n		1.6E-01	n	
				5.0E-03	I					1	0.1		Ethephon	16672-87-0	3.2E+02	n	4.1E+03	n					1.0E+02	n		2.1E-02	n	
				5.0E-04	I					1	0.1		Ethion	563-12-2	3.2E+01	n	4.1E+02	n					4.3E+00	n		8.5E-03	n	
				1.0E-01	P	6.0E-02	P	V		1		2.4E+04	Ethoxyethanol Acetate, 2-	111-15-9	2.6E+03	n	1.4E+04	n	6.3E+01	n	2.6E+02	n	1.2E+02	n		2.5E-02	n	
				9.0E-02	P	2.0E-01	I	V		1		1.1E+05	Ethoxyethanol, 2-	110-80-5	5.2E+03	n	4.7E+04	n	2.1E+02	n	8.8E+02	n	3.4E+02	n		6.8E-02	n	
				9.0E-01	I	7.0E-02	P	V		1		1.1E+04	Ethyl Acetate	141-78-6	6.2E+02	n	2.6E+03	n	7.3E+01	n	3.1E+02	n	1.4E+02	n		3.1E-02	n	
				5.0E-03	P	8.0E-03	P	V		1		2.5E+03	Ethyl Acrylate	140-88-5	4.7E+01	n	2.1E+02	n	8.3E+00	n	3.5E+01	n	1.4E+01	n		3.2E-03	n	
						1.0E+01	I	V		1		2.1E+03	Ethyl Chloride (Chloroethane)	75-00-3	1.4E+04	ns	5.7E+04	ns	1.0E+04	n	4.4E+04	n	2.1E+04	n		5.9E+00	n	
				2.0E-01	I			V		1		1.0E+04	Ethyl Ether	60-29-7	1.6E+04	ns	2.3E+05	nms					3.9E+03	n		8.8E-01	n	
						3.0E-01	P	V		1		1.1E+03	Ethyl Methacrylate	97-63-2	1.8E+03	ns	7.6E+03	ns	3.1E+02	n	1.3E+03	n	6.3E+02	n		1.5E-01	n	
				1.0E-05	I					1	0.1		Ethyl-p-nitrophenyl Phosphonate	2104-64-5	6.3E-01	n	8.2E+00	n					8.9E-02	n		2.8E-03	n	
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		1		4.8E+02	Ethylbenzene	100-41-4	5.8E+00	c	2.5E+01	c	1.1E+00	c	4.9E+00	c	1.5E+00	c	7.0E+02	1.7E-03	c	7.8E-01
				7.0E-02	P					1	0.1		Ethylene Cyanohydrin	109-78-4	4.4E+03	n	5.7E+04	n					1.4E+03	n		2.8E-01	n	
				9.0E-02	P			V		1		1.9E+05	Ethylene Diamine	107-15-3	7.0E+03	n	1.1E+05	nm					1.8E+03	n		4.1E-01	n	
				2.0E+00	I	4.0E-01	C			1	0.1		Ethylene Glycol	107-21-1	1.3E+05	nm	1.6E+06	nm	4.2E+02	n	1.8E+03	n	4.0E+04	n		8.1E+00	n	
				1.0E-01	I	1.6E+00	I			1	0.1		Ethylene Glycol Monobutyl Ether	111-76-2	6.3E+03	n	8.2E+04	n	1.7E+03	n	7.0E+03	n	2.0E+03	n		4.1E-01	n	
3.1E-01	C	8.8E-05	C			3.0E-02	C	V		1		1.2E+05	Ethylene Oxide	75-21-8	1.8E-01	c	7.9E-01	c	3.2E-02	c	1.4E-01	c	5.1E-02	c		1.1E-05	c	
4.5E-02	C	1.3E-05	C	8.0E-05	I					1	0.1		Ethylene Thiourea	96-45-7	5.1E+00	n	5.1E+01	c**	2.2E-01	c	9.4E-01	c	1.6E+00	n		3.6E-04	n	
6.5E+01	C	1.9E-02	C					V		1		1.5E+05	Ethyleneimine	151-56-4	2.7E-03	c	1.2E-02	c	1.5E-04	c	6.5E-04	c	2.4E-04	c		5.2E-08	c	
				3.0E+00	I					1	0.1		Ethylphthalyl Ethyl Glycolate	84-72-0	1.9E+05	nm	2.5E+06	nm					5.8E+04	n		1.3E+02	n	
				2.5E-04	I					1	0.1		Fenamiphos	22224-92-6	1.6E+01	n	2.1E+02	n					4.4E+00	n		4.3E-03	n	
				2.5E-02	I					1	0.1		Fenpropathrin	39515-41-8	1.6E+03	n	2.1E+04	n					6.4E+01	n		2.9E+00	n	
				2.5E-02	I					1	0.1		Fenvalerate	51630-58-1	1.6E+03	n	2.1E+04	n					5.0E+02	n		3.2E+02	n	
				1.3E-02	I					1	0.1		Fluometuron	2164-17-2	8.2E+02	n	1.1E+04	n					2.4E+02	n		1.9E-01	n	
				4.0E-02	C	1.3E-02	C			1			Fluoride	16984-48-8	3.1E+03	n	4.7E+04	n	1.4E+01	n	5.7E+01	n	8.0E+02	n		1.2E+02	n	
				6.0E-02	I	1.3E-02	C			1			Fluorine (Soluble Fluoride)	7782-41-4	4.7E+03	n	7.0E+04	n	1.4E+01	n	5.7E+01	n	1.2E+03	n	4.0E+03	1.8E+02	n	6.0E+02
				8.0E-02	I					1	0.1		Fluridone	59756-60-4	5.1E+03	n	6.6E+04	n					1.4E+03	n		1.6E+02	n	
				2.0E-02	I					1	0.1		Flurprimidol	56425-91-3	1.3E+03	n	1.6E+04	n					3.4E+02	n		1.6E+00	n	
				7.0E-04	I					1	0.1		Flusilazole	85509-19-9	4.4E+01	n	5.7E+02	n					1.1E+01	n		1.8E+00	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information																Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				6.0E-02	I					1	0.1		Flutolanil	66332-96-5	3.8E+03	n	4.9E+04	n					9.5E+02	n		5.0E+00	n	
				1.0E-02	I					1	0.1		Fluvalinate	69409-94-5	6.3E+02	n	8.2E+03	n					2.0E+02	n		2.9E+02	n	
3.5E-03	I			1.0E-01	I					1	0.1		Folpet	133-07-3	1.6E+02	c*	6.6E+02	c					2.0E+01	c*		4.7E-03	c*	
1.9E-01	I									1	0.1		Fomesafen	72178-02-0	2.9E+00	c	1.2E+01	c					3.9E-01	c		1.3E-03	c	
				2.0E-03	I					1	0.1		Fonofos	944-22-9	1.3E+02	n	1.6E+03	n					2.4E+01	n		4.7E-02	n	
		1.3E-05	I	2.0E-01	I	9.8E-03	A	V		1		4.2E+04	Formaldehyde	50-00-0	1.7E+01	c*	7.3E+01	c*	2.2E-01	c*	9.4E-01	c*	4.3E-01	c*		8.7E-05	c*	
				9.0E-01	P	3.0E-04	X	V		1		1.1E+05	Formic Acid	64-18-6	2.9E+01	n	1.2E+02	n	3.1E-01	n	1.3E+00	n	6.3E-01	n		1.3E-04	n	
				3.0E+00	I					1	0.1		Fosetyl-AL	39148-24-8	1.9E+05	nm	2.5E+06	nm					6.0E+04	n		7.9E+02	n	
													Furans																
				1.0E-03	X			V		1	0.03		~Dibenzofuran	132-64-9	7.3E+01	n	1.0E+03	n					7.9E+00	n		1.5E-01	n	
				1.0E-03	I			V		1	0.03	6.2E+03	~Furan	110-00-9	7.3E+01	n	1.0E+03	n					1.9E+01	n		7.3E-03	n	
				9.0E-01	I	2.0E+00	I	V		1	0.03	1.7E+05	~Tetrahydrofuran	109-99-9	1.8E+04	n	9.6E+04	n	2.1E+03	n	8.8E+03	n	3.4E+03	n		7.5E-01	n	
3.8E+00	H									1	0.1		Furazolidone	67-45-8	1.4E-01	c	6.0E-01	c					2.0E-02	c		3.9E-05	c	
				3.0E-03	I	5.0E-02	H	V		1		1.0E+04	Furfural	98-01-1	2.1E+02	n	2.6E+03	n	5.2E+01	n	2.2E+02	n	3.8E+01	n		8.1E-03	n	
1.5E+00	C	4.3E-04	C							1	0.1		Furium	531-82-8	3.6E-01	c	1.5E+00	c	6.5E-03	c	2.9E-02	c	5.1E-02	c		6.8E-05	c	
3.0E-02	I	8.6E-06	C							1	0.1		Furmecyclox	60568-05-0	1.8E+01	c	7.7E+01	c	3.3E-01	c	1.4E+00	c	1.1E+00	c		1.2E-03	c	
				4.0E-04	I					1	0.1		Glufosinate, Ammonium	77182-82-2	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.8E-03	n	
						8.0E-05	C			1	0.1		Glutaraldehyde	111-30-8	1.1E+05	nm	4.8E+05	nm	8.3E-02	n	3.5E-01	n						
				4.0E-04	I	1.0E-03	H	V		1		1.1E+05	Glycidyl	765-34-4	2.3E+01	n	2.1E+02	n	1.0E+00	n	4.4E+00	n	1.7E+00	n		3.3E-04	n	
				1.0E-01	I					1	0.1		Glyphosate	1071-83-6	6.3E+03	n	8.2E+04	n					2.0E+03	n	7.0E+02	8.8E+00	n	3.1E+00
				1.0E-02	X			V		1			*Guanidine*	113-00-8	7.8E+02	n	1.2E+04	n					2.0E+02	n		4.5E-02	n	
				2.0E-02	P					1	0.1		Guanidine Chloride	50-01-1	1.3E+03	n	1.6E+04	n					4.0E+02	n			n	
				5.0E-05	I					1	0.1		Haloxyfop, Methyl	69806-40-2	3.2E+00	n	4.1E+01	n					7.6E-01	n		8.4E-03	n	
4.5E+00	I	1.3E-03	I	5.0E-04	I			V		1			Heptachlor	76-44-8	1.3E-01	c	6.3E-01	c	2.2E-03	c	9.4E-03	c	1.4E-03	c	4.0E-01	1.2E-04	c	3.3E-02
9.1E+00	I	2.6E-03	I	1.3E-05	I			V		1			Heptachlor Epoxide	1024-57-3	7.0E-02	c*	3.3E-01	c*	1.1E-03	c	4.7E-03	c	1.4E-03	c*	2.0E-01	2.8E-05	c*	4.1E-03
				2.0E-03	I			V		1			Hexabromobenzene	87-82-1	1.6E+02	n	2.3E+03	n					4.0E+01	n		2.3E-01	n	
				2.0E-04	I					1	0.1		Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	1.3E+01	n	1.6E+02	n					4.0E+00	n			n	
1.6E+00	I	4.6E-04	I	8.0E-04	I			V		1			Hexachlorobenzene	118-74-1	2.1E-01	c	9.6E-01	c	6.1E-03	c	2.7E-02	c	9.8E-03	c	1.0E+00	1.2E-04	c	1.3E-02
7.8E-02	I	2.2E-05	I	1.0E-03	P			V		1		1.7E+01	Hexachlorobutadiene	87-68-3	1.2E+00	c*	5.3E+00	c	1.3E-01	c	5.6E-01	c	1.4E-01	c*		2.7E-04	c*	
6.3E+00	I	1.8E-03	I	8.0E-03	A					1	0.1		Hexachlorocyclohexane, Alpha-	319-84-6	8.6E-02	c	3.6E-01	c	1.6E-03	c	6.8E-03	c	7.2E-03	c		4.2E-05	c	
1.8E+00	I	5.3E-04	I							1	0.1		Hexachlorocyclohexane, Beta-	319-85-7	3.0E-01	c	1.3E+00	c	5.3E-03	c	2.3E-02	c	2.5E-02	c		1.5E-04	c	
1.1E+00	C	3.1E-04	C	3.0E-04	I					1	0.0		Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	5.7E-01	c*	2.5E+00	c	9.1E-03	c	4.0E-02	c	4.2E-02	c*	2.0E-01	2.4E-04	c*	1.2E-03
1.8E+00	I	5.1E-04	I							1	0.1		Hexachlorocyclohexane, Technical	608-73-1	3.0E-01	c	1.3E+00	c	5.5E-03	c	2.4E-02	c	2.5E-02	c		1.5E-04	c	
				6.0E-03	I	2.0E-04	I	V		1		1.6E+01	Hexachlorocyclopentadiene	77-47-4	1.8E+00	n	7.5E+00	n	2.1E-01	n	8.8E-01	n	4.1E-01	n	5.0E+01	1.3E-03	n	1.6E-01
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V		1			Hexachloroethane	67-72-1	1.8E+00	c*	8.0E+00	c*	2.6E-01	c	1.1E+00	c	3.3E-01	c*		2.0E-04	c*	
				3.0E-04	I					1	0.1		Hexachlorophene	70-30-4	1.9E+01	n	2.5E+02	n					6.0E+00	n		8.0E+00	n	
1.1E-01	I			3.0E-03	I					1	0.015		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	6.1E+00	c*	2.8E+01	c					7.0E-01	c*		2.7E-04	c*	
						1.0E-05	I	V		1		3.4E+03	Hexamethylene Diisocyanate, 1,6-	822-06-0	3.1E+00	n	1.3E+01	n	1.0E-02	n	4.4E-02	n	2.1E-02	n		2.1E-04	n	
				4.0E-04	P					1	0.1		Hexamethylphosphoramide	680-31-9	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.8E-03	n	
						7.0E-01	I	V		1		1.4E+02	Hexane, N-	110-54-3	6.1E+02	ns	2.5E+03	ns	7.3E+02	n	3.1E+03	n	1.5E+03	n		1.0E+01	n	
				2.0E+00	P					1	0.1		Hexanedioic Acid	124-04-9	1.3E+05	nm	1.6E+06	nm					4.0E+04	n		9.9E+00	n	
				5.0E-03	I	3.0E-02	I	V		1		3.3E+03	Hexanone, 2-	591-78-6	2.0E+02	n	1.3E+03	n	3.1E+01	n	1.3E+02	n	3.8E+01	n		8.8E-03	n	
				3.3E-02	I					1	0.1		Hexazinone	51235-04-2	2.1E+03	n	2.7E+04	n					6.4E+02	n		3.0E-01	n	
				2.5E-02	I					1	0.1		Hexythiazox	78587-05-0	1.6E+03	n	2.1E+04	n					1.1E+02	n		5.0E-01	n	
				3.0E-04	I					1	0.1		Hydramethylnon	67485-29-4	1.9E+01	n	2.5E+02	n					5.9E+00	n		2.1E+03	n	
3.0E+00	I	4.9E-03	I			3.0E-05	P	V		1			Hydrazine	302-01-2	2.3E-01	c	1.1E+00	c	5.7E-04	c*	2.5E-03	c*	1.1E-03	c*			c*	
3.0E+00	I	4.9E-03	I							1			Hydrazine Sulfate	10034-93-2	2.3E-01	c	1.1E+00	c	5.7E-04	c	2.5E-03	c	2.6E-02	c			c	
						2.0E-02	I	V		1			Hydrogen Chloride	7647-01-0	2.8E+07	nm	1.2E+08	nm	2.1E+01	n	8.8E+01	n	4.2E+01	n			n	
				4.0E-02	C	1.4E-02	C	V		1			Hydrogen Fluoride	7664-39-3	3.1E+03	n	4.7E+04	n	1.5E+01	n	6.1E+01	n	2.8E+01	n			n	
						2.0E-03	I	V		1			Hydrogen Sulfide	7783-06-4	2.8E+06	nm	1.2E+07	nm	2.1E+00	n	8.8E+00	n	4.2E+00	n			n	
6.0E-02	P			4.0E-02	P					1	0.1		Hydroquinone	123-31-9	9.0E+00	c	3.8E+01	c					1.3E+00	c		8.7E-04	c	
				1.3E-02	I					1	0.1		Imazalil	35554-44-0	8.2E+02	n	1.1E+04	n					1.9E+02	n		3.2E+00	n	
				2.5E-01	I					1	0.1		Imazaquin	81335-37-7	1.6E+04	n	2.1E+05	nm					4.9E+03	n		2.4E+01	n	
				2.5E-01	I					1	0.1		Imazethapyr	81335-77-5	1.6E+04	n	2.1E+05	nm					4.7E+03	n		4.1E+00	n	
				1.0E-02	A					1			Iodine	7553-56-2	7.8E+02	n	1.2E+04	n					2.0E+02	n		1.2E+01	n	
				4.0E-02	I					1	0.1		Iprodione	36734-19-7	2.5E+03	n	3.3E+04	n					7.4E+02	n		2.2E-01	n	
				7.0E-01	P					1			Iron	7439-89-6	5.5E+04	n	8.2E+05	nm					1.4E+04	n		3.5E+02	n	
				3.0E-01	I			V		1		1.0E+04	Isobutyl Alcohol	78-83-1	2.3E+04	ns	3.5E+05	nms					5.9E+03	n		1.2E+00	n	
9.5E-04	I			2.0E-01	I	2.0E+00	C			1	0.1		Isophorone	78-59-1	5.7E+02	c*	2.4E+03	c*	2.1E+03	n	8.8E+03	n	7.8E+01	c*		2.6E-02	c*	
				1.5E-02	I			V		1			Isopropalin	33820-53-0	1.2E+03	n	1.8E+04	n					4.0E+01	n		9.2E-01	n	
				2.0E+00	P	2.0E-01	P	V		1		1.1E+05	Isopropanol	67-63-0	5.6E+03	n	2.4E+04	n	2.1E+02	n	8.8E+02	n	4.1E+02	n		8.4E-02	n	
				1.0E-01	I					1	0.1		Isopropyl Methyl Phosphonic Acid	1832-54-8	6.3E+03	n	8.2E+04	n					2.0E+03	n		4.3E-01	n	
				5.0E-02	I					1	0.1		Isoxaben	82558-50-7	3.2E+03	n	4.1E+04	n					7.3E+02	n		2.0E+00	n	
						3.0E-01	A	V		1			JP-7	NA	4.3E+08	nm	1.8E+09	nm	3.1E+02	n	1.3E+03	n	6.3E+02	n			n	
				2.0E-03	I					1	0.1		Lactofen	77501-63-4	1.3E+02	n	1.6E+03	n					2.5E+01	n		1.2E+00	n	

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Toxicity and Chemical-specific Information												Contaminant		Screening Levels													Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
													Lead Compounds															
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			~Lead Chromate	7758-97-6	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c	
8.5E-03	C	1.2E-05	C							1			~Lead Phosphate	7446-27-7	8.2E+01	c	3.8E+02	c	2.3E-01	c	1.0E+00	c	9.1E+00	c			c	
2.8E-01	C	8.0E-05	C							1	0.1		~Lead acetate	301-04-2	1.9E+00	c	8.2E+00	c	3.5E-02	c	1.5E-01	c	2.8E-01	c			c	
										1			~Lead and Compounds	7439-92-1	4.0E+02	L	8.0E+02	L	1.5E-01	L			1.5E+01	L	1.5E+01		L	1.4E+01
8.5E-03	C	1.2E-05	C							1	0.1		~Lead subacetate	1335-32-6	6.4E+01	c	2.7E+02	c	2.3E-01	c	1.0E+00	c	9.2E+00	c			c	
				1.0E-07	I			V		1		2.4E+00	~Tetraethyl Lead	78-00-2	7.8E-03	n	1.2E-01	n					1.3E-03	n		4.7E-06	n	
				5.0E-06	P			V		1		3.8E+02	Lewisite	541-25-3	3.9E-01	n	5.8E+00	n					9.0E-02	n		3.8E-05	n	
				2.0E-03	I					1	0.1		Linuron	330-55-2	1.3E+02	n	1.6E+03	n					3.3E+01	n		2.9E-02	n	
				2.0E-03	P					1			Lithium	7439-93-2	1.6E+02	n	2.3E+03	n					4.0E+01	n		1.2E+01	n	
				5.0E-04	I					1	0.1		MCPA	94-74-6	3.2E+01	n	4.1E+02	n					7.5E+00	n		2.0E-03	n	
				1.0E-02	I					1	0.1		MCPB	94-81-5	6.3E+02	n	8.2E+03	n					1.5E+02	n		5.8E-02	n	
				1.0E-03	I					1	0.1		MCPP	93-65-2	6.3E+01	n	8.2E+02	n					1.6E+01	n		4.7E-03	n	
				2.0E-02	I					1	0.1		Malathion	121-75-5	1.3E+03	n	1.6E+04	n					3.9E+02	n		1.0E-01	n	
				1.0E-01	I	7.0E-04	C			1	0.1		Maleic Anhydride	108-31-6	6.3E+03	n	8.0E+04	n	7.3E-01	n	3.1E+00	n	1.9E+03	n		3.8E-01	n	
				5.0E-01	I					1	0.1		Maleic Hydrazide	123-33-1	3.2E+04	n	4.1E+05	nm					1.0E+04	n		2.1E+00	n	
				1.0E-04	P					1	0.1		Malononitrile	109-77-3	6.3E+00	n	8.2E+01	n					2.0E+00	n		4.1E-04	n	
				3.0E-02	H					1	0.1		Mancozeb	8018-01-7	1.9E+03	n	2.5E+04	n					5.4E+02	n		7.6E-01	n	
				5.0E-03	I					1	0.1		Maneb	12427-38-2	3.2E+02	n	4.1E+03	n					9.8E+01	n		1.4E-01	n	
				1.4E-01	I	5.0E-05	I			1			Manganese (Diet)	7439-96-5														
				2.4E-02	S	5.0E-05	I			0.04			Manganese (Non-diet)	7439-96-5	1.8E+03	n	2.6E+04	n	5.2E-02	n	2.2E-01	n	4.3E+02	n		2.8E+01	n	
				9.0E-05	H					1	0.1		Mephosfolan	950-10-7	5.7E+00	n	7.4E+01	n					1.8E+00	n		2.6E-03	n	
				3.0E-02	I					1	0.1		Mepiquat Chloride	24307-26-4	1.9E+03	n	2.5E+04	n					6.0E+02	n		2.0E-01	n	
													Mercury Compounds															
				3.0E-04	I	3.0E-04	S			0.07			~Mercuric Chloride (and other Mercury salts)	7487-94-7	2.3E+01	n	3.5E+02	n	3.1E-01	n	1.3E+00	n	5.7E+00	n	2.0E+00		n	
						3.0E-04	I	V		1		3.1E+00	~Mercury (elemental)	7439-97-6	1.1E+01	ns	4.6E+01	ns	3.1E-01	n	1.3E+00	n	6.3E-01	n	2.0E+00	3.3E-02	n	1.0E-01
				1.0E-04	I					1			~Methyl Mercury -	22967-92-6	7.8E+00	n	1.2E+02	n					2.0E+00	n				
				8.0E-05	I					1	0.1		~Phenylmercuric Acetate	62-38-4	5.1E+00	n	6.6E+01	n					1.6E+00	n		5.0E-04	n	
				3.0E-05	I			V		1			Merphos	150-50-5	2.3E+00	n	3.5E+01	n					6.0E-01	n		5.9E-02	n	
				3.0E-05	I					1	0.1		Merphos Oxide	78-48-8	1.9E+00	n	2.5E+01	n					8.5E-02	n		4.2E-04	n	
				6.0E-02	I					1	0.1		Metalaxyl	57837-19-1	3.8E+03	n	4.9E+04	n					1.2E+03	n		3.3E-01	n	
				1.0E-04	I	3.0E-02	P	V		1		4.6E+03	Methacrylonitrile	126-98-7	7.5E+00	n	1.0E+02	n	3.1E+01	n	1.3E+02	n	1.9E+00	n		4.3E-04	n	
				5.0E-05	I					1	0.1		Methamidophos	10265-92-6	3.2E+00	n	4.1E+01	n					1.0E+00	n		2.1E-04	n	
				2.0E+00	I	2.0E+01	I	V		1		1.1E+05	Methanol	67-56-1	1.2E+05	nms	1.2E+06	nms	2.1E+04	n	8.8E+04	n	2.0E+04	n		4.1E+00	n	
				1.0E-03	I					1	0.1		Methidathion	950-37-8	6.3E+01	n	8.2E+02	n					1.9E+01	n		4.7E-03	n	
				2.5E-02	I					1	0.1		Methomyl	16752-77-5	1.6E+03	n	2.1E+04	n					5.0E+02	n		1.1E-01	n	
4.9E-02	C	1.4E-05	C							1	0.1		Methoxy-5-nitroaniline, 2-	99-59-2	1.1E+01	c	4.7E+01	c	2.0E-01	c	8.8E-01	c	1.5E+00	c		5.3E-04	c	
				5.0E-03	I					1	0.1		Methoxychlor	72-43-5	3.2E+02	n	4.1E+03	n					3.7E+01	n	4.0E+01	2.0E+00	n	2.2E+00
				8.0E-03	P	1.0E-03	P	V		1		1.2E+05	Methoxyethanol Acetate, 2-	110-49-6	1.1E+02	n	5.1E+02	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		4.2E-04	n	
				5.0E-03	P	2.0E-02	I	V		1		1.1E+05	Methoxyethanol, 2-	109-86-4	3.3E+02	n	3.5E+03	n	2.1E+01	n	8.8E+01	n	2.9E+01	n		5.9E-03	n	
				1.0E+00	X			V		1		2.9E+04	Methyl Acetate	79-20-9	7.8E+04	ns	1.2E+06	nms					2.0E+04	n		4.1E+00	n	
						2.0E-02	P	V		1		6.8E+03	Methyl Acrylate	96-33-3	1.5E+02	n	6.1E+02	n	2.1E+01	n	8.8E+01	n	4.2E+01	n		8.9E-03	n	
				6.0E-01	I	5.0E+00	I	V		1		2.8E+04	Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.7E+04	n	1.9E+05	nms	5.2E+03	n	2.2E+04	n	5.6E+03	n		1.2E+00	n	
		1.0E-03	X	1.0E-03	P	2.0E-05	X	V		1		1.8E+05	Methyl Hydrazine	60-34-4	1.4E-01	c**	6.2E-01	c**	2.8E-03	c**	1.2E-02	c**	5.6E-03	c**		1.3E-06	c**	
						3.0E+00	I	V		1		3.4E+03	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	3.3E+04	ns	1.4E+05	nms	3.1E+03	n	1.3E+04	n	6.3E+03	n		1.4E+00	n	
						1.0E-03	C	V		1		1.0E+04	Methyl Isocyanate	624-83-9	4.6E+00	n	1.9E+01	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		5.9E-04	n	
				1.4E+00	I	7.0E-01	I	V		1		2.4E+03	Methyl Methacrylate	80-62-6	4.4E+03	ns	1.9E+04	ns	7.3E+02	n	3.1E+03	n	1.4E+03	n		3.0E-01	n	
				2.5E-04	I					1	0.1		Methyl Parathion	298-00-0	1.6E+01	n	2.1E+02	n					4.5E+00	n		7.4E-03	n	
				6.0E-02	X					1	0.1		Methyl Phosphonic Acid	993-13-5	3.8E+03	n	4.9E+04	n					1.2E+03	n		2.4E-01	n	
				6.0E-03	H	4.0E-02	H	V		1		3.9E+02	Methyl Styrene (Mixed Isomers)	25013-15-4	3.2E+02	n	2.6E+03	ns	4.2E+01	n	1.8E+02	n	2.3E+01	n		3.8E-02	n	
9.9E-02	C	2.8E-05	C							1	0.1		Methyl methanesulfonate	66-27-3	5.5E+00	c	2.3E+01	c	1.0E-01	c	4.4E-01	c	7.9E-01	c		1.6E-04	c	
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		1		8.9E+03	Methyl tert-Butyl Ether (MTBE)	1634-04-4	4.7E+01	c	2.1E+02	c	1.1E+01	c	4.7E+01	c	1.4E+01	c		3.2E-03	c	
				3.0E-04	X					1	0.1		Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	1.9E+01	n	2.5E+02	n					6.0E+00	n		3.6E-03	n	
9.0E-03	P			2.0E-02	X					1	0.1		Methyl-5-Nitroaniline, 2-	99-55-8	6.0E+01	c*	2.6E+02	c*					8.2E+00	c*		4.6E-03	c*	
8.3E+00	C	2.4E-03	C							1	0.1		Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	6.5E-02	c	2.8E-01	c	1.2E-03	c	5.1E-03	c	9.4E-03	c		3.2E-06	c	
1.3E-01	C	3.7E-05	C							1	0.1		Methylaniline Hydrochloride, 2-	636-21-5	4.2E+00	c	1.8E+01	c	7.6E-02	c	3.3E-01	c	6.0E-01	c		2.6E-04	c	
				1.0E-02	A					1	0.1		Methylarsonic acid	124-58-3	6.3E+02	n	8.2E+03	n					2.0E+02	n			n	
				2.0E-04	X					1	0.1		Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	1.3E+01	n	1.6E+02	n					4.0E+00	n			n	
1.0E-01	X			3.0E-04	X					1	0.1		Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	5.4E+00	c**	2.3E+01	c*					7.8E-01	c**			c**	
2.2E+01	C	6.3E-03	C						M	1	0.1		Methylcholanthrene, 3-	56-49-5	5.5E-03	c	1.0E-01	c	1.6E-04	c	1.9E-03	c	1.1E-03	c		2.2E-03	c	
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1		3.3E+03	Methylene Chloride	75-09-2	5.7E+01	c**	1.0E+03	c**	1.0E+02	c**	1.2E+03	c**	1.1E+01	c**	5.0E+00	2.9E-03	c**	1.3E-03
1.0E-01	P	4.3E-04	C	2.0E-03	P				M	1	0.1		Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.2E+00	c	2.3E+01	c*	2.4E-03	c	2.9E-02	c	1.6E-01	c		1.8E-03	c	
4.6E-02	I	1.3E-05	C							1	0.1		Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.2E+01	c	5.0E+01	c	2.2E-01	c	9.4E-01	c	4.8E-01	c		2.6E-03	c	
1.6E+00	C	4.6E-04	C			2.0E-02	C			1	0.1		Methylenebisbenzenamine, 4,4'-	101-77-9	3.4E-01	c	1.4E+00	c	6.1E-03	c	2.7E-02	c	4.7E-02	c		2.1E-04	c	
						6.0E-04	I			1	0.1		Methylenediphenyl Diisocyanate	101-68-8	8.5E+05	nm	3.6E+06	nm	6.3E-01	n	2.6E+00	n						

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				7.0E-02	H			V		1		5.0E+02	Methylstyrene, Alpha-	98-83-9	5.5E+03	ns	8.2E+04	ns					7.8E+02	n		1.2E+00	n		
				1.5E-01	I					1	0.1		Metolachlor	51218-45-2	9.5E+03	n	1.2E+05	nm					2.7E+03	n		3.2E+00	n		
				2.5E-02	I					1	0.1		Metribuzin	21087-64-9	1.6E+03	n	2.1E+04	n					4.9E+02	n		1.5E-01	n		
				2.5E-01	I					1	0.1		Metsulfuron-methyl	74223-64-6	1.6E+04	n	2.1E+05	nm					4.9E+03	n		1.9E+00	n		
				3.0E+00	P			V		1		3.4E-01	Mineral oils	8012-95-1	2.3E+05	nms	3.5E+06	nms					6.0E+04	n		2.4E+03	n		
1.8E+01	C	5.1E-03	C	2.0E-04	I			V		1			Mirex	2385-85-5	3.6E-02	c	1.7E-01	c	5.5E-04	c	2.4E-03	c	8.8E-04	c		6.3E-04	c		
				2.0E-03	I					1	0.1		Molinate	2212-67-1	1.3E+02	n	1.6E+03	n					3.0E+01	n		1.7E-02	n		
				5.0E-03	I					1			Molybdenum	7439-98-7	3.9E+02	n	5.8E+03	n					1.0E+02	n		2.0E+00	n		
				1.0E-01	I					1			Monochloramine	10599-90-3	7.8E+03	n	1.2E+05	nm					2.0E+03	n	4.0E+03		n		
				2.0E-03	P					1	0.1		Monomethylaniline	100-61-8	1.3E+02	n	1.6E+03	n					3.8E+01	n		1.4E-02	n		
				2.5E-02	I					1	0.1		Myclobutanil	88671-89-0	1.6E+03	n	2.1E+04	n					4.5E+02	n		5.6E+00	n		
				3.0E-04	X					1	0.1		N,N'-Diphenyl-1,4-benzenediamine	74-31-7	1.9E+01	n	2.5E+02	n					3.6E+00	n		3.7E-01	n		
				2.0E-03	I			V		1			Naled	300-76-5	1.6E+02	n	2.3E+03	n					4.0E+01	n		1.8E-02	n		
				3.0E-02	X	1.0E-01	P	V		1			Naphtha, High Flash Aromatic (HFAN)	64742-95-6	2.3E+03	n	3.5E+04	n	1.0E+02	n	4.4E+02	n	1.5E+02	n			n		
1.8E+00	C	0.0E+00	C							1	0.1		Naphthylamine, 2-	91-59-8	3.0E-01	c	1.3E+00	c					3.9E-02	c		2.0E-04	c		
				1.0E-01	I					1	0.1		Napropamide	15299-99-7	6.3E+03	n	8.2E+04	n					1.6E+03	n		1.1E+01	n		
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		Nickel Acetate	373-02-4	6.7E+02	n	8.1E+03	n	1.1E-02	c**	4.7E-02	c**	2.2E+02	n			n		
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		Nickel Carbonate	3333-67-3	6.7E+02	n	8.1E+03	n	1.1E-02	c**	4.7E-02	c**	2.2E+02	n			n		
		2.6E-04	C	1.1E-02	C	1.4E-05	C	V		1			Nickel Carbonyl	13463-39-3	8.2E+02	n	1.1E+04	n	1.1E-02	c**	4.7E-02	c**	2.2E-02	c**			c**		
		2.6E-04	C	1.1E-02	C	1.4E-05	C			0.04			Nickel Hydroxide	12054-48-7	8.2E+02	n	1.1E+04	n	1.1E-02	c**	4.7E-02	c**	2.0E+02	n			n		
		2.6E-04	C	1.1E-02	C	2.0E-05	C			0.04			Nickel Oxide	1313-99-1	8.4E+02	n	1.2E+04	n	1.1E-02	c**	4.7E-02	c**	2.0E+02	n			n		
		2.4E-04	I	1.1E-02	C	1.4E-05	C			0.04			Nickel Refinery Dust	NA	8.2E+02	n	1.1E+04	n	1.2E-02	c**	5.1E-02	c**	2.2E+02	n		3.2E+01	n		
		2.6E-04	C	2.0E-02	I	9.0E-05	A			0.04			Nickel Soluble Salts	7440-02-0	1.5E+03	n	2.2E+04	n	1.1E-02	c**	4.7E-02	c**	3.9E+02	n		2.6E+01	n		
1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C			0.04			Nickel Subsulfide	12035-72-2	4.1E-01	c	1.9E+00	c	5.8E-03	c**	2.6E-02	c**	4.5E-02	c			c		
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		Nickelocene	1271-28-9	6.7E+02	n	8.1E+03	n	1.1E-02	c**	4.7E-02	c**	2.2E+02	n			n		
				1.6E+00	I					1			Nitrate	14797-55-8	1.3E+05	nm	1.9E+06	nm					3.2E+04	n	1.0E+04		n		
										1			Nitrate + Nitrite (as N)	NA											1.0E+04				
				1.0E-01	I					1			Nitrite	14797-65-0	7.8E+03	n	1.2E+05	nm					2.0E+03	n	1.0E+03		n		
				1.0E-02	X	5.0E-05	X			1	0.1		Nitroaniline, 2-	88-74-4	6.3E+02	n	8.0E+03	n	5.2E-02	n	2.2E-01	n	1.9E+02	n		8.0E-02	n		
2.0E-02	P			4.0E-03	P	6.0E-03	P			1	0.1		Nitroaniline, 4-	100-01-6	2.7E+01	c**	1.1E+02	c*	6.3E+00	n	2.6E+01	n	3.8E+00	c*		1.6E-03	c*		
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1		3.1E+03	Nitrobenzene	98-95-3	5.1E+00	c*	2.2E+01	c*	7.0E-02	c	3.1E-01	c	1.4E-01	c*		9.2E-05	c*		
				3.0E+03	P					1	0.1		Nitrocellulose	9004-70-0	1.9E+08	nm	2.5E+09	nm					6.0E+07	n		1.3E+04	n		
				7.0E-02	H					1	0.1		Nitrofurantoin	67-20-9	4.4E+03	n	5.7E+04	n					1.4E+03	n		6.1E-01	n		
1.3E+00	C	3.7E-04	C							1	0.1		Nitrofurazone	59-87-0	4.2E-01	c	1.8E+00	c	7.6E-03	c	3.3E-02	c	6.0E-02	c		5.4E-05	c		
1.7E-02	P			1.0E-04	P					1	0.1		Nitroglycerin	55-63-0	6.3E+00	n	8.2E+01	n					2.0E+00	n		8.5E-04	n		
				1.0E-01	I					1	0.1		Nitroguanidine	556-88-7	6.3E+03	n	8.2E+04	n					2.0E+03	n		4.8E-01	n		
		8.8E-06	P			5.0E-03	P	V		1		1.8E+04	Nitromethane	75-52-5	5.4E+00	c*	2.4E+01	c*	3.2E-01	c*	1.4E+00	c*	6.4E-01	c*		1.4E-04	c*		
		2.7E-03	H			2.0E-02	I	V		1		4.9E+03	Nitropropane, 2-	79-46-9	1.4E-02	c	6.0E-02	c	1.0E-03	c	4.5E-03	c	2.1E-03	c		5.4E-07	c		
2.7E+01	C	7.7E-03	C						M	1	0.1		Nitroso-N-ethylurea, N-	759-73-9	4.5E-03	c	8.5E-02	c	1.3E-04	c	1.6E-03	c	9.2E-04	c		2.2E-07	c		
1.2E+02	C	3.4E-02	C						M	1	0.1		Nitroso-N-methylurea, N-	684-93-5	1.0E-03	c	1.9E-02	c	3.0E-05	c	3.6E-04	c	2.1E-04	c		4.6E-08	c		
5.4E+00	I	1.6E-03	I					V		1			Nitroso-di-N-butylamine, N-	924-16-3	9.9E-02	c	4.6E-01	c	1.8E-03	c	7.7E-03	c	2.7E-03	c		5.5E-06	c		
7.0E+00	I	2.0E-03	C							1	0.1		Nitroso-di-N-propylamine, N-	621-64-7	7.8E-02	c	3.3E-01	c	1.4E-03	c	6.1E-03	c	1.1E-02	c		8.1E-06	c		
2.8E+00	I	8.0E-04	C							1	0.1		Nitrosodiethanolamine, N-	1116-54-7	1.9E-01	c	8.2E-01	c	3.5E-03	c	1.5E-02	c	2.8E-02	c		5.6E-06	c		
1.5E+02	I	4.3E-02	I						M	1	0.1		Nitrosodiethylamine, N-	55-18-5	8.1E-04	c	1.5E-02	c	2.4E-05	c	2.9E-04	c	1.7E-04	c		6.1E-08	c		
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	1		2.4E+05	Nitrosodimethylamine, N-	62-75-9	2.0E-03	c	3.4E-02	c	7.2E-05	c	8.8E-04	c	1.1E-04	c		2.7E-08	c		
4.9E-03	I	2.6E-06	C							1	0.1		Nitrosodiphenylamine, N-	86-30-6	1.1E+02	c	4.7E+02	c	1.1E+00	c	4.7E+00	c	1.2E+01	c		6.7E-02	c		
2.2E+01	I	6.3E-03	C					V		1		1.1E+05	Nitrosomethylethylamine, N-	10595-95-6	2.0E-02	c	9.1E-02	c	4.5E-04	c	1.9E-03	c	7.1E-04	c		2.0E-07	c		
6.7E+00	C	1.9E-03	C							1	0.1		Nitrosomorpholine [N-]	59-89-2	8.1E-02	c	3.4E-01	c	1.5E-03	c	6.5E-03	c	1.2E-02	c		2.8E-06	c		
9.4E+00	C	2.7E-03	C							1	0.1		Nitrosopiperidine [N-]	100-75-4	5.8E-02	c	2.4E-01	c	1.0E-03	c	4.5E-03	c	8.2E-03	c		4.4E-06	c		
2.1E+00	I	6.1E-04	I							1	0.1		Nitrosopyrrolidine, N-	930-55-2	2.6E-01	c	1.1E+00	c	4.6E-03	c	2.0E-02	c	3.7E-02	c		1.4E-05	c		
				1.0E-04	X					1	0.1		Nitrotoluene, m-	99-08-1	6.3E+00	n	8.2E+01	n					1.7E+00	n		1.6E-03	n		
2.2E-01	P			9.0E-04	P			V		1		1.5E+03	Nitrotoluene, o-	88-72-2	3.2E+00	c*	1.5E+01	c*					3.1E-01	c*		3.0E-04	c*		
1.6E-02	P			4.0E-03	P					1	0.1		Nitrotoluene, p-	99-99-0	3.4E+01	c**	1.4E+02	c*					4.3E+00	c*		4.0E-03	c*		
				3.0E-04	X	2.0E-02	P	V		1		6.9E+00	Nonane, n-	111-84-2	1.1E+01	ns	7.2E+01	ns	2.1E+01	n	8.8E+01	n	5.3E+00	n		7.5E-02	n		
				4.0E-02	I					1	0.1		Norflurazon	27314-13-2	2.5E+03	n	3.3E+04	n					7.7E+02	n		5.0E+00	n		
				3.0E-03	I					1	0.1		Octabromodiphenyl Ether	32536-52-0	1.9E+02	n	2.5E+03	n					6.0E+01	n		1.2E+01	n		
				5.0E-02	I					1	0.006		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	3.9E+03	n	5.7E+04	n					1.0E+03	n		1.3E+00	n		
				2.0E-03	H					1	0.1		Octamethylpyrophosphoramide	152-16-9	1.3E+02	n	1.6E+03	n					4.0E+01	n		9.6E-03	n		
				5.0E-02	I					1	0.1		Oryzalin	19044-88-3	3.2E+03	n	4.1E+04	n					8.1E+02	n		1.5E+00	n		
				5.0E-03	I					1	0.1		Oxadiazon	19666-30-9	3.2E+02	n	4.1E+03	n					4.7E+01	n		4.8E-01	n		
				2.5E-02	I					1	0.1		Oxamyl	23135-22-0	1.6E+03	n	2.1E+04	n					5.0E+02	n	2.0E+02	1.1E-01	n	4.4E-02	
				3.0E-03	I					1	0.1		Oxyfluorfen	42874-03-3	1.9E+02	n	2.5E+03	n					3.2E+01	n		2.5E+00	n		
				1.3E-02	I					1	0.1		Paclobutrazol	76738-62-0	8.2E+02	n	1.1E+04	n					2.3E+02	n		4.6E-01	n		
				4.5E-03	I					1	0.1		Paraquat Dichloride	1910-42-5	2.8E+02	n	3.7E+03	n					9.0E+01	n		1.2E+00	n		
				6.0E-03	H					1	0.1		Parathion	56-38-2	3.8E+02	n	4.9E+03	n					8.6E+01	n		4.3E-01	n		

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				5.0E-02	H			V		1			Pebulate	1114-71-2	3.9E+03	n	5.8E+04	n					5.6E+02	n		4.5E-01	n		
				4.0E-02	I					1	0.1		Pendimethalin	40487-42-1	2.5E+03	n	3.3E+04	n					1.8E+02	n		2.1E+00	n		
				2.0E-03	I			V		1		3.1E-01	Pentabromodiphenyl Ether	32534-81-9	1.6E+02	ns	2.3E+03	ns					4.0E+01	n		1.7E+00	n		
				1.0E-04	I					1	0.1		Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	6.3E+00	n	8.2E+01	n					2.0E+00	n		8.7E-02	n		
				8.0E-04	I			V		1			Pentachlorobenzene	608-93-5	6.3E+01	n	9.3E+02	n					3.2E+00	n		2.4E-02	n		
9.0E-02	P							V		1		4.6E+02	Pentachloroethane	76-01-7	7.7E+00	c	3.6E+01	c					6.5E-01	c		3.1E-04	c		
2.6E-01	H			3.0E-03	I			V		1			Pentachloronitrobenzene	82-68-8	2.7E+00	c*	1.3E+01	c					1.2E-01	c		1.5E-03	c		
4.0E-01	I	5.1E-06	C	5.0E-03	I					1	0.25		Pentachlorophenol	87-86-5	1.0E+00	c	4.0E+00	c	5.5E-01	c	2.4E+00	c	4.1E-02	c	1.0E+00	4.2E-04	c	1.0E-02	
4.0E-03	X			2.0E-03	P					1	0.1		Pentaerythritol tetranitrate (PETN)	78-11-5	1.3E+02	n	5.7E+02	c**					1.9E+01	c**		2.8E-02	c**		
						1.0E+00	P	V		1		3.9E+02	Pentane, n-	109-66-0	8.1E+02	ns	3.4E+03	ns	1.0E+03	n	4.4E+03	n	2.1E+03	n		1.0E+01	n		
													Perchlorates																	
				7.0E-04	I					1			~Ammonium Perchlorate	7790-98-9	5.5E+01	n	8.2E+02	n					1.4E+01	n			n		
				7.0E-04	I					1			~Lithium Perchlorate	7791-03-9	5.5E+01	n	8.2E+02	n					1.4E+01	n			n		
				7.0E-04	I					1			~Perchlorate and Perchlorate Salts	14797-73-0	5.5E+01	n	8.2E+02	n					1.4E+01	n	1.5E+01(F)		n		
				7.0E-04	I					1			~Potassium Perchlorate	7778-74-7	5.5E+01	n	8.2E+02	n					1.4E+01	n			n		
				7.0E-04	I					1			~Sodium Perchlorate	7601-89-0	5.5E+01	n	8.2E+02	n					1.4E+01	n			n		
				2.0E-02	P			V		1			Perfluorobutane Sulfonate	375-73-5	1.6E+03	n	2.3E+04	n					3.8E+02	n		2.1E-01	n		
				5.0E-02	I					1	0.1		Permethrin	52645-53-1	3.2E+03	n	4.1E+04	n					1.0E+03	n		2.4E+02	n		
2.2E-03	C	6.3E-07	C							1	0.1		Phenacetin	62-44-2	2.5E+02	c	1.0E+03	c	4.5E+00	c	1.9E+01	c	3.4E+01	c		9.7E-03	c		
				2.5E-01	I					1	0.1		Phenmedipham	13684-63-4	1.6E+04	n	2.1E+05	nm					4.0E+03	n		2.1E+01	n		
				3.0E-01	I	2.0E-01	C			1	0.1		Phenol	108-95-2	1.9E+04	n	2.5E+05	nm	2.1E+02	n	8.8E+02	n	5.8E+03	n		3.3E+00	n		
				5.0E-04	X					1	0.1		Phenothiazine	92-84-2	3.2E+01	n	4.1E+02	n					4.3E+00	n		1.4E-02	n		
				6.0E-03	I					1	0.1		Phenylenediamine, m-	108-45-2	3.8E+02	n	4.9E+03	n					1.2E+02	n		3.2E-02	n		
4.7E-02	H									1	0.1		Phenylenediamine, o-	95-54-5	1.2E+01	c	4.9E+01	c					1.6E+00	c		4.4E-04	c		
				1.9E-01	H					1	0.1		Phenylenediamine, p-	106-50-3	1.2E+04	n	1.6E+05	nm					3.8E+03	n		1.0E+00	n		
1.9E-03	H									1	0.1		Phenylphenol, 2-	90-43-7	2.8E+02	c	1.2E+03	c					3.0E+01	c		4.1E-01	c		
				2.0E-04	H					1	0.1		Phorate	298-02-2	1.3E+01	n	1.6E+02	n					3.0E+00	n		3.4E-03	n		
						3.0E-04	I	V		1		1.6E+03	Phosgene	75-44-5	3.1E-01	n	1.3E+00	n	3.1E-01	n	1.3E+00	n							
				2.0E-02	I					1	0.1		Phosmet	732-11-6	1.3E+03	n	1.6E+04	n					3.7E+02	n		8.2E-02	n		
													Phosphates, Inorganic																	
				4.9E+01	P					1			~Aluminum metaphosphate	13776-88-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Ammonium polyphosphate	68333-79-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Calcium pyrophosphate	7790-76-3	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Diammonium phosphate	7783-28-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Dicalcium phosphate	7757-93-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Dimagnesium phosphate	7782-75-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Dipotassium phosphate	7758-11-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Disodium phosphate	7558-79-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monoaluminum phosphate	13530-50-2	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monoammonium phosphate	7722-76-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monocalcium phosphate	7758-23-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monomagnesium phosphate	7757-86-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monopotassium phosphate	7778-77-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Monosodium phosphate	7558-80-7	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Polyphosphoric acid	8017-16-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Potassium tripolyphosphate	13845-36-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium acid pyrophosphate	7758-16-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium aluminum phosphate (acidic)	7785-88-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium aluminum phosphate (anhydrous)	10279-59-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium aluminum phosphate (tetrahydrate)	10305-76-7	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium hexametaphosphate	10124-56-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium polyphosphate	68915-31-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium trimetaphosphate	7785-84-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Sodium tripolyphosphate	7758-29-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Tetrapotassium phosphate	7320-34-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Tetrasodium pyrophosphate	7722-88-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Tricalcium phosphate	7758-87-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Trimagnesium phosphate	7757-87-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Tripotassium phosphate	7778-53-2	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				4.9E+01	P					1			~Trisodium phosphate	7601-54-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n		
				3.0E-04	I	3.0E-04	I	V		1			Phosphine	7803-51-2	2.3E+01	n	3.5E+02	n	3.1E-01	n	1.3E+00	n	5.7E-01	n			n		
				4.9E+01	P	1.0E-02	I			1			Phosphoric Acid	7664-38-2	3.0E+06	nm	2.9E+07	nm	1.0E+01	n	4.4E+01	n	9.7E+05	n			n		
				2.0E-05	I			V		1			Phosphorus, White	7723-14-0	1.6E+00	n	2.3E+01	n					4.0E-01	n		1.5E-03	n		
													Phthalates																	

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Toxicity and Chemical-specific Information														Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
1.4E-02	I	2.4E-06	C	2.0E-02	I					1	0.1		~Bis(2-ethylhexyl)phthalate	117-81-7	3.9E+01	c*	1.6E+02	c	1.2E+00	c	5.1E+00	c	5.6E+00	c*	6.0E+00	1.3E+00	c*	1.4E+00
				1.0E+00	I					1	0.1		~Butylphthalyl Butylglycolate	85-70-1	6.3E+04	n	8.2E+05	nm					1.3E+04	n		3.1E+02	n		
				1.0E-01	I					1	0.1		~Dibutyl Phthalate	84-74-2	6.3E+03	n	8.2E+04	n					9.0E+02	n		2.3E+00	n		
				8.0E-01	I					1	0.1		~Diethyl Phthalate	84-66-2	5.1E+04	n	6.6E+05	nm					1.5E+04	n		6.1E+00	n		
				1.0E-01	I			V		1			~Dimethylterephthalate	120-61-6	7.8E+03	n	1.2E+05	nm					1.9E+03	n		4.9E-01	n		
				1.0E-02	P					1	0.1		~Octyl Phthalate, di-N-	117-84-0	6.3E+02	n	8.2E+03	n					2.0E+02	n		5.7E+01	n		
				1.0E+00	H					1	0.1		~Phthalic Acid, P-	100-21-0	6.3E+04	n	8.2E+05	nm					1.9E+04	n		6.8E+00	n		
				2.0E+00	I	2.0E-02	C			1	0.1		~Phthalic Anhydride	85-44-9	1.3E+05	nm	1.6E+06	nm	2.1E+01	n	8.8E+01	n	3.9E+04	n		8.5E+00	n		
				7.0E-02	I					1	0.1		Picloram	1918-02-1	4.4E+03	n	5.7E+04	n					1.4E+03	n	5.0E+02	3.8E-01	n	1.4E-01	
				1.0E-04	X					1	0.1		Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	6.3E+00	n	8.2E+01	n					2.0E+00	n		1.3E-03	n		
				9.0E-04	X					1	0.1		Picric Acid (2,4,6-Trinitrophenol)	88-89-1	5.7E+01	n	7.4E+02	n					1.8E+01	n		8.4E-02	n		
				1.0E-02	I					1	0.1		Pirimiphos, Methyl	29232-93-7	6.3E+02	n	8.2E+03	n					1.2E+02	n		1.2E-01	n		
3.0E+01	C	8.6E-03	C	7.0E-06	H					1	0.1		Polybrominated Biphenyls	59536-65-1	1.8E-02	c*	7.7E-02	c*	3.3E-04	c	1.4E-03	c	2.6E-03	c*			c*		
													Polychlorinated Biphenyls (PCBs)																	
7.0E-02	S	2.0E-05	S	7.0E-05	I			V		1	0.14		~Aroclor 1016	12674-11-2	4.1E+00	n	2.7E+01	c**	1.4E-01	c	6.1E-01	c	2.2E-01	c**		2.1E-02	c**		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1221	11104-28-2	2.0E-01	c	8.3E-01	c	4.9E-03	c	2.1E-02	c	4.7E-03	c		8.0E-05	c		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1232	11141-16-5	1.7E-01	c	7.2E-01	c	4.9E-03	c	2.1E-02	c	4.7E-03	c		8.0E-05	c		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1242	53469-21-9	2.3E-01	c	9.5E-01	c	4.9E-03	c	2.1E-02	c	7.8E-03	c		1.2E-03	c		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1248	12672-29-6	2.3E-01	c	9.5E-01	c	4.9E-03	c	2.1E-02	c	7.8E-03	c		1.2E-03	c		
2.0E+00	S	5.7E-04	S	2.0E-05	I			V		1	0.14		~Aroclor 1254	11097-69-1	2.4E-01	c**	9.7E-01	c*	4.9E-03	c	2.1E-02	c	7.8E-03	c*		2.0E-03	c*		
2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1260	11096-82-5	2.4E-01	c	9.9E-01	c	4.9E-03	c	2.1E-02	c	7.8E-03	c		5.5E-03	c		
				6.0E-04	X			V		1	0.14		~Aroclor 5460	11126-42-4	3.5E+01	n	4.4E+02	n					1.2E+01	n		2.0E+00	n		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.3E-01	c*	5.2E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		2.8E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.2E-01	c*	5.2E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.7E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.2E-01	c*	5.1E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.7E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.2E-01	c*	5.1E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.7E-03	c		
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V		1	0.14		~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.2E-04	c*	5.2E-04	c*	2.5E-06	c	1.1E-05	c	4.0E-06	c		1.7E-06	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.2E-01	c*	5.0E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.2E-01	c*	5.0E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.2E-01	c*	5.0E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c		
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.2E-01	c*	5.1E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c		
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V		1	0.14		~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	3.7E-05	c*	1.5E-04	c*	7.4E-07	c	3.2E-06	c	1.2E-06	c		3.0E-07	c		
2.0E+00	I	5.7E-04	I					V		1	0.14		~Polychlorinated Biphenyls (high risk)	1336-36-3	2.3E-01	c	9.4E-01	c	4.9E-03	c	2.1E-02	c							
4.0E-01	I	1.0E-04	I					V		1	0.14		~Polychlorinated Biphenyls (low risk)	1336-36-3					2.8E-02	c	1.2E-01	c	4.4E-02	c	5.0E-01	6.8E-03	c	7.8E-02	
7.0E-02	I	2.0E-05	I					V		1	0.14		~Polychlorinated Biphenyls (lowest risk)	1336-36-3					1.4E-01	c	6.1E-01	c							
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			1	0.14		~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	3.8E-02	c*	1.6E-01	c*	7.4E-04	c	3.2E-03	c	6.0E-03	c*		9.4E-04	c*		
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V		1	0.14		~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.2E-02	c*	4.9E-02	c*	2.5E-04	c	1.1E-03	c	4.0E-04	c		6.2E-05	c		
						6.0E-04	I			1	0.1		Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	8.5E+05	nm	3.6E+06	nm	6.3E-01	n	2.6E+00	n							
													Polynuclear Aromatic Hydrocarbons (PAHs)																	
				6.0E-02	I			V		1	0.13		~Acenaphthene	83-32-9	3.6E+03	n	4.5E+04	n					5.3E+02	n		5.5E+00	n		
				3.0E-01	I			V		1	0.13		~Anthracene	120-12-7	1.8E+04	n	2.3E+05	nm					1.8E+03	n		5.8E+01	n		
7.3E-01	E	1.1E-04	C					V	M	1	0.13		~Benz[a]anthracene	56-55-3	1.6E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	1.2E-02	c		4.2E-03	c		
1.2E+00	C	1.1E-04	C							1	0.13		~Benzo(j)fluoranthene	205-82-3	4.2E-01	c	1.8E+00	c	2.6E-02	c	1.1E-01	c	6.5E-02	c		7.8E-02	c		
7.3E+00	I	1.1E-03	C						M	1	0.13		~Benzo[a]pyrene	50-32-8	1.6E-02	c	2.9E-01	c	9.2E-04	c	1.1E-02	c	3.4E-03	c	2.0E-01	4.0E-03	c	2.4E-01	
7.3E-01	E	1.1E-04	C						M	1	0.13		~Benzo[b]fluoranthene	205-99-2	1.6E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	3.4E-02	c		4.1E-02	c		
7.3E-02	E	1.1E-04	C						M	1	0.13		~Benzo[k]fluoranthene	207-08-9	1.6E+00	c	2.9E+01	c	9.2E-03	c	1.1E-01	c	3.4E-01	c		4.0E-01	c		
				8.0E-02	I			V		1	0.13		~Chloronaphthalene, Beta-	91-58-7	4.8E+03	n	6.0E+04	n					7.5E+02	n		3.9E+00	n		
7.3E-03	E	1.1E-05	C						M	1	0.13		~Chrysene	218-01-9	1.6E+01	c	2.9E+02	c	9.2E-02	c	1.1E+00	c	3.4E+00	c		1.2E+00	c		
7.3E+00	E	1.2E-03	C						M	1	0.13		~Dibenz[a,h]anthracene	53-70-3	1.6E-02	c	2.9E-01	c	8.4E-04	c	1.0E-02	c	3.4E-03	c		1.3E-02	c		
1.2E+01	C	1.1E-03	C							1	0.13		~Dibenzo(a,e)pyrene	192-65-4	4.2E-02	c	1.8E-01	c	2.6E-03	c	1.1E-02	c	6.5E-03	c		8.4E-02	c		
2.5E+02	C	7.1E-02	C						M	1	0.13		~Dimethylbenz(a)anthracene, 7,12-	57-97-6	4.6E-04	c	8.4E-03	c	1.4E-05	c	1.7E-04	c	1.0E-04	c		9.9E-05	c		
				4.0E-02	I					1	0.13		~Fluoranthene	206-44-0	2.4E+03	n	3.0E+04	n					8.0E+02	n		8.9E+01	n		
				4.0E-02	I			V		1	0.13		~Fluorene	86-73-7	2.4E+03	n	3.0E+04	n					2.9E+02	n		5.4E+00	n		
7.3E-01	E	1.1E-04	C						M	1	0.13		~Indeno[1,2,3-cd]pyrene	193-39-5	1.6E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	3.4E-02	c		1.3E-01	c		
2.9E-02	P			7.0E-02	A			V		1	0.13	3.9E+02	~Methylnaphthalene, 1-	90-12-0	1.8E+01	c	7.3E+01	c					1.1E+00	c		6.0E-03	c		
				4.0E-03	I			V		1	0.13		~Methylnaphthalene, 2-	91-57-6	2.4E+02	n	3.0E+03	n					3.6E+01	n		1.9E-01	n		
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V		1	0.13		~Naphthalene	91-20-3	3.8E+00	c*	1.7E+01	c*	8.3E-02	c*	3.6E-01	c*	1.7E-01	c*		5.4E-04	c*		
1.2E+00	C	1.1E-04	C							1	0.13		~Nitropyrene, 4-	57835-92-4	4.2E-01	c	1.8E+00	c	2.6E-02	c	1.1E-01	c	1.9E-02	c		3.3E-03	c		
				3.0E-02	I			V		1	0.13		~Pyrene	129-00-0	1.8E+03	n	2.3E+04	n					1.2E+02	n		1.3E+01	n		
				2.0E-02	P					1	0.1		Potassium Perfluorobutane Sulfonate	29420-49-3	1.3E+03	n	1.6E+04	n					4.0E+02	n			n		
1.5E-01	I			9.0E-03	I					1	0.1		Prochloraz	67747-09-5	3.6E+00	c	1.5E+01	c					3.8E-01	c		1.9E-03	c		
				6.0E-03	H			V		1			Profluralin	26399-36-0	4.7E+02	n	7.0E+03	n					2.6E+01	n		1.6E+00	n		
				1.5E-02	I					1	0.1		Prometon	1610-18-0	9.5E+02	n	1.2E+04	n					2.5E+02	n		1.2E-01	n		
				4.0E-03	I					1	0.1		Prometryn	7287-19-6	2.5E+02	n	3.3E+03	n					6.0E+01	n		9.0E-02	n		
				1.3E-02	I					1	0.1		Propachlor	1918-16-7	8.2E+02	n	1.1E+04	n					2.5E+02	n		1.5E-01	n		

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information																Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	GIABS	ABS	C_{sat} (mg/kg)		Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				4.0E-03	I					1	0.1			Propanediol, 1,2-	114-26-1	2.5E+02	n	3.3E+03	n					7.8E+01	n		2.5E-02	n	
				5.0E-03	I					1	0.1			Propanil	709-98-8	3.2E+02	n	4.1E+03	n					8.2E+01	n		4.5E-02	n	
				2.0E-02	I					1	0.1			Propargite	2312-35-8	1.3E+03	n	1.6E+04	n					1.6E+02	n		1.2E+01	n	
				2.0E-03	I			V		1		1.1E+05		Propargyl Alcohol	107-19-7	1.6E+02	n	2.3E+03	n					4.0E+01	n		8.1E-03	n	
				2.0E-02	I					1	0.1			Propazine	139-40-2	1.3E+03	n	1.6E+04	n					3.4E+02	n		3.0E-01	n	
				2.0E-02	I					1	0.1			Propham	122-42-9	1.3E+03	n	1.6E+04	n					3.5E+02	n		2.2E-01	n	
				1.3E-02	I					1	0.1			Propiconazole	60207-90-1	8.2E+02	n	1.1E+04	n					2.1E+02	n		6.9E-01	n	
						8.0E-03	I	V		1		3.3E+04		Propionaldehyde	123-38-6	7.5E+01	n	3.1E+02	n	8.3E+00	n	3.5E+01	n	1.7E+01	n		3.4E-03	n	
				1.0E-01	X	1.0E+00	X	V		1		2.6E+02		Propyl benzene	103-65-1	3.8E+03	ns	2.4E+04	ns	1.0E+03	n	4.4E+03	n	6.6E+02	n		1.2E+00	n	
						3.0E+00	C	V		1		3.5E+02		Propylene	115-07-1	2.2E+03	ns	9.3E+03	ns	3.1E+03	n	1.3E+04	n	6.3E+03	n		6.0E+00	n	
				2.0E+01	P					1	0.1			Propylene Glycol	57-55-6	1.3E+06	nm	1.6E+07	nm					4.0E+05	n		8.1E+01	n	
						2.7E-04	A			1	0.1			Propylene Glycol Dinitrate	6423-43-4	3.9E+05	nm	1.6E+06	nm	2.8E-01	n	1.2E+00	n						
				7.0E-01	H	2.0E+00	I	V		1		1.1E+05		Propylene Glycol Monomethyl Ether	107-98-2	4.1E+04	n	3.7E+05	nms	2.1E+03	n	8.8E+03	n	3.2E+03	n		6.5E-01	n	
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		1		7.8E+04		Propylene Oxide	75-56-9	2.1E+00	c	9.7E+00	c	7.6E-01	c*	3.3E+00	c*	2.7E-01	c		5.6E-05	c	
				7.5E-02	I					1	0.1			Propyzamide	23950-58-5	4.7E+03	n	6.2E+04	n					1.2E+03	n		1.2E+00	n	
				1.0E-03	I			V		1		5.3E+05		Pyridine	110-86-1	7.8E+01	n	1.2E+03	n					2.0E+01	n		6.8E-03	n	
				5.0E-04	I					1	0.1			Quinalphos	13593-03-8	3.2E+01	n	4.1E+02	n					5.1E+00	n		4.3E-02	n	
3.0E+00	I									1	0.1			Quinoline	91-22-5	1.8E-01	c	7.7E-01	c					2.4E-02	c		7.8E-05	c	
				9.0E-03	I					1	0.1			Quizalofop-ethyl	76578-14-8	5.7E+02	n	7.4E+03	n					1.2E+02	n		1.9E+00	n	
						3.0E-02	A			1				Refractory Ceramic Fibers	NA	4.3E+07	nm	1.8E+08	nm	3.1E+01	n	1.3E+02	n						
				3.0E-02	I					1	0.1			Resmethrin	10453-86-8	1.9E+03	n	2.5E+04	n					6.7E+01	n		4.2E+01	n	
				5.0E-02	H			V		1				Ronnel	299-84-3	3.9E+03	n	5.8E+04	n					4.1E+02	n		3.7E+00	n	
				4.0E-03	I					1	0.1			Rotenone	83-79-4	2.5E+02	n	3.3E+03	n					6.1E+01	n		3.2E+01	n	
2.2E-01	C	6.3E-05	C						M	1	0.1			Safrole	94-59-7	5.5E-01	c	1.0E+01	c	1.6E-02	c	1.9E-01	c	9.6E-02	c		5.9E-05	c	
				5.0E-03	I					1				Selenious Acid	7783-00-8	3.9E+02	n	5.8E+03	n					1.0E+02	n			n	
				5.0E-03	I	2.0E-02	C			1				Selenium	7782-49-2	3.9E+02	n	5.8E+03	n	2.1E+01	n	8.8E+01	n	1.0E+02	n	5.0E+01	5.2E-01	n	2.6E-01
				5.0E-03	C	2.0E-02	C			1				Selenium Sulfide	7446-34-6	3.9E+02	n	5.8E+03	n	2.1E+01	n	8.8E+01	n	1.0E+02	n			n	
				9.0E-02	I					1	0.1			Sethoxydim	74051-80-2	5.7E+03	n	7.4E+04	n					1.0E+03	n		9.3E+00	n	
						3.0E-03	C			1				Silica (crystalline, respirable)	7631-86-9	4.3E+06	nm	1.8E+07	nm	3.1E+00	n	1.3E+01	n						
				5.0E-03	I					0.04				Silver	7440-22-4	3.9E+02	n	5.8E+03	n					9.4E+01	n		8.0E-01	n	
1.2E-01	H			5.0E-03	I					1	0.1			Simazine	122-34-9	4.5E+00	c*	1.9E+01	c					6.1E-01	c	4.0E+00	3.0E-04	c	2.0E-03
				1.3E-02	I					1	0.1			Sodium Acifluorfen	62476-59-9	8.2E+02	n	1.1E+04	n					2.6E+02	n		2.1E+00	n	
				4.0E-03	I					1				Sodium Azide	26628-22-8	3.1E+02	n	4.7E+03	n					8.0E+01	n			n	
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025				Sodium Dichromate	10588-01-9	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c	
2.7E-01	H			3.0E-02	I					1	0.1			Sodium Diethyldithiocarbamate	148-18-5	2.0E+00	c	8.5E+00	c					2.9E-01	c			c	
				5.0E-02	A	1.3E-02	C			1				Sodium Fluoride	7681-49-4	3.9E+03	n	5.8E+04	n	1.4E+01	n	5.7E+01	n	1.0E+03	n			n	
				2.0E-05	I					1	0.1			Sodium Fluoroacetate	62-74-8	1.3E+00	n	1.6E+01	n					4.0E-01	n		8.1E-05	n	
				1.0E-03	H					1				Sodium Metavanadate	13718-26-8	7.8E+01	n	1.2E+03	n					2.0E+01	n			n	
				8.0E-04	P					1				Sodium Tungstate	13472-45-2	6.3E+01	n	9.3E+02	n					1.6E+01	n			n	
				8.0E-04	P					1				Sodium Tungstate Dihydrate	10213-10-2	6.3E+01	n	9.3E+02	n					1.6E+01	n			n	
2.4E-02	H			3.0E-02	I					1	0.1			Strirofos (Tetrachlorovinphos)	961-11-5	2.3E+01	c*	9.6E+01	c					2.8E+00	c		8.2E-03	c	
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025				Strontium Chromate	7789-06-2	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c	
				6.0E-01	I					1				Strontium, Stable	7440-24-6	4.7E+04	n	7.0E+05	nm					1.2E+04	n		4.2E+02	n	
				3.0E-04	I					1	0.1			Strychnine	57-24-9	1.9E+01	n	2.5E+02	n					5.9E+00	n		6.5E-02	n	
				2.0E-01	I	1.0E+00	I	V		1		8.7E+02		Styrene	100-42-5	6.0E+03	ns	3.5E+04	ns	1.0E+03	n	4.4E+03	n	1.2E+03	n	1.0E+02	1.3E+00	n	1.1E-01
				3.0E-03	P					1	0.1			Styrene-Acrylonitrile (SAN) Trimer	NA	1.9E+02	n	2.5E+03	n					4.8E+01	n			n	
				1.0E-03	P	2.0E-03	X			1	0.1			Sulfolane	126-33-0	6.3E+01	n	8.2E+02	n	2.1E+00	n	8.8E+00	n	2.0E+01	n		4.4E-03	n	
				8.0E-04	P					1	0.1			Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	5.1E+01	n	6.6E+02	n					1.1E+01	n		6.5E-02	n	
						1.0E-03	C	V		1				Sulfur Trioxide	7446-11-9	1.4E+06	nm	6.0E+06	nm	1.0E+00	n	4.4E+00	n	2.1E+00	n			n	
						1.0E-03	C			1				Sulfuric Acid	7664-93-9	1.4E+06	nm	6.0E+06	nm	1.0E+00	n	4.4E+00	n						
2.5E-02	I	7.1E-06	I	5.0E-02	H					1	0.1			Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	2.2E+01	c	9.2E+01	c	4.0E-01	c	1.7E+00	c	1.3E+00	c		1.5E-02	c	
				3.0E-02	H					1	0.1			TCMTB	21564-17-0	1.9E+03	n	2.5E+04	n					4.8E+02	n		3.3E+00	n	
				7.0E-02	I					1	0.1			Tebuthiuron	34014-18-1	4.4E+03	n	5.7E+04	n					1.4E+03	n		3.9E-01	n	
				2.0E-02	H					1	0.1			Temephos	3383-96-8	1.3E+03	n	1.6E+04	n					4.0E+02	n		7.6E+01	n	
				1.3E-02	I					1	0.1			Terbacil	5902-51-2	8.2E+02	n	1.1E+04	n					2.5E+02	n		7.5E-02	n	
				2.5E-05	H			V		1		3.1E+01		Terbufos	13071-79-9	2.0E+00	n	2.9E+01	n					2.4E-01	n		5.2E-04	n	
				1.0E-03	I					1	0.1			Terbutryn	886-50-0	6.3E+01	n	8.2E+02	n					1.3E+01	n		1.9E-02	n	
				1.0E-04	I					1	0.1			Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1	6.3E+00	n	8.2E+01	n					2.0E+00	n		5.3E-02	n	
				3.0E-04	I			V		1				Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.3E+01	n	3.5E+02	n					1.7E+00	n		7.9E-03	n	
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		1		6.8E+02		Tetrachloroethane, 1,1,1,2-	630-20-6	2.0E+00	c	8.8E+00	c	3.8E-01	c	1.7E+00	c	5.7E-01	c		2.2E-04	c	
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1		1.9E+03		Tetrachloroethane, 1,1,2,2-	79-34-5	6.0E-01	c	2.7E+00	c	4.8E-02	c	2.1E-01	c	7.6E-02	c		3.0E-05	c	
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		1		1.7E+02		Tetrachloroethylene	127-18-4	2.4E+01	c**	1.0E+02	c**	1.1E+01	c**	4.7E+01	c**	1.1E+01	c**	5.0E+00	5.1E-03	c**	2.3E-03
				3.0E-02	I					1	0.1			Tetrachlorophenol, 2,3,4,6-	58-90-2	1.9E+03	n	2.5E+04	n					2.4E+02	n		1.5E+00	n	
2.0E+01	H							V		1				Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.5E-02	c	1.6E-01	c					1.3E-03	c		4.5E-06	c	
				5.0E-04	I					1	0.1			Tetraethyl Dithiopyrophosphate	3689-24-5	3.2E+01	n	4.1E+02	n					7.1E+00	n		5.2E-03	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Screening Levels												Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
						8.0E+01	I	V		1		2.1E+03	Tetrafluoroethane, 1,1,1,2-	811-97-2	1.0E+05	nms	4.3E+05	nms	8.3E+04	n	3.5E+05	n	1.7E+05	n		9.3E+01	n	
				2.0E-03	P					1	0.0007		Tetryl (Trinitrophenylmethylnitramine)	479-45-8	1.6E+02	n	2.3E+03	n					3.9E+01	n		3.7E-01	n	
				7.0E-06	X					1			Thallium (I) Nitrate	10102-45-1	5.5E-01	n	8.2E+00	n					1.4E-01	n			n	
				1.0E-05	X					1			Thallium (Soluble Salts)	7440-28-0	7.8E-01	n	1.2E+01	n					2.0E-01	n	2.0E+00	1.4E-02	n	1.4E-01
				6.0E-06	X			V		1			Thallium Acetate	563-68-8	4.7E-01	n	7.0E+00	n					1.2E-01	n			n	
				2.0E-05	X			V		1			Thallium Carbonate	6533-73-9	1.6E+00	n	2.3E+01	n					4.0E-01	n			n	
				6.0E-06	X					1			Thallium Chloride	7791-12-0	4.7E-01	n	7.0E+00	n					1.2E-01	n			n	
				2.0E-05	X					1			Thallium Sulfate	7446-18-6	1.6E+00	n	2.3E+01	n					4.0E-01	n			n	
				1.3E-02	I					1	0.1		Thifensulfuron-methyl	79277-27-3	8.2E+02	n	1.1E+04	n					2.6E+02	n		7.8E-02	n	
				1.0E-02	I					1	0.1		Thiobencarb	28249-77-6	6.3E+02	n	8.2E+03	n					1.6E+02	n		5.5E-01	n	
				7.0E-02	X					1	0.0075		Thiodiglycol	111-48-8	5.4E+03	n	7.9E+04	n					1.4E+03	n		2.8E-01	n	
				3.0E-04	H					1	0.1		Thiofanox	39196-18-4	1.9E+01	n	2.5E+02	n					5.3E+00	n		1.8E-03	n	
				8.0E-02	I					1	0.1		Thiophanate, Methyl	23564-05-8	5.1E+03	n	6.6E+04	n					1.6E+03	n		1.4E+00	n	
				5.0E-03	I					1	0.1		Thiram	137-26-8	3.2E+02	n	4.1E+03	n					9.8E+01	n		1.4E-01	n	
				6.0E-01	H					1			Tin	7440-31-5	4.7E+04	n	7.0E+05	nm					1.2E+04	n		3.0E+03	n	
						1.0E-04	A	V		1			Titanium Tetrachloride	7550-45-0	1.4E+05	nm	6.0E+05	nm	1.0E-01	n	4.4E-01	n	2.1E-01	n			n	
				8.0E-02	I	5.0E+00	I	V		1		8.2E+02	Toluene	108-88-3	4.9E+03	ns	4.7E+04	ns	5.2E+03	n	2.2E+04	n	1.1E+03	n	1.0E+03	7.6E-01	n	6.9E-01
1.8E-01	X			2.0E-04	X					1	0.1		Toluene-2,5-diamine	95-70-5	3.0E+00	c**	1.3E+01	c*					4.3E-01	c**		1.3E-04	c**	
3.0E-02	P			4.0E-03	X					1	0.1		Toluidine, p-	106-49-0	1.8E+01	c*	7.7E+01	c*					2.5E+00	c*		1.1E-03	c*	
				3.0E+00	P			V		1		3.4E-01	Total Petroleum Hydrocarbons (Aliphatic High)	NA	2.3E+05	nms	3.5E+06	nms					6.0E+04	n		2.4E+03	n	
						6.0E-01	P	V		1		1.4E+02	Total Petroleum Hydrocarbons (Aliphatic Low)	NA	5.2E+02	ns	2.2E+03	ns	6.3E+02	n	2.6E+03	n	1.3E+03	n		8.8E+00	n	
				1.0E-02	X	1.0E-01	P	V		1		6.9E+00	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	9.6E+01	ns	4.4E+02	ns	1.0E+02	n	4.4E+02	n	1.0E+02	n		1.5E+00	n	
				4.0E-02	P					1	0.1		Total Petroleum Hydrocarbons (Aromatic High)	NA	2.5E+03	n	3.3E+04	n					8.0E+02	n		8.9E+01	n	
				4.0E-03	P	3.0E-02	P	V		1		1.8E+03	Total Petroleum Hydrocarbons (Aromatic Low)	NA	8.2E+01	n	4.2E+02	n	3.1E+01	n	1.3E+02	n	3.3E+01	n		1.7E-02	n	
				4.0E-03	P	3.0E-03	P	V		1			Total Petroleum Hydrocarbons (Aromatic Medium)	NA	1.1E+02	n	6.0E+02	n	3.1E+00	n	1.3E+01	n	5.5E+00	n		2.3E-02	n	
1.1E+00	I	3.2E-04	I							1	0.1		Toxaphene	8001-35-2	4.9E-01	c	2.1E+00	c	8.8E-03	c	3.8E-02	c	7.1E-02	c	3.0E+00	1.1E-02	c	4.6E-01
				7.5E-03	I					1	0.1		Tralomethrin	66841-25-6	4.7E+02	n	6.2E+03	n					1.5E+02	n		5.8E+01	n	
				3.0E-04	A			V		1			Tri-n-butyltin	688-73-3	2.3E+01	n	3.5E+02	n					3.7E+00	n		8.2E-02	n	
				8.0E+01	X					1	0.1		Triacetin	102-76-1	5.1E+06	nm	6.6E+07	nm					1.6E+06	n		4.5E+02	n	
				3.0E-02	I					1	0.1		Triadimefon	43121-43-3	1.9E+03	n	2.5E+04	n					5.5E+02	n		4.4E-01	n	
				1.3E-02	I			V		1			Triallate	2303-17-5	1.0E+03	n	1.5E+04	n					1.2E+02	n		2.6E-01	n	
				1.0E-02	I					1	0.1		Triasulfuron	82097-50-5	6.3E+02	n	8.2E+03	n					2.0E+02	n		2.1E-01	n	
				8.0E-03	I					1	0.1		Tribenuron-methyl	101200-48-0	5.1E+02	n	6.6E+03	n					1.6E+02	n		6.1E-02	n	
				5.0E-03	I			V		1			Tribromobenzene, 1,2,4-	615-54-3	3.9E+02	n	5.8E+03	n					4.5E+01	n		6.4E-02	n	
9.0E-03	P			1.0E-02	P					1	0.1		Tributyl Phosphate	126-73-8	6.0E+01	c*	2.6E+02	c*					5.2E+00	c*		2.5E-02	c*	
				3.0E-04	P					1	0.1		Tributyltin Compounds	NA	1.9E+01	n	2.5E+02	n					6.0E+00	n			n	
				3.0E-04	I					1	0.1		Tributyltin Oxide	56-35-9	1.9E+01	n	2.5E+02	n					5.7E+00	n		2.9E+02	n	
				3.0E+01	I	3.0E+01	H	V		1		9.1E+02	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	4.0E+04	ns	1.7E+05	nms	3.1E+04	n	1.3E+05	n	5.5E+04	n		1.4E+02	n	
7.0E-02	I			2.0E-02	I					1	0.1		Trichloroacetic Acid	76-03-9	7.8E+00	c	3.3E+01	c					1.1E+00	c	6.0E+01	2.2E-04	c	1.2E-02
2.9E-02	H									1	0.1		Trichloroaniline HCl, 2,4,6-	33663-50-2	1.9E+01	c	7.9E+01	c					2.7E+00	c		7.4E-03	c	
7.0E-03	X			3.0E-05	X					1	0.1		Trichloroaniline, 2,4,6-	634-93-5	1.9E+00	n	2.5E+01	n					4.0E-01	n		3.6E-03	n	
				8.0E-04	X			V		1			Trichlorobenzene, 1,2,3-	87-61-6	6.3E+01	n	9.3E+02	n					7.0E+00	n		2.1E-02	n	
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		1		4.0E+02	Trichlorobenzene, 1,2,4-	120-82-1	2.4E+01	c**	1.1E+02	c**	2.1E+00	n	8.8E+00	n	1.2E+00	c**	7.0E+01	3.4E-03	c**	2.0E-01
				2.0E+00	I	5.0E+00	I	V		1		6.4E+02	Trichloroethane, 1,1,1-	71-55-6	8.1E+03	ns	3.6E+04	ns	5.2E+03	n	2.2E+04	n	8.0E+03	n	2.0E+02	2.8E+00	n	7.0E-02
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1		2.2E+03	Trichloroethane, 1,1,2-	79-00-5	1.1E+00	c**	5.0E+00	c**	1.8E-01	c**	7.7E-01	c**	2.8E-01	c**	5.0E+00	8.9E-05	c**	1.6E-03
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	1		6.9E+02	Trichloroethylene	79-01-6	9.4E-01	c**	6.0E+00	c**	4.8E-01	c**	3.0E+00	c**	4.9E-01	c**	5.0E+00	1.8E-04	c**	1.8E-03
				3.0E-01	I			V		1		1.2E+03	Trichlorofluoromethane	75-69-4	2.3E+04	ns	3.5E+05	nms					5.2E+03	n		3.3E+00	n	
				1.0E-01	I					1	0.1		Trichlorophenol, 2,4,5-	95-95-4	6.3E+03	n	8.2E+04	n					1.2E+03	n		4.4E+00	n	
1.1E-02	I	3.1E-06	I	1.0E-03	P					1	0.1		Trichlorophenol, 2,4,6-	88-06-2	4.9E+01	c**	2.1E+02	c**	9.1E-01	c	4.0E+00	c	4.1E+00	c**		1.5E-02	c**	
				1.0E-02	I					1	0.1		Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	6.3E+02	n	8.2E+03	n					1.6E+02	n		6.8E-02	n	
				8.0E-03	I					1	0.1		Trichlorophenoxypropionic acid, -2,4,5	93-72-1	5.1E+02	n	6.6E+03	n					1.1E+02	n	5.0E+01	6.1E-02	n	2.8E-02
				5.0E-03	I			V		1		1.3E+03	Trichloropropane, 1,1,2-	598-77-6	3.9E+02	n	5.8E+03	ns					8.8E+01	n		3.5E-02	n	
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1		1.4E+03	Trichloropropane, 1,2,3-	96-18-4	5.1E-03	c	1.1E-01	c	3.1E-01	n	1.3E+00	n	7.5E-04	c		3.2E-07	c	
				3.0E-03	X	3.0E-04	P	V		1		3.1E+02	Trichloropropene, 1,2,3-	96-19-5	7.3E-01	n	3.1E+00	n	3.1E-01	n	1.3E+00	n	6.2E-01	n		3.1E-04	n	
				2.0E-02	A					1	0.1		Tricresyl Phosphate (TCP)	1330-78-5	1.3E+03	n	1.6E+04	n					1.6E+02	n		1.5E+01	n	
				3.0E-03	I					1	0.1		Tridiphane	58138-08-2	1.9E+02	n	2.5E+03	n					1.8E+01	n		1.3E-01	n	
						7.0E-03	I	V		1		2.8E+04	Triethylamine	121-44-8	1.2E+02	n	4.8E+02	n	7.3E+00	n	3.1E+01	n	1.5E+01	n		4.4E-03	n	
				2.0E+00	P					1	0.1		Triethylene Glycol	112-27-6	1.3E+05	nm	1.6E+06	nm					4.0E+04	n		8.8E+00	n	
						2.0E+01	P	V		1		4.8E+03	Trifluoroethane, 1,1,1-	420-46-2	1.5E+04	ns	6.2E+04	ns	2.1E+04	n	8.8E+04	n	4.2E+04	n		1.3E+02	n	
7.7E-03	I			7.5E-03	I			V		1			Trifluralin	1582-09-8	9.0E+01	c**	4.2E+02	c*					2.6E+00	c*		8.4E-02	c*	
2.0E-02	P			1.0E-02	P					1	0.1		Trimethyl Phosphate	512-56-1	2.7E+01	c*	1.1E+02	c*					3.9E+00	c*		8.6E-04	c*	
						5.0E-03	P	V		1		2.9E+02	Trimethylbenzene, 1,2,3-	526-73-8	4.9E+01	n	2.1E+02	n	5.2E+00	n	2.2E+01	n	1.0E+01	n		1.5E-02	n	
						7.0E-03	P	V		1		2.2E+02	Trimethylbenzene, 1,2,4-	95-63-6	5.8E+01	n	2.4E+02	ns	7.3E+00	n	3.1E+01	n	1.5E+01	n		2.1E-02	n	
				1.0E-02	X			V		1		1.8E+02	Trimethylbenzene, 1,3,5-	108-67-8	7.8E+02	ns	1.2E+04	ns					1.2E+02	n		1.7E-01	n	
				1.0E-02	X			V		1		3.0E+01	Trimethylpentene, 2,4,4-	25167-70-8	7.8E+02	ns	1.2E+04	ns					6.5E+01	n		2.2E-01	n	

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Toxicity and Chemical-specific Information												Contaminant		Screening Levels													Protection of Ground Water SSLs		
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
				3.0E-02	I					1	0.019		Trinitrobenzene, 1,3,5-	99-35-4	2.2E+03	n	3.2E+04	n					5.9E+02	n		2.1E+00	n	
3.0E-02	I			5.0E-04	I					1	0.032		Trinitrotoluene, 2,4,6-	118-96-7	2.1E+01	c**	9.6E+01	c**					2.5E+00	c**		1.5E-02	c**	
				2.0E-02	P					1	0.1		Triphenylphosphine Oxide	791-28-6	1.3E+03	n	1.6E+04	n					3.6E+02	n		1.5E+00	n	
				2.0E-02	A					1	0.1		Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	1.3E+03	n	1.6E+04	n					3.6E+02	n		8.0E+00	n	
				1.0E-02	X					1	0.1		Tris(1-chloro-2-propyl)phosphate	13674-84-5	6.3E+02	n	8.2E+03	n					1.9E+02	n		6.5E-01	n	
2.3E+00	C	6.6E-04	C					V		1		4.7E+02	Tris(2,3-dibromopropyl)phosphate	126-72-7	2.8E-01	c	1.3E+00	c	4.3E-03	c	1.9E-02	c	6.8E-03	c		1.3E-04	c	
2.0E-02	P			7.0E-03	P					1	0.1		Tris(2-chloroethyl)phosphate	115-96-8	2.7E+01	c*	1.1E+02	c*					3.8E+00	c*		3.8E-03	c*	
3.2E-03	P			1.0E-01	P					1	0.1		Tris(2-ethylhexyl)phosphate	78-42-2	1.7E+02	c*	7.2E+02	c					2.4E+01	c*		1.2E+02	c*	
				8.0E-04	P					1			Tungsten	7440-33-7	6.3E+01	n	9.3E+02	n					1.6E+01	n		2.4E+00	n	
				3.0E-03	I	4.0E-05	A			1			Uranium (Soluble Salts)	NA	2.3E+02	n	3.5E+03	n	4.2E-02	n	1.8E-01	n	6.0E+01	n	3.0E+01	2.7E+01	n	1.4E+01
1.0E+00	C	2.9E-04	C						M	1	0.1		Urethane	51-79-6	1.2E-01	c	2.3E+00	c	3.5E-03	c	4.2E-02	c	2.5E-02	c		5.6E-06	c	
		8.3E-03	P	9.0E-03	I	7.0E-06	P			0.026			Vanadium Pentoxide	1314-62-1	4.6E+02	c**	2.0E+03	c**	3.4E-04	c*	1.5E-03	c*	1.5E+02	n			n	
				5.0E-03	S	1.0E-04	A			0.026			Vanadium and Compounds	7440-62-2	3.9E+02	n	5.8E+03	n	1.0E-01	n	4.4E-01	n	8.6E+01	n		8.6E+01	n	
				1.0E-03	I			V		1			Vernolate	1929-77-7	7.8E+01	n	1.2E+03	n					1.1E+01	n		8.9E-03	n	
				2.5E-02	I					1	0.1		Vinclozolin	50471-44-8	1.6E+03	n	2.1E+04	n					4.4E+02	n		3.4E-01	n	
				1.0E+00	H	2.0E-01	I	V		1		2.8E+03	Vinyl Acetate	108-05-4	9.1E+02	n	3.8E+03	ns	2.1E+02	n	8.8E+02	n	4.1E+02	n		8.7E-02	n	
		3.2E-05	H			3.0E-03	I	V		1		2.5E+03	Vinyl Bromide	593-60-2	1.2E-01	c*	5.2E-01	c*	8.8E-02	c*	3.8E-01	c*	1.8E-01	c*		5.1E-05	c*	
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1		3.9E+03	Vinyl Chloride	75-01-4	5.9E-02	c	1.7E+00	c	1.7E-01	c	2.8E+00	c	1.9E-02	c	2.0E+00	6.5E-06	c	6.9E-04
				3.0E-04	I					1	0.1		Warfarin	81-81-2	1.9E+01	n	2.5E+02	n					5.6E+00	n		5.9E-03	n	
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	Xylene, P-	106-42-3	5.6E+02	ns	2.4E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n		1.9E-01	n	
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	Xylene, m-	108-38-3	5.5E+02	ns	2.4E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n		1.9E-01	n	
				2.0E-01	S	1.0E-01	S	V		1		4.3E+02	Xylene, o-	95-47-6	6.5E+02	ns	2.8E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n		1.9E-01	n	
				2.0E-01	I	1.0E-01	I	V		1		2.6E+02	Xylenes	1330-20-7	5.8E+02	ns	2.5E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n	1.0E+04	1.9E-01	n	9.9E+00
				3.0E-04	I					1			Zinc Phosphide	1314-84-7	2.3E+01	n	3.5E+02	n					6.0E+00	n			n	
				3.0E-01	I					1			Zinc and Compounds	7440-66-6	2.3E+04	n	3.5E+05	nm					6.0E+03	n		3.7E+02	n	
				5.0E-02	I					1	0.1		Zineb	12122-67-7	3.2E+03	n	4.1E+04	n					9.9E+02	n		2.9E+00	n	
				8.0E-05	X					1			Zirconium	7440-67-7	6.3E+00	n	9.3E+01	n					1.6E+00	n		4.8E+00	n	

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
8.7E-03	I			4.0E-03	I					1	0.1		1.4E+09		Acephate	30560-19-1	8.0E+01	2.8E+02		6.2E+01	3.1E+02	1.3E+03		2.5E+02
		2.2E-06	I			9.0E-03	I	V		1		1.1E+05	1.4E+09	8.7E+03	Acetaldehyde	75-07-0			1.1E+01	1.1E+01			8.2E+01	8.2E+01
				2.0E-02	I					1	0.1		1.4E+09		Acetochlor	34256-82-1					1.6E+03	6.6E+03		1.3E+03
				9.0E-01	I	3.1E+01	A	V		1		1.1E+05	1.4E+09	1.4E+04	Acetone	67-64-1					7.0E+04		4.4E+05	6.1E+04
						2.0E-03	X			1	0.1		1.4E+09		Acetone Cyanohydrin	75-86-5							2.8E+06	2.8E+06
						6.0E-02	I	V		1		1.3E+05	1.4E+09	1.3E+04	Acetonitrile	75-05-8							8.1E+02	8.1E+02
				1.0E-01	I			V		1		2.5E+03	1.4E+09	6.0E+04	Acetophenone	98-86-2					7.8E+03			7.8E+03
3.8E+00	C	1.3E-03	C							1	0.1		1.4E+09		Acetylaminofluorene, 2-	53-96-3	1.8E-01	6.5E-01	2.9E+03	1.4E-01				
				5.0E-04	I	2.0E-05	I	V		1		2.3E+04	1.4E+09	6.9E+03	Acrolein	107-02-8					3.9E+01		1.4E-01	1.4E-01
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	1	0.1		1.4E+09		Acrylamide	79-06-1	3.1E-01	1.2E+00	1.4E+04	2.4E-01	1.6E+02	6.6E+02	8.5E+06	1.3E+02
				5.0E-01	I	1.0E-03	I	V		1		1.1E+05	1.4E+09	9.5E+04	Acrylic Acid	79-10-7					3.9E+04		9.9E+01	9.9E+01
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		1		1.1E+04	1.4E+09	7.7E+03	Acrylonitrile	107-13-1	1.3E+00		3.2E-01	2.5E-01	3.1E+03		1.6E+01	1.6E+01
						6.0E-03	P			1	0.1		1.4E+09		Adiponitrile	111-69-3							8.5E+06	8.5E+06
5.6E-02	C			1.0E-02	I					1	0.1		1.4E+09		Alachlor	15972-60-8	1.2E+01	4.4E+01		9.7E+00	7.8E+02	3.3E+03		6.3E+02
				1.0E-03	I					1	0.1		1.4E+09		Aldicarb	116-06-3					7.8E+01	3.3E+02		6.3E+01
				1.0E-03	I					1	0.1		1.4E+09		Aldicarb Sulfone	1646-88-4					7.8E+01	3.3E+02		6.3E+01
										1	0.1		1.4E+09		Aldicarb sulfoxide	1646-87-3								
1.7E+01	I	4.9E-03	I	3.0E-05	I			V		1			1.4E+09	1.7E+06	Aldrin	309-00-2	4.1E-02		9.8E-01	3.9E-02	2.3E+00			2.3E+00
				5.0E-03	I	1.0E-04	X	V		1		1.1E+05	1.4E+09	3.4E+04	Allyl Alcohol	107-18-6					3.9E+02		3.6E+00	3.5E+00
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1		1.4E+03	1.4E+09	1.6E+03	Allyl Chloride	107-05-1	3.3E+01		7.4E-01	7.2E-01			1.7E+00	1.7E+00
				1.0E+00	P	5.0E-03	P			1			1.4E+09		Aluminum	7429-90-5					7.8E+04		7.1E+06	7.7E+04
				4.0E-04	I					1			1.4E+09		Aluminum Phosphide	20859-73-8					3.1E+01			3.1E+01
				9.0E-03	I					1	0.1		1.4E+09		Ametryn	834-12-8					7.0E+02	3.0E+03		5.7E+02
2.1E+01	C	6.0E-03	C							1	0.1		1.4E+09		Aminobiphenyl, 4-	92-67-1	3.3E-02	1.2E-01	6.4E+02	2.6E-02				
				8.0E-02	P					1	0.1		1.4E+09		Aminophenol, m-	591-27-5					6.3E+03	2.6E+04		5.1E+03
				2.0E-02	P					1	0.1		1.4E+09		Aminophenol, p-	123-30-8					1.6E+03	6.6E+03		1.3E+03
				2.5E-03	I					1	0.1		1.4E+09		Amitraz	33089-61-1					2.0E+02	8.2E+02		1.6E+02
						1.0E-01	I	V		1					Ammonia	7664-41-7								
				2.0E-01	I					1			1.4E+09		Ammonium Sulfamate	7773-06-0					1.6E+04			1.6E+04
						3.0E-03	X	V		1		1.4E+04	1.4E+09	2.6E+04	Amyl Alcohol, tert-	75-85-4							8.2E+01	8.2E+01
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I			1	0.1		1.4E+09		Aniline	62-53-3	1.2E+02	4.3E+02	2.4E+06	9.5E+01	5.5E+02	2.3E+03	1.4E+06	4.4E+02
4.0E-02	P			2.0E-03	X					1	0.1		1.4E+09		Anthraquinone, 9,10-	84-65-1	1.7E+01	6.2E+01		1.4E+01	1.6E+02	6.6E+02		1.3E+02
				4.0E-04	I					0.15			1.4E+09		Antimony (metallic)	7440-36-0					3.1E+01			3.1E+01
				5.0E-04	H					0.15			1.4E+09		Antimony Pentoxide	1314-60-9					3.9E+01			3.9E+01
				4.0E-04	H					0.15			1.4E+09		Antimony Tetroxide	1332-81-6					3.1E+01			3.1E+01
						2.0E-04	I			0.15			1.4E+09		Antimony Trioxide	1309-64-4							2.8E+05	2.8E+05
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C			1	0.03		1.4E+09		Arsenic, Inorganic	7440-38-2	7.7E-01	5.5E+00	8.9E+02	6.8E-01	3.9E+01	3.3E+02	2.1E+04	3.5E+01
				3.5E-06	C	5.0E-05	I			1			1.4E+09		Arsine	7784-42-1					2.7E-01		7.1E+04	2.7E-01
				5.0E-02	I					1	0.1		1.4E+09		Asulam	3337-71-1					3.9E+03	1.6E+04		3.2E+03
2.3E-01	C			3.5E-02	I					1	0.1		1.4E+09		Atrazine	1912-24-9	3.0E+00	1.1E+01		2.4E+00	2.7E+03	1.2E+04		2.2E+03
8.8E-01	C	2.5E-04	C							1	0.1		1.4E+09		Auramine	492-80-8	7.9E-01	2.8E+00	1.5E+04	6.2E-01				
				4.0E-04	I					1	0.1		1.4E+09		Avermectin B1	65195-55-3					3.1E+01	1.3E+02		2.5E+01
				3.0E-03	A	1.0E-02	A			1	0.1		1.4E+09		Azinphos-methyl	86-50-0					2.3E+02	9.9E+02	1.4E+07	1.9E+02
1.1E-01	I	3.1E-05	I					V		1			1.4E+09	5.2E+05	Azobenzene	103-33-3	6.3E+00		4.7E+01	5.6E+00				
				1.0E+00	P	7.0E-06	P			1	0.1		1.4E+09		Azodicarbonamide	123-77-3					7.8E+04	3.3E+05	9.9E+03	8.6E+03
				2.0E-01	I	5.0E-04	H			0.07			1.4E+09		Barium	7440-39-3					1.6E+04		7.1E+05	1.5E+04
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		Barium Chromate	10294-40-3	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
				3.0E-01	I			V		1			1.4E+09	3.1E+05	Benfluralin	1861-40-1					2.3E+04			2.3E+04
				5.0E-02	I					1	0.1		1.4E+09		Benomyl	17804-35-2					3.9E+03	1.6E+04		3.2E+03
				2.0E-01	I					1	0.1		1.4E+09		Bensulfuron-methyl	83055-99-6					1.6E+04	6.6E+04		1.3E+04
				3.0E-02	I					1	0.1		1.4E+09		Bentazon	25057-89-0					2.3E+03	9.9E+03		1.9E+03
				1.0E-01	I			V		1		1.2E+03	1.4E+09	2.3E+04	Benzaldehyde	100-52-7					7.8E+03			7.8E+03
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		1		1.8E+03	1.4E+09	3.5E+03	Benzene	71-43-2	1.3E+01		1.3E+00	1.2E+00	3.1E+02		1.1E+02	8.2E+01
1.0E-01	X			3.0E-04	X					1	0.1		1.4E+09		Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	7.0E+00	2.5E+01		5.4E+00	2.3E+01	9.9E+01		1.9E+01
				1.0E-03	P			V		1		1.3E+03	1.4E+09	1.9E+04	Benzenethiol	108-98-5					7.8E+01			7.8E+01
2.3E+02	I	6.7E-02	I	3.0E-03	I				M	1	0.1		1.4E+09		Benzidine	92-87-5	6.7E-04	2.6E-03	2.1E+01	5.3E-04	2.3E+02	9.9E+02		1.9E+02
				4.0E+00	I					1	0.1		1.4E+09		Benzoic Acid	65-85-0					3.1E+05	1.3E+06		2.5E+05
1.3E+01	I							V		1		3.2E+02	1.4E+09	6.8E+04	Benzotrichloride	98-07-7	5.3E-02			5.3E-02				
				1.0E-01	P					1	0.1		1.4E+09		Benzyl Alcohol	100-51-6					7.8E+03	3.3E+04		6.3E+03
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		1		1.5E+03	1.4E+09	2.6E+04	Benzyl Chloride	100-44-7	4.1E+00		1.5E+00	1.1E+00	1.6E+02		2.7E+01	2.3E+01
		2.4E-03	I	2.0E-03	I	2.0E-05	I			0.007			1.4E+09		Beryllium and compounds	7440-41-7			1.6E+03	1.6E+03	1.6E+02		2.8E+04	1.6E+02
				9.0E-03	P					1	0.1		1.4E+09		Bifenox	42576-02-3					7.0E+02	3.0E+03		5.7E+02
				1.5E-02	I					1	0.1		1.4E+09		Biphenthrin	82657-04-3					1.2E+03	4.9E+03		9.5E+02
8.0E-03	I			5.0E-01	I	4.0E-04	X	V		1			1.4E+09	1.1E+05	Biphenyl, 1,1'-	92-52-4	8.7E+01			8.7E+01	3.9E+04		4.8E+01	4.7E+01

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				4.0E-02	I			V		1		1.0E+03	1.4E+09	3.5E+04	Bis(2-chloro-1-methylethyl) ether	108-60-1					3.1E+03			3.1E+03
				3.0E-03	P					1	0.1		1.4E+09		Bis(2-chloroethoxy)methane	111-91-1					2.3E+02	9.9E+02		1.9E+02
1.1E+00	I	3.3E-04	I					V		1		5.1E+03	1.4E+09	4.3E+04	Bis(2-chloroethyl)ether	111-44-4	6.3E-01		3.6E-01	2.3E-01				
2.2E+02	I	6.2E-02	I					V		1		4.2E+03	1.4E+09	1.9E+03	Bis(chloromethyl)ether	542-88-1	3.2E-03		8.5E-05	8.3E-05				
				5.0E-02	I					1	0.1		1.4E+09		Bisphenol A	80-05-7					3.9E+03	1.6E+04		3.2E+03
				2.0E-01	I	2.0E-02	H			1			1.4E+09		Boron And Borates Only	7440-42-8					1.6E+04		2.8E+07	1.6E+04
				2.0E+00	P	2.0E-02	P	V		1			1.4E+09		Boron Trichloride	10294-34-5					1.6E+05		2.8E+07	1.6E+05
				4.0E-02	C	1.3E-02	C	V		1			1.4E+09		Boron Trifluoride	7637-07-2					3.1E+03		1.8E+07	3.1E+03
7.0E-01	I			4.0E-03	I					1			1.4E+09		Bromate	15541-45-4	9.9E-01			9.9E-01	3.1E+02			3.1E+02
2.0E+00	X	6.0E-04	X					V		1		2.4E+03	1.4E+09	5.9E+03	Bromo-2-chloroethane, 1-	107-04-0	3.5E-01		2.8E-02	2.6E-02				
				8.0E-03	I	6.0E-02	I	V		1		6.8E+02	1.4E+09	8.4E+03	Bromobenzene	108-86-1					6.3E+02		5.2E+02	2.9E+02
						4.0E-02	X	V		1		4.0E+03	1.4E+09	3.6E+03	Bromochloromethane	74-97-5							1.5E+02	1.5E+02
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		1		9.3E+02	1.4E+09	4.0E+03	Bromodichloromethane	75-27-4	1.1E+01		3.0E-01	2.9E-01	1.6E+03			1.6E+03
7.9E-03	I	1.1E-06	I	2.0E-02	I			V		1		9.2E+02	1.4E+09	9.7E+03	Bromoform	75-25-2	8.8E+01		2.5E+01	1.9E+01	1.6E+03			1.6E+03
				1.4E-03	I	5.0E-03	I	V		1		3.6E+03	1.4E+09	1.4E+03	Bromomethane	74-83-9					1.1E+02		7.3E+00	6.8E+00
				5.0E-03	H			V		1			1.4E+09	1.2E+05	Bromophos	2104-96-3					3.9E+02			3.9E+02
				2.0E-02	I					1	0.1		1.4E+09		Bromoxynil	1689-84-5					1.6E+03	6.6E+03		1.3E+03
				2.0E-02	I			V		1			1.4E+09	4.7E+05	Bromoxynil Octanoate	1689-99-2					1.6E+03			1.6E+03
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1		6.7E+02	1.4E+09	8.7E+02	Butadiene, 1,3-	106-99-0	2.0E-01		8.1E-02	5.8E-02			1.8E+00	1.8E+00
				1.0E-01	I			V		1		7.6E+03	1.4E+09	3.0E+04	Butanol, N-	71-36-3					7.8E+03			7.8E+03
1.9E-03	P			2.0E-01	I					1	0.1		1.4E+09		Butyl Benzyl Phthalate	85-68-7	3.7E+02	1.3E+03		2.9E+02	1.6E+04	6.6E+04		1.3E+04
				2.0E+00	P	3.0E+01	P	V		1		2.1E+04	1.4E+09	2.9E+04	Butyl alcohol, sec-	78-92-2					1.6E+05		9.1E+05	1.3E+05
				5.0E-02	I			V		1			1.4E+09	8.6E+04	Butylate	2008-41-5					3.9E+03			3.9E+03
2.0E-04	C	5.7E-08	C							1	0.1		1.4E+09		Butylated hydroxyanisole	25013-16-5	3.5E+03	1.2E+04	6.7E+07	2.7E+03				
3.6E-03	P			3.0E-01	P					1	0.1		1.4E+09		Butylated hydroxytoluene	128-37-0	1.9E+02	6.9E+02		1.5E+02	2.3E+04	9.9E+04		1.9E+04
				5.0E-02	P			V		1		1.1E+02	1.4E+09	8.1E+03	Butylbenzene, n-	104-51-8					3.9E+03			3.9E+03
				1.0E-01	X			V		1		1.5E+02	1.4E+09	7.4E+03	Butylbenzene, sec-	135-98-8					7.8E+03			7.8E+03
				1.0E-01	X			V		1		1.8E+02	1.4E+09	7.4E+03	Butylbenzene, tert-	98-06-6					7.8E+03			7.8E+03
				2.0E-02	A					1	0.1		1.4E+09		Cacodylic Acid	75-60-5					1.6E+03	6.6E+03		1.3E+03
		1.8E-03	I	1.0E-03	I	1.0E-05	A			0.025	0.001		1.4E+09		Cadmium (Diet)	7440-43-9			2.1E+03	2.1E+03	7.8E+01	8.2E+02	1.4E+04	7.1E+01
		1.8E-03	I	5.0E-04	I	1.0E-05	A			0.05	0.001				Cadmium (Water)	7440-43-9								
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		Calcium Chromate	13765-19-0	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
				5.0E-01	I	2.2E-03	C			1	0.1		1.4E+09		Caprolactam	105-60-2					3.9E+04	1.6E+05	3.1E+06	3.1E+04
1.5E-01	C	4.3E-05	C	2.0E-03	I					1	0.1		1.4E+09		Captafol	2425-06-1	4.6E+00	1.6E+01	8.9E+04	3.6E+00	1.6E+02	6.6E+02		1.3E+02
2.3E-03	C	6.6E-07	C	1.3E-01	I					1	0.1		1.4E+09		Captan	133-06-2	3.0E+02	1.1E+03	5.8E+06	2.4E+02	1.0E+04	4.3E+04		8.2E+03
				1.0E-01	I					1	0.1		1.4E+09		Carbaryl	63-25-2					7.8E+03	3.3E+04		6.3E+03
				5.0E-03	I					1	0.1		1.4E+09		Carbofuran	1563-66-2					3.9E+02	1.6E+03		3.2E+02
				1.0E-01	I	7.0E-01	I	V		1		7.4E+02	1.4E+09	1.2E+03	Carbon Disulfide	75-15-0					7.8E+03		8.5E+02	7.7E+02
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		1		4.6E+02	1.4E+09	1.5E+03	Carbon Tetrachloride	56-23-5	9.9E+00		7.0E-01	6.5E-01	3.1E+02		1.6E+02	1.0E+02
						1.0E-01	P	V		1		5.9E+03	1.4E+09	6.5E+02	Carbonyl Sulfide	463-58-1							6.7E+01	6.7E+01
				1.0E-02	I					1	0.1		1.4E+09		Carbosulfan	55285-14-8					7.8E+02	3.3E+03		6.3E+02
				1.0E-01	I					1	0.1		1.4E+09		Carboxin	5234-68-4					7.8E+03	3.3E+04		6.3E+03
						9.0E-04	I			1			1.4E+09		Ceric oxide	1306-38-3							1.3E+06	1.3E+06
				1.0E-01	I			V		1			1.4E+09	1.5E+05	Chloral Hydrate	302-17-0					7.8E+03			7.8E+03
				1.5E-02	I					1	0.1		1.4E+09		Chloramben	133-90-4					1.2E+03	4.9E+03		9.5E+02
4.0E-01	H									1	0.1		1.4E+09		Chloranil	118-75-2	1.7E+00	6.1E+00		1.3E+00				
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V		1	0.04		1.4E+09	9.0E+05	Chlordane	12789-03-6	2.0E+00	1.8E+01	2.5E+01	1.7E+00	3.9E+01	4.1E+02	6.6E+02	3.4E+01
1.0E+01	I	4.6E-03	C	3.0E-04	I					1	0.1		1.4E+09		Chlordecone (Kepone)	143-50-0	7.0E-02	2.5E-01	8.3E+02	5.4E-02	2.3E+01	9.9E+01		1.9E+01
				7.0E-04	A					1	0.1		1.4E+09		Chlorfenvinphos	470-90-6					5.5E+01	2.3E+02		4.4E+01
				2.0E-02	I					1	0.1		1.4E+09		Chlorimuron, Ethyl-	90982-32-4					1.6E+03	6.6E+03		1.3E+03
				1.0E-01	I	1.5E-04	A	V		1		2.8E+03	1.4E+09	1.2E+03	Chlorine	7782-50-5					7.8E+03		1.8E-01	1.8E-01
				3.0E-02	I	2.0E-04	I	V		1			1.4E+09		Chlorine Dioxide	10049-04-4					2.3E+03		2.8E+05	2.3E+03
				3.0E-02	I					1			1.4E+09		Chlorite (Sodium Salt)	7758-19-2					2.3E+03			2.3E+03
						5.0E+01	I	V		1		1.2E+03	1.4E+09	1.0E+03	Chloro-1,1-difluoroethane, 1-	75-68-3							5.4E+04	5.4E+04
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		1		7.9E+02	1.4E+09	1.1E+03	Chloro-1,3-butadiene, 2-	126-99-8			1.0E-02	1.0E-02	1.6E+03		2.2E+01	2.2E+01
4.6E-01	H									1	0.1		1.4E+09		Chloro-2-methylaniline HCl, 4-	3165-93-3	1.5E+00	5.4E+00		1.2E+00				
1.0E-01	P	7.7E-05	C	3.0E-03	X					1	0.1		1.4E+09		Chloro-2-methylaniline, 4-	95-69-2	7.0E+00	2.5E+01	5.0E+04	5.4E+00	2.3E+02	9.9E+02		1.9E+02
2.7E-01	X							V		1		1.2E+04	1.4E+09	1.6E+04	Chloroacetaldehyde, 2-	107-20-0	2.6E+00			2.6E+00				
										1	0.1		1.4E+09		Chloroacetic Acid	79-11-8								
						3.0E-05	I			1	0.1		1.4E+09		Chloroacetophenone, 2-	532-27-4							4.3E+04	4.3E+04
2.0E-01	P			4.0E-03	I					1	0.1		1.4E+09		Chloroaniline, p-	106-47-8	3.5E+00	1.2E+01		2.7E+00	3.1E+02	1.3E+03		2.5E+02
				2.0E-02	I	5.0E-02	P	V		1		7.6E+02	1.4E+09	6.5E+03	Chlorobenzene	108-90-7					1.6E+03		3.4E+02	2.8E+02
1.1E-01	C	3.1E-05	C	2.0E-02	I					1	0.1		1.4E+09		Chlorobenzilate	510-15-6	6.3E+00	2.2E+01	1.2E+05	4.9E+00	1.6E+03	6.6E+03		1.3E+03
				3.0E-02	X					1	0.1		1.4E+09		Chlorobenzoic Acid, p-	74-11-3					2.3E+03	9.9E+03		1.9E+03

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				3.0E-03	P	3.0E-01	P	V		1		2.9E+02	1.4E+09	6.8E+03	Chlorobenzotrifluoride, 4-	98-56-6					2.3E+02		2.1E+03	2.1E+02
				4.0E-02	P			V		1		7.3E+02	1.4E+09	1.8E+03	Chlorobutane, 1-	109-69-3					3.1E+03			3.1E+03
						5.0E+01	I	V		1		1.7E+03	1.4E+09	9.4E+02	Chlorodifluoromethane	75-45-6							4.9E+04	4.9E+04
				2.0E-02	P			V		1		1.1E+05	1.4E+09	7.8E+04	Chloroethanol, 2-	107-07-3					1.6E+03			1.6E+03
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		1		2.5E+03	1.4E+09	2.6E+03	Chloroform	67-66-3	2.2E+01		3.2E-01	3.2E-01	7.8E+02		2.7E+02	2.0E+02
						9.0E-02	I	V		1		1.3E+03	1.4E+09	1.2E+03	Chloromethane	74-87-3							1.1E+02	1.1E+02
2.4E+00	C	6.9E-04	C					V		1		9.3E+03	1.4E+09	5.3E+03	Chloromethyl Methyl Ether	107-30-2	2.9E-01		2.2E-02	2.0E-02				
3.0E-01	P			3.0E-03	P	1.0E-05	X			1	0.1		1.4E+09		Chloronitrobenzene, o-	88-73-3	2.3E+00	8.2E+00		1.8E+00	2.3E+02	9.9E+02	1.4E+04	1.9E+02
6.3E-03	P			1.0E-03	P	6.0E-04	P			1	0.1		1.4E+09		Chloronitrobenzene, p-	100-00-5	1.1E+02	3.9E+02		8.6E+01	7.8E+01	3.3E+02	8.5E+05	6.3E+01
				5.0E-03	I			V		1		2.2E+04	1.4E+09	1.2E+05	Chlorophenol, 2-	95-57-8					3.9E+02			3.9E+02
						4.0E-04	C	V		1		6.2E+02	1.4E+09	4.7E+03	Chloropicrin	76-06-2							2.0E+00	2.0E+00
3.1E-03	C	8.9E-07	C	1.5E-02	I					1	0.1		1.4E+09		Chlorothalonil	1897-45-6	2.2E+02	8.0E+02	4.3E+06	1.8E+02	1.2E+03	4.9E+03		9.5E+02
				2.0E-02	I			V		1		9.1E+02	1.4E+09	8.1E+03	Chlorotoluene, o-	95-49-8					1.6E+03			1.6E+03
				2.0E-02	X			V		1		2.5E+02	1.4E+09	7.3E+03	Chlorotoluene, p-	106-43-4					1.6E+03			1.6E+03
2.4E+02	C	6.9E-02	C							1	0.1		1.4E+09		Chlorozotocin	54749-90-5	2.9E-03	1.0E-02	5.5E+01	2.3E-03				
				2.0E-01	I					1	0.1		1.4E+09		Chlorpropham	101-21-3					1.6E+04	6.6E+04		1.3E+04
				1.0E-03	A					1	0.1		1.4E+09		Chlorpyrifos	2921-88-2					7.8E+01	3.3E+02		6.3E+01
				1.0E-02	H					1	0.1		1.4E+09		Chlorpyrifos Methyl	5598-13-0					7.8E+02	3.3E+03		6.3E+02
				5.0E-02	I					1	0.1		1.4E+09		Chlorsulfuron	64902-72-3					3.9E+03	1.6E+04		3.2E+03
				1.0E-02	I					1	0.1		1.4E+09		Chlorthal-dimethyl	1861-32-1					7.8E+02	3.3E+03		6.3E+02
				8.0E-04	H					1	0.1		1.4E+09		Chlorthiophos	60238-56-4					6.3E+01	2.6E+02		5.1E+01
				1.5E+00	I					0.013			1.4E+09		Chromium(III), Insoluble Salts	16065-83-1					1.2E+05			1.2E+05
5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M	0.025			1.4E+09		Chromium(VI)	18540-29-9	3.1E-01		1.6E+01	3.0E-01	2.3E+02		1.4E+05	2.3E+02
										0.013			1.4E+09		Chromium, Total	7440-47-3								
				1.3E-02	I					1	0.1		1.4E+09		Clofentezine	74115-24-5					1.0E+03	4.3E+03		8.2E+02
		9.0E-03	P	3.0E-04	P	6.0E-06	P			1			1.4E+09		Cobalt	7440-48-4			4.2E+02	4.2E+02	2.3E+01		8.5E+03	2.3E+01
		6.2E-04	I					V	M	1					Coke Oven Emissions	8007-45-2								
				4.0E-02	H					1			1.4E+09		Copper	7440-50-8					3.1E+03			3.1E+03
				5.0E-02	I	6.0E-01	C			1	0.1		1.4E+09		Cresol, m-	108-39-4					3.9E+03	1.6E+04	8.5E+08	3.2E+03
				5.0E-02	I	6.0E-01	C			1	0.1		1.4E+09		Cresol, o-	95-48-7					3.9E+03	1.6E+04	8.5E+08	3.2E+03
				1.0E-01	A	6.0E-01	C			1	0.1		1.4E+09		Cresol, p-	106-44-5					7.8E+03	3.3E+04	8.5E+08	6.3E+03
				1.0E-01	A					1	0.1		1.4E+09		Cresol, p-chloro-m-	59-50-7					7.8E+03	3.3E+04		6.3E+03
				1.0E-01	A	6.0E-01	C			1	0.1		1.4E+09		Cresols	1319-77-3					7.8E+03	3.3E+04	8.5E+08	6.3E+03
1.9E+00	H			1.0E-03	P			V		1		1.7E+04	1.4E+09	1.9E+04	Crotonaldehyde, trans-	123-73-9	3.7E-01			3.7E-01	7.8E+01			7.8E+01
				1.0E-01	I	4.0E-01	I	V		1		2.7E+02	1.4E+09	6.2E+03	Cumene	98-82-8					7.8E+03		2.6E+03	1.9E+03
2.2E-01	C	6.3E-05	C							1	0.1		1.4E+09		Cupferron	135-20-6	3.2E+00	1.1E+01	6.1E+04	2.5E+00				
8.4E-01	H			2.0E-03	H					1	0.1		1.4E+09		Cyanazine	21725-46-2	8.3E-01	2.9E+00		6.5E-01	1.6E+02	6.6E+02		1.3E+02
															Cyanides									
				1.0E-03	I					1			1.4E+09		~Calcium Cyanide	592-01-8					7.8E+01			7.8E+01
				5.0E-03	I					1			1.4E+09		~Copper Cyanide	544-92-3					3.9E+02			3.9E+02
				6.0E-04	I	8.0E-04	S	V		1		9.7E+05	1.4E+09	3.5E+03	~Cyanide (CN-)	57-12-5					4.7E+01		2.9E+00	2.7E+00
				1.0E-03	I			V		1			1.4E+09		~Cyanogen	460-19-5					7.8E+01			7.8E+01
				9.0E-02	I			V		1			1.4E+09		~Cyanogen Bromide	506-68-3					7.0E+03			7.0E+03
				5.0E-02	I			V		1			1.4E+09		~Cyanogen Chloride	506-77-4					3.9E+03			3.9E+03
				6.0E-04	I	8.0E-04	I	V		1		1.0E+07	1.4E+09	5.2E+04	~Hydrogen Cyanide	74-90-8					4.7E+01		4.4E+01	2.3E+01
				2.0E-03	I					1			1.4E+09		~Potassium Cyanide	151-50-8					1.6E+02			1.6E+02
				5.0E-03	I					0.04			1.4E+09		~Potassium Silver Cyanide	506-61-6					3.9E+02			3.9E+02
				1.0E-01	I					0.04			1.4E+09		~Silver Cyanide	506-64-9					7.8E+03			7.8E+03
				1.0E-03	I					1			1.4E+09		~Sodium Cyanide	143-33-9					7.8E+01			7.8E+01
				2.0E-04	P					1			1.4E+09		~Thiocyanates	NA					1.6E+01			1.6E+01
				2.0E-04	X			V		1			1.4E+09		~Thiocyanic Acid	463-56-9					1.6E+01			1.6E+01
				5.0E-02	I					1			1.4E+09		~Zinc Cyanide	557-21-1					3.9E+03			3.9E+03
						6.0E+00	I	V		1		1.2E+02	1.4E+09	1.0E+03	Cyclohexane	110-82-7							6.5E+03	6.5E+03
2.3E-02	H									1	0.1		1.4E+09		Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	3.0E+01	1.1E+02		2.4E+01				
				5.0E+00	I	7.0E-01	P	V		1		5.1E+03	1.4E+09	4.2E+04	Cyclohexanone	108-94-1					3.9E+05		3.0E+04	2.8E+04
				5.0E-03	P	1.0E+00	X	V		1		2.8E+02	1.4E+09	1.5E+03	Cyclohexene	110-83-8					3.9E+02		1.5E+03	3.1E+02
				2.0E-01	I			V		1		2.9E+05	1.4E+09	7.5E+04	Cyclohexylamine	108-91-8					1.6E+04			1.6E+04
				2.5E-02	I					1	0.1		1.4E+09		Cyfluthrin	68359-37-5					2.0E+03	8.2E+03		1.6E+03
				5.0E-03	I					1	0.1		1.4E+09		Cyhalothrin	68085-85-8					3.9E+02	1.6E+03		3.2E+02
				1.0E-02	I					1	0.1		1.4E+09		Cypermethrin	52315-07-8					7.8E+02	3.3E+03		6.3E+02
				7.5E-03	I					1	0.1		1.4E+09		Cyromazine	66215-27-8					5.9E+02	2.5E+03		4.7E+02
2.4E-01	I	6.9E-05	C							1	0.1		1.4E+09		DDD	72-54-8	2.9E+00	1.0E+01	5.5E+04	2.3E+00				
3.4E-01	I	9.7E-05	C					V		1			1.4E+09	2.1E+06	DDE, p,p'-	72-55-9	2.0E+00		6.1E+01	2.0E+00				
3.4E-01	I	9.7E-05	I	5.0E-04	I					1	0.03		1.4E+09		DDT	50-29-3	2.0E+00	2.4E+01	3.9E+04	1.9E+00	3.9E+01	5.5E+02		3.7E+01

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information																	Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				3.0E-02	I					1	0.1		1.4E+09		Dalapon	75-99-0					2.3E+03	9.9E+03		1.9E+03
1.8E-02	C	5.1E-06	C	1.5E-01	I					1	0.1		1.4E+09		Daminozide	1596-84-5	3.9E+01	1.4E+02	7.5E+05	3.0E+01	1.2E+04	4.9E+04		9.5E+03
7.0E-04	I			7.0E-03	I					1	0.1		1.4E+09		Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	9.9E+02	3.5E+03		7.8E+02	5.5E+02	2.3E+03		4.4E+02
				4.0E-05	I					1	0.1		1.4E+09		Demeton	8065-48-3					3.1E+00	1.3E+01		2.5E+00
1.2E-03	I			6.0E-01	I					1	0.1		1.4E+09		Di(2-ethylhexyl)adipate	103-23-1	5.8E+02	2.1E+03		4.5E+02	4.7E+04	2.0E+05		3.8E+04
6.1E-02	H									1	0.1		1.4E+09		Diallate	2303-16-4	1.1E+01	4.1E+01		8.9E+00				
				7.0E-04	A					1	0.1		1.4E+09		Diazinon	333-41-5					5.5E+01	2.3E+02		4.4E+01
				1.0E-02	X			V		1			1.4E+09	5.2E+05	Dibenzothiophene	132-65-0					7.8E+02			7.8E+02
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	1		9.8E+02	1.4E+09	3.2E+04	Dibromo-3-chloropropane, 1,2-	96-12-8	1.9E-01		5.4E-03	5.3E-03	1.6E+01		6.7E+00	4.7E+00
				4.0E-04	X			V		1		1.6E+02	1.4E+09	1.9E+04	Dibromobenzene, 1,3-	108-36-1					3.1E+01			3.1E+01
				1.0E-02	I			V		1			1.4E+09	2.2E+04	Dibromobenzene, 1,4-	106-37-6					7.8E+02			7.8E+02
8.4E-02	I			2.0E-02	I			V		1		8.0E+02	1.4E+09	8.0E+03	Dibromochloromethane	124-48-1	8.3E+00			8.3E+00	1.6E+03			1.6E+03
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1		1.3E+03	1.4E+09	8.6E+03	Dibromoethane, 1,2-	106-93-4	3.5E-01		4.0E-02	3.6E-02	7.0E+02		8.1E+01	7.3E+01
						4.0E-03	X	V		1		2.8E+03	1.4E+09	5.6E+03	Dibromomethane (Methylene Bromide)	74-95-3							2.4E+01	2.4E+01
				3.0E-04	P					1	0.1		1.4E+09		Dibutyltin Compounds	NA					2.3E+01	9.9E+01		1.9E+01
				3.0E-02	I					1	0.1		1.4E+09		Dicamba	1918-00-9					2.3E+03	9.9E+03		1.9E+03
		4.2E-03	P					V		1		5.5E+02	1.4E+09	3.2E+03	Dichloro-2-butene, 1,4-	764-41-0			2.1E-03	2.1E-03				
		4.2E-03	P					V		1		5.2E+02	1.4E+09	1.1E+04	Dichloro-2-butene, cis-1,4-	1476-11-5			7.4E-03	7.4E-03				
		4.2E-03	P					V		1		7.6E+02	1.4E+09	1.1E+04	Dichloro-2-butene, trans-1,4-	110-57-6			7.4E-03	7.4E-03				
5.0E-02	I			4.0E-03	I					1	0.1		1.4E+09		Dichloroacetic Acid	79-43-6	1.4E+01	4.9E+01		1.1E+01	3.1E+02	1.3E+03		2.5E+02
				9.0E-02	I	2.0E-01	H	V		1		3.8E+02	1.4E+09	1.2E+04	Dichlorobenzene, 1,2-	95-50-1					7.0E+03		2.4E+03	1.8E+03
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		1			1.4E+09	1.0E+04	Dichlorobenzene, 1,4-	106-46-7	1.3E+02		2.7E+00	2.6E+00	5.5E+03		8.7E+03	3.4E+03
4.5E-01	I	3.4E-04	C							1	0.1		1.4E+09		Dichlorobenzidine, 3,3'-	91-94-1	1.5E+00	5.5E+00	1.1E+04	1.2E+00				
				9.0E-03	X					1	0.1		1.4E+09		Dichlorobenzophenone, 4,4'-	90-98-2					7.0E+02	3.0E+03		5.7E+02
				2.0E-01	I	1.0E-01	X	V		1		8.5E+02	1.4E+09	8.4E+02	Dichlorodifluoromethane	75-71-8					1.6E+04		8.8E+01	8.7E+01
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1		1.7E+03	1.4E+09	2.1E+03	Dichloroethane, 1,1-	75-34-3	1.2E+02		3.7E+00	3.6E+00	1.6E+04			1.6E+04
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1		3.0E+03	1.4E+09	4.6E+03	Dichloroethane, 1,2-	107-06-2	7.6E+00		4.9E-01	4.6E-01	4.7E+02		3.3E+01	3.1E+01
				5.0E-02	I	2.0E-01	I	V		1		1.2E+03	1.4E+09	1.2E+03	Dichloroethylene, 1,1-	75-35-4					3.9E+03		2.4E+02	2.3E+02
				2.0E-03	I			V		1		2.4E+03	1.4E+09	2.5E+03	Dichloroethylene, 1,2-cis-	156-59-2					1.6E+02			1.6E+02
				2.0E-02	I			V		1		1.9E+03	1.4E+09	1.8E+03	Dichloroethylene, 1,2-trans-	156-60-5					1.6E+03			1.6E+03
				3.0E-03	I					1	0.1		1.4E+09		Dichlorophenol, 2,4-	120-83-2					2.3E+02	9.9E+02		1.9E+02
				1.0E-02	I					1	0.05		1.4E+09		Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					7.8E+02	6.6E+03		7.0E+02
				8.0E-03	I					1	0.1		1.4E+09		Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6					6.3E+02	2.6E+03		5.1E+02
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1		1.4E+03	1.4E+09	3.8E+03	Dichloropropane, 1,2-	78-87-5	1.9E+01		1.1E+00	1.0E+00	7.0E+03		1.6E+01	1.6E+01
				2.0E-02	P			V		1		1.5E+03	1.4E+09	6.8E+03	Dichloropropane, 1,3-	142-28-9					1.6E+03			1.6E+03
				3.0E-03	I					1	0.1		1.4E+09		Dichloropropanol, 2,3-	616-23-9					2.3E+02	9.9E+02		1.9E+02
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		1		1.6E+03	1.4E+09	3.6E+03	Dichloropropene, 1,3-	542-75-6	7.0E+00		2.5E+00	1.8E+00	2.3E+03		7.4E+01	7.2E+01
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1	0.1		1.4E+09		Dichlorvos	62-73-7	2.4E+00	8.5E+00	4.6E+04	1.9E+00	3.9E+01	1.6E+02	7.1E+05	3.2E+01
				1.0E-04	I					1	0.1		1.4E+09		Dicrotophos	141-66-2					7.8E+00	3.3E+01		6.3E+00
				8.0E-02	P	3.0E-04	X	V		1		2.6E+02	1.4E+09	4.1E+03	Dicyclopentadiene	77-73-6					6.3E+03		1.3E+00	1.3E+00
1.6E+01	I	4.6E-03	I	5.0E-05	I					1	0.1		1.4E+09		Dieldrin	60-57-1	4.3E-02	1.5E-01	8.3E+02	3.4E-02	3.9E+00	1.6E+01		3.2E+00
		3.0E-04	C			5.0E-03	I			1	0.1				Diesel Engine Exhaust	NA								
				2.0E-03	P	2.0E-04	P			1	0.1		1.4E+09		Diethanolamine	111-42-2					1.6E+02	6.6E+02	2.8E+05	1.3E+02
				3.0E-02	P	1.0E-04	P			1	0.1		1.4E+09		Diethylene Glycol Monobutyl Ether	112-34-5					2.3E+03	9.9E+03	1.4E+05	1.9E+03
				6.0E-02	P	3.0E-04	P			1	0.1		1.4E+09		Diethylene Glycol Monoethyl Ether	111-90-0					4.7E+03	2.0E+04	4.3E+05	3.8E+03
				1.0E-03	P			V		1		1.1E+05	1.4E+09	1.4E+05	Diethylformamide	617-84-5					7.8E+01			7.8E+01
3.5E+02	C	1.0E-01	C							1	0.1		1.4E+09		Diethylstilbestrol	56-53-1	2.0E-03	7.1E-03	3.8E+01	1.6E-03				
				8.0E-02	I					1	0.1		1.4E+09		Difenzoquat	43222-48-6					6.3E+03	2.6E+04		5.1E+03
				2.0E-02	I					1	0.1		1.4E+09		Diflubenzuron	35367-38-5					1.6E+03	6.6E+03		1.3E+03
						4.0E+01	I	V		1		1.4E+03	1.4E+09	1.2E+03	Difluoroethane, 1,1-	75-37-6							4.8E+04	4.8E+04
4.4E-02	C	1.3E-05	C					V		1			1.4E+09	1.2E+05	Dihydrosafrole	94-58-6	1.6E+01		2.7E+01	9.9E+00				
						7.0E-01	P	V		1		2.3E+03	1.4E+09	3.1E+03	Diisopropyl Ether	108-20-3							2.2E+03	2.2E+03
				8.0E-02	I			V		1		5.3E+02	1.4E+09	3.8E+04	Diisopropyl Methylphosphonate	1445-75-6					6.3E+03			6.3E+03
				2.0E-02	I					1	0.1		1.4E+09		Dimethipin	55290-64-7					1.6E+03	6.6E+03		1.3E+03
				2.0E-04	I					1	0.1		1.4E+09		Dimethoate	60-51-5					1.6E+01	6.6E+01		1.3E+01
1.6E+00	P									1	0.1		1.4E+09		Dimethoxybenzidine, 3,3'-	119-90-4	4.3E-01	1.5E+00		3.4E-01				
1.7E-03	P			6.0E-02	P					1	0.1		1.4E+09		Dimethyl methylphosphonate	756-79-6	4.1E+02	1.5E+03		3.2E+02	4.7E+03	2.0E+04		3.8E+03
4.6E+00	C	1.3E-03	C							1	0.1		1.4E+09		Dimethylamino azobenzene [p-]	60-11-7	1.5E-01	5.4E-01	2.9E+03	1.2E-01				
5.8E-01	H									1	0.1		1.4E+09		Dimethylaniline HCl, 2,4-	21436-96-4	1.2E+00	4.3E+00		9.4E-01				
2.0E-01	P			2.0E-03	X					1	0.1		1.4E+09		Dimethylaniline, 2,4-	95-68-1	3.5E+00	1.2E+01		2.7E+00	1.6E+02	6.6E+02		1.3E+02
				2.0E-03	I			V		1		8.3E+02	1.4E+09	3.1E+04	Dimethylaniline, N,N-	121-69-7					1.6E+02			1.6E+02
1.1E+01	P									1	0.1		1.4E+09		Dimethylbenzidine, 3,3'-	119-93-7	6.3E-02	2.2E-01		4.9E-02				
				1.0E-01	P	3.0E-02	I	V		1		1.1E+05	1.4E+09	1.3E+05	Dimethylformamide	68-12-2					7.8E+03		4.0E+03	2.6E+03
				1.0E-04	X	2.0E-06	X	V		1		1.7E+05	1.4E+09	2.8E+04	Dimethylhydrazine, 1,1-	57-14-7					7.8E+00		5.8E-02	5.7E-02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information																Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (μg/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
5.5E+02	C	1.6E-01	C					V		1		1.9E+05	1.4E+09	1.7E+05	Dimethylhydrazine, 1,2-	540-73-8	1.3E-03		2.9E-03	8.8E-04				
				2.0E-02	I					1	0.1		1.4E+09		Dimethylphenol, 2,4-	105-67-9					1.6E+03	6.6E+03		1.3E+03
				6.0E-04	I					1	0.1		1.4E+09		Dimethylphenol, 2,6-	576-26-1					4.7E+01	2.0E+02		3.8E+01
				1.0E-03	I					1	0.1		1.4E+09		Dimethylphenol, 3,4-	95-65-8					7.8E+01	3.3E+02		6.3E+01
4.5E-02	C	1.3E-05	C					V		1		1.3E+03	1.4E+09	9.5E+02	Dimethylvinylchloride	513-37-1	1.5E+01		2.1E-01	2.0E-01				
				8.0E-05	X					1	0.1		1.4E+09		Dinitro-o-cresol, 4,6-	534-52-1					6.3E+00	2.6E+01		5.1E+00
				2.0E-03	I					1	0.1		1.4E+09		Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					1.6E+02	6.6E+02		1.3E+02
				1.0E-04	P					1	0.1		1.4E+09		Dinitrobenzene, 1,2-	528-29-0					7.8E+00	3.3E+01		6.3E+00
				1.0E-04	I					1	0.1		1.4E+09		Dinitrobenzene, 1,3-	99-65-0					7.8E+00	3.3E+01		6.3E+00
				1.0E-04	P					1	0.1		1.4E+09		Dinitrobenzene, 1,4-	100-25-4					7.8E+00	3.3E+01		6.3E+00
				2.0E-03	I					1	0.1		1.4E+09		Dinitrophenol, 2,4-	51-28-5					1.6E+02	6.6E+02		1.3E+02
6.8E-01	I									1	0.1		1.4E+09		Dinitrotoluene Mixture, 2,4/2,6-	NA	1.0E+00	3.6E+00		8.0E-01				
3.1E-01	C	8.9E-05	C	2.0E-03	I					1	0.102		1.4E+09		Dinitrotoluene, 2,4-	121-14-2	2.2E+00	7.8E+00	4.3E+04	1.7E+00	1.6E+02	6.5E+02		1.3E+02
1.5E+00	P			3.0E-04	X					1	0.099		1.4E+09		Dinitrotoluene, 2,6-	606-20-2	4.6E-01	1.7E+00		3.6E-01	2.3E+01	1.0E+02		1.9E+01
				2.0E-03	S					1	0.006		1.4E+09		Dinitrotoluene, 2-Amino-4,6-	35572-78-2					1.6E+02	1.1E+04		1.5E+02
				2.0E-03	S					1	0.009		1.4E+09		Dinitrotoluene, 4-Amino-2,6-	19406-51-0					1.6E+02	7.3E+03		1.5E+02
4.5E-01	X			9.0E-04	X					1	0.1		1.4E+09		Dinitrotoluene, Technical grade	25321-14-6	1.5E+00	5.5E+00		1.2E+00	7.0E+01	3.0E+02		5.7E+01
				1.0E-03	I					1	0.1		1.4E+09		Dinoseb	88-85-7					7.8E+01	3.3E+02		6.3E+01
1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		1		1.2E+05	1.4E+09	4.0E+04	Dioxane, 1,4-	123-91-1	7.0E+00		2.2E+01	5.3E+00	2.3E+03		1.2E+03	8.1E+02
															Dioxins									
6.2E+03	I	1.3E+00	I							1	0.03		1.4E+09		~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.1E-04	1.3E-03	2.9E+00	1.0E-04				
1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V		1	0.03		1.4E+09	2.0E+06	~TCDD, 2,3,7,8-	1746-01-6	5.3E-06	6.3E-05	1.4E-04	4.8E-06	5.5E-05	7.7E-04	8.2E-02	5.1E-05
				3.0E-02	I					1	0.1		1.4E+09		Diphenamid	957-51-7					2.3E+03	9.9E+03		1.9E+03
				8.0E-04	X					1	0.1		1.4E+09		Diphenyl Sulfone	127-63-9					6.3E+01	2.6E+02		5.1E+01
				2.5E-02	I					1	0.1		1.4E+09		Diphenylamine	122-39-4					2.0E+03	8.2E+03		1.6E+03
8.0E-01	I	2.2E-04	I							1	0.1		1.4E+09		Diphenylhydrazine, 1,2-	122-66-7	8.7E-01	3.1E+00	1.7E+04	6.8E-01				
				2.2E-03	I					1	0.1		1.4E+09		Diquat	85-00-7					1.7E+02	7.3E+02		1.4E+02
7.1E+00	C	1.4E-01	C							1	0.1		1.4E+09		Direct Black 38	1937-37-7	9.8E-02	3.5E-01	2.7E+01	7.6E-02				
7.4E+00	C	1.4E-01	C							1	0.1		1.4E+09		Direct Blue 6	2602-46-2	9.4E-02	3.3E-01	2.7E+01	7.3E-02				
6.7E+00	C	1.4E-01	C							1	0.1		1.4E+09		Direct Brown 95	16071-86-6	1.0E-01	3.7E-01	2.7E+01	8.1E-02				
				4.0E-05	I					1	0.1		1.4E+09		Disulfoton	298-04-4					3.1E+00	1.3E+01		2.5E+00
				1.0E-02	I			V		1			1.4E+09	4.5E+04	Dithiane, 1,4-	505-29-3					7.8E+02			7.8E+02
				2.0E-03	I					1	0.1		1.4E+09		Diuron	330-54-1					1.6E+02	6.6E+02		1.3E+02
				4.0E-03	I					1	0.1		1.4E+09		Dodine	2439-10-3					3.1E+02	1.3E+03		2.5E+02
				2.5E-02	I			V		1			1.4E+09	1.2E+05	EPTC	759-94-4					2.0E+03			2.0E+03
				6.0E-03	I			V		1			1.4E+09	4.1E+05	Endosulfan	115-29-7					4.7E+02			4.7E+02
				2.0E-02	I					1	0.1		1.4E+09		Endothall	145-73-3					1.6E+03	6.6E+03		1.3E+03
				3.0E-04	I					1	0.1		1.4E+09		Endrin	72-20-8					2.3E+01	9.9E+01		1.9E+01
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1		1.1E+04	1.4E+09	1.9E+04	Epichlorohydrin	106-89-8	7.0E+01		4.4E+01	2.7E+01	4.7E+02		2.0E+01	1.9E+01
						2.0E-02	I	V		1		1.5E+04	1.4E+09	7.7E+03	Epoxybutane, 1,2-	106-88-7							1.6E+02	1.6E+02
				4.0E-02	P					1	0.1		1.4E+09		Ethanol, 2-(2-methoxyethoxy)-	111-77-3					3.1E+03	1.3E+04		2.5E+03
				5.0E-03	I					1	0.1		1.4E+09		Ethephon	16672-87-0					3.9E+02	1.6E+03		3.2E+02
				5.0E-04	I					1	0.1		1.4E+09		Ethion	563-12-2					3.9E+01	1.6E+02		3.2E+01
				1.0E-01	P	6.0E-02	P	V		1		2.4E+04	1.4E+09	6.2E+04	Ethoxyethanol Acetate, 2-	111-15-9					7.8E+03		3.8E+03	2.6E+03
				9.0E-02	P	2.0E-01	I	V		1		1.1E+05	1.4E+09	9.8E+04	Ethoxyethanol, 2-	110-80-5					7.0E+03		2.1E+04	5.2E+03
				9.0E-01	I	7.0E-02	P	V		1		1.1E+04	1.4E+09	8.6E+03	Ethyl Acetate	141-78-6					7.0E+04		6.3E+02	6.2E+02
				5.0E-03	P	8.0E-03	P	V		1		2.5E+03	1.4E+09	6.3E+03	Ethyl Acrylate	140-88-5					3.9E+02		5.3E+01	4.7E+01
						1.0E+01	I	V		1		2.1E+03	1.4E+09	1.3E+03	Ethyl Chloride (Chloroethane)	75-00-3							1.4E+04	1.4E+04
				2.0E-01	I			V		1		1.0E+04	1.4E+09	3.1E+03	Ethyl Ether	60-29-7					1.6E+04			1.6E+04
						3.0E-01	P	V		1		1.1E+03	1.4E+09	5.8E+03	Ethyl Methacrylate	97-63-2							1.8E+03	1.8E+03
				1.0E-05	I					1	0.1		1.4E+09		Ethyl-p-nitrophenyl Phosphonate	2104-64-5					7.8E-01	3.3E+00		6.3E-01
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		1		4.8E+02	1.4E+09	5.7E+03	Ethylbenzene	100-41-4	6.3E+01		6.4E+00	5.8E+00	7.8E+03		5.9E+03	3.4E+03
				7.0E-02	P					1	0.1		1.4E+09		Ethylene Cyanohydrin	109-78-4					5.5E+03	2.3E+04		4.4E+03
				9.0E-02	P			V		1		1.9E+05	1.4E+09	1.8E+05	Ethylene Diamine	107-15-3					7.0E+03			7.0E+03
				2.0E+00	I	4.0E-01	C			1	0.1		1.4E+09		Ethylene Glycol	107-21-1					1.6E+05	6.6E+05	5.7E+08	1.3E+05
				1.0E-01	I	1.6E+00	I			1	0.1		1.4E+09		Ethylene Glycol Monobutyl Ether	111-76-2					7.8E+03	3.3E+04	2.3E+09	6.3E+03
3.1E-01	C	8.8E-05	C			3.0E-02	C	V		1		1.2E+05	1.4E+09	6.1E+03	Ethylene Oxide	75-21-8	2.2E+00		1.9E-01	1.8E-01			1.9E+02	1.9E+02
4.5E-02	C	1.3E-05	C	8.0E-05	I					1	0.1		1.4E+09		Ethylene Thiourea	96-45-7	1.5E+01	5.5E+01	2.9E+05	1.2E+01	6.3E+00	2.6E+01		5.1E+00
6.5E+01	C	1.9E-02	C					V		1		1.5E+05	1.4E+09	2.4E+04	Ethyleneimine	151-56-4	1.1E-02		3.5E-03	2.7E-03				
				3.0E+00	I					1	0.1		1.4E+09		Ethylphthalyl Ethyl Glycolate	84-72-0					2.3E+05	9.9E+05		1.9E+05
				2.5E-04	I					1	0.1		1.4E+09		Fenamiphos	22224-92-6					2.0E+01	8.2E+01		1.6E+01
				2.5E-02	I					1	0.1		1.4E+09		Fenpropathrin	39515-41-8					2.0E+03	8.2E+03		1.6E+03
				2.5E-02	I					1	0.1		1.4E+09		Fenvalerate	51630-58-1					2.0E+03	8.2E+03		1.6E+03
				1.3E-02	I					1	0.1		1.4E+09		Fluometuron	2164-17-2					1.0E+03	4.3E+03		8.2E+02

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				4.0E-02	C	1.3E-02	C			1			1.4E+09		Fluoride	16984-48-8					3.1E+03		1.8E+07	3.1E+03
				6.0E-02	I	1.3E-02	C			1			1.4E+09		Fluorine (Soluble Fluoride)	7782-41-4					4.7E+03		1.8E+07	4.7E+03
				8.0E-02	I					1	0.1		1.4E+09		Fluridone	59756-60-4					6.3E+03	2.6E+04		5.1E+03
				2.0E-02	I					1	0.1		1.4E+09		Flurprimidol	56425-91-3					1.6E+03	6.6E+03		1.3E+03
				7.0E-04	I					1	0.1		1.4E+09		Flusilazole	85509-19-9					5.5E+01	2.3E+02		4.4E+01
				6.0E-02	I					1	0.1		1.4E+09		Flutolanil	66332-96-5					4.7E+03	2.0E+04		3.8E+03
				1.0E-02	I					1	0.1		1.4E+09		Fluvalinate	69409-94-5					7.8E+02	3.3E+03		6.3E+02
3.5E-03	I			1.0E-01	I					1	0.1		1.4E+09		Folpet	133-07-3	2.0E+02	7.1E+02		1.6E+02	7.8E+03	3.3E+04		6.3E+03
1.9E-01	I									1	0.1		1.4E+09		Fomesafen	72178-02-0	3.7E+00	1.3E+01		2.9E+00				
				2.0E-03	I					1	0.1		1.4E+09		Fonofos	944-22-9					1.6E+02	6.6E+02		1.3E+02
		1.3E-05	I	2.0E-01	I	9.8E-03	A	V		1		4.2E+04	1.4E+09	7.8E+04	Formaldehyde	50-00-0			1.7E+01	1.7E+01	1.6E+04		8.0E+02	7.6E+02
				9.0E-01	P	3.0E-04	X	V		1		1.1E+05	1.4E+09	9.3E+04	Formic Acid	64-18-6					7.0E+04		2.9E+01	2.9E+01
				3.0E+00	I					1	0.1		1.4E+09		Fosetyl-AL	39148-24-8					2.3E+05	9.9E+05		1.9E+05
															Furans									
				1.0E-03	X			V		1	0.03		1.4E+09	2.0E+05	~Dibenzofuran	132-64-9					7.8E+01	1.1E+03		7.3E+01
				1.0E-03	I			V		1	0.03	6.2E+03	1.4E+09	2.6E+03	~Furan	110-00-9					7.8E+01	1.1E+03		7.3E+01
				9.0E-01	I	2.0E+00	I	V		1	0.03	1.7E+05	1.4E+09	1.2E+04	~Tetrahydrofuran	109-99-9					7.0E+04	9.9E+05	2.5E+04	1.8E+04
3.8E+00	H									1	0.1		1.4E+09		Furazolidone	67-45-8	1.8E-01	6.5E-01		1.4E-01				
				3.0E-03	I	5.0E-02	H	V		1		1.0E+04	1.4E+09	4.9E+04	Furfural	98-01-1					2.3E+02		2.5E+03	2.1E+02
1.5E+00	C	4.3E-04	C							1	0.1		1.4E+09		Furium	531-82-8	4.6E-01	1.6E+00	8.9E+03	3.6E-01				
3.0E-02	I	8.6E-06	C							1	0.1		1.4E+09		Furmecyclox	60568-05-0	2.3E+01	8.2E+01	4.4E+05	1.8E+01				
				4.0E-04	I					1	0.1		1.4E+09		Glufosinate, Ammonium	77182-82-2					3.1E+01	1.3E+02		2.5E+01
						8.0E-05	C			1	0.1		1.4E+09		Glutaraldehyde	111-30-8							1.1E+05	1.1E+05
				4.0E-04	I	1.0E-03	H	V		1		1.1E+05	1.4E+09	8.4E+04	Glycidyl	765-34-4					3.1E+01		8.8E+01	2.3E+01
				1.0E-01	I					1	0.1		1.4E+09		Glyphosate	1071-83-6					7.8E+03	3.3E+04		6.3E+03
				1.0E-02	X			V		1			1.4E+09	1.5E+05	Guanidine	113-00-8					7.8E+02			7.8E+02
				2.0E-02	P					1	0.1		1.4E+09		Guanidine Chloride	50-01-1					1.6E+03	6.6E+03		1.3E+03
				5.0E-05	I					1	0.1		1.4E+09		Haloxyfop, Methyl	69806-40-2					3.9E+00	1.6E+01		3.2E+00
4.5E+00	I	1.3E-03	I	5.0E-04	I			V		1			1.4E+09	4.8E+05	Heptachlor	76-44-8	1.5E-01		1.0E+00	1.3E-01	3.9E+01			3.9E+01
9.1E+00	I	2.6E-03	I	1.3E-05	I			V		1			1.4E+09	8.4E+05	Heptachlor Epoxide	1024-57-3	7.6E-02		9.1E-01	7.0E-02	1.0E+00			1.0E+00
				2.0E-03	I			V		1			1.4E+09	3.8E+05	Hexabromobenzene	87-82-1					1.6E+02			1.6E+02
				2.0E-04	I					1	0.1		1.4E+09		Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					1.6E+01	6.6E+01		1.3E+01
1.6E+00	I	4.6E-04	I	8.0E-04	I			V		1			1.4E+09	6.8E+04	Hexachlorobenzene	118-74-1	4.3E-01		4.1E-01	2.1E-01	6.3E+01			6.3E+01
7.8E-02	I	2.2E-05	I	1.0E-03	P			V		1		1.7E+01	1.4E+09	1.1E+04	Hexachlorobutadiene	87-68-3	8.9E+00		1.4E+00	1.2E+00	7.8E+01			7.8E+01
6.3E+00	I	1.8E-03	I	8.0E-03	A					1	0.1		1.4E+09		Hexachlorocyclohexane, Alpha-	319-84-6	1.1E-01	3.9E-01	2.1E+03	8.6E-02	6.3E+02	2.6E+03		5.1E+02
1.8E+00	I	5.3E-04	I							1	0.1		1.4E+09		Hexachlorocyclohexane, Beta-	319-85-7	3.9E-01	1.4E+00	7.2E+03	3.0E-01				
1.1E+00	C	3.1E-04	C	3.0E-04	I					1	0.04		1.4E+09		Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	6.3E-01	5.6E+00	1.2E+04	5.7E-01	2.3E+01	2.5E+02		2.1E+01
1.8E+00	I	5.1E-04	I							1	0.1		1.4E+09		Hexachlorocyclohexane, Technical	608-73-1	3.9E-01	1.4E+00	7.5E+03	3.0E-01				
				6.0E-03	I	2.0E-04	I	V		1		1.6E+01	1.4E+09	8.5E+03	Hexachlorocyclopentadiene	77-47-4					4.7E+02		1.8E+00	1.8E+00
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V		1			1.4E+09	8.0E+03	Hexachloroethane	67-72-1	1.7E+01		2.0E+00	1.8E+00	5.5E+01		2.5E+02	4.5E+01
				3.0E-04	I					1	0.1		1.4E+09		Hexachlorophene	70-30-4					2.3E+01	9.9E+01		1.9E+01
1.1E-01	I			3.0E-03	I					1	0.015		1.4E+09		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	6.3E+00	1.5E+02		6.1E+00	2.3E+02	6.6E+03		2.3E+02
						1.0E-05	I	V		1		3.4E+03	1.4E+09	3.0E+05	Hexamethylene Diisocyanate, 1,6-	822-06-0							3.1E+00	3.1E+00
				4.0E-04	P					1	0.1		1.4E+09		Hexamethylphosphoramide	680-31-9					3.1E+01	1.3E+02		2.5E+01
						7.0E-01	I	V		1		1.4E+02	1.4E+09	8.3E+02	Hexane, N-	110-54-3							6.1E+02	6.1E+02
				2.0E+00	P					1	0.1		1.4E+09		Hexanedioic Acid	124-04-9					1.6E+05	6.6E+05		1.3E+05
				5.0E-03	I	3.0E-02	I	V		1		3.3E+03	1.4E+09	1.3E+04	Hexanone, 2-	591-78-6					3.9E+02		4.2E+02	2.0E+02
				3.3E-02	I					1	0.1		1.4E+09		Hexazinone	51235-04-2					2.6E+03	1.1E+04		2.1E+03
				2.5E-02	I					1	0.1		1.4E+09		Hexythiazox	78587-05-0					2.0E+03	8.2E+03		1.6E+03
				3.0E-04	I					1	0.1		1.4E+09		Hydramethylnon	67485-29-4					2.3E+01	9.9E+01		1.9E+01
3.0E+00	I	4.9E-03	I			3.0E-05	P	V		1			1.4E+09		Hydrazine	302-01-2	2.3E-01		7.8E+02	2.3E-01			4.3E+04	4.3E+04
3.0E+00	I	4.9E-03	I							1			1.4E+09		Hydrazine Sulfate	10034-93-2	2.3E-01		7.8E+02	2.3E-01				
						2.0E-02	I	V		1			1.4E+09		Hydrogen Chloride	7647-01-0							2.8E+07	2.8E+07
				4.0E-02	C	1.4E-02	C	V		1			1.4E+09		Hydrogen Fluoride	7664-39-3					3.1E+03		2.0E+07	3.1E+03
						2.0E-03	I	V		1			1.4E+09		Hydrogen Sulfide	7783-06-4							2.8E+06	2.8E+06
6.0E-02	P			4.0E-02	P					1	0.1		1.4E+09		Hydroquinone	123-31-9	1.2E+01	4.1E+01		9.0E+00	3.1E+03	1.3E+04		2.5E+03
				1.3E-02	I					1	0.1		1.4E+09		Imazalil	35554-44-0					1.0E+03	4.3E+03		8.2E+02
				2.5E-01	I					1	0.1		1.4E+09		Imazaquin	81335-37-7					2.0E+04	8.2E+04		1.6E+04
				2.5E-01	I					1	0.1		1.4E+09		Imazethapyr	81335-77-5					2.0E+04	8.2E+04		1.6E+04
				1.0E-02	A					1			1.4E+09		Iodine	7553-56-2					7.8E+02			7.8E+02
				4.0E-02	I					1	0.1		1.4E+09		Iprodione	36734-19-7					3.1E+03	1.3E+04		2.5E+03
				7.0E-01	P					1			1.4E+09		Iron	7439-89-6					5.5E+04			5.5E+04
				3.0E-01	I			V		1		1.0E+04	1.4E+09	2.8E+04	Isobutyl Alcohol	78-83-1					2.3E+04			2.3E+04
9.5E-04	I			2.0E-01	I	2.0E+00	C			1	0.1		1.4E+09		Isophorone	78-59-1	7.3E+02	2.6E+03		5.7E+02	1.6E+04	6.6E+04	2.8E+09	1.3E+04

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				1.5E-02	I			V		1			1.4E+09	4.2E+05	Isopropalin	33820-53-0					1.2E+03			1.2E+03
				2.0E+00	P	2.0E-01	P	V		1		1.1E+05	1.4E+09	2.8E+04	Isopropanol	67-63-0					1.6E+05		5.8E+03	5.6E+03
				1.0E-01	I					1	0.1		1.4E+09		Isopropyl Methyl Phosphonic Acid	1832-54-8					7.8E+03	3.3E+04		6.3E+03
				5.0E-02	I					1	0.1		1.4E+09		Isoxaben	82558-50-7					3.9E+03	1.6E+04		3.2E+03
						3.0E-01	A	V		1			1.4E+09		JP-7	NA							4.3E+08	4.3E+08
				2.0E-03	I					1	0.1		1.4E+09		Lactofen	77501-63-4					1.6E+02	6.6E+02		1.3E+02
															Lead Compounds									
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		~Lead Chromate	7758-97-6	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
8.5E-03	C	1.2E-05	C							1			1.4E+09		~Lead Phosphate	7446-27-7	8.2E+01		3.2E+05	8.2E+01				
2.8E-01	C	8.0E-05	C							1	0.1		1.4E+09		~Lead acetate	301-04-2	2.5E+00	8.8E+00	4.8E+04	1.9E+00				
										1			1.4E+09		~Lead and Compounds	7439-92-1								4.0E+02
8.5E-03	C	1.2E-05	C							1	0.1		1.4E+09		~Lead subacetate	1335-32-6	8.2E+01	2.9E+02	3.2E+05	6.4E+01				
				1.0E-07	I			V		1		2.4E+00	1.4E+09	1.9E+03	~Tetraethyl Lead	78-00-2					7.8E-03			7.8E-03
				5.0E-06	P			V		1		3.8E+02	1.4E+09	2.6E+04	Lewisite	541-25-3					3.9E-01			3.9E-01
				2.0E-03	I					1	0.1		1.4E+09		Linuron	330-55-2					1.6E+02	6.6E+02		1.3E+02
				2.0E-03	P					1			1.4E+09		Lithium	7439-93-2					1.6E+02			1.6E+02
				5.0E-04	I					1	0.1		1.4E+09		MCPA	94-74-6					3.9E+01	1.6E+02		3.2E+01
				1.0E-02	I					1	0.1		1.4E+09		MCPB	94-81-5					7.8E+02	3.3E+03		6.3E+02
				1.0E-03	I					1	0.1		1.4E+09		MCPP	93-65-2					7.8E+01	3.3E+02		6.3E+01
				2.0E-02	I					1	0.1		1.4E+09		Malathion	121-75-5					1.6E+03	6.6E+03		1.3E+03
				1.0E-01	I	7.0E-04	C			1	0.1		1.4E+09		Maleic Anhydride	108-31-6					7.8E+03	3.3E+04	9.9E+05	6.3E+03
				5.0E-01	I					1	0.1		1.4E+09		Maleic Hydrazide	123-33-1					3.9E+04	1.6E+05		3.2E+04
				1.0E-04	P					1	0.1		1.4E+09		Malononitrile	109-77-3					7.8E+00	3.3E+01		6.3E+00
				3.0E-02	H					1	0.1		1.4E+09		Mancozeb	8018-01-7					2.3E+03	9.9E+03		1.9E+03
				5.0E-03	I					1	0.1		1.4E+09		Maneb	12427-38-2					3.9E+02	1.6E+03		3.2E+02
				1.4E-01	I	5.0E-05	I			1					Manganese (Diet)	7439-96-5								
				2.4E-02	S	5.0E-05	I			0.04			1.4E+09		Manganese (Non-diet)	7439-96-5					1.9E+03		7.1E+04	1.8E+03
				9.0E-05	H					1	0.1		1.4E+09		Mephosfolan	950-10-7					7.0E+00	3.0E+01		5.7E+00
				3.0E-02	I					1	0.1		1.4E+09		Mepiquat Chloride	24307-26-4					2.3E+03	9.9E+03		1.9E+03
															Mercury Compounds									
				3.0E-04	I	3.0E-04	S			0.07			1.4E+09		~Mercuric Chloride (and other Mercury salts)	7487-94-7					2.3E+01		4.3E+05	2.3E+01
						3.0E-04	I	V		1		3.1E+00	1.4E+09	3.5E+04	~Mercury (elemental)	7439-97-6							1.1E+01	1.1E+01
				1.0E-04	I					1			1.4E+09		~Methyl Mercury	22967-92-6					7.8E+00			7.8E+00
				8.0E-05	I					1	0.1		1.4E+09		~Phenylmercuric Acetate	62-38-4					6.3E+00	2.6E+01		5.1E+00
				3.0E-05	I			V		1			1.4E+09	1.9E+06	Merphos	150-50-5					2.3E+00			2.3E+00
				3.0E-05	I					1	0.1		1.4E+09		Merphos Oxide	78-48-8					2.3E+00	9.9E+00		1.9E+00
				6.0E-02	I					1	0.1		1.4E+09		Metalaxyl	57837-19-1					4.7E+03	2.0E+04		3.8E+03
				1.0E-04	I	3.0E-02	P	V		1		4.6E+03	1.4E+09	6.8E+03	Methacrylonitrile	126-98-7					7.8E+00		2.1E+02	7.5E+00
				5.0E-05	I					1	0.1		1.4E+09		Methamidophos	10265-92-6					3.9E+00	1.6E+01		3.2E+00
				2.0E+00	I	2.0E+01	I	V		1		1.1E+05	1.4E+09	2.9E+04	Methanol	67-56-1					1.6E+05		6.1E+05	1.2E+05
				1.0E-03	I					1	0.1		1.4E+09		Methidathion	950-37-8					7.8E+01	3.3E+02		6.3E+01
				2.5E-02	I					1	0.1		1.4E+09		Methomyl	16752-77-5					2.0E+03	8.2E+03		1.6E+03
4.9E-02	C	1.4E-05	C							1	0.1		1.4E+09		Methoxy-5-nitroaniline, 2-	99-59-2	1.4E+01	5.0E+01	2.7E+05	1.1E+01				
				5.0E-03	I					1	0.1		1.4E+09		Methoxychlor	72-43-5					3.9E+02	1.6E+03		3.2E+02
				8.0E-03	P	1.0E-03	P	V		1		1.2E+05	1.4E+09	1.2E+05	Methoxyethanol Acetate, 2-	110-49-6					6.3E+02		1.3E+02	1.1E+02
				5.0E-03	P	2.0E-02	I	V		1		1.1E+05	1.4E+09	1.0E+05	Methoxyethanol, 2-	109-86-4					3.9E+02		2.1E+03	3.3E+02
				1.0E+00	X			V		1		2.9E+04	1.4E+09	8.1E+03	Methyl Acetate	79-20-9					7.8E+04			7.8E+04
						2.0E-02	P	V		1		6.8E+03	1.4E+09	7.0E+03	Methyl Acrylate	96-33-3							1.5E+02	1.5E+02
				6.0E-01	I	5.0E+00	I	V		1		2.8E+04	1.4E+09	1.2E+04	Methyl Ethyl Ketone (2-Butanone)	78-93-3					4.7E+04		6.4E+04	2.7E+04
		1.0E-03	X	1.0E-03	P	2.0E-05	X	V		1		1.8E+05	1.4E+09	5.0E+04	Methyl Hydrazine	60-34-4			1.4E-01	1.4E-01	7.8E+01		1.1E+00	1.0E+00
						3.0E+00	I	V		1		3.4E+03	1.4E+09	1.1E+04	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1							3.3E+04	3.3E+04
						1.0E-03	C	V		1		1.0E+04	1.4E+09	4.4E+03	Methyl Isocyanate	624-83-9							4.6E+00	4.6E+00
				1.4E+00	I	7.0E-01	I	V		1		2.4E+03	1.4E+09	6.3E+03	Methyl Methacrylate	80-62-6					1.1E+05		4.6E+03	4.4E+03
				2.5E-04	I					1	0.1		1.4E+09		Methyl Parathion	298-00-0					2.0E+01	8.2E+01		1.6E+01
				6.0E-02	X					1	0.1		1.4E+09		Methyl Phosphonic Acid	993-13-5					4.7E+03	2.0E+04		3.8E+03
				6.0E-03	H	4.0E-02	H	V		1		3.9E+02	1.4E+09	2.4E+04	Methyl Styrene (Mixed Isomers)	25013-15-4					4.7E+02		1.0E+03	3.2E+02
9.9E-02	C	2.8E-05	C							1	0.1		1.4E+09		Methyl methanesulfonate	66-27-3	7.0E+00	2.5E+01	1.4E+05	5.5E+00				
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		1		8.9E+03	1.4E+09	4.9E+03	Methyl tert-Butyl Ether (MTBE)	1634-04-4	3.9E+02		5.3E+01	4.7E+01			1.5E+04	1.5E+04
				3.0E-04	X					1	0.1		1.4E+09		Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					2.3E+01	9.9E+01		1.9E+01
9.0E-03	P			2.0E-02	X					1	0.1		1.4E+09		Methyl-5-Nitroaniline, 2-	99-55-8	7.7E+01	2.7E+02		6.0E+01	1.6E+03	6.6E+03		1.3E+03
8.3E+00	C	2.4E-03	C							1	0.1		1.4E+09		Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	8.4E-02	3.0E-01	1.6E+03	6.5E-02				
1.3E-01	C	3.7E-05	C							1	0.1		1.4E+09		Methylaniline Hydrochloride, 2-	636-21-5	5.3E+00	1.9E+01	1.0E+05	4.2E+00				
				1.0E-02	A					1	0.1		1.4E+09		Methylarsonic acid	124-58-3					7.8E+02	3.3E+03		6.3E+02
				2.0E-04	X					1	0.1		1.4E+09		Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					1.6E+01	6.6E+01		1.3E+01

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information																Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
1.0E-01	X			3.0E-04	X					1	0.1		1.4E+09		Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	7.0E+00	2.5E+01		5.4E+00	2.3E+01	9.9E+01		1.9E+01
2.2E+01	C	6.3E-03	C						M	1	0.1		1.4E+09		Methylcholanthrene, 3-	56-49-5	7.0E-03	2.7E-02	2.2E+02	5.5E-03				
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1		3.3E+03	1.4E+09	2.2E+03	Methylene Chloride	75-09-2	7.7E+01		2.2E+02	5.7E+01	4.7E+02		1.4E+03	3.5E+02
1.0E-01	P	4.3E-04	C	2.0E-03	P				M	1	0.1		1.4E+09		Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.5E+00	6.0E+00	3.2E+03	1.2E+00	1.6E+02	6.6E+02		1.3E+02
4.6E-02	I	1.3E-05	C							1	0.1		1.4E+09		Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.5E+01	5.4E+01	2.9E+05	1.2E+01				
1.6E+00	C	4.6E-04	C			2.0E-02	C			1	0.1		1.4E+09		Methylenebisbenzenamine, 4,4'-	101-77-9	4.3E-01	1.5E+00	8.3E+03	3.4E-01			2.8E+07	2.8E+07
						6.0E-04	I			1	0.1		1.4E+09		Methylenediphenyl Diisocyanate	101-68-8							8.5E+05	8.5E+05
				7.0E-02	H			V		1		5.0E+02	1.4E+09	1.3E+04	Methylstyrene, Alpha-	98-83-9					5.5E+03			5.5E+03
				1.5E-01	I					1	0.1		1.4E+09		Metolachlor	51218-45-2					1.2E+04	4.9E+04		9.5E+03
				2.5E-02	I					1	0.1		1.4E+09		Metribuzin	21087-64-9					2.0E+03	8.2E+03		1.6E+03
				2.5E-01	I					1	0.1		1.4E+09		Metsulfuron-methyl	74223-64-6					2.0E+04	8.2E+04		1.6E+04
				3.0E+00	P			V		1		3.4E-01	1.4E+09	1.4E+03	Mineral oils	8012-95-1					2.3E+05			2.3E+05
1.8E+01	C	5.1E-03	C	2.0E-04	I			V		1			1.4E+09	8.6E+05	Mirex	2385-85-5	3.9E-02		4.7E-01	3.6E-02	1.6E+01			1.6E+01
				2.0E-03	I					1	0.1		1.4E+09		Molinate	2212-67-1					1.6E+02	6.6E+02		1.3E+02
				5.0E-03	I					1			1.4E+09		Molybdenum	7439-98-7					3.9E+02			3.9E+02
				1.0E-01	I					1			1.4E+09		Monochloramine	10599-90-3					7.8E+03			7.8E+03
				2.0E-03	P					1	0.1		1.4E+09		Monomethylaniline	100-61-8					1.6E+02	6.6E+02		1.3E+02
				2.5E-02	I					1	0.1		1.4E+09		Myclobutanil	88671-89-0					2.0E+03	8.2E+03		1.6E+03
				3.0E-04	X					1	0.1		1.4E+09		N,N'-Diphenyl-1,4-benzenediamine	74-31-7					2.3E+01	9.9E+01		1.9E+01
				2.0E-03	I			V		1			1.4E+09	5.7E+04	Naled	300-76-5					1.6E+02			1.6E+02
				3.0E-02	X	1.0E-01	P	V		1			1.4E+09		Naphtha, High Flash Aromatic (HFAN)	64742-95-6					2.3E+03		1.4E+08	2.3E+03
1.8E+00	C	0.0E+00	C							1	0.1		1.4E+09		Naphthylamine, 2-	91-59-8	3.9E-01	1.4E+00		3.0E-01				
				1.0E-01	I					1	0.1		1.4E+09		Napropamide	15299-99-7					7.8E+03	3.3E+04		6.3E+03
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		1.4E+09		Nickel Acetate	373-02-4			1.5E+04	1.5E+04	8.6E+02	3.6E+03	2.0E+04	6.7E+02
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		1.4E+09		Nickel Carbonate	3333-67-3			1.5E+04	1.5E+04	8.6E+02	3.6E+03	2.0E+04	6.7E+02
		2.6E-04	C	1.1E-02	C	1.4E-05	C	V		1			1.4E+09		Nickel Carbonyl	13463-39-3			1.5E+04	1.5E+04	8.6E+02		2.0E+04	8.2E+02
		2.6E-04	C	1.1E-02	C	1.4E-05	C			0.04			1.4E+09		Nickel Hydroxide	12054-48-7			1.5E+04	1.5E+04	8.6E+02		2.0E+04	8.2E+02
		2.6E-04	C	1.1E-02	C	2.0E-05	C			0.04			1.4E+09		Nickel Oxide	1313-99-1			1.5E+04	1.5E+04	8.6E+02		2.8E+04	8.4E+02
		2.4E-04	I	1.1E-02	C	1.4E-05	C			0.04			1.4E+09		Nickel Refinery Dust	NA			1.6E+04	1.6E+04	8.6E+02		2.0E+04	8.2E+02
		2.6E-04	C	2.0E-02	I	9.0E-05	A			0.04			1.4E+09		Nickel Soluble Salts	7440-02-0			1.5E+04	1.5E+04	1.6E+03		1.3E+05	1.5E+03
1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C			0.04			1.4E+09		Nickel Subsulfide	12035-72-2	4.1E-01		8.0E+03	4.1E-01	8.6E+02		2.0E+04	8.2E+02
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		1.4E+09		Nickelocene	1271-28-9			1.5E+04	1.5E+04	8.6E+02	3.6E+03	2.0E+04	6.7E+02
				1.6E+00	I					1			1.4E+09		Nitrate	14797-55-8					1.3E+05			1.3E+05
										1			1.4E+09		Nitrate + Nitrite (as N)	NA								
				1.0E-01	I					1			1.4E+09		Nitrite	14797-65-0					7.8E+03			7.8E+03
				1.0E-02	X	5.0E-05	X			1	0.1		1.4E+09		Nitroaniline, 2-	88-74-4					7.8E+02	3.3E+03	7.1E+04	6.3E+02
2.0E-02	P			4.0E-03	P	6.0E-03	P			1	0.1		1.4E+09		Nitroaniline, 4-	100-01-6	3.5E+01	1.2E+02		2.7E+01	3.1E+02	1.3E+03	8.5E+06	2.5E+02
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1		3.1E+03	1.4E+09	7.3E+04	Nitrobenzene	98-95-3			5.1E+00	5.1E+00	1.6E+02		6.9E+02	1.3E+02
				3.0E+03	P					1	0.1		1.4E+09		Nitrocellulose	9004-70-0					2.3E+08	9.9E+08		1.9E+08
				7.0E-02	H					1	0.1		1.4E+09		Nitrofurantoin	67-20-9					5.5E+03	2.3E+04		4.4E+03
1.3E+00	C	3.7E-04	C							1	0.1		1.4E+09		Nitrofurazone	59-87-0	5.3E-01	1.9E+00	1.0E+04	4.2E-01				
1.7E-02	P			1.0E-04	P					1	0.1		1.4E+09		Nitroglycerin	55-63-0	4.1E+01	1.5E+02		3.2E+01	7.8E+00	3.3E+01		6.3E+00
				1.0E-01	I					1	0.1		1.4E+09		Nitroguanidine	556-88-7					7.8E+03	3.3E+04		6.3E+03
		8.8E-06	P			5.0E-03	P	V		1		1.8E+04	1.4E+09	1.7E+04	Nitromethane	75-52-5			5.4E+00	5.4E+00			8.8E+01	8.8E+01
		2.7E-03	H			2.0E-02	I	V		1		4.9E+03	1.4E+09	1.3E+04	Nitropropane, 2-	79-46-9			1.4E-02	1.4E-02			2.7E+02	2.7E+02
2.7E+01	C	7.7E-03	C						M	1	0.1		1.4E+09		Nitroso-N-ethylurea, N-	759-73-9	5.7E-03	2.2E-02	1.8E+02	4.5E-03				
1.2E+02	C	3.4E-02	C						M	1	0.1		1.4E+09		Nitroso-N-methylurea, N-	684-93-5	1.3E-03	5.0E-03	4.1E+01	1.0E-03				
5.4E+00	I	1.6E-03	I					V		1			1.4E+09	2.4E+05	Nitroso-di-N-butylamine, N-	924-16-3	1.3E-01		4.3E-01	9.9E-02				
7.0E+00	I	2.0E-03	C							1	0.1		1.4E+09		Nitroso-di-N-propylamine, N-	621-64-7	9.9E-02	3.5E-01	1.9E+03	7.8E-02				
2.8E+00	I	8.0E-04	C							1	0.1		1.4E+09		Nitrosodiethanolamine, N-	1116-54-7	2.5E-01	8.8E-01	4.8E+03	1.9E-01				
1.5E+02	I	4.3E-02	I						M	1	0.1		1.4E+09		Nitrosodiethylamine, N-	55-18-5	1.0E-03	4.0E-03	3.2E+01	8.1E-04				
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	1		2.4E+05	1.4E+09	8.2E+04	Nitrosodimethylamine, N-	62-75-9	3.0E-03		6.0E-03	2.0E-03	6.3E-01		3.4E+00	5.3E-01
4.9E-03	I	2.6E-06	C							1	0.1		1.4E+09		Nitrosodiphenylamine, N-	86-30-6	1.4E+02	5.0E+02	1.5E+06	1.1E+02				
2.2E+01	I	6.3E-03	C					V		1		1.1E+05	1.4E+09	1.2E+05	Nitrosomethylethylamine, N-	10595-95-6	3.2E-02		5.4E-02	2.0E-02				
6.7E+00	C	1.9E-03	C							1	0.1		1.4E+09		Nitrosomorpholine [N-]	59-89-2	1.0E-01	3.7E-01	2.0E+03	8.1E-02				
9.4E+00	C	2.7E-03	C							1	0.1		1.4E+09		Nitrosopiperidine [N-]	100-75-4	7.4E-02	2.6E-01	1.4E+03	5.8E-02				
2.1E+00	I	6.1E-04	I							1	0.1		1.4E+09		Nitrosopyrrolidine, N-	930-55-2	3.3E-01	1.2E+00	6.3E+03	2.6E-01				
				1.0E-04	X					1	0.1		1.4E+09		Nitrotoluene, m-	99-08-1					7.8E+00	3.3E+01		6.3E+00
2.2E-01	P			9.0E-04	P			V		1		1.5E+03	1.4E+09	1.4E+05	Nitrotoluene, o-	88-72-2	3.2E+00			3.2E+00	7.0E+01			7.0E+01
1.6E-02	P			4.0E-03	P					1	0.1		1.4E+09		Nitrotoluene, p-	99-99-0	4.3E+01	1.5E+02		3.4E+01	3.1E+02	1.3E+03		2.5E+02
				3.0E-04	X	2.0E-02	P	V		1		6.9E+00	1.4E+09	1.0E+03	Nonane, n-	111-84-2					2.3E+01		2.2E+01	1.1E+01
				4.0E-02	I					1	0.1		1.4E+09		Norflurazon	27314-13-2					3.1E+03	1.3E+04		2.5E+03
				3.0E-03	I					1	0.1		1.4E+09		Octabromodiphenyl Ether	32536-52-0					2.3E+02	9.9E+02		1.9E+02
				5.0E-02	I					1	0.006		1.4E+09		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0					3.9E+03	2.7E+05		3.9E+03

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				2.0E-03	H					1	0.1		1.4E+09		Octamethylpyrophosphoramide	152-16-9					1.6E+02	6.6E+02		1.3E+02
				5.0E-02	I					1	0.1		1.4E+09		Oryzalin	19044-88-3					3.9E+03	1.6E+04		3.2E+03
				5.0E-03	I					1	0.1		1.4E+09		Oxadiazon	19666-30-9					3.9E+02	1.6E+03		3.2E+02
				2.5E-02	I					1	0.1		1.4E+09		Oxamyl	23135-22-0					2.0E+03	8.2E+03		1.6E+03
				3.0E-03	I					1	0.1		1.4E+09		Oxyfluorfen	42874-03-3					2.3E+02	9.9E+02		1.9E+02
				1.3E-02	I					1	0.1		1.4E+09		Paclobutrazol	76738-62-0					1.0E+03	4.3E+03		8.2E+02
				4.5E-03	I					1	0.1		1.4E+09		Paraquat Dichloride	1910-42-5					3.5E+02	1.5E+03		2.8E+02
				6.0E-03	H					1	0.1		1.4E+09		Parathion	56-38-2					4.7E+02	2.0E+03		3.8E+02
				5.0E-02	H			V		1			1.4E+09	4.5E+04	Pebulate	1114-71-2					3.9E+03			3.9E+03
				4.0E-02	I					1	0.1		1.4E+09		Pendimethalin	40487-42-1					3.1E+03	1.3E+04		2.5E+03
				2.0E-03	I			V		1		3.1E-01	1.4E+09	5.1E+05	Pentabromodiphenyl Ether	32534-81-9					1.6E+02			1.6E+02
				1.0E-04	I					1	0.1		1.4E+09		Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					7.8E+00	3.3E+01		6.3E+00
				8.0E-04	I			V		1			1.4E+09	8.1E+04	Pentachlorobenzene	608-93-5					6.3E+01			6.3E+01
9.0E-02	P							V		1		4.6E+02	1.4E+09	9.7E+03	Pentachloroethane	76-01-7	7.7E+00			7.7E+00				
2.6E-01	H			3.0E-03	I			V		1			1.4E+09	4.3E+05	Pentachloronitrobenzene	82-68-8	2.7E+00			2.7E+00	2.3E+02			2.3E+02
4.0E-01	I	5.1E-06	C	5.0E-03	I					1	0.25		1.4E+09		Pentachlorophenol	87-86-5	1.7E+00	2.5E+00	7.5E+05	1.0E+00	3.9E+02	6.6E+02		2.5E+02
4.0E-03	X			2.0E-03	P					1	0.1		1.4E+09		Pentaerythritol tetranitrate (PETN)	78-11-5	1.7E+02	6.2E+02		1.4E+02	1.6E+02	6.6E+02		1.3E+02
						1.0E+00	P	V		1		3.9E+02	1.4E+09	7.8E+02	Pentane, n-	109-66-0							8.1E+02	8.1E+02
															Perchlorates									
				7.0E-04	I					1			1.4E+09		~Ammonium Perchlorate	7790-98-9					5.5E+01			5.5E+01
				7.0E-04	I					1			1.4E+09		~Lithium Perchlorate	7791-03-9					5.5E+01			5.5E+01
				7.0E-04	I					1			1.4E+09		~Perchlorate and Perchlorate Salts	14797-73-0					5.5E+01			5.5E+01
				7.0E-04	I					1			1.4E+09		~Potassium Perchlorate	7778-74-7					5.5E+01			5.5E+01
				7.0E-04	I					1			1.4E+09		~Sodium Perchlorate	7601-89-0					5.5E+01			5.5E+01
				2.0E-02	P			V		1			1.4E+09	1.3E+05	Perfluorobutane Sulfonate	375-73-5					1.6E+03			1.6E+03
				5.0E-02	I					1	0.1		1.4E+09		Permethrin	52645-53-1					3.9E+03	1.6E+04		3.2E+03
2.2E-03	C	6.3E-07	C							1	0.1		1.4E+09		Phenacetin	62-44-2	3.2E+02	1.1E+03	6.1E+06	2.5E+02				
				2.5E-01	I					1	0.1		1.4E+09		Phenmedipham	13684-63-4					2.0E+04	8.2E+04		1.6E+04
				3.0E-01	I	2.0E-01	C			1	0.1		1.4E+09		Phenol	108-95-2					2.3E+04	9.9E+04	2.8E+08	1.9E+04
				5.0E-04	X					1	0.1		1.4E+09		Phenothiazine	92-84-2					3.9E+01	1.6E+02		3.2E+01
				6.0E-03	I					1	0.1		1.4E+09		Phenylenediamine, m-	108-45-2					4.7E+02	2.0E+03		3.8E+02
4.7E-02	H									1	0.1		1.4E+09		Phenylenediamine, o-	95-54-5	1.5E+01	5.3E+01		1.2E+01				
				1.9E-01	H					1	0.1		1.4E+09		Phenylenediamine, p-	106-50-3					1.5E+04	6.3E+04		1.2E+04
1.9E-03	H									1	0.1		1.4E+09		Phenylphenol, 2-	90-43-7	3.6E+02	1.3E+03		2.8E+02				
				2.0E-04	H					1	0.1		1.4E+09		Phorate	298-02-2					1.6E+01	6.6E+01		1.3E+01
						3.0E-04	I	V		1		1.6E+03	1.4E+09	9.8E+02	Phosgene	75-44-5							3.1E-01	3.1E-01
				2.0E-02	I					1	0.1		1.4E+09		Phosmet	732-11-6					1.6E+03	6.6E+03		1.3E+03
															Phosphates, Inorganic									
				4.9E+01	P					1			1.4E+09		~Aluminum metaphosphate	13776-88-0					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Ammonium polyphosphate	68333-79-9					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Calcium pyrophosphate	7790-76-3					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Diammonium phosphate	7783-28-0					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Dicalcium phosphate	7757-93-9					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Dimagnesium phosphate	7782-75-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Dipotassium phosphate	7758-11-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Disodium phosphate	7558-79-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monoaluminum phosphate	13530-50-2					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monoammonium phosphate	7722-76-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monocalcium phosphate	7758-23-8					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monomagnesium phosphate	7757-86-0					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monopotassium phosphate	7778-77-0					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Monosodium phosphate	7558-80-7					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Polyphosphoric acid	8017-16-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Potassium tripolyphosphate	13845-36-8					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium acid pyrophosphate	7758-16-9					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium aluminum phosphate (acidic)	7785-88-8					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium aluminum phosphate (anhydrous)	10279-59-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium hexametaphosphate	10124-56-8					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium polyphosphate	68915-31-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium trimetaphosphate	7785-84-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Sodium tripolyphosphate	7758-29-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Tetrapotassium phosphate	7320-34-5					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Tetrasodium pyrophosphate	7722-88-5					3.8E+06			3.8E+06

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				4.9E+01	P					1			1.4E+09		~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Tricalcium phosphate	7758-87-4					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Trimagnesium phosphate	7757-87-1					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Tripotassium phosphate	7778-53-2					3.8E+06			3.8E+06
				4.9E+01	P					1			1.4E+09		~Trisodium phosphate	7601-54-9					3.8E+06			3.8E+06
				3.0E-04	I	3.0E-04	I	V		1			1.4E+09		Phosphine	7803-51-2					2.3E+01		4.3E+05	2.3E+01
				4.9E+01	P	1.0E-02	I			1			1.4E+09		Phosphoric Acid	7664-38-2					3.8E+06		1.4E+07	3.0E+06
				2.0E-05	I			V		1			1.4E+09	6.9E+03	Phosphorus, White	7723-14-0					1.6E+00			1.6E+00
															Phthalates									
1.4E-02	I	2.4E-06	C	2.0E-02	I					1	0.1		1.4E+09		~Bis(2-ethylhexyl)phthalate	117-81-7	5.0E+01	1.8E+02	1.6E+06	3.9E+01	1.6E+03	6.6E+03		1.3E+03
				1.0E+00	I					1	0.1		1.4E+09		~Butylphthalyl Butylglycolate	85-70-1					7.8E+04	3.3E+05		6.3E+04
				1.0E-01	I					1	0.1		1.4E+09		~Dibutyl Phthalate	84-74-2					7.8E+03	3.3E+04		6.3E+03
				8.0E-01	I					1	0.1		1.4E+09		~Diethyl Phthalate	84-66-2					6.3E+04	2.6E+05		5.1E+04
				1.0E-01	I			V		1			1.4E+09	2.1E+04	~Dimethylterephthalate	120-61-6					7.8E+03			7.8E+03
				1.0E-02	P					1	0.1		1.4E+09		~Octyl Phthalate, di-N-	117-84-0					7.8E+02	3.3E+03		6.3E+02
				1.0E+00	H					1	0.1		1.4E+09		~Phthalic Acid, P-	100-21-0					7.8E+04	3.3E+05		6.3E+04
				2.0E+00	I	2.0E-02	C			1	0.1		1.4E+09		~Phthalic Anhydride	85-44-9					1.6E+05	6.6E+05	2.8E+07	1.3E+05
				7.0E-02	I					1	0.1		1.4E+09		Picloram	1918-02-1					5.5E+03	2.3E+04		4.4E+03
				1.0E-04	X					1	0.1		1.4E+09		Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					7.8E+00	3.3E+01		6.3E+00
				9.0E-04	X					1	0.1		1.4E+09		Picric Acid (2,4,6-Trinitrophenol)	88-89-1					7.0E+01	3.0E+02		5.7E+01
				1.0E-02	I					1	0.1		1.4E+09		Pirimiphos, Methyl	29232-93-7					7.8E+02	3.3E+03		6.3E+02
3.0E+01	C	8.6E-03	C	7.0E-06	H					1	0.1		1.4E+09		Polybrominated Biphenyls	59536-65-1	2.3E-02	8.2E-02	4.4E+02	1.8E-02	5.5E-01	2.3E+00		4.4E-01
															Polychlorinated Biphenyls (PCBs)									
7.0E-02	S	2.0E-05	S	7.0E-05	I			V		1	0.14		1.4E+09	7.1E+05	~Aroclor 1016	12674-11-2	9.9E+00	2.5E+01	1.0E+02	6.7E+00	5.5E+00	1.6E+01		4.1E+00
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	2.0E+05	~Aroclor 1221	11104-28-2	3.5E-01	8.8E-01	1.0E+00	2.0E-01				
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	1.1E+05	~Aroclor 1232	11141-16-5	3.5E-01	8.8E-01	5.5E-01	1.7E-01				
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	5.9E+05	~Aroclor 1242	53469-21-9	3.5E-01	8.8E-01	2.9E+00	2.3E-01				
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	6.3E+05	~Aroclor 1248	12672-29-6	3.5E-01	8.8E-01	3.1E+00	2.3E-01				
2.0E+00	S	5.7E-04	S	2.0E-05	I			V		1	0.14		1.4E+09	8.4E+05	~Aroclor 1254	11097-69-1	3.5E-01	8.8E-01	4.1E+00	2.4E-01	1.6E+00	4.7E+00		1.2E+00
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	1.3E+06	~Aroclor 1260	11096-82-5	3.5E-01	8.8E-01	6.5E+00	2.4E-01				
				6.0E-04	X			V		1	0.14		1.4E+09	9.6E+05	~Aroclor 5460	11126-42-4					4.7E+01	1.4E+02		3.5E+01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	3.3E+06	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.8E-01	4.5E-01	8.2E+00	1.3E-01	1.8E+00	5.5E+00	4.6E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	2.2E+06	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.8E-01	4.5E-01	5.4E+00	1.2E-01	1.8E+00	5.5E+00	3.1E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	1.5E+06	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.8E-01	4.5E-01	3.6E+00	1.2E-01	1.8E+00	5.5E+00	2.0E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	1.5E+06	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.8E-01	4.5E-01	3.8E+00	1.2E-01	1.8E+00	5.5E+00	2.1E+03	1.4E+00
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V		1	0.14		1.4E+09	2.2E+06	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.8E-04	4.5E-04	5.4E-03	1.2E-04	1.8E-03	5.5E-03	3.1E+00	1.4E-03
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	1.0E+06	~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.8E-01	4.5E-01	2.5E+00	1.2E-01	1.8E+00	5.5E+00	1.4E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	8.3E+05	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.8E-01	4.5E-01	2.0E+00	1.2E-01	1.8E+00	5.5E+00	1.2E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	8.5E+05	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.8E-01	4.5E-01	2.1E+00	1.2E-01	1.8E+00	5.5E+00	1.2E+03	1.4E+00
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	1.5E+06	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.8E-01	4.5E-01	3.6E+00	1.2E-01	1.8E+00	5.5E+00	2.0E+03	1.4E+00
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V		1	0.14		1.4E+09	1.0E+06	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	5.3E-05	1.4E-04	7.5E-04	3.7E-05	5.5E-04	1.6E-03	4.3E-01	4.1E-04
2.0E+00	I	5.7E-04	I					V		1	0.14		1.4E+09	5.3E+05	~Polychlorinated Biphenyls (high risk)	1336-36-3	3.5E-01	8.8E-01	2.6E+00	2.3E-01				
4.0E-01	I	1.0E-04	I					V		1	0.14				~Polychlorinated Biphenyls (low risk)	1336-36-3								
7.0E-02	I	2.0E-05	I					V		1	0.14				~Polychlorinated Biphenyls (lowest risk)	1336-36-3								
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			1	0.14		1.4E+09		~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	5.3E-02	1.4E-01	1.0E+03	3.8E-02	5.5E-01	1.6E+00	5.7E+05	4.1E-01
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V		1	0.14		1.4E+09	7.3E+05	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.8E-02	4.5E-02	1.8E-01	1.2E-02	1.8E-01	5.5E-01	1.0E+02	1.4E-01
						6.0E-04	I			1	0.1		1.4E+09		Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9							8.5E+05	8.5E+05
															Polynuclear Aromatic Hydrocarbons (PAHs)									
				6.0E-02	I			V		1	0.13		1.4E+09	1.4E+05	~Acenaphthene	83-32-9					4.7E+03	1.5E+04		3.6E+03
				3.0E-01	I			V		1	0.13		1.4E+09	5.2E+05	~Anthracene	120-12-7					2.3E+04	7.6E+04		1.8E+04
7.3E-01	E	1.1E-04	C					V	M	1	0.13		1.4E+09	4.4E+06	~Benz[a]anthracene	56-55-3	2.1E-01	6.3E-01	4.1E+01	1.6E-01				
1.2E+00	C	1.1E-04	C							1	0.13		1.4E+09		~Benzo(j)fluoranthene	205-82-3	5.8E-01	1.6E+00	3.5E+04	4.2E-01				
7.3E+00	I	1.1E-03	C						M	1	0.13		1.4E+09		~Benzo[a]pyrene	50-32-8	2.1E-02	6.3E-02	1.3E+03	1.6E-02				
7.3E-01	E	1.1E-04	C						M	1	0.13		1.4E+09		~Benzo[b]fluoranthene	205-99-2	2.1E-01	6.3E-01	1.3E+04	1.6E-01				
7.3E-02	E	1.1E-04	C						M	1	0.13		1.4E+09		~Benzo[k]fluoranthene	207-08-9	2.1E+00	6.3E+00	1.3E+04	1.6E+00				
				8.0E-02	I			V		1	0.13		1.4E+09	8.0E+04	~Chloronaphthalene, Beta-	91-58-7					6.3E+03	2.0E+04		4.8E+03
7.3E-03	E	1.1E-05	C						M	1	0.13		1.4E+09		~Chrysene	218-01-9	2.1E+01	6.3E+01	1.3E+05	1.6E+01				
7.3E+00	E	1.2E-03	C						M	1	0.13		1.4E+09		~Dibenz[a,h]anthracene	53-70-3	2.1E-02	6.3E-02	1.1E+03	1.6E-02				
1.2E+01	C	1.1E-03	C							1	0.13		1.4E+09		~Dibenzo(a,e)pyrene	192-65-4	5.8E-02	1.6E-01	3.5E+03	4.2E-02				
2.5E+02	C	7.1E-02	C						M	1	0.13		1.4E+09		~Dimethylbenz(a)anthracene, 7,12-	57-97-6	6.1E-04	1.8E-03	1.9E+01	4.6E-04				
				4.0E-02	I					1	0.13		1.4E+09		~Fluoranthene	206-44-0					3.1E+03	1.0E+04		2.4E+03
				4.0E-02	I			V		1	0.13		1.4E+09	2.8E+05	~Fluorene	86-73-7					3.1E+03	1.0E+04		2.4E+03
7.3E-01	E	1.1E-04	C						M	1	0.13		1.4E+09		~Indeno[1,2,3-cd]pyrene	193-39-5	2.1E-01	6.3E-01	1.3E+04	1.6E-01				
2.9E-02	P			7.0E-02	A			V		1	0.13	3.9E+02	1.4E+09	5.9E+04	~Methylnaphthalene, 1-	90-12-0	2.4E+01	6.6E+01		1.8E+01	5.5E+03	1.8E+04		4.2E+03

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				4.0E-03	I			V		1	0.13		1.4E+09	5.8E+04	~Methylnaphthalene, 2-	91-57-6					3.1E+02	1.0E+03		2.4E+02
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V		1	0.13		1.4E+09	4.6E+04	~Naphthalene	91-20-3			3.8E+00	3.8E+00	1.6E+03	5.1E+03	1.4E+02	1.3E+02
1.2E+00	C	1.1E-04	C							1	0.13		1.4E+09		~Nitropyrene, 4-	57835-92-4	5.8E-01	1.6E+00	3.5E+04	4.2E-01				
				3.0E-02	I			V		1	0.13		1.4E+09	2.4E+06	~Pyrene	129-00-0					2.3E+03	7.6E+03		1.8E+03
				2.0E-02	P					1	0.1		1.4E+09		Potassium Perfluorobutane Sulfonate	29420-49-3					1.6E+03	6.6E+03		1.3E+03
1.5E-01	I			9.0E-03	I					1	0.1		1.4E+09		Prochloraz	67747-09-5	4.6E+00	1.6E+01		3.6E+00	7.0E+02	3.0E+03		5.7E+02
				6.0E-03	H			V		1			1.4E+09	4.2E+05	Profluralin	26399-36-0					4.7E+02			4.7E+02
				1.5E-02	I					1	0.1		1.4E+09		Prometon	1610-18-0					1.2E+03	4.9E+03		9.5E+02
				4.0E-03	I					1	0.1		1.4E+09		Prometryn	7287-19-6					3.1E+02	1.3E+03		2.5E+02
				1.3E-02	I					1	0.1		1.4E+09		Propachlor	1918-16-7					1.0E+03	4.3E+03		8.2E+02
				4.0E-03	I					1	0.1		1.4E+09		Propanediol, 1,2-	114-26-1					3.1E+02	1.3E+03		2.5E+02
				5.0E-03	I					1	0.1		1.4E+09		Propanil	709-98-8					3.9E+02	1.6E+03		3.2E+02
				2.0E-02	I					1	0.1		1.4E+09		Propargite	2312-35-8					1.6E+03	6.6E+03		1.3E+03
				2.0E-03	I			V		1		1.1E+05	1.4E+09	6.3E+04	Propargyl Alcohol	107-19-7					1.6E+02			1.6E+02
				2.0E-02	I					1	0.1		1.4E+09		Propazine	139-40-2					1.6E+03	6.6E+03		1.3E+03
				2.0E-02	I					1	0.1		1.4E+09		Propham	122-42-9					1.6E+03	6.6E+03		1.3E+03
				1.3E-02	I					1	0.1		1.4E+09		Propiconazole	60207-90-1					1.0E+03	4.3E+03		8.2E+02
						8.0E-03	I	V		1		3.3E+04	1.4E+09	8.9E+03	Propionaldehyde	123-38-6							7.5E+01	7.5E+01
				1.0E-01	X	1.0E+00	X	V		1		2.6E+02	1.4E+09	7.0E+03	Propyl benzene	103-65-1					7.8E+03		7.3E+03	3.8E+03
						3.0E+00	C	V		1		3.5E+02	1.4E+09	7.0E+02	Propylene	115-07-1							2.2E+03	2.2E+03
				2.0E+01	P					1	0.1		1.4E+09		Propylene Glycol	57-55-6					1.6E+06	6.6E+06		1.3E+06
						2.7E-04	A			1	0.1		1.4E+09		Propylene Glycol Dinitrate	6423-43-4							3.9E+05	3.9E+05
				7.0E-01	H	2.0E+00	I	V		1		1.1E+05	1.4E+09	7.8E+04	Propylene Glycol Monomethyl Ether	107-98-2					5.5E+04		1.6E+05	4.1E+04
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		1		7.8E+04	1.4E+09	1.0E+04	Propylene Oxide	75-56-9	2.9E+00		7.8E+00	2.1E+00			3.2E+02	3.2E+02
				7.5E-02	I					1	0.1		1.4E+09		Propyzamide	23950-58-5					5.9E+03	2.5E+04		4.7E+03
				1.0E-03	I			V		1		5.3E+05	1.4E+09	5.5E+04	Pyridine	110-86-1					7.8E+01			7.8E+01
				5.0E-04	I					1	0.1		1.4E+09		Quinalphos	13593-03-8					3.9E+01	1.6E+02		3.2E+01
3.0E+00	I									1	0.1		1.4E+09		Quinoline	91-22-5	2.3E-01	8.2E-01		1.8E-01				
				9.0E-03	I					1	0.1		1.4E+09		Quizalofop-ethyl	76578-14-8					7.0E+02	3.0E+03		5.7E+02
						3.0E-02	A			1			1.4E+09		Refractory Ceramic Fibers	NA							4.3E+07	4.3E+07
				3.0E-02	I					1	0.1		1.4E+09		Resmethrin	10453-86-8					2.3E+03	9.9E+03		1.9E+03
				5.0E-02	H			V		1			1.4E+09	4.7E+05	Ronnel	299-84-3					3.9E+03			3.9E+03
				4.0E-03	I					1	0.1		1.4E+09		Rotenone	83-79-4					3.1E+02	1.3E+03		2.5E+02
2.2E-01	C	6.3E-05	C						M	1	0.1		1.4E+09		Safrole	94-59-7	7.0E-01	2.7E+00	2.2E+04	5.5E-01				
				5.0E-03	I					1			1.4E+09		Selenious Acid	7783-00-8					3.9E+02			3.9E+02
				5.0E-03	I	2.0E-02	C			1			1.4E+09		Selenium	7782-49-2					3.9E+02		2.8E+07	3.9E+02
				5.0E-03	C	2.0E-02	C			1			1.4E+09		Selenium Sulfide	7446-34-6					3.9E+02		2.8E+07	3.9E+02
				9.0E-02	I					1	0.1		1.4E+09		Sethoxydim	74051-80-2					7.0E+03	3.0E+04		5.7E+03
						3.0E-03	C			1			1.4E+09		Silica (crystalline, respirable)	7631-86-9							4.3E+06	4.3E+06
				5.0E-03	I					0.04			1.4E+09		Silver	7440-22-4					3.9E+02			3.9E+02
1.2E-01	H			5.0E-03	I					1	0.1		1.4E+09		Simazine	122-34-9	5.8E+00	2.1E+01		4.5E+00	3.9E+02	1.6E+03		3.2E+02
				1.3E-02	I					1	0.1		1.4E+09		Sodium Acifluorfen	62476-59-9					1.0E+03	4.3E+03		8.2E+02
				4.0E-03	I					1			1.4E+09		Sodium Azide	26628-22-8					3.1E+02			3.1E+02
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		Sodium Dichromate	10588-01-9	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
2.7E-01	H			3.0E-02	I					1	0.1		1.4E+09		Sodium Diethyldithiocarbamate	148-18-5	2.6E+00	9.2E+00		2.0E+00	2.3E+03	9.9E+03		1.9E+03
				5.0E-02	A	1.3E-02	C			1			1.4E+09		Sodium Fluoride	7681-49-4					3.9E+03		1.8E+07	3.9E+03
				2.0E-05	I					1	0.1		1.4E+09		Sodium Fluoroacetate	62-74-8					1.6E+00	6.6E+00		1.3E+00
				1.0E-03	H					1			1.4E+09		Sodium Metavanadate	13718-26-8					7.8E+01			7.8E+01
				8.0E-04	P					1			1.4E+09		Sodium Tungstate	13472-45-2					6.3E+01			6.3E+01
				8.0E-04	P					1			1.4E+09		Sodium Tungstate Dihydrate	10213-10-2					6.3E+01			6.3E+01
2.4E-02	H			3.0E-02	I					1	0.1		1.4E+09		Stirofos (Tetrachlorovinphos)	961-11-5	2.9E+01	1.0E+02		2.3E+01	2.3E+03	9.9E+03		1.9E+03
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		Strontium Chromate	7789-06-2	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
				6.0E-01	I					1			1.4E+09		Strontium, Stable	7440-24-6					4.7E+04			4.7E+04
				3.0E-04	I					1	0.1		1.4E+09		Strychnine	57-24-9					2.3E+01	9.9E+01		1.9E+01
				2.0E-01	I	1.0E+00	I	V		1		8.7E+02	1.4E+09	9.4E+03	Styrene	100-42-5					1.6E+04		9.7E+03	6.0E+03
				3.0E-03	P					1	0.1		1.4E+09		Styrene-Acrylonitrile (SAN) Trimer	NA					2.3E+02	9.9E+02		1.9E+02
				1.0E-03	P	2.0E-03	X			1	0.1		1.4E+09		Sulfolane	126-33-0					7.8E+01	3.3E+02	2.8E+06	6.3E+01
				8.0E-04	P					1	0.1		1.4E+09		Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					6.3E+01	2.6E+02		5.1E+01
						1.0E-03	C	V		1			1.4E+09		Sulfur Trioxide	7446-11-9							1.4E+06	1.4E+06
						1.0E-03	C			1			1.4E+09		Sulfuric Acid	7664-93-9							1.4E+06	1.4E+06
2.5E-02	I	7.1E-06	I	5.0E-02	H					1	0.1		1.4E+09		Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	2.8E+01	9.9E+01	5.4E+05	2.2E+01	3.9E+03	1.6E+04		3.2E+03
				3.0E-02	H					1	0.1		1.4E+09		TCMTB	21564-17-0					2.3E+03	9.9E+03		1.9E+03
				7.0E-02	I					1	0.1		1.4E+09		Tebuthiuron	34014-18-1					5.5E+03	2.3E+04		4.4E+03
				2.0E-02	H					1	0.1		1.4E+09		Temephos	3383-96-8					1.6E+03	6.6E+03		1.3E+03

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				1.3E-02	I					1	0.1		1.4E+09		Terbacil	5902-51-2					1.0E+03	4.3E+03		8.2E+02
				2.5E-05	H			V		1		3.1E+01	1.4E+09	2.6E+05	Terbufos	13071-79-9					2.0E+00			2.0E+00
				1.0E-03	I					1	0.1		1.4E+09		Terbutryn	886-50-0					7.8E+01	3.3E+02		6.3E+01
				1.0E-04	I					1	0.1		1.4E+09		Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					7.8E+00	3.3E+01		6.3E+00
				3.0E-04	I			V		1			1.4E+09	5.1E+04	Tetrachlorobenzene, 1,2,4,5-	95-94-3					2.3E+01			2.3E+01
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		1		6.8E+02	1.4E+09	5.7E+03	Tetrachloroethane, 1,1,1,2-	630-20-6	2.7E+01		2.2E+00	2.0E+00	2.3E+03			2.3E+03
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1		1.9E+03	1.4E+09	1.5E+04	Tetrachloroethane, 1,1,2,2-	79-34-5	3.5E+00		7.3E-01	6.0E-01	1.6E+03			1.6E+03
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		1		1.7E+02	1.4E+09	2.4E+03	Tetrachloroethylene	127-18-4	3.3E+02		2.5E+01	2.4E+01	4.7E+02		9.8E+01	8.1E+01
				3.0E-02	I					1	0.1		1.4E+09		Tetrachlorophenol, 2,3,4,6-	58-90-2					2.3E+03	9.9E+03		1.9E+03
2.0E+01	H							V		1			1.4E+09	1.1E+05	Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.5E-02			3.5E-02				
				5.0E-04	I					1	0.1		1.4E+09		Tetraethyl Dithiopyrophosphate	3689-24-5					3.9E+01	1.6E+02		3.2E+01
						8.0E+01	I	V		1		2.1E+03	1.4E+09	1.2E+03	Tetrafluoroethane, 1,1,1,2-	811-97-2							1.0E+05	1.0E+05
				2.0E-03	P					1	0.0007		1.4E+09		Tetryl (Trinitrophenylmethylnitramine)	479-45-8					1.6E+02	1.0E+05		1.6E+02
				7.0E-06	X					1			1.4E+09		Thallium (I) Nitrate	10102-45-1					5.5E-01			5.5E-01
				1.0E-05	X					1			1.4E+09		Thallium (Soluble Salts)	7440-28-0					7.8E-01			7.8E-01
				6.0E-06	X			V		1			1.4E+09		Thallium Acetate	563-68-8					4.7E-01			4.7E-01
				2.0E-05	X			V		1			1.4E+09		Thallium Carbonate	6533-73-9					1.6E+00			1.6E+00
				6.0E-06	X					1			1.4E+09		Thallium Chloride	7791-12-0					4.7E-01			4.7E-01
				2.0E-05	X					1			1.4E+09		Thallium Sulfate	7446-18-6					1.6E+00			1.6E+00
				1.3E-02	I					1	0.1		1.4E+09		Thifensulfuron-methyl	79277-27-3					1.0E+03	4.3E+03		8.2E+02
				1.0E-02	I					1	0.1		1.4E+09		Thiobencarb	28249-77-6					7.8E+02	3.3E+03		6.3E+02
				7.0E-02	X					1	0.0075		1.4E+09		Thiodiglycol	111-48-8					5.5E+03	3.1E+05		5.4E+03
				3.0E-04	H					1	0.1		1.4E+09		Thiofanox	39196-18-4					2.3E+01	9.9E+01		1.9E+01
				8.0E-02	I					1	0.1		1.4E+09		Thiophanate, Methyl	23564-05-8					6.3E+03	2.6E+04		5.1E+03
				5.0E-03	I					1	0.1		1.4E+09		Thiram	137-26-8					3.9E+02	1.6E+03		3.2E+02
				6.0E-01	H					1			1.4E+09		Tin	7440-31-5					4.7E+04			4.7E+04
						1.0E-04	A	V		1			1.4E+09		Titanium Tetrachloride	7550-45-0							1.4E+05	1.4E+05
				8.0E-02	I	5.0E+00	I	V		1		8.2E+02	1.4E+09	4.3E+03	Toluene	108-88-3					6.3E+03		2.2E+04	4.9E+03
1.8E-01	X			2.0E-04	X					1	0.1		1.4E+09		Toluene-2,5-diamine	95-70-5	3.9E+00	1.4E+01		3.0E+00	1.6E+01	6.6E+01		1.3E+01
3.0E-02	P			4.0E-03	X					1	0.1		1.4E+09		Toluidine, p-	106-49-0	2.3E+01	8.2E+01		1.8E+01	3.1E+02	1.3E+03		2.5E+02
				3.0E+00	P			V		1		3.4E-01	1.4E+09	1.1E+03	Total Petroleum Hydrocarbons (Aliphatic High)	NA					2.3E+05			2.3E+05
						6.0E-01	P	V		1		1.4E+02	1.4E+09	8.3E+02	Total Petroleum Hydrocarbons (Aliphatic Low)	NA							5.2E+02	5.2E+02
				1.0E-02	X	1.0E-01	P	V		1		6.9E+00	1.4E+09	1.0E+03	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA					7.8E+02		1.1E+02	9.6E+01
				4.0E-02	P					1	0.1		1.4E+09		Total Petroleum Hydrocarbons (Aromatic High)	NA					3.1E+03	1.3E+04		2.5E+03
				4.0E-03	P	3.0E-02	P	V		1		1.8E+03	1.4E+09	3.5E+03	Total Petroleum Hydrocarbons (Aromatic Low)	NA					3.1E+02		1.1E+02	8.2E+01
				4.0E-03	P	3.0E-03	P	V		1			1.4E+09	5.2E+04	Total Petroleum Hydrocarbons (Aromatic Medium)	NA					3.1E+02		1.6E+02	1.1E+02
1.1E+00	I	3.2E-04	I							1	0.1		1.4E+09		Toxaphene	8001-35-2	6.3E-01	2.2E+00	1.2E+04	4.9E-01				
				7.5E-03	I					1	0.1		1.4E+09		Tralomethrin	66841-25-6					5.9E+02	2.5E+03		4.7E+02
				3.0E-04	A			V		1			1.4E+09	3.4E+03	Tri-n-butyltin	688-73-3					2.3E+01			2.3E+01
				8.0E+01	X					1	0.1		1.4E+09		Triacetin	102-76-1					6.3E+06	2.6E+07		5.1E+06
				3.0E-02	I					1	0.1		1.4E+09		Triadimefon	43121-43-3					2.3E+03	9.9E+03		1.9E+03
				1.3E-02	I			V		1			1.4E+09	3.6E+05	Triallate	2303-17-5					1.0E+03			1.0E+03
				1.0E-02	I					1	0.1		1.4E+09		Triasulfuron	82097-50-5					7.8E+02	3.3E+03		6.3E+02
				8.0E-03	I					1	0.1		1.4E+09		Tribenuron-methyl	101200-48-0					6.3E+02	2.6E+03		5.1E+02
				5.0E-03	I			V		1			1.4E+09	4.8E+04	Tribromobenzene, 1,2,4-	615-54-3					3.9E+02			3.9E+02
9.0E-03	P			1.0E-02	P					1	0.1		1.4E+09		Tributyl Phosphate	126-73-8	7.7E+01	2.7E+02		6.0E+01	7.8E+02	3.3E+03		6.3E+02
				3.0E-04	P					1	0.1		1.4E+09		Tributyltin Compounds	NA					2.3E+01	9.9E+01		1.9E+01
				3.0E-04	I					1	0.1		1.4E+09		Tributyltin Oxide	56-35-9					2.3E+01	9.9E+01		1.9E+01
				3.0E+01	I	3.0E+01	H	V		1		9.1E+02	1.4E+09	1.3E+03	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					2.3E+06		4.0E+04	4.0E+04
7.0E-02	I			2.0E-02	I					1	0.1		1.4E+09		Trichloroacetic Acid	76-03-9	9.9E+00	3.5E+01		7.8E+00	1.6E+03	6.6E+03		1.3E+03
2.9E-02	H									1	0.1		1.4E+09		Trichloroaniline HCl, 2,4,6-	33663-50-2	2.4E+01	8.5E+01		1.9E+01				
7.0E-03	X			3.0E-05	X					1	0.1		1.4E+09		Trichloroaniline, 2,4,6-	634-93-5	9.9E+01	3.5E+02		7.8E+01	2.3E+00	9.9E+00		1.9E+00
				8.0E-04	X			V		1			1.4E+09	3.2E+04	Trichlorobenzene, 1,2,3-	87-61-6					6.3E+01			6.3E+01
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		1		4.0E+02	1.4E+09	3.0E+04	Trichlorobenzene, 1,2,4-	120-82-1	2.4E+01			2.4E+01	7.8E+02		6.2E+01	5.8E+01
				2.0E+00	I	5.0E+00	I	V		1		6.4E+02	1.4E+09	1.7E+03	Trichloroethane, 1,1,1-	71-55-6					1.6E+05		8.6E+03	8.1E+03
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1		2.2E+03	1.4E+09	7.2E+03	Trichloroethane, 1,1,2-	79-00-5	1.2E+01		1.3E+00	1.1E+00	3.1E+02		1.5E+00	1.5E+00
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	1		6.9E+02	1.4E+09	2.2E+03	Trichloroethylene	79-01-6	8.8E+00		1.1E+00	9.4E-01	3.9E+01		4.6E+00	4.1E+00
				3.0E-01	I			V		1		1.2E+03	1.4E+09	1.0E+03	Trichlorofluoromethane	75-69-4					2.3E+04			2.3E+04
				1.0E-01	I					1	0.1		1.4E+09		Trichlorophenol, 2,4,5-	95-95-4					7.8E+03	3.3E+04		6.3E+03
1.1E-02	I	3.1E-06	I	1.0E-03	P					1	0.1		1.4E+09		Trichlorophenol, 2,4,6-	88-06-2	6.3E+01	2.2E+02	1.2E+06	4.9E+01	7.8E+01	3.3E+02		6.3E+01
				1.0E-02	I					1	0.1		1.4E+09		Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					7.8E+02	3.3E+03		6.3E+02
				8.0E-03	I					1	0.1		1.4E+09		Trichlorophenoxypropionic acid, -2,4,5	93-72-1					6.3E+02	2.6E+03		5.1E+02
				5.0E-03	I			V		1		1.3E+03	1.4E+09	1.5E+04	Trichloropropane, 1,1,2-	598-77-6					3.9E+02			3.9E+02
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1		1.4E+03	1.4E+09	1.6E+04	Trichloropropane, 1,2,3-	96-18-4	5.1E-03			5.1E-03	3.1E+02		4.9E+00	4.8E+00

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				3.0E-03	X	3.0E-04	P	V		1		3.1E+02	1.4E+09	2.3E+03	Trichloropropene, 1,2,3-	96-19-5					2.3E+02		7.3E-01	7.3E-01
				2.0E-02	A					1	0.1		1.4E+09		Tricresyl Phosphate (TCP)	1330-78-5					1.6E+03	6.6E+03		1.3E+03
				3.0E-03	I					1	0.1		1.4E+09		Tridiphane	58138-08-2					2.3E+02	9.9E+02		1.9E+02
						7.0E-03	I	V		1		2.8E+04	1.4E+09	1.6E+04	Triethylamine	121-44-8							1.2E+02	1.2E+02
				2.0E+00	P					1	0.1		1.4E+09		Triethylene Glycol	112-27-6					1.6E+05	6.6E+05		1.3E+05
						2.0E+01	P	V		1		4.8E+03	1.4E+09	7.1E+02	Trifluoroethane, 1,1,1-	420-46-2							1.5E+04	1.5E+04
7.7E-03	I			7.5E-03	I			V		1			1.4E+09	5.1E+05	Trifluralin	1582-09-8	9.0E+01			9.0E+01	5.9E+02			5.9E+02
2.0E-02	P			1.0E-02	P					1	0.1		1.4E+09		Trimethyl Phosphate	512-56-1	3.5E+01	1.2E+02		2.7E+01	7.8E+02	3.3E+03		6.3E+02
						5.0E-03	P	V		1		2.9E+02	1.4E+09	9.4E+03	Trimethylbenzene, 1,2,3-	526-73-8							4.9E+01	4.9E+01
						7.0E-03	P	V		1		2.2E+02	1.4E+09	7.9E+03	Trimethylbenzene, 1,2,4-	95-63-6							5.8E+01	5.8E+01
				1.0E-02	X			V		1		1.8E+02	1.4E+09	6.6E+03	Trimethylbenzene, 1,3,5-	108-67-8					7.8E+02			7.8E+02
				1.0E-02	X			V		1		3.0E+01	1.4E+09	1.0E+03	Trimethylpentene, 2,4,4-	25167-70-8					7.8E+02			7.8E+02
				3.0E-02	I					1	0.019		1.4E+09		Trinitrobenzene, 1,3,5-	99-35-4					2.3E+03	5.2E+04		2.2E+03
3.0E-02	I			5.0E-04	I					1	0.032		1.4E+09		Trinitrotoluene, 2,4,6-	118-96-7	2.3E+01	2.6E+02		2.1E+01	3.9E+01	5.2E+02		3.6E+01
				2.0E-02	P					1	0.1		1.4E+09		Triphenylphosphine Oxide	791-28-6					1.6E+03	6.6E+03		1.3E+03
				2.0E-02	A					1	0.1		1.4E+09		Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					1.6E+03	6.6E+03		1.3E+03
				1.0E-02	X					1	0.1		1.4E+09		Tris(1-chloro-2-propyl)phosphate	13674-84-5					7.8E+02	3.3E+03		6.3E+02
2.3E+00	C	6.6E-04	C					V		1		4.7E+02	1.4E+09	9.0E+05	Tris(2,3-dibromopropyl)phosphate	126-72-7	3.0E-01		3.8E+00	2.8E-01				
2.0E-02	P			7.0E-03	P					1	0.1		1.4E+09		Tris(2-chloroethyl)phosphate	115-96-8	3.5E+01	1.2E+02		2.7E+01	5.5E+02	2.3E+03		4.4E+02
3.2E-03	P			1.0E-01	P					1	0.1		1.4E+09		Tris(2-ethylhexyl)phosphate	78-42-2	2.2E+02	7.7E+02		1.7E+02	7.8E+03	3.3E+04		6.3E+03
				8.0E-04	P					1			1.4E+09		Tungsten	7440-33-7					6.3E+01			6.3E+01
				3.0E-03	I	4.0E-05	A			1			1.4E+09		Uranium (Soluble Salts)	NA					2.3E+02		5.7E+04	2.3E+02
1.0E+00	C	2.9E-04	C						M	1	0.1		1.4E+09		Urethane	51-79-6	1.5E-01	6.0E-01	4.8E+03	1.2E-01				
		8.3E-03	P	9.0E-03	I	7.0E-06	P			0.026			1.4E+09		Vanadium Pentoxide	1314-62-1			4.6E+02	4.6E+02	7.0E+02		9.9E+03	6.6E+02
				5.0E-03	S	1.0E-04	A			0.026			1.4E+09		Vanadium and Compounds	7440-62-2					3.9E+02		1.4E+05	3.9E+02
				1.0E-03	I			V		1			1.4E+09	1.2E+05	Vernolate	1929-77-7					7.8E+01			7.8E+01
				2.5E-02	I					1	0.1		1.4E+09		Vinclozolin	50471-44-8					2.0E+03	8.2E+03		1.6E+03
				1.0E+00	H	2.0E-01	I	V		1		2.8E+03	1.4E+09	4.4E+03	Vinyl Acetate	108-05-4					7.8E+04		9.2E+02	9.1E+02
		3.2E-05	H			3.0E-03	I	V		1		2.5E+03	1.4E+09	1.4E+03	Vinyl Bromide	593-60-2			1.2E-01	1.2E-01			4.3E+00	4.3E+00
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1		3.9E+03	1.4E+09	9.6E+02	Vinyl Chloride	75-01-4	9.4E-02		1.6E-01	5.9E-02	2.3E+02		1.0E+02	7.0E+01
				3.0E-04	I					1	0.1		1.4E+09		Warfarin	81-81-2					2.3E+01	9.9E+01		1.9E+01
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	1.4E+09	5.6E+03	Xylene, P-	106-42-3					1.6E+04		5.8E+02	5.6E+02
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	1.4E+09	5.5E+03	Xylene, m-	108-38-3					1.6E+04		5.7E+02	5.5E+02
				2.0E-01	S	1.0E-01	S	V		1		4.3E+02	1.4E+09	6.5E+03	Xylene, o-	95-47-6					1.6E+04		6.7E+02	6.5E+02
				2.0E-01	I	1.0E-01	I	V		1		2.6E+02	1.4E+09	5.7E+03	Xylenes	1330-20-7					1.6E+04		6.0E+02	5.8E+02
				3.0E-04	I					1			1.4E+09		Zinc Phosphide	1314-84-7					2.3E+01			2.3E+01
				3.0E-01	I					1			1.4E+09		Zinc and Compounds	7440-66-6					2.3E+04			2.3E+04
				5.0E-02	I					1	0.1		1.4E+09		Zineb	12122-67-7					3.9E+03	1.6E+04		3.2E+03
				8.0E-05	X					1			1.4E+09		Zirconium	7440-67-7					6.3E+00			6.3E+00

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
8.7E-03	I			4.0E-03	I					-0.85	1	1	Yes	Acephate	30560-19-1	9.0E+00	1.2E+04		8.9E+00	8.0E+01	1.1E+05		8.0E+01	
		2.2E-06	I			9.0E-03	I	V		-0.34	1	1	Yes	Acetaldehyde	75-07-0			2.6E+00	2.6E+00			1.9E+01	1.9E+01	
				2.0E-02	I					3.03	1	0.9	Yes	Acetochlor	34256-82-1					4.0E+02	2.9E+03		3.5E+02	
				9.0E-01	I	3.1E+01	A	V		-0.24	1	1	Yes	Acetone	67-64-1					1.8E+04	4.4E+06	6.4E+04	1.4E+04	
						2.0E-03	X			-0.03	1	1	Yes	Acetone Cyanohydrin	75-86-5									
						6.0E-02	I	V		-0.34	1	1	Yes	Acetonitrile	75-05-8							1.3E+02	1.3E+02	
				1.0E-01	I			V		1.58	1	1	Yes	Acetophenone	98-86-2					2.0E+03	4.6E+04		1.9E+03	
3.8E+00	C	1.3E-03	C							3.12	1	1	Yes	Acetylaminofluorene, 2-	53-96-3	2.1E-02	6.7E-02		1.6E-02					
				5.0E-04	I	2.0E-05	I	V		-0.01	1	1	Yes	Acrolein	107-02-8					1.0E+01	1.7E+03	4.2E-02	4.2E-02	
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	-0.67	1	1	Yes	Acrylamide	79-06-1	5.0E-02	2.3E+01		5.0E-02	4.0E+01	2.1E+04		4.0E+01	
				5.0E-01	I	1.0E-03	I	V		0.35	1	1	Yes	Acrylic Acid	79-10-7					1.0E+04	1.1E+06	2.1E+00	2.1E+00	
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		0.25	1	1	Yes	Acrylonitrile	107-13-1	1.4E-01	1.4E+01	8.3E-02	5.2E-02	8.0E+02	8.9E+04	4.2E+00	4.1E+00	
						6.0E-03	P			-0.32	1	1	Yes	Adiponitrile	111-69-3									
5.6E-02	C			1.0E-02	I					3.52	1	0.9	Yes	Alachlor	15972-60-8	1.4E+00	4.4E+00		1.1E+00	2.0E+02	6.9E+02		1.6E+02	2.0E+00
				1.0E-03	I					1.13	1	1	Yes	Aldicarb	116-06-3					2.0E+01	1.4E+03		2.0E+01	3.0E+00
				1.0E-03	I					-0.57	1	1	Yes	Aldicarb Sulfone	1646-88-4					2.0E+01	2.4E+04		2.0E+01	2.0E+00
										-0.78	1	1	Yes	Aldicarb sulfoxide	1646-87-3									4.0E+00
1.7E+01	I	4.9E-03	I	3.0E-05	I			V		6.5	1	1	No	Aldrin	309-00-2	4.6E-03		1.1E-03	9.2E-04	6.0E-01			6.0E-01	
				5.0E-03	I	1.0E-04	X	V		0.17	1	1	Yes	Allyl Alcohol	107-18-6					1.0E+02	1.3E+04	2.1E-01	2.1E-01	
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1.93	1	1	Yes	Allyl Chloride	107-05-1	3.7E+00	3.5E+01	9.4E-01	7.3E-01			2.1E+00	2.1E+00	
				1.0E+00	P	5.0E-03	P				1	1	Yes	Aluminum	7429-90-5					2.0E+04	4.6E+06		2.0E+04	
				4.0E-04	I						1	1	Yes	Aluminum Phosphide	20859-73-8					8.0E+00	1.8E+03		8.0E+00	
				9.0E-03	I					2.98	1	1	Yes	Ametryn	834-12-8					1.8E+02	9.8E+02		1.5E+02	
2.1E+01	C	6.0E-03	C							2.86	1	1	Yes	Aminobiphenyl, 4-	92-67-1	3.7E-03	1.5E-02		3.0E-03					
				8.0E-02	P					0.21	1	1	Yes	Aminophenol, m-	591-27-5					1.6E+03	2.8E+05		1.6E+03	
				2.0E-02	P					0.04	1	1	Yes	Aminophenol, p-	123-30-8					4.0E+02	9.1E+04		4.0E+02	
				2.5E-03	I					5.5	1	0.9	Yes	Amitraz	33089-61-1					5.0E+01	9.8E+00		8.2E+00	
						1.0E-01	I	V		0.23	1	1		Ammonia	7664-41-7									
				2.0E-01	I						1	1	Yes	Ammonium Sulfamate	7773-06-0					4.0E+03	9.1E+05		4.0E+03	
						3.0E-03	X	V		0.89	1	1	Yes	Amyl Alcohol, tert-	75-85-4							6.3E+00	6.3E+00	
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I			0.9	1	1	Yes	Aniline	62-53-3	1.4E+01	6.9E+02		1.3E+01	1.4E+02	7.7E+03		1.4E+02	
4.0E-02	P			2.0E-03	X					3.39	1	0.9	Yes	Anthraquinone, 9,10-	84-65-1	1.9E+00	5.1E+00		1.4E+00	4.0E+01	1.1E+02		3.0E+01	
				4.0E-04	I						0.15	1	Yes	Antimony (metallic)	7440-36-0					8.0E+00	2.7E+02		7.8E+00	6.0E+00
				5.0E-04	H						0.15	1	Yes	Antimony Pentoxide	1314-60-9					1.0E+01	3.4E+02		9.7E+00	
				4.0E-04	H						0.15	1	Yes	Antimony Tetroxide	1332-81-6					8.0E+00	2.7E+02		7.8E+00	
						2.0E-04	I				0.15	1	Yes	Antimony Trioxide	1309-64-4									
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C				1	1	Yes	Arsenic, Inorganic	7440-38-2	5.2E-02	9.7E+00		5.2E-02	6.0E+00	1.4E+03		6.0E+00	1.0E+01
				3.5E-06	C	5.0E-05	I				1	1	Yes	Arsine	7784-42-1					7.0E-02	1.6E+01		7.0E-02	
				5.0E-02	I					-0.27	1	1	Yes	Asulam	3337-71-1					1.0E+03	8.0E+05		1.0E+03	
2.3E-01	C			3.5E-02	I					2.61	1	1	Yes	Atrazine	1912-24-9	3.4E-01	2.8E+00		3.0E-01	7.0E+02	6.2E+03		6.3E+02	3.0E+00
8.8E-01	C	2.5E-04	C							2.98	1	0.9	Yes	Auramine	492-80-8	8.9E-02	2.7E-01		6.7E-02					
				4.0E-04	I					4.48	1	1	No	Avermectin B1	65195-55-3					8.0E+00			8.0E+00	
				3.0E-03	A	1.0E-02	A			2.75	1	1	Yes	Azinphos-methyl	86-50-0					6.0E+01	8.3E+02		5.6E+01	
1.1E-01	I	3.1E-05	I					V		3.82	1	1	Yes	Azobenzene	103-33-3	7.1E-01	7.3E-01	1.8E-01	1.2E-01					
				1.0E+00	P	7.0E-06	P			-1.7	1	1	Yes	Azodicarbonamide	123-77-3					2.0E+04	6.8E+07		2.0E+04	
				2.0E-01	I	5.0E-04	H				0.07	1	Yes	Barium	7440-39-3					4.0E+03	6.4E+04		3.8E+03	2.0E+03
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Barium Chromate	10294-40-3	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
				3.0E-01	I			V		5.29	1	0.8	Yes	Benfluralin	1861-40-1					6.0E+03	2.4E+03		1.7E+03	
				5.0E-02	I					2.12	1	1	Yes	Benomyl	17804-35-2					1.0E+03	3.0E+04		9.7E+02	
				2.0E-01	I					2.18	1	1	Yes	Bensulfuron-methyl	83055-99-6					4.0E+03	2.4E+05		3.9E+03	
				3.0E-02	I					2.34	1	1	Yes	Bentazon	25057-89-0					6.0E+02	9.4E+03		5.7E+02	
				1.0E-01	I			V		1.48	1	1	Yes	Benzaldehyde	100-52-7					2.0E+03	4.9E+04		1.9E+03	
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		2.13	1	1	Yes	Benzene	71-43-2	1.4E+00	9.8E+00	7.2E-01	4.6E-01	8.0E+01	6.1E+02	6.3E+01	3.3E+01	5.0E+00
1.0E-01	X			3.0E-04	X					-3.727	1	1	No	Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	7.8E-01			7.8E-01	6.0E+00			6.0E+00	
				1.0E-03	P			V		2.52	1	1	Yes	Benzenethiol	108-98-5					2.0E+01	1.0E+02		1.7E+01	
2.3E+02	I	6.7E-02	I	3.0E-03	I				M	1.34	1	1	Yes	Benzidine	92-87-5	1.1E-04	5.0E-03		1.1E-04	6.0E+01	3.0E+03		5.9E+01	
				4.0E+00	I					1.87	1	1	Yes	Benzoic Acid	65-85-0					8.0E+04	1.2E+06		7.5E+04	
1.3E+01	I							V		3.9	1	1	Yes	Benzotrichloride	98-07-7	6.0E-03	6.0E-03		3.0E-03					
				1.0E-01	P					1.1	1	1	Yes	Benzyl Alcohol	100-51-6					2.0E+03	8.9E+04		2.0E+03	
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		2.3	1	1	Yes	Benzyl Chloride	100-44-7	4.6E-01	3.4E+00	1.1E-01	8.9E-02	4.0E+01	3.2E+02	2.1E+00	2.0E+00	
		2.4E-03	I	2.0E-03	I	2.0E-05	I				0.007	1	Yes	Beryllium and compounds	7440-41-7					4.0E+01	6.4E+01		2.5E+01	4.0E+00
				9.0E-03	P					4.48	1	0.9	Yes	Bifenox	42576-02-3					1.8E+02	2.3E+02		1.0E+02	
				1.5E-02	I					6	1	0	Yes	Biphenthrin	82657-04-3					3.0E+02			3.0E+02	
8.0E-03	I			5.0E-01	I	4.0E-04	X	V		4.01	1	1	Yes	Biphenyl, 1,1'-	92-52-4	9.7E+00	6.5E+00		3.9E+00	1.0E+04	7.3E+03	8.3E-01	8.3E-01	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				4.0E-02	I			V		2.48	1	1	Yes	Bis(2-chloro-1-methylethyl) ether	108-60-1					8.0E+02	6.5E+03		7.1E+02	
				3.0E-03	P					1.3	1	1	Yes	Bis(2-chloroethoxy)methane	111-91-1					6.0E+01	3.0E+03		5.9E+01	
1.1E+00	I	3.3E-04	I					V		1.29	1	1	Yes	Bis(2-chloroethyl)ether	111-44-4	7.1E-02	2.7E+00	1.7E-02	1.4E-02					
2.2E+02	I	6.2E-02	I					V		0.57	1	1	Yes	Bis(chloromethyl)ether	542-88-1	3.5E-04	3.4E-02	9.1E-05	7.2E-05					
				5.0E-02	I					3.32	1	1	Yes	Bisphenol A	80-05-7					1.0E+03	3.2E+03		7.7E+02	
				2.0E-01	I	2.0E-02	H				1	1	Yes	Boron And Borates Only	7440-42-8					4.0E+03	9.1E+05		4.0E+03	
				2.0E+00	P	2.0E-02	P	V		1.16	1	1	Yes	Boron Trichloride	10294-34-5					4.0E+04	9.1E+06	4.2E+01	4.2E+01	
				4.0E-02	C	1.3E-02	C	V		0.22	1	1	Yes	Boron Trifluoride	7637-07-2					8.0E+02	1.8E+05	2.7E+01	2.6E+01	
7.0E-01	I			4.0E-03	I						1	1	Yes	Bromate	15541-45-4	1.1E-01	2.1E+01		1.1E-01	8.0E+01	1.8E+04		8.0E+01	1.0E+01
2.0E+00	X	6.0E-04	X					V		1.92	1	1	Yes	Bromo-2-chloroethane, 1-	107-04-0	3.9E-02	5.7E-01	9.4E-03	7.4E-03					
				8.0E-03	I	6.0E-02	I	V		2.99	1	1	Yes	Bromobenzene	108-86-1					1.6E+02	5.4E+02	1.3E+02	6.2E+01	
						4.0E-02	X	V		1.41	1	1	Yes	Bromochloromethane	74-97-5							8.3E+01	8.3E+01	
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		2	1	1	Yes	Bromodichloromethane	75-27-4	1.3E+00	1.9E+01	1.5E-01	1.3E-01	4.0E+02	6.5E+03		3.8E+02	8.0E+01(F)
7.9E-03	I	1.1E-06	I	2.0E-02	I			V		2.4	1	1	Yes	Bromoform	75-25-2	9.9E+00	1.4E+02	5.1E+00	3.3E+00	4.0E+02	6.2E+03		3.8E+02	8.0E+01(F)
				1.4E-03	I	5.0E-03	I	V		1.19	1	1	Yes	Bromomethane	74-83-9					2.8E+01	1.0E+03	1.0E+01	7.5E+00	
				5.0E-03	H			V		5.21	1	0.8	Yes	Bromophos	2104-96-3					1.0E+02	5.5E+01		3.5E+01	
				2.0E-02	I					2.8	1	0.9	Yes	Bromoxynil	1689-84-5					4.0E+02	1.8E+03		3.3E+02	
				2.0E-02	I			V		5.4	1	0.8	Yes	Bromoxynil Octanoate	1689-99-2					4.0E+02	2.1E+02		1.4E+02	
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1.99	1	1	Yes	Butadiene, 1,3-	106-99-0	2.3E-02	1.6E-01	1.9E-01	1.8E-02			4.2E+00	4.2E+00	
				1.0E-01	I			V		0.88	1	1	Yes	Butanol, N-	71-36-3					2.0E+03	1.0E+05		2.0E+03	
1.9E-03	P			2.0E-01	I					4.73	1	0.9	Yes	Butyl Benzyl Phthalate	85-68-7	4.1E+01	2.7E+01		1.6E+01	4.0E+03	2.9E+03		1.7E+03	
				2.0E+00	P	3.0E+01	P	V		0.61	1	1	Yes	Butyl alcohol, sec-	78-92-2					4.0E+04	3.0E+06	6.3E+04	2.4E+04	
				5.0E-02	I			V		4.15	1	1	Yes	Butylate	2008-41-5					1.0E+03	8.5E+02		4.6E+02	
2.0E-04	C	5.7E-08	C							3.5	1	0.8	Yes	Butylated hydroxyanisole	25013-16-5	3.9E+02	2.5E+02		1.5E+02					
3.6E-03	P			3.0E-01	P					5.1	1	1	Yes	Butylated hydroxytoluene	128-37-0	2.2E+01	4.0E+00		3.4E+00	6.0E+03	1.2E+03		1.0E+03	
				5.0E-02	P			V		4.38	1	1	No	Butylbenzene, n-	104-51-8					1.0E+03			1.0E+03	
				1.0E-01	X			V		4.57	1	1	No	Butylbenzene, sec-	135-98-8					2.0E+03			2.0E+03	
				1.0E-01	X			V		4.11	1	1	Yes	Butylbenzene, tert-	98-06-6					2.0E+03	1.1E+03		6.9E+02	
				2.0E-02	A					0.36	1	1	Yes	Cacodylic Acid	75-60-5					4.0E+02	6.7E+04		4.0E+02	
		1.8E-03	I	1.0E-03	I	1.0E-05	A				0.025	1		Cadmium (Diet)	7440-43-9									
		1.8E-03	I	5.0E-04	I	1.0E-05	A				0.05	1	Yes	Cadmium (Water)	7440-43-9					1.0E+01	1.1E+02		9.2E+00	5.0E+00
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Calcium Chromate	13765-19-0	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
				5.0E-01	I	2.2E-03	C			-0.19	1	1	Yes	Caprolactam	105-60-2					1.0E+04	9.0E+05		9.9E+03	
1.5E-01	C	4.3E-05	C	2.0E-03	I					3.8	1	0.9	Yes	Captafol	2425-06-1	5.2E-01	1.8E+00		4.0E-01	4.0E+01	1.5E+02		3.2E+01	
2.3E-03	C	6.6E-07	C	1.3E-01	I					2.8	1	1	Yes	Captan	133-06-2	3.4E+01	3.6E+02		3.1E+01	2.6E+03	3.0E+04		2.4E+03	
				1.0E-01	I					2.36	1	1	Yes	Carbaryl	63-25-2					2.0E+03	2.4E+04		1.8E+03	
				5.0E-03	I					2.32	1	1	Yes	Carbofuran	1563-66-2					1.0E+02	1.4E+03		9.4E+01	4.0E+01
				1.0E-01	I	7.0E-01	I	V		1.94	1	1	Yes	Carbon Disulfide	75-15-0					2.0E+03	2.0E+04	1.5E+03	8.1E+02	
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		2.83	1	1	Yes	Carbon Tetrachloride	56-23-5	1.1E+00	4.3E+00	9.4E-01	4.6E-01	8.0E+01	3.4E+02	2.1E+02	4.9E+01	5.0E+00
						1.0E-01	P	V		-1.33	1	1	Yes	Carbonyl Sulfide	463-58-1							2.1E+02	2.1E+02	
				1.0E-02	I					5.57	1	0.8	Yes	Carbosulfan	55285-14-8					2.0E+02	6.9E+01		5.1E+01	
				1.0E-01	I					2.14	1	1	Yes	Carboxin	5234-68-4					2.0E+03	4.1E+04		1.9E+03	
						9.0E-04	I				1	1	Yes	Ceric oxide	1306-38-3									
				1.0E-01	I			V		0.99	1	1	Yes	Chloral Hydrate	302-17-0					2.0E+03	1.5E+05		2.0E+03	
				1.5E-02	I					1.9	1	1	Yes	Chloramben	133-90-4					3.0E+02	7.4E+03		2.9E+02	
4.0E-01	H									2.22	1	1	Yes	Chloranil	118-75-2	1.9E-01	3.5E+00		1.8E-01					
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V		6.26	1	0.7	No	Chlordane	12789-03-6	2.2E-01		5.6E-02	4.5E-02	1.0E+01		1.5E+00	1.3E+00	2.0E+00
1.0E+01	I	4.6E-03	C	3.0E-04	I					5.41	1	0.8	Yes	Chlordecone (Kepone)	143-50-0	7.8E-03	6.5E-03		3.5E-03	6.0E+00	5.4E+00		2.9E+00	
				7.0E-04	A					3.81	1	0.9	Yes	Chlorfenvinphos	470-90-6					1.4E+01	5.6E+01		1.1E+01	
				2.0E-02	I					2.5	1	1	Yes	Chlorimuron, Ethyl-	90982-32-4					4.0E+02	1.5E+04		3.9E+02	
				1.0E-01	I	1.5E-04	A	V		0.85	1	1	Yes	Chlorine	7782-50-5					2.0E+03	4.6E+05	3.0E-01	3.0E-01	
				3.0E-02	I	2.0E-04	I	V			1	1	Yes	Chlorine Dioxide	10049-04-4					6.0E+02	1.4E+05	4.2E-01	4.2E-01	
				3.0E-02	I						1	1	Yes	Chlorite (Sodium Salt)	7758-19-2					6.0E+02	1.4E+05		6.0E+02	1.0E+03
						5.0E+01	I	V		2.05	1	1	Yes	Chloro-1,1-difluoroethane, 1-	75-68-3							1.0E+05	1.0E+05	
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		2.53	1	1	Yes	Chloro-1,3-butadiene, 2-	126-99-8			1.9E-02	1.9E-02	4.0E+02	1.8E+03	4.2E+01	3.7E+01	
4.6E-01	H									2.27	1	1	Yes	Chloro-2-methylaniline HCl, 4-	3165-93-3	1.7E-01	5.1E+02		1.7E-01					
1.0E-01	P	7.7E-05	C	3.0E-03	X					2.27	1	1	Yes	Chloro-2-methylaniline, 4-	95-69-2	7.8E-01	6.6E+00		7.0E-01	6.0E+01	5.6E+02		5.4E+01	
2.7E-01	X							V		0.09	1	1	Yes	Chloroacetaldehyde, 2-	107-20-0	2.9E-01	4.6E+01		2.9E-01					
										0.22	1	1	Yes	Chloroacetic Acid	79-11-8									6.0E+01
						3.0E-05	I			1.93	1	1	Yes	Chloroacetophenone, 2-	532-27-4									
2.0E-01	P			4.0E-03	I					1.83	1	1	Yes	Chloroaniline, p-	106-47-8	3.9E-01	5.9E+00		3.7E-01	8.0E+01	1.3E+03		7.6E+01	
				2.0E-02	I	5.0E-02	P	V		2.84	1	1	Yes	Chlorobenzene	108-90-7					4.0E+02	1.3E+03	1.0E+02	7.8E+01	1.0E+02
1.1E-01	C	3.1E-05	C	2.0E-02	I					4.74	1	0.8	Yes	Chlorobenzilate	510-15-6	7.1E-01	5.6E-01		3.1E-01	4.0E+02	3.5E+02		1.9E+02	
				3.0E-02	X					2.65	1	1	Yes	Chlorobenzoic Acid, p-	74-11-3					6.0E+02	3.4E+03		5.1E+02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				3.0E-03	P	3.0E-01	P	V		3.6	1	1	Yes	Chlorobenzotrifluoride, 4-	98-56-6					6.0E+01	9.3E+01	6.3E+02	3.5E+01	
				4.0E-02	P			V		2.64	1	1	Yes	Chlorobutane, 1-	109-69-3					8.0E+02	3.1E+03		6.4E+02	
						5.0E+01	I	V		1.08	1	1	Yes	Chlorodifluoromethane	75-45-6							1.0E+05	1.0E+05	
				2.0E-02	P			V		0.03	1	1	Yes	Chloroethanol, 2-	107-07-3					4.0E+02	7.7E+04		4.0E+02	
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		1.97	1	1	Yes	Chloroform	67-66-3	2.5E+00	2.9E+01	2.4E-01	2.2E-01	2.0E+02	2.5E+03	2.0E+02	9.7E+01	8.0E+01(F)
						9.0E-02	I	V		0.91	1	1	Yes	Chloromethane	74-87-3							1.9E+02	1.9E+02	
2.4E+00	C	6.9E-04	C					V		0.32	1	1	Yes	Chloromethyl Methyl Ether	107-30-2	3.2E-02	3.7E+00	8.1E-03	6.5E-03					
3.0E-01	P			3.0E-03	P	1.0E-05	X			2.24	1	1	Yes	Chloronitrobenzene, o-	88-73-3	2.6E-01	2.6E+00		2.4E-01	6.0E+01	6.4E+02		5.5E+01	
6.3E-03	P			1.0E-03	P	6.0E-04	P			2.39	1	1	Yes	Chloronitrobenzene, p-	100-00-5	1.2E+01	9.7E+01		1.1E+01	2.0E+01	1.7E+02		1.8E+01	
				5.0E-03	I			V		2.15	1	1	Yes	Chlorophenol, 2-	95-57-8					1.0E+02	1.0E+03		9.1E+01	
						4.0E-04	C	V		2.09	1	1	Yes	Chloropicrin	76-06-2							8.3E-01	8.3E-01	
3.1E-03	C	8.9E-07	C	1.5E-02	I					3.05	1	0.9	Yes	Chlorothalonil	1897-45-6	2.5E+01	1.6E+02		2.2E+01	3.0E+02	2.1E+03		2.6E+02	
				2.0E-02	I			V		3.42	1	1	Yes	Chlorotoluene, o-	95-49-8					4.0E+02	5.8E+02		2.4E+02	
				2.0E-02	X			V		3.33	1	1	Yes	Chlorotoluene, p-	106-43-4					4.0E+02	6.6E+02		2.5E+02	
2.4E+02	C	6.9E-02	C							-1.02	1	1	Yes	Chlorozotocin	54749-90-5	3.2E-04	1.0E+00		3.2E-04					
				2.0E-01	I					3.51	1	0.9	Yes	Chlorpropham	101-21-3					4.0E+03	9.8E+03		2.8E+03	
				1.0E-03	A					4.96	1	0.8	Yes	Chlorpyrifos	2921-88-2					2.0E+01	1.5E+01		8.4E+00	
				1.0E-02	H					4.31	1	0.9	Yes	Chlorpyrifos Methyl	5598-13-0					2.0E+02	2.9E+02		1.2E+02	
				5.0E-02	I					2	1	1	Yes	Chlorsulfuron	64902-72-3					1.0E+03	5.7E+04		9.9E+02	
				1.0E-02	I					4.28	1	0.9	Yes	Chlorthal-dimethyl	1861-32-1					2.0E+02	3.3E+02		1.2E+02	
				8.0E-04	H					5.8	1	0.8	Yes	Chlorthiophos	60238-56-4					1.6E+01	3.4E+00		2.8E+00	
				1.5E+00	I						0.013	1	Yes	Chromium(III), Insoluble Salts	16065-83-1					3.0E+04	8.9E+04		2.2E+04	
5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M		0.025	1	Yes	Chromium(VI)	18540-29-9	5.0E-02	1.2E-01		3.5E-02	6.0E+01	1.7E+02		4.4E+01	
											0.013	1	Yes	Chromium, Total	7440-47-3									1.0E+02
				1.3E-02	I					3.1	1	0.9	Yes	Clofentezine	74115-24-5					2.6E+02	2.1E+03		2.3E+02	
		9.0E-03	P	3.0E-04	P	6.0E-06	P				1	1	Yes	Cobalt	7440-48-4					6.0E+00	3.4E+03		6.0E+00	
		6.2E-04	I					V	M		1	0		Coke Oven Emissions	8007-45-2									
				4.0E-02	H						1	1	Yes	Copper	7440-50-8					8.0E+02	1.8E+05		8.0E+02	1.3E+03
				5.0E-02	I	6.0E-01	C			1.96	1	1	Yes	Cresol, m-	108-39-4					1.0E+03	1.2E+04		9.3E+02	
				5.0E-02	I	6.0E-01	C			1.95	1	1	Yes	Cresol, o-	95-48-7					1.0E+03	1.2E+04		9.3E+02	
				1.0E-01	A	6.0E-01	C			1.94	1	1	Yes	Cresol, p-	106-44-5					2.0E+03	2.5E+04		1.9E+03	
				1.0E-01	A					3.1	1	1	Yes	Cresol, p-chloro-m-	59-50-7					2.0E+03	5.2E+03		1.4E+03	
				1.0E-01	A	6.0E-01	C			1.95	1	0.9	Yes	Cresols	1319-77-3					2.0E+03	6.7E+03		1.5E+03	
1.9E+00	H			1.0E-03	P			V		0.6	1	1	Yes	Crotonaldehyde, trans-	123-73-9	4.1E-02	2.7E+00		4.0E-02	2.0E+01	1.5E+03		2.0E+01	
				1.0E-01	I	4.0E-01	I	V		3.66	1	1	Yes	Cumene	98-82-8					2.0E+03	1.9E+03	8.3E+02	4.5E+02	
2.2E-01	C	6.3E-05	C							-1.73	1	1	Yes	Cupferron	135-20-6	3.5E-01	1.3E+04		3.5E-01					
8.4E-01	H			2.0E-03	H					2.22	1	1	Yes	Cyanazine	21725-46-2	9.3E-02	1.6E+00		8.8E-02	4.0E+01	7.6E+02		3.8E+01	
														Cyanides										
				1.0E-03	I						1	1	Yes	~Calcium Cyanide	592-01-8					2.0E+01	4.6E+03		2.0E+01	
				5.0E-03	I						1	1	Yes	~Copper Cyanide	544-92-3					1.0E+02	2.3E+04		1.0E+02	
				6.0E-04	I	8.0E-04	S	V			1	1	Yes	~Cyanide (CN-)	57-12-5					1.2E+01	2.7E+03	1.7E+00	1.5E+00	2.0E+02
				1.0E-03	I			V		0.07	1	1	Yes	~Cyanogen	460-19-5					2.0E+01	5.1E+03		2.0E+01	
				9.0E-02	I			V			1	1	Yes	~Cyanogen Bromide	506-68-3					1.8E+03	1.6E+06		1.8E+03	
				5.0E-02	I			V			1	1	Yes	~Cyanogen Chloride	506-77-4					1.0E+03	5.8E+05		1.0E+03	
				6.0E-04	I	8.0E-04	I	V		-0.25	1	1	Yes	~Hydrogen Cyanide	74-90-8					1.2E+01	2.7E+03	1.7E+00	1.5E+00	
				2.0E-03	I						1	1	Yes	~Potassium Cyanide	151-50-8					4.0E+01	4.6E+03		4.0E+01	
				5.0E-03	I						0.04	1	Yes	~Potassium Silver Cyanide	506-61-6					1.0E+02	4.6E+02		8.2E+01	
				1.0E-01	I						0.04	1	Yes	~Silver Cyanide	506-64-9					2.0E+03	1.8E+04		1.8E+03	
				1.0E-03	I						1	1	Yes	~Sodium Cyanide	143-33-9					2.0E+01	4.6E+03		2.0E+01	2.0E+02
				2.0E-04	P						1	0	Yes	~Thiocyanates	NA					4.0E+00	9.1E+02		4.0E+00	
				2.0E-04	X			V		0.58	1	1	Yes	~Thiocyanic Acid	463-56-9					4.0E+00	9.1E+02		4.0E+00	
				5.0E-02	I						1	1	Yes	~Zinc Cyanide	557-21-1					1.0E+03	3.8E+05		1.0E+03	
						6.0E+00	I	V		3.44	1	1	Yes	Cyclohexane	110-82-7							1.3E+04	1.3E+04	
2.3E-02	H									4.72	1	0.9	Yes	Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	3.4E+00	8.3E+00		2.4E+00					
				5.0E+00	I	7.0E-01	P	V		0.81	1	1	Yes	Cyclohexanone	108-94-1					1.0E+05	6.5E+06	1.5E+03	1.4E+03	
				5.0E-03	P	1.0E+00	X	V		2.86	1	1	Yes	Cyclohexene	110-83-8					1.0E+02	2.5E+02	2.1E+03	7.0E+01	
				2.0E-01	I			V		1.49	1	1	Yes	Cyclohexylamine	108-91-8					4.0E+03	9.3E+04		3.8E+03	
				2.5E-02	I					5.95	1	0.7	Yes	Cyfluthrin	68359-37-5					5.0E+02	1.6E+02		1.2E+02	
				5.0E-03	I					6.9	1	0.5	No	Cyhalothrin	68085-85-8					1.0E+02			1.0E+02	
				1.0E-02	I					6.6	1	0.7	No	Cypermethrin	52315-07-8					2.0E+02			2.0E+02	
				7.5E-03	I					-0.061	1	1	Yes	Cyromazine	66215-27-8					1.5E+02	1.2E+04		1.5E+02	
2.4E-01	I	6.9E-05	C							6.02	1	0.8	Yes	DDD	72-54-8	3.2E-01	3.5E-02		3.2E-02					
3.4E-01	I	9.7E-05	C					V		6.51	1	0.8	No	DDE, p,p'-	72-55-9	2.3E-01		5.8E-02	4.6E-02					
3.4E-01	I	9.7E-05	I	5.0E-04	I					6.91	1	0.7	No	DDT	50-29-3	2.3E-01			2.3E-01	1.0E+01			1.0E+01	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				3.0E-02	I					0.78	1	1	Yes	Dalapon	75-99-0					6.0E+02	5.5E+04		6.0E+02	2.0E+02
1.8E-02	C	5.1E-06	C	1.5E-01	I					-1.5	1	1	Yes	Daminozide	1596-84-5	4.3E+00	1.3E+04		4.3E+00	3.0E+03	1.0E+07		3.0E+03	
7.0E-04	I			7.0E-03	I					12.11	1	0	No	Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	1.1E+02			1.1E+02	1.4E+02			1.4E+02	
				4.0E-05	I					3.21	1	0.8	Yes	Demeton	8065-48-3					8.0E-01	8.8E-01		4.2E-01	
1.2E-03	I			6.0E-01	I					6.11	1	0	Yes	Di(2-ethylhexyl)adipate	103-23-1	6.5E+01			6.5E+01	1.2E+04			1.2E+04	4.0E+02
6.1E-02	H									4.49	1	0.9	Yes	Diallate	2303-16-4	1.3E+00	9.2E-01		5.4E-01					
				7.0E-04	A					3.81	1	0.9	Yes	Diazinon	333-41-5					1.4E+01	3.9E+01		1.0E+01	
				1.0E-02	X			V		4.38	1	1	Yes	Dibenzothiophene	132-65-0					2.0E+02	9.6E+01		6.5E+01	
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	2.96	1	1	Yes	Dibromo-3-chloropropane, 1,2-	96-12-8	3.1E-02	1.7E-01	3.4E-04	3.3E-04	4.0E+00	2.4E+01	4.2E-01	3.7E-01	2.0E-01
				4.0E-04	X			V		3.75	1	0.9	Yes	Dibromobenzene, 1,3-	108-36-1					8.0E+00	1.6E+01		5.3E+00	
				1.0E-02	I			V		3.79	1	0.9	Yes	Dibromobenzene, 1,4-	106-37-6					2.0E+02	3.7E+02		1.3E+02	
8.4E-02	I			2.0E-02	I			V		2.16	1	1	Yes	Dibromochloromethane	124-48-1	9.3E-01	1.4E+01		8.7E-01	4.0E+02	6.7E+03		3.8E+02	8.0E+01(F)
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1.96	1	1	Yes	Dibromoethane, 1,2-	106-93-4	3.9E-02	7.1E-01	9.4E-03	7.5E-03	1.8E+02	3.6E+03	1.9E+01	1.7E+01	5.0E-02
						4.0E-03	X	V		1.7	1	1	Yes	Dibromomethane (Methylene Bromide)	74-95-3							8.3E+00	8.3E+00	
				3.0E-04	P						1	0	No	Dibutyltin Compounds	NA					6.0E+00			6.0E+00	
				3.0E-02	I					2.21	1	1	Yes	Dicamba	1918-00-9					6.0E+02	1.0E+04		5.7E+02	
		4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, 1,4-	764-41-0			1.3E-03	1.3E-03					
		4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, cis-1,4-	1476-11-5			1.3E-03	1.3E-03					
		4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, trans-1,4-	110-57-6			1.3E-03	1.3E-03					
5.0E-02	I			4.0E-03	I					0.92	1	1	Yes	Dichloroacetic Acid	79-43-6	1.6E+00	9.6E+01		1.5E+00	8.0E+01	5.4E+03		7.9E+01	6.0E+01
				9.0E-02	I	2.0E-01	H	V		3.43	1	1	Yes	Dichlorobenzene, 1,2-	95-50-1					1.8E+03	2.9E+03	4.2E+02	3.0E+02	6.0E+02
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		3.44	1	1	Yes	Dichlorobenzene, 1,4-	106-46-7	1.4E+01	2.1E+01	5.1E-01	4.8E-01	1.4E+03	2.2E+03	1.7E+03	5.7E+02	7.5E+01
4.5E-01	I	3.4E-04	C							3.51	1	1	Yes	Dichlorobenzidine, 3,3'-	91-94-1	1.7E-01	4.5E-01		1.3E-01					
				9.0E-03	X					4.44	1	0.9	Yes	Dichlorobenzophenone, 4,4'-	90-98-2					1.8E+02	1.4E+02		7.8E+01	
				2.0E-01	I	1.0E-01	X	V		2.16	1	1	Yes	Dichlorodifluoromethane	75-71-8					4.0E+03	3.8E+04	2.1E+02	2.0E+02	
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1.79	1	1	Yes	Dichloroethane, 1,1-	75-34-3	1.4E+01	1.8E+02	3.5E+00	2.8E+00	4.0E+03	5.8E+04		3.8E+03	
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1.48	1	1	Yes	Dichloroethane, 1,2-	107-06-2	8.6E-01	1.8E+01	2.2E-01	1.7E-01	1.2E+02	2.8E+03	1.5E+01	1.3E+01	5.0E+00
				5.0E-02	I	2.0E-01	I	V		2.13	1	1	Yes	Dichloroethylene, 1,1-	75-35-4					1.0E+03	8.5E+03	4.2E+02	2.8E+02	7.0E+00
				2.0E-03	I			V		1.86	1	1	Yes	Dichloroethylene, 1,2-cis-	156-59-2					4.0E+01	3.6E+02		3.6E+01	7.0E+01
				2.0E-02	I			V		2.09	1	1	Yes	Dichloroethylene, 1,2-trans-	156-60-5					4.0E+02	3.6E+03		3.6E+02	1.0E+02
				3.0E-03	I					3.06	1	1	Yes	Dichlorophenol, 2,4-	120-83-2					6.0E+01	1.9E+02		4.6E+01	
				1.0E-02	I					2.81	1	1	Yes	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					2.0E+02	1.4E+03		1.7E+02	7.0E+01
				8.0E-03	I					3.53	1	0.9	Yes	Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6					1.6E+02	4.8E+02		1.2E+02	
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1.98	1	1	Yes	Dichloropropane, 1,2-	78-87-5	2.2E+00	2.4E+01	5.6E-01	4.4E-01	1.8E+03	2.2E+04	8.3E+00	8.3E+00	5.0E+00
				2.0E-02	P			V		2	1	1	Yes	Dichloropropane, 1,3-	142-28-9					4.0E+02	4.6E+03		3.7E+02	
				3.0E-03	I					0.78	1	1	Yes	Dichloropropanol, 2,3-	616-23-9					6.0E+01	5.0E+03		5.9E+01	
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		2.04	1	1	Yes	Dichloropropene, 1,3-	542-75-6	7.8E-01	7.8E+00	1.4E+00	4.7E-01	6.0E+02	6.6E+03	4.2E+01	3.9E+01	
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1.43	1	1	Yes	Dichlorvos	62-73-7	2.7E-01	1.4E+01		2.6E-01	1.0E+01	5.6E+02		9.9E+00	
				1.0E-04	I					0	1	1	Yes	Dicrotophos	141-66-2					2.0E+00	1.1E+03		2.0E+00	
				8.0E-02	P	3.0E-04	X	V		3.16	1	1	Yes	Dicyclopentadiene	77-73-6					1.6E+03	3.5E+03	6.3E-01	6.3E-01	
1.6E+01	I	4.6E-03	I	5.0E-05	I					5.4	1	0.8	Yes	Dieldrin	60-57-1	4.9E-03	2.7E-03		1.8E-03	1.0E+00	6.1E-01		3.8E-01	
		3.0E-04	C			5.0E-03	I				1	0		Diesel Engine Exhaust	NA									
				2.0E-03	P	2.0E-04	P			-1.43	1	1	Yes	Diethanolamine	111-42-2					4.0E+01	8.4E+04		4.0E+01	
				3.0E-02	P	1.0E-04	P			0.56	1	1	Yes	Diethylene Glycol Monobutyl Ether	112-34-5					6.0E+02	8.7E+04		6.0E+02	
				6.0E-02	P	3.0E-04	P			-0.54	1	1	Yes	Diethylene Glycol Monoethyl Ether	111-90-0					1.2E+03	7.8E+05		1.2E+03	
				1.0E-03	P			V		0.05	1	1	Yes	Diethylformamide	617-84-5					2.0E+01	4.3E+03		2.0E+01	
3.5E+02	C	1.0E-01	C							5.07	1	0.9	Yes	Diethylstilbestrol	56-53-1	2.2E-04	6.6E-05		5.1E-05					
				8.0E-02	I					0.65	1	1	Yes	Difenzoquat	43222-48-6					1.6E+03	7.3E+05		1.6E+03	
				2.0E-02	I					3.88	1	0.9	Yes	Diflubenzuron	35367-38-5					4.0E+02	1.0E+03		2.9E+02	
						4.0E+01	I	V		0.75	1	1	Yes	Difluoroethane, 1,1-	75-37-6							8.3E+04	8.3E+04	
4.4E-02	C	1.3E-05	C					V		3.58	1	1	Yes	Dihydrosafrole	94-58-6	1.8E+00	2.3E+00	4.3E-01	3.0E-01					
						7.0E-01	P	V		1.52	1	1	Yes	Diisopropyl Ether	108-20-3							1.5E+03	1.5E+03	
				8.0E-02	I			V		1.03	1	1	Yes	Diisopropyl Methylphosphonate	1445-75-6					1.6E+03	1.3E+05		1.6E+03	
				2.0E-02	I					-0.17	1	1	Yes	Dimethipin	55290-64-7					4.0E+02	2.4E+05		4.0E+02	
				2.0E-04	I					0.78	1	1	Yes	Dimethoate	60-51-5					4.0E+00	6.4E+02		4.0E+00	
1.6E+00	P									1.81	1	1	Yes	Dimethoxybenzidine, 3,3'-	119-90-4	4.9E-02	1.6E+00		4.7E-02					
1.7E-03	P			6.0E-02	P					-0.61	1	1	Yes	Dimethyl methylphosphonate	756-79-6	4.6E+01	2.8E+04		4.6E+01	1.2E+03	8.1E+05		1.2E+03	
4.6E+00	C	1.3E-03	C							4.58	1	1	Yes	Dimethylamino azobenzene [p-]	60-11-7	1.7E-02	7.2E-03		5.0E-03					
5.8E-01	H									2.17	1	1	Yes	Dimethylaniline HCl, 2,4-	21436-96-4	1.3E-01	5.2E+02		1.3E-01					
2.0E-01	P			2.0E-03	X					1.68	1	1	Yes	Dimethylaniline, 2,4-	95-68-1	3.9E-01	7.1E+00		3.7E-01	4.0E+01	8.0E+02		3.8E+01	
				2.0E-03	I			V		2.31	1	1	Yes	Dimethylaniline, N,N-	121-69-7					4.0E+01	3.1E+02		3.5E+01	
1.1E+01	P									2.34	1	1	Yes	Dimethylbenzidine, 3,3'-	119-93-7	7.1E-03	8.5E-02		6.5E-03					
				1.0E-01	P	3.0E-02	I	V		-1.01	1	1	Yes	Dimethylformamide	68-12-2					2.0E+03	1.8E+06	6.3E+01	6.1E+01	
				1.0E-04	X	2.0E-06	X	V		-1.19	1	1	Yes	Dimethylhydrazine, 1,1-	57-14-7					2.0E+00	3.5E+03	4.2E-03	4.2E-03	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
5.5E+02	C	1.6E-01	C					V		-0.54	1	1	Yes	Dimethylhydrazine, 1,2-	540-73-8	1.4E-04	5.0E-02	3.5E-05	2.8E-05					
				2.0E-02	I					2.3	1	1	Yes	Dimethylphenol, 2,4-	105-67-9					4.0E+02	3.1E+03		3.6E+02	
				6.0E-04	I					2.36	1	1	Yes	Dimethylphenol, 2,6-	576-26-1					1.2E+01	8.5E+01		1.1E+01	
				1.0E-03	I					2.23	1	1	Yes	Dimethylphenol, 3,4-	95-65-8					2.0E+01	1.7E+02		1.8E+01	
4.5E-02	C	1.3E-05	C					V		2.58	1	1	Yes	Dimethylvinylchloride	513-37-1	1.7E+00	6.5E+00	4.3E-01	3.3E-01					
				8.0E-05	X					2.13	1	1	Yes	Dinitro-o-cresol, 4,6-	534-52-1					1.6E+00	2.6E+01		1.5E+00	
				2.0E-03	I					4.12	1	0.9	Yes	Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					4.0E+01	5.4E+01		2.3E+01	
				1.0E-04	P					1.69	1	1	Yes	Dinitrobenzene, 1,2-	528-29-0					2.0E+00	5.3E+01		1.9E+00	
				1.0E-04	I					1.49	1	1	Yes	Dinitrobenzene, 1,3-	99-65-0					2.0E+00	7.3E+01		2.0E+00	
				1.0E-04	P					1.46	1	1	Yes	Dinitrobenzene, 1,4-	100-25-4					2.0E+00	7.6E+01		2.0E+00	
				2.0E-03	I					1.67	1	1	Yes	Dinitrophenol, 2,4-	51-28-5					4.0E+01	1.2E+03		3.9E+01	
6.8E-01	I									2.18	1	1	Yes	Dinitrotoluene Mixture, 2,4/2,6-	NA	1.1E-01	1.5E+00		1.1E-01					
3.1E-01	C	8.9E-05	C	2.0E-03	I					1.98	1	1	Yes	Dinitrotoluene, 2,4-	121-14-2	2.5E-01	4.3E+00		2.4E-01	4.0E+01	7.5E+02		3.8E+01	
1.5E+00	P			3.0E-04	X					2.1	1	1	Yes	Dinitrotoluene, 2,6-	606-20-2	5.2E-02	7.4E-01		4.9E-02	6.0E+00	9.3E+01		5.7E+00	
				2.0E-03	S					1.84	1	1	Yes	Dinitrotoluene, 2-Amino-4,6-	35572-78-2					4.0E+01	1.0E+03		3.9E+01	
				2.0E-03	S					1.84	1	1	Yes	Dinitrotoluene, 4-Amino-2,6-	19406-51-0					4.0E+01	1.0E+03		3.9E+01	
4.5E-01	X			9.0E-04	X					2.18	1	0.8	Yes	Dinitrotoluene, Technical grade	25321-14-6	1.7E-01	2.6E-01		1.0E-01	1.8E+01	3.0E+01		1.1E+01	
				1.0E-03	I					3.56	1	0.9	Yes	Dinoseb	88-85-7					2.0E+01	5.4E+01		1.5E+01	7.0E+00
1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		-0.27	1	1	Yes	Dioxane, 1,4-	123-91-1	7.8E-01	2.3E+02	1.1E+00	4.6E-01	6.0E+02	1.9E+05	6.3E+01	5.7E+01	
														Dioxins										
6.2E+03	I	1.3E+00	I							8.21	1	0	No	~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.3E-05			1.3E-05					
1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V		6.8	1	0.5	No	~TCDD, 2,3,7,8-	1746-01-6	6.0E-07		1.5E-07	1.2E-07	1.4E-05		8.3E-05	1.2E-05	3.0E-05
				3.0E-02	I					2.17	1	1	Yes	Diphenamid	957-51-7					6.0E+02	4.2E+03		5.3E+02	
				8.0E-04	X					2.4	1	1	Yes	Diphenyl Sulfone	127-63-9					1.6E+01	2.0E+02		1.5E+01	
				2.5E-02	I					3.5	1	1	Yes	Diphenylamine	122-39-4					5.0E+02	8.4E+02		3.1E+02	
8.0E-01	I	2.2E-04	I							2.94	1	1	Yes	Diphenylhydrazine, 1,2-	122-66-7	9.7E-02	3.9E-01		7.8E-02					
				2.2E-03	I					-4.6	1	1	No	Diquat	85-00-7					4.4E+01			4.4E+01	2.0E+01
7.1E+00	C	1.4E-01	C							4.9	1	1	No	Direct Black 38	1937-37-7	1.1E-02			1.1E-02					
7.4E+00	C	1.4E-01	C							2.6	1	1	No	Direct Blue 6	2602-46-2	1.1E-02			1.1E-02					
6.7E+00	C	1.4E-01	C							-6.53	1	1	No	Direct Brown 95	16071-86-6	1.2E-02			1.2E-02					
				4.0E-05	I					4.02	1	0.9	Yes	Disulfoton	298-04-4					8.0E-01	1.3E+00		5.0E-01	
				1.0E-02	I			V		0.77	1	1	Yes	Dithiane, 1,4-	505-29-3					2.0E+02	1.6E+04		2.0E+02	
				2.0E-03	I					2.68	1	1	Yes	Diuron	330-54-1					4.0E+01	3.6E+02		3.6E+01	
				4.0E-03	I					1.15	1	1	Yes	Dodine	2439-10-3					8.0E+01	1.1E+04		8.0E+01	
				2.5E-02	I			V		3.21	1	1	Yes	EPTC	759-94-4					5.0E+02	1.5E+03		3.8E+02	
				6.0E-03	I			V		3.83	1	0.9	Yes	Endosulfan	115-29-7					1.2E+02	6.3E+02		1.0E+02	
				2.0E-02	I					1.91	1	1	Yes	Endothall	145-73-3					4.0E+02	8.5E+03		3.8E+02	1.0E+02
				3.0E-04	I					5.2	1	0.8	Yes	Endrin	72-20-8					6.0E+00	3.7E+00		2.3E+00	2.0E+00
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		0.45	1	1	Yes	Epichlorohydrin	106-89-8	7.9E+00	7.9E+02	4.7E+00	2.9E+00	1.2E+02	1.3E+04	2.1E+00	2.0E+00	
						2.0E-02	I	V		0.86	1	1	Yes	Epoxybutane, 1,2-	106-88-7							4.2E+01	4.2E+01	
				4.0E-02	P					-1.18	1	1	Yes	Ethanol, 2-(2-methoxyethoxy)-	111-77-3					8.0E+02	3.9E+05		8.0E+02	
				5.0E-03	I					-0.22	1	1	Yes	Ethephon	16672-87-0					1.0E+02	4.2E+04		1.0E+02	
				5.0E-04	I					5.07	1	0.8	Yes	Ethion	563-12-2					1.0E+01	7.7E+00		4.3E+00	
				1.0E-01	P	6.0E-02	P	V		0.59	1	1	Yes	Ethoxyethanol Acetate, 2-	111-15-9					2.0E+03	2.3E+05	1.3E+02	1.2E+02	
				9.0E-02	P	2.0E-01	I	V		-0.32	1	1	Yes	Ethoxyethanol, 2-	110-80-5					1.8E+03	6.3E+05	4.2E+02	3.4E+02	
				9.0E-01	I	7.0E-02	P	V		0.73	1	1	Yes	Ethyl Acetate	141-78-6					1.8E+04	1.2E+06	1.5E+02	1.4E+02	
				5.0E-03	P	8.0E-03	P	V		1.32	1	1	Yes	Ethyl Acrylate	140-88-5					1.0E+02	3.0E+03	1.7E+01	1.4E+01	
						1.0E+01	I	V		1.43	1	1	Yes	Ethyl Chloride (Chloroethane)	75-00-3							2.1E+04	2.1E+04	
				2.0E-01	I			V		0.89	1	1	Yes	Ethyl Ether	60-29-7					4.0E+03	2.0E+05		3.9E+03	
						3.0E-01	P	V		1.94	1	1	Yes	Ethyl Methacrylate	97-63-2							6.3E+02	6.3E+02	
				1.0E-05	I					4.78	1	0.8	Yes	Ethyl-p-nitrophenyl Phosphonate	2104-64-5					2.0E-01	1.6E-01		8.9E-02	
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		3.15	1	1	Yes	Ethylbenzene	100-41-4	7.1E+00	1.2E+01	2.2E+00	1.5E+00	2.0E+03	3.8E+03	2.1E+03	8.1E+02	7.0E+02
				7.0E-02	P					-0.94	1	1	Yes	Ethylene Cyanohydrin	109-78-4					1.4E+03	1.1E+06		1.4E+03	
				9.0E-02	P			V		-2.04	1	1	No	Ethylene Diamine	107-15-3					1.8E+03			1.8E+03	
				2.0E+00	I	4.0E-01	C			-1.36	1	1	Yes	Ethylene Glycol	107-21-1					4.0E+04	5.7E+07		4.0E+04	
				1.0E-01	I	1.6E+00	I			0.83	1	1	Yes	Ethylene Glycol Monobutyl Ether	111-76-2					2.0E+03	1.4E+05		2.0E+03	
3.1E-01	C	8.8E-05	C			3.0E-02	C	V		-0.3	1	1	Yes	Ethylene Oxide	75-21-8	2.5E-01	5.4E+01	6.4E-02	5.1E-02			6.3E+01	6.3E+01	
4.5E-02	C	1.3E-05	C	8.0E-05	I					-0.66	1	1	Yes	Ethylene Thiourea	96-45-7	1.7E+00	1.0E+03		1.7E+00	1.6E+00	1.0E+03		1.6E+00	
6.5E+01	C	1.9E-02	C					V		-0.28	1	1	Yes	Ethyleneimine	151-56-4	1.2E-03	2.5E-01	3.0E-04	2.4E-04					
				3.0E+00	I					2.19	1	1	Yes	Ethylphthalyl Ethyl Glycolate	84-72-0					6.0E+04	1.5E+06		5.8E+04	
				2.5E-04	I					3.23	1	0.9	Yes	Fenamiphos	22224-92-6					5.0E+00	3.4E+01		4.4E+00	
				2.5E-02	I					5.7	1	0.8	Yes	Fenpropathrin	39515-41-8					5.0E+02	7.3E+01		6.4E+01	
				2.5E-02	I					6.2	1	0.7	No	Fenvalerate	51630-58-1					5.0E+02			5.0E+02	
				1.3E-02	I					2.42	1	1	Yes	Fluometuron	2164-17-2					2.6E+02	3.4E+03		2.4E+02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information													Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				4.0E-02	C	1.3E-02	C				1	1	Yes	Fluoride	16984-48-8					8.0E+02	1.8E+05		8.0E+02	
				6.0E-02	I	1.3E-02	C				1	1	Yes	Fluorine (Soluble Fluoride)	7782-41-4					1.2E+03	2.7E+05		1.2E+03	4.0E+03
				8.0E-02	I					3.16	1	0.9	Yes	Fluridone	59756-60-4					1.6E+03	1.4E+04		1.4E+03	
				2.0E-02	I					3.34	1	0.9	Yes	Flurprimidol	56425-91-3					4.0E+02	2.4E+03		3.4E+02	
				7.0E-04	I					3.7	1	0.9	Yes	Flusilazole	85509-19-9					1.4E+01	5.0E+01		1.1E+01	
				6.0E-02	I					3.7	1	0.9	Yes	Flutolanil	66332-96-5					1.2E+03	4.5E+03		9.5E+02	
				1.0E-02	I					6.81	1	0.6	No	Fluvalinate	69409-94-5					2.0E+02			2.0E+02	
3.5E-03	I			1.0E-01	I					2.85	1	1	Yes	Folpet	133-07-3	2.2E+01	2.1E+02		2.0E+01	2.0E+03	2.1E+04		1.8E+03	
1.9E-01	I									2.9	1	1	Yes	Fomesafen	72178-02-0	4.1E-01	9.1E+00		3.9E-01					
				2.0E-03	I					3.94	1	0.9	Yes	Fonofos	944-22-9					4.0E+01	6.3E+01		2.4E+01	
		1.3E-05	I	2.0E-01	I	9.8E-03	A	V		0.35	1	1	Yes	Formaldehyde	50-00-0			4.3E-01	4.3E-01	4.0E+03	3.2E+05	2.0E+01	2.0E+01	
				9.0E-01	P	3.0E-04	X	V		-0.54	1	1	Yes	Formic Acid	64-18-6					1.8E+04	6.4E+06	6.3E-01	6.3E-01	
				3.0E+00	I					-2.4	1	1	No	Fosetyl-AL	39148-24-8					6.0E+04			6.0E+04	
														Furans										
				1.0E-03	X			V		4.12	1	1	Yes	~Dibenzofuran	132-64-9					2.0E+01	1.3E+01		7.9E+00	
				1.0E-03	I			V		1.34	1	1	Yes	~Furan	110-00-9					2.0E+01	4.8E+02		1.9E+01	
				9.0E-01	I	2.0E+00	I	V		0.46	1	1	Yes	~Tetrahydrofuran	109-99-9					1.8E+04	1.7E+06	4.2E+03	3.4E+03	
3.8E+00	H									-0.04	1	1	Yes	Furazolidone	67-45-8	2.1E-02	1.0E+01		2.0E-02					
				3.0E-03	I	5.0E-02	H	V		0.41	1	1	Yes	Furfural	98-01-1					6.0E+01	7.1E+03	1.0E+02	3.8E+01	
1.5E+00	C	4.3E-04	C							1.8	1	1	Yes	Furium	531-82-8	5.2E-02	1.9E+00		5.1E-02					
3.0E-02	I	8.6E-06	C							4.38	1	0.9	Yes	Furmecyclox	60568-05-0	2.6E+00	2.0E+00		1.1E+00					
				4.0E-04	I					-4.81	1	1	No	Glufosinate, Ammonium	77182-82-2					8.0E+00			8.0E+00	
						8.0E-05	C			-0.33	1	1	Yes	Glutaraldehyde	111-30-8									
				4.0E-04	I	1.0E-03	H	V		-0.12	1	1	Yes	Glycidyl	765-34-4					8.0E+00	1.8E+03	2.1E+00	1.7E+00	
				1.0E-01	I					-3.4	1	1	No	Glyphosate	1071-83-6					2.0E+03			2.0E+03	7.0E+02
				1.0E-02	X			V		-1.63	1	1	Yes	Guanidine	113-00-8					2.0E+02	4.2E+05		2.0E+02	
				2.0E-02	P					-3.56	1	1	No	Guanidine Chloride	50-01-1					4.0E+02			4.0E+02	
				5.0E-05	I					4.07	1	0.9	Yes	Haloxyfop, Methyl	69806-40-2					1.0E+00	3.1E+00		7.6E-01	
4.5E+00	I	1.3E-03	I	5.0E-04	I			V		6.1	1	0.8	Yes	Heptachlor	76-44-8	1.7E-02	2.3E-03	4.3E-03	1.4E-03	1.0E+01	1.5E+00		1.3E+00	4.0E-01
9.1E+00	I	2.6E-03	I	1.3E-05	I			V		4.98	1	0.8	Yes	Heptachlor Epoxide	1024-57-3	8.6E-03	7.1E-03	2.2E-03	1.4E-03	2.6E-01	2.4E-01		1.2E-01	2.0E-01
				2.0E-03	I			V		6.07	1	0.7	No	Hexabromobenzene	87-82-1					4.0E+01			4.0E+01	
				2.0E-04	I						1	0	No	Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					4.0E+00			4.0E+00	
1.6E+00	I	4.6E-04	I	8.0E-04	I			V		5.73	1	0.9	No	Hexachlorobenzene	118-74-1	4.9E-02		1.2E-02	9.8E-03	1.6E+01			1.6E+01	1.0E+00
7.8E-02	I	2.2E-05	I	1.0E-03	P			V		4.78	1	0.9	Yes	Hexachlorobutadiene	87-68-3	1.0E+00	4.4E-01	2.6E-01	1.4E-01	2.0E+01	9.5E+00		6.5E+00	
6.3E+00	I	1.8E-03	I	8.0E-03	A					3.8	1	0.9	Yes	Hexachlorocyclohexane, Alpha-	319-84-6	1.2E-02	1.8E-02		7.2E-03	1.6E+02	2.5E+02		9.7E+01	
1.8E+00	I	5.3E-04	I							3.78	1	0.9	Yes	Hexachlorocyclohexane, Beta-	319-85-7	4.3E-02	6.1E-02		2.5E-02					
1.1E+00	C	3.1E-04	C	3.0E-04	I					3.72	1	0.9	Yes	Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	7.1E-02	1.0E-01		4.2E-02	6.0E+00	9.3E+00		3.6E+00	2.0E-01
1.8E+00	I	5.1E-04	I							4.14	1	0.9	Yes	Hexachlorocyclohexane, Technical	608-73-1	4.3E-02	6.1E-02		2.5E-02					
				6.0E-03	I	2.0E-04	I	V		5.04	1	0.9	Yes	Hexachlorocyclopentadiene	77-47-4					1.2E+02	4.2E+01	4.2E-01	4.1E-01	5.0E+01
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V		4.14	1	1	Yes	Hexachloroethane	67-72-1	1.9E+00	1.7E+00	5.1E-01	3.3E-01	1.4E+01	1.4E+01	6.3E+01	6.2E+00	
				3.0E-04	I					7.54	1	0	No	Hexachlorophene	70-30-4					6.0E+00			6.0E+00	
1.1E-01	I			3.0E-03	I					0.87	1	1	Yes	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	7.1E-01	8.6E+01		7.0E-01	6.0E+01	8.0E+03		6.0E+01	
						1.0E-05	I	V		3.2	1	1	Yes	Hexamethylene Diisocyanate, 1,6-	822-06-0							2.1E-02	2.1E-02	
				4.0E-04	P					0.28	1	1	Yes	Hexamethylphosphoramide	680-31-9					8.0E+00	2.0E+03		8.0E+00	
						7.0E-01	I	V		3.9	1	1	Yes	Hexane, N-	110-54-3							1.5E+03	1.5E+03	
				2.0E+00	P					0.08	1	1	Yes	Hexanedioic Acid	124-04-9					4.0E+04	1.1E+07		4.0E+04	
				5.0E-03	I	3.0E-02	I	V		1.38	1	1	Yes	Hexanone, 2-	591-78-6					1.0E+02	2.8E+03	6.3E+01	3.8E+01	
				3.3E-02	I					1.85	1	1	Yes	Hexazinone	51235-04-2					6.6E+02	2.4E+04		6.4E+02	
				2.5E-02	I					5.57	1	0.8	Yes	Hexythiazox	78587-05-0					5.0E+02	1.4E+02		1.1E+02	
				3.0E-04	I					2.31	1	1	Yes	Hydramethylnon	67485-29-4					6.0E+00	5.1E+02		5.9E+00	
3.0E+00	I	4.9E-03	I			3.0E-05	P	V		-2.07	1	1	Yes	Hydrazine	302-01-2	2.6E-02	1.1E+02	1.1E-03	1.1E-03			6.3E-02	6.3E-02	
3.0E+00	I	4.9E-03	I								1	1	Yes	Hydrazine Sulfate	10034-93-2	2.6E-02	4.9E+00		2.6E-02					
						2.0E-02	I	V			1	1	Yes	Hydrogen Chloride	7647-01-0							4.2E+01	4.2E+01	
				4.0E-02	C	1.4E-02	C	V		0.23	1	1	Yes	Hydrogen Fluoride	7664-39-3					8.0E+02	1.8E+05	2.9E+01	2.8E+01	
						2.0E-03	I	V		0.23	1	1	Yes	Hydrogen Sulfide	7783-06-4							4.2E+00	4.2E+00	
6.0E-02	P			4.0E-02	P					0.59	1	1	Yes	Hydroquinone	123-31-9	1.3E+00	1.2E+02		1.3E+00	8.0E+02	7.9E+04		7.9E+02	
				1.3E-02	I					3.82	1	0.9	Yes	Imazalil	35554-44-0					2.6E+02	6.8E+02		1.9E+02	
				2.5E-01	I					1.86	1	1	Yes	Imazaquin	81335-37-7					5.0E+03	2.6E+05		4.9E+03	
				2.5E-01	I					1.49	1	1	Yes	Imazethapyr	81335-77-5					5.0E+03	7.2E+04		4.7E+03	
				1.0E-02	A					2.49	1	1	Yes	Iodine	7553-56-2					2.0E+02	4.6E+04		2.0E+02	
				4.0E-02	I					3	1	0.9	Yes	Iprodione	36734-19-7					8.0E+02	9.1E+03		7.4E+02	
				7.0E-01	P						1	1	Yes	Iron	7439-89-6					1.4E+04	3.2E+06		1.4E+04	
				3.0E-01	I			V		0.76	1	1	Yes	Isobutyl Alcohol	78-83-1					6.0E+03	3.6E+05		5.9E+03	
9.5E-04	I			2.0E-01	I	2.0E+00	C			1.7	1	1	Yes	Isophorone	78-59-1	8.2E+01	1.6E+03		7.8E+01	4.0E+03	8.6E+04		3.8E+03	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				1.5E-02	I			V		5.8	1	0.8	Yes	Isopropalin	33820-53-0					3.0E+02	4.6E+01		4.0E+01	
				2.0E+00	P	2.0E-01	P	V		0.05	1	1	Yes	Isopropanol	67-63-0					4.0E+04	6.5E+06	4.2E+02	4.1E+02	
				1.0E-01	I					0.27	1	1	Yes	Isopropyl Methyl Phosphonic Acid	1832-54-8					2.0E+03	3.9E+05		2.0E+03	
				5.0E-02	I					3.94	1	0.9	Yes	Isoxaben	82558-50-7					1.0E+03	2.7E+03		7.3E+02	
						3.0E-01	A	V		8	1	0	No	JP-7	NA							6.3E+02	6.3E+02	
				2.0E-03	I					4.81	1	0.9	Yes	Lactofen	77501-63-4					4.0E+01	6.7E+01		2.5E+01	
														Lead Compounds										
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	~Lead Chromate	7758-97-6	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
8.5E-03	C	1.2E-05	C								1	0.8	Yes	~Lead Phosphate	7446-27-7	9.2E+00	1.7E+03		9.1E+00					
2.8E-01	C	8.0E-05	C							-0.08	1	1	Yes	~Lead acetate	301-04-2	2.8E-01	2.8E+02		2.8E-01					
											1	1	Yes	~Lead and Compounds	7439-92-1								1.5E+01	1.5E+01
8.5E-03	C	1.2E-05	C							-4	1	1	No	~Lead subacetate	1335-32-6	9.2E+00			9.2E+00					
				1.0E-07	I			V		4.15	1	0.9	Yes	~Tetraethyl Lead	78-00-2					2.0E-03	3.8E-03		1.3E-03	
				5.0E-06	P			V		2.56	1	1	Yes	Lewisite	541-25-3					1.0E-01	9.1E-01		9.0E-02	
				2.0E-03	I					3.2	1	0.9	Yes	Linuron	330-55-2					4.0E+01	2.0E+02		3.3E+01	
				2.0E-03	P						1	1	Yes	Lithium	7439-93-2					4.0E+01	9.1E+03		4.0E+01	
				5.0E-04	I					3.25	1	1	Yes	MCPA	94-74-6					1.0E+01	3.0E+01		7.5E+00	
				1.0E-02	I					2.79	1	0.9	Yes	MCPB	94-81-5					2.0E+02	5.5E+02		1.5E+02	
				1.0E-03	I					3.13	1	1	Yes	MCPP	93-65-2					2.0E+01	7.1E+01		1.6E+01	
				2.0E-02	I					2.36	1	1	Yes	Malathion	121-75-5					4.0E+02	1.1E+04		3.9E+02	
				1.0E-01	I	7.0E-04	C			1.62	1	1	Yes	Maleic Anhydride	108-31-6					2.0E+03	3.8E+04		1.9E+03	
				5.0E-01	I					-0.84	1	1	Yes	Maleic Hydrazide	123-33-1					1.0E+04	8.9E+06		1.0E+04	
				1.0E-04	P					-0.6	1	1	Yes	Malononitrile	109-77-3					2.0E+00	9.2E+02		2.0E+00	
				3.0E-02	H					1.33	1	0.9	Yes	Mancozeb	8018-01-7					6.0E+02	4.9E+03		5.4E+02	
				5.0E-03	I					0.62	1	1	Yes	Maneb	12427-38-2					1.0E+02	3.6E+03		9.8E+01	
				1.4E-01	I	5.0E-05	I				1	1		Manganese (Diet)	7439-96-5									
				2.4E-02	S	5.0E-05	I				0.04	1	Yes	Manganese (Non-diet)	7439-96-5					4.8E+02	4.4E+03		4.3E+02	
				9.0E-05	H					1.04	1	1	Yes	Mephosfolan	950-10-7					1.8E+00	2.5E+02		1.8E+00	
				3.0E-02	I					-2.82	1	1	No	Mepiquat Chloride	24307-26-4					6.0E+02			6.0E+02	
														Mercury Compounds										
				3.0E-04	I	3.0E-04	S			-0.22	0.07	1	Yes	~Mercuric Chloride (and other Mercury salts)	7487-94-7					6.0E+00	9.6E+01		5.7E+00	2.0E+00
						3.0E-04	I	V		0.62	1	1	Yes	~Mercury (elemental)	7439-97-6							6.3E-01	6.3E-01	2.0E+00
				1.0E-04	I						1	1	Yes	~Methyl Mercury	22967-92-6					2.0E+00	4.6E+02		2.0E+00	
				8.0E-05	I					0.71	1	1	Yes	~Phenylmercuric Acetate	62-38-4					1.6E+00	5.7E+02		1.6E+00	
				3.0E-05	I			V		7.67	1	0.3	No	Merphos	150-50-5					6.0E-01			6.0E-01	
				3.0E-05	I					5.7	1	0.9	Yes	Merphos Oxide	78-48-8					6.0E-01	9.9E-02		8.5E-02	
				6.0E-02	I					1.65	1	1	Yes	Metalaxyl	57837-19-1					1.2E+03	6.4E+04		1.2E+03	
				1.0E-04	I	3.0E-02	P	V		0.68	1	1	Yes	Methacrylonitrile	126-98-7					2.0E+00	1.3E+02	6.3E+01	1.9E+00	
				5.0E-05	I					-0.8	1	1	Yes	Methamidophos	10265-92-6					1.0E+00	1.0E+03		1.0E+00	
				2.0E+00	I	2.0E+01	I	V		-0.77	1	1	Yes	Methanol	67-56-1					4.0E+04	1.8E+07	4.2E+04	2.0E+04	
				1.0E-03	I					2.2	1	1	Yes	Methidathion	950-37-8					2.0E+01	5.8E+02		1.9E+01	
				2.5E-02	I					0.6	1	1	Yes	Methomyl	16752-77-5					5.0E+02	6.8E+04		5.0E+02	
4.9E-02	C	1.4E-05	C							1.47	1	1	Yes	Methoxy-5-nitroaniline, 2-	99-59-2	1.6E+00	5.4E+01		1.5E+00					
				5.0E-03	I					5.08	1	0.8	Yes	Methoxychlor	72-43-5					1.0E+02	5.9E+01		3.7E+01	4.0E+01
				8.0E-03	P	1.0E-03	P	V		0.1	1	1	Yes	Methoxyethanol Acetate, 2-	110-49-6					1.6E+02	3.5E+04	2.1E+00	2.1E+00	
				5.0E-03	P	2.0E-02	I	V		-0.77	1	1	Yes	Methoxyethanol, 2-	109-86-4					1.0E+02	6.3E+04	4.2E+01	2.9E+01	
				1.0E+00	X			V		0.18	1	1	Yes	Methyl Acetate	79-20-9					2.0E+04	2.9E+06		2.0E+04	
						2.0E-02	P	V		0.8	1	1	Yes	Methyl Acrylate	96-33-3							4.2E+01	4.2E+01	
				6.0E-01	I	5.0E+00	I	V		0.29	1	1	Yes	Methyl Ethyl Ketone (2-Butanone)	78-93-3					1.2E+04	1.5E+06	1.0E+04	5.6E+03	
		1.0E-03	X	1.0E-03	P	2.0E-05	X	V		-1.05	1	1	Yes	Methyl Hydrazine	60-34-4			5.6E-03	5.6E-03	2.0E+01	1.5E+04	4.2E-02	4.2E-02	
						3.0E+00	I	V		1.31	1	1	Yes	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1							6.3E+03	6.3E+03	
						1.0E-03	C	V		0.79	1	1	Yes	Methyl Isocyanate	624-83-9							2.1E+00	2.1E+00	
				1.4E+00	I	7.0E-01	I	V		1.38	1	1	Yes	Methyl Methacrylate	80-62-6					2.8E+04	7.7E+05	1.5E+03	1.4E+03	
				2.5E-04	I					2.86	1	1	Yes	Methyl Parathion	298-00-0					5.0E+00	4.1E+01		4.5E+00	
				6.0E-02	X					-0.7	1	1	Yes	Methyl Phosphonic Acid	993-13-5					1.2E+03	1.2E+06		1.2E+03	
				6.0E-03	H	4.0E-02	H	V		3.44	1	0.8	Yes	Methyl Styrene (Mixed Isomers)	25013-15-4					1.2E+02	4.3E+01	8.3E+01	2.3E+01	
9.9E-02	C	2.8E-05	C							-0.66	1	1	Yes	Methyl methanesulfonate	66-27-3	7.9E-01	4.8E+02		7.9E-01					
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		0.94	1	1	Yes	Methyl tert-Butyl Ether (MTBE)	1634-04-4	4.3E+01	2.0E+03	2.2E+01	1.4E+01			6.3E+03	6.3E+03	
				3.0E-04	X					-2.06	1	1	Yes	Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					6.0E+00	5.9E+04		6.0E+00	
9.0E-03	P			2.0E-02	X					1.87	1	1	Yes	Methyl-5-Nitroaniline, 2-	99-55-8	8.7E+00	1.4E+02		8.2E+00	4.0E+02	7.3E+03		3.8E+02	
8.3E+00	C	2.4E-03	C							-0.92	1	1	Yes	Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	9.4E-03	1.1E+01		9.4E-03					
1.3E-01	C	3.7E-05	C							1.62	1	1	Yes	Methylaniline Hydrochloride, 2-	636-21-5	6.0E-01	3.9E+03		6.0E-01					
				1.0E-02	A					-1.18	1	1	Yes	Methylarsonic acid	124-58-3					2.0E+02	3.6E+05		2.0E+02	
				2.0E-04	X						1	0	No	Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					4.0E+00			4.0E+00	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
1.0E-01	X			3.0E-04	X						1	0	No	Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	7.8E-01			7.8E-01	6.0E+00			6.0E+00	
2.2E+01	C	6.3E-03	C						M	6.42	1	0.8	No	Methylcholanthrene, 3-	56-49-5	1.1E-03			1.1E-03					
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1.25	1	1	Yes	Methylene Chloride	75-09-2	1.3E+01	3.5E+02	2.0E+02	1.1E+01	1.2E+02	3.7E+03	1.3E+03	1.1E+02	5.0E+00
1.0E-01	P	4.3E-04	C	2.0E-03	P				M	3.91	1	0.9	Yes	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	2.5E-01	4.3E-01		1.6E-01	4.0E+01	7.5E+01		2.6E+01	
4.6E-02	I	1.3E-05	C							4.37	1	1	Yes	Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.7E+00	6.7E-01		4.8E-01					
1.6E+00	C	4.6E-04	C			2.0E-02	C			1.59	1	1	Yes	Methylenebisbenzenamine, 4,4'-	101-77-9	4.9E-02	1.7E+00		4.7E-02					
						6.0E-04	I			5.22	1	0.9	Yes	Methylenediphenyl Diisocyanate	101-68-8									
				7.0E-02	H			V		3.48	1	1	Yes	Methylstyrene, Alpha-	98-83-9					1.4E+03	1.7E+03		7.8E+02	
				1.5E-01	I					3.13	1	1	Yes	Metolachlor	51218-45-2					3.0E+03	2.6E+04		2.7E+03	
				2.5E-02	I					1.7	1	1	Yes	Metribuzin	21087-64-9					5.0E+02	1.8E+04		4.9E+02	
				2.5E-01	I					2.2	1	1	Yes	Metsulfuron-methyl	74223-64-6					5.0E+03	2.4E+05		4.9E+03	
				3.0E+00	P			V		6.1	1	1	No	Mineral oils	8012-95-1					6.0E+04			6.0E+04	
1.8E+01	C	5.1E-03	C	2.0E-04	I			V		6.89	1	0.5	No	Mirex	2385-85-5	4.3E-03		1.1E-03	8.8E-04	4.0E+00			4.0E+00	
				2.0E-03	I					3.21	1	1	Yes	Molinate	2212-67-1					4.0E+01	1.2E+02		3.0E+01	
				5.0E-03	I						1	1	Yes	Molybdenum	7439-98-7					1.0E+02	2.3E+04		1.0E+02	
				1.0E-01	I						1	1	Yes	Monochloramine	10599-90-3					2.0E+03	4.6E+05		2.0E+03	4.0E+03
				2.0E-03	P					1.66	1	1	Yes	Monomethylaniline	100-61-8					4.0E+01	7.5E+02		3.8E+01	
				2.5E-02	I					2.94	1	1	Yes	Myclobutanil	88671-89-0					5.0E+02	4.7E+03		4.5E+02	
				3.0E-04	X					4.04	1	0.9	Yes	N,N'-Diphenyl-1,4-benzenediamine	74-31-7					6.0E+00	8.9E+00		3.6E+00	
				2.0E-03	I			V		1.38	1	1	Yes	Naled	300-76-5					4.0E+01	6.8E+03		4.0E+01	
				3.0E-02	X	1.0E-01	P	V			1	0	No	Naphtha, High Flash Aromatic (HFAN)	64742-95-6					6.0E+02		2.1E+02	1.5E+02	
1.8E+00	C	0.0E+00	C							2.28	1	1	Yes	Naphthylamine, 2-	91-59-8	4.3E-02	3.6E-01		3.9E-02					
				1.0E-01	I					3.36	1	0.9	Yes	Napropamide	15299-99-7					2.0E+03	9.0E+03		1.6E+03	
		2.6E-04	C	1.1E-02	C	1.4E-05	C			-1.38	1	1	Yes	Nickel Acetate	373-02-4					2.2E+02	6.8E+05		2.2E+02	
		2.6E-04	C	1.1E-02	C	1.4E-05	C			-2.12	1	1	Yes	Nickel Carbonate	3333-67-3					2.2E+02	1.4E+06		2.2E+02	
		2.6E-04	C	1.1E-02	C	1.4E-05	C	V			1	0	Yes	Nickel Carbonyl	13463-39-3			2.2E-02	2.2E-02	2.2E+02		2.9E-02	2.9E-02	
		2.6E-04	C	1.1E-02	C	1.4E-05	C				0.04	1	Yes	Nickel Hydroxide	12054-48-7					2.2E+02	2.0E+03		2.0E+02	
		2.6E-04	C	1.1E-02	C	2.0E-05	C				0.04	1	Yes	Nickel Oxide	1313-99-1					2.2E+02	2.0E+03		2.0E+02	
		2.4E-04	I	1.1E-02	C	1.4E-05	C				0.04	0	Yes	Nickel Refinery Dust	NA					2.2E+02	1.0E+04		2.2E+02	
		2.6E-04	C	2.0E-02	I	9.0E-05	A				0.04	1	Yes	Nickel Soluble Salts	7440-02-0					4.0E+02	1.8E+04		3.9E+02	
1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C				0.04	1	Yes	Nickel Subsulfide	12035-72-2	4.6E-02	1.7E+00		4.5E-02	2.2E+02	1.0E+04		2.2E+02	
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1	0	Yes	Nickelocene	1271-28-9					2.2E+02			2.2E+02	
				1.6E+00	I						1	1	Yes	Nitrate	14797-55-8					3.2E+04	7.3E+06		3.2E+04	1.0E+04
											1	0	Yes	Nitrate + Nitrite (as N)	NA									1.0E+04
				1.0E-01	I						1	1	Yes	Nitrite	14797-65-0					2.0E+03	4.6E+05		2.0E+03	1.0E+03
				1.0E-02	X	5.0E-05	X			1.85	1	1	Yes	Nitroaniline, 2-	88-74-4					2.0E+02	3.4E+03		1.9E+02	
2.0E-02	P			4.0E-03	P	6.0E-03	P			1.39	1	1	Yes	Nitroaniline, 4-	100-01-6	3.9E+00	1.2E+02		3.8E+00	8.0E+01	2.8E+03		7.8E+01	
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1.85	1	1	Yes	Nitrobenzene	98-95-3			1.4E-01	1.4E-01	4.0E+01	6.2E+02	1.9E+01	1.3E+01	
				3.0E+03	P					-4.56	1	1	No	Nitrocellulose	9004-70-0					6.0E+07			6.0E+07	
				7.0E-02	H					-0.47	1	1	Yes	Nitrofurantoin	67-20-9					1.4E+03	1.6E+06		1.4E+03	
1.3E+00	C	3.7E-04	C							0.23	1	1	Yes	Nitrofurazone	59-87-0	6.0E-02	1.7E+01		6.0E-02					
1.7E-02	P			1.0E-04	P					1.62	1	1	Yes	Nitroglycerin	55-63-0	4.6E+00	1.8E+02		4.5E+00	2.0E+00	8.7E+01		2.0E+00	
				1.0E-01	I					-0.89	1	1	Yes	Nitroguanidine	556-88-7					2.0E+03	1.8E+06		2.0E+03	
		8.8E-06	P			5.0E-03	P	V		-0.35	1	1	Yes	Nitromethane	75-52-5			6.4E-01	6.4E-01			1.0E+01	1.0E+01	
		2.7E-03	H			2.0E-02	I	V		0.93	1	1	Yes	Nitropropane, 2-	79-46-9			2.1E-03	2.1E-03			4.2E+01	4.2E+01	
2.7E+01	C	7.7E-03	C						M	0.23	1	1	Yes	Nitroso-N-ethylurea, N-	759-73-9	9.3E-04	1.5E-01		9.2E-04					
1.2E+02	C	3.4E-02	C						M	-0.03	1	1	Yes	Nitroso-N-methylurea, N-	684-93-5	2.1E-04	4.6E-02		2.1E-04					
5.4E+00	I	1.6E-03	I					V		2.63	1	1	Yes	Nitroso-di-N-butylamine, N-	924-16-3	1.4E-02	7.9E-02	3.5E-03	2.7E-03					
7.0E+00	I	2.0E-03	C							1.36	1	1	Yes	Nitroso-di-N-propylamine, N-	621-64-7	1.1E-02	3.5E-01		1.1E-02					
2.8E+00	I	8.0E-04	C							-1.28	1	1	Yes	Nitrosodiethanolamine, N-	1116-54-7	2.8E-02	8.1E+01		2.8E-02					
1.5E+02	I	4.3E-02	I						M	0.48	1	1	Yes	Nitrosodiethylamine, N-	55-18-5	1.7E-04	1.7E-02		1.7E-04					
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	-0.57	1	1	Yes	Nitrosodimethylamine, N-	62-75-9	4.9E-04	2.0E-01	1.4E-04	1.1E-04	1.6E-01	7.4E+01	8.3E-02	5.5E-02	
4.9E-03	I	2.6E-06	C							3.13	1	1	Yes	Nitrosodiphenylamine, N-	86-30-6	1.6E+01	5.2E+01		1.2E+01					
2.2E+01	I	6.3E-03	C					V		0.04	1	1	Yes	Nitrosomethylethylamine, N-	10595-95-6	3.5E-03	6.4E-01	8.9E-04	7.1E-04					
6.7E+00	C	1.9E-03	C							-0.44	1	1	Yes	Nitrosomorpholine [N-]	59-89-2	1.2E-02	5.3E+00		1.2E-02					
9.4E+00	C	2.7E-03	C							0.36	1	1	Yes	Nitrosopiperidine [N-]	100-75-4	8.3E-03	1.1E+00		8.2E-03					
2.1E+00	I	6.1E-04	I							-0.19	1	1	Yes	Nitrosopyrrolidine, N-	930-55-2	3.7E-02	1.0E+01		3.7E-02					
				1.0E-04	X					2.45	1	1	Yes	Nitrotoluene, m-	99-08-1					2.0E+00	1.4E+01		1.7E+00	
2.2E-01	P			9.0E-04	P			V		2.3	1	1	Yes	Nitrotoluene, o-	88-72-2	3.5E-01	2.8E+00		3.1E-01	1.8E+01	1.5E+02		1.6E+01	
1.6E-02	P			4.0E-03	P					2.37	1	1	Yes	Nitrotoluene, p-	99-99-0	4.9E+00	3.4E+01		4.3E+00	8.0E+01	6.2E+02		7.1E+01	
				3.0E-04	X	2.0E-02	P	V		5.65	1	1	No	Nonane, n-	111-84-2					6.0E+00		4.2E+01	5.3E+00	
				4.0E-02	I					2.3	1	1	Yes	Norflurazon	27314-13-2					8.0E+02	2.0E+04		7.7E+02	
				3.0E-03	I					8.71	1	0.3	No	Octabromodiphenyl Ether	32536-52-0					6.0E+01			6.0E+01	
				5.0E-02	I					0.16	1	1	Yes	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0					1.0E+03	6.3E+05		1.0E+03	

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Toxicity and Chemical-specific Information													Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				2.0E-03	H					-1.01	1	1	Yes	Octamethylpyrophosphoramide	152-16-9					4.0E+01	1.4E+05		4.0E+01	
				5.0E-02	I					3.73	1	0.9	Yes	Oryzalin	19044-88-3					1.0E+03	4.1E+03		8.1E+02	
				5.0E-03	I					4.8	1	0.8	Yes	Oxadiazon	19666-30-9					1.0E+02	9.0E+01		4.7E+01	
				2.5E-02	I					-0.47	1	1	Yes	Oxamyl	23135-22-0					5.0E+02	5.1E+05		5.0E+02	2.0E+02
				3.0E-03	I					4.73	1	0.8	Yes	Oxyfluorfen	42874-03-3					6.0E+01	6.7E+01		3.2E+01	
				1.3E-02	I					3.2	1	0.9	Yes	Paclobutrazol	76738-62-0					2.6E+02	1.7E+03		2.3E+02	
				4.5E-03	I					-4.5	1	1	No	Paraquat Dichloride	1910-42-5					9.0E+01			9.0E+01	
				6.0E-03	H					3.83	1	0.9	Yes	Parathion	56-38-2					1.2E+02	3.0E+02		8.6E+01	
				5.0E-02	H			V		3.83	1	1	Yes	Pebulate	1114-71-2					1.0E+03	1.3E+03		5.6E+02	
				4.0E-02	I					5.2	1	0.9	Yes	Pendimethalin	40487-42-1					8.0E+02	2.4E+02		1.8E+02	
				2.0E-03	I			V		6.84	1	0.6	No	Pentabromodiphenyl Ether	32534-81-9					4.0E+01			4.0E+01	
				1.0E-04	I					7.66	1	0.6	No	Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					2.0E+00			2.0E+00	
				8.0E-04	I			V		5.17	1	0.9	Yes	Pentachlorobenzene	608-93-5					1.6E+01	3.9E+00		3.2E+00	
9.0E-02	P							V		3.22	1	1	Yes	Pentachloroethane	76-01-7	8.7E-01	2.5E+00		6.5E-01					
2.6E-01	H			3.0E-03	I			V		4.64	1	0.9	Yes	Pentachloronitrobenzene	82-68-8	3.0E-01	2.0E-01		1.2E-01	6.0E+01	4.4E+01		2.6E+01	
4.0E-01	I	5.1E-06	C	5.0E-03	I					5.12	1	0.9	Yes	Pentachlorophenol	87-86-5	1.9E-01	5.2E-02		4.1E-02	1.0E+02	2.9E+01		2.3E+01	1.0E+00
4.0E-03	X			2.0E-03	P					2.38	1	1	Yes	Pentaerythritol tetranitrate (PETN)	78-11-5	1.9E+01	4.3E+02		1.9E+01	4.0E+01	9.6E+02		3.9E+01	
						1.0E+00	P	V		3.39	1	1	Yes	Pentane, n-	109-66-0							2.1E+03	2.1E+03	
														Perchlorates										
				7.0E-04	I						1	1	Yes	~Ammonium Perchlorate	7790-98-9					1.4E+01	3.2E+03		1.4E+01	
				7.0E-04	I						1	1	Yes	~Lithium Perchlorate	7791-03-9					1.4E+01	3.2E+03		1.4E+01	
				7.0E-04	I						1	1	Yes	~Perchlorate and Perchlorate Salts	14797-73-0					1.4E+01	3.2E+03		1.4E+01	1.5E+01(F)
				7.0E-04	I						1	1	Yes	~Potassium Perchlorate	7778-74-7					1.4E+01	1.6E+03		1.4E+01	
				7.0E-04	I						1	1	Yes	~Sodium Perchlorate	7601-89-0					1.4E+01	3.2E+03		1.4E+01	
				2.0E-02	P			V		2.41	1	1	Yes	Perfluorobutane Sulfonate	375-73-5					4.0E+02	8.3E+03		3.8E+02	
				5.0E-02	I					6.5	1	0.6	No	Permethrin	52645-53-1					1.0E+03			1.0E+03	
2.2E-03	C	6.3E-07	C							1.58	1	1	Yes	Phenacetin	62-44-2	3.5E+01	1.1E+03		3.4E+01					
				2.5E-01	I					3.59	1	0.9	Yes	Phenmedipham	13684-63-4					5.0E+03	1.9E+04		4.0E+03	
				3.0E-01	I	2.0E-01	C			1.46	1	1	Yes	Phenol	108-95-2					6.0E+03	1.4E+05		5.8E+03	
				5.0E-04	X					4.15	1	1	Yes	Phenothiazine	92-84-2					1.0E+01	7.6E+00		4.3E+00	
				6.0E-03	I					-0.33	1	1	Yes	Phenylenediamine, m-	108-45-2					1.2E+02	4.8E+04		1.2E+02	
4.7E-02	H									0.15	1	1	Yes	Phenylenediamine, o-	95-54-5	1.7E+00	2.9E+02		1.6E+00					
				1.9E-01	H					-0.3	1	1	Yes	Phenylenediamine, p-	106-50-3					3.8E+03	1.4E+06		3.8E+03	
1.9E-03	H									3.09	1	1	Yes	Phenylphenol, 2-	90-43-7	4.0E+01	1.2E+02		3.0E+01					
				2.0E-04	H					3.56	1	0.9	Yes	Phorate	298-02-2					4.0E+00	1.2E+01		3.0E+00	
						3.0E-04	I	V		-0.71	1	1		Phosgene	75-44-5									
				2.0E-02	I					2.78	1	1	Yes	Phosmet	732-11-6					4.0E+02	5.3E+03		3.7E+02	
														Phosphates, Inorganic										
				4.9E+01	P						1	1	Yes	~Aluminum metaphosphate	13776-88-0					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0	Yes	~Ammonium polyphosphate	68333-79-9					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Calcium pyrophosphate	7790-76-3					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Diammonium phosphate	7783-28-0					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Dicalcium phosphate	7757-93-9					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Dimagnesium phosphate	7782-75-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Dipotassium phosphate	7758-11-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Disodium phosphate	7558-79-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monoaluminum phosphate	13530-50-2					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monoammonium phosphate	7722-76-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monocalcium phosphate	7758-23-8					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monomagnesium phosphate	7757-86-0					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monopotassium phosphate	7778-77-0					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monosodium phosphate	7558-80-7					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Polyphosphoric acid	8017-16-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0.9	Yes	~Potassium tripolyphosphate	13845-36-8					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium acid pyrophosphate	7758-16-9					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium aluminum phosphate (acidic)	7785-88-8					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0	Yes	~Sodium aluminum phosphate (anhydrous)	10279-59-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0.8	Yes	~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0.9	Yes	~Sodium hexametaphosphate	10124-56-8					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium polyphosphate	68915-31-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium trimetaphosphate	7785-84-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium tripolyphosphate	7758-29-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Tetrapotassium phosphate	7320-34-5					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Tetrasodium pyrophosphate	7722-88-5					9.7E+05	2.2E+08		9.7E+05	

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				4.9E+01	P						1	0.8	Yes	~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Tricalcium phosphate	7758-87-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Trimagnesium phosphate	7757-87-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Tripotassium phosphate	7778-53-2					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Trisodium phosphate	7601-54-9					9.7E+05	2.2E+08		9.7E+05	
				3.0E-04	I	3.0E-04	I	V		-0.27	1	1	Yes	Phosphine	7803-51-2					6.0E+00	1.4E+03	6.3E-01	5.7E-01	
				4.9E+01	P	1.0E-02	I				1	1	Yes	Phosphoric Acid	7664-38-2					9.7E+05	2.2E+08		9.7E+05	
				2.0E-05	I			V		3.08	1	1	Yes	Phosphorus, White	7723-14-0					4.0E-01	9.1E+01		4.0E-01	
														Phthalates										
1.4E-02	I	2.4E-06	C	2.0E-02	I					7.6	1	0.8	No	~Bis(2-ethylhexyl)phthalate	117-81-7	5.6E+00			5.6E+00	4.0E+02			4.0E+02	6.0E+00
				1.0E+00	I					4.15	1	0.9	Yes	~Butylphthalyl Butylglycolate	85-70-1					2.0E+04	4.1E+04		1.3E+04	
				1.0E-01	I					4.5	1	0.9	Yes	~Dibutyl Phthalate	84-74-2					2.0E+03	1.6E+03		9.0E+02	
				8.0E-01	I					2.42	1	1	Yes	~Diethyl Phthalate	84-66-2					1.6E+04	2.0E+05		1.5E+04	
				1.0E-01	I			V		2.25	1	1	Yes	~Dimethylterephthalate	120-61-6					2.0E+03	2.7E+04		1.9E+03	
				1.0E-02	P					8.1	1	0	No	~Octyl Phthalate, di-N-	117-84-0					2.0E+02			2.0E+02	
				1.0E+00	H					2	1	1	Yes	~Phthalic Acid, P-	100-21-0					2.0E+04	3.3E+05		1.9E+04	
				2.0E+00	I	2.0E-02	C			1.6	1	1	Yes	~Phthalic Anhydride	85-44-9					4.0E+04	1.1E+06		3.9E+04	
				7.0E-02	I					1.9	1	1	Yes	Picloram	1918-02-1					1.4E+03	4.3E+04		1.4E+03	5.0E+02
				1.0E-04	X					0.93	1	1	Yes	Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					2.0E+00	2.1E+02		2.0E+00	
				9.0E-04	X					1.44	1	1	Yes	Picric Acid (2,4,6-Trinitrophenol)	88-89-1					1.8E+01	1.2E+03		1.8E+01	
				1.0E-02	I					4.2	1	0.9	Yes	Pirimiphos, Methyl	29232-93-7					2.0E+02	3.1E+02		1.2E+02	
3.0E+01	C	8.6E-03	C	7.0E-06	H						1	0	No	Polybrominated Biphenyls	59536-65-1	2.6E-03			2.6E-03	1.4E-01			1.4E-01	
														Polychlorinated Biphenyls (PCBs)										
7.0E-02	S	2.0E-05	S	7.0E-05	I			V		5.69	1	0	No	~Aroclor 1016	12674-11-2	1.1E+00		2.8E-01	2.2E-01	1.4E+00			1.4E+00	
2.0E+00	S	5.7E-04	S					V		4.65	1	1	Yes	~Aroclor 1221	11104-28-2	3.9E-02	1.2E-02	9.8E-03	4.7E-03					
2.0E+00	S	5.7E-04	S					V		4.4	1	1	Yes	~Aroclor 1232	11141-16-5	3.9E-02	1.2E-02	9.8E-03	4.7E-03					
2.0E+00	S	5.7E-04	S					V		6.34	1	0.7	No	~Aroclor 1242	53469-21-9	3.9E-02		9.8E-03	7.8E-03					
2.0E+00	S	5.7E-04	S					V		6.2	1	0	No	~Aroclor 1248	12672-29-6	3.9E-02		9.8E-03	7.8E-03					
2.0E+00	S	5.7E-04	S	2.0E-05	I			V		6.5	1	0.5	No	~Aroclor 1254	11097-69-1	3.9E-02		9.8E-03	7.8E-03	4.0E-01			4.0E-01	
2.0E+00	S	5.7E-04	S					V		7.55	1	0	No	~Aroclor 1260	11096-82-5	3.9E-02		9.8E-03	7.8E-03					
				6.0E-04	X			V		6.34	1	0.7	No	~Aroclor 5460	11126-42-4					1.2E+01			1.2E+01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		8.27	1	0	No	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.5	1	0	No	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.6	1	0	No	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 157)	69782-90-7	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.6	1	0	No	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 156)	38380-08-4	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V		7.41	1	0.1	No	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	2.0E-05		4.9E-06	4.0E-06	4.7E-04		2.8E-03	4.0E-04	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 123)	65510-44-3	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.12	1	0.3	No	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.79	1	0.5	No	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	6.0E-06		1.5E-06	1.2E-06	1.4E-04		8.3E-04	1.2E-04	
2.0E+00	I	5.7E-04	I					V		7.1	1	0.7		~Polychlorinated Biphenyls (high risk)	1336-36-3									
4.0E-01	I	1.0E-04	I					V		7.1	1	0.7	No	~Polychlorinated Biphenyls (low risk)	1336-36-3	1.9E-01		5.6E-02	4.4E-02					5.0E-01
7.0E-02	I	2.0E-05	I					V		7.1	1	0.7		~Polychlorinated Biphenyls (lowest risk)	1336-36-3									
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			6.63	1	0.6	No	~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	*6.0E-03*			6.0E-03	1.4E-01			1.4E-01	
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V		6.34	1	0.7	No	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	2.0E-03		4.9E-04	4.0E-04	4.7E-02		2.8E-01	4.0E-02	
						6.0E-04	I			10.46	1	0	No	Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9									
														Polynuclear Aromatic Hydrocarbons (PAHs)										
				6.0E-02	I			V		3.92	1	1	Yes	~Acenaphthene	83-32-9					1.2E+03	9.6E+02		5.3E+02	
				3.0E-01	I			V		4.45	1	1	Yes	~Anthracene	120-12-7					6.0E+03	2.5E+03		1.8E+03	
7.3E-01	E	1.1E-04	C					V	M	5.76	1	1	No	~Benz[a]anthracene	56-55-3	3.4E-02		1.8E-02	1.2E-02					
1.2E+00	C	1.1E-04	C							6.11	1	0.9	No	~Benzo(j)fluoranthene	205-82-3	6.5E-02			6.5E-02					
7.3E+00	I	1.1E-03	C						M	6.13	1	1	No	~Benzo[a]pyrene	50-32-8	3.4E-03			3.4E-03					2.0E-01
7.3E-01	E	1.1E-04	C						M	5.78	1	1	No	~Benzo[b]fluoranthene	205-99-2	3.4E-02			3.4E-02					
7.3E-02	E	1.1E-04	C						M	6.11	1	0.9	No	~Benzo[k]fluoranthene	207-08-9	3.4E-01			3.4E-01					
				8.0E-02	I			V		3.9	1	1	Yes	~Chloronaphthalene, Beta-	91-58-7					1.6E+03	1.4E+03		7.5E+02	
7.3E-03	E	1.1E-05	C						M	5.81	1	1	No	~Chrysene	218-01-9	3.4E+00			3.4E+00					
7.3E+00	E	1.2E-03	C						M	6.75	1	0.6	No	~Dibenz[a,h]anthracene	53-70-3	3.4E-03			3.4E-03					
1.2E+01	C	1.1E-03	C							7.71	1	0.3	No	~Dibenzo(a,e)pyrene	192-65-4	6.5E-03			6.5E-03					
2.5E+02	C	7.1E-02	C						M	5.8	1	0.9	No	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	1.0E-04			1.0E-04					
				4.0E-02	I					5.16	1	1	No	~Fluoranthene	206-44-0					8.0E+02			8.0E+02	
				4.0E-02	I			V		4.18	1	1	Yes	~Fluorene	86-73-7					8.0E+02	4.6E+02		2.9E+02	
7.3E-01	E	1.1E-04	C						M	6.7	1	0.6	No	~Indeno[1,2,3-cd]pyrene	193-39-5	3.4E-02			3.4E-02					
2.9E-02	P			7.0E-02	A			V		3.87	1	1	Yes	~Methylnaphthalene, 1-	90-12-0	2.7E+00	2.0E+00		1.1E+00	1.4E+03	1.1E+03		6.2E+02	

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				4.0E-03	I			V		3.86	1	1	Yes	~Methylnaphthalene, 2-	91-57-6					8.0E+01	6.5E+01		3.6E+01	
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V		3.3	1	1	Yes	~Naphthalene	91-20-3			1.7E-01	1.7E-01	4.0E+02	7.0E+02	6.3E+00	6.1E+00	
1.2E+00	C	1.1E-04	C							4.75	1	0.9	Yes	~Nitropyrene, 4-	57835-92-4	6.5E-02	2.7E-02		1.9E-02					
				3.0E-02	I			V		4.88	1	1	Yes	~Pyrene	129-00-0					6.0E+02	1.5E+02		1.2E+02	
				2.0E-02	P					-0.33	1	1	Yes	Potassium Perfluorobutane Sulfonate	29420-49-3					4.0E+02	2.8E+05		4.0E+02	
1.5E-01	I			9.0E-03	I					4.1	1	0.9	Yes	Prochloraz	67747-09-5	5.2E-01	1.4E+00		3.8E-01	1.8E+02	5.1E+02		1.3E+02	
				6.0E-03	H			V		5.58	1	0.8	Yes	Profluralin	26399-36-0					1.2E+02	3.3E+01		2.6E+01	
				1.5E-02	I					2.99	1	1	Yes	Prometon	1610-18-0					3.0E+02	1.6E+03		2.5E+02	
				4.0E-03	I					3.51	1	0.9	Yes	Prometryn	7287-19-6					8.0E+01	2.3E+02		6.0E+01	
				1.3E-02	I					2.18	1	1	Yes	Propachlor	1918-16-7					2.6E+02	4.3E+03		2.5E+02	
				4.0E-03	I					1.52	1	1	Yes	Propanediol, 1,2-	114-26-1					8.0E+01	3.6E+03		7.8E+01	
				5.0E-03	I					3.07	1	1	Yes	Propanil	709-98-8					1.0E+02	4.4E+02		8.2E+01	
				2.0E-02	I					5	1	0.8	Yes	Propargite	2312-35-8					4.0E+02	2.7E+02		1.6E+02	
				2.0E-03	I			V		-0.38	1	1	Yes	Propargyl Alcohol	107-19-7					4.0E+01	1.2E+04		4.0E+01	
				2.0E-02	I					2.93	1	1	Yes	Propazine	139-40-2					4.0E+02	2.4E+03		3.4E+02	
				2.0E-02	I					2.6	1	1	Yes	Propham	122-42-9					4.0E+02	2.8E+03		3.5E+02	
				1.3E-02	I					3.72	1	0.9	Yes	Propiconazole	60207-90-1					2.6E+02	1.1E+03		2.1E+02	
						8.0E-03	I	V		0.59	1	1	Yes	Propionaldehyde	123-38-6							1.7E+01	1.7E+01	
				1.0E-01	X	1.0E+00	X	V		3.69	1	1	Yes	Propyl benzene	103-65-1					2.0E+03	1.8E+03	2.1E+03	6.6E+02	
						3.0E+00	C	V		1.77	1	1	Yes	Propylene	115-07-1							6.3E+03	6.3E+03	
				2.0E+01	P					-0.92	1	1	Yes	Propylene Glycol	57-55-6					4.0E+05	3.2E+08		4.0E+05	
						2.7E-04	A			1.83	1	1	Yes	Propylene Glycol Dinitrate	6423-43-4									
				7.0E-01	H	2.0E+00	I	V		-0.49	1	1	Yes	Propylene Glycol Monomethyl Ether	107-98-2					1.4E+04	3.9E+06	4.2E+03	3.2E+03	
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		0.03	1	1	Yes	Propylene Oxide	75-56-9	3.2E-01	4.7E+01	1.5E+00	2.7E-01			6.3E+01	6.3E+01	
				7.5E-02	I					3.43	1	0.9	Yes	Propyzamide	23950-58-5					1.5E+03	5.5E+03		1.2E+03	
				1.0E-03	I			V		0.65	1	1	Yes	Pyridine	110-86-1					2.0E+01	1.5E+03		2.0E+01	
				5.0E-04	I					4.44	1	0.9	Yes	Quinalphos	13593-03-8					1.0E+01	1.0E+01		5.1E+00	
3.0E+00	I									2.03	1	1	Yes	Quinoline	91-22-5	2.6E-02	2.9E-01		2.4E-02					
				9.0E-03	I					4.28	1	0.9	Yes	Quizalofop-ethyl	76578-14-8					1.8E+02	3.8E+02		1.2E+02	
						3.0E-02	A				1	0	Yes	Refractory Ceramic Fibers	NA									
				3.0E-02	I					6.14	1	0.7	Yes	Resmethrin	10453-86-8					6.0E+02	7.6E+01		6.7E+01	
				5.0E-02	H			V		4.88	1	0.8	Yes	Ronnel	299-84-3					1.0E+03	6.8E+02		4.1E+02	
				4.0E-03	I					4.1	1	0.9	Yes	Rotenone	83-79-4					8.0E+01	2.6E+02		6.1E+01	
2.2E-01	C	6.3E-05	C						M	3.45	1	1	Yes	Safrole	94-59-7	1.1E-01	6.0E-01		9.6E-02					
				5.0E-03	I						1	1	Yes	Selenious Acid	7783-00-8					1.0E+02	2.3E+04		1.0E+02	
				5.0E-03	I	2.0E-02	C				1	1	Yes	Selenium	7782-49-2					1.0E+02	2.3E+04		1.0E+02	5.0E+01
				5.0E-03	C	2.0E-02	C				1	1	Yes	Selenium Sulfide	7446-34-6					1.0E+02	2.3E+04		1.0E+02	
				9.0E-02	I					4.38	1	0.9	Yes	Sethoxydim	74051-80-2					1.8E+03	2.4E+03		1.0E+03	
						3.0E-03	C				1	1	Yes	Silica (crystalline, respirable)	7631-86-9									
				5.0E-03	I						0.04	1	Yes	Silver	7440-22-4					1.0E+02	1.5E+03		9.4E+01	
1.2E-01	H			5.0E-03	I					2.18	1	1	Yes	Simazine	122-34-9	6.5E-01	9.3E+00		6.1E-01	1.0E+02	1.6E+03		9.4E+01	4.0E+00
				1.3E-02	I					0.37	1	1	Yes	Sodium Acifluorfen	62476-59-9					2.6E+02	2.1E+05		2.6E+02	
				4.0E-03	I						1	1	Yes	Sodium Azide	26628-22-8					8.0E+01	1.8E+04		8.0E+01	
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Sodium Dichromate	10588-01-9	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
2.7E-01	H			3.0E-02	I					-1.43	1	1	Yes	Sodium Diethyldithiocarbamate	148-18-5	2.9E-01	8.5E+02		2.9E-01	6.0E+02	1.9E+06		6.0E+02	
				5.0E-02	A	1.3E-02	C				1	1	Yes	Sodium Fluoride	7681-49-4					1.0E+03	2.3E+05		1.0E+03	
				2.0E-05	I					-3.78	1	1	No	Sodium Fluoroacetate	62-74-8					4.0E-01			4.0E-01	
				1.0E-03	H						1	1	Yes	Sodium Metavanadate	13718-26-8					2.0E+01	4.6E+03		2.0E+01	
				8.0E-04	P						1	1	Yes	Sodium Tungstate	13472-45-2					1.6E+01	3.6E+03		1.6E+01	
				8.0E-04	P						1	1	Yes	Sodium Tungstate Dihydrate	10213-10-2					1.6E+01	3.6E+03		1.6E+01	
2.4E-02	H			3.0E-02	I					3.53	1	0.9	Yes	Stirofos (Tetrachlorovinphos)	961-11-5	3.2E+00	1.9E+01		2.8E+00	6.0E+02	3.8E+03		5.2E+02	
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Strontium Chromate	7789-06-2	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
				6.0E-01	I						1	1	Yes	Strontium, Stable	7440-24-6					1.2E+04	2.7E+06		1.2E+04	
				3.0E-04	I					1.93	1	1	Yes	Strychnine	57-24-9					6.0E+00	3.2E+02		5.9E+00	
				2.0E-01	I	1.0E+00	I	V		2.95	1	1	Yes	Styrene	100-42-5					4.0E+03	1.0E+04	2.1E+03	1.2E+03	1.0E+02
				3.0E-03	P					3.1	1	1	Yes	Styrene-Acrylonitrile (SAN) Trimer	NA					6.0E+01	2.4E+02		4.8E+01	
				1.0E-03	P	2.0E-03	X			-0.77	1	1	Yes	Sulfolane	126-33-0					2.0E+01	1.7E+04		2.0E+01	
				8.0E-04	P					3.9	1	0.9	Yes	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					1.6E+01	3.5E+01		1.1E+01	
						1.0E-03	C	V			1	1	Yes	Sulfur Trioxide	7446-11-9							2.1E+00	2.1E+00	
						1.0E-03	C				1	1	Yes	Sulfuric Acid	7664-93-9									
2.5E-02	I	7.1E-06	I	5.0E-02	H					4.82	1	0.8	Yes	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	3.1E+00	2.3E+00		1.3E+00	1.0E+03	8.2E+02		4.5E+02	
				3.0E-02	H					3.3	1	0.9	Yes	TCMTB	21564-17-0					6.0E+02	2.4E+03		4.8E+02	
				7.0E-02	I					1.79	1	1	Yes	Tebuthiuron	34014-18-1					1.4E+03	4.7E+04		1.4E+03	
				2.0E-02	H					5.96	1	0.7	No	Temephos	3383-96-8					4.0E+02			4.0E+02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				1.3E-02	I					1.89	1	1	Yes	Terbacil	5902-51-2					2.6E+02	7.0E+03		2.5E+02	
				2.5E-05	H			V		4.48	1	0.9	Yes	Terbufos	13071-79-9					5.0E-01	4.5E-01		2.4E-01	
				1.0E-03	I					3.74	1	0.9	Yes	Terbutryn	886-50-0					2.0E+01	4.1E+01		1.3E+01	
				1.0E-04	I					6.77	1	0.6	No	Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					2.0E+00			2.0E+00	
				3.0E-04	I			V		4.64	1	1	Yes	Tetrachlorobenzene, 1,2,4,5-	95-94-3					6.0E+00	2.4E+00		1.7E+00	
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		2.93	1	1	Yes	Tetrachloroethane, 1,1,1,2-	630-20-6	3.0E+00	1.1E+01	7.6E-01	5.7E-01	6.0E+02	2.4E+03		4.8E+02	
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		2.39	1	1	Yes	Tetrachloroethane, 1,1,2,2-	79-34-5	3.9E-01	3.3E+00	9.7E-02	7.6E-02	4.0E+02	3.6E+03		3.6E+02	
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		3.4	1	1	Yes	Tetrachloroethylene	127-18-4	3.7E+01	6.5E+01	2.2E+01	1.1E+01	1.2E+02	2.3E+02	8.3E+01	4.1E+01	5.0E+00
				3.0E-02	I					4.45	1	0.9	Yes	Tetrachlorophenol, 2,3,4,6-	58-90-2					6.0E+02	3.9E+02		2.4E+02	
2.0E+01	H							V		4.54	1	0.9	Yes	Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.9E-03	2.0E-03		1.3E-03					
				5.0E-04	I					3.99	1	0.9	Yes	Tetraethyl Dithiopyrophosphate	3689-24-5					1.0E+01	2.4E+01		7.1E+00	
						8.0E+01	I	V		1.68	1	1	Yes	Tetrafluoroethane, 1,1,1,2-	811-97-2							1.7E+05	1.7E+05	
				2.0E-03	P					1.64	1	1	Yes	Tetryl (Trinitrophenylmethylnitramine)	479-45-8					4.0E+01	2.5E+03		3.9E+01	
				7.0E-06	X						1	1	Yes	Thallium (I) Nitrate	10102-45-1					1.4E-01	3.2E+01		1.4E-01	
				1.0E-05	X						1	1	Yes	Thallium (Soluble Salts)	7440-28-0					2.0E-01	4.6E+01		2.0E-01	2.0E+00
				6.0E-06	X			V		-0.17	1	1	Yes	Thallium Acetate	563-68-8					1.2E-01	1.0E+02		1.2E-01	
				2.0E-05	X			V		-0.86	1	1	Yes	Thallium Carbonate	6533-73-9					4.0E-01	3.7E+03		4.0E-01	
				6.0E-06	X						1	1	Yes	Thallium Chloride	7791-12-0					1.2E-01	2.7E+01		1.2E-01	
				2.0E-05	X						1	0.9	Yes	Thallium Sulfate	7446-18-6					4.0E-01	9.1E+01		4.0E-01	
				1.3E-02	I					1.56	1	1	Yes	Thifensulfuron-methyl	79277-27-3					2.6E+02	3.5E+04		2.6E+02	
				1.0E-02	I					3.4	1	0.9	Yes	Thiobencarb	28249-77-6					2.0E+02	7.7E+02		1.6E+02	
				7.0E-02	X					-0.63	1	1	Yes	Thiodiglycol	111-48-8					1.4E+03	9.7E+05		1.4E+03	
				3.0E-04	H					2.16	1	1	Yes	Thiofanox	39196-18-4					6.0E+00	4.4E+01		5.3E+00	
				8.0E-02	I					1.4	1	1	Yes	Thiophanate, Methyl	23564-05-8					1.6E+03	2.1E+05		1.6E+03	
				5.0E-03	I					1.73	1	1	Yes	Thiram	137-26-8					1.0E+02	4.0E+03		9.8E+01	
				6.0E-01	H						1	1	Yes	Tin	7440-31-5					1.2E+04	2.7E+06		1.2E+04	
						1.0E-04	A	V			1	1	Yes	Titanium Tetrachloride	7550-45-0							2.1E-01	2.1E-01	
				8.0E-02	I	5.0E+00	I	V		2.73	1	1	Yes	Toluene	108-88-3					1.6E+03	5.3E+03	1.0E+04	1.1E+03	1.0E+03
1.8E-01	X			2.0E-04	X					0.16	1	1	Yes	Toluene-2,5-diamine	95-70-5	4.3E-01	8.2E+01		4.3E-01	4.0E+00	8.3E+02		4.0E+00	
3.0E-02	P			4.0E-03	X					1.39	1	1	Yes	Toluidine, p-	106-49-0	2.6E+00	6.8E+01		2.5E+00	8.0E+01	2.3E+03		7.7E+01	
				3.0E+00	P			V		6.1	1	1	No	Total Petroleum Hydrocarbons (Aliphatic High)	NA					6.0E+04			6.0E+04	
						6.0E-01	P	V		3.9	1	1	Yes	Total Petroleum Hydrocarbons (Aliphatic Low)	NA							1.3E+03	1.3E+03	
				1.0E-02	X	1.0E-01	P	V		5.65	1	1	No	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA					2.0E+02		2.1E+02	1.0E+02	
				4.0E-02	P					5.16	1	1	No	Total Petroleum Hydrocarbons (Aromatic High)	NA					8.0E+02			8.0E+02	
				4.0E-03	P	3.0E-02	P	V		2.13	1	1	Yes	Total Petroleum Hydrocarbons (Aromatic Low)	NA					8.0E+01	6.1E+02	6.3E+01	3.3E+01	
				4.0E-03	P	3.0E-03	P	V		3.58	1	1	Yes	Total Petroleum Hydrocarbons (Aromatic Medium)	NA					8.0E+01	9.0E+01	6.3E+00	5.5E+00	
1.1E+00	I	3.2E-04	I							5.9	1	0.8	No	Toxaphene	8001-35-2	7.1E-02			7.1E-02					3.0E+00
				7.5E-03	I					7.56	1	0.5	No	Tralomethrin	66841-25-6					1.5E+02			1.5E+02	
				3.0E-04	A			V		4.1	1	0.9	Yes	Tri-n-butyltin	688-73-3					6.0E+00	9.9E+00		3.7E+00	
				8.0E+01	X					0.25	1	1	Yes	Triacetin	102-76-1					1.6E+06	5.3E+08		1.6E+06	
				3.0E-02	I					2.77	1	1	Yes	Triadimefon	43121-43-3					6.0E+02	6.9E+03		5.5E+02	
				1.3E-02	I			V		4.6	1	0.9	Yes	Triallate	2303-17-5					2.6E+02	2.2E+02		1.2E+02	
				1.0E-02	I					1.1	1	1	Yes	Triasulfuron	82097-50-5					2.0E+02	6.0E+04		2.0E+02	
				8.0E-03	I					0.78	1	1	Yes	Tribenuron-methyl	101200-48-0					1.6E+02	5.0E+03		1.6E+02	
				5.0E-03	I			V		4.66	1	0.9	Yes	Tribromobenzene, 1,2,4-	615-54-3					1.0E+02	8.1E+01		4.5E+01	
9.0E-03	P			1.0E-02	P					4	1	0.9	Yes	Tributyl Phosphate	126-73-8	8.7E+00	1.3E+01		5.2E+00	2.0E+02	3.3E+02		1.2E+02	
				3.0E-04	P						1	0	No	Tributyltin Compounds	NA					6.0E+00			6.0E+00	
				3.0E-04	I					4.05	1	1	Yes	Tributyltin Oxide	56-35-9					6.0E+00	9.5E+01		5.7E+00	
				3.0E+01	I	3.0E+01	H	V		3.16	1	1	Yes	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					6.0E+05	1.9E+06	6.3E+04	5.5E+04	
7.0E-02	I			2.0E-02	I					1.33	1	1	Yes	Trichloroacetic Acid	76-03-9	1.1E+00	4.6E+01		1.1E+00	4.0E+02	1.8E+04		3.9E+02	6.0E+01
2.9E-02	H									-0.67	1	1	Yes	Trichloroaniline HCl, 2,4,6-	33663-50-2	2.7E+00	3.7E+03		2.7E+00					
7.0E-03	X			3.0E-05	X					3.52	1	1	Yes	Trichloroaniline, 2,4,6-	634-93-5	1.1E+01	2.0E+01		7.1E+00	6.0E-01	1.2E+00		4.0E-01	
				8.0E-04	X			V		4.05	1	1	Yes	Trichlorobenzene, 1,2,3-	87-61-6					1.6E+01	1.3E+01		7.0E+00	
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		4.02	1	1	Yes	Trichlorobenzene, 1,2,4-	120-82-1	2.7E+00	2.0E+00		1.2E+00	2.0E+02	1.6E+02	4.2E+00	4.0E+00	7.0E+01
				2.0E+00	I	5.0E+00	I	V		2.49	1	1	Yes	Trichloroethane, 1,1,1-	71-55-6					4.0E+04	2.5E+05	1.0E+04	8.0E+03	2.0E+02
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1.89	1	1	Yes	Trichloroethane, 1,1,2-	79-00-5	1.4E+00	2.0E+01	3.5E-01	2.8E-01	8.0E+01	1.3E+03	4.2E-01	4.1E-01	5.0E+00
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	2.42	1	1	Yes	Trichloroethylene	79-01-6	1.2E+00	7.4E+00	9.6E-01	4.9E-01	1.0E+01	6.9E+01	4.2E+00	2.8E+00	5.0E+00
				3.0E-01	I			V		2.53	1	1	Yes	Trichlorofluoromethane	75-69-4					6.0E+03	3.6E+04		5.2E+03	
				1.0E-01	I					3.72	1	1	Yes	Trichlorophenol, 2,4,5-	95-95-4					2.0E+03	2.9E+03		1.2E+03	
1.1E-02	I	3.1E-06	I	1.0E-03	P					3.69	1	1	Yes	Trichlorophenol, 2,4,6-	88-06-2	7.1E+00	9.8E+00		4.1E+00	2.0E+01	3.0E+01		1.2E+01	
				1.0E-02	I					3.31	1	0.9	Yes	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					2.0E+02	8.7E+02		1.6E+02	
				8.0E-03	I					3.8	1	0.9	Yes	Trichlorophenoxypropionic acid, -2,4,5	93-72-1					1.6E+02	3.6E+02		1.1E+02	5.0E+01
				5.0E-03	I			V		2.43	1	1	Yes	Trichloropropane, 1,1,2-	598-77-6					1.0E+02	7.5E+02		8.8E+01	
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	2.27	1	1	Yes	Trichloropropane, 1,2,3-	96-18-4	8.4E-04	7.3E-03		7.5E-04	8.0E+01	7.7E+02	6.3E-01	6.2E-01	

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Toxicity and Chemical-specific Information													Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				3.0E-03	X	3.0E-04	P	V		2.78	1	1	Yes	Trichloropropene, 1,2,3-	96-19-5					6.0E+01	2.6E+02	6.3E-01	6.2E-01	
				2.0E-02	A					5.11	1	0.8	Yes	Tricresyl Phosphate (TCP)	1330-78-5					4.0E+02	2.6E+02		1.6E+02	
				3.0E-03	I					5.18	1	0.8	Yes	Tridiphane	58138-08-2					6.0E+01	2.6E+01		1.8E+01	
						7.0E-03	I	V		1.45	1	1	Yes	Triethylamine	121-44-8							1.5E+01	1.5E+01	
				2.0E+00	P					-1.75	1	1	Yes	Triethylene Glycol	112-27-6					4.0E+04	1.8E+08		4.0E+04	
						2.0E+01	P	V		1.74	1	1	Yes	Trifluoroethane, 1,1,1-	420-46-2							4.2E+04	4.2E+04	
7.7E-03	I			7.5E-03	I			V		5.34	1	0.8	Yes	Trifluralin	1582-09-8	1.0E+01	3.4E+00		2.6E+00	1.5E+02	5.5E+01		4.0E+01	
2.0E-02	P			1.0E-02	P					-0.65	1	1	Yes	Trimethyl Phosphate	512-56-1	3.9E+00	2.8E+03		3.9E+00	2.0E+02	1.6E+05		2.0E+02	
						5.0E-03	P	V		3.66	1	1	Yes	Trimethylbenzene, 1,2,3-	526-73-8							1.0E+01	1.0E+01	
						7.0E-03	P	V		3.63	1	1	Yes	Trimethylbenzene, 1,2,4-	95-63-6							1.5E+01	1.5E+01	
				1.0E-02	X			V		3.42	1	1	Yes	Trimethylbenzene, 1,3,5-	108-67-8					2.0E+02	2.8E+02		1.2E+02	
				1.0E-02	X			V		4.08	1	1	Yes	Trimethylpentene, 2,4,4-	25167-70-8					2.0E+02	9.6E+01		6.5E+01	
				3.0E-02	I					1.18	1	1	Yes	Trinitrobenzene, 1,3,5-	99-35-4					6.0E+02	4.7E+04		5.9E+02	
3.0E-02	I			5.0E-04	I					1.6	1	1	Yes	Trinitrotoluene, 2,4,6-	118-96-7	2.6E+00	1.1E+02		2.5E+00	1.0E+01	4.5E+02		9.8E+00	
				2.0E-02	P					2.83	1	1	Yes	Triphenylphosphine Oxide	791-28-6					4.0E+02	3.8E+03		3.6E+02	
				2.0E-02	A					3.65	1	0.9	Yes	Tris(1,3-Dichloro-2-propyl)Phosphate	13674-87-8					4.0E+02	3.2E+03		3.6E+02	
				1.0E-02	X					2.59	1	1	Yes	Tris(1-chloro-2-propyl)phosphate	13674-84-5					2.0E+02	3.8E+03		1.9E+02	
2.3E+00	C	6.6E-04	C					V		4.29	1	1	No	Tris(2,3-dibromopropyl)phosphate	126-72-7	3.4E-02		8.5E-03	6.8E-03					
2.0E-02	P			7.0E-03	P					1.44	1	1	Yes	Tris(2-chloroethyl)phosphate	115-96-8	3.9E+00	3.0E+02		3.8E+00	1.4E+02	1.2E+04		1.4E+02	
3.2E-03	P			1.0E-01	P					9.49	1	0	No	Tris(2-ethylhexyl)phosphate	78-42-2	2.4E+01			2.4E+01	2.0E+03			2.0E+03	
				8.0E-04	P						1	1	Yes	Tungsten	7440-33-7					1.6E+01	3.6E+03		1.6E+01	
				3.0E-03	I	4.0E-05	A				1	1	Yes	Uranium (Soluble Salts)	NA					6.0E+01	1.4E+04		6.0E+01	3.0E+01
1.0E+00	C	2.9E-04	C						M	-0.15	1	1	Yes	Urethane	51-79-6	2.5E-02	6.1E+00		2.5E-02					
		8.3E-03	P	9.0E-03	I	7.0E-06	P				0.026	1	Yes	Vanadium Pentoxide	1314-62-1					1.8E+02	1.1E+03		1.5E+02	
				5.0E-03	S	1.0E-04	A				0.026	1	Yes	Vanadium and Compounds	7440-62-2					1.0E+02	6.0E+02		8.6E+01	
				1.0E-03	I			V		3.84	1	1	Yes	Vernolate	1929-77-7					2.0E+01	2.5E+01		1.1E+01	
				2.5E-02	I					3.1	1	0.9	Yes	Vinclozolin	50471-44-8					5.0E+02	3.7E+03		4.4E+02	
				1.0E+00	H	2.0E-01	I	V		0.73	1	1	Yes	Vinyl Acetate	108-05-4					2.0E+04	1.4E+06	4.2E+02	4.1E+02	
		3.2E-05	H			3.0E-03	I	V		1.57	1	1	Yes	Vinyl Bromide	593-60-2			1.8E-01	1.8E-01			6.3E+00	6.3E+00	
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1.62	1	1	Yes	Vinyl Chloride	75-01-4	2.1E-02	2.8E-01	3.4E-01	1.9E-02	6.0E+01	8.9E+02	2.1E+02	4.4E+01	2.0E+00
				3.0E-04	I					2.7	1	1	Yes	Warfarin	81-81-2					6.0E+00	8.4E+01		5.6E+00	
				2.0E-01	S	1.0E-01	S	V		3.15	1	1	Yes	Xylene, P-	106-42-3					4.0E+03	7.6E+03	2.1E+02	1.9E+02	
				2.0E-01	S	1.0E-01	S	V		3.2	1	1	Yes	Xylene, m-	108-38-3					4.0E+03	7.1E+03	2.1E+02	1.9E+02	
				2.0E-01	S	1.0E-01	S	V		3.12	1	1	Yes	Xylene, o-	95-47-6					4.0E+03	8.0E+03	2.1E+02	1.9E+02	
				2.0E-01	I	1.0E-01	I	V		3.16	1	1	Yes	Xylenes	1330-20-7					4.0E+03	7.5E+03	2.1E+02	1.9E+02	1.0E+04
				3.0E-04	I						1	1	Yes	Zinc Phosphide	1314-84-7					6.0E+00	2.3E+03		6.0E+00	
				3.0E-01	I						1	1	Yes	Zinc and Compounds	7440-66-6					6.0E+03	2.3E+06		6.0E+03	
				5.0E-02	I					1.3	1	1	Yes	Zineb	12122-67-7					1.0E+03	9.7E+04		9.9E+02	
				8.0E-05	X						1	1	Yes	Zirconium	7440-67-7					1.6E+00	3.6E+02		1.6E+00	

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Toxicity and Chemical-specific							Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR $(ug/m^3)^{-1}$	key	RfC_i (mg/m^3)	key	vol	muta-gen		Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 $(\mu g/m^3)$
							Acephate	30560-19-1		
2.2E-06	I	9.0E-03	I	V			Acetaldehyde	75-07-0	1.3E+00	9.4E+00
							Acetochlor	34256-82-1		
		3.1E+01	A	V			Acetone	67-64-1		3.2E+04
		2.0E-03	X				Acetone Cyanohydrin	75-86-5		2.1E+00
		6.0E-02	I	V			Acetonitrile	75-05-8		6.3E+01
				V			Acetophenone	98-86-2		
1.3E-03	C						Acetylaminofluorene, 2-	53-96-3	2.2E-03	
		2.0E-05	I	V			Acrolein	107-02-8		2.1E-02
1.0E-04	I	6.0E-03	I		M		Acrylamide	79-06-1	1.0E-02	6.3E+00
		1.0E-03	I	V			Acrylic Acid	79-10-7		1.0E+00
6.8E-05	I	2.0E-03	I	V			Acrylonitrile	107-13-1	4.1E-02	2.1E+00
		6.0E-03	P				Adiponitrile	111-69-3		6.3E+00
							Alachlor	15972-60-8		
							Aldicarb	116-06-3		
							Aldicarb Sulfone	1646-88-4		
							Aldicarb sulfoxide	1646-87-3		
4.9E-03	I			V			Aldrin	309-00-2	5.7E-04	
		1.0E-04	X	V			Allyl Alcohol	107-18-6		1.0E-01
6.0E-06	C	1.0E-03	I	V			Allyl Chloride	107-05-1	4.7E-01	1.0E+00
		5.0E-03	P				Aluminum	7429-90-5		5.2E+00
							Aluminum Phosphide	20859-73-8		
							Ametryn	834-12-8		
6.0E-03	C						Aminobiphenyl, 4-	92-67-1	4.7E-04	
							Aminophenol, m-	591-27-5		
							Aminophenol, p-	123-30-8		
							Amitraz	33089-61-1		
		1.0E-01	I	V			Ammonia	7664-41-7		1.0E+02
							Ammonium Sulfamate	7773-06-0		
		3.0E-03	X	V			Amyl Alcohol, tert-	75-85-4		3.1E+00
1.6E-06	C	1.0E-03	I				Aniline	62-53-3	1.8E+00	1.0E+00
							Anthraquinone, 9,10-	84-65-1		
							Antimony (metallic)	7440-36-0		
							Antimony Pentoxide	1314-60-9		
							Antimony Tetroxide	1332-81-6		
		2.0E-04	I				Antimony Trioxide	1309-64-4		2.1E-01
4.3E-03	I	1.5E-05	C				Arsenic, Inorganic	7440-38-2	6.5E-04	1.6E-02
		5.0E-05	I				Arsine	7784-42-1		5.2E-02
							Asulam	3337-71-1		
							Atrazine	1912-24-9		
2.5E-04	C						Auramine	492-80-8	1.1E-02	
							Avermectin B1	65195-55-3		
		1.0E-02	A				Azinphos-methyl	86-50-0		1.0E+01
3.1E-05	I			V			Azobenzene	103-33-3	9.1E-02	
		7.0E-06	P				Azodicarbonamide	123-77-3		7.3E-03
		5.0E-04	H				Barium	7440-39-3		5.2E-01
1.5E-01	C	2.0E-04	C		M		Barium Chromate	10294-40-3	6.8E-06	2.1E-01
				V			Benfluralin	1861-40-1		
							Benomyl	17804-35-2		
							Bensulfuron-methyl	83055-99-6		
							Bentazon	25057-89-0		
				V			Benzaldehyde	100-52-7		
7.8E-06	I	3.0E-02	I	V			Benzene	71-43-2	3.6E-01	3.1E+01
							Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1		
				V			Benzenethiol	108-98-5		
6.7E-02	I				M		Benzidine	92-87-5	1.5E-05	
							Benzoic Acid	65-85-0		
				V			Benzotrichloride	98-07-7		
							Benzyl Alcohol	100-51-6		
4.9E-05	C	1.0E-03	P	V			Benzyl Chloride	100-44-7	5.7E-02	1.0E+00
2.4E-03	I	2.0E-05	I				Beryllium and compounds	7440-41-7	1.2E-03	2.1E-02
							Bifenox	42576-02-3		
							Biphenthrin	82657-04-3		
		4.0E-04	X	V			Biphenyl, 1,1'-	92-52-4		4.2E-01
				V			Bis(2-chloro-1-methylethyl) ether	108-60-1		
							Bis(2-chloroethoxy)methane	111-91-1		
3.3E-04	I			V			Bis(2-chloroethyl)ether	111-44-4	8.5E-03	
6.2E-02	I			V			Bis(chloromethyl)ether	542-88-1	4.5E-05	

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Toxicity and Chemical-specific							Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen		Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
							Bisphenol A	80-05-7		
		2.0E-02	H				Boron And Borates Only	7440-42-8		2.1E+01
		2.0E-02	P	V			Boron Trichloride	10294-34-5		2.1E+01
		1.3E-02	C	V			Boron Trifluoride	7637-07-2		1.4E+01
							Bromate	15541-45-4		
6.0E-04	X			V			Bromo-2-chloroethane, 1-	107-04-0	4.7E-03	
		6.0E-02	I	V			Bromobenzene	108-86-1		6.3E+01
		4.0E-02	X	V			Bromochloromethane	74-97-5		4.2E+01
3.7E-05	C			V			Bromodichloromethane	75-27-4	7.6E-02	
1.1E-06	I			V			Bromoform	75-25-2	2.6E+00	
		5.0E-03	I	V			Bromomethane	74-83-9		5.2E+00
				V			Bromophos	2104-96-3		
							Bromoxynil	1689-84-5		
				V			Bromoxynil Octanoate	1689-99-2		
3.0E-05	I	2.0E-03	I	V			Butadiene, 1,3-	106-99-0	9.4E-02	2.1E+00
				V			Butanol, N-	71-36-3		
							Butyl Benzyl Phthalate	85-68-7		
		3.0E+01	P	V			Butyl alcohol, sec-	78-92-2		3.1E+04
				V			Butylate	2008-41-5		
5.7E-08	C						Butylated hydroxyanisole	25013-16-5	4.9E+01	
							Butylated hydroxytoluene	128-37-0		
				V			Butylbenzene, n-	104-51-8		
				V			Butylbenzene, sec-	135-98-8		
				V			Butylbenzene, tert-	98-06-6		
							Cacodylic Acid	75-60-5		
1.8E-03	I	1.0E-05	A				Cadmium (Diet)	7440-43-9		
1.8E-03	I	1.0E-05	A				Cadmium (Water)	7440-43-9	1.6E-03	1.0E-02
1.5E-01	C	2.0E-04	C		M		Calcium Chromate	13765-19-0	6.8E-06	2.1E-01
		2.2E-03	C				Caprolactam	105-60-2		2.3E+00
4.3E-05	C						Captafol	2425-06-1	6.5E-02	
6.6E-07	C						Captan	133-06-2	4.3E+00	
							Carbaryl	63-25-2		
							Carbofuran	1563-66-2		
		7.0E-01	I	V			Carbon Disulfide	75-15-0		7.3E+02
6.0E-06	I	1.0E-01	I	V			Carbon Tetrachloride	56-23-5	4.7E-01	1.0E+02
		1.0E-01	P	V			Carbonyl Sulfide	463-58-1		1.0E+02
							Carbosulfan	55285-14-8		
							Carboxin	5234-68-4		
		9.0E-04	I				Ceric oxide	1306-38-3		9.4E-01
				V			Chloral Hydrate	302-17-0		
							Chloramben	133-90-4		
							Chloranil	118-75-2		
1.0E-04	I	7.0E-04	I	V			Chlordane	12789-03-6	2.8E-02	7.3E-01
4.6E-03	C						Chlordecone (Kepone)	143-50-0	6.1E-04	
							Chlorfenvinphos	470-90-6		
							Chlorimuron, Ethyl-	90982-32-4		
		1.5E-04	A	V			Chlorine	7782-50-5		1.5E-01
		2.0E-04	I	V			Chlorine Dioxide	10049-04-4		2.1E-01
							Chlorite (Sodium Salt)	7758-19-2		
		5.0E+01	I	V			Chloro-1,1-difluoroethane, 1-	75-68-3		5.2E+04
3.0E-04	I	2.0E-02	I	V			Chloro-1,3-butadiene, 2-	126-99-8	9.4E-03	2.1E+01
							Chloro-2-methylaniline HCl, 4-	3165-93-3		
7.7E-05	C						Chloro-2-methylaniline, 4-	95-69-2	3.6E-02	
				V			Chloroacetaldehyde, 2-	107-20-0		
							Chloroacetic Acid	79-11-8		
		3.0E-05	I				Chloroacetophenone, 2-	532-27-4		3.1E-02
							Chloroaniline, p-	106-47-8		
		5.0E-02	P	V			Chlorobenzene	108-90-7		5.2E+01
3.1E-05	C						Chlorobenzilate	510-15-6	9.1E-02	
							Chlorobenzoic Acid, p-	74-11-3		
		3.0E-01	P	V			Chlorobenzotrifluoride, 4-	98-56-6		3.1E+02
				V			Chlorobutane, 1-	109-69-3		
		5.0E+01	I	V			Chlorodifluoromethane	75-45-6		5.2E+04
				V			Chloroethanol, 2-	107-07-3		
2.3E-05	I	9.8E-02	A	V			Chloroform	67-66-3	1.2E-01	1.0E+02
		9.0E-02	I	V			Chloromethane	74-87-3		9.4E+01
6.9E-04	C			V			Chloromethyl Methyl Ether	107-30-2	4.1E-03	
		1.0E-05	X				Chloronitrobenzene, o-	88-73-3		1.0E-02

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Toxicity and Chemical-specific							Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen		Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
		6.0E-04	P				Chloronitrobenzene, p-	100-00-5		6.3E-01
				V			Chlorophenol, 2-	95-57-8		
		4.0E-04	C	V			Chloropicrin	76-06-2		4.2E-01
8.9E-07	C						Chlorothalonil	1897-45-6	3.2E+00	
				V			Chlorotoluene, o-	95-49-8		
				V			Chlorotoluene, p-	106-43-4		
6.9E-02	C						Chlorozotocin	54749-90-5	4.1E-05	
							Chlorpropham	101-21-3		
							Chlorpyrifos	2921-88-2		
							Chlorpyrifos Methyl	5598-13-0		
							Chlorsulfuron	64902-72-3		
							Chlorthal-dimethyl	1861-32-1		
							Chlorthiophos	60238-56-4		
							Chromium(III), Insoluble Salts	16065-83-1		
8.4E-02	S	1.0E-04	I		M		Chromium(VI)	18540-29-9	1.2E-05	1.0E-01
							Chromium, Total	7440-47-3		
							Clofentezine	74115-24-5		
9.0E-03	P	6.0E-06	P				Cobalt	7440-48-4	3.1E-04	6.3E-03
6.2E-04	I			V	M		Coke Oven Emissions	8007-45-2	1.6E-03	
							Copper	7440-50-8		
		6.0E-01	C				Cresol, m-	108-39-4		6.3E+02
		6.0E-01	C				Cresol, o-	95-48-7		6.3E+02
		6.0E-01	C				Cresol, p-	106-44-5		6.3E+02
							Cresol, p-chloro-m-	59-50-7		
		6.0E-01	C				Cresols	1319-77-3		6.3E+02
				V			Crotonaldehyde, trans-	123-73-9		
		4.0E-01	I	V			Cumene	98-82-8		4.2E+02
6.3E-05	C						Cupferron	135-20-6	4.5E-02	
							Cyanazine	21725-46-2		
							Cyanides			
							~Calcium Cyanide	592-01-8		
							~Copper Cyanide	544-92-3		
		8.0E-04	S	V			~Cyanide (CN-)	57-12-5		8.3E-01
				V			~Cyanogen	460-19-5		
				V			~Cyanogen Bromide	506-68-3		
				V			~Cyanogen Chloride	506-77-4		
		8.0E-04	I	V			~Hydrogen Cyanide	74-90-8		8.3E-01
							~Potassium Cyanide	151-50-8		
							~Potassium Silver Cyanide	506-61-6		
							~Silver Cyanide	506-64-9		
							~Sodium Cyanide	143-33-9		
							~Thiocyanates	NA		
				V			~Thiocyanic Acid	463-56-9		
							~Zinc Cyanide	557-21-1		
		6.0E+00	I	V			Cyclohexane	110-82-7		6.3E+03
							Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3		
		7.0E-01	P	V			Cyclohexanone	108-94-1		7.3E+02
		1.0E+00	X	V			Cyclohexene	110-83-8		1.0E+03
				V			Cyclohexylamine	108-91-8		
							Cyfluthrin	68359-37-5		
							Cyhalothrin	68085-85-8		
							Cypermethrin	52315-07-8		
							Cyromazine	66215-27-8		
6.9E-05	C						DDD	72-54-8	4.1E-02	
9.7E-05	C			V			DDE, p,p'-	72-55-9	2.9E-02	
9.7E-05	I						DDT	50-29-3	2.9E-02	
							Dalapon	75-99-0		
5.1E-06	C						Daminozide	1596-84-5	5.5E-01	
							Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5		
							Demeton	8065-48-3		
							Di(2-ethylhexyl)adipate	103-23-1		
							Diallate	2303-16-4		
							Diazinon	333-41-5		
				V			Dibenzothiophene	132-65-0		
6.0E-03	P	2.0E-04	I	V	M		Dibromo-3-chloropropane, 1,2-	96-12-8	1.7E-04	2.1E-01
				V			Dibromobenzene, 1,3-	108-36-1		
				V			Dibromobenzene, 1,4-	106-37-6		
				V			Dibromochloromethane	124-48-1		

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
6.0E-04	I	9.0E-03	I	V		Dibromoethane, 1,2-	106-93-4	4.7E-03	9.4E+00
		4.0E-03	X	V		Dibromomethane (Methylene Bromide)	74-95-3		4.2E+00
						Dibutyltin Compounds	NA		
						Dicamba	1918-00-9		
4.2E-03	P			V		Dichloro-2-butene, 1,4-	764-41-0	6.7E-04	
4.2E-03	P			V		Dichloro-2-butene, cis-1,4-	1476-11-5	6.7E-04	
4.2E-03	P			V		Dichloro-2-butene, trans-1,4-	110-57-6	6.7E-04	
						Dichloroacetic Acid	79-43-6		
		2.0E-01	H	V		Dichlorobenzene, 1,2-	95-50-1		2.1E+02
1.1E-05	C	8.0E-01	I	V		Dichlorobenzene, 1,4-	106-46-7	2.6E-01	8.3E+02
3.4E-04	C					Dichlorobenzidine, 3,3'-	91-94-1	8.3E-03	
						Dichlorobenzophenone, 4,4'-	90-98-2		
		1.0E-01	X	V		Dichlorodifluoromethane	75-71-8		1.0E+02
1.6E-06	C			V		Dichloroethane, 1,1-	75-34-3	1.8E+00	
2.6E-05	I	7.0E-03	P	V		Dichloroethane, 1,2-	107-06-2	1.1E-01	7.3E+00
		2.0E-01	I	V		Dichloroethylene, 1,1-	75-35-4		2.1E+02
				V		Dichloroethylene, 1,2-cis-	156-59-2		
				V		Dichloroethylene, 1,2-trans-	156-60-5		
						Dichlorophenol, 2,4-	120-83-2		
						Dichlorophenoxy Acetic Acid, 2,4-	94-75-7		
						Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6		
1.0E-05	C	4.0E-03	I	V		Dichloropropane, 1,2-	78-87-5	2.8E-01	4.2E+00
				V		Dichloropropane, 1,3-	142-28-9		
						Dichloropropanol, 2,3-	616-23-9		
4.0E-06	I	2.0E-02	I	V		Dichloropropene, 1,3-	542-75-6	7.0E-01	2.1E+01
8.3E-05	C	5.0E-04	I			Dichlorvos	62-73-7	3.4E-02	5.2E-01
						Dicrotophos	141-66-2		
		3.0E-04	X	V		Dicyclopentadiene	77-73-6		3.1E-01
4.6E-03	I					Dieldrin	60-57-1	6.1E-04	
3.0E-04	C	5.0E-03	I			Diesel Engine Exhaust	NA	9.4E-03	5.2E+00
		2.0E-04	P			Diethanolamine	111-42-2		2.1E-01
		1.0E-04	P			Diethylene Glycol Monobutyl Ether	112-34-5		1.0E-01
		3.0E-04	P			Diethylene Glycol Monoethyl Ether	111-90-0		3.1E-01
				V		Diethylformamide	617-84-5		
1.0E-01	C					Diethylstilbestrol	56-53-1	2.8E-05	
						Difenzoquat	43222-48-6		
						Diflubenzuron	35367-38-5		
		4.0E+01	I	V		Difluoroethane, 1,1-	75-37-6		4.2E+04
1.3E-05	C			V		Dihydrosafrole	94-58-6	2.2E-01	
		7.0E-01	P	V		Diisopropyl Ether	108-20-3		7.3E+02
				V		Diisopropyl Methylphosphonate	1445-75-6		
						Dimethipin	55290-64-7		
						Dimethoate	60-51-5		
						Dimethoxybenzidine, 3,3'-	119-90-4		
						Dimethyl methylphosphonate	756-79-6		
1.3E-03	C					Dimethylamino azobenzene [p-]	60-11-7	2.2E-03	
						Dimethylaniline HCl, 2,4-	21436-96-4		
						Dimethylaniline, 2,4-	95-68-1		
				V		Dimethylaniline, N,N-	121-69-7		
						Dimethylbenzidine, 3,3'-	119-93-7		
		3.0E-02	I	V		Dimethylformamide	68-12-2		3.1E+01
		2.0E-06	X	V		Dimethylhydrazine, 1,1-	57-14-7		2.1E-03
1.6E-01	C			V		Dimethylhydrazine, 1,2-	540-73-8	1.8E-05	
						Dimethylphenol, 2,4-	105-67-9		
						Dimethylphenol, 2,6-	576-26-1		
						Dimethylphenol, 3,4-	95-65-8		
1.3E-05	C			V		Dimethylvinylchloride	513-37-1	2.2E-01	
						Dinitro-o-cresol, 4,6-	534-52-1		
						Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5		
						Dinitrobenzene, 1,2-	528-29-0		
						Dinitrobenzene, 1,3-	99-65-0		
						Dinitrobenzene, 1,4-	100-25-4		
						Dinitrophenol, 2,4-	51-28-5		
						Dinitrotoluene Mixture, 2,4/2,6-	NA		
8.9E-05	C					Dinitrotoluene, 2,4-	121-14-2	3.2E-02	
						Dinitrotoluene, 2,6-	606-20-2		
						Dinitrotoluene, 2-Amino-4,6-	35572-78-2		
						Dinitrotoluene, 4-Amino-2,6-	19406-51-0		

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
						Dinitrotoluene, Technical grade	25321-14-6		
						Dinoseb	88-85-7		
5.0E-06	I	3.0E-02	I	V		Dioxane, 1,4-	123-91-1	5.6E-01	3.1E+01
						Dioxins			
1.3E+00	I					~Hexachlorodibenzo-p-dioxin, Mixture	NA	2.2E-06	
3.8E+01	C	4.0E-08	C	V		~TCDD, 2,3,7,8-	1746-01-6	7.4E-08	4.2E-05
						Diphenamid	957-51-7		
						Diphenyl Sulfone	127-63-9		
						Diphenylamine	122-39-4		
2.2E-04	I					Diphenylhydrazine, 1,2-	122-66-7	1.3E-02	
						Diquat	85-00-7		
1.4E-01	C					Direct Black 38	1937-37-7	2.0E-05	
1.4E-01	C					Direct Blue 6	2602-46-2	2.0E-05	
1.4E-01	C					Direct Brown 95	16071-86-6	2.0E-05	
						Disulfoton	298-04-4		
					V	Dithiane, 1,4-	505-29-3		
						Diuron	330-54-1		
						Dodine	2439-10-3		
					V	EPTC	759-94-4		
					V	Endosulfan	115-29-7		
						Endothall	145-73-3		
						Endrin	72-20-8		
1.2E-06	I	1.0E-03	I	V		Epichlorohydrin	106-89-8	2.3E+00	1.0E+00
		2.0E-02	I	V		Epoxybutane, 1,2-	106-88-7		2.1E+01
						Ethanol, 2-(2-methoxyethoxy)-	111-77-3		
						Ethephon	16672-87-0		
						Ethion	563-12-2		
		6.0E-02	P	V		Ethoxyethanol Acetate, 2-	111-15-9		6.3E+01
		2.0E-01	I	V		Ethoxyethanol, 2-	110-80-5		2.1E+02
		7.0E-02	P	V		Ethyl Acetate	141-78-6		7.3E+01
		8.0E-03	P	V		Ethyl Acrylate	140-88-5		8.3E+00
		1.0E+01	I	V		Ethyl Chloride (Chloroethane)	75-00-3		1.0E+04
				V		Ethyl Ether	60-29-7		
		3.0E-01	P	V		Ethyl Methacrylate	97-63-2		3.1E+02
						Ethyl-p-nitrophenyl Phosphonate	2104-64-5		
2.5E-06	C	1.0E+00	I	V		Ethylbenzene	100-41-4	1.1E+00	1.0E+03
						Ethylene Cyanohydrin	109-78-4		
				V		Ethylene Diamine	107-15-3		
		4.0E-01	C			Ethylene Glycol	107-21-1		4.2E+02
		1.6E+00	I			Ethylene Glycol Monobutyl Ether	111-76-2		1.7E+03
8.8E-05	C	3.0E-02	C	V		Ethylene Oxide	75-21-8	3.2E-02	3.1E+01
1.3E-05	C					Ethylene Thiourea	96-45-7	2.2E-01	
1.9E-02	C			V		Ethyleneimine	151-56-4	1.5E-04	
						Ethylphthalyl Ethyl Glycolate	84-72-0		
						Fenamiphos	22224-92-6		
						Fenpropathrin	39515-41-8		
						Fenvalerate	51630-58-1		
						Fluometuron	2164-17-2		
		1.3E-02	C			Fluoride	16984-48-8		1.4E+01
		1.3E-02	C			Fluorine (Soluble Fluoride)	7782-41-4		1.4E+01
						Fluridone	59756-60-4		
						Flurprimidol	56425-91-3		
						Flusilazole	85509-19-9		
						Flutolanil	66332-96-5		
						Fluvalinate	69409-94-5		
						Folpet	133-07-3		
						Fomesafen	72178-02-0		
						Fonofos	944-22-9		
1.3E-05	I	9.8E-03	A	V		Formaldehyde	50-00-0	2.2E-01	1.0E+01
		3.0E-04	X	V		Formic Acid	64-18-6		3.1E-01
						Fosetyl-AL	39148-24-8		
						Furans			
					V	~Dibenzofuran	132-64-9		
					V	~Furan	110-00-9		
		2.0E+00	I	V		~Tetrahydrofuran	109-99-9		2.1E+03
						Furazolidone	67-45-8		
		5.0E-02	H	V		Furfural	98-01-1		5.2E+01
4.3E-04	C					Furium	531-82-8	6.5E-03	

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
8.6E-06	C					Furmecyclox	60568-05-0	3.3E-01	
						Glufosinate, Ammonium	77182-82-2		
		8.0E-05	C			Glutaraldehyde	111-30-8		8.3E-02
		1.0E-03	H	V		Glycidyl	765-34-4		1.0E+00
						Glyphosate	1071-83-6		
				V		Guanidine	113-00-8		
						Guanidine Chloride	50-01-1		
						Haloxyfop, Methyl	69806-40-2		
1.3E-03	I			V		Heptachlor	76-44-8	2.2E-03	
2.6E-03	I			V		Heptachlor Epoxide	1024-57-3	1.1E-03	
				V		Hexabromobenzene	87-82-1		
						Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2		
4.6E-04	I			V		Hexachlorobenzene	118-74-1	6.1E-03	
2.2E-05	I			V		Hexachlorobutadiene	87-68-3	1.3E-01	
1.8E-03	I					Hexachlorocyclohexane, Alpha-	319-84-6	1.6E-03	
5.3E-04	I					Hexachlorocyclohexane, Beta-	319-85-7	5.3E-03	
3.1E-04	C					Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	9.1E-03	
5.1E-04	I					Hexachlorocyclohexane, Technical	608-73-1	5.5E-03	
		2.0E-04	I	V		Hexachlorocyclopentadiene	77-47-4		2.1E-01
1.1E-05	C	3.0E-02	I	V		Hexachloroethane	67-72-1	2.6E-01	3.1E+01
						Hexachlorophene	70-30-4		
						Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4		
		1.0E-05	I	V		Hexamethylene Diisocyanate, 1,6-	822-06-0		1.0E-02
						Hexamethylphosphoramide	680-31-9		
		7.0E-01	I	V		Hexane, N-	110-54-3		7.3E+02
						Hexanedioic Acid	124-04-9		
		3.0E-02	I	V		Hexanone, 2-	591-78-6		3.1E+01
						Hexazinone	51235-04-2		
						Hexythiazox	78587-05-0		
						Hydramethylnon	67485-29-4		
4.9E-03	I	3.0E-05	P	V		Hydrazine	302-01-2	5.7E-04	3.1E-02
4.9E-03	I					Hydrazine Sulfate	10034-93-2	5.7E-04	
		2.0E-02	I	V		Hydrogen Chloride	7647-01-0		2.1E+01
		1.4E-02	C	V		Hydrogen Fluoride	7664-39-3		1.5E+01
		2.0E-03	I	V		Hydrogen Sulfide	7783-06-4		2.1E+00
						Hydroquinone	123-31-9		
						Imazalil	35554-44-0		
						Imazaquin	81335-37-7		
						Imazethapyr	81335-77-5		
						Iodine	7553-56-2		
						Iprodione	36734-19-7		
						Iron	7439-89-6		
				V		Isobutyl Alcohol	78-83-1		
		2.0E+00	C			Isophorone	78-59-1		2.1E+03
				V		Isopropalin	33820-53-0		
		2.0E-01	P	V		Isopropanol	67-63-0		2.1E+02
						Isopropyl Methyl Phosphonic Acid	1832-54-8		
						Isoxaben	82558-50-7		
		3.0E-01	A	V		JP-7	NA		3.1E+02
						Lactofen	77501-63-4		
						Lead Compounds			
1.5E-01	C	2.0E-04	C		M	~Lead Chromate	7758-97-6	6.8E-06	2.1E-01
1.2E-05	C					~Lead Phosphate	7446-27-7	2.3E-01	
8.0E-05	C					~Lead acetate	301-04-2	3.5E-02	
						~Lead and Compounds	7439-92-1		1.5E-01
1.2E-05	C					~Lead subacetate	1335-32-6	2.3E-01	
				V		~Tetraethyl Lead	78-00-2		
				V		Lewisite	541-25-3		
						Linuron	330-55-2		
						Lithium	7439-93-2		
						MCPA	94-74-6		
						MCPB	94-81-5		
						MCPP	93-65-2		
						Malathion	121-75-5		
		7.0E-04	C			Maleic Anhydride	108-31-6		7.3E-01
						Maleic Hydrazide	123-33-1		
						Malononitrile	109-77-3		
						Mancozeb	8018-01-7		

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
						Maneb	12427-38-2		
		5.0E-05	I			Manganese (Diet)	7439-96-5		
		5.0E-05	I			Manganese (Non-diet)	7439-96-5		5.2E-02
						Mephosfolan	950-10-7		
						Mepiquat Chloride	24307-26-4		
						Mercury Compounds			
		3.0E-04	S			~Mercuric Chloride (and other Mercury salts)	7487-94-7		3.1E-01
		3.0E-04	I	V		~Mercury (elemental)	7439-97-6		3.1E-01
						~Methyl Mercury	22967-92-6		
						~Phenylmercuric Acetate	62-38-4		
				V		Merphos	150-50-5		
						Merphos Oxide	78-48-8		
						Metalaxyl	57837-19-1		
		3.0E-02	P	V		Methacrylonitrile	126-98-7		3.1E+01
						Methamidophos	10265-92-6		
		2.0E+01	I	V		Methanol	67-56-1		2.1E+04
						Methidathion	950-37-8		
						Methomyl	16752-77-5		
1.4E-05	C					Methoxy-5-nitroaniline, 2-	99-59-2	2.0E-01	
						Methoxychlor	72-43-5		
		1.0E-03	P	V		Methoxyethanol Acetate, 2-	110-49-6		1.0E+00
		2.0E-02	I	V		Methoxyethanol, 2-	109-86-4		2.1E+01
				V		Methyl Acetate	79-20-9		
		2.0E-02	P	V		Methyl Acrylate	96-33-3		2.1E+01
		5.0E+00	I	V		Methyl Ethyl Ketone (2-Butanone)	78-93-3		5.2E+03
1.0E-03	X	2.0E-05	X	V		Methyl Hydrazine	60-34-4	2.8E-03	2.1E-02
		3.0E+00	I	V		Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1		3.1E+03
		1.0E-03	C	V		Methyl Isocyanate	624-83-9		1.0E+00
		7.0E-01	I	V		Methyl Methacrylate	80-62-6		7.3E+02
						Methyl Parathion	298-00-0		
						Methyl Phosphonic Acid	993-13-5		
		4.0E-02	H	V		Methyl Styrene (Mixed Isomers)	25013-15-4		4.2E+01
2.8E-05	C					Methyl methanesulfonate	66-27-3	1.0E-01	
2.6E-07	C	3.0E+00	I	V		Methyl tert-Butyl Ether (MTBE)	1634-04-4	1.1E+01	3.1E+03
						Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2		
						Methyl-5-Nitroaniline, 2-	99-55-8		
2.4E-03	C					Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	1.2E-03	
3.7E-05	C					Methylaniline Hydrochloride, 2-	636-21-5	7.6E-02	
						Methylarsonic acid	124-58-3		
						Methylbenzene,1,4-diamine monohydrochloride, 2-	74612-12-7		
						Methylbenzene-1,4-diamine sulfate, 2-	615-50-9		
6.3E-03	C				M	Methylcholanthrene, 3-	56-49-5	1.6E-04	
1.0E-08	I	6.0E-01	I	V	M	Methylene Chloride	75-09-2	1.0E+02	6.3E+02
4.3E-04	C				M	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	2.4E-03	
1.3E-05	C					Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	2.2E-01	
4.6E-04	C	2.0E-02	C			Methylenebisbenzenamine, 4,4'-	101-77-9	6.1E-03	2.1E+01
		6.0E-04	I			Methylenediphenyl Diisocyanate	101-68-8		6.3E-01
				V		Methylstyrene, Alpha-	98-83-9		
						Metolachlor	51218-45-2		
						Metribuzin	21087-64-9		
						Metsulfuron-methyl	74223-64-6		
				V		Mineral oils	8012-95-1		
5.1E-03	C			V		Mirex	2385-85-5	5.5E-04	
						Molinate	2212-67-1		
						Molybdenum	7439-98-7		
						Monochloramine	10599-90-3		
						Monomethylaniline	100-61-8		
						Myclobutanil	88671-89-0		
						N,N'-Diphenyl-1,4-benzenediamine	74-31-7		
				V		Naled	300-76-5		
		1.0E-01	P	V		Naphtha, High Flash Aromatic (HFAN)	64742-95-6		1.0E+02
0.0E+00	C					Naphthylamine, 2-	91-59-8		
						Napropamide	15299-99-7		
2.6E-04	C	1.4E-05	C			Nickel Acetate	373-02-4	1.1E-02	1.5E-02
2.6E-04	C	1.4E-05	C			Nickel Carbonate	3333-67-3	1.1E-02	1.5E-02
2.6E-04	C	1.4E-05	C	V		Nickel Carbonyl	13463-39-3	1.1E-02	1.5E-02
2.6E-04	C	1.4E-05	C			Nickel Hydroxide	12054-48-7	1.1E-02	1.5E-02
2.6E-04	C	2.0E-05	C			Nickel Oxide	1313-99-1	1.1E-02	2.1E-02

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR $(ug/m^3)^{-1}$	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 $(\mu g/m^3)$
2.4E-04	I	1.4E-05	C			Nickel Refinery Dust	NA	1.2E-02	1.5E-02
2.6E-04	C	9.0E-05	A			Nickel Soluble Salts	7440-02-0	1.1E-02	9.4E-02
4.8E-04	I	1.4E-05	C			Nickel Subsulfide	12035-72-2	5.8E-03	1.5E-02
2.6E-04	C	1.4E-05	C			Nickelocene	1271-28-9	1.1E-02	1.5E-02
						Nitrate	14797-55-8		
						Nitrate + Nitrite (as N)	NA		
						Nitrite	14797-65-0		
		5.0E-05	X			Nitroaniline, 2-	88-74-4		5.2E-02
		6.0E-03	P			Nitroaniline, 4-	100-01-6		6.3E+00
4.0E-05	I	9.0E-03	I	V		Nitrobenzene	98-95-3	7.0E-02	9.4E+00
						Nitrocellulose	9004-70-0		
						Nitrofurantoin	67-20-9		
3.7E-04	C					Nitrofurazone	59-87-0	7.6E-03	
						Nitroglycerin	55-63-0		
						Nitroguanidine	556-88-7		
8.8E-06	P	5.0E-03	P	V		Nitromethane	75-52-5	3.2E-01	5.2E+00
2.7E-03	H	2.0E-02	I	V		Nitropropane, 2-	79-46-9	1.0E-03	2.1E+01
7.7E-03	C				M	Nitroso-N-ethylurea, N-	759-73-9	1.3E-04	
3.4E-02	C				M	Nitroso-N-methylurea, N-	684-93-5	3.0E-05	
1.6E-03	I			V		Nitroso-di-N-butylamine, N-	924-16-3	1.8E-03	
2.0E-03	C					Nitroso-di-N-propylamine, N-	621-64-7	1.4E-03	
8.0E-04	C					Nitrosodiethanolamine, N-	1116-54-7	3.5E-03	
4.3E-02	I				M	Nitrosodiethylamine, N-	55-18-5	2.4E-05	
1.4E-02	I	4.0E-05	X	V	M	Nitrosodimethylamine, N-	62-75-9	7.2E-05	4.2E-02
2.6E-06	C					Nitrosodiphenylamine, N-	86-30-6	1.1E+00	
6.3E-03	C			V		Nitrosomethylethylamine, N-	10595-95-6	4.5E-04	
1.9E-03	C					Nitrosomorpholine [N-]	59-89-2	1.5E-03	
2.7E-03	C					Nitrosopiperidine [N-]	100-75-4	1.0E-03	
6.1E-04	I					Nitrosopyrrolidine, N-	930-55-2	4.6E-03	
						Nitrotoluene, m-	99-08-1		
				V		Nitrotoluene, o-	88-72-2		
						Nitrotoluene, p-	99-99-0		
		2.0E-02	P	V		Nonane, n-	111-84-2		2.1E+01
						Norflurazon	27314-13-2		
						Octabromodiphenyl Ether	32536-52-0		
						Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0		
						Octamethylpyrophosphoramide	152-16-9		
						Oryzalin	19044-88-3		
						Oxadiazon	19666-30-9		
						Oxamyl	23135-22-0		
						Oxyfluorfen	42874-03-3		
						Paclobutrazol	76738-62-0		
						Paraquat Dichloride	1910-42-5		
						Parathion	56-38-2		
				V		Pebulate	1114-71-2		
						Pendimethalin	40487-42-1		
				V		Pentabromodiphenyl Ether	32534-81-9		
						Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9		
				V		Pentachlorobenzene	608-93-5		
				V		Pentachloroethane	76-01-7		
				V		Pentachloronitrobenzene	82-68-8		
5.1E-06	C					Pentachlorophenol	87-86-5	5.5E-01	
						Pentaerythritol tetranitrate (PETN)	78-11-5		
		1.0E+00	P	V		Pentane, n-	109-66-0		1.0E+03
						Perchlorates			
						~Ammonium Perchlorate	7790-98-9		
						~Lithium Perchlorate	7791-03-9		
						~Perchlorate and Perchlorate Salts	14797-73-0		
						~Potassium Perchlorate	7778-74-7		
						~Sodium Perchlorate	7601-89-0		
				V		Perfluorobutane Sulfonate	375-73-5		
						Permethrin	52645-53-1		
6.3E-07	C					Phenacetin	62-44-2	4.5E+00	
						Phenmedipham	13684-63-4		
		2.0E-01	C			Phenol	108-95-2		2.1E+02
						Phenothiazine	92-84-2		
						Phenylenediamine, m-	108-45-2		
						Phenylenediamine, o-	95-54-5		

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
						Phenylenediamine, p-	106-50-3		
						Phenylphenol, 2-	90-43-7		
						Phorate	298-02-2		
		3.0E-04	I	V		Phosgene	75-44-5		3.1E-01
						Phosmet	732-11-6		
						Phosphates, Inorganic			
						~Aluminum metaphosphate	13776-88-0		
						~Ammonium polyphosphate	68333-79-9		
						~Calcium pyrophosphate	7790-76-3		
						~Diammonium phosphate	7783-28-0		
						~Dicalcium phosphate	7757-93-9		
						~Dimagnesium phosphate	7782-75-4		
						~Dipotassium phosphate	7758-11-4		
						~Disodium phosphate	7558-79-4		
						~Monoaluminum phosphate	13530-50-2		
						~Monoammonium phosphate	7722-76-1		
						~Monocalcium phosphate	7758-23-8		
						~Monomagnesium phosphate	7757-86-0		
						~Monopotassium phosphate	7778-77-0		
						~Monosodium phosphate	7558-80-7		
						~Polyphosphoric acid	8017-16-1		
						~Potassium tripolyphosphate	13845-36-8		
						~Sodium acid pyrophosphate	7758-16-9		
						~Sodium aluminum phosphate (acidic)	7785-88-8		
						~Sodium aluminum phosphate (anhydrous)	10279-59-1		
						~Sodium aluminum phosphate (tetrahydrate)	10305-76-7		
						~Sodium hexametaphosphate	10124-56-8		
						~Sodium polyphosphate	68915-31-1		
						~Sodium trimetaphosphate	7785-84-4		
						~Sodium tripolyphosphate	7758-29-4		
						~Tetrapotassium phosphate	7320-34-5		
						~Tetrasodium pyrophosphate	7722-88-5		
						~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5		
						~Tricalcium phosphate	7758-87-4		
						~Trimagnesium phosphate	7757-87-1		
						~Tripotassium phosphate	7778-53-2		
						~Trisodium phosphate	7601-54-9		
		3.0E-04	I	V		Phosphine	7803-51-2		3.1E-01
		1.0E-02	I			Phosphoric Acid	7664-38-2		1.0E+01
				V		Phosphorus, White	7723-14-0		
						Phthalates			
2.4E-06	C					~Bis(2-ethylhexyl)phthalate	117-81-7	1.2E+00	
						~Butylphthalyl Butylglycolate	85-70-1		
						~Dibutyl Phthalate	84-74-2		
						~Diethyl Phthalate	84-66-2		
				V		~Dimethylterephthalate	120-61-6		
						~Octyl Phthalate, di-N-	117-84-0		
						~Phthalic Acid, P-	100-21-0		
		2.0E-02	C			~Phthalic Anhydride	85-44-9		2.1E+01
						Picloram	1918-02-1		
						Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3		
						Picric Acid (2,4,6-Trinitrophenol)	88-89-1		
						Pirimiphos, Methyl	29232-93-7		
8.6E-03	C					Polybrominated Biphenyls	59536-65-1	3.3E-04	
						Polychlorinated Biphenyls (PCBs)			
2.0E-05	S			V		~Aroclor 1016	12674-11-2	1.4E-01	
5.7E-04	S			V		~Aroclor 1221	11104-28-2	4.9E-03	
5.7E-04	S			V		~Aroclor 1232	11141-16-5	4.9E-03	
5.7E-04	S			V		~Aroclor 1242	53469-21-9	4.9E-03	
5.7E-04	S			V		~Aroclor 1248	12672-29-6	4.9E-03	
5.7E-04	S			V		~Aroclor 1254	11097-69-1	4.9E-03	
5.7E-04	S			V		~Aroclor 1260	11096-82-5	4.9E-03	
				V		~Aroclor 5460	11126-42-4		
1.1E-03	E	1.3E-03	E	V		~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	2.5E-03	1.4E+00
1.1E-03	E	1.3E-03	E	V		~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	2.5E-03	1.4E+00
1.1E-03	E	1.3E-03	E	V		~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	2.5E-03	1.4E+00
1.1E-03	E	1.3E-03	E	V		~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	2.5E-03	1.4E+00
1.1E+00	E	1.3E-06	E	V		~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	2.5E-06	1.4E-03

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
1.1E-03	E	1.3E-03	E	V		~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	2.5E-03	1.4E+00
1.1E-03	E	1.3E-03	E	V		~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	2.5E-03	1.4E+00
1.1E-03	E	1.3E-03	E	V		~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	2.5E-03	1.4E+00
1.1E-03	E	1.3E-03	E	V		~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	2.5E-03	1.4E+00
3.8E+00	E	4.0E-07	E	V		~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	7.4E-07	4.2E-04
5.7E-04	I			V		~Polychlorinated Biphenyls (high risk)	1336-36-3	4.9E-03	
1.0E-04	I			V		~Polychlorinated Biphenyls (low risk)	1336-36-3	2.8E-02	
2.0E-05	I			V		~Polychlorinated Biphenyls (lowest risk)	1336-36-3	1.4E-01	
3.8E-03	E	4.0E-04	E			~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	7.4E-04	4.2E-01
1.1E-02	E	1.3E-04	E	V		~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	2.5E-04	1.4E-01
		6.0E-04	I			Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9		6.3E-01
						Polynuclear Aromatic Hydrocarbons (PAHs)			
				V		~Acenaphthene	83-32-9		
				V		~Anthracene	120-12-7		
1.1E-04	C			V	M	~Benz[a]anthracene	56-55-3	9.2E-03	
1.1E-04	C					~Benzo(j)fluoranthene	205-82-3	2.6E-02	
1.1E-03	C				M	~Benzo[a]pyrene	50-32-8	9.2E-04	
1.1E-04	C				M	~Benzo[b]fluoranthene	205-99-2	9.2E-03	
1.1E-04	C				M	~Benzo[k]fluoranthene	207-08-9	9.2E-03	
				V		~Chloronaphthalene, Beta-	91-58-7		
1.1E-05	C				M	~Chrysene	218-01-9	9.2E-02	
1.2E-03	C				M	~Dibenz[a,h]anthracene	53-70-3	8.4E-04	
1.1E-03	C					~Dibenzo(a,e)pyrene	192-65-4	2.6E-03	
7.1E-02	C				M	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	1.4E-05	
						~Fluoranthene	206-44-0		
				V		~Fluorene	86-73-7		
1.1E-04	C				M	~Indeno[1,2,3-cd]pyrene	193-39-5	9.2E-03	
				V		~Methylnaphthalene, 1-	90-12-0		
				V		~Methylnaphthalene, 2-	91-57-6		
3.4E-05	C	3.0E-03	I	V		~Naphthalene	91-20-3	8.3E-02	3.1E+00
1.1E-04	C					~Nitropyrene, 4-	57835-92-4	2.6E-02	
				V		~Pyrene	129-00-0		
						Potassium Perfluorobutane Sulfonate	29420-49-3		
						Prochloraz	67747-09-5		
				V		Profluralin	26399-36-0		
						Prometon	1610-18-0		
						Prometryn	7287-19-6		
						Propachlor	1918-16-7		
						Propanediol, 1,2-	114-26-1		
						Propanil	709-98-8		
						Propargite	2312-35-8		
				V		Propargyl Alcohol	107-19-7		
						Propazine	139-40-2		
						Propham	122-42-9		
						Propiconazole	60207-90-1		
		8.0E-03	I	V		Propionaldehyde	123-38-6		8.3E+00
		1.0E+00	X	V		Propyl benzene	103-65-1		1.0E+03
		3.0E+00	C	V		Propylene	115-07-1		3.1E+03
						Propylene Glycol	57-55-6		
		2.7E-04	A			Propylene Glycol Dinitrate	6423-43-4		2.8E-01
		2.0E+00	I	V		Propylene Glycol Monomethyl Ether	107-98-2		2.1E+03
3.7E-06	I	3.0E-02	I	V		Propylene Oxide	75-56-9	7.6E-01	3.1E+01
						Propyzamide	23950-58-5		
				V		Pyridine	110-86-1		
						Quinalphos	13593-03-8		
						Quinoline	91-22-5		
						Quizalofop-ethyl	76578-14-8		
		3.0E-02	A			Refractory Ceramic Fibers	NA		3.1E+01
						Resmethrin	10453-86-8		
				V		Ronnel	299-84-3		
						Rotenone	83-79-4		
6.3E-05	C				M	Safrole	94-59-7	1.6E-02	
						Selenious Acid	7783-00-8		
		2.0E-02	C			Selenium	7782-49-2		2.1E+01
		2.0E-02	C			Selenium Sulfide	7446-34-6		2.1E+01
						Sethoxydim	74051-80-2		
		3.0E-03	C			Silica (crystalline, respirable)	7631-86-9		3.1E+00
						Silver	7440-22-4		

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
						Simazine	122-34-9		
						Sodium Acifluorfen	62476-59-9		
						Sodium Azide	26628-22-8		
1.5E-01	C	2.0E-04	C		M	Sodium Dichromate	10588-01-9	6.8E-06	2.1E-01
						Sodium Diethyldithiocarbamate	148-18-5		
		1.3E-02	C			Sodium Fluoride	7681-49-4		1.4E+01
						Sodium Fluoroacetate	62-74-8		
						Sodium Metavanadate	13718-26-8		
						Sodium Tungstate	13472-45-2		
						Sodium Tungstate Dihydrate	10213-10-2		
						Stirofos (Tetrachlorovinphos)	961-11-5		
1.5E-01	C	2.0E-04	C		M	Strontium Chromate	7789-06-2	6.8E-06	2.1E-01
						Strontium, Stable	7440-24-6		
						Strychnine	57-24-9		
		1.0E+00	I	V		Styrene	100-42-5		1.0E+03
						Styrene-Acrylonitrile (SAN) Trimer	NA		
		2.0E-03	X			Sulfolane	126-33-0		2.1E+00
						Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9		
		1.0E-03	C	V		Sulfur Trioxide	7446-11-9		1.0E+00
		1.0E-03	C			Sulfuric Acid	7664-93-9		1.0E+00
7.1E-06	I					Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	4.0E-01	
						TCMTB	21564-17-0		
						Tebuthiuron	34014-18-1		
						Temephos	3383-96-8		
						Terbacil	5902-51-2		
				V		Terbufos	13071-79-9		
						Terbutryn	886-50-0		
						Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1		
				V		Tetrachlorobenzene, 1,2,4,5-	95-94-3		
7.4E-06	I			V		Tetrachloroethane, 1,1,1,2-	630-20-6	3.8E-01	
5.8E-05	C			V		Tetrachloroethane, 1,1,2,2-	79-34-5	4.8E-02	
2.6E-07	I	4.0E-02	I	V		Tetrachloroethylene	127-18-4	1.1E+01	4.2E+01
						Tetrachlorophenol, 2,3,4,6-	58-90-2		
				V		Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1		
						Tetraethyl Dithiopyrophosphate	3689-24-5		
		8.0E+01	I	V		Tetrafluoroethane, 1,1,1,2-	811-97-2		8.3E+04
						Tetryl (Trinitrophenylmethylnitramine)	479-45-8		
						Thallium (I) Nitrate	10102-45-1		
						Thallium (Soluble Salts)	7440-28-0		
				V		Thallium Acetate	563-68-8		
				V		Thallium Carbonate	6533-73-9		
						Thallium Chloride	7791-12-0		
						Thallium Sulfate	7446-18-6		
						Thifensulfuron-methyl	79277-27-3		
						Thiobencarb	28249-77-6		
						Thiodiglycol	111 48 8		
						Thiofanox	39196-18-4		
						Thiophanate, Methyl	23564-05-8		
						Thiram	137-26-8		
						Tin	7440-31-5		
		1.0E-04	A	V		Titanium Tetrachloride	7550-45-0		1.0E-01
		5.0E+00	I	V		Toluene	108-88-3		5.2E+03
						Toluene-2,5-diamine	95-70-5		
						Toluidine, p-	106-49-0		
				V		Total Petroleum Hydrocarbons (Aliphatic High)	NA		
		6.0E-01	P	V		Total Petroleum Hydrocarbons (Aliphatic Low)	NA		6.3E+02
		1.0E-01	P	V		Total Petroleum Hydrocarbons (Aliphatic Medium)	NA		1.0E+02
						Total Petroleum Hydrocarbons (Aromatic High)	NA		
		3.0E-02	P	V		Total Petroleum Hydrocarbons (Aromatic Low)	NA		3.1E+01
		3.0E-03	P	V		Total Petroleum Hydrocarbons (Aromatic Medium)	NA		3.1E+00
3.2E-04	I					Toxaphene	8001-35-2	8.8E-03	
						Tralomethrin	66841-25-6		
				V		Tri-n-butyltin	688-73-3		
						Triacetin	102-76-1		
						Triadimefon	43121-43-3		
				V		Triallate	2303-17-5		
						Triasulfuron	82097-50-5		
						Tribenuron-methyl	101200-48-0		

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Toxicity and Chemical-specific							Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen		Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
				V			Tribromobenzene, 1,2,4-	615-54-3		
							Tributyl Phosphate	126-73-8		
							Tributyltin Compounds	NA		
							Tributyltin Oxide	56-35-9		
		3.0E+01	H	V			Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1		3.1E+04
							Trichloroacetic Acid	76-03-9		
							Trichloroaniline HCl, 2,4,6-	33663-50-2		
							Trichloroaniline, 2,4,6-	634-93-5		
				V			Trichlorobenzene, 1,2,3-	87-61-6		
		2.0E-03	P	V			Trichlorobenzene, 1,2,4-	120-82-1		2.1E+00
		5.0E+00	I	V			Trichloroethane, 1,1,1-	71-55-6		5.2E+03
1.6E-05	I	2.0E-04	X	V			Trichloroethane, 1,1,2-	79-00-5	1.8E-01	2.1E-01
4.1E-06	I	2.0E-03	I	V	M		Trichloroethylene	79-01-6	4.8E-01	2.1E+00
				V			Trichlorofluoromethane	75-69-4		
							Trichlorophenol, 2,4,5-	95-95-4		
3.1E-06	I						Trichlorophenol, 2,4,6-	88-06-2	9.1E-01	
							Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5		
							Trichlorophenoxypropionic acid, -2,4,5	93-72-1		
				V			Trichloropropane, 1,1,2-	598-77-6		
		3.0E-04	I	V	M		Trichloropropane, 1,2,3-	96-18-4		3.1E-01
		3.0E-04	P	V			Trichloropropene, 1,2,3-	96-19-5		3.1E-01
							Tricresyl Phosphate (TCP)	1330-78-5		
							Tridiphane	58138-08-2		
		7.0E-03	I	V			Triethylamine	121-44-8		7.3E+00
							Triethylene Glycol	112-27-6		
		2.0E+01	P	V			Trifluoroethane, 1,1,1-	420-46-2		2.1E+04
				V			Trifluralin	1582-09-8		
							Trimethyl Phosphate	512-56-1		
		5.0E-03	P	V			Trimethylbenzene, 1,2,3-	526-73-8		5.2E+00
		7.0E-03	P	V			Trimethylbenzene, 1,2,4-	95-63-6		7.3E+00
				V			Trimethylbenzene, 1,3,5-	108-67-8		
				V			Trimethylpentene, 2,4,4-	25167-70-8		
							Trinitrobenzene, 1,3,5-	99-35-4		
							Trinitrotoluene, 2,4,6-	118-96-7		
							Triphenylphosphine Oxide	791-28-6		
							Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8		
							Tris(1-chloro-2-propyl)phosphate	13674-84-5		
6.6E-04	C			V			Tris(2,3-dibromopropyl)phosphate	126-72-7	4.3E-03	
							Tris(2-chloroethyl)phosphate	115-96-8		
							Tris(2-ethylhexyl)phosphate	78-42-2		
							Tungsten	7440-33-7		
		4.0E-05	A				Uranium (Soluble Salts)	NA		4.2E-02
2.9E-04	C				M		Urethane	51-79-6	3.5E-03	
8.3E-03	P	7.0E-06	P				Vanadium Pentoxide	1314-62-1	3.4E-04	7.3E-03
		1.0E-04	A				Vanadium and Compounds	7440-62-2		1.0E-01
				V			Vernolate	1929-77-7		
							Vinclozolin	50471-44-8		
		2.0E-01	I	V			Vinyl Acetate	108-05-4		2.1E+02
3.2E-05	H	3.0E-03	I	V			Vinyl Bromide	593-60-2	8.8E-02	3.1E+00
4.4E-06	I	1.0E-01	I	V	M		Vinyl Chloride	75-01-4	1.7E-01	1.0E+02
							Warfarin	81-81-2		
		1.0E-01	S	V			Xylene, P-	106-42-3		1.0E+02
		1.0E-01	S	V			Xylene, m-	108-38-3		1.0E+02
		1.0E-01	S	V			Xylene, o-	95-47-6		1.0E+02
		1.0E-01	I	V			Xylenes	1330-20-7		1.0E+02
							Zinc Phosphide	1314-84-7		
							Zinc and Compounds	7440-66-6		
							Zineb	12122-67-7		
							Zirconium	7440-67-7		

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR (μg/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (μg/L)	Dermal SL TR=1E-06 (μg/L)	Inhalation SL TR=1E-06 (μg/L)	Carcinogenic SL TR=1E-06 (μg/L)	Ingestion SL Child THQ=1 (μg/L)	Dermal SL Child THQ=1 (μg/L)	SL Child THQ=1 (μg/L)	Noncarcinogenic SL Child THI=1 (μg/L)	MCL (μg/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
8.7E-03	I			4.0E-03	I					-0.85	1	1	Yes	Acephate	30560-19-1	9.0E+00	1.2E+04		8.9E+00	8.0E+01	1.1E+05		8.0E+01		2.0E-03	
		2.2E-06	I			9.0E-03	I	V		-0.34	1	1	Yes	Acetaldehyde	75-07-0			2.6E+00	2.6E+00			1.9E+01	1.9E+01		5.2E-04	
				2.0E-02	I					3.03	1	0.9	Yes	Acetochlor	34256-82-1					4.0E+02	2.9E+03		3.5E+02		2.8E-01	
				9.0E-01	I	3.1E+01	A	V		-0.24	1	1	Yes	Acetone	67-64-1					1.8E+04	4.4E+06	6.4E+04	1.4E+04		2.9E+00	
						2.0E-03	X			-0.03	1	1	Yes	Acetone Cyanohydrin	75-86-5											
						6.0E-02	I	V		-0.34	1	1	Yes	Acetonitrile	75-05-8							1.3E+02	1.3E+02		2.6E-02	
				1.0E-01	I			V		1.58	1	1	Yes	Acetophenone	98-86-2					2.0E+03	4.6E+04		1.9E+03		5.8E-01	
3.8E+00	C	1.3E-03	C							3.12	1	1	Yes	Acetylaminofluorene, 2-	53-96-3	2.1E-02	6.7E-02		1.6E-02						7.2E-05	
				5.0E-04	I	2.0E-05	I	V		-0.01	1	1	Yes	Acrolein	107-02-8					1.0E+01	1.7E+03	4.2E-02	4.2E-02		8.4E-06	
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	-0.67	1	1	Yes	Acrylamide	79-06-1	5.0E-02	2.3E+01		5.0E-02	4.0E+01	2.1E+04		4.0E+01		1.1E-05	
				5.0E-01	I	1.0E-03	I	V		0.35	1	1	Yes	Acrylic Acid	79-10-7					1.0E+04	1.1E+06	2.1E+00	2.1E+00		4.2E-04	
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		0.25	1	1	Yes	Acrylonitrile	107-13-1	1.4E-01	1.4E+01	8.3E-02	5.2E-02	8.0E+02	8.9E+04	4.2E+00	4.1E+00		1.1E-05	
						6.0E-03	P			-0.32	1	1	Yes	Adiponitrile	111-69-3											
5.6E-02	C			1.0E-02	I					3.52	1	0.9	Yes	Alachlor	15972-60-8	1.4E+00	4.4E+00		1.1E+00	2.0E+02	6.9E+02		1.6E+02	2.0E+00	8.7E-04	1.7E-03
				1.0E-03	I					1.13	1	1	Yes	Aldicarb	116-06-3					2.0E+01	1.4E+03		2.0E+01	3.0E+00	4.9E-03	7.5E-04
				1.0E-03	I					-0.57	1	1	Yes	Aldicarb Sulfone	1646-88-4					2.0E+01	2.4E+04		2.0E+01	2.0E+00	4.4E-03	4.4E-04
										-0.78	1	1	Yes	Aldicarb sulfoxide	1646-87-3									4.0E+00		8.8E-04
1.7E+01	I	4.9E-03	I	3.0E-05	I			V		6.5	1	1	No	Aldrin	309-00-2	4.6E-03		1.1E-03	9.2E-04	6.0E-01			6.0E-01		1.5E-04	
				5.0E-03	I	1.0E-04	X	V		0.17	1	1	Yes	Allyl Alcohol	107-18-6					1.0E+02	1.3E+04	2.1E-01	2.1E-01		4.2E-05	
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1.93	1	1	Yes	Allyl Chloride	107-05-1	3.7E+00	3.5E+01	9.4E-01	7.3E-01			2.1E+00	2.1E+00		2.3E-04	
				1.0E+00	P	5.0E-03	P				1	1	Yes	Aluminum	7429-90-5					2.0E+04	4.6E+06		2.0E+04		3.0E+04	
				4.0E-04	I						1	1	Yes	Aluminum Phosphide	20859-73-8					8.0E+00	1.8E+03		8.0E+00			
				9.0E-03	I					2.98	1	1	Yes	Ametryn	834-12-8					1.8E+02	9.8E+02		1.5E+02		1.6E-01	
2.1E+01	C	6.0E-03	C							2.86	1	1	Yes	Aminobiphenyl, 4-	92-67-1	3.7E-03	1.5E-02		3.0E-03						1.5E-05	
				8.0E-02	P					0.21	1	1	Yes	Aminophenol, m-	591-27-5					1.6E+03	2.8E+05		1.6E+03		6.1E-01	
				2.0E-02	P					0.04	1	1	Yes	Aminophenol, p-	123-30-8					4.0E+02	9.1E+04		4.0E+02		1.5E-01	
				2.5E-03	I					5.5	1	0.9	Yes	Amitraz	33089-61-1					5.0E+01	9.8E+00		8.2E+00		4.2E+00	
						1.0E-01	I	V		0.23	1	1		Ammonia	7664-41-7											
				2.0E-01	I						1	1	Yes	Ammonium Sulfamate	7773-06-0					4.0E+03	9.1E+05		4.0E+03			
						3.0E-03	X	V		0.89	1	1	Yes	Amyl Alcohol, tert-	75-85-4							6.3E+00	6.3E+00		1.3E-03	
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I			0.9	1	1	Yes	Aniline	62-53-3	1.4E+01	6.9E+02		1.3E+01	1.4E+02	7.7E+03		1.4E+02		4.6E-03	
4.0E-02	P			2.0E-03	X					3.39	1	0.9	Yes	Anthraquinone, 9,10-	84-65-1	1.9E+00	5.1E+00		1.4E+00	4.0E+01	1.1E+02		3.0E+01		1.4E-02	
				4.0E-04	I						0.15	1	Yes	Antimony (metallic)	7440-36-0					8.0E+00	2.7E+02		7.8E+00	6.0E+00	3.5E-01	2.7E-01
				5.0E-04	H						0.15	1	Yes	Antimony Pentoxide	1314-60-9					1.0E+01	3.4E+02		9.7E+00			
				4.0E-04	H						0.15	1	Yes	Antimony Tetroxide	1332-81-6					8.0E+00	2.7E+02		7.8E+00			
						2.0E-04	I				0.15	1	Yes	Antimony Trioxide	1309-64-4											
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C				1	1	Yes	Arsenic, Inorganic	7440-38-2	5.2E-02	9.7E+00		5.2E-02	6.0E+00	1.4E+03		6.0E+00	1.0E+01	1.5E-03	2.9E-01
				3.5E-06	C	5.0E-05	I				1	1	Yes	Arsine	7784-42-1					7.0E-02	1.6E+01		7.0E-02			
				5.0E-02	I					-0.27	1	1	Yes	Asulam	3337-71-1					1.0E+03	8.0E+05		1.0E+03		2.6E-01	
2.3E-01	C			3.5E-02	I					2.61	1	1	Yes	Atrazine	1912-24-9	3.4E-01	2.8E+00		3.0E-01	7.0E+02	6.2E+03		6.3E+02	3.0E+00	2.0E-04	2.0E-03
8.8E-01	C	2.5E-04	C							2.98	1	0.9	Yes	Auramine	492-80-8	8.9E-02	2.7E-01		6.7E-02						6.1E-04	
				4.0E-04	I					4.48	1	1	No	Avermectin B1	65195-55-3					8.0E+00			8.0E+00		1.4E+01	
				3.0E-03	A	1.0E-02	A			2.75	1	1	Yes	Azinphos-methyl	86-50-0					6.0E+01	8.3E+02		5.6E+01		1.7E-02	
1.1E-01	I	3.1E-05	I					V		3.82	1	1	Yes	Azobenzene	103-33-3	7.1E-01	7.3E-01	1.8E-01	1.2E-01						9.3E-04	
				1.0E+00	P	7.0E-06	P			-1.7	1	1	Yes	Azodicarbonamide	123-77-3					2.0E+04	6.8E+07		2.0E+04		6.8E+00	
				2.0E-01	I	5.0E-04	H				0.07	1	Yes	Barium	7440-39-3					4.0E+03	6.4E+04		3.8E+03	2.0E+03	1.6E+02	8.2E+01
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Barium Chromate	10294-40-3	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
				3.0E-01	I			V		5.29	1	0.8	Yes	Benfluralin	1861-40-1					6.0E+03	2.4E+03		1.7E+03		5.6E+01	
				5.0E-02	I					2.12	1	1	Yes	Benomyl	17804-35-2					1.0E+03	3.0E+04		9.7E+02		8.5E-01	
				2.0E-01	I					2.18	1	1	Yes	Bensulfuron-methyl	83055-99-6					4.0E+03	2.4E+05		3.9E+03		1.0E+00	
				3.0E-02	I					2.34	1	1	Yes	Bentazon	25057-89-0					6.0E+02	9.4E+03		5.7E+02		1.2E-01	
				1.0E-01	I			V		1.48	1	1	Yes	Benzaldehyde	100-52-7					2.0E+03	4.9E+04		1.9E+03		4.3E-01	
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		2.13	1	1	Yes	Benzene	71-43-2	1.4E+00	9.8E+00	7.2E-01	4.6E-01	8.0E+01	6.1E+02	6.3E+01	3.3E+01	5.0E+00	2.3E-04	2.6E-03
1.0E-01	X			3.0E-04	X					-3.727	1	1	No	Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	7.8E-01			7.8E-01	6.0E+00			6.0E+00		2.2E-04	
				1.0E-03	P			V		2.52	1	1	Yes	Benzenethiol	108-98-5					2.0E+01	1.0E+02		1.7E+01		1.1E-02	
2.3E+02	I	6.7E-02	I	3.0E-03	I				M	1.34	1	1	Yes	Benzidine	92-87-5	1.1E-04	5.0E-03		1.1E-04	6.0E+01	3.0E+03		5.9E+01		2.8E-07	
				4.0E+00	I					1.87	1	1	Yes	Benzoic Acid	65-85-0					8.0E+04	1.2E+06		7.5E+04		1.8E+01	
1.3E+01	I							V		3.9	1	1	Yes	Benzotrichloride	98-07-7	6.0E-03	6.0E-03		3.0E-03						6.6E-06	
				1.0E-01	P					1.1	1	1	Yes	Benzyl Alcohol	100-51-6					2.0E+03	8.9E+04		2.0E+03		4.8E-01	
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		2.3	1	1	Yes	Benzyl Chloride	100-44-7	4.6E-01	3.4E+00	1.1E-01	8.9E-02	4.0E+01	3.2E+02	2.1E+00	2.0E+00		9.8E-05	
		2.4E-03	I	2.0E-03	I	2.0E-05	I				0.007	1	Yes	Beryllium and compounds	7440-41-7					4.0E+01	6.4E+01		2.5E+01	4.0E+00	2.0E+01	3.2E+00
				9.0E-03	P					4.48	1	0.9	Yes	Bifenox	42576-02-3					1.8E+02	2.3E+02		1.0E+02		7.6E-01	
				1.5E-02	I					6	1	0	Yes	Biphenthrin	82657-04-3					3.0E+02			3.0E+02		1.4E+03	
8.0E-03	I			5.0E-01	I	4.0E-04	X	V		4.01	1	1	Yes	Biphenyl, 1,1'-	92-52-4	9.7E+00	6.5E+00		3.9E+00	1.0E+04	7.3E+03	8.3E-01	8.3E-01		8.7E-03	
				4.0E-02	I			V		2.48	1	1	Yes	Bis(2-chloro-1-methylethyl) ether	108-60-1					8.0E+02	6.5E+03		7.1E+02		2.6E-01	
				3.0E-03	P					1.3	1	1	Yes	Bis(2-chloroethoxy)methane	111-91-1					6.0E+01	3.0E+03		5.9E+01		1.4E-02	
1.1E+00	I	3.3E-04	I					V		1.29	1	1	Yes	Bis(2-chloroethyl)ether	111-44-4	7.1E-02	2.7E+00	1.7E-02	1.4E-02						3.6E-06	
2.2E+02	I	6.2E-02	I					V		0.57	1	1	Yes	Bis(chloromethyl)ether	542-88-1	3.5E-04	3.4E-02	9.1E-05	7.2E-05						1.7E-08	
				5.0E-02	I					3.32	1	1	Yes	Bisphenol A	80-05-7					1.0E+03	3.2E+03		7.7E+02		5.8E+01	
				2.0E-01	I	2.0E-02	H				1	1	Yes	Boron And Borates Only	7440-42-8					4.0E+03	9.1E+05		4.0E+03		1.3E+01	
				2.0E+00	P	2.0E-02	P	V		1.16	1	1	Yes	Boron Trichloride	10294-34-5					4.0E+04	9.1E+06	4.2E+01	4.2E+01			
				4.0E-02	C	1.3E-02	C	V		0.22	1	1	Yes	Boron Trifluoride	7637-07-2					8.0E+02	1.8E+05	2.7E+01	2.6E+01			
7.0E-01	I			4.0E-03	I						1	1	Yes	Bromate	15541-45-4	1.1E-01	2.1E+01		1.1E-01	8.0E+01	1.8E+04		8.0E+01	1.0E+01	8.5E-04	7.7E-02
2.0E+00	X	6.0E-04	X					V		1.92	1	1	Yes	Bromo-2-chloroethane, 1-	107-04-0	3.9E-02	5.7E-01	9.4E-03	7.4E-03						2.1E-06	
				8.0E-03	I	6.0E-02	I	V		2.99	1	1	Yes	Bromobenzene	108-86-1					1.6E+02	5.4E+02	1.3E+02	6.2E+01		4.2E-02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 ($\mu g/L$)	Dermal SL TR=1E-06 ($\mu g/L$)	Inhalation SL TR=1E-06 ($\mu g/L$)	Carcinogenic SL TR=1E-06 ($\mu g/L$)	Ingestion SL Child THQ=1 ($\mu g/L$)	Dermal SL Child THQ=1 ($\mu g/L$)	SL Child THQ=1 ($\mu g/L$)	Noncarcinogenic SL Child THI=1 ($\mu g/L$)	MCL ($\mu g/L$)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
						4.0E-02	X	V		1.41	1	1	Yes	Bromochloromethane	74-97-5							8.3E+01	8.3E+01		2.1E-02	
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		2	1	1	Yes	Bromodichloromethane	75-27-4	1.3E+00	1.9E+01	1.5E-01	1.3E-01	4.0E+02	6.5E+03		3.8E+02	8.0E+01(F)	3.7E-05	2.2E-02
7.9E-03	I	1.1E-06	I	2.0E-02	I			V		2.4	1	1	Yes	Bromoform	75-25-2	9.9E+00	1.4E+02	5.1E+00	3.3E+00	4.0E+02	6.2E+03		3.8E+02	8.0E+01(F)	8.7E-04	2.1E-02
				1.4E-03	I	5.0E-03	I	V		1.19	1	1	Yes	Bromomethane	74-83-9					2.8E+01	1.0E+03	1.0E+01	7.5E+00		1.9E-03	
				5.0E-03	H			V		5.21	1	0.8	Yes	Bromophos	2104-96-3					1.0E+02	5.5E+01		3.5E+01		1.5E-01	
				2.0E-02	I					2.8	1	0.9	Yes	Bromoxynil	1689-84-5					4.0E+02	1.8E+03		3.3E+02		2.8E-01	
				2.0E-02	I			V		5.4	1	0.8	Yes	Bromoxynil Octanoate	1689-99-2					4.0E+02	2.1E+02		1.4E+02		1.2E+00	
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1.99	1	1	Yes	Butadiene, 1,3-	106-99-0	2.3E-02	1.6E-01	1.9E-01	1.8E-02			4.2E+00	4.2E+00		9.9E-06	
				1.0E-01	I			V		0.88	1	1	Yes	Butanol, N-	71-36-3					2.0E+03	1.0E+05		2.0E+03		4.1E-01	
1.9E-03	P			2.0E-01	I					4.73	1	0.9	Yes	Butyl Benzyl Phthalate	85-68-7	4.1E+01	2.7E+01		1.6E+01	4.0E+03	2.9E+03		1.7E+03		2.4E-01	
				2.0E+00	P	3.0E+01	P	V		0.61	1	1	Yes	Butyl alcohol, sec-	78-92-2					4.0E+04	3.0E+06	6.3E+04	2.4E+04		5.0E+00	
				5.0E-02	I			V		4.15	1	1	Yes	Butylate	2008-41-5					1.0E+03	8.5E+02		4.6E+02		4.5E-01	
2.0E-04	C	5.7E-08	C							3.5	1	0.8	Yes	Butylated hydroxyanisole	25013-16-5	3.9E+02	2.5E+02		1.5E+02						2.9E-01	
3.6E-03	P			3.0E-01	P					5.1	1	1	Yes	Butylated hydroxytoluene	128-37-0	2.2E+01	4.0E+00		3.4E+00	6.0E+03	1.2E+03		1.0E+03		1.0E-01	
				5.0E-02	P			V		4.38	1	1	No	Butylbenzene, n-	104-51-8					1.0E+03			1.0E+03		3.2E+00	
				1.0E-01	X			V		4.57	1	1	No	Butylbenzene, sec-	135-98-8					2.0E+03			2.0E+03		5.9E+00	
				1.0E-01	X			V		4.11	1	1	Yes	Butylbenzene, tert-	98-06-6					2.0E+03	1.1E+03		6.9E+02		1.6E+00	
				2.0E-02	A					0.36	1	1	Yes	Cacodylic Acid	75-60-5					4.0E+02	6.7E+04		4.0E+02		1.2E-01	
		1.8E-03	I	1.0E-03	I	1.0E-05	A				0.025	1		Cadmium (Diet)	7440-43-9											
		1.8E-03	I	5.0E-04	I	1.0E-05	A				0.05	1	Yes	Cadmium (Water)	7440-43-9					1.0E+01	1.1E+02		9.2E+00	5.0E+00	6.9E-01	3.8E-01
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Calcium Chromate	13765-19-0	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
				5.0E-01	I	2.2E-03	C			-0.19	1	1	Yes	Caprolactam	105-60-2					1.0E+04	9.0E+05		9.9E+03		2.5E+00	
1.5E-01	C	4.3E-05	C	2.0E-03	I					3.8	1	0.9	Yes	Captafol	2425-06-1	5.2E-01	1.8E+00		4.0E-01	4.0E+01	1.5E+02		3.2E+01		7.1E-04	
2.3E-03	C	6.6E-07	C	1.3E-01	I					2.8	1	1	Yes	Captan	133-06-2	3.4E+01	3.6E+02		3.1E+01	2.6E+03	3.0E+04		2.4E+03		2.2E-02	
				1.0E-01	I					2.36	1	1	Yes	Carbaryl	63-25-2					2.0E+03	2.4E+04		1.8E+03		1.7E+00	
				5.0E-03	I					2.32	1	1	Yes	Carbofuran	1563-66-2					1.0E+02	1.4E+03		9.4E+01	4.0E+01	3.7E-02	1.6E-02
				1.0E-01	I	7.0E-01	I	V		1.94	1	1	Yes	Carbon Disulfide	75-15-0					2.0E+03	2.0E+04	1.5E+03	8.1E+02		2.4E-01	
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		2.83	1	1	Yes	Carbon Tetrachloride	56-23-5	1.1E+00	4.3E+00	9.4E-01	4.6E-01	8.0E+01	3.4E+02	2.1E+02	4.9E+01	5.0E+00	1.8E-04	1.9E-03
						1.0E-01	P	V		-1.33	1	1	Yes	Carbonyl Sulfide	463-58-1							2.1E+02	2.1E+02		5.1E-01	
				1.0E-02	I					5.57	1	0.8	Yes	Carbosulfan	55285-14-8					2.0E+02	6.9E+01		5.1E+01		1.2E+00	
				1.0E-01	I					2.14	1	1	Yes	Carboxin	5234-68-4					2.0E+03	4.1E+04		1.9E+03		1.0E+00	
						9.0E-04	I				1	1	Yes	Ceric oxide	1306-38-3											
				1.0E-01	I			V		0.99	1	1	Yes	Chloral Hydrate	302-17-0					2.0E+03	1.5E+05		2.0E+03		4.0E-01	
				1.5E-02	I					1.9	1	1	Yes	Chloramben	133-90-4					3.0E+02	7.4E+03		2.9E+02		7.0E-02	
4.0E-01	H									2.22	1	1	Yes	Chloranil	118-75-2	1.9E-01	3.5E+00		1.8E-01						1.5E-04	
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V		6.26	1	0.7	No	Chlordane	12789-03-6	2.2E-01		5.6E-02	4.5E-02	1.0E+01		1.5E+00	1.3E+00	2.0E+00	3.0E-03	1.4E-01
1.0E+01	I	4.6E-03	C	3.0E-04	I					5.41	1	0.8	Yes	Chlordecone (Kepone)	143-50-0	7.8E-03	6.5E-03		3.5E-03	6.0E+00	5.4E+00		2.9E+00		1.2E-04	
				7.0E-04	A					3.81	1	0.9	Yes	Chlorfenvinphos	470-90-6					1.4E+01	5.6E+01		1.1E+01		3.1E-02	
				2.0E-02	I					2.5	1	1	Yes	Chlorimuron, Ethyl-	90982-32-4					4.0E+02	1.5E+04		3.9E+02		1.3E-01	
				1.0E-01	I	1.5E-04	A	V		0.85	1	1	Yes	Chlorine	7782-50-5					2.0E+03	4.6E+05	3.0E-01	3.0E-01		1.4E-04	
				3.0E-02	I	2.0E-04	I	V			1	1	Yes	Chlorine Dioxide	10049-04-4					6.0E+02	1.4E+05	4.2E-01	4.2E-01			
				3.0E-02	I						1	1	Yes	Chlorite (Sodium Salt)	7758-19-2					6.0E+02	1.4E+05		6.0E+02	1.0E+03		
						5.0E+01	I	V		2.05	1	1	Yes	Chloro-1,1-difluoroethane, 1-	75-68-3							1.0E+05	1.0E+05		5.2E+01	
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		2.53	1	1	Yes	Chloro-1,3-butadiene, 2-	126-99-8			1.9E-02	1.9E-02	4.0E+02	1.8E+03	4.2E+01	3.7E+01		9.9E-06	
4.6E-01	H									2.27	1	1	Yes	Chloro-2-methylaniline HCl, 4-	3165-93-3	1.7E-01	5.1E+02		1.7E-01						1.5E-04	
1.0E-01	P	7.7E-05	C	3.0E-03	X					2.27	1	1	Yes	Chloro-2-methylaniline, 4-	95-69-2	7.8E-01	6.6E+00		7.0E-01	6.0E+01	5.6E+02		5.4E+01		4.0E-04	
2.7E-01	X							V		0.09	1	1	Yes	Chloroacetaldehyde, 2-	107-20-0	2.9E-01	4.6E+01		2.9E-01						5.8E-05	
										0.22	1	1	Yes	Chloroacetic Acid	79-11-8									6.0E-01		1.2E-02
						3.0E-05	I			1.93	1	1	Yes	Chloroacetophenone, 2-	532-27-4											
2.0E-01	P			4.0E-03	I					1.83	1	1	Yes	Chloroaniline, p-	106-47-8	3.9E-01	5.9E+00		3.7E-01	8.0E+01	1.3E+03		7.6E+01		1.6E-04	
				2.0E-02	I	5.0E-02	P	V		2.84	1	1	Yes	Chlorobenzene	108-90-7					4.0E+02	1.3E+03	1.0E+02	7.8E+01	1.0E+02	5.3E-02	6.8E-02
1.1E-01	C	3.1E-05	C	2.0E-02	I					4.74	1	0.8	Yes	Chlorobenzilate	510-15-6	7.1E-01	5.6E-01		3.1E-01	4.0E+02	3.5E+02		1.9E+02		1.0E-03	
				3.0E-02	X					2.65	1	1	Yes	Chlorobenzoic Acid, p-	74-11-3					6.0E+02	3.4E+03		5.1E+02		1.3E-01	
				3.0E-03	P	3.0E-01	P	V		3.6	1	1	Yes	Chlorobenzotrifluoride, 4-	98-56-6					6.0E+01	9.3E+01	6.3E+02	3.5E+01		1.2E-01	
				4.0E-02	P			V		2.64	1	1	Yes	Chlorobutane, 1-	109-69-3					8.0E+02	3.1E+03		6.4E+02		2.6E-01	
						5.0E+01	I	V		1.08	1	1	Yes	Chlorodifluoromethane	75-45-6							1.0E+05	1.0E+05		4.3E+01	
				2.0E-02	P			V		0.03	1	1	Yes	Chloroethanol, 2-	107-07-3					4.0E+02	7.7E+04		4.0E+02		8.1E-02	
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		1.97	1	1	Yes	Chloroform	67-66-3	2.5E+00	2.9E+01	2.4E-01	2.2E-01	2.0E+02	2.5E+03	2.0E+02	9.7E+01	8.0E+01(F)	6.1E-05	2.2E-02
						9.0E-02	I	V		0.91	1	1	Yes	Chloromethane	74-87-3							1.9E+02	1.9E+02		4.9E-02	
2.4E+00	C	6.9E-04	C					V		0.32	1	1	Yes	Chloromethyl Methyl Ether	107-30-2	3.2E-02	3.7E+00	8.1E-03	6.5E-03						1.4E-06	
3.0E-01	P			3.0E-03	P	1.0E-05	X			2.24	1	1	Yes	Chloronitrobenzene, o-	88-73-3	2.6E-01	2.6E+00		2.4E-01	6.0E+01	6.4E+02		5.5E+01		2.2E-04	
6.3E-03	P			1.0E-03	P	6.0E-04	P			2.39	1	1	Yes	Chloronitrobenzene, p-	100-00-5	1.2E+01	9.7E+01		1.1E+01	2.0E+01	1.7E+02		1.8E+01		1.0E-02	
				5.0E-03	I			V		2.15	1	1	Yes	Chlorophenol, 2-	95-57-8					1.0E+02	1.0E+03		9.1E+01		7.4E-02	
						4.0E-04	C	V		2.09	1	1	Yes	Chloropicrin	76-06-2							8.3E-01	8.3E-01		2.5E-04	
3.1E-03	C	8.9E-07	C	1.5E-02	I					3.05	1	0.9	Yes	Chlorothalonil	1897-45-6	2.5E+01	1.6E+02		2.2E+01	3.0E+02	2.1E+03		2.6E+02		5.0E-02	
				2.0E-02	I			V		3.42	1	1	Yes	Chlorotoluene, o-	95-49-8					4.0E+02	5.8E+02		2.4E+02		2.3E-01	
				2.0E-02	X			V		3.33	1	1	Yes	Chlorotoluene, p-	106-43-4					4.0E+02	6.6E+02		2.5E+02		2.4E-01	
2.4E+02	C	6.9E-02	C							-1.02	1	1	Yes	Chlorozotocin	54749-90-5	3.2E-04	1.0E+00		3.2E-04						7.1E-08	
				2.0E-01	I					3.51	1	0.9	Yes	Chlorpropham	101-21-3					4.0E+03	9.8E+03		2.8E+03		2.6E+00	
				1.0E-03	A					4.96	1	0.8	Yes	Chlorpyrifos	2921-88-2					2.0E+01	1.5E+01		8.4E+00		1.3E-01	
				1.0E-02	H					4.31	1	0.9	Yes	Chlorpyrifos Methyl	5598-13-0					2.0E+02	2.9E+02		1.2E+02		5.5E-01	
				5.0E-02	I					2	1	1	Yes	Chlorsulfuron	64902-72-3					1.0E+03	5.7E+04		9.9E+02		8.3E-01	
				1.0E-02	I					4.28	1	0.9	Yes	Chlorthal-dimethyl	1861-32-1					2.0E+02	3.3E+02		1.2E+02		1.5E-01	
				8.0E-04	H					5.8	1	0.8	Yes	Chlorthiophos	60238-56-4					1.6E+01	3.4E+00		2.8E+00		7.3E-02	
				1.5E+00	I						0.013	1	Yes	Chromium(III), Insoluble Salts	16065-83-1					3.0E+04	8.9E+04		2.2E+04		4.0E+07	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information													Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 ($\mu g/L$)	Dermal SL TR=1E-06 ($\mu g/L$)	Inhalation SL TR=1E-06 ($\mu g/L$)	Carcinogenic SL TR=1E-06 ($\mu g/L$)	Ingestion SL Child THQ=1 ($\mu g/L$)	Dermal SL Child THQ=1 ($\mu g/L$)	SL Child THQ=1 ($\mu g/L$)	Noncarcinogenic SL Child THI=1 ($\mu g/L$)	MCL ($\mu g/L$)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M		0.025	1	Yes	Chromium(VI)	18540-29-9	5.0E-02	1.2E-01		3.5E-02	6.0E+01	1.7E+02		4.4E+01		6.7E-04	
											0.013	1	Yes	Chromium, Total	7440-47-3									1.0E+02		1.8E+05
				1.3E-02	I					3.1	1	0.9	Yes	Clofentezine	74115-24-5					2.6E+02	2.1E+03		2.3E+02		1.4E+01	
		9.0E-03	P	3.0E-04	P	6.0E-06	P				1	1	Yes	Cobalt	7440-48-4					6.0E+00	3.4E+03		6.0E+00		2.7E-01	
		6.2E-04	I					V	M		1	0		Coke Oven Emissions	8007-45-2											
				4.0E-02	H						1	1	Yes	Copper	7440-50-8					8.0E+02	1.8E+05		8.0E+02	1.3E+03	2.8E+01	4.6E+01
				5.0E-02	I	6.0E-01	C			1.96	1	1	Yes	Cresol, m-	108-39-4					1.0E+03	1.2E+04		9.3E+02		7.4E-01	
				5.0E-02	I	6.0E-01	C			1.95	1	1	Yes	Cresol, o-	95-48-7					1.0E+03	1.2E+04		9.3E+02		7.5E-01	
				1.0E-01	A	6.0E-01	C			1.94	1	1	Yes	Cresol, p-	106-44-5					2.0E+03	2.5E+04		1.9E+03		1.5E+00	
				1.0E-01	A					3.1	1	1	Yes	Cresol, p-chloro-m-	59-50-7					2.0E+03	5.2E+03		1.4E+03		1.7E+00	
				1.0E-01	A	6.0E-01	C			1.95	1	0.9	Yes	Cresols	1319-77-3					2.0E+03	6.7E+03		1.5E+03		1.3E+00	
1.9E+00	H			1.0E-03	P			V		0.6	1	1	Yes	Crotonaldehyde, trans-	123-73-9	4.1E-02	2.7E+00		4.0E-02	2.0E+01	1.5E+03		2.0E+01		8.2E-06	
				1.0E-01	I	4.0E-01	I	V		3.66	1	1	Yes	Cumene	98-82-8					2.0E+03	1.9E+03	8.3E+02	4.5E+02		7.4E-01	
2.2E-01	C	6.3E-05	C							-1.73	1	1	Yes	Cupferron	135-20-6	3.5E-01	1.3E+04		3.5E-01						6.1E-04	
8.4E-01	H			2.0E-03	H					2.22	1	1	Yes	Cyanazine	21725-46-2	9.3E-02	1.6E+00		8.8E-02	4.0E+01	7.6E+02		3.8E+01		4.1E-05	
														Cyanides												
				1.0E-03	I						1	1	Yes	~Calcium Cyanide	592-01-8					2.0E+01	4.6E+03		2.0E+01			
				5.0E-03	I						1	1	Yes	~Copper Cyanide	544-92-3					1.0E+02	2.3E+04		1.0E+02			
				6.0E-04	I	8.0E-04	S	V			1	1	Yes	~Cyanide (CN-)	57-12-5					1.2E+01	2.7E+03	1.7E+00	1.5E+00	2.0E+02	1.5E-02	2.0E+00
				1.0E-03	I			V		0.07	1	1	Yes	~Cyanogen	460-19-5					2.0E+01	5.1E+03		2.0E+01			
				9.0E-02	I			V			1	1	Yes	~Cyanogen Bromide	506-68-3					1.8E+03	1.6E+06		1.8E+03			
				5.0E-02	I			V			1	1	Yes	~Cyanogen Chloride	506-77-4					1.0E+03	5.8E+05		1.0E+03			
				6.0E-04	I	8.0E-04	I	V		-0.25	1	1	Yes	~Hydrogen Cyanide	74-90-8					1.2E+01	2.7E+03	1.7E+00	1.5E+00		1.5E-02	
				2.0E-03	I						1	1	Yes	~Potassium Cyanide	151-50-8					4.0E+01	4.6E+03		4.0E+01			
				5.0E-03	I						0.04	1	Yes	~Potassium Silver Cyanide	506-61-6					1.0E+02	4.6E+02		8.2E+01			
				1.0E-01	I						0.04	1	Yes	~Silver Cyanide	506-64-9					2.0E+03	1.8E+04		1.8E+03			
				1.0E-03	I						1	1	Yes	~Sodium Cyanide	143-33-9					2.0E+01	4.6E+03		2.0E+01	2.0E+02		
				2.0E-04	P						1	0	Yes	~Thiocyanates	NA					4.0E+00	9.1E+02		4.0E+00			
				2.0E-04	X			V		0.58	1	1	Yes	~Thiocyanic Acid	463-56-9					4.0E+00	9.1E+02		4.0E+00			
				5.0E-02	I						1	1	Yes	~Zinc Cyanide	557-21-1					1.0E+03	3.8E+05		1.0E+03			
						6.0E+00	I	V		3.44	1	1	Yes	Cyclohexane	110-82-7							1.3E+04	1.3E+04		1.3E+01	
2.3E-02	H									4.72	1	0.9	Yes	Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	3.4E+00	8.3E+00		2.4E+00						1.4E-02	
				5.0E+00	I	7.0E-01	P	V		0.81	1	1	Yes	Cyclohexanone	108-94-1					1.0E+05	6.5E+06	1.5E+03	1.4E+03		3.4E-01	
				5.0E-03	P	1.0E+00	X	V		2.86	1	1	Yes	Cyclohexene	110-83-8					1.0E+02	2.5E+02	2.1E+03	7.0E+01		4.6E-02	
				2.0E-01	I			V		1.49	1	1	Yes	Cyclohexylamine	108-91-8					4.0E+03	9.3E+04		3.8E+03		1.0E+00	
				2.5E-02	I					5.95	1	0.7	Yes	Cyfluthrin	68359-37-5					5.0E+02	1.6E+02		1.2E+02		3.1E+01	
				5.0E-03	I					6.9	1	0.5	No	Cyhalothrin	68085-85-8					1.0E+02			1.0E+02		6.9E+01	
				1.0E-02	I					6.6	1	0.7	No	Cypermethrin	52315-07-8					2.0E+02			2.0E+02		3.2E+01	
				7.5E-03	I					-0.061	1	1	Yes	Cyromazine	66215-27-8					1.5E+02	1.2E+04		1.5E+02		3.8E-02	
2.4E-01	I	6.9E-05	C							6.02	1	0.8	Yes	DDD	72-54-8	3.2E-01	3.5E-02		3.2E-02						7.5E-03	
3.4E-01	I	9.7E-05	C					V		6.51	1	0.8	No	DDE, p,p'-	72-55-9	2.3E-01		5.8E-02	4.6E-02						1.1E-02	
3.4E-01	I	9.7E-05	I	5.0E-04	I					6.91	1	0.7	No	DDT	50-29-3	2.3E-01			2.3E-01	1.0E+01			1.0E+01		7.7E-02	
				3.0E-02	I					0.78	1	1	Yes	Dalapon	75-99-0					6.0E+02	5.5E+04		6.0E+02	2.0E+02	1.2E-01	4.1E-02
1.8E-02	C	5.1E-06	C	1.5E-01	I					-1.5	1	1	Yes	Daminozide	1596-84-5	4.3E+00	1.3E+04		4.3E+00	3.0E+03	1.0E+07		3.0E+03		9.5E-04	
7.0E-04	I			7.0E-03	I					12.11	1	0	No	Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	1.1E+02			1.1E+02	1.4E+02			1.4E+02		6.2E+01	
				4.0E-05	I					3.21	1	0.8	Yes	Demeton	8065-48-3					8.0E-01	8.8E-01		4.2E-01			
1.2E-03	I			6.0E-01	I					6.11	1	0	Yes	Di(2-ethylhexyl)adipate	103-23-1	6.5E+01			6.5E+01	1.2E+04			1.2E+04	4.0E+02	4.7E+00	2.9E+01
6.1E-02	H									4.49	1	0.9	Yes	Diallate	2303-16-4	1.3E+00	9.2E-01		5.4E-01						8.0E-04	
				7.0E-04	A					3.81	1	0.9	Yes	Diazinon	333-41-5					1.4E+01	3.9E+01		1.0E+01		6.5E-02	
				1.0E-02	X			V		4.38	1	1	Yes	Dibenzothiophene	132-65-0					2.0E+02	9.6E+01		6.5E+01		1.2E+00	
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	2.96	1	1	Yes	Dibromo-3-chloropropane, 1,2-	96-12-8	3.1E-02	1.7E-01	3.4E-04	3.3E-04	4.0E+00	2.4E+01	4.2E-01	3.7E-01	2.0E-01	1.4E-07	8.6E-05
				4.0E-04	X			V		3.75	1	0.9	Yes	Dibromobenzene, 1,3-	108-36-1					8.0E+00	1.6E+01		5.3E+00		5.1E-03	
				1.0E-02	I			V		3.79	1	0.9	Yes	Dibromobenzene, 1,4-	106-37-6					2.0E+02	3.7E+02		1.3E+02		1.2E-01	
8.4E-02	I			2.0E-02	I			V		2.16	1	1	Yes	Dibromochloromethane	124-48-1	9.3E-01	1.4E+01		8.7E-01	4.0E+02	6.7E+03		3.8E+02	8.0E+01(F)	2.3E-04	2.1E-02
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1.96	1	1	Yes	Dibromoethane, 1,2-	106-93-4	3.9E-02	7.1E-01	9.4E-03	7.5E-03	1.8E+02	3.6E+03	1.9E+01	1.7E+01	5.0E-02	2.1E-06	1.4E-05
						4.0E-03	X	V		1.7	1	1	Yes	Dibromomethane (Methylene Bromide)	74-95-3							8.3E+00	8.3E+00		2.1E-03	
				3.0E-04	P						1	0	No	Dibutyltin Compounds	NA					6.0E+00			6.0E+00			
				3.0E-02	I					2.21	1	1	Yes	Dicamba	1918-00-9					6.0E+02	1.0E+04		5.7E+02		1.5E-01	
		4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, 1,4-	764-41-0			1.3E-03	1.3E-03						6.6E-07	
		4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, cis-1,4-	1476-11-5			1.3E-03	1.3E-03						6.2E-07	
		4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, trans-1,4-	110-57-6			1.3E-03	1.3E-03						6.2E-07	
5.0E-02	I			4.0E-03	I					0.92	1	1	Yes	Dichloroacetic Acid	79-43-6	1.6E+00	9.6E+01		1.5E+00	8.0E+01	5.4E+03		7.9E+01	6.0E+01	3.1E-04	1.2E-02
				9.0E-02	I	2.0E-01	H	V		3.43	1	1	Yes	Dichlorobenzene, 1,2-	95-50-1					1.8E+03	2.9E+03	4.2E+02	3.0E+02	6.0E+02	3.0E-01	5.8E-01
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		3.44	1	1	Yes	Dichlorobenzene, 1,4-	106-46-7	1.4E+01	2.1E+01	5.1E-01	4.8E-01	1.4E+03	2.2E+03	1.7E+03	5.7E+02	7.5E+01	4.6E-04	7.2E-02
4.5E-01	I	3.4E-04	C							3.51	1	1	Yes	Dichlorobenzidine, 3,3'-	91-94-1	1.7E-01	4.5E-01		1.3E-01						8.2E-04	
				9.0E-03	X					4.44	1	0.9	Yes	Dichlorobenzophenone, 4,4'-	90-98-2					1.8E+02	1.4E+02		7.8E+01		4.7E-01	
				2.0E-01	I	1.0E-01	X	V		2.16	1	1	Yes	Dichlorodifluoromethane	75-71-8					4.0E+03	3.8E+04	2.1E+02	2.0E+02		3.0E-01	
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1.79	1	1	Yes	Dichloroethane, 1,1-	75-34-3	1.4E+01	1.8E+02	3.5E+00	2.8E+00	4.0E+03	5.8E+04		3.8E+03		7.8E-04	
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1.48	1	1	Yes	Dichloroethane, 1,2-	107-06-2	8.6E-01	1.8E+01	2.2E-01	1.7E-01	1.2E+02	2.8E+03	1.5E+01	1.3E+01	5.0E+00	4.8E-05	1.4E-03
				5.0E-02	I	2.0E-01	I	V		2.13	1	1	Yes	Dichloroethylene, 1,1-	75-35-4					1.0E+03	8.5E+03	4.2E+02	2.8E+02	7.0E+00	1.0E-01	2.5E-03
				2.0E-03	I			V		1.86	1	1	Yes	Dichloroethylene, 1,2-cis-	156-59-2					4.0E+01	3.6E+02		3.6E+01	7.0E+01	1.1E-02	2.1E-02
				2.0E-02	I			V		2.09	1	1	Yes	Dichloroethylene, 1,2-trans-	156-60-5					4.0E+02	3.6E+03		3.6E+02	1.0E+02	1.1E-01	3.1E-02
				3.0E-03	I					3.06	1	1	Yes	Dichlorophenol, 2,4-	120-83-2					6.0E+01	1.9E+02		4.6E+01		5.4E-02	
				1.0E-02	I					2.81	1	1	Yes	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					2.0E+02	1.4E+03		1.7E+02	7.0E+01	4.5E-02	1.8E-02
				8.0E-03	I					3.53	1	0.9	Yes	Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6					1.6E+02	4.8E+02		1.2E+02		1.1E-01	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 ($\mu g/L$)	Dermal SL TR=1E-06 ($\mu g/L$)	Inhalation SL TR=1E-06 ($\mu g/L$)	Carcinogenic SL TR=1E-06 ($\mu g/L$)	Ingestion SL Child THQ=1 ($\mu g/L$)	Dermal SL Child THQ=1 ($\mu g/L$)	SL Child THQ=1 ($\mu g/L$)	Noncarcinogenic SL Child THI=1 ($\mu g/L$)	MCL ($\mu g/L$)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1.98	1	1	Yes	Dichloropropane, 1,2-	78-87-5	2.2E+00	2.4E+01	5.6E-01	4.4E-01	1.8E+03	2.2E+04	8.3E+00	8.3E+00	5.0E+00	1.5E-04	1.7E-03
				2.0E-02	P			V		2	1	1	Yes	Dichloropropane, 1,3-	142-28-9					4.0E+02	4.6E+03		3.7E+02		1.3E-01	
				3.0E-03	I					0.78	1	1	Yes	Dichloropropanol, 2,3-	616-23-9					6.0E+01	5.0E+03		5.9E+01		1.3E-02	
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		2.04	1	1	Yes	Dichloropropene, 1,3-	542-75-6	7.8E-01	7.8E+00	1.4E+00	4.7E-01	6.0E+02	6.6E+03	4.2E+01	3.9E+01		1.7E-04	
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1.43	1	1	Yes	Dichlorvos	62-73-7	2.7E-01	1.4E+01		2.6E-01	1.0E+01	5.6E+02		9.9E+00		8.1E-05	
				1.0E-04	I					0	1	1	Yes	Dicrotophos	141-66-2					2.0E+00	1.1E+03		2.0E+00		4.7E-04	
				8.0E-02	P	3.0E-04	X	V		3.16	1	1	Yes	Dicyclopentadiene	77-73-6					1.6E+03	3.5E+03	6.3E-01	6.3E-01		2.2E-03	
1.6E+01	I	4.6E-03	I	5.0E-05	I					5.4	1	0.8	Yes	Dieldrin	60-57-1	4.9E-03	2.7E-03		1.8E-03	1.0E+00	6.1E-01		3.8E-01		7.1E-05	
		3.0E-04	C			5.0E-03	I				1	0		Diesel Engine Exhaust	NA											
				2.0E-03	P	2.0E-04	P			-1.43	1	1	Yes	Diethanolamine	111-42-2					4.0E+01	8.4E+04		4.0E+01		8.1E-03	
				3.0E-02	P	1.0E-04	P			0.56	1	1	Yes	Diethylene Glycol Monobutyl Ether	112-34-5					6.0E+02	8.7E+04		6.0E+02		1.3E-01	
				6.0E-02	P	3.0E-04	P			-0.54	1	1	Yes	Diethylene Glycol Monoethyl Ether	111-90-0					1.2E+03	7.8E+05		1.2E+03		2.4E-01	
				1.0E-03	P			V		0.05	1	1	Yes	Diethylformamide	617-84-5					2.0E+01	4.3E+03		2.0E+01		4.1E-03	
3.5E+02	C	1.0E-01	C							5.07	1	0.9	Yes	Diethylstilbestrol	56-53-1	2.2E-04	6.6E-05		5.1E-05						2.8E-05	
				8.0E-02	I					0.65	1	1	Yes	Difenzoquat	43222-48-6					1.6E+03	7.3E+05		1.6E+03			
				2.0E-02	I					3.88	1	0.9	Yes	Diflubenzuron	35367-38-5					4.0E+02	1.0E+03		2.9E+02		3.3E-01	
						4.0E+01	I	V		0.75	1	1	Yes	Difluoroethane, 1,1-	75-37-6							8.3E+04	8.3E+04		2.8E+01	
4.4E-02	C	1.3E-05	C					V		3.58	1	1	Yes	Dihydrosafrole	94-58-6	1.8E+00	2.3E+00	4.3E-01	3.0E-01						1.9E-04	
						7.0E-01	P	V		1.52	1	1	Yes	Diisopropyl Ether	108-20-3							1.5E+03	1.5E+03		3.7E-01	
				8.0E-02	I			V		1.03	1	1	Yes	Diisopropyl Methylphosphonate	1445-75-6					1.6E+03	1.3E+05		1.6E+03		4.5E-01	
				2.0E-02	I					-0.17	1	1	Yes	Dimethipin	55290-64-7					4.0E+02	2.4E+05		4.0E+02		8.8E-02	
				2.0E-04	I					0.78	1	1	Yes	Dimethoate	60-51-5					4.0E+00	6.4E+02		4.0E+00		9.0E-04	
1.6E+00	P									1.81	1	1	Yes	Dimethoxybenzidine, 3,3'-	119-90-4	4.9E-02	1.6E+00		4.7E-02						5.8E-05	
1.7E-03	P			6.0E-02	P					-0.61	1	1	Yes	Dimethyl methylphosphonate	756-79-6	4.6E+01	2.8E+04		4.6E+01	1.2E+03	8.1E+05		1.2E+03		9.7E-03	
4.6E+00	C	1.3E-03	C							4.58	1	1	Yes	Dimethylamino azobenzene [p-]	60-11-7	1.7E-02	7.2E-03		5.0E-03						2.2E-05	
5.8E-01	H									2.17	1	1	Yes	Dimethylaniline HCl, 2,4-	21436-96-4	1.3E-01	5.2E+02		1.3E-01						1.2E-04	
2.0E-01	P			2.0E-03	X					1.68	1	1	Yes	Dimethylaniline, 2,4-	95-68-1	3.9E-01	7.1E+00		3.7E-01	4.0E+01	8.0E+02		3.8E+01		2.1E-04	
				2.0E-03	I			V		2.31	1	1	Yes	Dimethylaniline, N,N-	121-69-7					4.0E+01	3.1E+02		3.5E+01		1.3E-02	
1.1E+01	P									2.34	1	1	Yes	Dimethylbenzidine, 3,3'-	119-93-7	7.1E-03	8.5E-02		6.5E-03						4.3E-05	
				1.0E-01	P	3.0E-02	I	V		-1.01	1	1	Yes	Dimethylformamide	68-12-2					2.0E+03	1.8E+06	6.3E+01	6.1E+01		1.2E-02	
				1.0E-04	X	2.0E-06	X	V		-1.19	1	1	Yes	Dimethylhydrazine, 1,1-	57-14-7					2.0E+00	3.5E+03	4.2E-03	4.2E-03		9.3E-07	
5.5E+02	C	1.6E-01	C					V		-0.54	1	1	Yes	Dimethylhydrazine, 1,2-	540-73-8	1.4E-04	5.0E-02	3.5E-05	2.8E-05						6.5E-09	
				2.0E-02	I					2.3	1	1	Yes	Dimethylphenol, 2,4-	105-67-9					4.0E+02	3.1E+03		3.6E+02		4.2E-01	
				6.0E-04	I					2.36	1	1	Yes	Dimethylphenol, 2,6-	576-26-1					1.2E+01	8.5E+01		1.1E+01		1.3E-02	
				1.0E-03	I					2.23	1	1	Yes	Dimethylphenol, 3,4-	95-65-8					2.0E+01	1.7E+02		1.8E+01		2.1E-02	
4.5E-02	C	1.3E-05	C					V		2.58	1	1	Yes	Dimethylvinylchloride	513-37-1	1.7E+00	6.5E+00	4.3E-01	3.3E-01						2.4E-04	
				8.0E-05	X					2.13	1	1	Yes	Dinitro-o-cresol, 4,6-	534-52-1					1.6E+00	2.6E+01		1.5E+00		2.6E-03	
				2.0E-03	I					4.12	1	0.9	Yes	Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					4.0E+01	5.4E+01		2.3E+01		7.7E-01	
				1.0E-04	P					1.69	1	1	Yes	Dinitrobenzene, 1,2-	528-29-0					2.0E+00	5.3E+01		1.9E+00		1.8E-03	
				1.0E-04	I					1.49	1	1	Yes	Dinitrobenzene, 1,3-	99-65-0					2.0E+00	7.3E+01		2.0E+00		1.8E-03	
				1.0E-04	P					1.46	1	1	Yes	Dinitrobenzene, 1,4-	100-25-4					2.0E+00	7.6E+01		2.0E+00		1.8E-03	
				2.0E-03	I					1.67	1	1	Yes	Dinitrophenol, 2,4-	51-28-5					4.0E+01	1.2E+03		3.9E+01		4.4E-02	
6.8E-01	I									2.18	1	1	Yes	Dinitrotoluene Mixture, 2,4/2,6-	NA	1.1E-01	1.5E+00		1.1E-01						1.5E-04	
3.1E-01	C	8.9E-05	C	2.0E-03	I					1.98	1	1	Yes	Dinitrotoluene, 2,4-	121-14-2	2.5E-01	4.3E+00		2.4E-01	4.0E+01	7.5E+02		3.8E+01		3.2E-04	
1.5E+00	P			3.0E-04	X					2.1	1	1	Yes	Dinitrotoluene, 2,6-	606-20-2	5.2E-02	7.4E-01		4.9E-02	6.0E+00	9.3E+01		5.7E+00		6.7E-05	
				2.0E-03	S					1.84	1	1	Yes	Dinitrotoluene, 2-Amino-4,6-	35572-78-2					4.0E+01	1.0E+03		3.9E+01		3.0E-02	
				2.0E-03	S					1.84	1	1	Yes	Dinitrotoluene, 4-Amino-2,6-	19406-51-0					4.0E+01	1.0E+03		3.9E+01		3.0E-02	
4.5E-01	X			9.0E-04	X					2.18	1	0.8	Yes	Dinitrotoluene, Technical grade	25321-14-6	1.7E-01	2.6E-01		1.0E-01	1.8E+01	3.0E+01		1.1E+01		1.4E-04	
				1.0E-03	I					3.56	1	0.9	Yes	Dinoseb	88-85-7					2.0E+01	5.4E+01		1.5E+01	7.0E+00	1.3E-01	6.2E-02
1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		-0.27	1	1	Yes	Dioxane, 1,4-	123-91-1	7.8E-01	2.3E+02	1.1E+00	4.6E-01	6.0E+02	1.9E+05	6.3E+01	5.7E+01		9.4E-05	
														Dioxins												
6.2E+03	I	1.3E+00	I							8.21	1	0	No	~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.3E-05			1.3E-05						1.8E-05	
1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V		6.8	1	0.5	No	~TCDD, 2,3,7,8-	1746-01-6	6.0E-07		1.5E-07	1.2E-07	1.4E-05		8.3E-05	1.2E-05	3.0E-05	5.9E-08	1.5E-05
				3.0E-02	I					2.17	1	1	Yes	Diphenamid	957-51-7					6.0E+02	4.2E+03		5.3E+02		5.2E+00	
				8.0E-04	X					2.4	1	1	Yes	Diphenyl Sulfone	127-63-9					1.6E+01	2.0E+02		1.5E+01		3.6E-02	
				2.5E-02	I					3.5	1	1	Yes	Diphenylamine	122-39-4					5.0E+02	8.4E+02		3.1E+02		5.8E-01	
8.0E-01	I	2.2E-04	I							2.94	1	1	Yes	Diphenylhydrazine, 1,2-	122-66-7	9.7E-02	3.9E-01		7.8E-02						2.5E-04	
				2.2E-03	I					-4.6	1	1	No	Diquat	85-00-7					4.4E+01			4.4E+01	2.0E+01	8.3E-01	3.8E-01
7.1E+00	C	1.4E-01	C							4.9	1	1	No	Direct Black 38	1937-37-7	1.1E-02			1.1E-02						5.3E+00	
7.4E+00	C	1.4E-01	C							2.6	1	1	No	Direct Blue 6	2602-46-2	1.1E-02			1.1E-02						1.7E+01	
6.7E+00	C	1.4E-01	C							-6.53	1	1	No	Direct Brown 95	16071-86-6	1.2E-02			1.2E-02							
				4.0E-05	I					4.02	1	0.9	Yes	Disulfoton	298-04-4					8.0E-01	1.3E+00		5.0E-01		9.4E-04	
				1.0E-02	I			V		0.77	1	1	Yes	Dithiane, 1,4-	505-29-3					2.0E+02	1.6E+04		2.0E+02		9.7E-02	
				2.0E-03	I					2.68	1	1	Yes	Diuron	330-54-1					4.0E+01	3.6E+02		3.6E+01		1.5E-02	
				4.0E-03	I					1.15	1	1	Yes	Dodine	2439-10-3					8.0E+01	1.1E+04		8.0E+01		4.1E-01	
				2.5E-02	I			V		3.21	1	1	Yes	EPTC	759-94-4					5.0E+02	1.5E+03		3.8E+02		2.0E-01	
				6.0E-03	I			V		3.83	1	0.9	Yes	Endosulfan	115-29-7					1.2E+02	6.3E+02		1.0E+02		1.4E+00	
				2.0E-02	I					1.91	1	1	Yes	Endothall	145-73-3					4.0E+02	8.5E+03		3.8E+02	1.0E+02	9.2E-02	2.4E-02
				3.0E-04	I					5.2	1	0.8	Yes	Endrin	72-20-8					6.0E+00	3.7E+00		2.3E+00	2.0E+00	9.2E-02	8.1E-02
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		0.45	1	1	Yes	Epichlorohydrin	106-89-8	7.9E+00	7.9E+02	4.7E+00	2.9E+00	1.2E+02	1.3E+04	2.1E+00	2.0E+00		4.5E-04	
						2.0E-02	I	V		0.86	1	1	Yes	Epoxybutane, 1,2-	106-88-7							4.2E+01	4.2E+01		9.2E-03	
				4.0E-02	P					-1.18	1	1	Yes	Ethanol, 2-(2-methoxyethoxy)-	111-77-3					8.0E+02	3.9E+05		8.0E+02		1.6E-01	
				5.0E-03	I					-0.22	1	1	Yes	Ethephon	16672-87-0					1.0E+02	4.2E+04		1.0E+02		2.1E-02	
				5.0E-04	I					5.07	1	0.8	Yes	Ethion	563-12-2					1.0E+01	7.7E+00		4.3E+00		8.5E-03	
				1.0E-01	P	6.0E-02	P	V		0.59	1	1	Yes	Ethoxyethanol Acetate, 2-	111-15-9					2.0E+03	2.3E+05	1.3E+02	1.2E+02		2.5E-02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 ($\mu g/L$)	Dermal SL TR=1E-06 ($\mu g/L$)	Inhalation SL TR=1E-06 ($\mu g/L$)	Carcinogenic SL TR=1E-06 ($\mu g/L$)	Ingestion SL Child THQ=1 ($\mu g/L$)	Dermal SL Child THQ=1 ($\mu g/L$)	SL Child THQ=1 ($\mu g/L$)	Noncarcinogenic SL Child THI=1 ($\mu g/L$)	MCL ($\mu g/L$)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
				9.0E-02	P	2.0E-01	I	V		-0.32	1	1	Yes	Ethoxyethanol, 2-	110-80-5					1.8E+03	6.3E+05	4.2E+02	3.4E+02		6.8E-02	
				9.0E-01	I	7.0E-02	P	V		0.73	1	1	Yes	Ethyl Acetate	141-78-6					1.8E+04	1.2E+06	1.5E+02	1.4E+02		3.1E-02	
				5.0E-03	P	8.0E-03	P	V		1.32	1	1	Yes	Ethyl Acrylate	140-88-5					1.0E+02	3.0E+03	1.7E+01	1.4E+01		3.2E-03	
						1.0E+01	I	V		1.43	1	1	Yes	Ethyl Chloride (Chloroethane)	75-00-3							2.1E+04	2.1E+04		5.9E+00	
				2.0E-01	I			V		0.89	1	1	Yes	Ethyl Ether	60-29-7					4.0E+03	2.0E+05		3.9E+03		8.8E-01	
						3.0E-01	P	V		1.94	1	1	Yes	Ethyl Methacrylate	97-63-2							6.3E+02	6.3E+02		1.5E-01	
				1.0E-05	I					4.78	1	0.8	Yes	Ethyl-p-nitrophenyl Phosphonate	2104-64-5					2.0E-01	1.6E-01		8.9E-02		2.8E-03	
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		3.15	1	1	Yes	Ethylbenzene	100-41-4	7.1E+00	1.2E+01	2.2E+00	1.5E+00	2.0E+03	3.8E+03	2.1E+03	8.1E+02	7.0E+02	1.7E-03	7.9E-01
				7.0E-02	P					-0.94	1	1	Yes	Ethylene Cyanohydrin	109-78-4					1.4E+03	1.1E+06		1.4E+03		2.8E-01	
				9.0E-02	P			V		-2.04	1	1	No	Ethylene Diamine	107-15-3					1.8E+03			1.8E+03		4.2E-01	
				2.0E+00	I	4.0E-01	C			-1.36	1	1	Yes	Ethylene Glycol	107-21-1					4.0E+04	5.7E+07		4.0E+04		8.1E+00	
				1.0E-01	I	1.6E+00	I			0.83	1	1	Yes	Ethylene Glycol Monobutyl Ether	111-76-2					2.0E+03	1.4E+05		2.0E+03		4.1E-01	
3.1E-01	C	8.8E-05	C			3.0E-02	C	V		-0.3	1	1	Yes	Ethylene Oxide	75-21-8	2.5E-01	5.4E+01	6.4E-02	5.1E-02			6.3E+01	6.3E+01		1.1E-05	
4.5E-02	C	1.3E-05	C	8.0E-05	I					-0.66	1	1	Yes	Ethylene Thiourea	96-45-7	1.7E+00	1.0E+03		1.7E+00	1.6E+00	1.0E+03		1.6E+00		3.6E-04	
6.5E+01	C	1.9E-02	C					V		-0.28	1	1	Yes	Ethyleneimine	151-56-4	1.2E-03	2.5E-01	3.0E-04	2.4E-04						5.2E-08	
				3.0E+00	I					2.19	1	1	Yes	Ethylphthalyl Ethyl Glycolate	84-72-0					6.0E+04	1.5E+06		5.8E+04		1.3E+02	
				2.5E-04	I					3.23	1	0.9	Yes	Fenamiphos	22224-92-6					5.0E+00	3.4E+01		4.4E+00		4.4E-03	
				2.5E-02	I					5.7	1	0.8	Yes	Fenpropathrin	39515-41-8					5.0E+02	7.3E+01		6.4E+01		2.9E+00	
				2.5E-02	I					6.2	1	0.7	No	Fenvalerate	51630-58-1					5.0E+02			5.0E+02		3.2E+02	
				1.3E-02	I					2.42	1	1	Yes	Fluometuron	2164-17-2					2.6E+02	3.4E+03		2.4E+02		1.9E-01	
				4.0E-02	C	1.3E-02	C				1	1	Yes	Fluoride	16984-48-8					8.0E+02	1.8E+05		8.0E+02		1.2E+02	
				6.0E-02	I	1.3E-02	C				1	1	Yes	Fluorine (Soluble Fluoride)	7782-41-4					1.2E+03	2.7E+05		1.2E+03	4.0E+03	1.8E+02	6.0E+02
				8.0E-02	I					3.16	1	0.9	Yes	Fluridone	59756-60-4					1.6E+03	1.4E+04		1.4E+03		1.6E+02	
				2.0E-02	I					3.34	1	0.9	Yes	Flurprimidol	56425-91-3					4.0E+02	2.4E+03		3.4E+02		1.6E+00	
				7.0E-04	I					3.7	1	0.9	Yes	Flusilazole	85509-19-9					1.4E+01	5.0E+01		1.1E+01		1.8E+00	
				6.0E-02	I					3.7	1	0.9	Yes	Flutolanil	66332-96-5					1.2E+03	4.5E+03		9.5E+02		5.0E+00	
				1.0E-02	I					6.81	1	0.6	No	Fluvalinate	69409-94-5					2.0E+02			2.0E+02		2.9E+02	
3.5E-03	I			1.0E-01	I					2.85	1	1	Yes	Folpet	133-07-3	2.2E+01	2.1E+02		2.0E+01	2.0E+03	2.1E+04		1.8E+03		4.7E-03	
1.9E-01	I									2.9	1	1	Yes	Fomesafen	72178-02-0	4.1E-01	9.1E+00		3.9E-01						1.3E-03	
				2.0E-03	I					3.94	1	0.9	Yes	Fonofos	944-22-9					4.0E+01	6.3E+01		2.4E+01		4.7E-02	
		1.3E-05	I	2.0E-01	I	9.8E-03	A	V		0.35	1	1	Yes	Formaldehyde	50-00-0			4.3E-01	4.3E-01	4.0E+03	3.2E+05	2.0E+01	2.0E+01		8.7E-05	
				9.0E-01	P	3.0E-04	X	V		-0.54	1	1	Yes	Formic Acid	64-18-6					1.8E+04	6.4E+06	6.3E-01	6.3E-01		1.3E-04	
				3.0E+00	I					-2.4	1	1	No	Fosetyl-AL	39148-24-8					6.0E+04			6.0E+04		7.9E+02	
														Furans												
				1.0E-03	X			V		4.12	1	1	Yes	"Dibenzofuran	132-64-9					2.0E+01	1.3E+01		7.9E+00		1.5E-01	
				1.0E-03	I			V		1.34	1	1	Yes	"Furan	110-00-9					2.0E+01	4.8E+02		1.9E+01		7.3E-03	
				9.0E-01	I	2.0E+00	I	V		0.46	1	1	Yes	"Tetrahydrofuran	109-99-9					1.8E+04	1.7E+06	4.2E+03	3.4E+03		7.5E-01	
3.8E+00	H									-0.04	1	1	Yes	Furazolidone	67-45-8	2.1E-02	1.0E+01		2.0E-02						3.9E-05	
				3.0E-03	I	5.0E-02	H	V		0.41	1	1	Yes	Furfural	98-01-1					6.0E+01	7.1E+03	1.0E+02	3.8E+01		8.1E-03	
1.5E+00	C	4.3E-04	C							1.8	1	1	Yes	Furium	531-82-8	5.2E-02	1.9E+00		5.1E-02						6.9E-05	
3.0E-02	I	8.6E-06	C							4.38	1	0.9	Yes	Furmecyclox	60568-05-0	2.6E+00	2.0E+00		1.1E+00						1.2E-03	
				4.0E-04	I					-4.81	1	1	No	Glufosinate, Ammonium	77182-82-2					8.0E+00			8.0E+00		1.8E-03	
						8.0E-05	C			-0.33	1	1	Yes	Glutaraldehyde	111-30-8											
				4.0E-04	I	1.0E-03	H	V		-0.12	1	1	Yes	Glycidyl	765-34-4					8.0E+00	1.8E+03	2.1E+00	1.7E+00		3.3E-04	
				1.0E-01	I					-3.4	1	1	No	Glyphosate	1071-83-6					2.0E+03			2.0E+03	7.0E+02	8.8E+00	3.1E+00
				1.0E-02	X			V		-1.63	1	1	Yes	Guanidine	113-00-8					2.0E+02	4.2E+05		2.0E+02		4.5E-02	
				2.0E-02	P					-3.56	1	1	No	Guanidine Chloride	50-01-1					4.0E+02			4.0E+02			
				5.0E-05	I					4.07	1	0.9	Yes	Haloxyfop, Methyl	69806-40-2					1.0E+00	3.1E+00		7.6E-01		8.4E-03	
4.5E+00	I	1.3E-03	I	5.0E-04	I			V		6.1	1	0.8	Yes	Heptachlor	76-44-8	1.7E-02	2.3E-03	4.3E-03	1.4E-03	1.0E+01	1.5E+00		1.3E+00	4.0E-01	1.2E-04	3.3E-02
9.1E+00	I	2.6E-03	I	1.3E-05	I			V		4.98	1	0.8	Yes	Heptachlor Epoxide	1024-57-3	8.6E-03	7.1E-03	2.2E-03	1.4E-03	2.6E-01	2.4E-01		1.2E-01	2.0E-01	2.8E-05	4.1E-03
				2.0E-03	I			V		6.07	1	0.7	No	Hexabromobenzene	87-82-1					4.0E+01			4.0E+01		2.3E-01	
				2.0E-04	I						1	0	No	Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					4.0E+00			4.0E+00			
1.6E+00	I	4.6E-04	I	8.0E-04	I			V		5.73	1	0.9	No	Hexachlorobenzene	118-74-1	4.9E-02		1.2E-02	9.8E-03	1.6E+01			1.6E+01	1.0E+00	1.2E-04	1.3E-02
7.8E-02	I	2.2E-05	I	1.0E-03	P			V		4.78	1	0.9	Yes	Hexachlorobutadiene	87-68-3	1.0E+00	4.4E-01	2.6E-01	1.4E-01	2.0E+01	9.5E+00		6.5E+00		2.7E-04	
6.3E+00	I	1.8E-03	I	8.0E-03	A					3.8	1	0.9	Yes	Hexachlorocyclohexane, Alpha-	319-84-6	1.2E-02	1.8E-02		7.2E-03	1.6E+02	2.5E+02		9.7E+01		4.2E-05	
1.8E+00	I	5.3E-04	I							3.78	1	0.9	Yes	Hexachlorocyclohexane, Beta-	319-85-7	4.3E-02	6.1E-02		2.5E-02						1.5E-04	
1.1E+00	C	3.1E-04	C	3.0E-04	I					3.72	1	0.9	Yes	Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	7.1E-02	1.0E-01		4.2E-02	6.0E+00	9.3E+00		3.6E+00	2.0E-01	2.4E-04	1.2E-03
1.8E+00	I	5.1E-04	I							4.14	1	0.9	Yes	Hexachlorocyclohexane, Technical	608-73-1	4.3E-02	6.1E-02		2.5E-02						1.5E-04	
				6.0E-03	I	2.0E-04	I	V		5.04	1	0.9	Yes	Hexachlorocyclopentadiene	77-47-4					1.2E+02	4.2E+01	4.2E-01	4.1E-01	5.0E+01	1.3E-03	1.6E-01
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V		4.14	1	1	Yes	Hexachloroethane	67-72-1	1.9E+00	1.7E+00	5.1E-01	3.3E-01	1.4E+01	1.4E+01	6.3E+01	6.2E+00		2.0E-04	
				3.0E-04	I					7.54	1	0	No	Hexachlorophene	70-30-4					6.0E+00			6.0E+00		8.1E+00	
1.1E-01	I			3.0E-03	I					0.87	1	1	Yes	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	7.1E-01	8.6E+01		7.0E-01	6.0E+01	8.0E+03		6.0E+01		2.7E-04	
						1.0E-05	I	V		3.2	1	1	Yes	Hexamethylene Diisocyanate, 1,6-	822-06-0							2.1E-02	2.1E-02		2.1E-04	
				4.0E-04	P					0.28	1	1	Yes	Hexamethylphosphoramide	680-31-9					8.0E+00	2.0E+03		8.0E+00		1.8E-03	
						7.0E-01	I	V		3.9	1	1	Yes	Hexane, N-	110-54-3							1.5E+03	1.5E+03		1.0E+01	
				2.0E+00	P					0.08	1	1	Yes	Hexanedioic Acid	124-04-9					4.0E+04	1.1E+07		4.0E+04		9.9E+00	
				5.0E-03	I	3.0E-02	I	V		1.38	1	1	Yes	Hexanone, 2-	591-78-6					1.0E+02	2.8E+03	6.3E+01	3.8E+01		8.8E-03	
				3.3E-02	I					1.85	1	1	Yes	Hexazinone	51235-04-2					6.6E+02	2.4E+04		6.4E+02		3.0E-01	
				2.5E-02	I					5.57	1	0.8	Yes	Hexythiazox	78587-05-0					5.0E+02	1.4E+02		1.1E+02		5.0E-01	
				3.0E-04	I					2.31	1	1	Yes	Hydramethylnon	67485-29-4					6.0E+00	5.1E+02		5.9E+00		2.1E+03	
3.0E+00	I	4.9E-03	I			3.0E-05	P	V		-2.07	1	1	Yes	Hydrazine	302-01-2	2.6E-02	1.1E+02	1.1E-03	1.1E-03			6.3E-02	6.3E-02			
3.0E+00	I	4.9E-03	I								1	1	Yes	Hydrazine Sulfate	10034-93-2	2.6E-02	4.9E+00		2.6E-02							
						2.0E-02	I	V			1	1	Yes	Hydrogen Chloride	7647-01-0							4.2E+01	4.2E+01			
				4.0E-02	C	1.4E-02	C	V		0.23	1	1	Yes	Hydrogen Fluoride	7664-39-3					8.0E+02	1.8E+05	2.9E+01	2.8E+01			
						2.0E-03	I	V		0.23	1	1	Yes	Hydrogen Sulfide	7783-06-4							4.2E+00	4.2E+00			

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 ($\mu g/L$)	Dermal SL TR=1E-06 ($\mu g/L$)	Inhalation SL TR=1E-06 ($\mu g/L$)	Carcinogenic SL TR=1E-06 ($\mu g/L$)	Ingestion SL Child THQ=1 ($\mu g/L$)	Dermal SL Child THQ=1 ($\mu g/L$)	SL Child THQ=1 ($\mu g/L$)	Noncancer Child THI=1 ($\mu g/L$)	MCL ($\mu g/L$)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
6.0E-02	P			4.0E-02	P					0.59	1	1	Yes	Hydroquinone	123-31-9	1.3E+00	1.2E+02		1.3E+00	8.0E+02	7.9E+04		7.9E+02		8.8E-04	
				1.3E-02	I					3.82	1	0.9	Yes	Imazalil	35554-44-0					2.6E+02	6.8E+02		1.9E+02		3.2E+00	
				2.5E-01	I					1.86	1	1	Yes	Imazaquin	81335-37-7					5.0E+03	2.6E+05		4.9E+03		2.5E+01	
				2.5E-01	I					1.49	1	1	Yes	Imazethapyr	81335-77-5					5.0E+03	7.2E+04		4.7E+03		4.1E+00	
				1.0E-02	A					2.49	1	1	Yes	Iodine	7553-56-2					2.0E+02	4.6E+04		2.0E+02		1.2E+01	
				4.0E-02	I					3	1	0.9	Yes	Iprodione	36734-19-7					8.0E+02	9.1E+03		7.4E+02		2.3E-01	
				7.0E-01	P						1	1	Yes	Iron	7439-89-6					1.4E+04	3.2E+06		1.4E+04		3.5E+02	
				3.0E-01	I			V		0.76	1	1	Yes	Isobutyl Alcohol	78-83-1					6.0E+03	3.6E+05		5.9E+03		1.2E+00	
9.5E-04	I			2.0E-01	I	2.0E+00	C			1.7	1	1	Yes	Isophorone	78-59-1	8.2E+01	1.6E+03		7.8E+01	4.0E+03	8.6E+04		3.8E+03		2.6E-02	
				1.5E-02	I			V		5.8	1	0.8	Yes	Isopropalin	33820-53-0					3.0E+02	4.6E+01		4.0E+01		9.2E-01	
				2.0E+00	P	2.0E-01	P	V		0.05	1	1	Yes	Isopropanol	67-63-0					4.0E+04	6.5E+06	4.2E+02	4.1E+02		8.4E-02	
				1.0E-01	I					0.27	1	1	Yes	Isopropyl Methyl Phosphonic Acid	1832-54-8					2.0E+03	3.9E+05		2.0E+03		4.3E-01	
				5.0E-02	I					3.94	1	0.9	Yes	Isoxaben	82558-50-7					1.0E+03	2.7E+03		7.3E+02		2.0E+00	
						3.0E-01	A	V		8	1	0	No	JP-7	NA							6.3E+02	6.3E+02			
				2.0E-03	I					4.81	1	0.9	Yes	Lactofen	77501-63-4					4.0E+01	6.7E+01		2.5E+01		1.2E+00	
														Lead Compounds												
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	~Lead Chromate	7758-97-6	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
8.5E-03	C	1.2E-05	C								1	0.8	Yes	~Lead Phosphate	7446-27-7	9.2E+00	1.7E+03		9.1E+00							
2.8E-01	C	8.0E-05	C							-0.08	1	1	Yes	~Lead acetate	301-04-2	2.8E-01	2.8E+02		2.8E-01							
											1	1	Yes	~Lead and Compounds	7439-92-1								1.5E+01	1.5E+01		1.4E+01
8.5E-03	C	1.2E-05	C							-4	1	1	No	~Lead subacetate	1335-32-6	9.2E+00			9.2E+00							
				1.0E-07	I			V		4.15	1	0.9	Yes	~Tetraethyl Lead	78-00-2					2.0E-03	3.8E-03		1.3E-03		4.7E-06	
				5.0E-06	P			V		2.56	1	1	Yes	Lewisite	541-25-3					1.0E-01	9.1E-01		9.0E-02		3.8E-05	
				2.0E-03	I					3.2	1	0.9	Yes	Linuron	330-55-2					4.0E+01	2.0E+02		3.3E+01		2.9E-02	
				2.0E-03	P						1	1	Yes	Lithium	7439-93-2					4.0E+01	9.1E+03		4.0E+01		1.2E+01	
				5.0E-04	I					3.25	1	1	Yes	MCPA	94-74-6					1.0E+01	3.0E+01		7.5E+00		2.0E-03	
				1.0E-02	I					2.79	1	0.9	Yes	MCPB	94-81-5					2.0E+02	5.5E+02		1.5E+02		5.8E-02	
				1.0E-03	I					3.13	1	1	Yes	MCPP	93-65-2					2.0E+01	7.1E+01		1.6E+01		4.7E-03	
				2.0E-02	I					2.36	1	1	Yes	Malathion	121-75-5					4.0E+02	1.1E+04		3.9E+02		1.0E-01	
				1.0E-01	I	7.0E-04	C			1.62	1	1	Yes	Maleic Anhydride	108-31-6					2.0E+03	3.8E+04		1.9E+03		3.9E-01	
				5.0E-01	I					-0.84	1	1	Yes	Maleic Hydrazide	123-33-1					1.0E+04	8.9E+06		1.0E+04		2.1E+00	
				1.0E-04	P					-0.6	1	1	Yes	Malononitrile	109-77-3					2.0E+00	9.2E+02		2.0E+00		4.1E-04	
				3.0E-02	H					1.33	1	0.9	Yes	Mancozeb	8018-01-7					6.0E+02	4.9E+03		5.4E+02		7.6E-01	
				5.0E-03	I					0.62	1	1	Yes	Maneb	12427-38-2					1.0E+02	3.6E+03		9.8E+01		1.4E-01	
				1.4E-01	I	5.0E-05	I				1	1		Manganese (Diet)	7439-96-5											
				2.4E-02	S	5.0E-05	I				0.04	1	Yes	Manganese (Non-diet)	7439-96-5					4.8E+02	4.4E+03		4.3E+02		2.8E+01	
				9.0E-05	H					1.04	1	1	Yes	Mephosfolan	950-10-7					1.8E+00	2.5E+02		1.8E+00		2.6E-03	
				3.0E-02	I					-2.82	1	1	No	Mepiquat Chloride	24307-26-4					6.0E+02			6.0E+02		2.0E-01	
														Mercury Compounds												
				3.0E-04	I	3.0E-04	S			-0.22	0.07	1	Yes	~Mercuric Chloride (and other Mercury salts)	7487-94-7					6.0E+00	9.6E+01		5.7E+00	2.0E+00		
						3.0E-04	I	V		0.62	1	1	Yes	~Mercury (elemental)	7439-97-6							6.3E-01	6.3E-01	2.0E+00	3.3E-02	1.0E-01
				1.0E-04	I						1	1	Yes	~Methyl Mercury	22967-92-6					2.0E+00	4.6E+02		2.0E+00			
				8.0E-05	I					0.71	1	1	Yes	~Phenylmercuric Acetate	62-38-4					1.6E+00	5.7E+02		1.6E+00		5.0E-04	
				3.0E-05	I			V		7.67	1	0.3	No	Merphos	150-50-5					6.0E-01			6.0E-01		5.9E-02	
				3.0E-05	I					5.7	1	0.9	Yes	Merphos Oxide	78-48-8					6.0E-01	9.9E-02		8.5E-02		4.2E-04	
				6.0E-02	I					1.65	1	1	Yes	Metalaxyl	57837-19-1					1.2E+03	6.4E+04		1.2E+03		3.3E-01	
				1.0E-04	I	3.0E-02	P	V		0.68	1	1	Yes	Methacrylonitrile	126-98-7					2.0E+00	1.3E+02	6.3E+01	1.9E+00		4.4E-04	
				5.0E-05	I					-0.8	1	1	Yes	Methamidophos	10265-92-6					1.0E+00	1.0E+03		1.0E+00		2.1E-04	
				2.0E+00	I	2.0E+01	I	V		-0.77	1	1	Yes	Methanol	67-56-1					4.0E+04	1.8E+07	4.2E+04	2.0E+04		4.1E+00	
				1.0E-03	I					2.2	1	1	Yes	Methidathion	950-37-8					2.0E+01	5.8E+02		1.9E+01		4.7E-03	
				2.5E-02	I					0.6	1	1	Yes	Methomyl	16752-77-5					5.0E+02	6.8E+04		5.0E+02		1.1E-01	
4.9E-02	C	1.4E-05	C							1.47	1	1	Yes	Methoxy-5-nitroaniline, 2-	99-59-2	1.6E+00	5.4E+01		1.5E+00						5.3E-04	
				5.0E-03	I					5.08	1	0.8	Yes	Methoxychlor	72-43-5					1.0E+02	5.9E+01		3.7E+01	4.0E+01	2.0E+00	2.2E+00
				8.0E-03	P	1.0E-03	P	V		0.1	1	1	Yes	Methoxyethanol Acetate, 2-	110-49-6					1.6E+02	3.5E+04	2.1E+00	2.1E+00		4.2E-04	
				5.0E-03	P	2.0E-02	I	V		-0.77	1	1	Yes	Methoxyethanol, 2-	109-86-4					1.0E+02	6.3E+04	4.2E+01	2.9E+01		6.0E-03	
				1.0E+00	X			V		0.18	1	1	Yes	Methyl Acetate	79-20-9					2.0E+04	2.9E+06		2.0E+04		4.1E+00	
						2.0E-02	P	V		0.8	1	1	Yes	Methyl Acrylate	96-33-3							4.2E+01	4.2E+01		8.9E-03	
				6.0E-01	I	5.0E+00	I	V		0.29	1	1	Yes	Methyl Ethyl Ketone (2-Butanone)	78-93-3					1.2E+04	1.5E+06	1.0E+04	5.6E+03		1.2E+00	
		1.0E-03	X	1.0E-03	P	2.0E-05	X	V		-1.05	1	1	Yes	Methyl Hydrazine	60-34-4			5.6E-03	5.6E-03	2.0E+01	1.5E+04	4.2E-02	4.2E-02		1.3E-06	
						3.0E+00	I	V		1.31	1	1	Yes	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1							6.3E+03	6.3E+03		1.4E+00	
						1.0E-03	C	V		0.79	1	1	Yes	Methyl Isocyanate	624-83-9							2.1E+00	2.1E+00		5.9E-04	
				1.4E+00	I	7.0E-01	I	V		1.38	1	1	Yes	Methyl Methacrylate	80-62-6					2.8E+04	7.7E+05	1.5E+03	1.4E+03		3.0E-01	
				2.5E-04	I					2.86	1	1	Yes	Methyl Parathion	298-00-0					5.0E+00	4.1E+01		4.5E+00		7.4E-03	
				6.0E-02	X					-0.7	1	1	Yes	Methyl Phosphonic Acid	993-13-5					1.2E+03	1.2E+06		1.2E+03		2.4E-01	
				6.0E-03	H	4.0E-02	H	V		3.44	1	0.8	Yes	Methyl Styrene (Mixed Isomers)	25013-15-4					1.2E+02	4.3E+01	8.3E+01	2.3E+01		3.8E-02	
9.9E-02	C	2.8E-05	C							-0.66	1	1	Yes	Methyl methanesulfonate	66-27-3	7.9E-01	4.8E+02		7.9E-01							1.6E-04
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		0.94	1	1	Yes	Methyl tert-Butyl Ether (MTBE)	1634-04-4	4.3E+01	2.0E+03	2.2E+01	1.4E+01			6.3E+03	6.3E+03		3.2E-03	
				3.0E-04	X					-2.06	1	1	Yes	Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					6.0E+00	5.9E+04		6.0E+00		3.6E-03	
9.0E-03	P			2.0E-02	X					1.87	1	1	Yes	Methyl-5-Nitroaniline, 2-	99-55-8	8.7E+00	1.4E+02		8.2E+00	4.0E+02	7.3E+03		3.8E+02		4.6E-03	
8.3E+00	C	2.4E-03	C							-0.92	1	1	Yes	Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	9.4E-03	1.1E+01		9.4E-03						3.2E-06	
1.3E-01	C	3.7E-05	C							1.62	1	1	Yes	Methylaniline Hydrochloride, 2-	636-21-5	6.0E-01	3.9E+03		6.0E-01						2.6E-04	
				1.0E-02	A					-1.18	1	1	Yes	Methylarsonic acid	124-58-3					2.0E+02	3.6E+05		2.0E+02			
				2.0E-04	X						1	0	No	Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					4.0E+00			4.0E+00			
1.0E-01	X			3.0E-04	X						1	0	No	Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	7.8E-01			7.8E-01	6.0E+00			6.0E+00			
2.2E+01	C	6.3E-03	C						M	6.42	1	0.8	No	Methylcholanthrene, 3-	56-49-5	1.1E-03			1.1E-03						2.2E-03	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 ($\mu g/L$)	Dermal SL TR=1E-06 ($\mu g/L$)	Inhalation SL TR=1E-06 ($\mu g/L$)	Carcinogenic SL TR=1E-06 ($\mu g/L$)	Ingestion SL Child THQ=1 ($\mu g/L$)	Dermal SL Child THQ=1 ($\mu g/L$)	SL Child THQ=1 ($\mu g/L$)	Noncarcinogenic SL Child THI=1 ($\mu g/L$)	MCL ($\mu g/L$)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1.25	1	1	Yes	Methylene Chloride	75-09-2	1.3E+01	3.5E+02	2.0E+02	1.1E+01	1.2E+02	3.7E+03	1.3E+03	1.1E+02	5.0E+00	2.9E-03	1.3E-03
1.0E-01	P	4.3E-04	C	2.0E-03	P				M	3.91	1	0.9	Yes	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	2.5E-01	4.3E-01		1.6E-01	4.0E+01	7.5E+01		2.6E+01		1.8E-03	
4.6E-02	I	1.3E-05	C							4.37	1	1	Yes	Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.7E+00	6.7E-01		4.8E-01						2.7E-03	
1.6E+00	C	4.6E-04	C			2.0E-02	C			1.59	1	1	Yes	Methylenebisbenzenamine, 4,4'-	101-77-9	4.9E-02	1.7E+00		4.7E-02						2.1E-04	
						6.0E-04	I			5.22	1	0.9	Yes	Methylenediphenyl Diisocyanate	101-68-8											
				7.0E-02	H			V		3.48	1	1	Yes	Methylstyrene, Alpha-	98-83-9					1.4E+03	1.7E+03		7.8E+02		1.3E+00	
				1.5E-01	I					3.13	1	1	Yes	Metolachlor	51218-45-2					3.0E+03	2.6E+04		2.7E+03		3.2E+00	
				2.5E-02	I					1.7	1	1	Yes	Metribuzin	21087-64-9					5.0E+02	1.8E+04		4.9E+02		1.5E-01	
				2.5E-01	I					2.2	1	1	Yes	Metsulfuron-methyl	74223-64-6					5.0E+03	2.4E+05		4.9E+03		1.9E+00	
				3.0E+00	P			V		6.1	1	1	No	Mineral oils	8012-95-1					6.0E+04			6.0E+04		2.4E+03	
1.8E+01	C	5.1E-03	C	2.0E-04	I			V		6.89	1	0.5	No	Mirex	2385-85-5	4.3E-03		1.1E-03	8.8E-04	4.0E+00			4.0E+00		6.3E-04	
				2.0E-03	I					3.21	1	1	Yes	Molinate	2212-67-1					4.0E+01	1.2E+02		3.0E+01		1.7E-02	
				5.0E-03	I						1	1	Yes	Molybdenum	7439-98-7					1.0E+02	2.3E+04		1.0E+02		2.0E+00	
				1.0E-01	I						1	1	Yes	Monochloramine	10599-90-3					2.0E+03	4.6E+05		2.0E+03	4.0E+03		
				2.0E-03	P					1.66	1	1	Yes	Monomethylaniline	100-61-8					4.0E+01	7.5E+02		3.8E+01		1.4E-02	
				2.5E-02	I					2.94	1	1	Yes	Myclobutanil	88671-89-0					5.0E+02	4.7E+03		4.5E+02		5.6E+00	
				3.0E-04	X					4.04	1	0.9	Yes	N,N'-Diphenyl-1,4-benzenediamine	74-31-7					6.0E+00	8.9E+00		3.6E+00		3.7E-01	
				2.0E-03	I			V		1.38	1	1	Yes	Naled	300-76-5					4.0E+01	6.8E+03		4.0E+01		1.8E-02	
				3.0E-02	X	1.0E-01	P	V			1	0	No	Naphtha, High Flash Aromatic (HFAN)	64742-95-6					6.0E+02		2.1E+02	1.5E+02			
1.8E+00	C	0.0E+00	C							2.28	1	1	Yes	Naphthylamine, 2-	91-59-8	4.3E-02	3.6E-01		3.9E-02						2.0E-04	
				1.0E-01	I					3.36	1	0.9	Yes	Napropamide	15299-99-7					2.0E+03	9.0E+03		1.6E+03		1.1E+01	
		2.6E-04	C	1.1E-02	C	1.4E-05	C			-1.38	1	1	Yes	Nickel Acetate	373-02-4					2.2E+02	6.8E+05		2.2E+02			
		2.6E-04	C	1.1E-02	C	1.4E-05	C			-2.12	1	1	Yes	Nickel Carbonate	3333-67-3					2.2E+02	1.4E+06		2.2E+02			
		2.6E-04	C	1.1E-02	C	1.4E-05	C	V			1	0	Yes	Nickel Carbonyl	13463-39-3			2.2E-02	2.2E-02	2.2E+02		2.9E-02	2.9E-02			
		2.6E-04	C	1.1E-02	C	1.4E-05	C				0.04	1	Yes	Nickel Hydroxide	12054-48-7					2.2E+02	2.0E+03		2.0E+02			
		2.6E-04	C	1.1E-02	C	2.0E-05	C				0.04	1	Yes	Nickel Oxide	1313-99-1					2.2E+02	2.0E+03		2.0E+02			
		2.4E-04	I	1.1E-02	C	1.4E-05	C				0.04	0	Yes	Nickel Refinery Dust	NA					2.2E+02	1.0E+04		2.2E+02		3.2E+01	
		2.6E-04	C	2.0E-02	I	9.0E-05	A				0.04	1	Yes	Nickel Soluble Salts	7440-02-0					4.0E+02	1.8E+04		3.9E+02		2.6E+01	
1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C				0.04	1	Yes	Nickel Subsulfide	12035-72-2	4.8E-02	1.7E+00		4.5E-02	2.2E+02	1.0E+04		2.2E+02			
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1	0	Yes	Nickelocene	1271-28-9					2.2E+02			2.2E+02			
				1.6E+00	I						1	1	Yes	Nitrate	14797-55-8					3.2E+04	7.3E+06		3.2E+04	1.0E+04		
											1	0	Yes	Nitrate + Nitrite (as N)	NA									1.0E+04		
				1.0E-01	I						1	1	Yes	Nitrite	14797-65-0					2.0E+03	4.6E+05		2.0E+03	1.0E+03		
				1.0E-02	X	5.0E-05	X			1.85	1	1	Yes	Nitroaniline, 2-	88-74-4					2.0E+02	3.4E+03		1.9E+02		8.0E-02	
2.0E-02	P			4.0E-03	P	6.0E-03	P			1.39	1	1	Yes	Nitroaniline, 4-	100-01-6	3.9E+00	1.2E+02		3.8E+00	8.0E+01	2.8E+03		7.8E+01		1.6E-03	
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1.85	1	1	Yes	Nitrobenzene	98-95-3			1.4E-01	1.4E-01	4.0E+01	6.2E+02	1.9E+01	1.3E+01		9.2E-05	
				3.0E+03	P					-4.56	1	1	No	Nitrocellulose	9004-70-0					6.0E+07			6.0E+07		1.3E+04	
				7.0E-02	H					-0.47	1	1	Yes	Nitrofurantoin	67-20-9					1.4E+03	1.6E+06		1.4E+03		6.1E-01	
1.3E+00	C	3.7E-04	C							0.23	1	1	Yes	Nitrofurazone	59-87-0	6.0E-02	1.7E+01		6.0E-02						5.4E-05	
1.7E-02	P			1.0E-04	P					1.62	1	1	Yes	Nitroglycerin	55-63-0	4.6E+00	1.8E+02		4.5E+00	2.0E+00	8.7E+01		2.0E+00		8.5E-04	
				1.0E-01	I					-0.89	1	1	Yes	Nitroguanidine	556-88-7					2.0E+03	1.8E+06		2.0E+03		4.8E-01	
		8.8E-06	P			5.0E-03	P	V		-0.35	1	1	Yes	Nitromethane	75-52-5			6.4E-01	6.4E-01			1.0E+01	1.0E+01		1.4E-04	
		2.7E-03	H			2.0E-02	I	V		0.93	1	1	Yes	Nitropropane, 2-	79-46-9			2.1E-03	2.1E-03			4.2E+01	4.2E+01		5.5E-07	
2.7E+01	C	7.7E-03	C						M	0.23	1	1	Yes	Nitroso-N-ethylurea, N-	759-73-9	9.3E-04	1.5E-01		9.2E-04						2.2E-07	
1.2E+02	C	3.4E-02	C						M	-0.03	1	1	Yes	Nitroso-N-methylurea, N-	684-93-5	2.1E-04	4.6E-02		2.1E-04						4.6E-08	
5.4E+00	I	1.6E-03	I					V		2.63	1	1	Yes	Nitroso-di-N-butylamine, N-	924-16-3	1.4E-02	7.9E-02	3.5E-03	2.7E-03						5.5E-06	
7.0E+00	I	2.0E-03	C							1.36	1	1	Yes	Nitroso-di-N-propylamine, N-	621-64-7	1.1E-02	3.5E-01		1.1E-02						8.1E-06	
2.8E+00	I	8.0E-04	C							-1.28	1	1	Yes	Nitrosodiethanolamine, N-	1116-54-7	2.8E-02	8.1E+01		2.8E-02						5.6E-06	
1.5E+02	I	4.3E-02	I						M	0.48	1	1	Yes	Nitrosodiethylamine, N-	55-18-5	1.7E-04	1.7E-02		1.7E-04						6.1E-08	
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	-0.57	1	1	Yes	Nitrosodimethylamine, N-	62-75-9	4.9E-04	2.0E-01	1.4E-04	1.1E-04	1.6E-01	7.4E+01	8.3E-02	5.5E-02		2.8E-08	
4.9E-03	I	2.6E-06	C							3.13	1	1	Yes	Nitrosodiphenylamine, N-	86-30-6	1.6E+01	5.2E+01		1.2E+01						6.7E-02	
2.2E+01	I	6.3E-03	C					V		0.04	1	1	Yes	Nitrosomethylethylamine, N-	10595-95-6	3.5E-03	6.4E-01	8.9E-04	7.1E-04						2.0E-07	
6.7E+00	C	1.9E-03	C							-0.44	1	1	Yes	Nitrosomorpholine [N-]	59-89-2	1.2E-02	5.3E+00		1.2E-02						2.8E-06	
9.4E+00	C	2.7E-03	C							0.36	1	1	Yes	Nitrosopiperidine [N-]	100-75-4	8.3E-03	1.1E+00		8.2E-03						4.4E-06	
2.1E+00	I	6.1E-04	I							-0.19	1	1	Yes	Nitrosopyrrolidine, N-	930-55-2	3.7E-02	1.0E+01		3.7E-02						1.4E-05	
				1.0E-04	X					2.45	1	1	Yes	Nitrotoluene, m-	99-08-1					2.0E+00	1.4E+01		1.7E+00		1.6E-03	
2.2E-01	P			9.0E-04	P			V		2.3	1	1	Yes	Nitrotoluene, o-	88-72-2	3.5E-01	2.8E+00		3.1E-01	1.8E+01	1.5E+02		1.6E+01		3.0E-04	
1.6E-02	P			4.0E-03	P					2.37	1	1	Yes	Nitrotoluene, p-	99-99-0	4.9E+00	3.4E+01		4.3E+00	8.0E+01	6.2E+02		7.1E+01		4.0E-03	
				3.0E-04	X	2.0E-02	P	V		5.65	1	1	No	Nonane, n-	111-84-2					6.0E+00		4.2E+01	5.3E+00		7.5E-02	
				4.0E-02	I					2.3	1	1	Yes	Norflurazon	27314-13-2					8.0E+02	2.0E+04		7.7E+02		5.0E+00	
				3.0E-03	I					8.71	1	0.3	No	Octabromodiphenyl Ether	32536-52-0					6.0E+01			6.0E+01		1.2E+01	
				5.0E-02	I					0.16	1	1	Yes	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0					1.0E+03	6.3E+05		1.0E+03		1.3E+00	
				2.0E-03	H					-1.01	1	1	Yes	Octamethylpyrophosphoramide	152-16-9					4.0E+01	1.4E+05		4.0E+01		9.6E-03	
				5.0E-02	I					3.73	1	0.9	Yes	Oryzalin	19044-88-3					1.0E+03	4.1E+03		8.1E+02		1.5E+00	
				5.0E-03	I					4.8	1	0.8	Yes	Oxadiazon	19666-30-9					1.0E+02	9.0E+01		4.7E+01		4.8E-01	
				2.5E-02	I					-0.47	1	1	Yes	Oxamyl	23135-22-0					5.0E+02	5.1E+05		5.0E+02	2.0E+02	1.1E-01	4.4E-02
				3.0E-03	I					4.73	1	0.8	Yes	Oxyfluorfen	42874-03-3					6.0E+01	6.7E+01		3.2E+01		2.5E+00	
				1.3E-02	I					3.2	1	0.9	Yes	Paclobutrazol	76738-62-0					2.6E+02	1.7E+03		2.3E+02		4.6E-01	
				4.5E-03	I					-4.5	1	1	No	Paraquat Dichloride	1910-42-5					9.0E+01			9.0E+01		1.2E+00	
				6.0E-03	H					3.83	1	0.9	Yes	Parathion	56-38-2					1.2E+02	3.0E+02		8.6E+01		4.3E-01	
				5.0E-02	H			V		3.83	1	1	Yes	Pebulate	1114-71-2					1.0E+03	1.3E+03		5.6E+02		4.5E-01	
				4.0E-02	I					5.2	1	0.9	Yes	Pendimethalin	40487-42-1					8.0E+02	2.4E+02		1.8E+02		2.1E+00	
				2.0E-03	I			V		6.84	1	0.6	No	Pentabromodiphenyl Ether	32534-81-9					4.0E+01			4.0E+01		1.8E+00	
				1.0E-04	I					7.66	1	0.6	No	Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					2.0E+00			2.0E+00		8.7E-02	
				8.0E-04	I			V		5.17	1	0.9	Yes	Pentachlorobenzene	608-93-5					1.6E+01	3.9E+00		3.2E+00		2.4E-02	

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 ($\mu g/L$)	Dermal SL TR=1E-06 ($\mu g/L$)	Inhalation SL TR=1E-06 ($\mu g/L$)	Carcinogenic SL TR=1E-06 ($\mu g/L$)	Ingestion SL Child THQ=1 ($\mu g/L$)	Dermal SL Child THQ=1 ($\mu g/L$)	SL Child THQ=1 ($\mu g/L$)	Noncarcinogenic SL Child THI=1 ($\mu g/L$)	MCL ($\mu g/L$)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
9.0E-02	P							V		3.22	1	1	Yes	Pentachloroethane	76-01-7	8.7E-01	2.5E+00		6.5E-01						3.1E-04	
2.6E-01	H			3.0E-03	I			V		4.64	1	0.9	Yes	Pentachloronitrobenzene	82-68-8	3.0E-01	2.0E-01		1.2E-01	6.0E+01	4.4E+01		2.6E+01		1.5E-03	
4.0E-01	I	5.1E-06	C	5.0E-03	I					5.12	1	0.9	Yes	Pentachlorophenol	87-86-5	1.9E-01	5.2E-02		4.1E-02	1.0E+02	2.9E+01		2.3E+01	1.0E+00	4.2E-04	1.0E-02
4.0E-03	X			2.0E-03	P					2.38	1	1	Yes	Pentaerythritol tetranitrate (PETN)	78-11-5	1.9E+01	4.3E+02		1.9E+01	4.0E+01	9.6E+02		3.9E+01		2.8E-02	
						1.0E+00	P	V		3.39	1	1	Yes	Pentane, n-	109-66-0							2.1E+03	2.1E+03		1.0E+01	
														Perchlorates												
				7.0E-04	I						1	1	Yes	~Ammonium Perchlorate	7790-98-9					1.4E+01	3.2E+03		1.4E+01			
				7.0E-04	I						1	1	Yes	~Lithium Perchlorate	7791-03-9					1.4E+01	3.2E+03		1.4E+01			
				7.0E-04	I						1	1	Yes	~Perchlorate and Perchlorate Salts	14797-73-0					1.4E+01	3.2E+03		1.4E+01	1.5E+01(F)		
				7.0E-04	I						1	1	Yes	~Potassium Perchlorate	7778-74-7					1.4E+01	1.6E+03		1.4E+01			
				7.0E-04	I						1	1	Yes	~Sodium Perchlorate	7601-89-0					1.4E+01	3.2E+03		1.4E+01			
				2.0E-02	P			V		2.41	1	1	Yes	Perfluorobutane Sulfonate	375-73-5					4.0E+02	8.3E+03		3.8E+02		2.1E-01	
				5.0E-02	I					6.5	1	0.6	No	Permethrin	52645-53-1					1.0E+03			1.0E+03		2.4E+02	
2.2E-03	C	6.3E-07	C							1.58	1	1	Yes	Phenacetin	62-44-2	3.5E+01	1.1E+03		3.4E+01						9.7E-03	
				2.5E-01	I					3.59	1	0.9	Yes	Phenmedipham	13684-63-4					5.0E+03	1.9E+04		4.0E+03		2.1E+01	
				3.0E-01	I	2.0E-01	C			1.46	1	1	Yes	Phenol	108-95-2					6.0E+03	1.4E+05		5.8E+03		3.3E+00	
				5.0E-04	X					4.15	1	1	Yes	Phenothiazine	92-84-2					1.0E+01	7.6E+00		4.3E+00		1.4E-02	
				6.0E-03	I					-0.33	1	1	Yes	Phenylenediamine, m-	108-45-2					1.2E+02	4.8E+04		1.2E+02		3.2E-02	
4.7E-02	H									0.15	1	1	Yes	Phenylenediamine, o-	95-54-5	1.7E+00	2.9E+02		1.6E+00						4.4E-04	
				1.9E-01	H					-0.3	1	1	Yes	Phenylenediamine, p-	106-50-3					3.8E+03	1.4E+06		3.8E+03		1.0E+00	
1.9E-03	H									3.09	1	1	Yes	Phenylphenol, 2-	90-43-7	4.0E+01	1.2E+02		3.0E+01						4.1E-01	
				2.0E-04	H					3.56	1	0.9	Yes	Phorate	298-02-2					4.0E+00	1.2E+01		3.0E+00		3.4E-03	
						3.0E-04	I	V		-0.71	1	1		Phosgene	75-44-5											
				2.0E-02	I					2.78	1	1	Yes	Phosmet	732-11-6					4.0E+02	5.3E+03		3.7E+02		8.2E-02	
														Phosphates, Inorganic												
				4.9E+01	P						1	1	Yes	~Aluminum metaphosphate	13776-88-0					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	0	Yes	~Ammonium polyphosphate	68333-79-9					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Calcium pyrophosphate	7790-76-3					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Diammonium phosphate	7783-28-0					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Dicalcium phosphate	7757-93-9					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Dimagnesium phosphate	7782-75-4					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Dipotassium phosphate	7758-11-4					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Disodium phosphate	7558-79-4					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Monoaluminum phosphate	13530-50-2					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Monoammonium phosphate	7722-76-1					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Monocalcium phosphate	7758-23-8					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Monomagnesium phosphate	7757-86-0					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Monopotassium phosphate	7778-77-0					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Monosodium phosphate	7558-80-7					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Polyphosphoric acid	8017-16-1					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	0.9	Yes	~Potassium tripolyphosphate	13845-36-8					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Sodium acid pyrophosphate	7758-16-9					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Sodium aluminum phosphate (acidic)	7785-88-8					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	0	Yes	~Sodium aluminum phosphate (anhydrous)	10279-59-1					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	0.8	Yes	~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	0.9	Yes	~Sodium hexametaphosphate	10124-56-8					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Sodium polyphosphate	68915-31-1					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Sodium trimetaphosphate	7785-84-4					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Sodium tripolyphosphate	7758-29-4					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Tetrapotassium phosphate	7320-34-5					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Tetrasodium pyrophosphate	7722-88-5					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	0.8	Yes	~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Tricalcium phosphate	7758-87-4					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Trimagnesium phosphate	7757-87-1					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Tripotassium phosphate	7778-53-2					9.7E+05	2.2E+08		9.7E+05			
				4.9E+01	P						1	1	Yes	~Trisodium phosphate	7601-54-9					9.7E+05	2.2E+08		9.7E+05			
				3.0E-04	I	3.0E-04	I	V		-0.27	1	1	Yes	Phosphine	7803-51-2					6.0E+00	1.4E+03	6.3E-01	5.7E-01			
				4.9E+01	P	1.0E-02	I				1	1	Yes	Phosphoric Acid	7664-38-2					9.7E+05	2.2E+08		9.7E+05			
				2.0E-05	I			V		3.08	1	1	Yes	Phosphorus, White	7723-14-0					4.0E-01	9.1E+01		4.0E-01		1.5E-03	
														Phthalates												
1.4E-02	I	2.4E-06	C	2.0E-02	I					7.6	1	0.8	No	~Bis(2-ethylhexyl)phthalate	117-81-7	5.6E+00			5.6E+00	4.0E+02			4.0E+02	6.0E+00	1.3E+00	1.4E+00
				1.0E+00	I					4.15	1	0.9	Yes	~Butylphthalyl Butylglycolate	85-70-1					2.0E+04	4.1E+04		1.3E+04		3.1E+02	
				1.0E-01	I					4.5	1	0.9	Yes	~Dibutyl Phthalate	84-74-2					2.0E+03	1.6E+03		9.0E+02		2.3E+00	
				8.0E-01	I					2.42	1	1	Yes	~Diethyl Phthalate	84-66-2					1.6E+04	2.0E+05		1.5E+04		6.1E+00	
				1.0E-01	I			V		2.25	1	1	Yes	~Dimethylterephthalate	120-61-6					2.0E+03	2.7E+04		1.9E+03		4.9E-01	
				1.0E-02	P					8.1	1	0	No	~Octyl Phthalate, di-N-	117-84-0					2.0E+02			2.0E+02		5.7E+01	
				1.0E+00	H					2	1	1	Yes	~Phthalic Acid, P-	100-21-0					2.0E+04	3.3E+05		1.9E+04		6.8E+00	
				2.0E+00	I	2.0E-02	C			1.6	1	1	Yes	~Phthalic Anhydride	85-44-9					4.0E+04	1.1E+06		3.9E+04		8.5E+00	
				7.0E-02	I					1.9	1	1	Yes	Picloram	1918-02-1					1.4E+03	4.3E+04		1.4E+03	5.0E+02	3.8E-01	1.4E-01
				1.0E-04	X					0.93	1	1	Yes	Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					2.0E+00	2.1E+02		2.0E+00		1.3E-03	
				9.0E-04	X					1.44	1	1	Yes	Picric Acid (2,4,6-Trinitrophenol)	88-89-1					1.8E+01	1.2E+03		1.8E+01		8.4E-02	
				1.0E-02	I					4.2	1	0.9	Yes	Pirimiphos, Methyl	29232-93-7					2.0E+02	3.1E+02		1.2E+02		1.2E-01	
3.0E+01	C	8.6E-03	C	7.0E-06	H						1	0	No	Polybrominated Biphenyls	59536-65-1	2.6E-03			2.6E-03	1.4E-01			1.4E-01			
														Polychlorinated Biphenyls (PCBs)												
7.0E-02	S	2.0E-05	S	7.0E-05	I			V		5.69	1	0	No	~Arodor 1016	12674-11-2	1.1E+00		2.8E-01	2.2E-01	1.4E+00			1.4E+00		2.1E-02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 ($\mu g/L$)	Dermal SL TR=1E-06 ($\mu g/L$)	Inhalation SL TR=1E-06 ($\mu g/L$)	Carcinogenic SL TR=1E-06 ($\mu g/L$)	Ingestion SL Child THQ=1 ($\mu g/L$)	Dermal SL Child THQ=1 ($\mu g/L$)	SL Child THQ=1 ($\mu g/L$)	Noncarcinogenic SL Child THI=1 ($\mu g/L$)	MCL ($\mu g/L$)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
2.0E+00	S	5.7E-04	S					V		4.65	1	1	Yes	~Aroclor 1221	11104-28-2	3.9E-02	1.2E-02	9.8E-03	4.7E-03						8.0E-05	
2.0E+00	S	5.7E-04	S					V		4.4	1	1	Yes	~Aroclor 1232	11141-16-5	3.9E-02	1.2E-02	9.8E-03	4.7E-03						8.0E-05	
2.0E+00	S	5.7E-04	S					V		6.34	1	0.7	No	~Aroclor 1242	53469-21-9	3.9E-02		9.8E-03	7.8E-03						1.2E-03	
2.0E+00	S	5.7E-04	S					V		6.2	1	0	No	~Aroclor 1248	12672-29-6	3.9E-02		9.8E-03	7.8E-03						1.2E-03	
2.0E+00	S	5.7E-04	S	2.0E-05	I			V		6.5	1	0.5	No	~Aroclor 1254	11097-69-1	3.9E-02		9.8E-03	7.8E-03	4.0E-01			4.0E-01		2.1E-03	
2.0E+00	S	5.7E-04	S					V		7.55	1	0	No	~Aroclor 1260	11096-82-5	3.9E-02		9.8E-03	7.8E-03						5.5E-03	
				6.0E-04	X			V		6.34	1	0.7	No	~Aroclor 5460	11126-42-4					1.2E+01			1.2E+01		2.0E+00	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		8.27	1	0	No	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		2.8E-03	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.5	1	0	No	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.7E-03	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.6	1	0	No	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.7E-03	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.6	1	0	No	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.7E-03	
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V		7.41	1	0.1	No	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	2.0E-05		4.9E-06	4.0E-06	4.7E-04		2.8E-03	4.0E-04		1.7E-06	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.0E-03	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.12	1	0.3	No	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.0E-03	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.79	1	0.5	No	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.0E-03	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.0E-03	
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	6.0E-06		1.5E-06	1.2E-06	1.4E-04		8.3E-04	1.2E-04		3.0E-07	
2.0E+00	I	5.7E-04	I					V		7.1	1	0.7		~Polychlorinated Biphenyls (high risk)	1336-36-3											
4.0E-01	I	1.0E-04	I					V		7.1	1	0.7	No	~Polychlorinated Biphenyls (low risk)	1336-36-3	1.9E-01		5.6E-02	4.4E-02					5.0E-01	6.8E-03	7.8E-02
7.0E-02	I	2.0E-05	I					V		7.1	1	0.7		~Polychlorinated Biphenyls (lowest risk)	1336-36-3											
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			6.63	1	0.6	No	~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	6.0E-03			6.0E-03	1.4E-01			1.4E-01		9.4E-04	
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V		6.34	1	0.7	No	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	2.0E-03		4.9E-04	4.0E-04	4.7E-02		2.8E-01	4.0E-02		6.2E-05	
						6.0E-04	I			10.46	1	0	No	Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9											
														Polynuclear Aromatic Hydrocarbons (PAHs)												
				6.0E-02	I			V		3.92	1	1	Yes	~Acenaphthene	83-32-9					1.2E+03	9.6E+02		5.3E+02		5.5E+00	
				3.0E-01	I			V		4.45	1	1	Yes	~Anthracene	120-12-7					6.0E+03	2.5E+03		1.8E+03		5.8E+01	
7.3E-01	E	1.1E-04	C					V	M	5.76	1	1	No	~Benz[a]anthracene	56-55-3	3.4E-02		1.8E-02	1.2E-02						4.3E-03	
1.2E+00	C	1.1E-04	C							6.11	1	0.9	No	~Benzo[j]fluoranthene	205-82-3	6.5E-02			6.5E-02						7.8E-02	
7.3E+00	I	1.1E-03	C						M	6.13	1	1	No	~Benzo[a]pyrene	50-32-8	3.4E-03			3.4E-03					2.0E-01	4.0E-03	2.4E-01
7.3E-01	E	1.1E-04	C						M	5.78	1	1	No	~Benzo[b]fluoranthene	205-99-2	3.4E-02			3.4E-02						4.1E-02	
7.3E-02	E	1.1E-04	C						M	6.11	1	0.9	No	~Benzo[k]fluoranthene	207-08-9	3.4E-01			3.4E-01						4.0E-01	
				8.0E-02	I			V		3.9	1	1	Yes	~Chloronaphthalene, Beta-	91-58-7					1.6E+03	1.4E+03		7.5E+02		3.9E+00	
7.3E-03	E	1.1E-05	C						M	5.81	1	1	No	~Chrysene	218-01-9	3.4E+00			3.4E+00						1.2E+00	
7.3E+00	E	1.2E-03	C						M	6.75	1	0.6	No	~Dibenz[a,h]anthracene	53-70-3	3.4E-03			3.4E-03						1.3E-02	
1.2E+01	C	1.1E-03	C							7.71	1	0.3	No	~Dibenzo(a,e)pyrene	192-65-4	6.5E-03			6.5E-03						8.4E-02	
2.5E+02	C	7.1E-02	C						M	5.8	1	0.9	No	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	1.0E-04			1.0E-04						9.9E-05	
				4.0E-02	I					5.16	1	1	No	~Fluoranthene	206-44-0					8.0E+02			8.0E+02		8.9E+01	
				4.0E-02	I			V		4.18	1	1	Yes	~Fluorene	86-73-7					8.0E+02	4.6E+02		2.9E+02		5.5E+00	
7.3E-01	E	1.1E-04	C						M	6.7	1	0.6	No	~Indeno[1,2,3-cd]pyrene	193-39-5	3.4E-02			3.4E-02						1.3E-01	
2.9E-02	P			7.0E-02	A			V		3.87	1	1	Yes	~Methylnaphthalene, 1-	90-12-0	2.7E+00	2.0E+00		1.1E+00	1.4E+03	1.1E+03		6.2E+02		6.0E-03	
				4.0E-03	I			V		3.86	1	1	Yes	~Methylnaphthalene, 2-	91-57-6					8.0E+01	6.5E+01		3.6E+01		1.9E-01	
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V		3.3	1	1	Yes	~Naphthalene	91-20-3			1.7E-01	1.7E-01	4.0E+02	7.0E+02	6.3E+00	6.1E+00		5.4E-04	
1.2E+00	C	1.1E-04	C							4.75	1	0.9	Yes	~Nitropyrene, 4-	57835-92-4	6.5E-02	2.7E-02		1.9E-02						3.3E-03	
				3.0E-02	I			V		4.88	1	1	Yes	~Pyrene	129-00-0					6.0E+02	1.5E+02		1.2E+02		1.3E+01	
				2.0E-02	P					-0.33	1	1	Yes	Potassium Perfluorobutane Sulfonate	29420-49-3					4.0E+02	2.8E+05		4.0E+02			
1.5E-01	I			9.0E-03	I					4.1	1	0.9	Yes	Prochloraz	67747-09-5	5.2E-01	1.4E+00		3.8E-01	1.8E+02	5.1E+02		1.3E+02		1.9E-03	
				6.0E-03	H			V		5.58	1	0.8	Yes	Profluralin	26399-36-0					1.2E+02	3.3E+01		2.6E+01		1.6E+00	
				1.5E-02	I					2.99	1	1	Yes	Prometon	1610-18-0					3.0E+02	1.6E+03		2.5E+02		1.2E-01	
				4.0E-03	I					3.51	1	0.9	Yes	Prometryn	7287-19-6					8.0E+01	2.3E+02		6.0E+01		9.1E-02	
				1.3E-02	I					2.18	1	1	Yes	Propachlor	1918-16-7					2.6E+02	4.3E+03		2.5E+02		1.5E-01	
				4.0E-03	I					1.52	1	1	Yes	Propanediol, 1,2-	114-26-1					8.0E+01	3.6E+03		7.8E+01		2.5E-02	
				5.0E-03	I					3.07	1	1	Yes	Propanil	709-98-8					1.0E+02	4.4E+02		8.2E+01		4.5E-02	
				2.0E-02	I					5	1	0.8	Yes	Propargite	2312-35-8					4.0E+02	2.7E+02		1.6E+02		1.2E+01	
				2.0E-03	I			V		-0.38	1	1	Yes	Propargyl Alcohol	107-19-7					4.0E+01	1.2E+04		4.0E+01		8.2E-03	
				2.0E-02	I					2.93	1	1	Yes	Propazine	139-40-2					4.0E+02	2.4E+03		3.4E+02		3.1E-01	
				2.0E-02	I					2.6	1	1	Yes	Propham	122-42-9					4.0E+02	2.8E+03		3.5E+02		2.2E-01	
				1.3E-02	I					3.72	1	0.9	Yes	Propiconazole	60207-90-1					2.6E+02	1.1E+03		2.1E+02		6.9E-01	
						8.0E-03	I	V		0.59	1	1	Yes	Propionaldehyde	123-38-6							1.7E+01	1.7E+01		3.4E-03	
				1.0E-01	X	1.0E+00	X	V		3.69	1	1	Yes	Propyl benzene	103-65-1					2.0E+03	1.8E+03	2.1E+03	6.6E+02		1.2E+00	
						3.0E+00	C	V		1.77	1	1	Yes	Propylene	115-07-1							6.3E+03	6.3E+03		6.0E+00	
				2.0E+01	P					-0.92	1	1	Yes	Propylene Glycol	57-55-6					4.0E+05	3.2E+08		4.0E+05		8.1E+01	
						2.7E-04	A			1.83	1	1	Yes	Propylene Glycol Dinitrate	6423-43-4											
				7.0E-01	H	2.0E+00	I	V		-0.49	1	1	Yes	Propylene Glycol Monomethyl Ether	107-98-2					1.4E+04	3.9E+06	4.2E+03	3.2E+03		6.5E-01	
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		0.03	1	1	Yes	Propylene Oxide	75-56-9	3.2E-01	4.7E+01	1.5E+00	2.7E-01			6.3E+01	6.3E+01		5.6E-05	
				7.5E-02	I					3.43	1	0.9	Yes	Propyzamide	23950-58-5					1.5E+03	5.5E+03		1.2E+03		1.2E+00	
				1.0E-03	I			V		0.65	1	1	Yes	Pyridine	110-86-1					2.0E+01	1.5E+03		2.0E+01		6.8E-03	
				5.0E-04	I					4.44	1	0.9	Yes	Quinalphos	13593-03-8					1.0E+01	1.0E+01		5.1E+00		4.3E-02	
3.0E+00	I									2.03	1	1	Yes	Quinoline	91-22-5	2.6E-02	2.9E-01		2.4E-02						7.8E-05	
				9.0E-03	I					4.28	1	0.9	Yes	Quizalofop-ethyl	76578-14-8					1.8E+02	3.8E+02		1.2E+02		1.9E+00	
						3.0E-02	A				1	0	Yes	Refractory Ceramic Fibers	NA											
				3.0E-02	I					6.14	1	0.7	Yes	Resmethrin	10453-86-8					6.0E+02	7.6E+01		6.7E+01		4.2E+01	
				5.0E-02	H			V		4.88	1	0.8	Yes	Ronnel	299-84-3					1.0E+03	6.8E+02		4.1E+02		3.7E+00	
				4.0E-03	I					4.1	1	0.9	Yes	Rotenone	83-79-4					8.0E+01	2.6E+02		6.1E+01		3.2E+01	
2.2E-01	C	6.3E-05	C						M	3.45	1	1	Yes	Safrole	94-59-7	1.1E-01	6.0E-01		9.6E-02						5.9E-05	
				5.0E-03	I						1	1	Yes	Selenious Acid	7783-00-8					1.0E+02	2.3E+04		1.0E+02			

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 ($\mu g/L$)	Dermal SL TR=1E-06 ($\mu g/L$)	Inhalation SL TR=1E-06 ($\mu g/L$)	Carcinogenic SL TR=1E-06 ($\mu g/L$)	Ingestion SL Child THQ=1 ($\mu g/L$)	Dermal SL Child THQ=1 ($\mu g/L$)	SL Child THQ=1 ($\mu g/L$)	Noncarcinogenic SL Child THI=1 ($\mu g/L$)	MCL ($\mu g/L$)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
				5.0E-03	I	2.0E-02	C				1	1	Yes	Selenium	7782-49-2					1.0E+02	2.3E+04		1.0E+02	5.0E+01	5.2E-01	2.6E-01
				5.0E-03	C	2.0E-02	C				1	1	Yes	Selenium Sulfide	7446-34-6					1.0E+02	2.3E+04		1.0E+02			
				9.0E-02	I					4.38	1	0.9	Yes	Sethoxydim	74051-80-2					1.8E+03	2.4E+03		1.0E+03		9.3E+00	
						3.0E-03	C				1	1	Yes	Silica (crystalline, respirable)	7631-86-9											
				5.0E-03	I						0.04	1	Yes	Silver	7440-22-4					1.0E+02	1.5E+03		9.4E+01		8.0E-01	
1.2E-01	H			5.0E-03	I					2.18	1	1	Yes	Simazine	122-34-9	6.5E-01	9.3E+00		6.1E-01	1.0E+02	1.6E+03		9.4E+01	4.0E+00	3.0E-04	2.0E-03
				1.3E-02	I					0.37	1	1	Yes	Sodium Acifluorfen	62476-59-9					2.6E+02	2.1E+05		2.6E+02		2.1E+00	
				4.0E-03	I						1	1	Yes	Sodium Azide	26628-22-8					8.0E+01	1.8E+04		8.0E+01			
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Sodium Dichromate	10588-01-9	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
2.7E-01	H			3.0E-02	I					-1.43	1	1	Yes	Sodium Diethyldithiocarbamate	148-18-5	2.9E-01	8.5E+02		2.9E-01	6.0E+02	1.9E+06		6.0E+02			
				5.0E-02	A	1.3E-02	C				1	1	Yes	Sodium Fluoride	7681-49-4					1.0E+03	2.3E+05		1.0E+03			
				2.0E-05	I					-3.78	1	1	No	Sodium Fluoroacetate	62-74-8					4.0E-01			4.0E-01		8.1E-05	
				1.0E-03	H						1	1	Yes	Sodium Metavanadate	13718-26-8					2.0E+01	4.6E+03		2.0E+01			
				8.0E-04	P						1	1	Yes	Sodium Tungstate	13472-45-2					1.6E+01	3.6E+03		1.6E+01			
				8.0E-04	P						1	1	Yes	Sodium Tungstate Dihydrate	10213-10-2					1.6E+01	3.6E+03		1.6E+01			
2.4E-02	H			3.0E-02	I					3.53	1	0.9	Yes	Stirofos (Tetrachlorovinphos)	961-11-5	3.2E+00	1.9E+01		2.8E+00	6.0E+02	3.8E+03		5.2E+02		8.2E-03	
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Strontium Chromate	7789-06-2	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
				6.0E-01	I						1	1	Yes	Strontium, Stable	7440-24-6					1.2E+04	2.7E+06		1.2E+04		4.2E+02	
				3.0E-04	I					1.93	1	1	Yes	Strychnine	57-24-9					6.0E+00	3.2E+02		5.9E+00		6.5E-02	
				2.0E-01	I	1.0E+00	I	V		2.95	1	1	Yes	Styrene	100-42-5					4.0E+03	1.0E+04	2.1E+03	1.2E+03	1.0E+02	1.3E+00	1.1E-01
				3.0E-03	P					3.1	1	1	Yes	Styrene-Acrylonitrile (SAN) Trimer	NA					6.0E+01	2.4E+02		4.8E+01			
				1.0E-03	P	2.0E-03	X			-0.77	1	1	Yes	Sulfolane	126-33-0					2.0E+01	1.7E+04		2.0E+01		4.4E-03	
				8.0E-04	P					3.9	1	0.9	Yes	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					1.6E+01	3.5E+01		1.1E+01		6.5E-02	
						1.0E-03	C	V			1	1	Yes	Sulfur Trioxide	7446-11-9							2.1E+00	2.1E+00			
						1.0E-03	C				1	1	Yes	Sulfuric Acid	7664-93-9											
2.5E-02	I	7.1E-06	I	5.0E-02	H					4.82	1	0.8	Yes	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl	140-57-8	3.1E+00	2.3E+00		1.3E+00	1.0E+03	8.2E+02		4.5E+02		1.5E-02	
				3.0E-02	H					3.3	1	0.9	Yes	TCMTB	21564-17-0					6.0E+02	2.4E+03		4.8E+02		3.3E+00	
				7.0E-02	I					1.79	1	1	Yes	Tebuthiuron	34014-18-1					1.4E+03	4.7E+04		1.4E+03		3.9E-01	
				2.0E-02	H					5.96	1	0.7	No	Temephos	3383-96-8					4.0E+02			4.0E+02		7.6E+01	
				1.3E-02	I					1.89	1	1	Yes	Terbacil	5902-51-2					2.6E+02	7.0E+03		2.5E+02		7.5E-02	
				2.5E-05	H			V		4.48	1	0.9	Yes	Terbufos	13071-79-9					5.0E-01	4.5E-01		2.4E-01		5.2E-04	
				1.0E-03	I					3.74	1	0.9	Yes	Terbutryn	886-50-0					2.0E+01	4.1E+01		1.3E+01		1.9E-02	
				1.0E-04	I					6.77	1	0.6	No	Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					2.0E+00			2.0E+00		5.4E-02	
				3.0E-04	I			V		4.64	1	1	Yes	Tetrachlorobenzene, 1,2,4,5-	95-94-3					6.0E+00	2.4E+00		1.7E+00		7.9E-03	
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		2.93	1	1	Yes	Tetrachloroethane, 1,1,1,2-	630-20-6	3.0E+00	1.1E+01	7.6E-01	5.7E-01	6.0E+02	2.4E+03		4.8E+02		2.2E-04	
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		2.39	1	1	Yes	Tetrachloroethane, 1,1,2,2-	79-34-5	3.9E-01	3.3E+00	9.7E-02	7.6E-02	4.0E+02	3.6E+03		3.6E+02		3.0E-05	
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		3.4	1	1	Yes	Tetrachloroethylene	127-18-4	3.7E+01	6.5E+01	2.2E+01	1.1E+01	1.2E+02	2.3E+02	8.3E+01	4.1E+01	5.0E+00	5.1E-03	2.3E-03
				3.0E-02	I					4.45	1	0.9	Yes	Tetrachlorophenol, 2,3,4,6-	58-90-2					6.0E+02	3.9E+02		2.4E+02		1.5E+00	
2.0E+01	H							V		4.54	1	0.9	Yes	Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.9E-03	2.0E-03		1.3E-03						4.5E-06	
				5.0E-04	I					3.99	1	0.9	Yes	Tetraethyl Dithiopyrophosphate	3689-24-5					1.0E+01	2.4E+01		7.1E+00		5.2E-03	
						8.0E+01	I	V		1.68	1	1	Yes	Tetrafluoroethane, 1,1,1,2-	811-97-2							1.7E+05	1.7E+05		9.3E+01	
				2.0E-03	P					1.64	1	1	Yes	Tetryl (Trinitrophenylmethylnitramine)	479-45-8					4.0E+01	2.5E+03		3.9E+01		3.7E-01	
				7.0E-06	X						1	1	Yes	Thallium (I) Nitrate	10102-45-1					1.4E-01	3.2E+01		1.4E-01			
				1.0E-05	X						1	1	Yes	Thallium (Soluble Salts)	7440-28-0					2.0E-01	4.6E+01		2.0E-01	2.0E+00	1.4E-02	1.4E-01
				6.0E-06	X			V		-0.17	1	1	Yes	Thallium Acetate	563-68-8					1.2E-01	1.0E+02		1.2E-01			
				2.0E-05	X			V		-0.86	1	1	Yes	Thallium Carbonate	6533-73-9					4.0E-01	3.7E+03		4.0E-01			
				6.0E-06	X						1	1	Yes	Thallium Chloride	7791-12-0					1.2E-01	2.7E+01		1.2E-01			
				2.0E-05	X						1	0.9	Yes	Thallium Sulfate	7446-18-6					4.0E-01	9.1E+01		4.0E-01			
				1.3E-02	I					1.56	1	1	Yes	Thifensulfuron-methyl	79277-27-3					2.6E+02	3.5E+04		2.6E+02		7.8E-02	
				1.0E-02	I					3.4	1	0.9	Yes	Thiobencarb	28249-77-6					2.0E+02	7.7E+02		1.6E+02		5.5E-01	
				7.0E-02	X					-0.63	1	1	Yes	Thiodiglycol	111-48-8					1.4E+03	9.7E+05		1.4E+03		2.8E-01	
				3.0E-04	H					2.16	1	1	Yes	Thiotanox	39196-18-4					6.0E+00	4.4E+01		5.3E+00		1.8E-03	
				8.0E-02	I					1.4	1	1	Yes	Thiophanate, Methyl	23564-05-8					1.6E+03	2.1E+05		1.6E+03		1.4E+00	
				5.0E-03	I					1.73	1	1	Yes	Thiram	137-26-8					1.0E+02	4.0E+03		9.8E+01		1.4E-01	
				6.0E-01	H						1	1	Yes	Tin	7440-31-5					1.2E+04	2.7E+06		1.2E+04		3.0E+03	
						1.0E-04	A	V			1	1	Yes	Titanium Tetrachloride	7550-45-0							2.1E-01	2.1E-01			
				8.0E-02	I	5.0E+00	I	V		2.73	1	1	Yes	Toluene	108-88-3					1.6E+03	5.3E+03	1.0E+04	1.1E+03	1.0E+03	7.6E-01	6.9E-01
1.8E-01	X			2.0E-04	X					0.16	1	1	Yes	Toluene-2,5-diamine	95-70-5	4.3E-01	8.2E+01		4.3E-01	4.0E+00	8.3E+02		4.0E+00		1.3E-04	
3.0E-02	P			4.0E-03	X					1.39	1	1	Yes	Toluidine, p-	106-49-0	2.6E+00	6.8E+01		2.5E+00	8.0E+01	2.3E+03		7.7E+01		1.1E-03	
				3.0E+00	P			V		6.1	1	1	No	Total Petroleum Hydrocarbons (Aliphatic High)	NA					6.0E+04			6.0E+04		2.4E+03	
						6.0E-01	P	V		3.9	1	1	Yes	Total Petroleum Hydrocarbons (Aliphatic Low)	NA							1.3E+03	1.3E+03		8.8E+00	
				1.0E-02	X	1.0E-01	P	V		5.65	1	1	No	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA					2.0E+02		2.1E+02	1.0E+02		1.5E+00	
				4.0E-02	P					5.16	1	1	No	Total Petroleum Hydrocarbons (Aromatic High)	NA					8.0E+02			8.0E+02		8.9E+01	
				4.0E-03	P	3.0E-02	P	V		2.13	1	1	Yes	Total Petroleum Hydrocarbons (Aromatic Low)	NA					8.0E+01	6.1E+02	6.3E+01	3.3E+01		1.7E-02	
				4.0E-03	P	3.0E-03	P	V		3.58	1	1	Yes	Total Petroleum Hydrocarbons (Aromatic Medium)	NA					8.0E+01	9.0E+01	6.3E+00	5.5E+00		2.3E-02	
1.1E+00	I	3.2E-04	I							5.9	1	0.8	No	Toxaphene	8001-35-2	7.1E-02			7.1E-02					3.0E+00	1.1E-02	4.6E-01
				7.5E-03	I					7.56	1	0.5	No	Tralomethrin	66841-25-6					1.5E+02			1.5E+02		5.8E+01	
				3.0E-04	A			V		4.1	1	0.9	Yes	Tri-n-butyltin	688-73-3					6.0E+00	9.9E+00		3.7E+00		8.2E-02	
				8.0E+01	X					0.25	1	1	Yes	Triacetin	102-76-1					1.6E+06	5.3E+08		1.6E+06		4.5E+02	
				3.0E-02	I					2.77	1	1	Yes	Triadimefon	43121-43-3					6.0E+02	6.9E+03		5.5E+02		4.4E-01	
				1.3E-02	I			V		4.6	1	0.9	Yes	Triallate	2303-17-5					2.6E+02	2.2E+02		1.2E+02		2.6E-01	
				1.0E-02	I					1.1	1	1	Yes	Triasulfuron	82097-50-5					2.0E+02	6.0E+04		2.0E+02		2.1E-01	
				8.0E-03	I					0.78	1	1	Yes	Tribenuron-methyl	101200-48-0					1.6E+02	5.0E+03		1.6E+02		6.1E-02	
				5.0E-03	I			V		4.66	1	0.9	Yes	Tribromobenzene, 1,2,4-	615-54-3					1.0E+02	8.1E+01		4.5E+01		6.4E-02	
9.0E-03	P			1.0E-02	P					4	1	0.9	Yes	Tributyl Phosphate	126-73-8	8.7E+00	1.3E+01		5.2E+00	2.0E+02	3.3E+02		1.2E+02		2.5E-02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater	
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
				3.0E-04	P						1	0	No	Tributyltin Compounds	NA					6.0E+00			6.0E+00			
				3.0E-04	I					4.05	1	1	Yes	Tributyltin Oxide	56-35-9					6.0E+00	9.5E+01		5.7E+00		2.9E+02	
				3.0E+01	I	3.0E+01	H	V		3.16	1	1	Yes	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					6.0E+05	1.9E+06	6.3E+04	5.5E+04		1.4E+02	
7.0E-02	I			2.0E-02	I					1.33	1	1	Yes	Trichloroacetic Acid	76-03-9	1.1E+00	4.6E+01		1.1E+00	4.0E+02	1.8E+04		3.9E+02	6.0E+01	2.2E-04	1.2E-02
2.9E-02	H									-0.67	1	1	Yes	Trichloroaniline HCl, 2,4,6-	33663-50-2	2.7E+00	3.7E+03		2.7E+00						7.4E-03	
7.0E-03	X			3.0E-05	X					3.52	1	1	Yes	Trichloroaniline, 2,4,6-	634-93-5	1.1E+01	2.0E+01		7.1E+00	6.0E-01	1.2E+00		4.0E-01		3.6E-03	
				8.0E-04	X			V		4.05	1	1	Yes	Trichlorobenzene, 1,2,3-	87-61-6					1.6E+01	1.3E+01		7.0E+00		2.1E-02	
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		4.02	1	1	Yes	Trichlorobenzene, 1,2,4-	120-82-1	2.7E+00	2.0E+00		1.2E+00	2.0E+02	1.6E+02	4.2E+00	4.0E+00	7.0E+01	3.4E-03	2.0E-01
				2.0E+00	I	5.0E+00	I	V		2.49	1	1	Yes	Trichloroethane, 1,1,1-	71-55-6					4.0E+04	2.5E+05	1.0E+04	8.0E+03	2.0E+02	2.8E+00	7.0E-02
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1.89	1	1	Yes	Trichloroethane, 1,1,2-	79-00-5	1.4E+00	2.0E+01	3.5E-01	2.8E-01	8.0E+01	1.3E+03	4.2E-01	4.1E-01	5.0E+00	8.9E-05	1.6E-03
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	2.42	1	1	Yes	Trichloroethylene	79-01-6	1.2E+00	7.4E+00	9.6E-01	4.9E-01	1.0E+01	6.9E+01	4.2E+00	2.8E+00	5.0E+00	1.8E-04	1.8E-03
				3.0E-01	I			V		2.53	1	1	Yes	Trichlorofluoromethane	75-69-4					6.0E+03	3.6E+04		5.2E+03		3.3E+00	
				1.0E-01	I					3.72	1	1	Yes	Trichlorophenol, 2,4,5-	95-95-4					2.0E+03	2.9E+03		1.2E+03		4.4E+00	
1.1E-02	I	3.1E-06	I	1.0E-03	P					3.69	1	1	Yes	Trichlorophenol, 2,4,6-	88-06-2	7.1E+00	9.8E+00		4.1E+00	2.0E+01	3.0E+01		1.2E+01		1.5E-02	
				1.0E-02	I					3.31	1	0.9	Yes	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					2.0E+02	8.7E+02		1.6E+02		6.8E-02	
				8.0E-03	I					3.8	1	0.9	Yes	Trichlorophenoxypropionic acid. -2.4.5	93-72-1					1.6E+02	3.6E+02		1.1E+02	5.0E+01	6.1E-02	2.8E-02
				5.0E-03	I			V		2.43	1	1	Yes	Trichloropropane, 1,1,2-	598-77-6					1.0E+02	7.5E+02		8.8E+01		3.5E-02	
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	2.27	1	1	Yes	Trichloropropane, 1,2,3-	96-18-4	8.4E-04	7.3E-03		7.5E-04	8.0E+01	7.7E+02	6.3E-01	6.2E-01		3.2E-07	
				3.0E-03	X	3.0E-04	P	V		2.78	1	1	Yes	Trichloropropene, 1,2,3-	96-19-5					6.0E+01	2.6E+02	6.3E-01	6.2E-01		3.1E-04	
				2.0E-02	A					5.11	1	0.8	Yes	Tricresyl Phosphate (TCP)	1330-78-5					4.0E+02	2.6E+02		1.6E+02		1.5E+01	
				3.0E-03	I					5.18	1	0.8	Yes	Tridiphane	58138-08-2					6.0E+01	2.6E+01		1.8E+01		1.3E-01	
						7.0E-03	I	V		1.45	1	1	Yes	Triethylamine	121-44-8							1.5E+01	1.5E+01		4.4E-03	
				2.0E+00	P					-1.75	1	1	Yes	Triethylene Glycol	112-27-6					4.0E+04	1.8E+08		4.0E+04		8.8E+00	
						2.0E+01	P	V		1.74	1	1	Yes	Trifluoroethane, 1,1,1-	420-46-2							4.2E+04	4.2E+04		1.3E+02	
7.7E-03	I			7.5E-03	I			V		5.34	1	0.8	Yes	Trifluralin	1582-09-8	1.0E+01	3.4E+00		2.6E+00	1.5E+02	5.5E+01		4.0E+01		8.4E-02	
2.0E-02	P			1.0E-02	P					-0.65	1	1	Yes	Trimethyl Phosphate	512-56-1	3.9E+00	2.8E+03		3.9E+00	2.0E+02	1.6E+05		2.0E+02		8.6E-04	
						5.0E-03	P	V		3.66	1	1	Yes	Trimethylbenzene, 1,2,3-	526-73-8							1.0E+01	1.0E+01		1.5E-02	
						7.0E-03	P	V		3.63	1	1	Yes	Trimethylbenzene, 1,2,4-	95-63-6							1.5E+01	1.5E+01		2.1E-02	
				1.0E-02	X			V		3.42	1	1	Yes	Trimethylbenzene, 1,3,5-	108-67-8					2.0E+02	2.8E+02		1.2E+02		1.7E-01	
				1.0E-02	X			V		4.08	1	1	Yes	Trimethylpentene, 2,4,4-	25167-70-8					2.0E+02	9.6E+01		6.5E+01		2.2E-01	
				3.0E-02	I					1.18	1	1	Yes	Trinitrobenzene, 1,3,5-	99-35-4					6.0E+02	4.7E+04		5.9E+02		2.1E+00	
3.0E-02	I			5.0E-04	I					1.6	1	1	Yes	Trinitrotoluene, 2,4,6-	118-96-7	2.6E+00	1.1E+02		2.5E+00	1.0E+01	4.5E+02		9.8E+00		1.5E-02	
				2.0E-02	P					2.83	1	1	Yes	Triphenylphosphine Oxide	791-28-6					4.0E+02	3.8E+03		3.6E+02		1.5E+00	
				2.0E-02	A					3.65	1	0.9	Yes	Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					4.0E+02	3.2E+03		3.6E+02		8.0E+00	
				1.0E-02	X					2.59	1	1	Yes	Tris(1-chloro-2-propyl)phosphate	13674-84-5					2.0E+02	3.8E+03		1.9E+02		6.5E-01	
2.3E+00	C	6.6E-04	C					V		4.29	1	1	No	Tris(2,3-dibromopropyl)phosphate	126-72-7	3.4E-02		8.5E-03	6.8E-03						1.3E-04	
2.0E-02	P			7.0E-03	P					1.44	1	1	Yes	Tris(2-chloroethyl)phosphate	115-96-8	3.9E+00	3.0E+02		3.8E+00	1.4E+02	1.2E+04		1.4E+02		3.8E-03	
3.2E-03	P			1.0E-01	P					9.49	1	0	No	Tris(2-ethylhexyl)phosphate	78-42-2	2.4E+01			2.4E+01	2.0E+03			2.0E+03		1.2E+02	
				8.0E-04	P						1	1	Yes	Tungsten	7440-33-7					1.6E+01	3.6E+03		1.6E+01		2.4E+00	
				3.0E-03	I	4.0E-05	A				1	1	Yes	Uranium (Soluble Salts)	NA					6.0E+01	1.4E+04		6.0E+01	3.0E+01	2.7E+01	1.4E+01
1.0E+00	C	2.9E-04	C						M	-0.15	1	1	Yes	Urethane	51-79-6	2.5E-02	6.1E+00		2.5E-02						5.6E-06	
		8.3E-03	P	9.0E-03	I	7.0E-06	P				0.026	1	Yes	Vanadium Pentoxide	1314-62-1					1.8E+02	1.1E+03		1.5E+02			
				5.0E-03	S	1.0E-04	A				0.026	1	Yes	Vanadium and Compounds	7440-62-2					1.0E+02	6.0E+02		8.6E+01		8.6E+01	
				1.0E-03	I			V		3.84	1	1	Yes	Vernolate	1929-77-7					2.0E+01	2.5E+01		1.1E+01		8.9E-03	
				2.5E-02	I					3.1	1	0.9	Yes	Vinclozolin	50471-44-8					5.0E+02	3.7E+03		4.4E+02		3.4E-01	
				1.0E+00	H	2.0E-01	I	V		0.73	1	1	Yes	Vinyl Acetate	108-05-4					2.0E+04	1.4E+06	4.2E+02	4.1E+02		8.7E-02	
		3.2E-05	H			3.0E-03	I	V		1.57	1	1	Yes	Vinyl Bromide	593-60-2			1.8E-01	1.8E-01			6.3E+00	6.3E+00		5.1E-05	
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1.62	1	1	Yes	Vinyl Chloride	75-01-4	2.1E-02	2.8E-01	3.4E-01	1.9E-02	6.0E+01	8.9E+02	2.1E+02	4.4E+01	2.0E+00	6.5E-06	6.9E-04
				3.0E-04	I					2.7	1	1	Yes	Warfarin	81-81-2					6.0E+00	8.4E+01		5.6E+00		5.9E-03	
				2.0E-01	S	1.0E-01	S	V		3.15	1	1	Yes	Xylene, P-	106-42-3					4.0E+03	7.6E+03	2.1E+02	1.9E+02		1.9E-01	
				2.0E-01	S	1.0E-01	S	V		3.2	1	1	Yes	Xylene, m-	108-38-3					4.0E+03	7.1E+03	2.1E+02	1.9E+02		1.9E-01	
				2.0E-01	S	1.0E-01	S	V		3.12	1	1	Yes	Xylene, o-	95-47-6					4.0E+03	8.0E+03	2.1E+02	1.9E+02		1.9E-01	
				2.0E-01	I	1.0E-01	I	V		3.16	1	1	Yes	Xylenes	1330-20-7					4.0E+03	7.5E+03	2.1E+02	1.9E+02	1.0E+04	1.9E-01	9.9E+00
				3.0E-04	I						1	1	Yes	Zinc Phosphide	1314-84-7					6.0E+00	2.3E+03		6.0E+00			
				3.0E-01	I						1	1	Yes	Zinc and Compounds	7440-66-6					6.0E+03	2.3E+06		6.0E+03		3.7E+02	
				5.0E-02	I					1.3	1	1	Yes	Zineb	12122-67-7					1.0E+03	9.7E+04		9.9E+02		2.9E+00	
				8.0E-05	X						1	1	Yes	Zirconium	7440-67-7					1.6E+00	3.6E+02		1.6E+00		4.8E+00	

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
8.7E-03	I			4.0E-03	I					1	0.1		1.4E+09		Acephate	30560-19-1	3.8E+02	8.9E+02		2.6E+02	4.7E+03	1.1E+04		3.3E+03
		2.2E-06	I			9.0E-03	I	V		1		1.1E+05	1.4E+09	8.7E+03	Acetaldehyde	75-07-0			4.9E+01	4.9E+01			3.4E+02	3.4E+02
				2.0E-02	I					1	0.1		1.4E+09		Acetochlor	34256-82-1					2.3E+04	5.5E+04		1.6E+04
				9.0E-01	I	3.1E+01	A	V		1		1.1E+05	1.4E+09	1.4E+04	Acetone	67-64-1					1.1E+06		1.8E+06	6.7E+05
						2.0E-03	X			1	0.1		1.4E+09		Acetone Cyanohydrin	75-86-5							1.2E+07	1.2E+07
						6.0E-02	I	V		1		1.3E+05	1.4E+09	1.3E+04	Acetonitrile	75-05-8							3.4E+03	3.4E+03
				1.0E-01	I			V		1		2.5E+03	1.4E+09	6.0E+04	Acetophenone	98-86-2					1.2E+05			1.2E+05
3.8E+00	C	1.3E-03	C							1	0.1		1.4E+09		Acetylaminofluorene, 2-	53-96-3	8.6E-01	2.0E+00	1.3E+04	6.0E-01				
				5.0E-04	I	2.0E-05	I	V		1		2.3E+04	1.4E+09	6.9E+03	Acrolein	107-02-8					5.8E+02		6.1E-01	6.0E-01
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	1	0.1		1.4E+09		Acrylamide	79-06-1	6.5E+00	1.5E+01	1.7E+05	4.6E+00	2.3E+03	5.5E+03	3.6E+07	1.6E+03
				5.0E-01	I	1.0E-03	I	V		1		1.1E+05	1.4E+09	9.5E+04	Acrylic Acid	79-10-7					5.8E+05		4.2E+02	4.2E+02
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		1		1.1E+04	1.4E+09	7.7E+03	Acrylonitrile	107-13-1	6.1E+00		1.4E+00	1.1E+00	4.7E+04		6.7E+01	6.7E+01
						6.0E-03	P			1	0.1		1.4E+09		Adiponitrile	111-69-3							3.6E+07	3.6E+07
5.6E-02	C			1.0E-02	I					1	0.1		1.4E+09		Alachlor	15972-60-8	5.8E+01	1.4E+02		4.1E+01	1.2E+04	2.8E+04		8.2E+03
				1.0E-03	I					1	0.1		1.4E+09		Aldicarb	116-06-3					1.2E+03	2.8E+03		8.2E+02
				1.0E-03	I					1	0.1		1.4E+09		Aldicarb Sulfone	1646-88-4					1.2E+03	2.8E+03		8.2E+02
										1	0.1		1.4E+09		Aldicarb sulfoxide	1646-87-3								
1.7E+01	I	4.9E-03	I	3.0E-05	I			V		1			1.4E+09	1.7E+06	Aldrin	309-00-2	1.9E-01		4.3E+00	1.8E-01	3.5E+01			3.5E+01
				5.0E-03	I	1.0E-04	X	V		1		1.1E+05	1.4E+09	3.4E+04	Allyl Alcohol	107-18-6					5.8E+03		1.5E+01	1.5E+01
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1		1.4E+03	1.4E+09	1.6E+03	Allyl Chloride	107-05-1	1.6E+02		3.2E+00	3.2E+00			6.9E+00	6.9E+00
				1.0E+00	P	5.0E-03	P			1			1.4E+09		Aluminum	7429-90-5					1.2E+06		3.0E+07	1.1E+06
				4.0E-04	I					1			1.4E+09		Aluminum Phosphide	20859-73-8					4.7E+02			4.7E+02
				9.0E-03	I					1	0.1		1.4E+09		Ametryn	834-12-8					1.1E+04	2.5E+04		7.4E+03
2.1E+01	C	6.0E-03	C							1	0.1		1.4E+09		Aminobiphenyl, 4-	92-67-1	1.6E-01	3.7E-01	2.8E+03	1.1E-01				
				8.0E-02	P					1	0.1		1.4E+09		Aminophenol, m-	591-27-5					9.3E+04	2.2E+05		6.6E+04
				2.0E-02	P					1	0.1		1.4E+09		Aminophenol, p-	123-30-8					2.3E+04	5.5E+04		1.6E+04
				2.5E-03	I					1	0.1		1.4E+09		Amitraz	33089-61-1					2.9E+03	6.9E+03		2.1E+03
						1.0E-01	I	V		1					Ammonia	7664-41-7								
				2.0E-01	I					1			1.4E+09		Ammonium Sulfamate	7773-06-0					2.3E+05			2.3E+05
						3.0E-03	X	V		1		1.4E+04	1.4E+09	2.6E+04	Amyl Alcohol, tert-	75-85-4							3.4E+02	3.4E+02
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I			1	0.1		1.4E+09		Aniline	62-53-3	5.7E+02	1.4E+03	1.0E+07	4.0E+02	8.2E+03	1.9E+04	6.0E+06	5.7E+03
4.0E-02	P			2.0E-03	X					1	0.1		1.4E+09		Anthraquinone, 9,10-	84-65-1	8.2E+01	1.9E+02		5.7E+01	2.3E+03	5.5E+03		1.6E+03
				4.0E-04	I					0.15			1.4E+09		Antimony (metallic)	7440-36-0					4.7E+02			4.7E+02
				5.0E-04	H					0.15			1.4E+09		Antimony Pentoxide	1314-60-9					5.8E+02			5.8E+02
				4.0E-04	H					0.15			1.4E+09		Antimony Tetroxide	1332-81-6					4.7E+02			4.7E+02
						2.0E-04	I			0.15			1.4E+09		Antimony Trioxide	1309-64-4							1.2E+06	1.2E+06
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C			1	0.03		1.4E+09		Arsenic, Inorganic	7440-38-2	3.6E+00	1.7E+01	3.9E+03	3.0E+00	5.8E+02	2.8E+03	8.9E+04	4.8E+02
				3.5E-06	C	5.0E-05	I			1			1.4E+09		Arsine	7784-42-1					4.1E+00		3.0E+05	4.1E+00
				5.0E-02	I					1	0.1		1.4E+09		Asulam	3337-71-1					5.8E+04	1.4E+05		4.1E+04
2.3E-01	C			3.5E-02	I					1	0.1		1.4E+09		Atrazine	1912-24-9	1.4E+01	3.4E+01		1.0E+01	4.1E+04	9.7E+04		2.9E+04
8.8E-01	C	2.5E-04	C							1	0.1		1.4E+09		Auramine	492-80-8	3.7E+00	8.8E+00	6.7E+04	2.6E+00				
				4.0E-04	I					1	0.1		1.4E+09		Avermectin B1	65195-55-3					4.7E+02	1.1E+03		3.3E+02
				3.0E-03	A	1.0E-02	A			1	0.1		1.4E+09		Azinphos-methyl	86-50-0					3.5E+03	8.3E+03	6.0E+07	2.5E+03
1.1E-01	I	3.1E-05	I					V		1			1.4E+09	5.2E+05	Azobenzene	103-33-3	3.0E+01		2.1E+02	2.6E+01				
				1.0E+00	P	7.0E-06	P			1	0.1		1.4E+09		Azodicarbonamide	123-77-3					1.2E+06	2.8E+06	4.2E+04	4.0E+04
				2.0E-01	I	5.0E-04	H			0.07			1.4E+09		Barium	7440-39-3					2.3E+05		3.0E+06	2.2E+05
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		Barium Chromate	10294-40-3	6.5E+00		1.1E+02	6.2E+00	2.3E+04		1.2E+06	2.3E+04
				3.0E-01	I			V		1			1.4E+09	3.1E+05	Benfluralin	1861-40-1					3.5E+05			3.5E+05
				5.0E-02	I					1	0.1		1.4E+09		Benomyl	17804-35-2					5.8E+04	1.4E+05		4.1E+04
				2.0E-01	I					1	0.1		1.4E+09		Bensulfuron-methyl	83055-99-6					2.3E+05	5.5E+05		1.6E+05
				3.0E-02	I					1	0.1		1.4E+09		Bentazon	25057-89-0					3.5E+04	8.3E+04		2.5E+04
				1.0E-01	I			V		1		1.2E+03	1.4E+09	2.3E+04	Benzaldehyde	100-52-7					1.2E+05			1.2E+05
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		1		1.8E+03	1.4E+09	3.5E+03	Benzene	71-43-2	5.9E+01		5.6E+00	5.1E+00	4.7E+03		4.6E+02	4.2E+02
1.0E-01	X			3.0E-04	X					1	0.1		1.4E+09		Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	3.3E+01	7.7E+01		2.3E+01	3.5E+02	8.3E+02		2.5E+02
				1.0E-03	P			V		1		1.3E+03	1.4E+09	1.9E+04	Benzenethiol	108-98-5					1.2E+03			1.2E+03
2.3E+02	I	6.7E-02	I	3.0E-03	I				M	1	0.1		1.4E+09		Benzidine	92-87-5	1.4E-02	3.4E-02	2.5E+02	1.0E-02	3.5E+03	8.3E+03		2.5E+03
				4.0E+00	I					1	0.1		1.4E+09		Benzoic Acid	65-85-0					4.7E+06	1.1E+07		3.3E+06
1.3E+01	I							V		1		3.2E+02	1.4E+09	6.8E+04	Benzotrichloride	98-07-7	2.5E-01			2.5E-01				
				1.0E-01	P					1	0.1		1.4E+09		Benzyl Alcohol	100-51-6					1.2E+05	2.8E+05		8.2E+04
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		1		1.5E+03	1.4E+09	2.6E+04	Benzyl Chloride	100-44-7	1.9E+01		6.4E+00	4.8E+00	2.3E+03		1.1E+02	1.1E+02
		2.4E-03	I	2.0E-03	I	2.0E-05	I			0.007			1.4E+09		Beryllium and compounds	7440-41-7			6.9E+03	6.9E+03	2.3E+03		1.2E+05	2.3E+03
				9.0E-03	P					1	0.1		1.4E+09		Bifenox	42576-02-3					1.1E+04	2.5E+04		7.4E+03
				1.5E-02	I					1	0.1		1.4E+09		Biphenthrin	82657-04-3					1.8E+04	4.1E+04		1.2E+04
8.0E-03	I			5.0E-01	I	4.0E-04	X	V		1			1.4E+09	1.1E+05	Biphenyl, 1,1'-	92-52-4	4.1E+02			4.1E+02	5.8E+05		2.0E+02	2.0E+02
				4.0E-02	I			V		1		1.0E+03	1.4E+09	3.5E+04	Bis(2-chloro-1-methylethyl) ether	108-60-1					4.7E+04			4.7E+04

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (μg/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
				3.0E-03	P					1	0.1		1.4E+09		Bis(2-chloroethoxy)methane	111-91-1					3.5E+03	8.3E+03		2.5E+03
1.1E+00	I	3.3E-04	I					V		1		5.1E+03	1.4E+09	4.3E+04	Bis(2-chloroethyl)ether	111-44-4	3.0E+00		1.6E+00	1.0E+00				
2.2E+02	I	6.2E-02	I					V		1		4.2E+03	1.4E+09	1.9E+03	Bis(chloromethyl)ether	542-88-1	1.5E-02		3.7E-04	3.6E-04				
				5.0E-02	I					1	0.1		1.4E+09		Bisphenol A	80-05-7					5.8E+04	1.4E+05		4.1E+04
				2.0E-01	I	2.0E-02	H			1			1.4E+09		Boron And Borates Only	7440-42-8					2.3E+05		1.2E+08	2.3E+05
				2.0E+00	P	2.0E-02	P	V		1			1.4E+09		Boron Trichloride	10294-34-5					2.3E+06		1.2E+08	2.3E+06
				4.0E-02	C	1.3E-02	C	V		1			1.4E+09		Boron Trifluoride	7637-07-2					4.7E+04		7.7E+07	4.7E+04
7.0E-01	I			4.0E-03	I					1			1.4E+09		Bromate	15541-45-4	4.7E+00			4.7E+00	4.7E+03			4.7E+03
2.0E+00	X	6.0E-04	X					V		1		2.4E+03	1.4E+09	5.9E+03	Bromo-2-chloroethane, 1-	107-04-0	1.6E+00		1.2E-01	1.1E-01				
				8.0E-03	I	6.0E-02	I	V		1		6.8E+02	1.4E+09	8.4E+03	Bromobenzene	108-86-1					9.3E+03		2.2E+03	1.8E+03
						4.0E-02	X	V		1		4.0E+03	1.4E+09	3.6E+03	Bromochloromethane	74-97-5							6.3E+02	6.3E+02
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		1		9.3E+02	1.4E+09	4.0E+03	Bromodichloromethane	75-27-4	5.3E+01		1.3E+00	1.3E+00	2.3E+04			2.3E+04
7.9E-03	I	1.1E-06	I	2.0E-02	I			V		1		9.2E+02	1.4E+09	9.7E+03	Bromoform	75-25-2	4.1E+02		1.1E+02	8.6E+01	2.3E+04			2.3E+04
				1.4E-03	I	5.0E-03	I	V		1		3.6E+03	1.4E+09	1.4E+03	Bromomethane	74-83-9					1.6E+03		3.1E+01	3.0E+01
				5.0E-03	H			V		1			1.4E+09	1.2E+05	Bromophos	2104-96-3					5.8E+03			5.8E+03
				2.0E-02	I					1	0.1		1.4E+09		Bromoxynil	1689-84-5					2.3E+04	5.5E+04		1.6E+04
				2.0E-02	I			V		1			1.4E+09	4.7E+05	Bromoxynil Octanoate	1689-99-2					2.3E+04			2.3E+04
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1		6.7E+02	1.4E+09	8.7E+02	Butadiene, 1,3-	106-99-0	9.6E-01		3.5E-01	2.6E-01			7.6E+00	7.6E+00
				1.0E-01	I			V		1		7.6E+03	1.4E+09	3.0E+04	Butanol, N-	71-36-3					1.2E+05			1.2E+05
1.9E-03	P			2.0E-01	I					1	0.1		1.4E+09		Butyl Benzyl Phthalate	85-68-7	1.7E+03	4.1E+03		1.2E+03	2.3E+05	5.5E+05		1.6E+05
				2.0E+00	P	3.0E+01	P	V		1		2.1E+04	1.4E+09	2.9E+04	Butyl alcohol, sec-	78-92-2					2.3E+06		3.8E+06	1.5E+06
				5.0E-02	I			V		1			1.4E+09	8.6E+04	Butylate	2008-41-5					5.8E+04			5.8E+04
2.0E-04	C	5.7E-08	C							1	0.1		1.4E+09		Butylated hydroxyanisole	25013-16-5	1.6E+04	3.9E+04	2.9E+08	1.1E+04				
3.6E-03	P			3.0E-01	P					1	0.1		1.4E+09		Butylated hydroxytoluene	128-37-0	9.1E+02	2.1E+03		6.4E+02	3.5E+05	8.3E+05		2.5E+05
				5.0E-02	P			V		1		1.1E+02	1.4E+09	8.1E+03	Butylbenzene, n-	104-51-8					5.8E+04			5.8E+04
				1.0E-01	X			V		1		1.5E+02	1.4E+09	7.4E+03	Butylbenzene, sec-	135-98-8					1.2E+05			1.2E+05
				1.0E-01	X			V		1		1.8E+02	1.4E+09	7.4E+03	Butylbenzene, tert-	98-06-6					1.2E+05			1.2E+05
				2.0E-02	A					1	0.1		1.4E+09		Cacodylic Acid	75-60-5					2.3E+04	5.5E+04		1.6E+04
		1.8E-03	I	1.0E-03	I	1.0E-05	A			0.025	0.001		1.4E+09		Cadmium (Diet)	7440-43-9			9.3E+03	9.3E+03	1.2E+03	6.9E+03	6.0E+04	9.8E+02
		1.8E-03	I	5.0E-04	I	1.0E-05	A			0.05	0.001				Cadmium (Water)	7440-43-9								
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		Calcium Chromate	13765-19-0	6.5E+00		1.1E+02	6.2E+00	2.3E+04		1.2E+06	2.3E+04
				5.0E-01	I	2.2E-03	C			1	0.1		1.4E+09		Caprolactam	105-60-2					5.8E+05	1.4E+06	1.3E+07	4.0E+05
1.5E-01	C	4.3E-05	C	2.0E-03	I					1	0.1		1.4E+09		Captafol	2425-06-1	2.2E+01	5.2E+01	3.9E+05	1.5E+01	2.3E+03	5.5E+03		1.6E+03
2.3E-03	C	6.6E-07	C	1.3E-01	I					1	0.1		1.4E+09		Captan	133-06-2	1.4E+03	3.4E+03	2.5E+07	1.0E+03	1.5E+05	3.6E+05		1.1E+05
				1.0E-01	I					1	0.1		1.4E+09		Carbaryl	63-25-2					1.2E+05	2.8E+05		8.2E+04
				5.0E-03	I					1	0.1		1.4E+09		Carbofuran	1563-66-2					5.8E+03	1.4E+04		4.1E+03
				1.0E-01	I	7.0E-01	I	V		1		7.4E+02	1.4E+09	1.2E+03	Carbon Disulfide	75-15-0					1.2E+05		3.6E+03	3.5E+03
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		1		4.6E+02	1.4E+09	1.5E+03	Carbon Tetrachloride	56-23-5	4.7E+01		3.1E+00	2.9E+00	4.7E+03		6.5E+02	5.7E+02
						1.0E-01	P	V		1		5.9E+03	1.4E+09	6.5E+02	Carbonyl Sulfide	463-58-1							2.8E+02	2.8E+02
				1.0E-02	I					1	0.1		1.4E+09		Carbosulfan	55285-14-8					1.2E+04	2.8E+04		8.2E+03
				1.0E-01	I					1	0.1		1.4E+09		Carboxin	5234-68-4					1.2E+05	2.8E+05		8.2E+04
						9.0E-04	I			1			1.4E+09		Ceric oxide	1306-38-3							5.4E+06	5.4E+06
				1.0E-01	I			V		1			1.4E+09	1.5E+05	Chloral Hydrate	302-17-0					1.2E+05			1.2E+05
				1.5E-02	I					1	0.1		1.4E+09		Chloramben	133-90-4					1.8E+04	4.1E+04		1.2E+04
4.0E-01	H									1	0.1		1.4E+09		Chloranil	118-75-2	8.1E+00	1.9E+01		5.7E+00				
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V		1	0.04		1.4E+09	9.0E+05	Chlordane	12789-03-6	9.3E+00	5.5E+01	1.1E+02	7.5E+00	5.8E+02	3.4E+03	2.8E+03	4.2E+02
1.0E+01	I	4.6E-03	C	3.0E-04	I					1	0.1		1.4E+09		Chlordecone (Kepone)	143-50-0	3.3E-01	7.7E-01	3.6E+03	2.3E-01	3.5E+02	8.3E+02		2.5E+02
				7.0E-04	A					1	0.1		1.4E+09		Chlorfenvinphos	470-90-6					8.2E+02	1.9E+03		5.7E+02
				2.0E-02	I					1	0.1		1.4E+09		Chlorimuron, Ethyl-	90982-32-4					2.3E+04	5.5E+04		1.6E+04
				1.0E-01	I	1.5E-04	A	V		1		2.8E+03	1.4E+09	1.2E+03	Chlorine	7782-50-5					1.2E+05		7.8E-01	7.8E-01
				3.0E-02	I	2.0E-04	I	V		1			1.4E+09		Chlorine Dioxide	10049-04-4					3.5E+04		1.2E+06	3.4E+04
				3.0E-02	I					1			1.4E+09		Chlorite (Sodium Salt)	7758-19-2					3.5E+04			3.5E+04
						5.0E+01	I	V		1		1.2E+03	1.4E+09	1.0E+03	Chloro-1,1-difluoroethane, 1-	75-68-3							2.3E+05	2.3E+05
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		1		7.9E+02	1.4E+09	1.1E+03	Chloro-1,3-butadiene, 2-	126-99-8			4.4E-02	4.4E-02	2.3E+04		9.4E+01	9.4E+01
4.6E-01	H									1	0.1		1.4E+09		Chloro-2-methylaniline HCl, 4-	3165-93-3	7.1E+00	1.7E+01		5.0E+00				
1.0E-01	P	7.7E-05	C	3.0E-03	X					1	0.1		1.4E+09		Chloro-2-methylaniline, 4-	95-69-2	3.3E+01	7.7E+01	2.2E+05	2.3E+01	3.5E+03	8.3E+03		2.5E+03
2.7E-01	X							V		1		1.2E+04	1.4E+09	1.6E+04	Chloroacetaldehyde, 2-	107-20-0	1.2E+01			1.2E+01				
										1	0.1		1.4E+09		Chloroacetic Acid	79-11-8								
						3.0E-05	I			1	0.1		1.4E+09		Chloroacetophenone, 2-	532-27-4							1.8E+05	1.8E+05
2.0E-01	P			4.0E-03	I					1	0.1		1.4E+09		Chloroaniline, p-	106-47-8	1.6E+01	3.9E+01		1.1E+01	4.7E+03	1.1E+04		3.3E+03
				2.0E-02	I	5.0E-02	P	V		1		7.6E+02	1.4E+09	6.5E+03	Chlorobenzene	108-90-7					2.3E+04		1.4E+03	1.3E+03
1.1E-01	C	3.1E-05	C	2.0E-02	I					1	0.1		1.4E+09		Chlorobenzilate	510-15-6	3.0E+01	7.0E+01	5.4E+05	2.1E+01	2.3E+04	5.5E+04		1.6E+04
				3.0E-02	X					1	0.1		1.4E+09		Chlorobenzoic Acid, p-	74-11-3					3.5E+04	8.3E+04		2.5E+04
				3.0E-03	P	3.0E-01	P	V		1		2.9E+02	1.4E+09	6.8E+03	Chlorobenzotrifluoride, 4-	98-56-6					3.5E+03		8.9E+03	2.5E+03
				4.0E-02	P			V		1		7.3E+02	1.4E+09	1.8E+03	Chlorobutane, 1-	109-69-3					4.7E+04			4.7E+04

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information																Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (μg/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
						5.0E+01	I	V		1		1.7E+03	1.4E+09	9.4E+02	Chlorodifluoromethane	75-45-6							2.1E+05	2.1E+05
				2.0E-02	P			V		1		1.1E+05	1.4E+09	7.8E+04	Chloroethanol, 2-	107-07-3					2.3E+04			2.3E+04
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		1		2.5E+03	1.4E+09	2.6E+03	Chloroform	67-66-3	1.1E+02		1.4E+00	1.4E+00	1.2E+04		1.1E+03	1.0E+03
						9.0E-02	I	V		1		1.3E+03	1.4E+09	1.2E+03	Chloromethane	74-87-3							4.6E+02	4.6E+02
2.4E+00	C	6.9E-04	C					V		1		9.3E+03	1.4E+09	5.3E+03	Chloromethyl Methyl Ether	107-30-2	1.4E+00		9.5E-02	8.9E-02				
3.0E-01	P			3.0E-03	P	1.0E-05	X			1	0.1		1.4E+09		Chloronitrobenzene, o-	88-73-3	1.1E+01	2.6E+01		7.7E+00	3.5E+03	8.3E+03	6.0E+04	2.4E+03
6.3E-03	P			1.0E-03	P	6.0E-04	P			1	0.1		1.4E+09		Chloronitrobenzene, p-	100-00-5	5.2E+02	1.2E+03		3.6E+02	1.2E+03	2.8E+03	3.6E+06	8.2E+02
				5.0E-03	I			V		1		2.2E+04	1.4E+09	1.2E+05	Chlorophenol, 2-	95-57-8					5.8E+03			5.8E+03
						4.0E-04	C	V		1		6.2E+02	1.4E+09	4.7E+03	Chloropicrin	76-06-2							8.2E+00	8.2E+00
3.1E-03	C	8.9E-07	C	1.5E-02	I					1	0.1		1.4E+09		Chlorothalonil	1897-45-6	1.1E+03	2.5E+03	1.9E+07	7.4E+02	1.8E+04	4.1E+04		1.2E+04
				2.0E-02	I			V		1		9.1E+02	1.4E+09	8.1E+03	Chlorotoluene, o-	95-49-8					2.3E+04			2.3E+04
				2.0E-02	X			V		1		2.5E+02	1.4E+09	7.3E+03	Chlorotoluene, p-	106-43-4					2.3E+04			2.3E+04
2.4E+02	C	6.9E-02	C							1	0.1		1.4E+09		Chlorozotocin	54749-90-5	1.4E-02	3.2E-02	2.4E+02	9.6E-03				
				2.0E-01	I					1	0.1		1.4E+09		Chlorpropham	101-21-3					2.3E+05	5.5E+05		1.6E+05
				1.0E-03	A					1	0.1		1.4E+09		Chlorpyrifos	2921-88-2					1.2E+03	2.8E+03		8.2E+02
				1.0E-02	H					1	0.1		1.4E+09		Chlorpyrifos Methyl	5598-13-0					1.2E+04	2.8E+04		8.2E+03
				5.0E-02	I					1	0.1		1.4E+09		Chlorsulfuron	64902-72-3					5.8E+04	1.4E+05		4.1E+04
				1.0E-02	I					1	0.1		1.4E+09		Chlorthal-dimethyl	1861-32-1					1.2E+04	2.8E+04		8.2E+03
				8.0E-04	H					1	0.1		1.4E+09		Chlorthiophos	60238-56-4					9.3E+02	2.2E+03		6.6E+02
				1.5E+00	I					0.013			1.4E+09		Chromium(III), Insoluble Salts	16065-83-1					1.8E+06			1.8E+06
5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M	0.025			1.4E+09		Chromium(VI)	18540-29-9	6.5E+00		2.0E+02	6.3E+00	3.5E+03		6.0E+05	3.5E+03
										0.013			1.4E+09		*Chromium, Total*	7440-47-3								
				1.3E-02	I					1	0.1		1.4E+09		Clofentezine	74115-24-5					1.5E+04	3.6E+04		1.1E+04
		9.0E-03	P	3.0E-04	P	6.0E-06	P			1			1.4E+09		Cobalt	7440-48-4			1.9E+03	1.9E+03	3.5E+02		3.6E+04	3.5E+02
		6.2E-04	I					V	M	1					Coke Oven Emissions	8007-45-2								
				4.0E-02	H					1			1.4E+09		Copper	7440-50-8					4.7E+04			4.7E+04
				5.0E-02	I	6.0E-01	C			1	0.1		1.4E+09		Cresol, m-	108-39-4					5.8E+04	1.4E+05	3.6E+09	4.1E+04
				5.0E-02	I	6.0E-01	C			1	0.1		1.4E+09		Cresol, o-	95-48-7					5.8E+04	1.4E+05	3.6E+09	4.1E+04
				1.0E-01	A	6.0E-01	C			1	0.1		1.4E+09		Cresol, p-	106-44-5					1.2E+05	2.8E+05	3.6E+09	8.2E+04
				1.0E-01	A					1	0.1		1.4E+09		Cresol, p-chloro-m-	59-50-7					1.2E+05	2.8E+05		8.2E+04
				1.0E-01	A	6.0E-01	C			1	0.1		1.4E+09		Cresols	1319-77-3					1.2E+05	2.8E+05	3.6E+09	8.2E+04
1.9E+00	H			1.0E-03	P			V		1		1.7E+04	1.4E+09	1.9E+04	Crotonaldehyde, trans-	123-73-9	1.7E+00			1.7E+00	1.2E+03			1.2E+03
				1.0E-01	I	4.0E-01	I	V		1		2.7E+02	1.4E+09	6.2E+03	Cumene	98-82-8					1.2E+05		1.1E+04	9.9E+03
2.2E-01	C	6.3E-05	C							1	0.1		1.4E+09		Cupferron	135-20-6	1.5E+01	3.5E+01	2.6E+05	1.0E+01				
8.4E-01	H			2.0E-03	H					1	0.1		1.4E+09		Cyanazine	21725-46-2	3.9E+00	9.2E+00		2.7E+00	2.3E+03	5.5E+03		1.6E+03
															Cyanides									
				1.0E-03	I					1			1.4E+09		~Calcium Cyanide	592-01-8					1.2E+03			1.2E+03
				5.0E-03	I					1			1.4E+09		~Copper Cyanide	544-92-3					5.8E+03			5.8E+03
				6.0E-04	I	8.0E-04	S	V		1		9.7E+05	1.4E+09	3.5E+03	~Cyanide (CN-)	57-12-5					7.0E+02		1.2E+01	1.2E+01
				1.0E-03	I			V		1			1.4E+09		~Cyanogen	460-19-5					1.2E+03			1.2E+03
				9.0E-02	I			V		1			1.4E+09		~Cyanogen Bromide	506-68-3					1.1E+05			1.1E+05
				5.0E-02	I			V		1			1.4E+09		~Cyanogen Chloride	506-77-4					5.8E+04			5.8E+04
				6.0E-04	I	8.0E-04	I	V		1		1.0E+07	1.4E+09	5.2E+04	~Hydrogen Cyanide	74-90-8					7.0E+02		1.8E+02	1.5E+02
				2.0E-03	I					1			1.4E+09		~Potassium Cyanide	151-50-8					2.3E+03			2.3E+03
				5.0E-03	I					0.04			1.4E+09		~Potassium Silver Cyanide	506-61-6					5.8E+03			5.8E+03
				1.0E-01	I					0.04			1.4E+09		~Silver Cyanide	506-64-9					1.2E+05			1.2E+05
				1.0E-03	I					1			1.4E+09		~Sodium Cyanide	143-33-9					1.2E+03			1.2E+03
				2.0E-04	P					1			1.4E+09		~Thiocyanates	NA					2.3E+02			2.3E+02
				2.0E-04	X			V		1			1.4E+09		~Thiocyanic Acid	463-56-9					2.3E+02			2.3E+02
				5.0E-02	I					1			1.4E+09		~Zinc Cyanide	557-21-1					5.8E+04			5.8E+04
						6.0E+00	I	V		1		1.2E+02	1.4E+09	1.0E+03	Cyclohexane	110-82-7							2.7E+04	2.7E+04
2.3E-02	H									1	0.1		1.4E+09		Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	1.4E+02	3.4E+02		1.0E+02				
				5.0E+00	I	7.0E-01	P	V		1		5.1E+03	1.4E+09	4.2E+04	Cyclohexanone	108-94-1					5.8E+06		1.3E+05	1.3E+05
				5.0E-03	P	1.0E+00	X	V		1		2.8E+02	1.4E+09	1.5E+03	Cyclohexene	110-83-8					5.8E+03		6.4E+03	3.1E+03
				2.0E-01	I			V		1		2.9E+05	1.4E+09	7.5E+04	Cyclohexylamine	108-91-8					2.3E+05			2.3E+05
				2.5E-02	I					1	0.1		1.4E+09		Cyfluthrin	68359-37-5					2.9E+04	6.9E+04		2.1E+04
				5.0E-03	I					1	0.1		1.4E+09		Cyhalothrin	68085-85-8					5.8E+03	1.4E+04		4.1E+03
				1.0E-02	I					1	0.1		1.4E+09		Cypermethrin	52315-07-8					1.2E+04	2.8E+04		8.2E+03
				7.5E-03	I					1	0.1		1.4E+09		Cyromazine	66215-27-8					8.8E+03	2.1E+04		6.2E+03
2.4E-01	I	6.9E-05	C							1	0.1		1.4E+09		DDD	72-54-8	1.4E+01	3.2E+01	2.4E+05	9.6E+00				
3.4E-01	I	9.7E-05	C					V		1			1.4E+09	2.1E+06	DDE, p,p'-	72-55-9	9.6E+00		2.7E+02	9.3E+00				
3.4E-01	I	9.7E-05	I	5.0E-04	I					1	0.03		1.4E+09		DDT	50-29-3	9.6E+00	7.6E+01	1.7E+05	8.5E+00	5.8E+02	4.6E+03		5.2E+02
				3.0E-02	I					1	0.1		1.4E+09		Dalapon	75-99-0					3.5E+04	8.3E+04		2.5E+04
1.8E-02	C	5.1E-06	C	1.5E-01	I					1	0.1		1.4E+09		Daminozide	1596-84-5	1.8E+02	4.3E+02	3.3E+06	1.3E+02	1.8E+05	4.1E+05		1.2E+05
7.0E-04	I			7.0E-03	I					1	0.1		1.4E+09		Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	4.7E+03	1.1E+04		3.3E+03	8.2E+03	1.9E+04		5.7E+03

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	vol	mutagen	GIABS	ABS	C$_{sat}$ (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
				4.0E-05	I					1	0.1		1.4E+09		Demeton	8065-48-3					4.7E+01	1.1E+02		3.3E+01
1.2E-03	I			6.0E-01	I					1	0.1		1.4E+09		Di(2-ethylhexyl)adipate	103-23-1	2.7E+03	6.4E+03		1.9E+03	7.0E+05	1.7E+06		4.9E+05
6.1E-02	H									1	0.1		1.4E+09		Diallate	2303-16-4	5.4E+01	1.3E+02		3.8E+01				
				7.0E-04	A					1	0.1		1.4E+09		Diazinon	333-41-5					8.2E+02	1.9E+03		5.7E+02
				1.0E-02	X			V		1			1.4E+09	5.2E+05	Dibenzothiophene	132-65-0					1.2E+04			1.2E+04
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	1		9.8E+02	1.4E+09	3.2E+04	Dibromo-3-chloropropane, 1,2-	96-12-8	4.1E+00		6.5E-02	6.4E-02	2.3E+02		2.8E+01	2.5E+01
				4.0E-04	X			V		1		1.6E+02	1.4E+09	1.9E+04	Dibromobenzene, 1,3-	108-36-1					4.7E+02			4.7E+02
				1.0E-02	I			V		1			1.4E+09	2.2E+04	Dibromobenzene, 1,4-	106-37-6					1.2E+04			1.2E+04
8.4E-02	I			2.0E-02	I			V		1		8.0E+02	1.4E+09	8.0E+03	Dibromochloromethane	124-48-1	3.9E+01			3.9E+01	2.3E+04			2.3E+04
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1		1.3E+03	1.4E+09	8.6E+03	Dibromoethane, 1,2-	106-93-4	1.6E+00		1.8E-01	1.6E-01	1.1E+04		3.4E+02	3.3E+02
						4.0E-03	X	V		1		2.8E+03	1.4E+09	5.6E+03	Dibromomethane (Methylene Bromide)	74-95-3							9.9E+01	9.9E+01
				3.0E-04	P					1	0.1		1.4E+09		Dibutyltin Compounds	NA					3.5E+02	8.3E+02		2.5E+02
				3.0E-02	I					1	0.1		1.4E+09		Dicamba	1918-00-9					3.5E+04	8.3E+04		2.5E+04
		4.2E-03	P					V		1		5.5E+02	1.4E+09	3.2E+03	Dichloro-2-butene, 1,4-	764-41-0			9.4E-03	9.4E-03				
		4.2E-03	P					V		1		5.2E+02	1.4E+09	1.1E+04	Dichloro-2-butene, cis-1,4-	1476-11-5			3.2E-02	3.2E-02				
		4.2E-03	P					V		1		7.6E+02	1.4E+09	1.1E+04	Dichloro-2-butene, trans-1,4-	110-57-6			3.2E-02	3.2E-02				
5.0E-02	I			4.0E-03	I					1	0.1		1.4E+09		Dichloroacetic Acid	79-43-6	6.5E+01	1.5E+02		4.6E+01	4.7E+03	1.1E+04		3.3E+03
				9.0E-02	I	2.0E-01	H	V		1		3.8E+02	1.4E+09	1.2E+04	Dichlorobenzene, 1,2-	95-50-1					1.1E+05		1.0E+04	9.3E+03
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		1			1.4E+09	1.0E+04	Dichlorobenzene, 1,4-	106-46-7	6.1E+02		1.2E+01	1.1E+01	8.2E+04		3.7E+04	2.5E+04
4.5E-01	I	3.4E-04	C							1	0.1		1.4E+09		Dichlorobenzidine, 3,3'-	91-94-1	7.3E+00	1.7E+01	4.9E+04	5.1E+00				
				9.0E-03	X					1	0.1		1.4E+09		Dichlorobenzophenone, 4,4'-	90-98-2					1.1E+04	2.5E+04		7.4E+03
				2.0E-01	I	1.0E-01	X	V		1		8.5E+02	1.4E+09	8.4E+02	Dichlorodifluoromethane	75-71-8					2.3E+05		3.7E+02	3.7E+02
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1		1.7E+03	1.4E+09	2.1E+03	Dichloroethane, 1,1-	75-34-3	5.7E+02		1.6E+01	1.6E+01	2.3E+05			2.3E+05
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1		3.0E+03	1.4E+09	4.6E+03	Dichloroethane, 1,2-	107-06-2	3.6E+01		2.2E+00	2.0E+00	7.0E+03		1.4E+02	1.4E+02
				5.0E-02	I	2.0E-01	I	V		1		1.2E+03	1.4E+09	1.2E+03	Dichloroethylene, 1,1-	75-35-4					5.8E+04		1.0E+03	1.0E+03
				2.0E-03	I			V		1		2.4E+03	1.4E+09	2.5E+03	Dichloroethylene, 1,2-cis-	156-59-2					2.3E+03			2.3E+03
				2.0E-02	I			V		1		1.9E+03	1.4E+09	1.8E+03	Dichloroethylene, 1,2-trans-	156-60-5					2.3E+04			2.3E+04
				3.0E-03	I					1	0.1		1.4E+09		Dichlorophenol, 2,4-	120-83-2					3.5E+03	8.3E+03		2.5E+03
				1.0E-02	I					1	0.05		1.4E+09		Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					1.2E+04	5.5E+04		9.6E+03
				8.0E-03	I					1	0.1		1.4E+09		Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6					9.3E+03	2.2E+04		6.6E+03
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1		1.4E+03	1.4E+09	3.8E+03	Dichloropropane, 1,2-	78-87-5	9.1E+01		4.6E+00	4.4E+00	1.1E+05		6.6E+01	6.6E+01
				2.0E-02	P			V		1		1.5E+03	1.4E+09	6.8E+03	Dichloropropane, 1,3-	142-28-9					2.3E+04			2.3E+04
				3.0E-03	I					1	0.1		1.4E+09		Dichloropropanol, 2,3-	616-23-9					3.5E+03	8.3E+03		2.5E+03
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		1		1.6E+03	1.4E+09	3.6E+03	Dichloropropene, 1,3-	542-75-6	3.3E+01		1.1E+01	8.2E+00	3.5E+04		3.1E+02	3.1E+02
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1	0.1		1.4E+09		Dichlorvos	62-73-7	1.1E+01	2.7E+01	2.0E+05	7.9E+00	5.8E+02	1.4E+03	3.0E+06	4.1E+02
				1.0E-04	I					1	0.1		1.4E+09		Dicrotophos	141-66-2					1.2E+02	2.8E+02		8.2E+01
				8.0E-02	P	3.0E-04	X	V		1		2.6E+02	1.4E+09	4.1E+03	Dicyclopentadiene	77-73-6					9.3E+04		5.4E+00	5.4E+00
1.6E+01	I	4.6E-03	I	5.0E-05	I					1	0.1		1.4E+09		Dieldrin	60-57-1	2.0E-01	4.8E-01	3.6E+03	1.4E-01	5.8E+01	1.4E+02		4.1E+01
		3.0E-04	C			5.0E-03	I			1	0.1				Diesel Engine Exhaust	NA								
				2.0E-03	P	2.0E-04	P			1	0.1		1.4E+09		Diethanolamine	111-42-2					2.3E+03	5.5E+03	1.2E+06	1.6E+03
				3.0E-02	P	1.0E-04	P			1	0.1		1.4E+09		Diethylene Glycol Monobutyl Ether	112-34-5					3.5E+04	8.3E+04	6.0E+05	2.4E+04
				6.0E-02	P	3.0E-04	P			1	0.1		1.4E+09		Diethylene Glycol Monoethyl Ether	111-90-0					7.0E+04	1.7E+05	1.8E+06	4.8E+04
				1.0E-03	P			V		1		1.1E+05	1.4E+09	1.4E+05	Diethylformamide	617-84-5					1.2E+03			1.2E+03
3.5E+02	C	1.0E-01	C							1	0.1		1.4E+09		Diethylstilbestrol	56-53-1	9.3E-03	2.2E-02	1.7E+02	6.6E-03				
				8.0E-02	I					1	0.1		1.4E+09		Difenzoquat	43222-48-6					9.3E+04	2.2E+05		6.6E+04
				2.0E-02	I					1	0.1		1.4E+09		Diflubenzuron	35367-38-5					2.3E+04	5.5E+04		1.6E+04
						4.0E+01	I	V		1		1.4E+03	1.4E+09	1.2E+03	Difluoroethane, 1,1-	75-37-6							2.0E+05	2.0E+05
4.4E-02	C	1.3E-05	C					V		1			1.4E+09	1.2E+05	Dihydrosafrole	94-58-6	7.4E+01		1.2E+02	4.5E+01				
						7.0E-01	P	V		1		2.3E+03	1.4E+09	3.1E+03	Diisopropyl Ether	108-20-3							9.4E+03	9.4E+03
				8.0E-02	I			V		1		5.3E+02	1.4E+09	3.8E+04	Diisopropyl Methylphosphonate	1445-75-6					9.3E+04			9.3E+04
				2.0E-02	I					1	0.1		1.4E+09		Dimethipin	55290-64-7					2.3E+04	5.5E+04		1.6E+04
				2.0E-04	I					1	0.1		1.4E+09		Dimethoate	60-51-5					2.3E+02	5.5E+02		1.6E+02
1.6E+00	P									1	0.1		1.4E+09		Dimethoxybenzidine, 3,3'-	119-90-4	2.0E+00	4.8E+00		1.4E+00				
1.7E-03	P			6.0E-02	P					1	0.1		1.4E+09		Dimethyl methylphosphonate	756-79-6	1.9E+03	4.5E+03		1.4E+03	7.0E+04	1.7E+05		4.9E+04
4.6E+00	C	1.3E-03	C							1	0.1		1.4E+09		Dimethylamino azobenzene [p-]	60-11-7	7.1E-01	1.7E+00	1.3E+04	5.0E-01				
5.8E-01	H									1	0.1		1.4E+09		Dimethylaniline HCl, 2,4-	21436-96-4	5.6E+00	1.3E+01		4.0E+00				
2.0E-01	P			2.0E-03	X					1	0.1		1.4E+09		Dimethylaniline, 2,4-	95-68-1	1.6E+01	3.9E+01		1.1E+01	2.3E+03	5.5E+03		1.6E+03
				2.0E-03	I			V		1		8.3E+02	1.4E+09	3.1E+04	Dimethylaniline, N,N-	121-69-7					2.3E+03			2.3E+03
1.1E+01	P									1	0.1		1.4E+09		Dimethylbenzidine, 3,3'-	119-93-7	3.0E-01	7.0E-01		2.1E-01				
				1.0E-01	P	3.0E-02	I	V		1		1.1E+05	1.4E+09	1.3E+05	Dimethylformamide	68-12-2					1.2E+05		1.7E+04	1.5E+04
				1.0E-04	X	2.0E-06	X	V		1		1.7E+05	1.4E+09	2.8E+04	Dimethylhydrazine, 1,1-	57-14-7					1.2E+02		2.4E-01	2.4E-01
5.5E+02	C	1.6E-01	C					V		1		1.9E+05	1.4E+09	1.7E+05	Dimethylhydrazine, 1,2-	540-73-8	5.9E-03		1.3E-02	4.1E-03				
				2.0E-02	I					1	0.1		1.4E+09		Dimethylphenol, 2,4-	105-67-9					2.3E+04	5.5E+04		1.6E+04
				6.0E-04	I					1	0.1		1.4E+09		Dimethylphenol, 2,6-	576-26-1					7.0E+02	1.7E+03		4.9E+02
				1.0E-03	I					1	0.1		1.4E+09		Dimethylphenol, 3,4-	95-65-8					1.2E+03	2.8E+03		8.2E+02

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
4.5E-02	C	1.3E-05	C					V		1		1.3E+03	1.4E+09	9.5E+02	Dimethylvinylchloride	513-37-1	7.3E+01		9.0E-01	8.9E-01				
				8.0E-05	X					1	0.1		1.4E+09		Dinitro-o-cresol, 4,6-	534-52-1					9.3E+01	2.2E+02		6.6E+01
				2.0E-03	I					1	0.1		1.4E+09		Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					2.3E+03	5.5E+03		1.6E+03
				1.0E-04	P					1	0.1		1.4E+09		Dinitrobenzene, 1,2-	528-29-0					1.2E+02	2.8E+02		8.2E+01
				1.0E-04	I					1	0.1		1.4E+09		Dinitrobenzene, 1,3-	99-65-0					1.2E+02	2.8E+02		8.2E+01
				1.0E-04	P					1	0.1		1.4E+09		Dinitrobenzene, 1,4-	100-25-4					1.2E+02	2.8E+02		8.2E+01
				2.0E-03	I					1	0.1		1.4E+09		Dinitrophenol, 2,4-	51-28-5					2.3E+03	5.5E+03		1.6E+03
6.8E-01	I									1	0.1		1.4E+09		Dinitrotoluene Mixture, 2,4/2,6-	NA	4.8E+00	1.1E+01		3.4E+00				
3.1E-01	C	8.9E-05	C	2.0E-03	I					1	0.102		1.4E+09		Dinitrotoluene, 2,4-	121-14-2	1.1E+01	2.4E+01	1.9E+05	7.4E+00	2.3E+03	5.4E+03		1.6E+03
1.5E+00	P			3.0E-04	X					1	0.099		1.4E+09		Dinitrotoluene, 2,6-	606-20-2	2.2E+00	5.2E+00		1.5E+00	3.5E+02	8.4E+02		2.5E+02
				2.0E-03	S					1	0.006		1.4E+09		Dinitrotoluene, 2-Amino-4,6-	35572-78-2					2.3E+03	9.2E+04		2.3E+03
				2.0E-03	S					1	0.009		1.4E+09		Dinitrotoluene, 4-Amino-2,6-	19406-51-0					2.3E+03	6.1E+04		2.3E+03
4.5E-01	X			9.0E-04	X					1	0.1		1.4E+09		Dinitrotoluene, Technical grade	25321-14-6	7.3E+00	1.7E+01		5.1E+00	1.1E+03	2.5E+03		7.4E+02
				1.0E-03	I					1	0.1		1.4E+09		Dinoseb	88-85-7					1.2E+03	2.8E+03		8.2E+02
1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		1		1.2E+05	1.4E+09	4.0E+04	Dioxane, 1,4-	123-91-1	3.3E+01		9.7E+01	2.4E+01	3.5E+04		5.2E+03	4.5E+03
															Dioxins									
6.2E+03	I	1.3E+00	I							1	0.03		1.4E+09		~Hexachlorodibenzo-p-dioxin, Mixture	NA	5.3E-04	4.2E-03	1.3E+01	4.7E-04				
1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V		1	0.03		1.4E+09	2.0E+06	~TCDD, 2,3,7,8-	1746-01-6	2.5E-05	2.0E-04	6.3E-04	2.2E-05	8.2E-04	6.4E-03	3.4E-01	7.2E-04
				3.0E-02	I					1	0.1		1.4E+09		Diphenamid	957-51-7					3.5E+04	8.3E+04		2.5E+04
				8.0E-04	X					1	0.1		1.4E+09		Diphenyl Sulfone	127-63-9					9.3E+02	2.2E+03		6.6E+02
				2.5E-02	I					1	0.1		1.4E+09		Diphenylamine	122-39-4					2.9E+04	6.9E+04		2.1E+04
8.0E-01	I	2.2E-04	I							1	0.1		1.4E+09		Diphenylhydrazine, 1,2-	122-66-7	4.1E+00	9.7E+00	7.6E+04	2.9E+00				
				2.2E-03	I					1	0.1		1.4E+09		Diquat	85-00-7					2.6E+03	6.1E+03		1.8E+03
7.1E+00	C	1.4E-01	C							1	0.1		1.4E+09		Direct Black 38	1937-37-7	4.6E-01	1.1E+00	1.2E+02	3.2E-01				
7.4E+00	C	1.4E-01	C							1	0.1		1.4E+09		Direct Blue 6	2602-46-2	4.4E-01	1.0E+00	1.2E+02	3.1E-01				
6.7E+00	C	1.4E-01	C							1	0.1		1.4E+09		Direct Brown 95	16071-86-6	4.9E-01	1.2E+00	1.2E+02	3.4E-01				
				4.0E-05	I					1	0.1		1.4E+09		Disulfoton	298-04-4					4.7E+01	1.1E+02		3.3E+01
				1.0E-02	I			V		1			1.4E+09	4.5E+04	Dithiane, 1,4-	505-29-3					1.2E+04			1.2E+04
				2.0E-03	I					1	0.1		1.4E+09		Diuron	330-54-1					2.3E+03	5.5E+03		1.6E+03
				4.0E-03	I					1	0.1		1.4E+09		Dodine	2439-10-3					4.7E+03	1.1E+04		3.3E+03
				2.5E-02	I			V		1			1.4E+09	1.2E+05	EPTC	759-94-4					2.9E+04			2.9E+04
				6.0E-03	I			V		1			1.4E+09	4.1E+05	Endosulfan	115-29-7					7.0E+03			7.0E+03
				2.0E-02	I					1	0.1		1.4E+09		Endothall	145-73-3					2.3E+04	5.5E+04		1.6E+04
				3.0E-04	I					1	0.1		1.4E+09		Endrin	72-20-8					3.5E+02	8.3E+02		2.5E+02
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1		1.1E+04	1.4E+09	1.9E+04	Epichlorohydrin	106-89-8	3.3E+02		1.9E+02	1.2E+02	7.0E+03		8.3E+01	8.2E+01
						2.0E-02	I	V		1		1.5E+04	1.4E+09	7.7E+03	Epoxybutane, 1,2-	106-88-7							6.7E+02	6.7E+02
				4.0E-02	P					1	0.1		1.4E+09		Ethanol, 2-(2-methoxyethoxy)-	111-77-3					4.7E+04	1.1E+05		3.3E+04
				5.0E-03	I					1	0.1		1.4E+09		Ethephon	16672-87-0					5.8E+03	1.4E+04		4.1E+03
				5.0E-04	I					1	0.1		1.4E+09		Ethion	563-12-2					5.8E+02	1.4E+03		4.1E+02
				1.0E-01	P	6.0E-02	P	V		1		2.4E+04	1.4E+09	6.2E+04	Ethoxyethanol Acetate, 2-	111-15-9					1.2E+05		1.6E+04	1.4E+04
				9.0E-02	P	2.0E-01	I	V		1		1.1E+05	1.4E+09	9.8E+04	Ethoxyethanol, 2-	110-80-5					1.1E+05		8.6E+04	4.7E+04
				9.0E-01	I	7.0E-02	P	V		1		1.1E+04	1.4E+09	8.6E+03	Ethyl Acetate	141-78-6					1.1E+06		2.6E+03	2.6E+03
				5.0E-03	P	8.0E-03	P	V		1		2.5E+03	1.4E+09	6.3E+03	Ethyl Acrylate	140-88-5					5.8E+03		2.2E+02	2.1E+02
						1.0E+01	I	V		1		2.1E+03	1.4E+09	1.3E+03	Ethyl Chloride (Chloroethane)	75-00-3							5.7E+04	5.7E+04
				2.0E-01	I			V		1		1.0E+04	1.4E+09	3.1E+03	Ethyl Ether	60-29-7					2.3E+05			2.3E+05
						3.0E-01	P	V		1		1.1E+03	1.4E+09	5.8E+03	Ethyl Methacrylate	97-63-2							7.6E+03	7.6E+03
				1.0E-05	I					1	0.1		1.4E+09		Ethyl-p-nitrophenyl Phosphonate	2104-64-5					1.2E+01	2.8E+01		8.2E+00
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		1		4.8E+02	1.4E+09	5.7E+03	Ethylbenzene	100-41-4	3.0E+02		2.8E+01	2.5E+01	1.2E+05		2.5E+04	2.0E+04
				7.0E-02	P					1	0.1		1.4E+09		Ethylene Cyanohydrin	109-78-4					8.2E+04	1.9E+05		5.7E+04
				9.0E-02	P			V		1		1.9E+05	1.4E+09	1.8E+05	Ethylene Diamine	107-15-3					1.1E+05			1.1E+05
				2.0E+00	I	4.0E-01	C			1	0.1		1.4E+09		Ethylene Glycol	107-21-1					2.3E+06	5.5E+06	2.4E+09	1.6E+06
				1.0E-01	I	1.6E+00	I			1	0.1		1.4E+09		Ethylene Glycol Monobutyl Ether	111-76-2					1.2E+05	2.8E+05	9.5E+09	8.2E+04
3.1E-01	C	8.8E-05	C			3.0E-02	C	V		1		1.2E+05	1.4E+09	6.1E+03	Ethylene Oxide	75-21-8	1.1E+01		8.5E-01	7.9E-01			8.0E+02	8.0E+02
4.5E-02	C	1.3E-05	C	8.0E-05	I					1	0.1		1.4E+09		Ethylene Thiourea	96-45-7	7.3E+01	1.7E+02	1.3E+06	5.1E+01	9.3E+01	2.2E+02		6.6E+01
6.5E+01	C	1.9E-02	C					V		1		1.5E+05	1.4E+09	2.4E+04	Ethyleneimine	151-56-4	5.0E-02		1.5E-02	1.2E-02				
				3.0E+00	I					1	0.1		1.4E+09		Ethylphthalyl Ethyl Glycolate	84-72-0					3.5E+06	8.3E+06		2.5E+06
				2.5E-04	I					1	0.1		1.4E+09		Fenamiphos	22224-92-6					2.9E+02	6.9E+02		2.1E+02
				2.5E-02	I					1	0.1		1.4E+09		Fenpropathrin	39515-41-8					2.9E+04	6.9E+04		2.1E+04
				2.5E-02	I					1	0.1		1.4E+09		Fenvalerate	51630-58-1					2.9E+04	6.9E+04		2.1E+04
				1.3E-02	I					1	0.1		1.4E+09		Fluometuron	2164-17-2					1.5E+04	3.6E+04		1.1E+04
				4.0E-02	C	1.3E-02	C			1			1.4E+09		Fluoride	16984-48-8					4.7E+04		7.7E+07	4.7E+04
				6.0E-02	I	1.3E-02	C			1			1.4E+09		Fluorine (Soluble Fluoride)	7782-41-4					7.0E+04		7.7E+07	7.0E+04
				8.0E-02	I					1	0.1		1.4E+09		Fluridone	59756-60-4					9.3E+04	2.2E+05		6.6E+04
				2.0E-02	I					1	0.1		1.4E+09		Flurprimidol	56425-91-3					2.3E+04	5.5E+04		1.6E+04
				7.0E-04	I					1	0.1		1.4E+09		Flusilazole	85509-19-9					8.2E+02	1.9E+03		5.7E+02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (μg/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
				6.0E-02	I					1	0.1		1.4E+09		Flutolanil	66332-96-5					7.0E+04	1.7E+05		4.9E+04
				1.0E-02	I					1	0.1		1.4E+09		Fluvalinate	69409-94-5					1.2E+04	2.8E+04		8.2E+03
3.5E-03	I			1.0E-01	I					1	0.1		1.4E+09		Folpet	133-07-3	9.3E+02	2.2E+03		6.6E+02	1.2E+05	2.8E+05		8.2E+04
1.9E-01	I									1	0.1		1.4E+09		Fomesafen	72178-02-0	1.7E+01	4.1E+01		1.2E+01				
				2.0E-03	I					1	0.1		1.4E+09		Fonofos	944-22-9					2.3E+03	5.5E+03		1.6E+03
		1.3E-05	I	2.0E-01	I	9.8E-03	A	V		1		4.2E+04	1.4E+09	7.8E+04	Formaldehyde	50-00-0			7.3E+01	7.3E+01	2.3E+05		3.3E+03	3.3E+03
				9.0E-01	P	3.0E-04	X	V		1		1.1E+05	1.4E+09	9.3E+04	Formic Acid	64-18-6					1.1E+06		1.2E+02	1.2E+02
				3.0E+00	I					1	0.1		1.4E+09		Fosetyl-AL	39148-24-8					3.5E+06	8.3E+06		2.5E+06
															Furans									
				1.0E-03	X			V		1	0.03		1.4E+09	2.0E+05	~Dibenzofuran	132-64-9					1.2E+03	9.2E+03		1.0E+03
				1.0E-03	I			V		1	0.03	6.2E+03	1.4E+09	2.6E+03	~Furan	110-00-9					1.2E+03	9.2E+03		1.0E+03
				9.0E-01	I	2.0E+00	I	V		1	0.03	1.7E+05	1.4E+09	1.2E+04	~Tetrahydrofuran	109-99-9					1.1E+06	8.3E+06	1.1E+05	9.6E+04
3.8E+00	H									1	0.1		1.4E+09		Furazolidone	67-45-8	8.6E-01	2.0E+00		6.0E-01				
				3.0E-03	I	5.0E-02	H	V		1		1.0E+04	1.4E+09	4.9E+04	Furfural	98-01-1					3.5E+03		1.1E+04	2.6E+03
1.5E+00	C	4.3E-04	C							1	0.1		1.4E+09		Furium	531-82-8	2.2E+00	5.2E+00	3.9E+04	1.5E+00				
3.0E-02	I	8.6E-06	C							1	0.1		1.4E+09		Furmecyclox	60568-05-0	1.1E+02	2.6E+02	1.9E+06	7.7E+01				
				4.0E-04	I					1	0.1		1.4E+09		Glufosinate, Ammonium	77182-82-2					4.7E+02	1.1E+03		3.3E+02
						8.0E-05	C			1	0.1		1.4E+09		Glutaraldehyde	111-30-8							4.8E+05	4.8E+05
				4.0E-04	I	1.0E-03	H	V		1		1.1E+05	1.4E+09	8.4E+04	Glycidyl	765-34-4					4.7E+02		3.7E+02	2.1E+02
				1.0E-01	I					1	0.1		1.4E+09		Glyphosate	1071-83-6					1.2E+05	2.8E+05		8.2E+04
				1.0E-02	X			V		1			1.4E+09	1.5E+05	Guanidine	113-00-8					1.2E+04			1.2E+04
				2.0E-02	P					1	0.1		1.4E+09		Guanidine Chloride	50-01-1					2.3E+04	5.5E+04		1.6E+04
				5.0E-05	I					1	0.1		1.4E+09		Haloxyfop, Methyl	69806-40-2					5.8E+01	1.4E+02		4.1E+01
4.5E+00	I	1.3E-03	I	5.0E-04	I			V		1			1.4E+09	4.8E+05	Heptachlor	76-44-8	7.3E-01		4.5E+00	6.3E-01	5.8E+02			5.8E+02
9.1E+00	I	2.6E-03	I	1.3E-05	I			V		1			1.4E+09	8.4E+05	Heptachlor Epoxide	1024-57-3	3.6E-01		4.0E+00	3.3E-01	1.5E+01			1.5E+01
				2.0E-03	I			V		1			1.4E+09	3.8E+05	Hexabromobenzene	87-82-1					2.3E+03			2.3E+03
				2.0E-04	I					1	0.1		1.4E+09		Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					2.3E+02	5.5E+02		1.6E+02
1.6E+00	I	4.6E-04	I	8.0E-04	I			V		1			1.4E+09	6.8E+04	Hexachlorobenzene	118-74-1	2.0E+00		1.8E+00	9.6E-01	9.3E+02			9.3E+02
7.8E-02	I	2.2E-05	I	1.0E-03	P			V		1		1.7E+01	1.4E+09	1.1E+04	Hexachlorobutadiene	87-68-3	4.2E+01		6.0E+00	5.3E+00	1.2E+03			1.2E+03
6.3E+00	I	1.8E-03	I	8.0E-03	A					1	0.1		1.4E+09		Hexachlorocyclohexane, Alpha-	319-84-6	5.2E-01	1.2E+00	9.3E+03	3.6E-01	9.3E+03	2.2E+04		6.6E+03
1.8E+00	I	5.3E-04	I							1	0.1		1.4E+09		Hexachlorocyclohexane, Beta-	319-85-7	1.8E+00	4.3E+00	3.1E+04	1.3E+00				
1.1E+00	C	3.1E-04	C	3.0E-04	I					1	0.04		1.4E+09		Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	3.0E+00	1.8E+01	5.4E+04	2.5E+00	3.5E+02	2.1E+03		3.0E+02
1.8E+00	I	5.1E-04	I							1	0.1		1.4E+09		Hexachlorocyclohexane, Technical	608-73-1	1.8E+00	4.3E+00	3.3E+04	1.3E+00				
				6.0E-03	I	2.0E-04	I	V		1		1.6E+01	1.4E+09	8.5E+03	Hexachlorocyclopentadiene	77-47-4					7.0E+03		7.5E+00	7.5E+00
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V		1			1.4E+09	8.0E+03	Hexachloroethane	67-72-1	8.2E+01		8.9E+00	8.0E+00	8.2E+02		1.1E+03	4.6E+02
				3.0E-04	I					1	0.1		1.4E+09		Hexachlorophene	70-30-4					3.5E+02	8.3E+02		2.5E+02
1.1E-01	I			3.0E-03	I					1	0.015		1.4E+09		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	3.0E+01	4.7E+02		2.8E+01	3.5E+03	5.5E+04		3.3E+03
						1.0E-05	I	V		1		3.4E+03	1.4E+09	3.0E+05	Hexamethylene Diisocyanate, 1,6-	822-06-0							1.3E+01	1.3E+01
				4.0E-04	P					1	0.1		1.4E+09		Hexamethylphosphoramide	680-31-9					4.7E+02	1.1E+03		3.3E+02
						7.0E-01	I	V		1		1.4E+02	1.4E+09	8.3E+02	Hexane, N-	110-54-3							2.5E+03	2.5E+03
				2.0E+00	P					1	0.1		1.4E+09		Hexanedioic Acid	124-04-9					2.3E+06	5.5E+06		1.6E+06
				5.0E-03	I	3.0E-02	I	V		1		3.3E+03	1.4E+09	1.3E+04	Hexanone, 2-	591-78-6					5.8E+03		1.7E+03	1.3E+03
				3.3E-02	I					1	0.1		1.4E+09		Hexazinone	51235-04-2					3.9E+04	9.1E+04		2.7E+04
				2.5E-02	I					1	0.1		1.4E+09		Hexythiazox	78587-05-0					2.9E+04	6.9E+04		2.1E+04
				3.0E-04	I					1	0.1		1.4E+09		Hydramethylnon	67485-29-4					3.5E+02	8.3E+02		2.5E+02
3.0E+00	I	4.9E-03	I			3.0E-05	P	V		1			1.4E+09		Hydrazine	302-01-2	1.1E+00		3.4E+03	1.1E+00			1.8E+05	1.8E+05
3.0E+00	I	4.9E-03	I							1			1.4E+09		Hydrazine Sulfate	10034-93-2	1.1E+00		3.4E+03	1.1E+00				
						2.0E-02	I	V		1			1.4E+09		Hydrogen Chloride	7647-01-0							1.2E+08	1.2E+08
				4.0E-02	C	1.4E-02	C	V		1			1.4E+09		Hydrogen Fluoride	7664-39-3					4.7E+04		8.3E+07	4.7E+04
						2.0E-03	I	V		1			1.4E+09		Hydrogen Sulfide	7783-06-4							1.2E+07	1.2E+07
6.0E-02	P			4.0E-02	P					1	0.1		1.4E+09		Hydroquinone	123-31-9	5.5E+01	1.3E+02		3.8E+01	4.7E+04	1.1E+05		3.3E+04
				1.3E-02	I					1	0.1		1.4E+09		Imazalil	35554-44-0					1.5E+04	3.6E+04		1.1E+04
				2.5E-01	I					1	0.1		1.4E+09		Imazaquin	81335-37-7					2.9E+05	6.9E+05		2.1E+05
				2.5E-01	I					1	0.1		1.4E+09		Imazethapyr	81335-77-5					2.9E+05	6.9E+05		2.1E+05
				1.0E-02	A					1			1.4E+09		Iodine	7553-56-2					1.2E+04			1.2E+04
				4.0E-02	I					1	0.1		1.4E+09		Iprodione	36734-19-7					4.7E+04	1.1E+05		3.3E+04
				7.0E-01	P					1			1.4E+09		Iron	7439-89-6					8.2E+05			8.2E+05
				3.0E-01	I			V		1		1.0E+04	1.4E+09	2.8E+04	Isobutyl Alcohol	78-83-1					3.5E+05			3.5E+05
9.5E-04	I			2.0E-01	I	2.0E+00	C			1	0.1		1.4E+09		Isophorone	78-59-1	3.4E+03	8.1E+03		2.4E+03	2.3E+05	5.5E+05	1.2E+10	1.6E+05
				1.5E-02	I			V		1			1.4E+09	4.2E+05	Isopropalin	33820-53-0					1.8E+04			1.8E+04
				2.0E+00	P	2.0E-01	P	V		1		1.1E+05	1.4E+09	2.8E+04	Isopropanol	67-63-0					2.3E+06		2.4E+04	2.4E+04
				1.0E-01	I					1	0.1		1.4E+09		Isopropyl Methyl Phosphonic Acid	1832-54-8					1.2E+05	2.8E+05		8.2E+04
				5.0E-02	I					1	0.1		1.4E+09		Isoxaben	82558-50-7					5.8E+04	1.4E+05		4.1E+04
						3.0E-01	A	V		1			1.4E+09		JP-7	NA							1.8E+09	1.8E+09
				2.0E-03	I					1	0.1		1.4E+09		Lactofen	77501-63-4					2.3E+03	5.5E+03		1.6E+03

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
															Lead Compounds									
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		~Lead Chromate	7758-97-6	6.5E+00		1.1E+02	6.2E+00	2.3E+04		1.2E+06	2.3E+04
8.5E-03	C	1.2E-05	C							1			1.4E+09		~Lead Phosphate	7446-27-7	3.8E+02		1.4E+06	3.8E+02				
2.8E-01	C	8.0E-05	C							1	0.1		1.4E+09		~Lead acetate	301-04-2	1.2E+01	2.8E+01	2.1E+05	8.2E+00				
										1			1.4E+09		~Lead and Compounds	7439-92-1								8.0E+02
8.5E-03	C	1.2E-05	C							1	0.1		1.4E+09		~Lead subacetate	1335-32-6	3.8E+02	9.1E+02	1.4E+06	2.7E+02				
				1.0E-07	I			V		1		2.4E+00	1.4E+09	1.9E+03	~Tetraethyl Lead	78-00-2					1.2E-01			1.2E-01
				5.0E-06	P			V		1		3.8E+02	1.4E+09	2.6E+04	Lewisite	541-25-3					5.8E+00			5.8E+00
				2.0E-03	I					1	0.1		1.4E+09		Linuron	330-55-2					2.3E+03	5.5E+03		1.6E+03
				2.0E-03	P					1			1.4E+09		Lithium	7439-93-2					2.3E+03			2.3E+03
				5.0E-04	I					1	0.1		1.4E+09		MCPA	94-74-6					5.8E+02	1.4E+03		4.1E+02
				1.0E-02	I					1	0.1		1.4E+09		MCPB	94-81-5					1.2E+04	2.8E+04		8.2E+03
				1.0E-03	I					1	0.1		1.4E+09		MCPP	93-65-2					1.2E+03	2.8E+03		8.2E+02
				2.0E-02	I					1	0.1		1.4E+09		Malathion	121-75-5					2.3E+04	5.5E+04		1.6E+04
				1.0E-01	I	7.0E-04	C			1	0.1		1.4E+09		Maleic Anhydride	108-31-6					1.2E+05	2.8E+05	4.2E+06	8.0E+04
				5.0E-01	I					1	0.1		1.4E+09		Maleic Hydrazide	123-33-1					5.8E+05	1.4E+06		4.1E+05
				1.0E-04	P					1	0.1		1.4E+09		Malononitrile	109-77-3					1.2E+02	2.8E+02		8.2E+01
				3.0E-02	H					1	0.1		1.4E+09		Mancozeb	8018-01-7					3.5E+04	8.3E+04		2.5E+04
				5.0E-03	I					1	0.1		1.4E+09		Maneb	12427-38-2					5.8E+03	1.4E+04		4.1E+03
				1.4E-01	I	5.0E-05	I			1					Manganese (Diet)	7439-96-5								
				2.4E-02	S	5.0E-05	I			0.04			1.4E+09		Manganese (Non-diet)	7439-96-5					2.8E+04		3.0E+05	2.6E+04
				9.0E-05	H					1	0.1		1.4E+09		Mephosfolan	950-10-7					1.1E+02	2.5E+02		7.4E+01
				3.0E-02	I					1	0.1		1.4E+09		Mepiquat Chloride	24307-26-4					3.5E+04	8.3E+04		2.5E+04
															Mercury Compounds									
				3.0E-04	I	3.0E-04	S			0.07			1.4E+09		~Mercuric Chloride (and other Mercury salts)	7487-94-7					3.5E+02		1.8E+06	3.5E+02
						3.0E-04	I	V		1		3.1E+00	1.4E+09	3.5E+04	~Mercury (elemental)	7439-97-6							4.6E+01	4.6E+01
				1.0E-04	I					1			1.4E+09		~Methyl Mercury	22967-92-6					1.2E+02			1.2E+02
				8.0E-05	I					1	0.1		1.4E+09		~Phenylmercuric Acetate	62-38-4					9.3E+01	2.2E+02		6.6E+01
				3.0E-05	I			V		1			1.4E+09	1.9E+06	Merphos	150-50-5					3.5E+01			3.5E+01
				3.0E-05	I					1	0.1		1.4E+09		Merphos Oxide	78-48-8					3.5E+01	8.3E+01		2.5E+01
				6.0E-02	I					1	0.1		1.4E+09		Metalaxyl	57837-19-1					7.0E+04	1.7E+05		4.9E+04
				1.0E-04	I	3.0E-02	P	V		1		4.6E+03	1.4E+09	6.8E+03	Methacrylonitrile	126-98-7					1.2E+02		8.9E+02	1.0E+02
				5.0E-05	I					1	0.1		1.4E+09		Methamidophos	10265-92-6					5.8E+01	1.4E+02		4.1E+01
				2.0E+00	I	2.0E+01	I	V		1		1.1E+05	1.4E+09	2.9E+04	Methanol	67-56-1					2.3E+06		2.5E+06	1.2E+06
				1.0E-03	I					1	0.1		1.4E+09		Methidathion	950-37-8					1.2E+03	2.8E+03		8.2E+02
				2.5E-02	I					1	0.1		1.4E+09		Methomyl	16752-77-5					2.9E+04	6.9E+04		2.1E+04
4.9E-02	C	1.4E-05	C							1	0.1		1.4E+09		Methoxy-5-nitroaniline, 2-	99-59-2	6.7E+01	1.6E+02	1.2E+06	4.7E+01				
				5.0E-03	I					1	0.1		1.4E+09		Methoxychlor	72-43-5					5.8E+03	1.4E+04		4.1E+03
				8.0E-03	P	1.0E-03	P	V		1		1.2E+05	1.4E+09	1.2E+05	Methoxyethanol Acetate, 2-	110-49-6					9.3E+03		5.4E+02	5.1E+02
				5.0E-03	P	2.0E-02	I	V		1		1.1E+05	1.4E+09	1.0E+05	Methoxyethanol, 2-	109-86-4					5.8E+03		8.8E+03	3.5E+03
				1.0E+00	X			V		1		2.9E+04	1.4E+09	8.1E+03	Methyl Acetate	79-20-9					1.2E+06			1.2E+06
						2.0E-02	P	V		1		6.8E+03	1.4E+09	7.0E+03	Methyl Acrylate	96-33-3							6.1E+02	6.1E+02
				6.0E-01	I	5.0E+00	I	V		1		2.8E+04	1.4E+09	1.2E+04	Methyl Ethyl Ketone (2-Butanone)	78-93-3					7.0E+05		2.7E+05	1.9E+05
		1.0E-03	X	1.0E-03	P	2.0E-05	X	V		1		1.8E+05	1.4E+09	5.0E+04	Methyl Hydrazine	60-34-4			6.2E-01	6.2E-01	1.2E+03		4.4E+00	4.4E+00
						3.0E+00	I	V		1		3.4E+03	1.4E+09	1.1E+04	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1							1.4E+05	1.4E+05
						1.0E-03	C	V		1		1.0E+04	1.4E+09	4.4E+03	Methyl Isocyanate	624-83-9							1.9E+01	1.9E+01
				1.4E+00	I	7.0E-01	I	V		1		2.4E+03	1.4E+09	6.3E+03	Methyl Methacrylate	80-62-6					1.6E+06		1.9E+04	1.9E+04
				2.5E-04	I					1	0.1		1.4E+09		Methyl Parathion	298-00-0					2.9E+02	6.9E+02		2.1E+02
				6.0E-02	X					1	0.1		1.4E+09		Methyl Phosphonic Acid	993-13-5					7.0E+04	1.7E+05		4.9E+04
				6.0E-03	H	4.0E-02	H	V		1		3.9E+02	1.4E+09	2.4E+04	Methyl Styrene (Mixed Isomers)	25013-15-4					7.0E+03		4.3E+03	2.6E+03
9.9E-02	C	2.8E-05	C							1	0.1		1.4E+09		Methyl methanesulfonate	66-27-3	3.3E+01	7.8E+01	6.0E+05	2.3E+01				
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		1		8.9E+03	1.4E+09	4.9E+03	Methyl tert-Butyl Ether (MTBE)	1634-04-4	1.8E+03		2.3E+02	2.1E+02			6.4E+04	6.4E+04
				3.0E-04	X					1	0.1		1.4E+09		Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					3.5E+02	8.3E+02		2.5E+02
9.0E-03	P			2.0E-02	X					1	0.1		1.4E+09		Methyl-5-Nitroaniline, 2-	99-55-8	3.6E+02	8.6E+02		2.6E+02	2.3E+04	5.5E+04		1.6E+04
8.3E+00	C	2.4E-03	C							1	0.1		1.4E+09		Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	3.9E-01	9.3E-01	6.9E+03	2.8E-01				
1.3E-01	C	3.7E-05	C							1	0.1		1.4E+09		Methylaniline Hydrochloride, 2-	636-21-5	2.5E+01	5.9E+01	4.5E+05	1.8E+01				
				1.0E-02	A					1	0.1		1.4E+09		Methylarsonic acid	124-58-3					1.2E+04	2.8E+04		8.2E+03
				2.0E-04	X					1	0.1		1.4E+09		Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					2.3E+02	5.5E+02		1.6E+02
1.0E-01	X			3.0E-04	X					1	0.1		1.4E+09		Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	3.3E+01	7.7E+01		2.3E+01	3.5E+02	8.3E+02		2.5E+02
2.2E+01	C	6.3E-03	C						M	1	0.1		1.4E+09		Methylcholanthrene, 3-	56-49-5	1.5E-01	3.5E-01	2.6E+03	1.0E-01				
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1		3.3E+03	1.4E+09	2.2E+03	Methylene Chloride	75-09-2	1.6E+03		2.7E+03	1.0E+03	7.0E+03		5.8E+03	3.2E+03
1.0E-01	P	4.3E-04	C	2.0E-03	P				M	1	0.1		1.4E+09		Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	3.3E+01	7.7E+01	3.9E+04	2.3E+01	2.3E+03	5.5E+03		1.6E+03
4.6E-02	I	1.3E-05	C							1	0.1		1.4E+09		Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	7.1E+01	1.7E+02	1.3E+06	5.0E+01				
1.6E+00	C	4.6E-04	C			2.0E-02	C			1	0.1		1.4E+09		Methylenebisbenzenamine, 4,4'-	101-77-9	2.0E+00	4.8E+00	3.6E+04	1.4E+00			1.2E+08	1.2E+08
						6.0E-04	I			1	0.1		1.4E+09		Methylenediphenyl Diisocyanate	101-68-8							3.6E+06	3.6E+06

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Toxicity and Chemical-specific Information																Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
				7.0E-02	H			V		1		5.0E+02	1.4E+09	1.3E+04	Methylstyrene, Alpha-	98-83-9					8.2E+04			8.2E+04
				1.5E-01	I					1	0.1		1.4E+09		Metolachlor	51218-45-2					1.8E+05	4.1E+05		1.2E+05
				2.5E-02	I					1	0.1		1.4E+09		Metribuzin	21087-64-9					2.9E+04	6.9E+04		2.1E+04
				2.5E-01	I					1	0.1		1.4E+09		Metsulfuron-methyl	74223-64-6					2.9E+05	6.9E+05		2.1E+05
				3.0E+00	P			V		1		3.4E-01	1.4E+09	1.4E+03	Mineral oils	8012-95-1					3.5E+06			3.5E+06
1.8E+01	C	5.1E-03	C	2.0E-04	I			V		1			1.4E+09	8.6E+05	Mirex	2385-85-5	1.8E-01		2.1E+00	1.7E-01	2.3E+02			2.3E+02
				2.0E-03	I					1	0.1		1.4E+09		Molinate	2212-67-1					2.3E+03	5.5E+03		1.6E+03
				5.0E-03	I					1			1.4E+09		Molybdenum	7439-98-7					5.8E+03			5.8E+03
				1.0E-01	I					1			1.4E+09		Monochloramine	10599-90-3					1.2E+05			1.2E+05
				2.0E-03	P					1	0.1		1.4E+09		Monomethylaniline	100-61-8					2.3E+03	5.5E+03		1.6E+03
				2.5E-02	I					1	0.1		1.4E+09		Myclobutanil	88671-89-0					2.9E+04	6.9E+04		2.1E+04
				3.0E-04	X					1	0.1		1.4E+09		N,N'-Diphenyl-1,4-benzenediamine	74-31-7					3.5E+02	8.3E+02		2.5E+02
				2.0E-03	I			V		1			1.4E+09	5.7E+04	Naled	300-76-5					2.3E+03			2.3E+03
				3.0E-02	X	1.0E-01	P	V		1			1.4E+09		Naphtha, High Flash Aromatic (HFAN)	64742-95-6					3.5E+04		6.0E+08	3.5E+04
1.8E+00	C	0.0E+00	C							1	0.1		1.4E+09		Naphthylamine, 2-	91-59-8	1.8E+00	4.3E+00		1.3E+00				
				1.0E-01	I					1	0.1		1.4E+09		Napropamide	15299-99-7					1.2E+05	2.8E+05		8.2E+04
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		1.4E+09		Nickel Acetate	373-02-4			6.4E+04	6.4E+04	1.3E+04	3.0E+04	8.3E+04	8.1E+03
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		1.4E+09		Nickel Carbonate	3333-67-3			6.4E+04	6.4E+04	1.3E+04	3.0E+04	8.3E+04	8.1E+03
		2.6E-04	C	1.1E-02	C	1.4E-05	C	V		1			1.4E+09		Nickel Carbonyl	13463-39-3			6.4E+04	6.4E+04	1.3E+04		8.3E+04	1.1E+04
		2.6E-04	C	1.1E-02	C	1.4E-05	C			0.04			1.4E+09		Nickel Hydroxide	12054-48-7			6.4E+04	6.4E+04	1.3E+04		8.3E+04	1.1E+04
		2.6E-04	C	1.1E-02	C	2.0E-05	C			0.04			1.4E+09		Nickel Oxide	1313-99-1			6.4E+04	6.4E+04	1.3E+04		1.2E+05	1.2E+04
		2.4E-04	I	1.1E-02	C	1.4E-05	C			0.04			1.4E+09		Nickel Refinery Dust	NA			6.9E+04	6.9E+04	1.3E+04		8.3E+04	1.1E+04
		2.6E-04	C	2.0E-02	I	9.0E-05	A			0.04			1.4E+09		Nickel Soluble Salts	7440-02-0			6.4E+04	6.4E+04	2.3E+04		5.4E+05	2.2E+04
1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C			0.04			1.4E+09		Nickel Subsulfide	12035-72-2	1.9E+00		3.5E+04	1.9E+00	1.3E+04		8.3E+04	1.1E+04
		2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		1.4E+09		Nickelocene	1271-28-9			6.4E+04	6.4E+04	1.3E+04	3.0E+04	8.3E+04	8.1E+03
				1.6E+00	I					1			1.4E+09		Nitrate	14797-55-8					1.9E+06			1.9E+06
										1			1.4E+09		Nitrate + Nitrite (as N)	NA								
				1.0E-01	I					1			1.4E+09		Nitrite	14797-65-0					1.2E+05			1.2E+05
				1.0E-02	X	5.0E-05	X			1	0.1		1.4E+09		Nitroaniline, 2-	88-74-4					1.2E+04	2.8E+04	3.0E+05	8.0E+03
2.0E-02	P			4.0E-03	P	6.0E-03	P			1	0.1		1.4E+09		Nitroaniline, 4-	100-01-6	1.6E+02	3.9E+02		1.1E+02	4.7E+03	1.1E+04	3.6E+07	3.3E+03
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1		3.1E+03	1.4E+09	7.3E+04	Nitrobenzene	98-95-3			2.2E+01	2.2E+01	2.3E+03		2.9E+03	1.3E+03
				3.0E+03	P					1	0.1		1.4E+09		Nitrocellulose	9004-70-0					3.5E+09	8.3E+09		2.5E+09
				7.0E-02	H					1	0.1		1.4E+09		Nitrofurantoin	67-20-9					8.2E+04	1.9E+05		5.7E+04
1.3E+00	C	3.7E-04	C							1	0.1		1.4E+09		Nitrofurazone	59-87-0	2.5E+00	5.9E+00	4.5E+04	1.8E+00				
1.7E-02	P			1.0E-04	P					1	0.1		1.4E+09		Nitroglycerin	55-63-0	1.9E+02	4.5E+02		1.4E+02	1.2E+02	2.8E+02		8.2E+01
				1.0E-01	I					1	0.1		1.4E+09		Nitroguanidine	556-88-7					1.2E+05	2.8E+05		8.2E+04
		8.8E-06	P			5.0E-03	P	V		1		1.8E+04	1.4E+09	1.7E+04	Nitromethane	75-52-5			2.4E+01	2.4E+01			3.7E+02	3.7E+02
		2.7E-03	H			2.0E-02	I	V		1		4.9E+03	1.4E+09	1.3E+04	Nitropropane, 2-	79-46-9			6.0E-02	6.0E-02			1.2E+03	1.2E+03
2.7E+01	C	7.7E-03	C						M	1	0.1		1.4E+09		Nitroso-N-ethylurea, N-	759-73-9	1.2E-01	2.9E-01	2.2E+03	8.5E-02				
1.2E+02	C	3.4E-02	C						M	1	0.1		1.4E+09		Nitroso-N-methylurea, N-	684-93-5	2.7E-02	6.4E-02	4.9E+02	1.9E-02				
5.4E+00	I	1.6E-03	I					V		1			1.4E+09	2.4E+05	Nitroso-di-N-butylamine, N-	924-16-3	6.1E-01		1.9E+00	4.6E-01				
7.0E+00	I	2.0E-03	C							1	0.1		1.4E+09		Nitroso-di-N-propylamine, N-	621-64-7	4.7E-01	1.1E+00	8.3E+03	3.3E-01				
2.8E+00	I	8.0E-04	C							1	0.1		1.4E+09		Nitrosodiethanolamine, N-	1116-54-7	1.2E+00	2.8E+00	2.1E+04	8.2E-01				
1.5E+02	I	4.3E-02	I						M	1	0.1		1.4E+09		Nitrosodiethylamine, N-	55-18-5	2.2E-02	5.2E-02	3.9E+02	1.5E-02				
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	1		2.4E+05	1.4E+09	8.2E+04	Nitrosodimethylamine, N-	62-75-9	6.4E-02		7.2E-02	3.4E-02	9.3E+00		1.4E+01	5.7E+00
4.9E-03	I	2.6E-06	C							1	0.1		1.4E+09		Nitrosodiphenylamine, N-	86-30-6	6.7E+02	1.6E+03	6.4E+06	4.7E+02				
2.2E+01	I	6.3E-03	C					V		1		1.1E+05	1.4E+09	1.2E+05	Nitrosomethylethylamine, N-	10595-95-6	1.5E-01		2.4E-01	9.1E-02				
6.7E+00	C	1.9E-03	C							1	0.1		1.4E+09		Nitrosomorpholine [N-]	59-89-2	4.9E-01	1.2E+00	8.8E+03	3.4E-01				
9.4E+00	C	2.7E-03	C							1	0.1		1.4E+09		Nitrosopiperidine [N-]	100-75-4	3.5E-01	8.2E-01	6.2E+03	2.4E-01				
2.1E+00	I	6.1E-04	I							1	0.1		1.4E+09		Nitrosopyrrolidine, N-	930-55-2	1.6E+00	3.7E+00	2.7E+04	1.1E+00				
				1.0E-04	X					1	0.1		1.4E+09		Nitrotoluene, m-	99-08-1					1.2E+02	2.8E+02		8.2E+01
2.2E-01	P			9.0E-04	P			V		1		1.5E+03	1.4E+09	1.4E+05	Nitrotoluene, o-	88-72-2	1.5E+01			1.5E+01	1.1E+03			1.1E+03
1.6E-02	P			4.0E-03	P					1	0.1		1.4E+09		Nitrotoluene, p-	99-99-0	2.0E+02	4.8E+02		1.4E+02	4.7E+03	1.1E+04		3.3E+03
				3.0E-04	X	2.0E-02	P	V		1		6.9E+00	1.4E+09	1.0E+03	Nonane, n-	111-84-2					3.5E+02		9.1E+01	7.2E+01
				4.0E-02	I					1	0.1		1.4E+09		Norflurazon	27314-13-2					4.7E+04	1.1E+05		3.3E+04
				3.0E-03	I					1	0.1		1.4E+09		Octabromodiphenyl Ether	32536-52-0					3.5E+03	8.3E+03		2.5E+03
				5.0E-02	I					1	0.006		1.4E+09		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0					5.8E+04	2.3E+06		5.7E+04
				2.0E-03	H					1	0.1		1.4E+09		Octamethylpyrophosphoramide	152-16-9					2.3E+03	5.5E+03		1.6E+03
				5.0E-02	I					1	0.1		1.4E+09		Oryzalin	19044-88-3					5.8E+04	1.4E+05		4.1E+04
				5.0E-03	I					1	0.1		1.4E+09		Oxadiazon	19666-30-9					5.8E+03	1.4E+04		4.1E+03
				2.5E-02	I					1	0.1		1.4E+09		Oxamyl	23135-22-0					2.9E+04	6.9E+04		2.1E+04
				3.0E-03	I					1	0.1		1.4E+09		Oxyfluorfen	42874-03-3					3.5E+03	8.3E+03		2.5E+03
				1.3E-02	I					1	0.1		1.4E+09		Paclobutrazol	76738-62-0					1.5E+04	3.6E+04		1.1E+04
				4.5E-03	I					1	0.1		1.4E+09		Paraquat Dichloride	1910-42-5					5.3E+03	1.2E+04		3.7E+03
				6.0E-03	H					1	0.1		1.4E+09		Parathion	56-38-2					7.0E+03	1.7E+04		4.9E+03

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
				5.0E-02	H			V		1			1.4E+09	4.5E+04	Pebulate	1114-71-2					5.8E+04			5.8E+04
				4.0E-02	I					1	0.1		1.4E+09		Pendimethalin	40487-42-1					4.7E+04	1.1E+05		3.3E+04
				2.0E-03	I			V		1		3.1E-01	1.4E+09	5.1E+05	Pentabromodiphenyl Ether	32534-81-9					2.3E+03			2.3E+03
				1.0E-04	I					1	0.1		1.4E+09		Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					1.2E+02	2.8E+02		8.2E+01
				8.0E-04	I			V		1			1.4E+09	8.1E+04	Pentachlorobenzene	608-93-5					9.3E+02			9.3E+02
9.0E-02	P							V		1		4.6E+02	1.4E+09	9.7E+03	Pentachloroethane	76-01-7	3.6E+01			3.6E+01				
2.6E-01	H			3.0E-03	I			V		1			1.4E+09	4.3E+05	Pentachloronitrobenzene	82-68-8	1.3E+01			1.3E+01	3.5E+03			3.5E+03
4.0E-01	I	5.1E-06	C	5.0E-03	I					1	0.25		1.4E+09		Pentachlorophenol	87-86-5	8.2E+00	7.7E+00	3.3E+06	4.0E+00	5.8E+03	5.5E+03		2.8E+03
4.0E-03	X			2.0E-03	P					1	0.1		1.4E+09		Pentaerythritol tetranitrate (PETN)	78-11-5	8.2E+02	1.9E+03		5.7E+02	2.3E+03	5.5E+03		1.6E+03
						1.0E+00	P	V		1		3.9E+02	1.4E+09	7.8E+02	Pentane, n-	109-66-0							3.4E+03	3.4E+03
															Perchlorates									
				7.0E-04	I					1			1.4E+09		~Ammonium Perchlorate	7790-98-9					8.2E+02			8.2E+02
				7.0E-04	I					1			1.4E+09		~Lithium Perchlorate	7791-03-9					8.2E+02			8.2E+02
				7.0E-04	I					1			1.4E+09		~Perchlorate and Perchlorate Salts	14797-73-0					8.2E+02			8.2E+02
				7.0E-04	I					1			1.4E+09		~Potassium Perchlorate	7778-74-7					8.2E+02			8.2E+02
				7.0E-04	I					1			1.4E+09		~Sodium Perchlorate	7601-89-0					8.2E+02			8.2E+02
				2.0E-02	P			V		1			1.4E+09	1.3E+05	Perfluorobutane Sulfonate	375-73-5					2.3E+04			2.3E+04
				5.0E-02	I					1	0.1		1.4E+09		Permethrin	52645-53-1					5.8E+04	1.4E+05		4.1E+04
2.2E-03	C	6.3E-07	C							1	0.1		1.4E+09		Phenacetin	62-44-2	1.5E+03	3.5E+03	2.6E+07	1.0E+03				
				2.5E-01	I					1	0.1		1.4E+09		Phenmedipham	13684-63-4					2.9E+05	6.9E+05		2.1E+05
				3.0E-01	I	2.0E-01	C			1	0.1		1.4E+09		Phenol	108-95-2					3.5E+05	8.3E+05	1.2E+09	2.5E+05
				5.0E-04	X					1	0.1		1.4E+09		Phenothiazine	92-84-2					5.8E+02	1.4E+03		4.1E+02
				6.0E-03	I					1	0.1		1.4E+09		Phenylenediamine, m-	108-45-2					7.0E+03	1.7E+04		4.9E+03
4.7E-02	H									1	0.1		1.4E+09		Phenylenediamine, o-	95-54-5	7.0E+01	1.6E+02		4.9E+01				
		1.9E-01	H							1	0.1		1.4E+09		Phenylenediamine, p-	106-50-3					2.2E+05	5.2E+05		1.6E+05
1.9E-03	H									1	0.1		1.4E+09		Phenylphenol, 2-	90-43-7	1.7E+03	4.0E+03		1.2E+03				
				2.0E-04	H					1	0.1		1.4E+09		Phorate	298-02-2					2.3E+02	5.5E+02		1.6E+02
						3.0E-04	I	V		1		1.6E+03	1.4E+09	9.8E+02	Phosgene	75-44-5							1.3E+00	1.3E+00
				2.0E-02	I					1	0.1		1.4E+09		Phosmet	732-11-6					2.3E+04	5.5E+04		1.6E+04
															Phosphates, Inorganic									
				4.9E+01	P					1			1.4E+09		~Aluminum metaphosphate	13776-88-0					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Ammonium polyphosphate	68333-79-9					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Calcium pyrophosphate	7790-76-3					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Diammonium phosphate	7783-28-0					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Dicalcium phosphate	7757-93-9					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Dimagnesium phosphate	7782-75-4					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Dipotassium phosphate	7758-11-4					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Disodium phosphate	7558-79-4					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Monoaluminum phosphate	13530-50-2					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Monoammonium phosphate	7722-76-1					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Monocalcium phosphate	7758-23-8					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Monomagnesium phosphate	7757-86-0					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Monopotassium phosphate	7778-77-0					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Monosodium phosphate	7558-80-7					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Polyphosphoric acid	8017-16-1					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Potassium tripolyphosphate	13845-36-8					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Sodium acid pyrophosphate	7758-16-9					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Sodium aluminum phosphate (acidic)	7785-88-8					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Sodium aluminum phosphate (anhydrous)	10279-59-1					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Sodium hexametaphosphate	10124-56-8					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Sodium polyphosphate	68915-31-1					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Sodium trimetaphosphate	7785-84-4					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Sodium tripolyphosphate	7758-29-4					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Tetrapotassium phosphate	7320-34-5					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Tetrasodium pyrophosphate	7722-88-5					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Tricalcium phosphate	7758-87-4					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Trimagnesium phosphate	7757-87-1					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Tripotassium phosphate	7778-53-2					5.7E+07			5.7E+07
				4.9E+01	P					1			1.4E+09		~Trisodium phosphate	7601-54-9					5.7E+07			5.7E+07
				3.0E-04	I	3.0E-04	I	V		1			1.4E+09		Phosphine	7803-51-2					3.5E+02		1.8E+06	3.5E+02
				4.9E+01	P	1.0E-02	I			1			1.4E+09		Phosphoric Acid	7664-38-2					5.7E+07		6.0E+07	2.9E+07
				2.0E-05	I			V		1			1.4E+09	6.9E+03	Phosphorus, White	7723-14-0					2.3E+01			2.3E+01
															Phthalates									

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
1.4E-02	I	2.4E-06	C	2.0E-02	I					1	0.1		1.4E+09		~Bis(2-ethylhexyl)phthalate	117-81-7	2.3E+02	5.5E+02	6.9E+06	1.6E+02	2.3E+04	5.5E+04		1.6E+04
				1.0E+00	I					1	0.1		1.4E+09		~Butylphthalyl Butylglycolate	85-70-1					1.2E+06	2.8E+06		8.2E+05
				1.0E-01	I					1	0.1		1.4E+09		~Dibutyl Phthalate	84-74-2					1.2E+05	2.8E+05		8.2E+04
				8.0E-01	I					1	0.1		1.4E+09		~Diethyl Phthalate	84-66-2					9.3E+05	2.2E+06		6.6E+05
				1.0E-01	I			V		1			1.4E+09	2.1E+04	~Dimethylterephthalate	120-61-6					1.2E+05			1.2E+05
				1.0E-02	P					1	0.1		1.4E+09		~Octyl Phthalate, di-N-	117-84-0					1.2E+04	2.8E+04		8.2E+03
				1.0E+00	H					1	0.1		1.4E+09		~Phthalic Acid, P-	100-21-0					1.2E+06	2.8E+06		8.2E+05
				2.0E+00	I	2.0E-02	C			1	0.1		1.4E+09		~Phthalic Anhydride	85-44-9					2.3E+06	5.5E+06	1.2E+08	1.6E+06
				7.0E-02	I					1	0.1		1.4E+09		Picloram	1918-02-1					8.2E+04	1.9E+05		5.7E+04
				1.0E-04	X					1	0.1		1.4E+09		Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					1.2E+02	2.8E+02		8.2E+01
				9.0E-04	X					1	0.1		1.4E+09		Picric Acid (2,4,6-Trinitrophenol)	88-89-1					1.1E+03	2.5E+03		7.4E+02
				1.0E-02	I					1	0.1		1.4E+09		Pirimiphos, Methyl	29232-93-7					1.2E+04	2.8E+04		8.2E+03
3.0E+01	C	8.6E-03	C	7.0E-06	H					1	0.1		1.4E+09		Polybrominated Biphenyls	59536-65-1	1.1E-01	2.6E-01	1.9E+03	7.7E-02	8.2E+00	1.9E+01		5.7E+00
															Polychlorinated Biphenyls (PCBs)									
7.0E-02	S	2.0E-05	S	7.0E-05	I			V		1	0.14		1.4E+09	7.1E+05	~Aroclor 1016	12674-11-2	4.7E+01	7.9E+01	4.4E+02	2.7E+01	8.2E+01	1.4E+02		5.1E+01
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	2.0E+05	~Aroclor 1221	11104-28-2	1.6E+00	2.8E+00	4.4E+00	8.3E-01				
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	1.1E+05	~Aroclor 1232	11141-16-5	1.6E+00	2.8E+00	2.4E+00	7.2E-01				
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	5.9E+05	~Aroclor 1242	53469-21-9	1.6E+00	2.8E+00	1.3E+01	9.5E-01				
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	6.3E+05	~Aroclor 1248	12672-29-6	1.6E+00	2.8E+00	1.3E+01	9.5E-01				
2.0E+00	S	5.7E-04	S	2.0E-05	I			V		1	0.14		1.4E+09	8.4E+05	~Aroclor 1254	11097-69-1	1.6E+00	2.8E+00	1.8E+01	9.7E-01	2.3E+01	3.9E+01		1.5E+01
2.0E+00	S	5.7E-04	S					V		1	0.14		1.4E+09	1.3E+06	~Aroclor 1260	11096-82-5	1.6E+00	2.8E+00	2.8E+01	9.9E-01				
				6.0E-04	X			V		1	0.14		1.4E+09	9.6E+05	~Aroclor 5460	11126-42-4					7.0E+02	1.2E+03		4.4E+02
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	3.3E+06	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	8.4E-01	1.4E+00	3.6E+01	5.2E-01	2.7E+01	4.6E+01	1.9E+04	1.7E+01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	2.2E+06	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	8.4E-01	1.4E+00	2.4E+01	5.2E-01	2.7E+01	4.6E+01	1.3E+04	1.7E+01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	1.5E+06	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	8.4E-01	1.4E+00	1.6E+01	5.1E-01	2.7E+01	4.6E+01	8.5E+03	1.7E+01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	1.5E+06	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	8.4E-01	1.4E+00	1.7E+01	5.1E-01	2.7E+01	4.6E+01	9.0E+03	1.7E+01
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V		1	0.14		1.4E+09	2.2E+06	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	8.4E-04	1.4E-03	2.4E-02	5.2E-04	2.7E-02	4.6E-02	1.3E+01	1.7E-02
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	1.0E+06	~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	8.4E-01	1.4E+00	1.1E+01	5.0E-01	2.7E+01	4.6E+01	6.0E+03	1.7E+01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	8.3E+05	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	8.4E-01	1.4E+00	8.9E+00	5.0E-01	2.7E+01	4.6E+01	4.8E+03	1.7E+01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	8.5E+05	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	8.4E-01	1.4E+00	9.1E+00	5.0E-01	2.7E+01	4.6E+01	4.9E+03	1.7E+01
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		1.4E+09	1.5E+06	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	8.4E-01	1.4E+00	1.6E+01	5.1E-01	2.7E+01	4.6E+01	8.6E+03	1.7E+01
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V		1	0.14		1.4E+09	1.0E+06	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	2.5E-04	4.2E-04	3.3E-03	1.5E-04	8.2E-03	1.4E-02	1.8E+00	5.1E-03
2.0E+00	I	5.7E-04	I					V		1	0.14		1.4E+09	5.3E+05	~Polychlorinated Biphenyls (high risk)	1336-36-3	1.6E+00	2.8E+00	1.1E+01	9.4E-01				
4.0E-01	I	1.0E-04	I					V		1	0.14				~Polychlorinated Biphenyls (low risk)	1336-36-3								
7.0E-02	I	2.0E-05	I					V		1	0.14				~Polychlorinated Biphenyls (lowest risk)	1336-36-3								
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			1	0.14		1.4E+09		~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	2.5E-01	4.2E-01	4.4E+03	1.6E-01	8.2E+00	1.4E+01	2.4E+06	5.1E+00
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V		1	0.14		1.4E+09	7.3E+05	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	8.4E-02	1.4E-01	7.8E-01	4.9E-02	2.7E+00	4.6E+00	4.2E+02	1.7E+00
						6.0E-04	I			1	0.1		1.4E+09		Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9							3.6E+06	3.6E+06
															Polynuclear Aromatic Hydrocarbons (PAHs)									
				6.0E-02	I			V		1	0.13		1.4E+09	1.4E+05	~Acenaphthene	83-32-9					7.0E+04	1.3E+05		4.5E+04
				3.0E-01	I			V		1	0.13		1.4E+09	5.2E+05	~Anthracene	120-12-7					3.5E+05	6.4E+05		2.3E+05
7.3E-01	E	1.1E-04	C					V	M	1	0.13		1.4E+09	4.4E+06	~Benz[a]anthracene	56-55-3	4.5E+00	8.1E+00	4.9E+02	2.9E+00				
1.2E+00	C	1.1E-04	C							1	0.13		1.4E+09		~Benzo(j)fluoranthene	205-82-3	2.7E+00	5.0E+00	1.5E+05	1.8E+00				
7.3E+00	I	1.1E-03	C						M	1	0.13		1.4E+09		~Benzo[a]pyrene	50-32-8	4.5E-01	8.1E-01	1.5E+04	2.9E-01				
7.3E-01	E	1.1E-04	C						M	1	0.13		1.4E+09		~Benzo[b]fluoranthene	205-99-2	4.5E+00	8.1E+00	1.5E+05	2.9E+00				
7.3E-02	E	1.1E-04	C						M	1	0.13		1.4E+09		~Benzo[k]fluoranthene	207-08-9	4.5E+01	8.1E+01	1.5E+05	2.9E+01				
				8.0E-02	I			V		1	0.13		1.4E+09	8.0E+04	~Chloronaphthalene, Beta-	91-58-7					9.3E+04	1.7E+05		6.0E+04
7.3E-03	E	1.1E-05	C						M	1	0.13		1.4E+09		~Chrysene	218-01-9	4.5E+02	8.1E+02	1.5E+06	2.9E+02				
7.3E+00	E	1.2E-03	C						M	1	0.13		1.4E+09		~Dibenz[a,h]anthracene	53-70-3	4.5E-01	8.1E-01	1.4E+04	2.9E-01				
1.2E+01	C	1.1E-03	C							1	0.13		1.4E+09		~Dibenzo(a,e)pyrene	192-65-4	2.7E-01	5.0E-01	1.5E+04	1.8E-01				
2.5E+02	C	7.1E-02	C						M	1	0.13		1.4E+09		~Dimethylbenz(a)anthracene, 7,12-	57-97-6	1.3E-02	2.4E-02	2.3E+02	8.4E-03				
				4.0E-02	I					1	0.13		1.4E+09		~Fluoranthene	206-44-0					4.7E+04	8.5E+04		3.0E+04
				4.0E-02	I			V		1	0.13		1.4E+09	2.8E+05	~Fluorene	86-73-7					4.7E+04	8.5E+04		3.0E+04
7.3E-01	E	1.1E-04	C						M	1	0.13		1.4E+09		~Indeno[1,2,3-cd]pyrene	193-39-5	4.5E+00	8.1E+00	1.5E+05	2.9E+00				
2.9E-02	P			7.0E-02	A			V		1	0.13	3.9E+02	1.4E+09	5.9E+04	~Methylnaphthalene, 1-	90-12-0	1.1E+02	2.0E+02		7.3E+01	8.2E+04	1.5E+05		5.3E+04
				4.0E-03	I			V		1	0.13		1.4E+09	5.8E+04	~Methylnaphthalene, 2-	91-57-6					4.7E+03	8.5E+03		3.0E+03
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V		1	0.13		1.4E+09	4.6E+04	~Naphthalene	91-20-3			1.7E+01	1.7E+01	2.3E+04	4.2E+04	6.1E+02	5.9E+02
1.2E+00	C	1.1E-04	C							1	0.13		1.4E+09		~Nitropyrene, 4-	57835-92-4	2.7E+00	5.0E+00	1.5E+05	1.8E+00				
				3.0E-02	I			V		1	0.13		1.4E+09	2.4E+06	~Pyrene	129-00-0					3.5E+04	6.4E+04		2.3E+04
				2.0E-02	P					1	0.1		1.4E+09		Potassium Perfluorobutane Sulfonate	29420-49-3					2.3E+04	5.5E+04		1.6E+04
1.5E-01	I			9.0E-03	I					1	0.1		1.4E+09		Prochloraz	67747-09-5	2.2E+01	5.2E+01		1.5E+01	1.1E+04	2.5E+04		7.4E+03
				6.0E-03	H			V		1			1.4E+09	4.2E+05	Profluralin	26399-36-0					7.0E+03			7.0E+03
				1.5E-02	I					1	0.1		1.4E+09		Prometon	1610-18-0					1.8E+04	4.1E+04		1.2E+04
				4.0E-03	I					1	0.1		1.4E+09		Prometryn	7287-19-6					4.7E+03	1.1E+04		3.3E+03
				1.3E-02	I					1	0.1		1.4E+09		Propachlor	1918-16-7					1.5E+04	3.6E+04		1.1E+04

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Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
				4.0E-03	I					1	0.1		1.4E+09		Propanediol, 1,2-	114-26-1					4.7E+03	1.1E+04		3.3E+03
				5.0E-03	I					1	0.1		1.4E+09		Propanil	709-98-8					5.8E+03	1.4E+04		4.1E+03
				2.0E-02	I					1	0.1		1.4E+09		Propargite	2312-35-8					2.3E+04	5.5E+04		1.6E+04
				2.0E-03	I			V		1		1.1E+05	1.4E+09	6.3E+04	Propargyl Alcohol	107-19-7					2.3E+03			2.3E+03
				2.0E-02	I					1	0.1		1.4E+09		Propazine	139-40-2					2.3E+04	5.5E+04		1.6E+04
				2.0E-02	I					1	0.1		1.4E+09		Propham	122-42-9					2.3E+04	5.5E+04		1.6E+04
				1.3E-02	I					1	0.1		1.4E+09		Propiconazole	60207-90-1					1.5E+04	3.6E+04		1.1E+04
						8.0E-03	I	V		1		3.3E+04	1.4E+09	8.9E+03	Propionaldehyde	123-38-6							3.1E+02	3.1E+02
				1.0E-01	X	1.0E+00	X	V		1		2.6E+02	1.4E+09	7.0E+03	Propyl benzene	103-65-1					1.2E+05		3.1E+04	2.4E+04
						3.0E+00	C	V		1		3.5E+02	1.4E+09	7.0E+02	Propylene	115-07-1							9.3E+03	9.3E+03
				2.0E+01	P					1	0.1		1.4E+09		Propylene Glycol	57-55-6					2.3E+07	5.5E+07		1.6E+07
						2.7E-04	A			1	0.1		1.4E+09		Propylene Glycol Dinitrate	6423-43-4							1.6E+06	1.6E+06
				7.0E-01	H	2.0E+00	I	V		1		1.1E+05	1.4E+09	7.8E+04	Propylene Glycol Monomethyl Ether	107-98-2					8.2E+05		6.9E+05	3.7E+05
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		1		7.8E+04	1.4E+09	1.0E+04	Propylene Oxide	75-56-9	1.4E+01		3.4E+01	9.7E+00			1.4E+03	1.4E+03
				7.5E-02	I					1	0.1		1.4E+09		Propyzamide	23950-58-5					8.8E+04	2.1E+05		6.2E+04
				1.0E-03	I			V		1		5.3E+05	1.4E+09	5.5E+04	Pyridine	110-86-1					1.2E+03			1.2E+03
				5.0E-04	I					1	0.1		1.4E+09		Quinalphos	13593-03-8					5.8E+02	1.4E+03		4.1E+02
3.0E+00	I									1	0.1		1.4E+09		Quinoline	91-22-5	1.1E+00	2.6E+00		7.7E-01				
				9.0E-03	I					1	0.1		1.4E+09		Quizalofop-ethyl	76578-14-8					1.1E+04	2.5E+04		7.4E+03
						3.0E-02	A			1			1.4E+09		Refractory Ceramic Fibers	NA							1.8E+08	1.8E+08
				3.0E-02	I					1	0.1		1.4E+09		Resmethrin	10453-86-8					3.5E+04	8.3E+04		2.5E+04
				5.0E-02	H			V		1			1.4E+09	4.7E+05	Ronnel	299-84-3					5.8E+04			5.8E+04
				4.0E-03	I					1	0.1		1.4E+09		Rotenone	83-79-4					4.7E+03	1.1E+04		3.3E+03
2.2E-01	C	6.3E-05	C						M	1	0.1		1.4E+09		Safrole	94-59-7	1.5E+01	3.5E+01	2.6E+05	1.0E+01				
				5.0E-03	I					1			1.4E+09		Selenious Acid	7783-00-8					5.8E+03			5.8E+03
				5.0E-03	I	2.0E-02	C			1			1.4E+09		Selenium	7782-49-2					5.8E+03		1.2E+08	5.8E+03
				5.0E-03	C	2.0E-02	C			1			1.4E+09		Selenium Sulfide	7446-34-6					5.8E+03		1.2E+08	5.8E+03
				9.0E-02	I					1	0.1		1.4E+09		Sethoxydim	74051-80-2					1.1E+05	2.5E+05		7.4E+04
						3.0E-03	C			1			1.4E+09		Silica (crystalline, respirable)	7631-86-9							1.8E+07	1.8E+07
				5.0E-03	I					0.04			1.4E+09		Silver	7440-22-4					5.8E+03			5.8E+03
1.2E-01	H			5.0E-03	I					1	0.1		1.4E+09		Simazine	122-34-9	2.7E+01	6.4E+01		1.9E+01	5.8E+03	1.4E+04		4.1E+03
				1.3E-02	I					1	0.1		1.4E+09		Sodium Acifluorfen	62476-59-9					1.5E+04	3.6E+04		1.1E+04
				4.0E-03	I					1			1.4E+09		Sodium Azide	26628-22-8					4.7E+03			4.7E+03
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		Sodium Dichromate	10588-01-9	6.5E+00		1.1E+02	6.2E+00	2.3E+04		1.2E+06	2.3E+04
2.7E-01	H			3.0E-02	I					1	0.1		1.4E+09		Sodium Diethyldithiocarbamate	148-18-5	1.2E+01	2.9E+01		8.5E+00	3.5E+04	8.3E+04		2.5E+04
				5.0E-02	A	1.3E-02	C			1			1.4E+09		Sodium Fluoride	7681-49-4					5.8E+04		7.7E+07	5.8E+04
				2.0E-05	I					1	0.1		1.4E+09		Sodium Fluoroacetate	62-74-8					2.3E+01	5.5E+01		1.6E+01
				1.0E-03	H					1			1.4E+09		Sodium Metavanadate	18718-26-8					1.2E+03			1.2E+03
				8.0E-04	P					1			1.4E+09		Sodium Tungstate	13472-45-2					9.3E+02			9.3E+02
				8.0E-04	P					1			1.4E+09		Sodium Tungstate Dihydrate	10213-10-2					9.3E+02			9.3E+02
2.4E-02	H			3.0E-02	I					1	0.1		1.4E+09		Stirofos (Tetrachlorovinphos)	961-11-5	1.4E+02	3.2E+02		9.6E+01	3.5E+04	8.3E+04		2.5E+04
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			1.4E+09		Strontium Chromate	7789-06-2	6.5E+00		1.1E+02	6.2E+00	2.3E+04		1.2E+06	2.3E+04
				6.0E-01	I					1			1.4E+09		Strontium, Stable	7440-24-6					7.0E+05			7.0E+05
				3.0E-04	I					1	0.1		1.4E+09		Strychnine	57-24-9					3.5E+02	8.3E+02		2.5E+02
				2.0E-01	I	1.0E+00	I	V		1		8.7E+02	1.4E+09	9.4E+03	Styrene	100-42-5					2.3E+05		4.1E+04	3.5E+04
				3.0E-03	P					1	0.1		1.4E+09		Styrene-Acrylonitrile (SAN) Trimer	NA					3.5E+03	8.3E+03		2.5E+03
				1.0E-03	P	2.0E-03	X			1	0.1		1.4E+09		Sulfolane	126-33-0					1.2E+03	2.8E+03	1.2E+07	8.2E+02
				8.0E-04	P					1	0.1		1.4E+09		Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					9.3E+02	2.2E+03		6.6E+02
						1.0E-03	C	V		1			1.4E+09		Sulfur Trioxide	7446-11-9							6.0E+06	6.0E+06
						1.0E-03	C			1			1.4E+09		Sulfuric Acid	7664-93-9							6.0E+06	6.0E+06
2.5E-02	I	7.1E-06	I	5.0E-02	H					1	0.1		1.4E+09		Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	1.3E+02	3.1E+02	2.3E+06	9.2E+01	5.8E+04	1.4E+05		4.1E+04
				3.0E-02	H					1	0.1		1.4E+09		TCMTB	21564-17-0					3.5E+04	8.3E+04		2.5E+04
				7.0E-02	I					1	0.1		1.4E+09		Tebuthiuron	34014-18-1					8.2E+04	1.9E+05		5.7E+04
				2.0E-02	H					1	0.1		1.4E+09		Temephos	3383-96-8					2.3E+04	5.5E+04		1.6E+04
				1.3E-02	I					1	0.1		1.4E+09		Terbacil	5902-51-2					1.5E+04	3.6E+04		1.1E+04
				2.5E-05	H			V		1		3.1E+01	1.4E+09	2.6E+05	Terbufos	13071-79-9					2.9E+01			2.9E+01
				1.0E-03	I					1	0.1		1.4E+09		Terbutryn	886-50-0					1.2E+03	2.8E+03		8.2E+02
				1.0E-04	I					1	0.1		1.4E+09		Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					1.2E+02	2.8E+02		8.2E+01
				3.0E-04	I			V		1			1.4E+09	5.1E+04	Tetrachlorobenzene, 1,2,4,5-	95-94-3					3.5E+02			3.5E+02
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		1		6.8E+02	1.4E+09	5.7E+03	Tetrachloroethane, 1,1,1,2-	630-20-6	1.3E+02		9.4E+00	8.8E+00	3.5E+04			3.5E+04
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1		1.9E+03	1.4E+09	1.5E+04	Tetrachloroethane, 1,1,2,2-	79-34-5	1.6E+01		3.2E+00	2.7E+00	2.3E+04			2.3E+04
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		1		1.7E+02	1.4E+09	2.4E+03	Tetrachloroethylene	127-18-4	1.6E+03		1.1E+02	1.0E+02	7.0E+03		4.1E+02	3.9E+02
				3.0E-02	I					1	0.1		1.4E+09		Tetrachlorophenol, 2,3,4,6-	58-90-2					3.5E+04	8.3E+04		2.5E+04
2.0E+01	H							V		1			1.4E+09	1.1E+05	Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	1.6E-01			1.6E-01				
				5.0E-04	I					1	0.1		1.4E+09		Tetraethyl Dithiopyrophosphate	3689-24-5					5.8E+02	1.4E+03		4.1E+02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
						8.0E-01	I	V		1		2.1E+03	1.4E+09	1.2E+03	Tetrafluoroethane, 1,1,1,2-	811-97-2							4.3E+05	4.3E+05
				2.0E-03	P					1	0.0007		1.4E+09		Tetryl (Trinitrophenylmethylnitramine)	479-45-8					2.3E+03	8.5E+05		2.3E+03
				7.0E-06	X					1			1.4E+09		Thallium (I) Nitrate	10102-45-1					8.2E+00			8.2E+00
				1.0E-05	X					1			1.4E+09		Thallium (Soluble Salts)	7440-28-0					1.2E+01			1.2E+01
				6.0E-06	X			V		1			1.4E+09		Thallium Acetate	563-68-8					7.0E+00			7.0E+00
				2.0E-05	X			V		1			1.4E+09		Thallium Carbonate	6533-73-9					2.3E+01			2.3E+01
				6.0E-06	X					1			1.4E+09		Thallium Chloride	7791-12-0					7.0E+00			7.0E+00
				2.0E-05	X					1			1.4E+09		Thallium Sulfate	7446-18-6					2.3E+01			2.3E+01
				1.3E-02	I					1	0.1		1.4E+09		Thifensulfuron-methyl	79277-27-3					1.5E+04	3.6E+04		1.1E+04
				1.0E-02	I					1	0.1		1.4E+09		Thiobencarb	28249-77-6					1.2E+04	2.8E+04		8.2E+03
				7.0E-02	X					1	0.0075		1.4E+09		Thiodiglycol	111-48-8					8.2E+04	2.6E+06		7.9E+04
				3.0E-04	H					1	0.1		1.4E+09		Thiofanox	39196-18-4					3.5E+02	8.3E+02		2.5E+02
				8.0E-02	I					1	0.1		1.4E+09		Thiophanate, Methyl	23564-05-8					9.3E+04	2.2E+05		6.6E+04
				5.0E-03	I					1	0.1		1.4E+09		Thiram	137-26-8					5.8E+03	1.4E+04		4.1E+03
				6.0E-01	H					1			1.4E+09		Tin	7440-31-5					7.0E+05			7.0E+05
						1.0E-04	A	V		1			1.4E+09		Titanium Tetrachloride	7550-45-0							6.0E+05	6.0E+05
				8.0E-02	I	5.0E+00	I	V		1		8.2E+02	1.4E+09	4.3E+03	Toluene	108-88-3					9.3E+04		9.4E+04	4.7E+04
1.8E-01	X			2.0E-04	X					1	0.1		1.4E+09		Toluene-2,5-diamine	95-70-5	1.8E+01	4.3E+01		1.3E+01	2.3E+02	5.5E+02		1.6E+02
3.0E-02	P			4.0E-03	X					1	0.1		1.4E+09		Toluidine, p-	106-49-0	1.1E+02	2.6E+02		7.7E+01	4.7E+03	1.1E+04		3.3E+03
				3.0E+00	P			V		1		3.4E-01	1.4E+09	1.1E+03	Total Petroleum Hydrocarbons (Aliphatic High)	NA					3.5E+06			3.5E+06
						6.0E-01	P	V		1		1.4E+02	1.4E+09	8.3E+02	Total Petroleum Hydrocarbons (Aliphatic Low)	NA							2.2E+03	2.2E+03
				1.0E-02	X	1.0E-01	P	V		1		6.9E+00	1.4E+09	1.0E+03	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA					1.2E+04		4.6E+02	4.4E+02
				4.0E-02	P					1	0.1		1.4E+09		Total Petroleum Hydrocarbons (Aromatic High)	NA					4.7E+04	1.1E+05		3.3E+04
				4.0E-03	P	3.0E-02	P	V		1		1.8E+03	1.4E+09	3.5E+03	Total Petroleum Hydrocarbons (Aromatic Low)	NA					4.7E+03		4.6E+02	4.2E+02
				4.0E-03	P	3.0E-03	P	V		1			1.4E+09	5.2E+04	Total Petroleum Hydrocarbons (Aromatic Medium)	NA					4.7E+03		6.9E+02	6.0E+02
1.1E+00	I	3.2E-04	I							1	0.1		1.4E+09		Toxaphene	8001-35-2	3.0E+00	7.0E+00	5.2E+04	2.1E+00				
				7.5E-03	I					1	0.1		1.4E+09		Tralomethrin	66841-25-6					8.8E+03	2.1E+04		6.2E+03
				3.0E-04	A			V		1			1.4E+09	3.4E+03	Tri-n-butyltin	688-73-3					3.5E+02			3.5E+02
				8.0E+01	X					1	0.1		1.4E+09		Triacetin	102-76-1					9.3E+07	2.2E+08		6.6E+07
				3.0E-02	I					1	0.1		1.4E+09		Triadimefon	43121-43-3					3.5E+04	8.3E+04		2.5E+04
				1.3E-02	I			V		1			1.4E+09	3.6E+05	Triallate	2303-17-5					1.5E+04			1.5E+04
				1.0E-02	I					1	0.1		1.4E+09		Triasulfuron	82097-50-5					1.2E+04	2.8E+04		8.2E+03
				8.0E-03	I					1	0.1		1.4E+09		Tribenuron-methyl	101200-48-0					9.3E+03	2.2E+04		6.6E+03
				5.0E-03	I			V		1			1.4E+09	4.8E+04	Tribromobenzene, 1,2,4-	615-54-3					5.8E+03			5.8E+03
9.0E-03	P			1.0E-02	P					1	0.1		1.4E+09		Tributyl Phosphate	126-73-8	3.6E+02	8.6E+02		2.6E+02	1.2E+04	2.8E+04		8.2E+03
				3.0E-04	P					1	0.1		1.4E+09		Tributyltin Compounds	NA					3.5E+02	8.3E+02		2.5E+02
				3.0E-04	I					1	0.1		1.4E+09		Tributyltin Oxide	56-35-9					3.5E+02	8.3E+02		2.5E+02
				3.0E+01	I	3.0E+01	H	V		1		9.1E+02	1.4E+09	1.3E+03	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					3.5E+07		1.7E+05	1.7E+05
7.0E-02	I			2.0E-02	I					1	0.1		1.4E+09		Trichloroacetic Acid	76-03-9	4.7E+01	1.1E+02		3.3E+01	2.3E+04	5.5E+04		1.6E+04
2.9E-02	H									1	0.1		1.4E+09		Trichloroaniline HCl, 2,4,6-	33663-50-2	1.1E+02	2.7E+02		7.9E+01				
7.0E-03	X			3.0E-05	X					1	0.1		1.4E+09		Trichloroaniline, 2,4,6-	634-93-5	4.7E+02	1.1E+03		3.3E+02	3.5E+01	8.3E+01		2.5E+01
				8.0E-04	X			V		1			1.4E+09	3.2E+04	Trichlorobenzene, 1,2,3-	87-61-6					9.3E+02			9.3E+02
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		1		4.0E+02	1.4E+09	3.0E+04	Trichlorobenzene, 1,2,4-	120-82-1	1.1E+02			1.1E+02	1.2E+04		2.6E+02	2.6E+02
				2.0E+00	I	5.0E+00	I	V		1		6.4E+02	1.4E+09	1.7E+03	Trichloroethane, 1,1,1-	71-55-6					2.3E+06		3.6E+04	3.6E+04
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1		2.2E+03	1.4E+09	7.2E+03	Trichloroethane, 1,1,2	79-00-5	5.7E+01		5.5E+00	5.0E+00	4.7E+03		6.3E+00	6.3E+00
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	1		6.9E+02	1.4E+09	2.2E+03	Trichloroethylene	79-01-6	7.1E+01		6.6E+00	6.0E+00	5.8E+02		1.9E+01	1.9E+01
				3.0E-01	I			V		1		1.2E+03	1.4E+09	1.0E+03	Trichlorofluoromethane	75-69-4					3.5E+05			3.5E+05
				1.0E-01	I					1	0.1		1.4E+09		Trichlorophenol, 2,4,5-	95-95-4					1.2E+05	2.8E+05		8.2E+04
1.1E-02	I	3.1E-06	I	1.0E-03	P					1	0.1		1.4E+09		Trichlorophenol, 2,4,6-	88-06-2	3.0E+02	7.0E+02	5.4E+06	2.1E+02	1.2E+03	2.8E+03		8.2E+02
				1.0E-02	I					1	0.1		1.4E+09		Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					1.2E+04	2.8E+04		8.2E+03
				8.0E-03	I					1	0.1		1.4E+09		Trichlorophenoxypropionic acid, -2,4,5	93-72-1					9.3E+03	2.2E+04		6.6E+03
				5.0E-03	I			V		1		1.3E+03	1.4E+09	1.5E+04	Trichloropropane, 1,1,2-	598-77-6					5.8E+03			5.8E+03
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1		1.4E+03	1.4E+09	1.6E+04	Trichloropropane, 1,2,3-	96-18-4	1.1E-01			1.1E-01	4.7E+03		2.1E+01	2.1E+01
				3.0E-03	X	3.0E-04	P	V		1		3.1E+02	1.4E+09	2.3E+03	Trichloropropene, 1,2,3-	96-19-5					3.5E+03		3.1E+00	3.1E+00
				2.0E-02	A					1	0.1		1.4E+09		Tricresyl Phosphate (TCP)	1330-78-5					2.3E+04	5.5E+04		1.6E+04
				3.0E-03	I					1	0.1		1.4E+09		Tridiphane	58138-08-2					3.5E+03	8.3E+03		2.5E+03
						7.0E-03	I	V		1		2.8E+04	1.4E+09	1.6E+04	Triethylamine	121-44-8							4.8E+02	4.8E+02
				2.0E+00	P					1	0.1		1.4E+09		Triethylene Glycol	112-27-6					2.3E+06	5.5E+06		1.6E+06
						2.0E+01	P	V		1		4.8E+03	1.4E+09	7.1E+02	Trifluoroethane, 1,1,1-	420-46-2							6.2E+04	6.2E+04
7.7E-03	I			7.5E-03	I			V		1			1.4E+09	5.1E+05	Trifluralin	1582-09-8	4.2E+02			4.2E+02	8.8E+03			8.8E+03
2.0E-02	P			1.0E-02	P					1	0.1		1.4E+09		Trimethyl Phosphate	512-56-1	1.6E+02	3.9E+02		1.1E+02	1.2E+04	2.8E+04		8.2E+03
						5.0E-03	P	V		1		2.9E+02	1.4E+09	9.4E+03	Trimethylbenzene, 1,2,3-	526-73-8							2.1E+02	2.1E+02
						7.0E-03	P	V		1		2.2E+02	1.4E+09	7.9E+03	Trimethylbenzene, 1,2,4-	95-63-6							2.4E+02	2.4E+02
				1.0E-02	X			V		1		1.8E+02	1.4E+09	6.6E+03	Trimethylbenzene, 1,3,5-	108-67-8					1.2E+04			1.2E+04
				1.0E-02	X			V		1		3.0E+01	1.4E+09	1.0E+03	Trimethylpentene, 2,4,4-	25167-70-8					1.2E+04			1.2E+04

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Hazard Index (HI) = 1			
SFO (mg/kg-day)$^{-1}$	key	IUR ($\mu g/m^3$)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
				3.0E-02	I					1	0.019		1.4E+09		Trinitrobenzene, 1,3,5-	99-35-4					3.5E+04	4.4E+05		3.2E+04
3.0E-02	I			5.0E-04	I					1	0.032		1.4E+09		Trinitrotoluene, 2,4,6-	118-96-7	1.1E+02	8.0E+02		9.6E+01	5.8E+02	4.3E+03		5.1E+02
				2.0E-02	P					1	0.1		1.4E+09		Triphenylphosphine Oxide	791-28-6					2.3E+04	5.5E+04		1.6E+04
				2.0E-02	A					1	0.1		1.4E+09		Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					2.3E+04	5.5E+04		1.6E+04
				1.0E-02	X					1	0.1		1.4E+09		Tris(1-chloro-2-propyl)phosphate	13674-84-5					1.2E+04	2.8E+04		8.2E+03
2.3E+00	C	6.6E-04	C					V		1		4.7E+02	1.4E+09	9.0E+05	Tris(2,3-dibromopropyl)phosphate	126-72-7	1.4E+00		1.7E+01	1.3E+00				
2.0E-02	P			7.0E-03	P					1	0.1		1.4E+09		Tris(2-chloroethyl)phosphate	115-96-8	1.6E+02	3.9E+02		1.1E+02	8.2E+03	1.9E+04		5.7E+03
3.2E-03	P			1.0E-01	P					1	0.1		1.4E+09		Tris(2-ethylhexyl)phosphate	78-42-2	1.0E+03	2.4E+03		7.2E+02	1.2E+05	2.8E+05		8.2E+04
				8.0E-04	P					1			1.4E+09		Tungsten	7440-33-7					9.3E+02			9.3E+02
				3.0E-03	I	4.0E-05	A			1			1.4E+09		Uranium (Soluble Salts)	NA					3.5E+03		2.4E+05	3.5E+03
1.0E+00	C	2.9E-04	C						M	1	0.1		1.4E+09		Urethane	51-79-6	3.3E+00	7.7E+00	5.7E+04	2.3E+00				
		8.3E-03	P	9.0E-03	I	7.0E-06	P			0.026			1.4E+09		Vanadium Pentoxide	1314-62-1			2.0E+03	2.0E+03	1.1E+04		4.2E+04	8.4E+03
				5.0E-03	S	1.0E-04	A			0.026			1.4E+09		Vanadium and Compounds	7440-62-2					5.9E+03		6.0E+05	5.8E+03
				1.0E-03	I			V		1			1.4E+09	1.2E+05	Vernolate	1929-77-7					1.2E+03			1.2E+03
				2.5E-02	I					1	0.1		1.4E+09		Vinclozolin	50471-44-8					2.9E+04	6.9E+04		2.1E+04
				1.0E+00	H	2.0E-01	I	V		1		2.8E+03	1.4E+09	4.4E+03	Vinyl Acetate	108-05-4					1.2E+06		3.9E+03	3.8E+03
		3.2E-05	H			3.0E-03	I	V		1		2.5E+03	1.4E+09	1.4E+03	Vinyl Bromide	593-60-2			5.2E-01	5.2E-01			1.8E+01	1.8E+01
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1		3.9E+03	1.4E+09	9.6E+02	Vinyl Chloride	75-01-4	4.5E+00		2.7E+00	1.7E+00	3.5E+03		4.2E+02	3.7E+02
				3.0E-04	I					1	0.1		1.4E+09		Warfarin	81-81-2					3.5E+02	8.3E+02		2.5E+02
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	1.4E+09	5.6E+03	Xylene, P-	106-42-3					2.3E+05		2.4E+03	2.4E+03
				2.0E-01	S	1.0E-01	S	V		1		3.9E+02	1.4E+09	5.5E+03	Xylene, m-	108-38-3					2.3E+05		2.4E+03	2.4E+03
				2.0E-01	S	1.0E-01	S	V		1		4.3E+02	1.4E+09	6.5E+03	Xylene, o-	95-47-6					2.3E+05		2.8E+03	2.8E+03
				2.0E-01	I	1.0E-01	I	V		1		2.6E+02	1.4E+09	5.7E+03	Xylenes	1330-20-7					2.3E+05		2.5E+03	2.5E+03
				3.0E-04	I					1			1.4E+09		Zinc Phosphide	1314-84-7					3.5E+02			3.5E+02
				3.0E-01	I					1			1.4E+09		Zinc and Compounds	7440-66-6					3.5E+05			3.5E+05
				5.0E-02	I					1	0.1		1.4E+09		Zineb	12122-67-7					5.8E+04	1.4E+05		4.1E+04
				8.0E-05	X					1			1.4E+09		Zirconium	7440-67-7					9.3E+01			9.3E+01

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Toxicity and Chemical-specific							Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR $(ug/m^3)^{-1}$	key	RfC_i (mg/m^3)	key	vol	muta-gen		Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 $(\mu g/m^3)$
							Acephate	30560-19-1		
2.2E-06	I	9.0E-03	I	V			Acetaldehyde	75-07-0	5.6E+00	3.9E+01
							Acetochlor	34256-82-1		
		3.1E+01	A	V			Acetone	67-64-1		1.4E+05
		2.0E-03	X				Acetone Cyanohydrin	75-86-5		8.8E+00
		6.0E-02	I	V			Acetonitrile	75-05-8		2.6E+02
				V			Acetophenone	98-86-2		
1.3E-03	C						Acetylaminofluorene, 2-	53-96-3	9.4E-03	
		2.0E-05	I	V			Acrolein	107-02-8		8.8E-02
1.0E-04	I	6.0E-03	I		M		Acrylamide	79-06-1	1.2E-01	2.6E+01
		1.0E-03	I	V			Acrylic Acid	79-10-7		4.4E+00
6.8E-05	I	2.0E-03	I	V			Acrylonitrile	107-13-1	1.8E-01	8.8E+00
		6.0E-03	P				Adiponitrile	111-69-3		2.6E+01
							Alachlor	15972-60-8		
							Aldicarb	116-06-3		
							Aldicarb Sulfone	1646-88-4		
							Aldicarb sulfoxide	1646-87-3		
4.9E-03	I			V			Aldrin	309-00-2	2.5E-03	
		1.0E-04	X	V			Allyl Alcohol	107-18-6		4.4E-01
6.0E-06	C	1.0E-03	I	V			Allyl Chloride	107-05-1	2.0E+00	4.4E+00
		5.0E-03	P				Aluminum	7429-90-5		2.2E+01
							Aluminum Phosphide	20859-73-8		
							Ametryn	834-12-8		
6.0E-03	C						Aminobiphenyl, 4-	92-67-1	2.0E-03	
							Aminophenol, m-	591-27-5		
							Aminophenol, p-	123-30-8		
							Amitraz	33089-61-1		
		1.0E-01	I	V			Ammonia	7664-41-7		4.4E+02
							Ammonium Sulfamate	7773-06-0		
		3.0E-03	X	V			Amyl Alcohol, tert-	75-85-4		1.3E+01
1.6E-06	C	1.0E-03	I				Aniline	62-53-3	7.7E+00	4.4E+00
							Anthraquinone, 9,10-	84-65-1		
							Antimony (metallic)	7440-36-0		
							Antimony Pentoxide	1314-60-9		
							Antimony Tetroxide	1332-81-6		
		2.0E-04	I				Antimony Trioxide	1309-64-4		8.8E-01
4.3E-03	I	1.5E-05	C				Arsenic, Inorganic	7440-38-2	2.9E-03	6.6E-02
		5.0E-05	I				Arsine	7784-42-1		2.2E-01
							Asulam	3337-71-1		
							Atrazine	1912-24-9		
2.5E-04	C						Auramine	492-80-8	4.9E-02	
							Avermectin B1	65195-55-3		
		1.0E-02	A				Azinphos-methyl	86-50-0		4.4E+01
3.1E-05	I			V			Azobenzene	103-33-3	4.0E-01	
		7.0E-06	P				Azodicarbonamide	123-77-3		3.1E-02
		5.0E-04	H				Barium	7440-39-3		2.2E+00
1.5E-01	C	2.0E-04	C		M		Barium Chromate	10294-40-3	8.2E-05	8.8E-01
				V			Benfluralin	1861-40-1		
							Benomyl	17804-35-2		
							Bensulfuron-methyl	83055-99-6		
							Bentazon	25057-89-0		
				V			Benzaldehyde	100-52-7		
7.8E-06	I	3.0E-02	I	V			Benzene	71-43-2	1.6E+00	1.3E+02
							Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1		
				V			Benzenethiol	108-98-5		
6.7E-02	I				M		Benzidine	92-87-5	1.8E-04	
							Benzoic Acid	65-85-0		
				V			Benzotrichloride	98-07-7		
							Benzyl Alcohol	100-51-6		
4.9E-05	C	1.0E-03	P	V			Benzyl Chloride	100-44-7	2.5E-01	4.4E+00
2.4E-03	I	2.0E-05	I				Beryllium and compounds	7440-41-7	5.1E-03	8.8E-02
							Bifenox	42576-02-3		
							Biphenthrin	82657-04-3		
		4.0E-04	X	V			Biphenyl, 1,1'-	92-52-4		1.8E+00
				V			Bis(2-chloro-1-methylethyl) ether	108-60-1		
							Bis(2-chloroethoxy)methane	111-91-1		
3.3E-04	I			V			Bis(2-chloroethyl)ether	111-44-4	3.7E-02	
6.2E-02	I			V			Bis(chloromethyl)ether	542-88-1	2.0E-04	

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Toxicity and Chemical-specific							Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen		Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
							Bisphenol A	80-05-7		
		2.0E-02	H				Boron And Borates Only	7440-42-8		8.8E+01
		2.0E-02	P	V			Boron Trichloride	10294-34-5		8.8E+01
		1.3E-02	C	V			Boron Trifluoride	7637-07-2		5.7E+01
							Bromate	15541-45-4		
6.0E-04	X			V			Bromo-2-chloroethane, 1-	107-04-0	2.0E-02	
		6.0E-02	I	V			Bromobenzene	108-86-1		2.6E+02
		4.0E-02	X	V			Bromochloromethane	74-97-5		1.8E+02
3.7E-05	C			V			Bromodichloromethane	75-27-4	3.3E-01	
1.1E-06	I			V			Bromoform	75-25-2	1.1E+01	
		5.0E-03	I	V			Bromomethane	74-83-9		2.2E+01
				V			Bromophos	2104-96-3		
							Bromoxynil	1689-84-5		
				V			Bromoxynil Octanoate	1689-99-2		
3.0E-05	I	2.0E-03	I	V			Butadiene, 1,3-	106-99-0	4.1E-01	8.8E+00
				V			Butanol, N-	71-36-3		
							Butyl Benzyl Phthalate	85-68-7		
		3.0E+01	P	V			Butyl alcohol, sec-	78-92-2		1.3E+05
				V			Butylate	2008-41-5		
5.7E-08	C						Butylated hydroxyanisole	25013-16-5	2.2E+02	
							Butylated hydroxytoluene	128-37-0		
				V			Butylbenzene, n-	104-51-8		
				V			Butylbenzene, sec-	135-98-8		
				V			Butylbenzene, tert-	98-06-6		
							Cacodylic Acid	75-60-5		
1.8E-03	I	1.0E-05	A				Cadmium (Diet)	7440-43-9		
1.8E-03	I	1.0E-05	A				Cadmium (Water)	7440-43-9	6.8E-03	4.4E-02
1.5E-01	C	2.0E-04	C		M		Calcium Chromate	13765-19-0	8.2E-05	8.8E-01
		2.2E-03	C				Caprolactam	105-60-2		9.6E+00
4.3E-05	C						Captafol	2425-06-1	2.9E-01	
6.6E-07	C						Captan	133-06-2	1.9E+01	
							Carbaryl	63-25-2		
							Carbofuran	1563-66-2		
		7.0E-01	I	V			Carbon Disulfide	75-15-0		3.1E+03
6.0E-06	I	1.0E-01	I	V			Carbon Tetrachloride	56-23-5	2.0E+00	4.4E+02
		1.0E-01	P	V			Carbonyl Sulfide	463-58-1		4.4E+02
							Carbosulfan	55285-14-8		
							Carboxin	5234-68-4		
		9.0E-04	I				Ceric oxide	1306-38-3		3.9E+00
				V			Chloral Hydrate	302-17-0		
							Chloramben	133-90-4		
							Chloranil	118-75-2		
1.0E-04	I	7.0E-04	I	V			Chlordane	12789-03-6	1.2E-01	3.1E+00
4.6E-03	C						Chlordecone (Kepone)	143-50-0	2.7E-03	
							Chlorfenvinphos	470-90-6		
							Chlorimuron, Ethyl-	90982-32-4		
		1.5E-04	A	V			Chlorine	7782-50-5		6.4E-01
		2.0E-04	I	V			Chlorine Dioxide	10049-04-4		8.8E-01
							Chlorite (Sodium Salt)	7758-19-2		
		5.0E+01	I	V			Chloro-1,1-difluoroethane, 1-	75-68-3		2.2E+05
3.0E-04	I	2.0E-02	I	V			Chloro-1,3-butadiene, 2-	126-99-8	4.1E-02	8.8E+01
							Chloro-2-methylaniline HCl, 4-	3165-93-3		
7.7E-05	C						Chloro-2-methylaniline, 4-	95-69-2	1.6E-01	
				V			Chloroacetaldehyde, 2-	107-20-0		
							Chloroacetic Acid	79-11-8		
		3.0E-05	I				Chloroacetophenone, 2-	532-27-4		1.3E-01
							Chloroaniline, p-	106-47-8		
		5.0E-02	P	V			Chlorobenzene	108-90-7		2.2E+02
3.1E-05	C						Chlorobenzilate	510-15-6	4.0E-01	
							Chlorobenzoic Acid, p-	74-11-3		
		3.0E-01	P	V			Chlorobenzotrifluoride, 4-	98-56-6		1.3E+03
				V			Chlorobutane, 1-	109-69-3		
		5.0E+01	I	V			Chlorodifluoromethane	75-45-6		2.2E+05
				V			Chloroethanol, 2-	107-07-3		
2.3E-05	I	9.8E-02	A	V			Chloroform	67-66-3	5.3E-01	4.3E+02
		9.0E-02	I	V			Chloromethane	74-87-3		3.9E+02
6.9E-04	C			V			Chloromethyl Methyl Ether	107-30-2	1.8E-02	
		1.0E-05	X				Chloronitrobenzene, o-	88-73-3		4.4E-02

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR $(ug/m^3)^{-1}$	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 $(\mu g/m^3)$
		6.0E-04	P			Chloronitrobenzene, p-	100-00-5		2.6E+00
				V		Chlorophenol, 2-	95-57-8		
		4.0E-04	C	V		Chloropicrin	76-06-2		1.8E+00
8.9E-07	C					Chlorothalonil	1897-45-6	1.4E+01	
				V		Chlorotoluene, o-	95-49-8		
				V		Chlorotoluene, p-	106-43-4		
6.9E-02	C					Chlorozotocin	54749-90-5	1.8E-04	
						Chlorpropham	101-21-3		
						Chlorpyrifos	2921-88-2		
						Chlorpyrifos Methyl	5598-13-0		
						Chlorsulfuron	64902-72-3		
						Chlorthal-dimethyl	1861-32-1		
						Chlorthiophos	60238-56-4		
						Chromium(III), Insoluble Salts	16065-83-1		
8.4E-02	S	1.0E-04	I		M	Chromium(VI)	18540-29-9	1.5E-04	4.4E-01
						Chromium, Total	7440-47-3		
						Clofentezine	74115-24-5		
9.0E-03	P	6.0E-06	P			Cobalt	7440-48-4	1.4E-03	2.6E-02
6.2E-04	I			V	M	Coke Oven Emissions	8007-45-2	2.0E-02	
						Copper	7440-50-8		
		6.0E-01	C			Cresol, m-	108-39-4		2.6E+03
		6.0E-01	C			Cresol, o-	95-48-7		2.6E+03
		6.0E-01	C			Cresol, p-	106-44-5		2.6E+03
						Cresol, p-chloro-m-	59-50-7		
		6.0E-01	C			Cresols	1319-77-3		2.6E+03
				V		Crotonaldehyde, trans-	123-73-9		
		4.0E-01	I	V		Cumene	98-82-8		1.8E+03
6.3E-05	C					Cupferron	135-20-6	1.9E-01	
						Cyanazine	21725-46-2		
						Cyanides			
						~Calcium Cyanide	592-01-8		
						~Copper Cyanide	544-92-3		
		8.0E-04	S	V		~Cyanide (CN-)	57-12-5		3.5E+00
				V		~Cyanogen	460-19-5		
				V		~Cyanogen Bromide	506-68-3		
				V		~Cyanogen Chloride	506-77-4		
		8.0E-04	I	V		~Hydrogen Cyanide	74-90-8		3.5E+00
						~Potassium Cyanide	151-50-8		
						~Potassium Silver Cyanide	506-61-6		
						~Silver Cyanide	506-64-9		
						~Sodium Cyanide	143-33-9		
						~Thiocyanates	NA		
				V		~Thiocyanic Acid	463-56-9		
						~Zinc Cyanide	557-21-1		
		6.0E+00	I	V		Cyclohexane	110-82-7		2.6E+04
						Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3		
		7.0E-01	P	V		Cyclohexanone	108-94-1		3.1E+03
		1.0E+00	X	V		Cyclohexene	110-83-8		4.4E+03
				V		Cyclohexylamine	108-91-8		
						Cyfluthrin	68359-37-5		
						Cyhalothrin	68085-85-8		
						Cypermethrin	52315-07-8		
						Cyromazine	66215-27-8		
6.9E-05	C					DDD	72-54-8	1.8E-01	
9.7E-05	C			V		DDE, p,p'-	72-55-9	1.3E-01	
9.7E-05	I					DDT	50-29-3	1.3E-01	
						Dalapon	75-99-0		
5.1E-06	C					Daminozide	1596-84-5	2.4E+00	
						Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5		
						Demeton	8065-48-3		
						Di(2-ethylhexyl)adipate	103-23-1		
						Diallate	2303-16-4		
						Diazinon	333-41-5		
				V		Dibenzothiophene	132-65-0		
6.0E-03	P	2.0E-04	I	V	M	Dibromo-3-chloropropane, 1,2-	96-12-8	2.0E-03	8.8E-01
				V		Dibromobenzene, 1,3-	108-36-1		
				V		Dibromobenzene, 1,4-	106-37-6		
				V		Dibromochloromethane	124-48-1		

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Toxicity and Chemical-specific							Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
6.0E-04	I	9.0E-03	I	V		Dibromoethane, 1,2-	106-93-4	2.0E-02	3.9E+01
		4.0E-03	X	V		Dibromomethane (Methylene Bromide)	74-95-3		1.8E+01
						Dibutyltin Compounds	NA		
						Dicamba	1918-00-9		
4.2E-03	P			V		Dichloro-2-butene, 1,4-	764-41-0	2.9E-03	
4.2E-03	P			V		Dichloro-2-butene, cis-1,4-	1476-11-5	2.9E-03	
4.2E-03	P			V		Dichloro-2-butene, trans-1,4-	110-57-6	2.9E-03	
						Dichloroacetic Acid	79-43-6		
		2.0E-01	H	V		Dichlorobenzene, 1,2-	95-50-1		8.8E+02
1.1E-05	C	8.0E-01	I	V		Dichlorobenzene, 1,4-	106-46-7	1.1E+00	3.5E+03
3.4E-04	C					Dichlorobenzidine, 3,3'-	91-94-1	3.6E-02	
						Dichlorobenzophenone, 4,4'-	90-98-2		
		1.0E-01	X	V		Dichlorodifluoromethane	75-71-8		4.4E+02
1.6E-06	C			V		Dichloroethane, 1,1-	75-34-3	7.7E+00	
2.6E-05	I	7.0E-03	P	V		Dichloroethane, 1,2-	107-06-2	4.7E-01	3.1E+01
		2.0E-01	I	V		Dichloroethylene, 1,1-	75-35-4		8.8E+02
				V		Dichloroethylene, 1,2-cis-	156-59-2		
				V		Dichloroethylene, 1,2-trans-	156-60-5		
						Dichlorophenol, 2,4-	120-83-2		
						Dichlorophenoxy Acetic Acid, 2,4-	94-75-7		
						Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6		
1.0E-05	C	4.0E-03	I	V		Dichloropropane, 1,2-	78-87-5	1.2E+00	1.8E+01
				V		Dichloropropane, 1,3-	142-28-9		
						Dichloropropanol, 2,3-	616-23-9		
4.0E-06	I	2.0E-02	I	V		Dichloropropene, 1,3-	542-75-6	3.1E+00	8.8E+01
8.3E-05	C	5.0E-04	I			Dichlorvos	62-73-7	1.5E-01	2.2E+00
						Dicrotophos	141-66-2		
		3.0E-04	X	V		Dicyclopentadiene	77-73-6		1.3E+00
4.6E-03	I					Dieldrin	60-57-1	2.7E-03	
3.0E-04	C	5.0E-03	I			Diesel Engine Exhaust	NA	4.1E-02	2.2E+01
		2.0E-04	P			Diethanolamine	111-42-2		8.8E-01
		1.0E-04	P			Diethylene Glycol Monobutyl Ether	112-34-5		4.4E-01
		3.0E-04	P			Diethylene Glycol Monoethyl Ether	111-90-0		1.3E+00
				V		Diethylformamide	617-84-5		
1.0E-01	C					Diethylstilbestrol	56-53-1	1.2E-04	
						Difenzoquat	43222-48-6		
						Diflubenzuron	35367-38-5		
		4.0E+01	I	V		Difluoroethane, 1,1-	75-37-6		1.8E+05
1.3E-05	C			V		Dihydrosafrole	94-58-6	9.4E-01	
		7.0E-01	P	V		Diisopropyl Ether	108-20-3		3.1E+03
				V		Diisopropyl Methylphosphonate	1445-75-6		
						Dimethipin	55290-64-7		
						Dimethoate	60-51-5		
						Dimethoxybenzidine, 3,3'-	119-90-4		
						Dimethyl methylphosphonate	756-79-6		
1.3E-03	C					Dimethylamino azobenzene [p-]	60-11-7	9.4E-03	
						Dimethylaniline HCl, 2,4-	21436-96-4		
						Dimethylaniline, 2,4-	95-68-1		
				V		Dimethylaniline, N,N-	121-69-7		
						Dimethylbenzidine, 3,3'-	119-93-7		
		3.0E-02	I	V		Dimethylformamide	68-12-2		1.3E+02
		2.0E-06	X	V		Dimethylhydrazine, 1,1-	57-14-7		8.8E-03
1.6E-01	C			V		Dimethylhydrazine, 1,2-	540-73-8	7.7E-05	
						Dimethylphenol, 2,4-	105-67-9		
						Dimethylphenol, 2,6-	576-26-1		
						Dimethylphenol, 3,4-	95-65-8		
1.3E-05	C			V		Dimethylvinylchloride	513-37-1	9.4E-01	
						Dinitro-o-cresol, 4,6-	534-52-1		
						Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5		
						Dinitrobenzene, 1,2-	528-29-0		
						Dinitrobenzene, 1,3-	99-65-0		
						Dinitrobenzene, 1,4-	100-25-4		
						Dinitrophenol, 2,4-	51-28-5		
						Dinitrotoluene Mixture, 2,4/2,6-	NA		
8.9E-05	C					Dinitrotoluene, 2,4-	121-14-2	1.4E-01	
						Dinitrotoluene, 2,6-	606-20-2		
						Dinitrotoluene, 2-Amino-4,6-	35572-78-2		
						Dinitrotoluene, 4-Amino-2,6-	19406-51-0		

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Toxicity and Chemical-specific							Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
						Dinitrotoluene, Technical grade	25321-14-6		
						Dinoseb	88-85-7		
5.0E-06	I	3.0E-02	I	V		Dioxane, 1,4-	123-91-1	2.5E+00	1.3E+02
						Dioxins			
1.3E+00	I					~Hexachlorodibenzo-p-dioxin, Mixture	NA	9.4E-06	
3.8E+01	C	4.0E-08	C	V		~TCDD, 2,3,7,8-	1746-01-6	3.2E-07	1.8E-04
						Diphenamid	957-51-7		
						Diphenyl Sulfone	127-63-9		
						Diphenylamine	122-39-4		
2.2E-04	I					Diphenylhydrazine, 1,2-	122-66-7	5.6E-02	
						Diquat	85-00-7		
1.4E-01	C					Direct Black 38	1937-37-7	8.8E-05	
1.4E-01	C					Direct Blue 6	2602-46-2	8.8E-05	
1.4E-01	C					Direct Brown 95	16071-86-6	8.8E-05	
						Disulfoton	298-04-4		
				V		Dithiane, 1,4-	505-29-3		
						Diuron	330-54-1		
						Dodine	2439-10-3		
				V		EPTC	759-94-4		
				V		Endosulfan	115-29-7		
						Endothall	145-73-3		
						Endrin	72-20-8		
1.2E-06	I	1.0E-03	I	V		Epichlorohydrin	106-89-8	1.0E+01	4.4E+00
		2.0E-02	I	V		Epoxybutane, 1,2	106-88-7		8.8E+01
						Ethanol, 2-(2-methoxyethoxy)-	111-77-3		
						Ethephon	16672-87-0		
						Ethion	563-12-2		
		6.0E-02	P	V		Ethoxyethanol Acetate, 2-	111-15-9		2.6E+02
		2.0E-01	I	V		Ethoxyethanol, 2-	110-80-5		8.8E+02
		7.0E-02	P	V		Ethyl Acetate	141-78-6		3.1E+02
		8.0E-03	P	V		Ethyl Acrylate	140-88-5		3.5E+01
		1.0E+01	I	V		Ethyl Chloride (Chloroethane)	75-00-3		4.4E+04
				V		Ethyl Ether	60-29-7		
		3.0E-01	P	V		Ethyl Methacrylate	97-63-2		1.3E+03
						Ethyl-p-nitrophenyl Phosphonate	2104-64-5		
2.5E-06	C	1.0E+00	I	V		Ethylbenzene	100-41-4	4.9E+00	4.4E+03
						Ethylene Cyanohydrin	109-78-4		
				V		Ethylene Diamine	107-15-3		
		4.0E-01	C			Ethylene Glycol	107-21-1		1.8E+03
		1.6E+00	I			Ethylene Glycol Monobutyl Ether	111-76-2		7.0E+03
8.8E-05	C	3.0E-02	C	V		Ethylene Oxide	75-21-8	1.4E-01	1.3E+02
1.3E-05	C					Ethylene Thiourea	96-45-7	9.4E-01	
1.9E-02	C			V		Ethyleneimine	151-56-4	6.5E-04	
						Ethylphthalyl Ethyl Glycolate	84-72-0		
						Fenamiphos	22224-92-6		
						Fenpropathrin	39515-41-8		
						Fenvalerate	51630-58-1		
						Fluometuron	2164-17-2		
		1.3E-02	C			Fluoride	16984-48-8		5.7E+01
		1.3E-02	C			Fluorine (Soluble Fluoride)	7782-41-4		5.7E+01
						Fluridone	59756-60-4		
						Flurprimidol	56425-91-3		
						Flusilazole	85509-19-9		
						Flutolanil	66332-96-5		
						Fluvalinate	69409-94-5		
						Folpet	133-07-3		
						Fomesafen	72178-02-0		
						Fonofos	944-22-9		
1.3E-05	I	9.8E-03	A	V		Formaldehyde	50-00-0	9.4E-01	4.3E+01
		3.0E-04	X	V		Formic Acid	64-18-6		1.3E+00
						Fosetyl-AL	39148-24-8		
						Furans			
				V		~Dibenzofuran	132-64-9		
				V		~Furan	110-00-9		
		2.0E+00	I	V		~Tetrahydrofuran	109-99-9		8.8E+03
						Furazolidone	67-45-8		
		5.0E-02	H	V		Furfural	98-01-1		2.2E+02
4.3E-04	C					Furium	531-82-8	2.9E-02	

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
8.6E-06	C					Furmecyclox	60568-05-0	1.4E+00	
						Glufosinate, Ammonium	77182-82-2		
		8.0E-05	C			Glutaraldehyde	111-30-8		3.5E-01
		1.0E-03	H	V		Glycidyl	765-34-4		4.4E+00
						Glyphosate	1071-83-6		
				V		Guanidine	113-00-8		
						Guanidine Chloride	50-01-1		
						Haloxyfop, Methyl	69806-40-2		
1.3E-03	I			V		Heptachlor	76-44-8	9.4E-03	
2.6E-03	I			V		Heptachlor Epoxide	1024-57-3	4.7E-03	
				V		Hexabromobenzene	87-82-1		
						Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2		
4.6E-04	I			V		Hexachlorobenzene	118-74-1	2.7E-02	
2.2E-05	I			V		Hexachlorobutadiene	87-68-3	5.6E-01	
1.8E-03	I					Hexachlorocyclohexane, Alpha-	319-84-6	6.8E-03	
5.3E-04	I					Hexachlorocyclohexane, Beta-	319-85-7	2.3E-02	
3.1E-04	C					Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	4.0E-02	
5.1E-04	I					Hexachlorocyclohexane, Technical	608-73-1	2.4E-02	
		2.0E-04	I	V		Hexachlorocyclopentadiene	77-47-4		8.8E-01
1.1E-05	C	3.0E-02	I	V		Hexachloroethane	67-72-1	1.1E+00	1.3E+02
						Hexachlorophene	70-30-4		
						Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4		
		1.0E-05	I	V		Hexamethylene Diisocyanate, 1,6-	822-06-0		4.4E-02
						Hexamethylphosphoramide	680-31-9		
		7.0E-01	I	V		Hexane, N-	110-54-3		3.1E+03
						Hexanedioic Acid	124-04-9		
		3.0E-02	I	V		Hexanone, 2-	591-78-6		1.3E+02
						Hexazinone	51235-04-2		
						Hexythiazox	78587-05-0		
						Hydramethylnon	67485-29-4		
4.9E-03	I	3.0E-05	P	V		Hydrazine	302-01-2	2.5E-03	1.3E-01
4.9E-03	I					Hydrazine Sulfate	10034-93-2	2.5E-03	
		2.0E-02	I	V		Hydrogen Chloride	7647-01-0		8.8E+01
		1.4E-02	C	V		Hydrogen Fluoride	7664-39-3		6.1E+01
		2.0E-03	I	V		Hydrogen Sulfide	7783-06-4		8.8E+00
						Hydroquinone	123-31-9		
						Imazalil	35554-44-0		
						Imazaquin	81335-37-7		
						Imazethapyr	81335-77-5		
						Iodine	7553-56-2		
						Iprodione	36734-19-7		
						Iron	7439-89-6		
				V		Isobutyl Alcohol	78-83-1		
		2.0E+00	C			Isophorone	78-59-1		8.8E+03
				V		Isopropalin	33820-53-0		
		2.0E-01	P	V		Isopropanol	67-63-0		8.8E+02
						Isopropyl Methyl Phosphonic Acid	1832-54-8		
						Isoxaben	82558-50-7		
		3.0E-01	A	V		JP-7	NA		1.3E+03
						Lactofen	77501-63-4		
						Lead Compounds			
1.5E-01	C	2.0E-04	C		M	~Lead Chromate	7758-97-6	8.2E-05	8.8E-01
1.2E-05	C					~Lead Phosphate	7446-27-7	1.0E+00	
8.0E-05	C					~Lead acetate	301-04-2	1.5E-01	
						~Lead and Compounds	7439-92-1		
1.2E-05	C					~Lead subacetate	1335-32-6	1.0E+00	
				V		~Tetraethyl Lead	78-00-2		
				V		Lewisite	541-25-3		
						Linuron	330-55-2		
						Lithium	7439-93-2		
						MCPA	94-74-6		
						MCPB	94-81-5		
						MCPP	93-65-2		
						Malathion	121-75-5		
		7.0E-04	C			Maleic Anhydride	108-31-6		3.1E+00
						Maleic Hydrazide	123-33-1		
						Malononitrile	109-77-3		
						Mancozeb	8018-01-7		

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
						Maneb	12427-38-2		
		5.0E-05	I			Manganese (Diet)	7439-96-5		
		5.0E-05	I			Manganese (Non-diet)	7439-96-5		2.2E-01
						Mephosfolan	950-10-7		
						Mepiquat Chloride	24307-26-4		
						Mercury Compounds			
		3.0E-04	S			~Mercuric Chloride (and other Mercury salts)	7487-94-7		1.3E+00
		3.0E-04	I	V		~Mercury (elemental)	7439-97-6		1.3E+00
						~Methyl Mercury	22967-92-6		
						~Phenylmercuric Acetate	62-38-4		
				V		Merphos	150-50-5		
						Merphos Oxide	78-48-8		
						Metalaxyl	57837-19-1		
		3.0E-02	P	V		Methacrylonitrile	126-98-7		1.3E+02
						Methamidophos	10265-92-6		
		2.0E+01	I	V		Methanol	67-56-1		8.8E+04
						Methidathion	950-37-8		
						Methomyl	16752-77-5		
1.4E-05	C					Methoxy-5-nitroaniline, 2-	99-59-2	8.8E-01	
						Methoxychlor	72-43-5		
		1.0E-03	P	V		Methoxyethanol Acetate, 2-	110-49-6		4.4E+00
		2.0E-02	I	V		Methoxyethanol, 2-	109-86-4		8.8E+01
				V		Methyl Acetate	79-20-9		
		2.0E-02	P	V		Methyl Acrylate	96-33-3		8.8E+01
		5.0E+00	I	V		Methyl Ethyl Ketone (2-Butanone)	78-93-3		2.2E+04
1.0E-03	X	2.0E-05	X	V		Methyl Hydrazine	60-34-4	1.2E-02	8.8E-02
		3.0E+00	I	V		Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1		1.3E+04
		1.0E-03	C	V		Methyl Isocyanate	624-83-9		4.4E+00
		7.0E-01	I	V		Methyl Methacrylate	80-62-6		3.1E+03
						Methyl Parathion	298-00-0		
						Methyl Phosphonic Acid	993-13-5		
		4.0E-02	H	V		Methyl Styrene (Mixed Isomers)	25013-15-4		1.8E+02
2.8E-05	C					Methyl methanesulfonate	66-27-3	4.4E-01	
2.6E-07	C	3.0E+00	I	V		Methyl tert-Butyl Ether (MTBE)	1634-04-4	4.7E+01	1.3E+04
						Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2		
						Methyl-5-Nitroaniline, 2-	99-55-8		
2.4E-03	C					Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	5.1E-03	
3.7E-05	C					Methylaniline Hydrochloride, 2-	636-21-5	3.3E-01	
						Methylarsonic acid	124-58-3		
						Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7		
						Methylbenzene-1,4-diamine sulfate, 2-	615-50-9		
6.3E-03	C				M	Methylcholanthrene, 3-	56-49-5	1.9E-03	
1.0E-08	I	6.0E-01	I	V	M	Methylene Chloride	75-09-2	1.2E+03	2.6E+03
4.3E-04	C				M	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	2.9E-02	
1.3E-05	C					Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	9.4E-01	
4.6E-04	C	2.0E-02	C			Methylenebisbenzenamine, 4,4'-	101-77-9	2.7E-02	8.8E+01
		6.0E-04	I			Methylenediphenyl Diisocyanate	101-68-8		2.6E+00
				V		Methylstyrene, Alpha-	98-83-9		
						Metolachlor	51218-45-2		
						Metribuzin	21087-64-9		
						Metsulfuron-methyl	74223-64-6		
				V		Mineral oils	8012-95-1		
5.1E-03	C			V		Mirex	2385-85-5	2.4E-03	
						Molinate	2212-67-1		
						Molybdenum	7439-98-7		
						Monochloramine	10599-90-3		
						Monomethylaniline	100-61-8		
						Myclobutanil	88671-89-0		
						N,N'-Diphenyl-1,4-benzenediamine	74-31-7		
				V		Naled	300-76-5		
		1.0E-01	P	V		Naphtha, High Flash Aromatic (HFAN)	64742-95-6		4.4E+02
0.0E+00	C					Naphthylamine, 2-	91-59-8		
						Napropamide	15299-99-7		
2.6E-04	C	1.4E-05	C			Nickel Acetate	373-02-4	4.7E-02	6.1E-02
2.6E-04	C	1.4E-05	C			Nickel Carbonate	3333-67-3	4.7E-02	6.1E-02
2.6E-04	C	1.4E-05	C	V		Nickel Carbonyl	13463-39-3	4.7E-02	6.1E-02
2.6E-04	C	1.4E-05	C			Nickel Hydroxide	12054-48-7	4.7E-02	6.1E-02
2.6E-04	C	2.0E-05	C			Nickel Oxide	1313-99-1	4.7E-02	8.8E-02

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Toxicity and Chemical-specific							Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
2.4E-04	I	1.4E-05	C			Nickel Refinery Dust	NA	5.1E-02	6.1E-02
2.6E-04	C	9.0E-05	A			Nickel Soluble Salts	7440-02-0	4.7E-02	3.9E-01
4.8E-04	I	1.4E-05	C			Nickel Subsulfide	12035-72-2	2.6E-02	6.1E-02
2.6E-04	C	1.4E-05	C			Nickelocene	1271-28-9	4.7E-02	6.1E-02
						Nitrate	14797-55-8		
						Nitrate + Nitrite (as N)	NA		
						Nitrite	14797-65-0		
		5.0E-05	X			Nitroaniline, 2-	88-74-4		2.2E-01
		6.0E-03	P			Nitroaniline, 4-	100-01-6		2.6E+01
4.0E-05	I	9.0E-03	I	V		Nitrobenzene	98-95-3	3.1E-01	3.9E+01
						Nitrocellulose	9004-70-0		
						Nitrofurantoin	67-20-9		
3.7E-04	C					Nitrofurazone	59-87-0	3.3E-02	
						Nitroglycerin	55-63-0		
						Nitroguanidine	556-88-7		
8.8E-06	P	5.0E-03	P	V		Nitromethane	75-52-5	1.4E+00	2.2E+01
2.7E-03	H	2.0E-02	I	V		Nitropropane, 2-	79-46-9	4.5E-03	8.8E+01
7.7E-03	C				M	Nitroso-N-ethylurea, N-	759-73-9	1.6E-03	
3.4E-02	C				M	Nitroso-N-methylurea, N-	684-93-5	3.6E-04	
1.6E-03	I			V		Nitroso-di-N-butylamine, N-	924-16-3	7.7E-03	
2.0E-03	C					Nitroso-di-N-propylamine, N-	621-64-7	6.1E-03	
8.0E-04	C					Nitrosodiethanolamine, N-	1116-54-7	1.5E-02	
4.3E-02	I				M	Nitrosodiethylamine, N-	55-18-5	2.9E-04	
1.4E-02	I	4.0E-05	X	V	M	Nitrosodimethylamine, N-	62-75-9	8.8E-04	1.8E-01
2.6E-06	C					Nitrosodiphenylamine, N-	86-30-6	4.7E+00	
6.3E-03	C			V		Nitrosomethylethylamine, N-	10595-95-6	1.9E-03	
1.9E-03	C					Nitrosomorpholine [N-]	59-89-2	6.5E-03	
2.7E-03	C					Nitrosopiperidine [N-]	100-75-4	4.5E-03	
6.1E-04	I					Nitrosopyrrolidine, N-	930-55-2	2.0E-02	
						Nitrotoluene, m-	99-08-1		
				V		Nitrotoluene, o-	88-72-2		
						Nitrotoluene, p-	99-99-0		
		2.0E-02	P	V		Nonane, n-	111-84-2		8.8E+01
						Norflurazon	27314-13-2		
						Octabromodiphenyl Ether	32536-52-0		
						Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0		
						Octamethylpyrophosphoramide	152-16-9		
						Oryzalin	19044-88-3		
						Oxadiazon	19666-30-9		
						Oxamyl	23135-22-0		
						Oxyfluorfen	42874-03-3		
						Paclobutrazol	76738-62-0		
						Paraquat Dichloride	1910-42-5		
						Parathion	56-38-2		
				V		Pebulate	1114-71-2		
						Pendimethalin	40487-42-1		
				V		Pentabromodiphenyl Ether	32534-81-9		
						Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9		
				V		Pentachlorobenzene	608-93-5		
				V		Pentachloroethane	76-01-7		
				V		Pentachloronitrobenzene	82-68-8		
5.1E-06	C					Pentachlorophenol	87-86-5	2.4E+00	
						Pentaerythritol tetranitrate (PETN)	78-11-5		
		1.0E+00	P	V		Pentane, n-	109-66-0		4.4E+03
						Perchlorates			
						~Ammonium Perchlorate	7790-98-9		
						~Lithium Perchlorate	7791-03-9		
						~Perchlorate and Perchlorate Salts	14797-73-0		
						~Potassium Perchlorate	7778-74-7		
						~Sodium Perchlorate	7601-89-0		
				V		Perfluorobutane Sulfonate	375-73-5		
						Permethrin	52645-53-1		
6.3E-07	C					Phenacetin	62-44-2	1.9E+01	
						Phenmedipham	13684-63-4		
		2.0E-01	C			Phenol	108-95-2		8.8E+02
						Phenothiazine	92-84-2		
						Phenylenediamine, m-	108-45-2		
						Phenylenediamine, o-	95-54-5		

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR $(ug/m^3)^{-1}$	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 $(\mu g/m^3)$
						Phenylenediamine, p-	106-50-3		
						Phenylphenol, 2-	90-43-7		
						Phorate	298-02-2		
		3.0E-04	I	V		Phosgene	75-44-5		1.3E+00
						Phosmet	732-11-6		
						Phosphates, Inorganic			
						~Aluminum metaphosphate	13776-88-0		
						~Ammonium polyphosphate	68333-79-9		
						~Calcium pyrophosphate	7790-76-3		
						~Diammonium phosphate	7783-28-0		
						~Dicalcium phosphate	7757-93-9		
						~Dimagnesium phosphate	7782-75-4		
						~Dipotassium phosphate	7758-11-4		
						~Disodium phosphate	7558-79-4		
						~Monoaluminum phosphate	13530-50-2		
						~Monoammonium phosphate	7722-76-1		
						~Monocalcium phosphate	7758-23-8		
						~Monomagnesium phosphate	7757-86-0		
						~Monopotassium phosphate	7778-77-0		
						~Monosodium phosphate	7558-80-7		
						~Polyphosphoric acid	8017-16-1		
						~Potassium tripolyphosphate	13845-36-8		
						~Sodium acid pyrophosphate	7758-16-9		
						~Sodium aluminum phosphate (acidic)	7785-88-8		
						~Sodium aluminum phosphate (anhydrous)	10279-59-1		
						~Sodium aluminum phosphate (tetrahydrate)	10305-76-7		
						~Sodium hexametaphosphate	10124-56-8		
						~Sodium polyphosphate	68915-31-1		
						~Sodium trimetaphosphate	7785-84-4		
						~Sodium tripolyphosphate	7758-29-4		
						~Tetrapotassium phosphate	7320-34-5		
						~Tetrasodium pyrophosphate	7722-88-5		
						~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5		
						~Tricalcium phosphate	7758-87-4		
						~Trimagnesium phosphate	7757-87-1		
						~Tripotassium phosphate	7778-53-2		
						~Trisodium phosphate	7601-54-9		
		3.0E-04	I	V		Phosphine	7803-51-2		1.3E+00
		1.0E-02	I			Phosphoric Acid	7664-38-2		4.4E+01
				V		Phosphorus, White	7723-14-0		
						Phthalates			
2.4E-06	C					~Bis(2-ethylhexyl)phthalate	117-81-7	5.1E+00	
						~Butylphthalyl Butylglycolate	85-70-1		
						~Dibutyl Phthalate	84-74-2		
						~Diethyl Phthalate	84-66-2		
				V		~Dimethylterephthalate	120-61-6		
						~Octyl Phthalate, di-N-	117-84-0		
						~Phthalic Acid, P-	100-21-0		
		2.0E-02	C			~Phthalic Anhydride	85-44-9		8.8E+01
						Picloram	1918-02-1		
						Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3		
						Picric Acid (2,4,6-Trinitrophenol)	88-89-1		
						Pirimiphos, Methyl	29232-93-7		
8.6E-03	C					Polybrominated Biphenyls	59536-65-1	1.4E-03	
						Polychlorinated Biphenyls (PCBs)			
2.0E-05	S			V		~Aroclor 1016	12674-11-2	6.1E-01	
5.7E-04	S			V		~Aroclor 1221	11104-28-2	2.1E-02	
5.7E-04	S			V		~Aroclor 1232	11141-16-5	2.1E-02	
5.7E-04	S			V		~Aroclor 1242	53469-21-9	2.1E-02	
5.7E-04	S			V		~Aroclor 1248	12672-29-6	2.1E-02	
5.7E-04	S			V		~Aroclor 1254	11097-69-1	2.1E-02	
5.7E-04	S			V		~Aroclor 1260	11096-82-5	2.1E-02	
				V		~Aroclor 5460	11126-42-4		
1.1E-03	E	1.3E-03	E	V		~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.1E-02	5.8E+00
1.1E-03	E	1.3E-03	E	V		~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.1E-02	5.8E+00
1.1E-03	E	1.3E-03	E	V		~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.1E-02	5.8E+00
1.1E-03	E	1.3E-03	E	V		~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.1E-02	5.8E+00
1.1E+00	E	1.3E-06	E	V		~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.1E-05	5.8E-03

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
1.1E-03	E	1.3E-03	E	V		~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.1E-02	5.8E+00
1.1E-03	E	1.3E-03	E	V		~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.1E-02	5.8E+00
1.1E-03	E	1.3E-03	E	V		~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.1E-02	5.8E+00
1.1E-03	E	1.3E-03	E	V		~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.1E-02	5.8E+00
3.8E+00	E	4.0E-07	E	V		~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	3.2E-06	1.8E-03
5.7E-04	I			V		~Polychlorinated Biphenyls (high risk)	1336-36-3	2.1E-02	
1.0E-04	I			V		~Polychlorinated Biphenyls (low risk)	1336-36-3	1.2E-01	
2.0E-05	I			V		~Polychlorinated Biphenyls (lowest risk)	1336-36-3	6.1E-01	
3.8E-03	E	4.0E-04	E			~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	3.2E-03	1.8E+00
1.1E-02	E	1.3E-04	E	V		~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.1E-03	5.8E-01
		6.0E-04	I			Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9		2.6E+00
						Polynuclear Aromatic Hydrocarbons (PAHs)			
				V		~Acenaphthene	83-32-9		
				V		~Anthracene	120-12-7		
1.1E-04	C			V	M	~Benz[a]anthracene	56-55-3	1.1E-01	
1.1E-04	C					~Benzo(j)fluoranthene	205-82-3	1.1E-01	
1.1E-03	C				M	~Benzo[a]pyrene	50-32-8	1.1E-02	
1.1E-04	C				M	~Benzo[b]fluoranthene	205-99-2	1.1E-01	
1.1E-04	C				M	~Benzo[k]fluoranthene	207-08-9	1.1E-01	
				V		~Chloronaphthalene, Beta-	91-58-7		
1.1E-05	C				M	~Chrysene	218-01-9	1.1E+00	
1.2E-03	C				M	~Dibenz[a,h]anthracene	53-70-3	1.0E-02	
1.1E-03	C					~Dibenzo(a,e)pyrene	192-65-4	1.1E-02	
7.1E-02	C				M	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	1.7E-04	
						~Fluoranthene	206-44-0		
				V		~Fluorene	86-73-7		
1.1E-04	C				M	~Indeno[1,2,3-cd]pyrene	193-39-5	1.1E-01	
				V		~Methylnaphthalene, 1-	90-12-0		
				V		~Methylnaphthalene, 2-	91-57-6		
3.4E-05	C	3.0E-03	I	V		~Naphthalene	91-20-3	3.6E-01	1.3E+01
1.1E-04	C					~Nitropyrene, 4-	57835-92-4	1.1E-01	
				V		~Pyrene	129-00-0		
						Potassium Perfluorobutane Sulfonate	29420-49-3		
						Prochloraz	67747-09-5		
				V		Profluralin	26399-36-0		
						Prometon	1610-18-0		
						Prometryn	7287-19-6		
						Propachlor	1918-16-7		
						Propanediol, 1,2-	114-26-1		
						Propanil	709-98-8		
						Propargite	2312-35-8		
				V		Propargyl Alcohol	107-19-7		
						Propazine	139-40-2		
						Propham	122-42-9		
						Propiconazole	60207-90-1		
		8.0E-03	I	V		Propionaldehyde	123-38-6		3.5E+01
		1.0E+00	X	V		Propyl benzene	103-65-1		4.4E+03
		3.0E+00	C	V		Propylene	115-07-1		1.3E+04
						Propylene Glycol	57-55-6		
		2.7E-04	A			Propylene Glycol Dinitrate	6423-43-4		1.2E+00
		2.0E+00	I	V		Propylene Glycol Monomethyl Ether	107-98-2		8.8E+03
3.7E-06	I	3.0E-02	I	V		Propylene Oxide	75-56-9	3.3E+00	1.3E+02
						Propyzamide	23950-58-5		
				V		Pyridine	110-86-1		
						Quinalphos	13593-03-8		
						Quinoline	91-22-5		
						Quizalofop-ethyl	76578-14-8		
		3.0E-02	A			Refractory Ceramic Fibers	NA		1.3E+02
						Resmethrin	10453-86-8		
				V		Ronnel	299-84-3		
						Rotenone	83-79-4		
6.3E-05	C				M	Safrole	94-59-7	1.9E-01	
						Selenious Acid	7783-00-8		
		2.0E-02	C			Selenium	7782-49-2		8.8E+01
		2.0E-02	C			Selenium Sulfide	7446-34-6		8.8E+01
						Sethoxydim	74051-80-2		
		3.0E-03	C			Silica (crystalline, respirable)	7631-86-9		1.3E+01
						Silver	7440-22-4		

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR $(ug/m^3)^{-1}$	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 $(\mu g/m^3)$
						Simazine	122-34-9		
						Sodium Acifluorfen	62476-59-9		
						Sodium Azide	26628-22-8		
1.5E-01	C	2.0E-04	C		M	Sodium Dichromate	10588-01-9	8.2E-05	8.8E-01
						Sodium Diethyldithiocarbamate	148-18-5		
		1.3E-02	C			Sodium Fluoride	7681-49-4		5.7E+01
						Sodium Fluoroacetate	62-74-8		
						Sodium Metavanadate	13718-26-8		
						Sodium Tungstate	13472-45-2		
						Sodium Tungstate Dihydrate	10213-10-2		
						Stirofos (Tetrachlorovinphos)	961-11-5		
1.5E-01	C	2.0E-04	C		M	Strontium Chromate	7789-06-2	8.2E-05	8.8E-01
						Strontium, Stable	7440-24-6		
						Strychnine	57-24-9		
		1.0E+00	I	V		Styrene	100-42-5		4.4E+03
						Styrene-Acrylonitrile (SAN) Trimer	NA		
		2.0E-03	X			Sulfolane	126-33-0		8.8E+00
						Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9		
		1.0E-03	C	V		Sulfur Trioxide	7446-11-9		4.4E+00
		1.0E-03	C			Sulfuric Acid	7664-93-9		4.4E+00
7.1E-06	I					Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	1.7E+00	
						TCMTB	21564-17-0		
						Tebuthiuron	34014-18-1		
						Temephos	3383-96-8		
						Terbacil	5902-51-2		
				V		Terbufos	13071-79-9		
						Terbutryn	886-50-0		
						Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1		
				V		Tetrachlorobenzene, 1,2,4,5-	95-94-3		
7.4E-06	I			V		Tetrachloroethane, 1,1,1,2-	630-20-6	1.7E+00	
5.8E-05	C			V		Tetrachloroethane, 1,1,2,2-	79-34-5	2.1E-01	
2.6E-07	I	4.0E-02	I	V		Tetrachloroethylene	127-18-4	4.7E+01	1.8E+02
						Tetrachlorophenol, 2,3,4,6-	58-90-2		
				V		Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1		
						Tetraethyl Dithiopyrophosphate	3689-24-5		
		8.0E+01	I	V		Tetrafluoroethane, 1,1,1,2-	811-97-2		3.5E+05
						Tetryl (Trinitrophenylmethylnitramine)	479-45-8		
						Thallium (I) Nitrate	10102-45-1		
						Thallium (Soluble Salts)	7440-28-0		
				V		Thallium Acetate	563-68-8		
				V		Thallium Carbonate	6533-73-9		
						Thallium Chloride	7791-12-0		
						Thallium Sulfate	7446-18-6		
						Thifensulfuron-methyl	79277-27-3		
						Thiobencarb	28249-77-6		
						Thiodiglycol	111-48-8		
						Thiofanox	39196-18-4		
						Thiophanate, Methyl	23564-05-8		
						Thiram	137-26-8		
						Tin	7440-31-5		
		1.0E-04	A	V		Titanium Tetrachloride	7550-45-0		4.4E-01
		5.0E+00	I	V		Toluene	108-88-3		2.2E+04
						Toluene-2,5-diamine	95-70-5		
						Toluidine, p-	106-49-0		
				V		Total Petroleum Hydrocarbons (Aliphatic High)	NA		
		6.0E-01	P	V		Total Petroleum Hydrocarbons (Aliphatic Low)	NA		2.6E+03
		1.0E-01	P	V		Total Petroleum Hydrocarbons (Aliphatic Medium)	NA		4.4E+02
						Total Petroleum Hydrocarbons (Aromatic High)	NA		
		3.0E-02	P	V		Total Petroleum Hydrocarbons (Aromatic Low)	NA		1.3E+02
		3.0E-03	P	V		Total Petroleum Hydrocarbons (Aromatic Medium)	NA		1.3E+01
3.2E-04	I					Toxaphene	8001-35-2	3.8E-02	
						Tralomethrin	66841-25-6		
				V		Tri-n-butyltin	688-73-3		
						Triacetin	102-76-1		
						Triadimefon	43121-43-3		
				V		Triallate	2303-17-5		
						Triasulfuron	82097-50-5		
						Tribenuron-methyl	101200-48-0		

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Toxicity and Chemical-specific						Contaminant		Carcinogenic Target Risk (TR) = 1E-06	Noncancer Hazard Index (HI) = 1
IUR ($(ug/m^3)^{-1}$)	key	RfC_i (mg/m^3)	key	vol	muta-gen	Analyte	CAS No.	Carcinogenic SL TR=1E-06 (ug/m^3)	Noncarcinogenic SL HI=1 ($\mu g/m^3$)
				V		Tribromobenzene, 1,2,4-	615-54-3		
						Tributyl Phosphate	126-73-8		
						Tributyltin Compounds	NA		
						Tributyltin Oxide	56-35-9		
		3.0E+01	H	V		Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1		1.3E+05
						Trichloroacetic Acid	76-03-9		
						Trichloroaniline HCl, 2,4,6-	33663-50-2		
						Trichloroaniline, 2,4,6-	634-93-5		
				V		Trichlorobenzene, 1,2,3-	87-61-6		
		2.0E-03	P	V		Trichlorobenzene, 1,2,4-	120-82-1		8.8E+00
		5.0E+00	I	V		Trichloroethane, 1,1,1-	71-55-6		2.2E+04
1.6E-05	I	2.0E-04	X	V		Trichloroethane, 1,1,2-	79-00-5	7.7E-01	8.8E-01
4.1E-06	I	2.0E-03	I	V	M	Trichloroethylene	79-01-6	3.0E+00	8.8E+00
				V		Trichlorofluoromethane	75-69-4		
						Trichlorophenol, 2,4,5-	95-95-4		
3.1E-06	I					Trichlorophenol, 2,4,6-	88-06-2	4.0E+00	
						Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5		
						Trichlorophenoxypropionic acid, -2,4,5	93-72-1		
				V		Trichloropropane, 1,1,2-	598-77-6		
		3.0E-04	I	V	M	Trichloropropane, 1,2,3-	96-18-4		1.3E+00
		3.0E-04	P	V		Trichloropropene, 1,2,3-	96-19-5		1.3E+00
						Tricresyl Phosphate (TCP)	1330-78-5		
						Tridiphane	58138-08-2		
		7.0E-03	I	V		Triethylamine	121-44-8		3.1E+01
						Triethylene Glycol	112-27-6		
		2.0E+01	P	V		Trifluoroethane, 1,1,1-	420-46-2		8.8E+04
				V		Trifluralin	1582-09-8		
						Trimethyl Phosphate	512-56-1		
		5.0E-03	P	V		Trimethylbenzene, 1,2,3-	526-73-8		2.2E+01
		7.0E-03	P	V		Trimethylbenzene, 1,2,4-	95-63-6		3.1E+01
				V		Trimethylbenzene, 1,3,5-	108-67-8		
				V		Trimethylpentene, 2,4,4-	25167-70-8		
						Trinitrobenzene, 1,3,5-	99-35-4		
						Trinitrotoluene, 2,4,6-	118-96-7		
						Triphenylphosphine Oxide	791-28-6		
						Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8		
						Tris(1-chloro-2-propyl)phosphate	13674-84-5		
6.6E-04	C			V		Tris(2,3-dibromopropyl)phosphate	126-72-7	1.9E-02	
						Tris(2-chloroethyl)phosphate	115-96-8		
						Tris(2-ethylhexyl)phosphate	78-42-2		
						Tungsten	7440-33-7		
		4.0E-05	A			Uranium (Soluble Salts)	NA		1.8E-01
2.9E-04	C				M	Urethane	51-79-6	4.2E-02	
8.3E-03	P	7.0E-06	P			Vanadium Pentoxide	1314-62-1	1.5E-03	3.1E-02
		1.0E-04	A			Vanadium and Compounds	7440-62-2		4.4E-01
				V		Vernolate	1929-77-7		
						Vinclozolin	50471-44-8		
		2.0E-01	I	V		Vinyl Acetate	108-05-4		8.8E+02
3.2E-05	H	3.0E-03	I	V		Vinyl Bromide	593-60-2	3.8E-01	1.3E+01
4.4E-06	I	1.0E-01	I	V	M	Vinyl Chloride	75-01-4	2.8E+00	4.4E+02
						Warfarin	81-81-2		
		1.0E-01	S	V		Xylene, P-	106-42-3		4.4E+02
		1.0E-01	S	V		Xylene, m-	108-38-3		4.4E+02
		1.0E-01	S	V		Xylene, o-	95-47-6		4.4E+02
		1.0E-01	I	V		Xylenes	1330-20-7		4.4E+02
						Zinc Phosphide	1314-84-7		
						Zinc and Compounds	7440-66-6		
						Zineb	12122-67-7		
						Zirconium	7440-67-7		

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	HLC (atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	KPREF
Acephate	30560-19-1	1.8E+02	PHYSPROP	2.0E-11	5.0E-13	EPI	1.7E-06	PHYSPROP	8.8E+01	PHYSPROP	1.4E+00	CRC89	3.7E-02	8.0E-06	EPA WATER9			1.0E+01	EPI	-8.5E-01	PHYSPROP	8.2E+05	PHYSPROP	2.1E-04	1.1E+00	2.7E+00	4.0E-05	EPI
Acetaldehyde	75-07-0	4.4E+01	PHYSPROP	2.7E-03	6.7E-05	PHYSPROP	9.0E+02	PHYSPROP	-1.2E+02	PHYSPROP	7.8E-01	CRC89	1.3E-01	1.4E-05	EPA WATER9			1.0E+00	EPI	-3.4E-01	PHYSPROP	1.0E+06	PHYSPROP	1.3E-03	1.9E-01	4.5E-01	5.3E-04	EPI
Acetochlor	34256-82-1	2.7E+02	PHYSPROP	9.1E-07	2.2E-08	PHYSPROP	2.8E-05	PHYSPROP	1.1E+01	PubChem	1.1E+00	PubChem	2.2E-02	5.6E-06	EPA WATER9			3.0E+02	EPI	3.0E+00	PHYSPROP	2.2E+02	PHYSPROP	3.1E-02	3.4E+00	8.2E+00	5.0E-03	EPI
Acetone	67-64-1	5.8E+01	PHYSPROP	1.4E-03	3.5E-05	PHYSPROP	2.3E+02	PHYSPROP	-9.5E+01	PHYSPROP	7.8E-01	CRC89	1.1E-01	1.2E-05	EPA WATER9			2.4E+00	EPI	-2.4E-01	PHYSPROP	1.0E+06	PHYSPROP	1.5E-03	2.2E-01	5.3E-01	5.1E-04	EPI
Acetone Cyanohydrin	75-86-5	8.5E+01	PHYSPROP	8.1E-08	2.0E-09	PHYSPROP	3.4E-01	PHYSPROP	-1.9E+01	PHYSPROP	9.3E-01	CRC89	8.6E-02	1.0E-05	EPA WATER9			1.0E+00	EPI	-3.0E-02	PHYSPROP	1.0E+06	PHYSPROP	1.8E-03	3.2E-01	7.6E-01	5.0E-04	EPI
Acetonitrile	75-05-8	4.1E+01	PHYSPROP	1.4E-03	3.5E-05	PHYSPROP	8.9E+01	PHYSPROP	-4.4E+01	PHYSPROP	7.9E-01	CRC89	1.3E-01	1.4E-05	EPA WATER9			4.7E+00	EPI	-3.4E-01	PHYSPROP	1.0E+06	PHYSPROP	1.4E-03	1.8E-01	4.3E-01	5.5E-04	EPI
Acetophenone	98-86-2	1.2E+02	PHYSPROP	4.3E-04	1.0E-05	PHYSPROP	4.0E-01	PHYSPROP	2.0E+01	PHYSPROP	1.0E+00	CRC89	6.5E-02	8.7E-06	EPA WATER9			5.2E+01	EPI	1.6E+00	PHYSPROP	6.1E+03	PHYSPROP	1.6E-02	5.0E-01	1.2E+00	3.7E-03	EPI
Acetylaminofluorene, 2-	53-96-3	2.2E+02	PHYSPROP	7.8E-09	1.9E-10	PHYSPROP	9.4E-08	PHYSPROP	1.9E+02	PHYSPROP			5.2E-02	6.0E-06	EPA WATER9			2.2E+03	EPI	3.1E+00	PHYSPROP	5.5E+00	PHYSPROP	7.2E-02	1.9E+00	4.5E+00	1.2E-02	RAGSE
Acrolein	107-02-8	5.6E+01	PHYSPROP	5.0E-03	1.2E-04	PHYSPROP	2.7E+02	PHYSPROP	-8.8E+01	PHYSPROP	8.4E-01	CRC89	1.1E-01	1.2E-05	EPA WATER9			1.0E+00	EPI	-1.0E-02	PHYSPROP	2.1E+05	PHYSPROP	2.2E-03	2.2E-01	5.2E-01	7.5E-04	EPI
Acrylamide	79-06-1	7.1E+01	PHYSPROP	7.0E-08	1.7E-09	EPI	7.0E-03	PHYSPROP	8.5E+01	PHYSPROP	1.2E+00	LANGE	1.1E-01	1.3E-05	EPA WATER9			5.7E+00	EPI	-6.7E-01	PHYSPROP	3.9E+05	PHYSPROP	7.3E-04	2.6E-01	6.3E-01	2.2E-04	EPI
Acrylic Acid	79-10-7	7.2E+01	PHYSPROP	1.5E-05	3.7E-07	EPI	4.0E+00	PHYSPROP	1.3E+01	PHYSPROP	1.1E+00	CRC89	1.0E-01	1.2E-05	EPA WATER9			1.4E+00	EPI	3.5E-01	PHYSPROP	1.0E+06	PHYSPROP	3.4E-03	2.7E-01	6.4E-01	1.1E-03	EPI
Acrylonitrile	107-13-1	5.3E+01	PHYSPROP	5.6E-03	1.4E-04	PHYSPROP	1.1E+02	PHYSPROP	-8.4E+01	PHYSPROP	8.0E-01	CRC89	1.1E-01	1.2E-05	EPA WATER9			8.5E+00	EPI	2.5E-01	PHYSPROP	7.5E+04	PHYSPROP	3.3E-03	2.1E-01	5.0E-01	1.2E-03	EPI
Adiponitrile	111-69-3	1.1E+02	PHYSPROP	4.9E-08	1.2E-09	EPI	6.8E-04	PHYSPROP	1.0E+00	PHYSPROP	9.7E-01	CRC89	7.1E-02	9.0E-06	EPA WATER9			2.0E+01	EPI	-3.2E-01	PHYSPROP	8.0E+04	PHYSPROP	9.5E-04	4.2E-01	1.0E+00	2.4E-04	EPI
Alachlor	15972-60-8	2.7E+02	PHYSPROP	3.4E-07	8.3E-09	PHYSPROP	2.2E-05	PHYSPROP	4.0E+01	PHYSPROP	1.1E+00	CRC89	2.3E-02	5.7E-06	EPA WATER9			3.1E+02	EPI	3.5E+00	PHYSPROP	2.4E+02	PHYSPROP	6.6E-02	3.4E+00	8.2E+00	1.1E-02	EPI
Aldicarb	116-06-3	1.9E+02	PHYSPROP	5.9E-08	1.4E-09	EPI	3.5E-05	PHYSPROP	9.9E+01	PHYSPROP	1.2E+00	CRC89	3.2E-02	7.2E-06	EPA WATER9			2.5E+01	EPI	1.1E+00	PHYSPROP	6.0E+03	PHYSPROP	4.0E-03	1.2E+00	2.9E+00	7.6E-04	EPI
Aldicarb Sulfone	1646-88-4	2.2E+02	PHYSPROP	1.4E-07	3.4E-09	EPI	9.0E-05	PHYSPROP	1.4E+02	PHYSPROP			5.2E-02	6.1E-06	EPA WATER9			1.0E+01	EPI	-5.7E-01	PHYSPROP	1.0E+04	PHYSPROP	2.1E-04	1.8E+00	4.4E+00	3.7E-05	EPI
Aldicarb sulfoxide	1646-87-3	2.1E+02	PHYSPROP	4.0E-08	9.7E-10	EPI	1.0E-04	PHYSPROP	7.8E+01	EPI			5.4E-02	6.4E-06	EPA WATER9			1.0E+01	EPI	-7.8E-01	PHYSPROP	2.8E+04	PHYSPROP	1.8E-04	1.5E+00	3.6E+00	3.3E-05	EPI
Aldrin	309-00-2	3.6E+02	PHYSPROP	1.8E-03	4.4E-05	PHYSPROP	1.2E-04	PHYSPROP	1.0E+02	PHYSPROP	1.6E+00	PubChem	2.3E-02	5.8E-06	EPA WATER9			8.2E+04	EPI	6.5E+00	PHYSPROP	1.7E-02	PHYSPROP	2.2E+00	1.2E+01	4.8E+01	2.9E-01	EPI
Allyl Alcohol	107-18-6	5.8E+01	PHYSPROP	2.0E-04	5.0E-06	PHYSPROP	2.6E+01	PHYSPROP	-1.3E+02	PHYSPROP	8.5E-01	CRC89	1.1E-01	1.2E-05	EPA WATER9			1.9E+00	EPI	1.7E-01	PHYSPROP	1.0E+06	PHYSPROP	2.8E-03	2.2E-01	5.3E-01	9.6E-04	EPI
Allyl Chloride	107-05-1	7.7E+01	PHYSPROP	4.5E-01	1.1E-02	EPI	3.7E+02	PHYSPROP	-1.3E+02	PHYSPROP	9.4E-01	CRC89	9.4E-02	1.1E-05	EPA WATER9			4.0E+01	EPI	1.9E+00	PHYSPROP	3.4E+03	PHYSPROP	3.8E-02	2.8E-01	6.8E-01	1.1E-02	EPI
Aluminum	7429-90-5	2.7E+01	CRC89				0.0E+00	NIOSH	6.6E+02	CRC89	2.7E+00	CRC89				1.5E+03	BAES							2.0E-03	1.5E-01	3.6E-01	1.0E-03	RAGSE
Aluminum Phosphide	20859-73-8	5.8E+01	PHYSPROP						2.6E+03	CRC89	2.4E+00	CRC89												2.9E-03	2.2E-01	5.3E-01	1.0E-03	RAGSE
Ametryn	834-12-8	2.3E+02	PHYSPROP	9.9E-08	2.4E-09	EPI	2.7E-06	PHYSPROP	8.8E+01	PHYSPROP			5.1E-02	6.0E-06	EPA WATER9			4.3E+02	EPI	3.0E+00	PHYSPROP	2.1E+02	PHYSPROP	4.6E-02	2.0E+00	4.7E+00	7.9E-03	EPI
Aminobiphenyl, 4-	92-67-1	1.7E+02	PHYSPROP	6.0E-06	1.5E-07	PHYSPROP	1.2E-04	PHYSPROP	5.4E+01	PHYSPROP			6.2E-02	7.3E-06	EPA WATER9			2.5E+03	EPI	2.9E+00	PHYSPROP	2.2E+02	PHYSPROP	7.0E-02	9.3E-01	2.2E+00	1.4E-02	EPI
Aminophenol, m-	591-27-5	1.1E+02	PHYSPROP	8.1E-09	2.0E-10	PHYSPROP	9.6E-03	PHYSPROP	1.2E+02	PHYSPROP			8.3E-02	9.7E-06	EPA WATER9			9.0E+01	EPI	2.1E-01	PHYSPROP	2.7E+04	PHYSPROP	2.1E-03	4.3E-01	1.0E+00	5.3E-04	EPI
Aminophenol, p-	123-30-8	1.1E+02	PHYSPROP	1.5E-08	3.6E-10	EPI	4.0E-05	EPI	1.9E+02	PHYSPROP			8.3E-02	9.7E-06	EPA WATER9			9.0E+01	EPI	4.0E-02	PHYSPROP	1.6E+04	PHYSPROP	1.6E-03	4.3E-01	1.0E+00	4.1E-04	EPI
Amitraz	33089-61-1	2.9E+02	PHYSPROP	4.0E-04	9.9E-06	PHYSPROP	2.0E-06	PHYSPROP	8.6E+01	PHYSPROP	1.1E+00	CRC89	2.2E-02	5.4E-06	EPA WATER9			2.6E+05	EPI	5.5E+00	PHYSPROP	1.0E+00	PHYSPROP	1.1E+00	4.6E+00	1.8E+01	1.6E-01	EPI
Ammonia	7664-41-7	1.7E+01	PHYSPROP	6.6E-04	1.6E-05	PHYSPROP	7.5E+03	PHYSPROP	-7.8E+01	PHYSPROP	7.0E-01	CRC89	2.3E-01	2.2E-05	EPA WATER9					2.3E-01	OTHER	4.8E+05	PHYSPROP	1.6E-03	1.3E-01	3.1E-01	1.0E-03	RAGSE
Ammonium Sulfamate	7773-06-0	1.1E+02	CRC89				0.0E+00	NIOSH	1.3E+02	CRC89	1.8E+00	PubChem										1.3E+06	PERRY	4.1E-03	4.6E-01	1.1E+00	1.0E-03	RAGSE
Amyl Alcohol, tert-	75-85-4	8.8E+01	PHYSPROP	5.6E-04	1.4E-05	PHYSPROP	1.7E+01	PHYSPROP	-9.1E+00	PHYSPROP	8.1E-01	CRC89	7.9E-02	9.1E-06	EPA WATER9			4.1E+00	EPI	8.9E-01	PHYSPROP	1.1E+05	PHYSPROP	7.1E-03	3.3E-01	7.9E-01	2.0E-03	EPI
Aniline	62-53-3	9.3E+01	PHYSPROP	8.3E-05	2.0E-06	PHYSPROP	6.7E-01	PHYSPROP	-6.0E+00	PHYSPROP	1.0E+00	CRC89	8.3E-02	1.0E-05	EPA WATER9			7.0E+01	EPI	9.0E-01	PHYSPROP	3.6E+04	PHYSPROP	6.9E-03	3.5E-01	8.4E-01	1.9E-03	EPI
Anthraquinone, 9,10-	84-65-1	2.1E+02	PHYSPROP	9.6E-07	2.4E-08	EPI	1.2E-07	PHYSPROP	2.9E+02	PHYSPROP			5.4E-02	6.3E-06	EPA WATER9			5.0E+03	EPI	3.4E+00	PHYSPROP	1.4E+00	PHYSPROP	1.1E-01	1.5E+00	3.7E+00	1.9E-02	EPI
Antimony (metallic)	7440-36-0	1.2E+02	PHYSPROP				0.0E+00	NIOSH	6.3E+02	PHYSPROP	6.7E+00	CRC89				4.5E+01	SSL							4.3E-03	5.3E-01	1.3E+00	1.0E-03	RAGSE
Antimony Pentoxide	1314-60-9	3.2E+02	CRC89								3.8E+00	CRC89										3.0E+03	CRC89	6.9E-03	6.8E+00	1.6E+01	1.0E-03	RAGSE
Antimony Tetroxide	1332-81-6	3.1E+02	EPI								6.6E+00	CRC89												6.7E-03	5.5E+00	1.3E+01	1.0E-03	RAGSE
Antimony Trioxide	1309-64-4	2.9E+02	EPI						5.7E+02	CRC89	5.6E+00	CRC89												6.6E-03	4.5E+00	1.1E+01	1.0E-03	RAGSE
Arsenic, Inorganic	7440-38-2	7.8E+01	PHYSPROP						2.7E+02	CRC89	4.9E+00	CRC89				2.9E+01	SSL							3.4E-03	2.9E-01	6.9E-01	1.0E-03	RAGSE
Arsine	7784-42-1	7.8E+01	PHYSPROP						-1.2E+02	PHYSPROP	3.2E+00	CRC89										2.0E+05	PERRY	3.4E-03	2.9E-01	6.9E-01	1.0E-03	RAGSE
Asulam	3337-71-1	2.3E+02	PHYSPROP	7.0E-11	1.7E-12	PHYSPROP	1.4E-06	PHYSPROP	1.4E+02	PHYSPROP			5.1E-02	5.9E-06	EPA WATER9			2.8E+01	EPI	-2.7E-01	PHYSPROP	5.0E+03	PHYSPROP	3.1E-04	2.0E+00	4.9E+00	5.3E-05	EPI
Atrazine	1912-24-9	2.2E+02	PHYSPROP	9.6E-08	2.4E-09	EPI	2.9E-07	PHYSPROP	1.7E+02	PHYSPROP	1.2E+00	PubChem	2.6E-02	6.8E-06	EPA WATER9			2.2E+02	EPI	2.6E+00	PHYSPROP	3.5E+01	PHYSPROP	3.0E-02	1.7E+00	4.1E+00	5.2E-03	EPI
Auramine	492-80-8	2.7E+02	PHYSPROP	1.5E-07	3.6E-09	PHYSPROP	1.3E-06	PHYSPROP	1.4E+02	PHYSPROP			4.6E-02	5.3E-06	EPA WATER9			4.5E+03	EPI	3.0E+00	PHYSPROP	5.4E+01	PHYSPROP	7.0E-02	3.3E+00	7.9E+00	1.1E-02	RAGSE
Avermectin B1	65195-55-3	8.8E+02	PHYSPROP	5.4E-26	1.3E-27	PHYSPROP	1.5E-30	PHYSPROP	3.5E+02	EPI			2.1E-02	2.4E-06	EPA WATER9			8.8E+05	EPI	4.5E+00	PHYSPROP	3.5E-04	PHYSPROP	2.1E-04	8.4E+03	2.0E+04	1.8E-05	EPI
Azinphos-methyl	86-50-0	3.2E+02	PHYSPROP	9.8E-07	2.4E-08	EPI	1.6E-06	PHYSPROP	7.3E+01	PHYSPROP	1.4E+00	CRC89	2.3E-02	6.0E-06	EPA WATER9			5.2E+01	EPI	2.8E+00	PHYSPROP	2.1E+01	PHYSPROP	1.2E-02	6.3E+00	1.5E+01	1.8E-03	EPI
Azobenzene	103-33-3	1.8E+02	PHYSPROP	5.5E-04	1.4E-05	EPI	3.6E-04	PHYSPROP	6.8E+01	PHYSPROP	1.2E+00	PERRY	3.6E-02	7.5E-06	EPA WATER9			3.8E+03	EPI	3.8E+00	PHYSPROP	6.4E+00	PHYSPROP	2.7E-01	1.1E+00	2.6E+00	5.1E-02	EPI
Azodicarbonamide	123-77-3	1.2E+02	PHYSPROP	3.4E-11	8.2E-13	EPI	1.9E-10	PHYSPROP	2.1E+02	EPI	1.7E+00	GuideChem	8.3E-02	1.2E-05	EPA WATER9			7.0E+01	EPI	-1.7E+00	PHYSPROP	3.5E+01	PHYSPROP	1.1E-04	4.7E-01	1.1E+00	2.6E-05	EPI
Barium	7440-39-3	1.4E+02	PHYSPROP						7.1E+02	PHYSPROP	3.6E+00	CRC89				4.1E+01	SSL							4.5E-03	6.3E-01	1.5E+00	1.0E-03	RAGSE
Barium Chromate	10294-40-3	2.5E+02	CRC89						1.4E+03	CRC89	4.5E+00	CRC89										2.6E+00	CRC89	6.1E-03	2.8E+00	6.6E+00	1.0E-03	RAGSE
Benfluralin	1861-40-1	3.4E+02	PHYSPROP	1.2E-02	2.9E-04	EPI	6.5E-05	PHYSPROP	6.6E+01	PHYSPROP	1.3E+00	ChemNet	2.2E-02	5.5E-06	EPA WATER9			1.6E+04	EPI	5.3E+00	PHYSPROP	1.0E-01	PHYSPROP	4.8E-01	7.9E+00	1.9E+01	6.8E-02	EPI
Benomyl	17804-35-2	2.9E+02	PHYSPROP	2.0E-10	4.9E-12	PHYSPROP	3.7E-09	PHYSPROP	1.4E+02	EPI			4.3E-02	5.1E-06	EPA WATER9			3.4E+02	EPI	2.1E+00	PHYSPROP	3.8E+00	PHYSPROP	6.2E-03	4.4E+00	1.1E+01	9.4E-04	EPI
Bensulfuron-methyl	83055-99-6	4.1E+02	PHYSPROP	1.5E-13	3.8E-15	EPI	2.1E-14	PHYSPROP	1.9E+02	PHYSPROP			3.4E-02	4.0E-06	EPA WATER9			2.8E+01	EPI	2.2E+00	PHYSPROP	1.2E+02	PHYSPROP	1.7E-03	2.1E+01	5.0E+01	2.2E-04	EPI
Bentazon	25057-89-0	2.4E+02	PHYSPROP	8.9E-08	2.2E-09	EPI	3.5E-06	PHYSPROP	1.4E+02	PHYSPROP			4.9E-02	5.7E-06	EPA WATER9			1.0E+01	EPI	2.3E+00	PHYSPROP	5.0E+02	PHYSPROP	1.5E-02	2.3E+00	5.6E+00	2.5E-03	EPI
Benzaldehyde	100-52-7	1.1E+02	PHYSPROP	1.1E-03	2.7E-05	PHYSPROP	1.3E+00	PHYSPROP	-2.6E+01	PHYSPROP	1.0E+00	CRC89	7.4E-02	9.5E-06	EPA WATER9			1.1E+01	EPI	1.5E+00	PHYSPROP	7.0E+03	PHYSPROP	1.5E-02	4.1E-01	9.9E-01	3.8E-03	EPI
Benzene	71-43-2	7.8E+01	PHYSPROP	2.3E-01	5.6E-03	PHYSPROP	9.5E+01	PHYSPROP	5.5E+00	PHYSPROP	8.8E-01	CRC89	9.0E-02	1.0E-05	EPA WATER9			1.5E+02	EPI	2.1E+00	PHYSPROP	1.8E+03	PHYSPROP	5.1E-02	2.9E-01	6.9E-01	1.5E-02	EPI
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	2.2E+02	EPI	8.9E-22	2.2E-23	EPI	2.9E-14	EPI	2.4E+02	EPI			5.2E-02	6.1E-06	EPA WATER9			3.8E+01	EPI	-3.7E+00	EPI	1.0E+06	EPI	1.7E-06	1.8E+00	4.3E+00	3.0E-07	EPI
Benzenethiol	108-98-5	1.1E+02	PHYSPROP	1.4E-02	3.4E-04	EPI	1.9E+00	PHYSPROP	-1.5E+01	PHYSPROP	1.1E+00	CRC89	7.3E-02	9.5E-06	EPA WATER9			2.3E+02	EPI	2.5E+00	PHYSPROP	8.4E+02	PHYSPROP	7.2E-02	4.4E-01	1.0E+00	1.8E-02	EPI
Benzidine	92-87-5	1.8E+02	PHYSPROP	2.1E-09	5.2E-11	PHYSPROP	9.0E-07	PHYSPROP	1.2E+02	PHYSPROP	1.2E+00	Yaws 2008	3.5E-02	7.5E-06	EPA WATER9			1.2E+03	EPI	1.3E+00	PHYSPROP	3.2E+02	PHYSPROP	5.9E-03	1.1E+00	2.7E+00	1.1E-03	EPI
Benzoic Acid	65-85-0	1.2E+02	PHYSPROP	1.6E-06	3.8E-08	EPI	7.0E-04	PHYSPROP	1.2E+02	PHYSPROP	1.3E+00	CRC89	7.0E-02	9.8E-06	EPA WATER9			1.7E+01	EPI	1.9E+00	PHYSPROP	3.4E+03	PHYSPROP	2.4E-02	5.1E-01	1.2E+00	5.7E-03	EPI
Benzotrichloride	98-07-7	2.0E+02	PHYSPROP	1.1E-02	2.6E-04	PHYSPROP	4.1E-01	EPI	-5.0E+00	PHYSPROP	1.4E+00	CRC89	3.1E-02	7.7E-06	EPA WATER9			1.0E+03	EPI	3.9E+00	PHYSPROP	5.3E+01	PHYSPROP	2.6E-01	1.3E+00	3.1E+00	4.9E-02	EPI
Benzyl Alcohol	100-51-6	1.1E+02	PHYSPROP	1.4E-05	3.4E-07	PHYSPROP	9.4E-02	PHYSPROP	-1.5E+01	PHYSPROP	1.0E+00	CRC89	7.3E-02	9.4E-06	EPA WATER9			2.1E+01	EPI	1.1E+00	PHYSPROP	4.3E+04	PHYSPROP	8.4E-03	4.2E-01	1.0E+00	2.1E-03	EPI
Benzyl Chloride	100-44-7	1.3E+02	PHYSPROP	1.7E-02	4.1E-04	EPI	1.2E+00	PHYSPROP	-4.5E+01	PHYSPROP	1.1E+00	CRC89	6.3E-02	8.8E-06	EPA WATER9			4.5E+02	EPI	2.3E+00	PHYSPROP	5.3E+02	PHYSPROP	4.5E-02	5.4E-01	1.3E+00	1.0E-02	EPI
Beryllium and compounds	7440-41-7	1.1E+01	PHYSPROP				0.0E+00	NIOSH	9.9E+02	PHYSPROP	1.9E+00	CRC89				7.9E+02	SSL							1.3E-03	1.2E-01	2.9E-01	1.0E-03	RAGSE
Bifenox	42576-02-3	3.4E+02	PHYSPROP	4.4E-06	1.1E-07	EPI	1.0E-07	PHYSPROP	8.5E+01	PHYSPROP	1.2E+00	PubChem	2.0E-02	5.0E-06	EPA WATER9			3.7E+03	EPI	4.5E+00	PHYSPROP	4.0E-01	PHYSPROP	1.3E-01	8.7E+00	2.1E+01	1.8E-02	EPI
Biphenthrin	82657-04-3	4.2E+02	PHYSPROP	4.1E-05	1.0E-06	EPI	1.8E-07	PHYSPROP	6.9E+01	PHYSPROP	1.2E+00	CRC89	1.8E-02	4.5E-06	EPA WATER9			2.3E+06	EPI	6.0E+00	PHYSPROP	1.0E-03	PHYSPROP	1.4E+01	2.5E+01	1.1E+02	1.7E+00	EPI
Biphenyl, 1,1'-	92-52-4	1.5E+02	PHYSPROP	1.3E-02	3.1E-04	PHYSPROP	8.9E-03	PHYSPROP	6.9E+01	PHYSPROP	1.0E+00	CRC89	4.7E-02	7.6E-06	EPA WATER9			5.1E+03	EPI	4.0E+00	PHYSPROP	7.5E+00	PHYSPROP	4.5E-01	7.7E-01	1.8E+00	9.4E-02	EPI
Bis(2-chloro-1-methylethyl) ether	108-60-1	1.7E+02	PHYSPROP	3.0E-03	7.4E-05	EPI	5.6E-01	PHYSPROP	-9.7E+01	PHYSPROP	1.1E+00	CRC89	4.0E-02	7.4E-06	EPA WATER9			8.3E+01	EPI	2.5E+00	PHYSPROP	1.7E+03	PHYSPROP	3.8E-02	9.5E-01	2.3E+00	7.6E-03	EPI
Bis(2-chloroethoxy)methane	111-91-1	1.7E+02	PHYSPROP	1.6E-04	3.9E-06	EPI	1.3E-01	EPI	-3.2E+01	PHYSPROP			6.1E-02	7.1E-06	EPA WATER9			1.4E+01	EPI	1.3E+00	PHYSPROP	7.8E+03	PHYSPROP	6.2E-03	9.8E-01	2.4E+00	1.2E-03	EPI
Bis(2-chloroethyl)ether	111-44-4	1.4E+02	PHYSPROP	7.0E-04	1.7E-05	EPI	1.6E+00	PHYSPROP	-5.2E+01	PHYSPROP	1.2E+00	CRC89	5.7E-02	8.7E-06	EPA WATER9			3.2E+01	EPI	1.3E+00	PHYSPROP	1.7E+04	PHYSPROP	8.2E-03	6.6E-01	1.6E+00	1.8E-03	EPI
Bis(chloromethyl)ether	542-88-1	1.1E+02	PHYSPROP	1.8E-01	4.4E-03	EPI	2.9E+01	PHYSPROP	-4.2E+01	PHYSPROP	1.3E+00	CRC89	7.6E-02	1.0E-05	EPA WATER9			9.7E+00	EPI	5.7E-01	PHYSPROP	2.2E+04	PHYSPROP	3.5E-03	4.6E-01	1.1E+00	8.6E-04	EPI
Bisphenol A	80-05-7	2.3E+02	PHYSPROP	4.1E-10	1.0E-11	PHYSPROP	3.9E-07	PHYSPROP	1.5E+02	PHYSPROP	1.2E+00	PubChem	2.5E-02	6.5E-06	EPA WATER9			3.8E+04	EPI	3.3E+00	PHYSPROP	1.2E+02	PHYSPROP	7.7E-02	2.0E+00	4.8E+00	1.3E-02	EPI
Boron And Borates Only	7440-42-8	1.4E+01	EPI						2.1E+03	CRC89	2.3E+00	CRC89				3.0E+00	BAES							1.4E-03	1.3E-01	3.0E-01	1.0E-03	RAGSE
Boron Trichloride	10294-34-5	1.2E+02	PHYSPROP	7.5E-01	1.8E-02		1.0E+00	PHYSPROP	-1.1E+02	PHYSPROP	4.8E+00	CRC89	1.2E-01	2.2E-05	EPA WATER9					1.2E+00	OTHER			4.2E-03	4.8E-01	1.1E+00	1.0E-03	RAGSE
Boron Trifluoride	7637-07-2	6.8E+01	PHYSPROP				3.7E+04	PHYSPROP	-1.3E+02	PHYSPROP	2.8E+00	CRC89	1.6E-01	2.2E-05	EPA WATER9					2.2E-01	OTHER	3.3E+06	PHYSPROP	3.2E-03	2.5E-01	6.1E-01	1.0E-03	RAGSE
Bromate	15541-45-4	8.0E+01	EPI													7.5E+00	BAES							3.4E-03	2.9E-01	7.1E-01	1.0E-03	RAGSE
Bromo-2-chloroethane, 1-	107-04-0	1.4E+02	PHYSPROP	3.7E-02	9.1E-04	PHYSPROP	3.3E+01	PHYSPROP	-1.7E+01	PHYSPROP	1.7E+00	CRC89	6.6E-02	1.1E-05	EPA WATER9			4.0E+01	EPI	1.9E+00	PHYSPROP	6.9E+03	PHYSPROP	2.1E-02	6.7E-01	1.6E+00	4.6E-03	EPI
Bromobenzene	108-86-1	1.6E+02	PHYSPROP	1.0E-01	2.5E-03	PHYSPROP	4.2E+00	PHYSPROP	-3.1E+01	PHYSPROP	1.5E+00	CRC89	5.4E-02	9.3E-06	EPA WATER9			2.3E+02	EPI	3.0E+00	PHYSPROP	4.5E+02	PHYSPROP	9.6E-02	8.0E-01	1.9E+00	2.0E-02	EPI
Bromochloromethane	74-97-5	1.3E+02	PHYSPROP	6.0E-02	1.5E-03	EPI	1.4E+02	PHYSPROP	-8.8E+01	PHYSPROP	1.9E+00	CRC89	7.9E-02	1.2E-05	EPA WATER9			2.2E+01	EPI	1.4E+00	PHYSPROP	1.7E+04	PHYSPROP	1.1E-02	5.6E-01	1.3E+00	2.6E-03	EPI
Bromodichloromethane	75-27-4	1.6E+02	PHYSPROP	8.7E-02	2.1E-03	PHYSPROP	5.0E+01	PHYSPROP	-5.7E+01	PHYSPROP	2.0E+00	CRC89	5.6E-02	1.1E-05	EPA WATER9			3.2E+01	EPI	2.0E+00	PHYSPROP	3.0E+03	PHYSPROP	2.0E-02	8.7E-01	2.1E+00	4.0E-03	EPI
Bromoform	75-25-2	2.5E+02	PHYSPROP	2.2E-02	5.4E-04	PHYSPROP	5.4E+00	EPI	8.0E+00	PHYSPROP	2.9E+00	CRC89	3.6E-02	1.0E-05	EPA WATER9			3.2E+01	EPI	2.4E+00	PHYSPROP	3.1E+03	PHYSPROP	1.4E-02	2.7E+00	6.6E+00	2.4E-03	EPI
Bromomethane	74-83-9	9.5E+01	PHYSPROP	3.0E-01	7.3E-03	PHYSPROP	1.6E+03	PHYSPROP	-9.4E+01	PHYSPROP	1.7E+00	CRC89	1.0E-01	1.4E-05	EPA WATER9			1.3E+01	EPI	1.2E+00	PHYSPROP	1.5E+04	PHYSPROP	1.1E-02	3.6E-01	8.6E-01	2.8E-03	EPI
Bromophos	2104-96-3	3.7E+02	PHYSPROP	8.4E-03	2.1E-04	EPI	1.3E-04	PHYSPROP	5.4E+01	PHYSPROP	1.7E+00	LookChem	2.3E-02	6.1E-06	EPA WATER9			2.0E+03	EPI	5.2E+00	PHYSPROP	3.0E-01	PHYSPROP	3.0E-01	1.2E+01	2.8E+01	4.0E-02	EPI
Bromoxynil	1689-84-5	2.8E+02	PHYSPROP	5.4E-09	1.3E-10	EPI	4.7E-08	PHYSPROP	1.9E+02	PHYSPROP			4.5E-02	5.2E-06	EPA WATER9			3.3E+02	EPI	2.8E+00	PHYSPROP	1.3E+02	PHYSPROP	5.0E-02	3.7E+00	9.0E+00	7.8E-03	EPI
Bromoxynil Octanoate	1689-99-2	4.0E+02	PHYSPROP	1.3E-03	3.2E-05	EPI	4.8E-06	PHYSPROP	4.6E+01	PHYSPROP	1.5E+00	LookChem	2.1E-02	5.4E-06	EPA WATER9			4.3E+03	EPI	5.4E+00	PHYSPROP	8.0E-02	PHYSPROP	2.6E-01	1.9E+01	4.6E+01	3.3E-02	EPI
Butadiene, 1,3-	106-99-0	5.4E+01	PHYSPROP	3.0E+00	7.4E-02	EPI	2.1E+03	PHYSPROP	-1.1E+02	PHYSPROP	6.1E-01	CRC89	1.0E-01	1.0E-05	EPA WATER9			4.0E+01	EPI	2.0E+00	PHYSPROP	7.4E+02	PHYSPROP	4.6E-02	2.1E-01	5.1E-01	1.6E-02	EPI
Butanol, N-	71-36-3	7.4E+01	PHYSPROP	3.6E-04	8.8E-06	PHYSPROP	6.7E+00	PHYSPROP	-9.0E+01	PHYSPROP	8.1E-01	CRC89	9.0E-02	1.0E-05	EPA WATER9			3.5E+00	EPI	8.8E-01	PHYSPROP	6.3E+04	PHYSPROP	7.6E-03	2.7E-01	6.6E-01	2.3E-03	EPI
Butyl Benzyl Phthalate	85-68-7	3.1E+02	PHYSPROP	5.2E-05	1.3E-06	EPI	8.3E-06	PHYSPROP	-3.5E+01	PubChem	1.1E+00	CRC89	2.1E-02	5.2E-06	EPA WATER9			7.2E+03	EPI	4.7E+00	PHYSPROP	2.7E+00	PHYSPROP	2.6E-01	5.9E+00	1.4E+01	3.9E-02	EPI
Butyl alcohol, sec-	78-92-2	7.4E+01	PHYSPROP	3.7E-04	9.1E-06	PHYSPROP	1.8E+01	PHYSPROP	-1.1E+02	PHYSPROP	8.1E-01	CRC89	9.0E-02	1.0E-05	EPA WATER9			2.9E+00	EPI	6.1E-01	PHYSPROP	1.8E+05	PHYSPROP	5.1E-03	2.7E-01	6.6E-01	1.5E-03	EPI

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	HLC (atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	$\log K_{ow}$ (unitless)	$\log K_{ow}$ Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t^* (hr)	K_p (cm/hr)	KPREF
Butylate	2008-41-5	2.2E+02	PHYSPROP	3.5E-03	8.5E-05	EPI	1.3E-02	PHYSPROP	6.0E+01	EPI	9.4E-01	CRC89	2.3E-02	5.8E-06	EPA WATER9			3.9E+02	EPI	4.2E+00	PHYSPROP	4.5E+01	PHYSPROP	3.1E-01	1.7E+00	4.2E+00	5.4E-02	EPI
Butylated hydroxyanisole	25013-16-5	3.6E+02	PHYSPROP	4.8E-05	1.2E-06	PHYSPROP	2.5E-03	PHYSPROP	5.1E+01	PHYSPROP			3.8E-02	4.4E-06	EPA WATER9			8.4E+02	EPI	3.5E+00	PHYSPROP	2.1E+02	PHYSPROP	2.4E-01	1.1E+01	2.6E+01	3.3E-02	EPI
Butylated hydroxytoluene	128-37-0	2.2E+02	PHYSPROP	1.7E-04	4.1E-06	PHYSPROP	5.2E-03	EPI	7.1E+01	PHYSPROP	8.9E-01	CRC89	2.3E-02	5.6E-06	EPA WATER9			1.5E+04	EPI	5.1E+00	PHYSPROP	6.0E-01	PHYSPROP	1.3E+00	1.8E+00	7.1E+00	2.2E-01	EPI
Butylbenzene, n-	104-51-8	1.3E+02	PHYSPROP	6.5E-01	1.6E-02	EPI	1.1E+00	PHYSPROP	-8.8E+01	PHYSPROP	8.6E-01	CRC89	5.3E-02	7.3E-06	EPA WATER9			1.5E+03	EPI	4.4E+00	PHYSPROP	1.2E+01	PHYSPROP	1.0E+00	5.9E-01	2.3E+00	2.3E-01	EPI
Butylbenzene, sec-	135-98-8	1.3E+02	PHYSPROP	7.2E-01	1.8E-02	EPI	1.8E+00	PHYSPROP	-8.3E+01	PHYSPROP	8.6E-01	LANGE	5.3E-02	7.3E-06	EPA WATER9			1.3E+03	EPI	4.6E+00	PHYSPROP	1.8E+01	PHYSPROP	1.3E+00	5.9E-01	2.3E+00	3.0E-01	EPI
Butylbenzene, tert-	98-06-6	1.3E+02	PHYSPROP	5.4E-01	1.3E-02	EPI	2.2E+00	PHYSPROP	-5.8E+01	PHYSPROP	8.7E-01	CRC89	5.3E-02	7.4E-06	EPA WATER9			1.0E+03	EPI	4.1E+00	PHYSPROP	3.0E+01	PHYSPROP	6.6E-01	5.9E-01	2.3E+00	1.5E-01	EPI
Cacodylic Acid	75-60-5	1.4E+02	PHYSPROP	7.4E-13	1.8E-14	PHYSPROP	1.0E-07	PHYSPROP	2.0E+02	PHYSPROP			7.1E-02	8.3E-06	EPA WATER9			4.4E+01	EPI	3.6E-01	PHYSPROP	2.0E+06	PHYSPROP	2.1E-03	6.2E-01	1.5E+00	4.6E-04	EPI
Cadmium (Diet)	7440-43-9	1.1E+02	PHYSPROP				0.0E+00	NIOSH	3.2E+02	PHYSPROP	8.7E+00	CRC89				7.5E+01	SSL							4.1E-03	4.5E-01	1.1E+00	1.0E-03	RAGSE
Cadmium (Water)	7440-43-9	1.1E+02	PHYSPROP				0.0E+00	NIOSH	3.2E+02	PHYSPROP	8.7E+00	CRC89				7.5E+01	SSL							4.1E-03	4.5E-01	1.1E+00	1.0E-03	RAGSE
Calcium Chromate	13765-19-0	1.6E+02	CRC89						1.0E+03	CRC89														4.8E-03	7.9E-01	1.9E+00	1.0E-03	RAGSE
Caprolactam	105-60-2	1.1E+02	PHYSPROP	1.0E-06	2.5E-08	PHYSPROP	1.6E-03	EPI	6.9E+01	PHYSPROP	1.0E+00	LANGE	6.9E-02	9.0E-06	EPA WATER9			2.5E+01	EPI	-1.9E-01	YAWS	7.7E+05	PHYSPROP	4.1E-03	4.5E-01	1.1E+00	1.0E-03	EPI
Captafol	2425-06-1	3.5E+02	PHYSPROP	2.0E-07	4.9E-09	EPI	1.5E-08	EPI	1.6E+02	PHYSPROP			3.8E-02	4.5E-06	EPA WATER9			7.8E+02	EPI	3.8E+00	PHYSPROP	1.4E+00	PHYSPROP	4.1E-02	9.5E+00	2.3E+01	5.8E-03	EPI
Captan	133-06-2	3.0E+02	PHYSPROP	2.9E-07	7.0E-09	EPI	9.0E-08	PHYSPROP	1.8E+02	PHYSPROP	1.7E+00	CRC89	2.6E-02	6.9E-06	EPA WATER9			2.5E+02	EPI	2.8E+00	PHYSPROP	5.1E+00	PHYSPROP	1.6E-02	5.1E+00	1.2E+01	2.3E-03	EPI
Carbaryl	63-25-2	2.0E+02	PHYSPROP	1.3E-07	3.3E-09	EPI	1.4E-06	PHYSPROP	1.5E+02	PHYSPROP	1.2E+00	CRC89	2.7E-02	7.1E-06	EPA WATER9			3.5E+02	EPI	2.4E+00	PHYSPROP	1.1E+02	PHYSPROP	2.4E-02	1.4E+00	3.4E+00	4.3E-03	EPI
Carbofuran	1563-66-2	2.2E+02	PHYSPROP	1.3E-07	3.1E-09	EPI	4.9E-06	PHYSPROP	1.5E+02	PHYSPROP	1.2E+00	CRC89	2.6E-02	6.6E-06	EPA WATER9			9.5E+01	EPI	2.3E+00	PHYSPROP	3.2E+02	PHYSPROP	1.8E-02	1.8E+00	4.4E+00	3.1E-03	EPI
Carbon Disulfide	75-15-0	7.6E+01	PHYSPROP	5.9E-01	1.4E-02	PHYSPROP	3.6E+02	PHYSPROP	-1.1E+02	PHYSPROP	1.3E+00	CRC89	1.1E-01	1.3E-05	EPA WATER9			2.2E+01	EPI	1.9E+00	PHYSPROP	2.2E+03	PHYSPROP	3.8E-02	2.8E-01	6.7E-01	1.1E-02	EPI
Carbon Tetrachloride	56-23-5	1.5E+02	PHYSPROP	1.1E+00	2.8E-02	PHYSPROP	1.2E+02	PHYSPROP	-2.3E+01	PHYSPROP	1.6E+00	CRC89	5.7E-02	9.8E-06	EPA WATER9			4.4E+01	EPI	2.8E+00	PHYSPROP	7.9E+02	PHYSPROP	7.8E-02	7.6E-01	1.8E+00	1.6E-02	EPI
Carbonyl Sulfide	463-58-1	6.0E+01	PHYSPROP	2.5E+01	6.1E-01	EPI	9.4E+03	PHYSPROP	-1.4E+02	PHYSPROP	1.0E+00	CRC89	1.2E-01	1.3E-05	EPA WATER9			1.0E+00	EPI	-1.3E+00	PHYSPROP	1.2E+03	PHYSPROP	2.8E-04	2.3E-01	5.5E-01	9.4E-05	EPI
Carbosulfan	55285-14-8	3.8E+02	PHYSPROP	2.1E-05	5.1E-07	EPI	3.1E-07	PHYSPROP	1.8E+02	EPI	1.1E+00	CRC89	1.8E-02	4.4E-06	EPA WATER9			1.2E+04	EPI	5.6E+00	PHYSPROP	3.0E-01	PHYSPROP	4.3E-01	1.4E+01	3.4E+01	5.8E-02	EPI
Carboxin	5234-68-4	2.4E+02	PHYSPROP	1.3E-08	3.2E-10	EPI	1.5E-07	PHYSPROP	9.2E+01	PHYSPROP			5.0E-02	5.8E-06	EPA WATER9			1.7E+02	EPI	2.1E+00	PHYSPROP	1.5E+02	PHYSPROP	1.2E-02	2.2E+00	5.2E+00	2.0E-03	EPI
Ceric oxide	1306-38-3	1.7E+02	CRC89						2.5E+03	CRC89	7.2E+00	CRC89												5.0E-03	9.7E-01	2.3E+00	1.0E-03	RAGSE
Chloral Hydrate	302-17-0	1.7E+02	PHYSPROP	2.3E-07	5.7E-09	PHYSPROP	1.5E+01	PHYSPROP	5.7E+01	PHYSPROP	1.9E+00	CRC89	5.4E-02	1.0E-05	EPA WATER9			1.0E+00	EPI	9.9E-01	PHYSPROP	7.9E+05	PHYSPROP	4.2E-03	8.9E-01	2.1E+00	8.4E-04	EPI
Chloramben	133-90-4	2.1E+02	PHYSPROP	1.6E-09	3.9E-11	EPI	1.0E-07	PHYSPROP	2.0E+02	PHYSPROP			5.4E-02	6.4E-06	EPA WATER9			2.1E+01	EPI	1.9E+00	PHYSPROP	7.0E+02	PHYSPROP	1.1E-02	1.5E+00	3.6E+00	2.0E-03	EPI
Chloranil	118-75-2	2.5E+02	PHYSPROP	1.3E-08	3.3E-10	PHYSPROP	2.3E-06	PHYSPROP	2.9E+02	PHYSPROP			4.8E-02	5.7E-06	EPA WATER9			3.1E+02	EPI	2.2E+00	PHYSPROP	2.5E+02	PHYSPROP	1.2E-02	2.5E+00	6.0E+00	1.9E-03	EPI
Chlordane	12789-03-6	4.1E+02	PHYSPROP	2.9E-03	7.0E-05	PHYSPROP	1.0E-05	PHYSPROP	4.1E+02	PhysProp	1.6E+00	PubChem	2.1E-02	5.4E-06	EPA WATER9			3.4E+04	EPI	6.3E+00	PHYSPROP	1.3E-02	PHYSPROP	8.3E-01	2.1E+01	8.0E+01	1.1E-01	EPI
Chlordecone (Kepone)	143-50-0	4.9E+02	PHYSPROP	2.2E-06	5.4E-08	EPI	2.3E-07	PHYSPROP	3.5E+02	EPI	1.6E+00	CRC89	2.0E-02	4.9E-06	EPA WATER9			1.8E+04	EPI	5.4E+00	PHYSPROP	2.7E+00	PHYSPROP	9.3E-02	5.9E+01	1.4E+02	1.1E-02	EPI
Chlorfenvinphos	470-90-6	3.6E+02	PHYSPROP	1.2E-06	2.9E-08	EPI	7.5E-06	PHYSPROP	-2.0E+01	PHYSPROP			3.8E-02	4.4E-06	EPA WATER9			1.3E+03	EPI	3.8E+00	PHYSPROP	1.2E+02	PHYSPROP	3.7E-02	1.1E+01	2.6E+01	5.1E-03	EPI
Chlorimuron, Ethyl-	90982-32-4	4.1E+02	PHYSPROP	7.4E-14	1.8E-15	EPI	4.0E-12	PHYSPROP	1.8E+02	PHYSPROP			3.4E-02	4.0E-06	EPA WATER9			7.2E+01	EPI	2.5E+00	PHYSPROP	1.2E+03	PHYSPROP	2.6E-03	2.2E+01	5.3E+01	3.4E-04	EPI
Chlorine	7782-50-5	7.1E+01	PHYSPROP	4.8E-01	1.2E-02	PHYSPROP	5.9E+03	PHYSPROP	-1.0E+02	PHYSPROP	2.9E+00	CRC89	1.5E-01	2.2E-05	EPA WATER9	2.5E-01	BAES			8.5E-01	OTHER	6.3E+03	PHYSPROP	3.2E-03	2.6E-01	6.3E-01	1.0E-03	RAGSE
Chlorine Dioxide	10049-04-4	6.7E+01	EPI	1.6E+00	4.0E-02	Toxnet HSDB	7.6E+02	Toxnet HSDB	-5.9E+01	CRC89	2.8E+00	CRC89	1.6E-01	2.2E-05	EPA WATER9									3.2E-03	2.5E-01	6.0E-01	1.0E-03	RAGSE
Chlorite (Sodium Salt)	7758-19-2	9.0E+01	EPI						1.8E+02	CRC89												6.4E+05	CRC89	3.7E-03	3.4E-01	8.1E-01	1.0E-03	RAGSE
Chloro-1,1-difluoroethane, 1-	75-68-3	1.0E+02	PHYSPROP	2.4E+00	5.9E-02	PHYSPROP	2.5E+03	PHYSPROP	-1.3E+02	PHYSPROP	1.1E+00	CRC89	8.0E-02	1.0E-05	EPA WATER9			4.4E+01	EPI	2.1E+00	PHYSPROP	1.4E+03	PHYSPROP	3.8E-02	3.8E-01	9.2E-01	9.9E-03	EPI
Chloro-1,3-butadiene, 2-	126-99-8	8.9E+01	PHYSPROP	2.3E+00	5.6E-02	PHYSPROP	2.2E+02	PHYSPROP	-1.3E+02	PHYSPROP	9.6E-01	CRC89	8.4E-02	1.0E-05	EPA WATER9			6.1E+01	EPI	2.5E+00	PHYSPROP	8.7E+02	PHYSPROP	8.6E-02	3.3E-01	7.9E-01	2.4E-02	EPI
Chloro-2-methylaniline HCl, 4-	3165-93-3	1.8E+02	PHYSPROP	6.4E-05	1.6E-06	PHYSPROP	4.1E-02	PHYSPROP	1.6E+02	EPI			6.0E-02	7.0E-06	EPA WATER9			3.5E+02	EPI	2.3E+00	PHYSPROP	9.5E+02	PHYSPROP	9.2E-05	1.0E+00	2.5E+00	1.8E-05	EPI
Chloro-2-methylaniline, 4-	95-69-2	1.4E+02	PHYSPROP	8.1E-05	2.0E-06	PHYSPROP	4.1E-02	PHYSPROP	3.0E+01	PHYSPROP			7.0E-02	8.2E-06	EPA WATER9			1.8E+02	EPI	2.3E+00	PHYSPROP	9.5E+02	PHYSPROP	3.7E-02	6.5E-01	1.6E+00	8.1E-03	EPI
Chloroacetaldehyde, 2-	107-20-0	7.8E+01	PHYSPROP	9.8E-04	2.4E-05	PHYSPROP	6.4E+01	PHYSPROP	-1.6E+01	PHYSPROP	1.2E+00	CRC89	1.0E-01	1.2E-05	EPA WATER9			1.0E+00	EPI	9.0E-02	PHYSPROP	1.1E+05	PHYSPROP	2.2E-03	2.9E-01	6.9E-01	6.5E-04	EPI
Chloroacetic Acid	79-11-8	9.4E+01	PHYSPROP	3.8E-07	9.3E-09	PHYSPROP	6.5E-02	PHYSPROP	6.3E+01	PHYSPROP	1.4E+00	CRC89	9.4E-02	1.2E-05	EPA WATER9			1.4E+00	EPI	2.2E-01	PHYSPROP	8.6E+05	PHYSPROP	2.4E-03	3.6E-01	8.5E-01	6.5E-04	EPI
Chloroacetophenone, 2-	532-27-4	1.5E+02	PHYSPROP	1.4E-04	3.5E-06	PHYSPROP	5.4E-03	PHYSPROP	5.7E+01	PHYSPROP	1.3E+00	CRC89	5.2E-02	8.7E-06	EPA WATER9			9.9E+01	EPI	1.9E+00	PHYSPROP	1.1E+03	PERRY	1.9E-02	7.7E-01	1.9E+00	4.1E-03	EPI
Chloroaniline, p-	106-47-8	1.3E+02	PHYSPROP	4.7E-05	1.2E-06	EPI	2.7E-02	PHYSPROP	7.3E+01	PHYSPROP	1.4E+00	CRC89	7.0E-02	1.0E-05	EPA WATER9			1.1E+02	EPI	1.8E+00	PHYSPROP	3.9E+03	PHYSPROP	2.2E-02	5.4E-01	1.3E+00	5.0E-03	EPI
Chlorobenzene	108-90-7	1.1E+02	PHYSPROP	1.3E-01	3.1E-03	PHYSPROP	1.2E+01	PHYSPROP	-4.5E+01	PHYSPROP	1.1E+00	CRC89	7.2E-02	9.5E-06	EPA WATER9			2.3E+02	EPI	2.8E+00	PHYSPROP	5.0E+02	PHYSPROP	1.2E-01	4.5E-01	1.1E+00	2.8E-02	EPI
Chlorobenzilate	510-15-6	3.3E+02	PHYSPROP	3.0E-06	7.2E-08	EPI	2.2E-06	PHYSPROP	3.7E+01	PHYSPROP	1.3E+00	CRC89	2.2E-02	5.5E-06	EPA WATER9			1.5E+03	EPI	4.7E+00	PHYSPROP	1.3E+01	PHYSPROP	2.3E-01	7.0E+00	1.7E+01	3.3E-02	EPI
Chlorobenzoic Acid, p-	74-11-3	1.6E+02	PHYSPROP	3.3E-06	8.0E-08	PHYSPROP	2.3E-03	PHYSPROP	2.4E+02	PHYSPROP	1.5E+00	PERRY	5.5E-02	9.5E-06	EPA WATER9			2.7E+01	EPI	2.7E+00	PHYSPROP	7.2E+01	PHYSPROP	5.8E-02	7.9E-01	1.9E+00	1.2E-02	EPI
Chlorobenzotrifluoride, 4-	98-56-6	1.8E+02	PHYSPROP	1.4E+00	3.5E-02	PHYSPROP	7.6E+00	PHYSPROP	-3.3E+01	PHYSPROP	1.3E+00	CRC89	3.8E-02	8.0E-06	EPA WATER9			1.6E+03	EPI	3.6E+00	PHYSPROP	2.9E+01	PHYSPROP	1.9E-01	1.1E+00	2.6E+00	3.8E-02	EPI
Chlorobutane, 1-	109-69-3	9.3E+01	PHYSPROP	6.8E-01	1.7E-02	PHYSPROP	1.0E+02	PHYSPROP	-1.2E+02	PHYSPROP	8.9E-01	CRC89	7.8E-02	9.3E-06	EPA WATER9			7.2E+01	EPI	2.6E+00	PHYSPROP	1.1E+03	PHYSPROP	1.0E-01	3.5E-01	8.3E-01	2.7E-02	EPI
Chlorodifluoromethane	75-45-6	8.6E+01	PHYSPROP	1.7E+00	4.1E-02	PHYSPROP	7.3E+03	PHYSPROP	-1.6E+02	PHYSPROP	1.5E+00	CRC89	1.0E-01	1.3E-05	EPA WATER9			3.2E+01	EPI	1.1E+00	PHYSPROP	2.8E+03	PHYSPROP	9.6E-03	3.2E-01	7.7E-01	2.7E-03	EPI
Chloroethanol, 2-	107-07-3	8.1E+01	PHYSPROP	3.1E-05	7.6E-07	EPI	7.2E+00	PHYSPROP	-6.8E+01	PHYSPROP	1.2E+00	CRC89	1.0E-01	1.2E-05	EPA WATER9			1.9E+00	EPI	3.0E-02	PHYSPROP	1.0E+06	PHYSPROP	2.0E-03	3.0E-01	7.1E-01	5.8E-04	EPI
Chloroform	67-66-3	1.2E+02	PHYSPROP	1.5E-01	3.7E-03	PHYSPROP	2.0E+02	PHYSPROP	-6.4E+01	PHYSPROP	1.5E+00	CRC89	7.7E-02	1.1E-05	EPA WATER9			3.2E+01	EPI	2.0E+00	PHYSPROP	8.0E+03	PHYSPROP	2.9E-02	4.9E-01	1.2E+00	6.8E-03	EPI
Chloromethane	74-87-3	5.0E+01	PHYSPROP	3.6E-01	8.8E-03	PHYSPROP	4.3E+03	PHYSPROP	-9.8E+01	PHYSPROP	9.1E-01	CRC89	1.2E-01	1.4E-05	EPA WATER9			1.3E+01	EPI	9.1E-01	PHYSPROP	5.3E+03	PHYSPROP	9.0E-03	2.0E-01	4.8E-01	3.3E-03	EPI
Chloromethyl Methyl Ether	107-30-2	8.1E+01	PHYSPROP	1.2E-02	3.0E-04	PHYSPROP	3.0E+01	PHYSPROP	-1.0E+02	PHYSPROP	1.1E+00	CRC89	9.5E-02	1.1E-05	EPA WATER9			5.3E+00	EPI	3.2E-01	PHYSPROP	6.9E+04	PHYSPROP	3.1E-03	3.0E-01	7.1E-01	9.1E-04	EPI
Chloronitrobenzene, o-	88-73-3	1.6E+02	PHYSPROP	3.8E-04	9.3E-06	PHYSPROP	1.8E-02	EPI	3.3E+01	PHYSPROP	1.4E+00	CRC89	5.1E-02	8.8E-06	EPA WATER9			3.7E+02	EPI	2.2E+00	PHYSPROP	4.4E+02	PHYSPROP	3.0E-02	8.0E-01	1.9E+00	6.3E-03	EPI
Chloronitrobenzene, p-	100-00-5	1.6E+02	PHYSPROP	2.0E-04	4.9E-06	PHYSPROP	2.2E-02	EPI	8.4E+01	PHYSPROP	1.3E+00	CRC89	5.0E-02	8.5E-06	EPA WATER9			3.6E+02	EPI	2.4E+00	PHYSPROP	2.3E+02	PHYSPROP	3.8E-02	8.0E-01	1.9E+00	7.9E-03	EPI
Chlorophenol, 2-	95-57-8	1.3E+02	PHYSPROP	4.6E-04	1.1E-05	PHYSPROP	2.5E+00	PHYSPROP	9.8E+00	PHYSPROP	1.3E+00	CRC89	6.6E-02	9.5E-06	EPA WATER9			3.1E+02	EPI	2.2E+00	PHYSPROP	1.1E+04	PHYSPROP	3.5E-02	5.5E-01	1.3E+00	8.0E-03	EPI
Chloropicrin	76-06-2	1.6E+02	PHYSPROP	8.4E-02	2.1E-03	PHYSPROP	2.4E+01	PHYSPROP	-6.4E+01	PHYSPROP	1.7E+00	CRC89	5.2E-02	9.6E-06	EPA WATER9			4.4E+01	EPI	2.1E+00	PHYSPROP	1.6E+03	PHYSPROP	2.3E-02	8.8E-01	2.1E+00	4.6E-03	EPI
Chlorothalonil	1897-45-6	2.7E+02	PHYSPROP	8.2E-05	2.0E-06	PHYSPROP	5.7E-07	PHYSPROP	2.5E+02	PHYSPROP	1.7E+00	CRC89	2.8E-02	7.3E-06	EPA WATER9			1.0E+03	EPI	3.1E+00	PHYSPROP	8.1E-01	PHYSPROP	3.4E-02	3.2E+00	7.8E+00	5.4E-03	EPI
Chlorotoluene, o-	95-49-8	1.3E+02	PHYSPROP	1.5E-01	3.6E-03	PHYSPROP	3.4E+00	PHYSPROP	-3.6E+01	PHYSPROP	1.1E+00	CRC89	6.3E-02	8.7E-06	EPA WATER9			3.8E+02	EPI	3.4E+00	PHYSPROP	3.7E+02	PHYSPROP	2.5E-01	5.4E-01	1.3E+00	5.7E-02	EPI
Chlorotoluene, p-	106-43-4	1.3E+02	PHYSPROP	1.8E-01	4.4E-03	EPI	2.7E+00	PHYSPROP	7.5E+00	PHYSPROP	1.1E+00	CRC89	6.3E-02	8.7E-06	EPA WATER9			3.8E+02	EPI	3.3E+00	PHYSPROP	1.1E+02	PHYSPROP	2.2E-01	5.4E-01	1.3E+00	5.0E-02	EPI
Chlorozotocin	54749-90-5	2.7E+02	PHYSPROP	1.5E-20	3.7E-22	PHYSPROP	4.0E-14	PHYSPROP	1.5E+02	EPI			4.6E-02	5.4E-06	EPA WATER9			1.0E+01	EPI	-1.0E+00	PHYSPROP	1.8E+03	PHYSPROP	6.2E-05	3.2E+00	7.8E+00	9.9E-06	EPI
Chlorpropham	101-21-3	2.1E+02	PHYSPROP	2.3E-05	5.7E-07	EPI	1.8E-04	PHYSPROP	4.1E+01	PHYSPROP	1.2E+00	CRC89	2.6E-02	6.7E-06	EPA WATER9			3.5E+02	EPI	3.5E+00	PHYSPROP	8.9E+01	PHYSPROP	1.2E-01	1.7E+00	4.0E+00	2.1E-02	EPI
Chlorpyrifos	2921-88-2	3.5E+02	PHYSPROP	1.2E-04	2.9E-06	PHYSPROP	2.0E-05	PHYSPROP	4.2E+01	PHYSPROP			3.8E-02	4.5E-06	EPA WATER9			7.3E+03	EPI	5.0E+00	PHYSPROP	1.1E+00	PHYSPROP	2.4E-01	9.7E+00	2.3E+01	3.3E-02	EPI
Chlorpyrifos Methyl	5598-13-0	3.2E+02	PHYSPROP	1.5E-04	3.8E-06	EPI	4.2E-05	PHYSPROP	4.3E+01	PHYSPROP			4.0E-02	4.7E-06	EPA WATER9			2.2E+03	EPI	4.3E+00	PHYSPROP	4.8E+00	PHYSPROP	1.2E-01	6.7E+00	1.6E+01	1.8E-02	EPI
Chlorsulfuron	64902-72-3	3.6E+02	PHYSPROP	1.4E-14	3.4E-16	EPI	2.3E-11	PHYSPROP	1.8E+02	PHYSPROP			3.8E-02	4.4E-06	EPA WATER9			3.2E+02	EPI	2.0E+00	PHYSPROP	3.1E+04	PHYSPROP	2.4E-03	1.1E+01	2.5E+01	3.3E-04	EPI
Chlorthal-dimethyl	1861-32-1	3.3E+02	PHYSPROP	8.9E-05	2.2E-06	EPI	2.5E-06	PHYSPROP	1.6E+02	PHYSPROP			4.0E-02	4.6E-06	EPA WATER9			5.1E+02	EPI	4.3E+00	PHYSPROP	5.0E-01	PHYSPROP	1.1E-01	7.6E+00	1.8E+01	1.5E-02	EPI
Chlorthiophos	60238-56-4	3.6E+02	PHYSPROP	4.9E-05	1.2E-06	PHYSPROP	4.0E-01	PHYSPROP	8.6E+01	EPI			3.7E-02	4.4E-06	EPA WATER9			1.3E+04	EPI	5.8E+00	PHYSPROP	3.0E-01	PHYSPROP	7.7E-01	1.1E+01	4.3E+01	1.1E-01	EPI
Chromium(III), Insoluble Salts	16065-83-1	5.2E+01	EPI								5.2E+00	CRC89				1.8E+06	SSL							2.8E-03	2.1E-01	4.9E-01	1.0E-03	RAGSE
Chromium(VI)	18540-29-9	5.2E+01	EPI													1.9E+01	SSL					1.7E+06	CRC89	5.5E-03	2.1E-01	4.9E-01	2.0E-03	RAGSE
Chromium, Total	7440-47-3	5.2E+01	PHYSPROP						1.9E+03	PHYSPROP	7.2E+00	CRC89				1.8E+06	SSL							2.8E-03	2.1E-01	4.9E-01	1.0E-03	RAGSE
Clofentezine	74115-24-5	3.0E+02	PHYSPROP	1.6E-08	3.9E-10	EPI	9.8E-10	PHYSPROP	1.8E+02	PHYSPROP			4.2E-02	4.9E-06	EPA WATER9			3.0E+04	EPI	3.1E+00	PHYSPROP	1.0E+00	PHYSPROP	2.4E-02	5.2E+00	1.3E+01	3.6E-03	EPI
Cobalt	7440-48-4	5.9E+01	EPI				0.0E+00	NIOSH	1.5E+03	CRC89	8.9E+00	CRC89				4.5E+01	BAES							1.2E-03	2.2E-01	5.4E-01	4.0E-04	RAGSE
Coke Oven Emissions	8007-45-2			4.5E-01	1.1E-02	Toxnet HSDB	9.5E+01	Toxnet HSDB					1.0E-01	1.2E-05	EPA WATER9			1.6E+04										
Copper	7440-50-8	6.4E+01	PHYSPROP				0.0E+00	NIOSH	1.1E+03	PHYSPROP	9.0E+00	CRC89				3.5E+01	BAES							3.1E-03	2.4E-01	5.7E-01	1.0E-03	RAGSE
Cresol, m-	108-39-4	1.1E+02	PHYSPROP	3.5E-05	8.6E-07	PHYSPROP	1.1E-01	PHYSPROP	1.2E+01	PHYSPROP	1.0E+00	CRC89	7.3E-02	9.3E-06	EPA WATER9			3.0E+02	EPI	2.0E+00	PHYSPROP	2.3E+04	PHYSPROP	3.1E-02	4.2E-01	1.0E+00	7.8E-03	EPI
Cresol, o-	95-48-7	1.1E+02	PHYSPROP	4.9E-05	1.2E-06	PHYSPROP	3.0E-01	EPI	3.0E+01	PHYSPROP	1.0E+00	CRC89	7.3E-02	9.3E-06	EPA WATER9			3.1E+02	EPI	2.0E+00	PHYSPROP	2.6E+04	PHYSPROP	3.1E-02	4.2E-01	1.0E+00	7.7E-03	EPI
Cresol, p-	106-44-5	1.1E+02	PHYSPROP	4.1E-05	1.0E-06	PHYSPROP	1.1E-01	PHYSPROP	3.6E+01	PHYSPROP	1.0E+00	CRC89	7.2E-02	9.2E-06	EPA WATER9			3.0E+02	EPI	1.9E+00	PHYSPROP	2.2E+04	PHYSPROP	3.0E-02	4.2E-01	1.0E+00	7.5E-03	EPI
Cresol, p-chloro-m-	59-50-7	1.4E+02	PHYSPROP	1.0E-04	2.5E-06	EPI	5.0E-02	PHYSPROP	6.7E+01	PHYSPROP			7.0E-02	8.1E-06	EPA WATER9			4.9E+02	EPI	3.1E+00	PHYSPROP	3.8E+03	PHYSPROP	1.3E-01	6.6E-01	1.6E+00	2.9E-02	EPI
Cresols	1319-77-3	3.2E+02	PHYSPROP	2.5E-05	6.2E-07	PHYSPROP	1.7E-01	PHYSPROP	3.0E+01	EPI			4.0E-02	4.7E-06	EPA WATER9			3.1E+02	EPI	2.0E+00	PHYSPROP	9.1E+03	PHYSPROP	5.3E-02	6.9E+00	1.7E+01	7.7E-03	EPI
Crotonaldehyde, trans-	123-73-9	7.0E+01	PHYSPROP	7.9E-04	1.9E-05	PHYSPROP	3.0E+01	PHYSPROP	-7.6E+01	PHYSPROP	8.5E-01	CRC89	9.6E-02	1.1E-05	EPA WATER9			1.8E+00	EPI	6.0E-01	PHYSPROP	1.5E+05	PHYSPROP	5.1E-03	2.6E-01	6.2E-01	1.6E-03	EPI
Cumene	98-82-8	1.2E+02	PHYSPROP	4.7E-01	1.2E-02	PHYSPROP	4.5E+00	PHYSPROP	-9.6E+01	PHYSPROP	8.6E-01	CRC89	6.0E-02	7.9E-06	EPA WATER9			7.0E+02	EPI	3.7E+00	PHYSPROP	6.1E+01	PHYSPROP	3.8E-01	5.0E-01	1.2E+00	9.0E-02	EPI
Cupferron	135-20-6	1.6E+02	PHYSPROP	1.5E-07	3.6E-09	PHYSPROP	6.3E-05	PHYSPROP	1.6E+02	PHYSPROP			6.6E-02	7.7E-06	EPA WATER9			7.6E+02	EPI	-1.7E+00	PHYSPROP	6.1E+05	PHYSPROP	8.0E-06	7.8E-01	1.9E+00	1.7E-06	EPI
Cyanazine	21725-46-2	2.4E+02	PHYSPROP	1.1E-10	2.6E-12	EPI	1.4E-07	PHYSPROP	1.7E+02	PHYSPROP			4.9E-02	5.7E-06	EPA WATER9			1.3E+02	EPI	2.2E+00	PHYSPROP	1.7E+02	PHYSPROP	1.2E-02	2.3E+00	5.6E+00	2.1E-03	EPI
Cyanides																												
~Calcium Cyanide	592-01-8	9.2E+01	PHYSPROP																					3.7E-03	3.4E-01	8.3E-01	1.0E-03	RAGSE
~Copper Cyanide	544-92-3	9.0E+01	PHYSPROP						4.7E+02	PHYSPROP	2.9E+00	CRC89												3.6E-03	3.3E-01	8.0E-01	1.0E-03	RAGSE
~Cyanide (CN-)	57-12-5	2.6E+01	PHYSPROP	9.9E-01	2.4E-02	PHYSPROP	3.1E+02	PHYSPROP			7.0E-01	CHEM GUIDE	2.1E-01	2.5E-05	EPA WATER9	9.9E+00	SSL					9.5E+04	PHYSPROP	2.0E-03	1.5E-01	3.5E-01	1.0E-03	RAGSE
~Cyanogen	460-19-5	5.2E+01	PHYSPROP	2.2E-01	5.4E-03	EPI	4.3E+03	PHYSPROP	-2.8E+01	PHYSPROP	9.5E-01	CRC89	1.2E-01	1.4E-05	EPA WATER9					7.0E-02	PHYSPROP	9.5E+03	YAWS	2.5E-03	2.1E-01	4.9E-01	8.9E-04	RAGSE
~Cyanogen Bromide	506-68-3	1.1E+02	PHYSPROP	1.0E+00	2.5E-02	EPI	1.2E+02	PHYSPROP	5.2E+01	PHYSPROP	2.0E+00	CRC89	9.8E-02	1.4E-05	EPA WATER9									1.0E-03	4.1E-01	9.9E-01	2.6E-04	RAGSE
~Cyanogen Chloride	506-77-4	6.1E+01	PHYSPROP	7.9E-02	1.9E-03	YAWS	1.2E+03	PHYSPROP	-6.6E+00	PHYSPROP	1.2E+00	CRC89	1.2E-01	1.4E-05	EPA WATER9							6.0E+04	PHYSPROP	1.2E-03	2.3E-01	5.6E-01	3.9E-04	RAGSE

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	HLC (atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	KPREF
~Hydrogen Cyanide	74-90-8	2.7E+01	PHYSPROP	5.4E-03	1.3E-04	PHYSPROP	7.4E+02	PHYSPROP	-1.3E+01	PHYSPROP	6.9E-01	CRC89	1.7E-01	1.7E-05	EPA WATER9	9.9E+00	SSL			-2.5E-01	PHYSPROP	1.0E+06	PHYSPROP	2.0E-03	1.5E-01	3.6E-01	1.0E-03	RAGSE
~Potassium Cyanide	151-50-8	6.5E+01	PHYSPROP				0.0E+00	NIOSH	6.3E+02	PHYSPROP	1.6E+00	CRC89										7.2E+05	PHYSPROP	6.2E-03	2.4E-01	5.8E-01	2.0E-03	RAGSE
~Potassium Silver Cyanide	506-61-6	2.0E+02	PHYSPROP																					1.1E-02	1.4E+00	3.3E+00	2.0E-03	RAGSE
~Silver Cyanide	506-64-9	1.3E+02	PHYSPROP						3.2E+02	PHYSPROP	4.0E+00	CRC89										2.3E+01	PHYSPROP	4.5E-03	5.9E-01	1.4E+00	1.0E-03	RAGSE
~Sodium Cyanide	143-33-9	4.9E+01	PHYSPROP				0.0E+00	NIOSH	5.6E+02	PHYSPROP	1.6E+00	CRC89										5.8E+05	CRC89	2.7E-03	2.0E-01	4.7E-01	1.0E-03	RAGSE
~Thiocyanates	NA																										1.0E-03	RAGSE
~Thiocyanic Acid	463-56-9	5.9E+01	PHYSPROP				4.7E+00	PPRTV	5.0E+00	PPRTV	1.1E+00	PPRTV	1.2E-01	1.4E-05	EPA WATER9					5.8E-01	OTHER			3.0E-03	2.3E-01	5.4E-01	1.0E-03	RAGSE
~Zinc Cyanide	557-21-1	1.2E+02	PHYSPROP						8.0E+01	PERRY	1.9E+00	CRC89										4.7E+00	CRC89	2.5E-03	4.8E-01	1.1E+00	6.0E-04	RAGSE
Cyclohexane	110-82-7	8.4E+01	PHYSPROP	6.1E+00	1.5E-01	PHYSPROP	9.7E+01	PHYSPROP	6.6E+00	PHYSPROP	7.7E-01	CRC89	8.0E-02	9.1E-06	EPA WATER9			1.5E+02	EPI	3.4E+00	PHYSPROP	5.5E+01	PHYSPROP	3.6E-01	3.1E-01	7.5E-01	1.0E-01	EPI
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	5.1E+02	PHYSPROP	3.9E-05	9.6E-07	PHYSPROP	3.5E-06	PHYSPROP	2.0E+02	CRC89			3.0E-02	3.5E-06	EPA WATER9			2.8E+03	EPI	4.7E+00	PHYSPROP	5.5E-02	PHYSPROP	2.5E-02	7.9E+01	1.9E+02	2.8E-03	EPI
Cyclohexanone	108-94-1	9.8E+01	PHYSPROP	3.7E-04	9.0E-06	PHYSPROP	4.3E+00	PHYSPROP	-3.1E+01	PHYSPROP	9.5E-01	CRC89	7.7E-02	9.4E-06	EPA WATER9			1.7E+01	EPI	8.1E-01	PHYSPROP	2.5E+04	PHYSPROP	5.8E-03	3.7E-01	8.9E-01	1.5E-03	EPI
Cyclohexene	110-83-8	8.2E+01	PHYSPROP	1.9E+00	4.6E-02	PHYSPROP	8.9E+01	PHYSPROP	-1.0E+02	PHYSPROP	8.1E-01	NIOSH	8.3E-02	9.5E-06	EPA WATER9			1.5E+02	EPI	2.9E+00	PHYSPROP	2.1E+02	PHYSPROP	1.5E-01	3.0E-01	7.3E-01	4.3E-02	EPI
Cyclohexylamine	108-91-8	9.9E+01	PHYSPROP	1.7E-04	4.2E-06	PHYSPROP	1.0E+01	PHYSPROP	-1.8E+01	PHYSPROP	8.2E-01	CRC89	7.1E-02	8.5E-06	EPA WATER9			3.2E+01	EPI	1.5E+00	PHYSPROP	1.0E+06	PHYSPROP	1.6E-02	3.8E-01	9.1E-01	4.3E-03	EPI
Cyfluthrin	68359-37-5	4.3E+02	PHYSPROP	1.2E-06	2.9E-08	EPI	1.5E-10	PHYSPROP	6.0E+01	PHYSPROP			3.3E-02	3.9E-06	EPA WATER9			1.3E+05	EPI	6.0E+00	PHYSPROP	3.0E-03	PHYSPROP	4.1E-01	2.8E+01	6.8E+01	5.2E-02	EPI
Cyhalothrin	68085-85-8	4.5E+02	PHYSPROP	6.1E-05	1.5E-06	EPI	1.5E-09	EPI	4.9E+01	EPI			3.2E-02	3.8E-06	EPA WATER9			3.4E+05	EPI	6.9E+00	PHYSPROP	5.0E-03	PHYSPROP	1.7E+00	3.5E+01	1.4E+02	2.1E-01	EPI
Cypermethrin	52315-07-8	4.2E+02	PHYSPROP	1.7E-05	4.2E-07	EPI	3.1E-09	PHYSPROP	8.1E+01	PHYSPROP	1.3E+00	CRC89	1.9E-02	4.7E-06	EPA WATER9			8.0E+04	EPI	6.6E+00	PHYSPROP	4.0E-03	PHYSPROP	6.0E-01	2.3E+01	9.1E+01	7.7E-02	EPI
Cyromazine	66215-27-8	1.7E+02	PHYSPROP	2.3E-12	5.7E-14	EPI	3.4E-09	PHYSPROP	2.2E+02	PHYSPROP			6.3E-02	7.3E-06	EPA WATER9			2.9E+01	EPI	-6.1E-02	PHYSPROP	1.3E+04	PHYSPROP	4.0E-03	9.0E-01	2.2E+00	8.0E-04	EPI
DDD	72-54-8	3.2E+02	PHYSPROP	2.7E-04	6.6E-06	PHYSPROP	1.4E-06	PHYSPROP	1.1E+02	PHYSPROP			4.1E-02	4.7E-06	EPA WATER9			1.2E+05	EPI	6.0E+00	PHYSPROP	9.0E-02	PHYSPROP	1.7E+00	6.5E+00	2.6E+01	2.5E-01	EPI
DDE, p,p'-	72-55-9	3.2E+02	PHYSPROP	1.7E-03	4.2E-05	PHYSPROP	6.0E-06	EPI	8.9E+01	PHYSPROP	1.4E+00	LookChem	2.3E-02	5.9E-06	EPA WATER9			1.2E+05	EPI	6.5E+00	PHYSPROP	4.0E-02	PHYSPROP	3.7E+00	6.4E+00	2.7E+01	5.5E-01	EPI
DDT	50-29-3	3.5E+02	PHYSPROP	3.4E-04	8.3E-06	PHYSPROP	1.6E-07	PHYSPROP	1.1E+02	PHYSPROP			3.8E-02	4.4E-06	EPA WATER9			1.7E+05	EPI	6.9E+00	PHYSPROP	5.5E-03	PHYSPROP	4.5E+00	1.0E+01	4.4E+01	6.3E-01	EPI
Dalapon	75-99-0	1.4E+02	PHYSPROP	2.3E-06	5.7E-08	EPI	1.5E-01	EPI	-5.0E+00	PHYSPROP	1.4E+00	CRC89	6.0E-02	9.4E-06	EPA WATER9			3.2E+00	EPI	7.8E-01	PHYSPROP	5.0E+05	PHYSPROP	3.7E-03	6.6E-01	1.6E+00	8.2E-04	EPI
Daminozide	1596-84-5	1.6E+02	PHYSPROP	1.7E-08	4.2E-10	EPI	2.0E-04	PHYSPROP	1.5E+02	PHYSPROP			6.4E-02	7.5E-06	EPA WATER9			1.0E+01	EPI	-1.5E+00	PHYSPROP	1.0E+05	PHYSPROP	9.7E-05	8.3E-01	2.0E+00	2.0E-05	EPI
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209	1163-19-5	9.6E+02	PHYSPROP	4.9E-07	1.2E-08	PHYSPROP	4.7E-12	PHYSPROP	3.1E+02	PHYSPROP	3.0E+00	IRIS	1.9E-02	4.8E-06	EPA WATER9			2.8E+05	EPI	1.2E+01	PHYSPROP	1.0E-04	PHYSPROP	8.6E+00	2.5E+04	1.1E+05	7.3E-01	EPI
Demeton	8065-48-3	5.2E+02	PHYSPROP	1.6E-04	3.8E-06	PHYSPROP	3.4E-04	PHYSPROP			1.1E+00	PubChem	1.6E-02	3.8E-06	EPA WATER9					3.2E+00	PHYSPROP	6.7E+02	PHYSPROP	6.6E-02	8.2E+01	2.0E+02	7.6E-03	RAGSE
Di(2-ethylhexyl)adipate	103-23-1	3.7E+02	PHYSPROP	1.8E-05	4.3E-07	PHYSPROP	8.5E-07	PHYSPROP	-6.8E+01	PHYSPROP	9.2E-01	CRC89	1.7E-02	4.2E-06	EPA WATER9			3.6E+04	EPI	6.1E+00	PHYSPROP	7.8E-01	PHYSPROP	2.4E+01	1.3E+01	5.8E+01	3.2E+00	EPI
Diallate	2303-16-4	2.7E+02	PHYSPROP	1.6E-04	3.8E-06	EPI	1.5E-04	PHYSPROP	2.5E+01	PHYSPROP			4.5E-02	5.3E-06	EPA WATER9			6.4E+02	EPI	4.5E+00	PHYSPROP	1.4E+01	PHYSPROP	2.9E-01	3.4E+00	8.2E+00	4.6E-02	EPI
Diazinon	333-41-5	3.0E+02	PHYSPROP	4.6E-06	1.1E-07	PHYSPROP	9.0E-05	PHYSPROP	8.8E+01	EPI	1.1E+00	CRC89	2.1E-02	5.2E-06	EPA WATER9			3.0E+03	EPI	3.8E+00	PHYSPROP	4.0E+01	PHYSPROP	7.0E-02	5.3E+00	1.3E+01	1.0E-02	EPI
Dibenzothiophene	132-65-0	1.8E+02	PHYSPROP	1.4E-03	3.4E-05	EPI	2.1E-04	EPI	9.7E+01	PHYSPROP	1.3E+00	ChemNet	3.6E-02	7.6E-06	EPA WATER9			9.2E+03	EPI	4.4E+00	PHYSPROP	1.5E+00	PHYSPROP	6.2E-01	1.1E+00	4.5E+00	1.2E-01	EPI
Dibromo-3-chloropropane, 1,2-	96-12-8	2.4E+02	PHYSPROP	6.0E-03	1.5E-04	EPI	5.8E-01	PHYSPROP	6.0E+00	PHYSPROP	2.1E+00	CRC89	3.2E-02	8.9E-06	EPA WATER9			1.2E+02	EPI	3.0E+00	PHYSPROP	1.2E+03	PHYSPROP	4.1E-02	2.2E+00	5.3E+00	6.9E-03	EPI
Dibromobenzene, 1,3-	108-36-1	2.4E+02	PHYSPROP	5.1E-02	1.2E-03	EPI	2.7E-01	PHYSPROP	-7.0E+00	PHYSPROP	2.0E+00	CRC89	3.1E-02	8.5E-06	EPA WATER9			3.8E+02	EPI	3.8E+00	PHYSPROP	6.8E+01	PHYSPROP	1.4E-01	2.2E+00	5.3E+00	2.3E-02	EPI
Dibromobenzene, 1,4-	106-37-6	2.4E+02	PHYSPROP	3.7E-02	8.9E-04	EPI	5.8E-02	PHYSPROP	8.7E+01	PHYSPROP	2.3E+00	CRC89	3.3E-02	9.3E-06	EPA WATER9			3.8E+02	EPI	3.8E+00	PHYSPROP	2.0E+01	PHYSPROP	1.4E-01	2.2E+00	5.3E+00	2.5E-02	EPI
Dibromochloromethane	124-48-1	2.1E+02	PHYSPROP	3.2E-02	7.8E-04	PHYSPROP	5.5E+00	PHYSPROP	-2.0E+01	PHYSPROP	2.5E+00	CRC89	3.7E-02	1.1E-05	EPA WATER9			3.2E+01	EPI	2.2E+00	PHYSPROP	2.7E+03	PHYSPROP	1.6E-02	1.5E+00	3.7E+00	2.9E-03	EPI
Dibromoethane, 1,2-	106-93-4	1.9E+02	PHYSPROP	2.7E-02	6.5E-04	PHYSPROP	1.1E+01	PHYSPROP	9.9E+00	PHYSPROP	2.2E+00	CRC89	4.3E-02	1.0E-05	EPA WATER9			4.0E+01	EPI	2.0E+00	PHYSPROP	3.9E+03	PHYSPROP	1.5E-02	1.2E+00	2.8E+00	2.8E-03	EPI
Dibromomethane (Methylene Bromide)	74-95-3	1.7E+02	PHYSPROP	3.4E-02	8.2E-04	PHYSPROP	4.4E+01	PHYSPROP	-5.3E+01	PHYSPROP	2.5E+00	CRC89	5.5E-02	1.2E-05	EPA WATER9			2.2E+01	EPI	1.7E+00	PHYSPROP	1.2E+04	PHYSPROP	1.1E-02	9.9E-01	2.4E+00	2.2E-03	EPI
Dibutyltin Compounds	NA																											
Dicamba	1918-00-9	2.2E+02	PHYSPROP	8.9E-08	2.2E-09	EPI	1.3E-05	PHYSPROP	1.2E+02	PHYSPROP	1.6E+00	CRC89	2.9E-02	7.8E-06	EPA WATER9			2.9E+01	EPI	2.2E+00	PHYSPROP	8.3E+03	PHYSPROP	1.5E-02	1.8E+00	4.4E+00	2.7E-03	EPI
Dichloro-2-butene, 1,4-	764-41-0	1.3E+02	PHYSPROP	3.5E-01	8.5E-03	PHYSPROP	3.0E+00	EPI	3.5E+00	PHYSPROP	1.2E+00	LANGE	6.7E-02	9.3E-06	EPA WATER9			1.3E+02	EPI	2.6E+00	PHYSPROP	5.8E+02	PHYSPROP	7.1E-02	5.3E-01	1.3E+00	1.7E-02	EPI
Dichloro-2-butene, cis-1,4-	1476-11-5	1.3E+02	PHYSPROP	2.7E-02	6.6E-04	EPI	4.1E+00	PHYSPROP	-4.8E+01	PHYSPROP	1.2E+00	CRC89	6.7E-02	9.3E-06	EPA WATER9			1.3E+02	EPI	2.6E+00	PHYSPROP	5.8E+02	PHYSPROP	7.1E-02	5.3E-01	1.3E+00	1.7E-02	EPI
Dichloro-2-butene, trans-1,4-	110-57-6	1.3E+02	PHYSPROP	2.7E-02	6.6E-04	EPI	3.4E+00	PHYSPROP	2.0E+00	PHYSPROP	1.2E+00	CRC89	6.6E-02	9.3E-06	EPA WATER9			1.3E+02	EPI	2.6E+00	PHYSPROP	8.5E+02	PHYSPROP	7.1E-02	5.3E-01	1.3E+00	1.7E-02	EPI
Dichloroacetic Acid	79-43-6	1.3E+02	PHYSPROP	3.4E-07	8.4E-09	PHYSPROP	1.8E-01	PHYSPROP	1.4E+01	PHYSPROP	1.6E+00	CRC89	7.2E-02	1.1E-05	EPA WATER9			2.3E+00	EPI	9.2E-01	PHYSPROP	1.0E+06	PHYSPROP	5.3E-03	5.5E-01	1.3E+00	1.2E-03	EPI
Dichlorobenzene, 1,2-	95-50-1	1.5E+02	PHYSPROP	7.8E-02	1.9E-03	PHYSPROP	1.4E+00	PHYSPROP	-1.7E+01	PHYSPROP	1.3E+00	CRC89	5.6E-02	8.9E-06	EPA WATER9			3.8E+02	EPI	3.4E+00	PHYSPROP	1.6E+02	PHYSPROP	2.1E-01	7.0E-01	1.7E+00	4.5E-02	EPI
Dichlorobenzene, 1,4-	106-46-7	1.5E+02	PHYSPROP	9.9E-02	2.4E-03	PHYSPROP	1.7E+00	PHYSPROP	5.2E+01	PHYSPROP	1.2E+00	CRC89	5.5E-02	8.7E-06	EPA WATER9			3.8E+02	EPI	3.4E+00	PHYSPROP	8.1E+01	PHYSPROP	2.1E-01	7.0E-01	1.7E+00	4.5E-02	EPI
Dichlorobenzidine, 3,3'-	91-94-1	2.5E+02	PHYSPROP	1.2E-09	2.8E-11	PHYSPROP	2.6E-07	PHYSPROP	1.3E+02	PHYSPROP			4.7E-02	5.5E-06	EPA WATER9			3.2E+03	EPI	3.5E+00	PHYSPROP	3.1E+00	PHYSPROP	7.8E-02	2.8E+00	6.6E+00	1.3E-02	EPI
Dichlorobenzophenone, 4,4'-	90-98-2	2.5E+02	PHYSPROP	4.4E-05	1.1E-06	PHYSPROP	6.4E-06	PHYSPROP	1.5E+02	PHYSPROP	1.5E+00	CRC89	2.6E-02	6.9E-06	EPA WATER9			2.9E+03	EPI	4.4E+00	PHYSPROP	8.3E-01	PHYSPROP	3.3E-01	2.7E+00	6.4E+00	5.4E-02	EPI
Dichlorodifluoromethane	75-71-8	1.2E+02	PHYSPROP	1.4E+01	3.4E-01	PHYSPROP	4.8E+03	PHYSPROP	-1.6E+02	PHYSPROP	1.5E+00	PERRY	7.6E-02	1.1E-05	EPA WATER9			4.4E+01	EPI	2.2E+00	PHYSPROP	2.8E+02	PHYSPROP	3.8E-02	5.0E-01	1.2E+00	9.0E-03	EPI
Dichloroethane, 1,1-	75-34-3	9.9E+01	PHYSPROP	2.3E-01	5.6E-03	PHYSPROP	2.3E+02	PHYSPROP	-9.7E+01	PHYSPROP	1.2E+00	CRC89	8.4E-02	1.1E-05	EPA WATER9			3.2E+01	EPI	1.8E+00	PHYSPROP	5.0E+03	PHYSPROP	2.6E-02	3.8E-01	9.0E-01	6.8E-03	EPI
Dichloroethane, 1,2-	107-06-2	9.9E+01	PHYSPROP	4.8E-02	1.2E-03	PHYSPROP	7.9E+01	PHYSPROP	-3.6E+01	PHYSPROP	1.2E+00	CRC89	8.6E-02	1.1E-05	EPA WATER9			4.0E+01	EPI	1.5E+00	PHYSPROP	8.6E+03	PHYSPROP	1.6E-02	3.8E-01	9.0E-01	4.2E-03	EPI
Dichloroethylene, 1,1-	75-35-4	9.7E+01	PHYSPROP	1.1E+00	2.6E-02	PHYSPROP	6.0E+02	PHYSPROP	-1.2E+02	PHYSPROP	1.2E+00	CRC89	8.6E-02	1.1E-05	EPA WATER9			3.2E+01	EPI	2.1E+00	PHYSPROP	2.4E+03	PHYSPROP	4.4E-02	3.7E-01	8.8E-01	1.2E-02	EPI
Dichloroethylene, 1,2-cis-	156-59-2	9.7E+01	PHYSPROP	1.7E-01	4.1E-03	PHYSPROP	2.0E+02	PHYSPROP	-8.0E+01	PHYSPROP	1.3E+00	CRC89	8.8E-02	1.1E-05	EPA WATER9			4.0E+01	EPI	1.9E+00	PHYSPROP	6.4E+03	PHYSPROP	4.2E-02	3.7E-01	8.8E-01	1.1E-02	EPI
Dichloroethylene, 1,2-trans-	156-60-5	9.7E+01	PHYSPROP	3.8E-01	9.4E-03	PHYSPROP	3.3E+02	EPI	-5.0E+01	PHYSPROP	1.3E+00	CRC89	8.8E-02	1.1E-05	EPA WATER9			4.0E+01	EPI	2.1E+00	PHYSPROP	4.5E+03	PHYSPROP	4.2E-02	3.7E-01	8.8E-01	1.1E-02	EPI
Dichlorophenol, 2,4-	120-83-2	1.6E+02	PHYSPROP	1.8E-04	4.3E-06	EPI	9.0E-02	PHYSPROP	4.5E+01	PHYSPROP	1.4E+00	PERRY	4.9E-02	8.7E-06	EPA WATER9			4.9E+02	EPI	3.1E+00	PHYSPROP	5.6E+03	PHYSPROP	1.0E-01	8.6E-01	2.1E+00	2.1E-02	EPI
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	2.2E+02	PHYSPROP	1.4E-06	3.5E-08	EPI	8.3E-05	PHYSPROP	1.4E+02	PHYSPROP	1.4E+00	PubChem	2.8E-02	7.3E-06	EPA WATER9			3.0E+01	EPI	2.8E+00	PHYSPROP	6.8E+02	PHYSPROP	3.8E-02	1.8E+00	4.4E+00	6.6E-03	EPI
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	2.5E+02	PHYSPROP	9.4E-08	2.3E-09	PHYSPROP	1.1E-05	PHYSPROP	1.2E+02	PHYSPROP	1.4E+00	ChemNet	2.6E-02	6.7E-06	EPA WATER9			3.7E+02	PubChem	3.5E+00	PHYSPROP	4.6E+01	PHYSPROP	8.4E-02	2.6E+00	6.3E+00	1.4E-02	EPI
Dichloropropane, 1,2-	78-87-5	1.1E+02	PHYSPROP	1.2E-01	2.8E-03	PHYSPROP	5.3E+01	PHYSPROP	-1.0E+02	PHYSPROP	1.2E+00	PERRY	7.3E-02	9.7E-06	EPA WATER9			6.1E+01	EPI	2.0E+00	PHYSPROP	2.8E+03	PHYSPROP	3.1E-02	4.5E-01	1.1E+00	7.5E-03	EPI
Dichloropropane, 1,3-	142-28-9	1.1E+02	PHYSPROP	4.0E-02	9.8E-04	PHYSPROP	1.8E+01	PHYSPROP	-1.0E+02	PHYSPROP	1.2E+00	CRC89	7.4E-02	9.8E-06	EPA WATER9			7.2E+01	EPI	2.0E+00	PHYSPROP	2.8E+03	PHYSPROP	3.2E-02	4.5E-01	1.1E+00	7.8E-03	EPI
Dichloropropanol, 2,3-	616-23-9	1.3E+02	PHYSPROP	1.5E-07	3.6E-09	PHYSPROP	1.8E-01	PHYSPROP	-2.5E+01	EPI	1.4E+00	CRC89	6.8E-02	9.9E-06	EPA WATER9			5.6E+00	EPI	7.8E-01	PHYSPROP	6.4E+04	PHYSPROP	4.3E-03	5.5E-01	1.3E+00	9.8E-04	EPI
Dichloropropene, 1,3-	542-75-6	1.1E+02	PHYSPROP	1.5E-01	3.6E-03	PHYSPROP	3.4E+01	PHYSPROP	-5.0E+01	PHYSPROP	1.2E+00	LANGE	7.6E-02	1.0E-05	EPA WATER9			7.2E+01	EPI	2.0E+00	PHYSPROP	2.8E+03	PHYSPROP	3.4E-02	4.4E-01	1.1E+00	8.3E-03	EPI
Dichlorvos	62-73-7	2.2E+02	PHYSPROP	2.4E-05	5.7E-07	EPI	1.6E-02	PHYSPROP	-6.0E+01	PHYSPROP	1.4E+00	CRC89	2.8E-02	7.3E-06	EPA WATER9			5.4E+01	EPI	1.4E+00	PHYSPROP	8.0E+03	PHYSPROP	4.6E-03	1.8E+00	4.4E+00	8.0E-04	EPI
Dicrotophos	141-66-2	2.4E+02	PHYSPROP	2.1E-09	5.0E-11	PHYSPROP	1.6E-04	PHYSPROP	7.9E+01	EPI	1.2E+00	CRC89	2.5E-02	6.4E-06	EPA WATER9			1.7E+01	EPI	0.0E+00	PHYSPROP	1.0E+06	PHYSPROP	4.3E-04	2.2E+00	5.4E+00	7.3E-05	EPI
Dicyclopentadiene	77-73-6	1.3E+02	PHYSPROP	2.6E+00	6.3E-02	PHYSPROP	2.3E+00	EPI	-1.0E+00	PHYSPROP	9.3E-01	LANGE	5.6E-02	7.8E-06	EPA WATER9			1.5E+03	EPI	3.2E+00	PHYSPROP	2.6E+01	PHYSPROP	1.6E-01	5.8E-01	1.4E+00	3.6E-02	EPI
Dieldrin	60-57-1	3.8E+02	PHYSPROP	4.1E-04	1.0E-05	PHYSPROP	5.9E-06	PHYSPROP	1.8E+02	PHYSPROP	1.8E+00	CRC89	2.3E-02	6.0E-06	EPA WATER9			2.0E+04	EPI	5.4E+00	PHYSPROP	2.0E-01	PHYSPROP	2.4E-01	1.4E+01	3.4E+01	3.3E-02	EPI
Diesel Engine Exhaust	NA																											
Diethanolamine	111-42-2	1.1E+02	PHYSPROP	1.6E-09	3.9E-11	EPI	2.8E-04	PHYSPROP	2.8E+01	PHYSPROP	1.1E+00	CRC89	7.7E-02	9.8E-06	EPA WATER9			1.0E+00	EPI	-1.4E+00	PHYSPROP	1.0E+06	PHYSPROP	1.8E-04	4.1E-01	9.8E-01	4.5E-05	EPI
Diethylene Glycol Monobutyl Ether	112-34-5	1.6E+02	PHYSPROP	2.9E-07	7.2E-09	PHYSPROP	2.2E-02	PHYSPROP	-6.8E+01	PHYSPROP	9.6E-01	CRC89	4.1E-02	7.0E-06	EPA WATER9			1.0E+01	EPI	5.6E-01	PHYSPROP	1.0E+06	PHYSPROP	2.2E-03	8.5E-01	2.0E+00	4.5E-04	EPI
Diethylene Glycol Monoethyl Ether	111-90-0	1.3E+02	PHYSPROP	9.1E-07	2.2E-08	EPI	1.3E-01	PHYSPROP	-7.6E+01	PHYSPROP	9.9E-01	CRC89	5.6E-02	8.0E-06	EPA WATER9			1.0E+00	EPI	-5.4E-01	PHYSPROP	1.0E+06	PHYSPROP	5.4E-04	5.9E-01	1.4E+00	1.2E-04	EPI
Diethylformamide	617-84-5	1.0E+02	PHYSPROP	5.3E-06	1.3E-07	PHYSPROP	1.2E+00	EPI	-7.6E+00	EPI	9.1E-01	CRC89	7.3E-02	9.0E-06	EPA WATER9			2.1E+00	EPI	5.0E-02	PHYSPROP	1.0E+06	PHYSPROP	1.8E-03	3.9E-01	9.3E-01	4.6E-04	EPI
Diethylstilbestrol	56-53-1	2.7E+02	PHYSPROP	2.4E-10	5.8E-12	PHYSPROP	1.4E-08	PHYSPROP	1.7E+02	PHYSPROP			4.6E-02	5.3E-06	EPA WATER9			2.7E+05	EPI	5.1E+00	PHYSPROP	1.2E+01	PHYSPROP	7.2E-01	3.3E+00	1.3E+01	1.1E-01	EPI
Difenzoquat	43222-48-6	3.6E+02	PHYSPROP				4.1E-12	PHYSPROP	1.6E+02	PHYSPROP			3.8E-02	4.4E-06	EPA WATER9			7.8E+04	EPI	6.5E-01	PHYSPROP	8.2E+05	PHYSPROP	2.9E-04	1.1E+01	2.6E+01	4.0E-05	EPI
Diflubenzuron	35367-38-5	3.1E+02	PHYSPROP	1.9E-07	4.6E-09	EPI	9.0E-10	PHYSPROP	2.4E+02	PHYSPROP			4.1E-02	4.8E-06	EPA WATER9			4.6E+02	EPI	3.9E+00	PHYSPROP	8.0E-02	PHYSPROP	7.3E-02	5.8E+00	1.4E+01	1.1E-02	EPI
Difluoroethane, 1,1-	75-37-6	6.6E+01	PHYSPROP	8.3E-01	2.0E-02	PHYSPROP	4.6E+03	PHYSPROP	-1.2E+02	PHYSPROP	9.0E-01	CRC89	1.0E-01	1.2E-05	EPA WATER9			3.2E+01	EPI	7.5E-01	PHYSPROP	3.2E+03	PHYSPROP	6.6E-03	2.5E-01	5.9E-01	2.1E-03	EPI
Dihydrosafrole	94-58-6	1.6E+02	PHYSPROP	5.0E-04	1.2E-05	PHYSPROP	5.6E-02	PHYSPROP	4.4E+01	EPI	1.1E+00	PubChem	4.3E-02	7.4E-06	EPA WATER9			2.1E+02	EPI	3.6E+00	PHYSPROP	5.7E+01	PHYSPROP	2.2E-01	8.7E-01	2.1E+00	4.5E-02	EPI
Diisopropyl Ether	108-20-3	1.0E+02	PHYSPROP	1.0E-01	2.6E-03	PHYSPROP	1.5E+02	PHYSPROP	-8.7E+01	PHYSPROP	7.2E-01	CRC89	6.5E-02	7.8E-06	EPA WATER9			2.3E+01	EPI	1.5E+00	PHYSPROP	8.8E+03	PHYSPROP	1.7E-02	3.9E-01	9.4E-01	4.3E-03	EPI
Diisopropyl Methylphosphonate	1445-75-6	1.8E+02	PHYSPROP	1.8E-03	4.4E-05	EPI	2.3E-01	PHYSPROP	-2.4E+01	EPI	9.8E-01	ATSDR Profile	3.4E-02	6.6E-06	EPA WATER9			4.2E+01	EPI	1.0E+00	PHYSPROP	1.5E+03	PHYSPROP	3.8E-03	1.1E+00	2.6E+00	7.4E-04	EPI
Dimethipin	55290-64-7	2.1E+02	PHYSPROP	9.4E-10	2.3E-11	EPI	3.8E-07	PHYSPROP	1.7E+02	PHYSPROP			5.4E-02	6.3E-06	EPA WATER9			1.0E+01	EPI	-1.7E-01	PHYSPROP	4.6E+03	PHYSPROP	4.5E-04	1.6E+00	3.8E+00	8.0E-05	EPI
Dimethoate	60-51-5	2.3E+02	PHYSPROP	9.9E-09	2.4E-10	EPI	1.9E-05	PHYSPROP	5.2E+01	PHYSPROP	1.3E+00	CRC89	2.6E-02	6.7E-06	EPA WATER9			1.3E+01	EPI	7.8E-01	PHYSPROP	2.3E+04	PHYSPROP	1.6E-03	2.0E+00	4.9E+00	2.7E-04	EPI
Dimethoxybenzidine, 3,3'-	119-90-4	2.4E+02	PHYSPROP	1.9E-09	4.7E-11	PHYSPROP	1.3E-07	PHYSPROP	1.4E+02	PHYSPROP			4.9E-02	5.7E-06	EPA WATER9			5.1E+02	EPI	1.8E+00	PHYSPROP	6.0E+01	PHYSPROP	6.4E-03	2.5E+00	5.9E+00	1.1E-03	EPI
Dimethyl methylphosphonate	756-79-6	1.2E+02	PHYSPROP	5.6E-06	1.4E-07	PHYSPROP	8.3E-01	PHYSPROP	-4.8E+01	EPI	1.2E+00	CRC89	6.7E-02	9.2E-06	EPA WATER9			5.4E+00	EPI	-6.1E-01	PHYSPROP	1.0E+06	PHYSPROP	5.3E-04	5.2E-01	1.2E+00	1.2E-04	EPI
Dimethylamino azobenzene [p-]	60-11-7	2.3E+02	PHYSPROP	1.6E-08	4.0E-10	PHYSPROP	7.0E-08	EPI	1.2E+02	PHYSPROP			5.1E-02	6.0E-06	EPA WATER9			2.0E+03	EPI	4.6E+00	PHYSPROP	2.3E-01	PHYSPROP	5.4E-01	1.9E+00	4.6E+00	9.4E-02	EPI
Dimethylaniline HCl, 2,4-	21436-96-4	1.2E+02	PHYSPROP	9.5E-05	2.3E-06	PHYSPROP	1.8E-01	PHYSPROP	1.6E+02	EPI			7.8E-02	9.1E-06	EPA WATER9			3.5E+02	EPI	2.2E+00	PHYSPROP	3.7E+03	PHYSPROP	8.6E-05	5.0E-01	1.2E+00	2.0E-05	EPI
Dimethylaniline, 2,4-	95-68-1	1.2E+02	PHYSPROP	1.0E-04	2.5E-06	PHYSPROP	1.3E-01	PHYSPROP	-1.4E+01	PHYSPROP	9.7E-01	CRC89	6.3E-02	8.4E-06	EPA WATER9			1.8E+02	EPI	1.7E+00	PHYSPROP	6.1E+03	PHYSPROP	1.8E-02	5.0E-01	1.2E+00	4.3E-03	EPI
Dimethylaniline, N,N-	121-69-7	1.2E+02	PHYSPROP	2.3E-03	5.7E-05	EPI	7.0E-01	PHYSPROP	2.5E+00	PHYSPROP	9.6E-01	CRC89	6.3E-02	8.3E-06	EPA WATER9			7.9E+01	EPI	2.3E+00	PHYSPROP	1.5E+03	PHYSPROP	4.7E-02	5.0E-01	1.2E+00	1.1E-02	EPI
Dimethylbenzidine, 3,3'-	119-93-7	2.1E+02	PHYSPROP	2.6E-09	6.3E-11	PHYSPROP	6.9E-07	PHYSPROP	1.3E+02	PHYSPROP			5.3E-02	6.2E-06	EPA WATER9			3.2E+03	EPI	2.3E+00	PHYSPROP	1.3E+03	PHYSPROP	2.0E-02	1.6E+00	3.9E+00	3.6E-03	EPI
Dimethylformamide	68-12-2	7.3E+01	PHYSPROP	3.0E-06	7.4E-08	PHYSPROP	3.9E+00	PHYSPROP	-6.0E+01	PHYSPROP	9.4E-01	CRC89	9.7E-02	1.1E-05	EPA WATER9			1.0E+00	EPI	-1.0E+00	PHYSPROP	1.0E+06	PHYSPROP	4.3E-04	2.7E-01	6.5E-01	1.3E-04	EPI
Dimethylhydrazine, 1,1-	57-14-7	6.0E+01	PHYSPROP	5.3E-04	1.3E-05	PHYSPROP	1.6E+02	PHYSPROP	-5.8E+01	PHYSPROP	7.9E-01	CRC89	1.0E-01	1.1E-05	EPA WATER9			1.2E+01	EPI	-1.2E+00	PHYSPROP	1.0E+06	PHYSPROP	2.2E-04	2.3E-01	5.5E-01	7.3E-05	RAGSE
Dimethylhydrazine, 1,2-	540-73-8	6.0E+01	PHYSPROP	2.8E-06	7.0E-08	PHYSPROP	7.0E+01	PHYSPROP	-9.0E+00	PHYSPROP	8.3E-01	CRC89	1.1E-01	1.2E-05	EPA WATER9			1.5E+01	EPI	-5.4E-01	PHYSPROP	1.0E+06	PHYSPROP	9.5E-04	2.3E-01	5.5E-01	3.2E-04	EPI
Dimethylphenol, 2,4-	105-67-9	1.2E+02	PHYSPROP	3.9E-05	9.5E-07	PHYSPROP	1.0E-01	PHYSPROP	2.5E+01	PHYSPROP	9.7E-01	CRC89	6.2E-02	8.3E-06	EPA WATER9			4.9E+02	EPI	2.3E+00	PHYSPROP	7.9E+03	PHYSPROP	4.6E-02	5.1E-01	1.2E+00	1.1E-02	EPI

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	HLC (atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	KPREF
Dimethylphenol, 2,6-	576-26-1	1.2E+02	PHYSPROP	2.7E-04	6.7E-06	PHYSPROP	1.7E-01	EPI	4.6E+01	PHYSPROP			7.7E-02	9.0E-06	EPA WATER9			5.0E+02	EPI	2.4E+00	PHYSPROP	6.1E+03	PHYSPROP	5.1E-02	5.1E-01	1.2E+00	1.2E-02	EPI
Dimethylphenol, 3,4-	95-65-8	1.2E+02	PHYSPROP	1.7E-05	4.2E-07	PHYSPROP	3.6E-02	EPI	6.1E+01	PHYSPROP	9.8E-01	CRC89	6.3E-02	8.4E-06	EPA WATER9			4.9E+02	EPI	2.2E+00	PHYSPROP	4.8E+03	PHYSPROP	4.2E-02	5.1E-01	1.2E+00	9.8E-03	EPI
Dimethylvinylchloride	513-37-1	9.1E+01	PHYSPROP	4.5E+00	1.1E-01	PHYSPROP	2.1E+02	PHYSPROP	-1.0E+02	EPI	9.2E-01	CRC89	8.1E-02	9.7E-06	EPA WATER9			6.1E+01	EPI	2.6E+00	PHYSPROP	1.0E+03	PHYSPROP	9.3E-02	3.4E-01	8.1E-01	2.5E-02	EPI
Dinitro-o-cresol, 4,6-	534-52-1	2.0E+02	PHYSPROP	5.7E-05	1.4E-06	PHYSPROP	1.2E-04	PHYSPROP	8.7E+01	PHYSPROP			5.6E-02	6.5E-06	EPA WATER9			7.5E+02	EPI	2.1E+00	PHYSPROP	2.0E+02	PHYSPROP	1.7E-02	1.4E+00	3.2E+00	3.2E-03	EPI
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	2.7E+02	PHYSPROP	2.3E-06	5.5E-08	PHYSPROP	4.2E-08	PHYSPROP	1.1E+02	PHYSPROP			4.6E-02	5.4E-06	EPA WATER9			1.7E+04	EPI	4.1E+00	PHYSPROP	1.5E+01	PHYSPROP	1.7E-01	3.3E+00	7.8E+00	2.8E-02	EPI
Dinitrobenzene, 1,2-	528-29-0	1.7E+02	PHYSPROP	2.2E-06	5.3E-08	EPI	4.6E-05	EPI	1.2E+02	PHYSPROP	1.3E+00	CRC89	4.5E-02	8.3E-06	EPA WATER9			3.6E+02	EPI	1.7E+00	PHYSPROP	1.3E+02	PHYSPROP	1.2E-02	9.2E-01	2.2E+00	2.4E-03	EPI
Dinitrobenzene, 1,3-	99-65-0	1.7E+02	PHYSPROP	2.0E-06	4.9E-08	PHYSPROP	9.0E-04	EPI	9.0E+01	PHYSPROP	1.6E+00	CRC89	4.8E-02	9.2E-06	EPA WATER9			3.5E+02	EPI	1.5E+00	PHYSPROP	5.3E+02	PHYSPROP	8.7E-03	9.2E-01	2.2E+00	1.7E-03	EPI
Dinitrobenzene, 1,4-	100-25-4	1.7E+02	PHYSPROP	3.4E-06	8.4E-08	PHYSPROP	2.6E-05	PHYSPROP	1.7E+02	PHYSPROP	1.6E+00	CRC89	4.9E-02	9.4E-06	EPA WATER9			3.5E+02	EPI	1.5E+00	PHYSPROP	6.9E+01	PHYSPROP	8.3E-03	9.2E-01	2.2E+00	1.7E-03	EPI
Dinitrophenol, 2,4-	51-28-5	1.8E+02	PHYSPROP	3.5E-06	8.6E-08	PHYSPROP	3.9E-04	PHYSPROP	1.1E+02	PHYSPROP	1.7E+00	CRC89	4.1E-02	9.1E-06	EPA WATER9			4.6E+02	EPI	1.7E+00	PHYSPROP	2.8E+03	PHYSPROP	9.8E-03	1.1E+00	2.7E+00	1.9E-03	EPI
Dinitrotoluene Mixture, 2,4/2,6-	NA	1.8E+02	EPI	1.6E-05	4.0E-07	EPI	2.2E-03	EPI	6.0E+01	EPI			5.9E-02	6.9E-06	EPA WATER9			5.9E+02	EPI	2.2E+00	EPI	2.7E+02	EPI	2.2E-02	1.1E+00	2.6E+00	4.2E-03	EPI
Dinitrotoluene, 2,4-	121-14-2	1.8E+02	PHYSPROP	2.2E-06	5.4E-08	PHYSPROP	1.5E-04	PHYSPROP	7.1E+01	PHYSPROP	1.3E+00	CRC89	3.8E-02	7.9E-06	EPA WATER9			5.8E+02	EPI	2.0E+00	PHYSPROP	2.0E+02	PHYSPROP	1.6E-02	1.1E+00	2.6E+00	3.1E-03	EPI
Dinitrotoluene, 2,6-	606-20-2	1.8E+02	PHYSPROP	3.1E-05	7.5E-07	EPI	5.7E-04	PHYSPROP	6.6E+01	PHYSPROP	1.3E+00	CRC89	3.7E-02	7.8E-06	EPA WATER9			5.9E+02	EPI	2.1E+00	PHYSPROP	1.8E+02	PHYSPROP	1.9E-02	1.1E+00	2.6E+00	3.7E-03	EPI
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	2.0E+02	PHYSPROP	1.3E-09	3.3E-11	PHYSPROP	1.1E-05	PHYSPROP	1.7E+02	PHYSPROP			5.6E-02	6.6E-06	EPA WATER9			2.8E+02	EPI	1.8E+00	PHYSPROP	1.2E+03	PHYSPROP	1.1E-02	1.3E+00	3.2E+00	2.0E-03	EPI
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	2.0E+02	PHYSPROP	1.3E-09	3.3E-11	PHYSPROP	1.1E-05	PHYSPROP	1.7E+02	PHYSPROP			5.6E-02	6.6E-06	EPA WATER9			2.8E+02	EPI	1.8E+00	PHYSPROP	1.2E+03	PHYSPROP	1.1E-02	1.3E+00	3.2E+00	2.0E-03	EPI
Dinitrotoluene, Technical grade	25321-14-6	5.5E+02	PHYSPROP	3.8E-06	9.3E-08	PHYSPROP	4.0E-04	PHYSPROP	6.0E+01	EPI			2.8E-02	3.3E-06	EPA WATER9			5.9E+02	EPI	2.2E+00	PHYSPROP	2.7E+02	PHYSPROP	3.7E-02	1.2E+02	2.9E+02	4.2E-03	EPI
Dinoseb	88-85-7	2.4E+02	PHYSPROP	1.9E-05	4.6E-07	EPI	7.5E-05	PHYSPROP	4.0E+01	PHYSPROP	1.3E+00	CRC89	2.5E-02	6.5E-06	EPA WATER9			4.3E+03	EPI	3.6E+00	PHYSPROP	5.2E+01	PHYSPROP	9.7E-02	2.3E+00	5.6E+00	1.6E-02	EPI
Dioxane, 1,4-	123-91-1	8.8E+01	PHYSPROP	2.0E-04	4.8E-06	PHYSPROP	3.8E+01	PHYSPROP	1.2E+01	PHYSPROP	1.0E+00	CRC89	8.7E-02	1.1E-05	EPA WATER9			2.6E+00	EPI	-2.7E-01	PHYSPROP	1.0E+06	PHYSPROP	1.2E-03	3.3E-01	7.9E-01	3.3E-04	EPI
Dioxins																												
~Hexachlorodibenzo-p-dioxin, Mixture	NA	3.9E+02	EPI	2.3E-04	5.7E-06	EPI	4.4E-11	EPI	2.5E+02	EPI			3.6E-02	4.2E-06	EPA WATER9			7.0E+05	EPI	8.2E+00	EPI	4.0E-06	EPI	2.2E+01	1.6E+01	7.5E+01	2.9E+00	EPI
~TCDD, 2,3,7,8-	1746-01-6	3.2E+02	PHYSPROP	2.0E-03	5.0E-05	EPI	1.5E-09	PHYSPROP	3.1E+02	PHYSPROP	1.8E+00	PubChem	4.7E-02	6.8E-06	EPA WATER9			2.5E+05	EPI	6.8E+00	PHYSPROP	2.0E-04	PHYSPROP	5.6E+00	6.7E+00	2.9E+01	8.1E-01	EPI
Diphenamid	957-51-7	2.4E+02	PHYSPROP	1.5E-09	3.6E-11	EPI	3.0E-08	PHYSPROP	1.4E+02	PHYSPROP	1.2E+00	CRC89	2.4E-02	6.2E-06	EPA WATER9			4.8E+03	EPI	2.2E+00	PHYSPROP	2.6E+02	PHYSPROP	3.3E-02	2.3E+00	5.5E+00	5.6E-03	EPI
Diphenyl Sulfone	127-63-9	2.2E+02	PHYSPROP	1.0E-05	2.5E-07	PHYSPROP	1.5E-05	PHYSPROP	1.3E+02	PHYSPROP	1.3E+00	CRC89	2.7E-02	6.9E-06	EPA WATER9			1.1E+03	EPI	2.4E+00	PHYSPROP	3.1E+02	PHYSPROP	2.1E-02	1.8E+00	4.2E+00	3.7E-03	EPI
Diphenylamine	122-39-4	1.7E+02	PHYSPROP	1.1E-04	2.7E-06	EPI	6.7E-04	PHYSPROP	5.3E+01	PHYSPROP	1.2E+00	CRC89	4.2E-02	7.6E-06	EPA WATER9			8.3E+02	EPI	3.5E+00	PHYSPROP	5.3E+01	PHYSPROP	1.9E-01	9.3E-01	2.2E+00	3.7E-02	EPI
Diphenylhydrazine, 1,2-	122-66-7	1.8E+02	PHYSPROP	2.0E-05	4.8E-07	EPI	4.4E-04	EPI	1.3E+02	PHYSPROP	1.2E+00	CRC89	3.4E-02	7.2E-06	EPA WATER9			1.5E+03	EPI	2.9E+00	PHYSPROP	2.2E+02	PHYSPROP	6.8E-02	1.1E+00	2.7E+00	1.3E-02	EPI
Diquat	85-00-7	3.4E+02	PHYSPROP	5.8E-12	1.4E-13	PHYSPROP	1.8E-06	PHYSPROP	3.4E+02	PHYSPROP	1.2E+00	CRC89	2.1E-02	5.2E-06	EPA WATER9			9.3E+03	EPI	-4.6E+00	PHYSPROP	7.1E+05	PHYSPROP	1.7E-06	8.9E+00	2.1E+01	2.4E-07	EPI
Direct Black 38	1937-37-7	7.8E+02	PHYSPROP	3.4E-38	8.2E-40	PHYSPROP	1.5E-36	PHYSPROP	3.5E+02	EPI			2.2E-02	2.6E-06	EPA WATER9			2.4E+08	EPI	4.9E+00	PHYSPROP	3.0E+03	PHYSPROP	2.2E-03	2.4E+03	5.9E+03	2.1E-04	EPI
Direct Blue 6	2602-46-2	9.3E+02	PHYSPROP	3.7E-42	9.1E-44	PHYSPROP	9.5E-39	PHYSPROP	3.5E+02	EPI			2.0E-02	2.3E-06	EPA WATER9			7.9E+08	EPI	2.6E+00	PHYSPROP	1.4E-04	PHYSPROP	2.0E-08	1.8E+04	4.2E+04	1.7E-09	EPI
Direct Brown 95	16071-86-6	7.6E+02	PHYSPROP				1.4E-41	PHYSPROP	3.5E+02	EPI			2.3E-02	2.7E-06	EPA WATER9			7.0E+06	EPI	-6.5E+00	PHYSPROP	1.0E+06	PHYSPROP	4.1E-11	1.9E+03	4.6E+03	3.9E-12	EPI
Disulfoton	298-04-4	2.7E+02	PHYSPROP	8.8E-05	2.2E-06	EPI	9.8E-05	PHYSPROP	-2.5E+01	PHYSPROP	1.1E+00	CRC89	2.3E-02	5.7E-06	EPA WATER9			8.4E+02	EPI	4.0E+00	PHYSPROP	1.6E+01	PHYSPROP	1.4E-01	3.6E+00	8.7E+00	2.1E-02	EPI
Dithiane, 1,4-	505-29-3	1.2E+02	PHYSPROP	1.7E-03	4.2E-05	EPI	8.0E-02	PHYSPROP	1.1E+02	PHYSPROP	1.1E+00	ChemNet	6.8E-02	9.3E-06	EPA WATER9			1.5E+02	EPI	7.7E-01	PHYSPROP	3.0E+03	PHYSPROP	4.6E-03	5.0E-01	1.2E+00	1.1E-03	EPI
Diuron	330-54-1	2.3E+02	PHYSPROP	2.1E-08	5.0E-10	EPI	6.9E-08	PHYSPROP	1.6E+02	PHYSPROP			5.0E-02	5.9E-06	EPA WATER9			1.1E+02	EPI	2.7E+00	PHYSPROP	4.2E+01	PHYSPROP	2.7E-02	2.1E+00	5.1E+00	4.7E-03	EPI
Dodine	2439-10-3	2.9E+02	PHYSPROP	3.7E-09	9.0E-11	EPI	1.5E-07	PHYSPROP	1.4E+02	PHYSPROP			4.4E-02	5.1E-06	EPA WATER9			2.5E+03	EPI	1.2E+00	PHYSPROP	6.3E+02	PHYSPROP	1.4E-03	4.3E+00	1.0E+01	2.2E-04	EPI
EPTC	759-94-4	1.9E+02	PHYSPROP	6.5E-04	1.6E-05	EPI	2.4E-02	PHYSPROP	6.1E+01	EPI	9.5E-01	CRC89	2.9E-02	6.4E-06	EPA WATER9			1.6E+02	EPI	3.2E+00	PHYSPROP	3.8E+02	PHYSPROP	9.7E-02	1.2E+00	2.9E+00	1.8E-02	EPI
Endosulfan	115-29-7	4.1E+02	PHYSPROP	2.7E-03	6.5E-05	PHYSPROP	1.7E-07	PHYSPROP	1.1E+02	PHYSPROP	1.7E+00	CRC89	2.2E-02	5.8E-06	EPA WATER9			6.8E+03	EPI	3.8E+00	PHYSPROP	3.3E-01	PHYSPROP	2.2E-02	2.0E+01	4.8E+01	2.9E-03	EPI
Endothall	145-73-3	1.9E+02	PHYSPROP	1.6E-14	3.9E-16	EPI	1.6E-10	PHYSPROP	1.4E+02	PHYSPROP	1.4E+00	CRC89	3.7E-02	8.2E-06	EPA WATER9			1.9E+01	EPI	1.9E+00	PHYSPROP	1.0E+05	PHYSPROP	1.4E-02	1.2E+00	2.8E+00	2.6E-03	EPI
Endrin	72-20-8	3.8E+02	PHYSPROP	2.6E-04	6.4E-06	PHYSPROP	3.0E-06	PHYSPROP	2.3E+02	PHYSPROP			3.6E-02	4.2E-06	EPA WATER9			2.0E+04	EPI	5.2E+00	PHYSPROP	2.5E-01	PHYSPROP	2.4E-01	1.4E+01	3.4E+01	3.3E-02	EPI
Epichlorohydrin	106-89-8	9.3E+01	PHYSPROP	1.2E-03	3.0E-05	EPI	1.6E+01	PHYSPROP	-5.7E+01	PHYSPROP	1.2E+00	PERRY	8.9E-02	1.1E-05	EPA WATER9			9.9E+00	EPI	4.5E-01	PHYSPROP	6.6E+04	PHYSPROP	3.5E-03	3.5E-01	8.3E-01	9.4E-04	EPI
Epoxybutane, 1,2-	106-88-7	7.2E+01	PHYSPROP	7.4E-03	1.8E-04	EPI	1.8E+02	PHYSPROP	-1.5E+02	PHYSPROP	8.3E-01	CRC89	9.3E-02	1.0E-05	EPA WATER9			9.9E+00	EPI	8.6E-01	PHYSPROP	9.5E+04	PHYSPROP	7.5E-03	2.7E-01	6.4E-01	2.3E-03	EPI
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	1.2E+02	PHYSPROP	6.7E-10	1.7E-11	PHYSPROP	2.5E-01	PHYSPROP	-1.5E+01	EPI			7.8E-02	9.1E-06	EPA WATER9			1.0E+00	EPI	-1.2E+00	PHYSPROP	1.0E+06	PHYSPROP	7.4E-04	5.0E-01	1.2E+00	1.7E-04	RAGSE
Ethephon	16672-87-0	1.4E+02	PHYSPROP	2.3E-10	5.7E-12	PHYSPROP	9.8E-08	PHYSPROP	7.4E+01	PHYSPROP	1.2E+00	CRC89	5.5E-02	8.6E-06	EPA WATER9			5.0E+00	EPI	-2.2E-01	PHYSPROP	1.0E+06	PHYSPROP	8.0E-04	6.8E-01	1.6E+00	1.7E-04	EPI
Ethion	563-12-2	3.8E+02	PHYSPROP	1.6E-05	3.8E-07	EPI	1.5E-06	PHYSPROP	-1.3E+01	PHYSPROP	1.2E+00	CRC89	1.9E-02	4.8E-06	EPA WATER9			8.8E+02	EPI	5.1E+00	PHYSPROP	2.0E+00	PHYSPROP	1.9E-01	1.5E+01	3.6E+01	2.6E-02	EPI
Ethoxyethanol Acetate, 2-	111-15-9	1.3E+02	PHYSPROP	1.3E-04	3.2E-06	PHYSPROP	2.0E+00	PHYSPROP	-6.2E+01	PHYSPROP	9.7E-01	CRC89	5.7E-02	8.0E-06	EPA WATER9			4.5E+00	EPI	5.9E-01	PHYSPROP	1.9E+05	PHYSPROP	3.1E-03	5.8E-01	1.4E+00	7.0E-04	EPI
Ethoxyethanol, 2-	110-80-5	9.0E+01	PHYSPROP	1.9E-05	4.7E-07	PHYSPROP	5.3E+00	PHYSPROP	-7.0E+01	PHYSPROP	9.3E-01	CRC89	8.2E-02	9.7E-06	EPA WATER9			1.0E+00	EPI	-3.2E-01	PHYSPROP	1.0E+06	PHYSPROP	1.1E-03	3.4E-01	8.1E-01	3.0E-04	EPI
Ethyl Acetate	141-78-6	8.8E+01	PHYSPROP	5.5E-03	1.3E-04	PHYSPROP	9.3E+01	PHYSPROP	-8.4E+01	PHYSPROP	9.0E-01	CRC89	8.2E-02	9.7E-06	EPA WATER9			5.6E+00	EPI	7.3E-01	PHYSPROP	8.0E+04	PHYSPROP	5.5E-03	3.3E-01	7.9E-01	1.5E-03	EPI
Ethyl Acrylate	140-88-5	1.0E+02	PHYSPROP	1.4E-02	3.4E-04	EPI	3.9E+01	PHYSPROP	-7.1E+01	PHYSPROP	9.2E-01	CRC89	7.5E-02	9.1E-06	EPA WATER9			1.1E+01	EPI	1.3E+00	PHYSPROP	1.5E+04	PHYSPROP	1.2E-02	3.8E-01	9.2E-01	3.2E-03	EPI
Ethyl Chloride (Chloroethane)	75-00-3	6.5E+01	PHYSPROP	4.5E-01	1.1E-02	PHYSPROP	1.0E+03	PHYSPROP	-1.4E+02	PHYSPROP	8.9E-01	CRC89	1.0E-01	1.2E-05	EPA WATER9			2.2E+01	EPI	1.4E+00	PHYSPROP	6.7E+03	PHYSPROP	1.9E-02	2.4E-01	5.8E-01	6.1E-03	EPI
Ethyl Ether	60-29-7	7.4E+01	PHYSPROP	5.0E-02	1.2E-03	PHYSPROP	5.4E+02	PHYSPROP	-1.2E+02	PHYSPROP	7.1E-01	CRC89	8.5E-02	9.4E-06	EPA WATER9			9.7E+00	EPI	8.9E-01	PHYSPROP	6.0E+04	PHYSPROP	7.8E-03	2.7E-01	6.6E-01	2.4E-03	EPI
Ethyl Methacrylate	97-63-2	1.1E+02	PHYSPROP	2.3E-02	5.7E-04	EPI	2.1E+01	PHYSPROP	-7.5E+01	PHYSPROP	9.1E-01	CRC89	6.5E-02	8.4E-06	EPA WATER9			1.7E+01	EPI	1.9E+00	PHYSPROP	5.4E+03	PHYSPROP	2.9E-02	4.6E-01	1.1E+00	7.0E-03	EPI
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	3.2E+02	PHYSPROP	1.8E-05	4.4E-07	EPI	9.5E-07	PHYSPROP	3.6E+01	PHYSPROP	1.3E+00	CRC89	2.2E-02	5.5E-06	EPA WATER9			1.5E+04	EPI	4.8E+00	PHYSPROP	3.1E+00	PHYSPROP	2.5E-01	6.8E+00	1.6E+01	3.6E-02	EPI
Ethylbenzene	100-41-4	1.1E+02	PHYSPROP	3.2E-01	7.9E-03	PHYSPROP	9.6E+00	PHYSPROP	-9.5E+01	PHYSPROP	8.6E-01	CRC89	6.8E-02	8.5E-06	EPA WATER9			4.5E+02	EPI	3.2E+00	PHYSPROP	1.7E+02	PHYSPROP	2.0E-01	4.1E-01	9.9E-01	4.9E-02	EPI
Ethylene Cyanohydrin	109-78-4	7.1E+01	PHYSPROP	3.1E-07	7.5E-09	EPI	8.0E-02	PHYSPROP	-4.6E+01	PHYSPROP	1.0E+00	CRC89	1.0E-01	1.2E-05	EPA WATER9			1.0E+00	EPI	-9.4E-01	PHYSPROP	1.0E+06	PHYSPROP	4.8E-04	2.6E-01	6.3E-01	1.5E-04	EPI
Ethylene Diamine	107-15-3	6.0E+01	PHYSPROP	7.1E-08	1.7E-09	PHYSPROP	1.2E+01	PHYSPROP	1.1E+01	PHYSPROP	9.0E-01	CRC89	1.1E-01	1.2E-05	EPA WATER9			1.5E+01	EPI	-2.0E+00	PHYSPROP	1.0E+06	PHYSPROP	9.5E-05	2.3E-01	5.5E-01	3.2E-05	EPI
Ethylene Glycol	107-21-1	6.2E+01	PHYSPROP	2.5E-06	6.0E-08	PHYSPROP	9.2E-02	PHYSPROP	-1.3E+01	PHYSPROP	1.1E+00	CRC89	1.2E-01	1.4E-05	EPA WATER9			1.0E+00	EPI	-1.4E+00	PHYSPROP	1.0E+06	PHYSPROP	2.7E-04	2.3E-01	5.6E-01	8.8E-05	EPI
Ethylene Glycol Monobutyl Ether	111-76-2	1.2E+02	PHYSPROP	6.5E-05	1.6E-06	PHYSPROP	8.8E-01	PHYSPROP	-7.5E+01	PHYSPROP	9.0E-01	CRC89	6.3E-02	8.1E-06	EPA WATER9			2.8E+00	EPI	8.3E-01	PHYSPROP	1.0E+06	PHYSPROP	5.1E-03	4.8E-01	1.2E+00	1.2E-03	EPI
Ethylene Oxide	75-21-8	4.4E+01	PHYSPROP	6.1E-03	1.5E-04	PHYSPROP	1.3E+03	PHYSPROP	-1.1E+02	PHYSPROP	8.8E-01	CRC89	1.3E-01	1.5E-05	EPA WATER9			3.2E+00	EPI	-3.0E-01	PHYSPROP	1.0E+06	PHYSPROP	1.4E-03	1.9E-01	4.5E-01	5.6E-04	EPI
Ethylene Thiourea	96-45-7	1.0E+02	PHYSPROP	5.6E-10	1.4E-11	PHYSPROP	2.0E-06	PHYSPROP	2.0E+02	PHYSPROP			8.7E-02	1.0E-05	EPA WATER9			1.3E+01	EPI	-6.6E-01	PHYSPROP	2.0E+04	PHYSPROP	5.9E-04	3.9E-01	9.4E-01	1.5E-04	EPI
Ethyleneimine	151-56-4	4.3E+01	PHYSPROP	4.9E-04	1.2E-05	EPI	2.1E+02	PHYSPROP	-7.8E+01	PHYSPROP	8.3E-01	CRC89	1.3E-01	1.4E-05	EPA WATER9			9.0E+00	EPI	-2.8E-01	PHYSPROP	1.0E+06	PHYSPROP	1.5E-03	1.8E-01	4.4E-01	5.8E-04	EPI
Ethylphthalyl Ethyl Glycolate	84-72-0	2.8E+02	PHYSPROP	2.7E-07	6.6E-09	PHYSPROP	2.2E-04	PHYSPROP	2.3E+01	EPI			4.4E-02	5.2E-06	EPA WATER9			1.0E+03	EPI	2.2E+00	PHYSPROP	2.2E+02	PHYSPROP	7.7E-03	3.9E+00	9.4E+00	1.2E-03	EPI
Fenamiphos	22224-92-6	3.0E+02	PHYSPROP	4.9E-08	1.2E-09	EPI	1.0E-06	PHYSPROP	4.9E+01	PHYSPROP	1.2E+00	CRC89	2.1E-02	5.4E-06	EPA WATER9			4.0E+02	EPI	3.2E+00	PHYSPROP	3.3E+02	PHYSPROP	2.9E-02	5.3E+00	1.3E+01	4.4E-03	EPI
Fenpropathrin	39515-41-8	3.5E+02	PHYSPROP	3.1E-04	7.6E-06	EPI	5.5E-06	PHYSPROP	4.7E+01	PHYSPROP			3.8E-02	4.5E-06	EPA WATER9			2.2E+04	EPI	5.7E+00	PHYSPROP	3.3E-01	PHYSPROP	1.2E+00	9.5E+00	3.7E+01	1.7E-01	EPI
Fenvalerate	51630-58-1	4.2E+02	PHYSPROP	1.4E-06	3.5E-08	EPI	1.5E-09	PHYSPROP	4.0E+01	PHYSPROP	1.2E+00	CRC89	1.8E-02	4.4E-06	EPA WATER9			3.2E+05	EPI	6.2E+00	PHYSPROP	2.4E-02	PHYSPROP	7.4E-01	2.4E+01	9.1E+01	9.4E-02	EPI
Fluometuron	2164-17-2	2.3E+02	PHYSPROP	1.1E-07	2.6E-09	EPI	9.4E-07	PHYSPROP	1.6E+02	PHYSPROP			5.0E-02	5.9E-06	EPA WATER9			2.9E+02	EPI	2.4E+00	PHYSPROP	1.1E+02	PHYSPROP	1.9E-02	2.1E+00	5.0E+00	3.2E-03	EPI
Fluoride	16984-48-8	3.8E+01	EPI						-2.2E+02	EPI						1.5E+02	BAES					1.7E+00	EPI	2.4E-03	1.7E-01	4.1E-01	1.0E-03	RAGSE
Fluorine (Soluble Fluoride)	7782-41-4	3.8E+01	PHYSPROP						-2.2E+02	PHYSPROP	1.6E+00	CRC89				1.5E+02	BAES					1.7E+00	PHYSPROP	2.4E-03	1.7E-01	4.1E-01	1.0E-03	RAGSE
Fluridone	59756-60-4	3.3E+02	PHYSPROP	3.3E-07	8.1E-09	EPI	9.8E-08	PHYSPROP	1.5E+02	PHYSPROP			4.0E-02	4.7E-06	EPA WATER9			5.7E+04	EPI	3.2E+00	PHYSPROP	1.2E+01	PHYSPROP	2.0E-02	7.3E+00	1.8E+01	2.8E-03	EPI
Flurprimidol	56425-91-3	3.1E+02	PHYSPROP	5.4E-08	1.3E-09	EPI	3.6E-07	PHYSPROP	9.5E+01	PHYSPROP			4.1E-02	4.8E-06	EPA WATER9			2.2E+03	EPI	3.3E+00	PHYSPROP	1.1E+02	PHYSPROP	3.1E-02	5.9E+00	1.4E+01	4.6E-03	EPI
Flusilazole	85509-19-9	3.2E+02	PHYSPROP	9.2E-08	2.3E-09	PHYSPROP	2.9E-07	PHYSPROP	5.4E+01	PHYSPROP			4.1E-02	4.8E-06	EPA WATER9			8.1E+04	EPI	3.7E+00	PHYSPROP	5.4E+01	PHYSPROP	5.2E-02	6.1E+00	1.5E+01	7.7E-03	EPI
Flutolanil	66332-96-5	3.2E+02	PHYSPROP	1.3E-07	3.2E-09	EPI	4.9E-08	PHYSPROP	1.0E+02	PHYSPROP			4.0E-02	4.7E-06	EPA WATER9			2.6E+03	EPI	3.7E+00	PHYSPROP	6.5E+00	PHYSPROP	4.8E-02	6.8E+00	1.6E+01	6.9E-03	EPI
Fluvalinate	69409-94-5	5.0E+02	PHYSPROP	5.9E-07	1.5E-08	PHYSPROP	1.0E-07	PHYSPROP	1.6E+02	EPI			3.0E-02	3.5E-06	EPA WATER9			7.3E+05	EPI	6.8E+00	PHYSPROP	5.0E-03	PHYSPROP	6.8E-01	6.9E+01	2.7E+02	7.9E-02	EPI
Folpet	133-07-3	3.0E+02	PHYSPROP	3.1E-06	7.7E-08	EPI	1.6E-07	PHYSPROP	1.8E+02	EPI			4.3E-02	5.0E-06	EPA WATER9			1.8E+01	EPI	2.9E+00	PHYSPROP	8.0E-01	PHYSPROP	1.8E-02	4.8E+00	1.2E+01	2.7E-03	EPI
Fomesafen	72178-02-0	4.4E+02	PHYSPROP	3.1E-11	7.5E-13	PHYSPROP	7.5E-07	EPI	2.2E+02	PHYSPROP	1.3E+00	CRC89	1.9E-02	4.6E-06	EPA WATER9			1.5E+03	EPI	2.9E+00	PHYSPROP	5.0E+01	PHYSPROP	3.7E-03	3.0E+01	7.2E+01	4.6E-04	EPI
Fonofos	944-22-9	2.5E+02	PHYSPROP	2.9E-04	7.0E-06	EPI	3.4E-04	PHYSPROP	6.6E-01	EPI	1.2E+00	CRC89	2.4E-02	6.1E-06	EPA WATER9			8.6E+02	EPI	3.9E+00	PHYSPROP	1.6E+01	PHYSPROP	1.6E-01	2.5E+00	6.0E+00	2.7E-02	EPI
Formaldehyde	50-00-0	3.0E+01	PHYSPROP	1.4E-05	3.4E-07	PHYSPROP	3.9E+03	EPI	-9.2E+01	PHYSPROP	8.2E-01	CRC89	1.7E-01	1.7E-05	EPA WATER9			1.0E+00	EPI	3.5E-01	PHYSPROP	4.0E+05	PHYSPROP	3.8E-03	1.5E-01	3.7E-01	1.8E-03	EPI
Formic Acid	64-18-6	4.6E+01	PHYSPROP	6.8E-06	1.7E-07	PHYSPROP	4.3E+01	PHYSPROP	8.3E+00	PHYSPROP	1.2E+00	CRC89	1.5E-01	1.7E-05	EPA WATER9			1.0E+00	EPI	-5.4E-01	PHYSPROP	1.0E+06	PHYSPROP	9.9E-04	1.9E-01	4.6E-01	3.8E-04	EPI
Fosetyl-AL	39148-24-8	3.5E+02	PHYSPROP	1.3E-12	3.2E-14	PHYSPROP	7.5E-11	PHYSPROP	2.2E+02	PHYSPROP			3.8E-02	4.4E-06	EPA WATER9			6.5E+03	EPI	-2.4E+00	PHYSPROP	1.1E+05	PHYSPROP	3.0E-06	1.0E+01	2.4E+01	4.1E-07	EPI
Furans																												
~Dibenzofuran	132-64-9	1.7E+02	PHYSPROP	8.7E-03	2.1E-04	EPI	2.5E-03	PHYSPROP	8.7E+01	PHYSPROP	1.1E+00	CRC89	4.1E-02	7.4E-06	EPA WATER9			9.2E+03	EPI	4.1E+00	PHYSPROP	3.1E+00	PHYSPROP	4.9E-01	9.2E-01	2.2E+00	9.8E-02	EPI
~Furan	110-00-9	6.8E+01	PHYSPROP	2.2E-01	5.4E-03	EPI	6.0E+02	PHYSPROP	-8.6E+01	PHYSPROP	9.5E-01	CRC89	1.0E-01	1.2E-05	EPA WATER9			8.0E+01	EPI	1.3E+00	PHYSPROP	1.0E+04	PHYSPROP	1.6E-02	2.5E-01	6.1E-01	5.1E-03	EPI
~Tetrahydrofuran	109-99-9	7.2E+01	PHYSPROP	2.9E-03	7.1E-05	PHYSPROP	1.6E+02	PHYSPROP	-1.1E+02	PHYSPROP	8.8E-01	CRC89	9.5E-02	1.1E-05	EPA WATER9			1.1E+01	EPI	4.6E-01	PHYSPROP	1.0E+06	PHYSPROP	4.1E-03	2.7E-01	6.4E-01	1.3E-03	EPI
Furazolidone	67-45-8	2.3E+02	PHYSPROP	1.3E-09	3.3E-11	PHYSPROP	2.6E-06	PHYSPROP	2.6E+02	PHYSPROP			5.1E-02	6.0E-06	EPA WATER9			8.6E+02	EPI	-4.0E-02	PHYSPROP	4.0E+01	PHYSPROP	4.6E-04	1.9E+00	4.6E+00	8.0E-05	EPI
Furfural	98-01-1	9.6E+01	PHYSPROP	1.5E-04	3.8E-06	EPI	2.2E+00	PHYSPROP	-3.8E+01	PHYSPROP	1.2E+00	CRC89	8.5E-02	1.1E-05	EPA WATER9			6.1E+00	EPI	4.1E-01	PHYSPROP	7.4E+04	PHYSPROP	3.2E-03	3.6E-01	8.7E-01	8.5E-04	EPI
Furium	531-82-8	2.5E+02	EPI	5.4E-14	1.3E-15	EPI	8.8E-09	EPI	1.9E+02	EPI			4.7E-02	5.5E-06	EPA WATER9			5.8E+02	EPI	1.8E+00	EPI	4.2E+03	EPI	5.7E-03	2.8E+00	6.6E+00	9.4E-04	EPI
Furmecyclox	60568-05-0	2.5E+02	PHYSPROP	2.8E-07	6.9E-09	PHYSPROP	8.4E-05	PHYSPROP	3.3E+01	PHYSPROP			4.8E-02	5.6E-06	EPA WATER9			4.3E+02	EPI	4.4E+00	PHYSPROP	3.0E-01	PHYSPROP	3.0E-01	2.7E+00	6.4E+00	5.0E-02	EPI
Glufosinate, Ammonium	77182-82-2	2.0E+02	PHYSPROP	1.8E-12	4.4E-14	PHYSPROP	9.1E-12	PHYSPROP	2.2E+02	PHYSPROP			5.6E-02	6.5E-06	EPA WATER9			1.0E+01	EPI	-4.8E+00	PHYSPROP	1.4E+06	PHYSPROP	1.9E-07	1.4E+00	3.2E+00	3.4E-08	EPI
Glutaraldehyde	111-30-8	1.0E+02	PHYSPROP	1.3E-06	3.3E-08	PHYSPROP	6.0E-01	PHYSPROP	-3.0E+01	EPI			8.8E-02	1.0E-05	EPA WATER9			1.0E+00	EPI	-3.3E-01	PHYSPROP	2.2E+05	PHYSPROP	1.3E-03	3.8E-01	9.2E-01	3.3E-04	EPI
Glycidyl	765-34-4	7.2E+01	PHYSPROP	2.1E-05	5.1E-07	PHYSPROP	4.5E+01	PHYSPROP	-6.2E+01	PHYSPROP	1.1E+00	CRC89	1.1E-01	1.3E-05	EPA WATER9			1.0E+00	EPI	-1.2E-01	PHYSPROP	1.0E+06	PHYSPROP	1.7E-03	2.7E-01	6.4E-01	5.2E-04	EPI

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	HLC (atm-m³/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm³)	Density Ref	Dia (cm²/s)	Diw (cm²/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	KPREF
Glyphosate	1071-83-6	1.7E+02	PHYSPROP	8.6E-11	2.1E-12	EPI	9.8E-08	PHYSPROP	1.9E+02	PHYSPROP			6.2E-02	7.3E-06	EPA WATER9			2.1E+03	USDA ARS	-3.4E+00	PHYSPROP	1.1E+04	PHYSPROP	2.3E-07	9.3E-01	2.2E+00	4.5E-08	EPI
Guanidine	113-00-8	5.9E+01	PHYSPROP	9.6E-10	2.3E-11	PHYSPROP	2.2E+00	PHYSPROP	5.0E+01	PHYSPROP	1.6E+00	GuideChem	1.4E-01	1.7E-05	EPA WATER9			1.2E+01	EPI	-1.6E+00	PHYSPROP	1.8E+03	PHYSPROP	1.8E-04	2.3E-01	5.4E-01	6.0E-05	EPI
Guanidine Chloride	50-01-1	9.6E+01	PHYSPROP	8.9E-17	2.2E-18	PHYSPROP	1.8E-06	PHYSPROP	1.8E+02	PHYSPROP	1.4E+00	CRC89	9.2E-02	1.2E-05	EPA WATER9					-3.6E+00	PHYSPROP	1.0E+06	PHYSPROP	1.5E-07	3.6E-01	8.7E-01	3.9E-08	EPI
Haloxyfop, Methyl	69806-40-2	3.8E+02	PHYSPROP	1.3E-05	3.2E-07	EPI	6.0E-06	PHYSPROP	5.6E+01	PHYSPROP			3.6E-02	4.3E-06	EPA WATER9			5.5E+03	EPI	4.1E+00	PHYSPROP	9.3E+00	PHYSPROP	4.5E-02	1.3E+01	3.2E+01	6.0E-03	EPI
Heptachlor	76-44-8	3.7E+02	PHYSPROP	1.2E-02	2.9E-04	PHYSPROP	4.0E-04	PHYSPROP	9.6E+01	PHYSPROP	1.6E+00	CRC89	2.2E-02	5.7E-06	EPA WATER9			4.1E+04	EPI	6.1E+00	PHYSPROP	1.8E-01	PHYSPROP	1.1E+00	1.3E+01	5.0E+01	1.4E-01	EPI
Heptachlor Epoxide	1024-57-3	3.9E+02	PHYSPROP	8.6E-04	2.1E-05	PHYSPROP	2.0E-05	PHYSPROP	1.6E+02	PHYSPROP	1.9E+00	LookChem	2.4E-02	6.2E-06	EPA WATER9			1.0E+04	EPI	5.0E+00	PHYSPROP	2.0E-01	PHYSPROP	1.6E-01	1.6E+01	3.8E+01	2.1E-02	EPI
Hexabromobenzene	87-82-1	5.5E+02	PHYSPROP	1.1E-03	2.8E-05	PHYSPROP	1.6E-08	PHYSPROP	3.3E+02	PHYSPROP	3.0E+00	LookChem	2.5E-02	6.6E-06	EPA WATER9			2.8E+03	EPI	6.1E+00	PHYSPROP	1.6E-04	PHYSPROP	1.2E-01	1.3E+02	3.1E+02	1.4E-02	EPI
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	6.4E+02	OTHER				5.8E-06	IRIS					2.5E-02	3.0E-06	EPA WATER9							9.0E-04	IRIS		4.2E+02	1.0E+03		
Hexachlorobenzene	118-74-1	2.8E+02	PHYSPROP	7.0E-02	1.7E-03	PHYSPROP	1.8E-05	PHYSPROP	2.3E+02	PHYSPROP	2.0E+00	CRC89	2.9E-02	7.8E-06	EPA WATER9			6.2E+03	EPI	5.7E+00	PHYSPROP	6.2E-03	PHYSPROP	1.6E+00	4.1E+00	1.7E+01	2.5E-01	EPI
Hexachlorobutadiene	87-68-3	2.6E+02	PHYSPROP	4.2E-01	1.0E-02	PHYSPROP	2.2E-01	PHYSPROP	-2.1E+01	PHYSPROP	1.6E+00	CRC89	2.7E-02	7.0E-06	EPA WATER9			8.5E+02	EPI	4.8E+00	PHYSPROP	3.2E+00	PHYSPROP	5.0E-01	3.0E+00	7.3E+00	8.1E-02	EPI
Hexachlorocyclohexane, Alpha-	319-84-6	2.9E+02	PHYSPROP	2.7E-04	6.7E-06	PHYSPROP	3.5E-05	EPI	1.6E+02	PHYSPROP			4.3E-02	5.1E-06	EPA WATER9			2.8E+03	EPI	3.8E+00	PHYSPROP	2.0E+00	PHYSPROP	1.4E-01	4.5E+00	1.1E+01	2.1E-02	EPI
Hexachlorocyclohexane, Beta-	319-85-7	2.9E+02	PHYSPROP	1.8E-05	4.4E-07	PHYSPROP	3.6E-07	PHYSPROP	3.1E+02	PHYSPROP	1.9E+00	CRC89	2.8E-02	7.4E-06	EPA WATER9			2.8E+03	EPI	3.8E+00	PHYSPROP	2.4E-01	PHYSPROP	1.4E-01	4.5E+00	1.1E+01	2.1E-02	EPI
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	2.9E+02	PHYSPROP	2.1E-04	5.1E-06	PHYSPROP	4.2E-05	PHYSPROP	1.1E+02	PHYSPROP			4.3E-02	5.1E-06	EPA WATER9			2.8E+03	EPI	3.7E+00	PHYSPROP	7.3E+00	PHYSPROP	1.4E-01	4.5E+00	1.1E+01	2.1E-02	EPI
Hexachlorocyclohexane, Technical	608-73-1	2.9E+02	PHYSPROP	2.1E-04	5.1E-06	EPI	3.5E-05	EPI	1.1E+02	EPI			4.3E-02	5.1E-06	EPA WATER9			2.8E+03	EPI	4.1E+00	EPI	8.0E+00	PHYSPROP	1.4E-01	4.5E+00	1.1E+01	2.1E-02	EPI
Hexachlorocyclopentadiene	77-47-4	2.7E+02	PHYSPROP	1.1E+00	2.7E-02	PHYSPROP	6.0E-02	PHYSPROP	-9.0E+00	PHYSPROP	1.7E+00	CRC89	2.7E-02	7.2E-06	EPA WATER9			1.4E+03	EPI	5.0E+00	PHYSPROP	1.8E+00	PHYSPROP	6.5E-01	3.5E+00	1.4E+01	1.0E-01	EPI
Hexachloroethane	67-72-1	2.4E+02	PHYSPROP	1.6E-01	3.9E-03	PHYSPROP	2.1E-01	PHYSPROP	1.9E+02	PHYSPROP	2.1E+00	CRC89	3.2E-02	8.9E-06	EPA WATER9			2.0E+02	EPI	4.1E+00	PHYSPROP	5.0E+01	PHYSPROP	2.5E-01	2.2E+00	5.3E+00	4.2E-02	EPI
Hexachlorophene	70-30-4	4.1E+02	PHYSPROP	2.2E-11	5.5E-13	PHYSPROP	1.0E-10	PHYSPROP	1.7E+02	PHYSPROP			3.5E-02	4.0E-06	EPA WATER9			6.7E+05	EPI	7.5E+00	PHYSPROP	1.4E+02	PHYSPROP	6.5E+00	2.0E+01	8.9E+01	8.4E-01	EPI
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	2.2E+02	PHYSPROP	8.2E-10	2.0E-11	EPI	4.1E-09	EPI	2.1E+02	PHYSPROP	1.8E+00	CRC89	3.1E-02	8.5E-06	EPA WATER9			8.9E+01	EPI	8.7E-01	PHYSPROP	6.0E+01	PHYSPROP	1.9E-03	1.8E+00	4.4E+00	3.4E-04	EPI
Hexamethylene Diisocyanate, 1,6-	822-06-0	1.7E+02	PHYSPROP	2.0E-03	4.8E-05	PHYSPROP	3.0E-02	PHYSPROP	-6.7E+01	PHYSPROP	1.1E+00	CRC89	4.0E-02	7.2E-06	EPA WATER9			4.8E+03	EPI	3.2E+00	PHYSPROP	1.2E+02	PHYSPROP	1.2E-01	9.2E-01	2.2E+00	2.4E-02	EPI
Hexamethylphosphoramide	680-31-9	1.8E+02	PHYSPROP	8.2E-07	2.0E-08	PHYSPROP	4.6E-02	PHYSPROP	7.2E+00	PHYSPROP	1.0E+00	CRC89	3.5E-02	6.9E-06	EPA WATER9			1.0E+01	EPI	2.8E-01	PHYSPROP	1.0E+06	PHYSPROP	1.2E-03	1.1E+00	2.5E+00	2.4E-04	EPI
Hexane, N-	110-54-3	8.6E+01	PHYSPROP	7.4E+01	1.8E+00	EPI	1.5E+02	PHYSPROP	-9.5E+01	PHYSPROP	6.6E-01	CRC89	7.3E-02	8.2E-06	EPA WATER9			1.3E+02	EPI	3.9E+00	PHYSPROP	9.5E+00	PHYSPROP	7.2E-01	3.2E-01	1.2E+00	2.0E-01	EPI
Hexanedioic Acid	124-04-9	1.5E+02	PHYSPROP	1.9E-10	4.7E-12	EPI	3.2E-07	EPI	1.5E+02	PHYSPROP	1.4E+00	CRC89	5.8E-02	9.2E-06	EPA WATER9			2.4E+01	EPI	8.0E-02	PHYSPROP	3.1E+04	PHYSPROP	1.2E-03	6.9E-01	1.7E+00	2.7E-04	EPI
Hexanone, 2-	591-78-6	1.0E+02	PHYSPROP	3.8E-03	9.3E-05	EPI	1.2E+01	PHYSPROP	-5.6E+01	PHYSPROP	8.1E-01	CRC89	7.0E-02	8.4E-06	EPA WATER9			1.5E+01	EPI	1.4E+00	PHYSPROP	1.7E+04	PHYSPROP	1.4E-02	3.8E-01	9.2E-01	3.6E-03	EPI
Hexazinone	51235-04-2	2.5E+02	PHYSPROP	9.2E-11	2.3E-12	EPI	2.3E-07	EPI	1.2E+02	PHYSPROP	1.3E+00	CRC89	2.5E-02	6.3E-06	EPA WATER9			1.3E+02	EPI	1.9E+00	PHYSPROP	3.3E+04	PHYSPROP	6.2E-03	2.7E+00	6.5E+00	1.0E-03	EPI
Hexythiazox	78587-05-0	3.5E+02	PHYSPROP	9.7E-07	2.4E-08	EPI	2.6E-08	PHYSPROP	1.1E+02	PHYSPROP			3.8E-02	4.4E-06	EPA WATER9			2.1E+03	EPI	5.6E+00	PHYSPROP	5.0E-01	PHYSPROP	6.0E-01	1.0E+01	2.4E+01	8.3E-02	EPI
Hydramethylnon	67485-29-4	4.9E+02	PHYSPROP	9.0E-05	2.2E-06	EPI	2.0E-08	PHYSPROP	1.9E+02	PHYSPROP			3.0E-02	3.6E-06	EPA WATER9			1.8E+08	EPI	2.3E+00	PHYSPROP	6.0E-03	PHYSPROP	7.7E-04	6.2E+01	1.5E+02	9.0E-05	EPI
Hydrazine	302-01-2	3.2E+01	PHYSPROP	2.5E-05	6.1E-07	PubChem	1.4E+01	PHYSPROP	2.0E+00	PHYSPROP	1.0E+00	CRC89	1.7E-01	1.9E-05	EPA WATER9					-2.1E+00	PHYSPROP	1.0E+06	PHYSPROP	9.5E-05	1.6E-01	3.8E-01	4.4E-05	RAGSE
Hydrazine Sulfate	10034-93-2	1.3E+02	EPI						2.5E+02	CRC89	1.4E+00	CRC89										3.1E+04	PERRY	4.4E-03	5.5E-01	1.3E+00	1.0E-03	RAGSE
Hydrogen Chloride	7647-01-0	3.5E+01	EPI	8.3E+07	2.0E+06	Toxnet HSDB	3.5E+04	PubChem	-1.1E+02	CRC89	1.5E+00	CRC89	1.9E-01	2.3E-05	EPA WATER9							6.7E+05	Toxnet HSDB	2.3E-03	1.7E-01	4.0E-01	1.0E-03	RAGSE
Hydrogen Fluoride	7664-39-3	2.0E+01	PHYSPROP	4.3E-03	1.0E-04	PHYSPROP	9.2E+02	PHYSPROP	-8.4E+01	PHYSPROP	8.2E-01	CRC89	2.2E-01	2.2E-05	EPA WATER9					2.3E-01	OTHER	1.0E+06	PHYSPROP	1.7E-03	1.4E-01	3.3E-01	1.0E-03	RAGSE
Hydrogen Sulfide	7783-06-4	3.4E+01	PHYSPROP	3.5E-01	8.6E-03	PhysProp	1.6E+04	PHYSPROP	-8.5E+01	PHYSPROP	1.4E+00	CRC89	1.9E-01	2.2E-05	EPA WATER9					2.3E-01	OTHER	3.7E+03	PHYSPROP	2.2E-03	1.6E-01	3.9E-01	1.0E-03	RAGSE
Hydroquinone	123-31-9	1.1E+02	PHYSPROP	1.9E-09	4.7E-11	EPI	2.4E-05	EPI	1.7E+02	PHYSPROP	1.3E+00	CRC89	8.0E-02	1.1E-05	EPA WATER9			2.4E+02	EPI	5.9E-01	PHYSPROP	7.2E+04	PHYSPROP	3.8E-03	4.3E-01	1.0E+00	9.3E-04	EPI
Imazalil	35554-44-0	3.0E+02	PHYSPROP	1.1E-07	2.6E-09	EPI	1.2E-06	PHYSPROP	5.3E+01	PHYSPROP	1.2E+00	CRC89	2.2E-02	5.7E-06	EPA WATER9			8.5E+03	EPI	3.8E+00	PHYSPROP	1.8E+02	PHYSPROP	7.7E-02	4.9E+00	1.2E+01	1.2E-02	EPI
Imazaquin	81335-37-7	3.1E+02	PHYSPROP	2.8E-16	6.9E-18	PHYSPROP	1.0E-13	PHYSPROP	2.2E+02	PHYSPROP			4.1E-02	4.8E-06	EPA WATER9			2.4E+03	EPI	1.9E+00	PHYSPROP	9.0E+01	PHYSPROP	3.3E-03	5.8E+00	1.4E+01	4.8E-04	EPI
Imazethapyr	81335-77-5	2.9E+02	PHYSPROP	4.3E-15	1.0E-16	PHYSPROP	2.2E-11	PHYSPROP	1.7E+02	PHYSPROP			4.3E-02	5.1E-06	EPA WATER9			3.4E+02	EPI	1.5E+00	PHYSPROP	1.4E+03	PHYSPROP	1.3E-02	4.4E+00	1.1E+01	2.0E-03	EPI
Iodine	7553-56-2	2.5E+02	PHYSPROP				2.3E-01	PHYSPROP	1.1E+02	PHYSPROP	4.9E+00	CRC89				6.0E+01	BAES			2.5E+00	PHYSPROP	3.3E+02	PHYSPROP	6.1E-03	2.8E+00	6.7E+00	1.0E-03	RAGSE
Iprodione	36734-19-7	3.3E+02	PHYSPROP	1.3E-07	3.1E-09	PHYSPROP	3.8E-09	PHYSPROP	1.4E+02	PHYSPROP			4.0E-02	4.6E-06	EPA WATER9			5.3E+01	EPI	3.0E+00	PHYSPROP	1.4E+01	PHYSPROP	1.5E-02	7.4E+00	1.8E+01	2.2E-03	EPI
Iron	7439-89-6	5.6E+01	PHYSPROP				0.0E+00	NIOSH	1.5E+03	CRC89	7.9E+00	CRC89				2.5E+01	BAES							2.9E-03	2.2E-01	5.2E-01	1.0E-03	RAGSE
Isobutyl Alcohol	78-83-1	7.4E+01	PHYSPROP	4.0E-04	9.8E-06	PHYSPROP	1.0E+01	PHYSPROP	-1.1E+02	PHYSPROP	8.0E-01	CRC89	9.0E-02	1.0E-05	EPA WATER9			2.9E+00	EPI	7.6E-01	PHYSPROP	8.5E+04	PHYSPROP	6.4E-03	2.7E-01	6.6E-01	1.9E-03	EPI
Isophorone	78-59-1	1.4E+02	PHYSPROP	2.7E-04	6.6E-06	EPI	4.4E-01	PHYSPROP	-8.1E+00	PHYSPROP	9.3E-01	CRC89	5.3E-02	7.5E-06	EPA WATER9			6.5E+01	EPI	1.7E+00	PHYSPROP	1.2E+04	PHYSPROP	1.6E-02	6.2E-01	1.5E+00	3.5E-03	EPI
Isopropalin	33820-53-0	3.1E+02	PHYSPROP	4.5E-03	1.1E-04	EPI	3.0E-05	PHYSPROP	1.5E+02	EPI	1.2E+00	ChemNet	2.1E-02	5.3E-06	EPA WATER9			1.1E+04	EPI	5.8E+00	PHYSPROP	1.1E-01	PHYSPROP	1.4E+00	5.7E+00	2.2E+01	2.1E-01	EPI
Isopropanol	67-63-0	6.0E+01	PHYSPROP	3.3E-04	8.1E-06	PHYSPROP	4.5E+01	PHYSPROP	-9.0E+01	PHYSPROP	7.8E-01	CRC89	1.0E-01	1.1E-05	EPA WATER9			1.5E+00	EPI	5.0E-02	PHYSPROP	1.0E+06	PHYSPROP	2.3E-03	2.3E-01	5.5E-01	7.8E-04	EPI
Isopropyl Methyl Phosphonic Acid	1832-54-8	1.4E+02	PHYSPROP	2.8E-07	6.9E-09	PHYSPROP	1.2E-02	PHYSPROP	-8.1E+00	EPI			7.1E-02	8.3E-06	EPA WATER9			7.7E+00	EPI	2.7E-01	PHYSPROP	5.0E+04	PHYSPROP	1.8E-03	6.2E-01	1.5E+00	4.0E-04	EPI
Isoxaben	82558-50-7	3.3E+02	PHYSPROP	5.2E-08	1.3E-09	EPI	4.1E-09	PHYSPROP	1.8E+02	PHYSPROP			4.0E-02	4.6E-06	EPA WATER9			1.3E+03	EPI	3.9E+00	PHYSPROP	1.4E+00	PHYSPROP	6.2E-02	7.6E+00	1.8E+01	8.9E-03	EPI
JP-7	NA			4.1E-01	1.0E-02	EPA HCD	1.1E+01	EPA HCD	-5.5E+01	EPA HCD	7.8E-01	ATSDR Profile								8.0E+00	OTHER	1.0E+01	EPA HCD					
Lactofen	77501-63-4	4.6E+02	PHYSPROP	1.9E-05	4.7E-07	EPI	7.0E-08	PHYSPROP	4.5E+01	PHYSPROP			3.2E-02	3.7E-06	EPA WATER9			2.3E+04	EPI	4.8E+00	PHYSPROP	1.0E-01	PHYSPROP	5.2E-02	4.1E+01	9.7E+01	6.3E-03	EPI
Lead Compounds																												
~Lead Chromate	7758-97-6	3.2E+02	CRC89						8.4E+02	CRC89	6.1E+00	CRC89										1.7E-01	CRC89	6.9E-03	6.8E+00	1.6E+01	1.0E-03	RAGSE
~Lead Phosphate	7446-27-7	8.1E+02	PHYSPROP						1.0E+03	PHYSPROP	7.0E+00	CRC89										0.0E+00	CRC89	1.1E-02	3.7E+03	8.8E+03	1.0E-03	RAGSE
~Lead acetate	301-04-2	3.3E+02	PHYSPROP				7.2E-04	PHYSPROP	3.3E+02	PHYSPROP	3.3E+00	CRC89	3.3E-02	9.5E-06	EPA WATER9			1.0E+00	EPI	-8.0E-02	PHYSPROP	1.6E+03	PHYSPROP	1.4E-04	7.2E+00	1.7E+01	2.1E-05	EPI
~Lead and Compounds	7439-92-1	2.1E+02	EPI				0.0E+00	NIOSH	3.3E+02	EPI	1.1E+01	CRC89				9.0E+02	BAES							5.5E-04	1.5E+00	3.7E+00	1.0E-04	RAGSE
~Lead subacetate	1335-32-6	8.1E+02	PHYSPROP				3.0E-10	PHYSPROP	1.6E+02	EPI			2.2E-02	2.6E-06	EPA WATER9			1.0E+01	EPI	-4.0E+00	PHYSPROP	6.3E+04	PHYSPROP	1.1E-09	3.4E+03	8.2E+03	1.0E-10	EPI
~Tetraethyl Lead	78-00-2	3.2E+02	PHYSPROP	2.3E+01	5.7E-01	PHYSPROP	2.6E-01	PHYSPROP	-1.3E+02	PHYSPROP	1.7E+00	CRC89	2.5E-02	6.4E-06	EPA WATER9			6.5E+02	EPI	4.2E+00	PHYSPROP	2.9E-01	PHYSPROP	9.5E-02	6.8E+00	1.6E+01	1.4E-02	EPI
Lewisite	541-25-3	2.1E+02	PHYSPROP	8.9E-03	2.2E-04	EPI	5.8E-01	PHYSPROP	1.0E-01	PHYSPROP	1.9E+00	CRC89	3.3E-02	9.1E-06	EPA WATER9			1.1E+02	EPI	2.6E+00	PHYSPROP	5.0E+02	PHYSPROP	3.0E-02	1.5E+00	3.7E+00	5.4E-03	EPI
Linuron	330-55-2	2.5E+02	PHYSPROP	2.6E-07	6.3E-09	EPI	1.4E-06	PHYSPROP	9.3E+01	PHYSPROP			4.8E-02	5.6E-06	EPA WATER9			3.4E+02	EPI	3.2E+00	PHYSPROP	7.5E+01	PHYSPROP	5.1E-02	2.6E+00	6.3E+00	8.4E-03	EPI
Lithium	7439-93-2	6.9E+00	EPI						1.8E+02	CRC89	5.3E-01	CRC89				3.0E+02	BAES							1.0E-03	1.2E-01	2.8E-01	1.0E-03	RAGSE
MCPA	94-74-6	2.0E+02	PHYSPROP	5.4E-08	1.3E-09	EPI	5.9E-06	PHYSPROP	1.2E+02	PHYSPROP	1.6E+00	PubChem	3.1E-02	8.2E-06	EPA WATER9			3.0E+01	EPI	3.3E+00	PHYSPROP	6.3E+02	PHYSPROP	9.2E-02	1.4E+00	3.4E+00	1.7E-02	EPI
MCPB	94-81-5	2.3E+02	PHYSPROP	1.1E-07	2.7E-09	EPI	4.3E-07	PHYSPROP	1.0E+02	PHYSPROP			5.1E-02	5.9E-06	EPA WATER9			9.8E+01	EPI	2.8E+00	PHYSPROP	4.8E+01	PHYSPROP	1.0E-01	2.0E+00	4.8E+00	1.7E-02	EPI
MCPP	93-65-2	2.1E+02	PHYSPROP	7.4E-07	1.8E-08	PHYSPROP	7.5E-07	PHYSPROP	9.5E+01	PHYSPROP	1.3E+00	PubChem	2.7E-02	7.0E-06	EPA WATER9			4.9E+01	EPI	3.1E+00	PHYSPROP	6.2E+02	PHYSPROP	7.4E-02	1.7E+00	4.0E+00	1.3E-02	EPI
Malathion	121-75-5	3.3E+02	PHYSPROP	2.0E-07	4.9E-09	PHYSPROP	3.4E-06	PHYSPROP	2.8E+00	PHYSPROP	1.2E+00	CRC89	2.1E-02	5.2E-06	EPA WATER9			3.1E+01	EPI	2.4E+00	PHYSPROP	1.4E+02	PHYSPROP	5.7E-03	7.4E+00	1.8E+01	8.1E-04	EPI
Maleic Anhydride	108-31-6	9.8E+01	PHYSPROP	1.6E-04	3.9E-06	PHYSPROP	2.5E-01	EPI	5.3E+01	PHYSPROP	1.3E+00	CRC89	8.8E-02	1.1E-05	EPA WATER9			1.0E+00	EPI	1.6E+00	PHYSPROP	1.6E+05	PERRY	2.0E-02	3.7E-01	8.9E-01	5.3E-03	EPI
Maleic Hydrazide	123-33-1	1.1E+02	PHYSPROP	1.1E-09	2.7E-11	PHYSPROP	2.8E-06	PHYSPROP	3.1E+02	PHYSPROP			8.2E-02	9.5E-06	EPA WATER9			3.3E+00	EPI	-8.4E-01	PHYSPROP	4.5E+03	PHYSPROP	4.2E-04	4.5E-01	1.1E+00	1.0E-04	EPI
Malononitrile	109-77-3	6.6E+01	PHYSPROP	5.4E-06	1.3E-07	EPI	2.0E-01	EPI	3.2E+01	PHYSPROP	1.2E+00	CRC89	1.2E-01	1.4E-05	EPA WATER9			3.3E+00	EPI	-6.0E-01	PHYSPROP	1.3E+05	PHYSPROP	8.3E-04	2.5E-01	5.9E-01	2.7E-04	EPI
Mancozeb	8018-01-7	5.4E+02	PHYSPROP	6.2E-10	1.5E-11	PHYSPROP	1.3E-10	PHYSPROP	1.7E+02	PhysProp	1.9E+00	PubChem	2.0E-02	5.1E-06	EPA WATER9			6.1E+02	EPI	1.3E+00	PHYSPROP	6.2E+00	PHYSPROP	6.9E-03	1.1E+02	2.7E+02	7.7E-04	EPI
Maneb	12427-38-2	3.0E+02	PHYSPROP	2.0E-07	4.9E-09	PHYSPROP	7.5E-08	PHYSPROP	2.0E+02	EPI			4.3E-02	5.0E-06	EPA WATER9			6.1E+02	EPI	6.2E-01	PHYSPROP	6.0E+00	PHYSPROP	5.1E-03	4.7E+00	1.1E+01	7.7E-04	EPI
Manganese (Diet)	7439-96-5	5.5E+01	PHYSPROP				0.0E+00	NIOSH	1.2E+03	PHYSPROP	7.3E+00	CRC89				6.5E+01	BAES							2.9E-03	2.1E-01	5.1E-01	1.0E-03	RAGSE
Manganese (Non-diet)	7439-96-5	5.5E+01	PHYSPROP				0.0E+00	NIOSH	1.2E+03	PHYSPROP	7.3E+00	CRC89				6.5E+01	BAES							2.9E-03	2.1E-01	5.1E-01	1.0E-03	RAGSE
Mephosfolan	950-10-7	2.7E+02	PHYSPROP	4.9E-09	1.2E-10	PHYSPROP	3.2E-05	PHYSPROP	8.4E+01	EPI			4.6E-02	5.3E-06	EPA WATER9			6.4E+02	EPI	1.0E+00	PHYSPROP	5.7E+01	PHYSPROP	1.5E-03	3.4E+00	8.1E+00	2.4E-04	EPI
Mepiquat Chloride	24307-26-4	1.5E+02	PHYSPROP	1.8E-10	4.3E-12	PHYSPROP	3.7E-07	PHYSPROP	2.2E+02	PHYSPROP			6.7E-02	7.9E-06	EPA WATER9			6.6E+01	EPI	-2.8E+00	PHYSPROP	5.0E+05	PHYSPROP	1.4E-05	7.2E-01	1.7E+00	3.0E-06	EPI
Mercury Compounds																												
~Mercuric Chloride (and other Mercury salts)	7487-94-7	2.7E+02	PHYSPROP						2.8E+02	PHYSPROP	5.6E+00	CRC89								-2.2E-01	PHYSPROP	6.9E+04	PHYSPROP	6.3E-03	3.5E+00	8.4E+00	1.0E-03	RAGSE
~Mercury (elemental)	7439-97-6	2.0E+02	PHYSPROP	3.5E-01	8.6E-03	PHYSPROP	2.0E-03	PHYSPROP	-3.9E+01	PHYSPROP	1.4E+01	CRC89	3.1E-02	6.3E-06	EPA WATER9	5.2E+01	SSL			6.2E-01	PHYSPROP	6.0E-02	PHYSPROP	5.4E-03	1.4E+00	3.4E+00	1.0E-03	RAGSE
~Methyl Mercury	22967-92-6	2.2E+02	OTHER																					5.7E-03	1.7E+00	4.1E+00	1.0E-03	RAGSE
~Phenylmercuric Acetate	62-38-4	3.4E+02	PHYSPROP	2.3E-08	5.7E-10	EPI	6.0E-06	PHYSPROP	1.5E+02	PHYSPROP			3.9E-02	4.6E-06	EPA WATER9			5.6E+01	EPI	7.1E-01	PHYSPROP	4.4E+03	PHYSPROP	4.2E-04	8.1E+00	1.9E+01	6.0E-05	EPI
Merphos	150-50-5	3.0E+02	PHYSPROP	9.3E-04	2.3E-05	PHYSPROP	2.0E-05	PHYSPROP	1.0E+02	PHYSPROP	1.0E+00	CRC89	2.0E-02	5.0E-06	EPA WATER9			4.9E+04	EPI	7.7E+00	PHYSPROP	3.5E-03	PHYSPROP	2.8E+01	4.9E+00	2.3E+01	4.2E+00	EPI
Merphos Oxide	78-48-8	3.1E+02	PHYSPROP	1.2E-05	2.9E-07	PHYSPROP	5.3E-06	PHYSPROP	-2.5E+01	CRC89	1.1E+00	CRC89	2.0E-02	5.0E-06	EPA WATER9			2.4E+03	EPI	5.7E+00	PHYSPROP	2.3E+00	PHYSPROP	1.1E+00	6.1E+00	2.4E+01	1.7E-01	EPI
Metalaxyl	57837-19-1	2.8E+02	PHYSPROP	1.2E-07	3.0E-09	EPI	5.6E-06	PHYSPROP	7.1E+01	PHYSPROP			4.4E-02	5.2E-06	EPA WATER9			3.9E+01	EPI	1.7E+00	PHYSPROP	8.4E+03	PHYSPROP	3.7E-03	3.9E+00	9.3E+00	5.8E-04	EPI
Methacrylonitrile	126-98-7	6.7E+01	PHYSPROP	1.0E-02	2.5E-04	EPI	7.1E+01	PHYSPROP	-3.6E+01	PHYSPROP	8.0E-01	CRC89	9.6E-02	1.1E-05	EPA WATER9			1.3E+01	EPI	6.8E-01	PHYSPROP	2.5E+04	PHYSPROP	5.9E-03	2.5E-01	6.0E-01	1.9E-03	EPI
Methamidophos	10265-92-6	1.4E+02	PHYSPROP	3.5E-08	8.7E-10	PHYSPROP	3.5E-05	PHYSPROP	4.6E+01	PHYSPROP	1.3E+00	CRC89	6.0E-02	9.2E-06	EPA WATER9			5.4E+00	EPI	-8.0E-01	PHYSPROP	1.0E+06	PHYSPROP	3.4E-04	6.5E-01	1.6E+00	7.4E-05	EPI
Methanol	67-56-1	3.2E+01	PHYSPROP	1.9E-04	4.6E-06	PHYSPROP	1.3E+02	PHYSPROP	-9.8E+01	PHYSPROP	7.9E-01	CRC89	1.6E-01	1.7E-05	EPA WATER9			1.0E+00	EPI	-7.7E-01	PHYSPROP	1.0E+06	PHYSPROP	6.9E-04	1.6E-01	3.8E-01	3.2E-04	EPI
Methidathion	950-37-8	3.0E+02	PHYSPROP	2.9E-07	7.2E-09	EPI	3.4E-06	PHYSPROP	3.9E+01	PHYSPROP			4.2E-02	4.9E-06	EPA WATER9			2.1E+01	EPI	2.2E+00	PHYSPROP	1.9E+02	PHYSPROP	6.1E-03	5.2E+00	1.2E+01	9.1E-04	EPI
Methomyl	16752-77-5	1.6E+02	PHYSPROP	8.1E-10	2.0E-11	EPI	5.4E-06	PHYSPROP	7.8E+01	PHYSPROP	1.3E+00	CRC89	4.8E-02	8.4E-06	EPA WATER9			1.0E+01	EPI	6.0E-01	PHYSPROP	5.8E+04	PHYSPROP	2.4E-03	8.5E-01	2.0E+00	4.8E-04	EPI
Methoxy-5-nitroaniline, 2-	99-59-2	1.7E+02	PHYSPROP	5.1E-07	1.3E-08	PHYSPROP	3.2E-04	PHYSPROP	1.2E+02	PHYSPROP	1.2E+00	CRC89	4.3E-02	7.8E-06	EPA WATER9			7.1E+01	EPI	1.5E+00	PHYSPROP	1.2E+02	PHYSPROP	8.4E-03	9.2E-01	2.2E+00	1.7E-03	EPI
Methoxychlor	72-43-5	3.5E+02	PHYSPROP	8.3E-06	2.0E-07	PHYSPROP	2.6E-06	PHYSPROP	8.7E+01	PHYSPROP	1.4E+00	CRC89	2.2E-02	5.6E-06	EPA WATER9			2.7E+04	EPI	5.1E+00	PHYSPROP	1.0E-01	PHYSPROP	3.1E-01	9.1E+00	2.2E+01	4.3E-02	EPI
Methoxyethanol Acetate, 2-	110-49-6	1.2E+02	PHYSPROP	1.3E-05	3.1E-07	EPI	7.0E+00	PHYSPROP	-6.5E+01	PHYSPROP	1.0E+00	CRC89	6.6E-02	8.7E-06	EPA WATER9			2.5E+00	EPI	1.0E-01	PHYSPROP	1.0E+06	PHYSPROP	1.7E-03	4.8E-01	1.2E+00	4.0E-04	EPI
Methoxyethanol, 2-	109-86-4	7.6E+01	PHYSPROP	1.4E-05	3.3E-07	PHYSPROP	9.5E+00	PHYSPROP	-8.5E+01	PHYSPROP	9.6E-01	CRC89	9.5E-02	1.1E-05	EPA WATER9			1.0E+00	EPI	-7.7E-01	PHYSPROP	1.0E+06	PHYSPROP	6.0E-04	2.8E-01	6.7E-01	1.8E-04	EPI

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	HLC (atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	KPREF
Methyl Acetate	79-20-9	7.4E+01	PHYSPROP	4.7E-03	1.2E-04	PHYSPROP	2.2E+02	PHYSPROP	-9.8E+01	PHYSPROP	9.3E-01	CRC89	9.6E-02	1.1E-05	EPA WATER9			3.1E+00	EPI	1.8E-01	PHYSPROP	2.4E+05	PHYSPROP	2.6E-03	2.7E-01	6.6E-01	7.9E-04	EPI
Methyl Acrylate	96-33-3	8.6E+01	PHYSPROP	8.1E-03	2.0E-04	EPI	8.7E+01	PHYSPROP	-7.7E+01	PHYSPROP	9.5E-01	CRC89	8.6E-02	1.0E-05	EPA WATER9			5.8E+00	EPI	8.0E-01	PHYSPROP	4.9E+04	PHYSPROP	6.2E-03	3.2E-01	7.7E-01	1.8E-03	EPI
Methyl Ethyl Ketone (2-Butanone)	78-93-3	7.2E+01	PHYSPROP	2.3E-03	5.7E-05	PHYSPROP	9.1E+01	PHYSPROP	-8.7E+01	PHYSPROP	8.0E-01	CRC89	9.1E-02	1.0E-05	EPA WATER9			4.5E+00	EPI	2.9E-01	PHYSPROP	2.2E+05	PHYSPROP	3.1E-03	2.7E-01	6.4E-01	9.6E-04	EPI
Methyl Hydrazine	60-34-4	4.6E+01	PHYSPROP	1.2E-04	3.0E-06	PHYSPROP	5.0E+01	PHYSPROP	-5.2E+01	PHYSPROP	8.7E-01	LANGE	1.3E-01	1.4E-05	EPA WATER9			1.3E+01	EPI	-1.1E+00	PHYSPROP	1.0E+06	PHYSPROP	4.5E-04	1.9E-01	4.6E-01	1.7E-04	EPI
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	1.0E+02	PHYSPROP	5.6E-03	1.4E-04	EPI	2.0E+01	PHYSPROP	-8.4E+01	PHYSPROP	8.0E-01	CRC89	7.0E-02	8.3E-06	EPA WATER9			1.3E+01	EPI	1.3E+00	PHYSPROP	1.9E+04	PHYSPROP	1.2E-02	3.8E-01	9.2E-01	3.2E-03	EPI
Methyl Isocyanate	624-83-9	5.7E+01	PHYSPROP	3.8E-02	9.3E-04	PHYSPROP	3.5E+02	PHYSPROP	-4.5E+01	PHYSPROP	9.6E-01	CRC89	1.2E-01	1.3E-05	EPA WATER9			4.0E+01	EPI	7.9E-01	PHYSPROP	2.9E+04	PHYSPROP	7.3E-03	2.2E-01	5.3E-01	2.5E-03	EPI
Methyl Methacrylate	80-62-6	1.0E+02	PHYSPROP	1.3E-02	3.2E-04	EPI	3.9E+01	PHYSPROP	-4.8E+01	PHYSPROP	9.4E-01	CRC89	7.5E-02	9.2E-06	EPA WATER9			9.1E+00	EPI	1.4E+00	PHYSPROP	1.5E+04	PHYSPROP	1.4E-02	3.8E-01	9.2E-01	3.6E-03	EPI
Methyl Parathion	298-00-0	2.6E+02	PHYSPROP	4.1E-06	1.0E-07	PHYSPROP	3.5E-06	PHYSPROP	3.6E+01	PHYSPROP	1.4E+00	CRC89	2.5E-02	6.4E-06	EPA WATER9			7.3E+02	EPI	2.9E+00	PHYSPROP	3.8E+01	PHYSPROP	2.6E-02	3.1E+00	7.5E+00	4.2E-03	EPI
Methyl Phosphonic Acid	993-13-5	9.6E+01	PHYSPROP	5.0E-10	1.2E-11	PHYSPROP	3.3E-04	EPI	1.1E+02	PHYSPROP			9.1E-02	1.1E-05	EPA WATER9			1.4E+00	EPI	-7.0E-01	PHYSPROP	2.0E+04	PHYSPROP	3.7E-04	3.6E-01	8.7E-01	9.8E-05	EPI
Methyl Styrene (Mixed Isomers)	25013-15-4	3.5E+02	PHYSPROP	1.1E-01	2.6E-03	PHYSPROP	1.5E+00	PHYSPROP	-8.6E+01	EPI	8.9E-01	HSDB	1.7E-02	4.2E-06	EPA WATER9			7.2E+02	EPI	3.4E+00	PHYSPROP	8.9E+01	PHYSPROP	4.8E-01	1.0E+01	2.4E+01	6.6E-02	EPI
Methyl methanesulfonate	66-27-3	1.1E+02	PHYSPROP	1.6E-04	4.0E-06	PHYSPROP	3.1E-01	PHYSPROP	2.0E+01	PHYSPROP	1.3E+00	CRC89	7.9E-02	1.1E-05	EPA WATER9			4.3E+00	EPI	-6.6E-01	PHYSPROP	2.0E+05	LANGE	5.6E-04	4.4E-01	1.0E+00	1.4E-04	EPI
Methyl tert-Butyl Ether (MTBE)	1634-04-4	8.8E+01	PHYSPROP	2.4E-02	5.9E-04	PHYSPROP	2.5E+02	PHYSPROP	-1.1E+02	PHYSPROP	7.4E-01	CRC89	7.5E-02	8.6E-06	EPA WATER9			1.2E+01	EPI	9.4E-01	PHYSPROP	5.1E+04	PHYSPROP	7.6E-03	3.3E-01	7.9E-01	2.1E-03	EPI
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	2.0E+02	PHYSPROP	2.6E-16	6.4E-18	PHYSPROP	4.1E-12	PHYSPROP	2.4E+02	EPI			5.6E-02	6.6E-06	EPA WATER9			2.0E+02	EPI	-2.1E+00	PHYSPROP	1.0E+06	PHYSPROP	2.9E-05	1.3E+00	3.1E+00	5.4E-06	EPI
Methyl-5-Nitroaniline, 2-	99-55-8	1.5E+02	PHYSPROP	3.4E-07	8.3E-09	PHYSPROP	9.8E-04	PHYSPROP	1.1E+02	PHYSPROP			6.7E-02	7.8E-06	EPA WATER9			1.8E+02	EPI	1.9E+00	PHYSPROP	1.0E+04	PHYSPROP	1.8E-02	7.5E-01	1.8E+00	3.8E-03	EPI
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	1.5E+02	PHYSPROP	5.0E-11	1.2E-12	PHYSPROP	1.2E-04	PHYSPROP	1.2E+02	EPI			6.8E-02	8.0E-06	EPA WATER9			7.2E+01	EPI	-9.2E-01	PHYSPROP	2.7E+05	PHYSPROP	2.7E-04	7.0E-01	1.7E+00	5.7E-05	EPI
Methylaniline Hydrochloride, 2-	636-21-5	1.4E+02	PHYSPROP	8.6E-05	2.1E-06	PHYSPROP	2.9E-01	PHYSPROP	2.2E+02	PHYSPROP			6.9E-02	8.1E-06	EPA WATER9			1.2E+02	EPI	1.6E+00	PHYSPROP	8.3E+03	PHYSPROP	4.8E-05	6.7E-01	1.6E+00	1.1E-05	EPI
Methylarsonic acid	124-58-3	1.4E+02	PHYSPROP				1.6E-03	PHYSPROP	1.6E+02	PHYSPROP			7.0E-02	8.2E-06	EPA WATER9			4.4E+01	EPI	-1.2E+00	PHYSPROP	2.6E+05	PHYSPROP	1.9E-04	6.4E-01	1.5E+00	4.2E-05	EPI
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	1.6E+02	OTHER										6.5E-02	7.6E-06	EPA WATER9										8.1E-01	2.0E+00		
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	2.2E+02	OTHER										5.2E-02	6.1E-06	EPA WATER9										1.8E+00	4.3E+00		
Methylcholanthrene, 3-	56-49-5	2.7E+02	PHYSPROP	2.1E-04	5.2E-06	EPI	4.3E-08	EPI	1.8E+02	PHYSPROP	1.3E+00	CRC89	2.4E-02	6.1E-06	EPA WATER9			9.6E+05	EPI	6.4E+00	PHYSPROP	2.9E-03	PHYSPROP	5.7E+00	3.3E+00	1.5E+01	9.0E-01	EPI
Methylene Chloride	75-09-2	8.5E+01	PHYSPROP	1.3E-01	3.3E-03	PHYSPROP	4.4E+02	PHYSPROP	-9.5E+01	PHYSPROP	1.3E+00	CRC89	1.0E-01	1.3E-05	EPA WATER9			2.2E+01	EPI	1.3E+00	PHYSPROP	1.3E+04	PHYSPROP	1.3E-02	3.1E-01	7.5E-01	3.5E-03	EPI
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	2.7E+02	PHYSPROP	1.7E-09	4.1E-11	PHYSPROP	2.9E-07	PHYSPROP	1.1E+02	PHYSPROP			4.6E-02	5.4E-06	EPA WATER9			5.7E+03	EPI	3.9E+00	PHYSPROP	1.4E+01	PHYSPROP	1.2E-01	3.3E+00	7.9E+00	2.0E-02	EPI
Methylene-bis(N,N-dimethyl) Aniline, 4,4'	101-61-1	2.5E+02	PHYSPROP	4.4E-08	1.1E-09	PHYSPROP	1.8E-05	PHYSPROP	9.2E+01	PHYSPROP			4.7E-02	5.5E-06	EPA WATER9			2.7E+03	EPI	4.4E+00	PHYSPROP	4.1E+00	PHYSPROP	5.2E-01	2.8E+00	6.7E+00	8.4E-02	RAGSE
Methylenebisbenzenamine, 4,4'-	101-77-9	2.0E+02	PHYSPROP	2.2E-09	5.3E-11	PHYSPROP	2.0E-07	PHYSPROP	9.3E+01	PHYSPROP			5.6E-02	6.5E-06	EPA WATER9			2.1E+03	EPI	1.6E+00	PHYSPROP	1.0E+03	PHYSPROP	7.5E-03	1.4E+00	3.3E+00	1.4E-03	EPI
Methylenediphenyl Diisocyanate	101-68-8	2.5E+02	PHYSPROP	3.7E-05	9.0E-07	PHYSPROP	5.0E-06	PHYSPROP	3.8E+01	PHYSPROP	1.2E+00	CRC89	2.4E-02	6.2E-06	EPA WATER9			2.8E+05	EPI	5.2E+00	PHYSPROP	8.3E-01	PHYSPROP	1.1E+00	2.7E+00	1.0E+01	1.8E-01	EPI
Methylstyrene, Alpha-	98-83-9	1.2E+02	PHYSPROP	1.0E-01	2.6E-03	EPI	1.9E+00	EPI	-2.3E+01	PHYSPROP	9.1E-01	CRC89	6.3E-02	8.2E-06	EPA WATER9			7.0E+02	EPI	3.5E+00	PHYSPROP	1.2E+02	PHYSPROP	2.9E-01	4.8E-01	1.2E+00	7.0E-02	EPI
Metolachlor	51218-45-2	2.8E+02	PHYSPROP	3.7E-07	9.0E-09	PHYSPROP	3.1E-05	PHYSPROP	-6.2E+01	PHYSPROP	1.1E+00	CRC89	2.2E-02	5.5E-06	EPA WATER9			4.9E+02	EPI	3.1E+00	PHYSPROP	5.3E+02	PHYSPROP	2.2E-02	4.1E+00	9.8E+00	3.4E-03	EPI
Metribuzin	21087-64-9	2.1E+02	PHYSPROP	4.8E-09	1.2E-10	EPI	4.4E-07	PHYSPROP	1.3E+02	PHYSPROP	1.3E+00	CRC89	2.7E-02	7.1E-06	EPA WATER9			5.3E+01	EPI	1.7E+00	PHYSPROP	1.1E+03	PHYSPROP	7.4E-03	1.7E+00	4.0E+00	1.3E-03	EPI
Metsulfuron-methyl	74223-64-6	3.8E+02	PHYSPROP	5.4E-15	1.3E-16	EPI	2.5E-12	PHYSPROP	1.6E+02	PHYSPROP			3.6E-02	4.2E-06	EPA WATER9			9.3E+01	EPI	2.2E+00	PHYSPROP	9.5E+03	PHYSPROP	2.5E-03	1.4E+01	3.4E+01	3.3E-04	EPI
Mineral oils	8012-95-1	1.7E+02	EPI	3.3E+02	8.2E+00	EPI	1.4E-01	EPI	-9.6E+00	EPI	8.8E-01	ChemNet	3.6E-02	6.4E-06	EPA WATER9			4.8E+03	EPI	6.1E+00	EPI	3.7E-03	EPI	9.8E+00	9.5E-01	4.3E+00	2.0E+00	EPI
Mirex	2385-85-5	5.5E+02	PHYSPROP	3.3E-02	8.1E-04	PHYSPROP	8.0E-07	PHYSPROP	4.9E+02	CRC89	2.3E+00	ChemNet	2.2E-02	5.6E-06	EPA WATER9			3.6E+05	EPI	6.9E+00	PHYSPROP	8.5E-02	PHYSPROP	4.6E-01	1.2E+02	2.9E+02	5.2E-02	EPI
Molinate	2212-67-1	1.9E+02	PHYSPROP	1.7E-04	4.1E-06	PHYSPROP	5.6E-03	PHYSPROP	7.0E+01	EPI	1.1E+00	CRC89	3.2E-02	6.8E-06	EPA WATER9			1.8E+02	EPI	3.2E+00	PHYSPROP	9.7E+02	PHYSPROP	9.9E-02	1.2E+00	2.8E+00	1.9E-02	EPI
Molybdenum	7439-98-7	9.6E+01	PHYSPROP				0.0E+00	NIOSH	2.6E+03	PHYSPROP	1.0E+01	CRC89				2.0E+01	BAES							3.8E-03	3.6E-01	8.7E-01	1.0E-03	RAGSE
Monochloramine	10599-90-3	5.1E+01	EPI						-6.6E+01	CRC89														2.8E-03	2.0E-01	4.9E-01	1.0E-03	RAGSE
Monomethylaniline	100-61-8	1.1E+02	PHYSPROP	3.6E-04	8.9E-06	PHYSPROP	4.5E-01	PHYSPROP	-5.7E+01	PHYSPROP	9.9E-01	CRC89	7.2E-02	9.1E-06	EPA WATER9			8.2E+01	EPI	1.7E+00	PHYSPROP	5.6E+03	PHYSPROP	2.0E-02	4.2E-01	1.0E+00	5.0E-03	EPI
Myclobutanil	88671-89-0	2.7E+02	PHYSPROP	1.7E-07	4.3E-09	EPI	1.6E-06	PHYSPROP	6.6E+01	PHYSPROP			4.5E-02	5.3E-06	EPA WATER9			6.1E+03	EPI	2.9E+00	PHYSPROP	1.4E+02	PHYSPROP	2.1E-02	3.6E+00	8.7E+00	3.4E-03	EPI
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	2.6E+02	PHYSPROP	8.4E-09	2.1E-10	PHYSPROP	6.4E-09	EPI	1.4E+02	PHYSPROP			4.7E-02	5.4E-06	EPA WATER9			5.2E+04	EPI	4.0E+00	PHYSPROP	7.4E+00	PHYSPROP	1.6E-01	3.0E+00	7.2E+00	2.6E-02	EPI
Naled	300-76-5	3.8E+02	PHYSPROP	2.7E-03	6.5E-05	EPI	2.0E-04	PHYSPROP	2.7E+01	PHYSPROP	2.0E+00	CRC89	2.5E-02	6.4E-06	EPA WATER9			1.3E+02	EPI	1.4E+00	PHYSPROP	1.5E+00	PHYSPROP	7.1E-04	1.4E+01	3.4E+01	9.4E-05	EPI
Naphtha, High Flash Aromatic (HFAN)	64742-95-6			1.8E-02	4.4E-04	EPI	8.5E-02	EPI														3.1E+01	EPI					
Naphthylamine, 2-	91-59-8	1.4E+02	PHYSPROP	3.3E-06	8.1E-08	PHYSPROP	2.6E-04	PHYSPROP	1.1E+02	PHYSPROP	1.6E+00	CRC89	6.4E-02	1.0E-05	EPA WATER9			2.5E+03	EPI	2.3E+00	PHYSPROP	1.9E+02	PHYSPROP	3.7E-02	6.7E-01	1.6E+00	8.1E-03	EPI
Napropamide	15299-99-7	2.7E+02	PHYSPROP	3.4E-08	8.4E-10	EPI	1.7E-07	PHYSPROP	7.5E+01	PHYSPROP			4.5E-02	5.3E-06	EPA WATER9			3.2E+03	EPI	3.4E+00	PHYSPROP	7.3E+01	PHYSPROP	5.1E-02	3.5E+00	8.3E+00	8.0E-03	EPI
Nickel Acetate	373-02-4	1.8E+02	PHYSPROP				1.8E-05	PHYSPROP			1.8E+00	PERRY	4.6E-02	9.7E-06	EPA WATER9					-1.4E+00	PHYSPROP	1.7E+05	PHYSPROP	9.9E-05	1.0E+00	2.5E+00	1.9E-05	EPI
Nickel Carbonate	3333-67-3	1.2E+02	PHYSPROP				3.6E-06	PHYSPROP					7.9E-02	9.2E-06	EPA WATER9					-2.1E+00	PHYSPROP	9.3E+01	PERRY	5.5E-05	4.9E-01	1.2E+00	1.3E-05	EPI
Nickel Carbonyl	13463-39-3	1.7E+02	CRC89	2.0E+01	5.0E-01	MSDS	3.2E+02	NIOSH	-1.9E+01	CRC89	1.3E+00	CRC89	4.3E-02	8.2E-06	EPA WATER9							1.8E+02	PERRY		9.5E-01	2.3E+00		
Nickel Hydroxide	12054-48-7	9.3E+01	OTHER																					3.7E-03	3.5E-01	8.3E-01	1.0E-03	RAGSE
Nickel Oxide	1313-99-1	7.5E+01	EPI						2.0E+03	CRC89	6.7E+00	CRC89												3.3E-03	2.8E-01	6.6E-01	1.0E-03	RAGSE
Nickel Refinery Dust	NA															1.5E+02	BAES										2.0E-04	RAGSE
Nickel Soluble Salts	7440-02-0	5.9E+01	PHYSPROP				0.0E+00	NIOSH	1.5E+03	CRC89	8.9E+00	CRC89				6.5E+01	SSL							5.9E-04	2.2E-01	5.4E-01	2.0E-04	RAGSE
Nickel Subsulfide	12035-72-2	2.4E+02	CRC89						7.9E+02	CRC89	5.9E+00	CRC89												1.2E-03	2.3E+00	5.6E+00	2.0E-04	RAGSE
Nickelocene	1271-28-9	1.9E+02	CRC89						1.7E+02	CRC89			5.8E-02	6.7E-06	EPA WATER9										1.2E+00	2.9E+00		
Nitrate	14797-55-8	6.2E+01	EPI																					3.0E-03	2.3E-01	5.6E-01	1.0E-03	RAGSE
Nitrate + Nitrite (as N)	NA																										1.0E-03	RAGSE
Nitrite	14797-65-0	4.7E+01	EPI																					2.6E-03	1.9E-01	4.6E-01	1.0E-03	RAGSE
Nitroaniline, 2-	88-74-4	1.4E+02	PHYSPROP	2.4E-06	5.9E-08	PHYSPROP	2.8E-03	PHYSPROP	7.1E+01	PHYSPROP	9.0E-01	CRC89	5.2E-02	7.4E-06	EPA WATER9			1.1E+02	EPI	1.9E+00	PHYSPROP	1.5E+03	PHYSPROP	2.0E-02	6.2E-01	1.5E+00	4.5E-03	EPI
Nitroaniline, 4-	100-01-6	1.4E+02	PHYSPROP	5.2E-08	1.3E-09	PHYSPROP	3.2E-06	EPI	1.5E+02	PHYSPROP	1.4E+00	CRC89	6.4E-02	9.8E-06	EPA WATER9			1.1E+02	EPI	1.4E+00	PHYSPROP	7.3E+02	PHYSPROP	1.0E-02	6.2E-01	1.5E+00	2.2E-03	EPI
Nitrobenzene	98-95-3	1.2E+02	PHYSPROP	9.8E-04	2.4E-05	PHYSPROP	2.5E-01	PHYSPROP	5.7E+00	PHYSPROP	1.2E+00	CRC89	6.8E-02	9.4E-06	EPA WATER9			2.3E+02	EPI	1.9E+00	PHYSPROP	2.1E+03	PHYSPROP	2.3E-02	5.1E-01	1.2E+00	5.4E-03	EPI
Nitrocellulose	9004-70-0	3.9E+02	PHYSPROP	1.3E-21	3.3E-23	PHYSPROP	1.4E-17	PHYSPROP	2.6E+02	EPI			3.6E-02	4.2E-06	EPA WATER9			1.0E+01	EPI	-4.6E+00	PHYSPROP	1.0E+06	PHYSPROP	7.5E-08	1.6E+01	3.7E+01	9.9E-09	EPI
Nitrofurantoin	67-20-9	2.4E+02	PHYSPROP	5.4E-11	1.3E-12	PHYSPROP	2.8E-10	PHYSPROP	2.6E+02	PHYSPROP			4.9E-02	5.8E-06	EPA WATER9			1.2E+02	EPI	-4.7E-01	PHYSPROP	8.0E+01	PHYSPROP	2.1E-04	2.3E+00	5.4E+00	3.5E-05	EPI
Nitrofurazone	59-87-0	2.0E+02	PHYSPROP	1.3E-11	3.1E-13	PHYSPROP	4.3E-06	PHYSPROP	2.4E+02	EPI			5.6E-02	6.5E-06	EPA WATER9			3.5E+02	EPI	2.3E-01	PHYSPROP	2.1E+02	PHYSPROP	9.3E-04	1.4E+00	3.2E+00	1.7E-04	EPI
Nitroglycerin	55-63-0	2.3E+02	PHYSPROP	3.5E-06	8.7E-08	EPI	4.0E-04	EPI	1.4E+01	PHYSPROP	1.6E+00	CRC89	2.9E-02	7.7E-06	EPA WATER9			1.2E+02	EPI	1.6E+00	PHYSPROP	1.4E+03	PHYSPROP	5.8E-03	2.0E+00	4.7E+00	9.9E-04	EPI
Nitroguanidine	556-88-7	1.0E+02	PHYSPROP	1.8E-14	4.5E-16	PHYSPROP	1.4E-11	PHYSPROP	2.4E+02	EPI	2.0E+00	ChemNet	1.0E-01	1.4E-05	EPA WATER9			2.1E+01	EPI	-8.9E-01	PHYSPROP	4.4E+03	PHYSPROP	4.1E-04	4.0E-01	9.7E-01	1.1E-04	EPI
Nitromethane	75-52-5	6.1E+01	PHYSPROP	1.2E-03	2.9E-05	PHYSPROP	3.6E+01	PHYSPROP	-2.9E+01	PHYSPROP	1.1E+00	CRC89	1.2E-01	1.4E-05	EPA WATER9			1.0E+01	EPI	-3.5E-01	PHYSPROP	1.1E+05	PHYSPROP	1.3E-03	2.3E-01	5.5E-01	4.2E-04	EPI
Nitropropane, 2-	79-46-9	8.9E+01	PHYSPROP	4.9E-03	1.2E-04	EPI	1.7E+01	PHYSPROP	-9.1E+01	PHYSPROP	9.8E-01	CRC89	8.5E-02	1.0E-05	EPA WATER9			3.1E+01	EPI	9.3E-01	PHYSPROP	1.7E+04	PHYSPROP	7.5E-03	3.3E-01	8.0E-01	2.1E-03	EPI
Nitroso-N-ethylurea, N-	759-73-9	1.2E+02	PHYSPROP	5.4E-09	1.3E-10	PHYSPROP	1.8E-02	PHYSPROP	9.9E+01	EPI			7.9E-02	9.3E-06	EPA WATER9			2.1E+01	EPI	2.3E-01	PHYSPROP	1.3E+04	PHYSPROP	2.0E-03	4.8E-01	1.1E+00	4.9E-04	EPI
Nitroso-N-methylurea, N-	684-93-5	1.0E+02	PHYSPROP	4.1E-09	9.9E-11	PHYSPROP	2.9E-02	PHYSPROP	1.2E+02	EPI			8.6E-02	1.0E-05	EPA WATER9			1.1E+01	EPI	-3.0E-02	PHYSPROP	1.4E+04	PHYSPROP	1.5E-03	4.0E-01	9.5E-01	4.0E-04	EPI
Nitroso-di-N-butylamine, N-	924-16-3	1.6E+02	PHYSPROP	5.4E-04	1.3E-05	PHYSPROP	4.7E-02	EPI	2.8E+01	EPI	9.0E-01	PubChem	4.2E-02	6.8E-06	EPA WATER9			9.1E+02	EPI	2.6E+00	PHYSPROP	1.3E+03	PHYSPROP	5.5E-02	8.1E-01	1.9E+00	1.1E-02	EPI
Nitroso-di-N-propylamine, N-	621-64-7	1.3E+02	PHYSPROP	2.2E-04	5.4E-06	PHYSPROP	8.6E-02	PHYSPROP	6.8E+00	EPI	9.2E-01	CRC89	5.6E-02	7.8E-06	EPA WATER9			2.8E+02	EPI	1.4E+00	PHYSPROP	1.3E+04	PHYSPROP	1.0E-02	5.6E-01	1.4E+00	2.3E-03	EPI
Nitrosodiethanolamine, N-	1116-54-7	1.3E+02	PHYSPROP	2.0E-10	4.9E-12	PHYSPROP	5.0E-04	PHYSPROP	8.2E+01	EPI			7.3E-02	8.5E-06	EPA WATER9			1.0E+00	EPI	-1.3E+00	PHYSPROP	1.0E+06	PHYSPROP	1.1E-04	5.9E-01	1.4E+00	2.5E-05	RAGSE
Nitrosodiethylamine, N-	55-18-5	1.0E+02	PHYSPROP	1.5E-04	3.6E-06	PHYSPROP	8.6E-01	PHYSPROP	-1.6E+01	EPI	9.4E-01	CRC89	7.4E-02	9.1E-06	EPA WATER9			8.3E+01	EPI	4.8E-01	PHYSPROP	1.1E+05	PHYSPROP	3.4E-03	3.9E-01	9.4E-01	8.7E-04	EPI
Nitrosodimethylamine, N-	62-75-9	7.4E+01	PHYSPROP	7.4E-05	1.8E-06	PHYSPROP	2.7E+00	PHYSPROP	-3.9E+01	EPI	1.0E+00	CRC89	9.9E-02	1.2E-05	EPA WATER9			2.3E+01	EPI	-5.7E-01	PHYSPROP	1.0E+06	PHYSPROP	8.3E-04	2.7E-01	6.6E-01	2.5E-04	EPI
Nitrosodiphenylamine, N-	86-30-6	2.0E+02	PHYSPROP	5.0E-05	1.2E-06	PHYSPROP	1.0E-01	PHYSPROP	6.7E+01	PHYSPROP			5.6E-02	6.5E-06	EPA WATER9			2.6E+03	EPI	3.1E+00	PHYSPROP	3.5E+01	PHYSPROP	7.9E-02	1.4E+00	3.3E+00	1.5E-02	EPI
Nitrosomethylethylamine, N-	10595-95-6	8.8E+01	PHYSPROP	5.9E-05	1.4E-06	PHYSPROP	1.1E+00	PHYSPROP	-2.7E+01	EPI	9.4E-01	PubChem	8.4E-02	1.0E-05	EPA WATER9			4.3E+01	EPI	4.0E-02	PHYSPROP	3.0E+05	PHYSPROP	1.9E-03	3.3E-01	7.9E-01	5.3E-04	EPI
Nitrosomorpholine [N-]	59-89-2	1.2E+02	PHYSPROP	1.0E-06	2.5E-08	PHYSPROP	3.6E-02	PHYSPROP	2.9E+01	PHYSPROP			8.0E-02	9.3E-06	EPA WATER9			2.3E+01	EPI	-4.4E-01	PHYSPROP	1.0E+06	PHYSPROP	7.4E-04	4.7E-01	1.1E+00	1.8E-04	EPI
Nitrosopiperidine [N-]	100-75-4	1.1E+02	PHYSPROP	3.5E-05	8.4E-07	PHYSPROP	9.2E-02	PHYSPROP	6.8E+00	EPI	1.1E+00	CRC89	7.0E-02	9.2E-06	EPA WATER9			1.7E+02	EPI	3.6E-01	PHYSPROP	7.7E+04	PHYSPROP	2.6E-03	4.6E-01	1.1E+00	6.2E-04	EPI
Nitrosopyrrolidine, N-	930-55-2	1.0E+02	PHYSPROP	2.0E-06	4.9E-08	PHYSPROP	6.0E-02	PHYSPROP	-3.1E+00	EPI	1.1E+00	CRC89	8.0E-02	1.0E-05	EPA WATER9			9.2E+01	EPI	-1.9E-01	PHYSPROP	1.0E+06	PHYSPROP	1.2E-03	3.8E-01	9.2E-01	3.2E-04	EPI
Nitrotoluene, m-	99-08-1	1.4E+02	PHYSPROP	3.8E-04	9.3E-06	PHYSPROP	2.1E-01	EPI	1.6E+01	PHYSPROP	1.2E+00	CRC89	5.9E-02	8.7E-06	EPA WATER9			3.6E+02	EPI	2.5E+00	PHYSPROP	5.0E+02	PHYSPROP	5.1E-02	6.2E-01	1.5E+00	1.1E-02	EPI
Nitrotoluene, o-	88-72-2	1.4E+02	PHYSPROP	5.1E-04	1.3E-05	PHYSPROP	1.9E-01	EPI	-1.0E+01	PHYSPROP	1.2E+00	CRC89	5.9E-02	8.7E-06	EPA WATER9			3.7E+02	EPI	2.3E+00	PHYSPROP	6.5E+02	PHYSPROP	4.0E-02	6.2E-01	1.5E+00	9.0E-03	EPI
Nitrotoluene, p-	99-99-0	1.4E+02	PHYSPROP	2.3E-04	5.6E-06	PHYSPROP	1.6E-02	EPI	5.2E+01	PHYSPROP	1.1E+00	CRC89	5.7E-02	8.4E-06	EPA WATER9			3.6E+02	EPI	2.4E+00	PHYSPROP	4.4E+02	PHYSPROP	4.5E-02	6.2E-01	1.5E+00	1.0E-02	EPI
Nonane, n-	111-84-2	1.3E+02	PHYSPROP	1.4E+02	3.4E+00	EPI	4.5E+00	PHYSPROP	-5.4E+01	PHYSPROP	7.2E-01	CRC89	5.1E-02	6.8E-06	EPA WATER9			8.0E+02	EPI	5.7E+00	PHYSPROP	2.2E-01	PHYSPROP	7.4E+00	5.5E-01	2.5E+00	1.7E+00	EPI
Norflurazon	27314-13-2	3.0E+02	PHYSPROP	1.4E-08	3.4E-10	EPI	2.9E-08	PHYSPROP	1.8E+02	PHYSPROP			4.2E-02	4.9E-06	EPA WATER9			3.1E+03	EPI	2.3E+00	PHYSPROP	3.4E+01	PHYSPROP	7.0E-03	5.3E+00	1.3E+01	1.1E-03	EPI
Octabromodiphenyl Ether	32536-52-0	8.0E+02	PHYSPROP	3.1E-06	7.5E-08	PHYSPROP	1.3E-02	EPI	2.0E+02	PHYSPROP			2.2E-02	2.6E-06	EPA WATER9			9.9E+04	EPI	8.7E+00	PHYSPROP	1.1E-08	PHYSPROP	3.3E-01	3.2E+03	7.8E+03	3.1E-02	EPI
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	3.0E+02	PHYSPROP	3.5E-08	8.7E-10	PHYSPROP	3.3E-14	PHYSPROP	2.9E+02	CRC89			4.3E-02	5.0E-06	EPA WATER9			5.3E+02	EPI	1.6E-01	PHYSPROP	5.0E+00	PHYSPROP	2.9E-04	4.8E+00	1.1E+01	4.4E-05	EPI
Octamethylpyrophosphoramide	152-16-9	2.9E+02	PHYSPROP	1.5E-08	3.8E-10	PHYSPROP	1.0E-03	PHYSPROP	1.7E+01	PHYSPROP	1.1E+00	CRC89	2.2E-02	5.4E-06	EPA WATER9			2.0E+01	EPI	-1.0E+00	PHYSPROP	1.0E+06	PHYSPROP	5.4E-05	4.2E+00	1.0E+01	8.3E-06	EPI
Oryzalin	19044-88-3	3.5E+02	PHYSPROP	7.8E-08	1.9E-09	PHYSPROP	9.8E-09	PHYSPROP	1.4E+02	PHYSPROP			3.9E-02	4.5E-06	EPA WATER9			8.3E+02	EPI	3.7E+00	PHYSPROP	2.5E+00	PHYSPROP	3.8E-02	9.2E+00	2.2E+01	5.4E-03	EPI
Oxadiazon	19666-30-9	3.5E+02	PHYSPROP	3.0E-06	7.3E-08	EPI	1.1E-07	PHYSPROP	9.0E+01	PHYSPROP			3.9E-02	4.5E-06	EPA WATER9			5.0E+03	EPI	4.8E+00	PHYSPROP	7.0E-01	PHYSPROP	2.0E-01	9.0E+00	2.2E+01	2.8E-02	EPI
Oxamyl	23135-22-0	2.2E+02	PHYSPROP	9.7E-09	2.4E-10	EPI	2.3E-04	PHYSPROP	1.0E+02	PHYSPROP	9.7E-01	CRC89	2.3E-02	5.9E-06	EPA WATER9			1.0E+01	EPI	-4.7E-01	PHYSPROP	2.8E+05	PHYSPROP	2.6E-04	1.8E+00	4.3E+00	4.5E-05	EPI

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m³/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm³)	Density Ref	Dia (cm²/s)	Diw (cm²/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t^* (hr)	K_p (cm/hr)	KPREF
Oxyfluorfen	42874-03-3	3.6E+02	PHYSPROP	3.4E-05	8.2E-07	EPI	2.0E-07	PHYSPROP	8.4E+01	PHYSPROP	1.4E+00	CRC89	2.1E-02	5.3E-06	EPA WATER9			4.0E+04	EPI	4.7E+00	PHYSPROP	1.2E-01	PHYSPROP	1.5E-01	1.1E+01	2.7E+01	2.0E-02	EPI
Paclobutrazol	76738-62-0	2.9E+02	PHYSPROP	3.4E-09	8.3E-11	EPI	7.5E-09	PHYSPROP	1.7E+02	PHYSPROP	1.2E+00	CRC89	2.2E-02	5.7E-06	EPA WATER9			9.2E+02	EPI	3.2E+00	PHYSPROP	2.6E+01	PHYSPROP	3.1E-02	4.6E+00	1.1E+01	4.7E-03	EPI
Paraquat Dichloride	1910-42-5	2.6E+02	PHYSPROP	1.3E-11	3.2E-13	PHYSPROP	7.5E-08	PHYSPROP	3.0E+02	EPI			4.7E-02	5.5E-06	EPA WATER9			6.8E+03	EPI	-4.5E+00	PHYSPROP	6.2E+05	PHYSPROP	3.6E-07	2.9E+00	7.0E+00	5.8E-08	EPI
Parathion	56-38-2	2.9E+02	PHYSPROP	1.2E-05	3.0E-07	PHYSPROP	6.7E-06	PHYSPROP	6.1E+00	PHYSPROP	1.3E+00	CRC89	2.3E-02	5.8E-06	EPA WATER9			2.4E+03	EPI	3.8E+00	PHYSPROP	1.1E+01	PHYSPROP	8.4E-02	4.5E+00	1.1E+01	1.3E-02	EPI
Pebulate	1114-71-2	2.0E+02	PHYSPROP	9.7E-03	2.4E-04	EPI	8.9E-02	PHYSPROP	7.1E+01	EPI	9.5E-01	CRC89	2.4E-02	6.1E-06	EPA WATER9			3.0E+02	EPI	3.8E+00	PHYSPROP	1.0E+02	PHYSPROP	2.2E-01	1.4E+00	3.5E+00	4.0E-02	EPI
Pendimethalin	40487-42-1	2.8E+02	PHYSPROP	3.5E-05	8.6E-07	EPI	1.5E-05	PHYSPROP	5.6E+01	PHYSPROP	1.2E+00	CRC89	2.3E-02	5.7E-06	EPA WATER9			5.6E+03	EPI	5.2E+00	PHYSPROP	3.3E-01	PHYSPROP	7.4E-01	4.0E+00	1.5E+01	1.2E-01	EPI
Pentabromodiphenyl Ether	32534-81-9	5.6E+02	PHYSPROP	4.4E-03	1.1E-04	PHYSPROP	3.1E-08	EPI	5.0E+00	PHYSPROP			2.8E-02	3.2E-06	EPA WATER9			2.2E+04	EPI	6.8E+00	PHYSPROP	2.4E-03	PHYSPROP	3.4E-01	1.5E+02	3.7E+02	3.7E-02	EPI
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	5.6E+02	PHYSPROP	4.8E-05	1.2E-06	PHYSPROP	3.1E-08	EPI	-5.0E+00	EPI	2.3E+00	IRIS	2.2E-02	5.6E-06	EPA WATER9			2.2E+04	EPI	7.7E+00	PHYSPROP	7.9E-05	PHYSPROP	3.4E-01	1.5E+02	3.7E+02	3.7E-02	EPI
Pentachlorobenzene	608-93-5	2.5E+02	PHYSPROP	2.9E-02	7.0E-04	PHYSPROP	1.0E-03	EPI	8.6E+01	PHYSPROP	1.8E+00	CRC89	2.9E-02	7.9E-06	EPA WATER9			3.7E+03	EPI	5.2E+00	PHYSPROP	8.3E-01	PHYSPROP	1.0E+00	2.7E+00	1.0E+01	1.7E-01	EPI
Pentachloroethane	76-01-7	2.0E+02	PHYSPROP	7.9E-02	1.9E-03	EPI	3.5E+00	PHYSPROP	2.9E+01	PHYSPROP	1.7E+00	CRC89	3.2E-02	8.6E-06	EPA WATER9			1.4E+02	EPI	3.2E+00	PHYSPROP	4.9E+02	PHYSPROP	8.6E-02	1.4E+00	3.4E+00	1.6E-02	EPI
Pentachloronitrobenzene	82-68-8	3.0E+02	PHYSPROP	1.8E-03	4.4E-05	EPI	5.0E-05	PHYSPROP	1.4E+02	PHYSPROP	1.7E+00	CRC89	2.6E-02	6.9E-06	EPA WATER9			6.0E+03	EPI	4.6E+00	PHYSPROP	4.4E-01	PHYSPROP	2.8E-01	4.7E+00	1.1E+01	4.2E-02	EPI
Pentachlorophenol	87-86-5	2.7E+02	PHYSPROP	1.0E-06	2.5E-08	PHYSPROP	1.1E-04	PHYSPROP	1.7E+02	PHYSPROP	2.0E+00	CRC89	3.0E-02	8.0E-06	EPA WATER9			5.0E+03	EPI	5.1E+00	PHYSPROP	1.4E+01	PHYSPROP	8.0E-01	3.3E+00	1.3E+01	1.3E-01	EPI
Pentaerythritol tetranitrate (PETN)	78-11-5	3.2E+02	PHYSPROP	5.4E-08	1.3E-09	PHYSPROP	5.5E-09	EPI	1.4E+02	PHYSPROP	1.8E+00	CRC89	2.6E-02	6.8E-06	EPA WATER9			6.5E+02	EPI	2.4E+00	PHYSPROP	4.3E+01	PHYSPROP	6.9E-03	6.2E+00	1.5E+01	1.0E-03	EPI
Pentane, n-	109-66-0	7.2E+01	PHYSPROP	5.1E+01	1.3E+00	PHYSPROP	5.1E+02	PHYSPROP	-1.3E+02	PHYSPROP	6.3E-01	CRC89	8.2E-02	8.8E-06	EPA WATER9			7.2E+01	EPI	3.4E+00	PHYSPROP	3.8E+01	PHYSPROP	3.6E-01	2.7E-01	6.4E-01	1.1E-01	EPI
Perchlorates																												
~Ammonium Perchlorate	7790-98-9	1.2E+02	PHYSPROP								2.0E+00	CRC89										2.5E+05	PHYSPROP	4.2E-03	4.8E-01	1.1E+00	1.0E-03	RAGSE
~Lithium Perchlorate	7791-03-9	1.1E+02	CRC89						2.4E+02	CRC89	2.4E+00	CRC89										5.9E+05	CRC89	4.0E-03	4.1E-01	1.0E+00	1.0E-03	RAGSE
~Perchlorate and Perchlorate Salts	14797-73-0	1.2E+02	CRC89																			2.5E+05	CRC89	4.2E-03	4.8E-01	1.1E+00	1.0E-03	RAGSE
~Potassium Perchlorate	7778-74-7	1.4E+02	PHYSPROP						5.3E+02	PHYSPROP	2.5E+00	CRC89										1.5E+04	PHYSPROP	9.1E-03	6.3E-01	1.5E+00	2.0E-03	RAGSE
~Sodium Perchlorate	7601-89-0	1.2E+02	PHYSPROP						4.8E+02	EPI	2.5E+00	CRC89										2.1E+06	PHYSPROP	4.3E-03	5.1E-01	1.2E+00	1.0E-03	RAGSE
Perfluorobutane Sulfonate	375-73-5	3.0E+02	PHYSPROP	5.9E-04	1.4E-05	PHYSPROP	5.2E-02	PHYSPROP	3.7E+01	EPI	1.8E+00	LookChem	2.7E-02	7.2E-06	EPA WATER9			1.8E+02	EPI	2.4E+00	PHYSPROP	1.1E+02	PHYSPROP	8.7E-03	5.0E+00	1.2E+01	1.3E-03	EPI
Permethrin	52645-53-1	3.9E+02	PHYSPROP	7.7E-05	1.9E-06	EPI	2.2E-08	PHYSPROP	3.4E+01	PHYSPROP	1.2E+00	CRC89	1.9E-02	4.8E-06	EPA WATER9			1.2E+05	EPI	6.5E+00	PHYSPROP	6.0E-03	PHYSPROP	1.6E+00	1.6E+01	6.5E+01	2.1E-01	EPI
Phenacetin	62-44-2	1.8E+02	PHYSPROP	8.7E-09	2.1E-10	EPI	6.9E-07	PHYSPROP	1.4E+02	PHYSPROP			6.0E-02	7.0E-06	EPA WATER9			4.1E+01	EPI	1.6E+00	PHYSPROP	7.7E+02	PHYSPROP	8.9E-03	1.1E+00	2.5E+00	1.7E-03	EPI
Phenmedipham	13684-63-4	3.0E+02	PHYSPROP	3.4E-11	8.4E-13	EPI	1.0E-11	PHYSPROP	1.4E+02	PHYSPROP			4.2E-02	5.0E-06	EPA WATER9			2.6E+03	EPI	3.6E+00	PHYSPROP	4.7E+00	PHYSPROP	5.2E-02	5.1E+00	1.2E+01	7.9E-03	EPI
Phenol	108-95-2	9.4E+01	PHYSPROP	1.4E-05	3.3E-07	PHYSPROP	3.5E-01	PHYSPROP	4.1E+01	PHYSPROP	1.1E+00	CRC89	8.3E-02	1.0E-05	EPA WATER9			1.9E+02	EPI	1.5E+00	PHYSPROP	8.3E+04	PHYSPROP	1.6E-02	3.5E-01	8.5E-01	4.3E-03	EPI
Phenothiazine	92-84-2	2.0E+02	PHYSPROP	1.1E-06	2.8E-08	PHYSPROP	8.9E-07	PHYSPROP	1.9E+02	PHYSPROP	1.3E+00	PubChem	2.9E-02	7.5E-06	EPA WATER9			1.5E+03	EPI	4.2E+00	PHYSPROP	1.6E+00	PHYSPROP	3.7E-01	1.4E+00	3.3E+00	6.8E-02	EPI
Phenylenediamine, m-	108-45-2	1.1E+02	PHYSPROP	5.1E-08	1.3E-09	EPI	2.1E-03	EPI	6.4E+01	PHYSPROP	1.0E+00	CRC89	7.2E-02	9.2E-06	EPA WATER9			3.4E+01	EPI	-3.3E-01	PHYSPROP	2.4E+05	PHYSPROP	9.4E-04	4.2E-01	1.0E+00	2.3E-04	EPI
Phenylenediamine, o-	95-54-5	1.1E+02	PHYSPROP	2.9E-07	7.2E-09	EPI	2.1E-03	EPI	1.0E+02	PHYSPROP			8.4E-02	9.8E-06	EPA WATER9			3.5E+01	EPI	1.5E-01	PHYSPROP	4.0E+04	PHYSPROP	1.9E-03	4.2E-01	1.0E+00	4.9E-04	EPI
Phenylenediamine, p-	106-50-3	1.1E+02	PHYSPROP	2.8E-08	6.7E-10	PHYSPROP	5.0E-03	PHYSPROP	1.5E+02	PHYSPROP			8.4E-02	9.8E-06	EPA WATER9			3.4E+01	EPI	-3.0E-01	PHYSPROP	3.7E+04	PHYSPROP	9.8E-04	4.2E-01	1.0E+00	2.5E-04	EPI
Phenylphenol, 2-	90-43-7	1.7E+02	PHYSPROP	4.3E-05	1.1E-06	EPI	2.0E-03	EPI	5.9E+01	PHYSPROP	1.2E+00	CRC89	4.2E-02	7.8E-06	EPA WATER9			6.7E+03	EPI	3.1E+00	PHYSPROP	7.0E+02	PHYSPROP	9.8E-02	9.4E-01	2.3E+00	2.0E-02	EPI
Phorate	298-02-2	2.6E+02	PHYSPROP	1.8E-04	4.4E-06	EPI	6.4E-04	PHYSPROP	-1.5E+01	CRC89	1.2E+00	CRC89	2.3E-02	5.9E-06	EPA WATER9			4.6E+02	EPI	3.6E+00	PHYSPROP	5.0E+01	PHYSPROP	7.8E-02	3.0E+00	7.2E+00	1.3E-02	EPI
Phosgene	75-44-5	9.9E+01	PHYSPROP	6.8E-01	1.7E-02	PHYSPROP	1.4E+03	PHYSPROP	-1.2E+02	PHYSPROP	1.4E+00	CRC89	8.9E-02	1.2E-05	EPA WATER9			1.0E+00	EPI	-7.1E-01	PHYSPROP	6.8E+03	YAWS	5.6E-04	3.8E-01	9.0E-01	1.5E-04	EPI
Phosmet	732-11-6	3.2E+02	PHYSPROP	3.4E-07	8.4E-09	EPI	4.9E-07	PHYSPROP	7.2E+01	PHYSPROP			4.1E-02	4.8E-06	EPA WATER9			1.0E+01	EPI	2.8E+00	PHYSPROP	2.4E+01	PHYSPROP	1.3E-02	6.3E+00	1.5E+01	1.8E-03	EPI
Phosphates, Inorganic																												
~Aluminum metaphosphate	13776-88-0	2.6E+02	CRC89								2.8E+00	CRC89												6.2E-03	3.2E+00	7.6E+00	1.0E-03	RAGSE
~Ammonium polyphosphate	68333-79-9																										1.0E-03	RAGSE
~Calcium pyrophosphate	7790-76-3	2.5E+02	CRC89						1.2E+03	CRC89	3.1E+00	CRC89												6.1E-03	2.8E+00	6.7E+00	1.0E-03	RAGSE
~Diammonium phosphate	7783-28-0	1.3E+02	EPI																					4.4E-03	5.8E-01	1.4E+00	1.0E-03	RAGSE
~Dicalcium phosphate	7757-93-9	1.4E+02	EPI																					4.5E-03	6.1E-01	1.5E+00	1.0E-03	RAGSE
~Dimagnesium phosphate	7782-75-4	1.7E+02	CRC89								2.1E+00	CRC89												5.1E-03	1.0E+00	2.4E+00	1.0E-03	RAGSE
~Dipotassium phosphate	7758-11-4	1.7E+02	EPI																					5.1E-03	9.9E-01	2.4E+00	1.0E-03	RAGSE
~Disodium phosphate	7558-79-4	1.4E+02	EPI																					4.6E-03	6.6E-01	1.6E+00	1.0E-03	RAGSE
~Monoaluminum phosphate	13530-50-2	3.2E+02	CRC89																					6.9E-03	6.3E+00	1.5E+01	1.0E-03	RAGSE
~Monoammonium phosphate	7722-76-1	1.2E+02	EPI																					4.1E-03	4.6E-01	1.1E+00	1.0E-03	RAGSE
~Monocalcium phosphate	7758-23-8	2.3E+02	EPI																					5.9E-03	2.2E+00	5.2E+00	1.0E-03	RAGSE
~Monomagnesium phosphate	7757-86-0	1.2E+02	CRC89																					4.2E-03	5.0E-01	1.2E+00	1.0E-03	RAGSE
~Monopotassium phosphate	7778-77-0	1.4E+02	EPI																					4.5E-03	6.1E-01	1.5E+00	1.0E-03	RAGSE
~Monosodium phosphate	7558-80-7	1.2E+02	PHYSPROP						6.0E+01	PHYSPROP												4.9E+05	PHYSPROP	4.2E-03	4.9E-01	1.2E+00	1.0E-03	RAGSE
~Polyphosphoric acid	8017-16-1	2.6E+02	EPI																					6.2E-03	2.9E+00	7.0E+00	1.0E-03	RAGSE
~Potassium tripolyphosphate	13845-36-8	4.5E+02	OTHER																					8.1E-03	3.4E+01	8.2E+01	1.0E-03	RAGSE
~Sodium acid pyrophosphate	7758-16-9	2.2E+02	EPI																					5.7E-03	1.8E+00	4.4E+00	1.0E-03	RAGSE
~Sodium aluminum phosphate (acidic)	7785-88-8	1.4E+02	OTHER																					4.6E-03	6.8E-01	1.6E+00	1.0E-03	RAGSE
~Sodium aluminum phosphate (anhydrous)	10279-59-1																										1.0E-03	RAGSE
~Sodium aluminum phosphate (tetrahydrate	10305-76-7	9.5E+02	OTHER																					1.2E-02	2.2E+04	5.3E+04	1.0E-03	RAGSE
~Sodium hexametaphosphate	10124-56-8	6.1E+02	CRC89																					9.5E-03	2.8E+02	6.7E+02	1.0E-03	RAGSE
~Sodium polyphosphate	68915-31-1	3.6E+02	EPI																					7.3E-03	1.1E+01	2.6E+01	1.0E-03	RAGSE
~Sodium trimetaphosphate	7785-84-4	3.1E+02	EPI																					6.7E-03	5.4E+00	1.3E+01	1.0E-03	RAGSE
~Sodium tripolyphosphate	7758-29-4	3.7E+02	EPI																					7.4E-03	1.2E+01	2.9E+01	1.0E-03	RAGSE
~Tetrapotassium phosphate	7320-34-5	3.3E+02	PHYSPROP																					7.0E-03	7.4E+00	1.8E+01	1.0E-03	RAGSE
~Tetrasodium pyrophosphate	7722-88-5	2.7E+02	PHYSPROP						8.0E+01	PHYSPROP												8.1E+04	PHYSPROP	6.3E-03	3.2E+00	7.8E+00	1.0E-03	RAGSE
~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	8.9E+02	OTHER																					1.1E-02	9.9E+03	2.4E+04	1.0E-03	RAGSE
~Tricalcium phosphate	7758-87-4	3.1E+02	CRC89						1.7E+03	CRC89	3.1E+00	CRC89												6.8E-03	5.7E+00	1.4E+01	1.0E-03	RAGSE
~Trimagnesium phosphate	7757-87-1	2.6E+02	CRC89						1.2E+03	CRC89														6.2E-03	3.1E+00	7.5E+00	1.0E-03	RAGSE
~Tripotassium phosphate	7778-53-2	2.1E+02	EPI																					5.6E-03	1.6E+00	3.9E+00	1.0E-03	RAGSE
~Trisodium phosphate	7601-54-9	1.6E+02	PHYSPROP						7.5E+01	PHYSPROP														4.9E-03	8.7E-01	2.1E+00	1.0E-03	RAGSE
Phosphine	7803-51-2	3.4E+01	PHYSPROP	1.0E+00	2.4E-02	PHYSPROP	2.9E+04	PHYSPROP	-1.3E+02	PHYSPROP	1.4E+00	CRC89	1.9E-01	2.2E-05	EPA WATER9					-2.7E-01	OTHER	2.6E+05	PERRY	2.2E-03	1.6E-01	3.9E-01	1.0E-03	RAGSE
Phosphoric Acid	7664-38-2	9.8E+01	PHYSPROP				3.0E-02	NIOSH	4.2E+01	PHYSPROP	1.8E+00	PERRY										5.5E+06	CRC89	3.8E-03	3.7E-01	8.9E-01	1.0E-03	RAGSE
Phosphorus, White	7723-14-0	3.4E+01	PHYSPROP	8.6E-02	2.1E-03	ATSDR Profile	2.5E-02	ATSDR Profile	4.4E+01	PHYSPROP	1.8E+00	CRC89	2.2E-01	2.8E-05	EPA WATER9	3.5E+00	BAES			3.1E+00	OTHER	3.3E+00	PHYSPROP	2.2E-03	1.6E-01	3.9E-01	1.0E-03	RAGSE
Phthalates																												
~Bis(2-ethylhexyl)phthalate	117-81-7	3.9E+02	PHYSPROP	1.1E-05	2.7E-07	EPI	1.4E-07	PHYSPROP	5.5E+01	PHYSPROP	9.8E-01	CRC89	1.7E-02	4.2E-06	EPA WATER9			1.2E+05	EPI	7.6E+00	PHYSPROP	2.7E-01	PHYSPROP	8.6E+00	1.6E+01	7.3E+01	1.1E+00	EPI
~Butylphthalyl Butylglycolate	85-70-1	3.4E+02	PHYSPROP	8.4E-07	2.1E-08	PHYSPROP	7.1E-06	PHYSPROP	3.5E+01	PHYSPROP	1.1E+00	LANGE	2.0E-02	4.9E-06	EPA WATER9			1.1E+04	EPI	4.2E+00	PHYSPROP	8.8E+00	PHYSPROP	8.2E-02	8.0E+00	1.9E+01	1.2E-02	EPI
~Dibutyl Phthalate	84-74-2	2.8E+02	PHYSPROP	7.4E-05	1.8E-06	PHYSPROP	2.0E-05	PHYSPROP	3.5E+01	PHYSPROP	1.0E+00	CRC89	2.1E-02	5.3E-06	EPA WATER9			1.2E+03	EPI	4.5E+00	PHYSPROP	1.1E+01	PHYSPROP	2.7E-01	3.8E+00	9.1E+00	4.2E-02	EPI
~Diethyl Phthalate	84-66-2	2.2E+02	PHYSPROP	2.5E-05	6.1E-07	EPI	2.1E-03	PHYSPROP	4.1E+01	PHYSPROP	1.2E+00	CRC89	2.6E-02	6.7E-06	EPA WATER9			1.0E+02	EPI	2.4E+00	PHYSPROP	1.1E+03	PHYSPROP	2.1E-02	1.8E+00	4.4E+00	3.6E-03	EPI
~Dimethylterephthalate	120-61-6	1.9E+02	PHYSPROP	5.5E-03	1.3E-04	EPI	1.0E-02	PHYSPROP	1.4E+02	PHYSPROP	1.1E+00	CRC89	2.9E-02	6.7E-06	EPA WATER9			3.1E+01	EPI	2.3E+00	PHYSPROP	1.9E+01	PHYSPROP	2.1E-02	1.3E+00	3.1E+00	4.0E-03	EPI
~Octyl Phthalate, di-N-	117-84-0	3.9E+02	PHYSPROP	1.1E-04	2.6E-06	EPI	1.0E-07	PHYSPROP	2.5E+01	PHYSPROP			3.6E-02	4.2E-06	EPA WATER9			1.4E+05	EPI	8.1E+00	PHYSPROP	2.2E-02	PHYSPROP	1.8E+01	1.6E+01	7.5E+01	2.4E+00	EPI
~Phthalic Acid, P-	100-21-0	1.7E+02	PHYSPROP	1.6E-11	3.9E-13	PHYSPROP	9.2E-06	EPI	4.0E+02	LANGE	1.5E+00	PERRY	4.9E-02	9.0E-06	EPA WATER9			7.9E+01	EPI	2.0E+00	PHYSPROP	1.5E+01	PHYSPROP	1.9E-02	9.0E-01	2.1E+00	3.9E-03	EPI
~Phthalic Anhydride	85-44-9	1.5E+02	PHYSPROP	6.7E-07	1.6E-08	EPI	5.2E-04	EPI	1.3E+02	PHYSPROP	1.5E+00	CRC89	5.9E-02	9.8E-06	EPA WATER9			1.0E+01	EPI	1.6E+00	PHYSPROP	6.2E+03	PHYSPROP	1.2E-02	7.1E-01	1.7E+00	2.7E-03	EPI
Picloram	1918-02-1	2.4E+02	PHYSPROP	2.2E-12	5.3E-14	EPI	7.2E-11	PHYSPROP	2.2E+02	PHYSPROP			4.9E-02	5.7E-06	EPA WATER9			3.9E+01	EPI	1.9E+00	PHYSPROP	4.3E+02	PHYSPROP	7.6E-03	2.4E+00	5.7E+00	1.3E-03	EPI
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	2.0E+02	PHYSPROP	4.0E-10	9.8E-12	PHYSPROP	4.2E-07	PHYSPROP	1.7E+02	PHYSPROP			5.6E-02	6.5E-06	EPA WATER9			2.3E+02	EPI	9.3E-01	PHYSPROP	1.4E+03	PHYSPROP	2.7E-03	1.4E+00	3.3E+00	5.0E-04	EPI
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	2.3E+02	PHYSPROP	7.0E-10	1.7E-11	EPI	7.5E-07	PHYSPROP	1.2E+02	PHYSPROP	1.8E+00	PERRY	3.0E-02	8.2E-06	EPA WATER9			2.3E+03	EPI	1.4E+00	PHYSPROP	1.3E+04	PHYSPROP	3.6E-03	2.0E+00	4.8E+00	6.2E-04	EPI
Pirimiphos, Methy	29232-93-7	3.1E+02	PHYSPROP	2.9E-05	7.0E-07	EPI	1.5E-05	PHYSPROP	1.5E+01	PHYSPROP	1.2E+00	CRC89	2.2E-02	5.4E-06	EPA WATER9			3.7E+02	EPI	4.2E+00	PHYSPROP	8.6E+00	PHYSPROP	1.3E-01	5.4E+00	1.3E+01	1.9E-02	EPI
Polybrominated Biphenyls	59536-65-1																											
Polychlorinated Biphenyls (PCBs)																												
~Aroclor 1016	12674-11-2	5.5E+02	PHYSPROP	8.2E-03	2.0E-04	EPI	4.0E-04	PHYSPROP	1.0E+02	EPI	1.4E+00	ATSDR Profile	1.7E-02	4.2E-06	EPA WATER9			4.8E+04	EPI	5.7E+00	PHYSPROP	4.2E-01	PHYSPROP	2.7E+00	1.3E+02	5.3E+02	3.1E-01	EPI
~Aroclor 1221	11104-28-2	1.9E+02	PHYSPROP	9.3E-03	2.3E-04	PHYSPROP	6.7E-03	PHYSPROP	3.4E+01	EPI	1.2E+00	ATSDR Profile	3.2E-02	7.2E-06	EPA WATER9			8.4E+03	EPI	4.7E+00	PHYSPROP	1.5E+01	PHYSPROP	8.9E-01	1.2E+00	4.6E+00	1.7E-01	EPI
~Aroclor 1232	11141-16-5	1.9E+02	PHYSPROP	3.0E-02	7.4E-04	EPI	4.1E-03	PHYSPROP	3.4E+01	EPI	1.3E+00	ATSDR Profile	3.3E-02	7.5E-06	EPA WATER9			8.4E+03	EPI	4.4E+00	PHYSPROP	1.5E+00	PHYSPROP	8.9E-01	1.2E+00	4.6E+00	1.7E-01	EPI

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	HLC (atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	KPREF
~Aroclor 1242	53469-21-9	2.9E+02	PHYSPROP	1.4E-02	3.4E-04	PHYSPROP	8.6E-05	EPI	1.2E+02	EPI	1.4E+00	ATSDR Profile	2.4E-02	6.1E-06	EPA WATER9			7.8E+04	EPI	6.3E+00	PHYSPROP	2.8E-01	PHYSPROP	3.6E+00	4.5E+00	1.9E+01	5.5E-01	EPI
~Aroclor 1248	12672-29-6	6.2E+02	PHYSPROP	1.8E-02	4.4E-04	PHYSPROP	4.9E-04	PHYSPROP	1.2E+02	EPI	1.4E+00	HSDB	1.6E-02	3.9E-06	EPA WATER9			7.7E+04	EPI	6.2E+00	PHYSPROP	1.0E-01	PHYSPROP	4.5E+00	3.1E+02	1.3E+03	4.8E-01	EPI
~Aroclor 1254	11097-69-1	3.3E+02	PHYSPROP	1.2E-02	2.8E-04	PHYSPROP	7.7E-05	PHYSPROP	1.3E+02	EPI	1.5E+00	ATSDR Profile	2.4E-02	6.1E-06	EPA WATER9			1.3E+05	EPI	6.5E+00	PHYSPROP	4.3E-02	PHYSPROP	5.2E+00	7.1E+00	3.1E+01	7.5E-01	EPI
~Aroclor 1260	11096-82-5	4.0E+02	PHYSPROP	1.4E-02	3.4E-04	PHYSPROP	4.1E-05	PHYSPROP	1.6E+02	EPI	1.6E+00	ATSDR Profile	2.2E-02	5.6E-06	EPA WATER9			3.5E+05	EPI	7.6E+00	PHYSPROP	1.4E-02	PHYSPROP	7.5E+00	1.7E+01	7.7E+01	9.9E-01	EPI
~Aroclor 5460	11126-42-4	2.9E+02	PHYSPROP	5.1E-03	1.3E-04	PHYSPROP	8.5E-06	PHYSPROP	1.2E+02	EPI	1.6E+00	LookChem	2.6E-02	6.8E-06	EPA WATER9			8.1E+04	EPI	6.3E+00	PHYSPROP	5.3E-02	PHYSPROP	3.8E+00	4.5E+00	2.0E+01	5.8E-01	EPI
~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	4.0E+02	PHYSPROP	2.1E-03	5.1E-05	PHYSPROP	1.3E-07	PHYSPROP	1.6E+02	EPI	1.7E+00	LookChem	2.2E-02	5.7E-06	EPA WATER9			3.5E+05	EPI	8.3E+00	PHYSPROP	7.5E-04	PHYSPROP	2.3E+01	1.7E+01	8.0E+01	3.0E+00	EPI
~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167	52663-72-6	3.6E+02	PHYSPROP	2.8E-03	6.9E-05	PHYSPROP	5.8E-07	PHYSPROP	1.5E+02	EPI	1.6E+00	LookChem	2.3E-02	5.9E-06	EPA WATER9			2.1E+05	EPI	7.5E+00	PHYSPROP	2.2E-03	PHYSPROP	1.0E+01	1.1E+01	5.0E+01	1.4E+00	EPI
~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	3.6E+02	PHYSPROP	6.6E-03	1.6E-04	EPI	5.8E-07	EPI	1.5E+02	EPI	1.6E+00	l	2.3E-02	5.9E-06	EPA WATER9			2.1E+05	EPI	7.6E+00	PHYSPROP	1.6E-03	EPI	1.2E+01	1.1E+01	5.0E+01	1.7E+00	EPI
~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	3.6E+02	PHYSPROP	5.8E-03	1.4E-04	EPI	1.6E-06	PHYSPROP	1.5E+02	EPI	1.6E+00	LookChem	2.3E-02	5.9E-06	EPA WATER9			2.1E+05	EPI	7.6E+00	PHYSPROP	5.3E-03	PHYSPROP	1.2E+01	1.1E+01	5.0E+01	1.7E+00	EPI
~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169	32774-16-6	3.6E+02	PHYSPROP	2.8E-03	6.9E-05	PHYSPROP	5.8E-07	PHYSPROP	1.5E+02	EPI	1.6E+00	LookChem	2.3E-02	5.9E-06	EPA WATER9			2.1E+05	EPI	7.4E+00	PHYSPROP	5.1E-04	PHYSPROP	9.1E+00	1.1E+01	5.0E+01	1.2E+00	EPI
~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	3.3E+02	EPI	7.8E-03	1.9E-04	EPI	5.5E-06	EPI	9.8E+01	EPI	1.5E+00	LookChem	2.4E-02	6.1E-06	EPA WATER9			1.3E+05	EPI	7.0E+00	EPI	1.6E-02	EPI	6.9E+00	7.1E+00	3.2E+01	1.0E+00	EPI
~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	3.3E+02	PHYSPROP	1.2E-02	2.9E-04	EPI	9.0E-06	PHYSPROP	1.3E+02	EPI	1.5E+00	LookChem	2.4E-02	6.1E-06	EPA WATER9			1.3E+05	EPI	7.1E+00	PHYSPROP	1.3E-02	PHYSPROP	8.6E+00	7.1E+00	3.2E+01	1.2E+00	EPI
~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105	32598-14-4	3.3E+02	PHYSPROP	1.2E-02	2.8E-04	EPI	6.5E-06	PHYSPROP	1.3E+02	EPI	1.5E+00	LookChem	2.4E-02	6.1E-06	EPA WATER9			1.3E+05	EPI	6.8E+00	PHYSPROP	3.4E-03	PHYSPROP	5.2E+00	7.1E+00	3.1E+01	7.5E-01	EPI
~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	3.3E+02	PHYSPROP	3.8E-03	9.2E-05	PHYSPROP	5.5E-06	PHYSPROP	9.8E+01	PHYSPROP	1.5E+00	LookChem	2.4E-02	6.1E-06	EPA WATER9			1.3E+05	EPI	7.0E+00	PHYSPROP	1.6E-02	PHYSPROP	6.9E+00	7.1E+00	3.2E+01	1.0E+00	EPI
~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	3.3E+02	EPI	7.8E-03	1.9E-04	EPI	2.2E-06	EPI	1.3E+02	EPI	1.5E+00	LookChem	2.4E-02	6.1E-06	EPA WATER9			1.3E+05	EPI	7.0E+00	EPI	7.3E-03	EPI	6.9E+00	7.1E+00	3.2E+01	1.0E+00	EPI
~Polychlorinated Biphenyls (high risk	1336-36-3	2.9E+02	PHYSPROP	1.7E-02	4.2E-04	PHYSPROP	4.9E-04	PHYSPROP	1.2E+02	EPI	1.4E+00	HSDB	2.4E-02	6.3E-06	EPA WATER9			7.8E+04	EPI	7.1E+00	PHYSPROP	7.0E-01	PHYSPROP	3.6E+00	4.5E+00	1.9E+01	5.5E-01	EPI
~Polychlorinated Biphenyls (low risk)	1336-36-3	2.9E+02	PHYSPROP	1.7E-02	4.2E-04	PHYSPROP	4.9E-04	PHYSPROP	1.2E+02	EPI	1.4E+00	HSDB	2.4E-02	6.3E-06	EPA WATER9			7.8E+04	EPI	7.1E+00	PHYSPROP	7.0E-01	PHYSPROP	3.6E+00	4.5E+00	1.9E+01	5.5E-01	EPI
~Polychlorinated Biphenyls (lowest risk)	1336-36-3	2.9E+02	PHYSPROP	1.7E-02	4.2E-04	PHYSPROP	4.9E-04	PHYSPROP	1.2E+02	EPI	1.4E+00	HSDB	2.4E-02	6.3E-06	EPA WATER9			7.8E+04	EPI	7.1E+00	PHYSPROP	7.0E-01	PHYSPROP	3.6E+00	4.5E+00	1.9E+01	5.5E-01	EPI
~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77	32598-13-3	2.9E+02	PHYSPROP	3.8E-04	9.4E-06	PHYSPROP	1.6E-05	PHYSPROP	1.8E+02	CRC89			4.3E-02	5.0E-06	EPA WATER9			7.8E+04	EPI	6.6E+00	PHYSPROP	5.7E-04	PHYSPROP	6.0E+00	4.5E+00	2.0E+01	9.2E-01	EPI
~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	2.9E+02	EPI	9.1E-03	2.2E-04	EPI	8.5E-06	EPI	1.2E+02	EPI	1.4E+00	LookChem	2.4E-02	6.3E-06	EPA WATER9			7.8E+04	EPI	6.3E+00	EPI	3.2E-02	EPI	3.8E+00	4.5E+00	2.0E+01	5.8E-01	EPI
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	5.1E+02	EPI	5.4E-10	1.3E-11	EPI	5.4E-13	EPI	2.5E+02	EPI			3.0E-02	3.5E-06	EPA WATER9			1.0E+10	EPI	1.0E+01	EPI	1.8E-06	EPI	1.6E+02	7.8E+01	3.7E+02	1.9E+01	EPI
Polynuclear Aromatic Hydrocarbons (PAHs)																												
~Acenaphthene	83-32-9	1.5E+02	PHYSPROP	7.5E-03	1.8E-04	PHYSPROP	2.2E-03	PHYSPROP	9.3E+01	PHYSPROP	1.2E+00	CRC89	5.1E-02	8.3E-06	EPA WATER9			5.0E+03	EPI	3.9E+00	PHYSPROP	3.9E+00	PHYSPROP	4.1E-01	7.7E-01	1.8E+00	8.6E-02	EPI
~Anthracene	120-12-7	1.8E+02	PHYSPROP	2.3E-03	5.6E-05	PHYSPROP	6.5E-06	EPI	2.2E+02	PHYSPROP	1.3E+00	CRC89	3.9E-02	7.9E-06	EPA WATER9			1.6E+04	EPI	4.5E+00	PHYSPROP	4.3E-02	PHYSPROP	7.3E-01	1.0E+00	4.1E+00	1.4E-01	EPI
~Benz[a]anthracene	56-55-3	2.3E+02	PHYSPROP	4.9E-04	1.2E-05	PHYSPROP	2.1E-07	PHYSPROP	8.4E+01	PHYSPROP	1.3E+00	PubChem	2.6E-02	6.7E-06	EPA WATER9			1.8E+05	EPI	5.8E+00	PHYSPROP	9.4E-03	PHYSPROP	3.2E+00	2.0E+00	8.5E+00	5.5E-01	EPI
~Benzo(j)fluoranthene	205-82-3	2.5E+02	PHYSPROP	8.3E-06	2.0E-07	PHYSPROP	2.6E-08	PHYSPROP	1.7E+02	PHYSPROP			4.8E-02	5.6E-06	EPA WATER9			6.0E+05	EPI	6.1E+00	PHYSPROP	2.5E-03	PHYSPROP	4.2E+00	2.7E+00	1.2E+01	6.9E-01	EPI
~Benzo[a]pyrene	50-32-8	2.5E+02	PHYSPROP	1.9E-05	4.6E-07	PHYSPROP	5.5E-09	EPI	1.8E+02	PHYSPROP			4.8E-02	5.6E-06	EPA WATER9			5.9E+05	EPI	6.1E+00	PHYSPROP	1.6E-03	PHYSPROP	4.4E+00	2.7E+00	1.2E+01	7.1E-01	EPI
~Benzo[b]fluoranthene	205-99-2	2.5E+02	PHYSPROP	2.7E-05	6.6E-07	PHYSPROP	5.0E-07	PHYSPROP	1.7E+02	PHYSPROP			4.8E-02	5.6E-06	EPA WATER9			6.0E+05	EPI	5.8E+00	PHYSPROP	1.5E-03	PHYSPROP	2.5E+00	2.7E+00	1.1E+01	4.2E-01	EPI
~Benzo[k]fluoranthene	207-08-9	2.5E+02	PHYSPROP	2.4E-05	5.8E-07	PHYSPROP	9.7E-10	EPI	2.2E+02	PHYSPROP			4.8E-02	5.6E-06	EPA WATER9			5.9E+05	EPI	6.1E+00	PHYSPROP	8.0E-04	PHYSPROP	4.2E+00	2.7E+00	1.2E+01	6.9E-01	EPI
~Chloronaphthalene, Beta-	91-58-7	1.6E+02	PHYSPROP	1.3E-02	3.2E-04	PHYSPROP	1.2E-02	EPI	6.1E+01	PHYSPROP	1.1E+00	CRC89	4.5E-02	7.7E-06	EPA WATER9			2.5E+03	EPI	3.9E+00	PHYSPROP	1.2E+01	PHYSPROP	3.7E-01	8.6E-01	2.1E+00	7.5E-02	EPI
~Chrysene	218-01-9	2.3E+02	PHYSPROP	2.1E-04	5.2E-06	PHYSPROP	6.2E-09	PHYSPROP	2.6E+02	PHYSPROP	1.3E+00	CRC89	2.6E-02	6.7E-06	EPA WATER9			1.8E+05	EPI	5.8E+00	PHYSPROP	2.0E-03	PHYSPROP	3.5E+00	2.0E+00	8.5E+00	6.0E-01	EPI
~Dibenz[a,h]anthracene	53-70-3	2.8E+02	PHYSPROP	5.8E-06	1.4E-07	EPI	9.6E-10	EPI	2.7E+02	PHYSPROP			4.5E-02	5.2E-06	EPA WATER9			1.9E+06	EPI	6.8E+00	PHYSPROP	2.5E-03	PHYSPROP	6.1E+00	3.8E+00	1.7E+01	9.5E-01	EPI
~Dibenzo(a,e)pyrene	192-65-4	3.0E+02	PHYSPROP	5.8E-07	1.4E-08	PHYSPROP	7.0E-11	PHYSPROP	2.3E+02	PHYSPROP			4.2E-02	4.9E-06	EPA WATER9			6.5E+06	EPI	7.7E+00	EPI	8.0E-05	PHYSPROP	2.8E+01	5.2E+00	2.4E+01	4.2E+00	EPI
~Dimethylbenz(a)anthracene, 7,12-	57-97-6	2.6E+02	PHYSPROP	1.5E-04	3.8E-06	EPI	6.8E-07	PHYSPROP	1.2E+02	PHYSPROP			4.7E-02	5.5E-06	EPA WATER9			4.9E+05	EPI	5.8E+00	PHYSPROP	6.1E-02	PHYSPROP	2.5E+00	2.9E+00	1.2E+01	4.1E-01	EPI
~Fluoranthene	206-44-0	2.0E+02	PHYSPROP	3.6E-04	8.9E-06	PHYSPROP	9.2E-06	PHYSPROP	1.1E+02	PHYSPROP	1.3E+00	CRC89	2.8E-02	7.2E-06	EPA WATER9			5.5E+04	EPI	5.2E+00	PHYSPROP	2.6E-01	PHYSPROP	1.7E+00	1.4E+00	5.7E+00	3.1E-01	EPI
~Fluorene	86-73-7	1.7E+02	PHYSPROP	3.9E-03	9.6E-05	PHYSPROP	6.0E-04	PHYSPROP	1.1E+02	PHYSPROP	1.2E+00	CRC89	4.4E-02	7.9E-06	EPA WATER9			9.2E+03	EPI	4.2E+00	PHYSPROP	1.7E+00	PHYSPROP	5.5E-01	9.0E-01	2.2E+00	1.1E-01	EPI
~Indeno[1,2,3-cd]pyrene	193-39-5	2.8E+02	PHYSPROP	1.4E-05	3.5E-07	PHYSPROP	1.3E-10	PHYSPROP	1.6E+02	PHYSPROP			4.5E-02	5.2E-06	EPA WATER9			2.0E+06	EPI	6.7E+00	PHYSPROP	1.9E-04	PHYSPROP	7.9E+00	3.7E+00	1.7E+01	1.2E+00	EPI
~Methylnaphthalene, 1-	90-12-0	1.4E+02	PHYSPROP	2.1E-02	5.1E-04	PHYSPROP	6.7E-02	PHYSPROP	-3.0E+01	PHYSPROP	1.0E+00	CRC89	5.3E-02	7.8E-06	EPA WATER9			2.5E+03	EPI	3.9E+00	PHYSPROP	2.6E+01	PHYSPROP	4.3E-01	6.6E-01	1.6E+00	9.3E-02	EPI
~Methylnaphthalene, 2-	91-57-6	1.4E+02	PHYSPROP	2.1E-02	5.2E-04	PHYSPROP	5.5E-02	PHYSPROP	3.4E+01	PHYSPROP	1.0E+00	CRC89	5.2E-02	7.8E-06	EPA WATER9			2.5E+03	EPI	3.9E+00	PHYSPROP	2.5E+01	PHYSPROP	4.2E-01	6.6E-01	1.6E+00	9.2E-02	EPI
~Naphthalene	91-20-3	1.3E+02	PHYSPROP	1.8E-02	4.4E-04	PHYSPROP	8.5E-02	PHYSPROP	8.0E+01	PHYSPROP	1.0E+00	CRC89	6.0E-02	8.4E-06	EPA WATER9			1.5E+03	EPI	3.3E+00	PHYSPROP	3.1E+01	PHYSPROP	2.0E-01	5.5E-01	1.3E+00	4.7E-02	EPI
~Nitropyrene, 4-	57835-92-4	2.5E+02	PHYSPROP	1.0E-06	2.5E-08	PHYSPROP	5.5E-08	PHYSPROP	1.9E+02	PHYSPROP			4.8E-02	5.6E-06	EPA WATER9			8.6E+04	EPI	4.8E+00	PHYSPROP	6.8E-02	PHYSPROP	5.6E-01	2.6E+00	6.3E+00	9.2E-02	EPI
~Pyrene	129-00-0	2.0E+02	PHYSPROP	4.9E-04	1.2E-05	PHYSPROP	4.5E-06	PHYSPROP	1.5E+02	PHYSPROP	1.3E+00	CRC89	2.8E-02	7.2E-06	EPA WATER9			5.4E+04	EPI	4.9E+00	PHYSPROP	1.4E-01	PHYSPROP	1.1E+00	1.4E+00	5.5E+00	2.0E-01	EPI
Potassium Perfluorobutane Sulfonate	29420-49-3	3.4E+02	EPI				1.1E-08	EPI	1.9E+02	EPI			3.9E-02	4.6E-06	EPA WATER9			1.8E+02	EPI	-3.3E-01	EPI	1.4E+00	EPI	2.1E-04	8.2E+00	2.0E+01	3.0E-05	EPI
Prochloraz	67747-09-5	3.8E+02	PHYSPROP	6.7E-07	1.6E-08	EPI	1.1E-06	PHYSPROP	4.8E+01	PHYSPROP			3.6E-02	4.3E-06	EPA WATER9			2.4E+03	EPI	4.1E+00	PHYSPROP	3.4E+01	PHYSPROP	4.8E-02	1.4E+01	3.2E+01	6.4E-03	EPI
Profluralin	26399-36-0	3.5E+02	PHYSPROP	1.2E-02	2.9E-04	EPI	6.3E-05	PHYSPROP	3.2E+01	PHYSPROP	1.4E+00	HSDB	2.2E-02	5.5E-06	EPA WATER9			3.1E+04	EPI	5.6E+00	PHYSPROP	1.0E-01	PHYSPROP	6.5E-01	9.3E+00	3.7E+01	9.0E-02	EPI
Prometon	1610-18-0	2.3E+02	PHYSPROP	3.7E-08	9.1E-10	EPI	2.3E-06	PHYSPROP	9.1E+01	PHYSPROP			5.1E-02	6.0E-06	EPA WATER9			1.4E+02	EPI	3.0E+00	PHYSPROP	7.5E+02	PHYSPROP	4.8E-02	1.9E+00	4.6E+00	8.3E-03	EPI
Prometryn	7287-19-6	2.4E+02	PHYSPROP	4.9E-07	1.2E-08	EPI	1.2E-06	PHYSPROP	1.2E+02	PHYSPROP	1.2E+00	CRC89	2.4E-02	6.2E-06	EPA WATER9			6.6E+02	EPI	3.5E+00	PHYSPROP	3.3E+01	PHYSPROP	8.9E-02	2.4E+00	5.7E+00	1.5E-02	EPI
Propachlor	1918-16-7	2.1E+02	PHYSPROP	1.5E-05	3.6E-07	EPI	2.3E-04	PHYSPROP	7.7E+01	PHYSPROP	1.2E+00	CRC89	2.7E-02	7.0E-06	EPA WATER9			2.0E+02	EPI	2.2E+00	PHYSPROP	5.8E+02	PHYSPROP	1.6E-02	1.6E+00	3.9E+00	2.9E-03	EPI
Propanediol, 1,2-	114-26-1	2.1E+02	PHYSPROP	5.8E-08	1.4E-09	EPI	2.1E-05	PHYSPROP	9.0E+01	PHYSPROP	1.1E+00	CRC89	2.6E-02	6.6E-06	EPA WATER9			6.0E+01	EPI	1.5E+00	PHYSPROP	1.9E+03	PHYSPROP	6.0E-03	1.6E+00	3.7E+00	1.1E-03	EPI
Propanil	709-98-8	2.2E+02	PHYSPROP	7.0E-08	1.7E-09	EPI	9.1E-07	PHYSPROP	9.2E+01	PHYSPROP	1.3E+00	CRC89	2.7E-02	6.9E-06	EPA WATER9			1.8E+02	EPI	3.1E+00	PHYSPROP	1.5E+02	PHYSPROP	5.9E-02	1.8E+00	4.2E+00	1.0E-02	EPI
Propargite	2312-35-8	3.5E+02	PHYSPROP	2.6E-05	6.4E-07	EPI	3.0E-07	PHYSPROP	1.7E+02	EPI	1.1E+00	CRC89	1.9E-02	4.8E-06	EPA WATER9			3.7E+04	EPI	5.0E+00	PHYSPROP	2.2E-01	PHYSPROP	2.6E-01	9.7E+00	2.3E+01	3.6E-02	EPI
Propargyl Alcohol	107-19-7	5.6E+01	PHYSPROP	4.7E-05	1.2E-06	EPI	1.6E+01	PHYSPROP	-5.0E+01	PHYSPROP	9.5E-01	CRC89	1.2E-01	1.3E-05	EPA WATER9			1.9E+00	EPI	-3.8E-01	PHYSPROP	1.0E+06	PHYSPROP	1.2E-03	2.2E-01	5.2E-01	4.2E-04	EPI
Propazine	139-40-2	2.3E+02	PHYSPROP	1.9E-07	4.6E-09	EPI	1.3E-07	PHYSPROP	2.1E+02	PHYSPROP	1.2E+00	CRC89	2.5E-02	6.4E-06	EPA WATER9			3.4E+02	EPI	2.9E+00	PHYSPROP	8.6E+00	PHYSPROP	4.2E-02	2.0E+00	4.9E+00	7.1E-03	EPI
Propham	122-42-9	1.8E+02	PHYSPROP	7.5E-06	1.8E-07	EPI	1.4E-04	PHYSPROP	8.7E+01	PHYSPROP	1.1E+00	CRC89	3.6E-02	7.1E-06	EPA WATER9			2.2E+02	EPI	2.6E+00	PHYSPROP	1.8E+02	PHYSPROP	4.3E-02	1.1E+00	2.5E+00	8.3E-03	EPI
Propiconazole	60207-90-1	3.4E+02	PHYSPROP	7.0E-08	1.7E-09	EPI	4.2E-07	PHYSPROP	1.7E+02	EPI	1.3E+00	CRC89	2.1E-02	5.3E-06	EPA WATER9			1.6E+03	EPI	3.7E+00	PHYSPROP	1.1E+02	PHYSPROP	4.0E-02	8.7E+00	2.1E+01	5.6E-03	EPI
Propionaldehyde	123-38-6	5.8E+01	PHYSPROP	3.0E-03	7.3E-05	PHYSPROP	3.2E+02	PHYSPROP	-8.0E+01	PHYSPROP	8.7E-01	CRC89	1.1E-01	1.2E-05	EPA WATER9			1.0E+00	EPI	5.9E-01	PHYSPROP	3.1E+05	PHYSPROP	5.3E-03	2.2E-01	5.3E-01	1.8E-03	EPI
Propyl benzene	103-65-1	1.2E+02	PHYSPROP	4.3E-01	1.1E-02	PHYSPROP	3.4E+00	PHYSPROP	-1.0E+02	PHYSPROP	8.6E-01	CRC89	6.0E-02	7.8E-06	EPA WATER9			8.1E+02	EPI	3.7E+00	PHYSPROP	5.2E+01	PHYSPROP	4.0E-01	5.0E-01	1.2E+00	9.4E-02	EPI
Propylene	115-07-1	4.2E+01	PHYSPROP	8.0E+00	2.0E-01	PHYSPROP	8.7E+03	PHYSPROP	-1.9E+02	PHYSPROP	5.1E-01	CRC89	1.1E-01	1.1E-05	EPA WATER9			2.2E+01	EPI	1.8E+00	PHYSPROP	2.0E+02	PHYSPROP	3.4E-02	1.8E-01	4.3E-01	1.4E-02	EPI
Propylene Glycol	57-55-6	7.6E+01	PHYSPROP	5.3E-07	1.3E-08	EPI	1.3E-01	PHYSPROP	-6.0E+01	PHYSPROP	1.0E+00	CRC89	9.8E-02	1.2E-05	EPA WATER9			1.0E+00	EPI	-9.2E-01	PHYSPROP	1.0E+06	PHYSPROP	4.8E-04	2.8E-01	6.7E-01	1.4E-04	EPI
Propylene Glycol Dinitrate	6423-43-4	1.7E+02	PHYSPROP	3.9E-05	9.4E-07	PHYSPROP	3.8E-01	PHYSPROP	-9.6E+00	EPI			6.3E-02	7.3E-06	EPA WATER9			6.1E+01	EPI	1.8E+00	PHYSPROP	3.3E+03	EPI	1.0E-02	9.0E-01	2.1E+00	2.1E-03	EPI
Propylene Glycol Monomethyl Ether	107-98-2	9.0E+01	PHYSPROP	3.8E-05	9.2E-07	PHYSPROP	1.3E+01	PHYSPROP	-9.5E+01	PHYSPROP	9.6E-01	CRC89	8.3E-02	1.0E-05	EPA WATER9			1.0E+00	EPI	-4.9E-01	PHYSPROP	1.0E+06	PHYSPROP	1.4E-03	3.4E-01	8.1E-01	3.7E-04	RAGSE
Propylene Oxide	75-56-9	5.8E+01	PHYSPROP	2.8E-03	7.0E-05	EPI	5.4E+02	PHYSPROP	-1.1E+02	PHYSPROP	8.3E-01	PERRY	1.1E-01	1.2E-05	EPA WATER9			5.2E+00	EPI	3.0E-02	PHYSPROP	5.9E+05	PHYSPROP	2.3E-03	2.2E-01	5.3E-01	7.7E-04	EPI
Propyzamide	23950-58-5	2.6E+02	PHYSPROP	4.0E-07	9.8E-09	EPI	4.4E-07	PHYSPROP	1.6E+02	PHYSPROP			4.7E-02	5.5E-06	EPA WATER9			4.0E+02	EPI	3.4E+00	PHYSPROP	1.5E+01	PHYSPROP	6.7E-02	2.9E+00	6.9E+00	1.1E-02	EPI
Pyridine	110-86-1	7.9E+01	PHYSPROP	4.5E-04	1.1E-05	PHYSPROP	2.1E+01	PHYSPROP	-4.2E+01	PHYSPROP	9.8E-01	CRC89	9.3E-02	1.1E-05	EPA WATER9			7.2E+01	EPI	6.5E-01	PHYSPROP	1.0E+06	PHYSPROP	5.2E-03	2.9E-01	7.0E-01	1.5E-03	EPI
Quinalphos	13593-03-8	3.0E+02	PHYSPROP	1.9E-06	4.6E-08	EPI	2.6E-06	PHYSPROP	3.2E+01	PHYSPROP			4.3E-02	5.0E-06	EPA WATER9			4.2E+03	EPI	4.4E+00	PHYSPROP	2.2E+01	PHYSPROP	2.0E-01	4.9E+00	1.2E+01	3.0E-02	EPI
Quinoline	91-22-5	1.3E+02	PHYSPROP	6.8E-05	1.7E-06	EPI	6.0E-02	PHYSPROP	-1.5E+01	PHYSPROP	1.1E+00	CRC89	6.2E-02	8.7E-06	EPA WATER9			1.5E+03	EPI	2.0E+00	PHYSPROP	6.1E+03	PHYSPROP	2.9E-02	5.6E-01	1.3E+00	6.6E-03	EPI
Quizalofop-ethyl	76578-14-8	3.7E+02	PHYSPROP	4.3E-07	1.1E-08	EPI	6.5E-09	PHYSPROP	9.2E+01	PHYSPROP			3.7E-02	4.3E-06	EPA WATER9			7.7E+03	EPI	4.3E+00	PHYSPROP	3.0E-01	PHYSPROP	6.6E-02	1.3E+01	3.1E+01	8.9E-03	EPI
Refractory Ceramic Fibers	NA																										1.0E-03	RAGSE
Resmethrin	10453-86-8	3.4E+02	PHYSPROP	5.4E-06	1.3E-07	EPI	1.1E-08	PHYSPROP	5.7E+01	PHYSPROP			3.9E-02	4.6E-06	EPA WATER9			3.1E+05	EPI	6.1E+00	PHYSPROP	3.8E-02	PHYSPROP	1.7E+00	8.3E+00	3.3E+01	2.4E-01	EPI
Ronnel	299-84-3	3.2E+02	PHYSPROP	1.3E-03	3.2E-05	EPI	7.5E-05	PHYSPROP	4.1E+01	PHYSPROP	1.4E+00	CRC89	2.3E-02	5.9E-06	EPA WATER9			4.5E+03	EPI	4.9E+00	PHYSPROP	1.0E+00	PHYSPROP	3.0E-01	6.6E+00	1.6E+01	4.3E-02	EPI
Rotenone	83-79-4	3.9E+02	PHYSPROP	4.6E-12	1.1E-13	PHYSPROP	6.9E-10	PHYSPROP	1.8E+02	PHYSPROP			3.5E-02	4.1E-06	EPA WATER9			2.6E+05	EPI	4.1E+00	PHYSPROP	2.0E-01	PHYSPROP	3.9E-02	1.7E+01	4.1E+01	5.1E-03	EPI
Safrole	94-59-7	1.6E+02	PHYSPROP	3.7E-04	9.1E-06	PHYSPROP	6.2E-02	PHYSPROP	1.1E+01	PHYSPROP	1.1E+00	CRC89	4.4E-02	7.6E-06	EPA WATER9			2.1E+02	EPI	3.5E+00	PHYSPROP	1.2E+02	PHYSPROP	5.5E-02	8.5E-01	2.0E+00	1.1E-02	RAGSE
Selenious Acid	7783-00-8	1.3E+02	PHYSPROP						7.0E+01	EPI	3.0E+00	CRC89										9.0E+05	PERRY	4.4E-03	5.5E-01	1.3E+00	1.0E-03	RAGSE
Selenium	7782-49-2	7.9E+01	PHYSPROP				1.4E-10	EPI	2.2E+02	PHYSPROP	4.8E+00	CRC89				5.0E+00	SSL							3.4E-03	2.9E-01	7.0E-01	1.0E-03	RAGSE
Selenium Sulfide	7446-34-6	1.1E+02	EPI																					4.1E-03	4.4E-01	1.1E+00	1.0E-03	RAGSE
Sethoxydim	74051-80-2	3.3E+02	PHYSPROP	8.8E-10	2.2E-11	PHYSPROP	1.6E-07	PHYSPROP	1.6E+02	EPI	1.0E+00	CRC89	2.0E-02	4.8E-06	EPA WATER9			4.4E+03	EPI	4.4E+00	PHYSPROP	2.5E+01	PHYSPROP	1.3E-01	7.2E+00	1.7E+01	1.9E-02	EPI
Silica (crystalline, respirable)	7631-86-9	6.0E+01	EPI						1.7E+03	PERRY	2.3E+00	PERRY												3.0E-03	2.3E-01	5.5E-01	1.0E-03	RAGSE
Silver	7440-22-4	1.1E+02	PHYSPROP				0.0E+00	NIOSH	9.6E+02	PHYSPROP	1.1E+01	CRC89				8.3E+00	SSL							2.4E-03	4.2E-01	1.0E+00	6.0E-04	RAGSE
Simazine	122-34-9	2.0E+02	PHYSPROP	3.9E-08	9.4E-10	EPI	2.2E-08	PHYSPROP	2.3E+02	PHYSPROP	1.3E+00	CRC89	2.8E-02	7.4E-06	EPA WATER9			1.5E+02	EPI	2.2E+00	PHYSPROP	6.2E+00	PHYSPROP	1.8E-02	1.4E+00	3.4E+00	3.3E-03	EPI
Sodium Acifluorfen	62476-59-9	3.8E+02	PHYSPROP	2.5E-09	6.1E-11	PHYSPROP	9.8E-09	EPI	2.8E+02	EPI			3.6E-02	4.2E-06	EPA WATER9			3.9E+03	EPI	3.7E-01	PHYSPROP	2.5E+05	PHYSPROP	1.5E-04	1.5E+01	3.6E+01	2.0E-05	EPI
Sodium Azide	26628-22-8	6.5E+01	EPI						3.0E+02	CRC89	1.8E+00	CRC89										4.1E+05	CRC89	3.1E-03	2.4E-01	5.8E-01	1.0E-03	RAGSE
Sodium Dichromate	10588-01-9	2.6E+02	CRC89						3.6E+02	CRC89												1.9E+06	CRC89	6.2E-03	3.1E+00	7.4E+00	1.0E-03	RAGSE
Sodium Diethyldithiocarbamate	148-18-5	1.7E+02	PHYSPROP				8.2E-10	PHYSPROP	9.4E+01	PHYSPROP			6.1E-02	7.2E-06	EPA WATER9			2.0E+02	EPI	-1.4E+00	PHYSPROP	3.6E+05	PHYSPROP	9.7E-05	9.7E-01	2.3E+00	1.9E-05	EPI
Sodium Fluoride	7681-49-4	4.2E+01	PHYSPROP				0.0E+00	NIOSH	9.9E+02	PHYSPROP	2.8E+00	CRC89										4.2E+04	PHYSPROP	2.5E-03	1.8E-01	4.3E-01	1.0E-03	RAGSE
Sodium Fluoroacetate	62-74-8	1.0E+02	PHYSPROP	4.5E-05	1.1E-06	PHYSPROP	6.5E-07	PHYSPROP	2.0E+02	PHYSPROP			8.8E-02	1.0E-05	EPA WATER9			1.4E+00	EPI	-3.8E+00	PHYSPROP	1.1E+06	PHYSPROP	5.1E-06	3.8E-01	9.2E-01	1.3E-06	EPI
Sodium Metavanadate	13718-26-8	1.2E+02	CRC89						6.3E+02	CRC89												2.1E+05	CRC89	4.2E-03	5.1E-01	1.2E+00	1.0E-03	RAGSE

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	HLC (atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	KPREF
Sodium Tungstate	13472-45-2	2.9E+02	CRC89						7.0E+02	CRC89	4.2E+00	CRC89										7.4E+05	CRC89	6.6E-03	4.6E+00	1.1E+01	1.0E-03	RAGSE
Sodium Tungstate Dihydrate	10213-10-2	3.3E+02	CRC89						1.0E+02	CRC89	3.3E+00	CRC89										7.4E+05	CRC89	7.0E-03	7.4E+00	1.8E+01	1.0E-03	RAGSE
Stirofos (Tetrachlorovinphos)	961-11-5	3.7E+02	PHYSPROP	7.5E-08	1.8E-09	EPI	4.2E-08	PHYSPROP	9.8E+01	PHYSPROP			3.7E-02	4.3E-06	EPA WATER9			1.4E+03	EPI	3.5E+00	PHYSPROP	1.1E+01	PHYSPROP	2.3E-02	1.2E+01	2.8E+01	3.1E-03	EPI
Strontium Chromate	7789-06-2	2.0E+02	CRC89								3.9E+00	CRC89										1.1E+03	CRC89	5.5E-03	1.5E+00	3.5E+00	1.0E-03	RAGSE
Strontium, Stable	7440-24-6	8.8E+01	PHYSPROP						7.8E+02	PHYSPROP	2.6E+00	CRC89				3.5E+01	BAES							3.6E-03	3.3E-01	7.8E-01	1.0E-03	RAGSE
Strychnine	57-24-9	3.3E+02	PHYSPROP	3.1E-12	7.6E-14	PHYSPROP	2.9E-09	PHYSPROP	2.9E+02	PHYSPROP	1.4E+00	CRC89	2.2E-02	5.6E-06	EPA WATER9			5.4E+03	EPI	1.9E+00	PHYSPROP	1.6E+02	PHYSPROP	2.8E-03	7.8E+00	1.9E+01	4.0E-04	EPI
Styrene	100-42-5	1.0E+02	PHYSPROP	1.1E-01	2.8E-03	PHYSPROP	6.4E+00	PHYSPROP	-3.1E+01	PHYSPROP	9.0E-01	CRC89	7.1E-02	8.8E-06	EPA WATER9			4.5E+02	EPI	3.0E+00	PHYSPROP	3.1E+02	PHYSPROP	1.5E-01	4.0E-01	9.7E-01	3.7E-02	EPI
Styrene-Acrylonitrile (SAN) Trimer	NA	2.1E+02	OTHER								1.1E+00	PPRTV	2.6E-02	6.5E-06	EPA WATER9					3.1E+00	OTHER	8.5E+01	PPRTV	6.6E-02	1.6E+00	3.8E+00	1.2E-02	RAGSE
Sulfolane	126-33-0	1.2E+02	PHYSPROP	2.0E-04	4.9E-06	PHYSPROP	4.1E-03	EPI	2.8E+01	PHYSPROP	1.3E+00	CRC89	7.2E-02	9.9E-06	EPA WATER9			9.1E+00	EPI	-7.7E-01	PHYSPROP	1.0E+06	PHYSPROP	4.3E-04	5.0E-01	1.2E+00	1.0E-04	EPI
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	2.9E+02	PHYSPROP	5.6E-06	1.4E-07	PHYSPROP	8.1E-07	PHYSPROP	1.5E+02	PHYSPROP			4.4E-02	5.1E-06	EPA WATER9			2.9E+03	EPI	3.9E+00	PHYSPROP	2.4E+00	PHYSPROP	9.7E-02	4.3E+00	1.0E+01	1.5E-02	EPI
Sulfur Trioxide	7446-11-9	8.0E+01	PHYSPROP				2.6E+02	PHYSPROP	1.7E+01	PHYSPROP	1.9E+00	CRC89	1.2E-01	1.6E-05	EPA WATER9									3.4E-03	3.0E-01	7.1E-01	1.0E-03	RAGSE
Sulfuric Acid	7664-93-9	9.8E+01	PHYSPROP				5.9E-05	PHYSPROP	1.0E+01	PHYSPROP	1.8E+00	CRC89										1.0E+06	PHYSPROP	3.8E-03	3.7E-01	8.9E-01	1.0E-03	RAGSE
Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	3.3E+02	PHYSPROP	7.8E-06	1.9E-07	PHYSPROP	2.2E-07	PHYSPROP	-3.2E+01	PHYSPROP	1.1E+00	CRC89	2.0E-02	5.0E-06	EPA WATER9			5.6E+03	EPI	4.8E+00	PHYSPROP	5.9E-01	PHYSPROP	2.3E-01	7.9E+00	1.9E+01	3.3E-02	EPI
TCMTB	21564-17-0	2.4E+02	PHYSPROP	2.7E-10	6.5E-12	PHYSPROP	3.1E-07	PHYSPROP	1.5E+02	EPI			4.9E-02	5.8E-06	EPA WATER9			3.4E+03	EPI	3.3E+00	PHYSPROP	1.3E+02	PHYSPROP	6.7E-02	2.3E+00	5.5E+00	1.1E-02	EPI
Tebuthiuron	34014-18-1	2.3E+02	PHYSPROP	4.9E-09	1.2E-10	PHYSPROP	3.0E-07	PHYSPROP	1.6E+02	PHYSPROP			5.1E-02	5.9E-06	EPA WATER9			4.2E+01	EPI	1.8E+00	PHYSPROP	2.5E+03	PHYSPROP	7.4E-03	2.0E+00	4.8E+00	1.3E-03	EPI
Temephos	3383-96-8	4.7E+02	PHYSPROP	8.0E-08	2.0E-09	PHYSPROP	7.9E-08	PHYSPROP	3.0E+01	PHYSPROP	1.3E+00	CRC89	1.8E-02	4.5E-06	EPA WATER9			9.5E+04	EPI	6.0E+00	PHYSPROP	2.7E-01	PHYSPROP	2.9E-01	4.3E+01	1.0E+02	3.5E-02	EPI
Terbacil	5902-51-2	2.2E+02	PHYSPROP	4.9E-09	1.2E-10	EPI	4.7E-07	PHYSPROP	1.8E+02	PHYSPROP	1.3E+00	CRC89	2.7E-02	7.2E-06	EPA WATER9			5.0E+01	EPI	1.9E+00	PHYSPROP	7.1E+02	PHYSPROP	9.7E-03	1.7E+00	4.1E+00	1.7E-03	EPI
Terbufos	13071-79-9	2.9E+02	PHYSPROP	9.8E-04	2.4E-05	EPI	3.2E-04	PHYSPROP	-2.9E+01	PHYSPROP	1.1E+00	CRC89	2.2E-02	5.4E-06	EPA WATER9			1.0E+03	EPI	4.5E+00	PHYSPROP	5.1E+00	PHYSPROP	2.3E-01	4.3E+00	1.0E+01	3.6E-02	EPI
Terbutryn	886-50-0	2.4E+02	PHYSPROP	8.8E-07	2.2E-08	EPI	1.7E-06	PHYSPROP	1.0E+02	PHYSPROP	1.1E+00	CRC89	2.4E-02	6.0E-06	EPA WATER9			6.1E+02	EPI	3.7E+00	PHYSPROP	2.5E+01	PHYSPROP	1.3E-01	2.4E+00	5.7E+00	2.1E-02	EPI
Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47	5436-43-1	4.9E+02	PHYSPROP	1.2E-04	3.0E-06	PHYSPROP	7.0E-08	EPI	1.6E+02	EPI			3.1E-02	3.6E-06	EPA WATER9			1.3E+04	EPI	6.8E+00	PHYSPROP	1.5E-03	PHYSPROP	7.9E-01	5.5E+01	2.1E+02	9.3E-02	EPI
Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.2E+02	PHYSPROP	4.1E-02	1.0E-03	PHYSPROP	5.4E-03	EPI	1.4E+02	PHYSPROP	1.9E+00	CRC89	3.2E-02	8.8E-06	EPA WATER9			2.2E+03	EPI	4.6E+00	PHYSPROP	6.0E-01	PHYSPROP	6.6E-01	1.7E+00	6.7E+00	1.2E-01	EPI
Tetrachloroethane, 1,1,1,2-	630-20-6	1.7E+02	PHYSPROP	1.0E-01	2.5E-03	PHYSPROP	1.2E+01	PHYSPROP	-7.0E+01	PHYSPROP	1.5E+00	CRC89	4.8E-02	9.1E-06	EPA WATER9			8.6E+01	EPI	2.9E+00	PHYSPROP	1.1E+03	PHYSPROP	7.9E-02	9.2E-01	2.2E+00	1.6E-02	EPI
Tetrachloroethane, 1,1,2,2-	79-34-5	1.7E+02	PHYSPROP	1.5E-02	3.7E-04	PHYSPROP	4.6E+00	PHYSPROP	-4.4E+01	PHYSPROP	1.6E+00	CRC89	4.9E-02	9.3E-06	EPA WATER9			9.5E+01	EPI	2.4E+00	PHYSPROP	2.8E+03	PHYSPROP	3.5E-02	9.2E-01	2.2E+00	6.9E-03	EPI
Tetrachloroethylene	127-18-4	1.7E+02	PHYSPROP	7.2E-01	1.8E-02	PHYSPROP	1.9E+01	PHYSPROP	-2.2E+01	PHYSPROP	1.6E+00	CRC89	5.0E-02	9.5E-06	EPA WATER9			9.5E+01	EPI	3.4E+00	PHYSPROP	2.1E+02	PHYSPROP	1.7E-01	8.9E-01	2.1E+00	3.3E-02	EPI
Tetrachlorophenol, 2,3,4,6-	58-90-2	2.3E+02	PHYSPROP	3.6E-04	8.8E-06	EPI	6.7E-04	EPI	7.0E+01	PHYSPROP			5.0E-02	5.9E-06	EPA WATER9			3.0E+03	EPI	4.5E+00	PHYSPROP	2.3E+01	PHYSPROP	4.2E-01	2.1E+00	5.0E+00	7.1E-02	EPI
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	2.3E+02	PHYSPROP	7.9E-03	1.9E-04	PHYSPROP	3.8E-02	PHYSPROP	4.0E+01	EPI	1.4E+00	CRC89	2.8E-02	7.3E-06	EPA WATER9			1.6E+03	EPI	4.5E+00	PHYSPROP	4.0E+00	PHYSPROP	4.9E-01	2.0E+00	4.9E+00	8.4E-02	EPI
Tetraethyl Dithiopyrophosphate	3689-24-5	3.2E+02	PHYSPROP	1.8E-04	4.5E-06	EPI	1.1E-04	PHYSPROP	-3.2E+01	EPI	1.2E+00	CRC89	2.1E-02	5.3E-06	EPA WATER9			2.7E+02	EPI	4.0E+00	PHYSPROP	3.0E+01	PHYSPROP	7.5E-02	6.7E+00	1.6E+01	1.1E-02	EPI
Tetrafluoroethane, 1,1,1,2-	811-97-2	1.0E+02	PHYSPROP	2.0E+00	5.0E-02	PHYSPROP	5.0E+03	PHYSPROP	-1.0E+02	PHYSPROP	1.2E+00	CRC89	8.2E-02	1.1E-05	EPA WATER9			8.6E+01	EPI	1.7E+00	PHYSPROP	2.0E+03	PHYSPROP	2.1E-02	3.9E-01	9.4E-01	5.5E-03	EPI
Tetryl (Trinitrophenylmethylnitramine	479-45-8	2.9E+02	PHYSPROP	1.1E-07	2.7E-09	PHYSPROP	5.7E-08	PHYSPROP	1.3E+02	PHYSPROP	1.6E+00	CRC89	2.6E-02	6.7E-06	EPA WATER9			4.6E+03	EPI	1.6E+00	PHYSPROP	7.4E+01	PHYSPROP	3.1E-03	4.3E+00	1.0E+01	4.7E-04	EPI
Thallium (I) Nitrate	10102-45-1	2.7E+02	PHYSPROP						2.1E+02	PHYSPROP	5.6E+00	CRC89										9.6E+04	PHYSPROP	6.3E-03	3.3E+00	7.9E+00	1.0E-03	RAGSE
Thallium (Soluble Salts)	7440-28-0	2.1E+02	PHYSPROP						3.0E+02	PHYSPROP	1.2E+01	CRC89				7.1E+01	SSL							5.5E-03	1.5E+00	3.6E+00	1.0E-03	RAGSE
Thallium Acetate	563-68-8	2.6E+02	PHYSPROP				1.5E+01	PHYSPROP	1.3E+02	CRC89	3.7E+00	CRC89	3.9E-02	1.2E-05	EPA WATER9					-1.7E-01	PHYSPROP	2.8E+04	PHYSPROP	2.5E-04	3.1E+00	7.5E+00	4.0E-05	EPI
Thallium Carbonate	6533-73-9	4.7E+02	PHYSPROP				5.8E+00	PHYSPROP	2.7E+02	PHYSPROP	7.1E+00	CRC89	3.9E-02	1.2E-05	EPA WATER9					-8.6E-01	PHYSPROP	5.2E+04	PHYSPROP	8.2E-06	4.4E+01	1.1E+02	9.8E-07	EPI
Thallium Chloride	7791-12-0	2.4E+02	PHYSPROP						4.3E+02	PHYSPROP	7.0E+00	CRC89	5.2E-02	1.8E-05	EPA WATER9							2.9E+03	PHYSPROP	6.0E-03	2.3E+00	5.6E+00	1.0E-03	RAGSE
Thallium Sulfate	7446-18-6	5.0E+02	PHYSPROP						6.3E+02	PHYSPROP	6.8E+00	CRC89										5.5E+04	CRC89	8.6E-03	7.1E+01	1.7E+02	1.0E-03	RAGSE
Thifensulfuron-methyl	79277-27-3	3.9E+02	PHYSPROP	1.7E-12	4.1E-14	PHYSPROP	1.3E-10	PHYSPROP	1.8E+02	PHYSPROP			3.6E-02	4.2E-06	EPA WATER9			5.1E+01	EPI	1.6E+00	PHYSPROP	2.2E+03	PHYSPROP	8.6E-04	1.6E+01	3.7E+01	1.1E-04	EPI
Thiobencarb	28249-77-6	2.6E+02	PHYSPROP	1.1E-05	2.7E-07	EPI	2.2E-05	PHYSPROP	3.3E+00	PHYSPROP	1.2E+00	CRC89	2.3E-02	5.9E-06	EPA WATER9			1.6E+03	EPI	3.4E+00	PHYSPROP	2.8E+01	PHYSPROP	6.3E-02	2.9E+00	7.0E+00	1.0E-02	EPI
Thiodiglycol	111-48-8	1.2E+02	PHYSPROP	7.6E-08	1.9E-09	PHYSPROP	3.2E-03	PHYSPROP	-1.0E+01	PHYSPROP	1.2E+00	CRC89	6.8E-02	9.4E-06	EPA WATER9			1.0E+00	EPI	-6.3E-01	PHYSPROP	1.0E+06	PHYSPROP	5.2E-04	5.1E-01	1.2E+00	1.2E-04	EPI
Thiofanox	39196-18-4	2.2E+02	PHYSPROP	3.8E-07	9.4E-09	EPI	1.7E-04	PHYSPROP	5.7E+01	PHYSPROP			5.2E-02	6.1E-06	EPA WATER9			7.2E+01	EPI	2.2E+00	PHYSPROP	5.2E+03	PHYSPROP	3.6E-02	1.8E+00	4.2E+00	6.3E-03	EPI
Thiophanate, Methyl	23564-05-8	3.4E+02	PHYSPROP	4.9E-08	1.2E-09	EPI	7.1E-08	PHYSPROP	1.7E+02	EPI			3.9E-02	4.5E-06	EPA WATER9			3.3E+02	EPI	1.4E+00	PHYSPROP	2.7E+01	PHYSPROP	1.1E-03	8.7E+00	2.1E+01	1.6E-04	EPI
Thiram	137-26-8	2.4E+02	PHYSPROP	7.4E-06	1.8E-07	EPI	1.7E-05	PHYSPROP	1.6E+02	PHYSPROP	1.3E+00	PERRY	2.6E-02	6.6E-06	EPA WATER9			6.1E+02	EPI	1.7E+00	PHYSPROP	3.0E+01	PHYSPROP	5.9E-03	2.3E+00	5.6E+00	9.9E-04	EPI
Tin	7440-31-5	1.2E+02	CRC89				0.0E+00	NIOSH	1.3E+01	CRC89	7.3E+00	CRC89				2.5E+02	BAES							4.2E-03	4.9E-01	1.2E+00	1.0E-03	RAGSE
Titanium Tetrachloride	7550-45-0	1.9E+02	CRC89				1.0E+01	ATSDR Profile	-2.4E+01	CRC89	1.7E+00	CRC89	3.8E-02	9.1E-06	EPA WATER9									5.3E-03	1.2E+00	2.9E+00	1.0E-03	RAGSE
Toluene	108-88-3	9.2E+01	PHYSPROP	2.7E-01	6.6E-03	PHYSPROP	2.8E+01	PHYSPROP	-9.5E+01	PHYSPROP	8.6E-01	CRC89	7.8E-02	9.2E-06	EPA WATER9			2.3E+02	EPI	2.7E+00	PHYSPROP	5.3E+02	PHYSPROP	1.1E-01	3.5E-01	8.3E-01	3.1E-02	EPI
Toluene-2,5-diamine	95-70-5	1.2E+02	PHYSPROP	3.0E-07	7.4E-09	PHYSPROP	3.4E-03	PHYSPROP	6.4E+01	PHYSPROP			7.7E-02	9.0E-06	EPA WATER9			5.5E+01	EPI	1.6E-01	PHYSPROP	7.7E+04	PHYSPROP	1.7E-03	5.1E-01	1.2E+00	4.1E-04	EPI
Toluidine, p-	106-49-0	1.1E+02	PHYSPROP	8.3E-05	2.0E-06	PHYSPROP	2.9E-01	PHYSPROP	4.4E+01	PHYSPROP	9.6E-01	CRC89	7.1E-02	9.0E-06	EPA WATER9			1.1E+02	EPI	1.4E+00	PHYSPROP	6.5E+03	PHYSPROP	1.3E-02	4.2E-01	1.0E+00	3.3E-03	EPI
Total Petroleum Hydrocarbons (Aliphatic High	NA	1.7E+02	EPI	3.3E+02	8.2E+00	EPI	1.4E-01	EPI	-9.6E+00	EPI			6.2E-02	7.2E-06	EPA WATER9			4.8E+03	EPI	6.1E+00	EPI	3.7E-03	EPI	9.8E+00	9.5E-01	4.3E+00	2.0E+00	EPI
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	8.6E+01	EPI	7.4E+01	1.8E+00	EPI	1.5E+02	EPI	-9.5E+01	EPI	6.6E-01	CRC89	7.3E-02	8.2E-06	EPA WATER9			1.3E+02	EPI	3.9E+00	EPI	9.5E+00	EPI	7.2E-01	3.2E-01	1.2E+00	2.0E-01	EPI
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	1.3E+02	EPI	1.4E+02	3.4E+00	EPI	4.5E+00	EPI	-5.4E+01	EPI	7.2E-01	CRC89	5.1E-02	6.8E-06	EPA WATER9			8.0E+02	EPI	5.7E+00	EPI	2.2E-01	EPI	7.4E+00	5.5E-01	2.5E+00	1.7E+00	EPI
Total Petroleum Hydrocarbons (Aromatic High	NA	2.0E+02	EPI	3.6E-04	8.9E-06	EPI	9.2E-06	EPI	1.1E+02	EPI	1.3E+00	CRC89	2.8E-02	7.2E-06	EPA WATER9			5.5E+04	EPI	5.2E+00	EPI	2.6E-01	EPI	1.7E+00	1.4E+00	5.7E+00	3.1E-01	EPI
Total Petroleum Hydrocarbons (Aromatic Low)	NA	7.8E+01	EPI	2.3E-01	5.6E-03	EPI	9.5E+01	EPI	5.5E+00	EPI	8.8E-01	CRC89	9.0E-02	1.0E-05	EPA WATER9			1.5E+02	EPI	2.1E+00	EPI	1.8E+03	EPI	5.1E-02	2.9E-01	6.9E-01	1.5E-02	EPI
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	1.4E+02	EPI	2.0E-02	4.8E-04	EPI	7.0E-02	EPI	5.7E+01	EPI	1.0E+00	CRC89	5.6E-02	8.1E-06	EPA WATER9			2.0E+03	EPI	3.6E+00	EPI	2.8E+01	EPI	3.1E-01	6.0E-01	1.4E+00	6.9E-02	EPI
Toxaphene	8001-35-2	4.5E+02	PHYSPROP	2.5E-04	6.0E-06	PHYSPROP	6.7E-06	PHYSPROP	7.7E+01	PHYSPROP			3.2E-02	3.8E-06	EPA WATER9			7.7E+04	EPI	5.9E+00	PHYSPROP	5.5E-01	PHYSPROP	4.2E-01	3.4E+01	8.2E+01	5.2E-02	EPI
Tralomethrin	66841-25-6	6.7E+02	PHYSPROP	1.6E-08	3.9E-10	EPI	3.6E-11	PHYSPROP	1.4E+02	PHYSPROP			2.5E-02	2.9E-06	EPA WATER9			1.9E+05	EPI	7.6E+00	PHYSPROP	8.0E-02	PHYSPROP	3.0E-01	5.6E+02	1.3E+03	3.1E-02	EPI
Tri-n-butyltin	688-73-3	2.9E+02	PHYSPROP	6.2E+01	1.5E+00	PHYSPROP	4.0E-02	PHYSPROP	2.9E+01	EPI	1.1E+00	CRC89	2.1E-02	5.4E-06	EPA WATER9			8.1E+03	EPI	4.1E+00	PHYSPROP	7.3E-03	PHYSPROP	1.3E-01	4.5E+00	1.1E+01	1.9E-02	EPI
Triacetin	102-76-1	2.2E+02	PHYSPROP	5.0E-07	1.2E-08	EPI	2.5E-03	PHYSPROP	7.8E+01	PHYSPROP	1.2E+00	CRC89	2.6E-02	6.6E-06	EPA WATER9			4.1E+01	EPI	2.5E-01	PHYSPROP	5.8E+04	PHYSPROP	7.8E-04	1.8E+00	4.2E+00	1.4E-04	EPI
Triadimefon	43121-43-3	2.9E+02	PHYSPROP	3.3E-09	8.1E-11	EPI	1.5E-08	PHYSPROP	8.2E+01	PHYSPROP	1.2E+00	CRC89	2.2E-02	5.7E-06	EPA WATER9			3.0E+02	EPI	2.8E+00	PHYSPROP	7.2E+01	PHYSPROP	1.6E-02	4.6E+00	1.1E+01	2.4E-03	EPI
Triallate	2303-17-5	3.0E+02	PHYSPROP	4.9E-04	1.2E-05	EPI	1.2E-04	PHYSPROP	2.9E+01	PHYSPROP	1.3E+00	CRC89	2.2E-02	5.7E-06	EPA WATER9			1.0E+03	EPI	4.6E+00	PHYSPROP	4.0E+00	PHYSPROP	2.3E-01	5.3E+00	1.3E+01	3.5E-02	EPI
Triasulfuron	82097-50-5	4.0E+02	PHYSPROP	1.3E-11	3.2E-13	PHYSPROP	5.5E-12	PHYSPROP	1.9E+02	PHYSPROP			3.5E-02	4.1E-06	EPA WATER9			4.3E+02	EPI	1.1E+00	PHYSPROP	3.2E+01	PHYSPROP	3.6E-04	1.9E+01	4.5E+01	4.7E-05	EPI
Tribenuron-methyl	101200-48-0	4.0E+02	PHYSPROP	4.2E-12	1.0E-13	PHYSPROP	3.9E-10	PHYSPROP	1.4E+02	PHYSPROP			3.5E-02	4.1E-06	EPA WATER9			9.5E+01	EPI	7.8E-01	PHYSPROP	5.0E+01	PHYSPROP	3.6E-03	1.7E+01	4.1E+01	4.7E-04	EPI
Tribromobenzene, 1,2,4-	615-54-3	3.1E+02	PHYSPROP	1.4E-02	3.4E-04	PHYSPROP	5.5E-03	PHYSPROP	4.5E+01	PHYSPROP	2.3E+00	ChemNet	2.9E-02	7.9E-06	EPA WATER9			6.1E+02	EPI	4.7E+00	PHYSPROP	4.9E+00	PHYSPROP	2.3E-01	6.1E+00	1.5E+01	3.4E-02	EPI
Tributyl Phosphate	126-73-8	2.7E+02	PHYSPROP	5.8E-05	1.4E-06	EPI	1.1E-03	PHYSPROP	-7.9E+01	PHYSPROP	9.7E-01	CRC89	2.1E-02	5.2E-06	EPA WATER9			2.4E+03	EPI	4.0E+00	PHYSPROP	2.8E+02	PHYSPROP	1.4E-01	3.3E+00	7.8E+00	2.3E-02	EPI
Tributyltin Compounds	NA																											
Tributyltin Oxide	56-35-9	6.0E+02	PHYSPROP	1.2E-05	3.0E-07	EPI	7.5E-06	PHYSPROP	-4.5E+01	PHYSPROP	1.2E+00	CRC89	1.5E-02	3.6E-06	EPA WATER9			2.6E+07	EPI	4.1E+00	PHYSPROP	2.0E+01	PHYSPROP	2.4E-03	2.3E+02	5.5E+02	2.5E-04	EPI
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	1.9E+02	PHYSPROP	2.2E+01	5.3E-01	EPI	3.6E+02	PHYSPROP	-3.5E+01	PHYSPROP	1.6E+00	CRC89	3.8E-02	8.6E-06	EPA WATER9			2.0E+02	EPI	3.2E+00	PHYSPROP	1.7E+02	PHYSPROP	9.2E-02	1.2E+00	2.8E+00	1.8E-02	EPI
Trichloroacetic Acid	76-03-9	1.6E+02	PHYSPROP	5.5E-07	1.4E-08	PHYSPROP	6.0E-02	EPI	5.8E+01	PHYSPROP	1.6E+00	CRC89	5.2E-02	9.5E-06	EPA WATER9			3.2E+00	EPI	1.3E+00	PHYSPROP	5.5E+04	PHYSPROP	7.1E-03	8.6E-01	2.1E+00	1.5E-03	EPI
Trichloroaniline HCl, 2,4,6-	33663-50-2	2.3E+02	EPI	2.9E-12	7.2E-14	EPI	6.1E-08	EPI	1.8E+02	EPI			5.0E-02	5.9E-06	EPA WATER9			1.3E+03	EPI	-6.7E-01	EPI	2.1E+01	EPI	1.6E-04	2.1E+00	5.1E+00	2.8E-05	EPI
Trichloroaniline, 2,4,6-	634-93-5	2.0E+02	PHYSPROP	5.5E-05	1.3E-06	PHYSPROP	4.4E-03	PHYSPROP	7.9E+01	PHYSPROP			5.6E-02	6.6E-06	EPA WATER9			4.4E+03	EPI	3.5E+00	PHYSPROP	4.0E+01	PHYSPROP	1.5E-01	1.3E+00	3.2E+00	2.7E-02	EPI
Trichlorobenzene, 1,2,3-	87-61-6	1.8E+02	PHYSPROP	5.1E-02	1.3E-03	PHYSPROP	2.1E-01	PHYSPROP	5.4E+01	PHYSPROP	1.5E+00	CRC89	4.0E-02	8.4E-06	EPA WATER9			1.4E+03	EPI	4.1E+00	PHYSPROP	1.8E+01	PHYSPROP	3.8E-01	1.1E+00	2.6E+00	7.4E-02	EPI
Trichlorobenzene, 1,2,4-	120-82-1	1.8E+02	PHYSPROP	5.8E-02	1.4E-03	PHYSPROP	4.6E-01	PHYSPROP	1.7E+01	PHYSPROP	1.5E+00	CRC89	4.0E-02	8.4E-06	EPA WATER9			1.4E+03	EPI	4.0E+00	PHYSPROP	4.9E+01	PHYSPROP	3.7E-01	1.1E+00	2.6E+00	7.1E-02	EPI
Trichloroethane, 1,1,1-	71-55-6	1.3E+02	PHYSPROP	7.0E-01	1.7E-02	PHYSPROP	1.2E+02	PHYSPROP	-3.0E+01	PHYSPROP	1.3E+00	CRC89	6.5E-02	9.6E-06	EPA WATER9			4.4E+01	EPI	2.5E+00	PHYSPROP	1.3E+03	PHYSPROP	5.6E-02	5.9E-01	1.4E+00	1.3E-02	EPI
Trichloroethane, 1,1,2-	79-00-5	1.3E+02	PHYSPROP	3.4E-02	8.2E-04	PHYSPROP	2.3E+01	PHYSPROP	-3.7E+01	PHYSPROP	1.4E+00	CRC89	6.7E-02	1.0E-05	EPA WATER9			6.1E+01	EPI	1.9E+00	PHYSPROP	4.6E+03	PHYSPROP	2.2E-02	5.9E-01	1.4E+00	5.0E-03	EPI
Trichloroethylene	79-01-6	1.3E+02	PHYSPROP	4.0E-01	9.9E-03	PHYSPROP	6.9E+01	PHYSPROP	-8.5E+01	PHYSPROP	1.5E+00	CRC89	6.9E-02	1.0E-05	EPA WATER9			6.1E+01	EPI	2.4E+00	PHYSPROP	1.3E+03	PHYSPROP	5.1E-02	5.7E-01	1.4E+00	1.2E-02	EPI
Trichlorofluoromethane	75-69-4	1.4E+02	PHYSPROP	4.0E+00	9.7E-02	PHYSPROP	8.0E+02	PHYSPROP	-1.1E+02	PHYSPROP	1.5E+00	CRC89	6.5E-02	1.0E-05	EPA WATER9			4.4E+01	EPI	2.5E+00	PHYSPROP	1.1E+03	PHYSPROP	5.7E-02	6.2E-01	1.5E+00	1.3E-02	EPI
Trichlorophenol, 2,4,5-	95-95-4	2.0E+02	PHYSPROP	6.6E-05	1.6E-06	EPI	7.5E-03	EPI	6.9E+01	PHYSPROP	1.5E+00	PERRY	3.1E-02	8.1E-06	EPA WATER9			1.8E+03	EPI	3.7E+00	PHYSPROP	1.2E+03	PHYSPROP	2.0E-01	1.3E+00	3.2E+00	3.6E-02	EPI
Trichlorophenol, 2,4,6-	88-06-2	2.0E+02	PHYSPROP	1.1E-04	2.6E-06	EPI	8.0E-03	EPI	6.9E+01	PHYSPROP	1.5E+00	CRC89	3.1E-02	8.1E-06	EPA WATER9			1.8E+03	EPI	3.7E+00	PHYSPROP	8.0E+02	PHYSPROP	1.9E-01	1.3E+00	3.2E+00	3.5E-02	EPI
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	2.6E+02	PHYSPROP	3.5E-07	8.7E-09	PHYSPROP	3.8E-05	EPI	1.5E+02	PHYSPROP	1.8E+00	PubChem	2.9E-02	7.8E-06	EPA WATER9			1.1E+02	EPI	3.3E+00	PHYSPROP	2.8E+02	PHYSPROP	5.6E-02	2.8E+00	6.8E+00	9.1E-03	EPI
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	2.7E+02	PHYSPROP	3.7E-07	9.1E-09	PHYSPROP	1.0E-05	PHYSPROP	1.8E+02	PHYSPROP	1.2E+00	PubChem	2.3E-02	5.9E-06	EPA WATER9			1.8E+02	EPI	3.8E+00	PHYSPROP	7.1E+01	PHYSPROP	1.0E-01	3.4E+00	8.2E+00	1.6E-02	EPI
Trichloropropane, 1,1,2-	598-77-6	1.5E+02	PHYSPROP	1.3E-02	3.2E-04	EPI	3.1E+00	PHYSPROP	-6.5E+01	EPI	1.4E+00	CRC89	5.7E-02	9.2E-06	EPA WATER9			9.5E+01	EPI	2.4E+00	PHYSPROP	1.9E+03	PHYSPROP	4.5E-02	7.0E-01	1.7E+00	9.6E-03	EPI
Trichloropropane, 1,2,3-	96-18-4	1.5E+02	PHYSPROP	1.4E-02	3.4E-04	PHYSPROP	3.7E+00	PHYSPROP	-1.5E+01	PHYSPROP	1.4E+00	CRC89	5.7E-02	9.2E-06	EPA WATER9			1.2E+02	EPI	2.3E+00	PHYSPROP	1.8E+03	PHYSPROP	3.5E-02	7.0E-01	1.7E+00	7.5E-03	EPI
Trichloropropene, 1,2,3-	96-19-5	1.5E+02	PHYSPROP	7.2E-01	1.8E-02	PHYSPROP	4.4E+00	PHYSPROP	-5.6E+01	EPI	1.4E+00	CRC89	5.9E-02	9.4E-06	EPA WATER9			1.2E+02	EPI	2.8E+00	PHYSPROP	3.3E+02	PHYSPROP	7.8E-02	6.9E-01	1.6E+00	1.7E-02	EPI
Tricresyl Phosphate (TCP)	1330-78-5	3.7E+02	PHYSPROP	3.3E-05	8.1E-07	EPI	6.0E-07	EPI	-3.3E+01	PHYSPROP	1.2E+00	Yaws	1.9E-02	4.8E-06	EPA WATER9			4.7E+04	EPI	5.1E+00	PHYSPROP	3.6E-01	PHYSPROP	2.5E-01	1.2E+01	2.9E+01	3.3E-02	EPI
Tridiphane	58138-08-2	3.2E+02	PHYSPROP	1.7E-05	4.1E-07	PHYSPROP	3.9E-04	PHYSPROP	4.3E+01	PHYSPROP			4.1E-02	4.7E-06	EPA WATER9			3.4E+03	EPI	5.2E+00	PHYSPROP	1.1E+00	PHYSPROP	4.7E-01	6.6E+00	1.6E+01	6.9E-02	EPI
Triethylamine	121-44-8	1.0E+02	PHYSPROP	6.1E-03	1.5E-04	PHYSPROP	5.7E+01	PHYSPROP	-1.1E+02	PHYSPROP	7.3E-01	CRC89	6.6E-02	7.9E-06	EPA WATER9			5.1E+01	EPI	1.5E+00	PHYSPROP	6.9E+04	PHYSPROP	1.5E-02	3.9E-01	9.3E-01	3.9E-03	EPI
Triethylene Glycol	112-27-6	1.5E+02	PHYSPROP	1.3E-09	3.2E-11	PHYSPROP	1.3E-03	PHYSPROP	-7.0E+00	PHYSPROP	1.1E+00	CRC89	5.1E-02	8.1E-06	EPA WATER9			1.0E+01	EPI	-1.8E+00	PHYSPROP	1.0E+06	PHYSPROP	7.3E-05	7.3E-01	1.8E+00	1.6E-05	EPI
Trifluoroethane, 1,1,1-	420-46-2	8.4E+01	PHYSPROP	3.1E+01	7.7E-01	PHYSPROP	9.5E+03	PHYSPROP	-1.1E+02	PHYSPROP			9.9E-02	1.2E-05	EPA WATER9			4.4E+01	EPI	1.7E+00	PHYSPROP	7.6E+02	PHYSPROP	2.7E-02	3.1E-01	7.5E-01	7.6E-03	EPI

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Soil Partition Coefficients				Water Partition		Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m³/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm³)	Density Ref	Dia (cm²/s)	Diw (cm²/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t^* (hr)	K_p (cm/hr)	KPREF
Trifluralin	1582-09-8	3.4E+02	PHYSPROP	4.2E-03	1.0E-04	PHYSPROP	4.6E-05	PHYSPROP	4.9E+01	PHYSPROP	1.4E+00	PubChem	2.2E-02	5.6E-06	EPA WATER9			1.6E+04	EPI	5.3E+00	PHYSPROP	1.8E-01	PHYSPROP	5.1E-01	7.9E+00	1.9E+01	7.3E-02	EPI
Trimethyl Phosphate	512-56-1	1.4E+02	PHYSPROP	2.9E-07	7.2E-09	PHYSPROP	8.5E-01	EPI	-4.6E+01	PHYSPROP	1.2E+00	CRC89	5.8E-02	8.8E-06	EPA WATER9			1.1E+01	EPI	-6.5E-01	PHYSPROP	5.0E+05	PHYSPROP	4.3E-04	6.4E-01	1.5E+00	9.5E-05	EPI
Trimethylbenzene, 1,2,3-	526-73-8	1.2E+02	PHYSPROP	1.8E-01	4.4E-03	PHYSPROP	1.7E+00	PHYSPROP	-2.5E+01	PHYSPROP	8.9E-01	CRC89	6.1E-02	8.0E-06	EPA WATER9			6.3E+02	EPI	3.7E+00	PHYSPROP	7.5E+01	PHYSPROP	3.8E-01	5.0E-01	1.2E+00	9.0E-02	EPI
Trimethylbenzene, 1,2,4-	95-63-6	1.2E+02	PHYSPROP	2.5E-01	6.2E-03	PHYSPROP	2.1E+00	PHYSPROP	-4.4E+01	PHYSPROP	8.8E-01	CRC89	6.1E-02	7.9E-06	EPA WATER9			6.1E+02	EPI	3.6E+00	PHYSPROP	5.7E+01	PHYSPROP	3.6E-01	5.0E-01	1.2E+00	8.6E-02	EPI
Trimethylbenzene, 1,3,5-	108-67-8	1.2E+02	PHYSPROP	3.6E-01	8.8E-03	PHYSPROP	2.5E+00	PHYSPROP	-4.5E+01	PHYSPROP	8.6E-01	CRC89	6.0E-02	7.8E-06	EPA WATER9			6.0E+02	EPI	3.4E+00	PHYSPROP	4.8E+01	PHYSPROP	2.6E-01	5.0E-01	1.2E+00	6.2E-02	EPI
Trimethylpentene, 2,4,4-	25167-70-8	1.1E+02	PHYSPROP	3.0E+01	7.5E-01	PHYSPROP	7.1E+01	PHYSPROP	-8.4E+01	EPI	7.2E-01	PubChem	6.0E-02	7.3E-06	EPA WATER9			2.4E+02	EPI	4.1E+00	PHYSPROP	4.0E+00	PHYSPROP	7.7E-01	4.5E-01	1.7E+00	1.9E-01	RAGSE
Trinitrobenzene, 1,3,5-	99-35-4	2.1E+02	PHYSPROP	2.7E-07	6.5E-09	EPI	6.4E-06	EPI	1.2E+02	PHYSPROP	1.5E+00	CRC89	2.9E-02	7.7E-06	EPA WATER9			1.7E+03	EPI	1.2E+00	PHYSPROP	2.8E+02	PHYSPROP	3.4E-03	1.6E+00	3.9E+00	6.1E-04	EPI
Trinitrotoluene, 2,4,6-	118-96-7	2.3E+02	PHYSPROP	8.5E-07	2.1E-08	EPI	8.0E-06	PHYSPROP	8.0E+01	PHYSPROP	1.7E+00	CRC89	3.0E-02	7.9E-06	EPA WATER9			2.8E+03	EPI	1.6E+00	PHYSPROP	1.2E+02	PHYSPROP	5.6E-03	2.0E+00	4.7E+00	9.6E-04	EPI
Triphenylphosphine Oxide	791-28-6	2.8E+02	PHYSPROP	2.2E-08	5.3E-10	PHYSPROP	2.6E-09	EPI	1.6E+02	PHYSPROP	1.2E+00	CRC89	2.3E-02	5.8E-06	EPA WATER9			2.0E+03	EPI	2.8E+00	PHYSPROP	6.3E+01	PHYSPROP	2.1E-02	3.8E+00	9.1E+00	3.3E-03	EPI
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	4.3E+02	PHYSPROP	1.1E-07	2.6E-09	PHYSPROP	7.4E-08	PHYSPROP	2.7E+01	PHYSPROP			3.3E-02	3.9E-06	EPA WATER9			1.1E+04	EPI	3.7E+00	PHYSPROP	7.0E+00	PHYSPROP	1.3E-02	2.7E+01	6.5E+01	1.6E-03	EPI
Tris(1-chloro-2-propyl)phosphate	13674-84-5	3.3E+02	PHYSPROP	2.4E-06	6.0E-08	PHYSPROP	2.0E-05	PHYSPROP	-4.0E+01	PHYSPROP			4.0E-02	4.7E-06	EPA WATER9			1.6E+03	EPI	2.6E+00	PHYSPROP	1.2E+03	PHYSPROP	8.4E-03	7.2E+00	1.7E+01	1.2E-03	EPI
Tris(2,3-dibromopropyl)phosphate	126-72-7	7.0E+02	PHYSPROP	8.9E-04	2.2E-05	EPI	1.9E-04	PHYSPROP	5.5E+00	PHYSPROP	2.3E+00	PubChem	1.9E-02	4.9E-06	EPA WATER9			9.7E+03	EPI	4.3E+00	PHYSPROP	8.0E+00	PHYSPROP	1.4E-03	8.5E+02	2.0E+03	1.4E-04	EPI
Tris(2-chloroethyl)phosphate	115-96-8	2.9E+02	PHYSPROP	1.3E-04	3.3E-06	EPI	6.1E-02	PHYSPROP	-5.5E+01	PHYSPROP	1.4E+00	CRC89	2.4E-02	6.2E-06	EPA WATER9			3.9E+02	EPI	1.4E+00	PHYSPROP	7.0E+03	PHYSPROP	2.3E-03	4.2E+00	1.0E+01	3.6E-04	EPI
Tris(2-ethylhexyl)phosphate	78-42-2	4.3E+02	PHYSPROP	3.2E-06	7.9E-08	EPI	8.3E-08	PHYSPROP	-7.4E+01	PHYSPROP	9.9E-01	CRC89	1.6E-02	3.9E-06	EPA WATER9			2.5E+06	EPI	9.5E+00	PHYSPROP	6.0E-01	PHYSPROP	9.3E+01	2.9E+01	1.3E+02	1.2E+01	EPI
Tungsten	7440-33-7	1.8E+02	PHYSPROP				0.0E+00	NIOSH	3.4E+03	PHYSPROP	1.9E+01	CRC89				1.5E+02	BAES							5.2E-03	1.1E+00	2.7E+00	1.0E-03	RAGSE
Uranium (Soluble Salts)	NA	2.4E+02	CRC89				0.0E+00	NIOSH	1.1E+03	CRC89	1.9E+01	CRC89				4.5E+02	BAES							5.9E-03	2.3E+00	5.4E+00	1.0E-03	RAGSE
Urethane	51-79-6	8.9E+01	PHYSPROP	2.6E-06	6.4E-08	EPI	2.6E-01	EPI	4.9E+01	PHYSPROP	9.9E-01	CRC89	8.5E-02	1.0E-05	EPA WATER9			1.2E+01	EPI	-1.5E-01	PHYSPROP	4.8E+05	PHYSPROP	1.4E-03	3.3E-01	8.0E-01	3.9E-04	EPI
Vanadium Pentoxide	1314-62-1	1.8E+02	EPI				0.0E+00	NIOSH	6.8E+02	CRC89	3.4E+00	CRC89										7.0E+02	CRC89	5.2E-03	1.1E+00	2.6E+00	1.0E-03	RAGSE
Vanadium and Compounds	7440-62-2	5.1E+01	EPI						1.9E+03	CRC89	6.0E+00	CRC89				1.0E+03	SSL							2.7E-03	2.0E-01	4.9E-01	1.0E-03	RAGSE
Vernolate	1929-77-7	2.0E+02	PHYSPROP	1.3E-03	3.1E-05	EPI	1.0E-02	PHYSPROP	7.1E+01	EPI	9.5E-01	CRC89	2.4E-02	6.1E-06	EPA WATER9			3.0E+02	EPI	3.8E+00	PHYSPROP	9.0E+01	PHYSPROP	2.2E-01	1.4E+00	3.5E+00	4.0E-02	EPI
Vinclozolin	50471-44-8	2.9E+02	PHYSPROP	7.1E-07	1.7E-08	EPI	1.2E-07	PHYSPROP	1.1E+02	PHYSPROP	1.5E+00	CRC89	2.5E-02	6.5E-06	EPA WATER9			2.8E+02	EPI	3.1E+00	PHYSPROP	2.6E+00	PHYSPROP	2.9E-02	4.2E+00	1.0E+01	4.5E-03	EPI
Vinyl Acetate	108-05-4	8.6E+01	PHYSPROP	2.1E-02	5.1E-04	EPI	9.0E+01	PHYSPROP	-9.3E+01	PHYSPROP	9.3E-01	CRC89	8.5E-02	1.0E-05	EPA WATER9			5.6E+00	EPI	7.3E-01	PHYSPROP	2.0E+04	PHYSPROP	5.6E-03	3.2E-01	7.7E-01	1.6E-03	EPI
Vinyl Bromide	593-60-2	1.1E+02	PHYSPROP	5.0E-01	1.2E-02	PHYSPROP	1.0E+03	PHYSPROP	-1.4E+02	PHYSPROP	1.5E+00	CRC89	8.6E-02	1.2E-05	EPA WATER9			2.2E+01	EPI	1.6E+00	PHYSPROP	7.6E+03	PHYSPROP	1.7E-02	4.2E-01	1.0E+00	4.4E-03	EPI
Vinyl Chloride	75-01-4	6.2E+01	PHYSPROP	1.1E+00	2.8E-02	PHYSPROP	3.0E+03	EPI	-1.5E+02	PHYSPROP	9.1E-01	CRC89	1.1E-01	1.2E-05	EPA WATER9			2.2E+01	EPI	1.6E+00	PHYSPROP	8.8E+03	PHYSPROP	2.5E-02	2.4E-01	5.7E-01	8.4E-03	EPI
Warfarin	81-81-2	3.1E+02	PHYSPROP	1.1E-07	2.8E-09	EPI	1.2E-07	PHYSPROP	1.6E+02	PHYSPROP			4.2E-02	4.9E-06	EPA WATER9			4.3E+02	EPI	2.7E+00	PHYSPROP	1.7E+01	PHYSPROP	1.2E-02	5.6E+00	1.3E+01	1.8E-03	EPI
Xylene, P-	106-42-3	1.1E+02	PHYSPROP	2.8E-01	6.9E-03	PHYSPROP	8.8E+00	PHYSPROP	1.3E+01	PHYSPROP	8.6E-01	CRC89	6.8E-02	8.4E-06	EPA WATER9			3.8E+02	EPI	3.2E+00	PHYSPROP	1.6E+02	PHYSPROP	2.0E-01	4.1E-01	9.9E-01	4.9E-02	EPI
Xylene, m-	108-38-3	1.1E+02	PHYSPROP	2.9E-01	7.2E-03	PHYSPROP	8.3E+00	PHYSPROP	-4.8E+01	PHYSPROP	8.6E-01	CRC89	6.8E-02	8.4E-06	EPA WATER9			3.8E+02	EPI	3.2E+00	PHYSPROP	1.6E+02	PHYSPROP	2.1E-01	4.1E-01	9.9E-01	5.3E-02	EPI
Xylene, o-	95-47-6	1.1E+02	PHYSPROP	2.1E-01	5.2E-03	PHYSPROP	6.6E+00	PHYSPROP	-2.5E+01	PHYSPROP	8.8E-01	CRC89	6.9E-02	8.5E-06	EPA WATER9			3.8E+02	EPI	3.1E+00	PHYSPROP	1.8E+02	PHYSPROP	1.9E-01	4.1E-01	9.9E-01	4.7E-02	EPI
Xylenes	1330-20-7	1.1E+02	PHYSPROP	2.7E-01	6.6E-03	PHYSPROP	8.0E+00	PHYSPROP	-2.5E+01	EPI	8.6E-01	ATSDR Profile	6.9E-02	8.5E-06	EPA WATER9			3.8E+02	EPI	3.2E+00	PHYSPROP	1.1E+02	PHYSPROP	2.0E-01	4.1E-01	9.9E-01	5.0E-02	EPI
Zinc Phosphide	1314-84-7	2.6E+02	CRC89						1.2E+03	CRC89	4.6E+00	CRC89												3.7E-03	2.9E+00	7.0E+00	6.0E-04	RAGSE
Zinc and Compounds	7440-66-6	6.5E+01	PHYSPROP						4.2E+02	PHYSPROP	7.1E+00	CRC89				6.2E+01	SSL							1.9E-03	2.4E-01	5.9E-01	6.0E-04	RAGSE
Zineb	12122-67-7	2.8E+02	PHYSPROP	1.1E-07	2.7E-09	PHYSPROP	7.5E-08	PHYSPROP	1.6E+02	EPI			4.5E-02	5.2E-06	EPA WATER9			1.3E+03	EPI	1.3E+00	PHYSPROP	1.0E+01	PHYSPROP	2.1E-03	3.7E+00	8.8E+00	3.3E-04	EPI
Zirconium	7440-67-7	9.1E+01	EPI				0.0E+00	NIOSH	1.9E+03	CRC89	6.5E+00	CRC89				3.0E+03	BAES							3.7E-03	3.4E-01	8.2E-01	1.0E-03	RAGSE

APPENDIX B

SCS QUALITY MANAGEMENT SYSTEM

SCS ENGINEERS

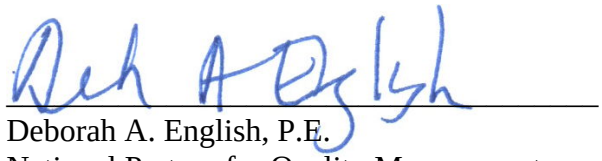
Quality Management System

SCS Engineers and Affiliated Companies

September 25, 2009
Revised October 21, 2010
Revised November 30, 2012
Revised January 5, 2015

Signatures of Primary Author and Reviewer:

Primary Author:



Deborah A. English, P.E.
National Partner for Quality Management
SCS Engineers

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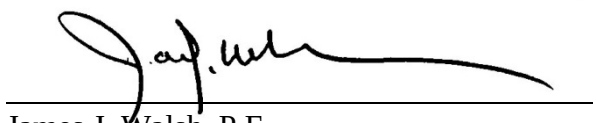

James J. Walsh, P.E.
President
SCS Engineers

1/5/15
Date

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Attachments

1.0 MANAGEMENT AND ORGANIZATION

1.1 APPROVAL PAGE

An approval page signed by the primary author and reviewer is included prior to the Table of Contents. The 2009 SCS Quality Management System was prepared by a committee consisting of Bob Gardner, Tom Nichols, Mark Tumlin, Bob Westly, John Picone, Dave Fisher, Tom Barham, Deborah English, Dave Laney, Jim Walsh, Tom Conrad and Mike McLaughlin. This update was prepared by Mike McLaughlin and Deborah English.

1.2 STATEMENT OF POLICY

To be the environmental firm of choice to clients, SCS must provide quality solutions to environmental problems in an ethical manner. We will treat our clients' environmental problems as if they were our own, making sure that SCS staff and our subcontractors have the necessary training and skills, use the proper tools, and employ sound procedures to address each client's needs. We will continuously seek to improve the quality of the services we deliver by checking our work, considering new technologies and work processes, and documenting compliance with the SCS Quality Management System.

Compliance with this policy and the SCS Quality Management System are required of all employees. In consideration of such compliance, SCS will provide a legal defense to employees who have signed, sealed, or initialed SCS work products.

The SCS Quality Assurance and Quality Control Program was first adopted by resolution of the Board of Directors on January 19, 1985 and amended and re-affirmed by the Board on the following dates:

- February 3, 1989
- July 15, 1992
- February 5, 1994
- May 29, 1998
- February 1, 2003

The SCS Quality Management System was first adopted by resolution of the Board of Directors on May 30, 2009 and amended and re-affirmed by the Board on the following dates:

- November 30, 2012
- January 5, 2015

This Quality Management System follows guidelines established in the most recent US Environmental Protection Agency (EPA) guidance for Quality Management Plans (Ref. 1).

1.3 ORGANIZATION CHART

Within SCS, everyone plays a role in delivering quality work. If you see a problem or mistake, fix it if you can, or bring it to the responsible person's or your supervisor's attention.

Certain individuals have specific roles and responsibilities as described elsewhere in this document. **Figure 1** is an organization chart showing roles for quality management at SCS. It shows the reporting relationships for corporate-wide support (National Partners, executives, corporate staff), Project Managers, Project Directors, Office Directors, Office Services Managers, office staff, and field staff.

The National Partner for Quality Management reports to the President with respect to quality management, and serves as the national leader and focal point for quality management at SCS. The National Partner is supported by Office Quality Management Coordinators designated by the Office Directors.

1.4 DISCUSSION OF AUTHORITY

This Quality Management System document has been adopted and may be revised by the Board of Directors, which also appoints executive officers of the firm. Executive officers of the firm are charged with the responsibility for its implementation under the direction of the President.

The National Partner for Quality Management is appointed by and reports to the President. This professional leads quality management at SCS, providing guidance, developing tools, and conducting training to his or her colleagues for quality management. The National Partner for Quality Management reports at least once a year to the Board of Directors, which provides access to senior management to plan, assess, and improve the Quality Management System.

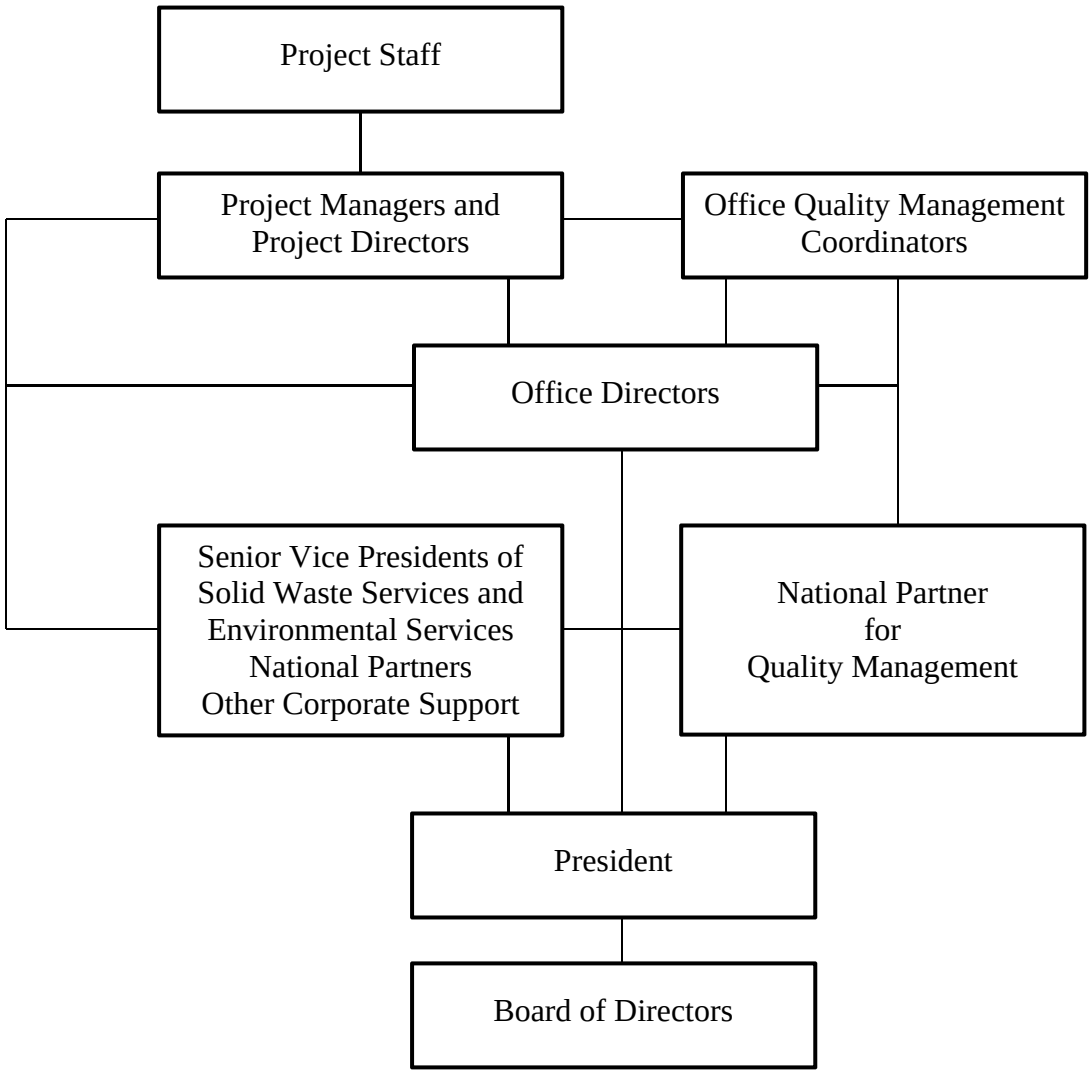
Each Office Director or designated Office Quality Management Coordinator is responsible for the implementation of the Quality Management System within the Office, including reviewing office procedures for conformance with the Quality Management System, following up on findings from annual audits, communicating quality management issues and developments to Office staff, making sure annual training is conducted, and communicating possible quality management issues to the National Partner for Quality Management.

The Executive Vice President and Senior Vice Presidents may designate National Partners and SCS Certified Leaders who have firm-wide leadership of their areas of expertise.

1.5 DISCUSSION OF TECHNICAL ACTIVITIES SUPPORTED BY THE QUALITY SYSTEM

SCS performs a variety of services. These include, but are not limited to, engineering and scientific studies, geotechnical and hydrogeological investigations, engineering designs, feasibility studies, field inspections, field sampling, construction, and operation, monitoring, and maintenance of environmental protection systems.

Figure 1. Organization Chart for Quality Management



Key:

| Direct Reporting Relationship

—— Relationship Involving Support and Assistance

Most services performed by SCS result in some form of documentation of the work, whether the work was conducted in the field or in the office. This Quality Management System applies to external documents (such as reports, draft reports, proposals, engineering plans and specifications, as-built drawings, conference papers, articles, and similar materials which are circulated outside the firm) and critical internal documents (such as work plans, inter-office assignments, and quality assurance project plans).

This Quality Management System includes procedures and checklists for use in conducting quality assurance reviews of external and internal documents.

1.6 HOW MANAGEMENT ASSURES PROGRAM IS UNDERSTOOD AND IMPLEMENTED

The current version of this Quality Management System document is maintained and available on the firm's Intranet. References to the firm's Quality Management System are included in the *SCS Employee Handbook* (Ref. 2) and the *SCS Project Manager's Manual* (Ref. 3). Periodic quality management training is provided to technical and support staff. In addition, quality management policies, issues, and suggested improvements are discussed during periodic Office Quality Management Coordinator conference calls chaired by the National Partner for Quality Management.

1.7 PROCESS FOR RESOLVING DISPUTES REGARDING THE QUALITY SYSTEM

If a dispute arises over quality system requirements, quality assurance and quality control procedures, assessments, or corrective actions that cannot be resolved through normal communication channels, the National Partner will be notified. The National Partner will investigate the matter as necessary, consult with appropriate technical experts as necessary, and resolve the dispute if possible. If the National Partner cannot resolve the dispute, it will be referred to the President.

2.0 QUALITY SYSTEM COMPONENTS

2.1 DESCRIPTION OF PRINCIPAL COMPONENTS

SCS is an environmental consulting and contracting firm. We provide quality solutions to environmental problems in an ethical manner. To achieve this, work performed by the firm is subject to a quality control process and a quality assurance review. Quality control includes the day-to-day steps we follow to make sure the work we do is correct. For example, we double-check our own calculations, read the meter twice, and proofread our own writing to make sure mistakes are fixed before anyone else sees the work.

For many of the types of work we do, the firm has adopted or published standard operating procedures that provide a consistent quality control process. In addition, certain projects and tasks may only be performed by SCS Certified staff. Additional information on the quality

control process, standard operating procedures, and SCS Certified are available on the SCS Intranet.

SCS plans, specifications, reports, work plans, and related materials (called "documents" below) shall be reviewed internally by a second qualified person (a person other than the primary author) prior to release. When feasible, proposals shall also be reviewed internally by a second qualified person. The internal review will be conducted by the Project Director or by an individual designated by the Project Director. If a qualified person cannot be identified within SCS, an external party (designated or approved by the Project Director) with the appropriate expertise may be contracted to perform the review. Whether or not the seal of a licensed professional is required on a given document, internal review is required to help assure the quality of SCS documents. Normally, internal review is reflected by the signatures of the primary author and the reviewer on the transmittal letter. In the event of transmittal by email, the quality assurance reviewer should be copied on the email, and a copy of the email saved to the project file.

At SCS, quality assurance/quality control is not just a final review before the document is delivered to a client. It is inefficient to "add quality" to a report or engineering design at or near the end of a project. While a necessary step, the end-of-project review, plan check, and/or final edit does not substitute for an overall project program that incorporates regular reviews of in-progress work, interaction with clients to confirm their needs, and frequent communication between project team members to verify assumptions. Quality work products are created when all team members focus throughout the project on the achievement of quality in each task.

Also related to the subjects of quality assurance and quality control is our commitment to ethical conduct and to protecting public health and safety. It would be wrong (and unacceptable) to write down field measurements that were not taken, or to state that something was observed when it was not observed. As a firm, we depend on our colleagues to be careful, honest, and professional in the work they perform, and we can accept no less. We provide annual ethics training to all employees. Additional information on SCS Standards of Business Ethics and Conduct are contained in SCS's *Employee Handbook* and *Project Managers Manual* (both of which can be found on the SCS Intranet).

2.2 ROLES AND RESPONSIBILITIES OF STAFF

2.2.1 Project Manager

The SCS Project Manager is the person identified as such for a given project or task in Vision, the software used by SCS to plan and track project performance. The Project Manager is responsible for the quality of project work and external and internal documents associated with that work. Responsibilities include making sure that:

- Contracts are reviewed and executed in accordance with SCS policies.
- Project work and reporting documents are of professional quality, correct, accurate (i.e., no errors), and consistent.

- The work and deliverables satisfy the contract, reflect industry standards, and comply with regulatory requirements.
- Client expectations and requirements are met or surpassed.
- Review has been completed before deliverables are sent to the client or others outside SCS.
- Work performed by subcontractors meets subcontract and client specifications.
- Deliverables are understandable to the intended audience, not just to those intimately familiar with the subject matter.
- Findings, results, and conclusions are presented in a manner appropriate to client needs, and are supported by the deliverable.
- Applicable SCS and client procedures are followed, including the latest *SCS Health and Safety Injury and Illness Prevention Program* (Ref. 4), SCS standard operating procedures, and standards for writing style, format, and similar standards. These referenced SCS documents are posted on the Intranet.
- Operations, monitoring, and maintenance by SCS are performed in accordance with contract documents, applicable regulatory requirements, and available operation and maintenance manuals and standard operating procedures.
- Construction by SCS is performed in accordance with construction documents (design drawings, specifications, etc.), applicable regulatory requirements (including local building permits), and under proper State contracting licenses.
- Project file documentation is complete, organized, and accurate.

2.2.2 Project Director

The SCS Project Director is the person identified as such for a given project in Vision. The Project Director normally provides quality assurance review of the work products and deliverables (prior to transmittal to the client in the case of external documents). Where the Project Director also serves as the Project Manager, he or she will perform the quality control responsibilities of the Project Manager, and obtain a quality assurance review by another qualified senior professional.

In some situations, Project Directors may designate others to be responsible for quality assurance reviews. For example, on complex multidisciplinary projects, appropriately qualified persons, regardless of title, should be designated by the Project Director to conduct quality assurance reviews of specific project elements.

2.2.3 Office Director and Office Quality Management Coordinators

The Office Director of the office performing the work is ultimately responsible for assuring that this Quality Management System is followed within his or her office. If the Office Director does not serve as the Office Quality Management Coordinator, he or she will designate one or more Office Quality Management Coordinators. Office Quality Management Coordinator responsibilities include reviewing Office procedures for conformance with the Quality Management System, following up on annual audits, communicating quality management issues and developments to Office staff, making sure periodic training is conducted, and communicating possible quality management issues to the National Partner for Quality Management.

2.2.4 Officers of the Firm (Vice Presidents and Above)

Officers of the firm are appointed by the Board of Directors and are authorized by the Board to sign proposals and contracts in accordance with Board policy. Often this means that an officer of the firm serves as Project Manager, Project Director, or Office Director as described above.

In addition, officers are required to complete and document at least one Quality Management System audit each year for a project or activity in which they are not otherwise directly involved, as described in Section 9.1.

2.2.5 National Partners

National Partners are appointed by Senior Vice Presidents and confirmed by the Board to serve as the leader of a topic or practice area nationwide. As such, National Partners are responsible for developing standard technical approaches to our work and identifying , identifying staff with the expertise to perform certain tasks, answering questions and providing technical guidance, and reviewing or identifying reviewers of high risk deliverables (i.e., those in which an error could represent significant potential liability to SCS) .

2.2.6 National Partner for Quality Management

As noted in Section 0 above, the National Partner for Quality Management is appointed by the President and confirmed by the Board of Directors. This professional leads quality management at SCS, providing guidance, developing tools, conducting training for quality management, recommending and following up on audits, tracking quality management performance and improvements, and reporting to the Board of Directors. In addition, the National Partner for Quality Management may conduct audits, investigate deviations from this Quality Management System and impose corrective actions, subject only to review by the President.

2.2.7 SCS Certified Leaders

The leaders of the SCS Certified projects or tasks are identified by the Senior Vice Presidents. These leaders are responsible for identifying the criteria for certification, providing training (if appropriate), approving certification, and maintaining current lists of certified individuals on the Intranet.

2.3 TOOLS AVAILABLE FOR IMPLEMENTING QUALITY MANAGEMENT SYSTEM

2.3.1 SCS Intranet

The SCS Intranet provides a variety of tools, references, and links to support SCS personnel in performing their work. It includes accounting reports, corporate policies, legal guidelines and standard contracts, resources associated with specific practice areas, computer information and resources, and the health and safety program requirements and standard operating procedures. Quality Assurance is located under corporate policies and includes the Quality Management System, tools and references, review and documentation checklists, standard operating procedures and audit documentation. Additional tools are available within the practice area sections of the Intranet.

2.3.2 Deltek Vision

Deltek Vision is a project-based enterprise resource planning software that can be used to monitor project budgets, costs, schedules, and time allocation. The firm's Vision database identifies the persons serving as Project Director and Project Manager, and it documents staff who charge time to the project. In addition, the Vision database summarizes education, experience, and selected training and competencies for SCS personnel.

2.3.3 Learning Management System

The Learning Management System is a software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, e-learning programs, and training content. Use of the Learning Management System facilitates making sure that all staff required to complete certain training have in fact accomplished it.

2.4 SPECIFIC GROUPS AT SCS WHO DEVELOP QUALITY ASSURANCE PLANS

Each profit center at SCS develops quality assurance plans as required to perform work properly for specific projects. If it is anticipated that a specific project requires a departure from an existing SCS standard operating procedure due to client requirements or the unusual nature of the project, the Project Manager will provide details to the appropriate SCS National Partner, SCS Certified Leader or staff, or Senior Vice President, and a copy of the resulting project-specific standard operating procedure will be given to the National Partner for Quality Management.

3.0 PERSONNEL QUALIFICATIONS AND TRAINING

3.1 POLICY STATEMENT

SCS work will be performed or supervised by staff who are qualified by virtue of training or experience. Evidence of such training or experience will be documented (e.g., in Vision, in the SCS Learning Management System, on an individual resume, and/or in a personnel file).

3.2 DESCRIPTION OF THE PROCESS USED TO IDENTIFY, ENSURE AND DOCUMENT THAT PERSONNEL HAVE AND MAINTAIN THE APPROPRIATE KNOWLEDGE, SKILL AND CREDENTIALS NEEDED TO PERFORM THEIR JOBS

First and foremost, Project Managers and Project Directors select staff whom they know from experience have the appropriate background and skills to make up the project team. As described in the SCS *Project Managers Manual*, the proposed SCS team credentials are evaluated with respect to those needed for the project, and summarized in the proposal to the client or at the start of a new project. If needed, the proposed project team will be strengthened through additional training, assistance from other SCS personnel, or assistance from outside contractors. The need for strengthening the project team will be determined by the Project Manager and Project Director.

SCS positions have training requirements that must be completed and documented. For example, new employees must receive orientation, while others require human resources training, health and safety training, technical training, etc. Other training requirements may be specified in SCS Certified (Section 3.3) and SCS standard operating procedures (Section 8). Supervisors are responsible for identifying training requirements for those they supervise. SCS Certified training and expertise are specified by the With respect to professional licenses and similar credentials, the professional is responsible for maintaining these (e.g., obtaining continuing education or similar credits), with support from his or her supervisor.

Employee training requirements and renewal dates may be tracked using software such as the Intranet or the SCS Learning Management System. The Learning Management System or another system may also notify both the employee and supervisor of upcoming license and certification (internal and external) renewal dates, but the employee is responsible to maintain his or her own credentials. As part of annual performance reviews, training and credentials are addressed, needed training is identified, and new skills or credentials may be added as goals to complete. Individuals may also record their training on their SCS professional resumes.

3.3 SCS CERTIFIED STAFF

Special SCS certifications are required to perform some kinds of projects and tasks. To perform such projects/tasks, an individual's name must appear on the list of those certified as having completed the appropriate training and/or as having the necessary experience as determined by the designated leader of the applicable SCS Certified programs. The projects/tasks for which such internal SCS Certifications are required appear below; details (including the designated leader, definitions, training information, and lists of names of those certified) appear on the Intranet:

- Landfill gas modeling
- Drilling atop lined landfills
- Geotechnical analysis
- Dangerous goods shipping
- Environmental due diligence

4.0 PROCUREMENT OF ITEMS AND SERVICES

Quality is an important criterion when SCS purchases goods or services from third parties. We require subcontractors to provide certain basic information (evidence of insurance, tax identification, evidence of special certifications required to perform the work, small or disadvantaged status, etc.), and we require purchase orders, service orders, or subcontracts as provided in the SCS *Contract Guide* (Ref. 5). We normally are not required to accept the "low bid" for subcontract services, and this Quality Management System and our longstanding practices require that we select subcontractors and vendors who we believe offer the best value for the work required.

4.1 REVIEW AND APPROVAL OF PROCUREMENT DOCUMENTS

The SCS Project Manager (or designee) is responsible for review and approval of procurement documents. Often all that is needed is to assure that the procurement documents (e.g., scope of work and associated specifications) meet the needs of the project. This could be as simple as specifying laboratory methods for samples to be collected by SCS, together with associated quality assurance/quality control requirements. Or it could be more complicated (e.g., detailed performance specifications for a control system). In any event, it is the SCS Project Manager's (or designee's) job to make sure we are buying what is needed for the project.

For repetitive procurement items, we follow an informal "vendor approval" process. A vendor who has delivered responsive service with good value to SCS and our clients in the past is considered approved for similar services. Where we do not have experience with a prospective vendor, the approval process is more formal. Questions the Project Manager (or designee) will consider include the extent to which the prospective vendor:

- Demonstrates appropriate qualifications and experience.
- Demonstrates appropriate attention to quality (e.g., through a written quality assurance/quality control program, certifications, etc.).
- Provides technical details of their products or services.
- Provides business and technical references for their work.

Vendor records are maintained in the Vision database. Vendors who have established national accounts and/or Master Services Agreements with SCS are posted on the SCS Intranet; as appropriate, copies of (or links to) qualifications materials and similar documents also are posted.

4.2 ENSURING PROCURED ITEMS AND SERVICES ARE OF ACCEPTABLE QUALITY

Purchased goods and services will be evaluated by the SCS Project Manager (or designee) upon receipt, if possible, or before acceptance and payment in any case. Briefly summarized, at a minimum the Project Manager (or designee) will confirm that the items or services appear to meet the requirements contained in the procurement documents.

In some cases, it may be necessary to conduct additional investigation to confirm items and services are of acceptable quality. For example, it may be prudent to visit the facilities of a fabricator or laboratory to become familiar with their work at that facility. As another example, it may be necessary to confirm the items or services are of acceptable quality through independent validation (e.g., for laboratory data) or material testing.

The need for and results of additional investigation or testing will be documented by the Project Manager (or designee).

5.0 DOCUMENTS AND RECORDS

This section addresses the following topics:

- Quality-Related Documents and Records Requiring Retention and Review.
- Preparing and Reviewing Documents for Conformance with Requirements.
- Ensuring Accuracy of Documents and Records.
- Maintaining Documents and Retention Policy.
- Ensuring Compliance with Regulatory Requirements for Records.
- Chain-Of-Custody and Confidentiality Provisions.

We use Job Numbers to track and control documents. For jobs, the Job Number is a number in the following format:

A	A	B	C	C	D	D	D	.	E	E

where AA corresponds to the Profit Center code, B is the century (2 for years between 2000 and 2099), CC is the fiscal year (11 for projects between 1/1/11 and 12/31/11), DDD is a sequential number generally starting with 001 for the first project of the year (although some profit centers allocate these numbers in different blocks for different satellite offices), and EE is a suffix (often not used; thus "00" is the default). For example, 01215059.00 would be the 59th project for Office 01 in the year 2015.

Some Job Numbers are further divided into Project Tasks (Task 1, Task 2, etc.) to facilitate tracking portions of a given project that are managed and invoiced separately.

For proposals, the positions of BCC and DDD are reversed; an extra number is available to designate the proposal; e.g., 010074210; and no suffix is included

A	A	D	D	D	D	B	C	C

Documents and records (including emails) should contain the appropriate Job Number as provided in the *SCS Style Manual* (Ref. 6). Emails sent by SCS normally should include the Job Number or Proposal Number in the Subject line. If the email is originated by SCS, the Job Number or Proposal Number should be included. It may be included anywhere in the subject line, but the end of the subject line is preferred. The Job Number or Proposal Number should be

added to the subject line in responses to client-generated emails, if this procedure does not conflict with client preferences.

5.1 QUALITY-RELATED DOCUMENTS AND RECORDS REQUIRING RETENTION AND REVIEW

We generate many documents and records in the course of our work, and all of them are a reflection of the quality of our work to one degree or another. However, the following documents and records require retention and review as provided in this Quality Management System:

- Technical Reports
- Engineering Plans, Specifications, Basis of Design Documents, and Cost Estimates
- Proposals and Contracts
- Conference Papers and Articles
- Internal Project Documents (General)
- Correspondence and Emails
- Diary, Daily Logs, or Log Book
- Record Copies (Final Client Deliverables)
- Internal Documents (Controlled)
- Special Documentation Requirements
  - Project Health and Safety Plans
  - Sampling and Analysis Plans
  - Quality Assurance Project Plans
  - Calculations

Document and data controls include:

- Review and approval by Project Manager and Project Director or other professional providing quality assurance review prior to issue and use. For documents that are externally transmitted, this will be documented by the signatures of the primary author and the quality assurance reviewer on the transmittal letter or, in the event of email transmittal, by copying the quality assurance reviewer on the transmittal email. The transmittal document should be saved to the project file.

- Where multiple versions of a document have been issued, version numbers or similar are used in the file name (e.g., v0.x for draft documents, v1.x for deliverables, v2.x for subsequent generation of deliverable following regulatory review, etc., where x is the version number).

- Making documents available where needed. File them in accordance with this Quality Management System on a common network drive.

- Removal or suitable marking of obsolete documents to prevent inadvertent use.

Materials and data provided by a client for use on a project are evaluated for suitability before use, and handled and stored to protect usability. Such materials or data that become lost or damaged or are found unsuitable are reported to the client and recorded in the project files. Special requirements for handling, storage, or control of client supplied materials or data, if any, are documented within the project files.

5.2 PREPARING AND REVIEWING DOCUMENTS FOR CONFORMANCE WITH REQUIREMENTS

5.2.1 Technical Reports

Proposals as well as draft, draft final, and final reports prepared by SCS will be reviewed by a Project Director (or designee) for quality assurance to confirm that the following questions have been answered in the affirmative (or are being documented as inapplicable):

- Have the scope and purpose been identified?
- Have the documents and other necessary supporting data been identified and cross-checked, including:
  - Regulatory requirements (federal, state, and local).
  - References to industry standards (National Fire Protection Association, American Society of Testing Materials, etc.).
  - References to technical literature and related reports.
  - Field testing results, laboratory analysis, calculations, and in-house analyses.
  - Special features, qualifications, and/or limitations of the data.
- Was the work done in conformance with industry standards, contract specifications, and regulatory requirements?
- Was the scope of data collection appropriate, given the project scope and purpose?
- Were the analytical techniques used appropriate, considering client requirements, regulatory requirements, industry and professional standards of practice, and available data?
- Are deviations from standard practice justified and explained?
- Are tables and figures of consistent format, easily understood, and adequate in number and content?
- Are mathematical expressions developed logically? Are calculations correct?
- Are assumptions clearly identified, together with an appropriate explanation or rationale?
- Are the coverage and explanation of previous work sufficient (but not unduly duplicative) to place the report in context?

- Have findings, conclusions, and recommendations been stated clearly? Are the findings, conclusions and recommendations supported by the data collected and analyses performed, as presented in the text?

- Are the findings and conclusions correct and well founded?

- Are the findings and conclusions consistent with similar work performed by SCS or others? If not, is a sufficient technical basis presented to explain the difference?

5.2.2 Engineering Plans and Specifications

In addition to transmittal documentation, final or near-final (e.g., 95 percent) drawing title blocks will be initialed to reflect the appropriate reviews.

For final submittals, the appropriate professional seals will be placed on each drawing by the primary designer (if registered) or the Project Manager if he or she provided detailed review, and the cover sheet will be signed and sealed by the professional having primary responsibility and authority for the project (the Project Director, the Office Director, or the Reviewing Principal), as well as the primary designer or Project Manager (if they hold the appropriate professional license). All submittals will be signed, sealed, and otherwise marked (e.g., with firm certificate of authorization number, phraseology, etc.) in accordance with state regulatory requirements.

A Design Checklist should be completed for each review and a copy saved with the deliverable in the project file. The standard Design Checklist is included in Attachment A, but may be modified to meet Office- or project-specific requirements. During each review, the professionals conducting the review will assure and document that the following questions have been answered in the affirmative (or are documented as being not applicable):

- Was the design prepared in conformance with contract requirements?

- Have relevant building codes and other standards been obtained and reviewed by the designer? Is the design consistent with applicable codes?

- Is the basis for design adequately documented? Were the formulae used appropriate? Are calculations correct and have they been independently checked?

- Are the title blocks, referencing, and drafting consistent throughout the drawings with *SCS Computer Aided Design and Drafting Standards Manual* (Ref. 7) or those of the client?

- Are dimensions clearly shown, or readily computed?

- Are details clearly shown, properly referenced, and adequate in number and quality?

- Are notes clear, specific, and complete?

- Are materials and products adequately specified in the specifications or drawings? Are applicable Constructions Specifications Institute (or similar) divisions covered?

Is the specification terminology consistent with the design drawings? Are materials and specifications properly incorporated by reference? Are the specified materials or products readily available and at a reasonable, cost effective price?

- Is the design practical? Can it be constructed? Once built, can it be properly operated and maintained?

- Is the construction cost estimate complete? Are the prime contractor's and subcontractors' mark-ups identified and properly applied?

- Are operation and maintenance manuals included? If so, are they understandable and complete? Are manuals required to be complete prior to start up and operation of the system? Do they contain performance or operation goals, sample data sheets, and manufacturers' specifications?

5.2.3 Proposals and Contracts

Before a proposal is prepared, a Go/No-Go Decision should be made by a person authorized to execute a contract of the anticipated value of the proposed project, as provided in the *SCS Contract Guide*. Proposals will be transmitted over the signature of the person so authorized. In general, the highest-ranking officer of the firm involved in the proposal effort should sign it, along with the preparer of the proposal. Normally, the person signing the transmittal letter should provide a quality assurance review of the proposal before signing the transmittal letter. In those cases in which the person signing the transmittal letter is also the primary author of the proposal, a quality assurance review should be performed by another qualified professional in the office or another office, who should also sign the transmittal letter. The review typically should include at least a comparison of the proposal with the request for proposal (if any) and verification of the cost estimate.

Contracts may only be signed by authorized SCS personnel as provided in the current version of the SCS Contract Guide (available on the Intranet). If the contract used is not an SCS standard contract or if modifications to an SCS standard contract are requested by a client or subcontractor, the contract must be reviewed by the SCS legal department. The legal department keeps a record of all contract reviews. Client contracts and subcontracts must be fully executed before work is performed, and a copy provided to the Office Services Manager. The Office Services Managers save contracts on laser fiche in a central filing system. Copies of contract documents shall also be maintained in the project file.

5.2.4 Conference Papers and Articles

Conference papers and articles should include a second SCS professional as co-author or be reviewed by a second qualified SCS professional before transmittal. In cases in which the co-author is not an SCS professional (e.g., a client or subcontractor), a second SCS professional should still perform an independent quality assurance review of the paper.

5.2.5 Internal Documents (General)

Internal documents, such as telephone conversation notes, meeting notes, trip reports, and work plans, will be kept in a central filing system established by the SCS Project Manager in accordance with standard office filing procedures. The person who prepares an internal document will route one copy to the Project Manager (or, for large jobs, to his or her designee). Under no circumstances may such an internal document be distributed outside the firm without the approval of the Project Manager. The person providing the quality assurance review for the project periodically should audit project files to assure that adequate records are being maintained.

5.2.6 Correspondence and Emails

Project-related correspondence, such as letters, memoranda, and emails, must be routed to the Project Manager. At the discretion of the Project Manager, such correspondence may require his or her approval prior to distribution outside the firm. Letter reports and similar deliverables will be subject to quality assurance review in accordance with the requirements for Technical Reports provided in Section 5.2.1. Significant correspondence, including emails (e.g., documenting transmittal of deliverables, client approval of deliverables and scope and schedule changes, comments on or approval of subcontractor deliverables, etc.) will also be saved in the project files.

5.2.7 Diary, Daily Logs, or Log Book

On construction projects where SCS is providing either on-site inspection or periodic observations, the Project Manager will assure that a diary or log book is kept with notes recorded for each day (or observation). On other projects with field activities, the Project Manager will assure that a diary (or daily log) is maintained to note work performed, problems, solutions, conclusions, conversations, and other relevant matters, all recorded in a businesslike and professional manner (e.g., factual in tone, without personal or editorial comments). Copies of field documents will be retained in the project file.

5.2.8 Record Copies

Following completion of a project, the Project Manager will assure that job files are purged of duplicate information and generally arranged in chronological order to facilitate future access and review. A record copy of final project documents (drawings, specifications, reports, etc.) shall be provided for the project file. A complete set of files must be retained in some combination of electronic and hard copies. See Section 5.4 for additional guidance on preparing project files for closure and the SCS records retention policy.

5.2.9 Internal Documents (Controlled)

Internal Documents (Controlled) are documents relating to company policies and procedures that are maintained and updated using a controlled procedure. Examples include this Quality Management System and the *Health and Safety Injury and Illness Prevention Program.* Controlled documents are formally approved by the President and the Board of Directors

following development or modification by the person or committee with responsibility for the document.

Company policy and procedure documents are maintained in read-only versions on the SCS Intranet to ensure that the current versions are always available to all employees.

5.2.10 Special Documentation Requirements

5.2.10.1 Project Health and Safety Plans

Prior to the conduct of field assignments, the Project Manager will identify and evaluate the potential hazards, if any, to employees who may work at the job site. The Project Manager will prepare, or request that the Office Health and Safety Coordinator or others prepare, a site-specific health and safety plan for the project. The site-specific health and safety plan will conform to SCS's *Health and Safety Injury and Illness Prevention Program* requirements (SOP 2), client specifications, and applicable local, state, and federal guidelines.

The site-specific health and safety plan will be reviewed by the Project Manager and, if not prepared by the Office Health and Safety Coordinator, also by the Office Health and Safety Coordinator or the Corporate Health and Safety Director, as applicable. Evidence of this review and approval will be placed in the project files. The plan will be provided to and signed by employees and subcontractors working on the job prior to the initiation of field activities. The site-specific health and safety plan including a copy of the signed Acknowledgement page will be retained in the project file.

See Section 7.7.3 for additional guidance on Project Health and Safety Plans.

5.2.10.2 Sampling and Analysis Plans

Prior to the conduct of a sampling and analysis assignment, the Project Manager will evaluate the sampling and analysis requirements after considering the physical characteristics of the site, the material to be sampled, and standard references that are relevant to the assignment. If warranted or required (e.g., the assignment is complex or a regulatory agency requires it), a written sampling and analysis plan will be prepared.

The sampling and analysis plan will describe the sampling methods to be used and their rationale, documentation standards (including chain-of-custody considerations), analyses selected and their rationale, and analytical procedures to be used and their rationale (including method detection and reporting limits). It must take into consideration the quality assurance/quality control program followed by whatever laboratory will be used to analyze the samples. The sampling and analysis plan will be reviewed and approved by the Project Manager and the person providing quality assurance review (i.e., the Project Director or designee), with evidence of these approvals maintained in the project files.

See Section 7.7.1 for additional guidance on preparing field sampling plans.

5.2.10.3 Quality Assurance Project Plans

This Quality Management System provides general guidance and policy with respect to quality assurance and quality control. For some projects, the client may require SCS to provide as a deliverable a separate quality assurance/quality control plan for the specific program or project. This Quality Management System can serve as a reference for such a project-specific plan. Project Managers are responsible for preparing the quality assurance/quality control project plan, and it must be reviewed and approved by the Project Director or designee, with approvals noted as a part of the document (e.g., a signature block on the title page).

Section 7.7.2 provides additional guidance on preparation of quality assurance project plans.

5.3 ENSURING ACCURACY OF DOCUMENTS AND RECORDS

SCS processes are implemented under controlled conditions by means of standard practices and project-specific controls, as follows:

- Objectives, scope of services, and technical approach for each project are documented and referenced to contract documents.
- Suitable equipment and techniques are utilized in accordance with applicable standard practices or separately specified client-specific requirements as appropriate.
- Referenced standards and practices are followed.
- Construction contractor proposed variances from the drawings and specifications are documented, and change orders are negotiated as necessary.
- To the extent necessary, workmanship requirements are defined in the specifications, contract documents, or by standard practices.
- Special requirements that cannot be readily verified are identified and controlled as specified by personnel having the appropriate educational backgrounds and relevant experience.

The Project Manager manages the production processes and preparation of work results and services, supported by other staff and subcontractors as required. The following activities typically are included:

- Plan the work.
- Hold project kick-off meeting with the project team to review the project requirements and quality control/quality assurance procedures (Section 7.5).
- Use standard operating procedures (including activity-specific forms and logs for documentation) appropriate to the work to be performed (Section 8.0).
- Obtain permits and similar approval documents as required by our scope.

- Review results.
- Re-plan work or activities as necessitated by data and results obtained.
- Coordinate client reviews as appropriate.
- Prepare written work results including appropriate quality control reviews and assurance verifications.
- Submit written work results to the client in an appropriate form (e.g., letter, formal bound report, technical memo, design plans and specifications, "as-built" documentation for constructed systems, etc.).

5.4 MAINTAINING DOCUMENTS AND RETENTION POLICY

Documents and records are maintained in a central filing system. Electronic records associated with a given project are filed in a subdirectory having the Job Number as its name. If Project Tasks are used, they will appear as the next file directory level within the project directory. Within each project or task directory, the following folders or subdirectories should be used:

- Background Documents (existing information obtained from other sources, including the client)
- Contract and Invoices (contract, change orders, subcontracts, insurance certificates, invoices)
- Correspondence (emails, letters, progress reports, etc.).
- Deliverables (draft and final reports, drawings, etc.).
- Data and Calculations (database reports, spreadsheets, laboratory reports, chain-of-custody forms, scanned handwritten calculations, field notes, logs, etc.).

The Project Manager or designee is responsible for maintaining project documents and records while the project is active and for organizing project files for retention when the project is closed. There is no need to maintain or retain paper copies when electronic copies have been made, and there is no need to maintain or retain superseded draft documents, insignificant correspondence, or duplicate copies. Draft documents should be discarded unless there is a specific need to retain them (e.g., to document client changes or to retain information that may be used for other purposes or in other deliverables). Significant correspondence (including emails) should be saved to the project Correspondence folder or subdirectory instead of or in addition to other locations.

Provided there are no unusual circumstances requiring that the records be retained (which may include project-specific requirements), project records may be discarded as indicated below. All destruction of documents is suspended when a lawsuit, claim, or investigation is pending, threatened, or foreseeable. Appropriate precautions shall be taken when destroying records

subject to confidentiality obligations. For example, in some cases, it may be appropriate to shred confidential information or return it to our client. Questions regarding document retention or destruction should be directed to corporate legal counsel.

Except for items that are to be retained in our permanent records, project documents and records may be discarded 10 years after the project is closed. However, if future work at or near the project site is anticipated, and/or if the project contains elements that may be useful as a future reference (e.g., an unusual project element that could serve as a model for future projects or proposals), the files may be retained indefinitely.

The following records are permanent records and should not be discarded:

- Contracts and subcontracts.
- Insurance certificates.
- Final reports.
- Final plans and specifications.
- Other documents signed and sealed by an SCS professional engineer or professional geologist.

5.5 ENSURING COMPLIANCE WITH REGULATORY REQUIREMENTS FOR RECORDS

Environmental laws and requirements as well as projects with an obvious potential for litigation may supersede the SCS records retention policy. Similarly, when our work is the subject of a court or administrative order, those requirements for records retention should be followed in lieu of the guidance provided in Section 5.4.

If you are unclear or concerned that special requirements should be considered, consult with corporate legal counsel.

5.6 CHAIN-OF-CUSTODY AND CONFIDENTIALITY PROVISIONS

SCS will maintain security procedures internal to each office to safeguard information, limit access, and prevent unauthorized disclosure of information or records. Specific chain-of-custody procedures will be identified in the contractual and project documentation requirements for the project as necessary to withstand scrutiny during litigation.

In some cases, SCS employees will sign separate confidentiality agreements governing their work. In such cases, or where other considerations merit their use, related documents and other evidence generated in the performance of the work will be inventoried, cataloged, and stored in a separate secure area. SCS employees subject to such separate confidentiality agreements shall not disclose, either in whole or in part, to any entity external to the Client any information or data that is the subject of the agreements (e.g., site-specific cost information, or strategy) without first obtaining written permission from the Client.

6.0 COMPUTER HARDWARE AND SOFTWARE

6.1 COMPUTER HARDWARE AND SOFTWARE

SCS standardizes computer hardware and software across all offices. With numerous offices across the country and some international presence, SCS realizes the need for standardization in order to foster transparent interaction among colleagues. The goal is to create an SCS computer and network environment where workers from one office can travel to another office and find a familiar computer and network environment with access to the same files and file system rights as they enjoyed in their home office.

The SCS Information Systems Committee meets periodically to discuss information technology issues and to set policies, including policies on company standards for computer hardware and software. The committee reports to the SCS Board of Directors, and the most recent Board package or the Intranet should be consulted to determine any changes in standards (e.g., the specific software versions now considered standard at SCS).

At present, SCS uses Autodesk's AutoCAD, Microsoft Office (Word, Excel, PowerPoint), Microsoft Internet Explorer, and Microsoft Outlook software throughout the firm. To help SCS maintain standards for both software and hardware SCS has established purchasing agreements with Dell and Microsoft. Standard models are set up on the Dell website specific to SCS. For software purchases, employees should contact information technology support staff to make sure the correct versions are purchased. For security purposes, all users should lock or turn off their computers when not in use and when they leave for the day. It is also recommended that computers have a screen saver enabled that requires a password to be entered when the computer wakes up.

Where particular software is required for specific problems and applications, this software is procured, and information regarding the use of such niche software is tracked by SCS information technology support staff. As new software and solutions are proven reliable (and determined to be compatible with other SCS standard software), this information is made available to the entire firm.

Computer hardware standards have been established to increase effectiveness in acquiring and administering computer resources by promoting consistency in configurations and compatibility. Additional benefits include volume-based purchasing discounts, better inventory management, and better support by system administrators.

SCS's information technology group maintains and tests security patches and software updates to be sure they will work within the SCS environment. Updates and patches are pushed to SCS-owned computers to keep them on the same versions of updates and patches.

6.2 ASSESSING AND DOCUMENTING IMPACT OF CHANGES TO USER REQUIREMENTS

Prospective changes to computer hardware or software policies for SCS are the responsibility of the SCS Information Systems Committee, which is made up of senior executives, power users, and information technology professionals. The primary purpose of the committee is to make sure SCS is using the right technologies to meet the needs of our various users.

At least once each year (normally in the months before a meeting of the Board), the Information Systems Committee meets to discuss the status of information technology at SCS. If changes are planned, the committee will describe them in a written report to the Board that assesses and documents the impact of changes in computer technology (software and hardware) to users.

Users at SCS have access to a number of tools to help document challenges in using the computer systems available. We use web pages and a list server (netnews@scsengineers.com) to document SCS procedures and solutions with respect to computer systems.

6.3 EVALUATING HARDWARE AND SOFTWARE PURCHASES

The SCS Information Systems Committee evaluates hardware and software purchases based on feedback received from users. As noted above, a specific email list server is used to circulate questions, comments, problems, and solutions among SCS power users and others. The netnews messages provide a constant stream of feedback for evaluation.

6.4 ENSURING DATA AND INFORMATION THAT ARE AUTOMATED MEET MANAGEMENT REQUIREMENTS AND STANDARDS

The SCS Information Systems Committee is responsible to assure that the data and information automated by our various information systems are automated in ways that meet SCS requirements and standards. Of particular interest are approaches to automation that reduce the potential for inadvertent error, and that incorporate independent means of verifying some kinds of data.

7.0 PLANNING

7.1 PLANNING ENVIRONMENTAL DATA OPERATIONS CONSIDERING DATA QUALITY OBJECTIVES

This section has been prepared to conform to the guidelines presented in the most recent EPA requirements for quality management plans (Ref. 1), which states that the purpose of this section is “to document how individual data operations will be planned within the organization to ensure that data or information collected are of the needed and expected quality for their desired use.” This section describes the processes by which SCS plans environmental data operations using a systematic planning process, develops quality assurance project plans, and evaluates and qualifies data from SCS activities and other sources.

Planning is a dynamic function that begins with scoping at the proposal stage and evolves throughout the project through interaction between the client, regulatory agencies, SCS managers and staff, and subcontractors. The key to planning is communication on all levels throughout the project to ensure that all parties understand the project objectives and deadlines, as well as the agreed upon procedures to meet those goals.

Project planning is to some extent a function of the complexity of the project, and SCS personnel understand how to plan both quick turnaround due diligence investigations and complex, multi-phased projects requiring detailed work plans and schedules with critical path timelines utilizing project management programs such as Microsoft Project or Primavera. This section focuses on the planning process for more complex projects, but an abbreviated process will be followed for less complex projects. The basic elements of the planning process include scoping at the proposal level; identification of the project team; review of background information; definition of project objectives, schedule, and milestones; development of data quality objectives; work plan preparation, including the quality assurance project plan; and dynamic communication and planning during project implementation.

7.2 PROPOSAL LEVEL SCOPING

A successful project requires a clear understanding of the client's objectives, schedule, and budget at the proposal stage. Failure to adequately scope and budget the project at this stage may result in misunderstandings and dissatisfaction with work products and project costs at a later date. In addition, for small projects, the proposal scope of work may serve as the project work plan. Therefore, the proposal should clearly define:

- The project understanding, including available background information and regulatory requirements.
- The proposed scope of work, including any assumptions or limitations associated with site access, site conditions, data quality requirements, etc.
- The schedule, including assumptions that could affect the schedule such as access, laboratory turnaround, weather conditions, client or regulatory review times, etc.
- Pricing (the level of detail will depend on the type of quote. Time and materials should specify labor hours and rates, as well as expense and subcontractor markups).

Internally, staff and schedule constraints should be evaluated at the time the proposal is prepared to avoid conflicts with existing projects or other proposed work. The Project Director, Project Manager, and key technical staff will typically be identified at the proposal stage.

7.3 IDENTIFICATION OF THE PROJECT TEAM

Once the work has been awarded, the Project Director and Project Manager will work with the client to define the Project Team. This will include identifying client and regulatory personnel roles, as well as key SCS and subcontractor personnel. Key personnel in each entity participating in the project will be identified, and the lines of communication will be defined.

Once the external relationships and responsibilities are defined, the Project Manager will identify other internal staff requirements and roles. For a complex project this may involve development of critical path timelines and resource requirements using appropriate software. For less complex projects, the proposal schedule and pricing spreadsheet may be used.

7.4 REVIEW OF BACKGROUND INFORMATION AND OTHER INFORMATION SOURCES

If background information was not available for proposal scoping or if other sources of information have been identified, they will be reviewed if possible before the kickoff meeting so that issues that may affect performance of the work can be identified. Examples of such issues include:

- Data gaps.
- Data quality issues that could affect the usability of existing data.
- Unanticipated site conditions.

These information and data will be subject to a more intensive review during work plan preparation.

7.5 PROJECT TEAM REVIEW OF OBJECTIVES, SCHEDULE, AND MILESTONES (KICKOFF MEETING)

A kickoff meeting will be held with the client by telephone or in person to review the project objectives, schedule, and milestones. At a minimum, the client and key SCS personnel will attend this meeting. In some instances regulatory and subcontractor personnel may also be involved.

Issues to be addressed at the kickoff meeting include:

- Overall project objectives, schedule, and budget.
- Personnel roles and lines of communication, including regulatory agencies and subcontractors.
- Project milestones and deliverables.
- Technical and/or administrative constraints identified in the proposal or during review of background information (limiting physical conditions, access limitations, etc.).
- Site field activities, including subcontractors, equipment, and supplies.
- Health and safety requirements.
- Preliminary data quality objectives (as specified in the proposal).

7.6 DEVELOPMENT OF DATA QUALITY OBJECTIVES

Data Quality Objectives are qualitative and quantitative statements developed by data users to specify the quality of data from field and laboratory data collection activities to support decisions or regulatory actions. The complete Data Quality Objectives process involves seven steps to ensure that the data obtained meets the objectives of the investigation. This is not required for every project, but is a useful tool and may be a regulatory requirement. For simple projects, Data Quality Objectives may be limited to assumptions stated in the scope of work with reference to analytical methods and guidance documents or standards (for example, state and federal guidance documents and American Society of Testing and Materials standards).

However, for most complex projects the first step in work planning will be the development of Data Quality Objectives following the seven step Data Quality Objectives process, in accordance with the most recent EPA guidance (Ref. 8 and 9) or applicable state requirements.

The seven-step Data Quality Objectives process involves the following:

1. State the problem.
2. Identify the goals of the study.
3. Identify the information inputs.
4. Define the boundaries of the study.
5. Develop the analytic approach.
6. Specify performance or acceptance criteria.
7. Develop the plan for obtaining data.

The Data Quality Objectives provide the basis for the type and quantity of data that will be collected, the types of field testing and laboratory analyses that will be performed, the quality assurance/quality control requirements that will be specified for field and laboratory data, and the level of quality assurance review or validation that will be used to evaluate the collected data. These, in turn, will be specified in the project work plan. The Data Quality Objectives may be presented in a separate document or incorporated into the work plan.

7.7 WORK PLAN PREPARATION

For large, complex projects, a site specific work plan typically will be developed that will encompass the field sampling plan, quality assurance project plan, and health and safety plan. Small projects may be implemented directly from the proposal scope of work.

7.7.1 Field Sampling Plan

Where prepared, the field sampling plan will present the project background, investigation objectives, rationale, sample types and locations, and sampling procedures. The sampling design will be developed in accordance with the Data Quality Objectives by qualified personnel.

Sampling standard operating procedures identified in the field sampling plan may be site-specific, SCS internal, commercial (e.g., Geoprobe® hydraulic probing), or publicly available [e.g., EPA Region IV (http://www.epa.gov/region4/sesd/fbqstp/)]. Site-specific and SCS

standard operating procedures will be presented in the field sampling plan, while commercial and publicly available standard operating procedures will only be referenced. Site-specific and SCS standard operating procedures will be developed in accordance with the most recent EPA guidance for preparing standard operating procedures (Ref. 10). Additional guidance on standard operating procedures is provided in Section 8.0.

7.7.2 Quality Assurance Project Plan

The quality assurance project plan presents quality assurance/quality control requirements for field sample collection, laboratory analytical procedures, and data review/validation required to achieve the project Data Quality Objectives. In some instances, a standardized quality assurance project plan may be prepared and used for multiple investigation projects, but a site-specific quality assurance project plan will typically be used for complex projects. Quality assurance project plans will be prepared in accordance with the most recent EPA requirements and guidance for quality assurance project plans (Refs. 11 and 12) and will address the following elements (some may be cross-referenced to the field sampling plan):

- Title and Approval Sheet
- Table of Contents
- Distribution List
- Project/Task Organization
- Problem Definition/Background
- Project/Task Description
- Quality Objectives and Criteria
- Special Training/Certification
- Documents and Records
- Sampling Process Design
- Sampling Methods
- Sample Handling and Custody
- Analytical Methods
- Quality Control
- Instrument/Equipment Testing, Inspection ,and Maintenance
- Instrument/Equipment Calibration and Frequency
- Inspection/Acceptance of Supplies and Consumables
- Non-direct Measurements
- Data Management
- Assessments and Response Actions
- Reports to Management
- Data Review, Verification, and Validation
- Verification and Validation Methods
- Reconciliation with User Requirements

The specified level of data quality documentation and data review will depend on the project type and Data Quality Objectives. For some projects, data review may be limited to an assessment of precision, accuracy, completeness, representativeness, and comparability, combined with a review of method-specific quality control documentation, in accordance with

EPA guidance documents (Ref. 13). If formal data validation is required, it will be performed in accordance with EPA Contract Laboratory Program guidelines (Refs. 14 and 15).

7.7.3 Site-Specific Health and Safety Plan

When required, a project site-specific health and safety plan will be prepared to provide site-specific health and safety information and guidance. The site-specific health and safety plan will be prepared consistent with the processes and procedures defined in SCS *Health and Safety Injury and Illness Prevention Program* Standard Operating Procedure 2 (Site and Project Health and Safety Plans). SCS's health and safety program complies with applicable federal and state regulations including the Occupational Health and Safety Act requirements at 29 Code of Federal Regulations (CFR) 1910 and 29 CFR 1926. The site-specific health and safety plan template has been developed for projects requiring varying levels of health and safety protection.

7.8 ONGOING COMMUNICATION AND DYNAMIC PLANNING

SCS recognizes that communication within the project team, including representatives of the client and regulatory agency, if applicable, is critical throughout the project and that project planning is a dynamic process that continues through project implementation. Successful communication relies on both informal and formal processes. For large projects, formal status reports and project team meetings will be scheduled by the Project Manager to keep team members informed of project developments. The frequency of such activities will be determined by the overall length of the project and the intensity of project activities.

During field activities, the Field Team Leader will consult with the Project Manager regarding any major deviations from the work plan. The Project Manager will decide whether consultation with other team members is appropriate at the time of such deviations, or whether they may be reported during regularly scheduled communications.

Informal communication will typically continue at all levels during project implementation. This will include interactions between the subcontractors and SCS field staff, as well as communication at different levels between SCS staff and client representatives. If the client approves, communication by SCS with regulatory personnel will typically be through the Project Manager.

7.9 EVALUATING AND QUALIFYING DATA COLLECTED FOR OTHER PURPOSES AND/OR FROM OTHER SOURCES, INCLUDING USE OF STATISTICS

For many SCS projects, there is a wealth of existing data and other information that has been collected by others for various purposes. To the extent these data and other information are reliable and meet Data Quality Objectives for the project, they should be used.

Data from other sources will be evaluated to determine usability for site characterization, risk assessment, or other uses in accordance with EPA guidelines (Ref. 11.) Usability of site-specific existing data will be assessed on the basis of:

- Date of collection.
- Documentation of field quality assurance.
- Acceptability and comparability of analytical method.
- Adequacy of detection limits with respect to regulatory limits or risk-based standards.
- Availability of raw data.
- Documentation of analytical quality assurance.

Acceptability of existing data will be based on professional judgment in evaluating the overall precision, accuracy, completeness, representativeness, and comparability of that data with respect to standards to be applied to data from the current investigation.

8.0 IMPLEMENTATION OF WORK PROCESSES

This section has been prepared to conform to EPA guidelines (Ref. 1), which states that the purpose of this section is "to document how work processes will be implemented within the organization to ensure that data or information collected are of the needed and expected quality for their desired use." The process starts with the preparation of a proposal by SCS personnel and acceptance of a task order or signed contract from the client. These documents at a minimum identify the project scope of work, cost, and schedule, and, in some instances, specify the details of how the work will be performed. In addition to performing work in accordance with these documents, SCS employees are responsible for performing required work in accordance with approved planning and technical documents including standard operating procedures. Standard operating procedures represent a set of written procedures that serve to impose standardization on the performance of similar work processes in different geographical locations or offices by different SCS personnel.

8.1 ENSURING WORK IS PERFORMED IN ACCORDANCE WITH DOCUMENTS

To ensure that work is performed in accordance with the approved planning and technical documents, the Project Manager or his or her designee is responsible for reviewing project work on a frequent and ongoing basis. The objectives of the review will be to address the following questions:

- Does project work conform to appropriate contractual documents including the SCS proposal, the contract, task order, etc.?

- Does the project work conform to applicable planning documents, such as the work plan, field sampling plan, and quality assurance project plan?

- Does project work conform to current, relevant, and site- or project-specific standard operating procedures?

- If standard operating procedures are not available for the work performed, do they need to be developed?

It is expected that the Project Manager will ensure that the final project deliverables specify the documents with which our work conforms. If these documents are updated or superseded and replaced during the course of the project, the Project Manager will be responsible for placing a memo in the project file that documents the change.

It is also the responsibility of the Project Manager to bring to the attention of SCS's National Partner for Quality Management deficiencies that may exist in standard operating procedures currently accepted or approved by SCS, and inform him or her of standard operating procedures that may need to be adopted to improve the quality of project work that is performed.

8.2 IDENTIFYING OPERATIONS THAT NEED STANDARD OPERATING PROCEDURES

During performance of the project and review of work operations and processes as described in Section 8.1, the Project Manager will identify operations that need standard operating procedures. The identification of project related activities that need standard operating procedures, the identification of previously approved and applicable standard operating procedures, and/or the need to prepare new standard operating procedures can also be initiated by any employee.

Standard operating procedures provide employees guidance on policies and procedures associated with individual processes and operations. SCS employees are encouraged to use them whenever appropriate. Written standard operating procedures must be specific to the task to which they apply. However, they must not be so restrictive in nature that necessary and appropriate deviations that occur because of site- or project-specific conditions or requirements cannot be accommodated.

Some of the standard operating procedures used by SCS have been developed by a state or federal government (e.g., EPA). Some have been developed by SCS or SCS clients. The latest list of standard operating procedures appears on the Intranet.

Where available standard operating procedures are deficient or where SCS personnel require additional guidance, it is expected that SCS will develop company-specific or project-specific standard operating procedures. All company-specific standard operating procedures must follow a process for standard operating procedure development, review, formal approval/ adoption, revision, and withdrawal. Standard operating procedures that have been adopted by SCS will be posted on the company Intranet for use by all employees.

Any SCS employee who is unsure whether a standard operating procedure exists for performance of his or her work should contact his or her immediate supervisor and/or the Project Manger of any project to which s/he is assigned.

8.3 CONTROLLING AND DOCUMENTING CHANGES IN PROCEDURES

The Project Manager or designee will be responsible for documenting deviations from approved documents during performance of projects. Significant deviations by a project team member should be approved and documented by the Project Manager or their designee.

Deviations from standard operating procedures to collect environmental data must be reported to the National Partner for Chemical Data Quality, and deviations from standard operating procedures that affect health and safety must be reported to the Corporate Health and Safety Director. In the event of a disagreement or dispute regarding a deviation from a standard operating procedure, the procedure described in Section 1.7 will be followed.

Obsolete documentation should be removed from the work area (to avoid inadvertent use).

9.0 ASSESSMENT AND RESPONSE

In his book, *To Engineer Is Human: The Role of Failure in Successful Design*, Dr. Henry Petroski (Aleksandar S. Vesic professor of civil engineering at Duke University) makes the point that we do not learn so much from the bridge that stands as we do from the bridge that fails. By analyzing bridge failures, engineers learn how to make better bridges.

The same principle applies to the SCS Quality Management System. In the event that a mistake or failure is identified with respect to one of our projects, we will investigate and identify a root cause of the mistake or failure together with improvements to strengthen the system. The goal is to continuously improve our work and this Quality Management System.

Project quality problems identified by SCS personnel, clients, regulatory agencies or other entities with respect to a project will be reported to the Project Manager, Project Director, and to the appropriate Senior Vice President. The Senior Vice President will be responsible for investigation and corrective action. Major quality problems will be reported to the National Partner for Quality Management and to the Board of Directors by the Senior Vice President.

9.1 ASSESSING QUALITY MANAGEMENT SYSTEM (AT LEAST ANNUALLY)

At least once each year, every officer of the firm (Vice President and above) will complete at least one quality system audit using the audit form or checklist published by the National Partner for Quality Management. To be considered a quality system audit, the officer conducting the assessment must not be involved significantly in the project being audited.

In addition, Senior Vice President Practice Leaders for Environmental Services; Solid Waste; Construction; Operations, Maintenance, and Monitoring; and Energy; and the National Partner for Quality Management will annually select additional projects for auditing by a selected qualified professional or team of professionals.

9.2 FOLLOW-UP AND CORRECTIVE ACTION

Audit reports will be sent to the Project Manager, Project Director, National Partner for Quality Management, Senior Vice President Practice Leader, and Office Director/ Office Quality Management Coordinator for the project audited. The National Partner for Quality Management and the Office Quality Management Coordinator will follow-up, in consultation with the Practice Leader and Office Director, with the Project Manager and Project Director regarding any deficiencies noted in the audits.

Where problems associated with the quality of SCS performance are identified through the audit reports or during performance of the work, or where discrepancies are identified between SCS performance and the requirements of this Quality Management System, corrective actions will be taken and documented. Corrective actions will consider the root cause of the problem or discrepancy. Examples of corrective actions are shown on Table 1.

Table 1. Examples of Corrective Actions

Root Cause	Corrective Action
1. Lack of familiarity with Quality Management System (QMS) or Standard Operating Procedures (SOP)	Additional training in QMS or SOP
2. Omission or error in SOP	Modify SOP
3. Staff not competent for work assigned	Assign staff who are competent for work
4. Errors or sloppiness in deliverables	Auditor to review with Project Manager, Project Director, and/or project staff
5. Intentional departure from QMS or SOP requirements	Disciplinary action as appropriate
6. Fraudulent conduct	Dismissal

9.3 REPORTING ASSESSMENT RESULTS TO MANAGEMENT

At least once each year, the Senior Vice Presidents of our major practice groups and the National Partner for Quality Management will provide the SCS Board of Directors with a written assessment of the Quality Management System, together with any suggested changes. Summary quality system assessment reports presented to the Board of Directors, together with approved changes, will be posted to the Intranet and distributed to management via list servers as appropriate (ODsList, OHSCs, SWTelcon, ESLeaders, etc.).

The Board of Directors, in turn, will discuss and approve proposed changes as appropriate.

9.4 DETERMINING LEVEL OF COMPETENCE REQUIRED OF OUR STAFF

Ultimately, the Project Manager is responsible for determining the competencies needed for each project, and for assigning staff with the appropriate aptitude, education, background, experience and training to perform the work safely and properly. The Project Director is responsible for determining the competencies needed for the Project Manager, and the Office Director or ultimately the President is responsible for determining the competencies needed for the Project Director and/or Reviewing Principal. Competencies must be documented (e.g., in Vision, the Learning Management System, resumes, personnel files, and/or proposals).

Documented competencies are subject to quality system audit.

9.5 AUTHORITY OF THOSE CONDUCTING ASSESSMENTS

Officers of SCS are appointed by the Board of Directors and have the executive authority to review files associated with any project of the firm (subject only to specific confidentiality agreements that may limit access to information for some projects).

The National Partner for Quality Management is appointed by and reports directly to the President with respect to the Quality Management System and has the executive authority to review files associated with any project (subject to confidentiality agreements).

9.6 MANAGEMENT REVIEW

The National Partner for Quality Management will review audit reports and similar information as they are generated. These sources of information will be among those considered (along with changes in technology, feedback from clients and colleagues, and other sources of information bearing on this Quality Management System) as a part of the written assessments to be prepared under Section 9.3 for discussion by the SCS Board of Directors at least once each year.

9.7 DISPUTES

In the event that a quality system audit or proposed corrective action results in a dispute, the dispute will be resolved as discussed in Section 1.7 .

10.0 QUALITY IMPROVEMENT

SCS continuously strives to improve our work for clients and will use this Quality Management System to assist in that effort.

10.1 ELIMINATING CONDITIONS ADVERSE TO QUALITY

Conditions that adversely affect the quality of SCS work will be identified and eliminated. Such conditions will be addressed as they are identified and in any case during the annual assessments of the Quality Management System presented under Section 9.3 to the SCS Board of Directors.

10.2 TRAINING

SCS will provide staff with training to enhance professional performance. This includes training to improve technical proficiency, to communicate SCS policies, and to enhance managerial skills. Internal training topics include:

- Ethics and Business Standards of Conduct
- Project Management, including use of Vision, but also emphasizing the goal of client satisfaction and the importance of effective communication
- Contracts and Risk Management
- Health and Safety
- Quality Management
- Technical

10.3 IDENTIFYING PROCESS IMPROVEMENTS

This Quality Management System and its related components (standard operating procedures, Health and Safety requirements, documentation of staff competencies, etc.) will be improved as appropriate whenever changes are warranted. Such changes will be initiated by the National Partner for Quality Management and implemented as determined by the Board of Directors.

11.0 REFERENCES

1. *EPA Requirements for Quality Management Plans (QA/R-2)*, EPA/240/B-01/002, March 2001, reissued May 2006.

2. *SCS Employee Handbook.*

3. *SCS Project Manager's Manual.*

4. *SCS* Health and Safety *Injury and Illness Prevention Program.*

5. *SCS Contract Guide.*

6. *SCS Style Manual.*

7. *SCS Computer Aided Design and Drafting (CADD) Standards Manual.*

8. *Guidance on Systematic Planning using the Data Quality Objective Process, EPAQA/G-4,* EPA/240/B-06/001, February 2006.

9. *Systematic Planning: A Case Study for Hazardous Waste Site Investigations*, EPA/240/B-06/004, February 2006.

10. *Guidance for Preparing of Standard Operating Procedures, EPA G-6*, EPA/600/B-07/001, April 2007.

11. *EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5,* EPA/240/B-01/003, March 2001, reissued May 2006.

12. *Guidance for Quality Assurance Project Plans, EPA G-5, EPA/240/R-02/009, December 2002.*

13. *Guidance on Environmental Data Verification and Data Validation, G-8,* EPA/240/R-02/004, November 2002, reissued January 2008.

14. *USEPA National Functional Guidelines for Inorganic Superfund Data Review (ISM02.1),* EPA/540/R-13/001, October 2013.

15. *USEPA National Functional Guidelines for Superfund Organic Methods Data Review (SOM02.1),* EPA/540/R-014/002, October 2013.

16. *Guidance on Choosing a Sampling Design for Environmental Data Collection G-5S,* EPA/240/R-02/005, December 2002.

Attachment A

Design Checklist

SCS Design Quality Management Checklist *v1a Feb 2014*		Revision Dates:				Due Dates: *(M/DD/YYYY)*	
Project #:		Revision #s:				Design Start:	
Proj Name:		Project Location:				35% Review:	
Client:		SCS Team:				60% Review:	
POC Name:						95% Review:	
Title:		Project Designer	Design Lead	QA Review	Responsible Signatory	100% Complete:	
Location:						Bid:	
Phone #:						Award:	
email:						Const Start:	

Item #	Item	Project Designer	Design Lead	QA Review	Responsible Signatory	**Comment:**
		Initial and Date Each Box at Completion				
1	Does design conform with contract requirements?					
2	Have relevant building codes been obtained and reviewed by designer? (Design Lead should identify codes in comments.)					
3	Is design consistent with applicable codes?					
4	Is the basis for design documented (e.g., in a basis of design memo)?					
5	Are calculations documented and checked?					
6	Are drawings (including title blocks and profile and detail references) consistent with each other and with SCS CADD Standards Manual or client standards?					
7	Do drawings include dimensions or scale, north arrow, and source references?					
8	Are dimensions consistent and do they add up consistently?					
9	Are drawing notes spell-checked, consistent with cross references and specifications, clear, specific and complete?					

Item #	Item	Project Designer	Design Lead	QA Review	Responsible Signatory	**Comment:**
		Initial and Date Each Box at Completion				
10	Are materials and vendor sub-components adequately specified in drawings or specifications?					
11	Are applicable CSI divisions referenced?					
12	Are specifications consistent with drawings?					
13	Are specifications for materials incorporated by reference?					
14	Has engineers cost estimate been checked?					
15	Are sources of costs appropriately referenced (RS Means, contractor quotes)?					
16	Are specificied materials costs effective and readily available?					
17	Is the design practical and constructable?					
18	Are the drawings adequately detailed for construction?					
19	Does the design facilitate proper operation and maintenance?					

Attachment B

Quality Management System Audit Checklist

QUALITY SYSTEM AUDIT CHECKLIST

Audited Project (# and title): _____

Project Manager/Director[1]: _____

Office: _____

Auditor: _____

Audit Dates: _____

Brief Project Description: _____

AUDIT QUESTIONS	RESPONSE			COMMENTS
	Yes	No	Not Ap-plicable	
A. PLANNING				
1. Is scope of work adequately defined?				
2. Are SCS and subcontractor project staff qualified?				
3. Is the promised project schedule reasonable considering work to be performed and staff availability?				
4. Was the proposal reviewed by a second person and is the review documented by a dual signature?				
5. If a SCS standard contract was not used or was modified, was the contract reviewed by corporate legal staff?				
6. Were service orders and purchase orders executed before subcontracted work was performed?				
7. Are reviews of work planning documents (work plan, QAPP, etc.) documented?				
8. Was a Health and Safety Plan prepared and is a copy of the field signature page in the file?				
B. EXECUTION				
9. Does project work conform to the scope of work?				
10. Do the personnel working on the project have the appropriate aptitude, experience and training?				
11. If work includes SCS Certified scope, do personnel have the required certification?				
12. Are calculations documented as having been checked?				
13. Is work performed in accordance with regulatory requirements?				
14. Does the work appear to be correct (i.e. free of obvious errors)?				

[1] List both, even if they are the same. Do not audit a project you were involved in.

AUDIT QUESTIONS	RESPONSE			COMMENTS
	Yes	No	Not Applicable	
15. Is the work presented clearly and professionally?				
16. Are communications with client satisfactory and are they documented?				
17. Was the work delivered on time?				
18. Is work performed in accordance with the project-specific QAPP?[2]				
19. Are reviews of subcontractor submittals documented?				
20. Are field records complete and in the project file (log books, daily CQA records, etc.)?				
21. Are deviations from the scope of work and/or planning documents documented?				
22. Do the deviations adversely affect the quality of the work?				
23. Is calibration of equipment documented and consistent with QAPP, SOP, or manufacturer's instructions?				
24. Are reviews of change orders documented?				
25. Are copies of project deliverables in the file?				
26. Have draft documents been removed from the file or, if kept, are versions properly identified?				
27. Are reviews of project deliverables documented (by dual signature, copying reviewer on email transmittal, or other method)?				
28. Do reviewers have experience and expertise appropriate to their reviews?				
29. Are the project files complete and organized?				
30. If problems were identified during execution, are corrective actions documented?				
C. EVALUATION				
31. How would you evaluate the overall quality of this work, based on your review of the above? Provide constructive suggestions, if any.				

Send pdf of completed audit checklist to Deborah English in Kansas City office, with copies to the PM, PD, and applicable Senior Vice President.

[2] If this is applicable, review of field documentation (log books, chain of custody, etc.) and laboratory analytical data reports will be required to answer this question.

APPENDIX C

XRF CALIBRATION MANUAL

INSTRUCTION MANUAL

INNOV-X SYSTEMS
ALPHA SERIES™
X-RAY FLUORESCENCE SPECTROMETERS

August 2005
Version 2.1

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TABLE OF CONTENTS

Chapter 1 Introduction

1.0 INSPECTING YOUR INNOV-X ANALYZER

Upon receipt:

1. Locate and remove the shipping papers and documentation from under the lid's foam padding.
2. Remove the Innov-X Analyzer and all of the components from the protective carrying case and identify each on the enclosed shipping list.
3. Connect the battery charger to an 110V-240V AC power source. Place one Li-ion battery on the charger and charge it for at least 2 hours. Charge the second battery.
4. Charge the HP iPAQ using the attached AC adaptor for at least ½ hour.
5. Read and review the "Quick Start" section of the User's Manual. Innov-X recommends that you read the entire manual.
6. Install the fully charged battery into the analyzer.
7. Press the ON/OFF button on the back of the analyzer and the power button on the iPAQ.
8. Select Innov-X from the start menu located in the upper left hand corner of iPAQ screen.
9. Select the desired analysis mode (i.e., Analytical, FastID, Pass/Fail or Soil). The instrument will undergo a one minute hardware initialization period.
10. Standardize the instrument with the 316 Stainless Steel mask. Standardize the instrument every 4 hours or as directed by the display.
11. Release the software trigger lock and analyze a sample of known composition, in order to verify the correct operation of the analyzer.
12. Analyze samples of unknown composition.

1.1 COMPONENTS INCLUDED WITH THE ANALYZER

Shown here are the various items which are included with the Innov-X portable XRF analyzer. Unless otherwise noted, all items are standard accessories.

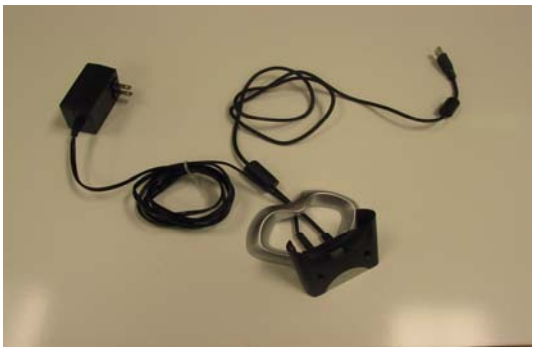
Analyzer, with iPAQ attached.

Two, Li-ion batteries (one shown).

Battery charger and an AC adaptor. Battery shown mounted in charging system.

Standardization cap and weld mask (optional)

The standard standardization cap has no weld slit.



iPAQ cradle and AC adaptor. The cradle is used to connect the iPAQ to a PC for downloading data and reports.

Testing stand. This is the benchtop docking station for the analyzer. It is an optional accessory

1.2 QUICK START INSTRUCTIONS

The following section provides a quick overview to using the Innov-X portable XRF analyzer. This is intended to provide the basic startup and operational instruction needed to perform simple analyses. It is highly recommended that the user read the sections on Radiation Safety (Chapter 3) and the detailed description on operation (Chapter 4). The following Quick Start information is also provided as a separate, bound, laminated publication for quick reference.

1. Place a battery in the analyzer.
2. Power on the Analyzer (On/Off switch located on back of analyzer)
3. Power on the iPAQ (Button located in upper right hand corner of iPAQ)
4. Select Innov-X from the start menu located in the upper left hand corner of iPAQ screen.
5. Read the radiation safety notice and acknowledge that you are a certified user by pressing Start.
6. Select Desired Mode.
7. The analyzer will undergo a 60 second hardware initialization.
8. Place a standardization clip on the nose of the analyzer. Tap the button on the screen to standardize. ***(Manual section 4.4 Standardization)***
9. When standardization is complete, remove the standardization clip.

10. Release the software trigger lock by tapping the locked icon on the iPAQ screen and tapping yes in response to the software prompt.
11. Test standard to verify instrument performance.
12. Results will display on screen. Subsequent tests may be started from either the Results or Analysis screens.

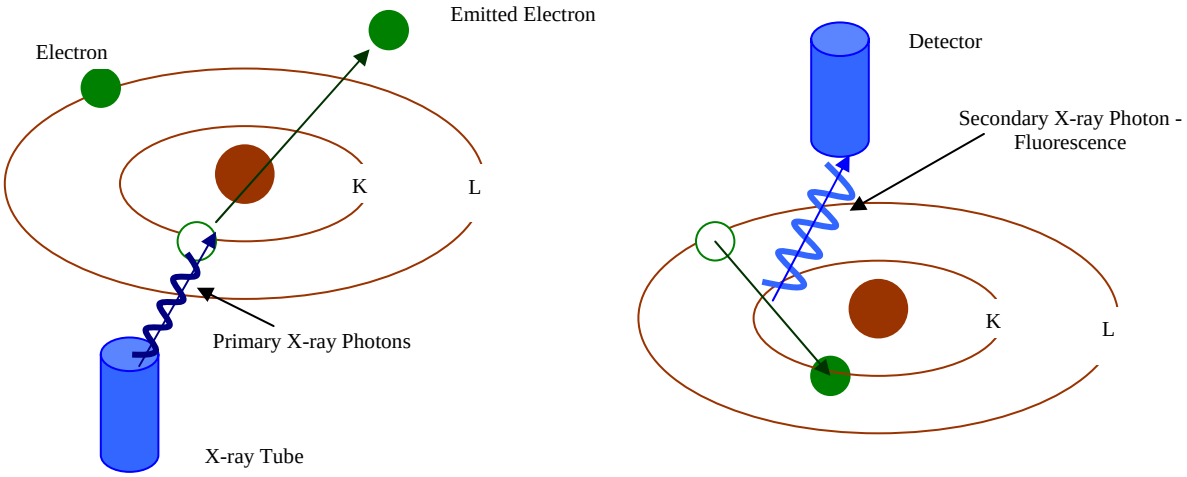
1.3 INTRODUCTION TO XRF: X-RAY FLUORESCENCE SPECTROMETRY OVERVIEW

Basic Theory

Although most commonly known for diagnostic use in the medical field, the use of x-rays forms the basis of many powerful analytical measurement techniques, including X-ray Fluorescence (XRF) Spectrometry.

XRF Spectrometry is used to identify elements in a substance and quantify the amount of those elements present. An element is identified by its characteristic X-ray emission wavelength (λ) or energy (E). The amount of an element present is quantified by measuring the intensity of its characteristic line. XRF Spectrometry ultimately determines the elemental composition of a material.

All atoms have a fixed number of electrons (negatively charged particles) arranged in orbitals around the nucleus. The number of electrons in a given atom is equal to the number of protons (positively charged particles) in the nucleus; and, the number of protons is indicated by the Atomic Number in the Periodic Table of Elements. Each Atomic Number is assigned an elemental name, such as Iron (Fe), with Atomic Number 26. Energy Dispersive (ED) XRF and Wavelength Dispersive (WD) XRF Spectrometry typically utilize activity in the first three electron orbitals, the K, L, and M lines, where K is closest to the nucleus. Each electron orbital corresponds to a specific and different energy level for a given element.



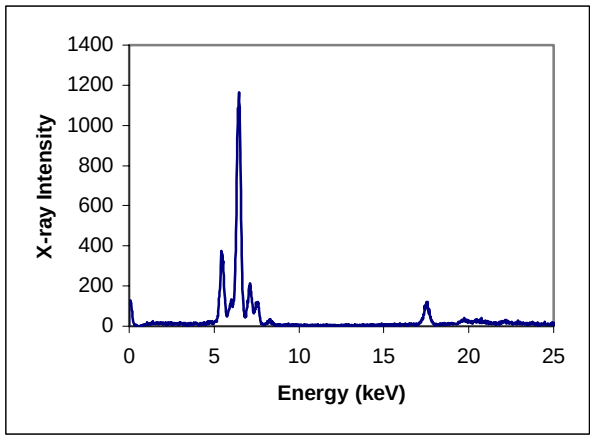
In XRF Spectrometry, high-energy primary X-ray photons are emitted from a source (X-ray tube) and strike the sample. The primary photons from the X-ray tube have enough energy to knock electrons out of the innermost, K or L, orbitals. When this occurs, the atoms become ions, which are unstable. Electrons seek stability; therefore, an electron from an outer orbital, L or M, will move into the newly vacant space at the inner orbital. As the electron from the outer orbital moves into the inner orbital space, it emits an energy known as a secondary X-ray photon. This phenomenon is called fluorescence. The secondary X-ray produced is characteristic of a specific element. The energy (E) of the emitted fluorescent X-ray photon is determined by the difference in energies between the initial and final orbitals of the individual transitions.

This is described by the formula

$$E=hc/\lambda$$

where h is Planck's constant; c is the velocity of light; and λ is the characteristic wavelength of the photon.

Wavelengths are inversely proportional to the energies; they are characteristic for each element. For example the Kα energy for Iron (Fe) is about 6.4keV. The number of element-specific characteristic X-rays produced in a sample over a given period of time, or the intensity, can be measured to determine the quantity of a given element in a sample. Typical spectra for EDXRF Spectrometry appear as a plot of Energy (E) versus the Intensity (I).



History

Wilhelm Roentgen discovered X-rays in 1895. Methods for identifying and quantifying elements using XRF were first published by Henry Moseley in 1913. Much research and development of XRF continued after Moseley's pioneering work, especially during WWII when rapid developments in the aircraft, automotive, steel and other metals industries heightened the need to identify alloys quickly and reliably. However, the first commercial XRF Spectrometers weren't available until the early 1950's. Those systems were based on WDXRF technology and measured the characteristic wavelength of an element, one element at a time. Although the use of these systems was critical for elemental analyses, they were large, expensive, and required highly skilled operators to use and maintain them.

In the late 1960's, EDXRF technology, which measures the characteristic energy of an element, began to rival the use of WDXRF due to the development of Si (Li) solid state detectors, which offered better energy resolution of the signal. EDXRF systems offered the potential of collecting and displaying information on all of the elements in a sample at the same time, as opposed to one at a time with typical WDXRF systems. Many of the early EDXRF systems used radioisotopes for excitation instead of X-ray tubes, which could require changing sources to determine all the elements of interest. Some of those early EDXRF systems did not easily resolve multiple elements in a single analytical run.

As can be imagined, the equipment and applications of XRF Spectrometers have developed tremendously since the 1960's. Advancements in technology, electronics, computers, software and the use and modification of them for XRF Spectrometers by instrument manufacturers, research scientists & engineers, and industrial users alike have led to the current state of the art in XRF Spectrometers. Now a mature technology, XRF Spectrometry is routinely used for R&D, QC and analytical services in support of production.

Elemental Analysis

XRF Spectrometry is the choice of many analysts for elemental analysis when compared to the other techniques available. Wet chemistry instrument techniques for elemental analysis require destructive and time-consuming specimen preparation, often using concentrated acids or other hazardous materials. Not only is the sample destroyed, waste streams are generated during the analytical process that need to be disposed of, many of which are hazardous. These wet chemistry elemental analysis techniques often take twenty minutes to several hours for specimen preparation and analysis time. All of these factors lead to a relatively high cost per sample. However, if PPB and lower elemental concentrations are the primary measurement need, wet chemistry instrument elemental analysis techniques are necessary.

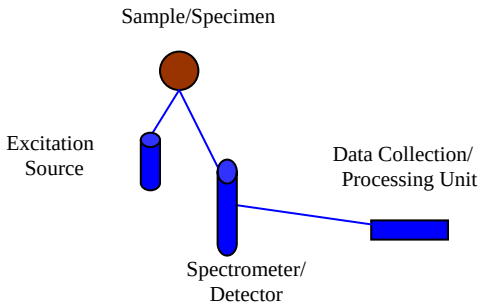
XRF Spectrometry easily and quickly identifies and quantifies elements over a wide dynamic concentration range, from PPM levels up to virtually 100% by weight. XRF Spectrometry does not destroy the sample and requires little, if any, specimen preparation. It has a very fast overall sample turnaround time. These factors lead to a significant reduction in the per sample analytical cost when compared to other elemental analysis techniques.

All elemental analysis techniques experience interferences, both chemical and physical in nature, and must be corrected or compensated for in order to achieve adequate analytical results. Most wet chemistry instrument techniques for elemental analysis suffer from interferences that are corrected for by both extensive and complex specimen preparation techniques, instrumentation advancements, and by mathematical corrections in the system's software. In XRF Spectrometry, the primary interference is from other specific elements in a substance that can influence (matrix effects) the analysis of the element(s) of interest. However, these interferences are well known and documented; and, instrumentation advancements and mathematical corrections in the system's software easily and quickly correct for them. In certain cases, the geometry of the sample can effect XRF analysis, but this is easily compensated for by grinding or polishing the sample, or by pressing a pellet or making glass beads.

Quantitative analysis for XRF Spectrometry is typically performed using Empirical Methods (calibration curves using standards similar in property to the unknown) or Fundamental Parameters (FP). FP is frequently preferred because it allows elemental analysis to be performed with no standards or calibration curves. This enables the analyst to use the system immediately, without having to spend additional time setting up individual calibration curves for the various elements and materials of interest. The capabilities of modern computers allow the use of this no-standard mathematical analysis, FP, accompanied by stored libraries of known materials, to determine not only the elemental composition of an unknown material quickly and easily, but even to identify the unknown material itself.

EDXRF Spectrometers

EDXRF Spectrometer systems are mechanically very simple; essentially there are no moving parts. An EDXRF system typically has three major components: an excitation source, a spectrometer/detector, and a data collection/processing unit. The ease of use, rapid analysis time, lower initial purchase price and substantially lower long-term maintenance costs of EDXRF Spectrometers have led to having more systems in use today worldwide than WDXRF Spectrometer systems.



EDXRF has been found most useful for scrap alloy sorting, forensic science, environmental analysis, archaeometry and a myriad of other elemental field-oriented analyses.

Handheld EDXRF Spectrometers for Field Analyses

It is clear that a future trend for elemental analysis is in rapid site investigation using techniques that are fast, inexpensive, reliable, and long-term cost effective. There is a need for immediate decisions to be made during the delivery of materials, industrial processing, and in the field for positive materials identification or environmental site assessment and remediation. It is also clear that EDXRF Spectrometry is the most suitable elemental analysis technique available for field analysis due to its simplicity, speed, precision, accuracy, reliability, and overall cost effectiveness.

Recent technological developments in cell phones, pocket PC's and other portable consumer electronics have led to the advancement of many high-performance, miniature components. X-ray equipment manufacturers began to take advantage of these developments in the late 1990's and developed Handheld EDXRF systems. An obvious advantage of Handheld EDXRF systems is that the analyzer is taken to the sample as opposed to bringing the sample to the analyzer and configuring it to fit in an analysis chamber. In addition to the per sample analytical cost savings, a key factor in using non-destructive EDXRF analysis, especially in the field, is the overall project cost savings due to improved and more timely decision making. The use of EDXRF for immediate positive materials identification or to guide an environmental site characterization will generally reduce the overall time required in the field due to the quick turnaround for the sample analysis; this invariably reduces the overall costs of analytical field work.

Of course, Handheld EDXRF technology has continued to evolve in concert with portable consumer electronic developments. Just like the early Benchtop EDXRF systems, early Handheld EDXRF systems used radioisotopes for excitation. There are several practical problems with the use of radioactive isotopes for handheld systems. The source decays and loses its testing speed over time. In addition to the loss in analytical capabilities, the sources have to be replaced incurring a cost. The use of radioactive isotopes also requires licensing (state-to-state in the US) and a radioactive materials control program; they are difficult to ship and transport, as they require hazardous materials declarations and/or permits. Consequently, the newest and most exciting development in Handheld EDXRF technology is the use of battery operated, miniature X-ray tubes, which was pioneered by the staff at Innov-X Systems.

Innov-X Systems Handheld EDXRF Spectrometers

Innov-X Systems specializes in Handheld EDXRF technology with the most advanced miniature components available for X-ray Tube sources, detectors, and PC 's. Innov-X Systems Handheld EDXRF Spectrometers are ideally suited for field analysis of alloys, lead-based paint, environmental soils, filters, dust wipes, forensics, archaeometry, and a variety of other elemental analyses in the field or around the plant. Innov-X Systems EDXRF Spectrometers are affordable, easy to use, reliable, and overall cost effective. The Innov-X Systems Handheld EDXRF units incorporate state-of the art components including a battery operated miniature X-ray tube, a high-resolution silicon pin detector, high speed data acquisition circuitry, and a Compaq IPAQ Pocket PC® handheld computer for calculations, results and operator interface.

Innov-X Systems EDXRF Spectrometers offer the following invaluable features:

- Portable
- Battery operated, rechargeable
- X-ray Tube-based (Ag or W anode, 10-40kV, 10-100uA)
- Si PiN diode detector.
- Integrated pocket PC
- Pistol-shaped design for difficult testing locations and welds
- Auto-compensation for irregular or small samples
- Fundamental Parameters for no-standard analyses
- Stored Grade Libraries for rapid Grade ID's
- Stored Fingerprint Libraries for rapid material ID's

- Docking station available for use as standard benchtop unit
- Results shown after a few seconds of testing time.

For more information on how to utilize your Innov-X Systems Handheld EDXRF Spectrometer optimally, please review this Instruction Manual or contact us directly.

Chapter 2. Usage and Assembly of Accessories

2.0 ACCESSORIES

This chapter describes the various accessories that are provided with an Innov-X XRF analysis system. Included are:

- Batteries
- Battery Charger
- iPAQ cradle and charger
- Testing Stand Assembly (not standard with all units)
- Standardization Clip or Standardization Clip/Welding mask.

2.1 ANALYZER BATTERY

The Innov-X Systems XRF Analyzer is powered by a replaceable, rechargeable Lithium ion battery. In addition, the iPAQ has its own internal battery.

Innov-X Systems Main Battery

The Innov-X Analyzer uses a rechargeable Lithium Ion Smart Battery. A picture of the battery is shown in Fig. 2.1. Two batteries are included with each analyzer. The batteries are charged an external battery charger. Batteries typically function for 4 to 8 hours, depending on usage patterns. Heavier duty cycles deplete the battery more quickly. Therefore, users who do longer and more frequent tests will need to replace their batteries more often than users who take shorter or fewer tests.

Figure 2.1. Li-ion Battery for analyzer

Replacement batteries can be purchased directly by calling Innov-X Systems at 781-938-5005. (P/N A003)

Battery power indicators:

There are two ways of determining the charge remaining on a battery: the LED indicator on the battery and the battery status icon on the analyzer screen. The battery icon, when tapped, will indicate the percent charge remaining on a battery inside the analyzer. Additionally, the battery icon will change from green to yellow when the battery gets low, indicating it has about 15 minutes left of charge.

To use the battery LED, push the button below the indicator. The lighting will indicate the % of charge. If possible, try to use batteries with at least 50% of their full charge, according to the indicator.

2.2 CHANGING A BATTERY

To change a battery, perform the following steps:

1. Hold the instrument by the handle, upside down, so the bottom of the instrument base is pointing upward. Please refer to Fig. 2.2.
2. Hold the instrument so that the nose is pointing away from the operator.
3. Open the battery door on the bottom of the handle. The batteries have a small tab attached for ease of removal.

4. Pull out the existing battery, and replace with a new battery.
5. Insert the charged battery into the analyzer such that the connectors on the top of the battery are facing to the right. Note that the battery slot is keyed so that the battery can only be inserted one way.

Figure 2.2a. Instrument handle. Pull the rubber latch and lift door. Reach into opening and remove battery.

Figure 2.2b Insert new battery into opening.

2.3 BATTERY CHARGER

The battery charger is shown in Fig. 2.3. It takes about 2 hours to completely charge a battery. The status of the charger is shown by two lights on the power adaptor. Table 2.1 lists the information conveyed by the lights.

Figure 2.3. Battery charger.

Left Light	Right light	Status
On	Off	Battery is charging
On	On	Battery is 80% charged
Off	On	Battery is completely charged
Blink	Blink	Error. Remove battery and replace on charger. If error persists, call Innov-X Systems Technical support.
Off	Off	No battery is on charger

Table 2.1 Battery charger status lights

2.4 HP IPAQ POCKET PC BATTERY

The iPAQ has an internal rechargeable battery, which can be recharged by using the power adaptor that is included with the unit. This adaptor can be connected either to the iPAQ itself, or to the cradle. If it is connected to the cradle, and plugged in, the iPAQ will recharge whenever it is placed in the cradle. In addition, the iPAQ Battery will recharge whenever the iPAQ is mounted in an Innov-X analyzer which is powered, but not actively taking a test. The amber light on the top of the iPAQ will blink whenever the battery is charging. It will remain solid when the battery is completely charged.

Since the iPAQ will be recharged whenever the Innov-X Systems Analyzer is in use, it may never be necessary to use the iPAQ power adaptor. However, care should be taken when the analyzer is not used for a period of several days, as the iPAQ uses some power even when it is powered off. It is therefore possible to completely discharge the battery simply by not using the iPAQ for several days, or by using it for several hours without recharging it.

If you do not use your Innov-X Analyzer on a daily basis, or if you will have a down period of more than several days, it is recommended that you remove the iPAQ from the Analyzer when it is not in use and plug in the iPAQ to a power outlet to recharge it. This will ensure that your iPAQ is always charged and ready for use. You should also always plug in the power cord whenever the iPAQ is removed from the analyzer for data transfer.

If you do allow the iPAQ battery to discharge significantly, either by allowing it to sit too long unused, or by using it for a period of time without it being connected to a power source, it may not be possible to operate your analyzer. If this happens, the Innov-X software will provide an error message indicating that the iPAQ battery is too low. Recharge the iPAQ for at least a half an hour before attempting another measurement.

If the iPAQ battery is completely discharged, it will not be possible to turn on the iPAQ until it is recharged. A complete power failure will erase anything that is stored in the Main Memory of the iPAQ. All Innov-X program and data files are stored on the storage card, rather than in Main Memory, so you will not lose any data or have to reinstall the Innov-X software.

1. If the battery on the iPAQ is completely discharged, charge it for at least one half hour.
2. You will be required to follow the prompts on the iPAQ screen before you can use the iPAQ. This procedure involves realigning the screen by tapping in several spots, and going through a quick tutorial.
3. The iPAQ will reinitialize the Innov-X Systems software. A message will appear indicating that this is going to happen. You must tap ok to initialize.
4. The software will open automatically; a message will appear indicating that several registries have been restored. Tap ok to dismiss this message.
5. Set the clock to the current time. **Note, this is very important,** as your data is indexed by date. If the date in the iPAQ is incorrect, you may not be able to locate your results. The instrument will not allow you to take a reading until the date has been changed.
    a. From the Start Menu, tap Settings.
    b. Select the System tab, and tap clock.
    c. Set the proper date. Further details about this procedure can be found in the HP iPAQ user's manual.

2.5 REMOVING THE IPAQ FROM THE ANALYZER

It is very important to properly remove the iPAQ Pocket PC from the analyzer to avoid damaging the connector on the back of the iPAQ.

In order to remove the iPAQ, push the iPAQ retainer shown in Fig. 2.4 towards the front of the analyzer. Holding the retainer forward, grab the iPAQ from the sides, slide the iPAQ forward until it is clear of its

connector, then tilt the front end up enough so it clears the front holder allowing the iPAQ to be lifted out of the instrument.

Note: Never grab the iPAQ and twist it side-to-side to remove it from the analyzer. Always move the iPAQ retainer forward as instructed above, slide the iPAQ forward and remove from the analyzer.

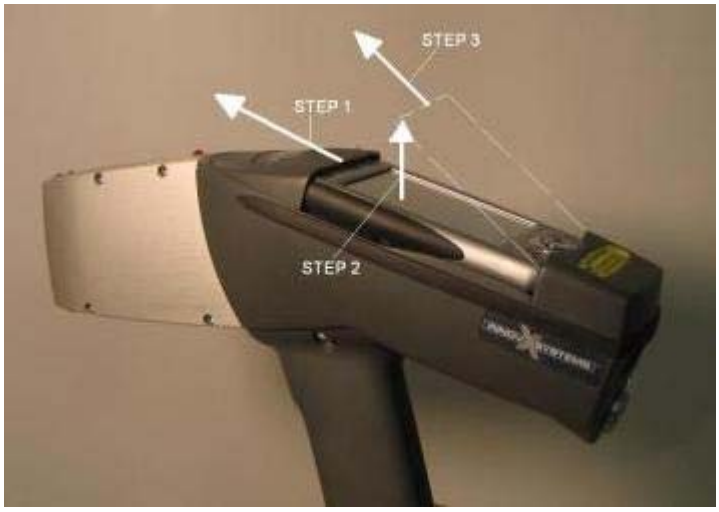


Figure 2.4. Removing the iPAQ from the analyzer.

2.6 STANDARDIZATION CAP and/or WELD TESTING MASK

All analyzers are supplied with either a standardization cap or a combination standardization cap welding mask. The standardization mask is the standard accessory. Welding masks can be purchased as an additional accessory, or in lieu of the standardization mask.

Standardization Cap

The cap clips on the front end of the analyzer and is used to standardize the system as described in Chapter 4. To attach the cap, snap it onto the nose of the analyzer over the Kapton window.

Combination Standardization Cap/Welding Mask

The standardization/welding mask is shown in Fig. 2.5. The cap clips onto the front end of the analyzer and is used to standardize the system as described in Chapter 4. To attach the cap, snap it onto the nose of the analyzer over the Kapton window. Be sure that when attaching the cap, that the solid end (as opposed to the end with the ¼" wide slit) is covering the window. To remove the mask, slide it off to either side.

The opposite end of the standardization cap serves as a welding mask. This mask is used to shield the base metal from analysis, when analyzing a weld. It is important to use this mask since failure to do so will produce an alloy chemistry that is a mixture of the base metal and the actual weld. For best results:

a. Use the welding mask only for welds that are larger than the opening in the mask;
b. Make solid contact between the surface of the mask and the material to test;
c. Use the mask only in the Analytical Mode – not with the standard Fast ID library;
d. Consider using longer test periods to compensate for the smaller testing area – especially with more difficult separations.

If it is desirable to use the welding mask in FastID mode, a user can create a special "Welding Mask Library." Teach all relevant alloys with the welding mask is in position. Make sure these fingerprints are

saved in library that contains ONLY fingerprints taught with a welding mask. When measuring a weld, make sure the "Weld" library is the only one selected. By creating a special finger print library using the welding mask, a user can get good results in the Fast ID Mode as well.

Figure 2.5 Standardization cap and welding mask. (Optional accessory)
The standard standardization cap does not have the welding slit.

2.7 TESTING STAND (optional accessory)

The testing stand is designed as a docking station for the handheld analyzer. It can be used as a bench-top system, or to test small samples. A list of components and an assembled stand is shown in Figure 2.6:

Figure 2.6. Assembled Testing Stand

Components of the testing stand:

1 Three (3) short legs
2. Three (3) long legs
3. Lower Stand
4. Upper Stand
5. Four (4) knobs for top plate
6. Test stand cradle
7. Clip for cradle.
8. Adaptor cable (connects serial connector on iPAQ cradle to auxiliary port on analyzer)

Assembly of Testing Stand

1. Insert the three Short Legs through the holes in the Lower Stand by inserting the threaded screw through the holes. This will balance the Lower Stand on the table top. (Fig. 2.7).

Figure 2.7. Mounting Lower Stand onto Short Legs.

2. Mount the three Long Legs onto the Lower Stand by inserting the threaded screws from the Short Legs into the holes on the Long Legs and turning until snug. Remove iPAQ from analyzer by following the instructions in Figure 2.4. Place the analyzer into the gap in the Lower Stand as shown. (Fig. 2.8).

Figure 2.8. Mounting Long Legs onto Lower Stand and inserting analyzer.

3. Mount the Upper Stand onto the Long Legs. The Upper Stand has holes for the screws at the end of each of the Long Legs. The Upper Stand will also fit snugly over the front end of the analyzer. Be sure that the Upper Stand is mounted so that all three screws are inserted through the holes, and the front end of the analyzer is flush with the top surface of the upper stand. (Fig. 2.9).

Figure 2.9. Mounting Upper Stand onto Testing Stand.

5. Put three knobs to secure testing stand onto analyzer. The iPAQ clip can be secured with any of the knobs. This clip grabs the base of the iPAQ cradle to hold the iPAQ securely in place.

6. Place the iPAQ in the cradle and connect it to the Auxiliary Port on the analyzer using the serial cable adaptor.

Figure 2.10. Connecting iPAQ to Auxiliary Port on analyzer.

Chapter 3 Safety Information

3.0 IMPORTANT SAFETY INFORMATION

THE XRF SHOULD NOT BE POINTED AT ANYONE OR ANY BODY PART, ENERGIZED OR DE-ENERGIZED! The safe and proper operation of the Innov-X XRF instruments is the highest priority. These instruments produce ionizing radiation and should **ONLY** be operated by individuals, who have been trained by Innov-X Systems, Inc. and received a manufacturer's training certificate. Innov-X recommends that operators and companies implement a written Radiation Safety Program, with safety components specific to the site and application of use of the instrument. The Radiation Safety Program should be reviewed annually and revised appropriately by a competent individual.

Innov-X analyzers must be used by trained operators, according to the instructions presented in this manual. Improper usage may circumvent safety protections and could potentially cause harm to the user. Pay attention to all warning labels and messages.

Important Notice for all Canadian Users:

Canadian Federal Regulations (Radiation Emitting Devices Act) require that all Canadian users must be certified according to NRC Standard CAN/CGSB-48.97/2-2000 in order to use this device.

For this certification contact: Natural Resources Canada, Manager Nondestructive Testing Certification, CANMET, 568 Booth St., Ottawa, ON, K1A 0G1; Tele: (613) 943-0583; Fax(613) 943-8297.

Users are advised to contact their appropriate federal/provincial./territorial radiation protection agency for applicable rules of operation.

The Innov-X analyzer is a very safe instrument when used according to manufacturer's recommended safety procedures as detailed in this chapter.

Radiation levels during testing are < 0.1 mR/hr on all surfaces of the analyzer except at or near the exit port for the radiation. This means that if an operator follows standard operating procedures, they will not obtain any detectable radiation dose above naturally occurring background radiation, on their hand while holding the analyzer, or on any area of their body.

This chapter details specifics of the radiation levels. It covers both standard (safe) and un-safe methods of operation, it provides radiation emission information, and also provides dose estimates for unsafe operations.

3.1 GENERAL SAFETY PRECAUTIONS AND INFORMATION:

Retain and follow all product safety and operating instructions. Observe all warnings on the product and in the operating instructions. To reduce the risk of bodily injury, electric shock, fire and damage to the equipment, observe the following precautions:

Heed service markings. Except as explained in this documentation, do not service any Innov-X product yourself. Opening or removing covers may expose you to electric shock. Service needed on components inside these compartments should be done only by Innov-X Systems, INC.

Damage requiring service:

- The power cord, plug or battery contacts for the battery charger are damaged.

- Liquid has been spilled or an object has fallen onto the instrument.
- The instrument has been exposed to rain or water.
- The instrument has been dropped or damaged.
- There are noticeable signs of overheating.
- The instrument does not operate normally when you follow operating instructions.

Safety Precautions:

Use the correct external power source: Ensure that the voltage is appropriate (100V-240 V/ 50-60 Hz) for charging the battery packs. Do not overload an electrical outlet, power strip, or convenience receptacle. The overall load should not exceed 80% of the branch circuit rating.

Use cables and power cords properly:
Plug the battery charger into a grounded electrical outlet that is easily accessible at all times. Do not pull on cords and cables. When unplugging the cord form the electrical outlet, grasp and pull the cord by the plug.

Handle battery packs properly; do not: disassemble, crush, puncture, short external contacts, dispose of in fire or water, or expose a battery pack to temperatures higher than 60 ^{o}C (140 ^{o}F).Do not attempt to open or service a battery pack.

WARNING: Danger of explosion if battery is incorrectly substituted. Replace only with Innov-X specified batteries. Used batteries may be returned to Innov-X Systems for disposal.

3.2 INNOV-X SYSTEMS – RECOMMENDED RADIATION SAFETY TRAINING COMPONENTS

Individual Companies and States have specific regulations and guidelines for the use of X-ray tube generated ionizing radiation. The purpose of the recommendations below is to provide generic guidance for an ALARA - best practice - approach to radiation safety. These recommendations do not replace the requirement to understand and comply with the specific policies of any state or organization.

1. **Proper Usage.** Never point the instrument at another person. Never point the instrument into the air and perform a test. Never hold a sample in your hand and test that part of the sample.
2. **Establish Controlled Areas.** The location of storage and use should be of restricted access to limit potential exposure to ionizing radiation. In use, the target should not be hand held and the area at least three paces beyond the target should be unoccupied.
3. **Specific Controls.** The instrument should be stored, in a locked case, or locked cabinets when not in use. When in use, it must remain in the direct control of a factory trained, certified operator.
4. **Time - Distance - Shielding Policies**. Operators should minimize the time around the energized instrument, maximize the distance from the instrument window, and shoot into high density materials whenever possible. Under no circumstances should the operator point the instrument at themselves or others.
5. **Prevent Exposure to Ionizing Radiation**. - All reasonable measures, including labeling, operator training and certification, and the concepts of time, distance, & shielding, should be implemented to limit radiation exposure to ***as low as reasonably achievable*** (ALARA).
6. **Personal Monitoring.** Radiation control regulations may require implementation of a radiation monitoring program, where each instrument operator wears a film badge or TLD detector for an initial period of 1 year to establish a baseline exposure record. Continuing radiation monitoring after this

period is recommended, but may be discontinued if accepted by radiation control regulators. Please refer to Sect. 3.10 for a list of providers of film badges.

3.3 INNOV-X SAFETY FEATURES

The Innov-X analyzer is very safe when used correctly, however the analyzer does emit radiation through the analyzer window, and all precautions must be taken to reduce exposure to this radiation. In order to minimize the possibility of accidental exposure, the following safety features are standard in all Innov-X analyzers.

1. "Deadman" trigger. The trigger must be held for the duration of the test. This requires that the user consciously depress the trigger whenever x-rays are emitted, and ensures that the analyzer is attended at all times while x-rays are emitted.

   Upon completion of safety training, an INNOV-X certified trainer may deactivate this feature upon request. The deactivation of the trigger is recommended only if long tests are required (such as for soil mode) and if the unit is used primarily by only 1 or 2 users who utilize it frequently, in a very controlled environment. In situations where multiple users are sharing the unit, it is recommended that the deadman trigger remain active.

   Note: Canadian Regulations require that the deadman trigger be used at all times. This feature will not be disabled for usage in Canada.

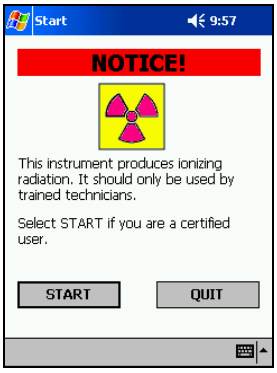
2. Software Trigger lock. Before using the trigger, the user must tap on a lock icon located in the lower right hand corner of the iPAQ screen. The user must then confirm that they wish to unlock the trigger. If the instrument is used continuously, the software trigger lock will remain off. If five minutes elapse between tests, the trigger will lock automatically.

3. Software Proximity sensor. The software requires that a sample be present in front of the analyzing window. This prevents the accidental exposure of bystanders to an open beam. If the analyzer detects that a sample is not present, it will abort the test and shut off x-rays two seconds after the test is started.

3.4 PERFORMING A TEST FOLLOWING APPROPRIATE RADIATION SAFETY PROCEDURES

Starting the Analyzer:

When an operator opens the Innov-X software on the iPAQ, he or she will be presented with one of the displays shown to the right. Provided an operator has received training from an authorized Innov-X trainer, he/she should tap the START button to begin using the analyzer.



In Canada, INNOV-X ANALYZERS MUST BE OPERATED BY CERTIFIED USERS ONLY!

From this point the operator is presented with the main menu of the analyzer to choose an operating mode and begin testing (described in Chapter 4). The remainder of this section is dedicated to operational and safety aspects that pertain to safe use and storage of the analyzer.

Starting a test using the trigger.

When the trigger is depressed, the analyzer supplies power to the x-ray tube and opens the shutter to emit x-rays.

If deadman trigger is enabled, the trigger must be depressed for the duration of the test. Releasing the trigger will close the shutter and immediately end the test. If deadman trigger is disabled, pulling the trigger once will start a test, pulling it again will stop it.

Figure 3.1 Handle of analyzer. Trigger is located at top of handle.

Starting a Test Using the "Start" Icon on the iPAQ Screen

This feature is disabled in all units shipped. It will become active only if the "deadman" trigger is disabled.

An operator may also begin a test by pressing the **Start** button on the touch screen, as shown at the right. The **Start** button, rather than the trigger, is generally used when the analyzer is docked into the testing stand.

This Feature is not available in Canada. All tests must be started via the trigger.

3.5 CORRECT AND INCORRECT INSTRUMENT USAGE:

The Innov-X XRF analyzer can be used in several different testing configurations. Safety guidelines are described for each configuration.

Configuration 1: Usage as a Handheld Alloy Analyzer:

In this configuration the analyzer is held in the hand, placed on various types of samples and a test is performed. Samples include pipes, valves, large pieces of scrap metal, basically any sample large enough to be tested in place, rather than held in the operator's hand. Point the instrument at a metal sample such that no part of your body including hands and/or fingers is near the aperture of the analyzer where x-rays are emitted.

Using the analyzer in this manner assures that the operator will not obtain a radiation dose to any body part or extremity in excess of naturally occurring background radiation. The radiation at any surface of the analyzer is < 0.1 mR/hr except at the exit port and the immediate area around the exit port.

The user should take care that personnel are not located within 3' (1 m) of the front end of the analyzer during testing, in the direction of the x-ray beam. Provided the analysis window is completely covered, there is virtually no radiation being emitted around the area of the sample. However, if a small component or curved surface is being analyzed, some radiation will be detectable.

Configuration 2: Usage in the Testing Stand

Innov-X strongly recommends that testing small pieces or small samples (rod, fasteners, turnings, XRF sample cups, bagged samples, etc.) be analyzed using the Innov-X Testing Stand. This allows the sample to be placed onto the analysis window of the analyzer without requiring the sample to be held by the operator. See figure below titled "Testing Stand Operation."

Note for Canadian Usage: The testing stand is not available for use in Canada at this time because it has not received regulatory approval yet. When an interlocked version of the testing stand has received regulatory approval, it will be available for sale into Canada. Please contact Innov-X Systems for an update on this process at 781-938-5005.

Figure 3.2 Testing Stand Operation. Please refer to **Section 2.7: Testing Stand** for assembly instructions.

Warning: Innov-X strongly recommends that operators do NOT hold samples in their hand for testing. Never hold a small sample in your hand, and test that sample, such that your hand is exposed to the x-ray beam being emitted from the analyzer. This type of testing produces a small but non-negligible radiation dose to the operator's hand. Please see **Section 3.7: Radiation Doses for Several Scenarios** for dose levels. Also, see **Figure 3.4** for an example of incorrect usage.

Figure 3.2.

Testing of Small Components:

Operators often are required to test small components, particularly in the field of alloy analysis. Examples of small samples include turnings, weld rod, wires, fasteners, nuts and/or bolts.

There are specific procedures to test small components. These procedures should be followed at all times. **Never hold a small part with your fingers or in the palm of your hand and perform a test. Doing so may deliver a significant dose of radiation to your fingers or hand.** Please refer to the Examples of Mis-use below.

Method 1: Testing a sample lying on a flat surface.

Figures 3.2.: Performing a testing for a sample lying on the surface of a table. This is a good way to test small samples, rather than holding them in your hand.

To analyzer small sample:

- Place the sample onto a flat surface.
- Place the window of the analyzer onto the sample and begin the test.

Safety Precautions:

Do not test samples in this manner at a desk or table where the operator is sitting. If the desk is made of wood or another non-metallic material, some radiation will penetrate the desk and may provide exposure to legs or feet if the operator is sitting at the desk or table.

Analytical Precautions:

If the sample does not completely cover the window, be sure the surface used does not contain metals or even trace levels of metals, as this may affect the accuracy of the XRF result. The XRF may report the presence of additional metals in the surface material. For this type of testing, it is good to place the sample onto a piece of 1100series aluminum alloy and perform the analysis. The operator should disable the aluminum analysis capability (See Section 8.3.3 in the manual for instructions).

Method 2: Use the testing stand as described above (see also Fig. 3.2).

Examples of Incorrect and Possible Unsafe Operation:

Improper Operation, DO NOT TEST SAMPLES LIKE THIS:

Exposure to the operator's hand/fingers will likely be minimal for this type of a testing, because the operator's hands and fingers are not in the primary beam. However, Innov-X believes that this type of the analyzer sets a poor safety precedent in that any operation where the operator places their fingers or hands near the window should not be permitted.

Figure 3.3. Incorrect Usage. While the dose to the operator's fingers/hand is negligible, testing this way sets a poor safety example for other operators, possibly encouraging other unsafe usage. Innov-X strongly recommends against this type of testing.

DO NOT TEST SAMPLES LIKE THIS:
Never hold a sample in your hand such that any part of your body or appendages are exposed to the x-ray beam. Testing samples in this way may generate significant radiation exposure (up to 27 R/hr) to the operator's fingers.

Figure 4.4 Extreme example of incorrect usage. An operator should NEVER hold small samples by hand

3.6 RADIATION WARNING LIGHTS AND LABELING:

3.6.1 Main Power switch and Indicator Light:

The main power switch is found on the rear of the unit and is shown in the figure to the left. Pressing the switch for several seconds will turn on the main power. A green LED indicates the main power is on. The main power must be turned on in order to operate the unit however, this switch DOES NOT turn on the x-ray tube. No power will be supplied to the x-ray tube unit the Innov-X software is started.

3.6.2 Probe Light and Probe Label:

The Innov-X analyzer is equipped with warning lights that alert the operator when the tube is receiving power, and when x-rays are being emitted from the analyzer. Please see Fig. 3.5.

When the red light on the front nose of the analyzer is ON continuously (not blinking), this indicates the x-ray tube is receiving a low level of electrical power and the shutter is closed. The system is producing a low level of x-rays internally in this condition, but the shutter is providing adequate shielding to keep x-ray levels below levels of detection. The instrument is safe to be carried around or set down in this configuration.

When the red light is blinking, this indicates the tube is powered, the shutter is open and the analyzer is emitting x-ray radiation out of the analysis window. The analyzer should only be pointed at a sample, or be in the testing stand with a sample resting on the window, in this configuration.

3.6.3 Display on Back of Analyzer:

The display on the back of the analyzer, shown in Fig. 3.6, provides a "testing" message to indicate that the x-ray tube is energized and the shutter is open. This display is for testing conditions (i.e. overhead) where the operator cannot see the Probe Light or the iPAQ display.

3.6.4 Label Behind iPAQ:

The analyzer also has a label just below the iPAQ indicating, as shown in Figure 3.7:

CAUTION: Radiation. This Equipment Produces Radiation When Energized.

This label is required by most regulatory agencies. The term "When Energized" refers to the condition where the tube is fully energized and the shutter is open. This condition is also indicated by the red blinking light on the probe.

Figure 3.5. Probe light and labeling. When the light is on continuously, the x-ray tube is receiving minimal power and it is producing a minimum level of x-rays. The shutter is also closed so there is no radiation exposure to the operator or bystanders.

Figure 3.6. Back light on analyzer.

Figure 3.7. Label behind iPAQ. Top version is used in Canada

3.7 RADIATION LEVELS FROM ANALYZER

Two pictures of the analyzer are shown below. In the first picture, all the relevant components referenced in this radiation safety section are displayed and labeled. The second picture shows a close-up of the front end of the window. The four sides A, B, C and D are indicated on this picture because they are referenced in terms of radiation levels output by the analyzer. The measured radiation levels for standard operating conditions are shown in the figures and tables below. Standard operating conditions are tube voltage operating at 35 kV, tube current of 5 uA, and 2 mm aluminum filtration.

Figure 3.8 Innov-X Analyzer, Side View

Figure 3.9 Innov-X Analyzer, Front View

Radiation Levels (mrem/hr) for Alloy Analysis, Standard Beam Conditions: 35kV, 5 uA, 2mm aluminum filtering:

Sample at Window	Trigger	Location A (Top)	Location B (Right Side)	Location C (Bottom)	Location D (Left Side)
Blank (Air)	<0.1	<0.1	<0.1	<0.1	<0.1
Metal	<0.1	<0.1	<0.1	<0.1	<0.1

Table 3.1. Dose rates (units of mrem/hr) at various locations with a metal sample covering the window and with no sample present. For "no sample" the analyzer is shooting the x-ray beam into air.

As shown in the Table 3-1, the dose to the operator's hand is negligible. The radiation levels at the side surfaces of the instrument snout (aluminum housing) are all <0.1 mrem/hour. Despite these low levels of radiation, there is no reason for any body part to be in the locations denoted A, B, C and D!

Table 3-2 shows the radiation levels directly in the x-ray beam that is emitted from the analyzer. Radiation levels at the exit aperture (or "port") are substantial. There is no reason for the operator or any personnel to be exposed by the direct beam. Operators should never hold samples in their fingers or cupped in their hands, as this may generate a significant radiation exposure.

Operations should never point the analyzer at another person and start a test, as this may also provide significant exposure to the person if they are within a few inches of the port of the instrument.

Radiation Levels in the Primary Beam Versus Distance from Port:
For Alloy Analysis, Standard Beam Conditions: 35kV, 5 uA, 2mm aluminum filtering:

Tube Conditions	At Trigger, or any part of operator's body.	At Window	4 inches	12 inches	36 inches	48 inches
35 kV, 5 uA, 2 mm Al filtering	<0.05	28,160	2,080	186	24	14
15 kV, 25 uA, thinner filter material	< 0.05	27,780	1,620	145	19	11

Table 3.2. Dose rates (units of mrem/hr) in the direct x-ray beam being emitted from the analyzer

3.8 RADIATION DOSES FOR SEVERAL SCENARIOS

In this section we provide data, concrete examples of use and misuse of the analyzer and common questions and answers we encounter when training personnel on the safe use of the Innov-X analyzer. The goal is to explain scenarios of safe versus improper usage of the analyzer.

The table below presents radiation doses for normal operating conditions and also for examples of misuse of the analyzer and even extreme misuse. Innov-X provides installation training that includes detailed radiation safety training and documentation designed to prevent misuse of the analyzer

Example of Instrument Usage	Radiation Exposure and Comments
Normal Operation - Dose to Hand: User analyzes samples according to standard operating procedures described in this manual. Assumption: Operator using system with x-ray tube ON for 8 hours/day, 5 days/week, 50 weeks/year. (Practically constant usage).	Maximum exposure is to operator's hand, at the trigger. Exposure is < 0.1 mrem/hr. Annual exposure to hand is then < 200 mrem (2mSv). US: Maximum exposure under OSHA regulations is 50,000 mrem annually. Thus continuous operation provides a dose that is at least 250 times lower than maximum allowed by OSHA. Canada: Maximum exposure under ICRP regulations is 500 mSv for radiation workers and 50 mSv for the general public. Thus continuous operation provides a dosage 250 times lower for a radiation worker and and 25 times lower for the general public.
Normal Operation – Dose to Torso: Analyzer is used under the same operating conditions described above.	Exposure to Torso is so low it cannot be measured. To be conservative we use the same figure as the trigger, <0.1 mrem hr. Annual exposure using operating conditions above is < 40 mrem. (0.4 mSv) Maximum allowed is 5,000 mrem under OSHA and 20 mSv under ICRP for radiation workers (1 mSv for general public).

For the x-ray energy emitted by portable XRF analyzers (10-60 keV region), the bone in the fingers will absorb radiation about 3-5 times more than soft tissue, so the bone would be at an elevated radiation risk compared to soft tissue. For this reason no person shall hold a test specimen in front of the window with the fingers in the direct beam, or direct the beam at any part of the human body. Reference: Health Physics 66(4):463-471;1994.

Misuse Example 1: Operator holds samples in front of window with fingers, such that fingers are directly in the primary beam. Do not do this!.	For fingers at the port, in the primary beam, the maximum dose to the fingers is 28,160 mrem/hr. Assume an operator performs a 10 sec test (typical). The dose to the operator's fingers or hand is 28,160 x (10/3600) = 78 mrem. If the operator did this 641 times/year they would exceed the allowable annual dose of 50,000 mrem to an extremity. In Canada, the maximum allowed dose is 500 mSv/year (Canada ICRP radiation worker) or 50 mSv/year (Canada ICRP general public). If the test time was 30 seconds instead of 10 seconds, the operator would receive a dose of 234 mrem for each exposure, and thus would exceed the annual safe limit of 50,000 mrem after 213 tests. Even though it is unlikely to make this mistake so many times in a year, do not even do it once. Take the extra time to test a sample on a surface or use a testing stand. **Note: If the operator takes an average of only two shortcuts per week and places his/her fingers within the primary x-ray beam at the window, they will exceed the annual dose rate.**

Misuse Example 2:
Operator places analyzer against body and pulls the trigger to start a test. Analyzer tests to preset testing time (usually 10 seconds) unless operator pulls trigger again to stop test. This applies to analyzer being in contact with operator or with bystander.

Dose at exit of sampling window is 28,160 mrem/hr.

Dose for a 10 second exposure with analyzer in contact with Torso: 78 mrem (.78 mSv).
US: If an operator did this act 64 times in a year, the operator would exceed the annual safe dosage to the torso of 5,000 mrem/year. The maximum dose of 5,000 mrem/year is a whole body limit, which does not truly apply in this case because the x-ray beam size is small (about 2 cm^2 area – 1.5 cm x 1 .3 cm – at the port). Applying correction factors for the beam size is complex and beyond the scope of this manual. The important point is that for proper operation there is no reason to ever exposure any part of the human body directly to the x-ray source. This example serves to provide estimated exposure in the event this occurs.

If the testing time was 30 seconds instead of 10 seconds, thus the operator placed the port against his body or that of a bystander and performed a 30 second test, the dose would be 234 mrem. This is about the same as a mammogram. Repeating this gross mis-use 22 times would exceed the annual allowable limits.

Canada: Radiation worker would have to repeat this example (234 mrem exposure) of gross misuse 8 times to achieve the ICRP level of 20 mSv. (general public 1.3 times to achieve limit of 1mSv)

Misuse Example 3:
Operator manages to initiate a test for 10 seconds and exposes a bystander that is standing 12" away from analyzer port. What is exposure to bystander?

Note: The proximity sensor would automatically shut down the x-ray tube after 2 seconds, so this is an extremely improbable occurrence.

Note 2: Equations to scale these to other scenarios involving longer or shorter tests, and bystander being at distances other than 12" are provided at right.

Dose to bystander at 1 foot is 350 mrem/hr. For a 10 second exposure dose is 1 mrem. This is 5,000 times lower than the allowable dose to a worker in a year. This would have to happen 5,000 times to for that worker or bystander to obtain the maximum allowable dose.

Formula for calculating other scenarios:

$$Dose = 1 mrem \left(\frac{13.25}{D + 1.25} \right)^2 x \left(\frac{t}{10} \right)$$

D = distance from port in inches
T = testing time

Example: Bystander is 3' away from port for a 30 second test. In this case the dose is calculated as:

$$Dose = 1 mr \left(\frac{13.25}{36 + 1.25} \right)^2 x \left(\frac{30}{10} \right) = 0.38 mrem$$

US OSHA: Maximum allowable level is 5,000 mrem assuming bystander's torso is exposed. Thus, this misuse would have to occur 12,500 times in a year to the same bystander before that bystander achieved his maximum allowed dose.
ICRP: 5000 times for rad worker, 250 for general public

Comparative: Radiation Doses from Typical Exposures to Ionizing Radiation

Common medical and/or dental x-rays:	20-30 mrem each.
Mammogram:	100-200 mrem
Flying in a commercial jet coast to coast (6 hrs.):	1-2 mrem.
Daily exposure from background radiation: * depends on geographic location	0.3 to 0.5 mrem/day

Table 3.3 Radiation Doses from Typical Exposures to Ionizing Radiation

From the above table, a single case of analyzer misuse, thus producing a one-time exposure of 70-250 mrem, is comparable with single-event common medical x-ray procedures such as an annual chest x-ray or mammogram, or 25-50 airline flights in a year, and thus is not considered harmful. Regular misuse, such as taking safety shortcuts twice weekly, produces radiation exposure that greatly exceeds these typical levels and should be avoided entirely.

3.9 COMMON QUESTIONS AND ANSWERS REGARDING RADIATION SAFETY

Question: When I'm shooting a piece of pipe or valve on a rack or on a table top, is there any exposure to people standing in other locations, or standing several feet away from the analyzer?

> Answer: Even a thin amount of metal sample (1-2 mm thickness) is enough to completely attenuate the x-ray beam emitted from the Innov-X analyzer. Shooting a piece of material that covers the sampling window on the analyzer will completely shield any bystanders from radiation exposure. However, good practice recommends that the area for at least 4-5 feet in front of the analyzer is clear of people.

Question: If I forgot to switch the safety on the trigger to "ON", I pick up the analyzer and accidentally pull the trigger, is that dangerous to nearby personnel?

> Answer: No, this example of misuse is not dangerous, but it may produce a non-negligible radiation exposure to nearby personnel. For an exposure to occur, the following things must happen. First, you must be holding the analyzer so that a bystander is actually standing in the x-ray beam being emitted. Just being near the analyzer is totally safe otherwise. Second, the bystander must be within 1-3 feet from the nose of the analyzer in addition to being in the beam path, to receive any appreciable dose. If all of these conditions are true, the dose received by a bystander is still extremely low. It ranges between 0.1 to 0.5 mrem depending on the exact location of the bystander. This dose is 10,000 to 50,000 times less than the allowed dose. Please see Misuse Example 4 in the table above.

Question: Do I need to create restricted areas where I am using the analyzer?

> Answer: No, provided you are following normal operating procedures there is no reason to restrict access to an area where the analyzer is in use. The operator should take precautions to keep any personnel more than 3 feet away from the sampling window of the analyzer in the event of accidental misuse as detailed above. Should the operator also elect to test small components like weld rod as shown in Figure 3.3, the operator should also be sure that no personnel are standing within about 4-5 feet of the sampling window.

Question: How does the x-ray tube in the Innov-X system compare to a radiography system used for taking images of metal parts.

Answer: The x-ray tube used in the Innov-X system produces between 1,000 and 10,000 times lower power than most radiography systems (0.5-1 watt for Innov-X versus kW for radiography systems). This is because a portable XRF is designed to perform surface analysis of alloys and other samples, whereas radiography systems are designed to shoot x-rays entirely through metal components in order to obtain an image on the other side of the object being bombarded with x-rays. For example, many tube-based radiography systems use a 300-400 kV tube and currents in the tens or hundreds of milliamps (mA). The Innov-X analyzer uses a tube operating at 35 kV and 5-30 micro-amps. The radiation levels produced are therefore thousands or tens of thousands times lower with the Innov-X system.

Question: Should we use dosimeter badges with the Innov-X analyzer.

Answer: Dosimeter badges are required by some states, and optional by other states. Innov-X recommends that operators wear badges, at least for the first year of operation, as a general precaution to flag any misuse of the analyzer. Dosimeter badges are available for the torso (generally worn on the belt loop or shirt pocket) and are available as "ring" badges. The best single badge to obtain is a ring badge that is worn on a finger, on the opposite hand used to hold the analyzer. This will record accidental exposure for the most likely case – an operator grabbing a small sample and holding it in one hand while analyzing it. Note: these badges generally have a threshold of 10 mrem, and are renewed monthly. So it will take several cases of misuse even to obtain a reading on a typical badge. When purchasing a badge, obtain the type used for x-ray and low energy gamma ray radiation.

3.10 SAFE GUARDS AND EMERGENCY RESPONSE

The main safeguards to use as an owner of an Innov-X portable XRF are really intended to restrict access to properly trained operators:. **Note: Canadian regulations require certified personnel to use the device, refer to section 3.0 in this chapter.**

1. Keep the system in a controlled location, where only authorized users are likely to have access to the analyzer at any given time.
2. Make a simple sign that is kept with the analyzer indicating that an operator must have completed a training class provided by your company or must have attended an Innov-X training course in order to use the analyzer. Note that when the Innov-X system is turned on, the screen displays a message indicating that the system should only be used by authorized personnel.

Emergency Response:

Because the Innov-X system is a battery operated, x-ray tube based analyzer, the emergency response plan is very simple. If the operator believes the analyzer is locked up in an "OPEN" position, they should do two things:

1. Press the On/Off switch on the base to power the analyzer off. The green LED indicator will turn off, indicating system power is off. At this point it is not possible for the analyzer to be producing x-rays.
2. As an additional precaution, the operator may remove the battery trap door at the bottom of the analyzer (have the nose pointing away from personnel), and pull out the battery. Even if the operator has failed to properly power the system off in Step #1, removing the battery guarantees that no x-rays can be produced. There is no electrical power being provided to the x-ray tube.

Note: It would be highly unusual for an operator to somehow lock up the analyzer with the x-ray tube powered on. This would require the operator to crash the iPAQ during an analysis. If this happens the analyzer will shut off the x-ray tube 10 seconds after the last communication with the iPAQ. However, if at any time the operator believes the x-ray tube is on and no test is in progress, powering off the analyzer and

restarting will automatically shut down the x-ray tube and close the shutter. It will no longer be possible to produce x-rays at this point.

3.11 DOSIMETER BADGES

Dosimeter badges are provided as a monthly service by several companies, listed in this section (see below). The badges are generally provided monthly, and the operator returns the previous month badges to the company for analysis. The operator receives a monthly report showing any personnel with readings higher than typical background radiation.

Dosimeter badges are required by some states, and optional by other states. Innov-X recommends that operators wear badges, at least for the first year of operation, as a general precaution to flag any misuse of the analyzer. Dosimeter badges are available for the torso (generally worn on the belt loop or shirt pocket) and are available as "ring" badges. The best single badge to obtain is a ring badge that is worn on a finger, on the opposite hand used to hold the analyzer. This will record accidental exposure for the most likely case – an operator grabbing a small sample and holding it in one hand while analyzing it. Note: these badges generally have a threshold of 10 mrem, and are renewed monthly. So it will take several cases of misuse even to obtain a reading on a typical badge. When purchasing a badge, obtain the type used for x-ray and low energy gamma ray radiation.

Dosimeter Companies:

Here are two companies that provide badges as a regular service. There are certainly many more.

Landauer Inc.	AEIL
Glenwood, IL	Houston, TX
708-755-7000	713-790-9719

3.12 TYPICAL REGISTRATION REQUIREMENTS

Innov-X maintains a database of the registration requirements for every state, including sample registration forms. Most states require some form of registration, and generally they require the registration to be received within 30 days of receipt of the instrument. Some states require no registration, while a few require notification in advance. Please contact Innov-X for specific questions regarding the state where the instrument will be used, or for copies of registration forms.

In general a company will have to provide the following information regarding the device:

1. Purpose of device. Generally this is "Analytical" or "Industrial." Be sure to inform the state registration office that the device will NOT be used for radiography or for medical uses.
2. Radiation Safety Officer – Monitors training, safe use, and controls access to the instrument.
3. Authorized Users – Trained by Innov-X Factory Authorized Representatives in the safe and proper use of the XRF.
4. Operating parameters of the analyzer – 35 kV, 5-30 micro-amps.
5. Type of system, either fixed, mobile or portable. Generally the correct choice is "Portable."
6. User Training Specified – Indicate that only individuals receiving manufacturer training, documented by a manufacturer's training certificate will operate the instrument.
7. Personal Monitoring. This may be required by radiation control authorities. Many registration forms will ask that you indicate whether or not you intend to perform dosimeter monitoring.
8. Copy of Registration & Manual at the Job Site

If you have any questions regarding the type of registration form or filling out the form, please contact Innov-X Systems. Many states may confuse a portable XRF system that uses a tube with medical or

industrial radiography systems. This is because of the relative newness of portable tube-based systems. In all likelihood, Innov-X personnel have experience providing the necessary documentation to the state in question, and can readily assist the customer in this process.

Chapter 4 Operation

4.0 OPERATION - GENERAL

Power to the instrument is controlled by the ON/OFF button located at the rear of the analyzer. The green LED next to this button will illuminate when the analyzer power is on. The iPAQ operates on the Microsoft Windows CE ® operating system and is activated separately by the power button on the right top face, just over the display. The trigger is locked via the software.

4.1 WORKING WITH THE HP iPAQ Pocket PC®

The Microsoft Windows CE ® operating system and Innov-X software provided on the iPAQ handheld computer are operated by user input through the touch screen. For comprehensive details on the iPAQ's operation, please refer to the iPAQ reference materials included with your unit.

General tips

- The Start Menu is found in the upper left corner of the iPAQ screen. This is used to launch all applications, including the Innov-X Systems Analyzer software.
- The instrument is designed as a "point and shoot" system that requires little, if any, entry of information for most operations. In the event the user modifies the grade library, enters testing information data, or performs other functions, it will be necessary to enter data via the virtual keyboard, which can be accessed by tapping the keyboard icon in the lower right corner. The iPAQ also includes character recognition software. This can be selected from the drop-down menu to the right of the keyboard icon.
- The File toolbar which will be used to Change Functions, Screens and Options is located at the bottom of the screen.
- It is possible to cut, copy, rename and delete files from within Windows File Explorer by selecting the file to be modified and holding the stylus on the screen for 2 seconds.
- Pressing buttons on the bottom of the iPAQ will perform various functions that are described in the iPAQ documentation. The button on the right hand size of the analyzer is the iPAQ task manager. Pressing this button will show all programs that are currently open. Open files can be closed from this menu. Simply hold the stylus on the file for a few seconds. The option to close the file will appear.

4.2 OPERATION - MAIN SOFTWARE SCREENS

The Innov-X Software consists of three main screens:

- **Main Menu screen:** Used to select the analysis mode, open the results screen, and change the administrator password.
- **Analysis Screen:** Used to change settings, edit libraries, and perform tests.
- **Results Screen:** Displays results from current reading, allows scrolling back to previous test results. Allows recorded data to be exported to a comma delimited file which is directly compatible with Microsoft Excel.

4.2.1 Innov-X Main Menu

The main menu below appears upon startup. The Main Menu allows you to choose an analysis mode, as well as perform certain administrative functions such as changing your login password. The modes which

are available on the analyzer are shown in blue. For information on adding additional analysis modes to an analyzer, please contact the Innov-X Sales Department at 781-938-5005.

- **Use the Main Menu to select the desired analysis mode.** The analysis mode can be selected by either tapping on the name of the method (shown in blue) or by selecting the appropriate mode from the Modes menu.
- The administrative password can be changed by selecting ***Options → Change Password.***
- It is possible to go directly to the Results Screen by selecting ***View→Results***. If the results screen is opened in this manner, it is possible to view results when the iPAQ is not connected to the analyzer.

4.2.2 The Analysis Screen

Selecting a mode opens the analysis window for that mode. All data acquisition and analyzer control are done from this window. This window allows the user to start or stop an analysis, change testing parameters, and modify the fingerprint and grade libraries (Alloy Analysis only).

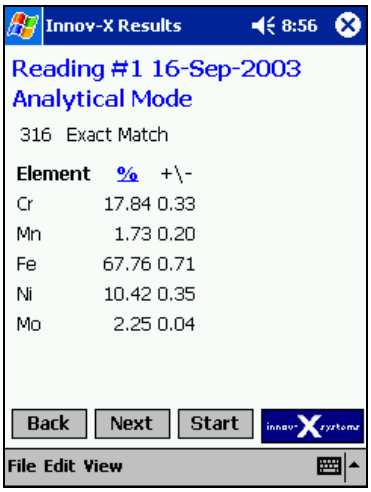
The analysis screen runs continually while during normal instrument operation. From the results menu, it is always possible to go back to the Analysis screen by selecting ***File→Exit*** or by tapping the X in the upper right hand corner of the screen.

The analysis screen for Analytical mode is shown to the right. Screens from other modes are similar and will be described in later in this manual. The analysis screen shows the name of the mode that is currently active, a start/stop button (which is inactive in most cases), an info button that is used to enter descriptive information for any given test, a trigger lock and a battery indicator. In addition, a message appears directly below the name of the mode which will indicate the current state of the analyzer. Typically it reads "Ready to Test," but also provides other information in certain circumstances. Any mode specific information will be displayed at the bottom of the screen above the menu choices.

4.2.3 The Results Screen

The Results screen displays the current reading and old data. All data handling functions such as exporting and deleting readings are carried out from this screen. Once the Results Screen is open, the user may start new tests without going back to the analysis screen by pulling and holding the trigger. Tapping the X in the upper right hand corner will return the user to the analysis screen without starting a test. If no analysis mode is running, an Exit button will appear which will close the Results screen.

The Results screen is automatically shown at the completion of any analysis. It can also be accessed from the analysis screen for any mode or the **Main Menu**, by selecting ***View→Results***. Once the Results screen has been opened, the information which is displayed can be changed by selecting options from the View menu. The various viewing options will be described in detail in later chapters.

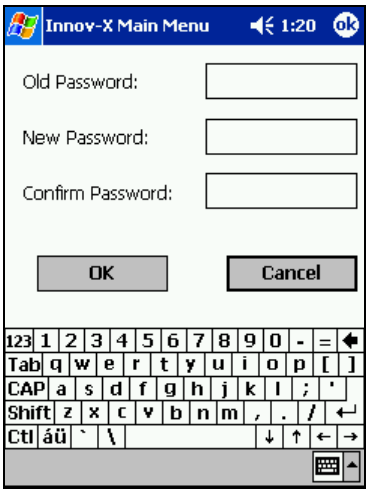


4.3 PASSWORDS - ABOUT PASSWORD PROTECTION

Certain functions such as adding and deleting fingerprints from the libraries, and Pass/Fail setup have been specified as Administrative Level Functions. These functions are described in detail in later sections of the manual. In order to use these functions, a password must be entered. The default password is set as the lowercase letter "z". This password can be entered whenever the system prompts for a password.

Changing the Administrator Password.

The Administrator password may be changed at any time from the **Innov-X Main Menu** by choosing ***Options→Change Password***. When the change password option is selected, this screen will appear.



If you are changing the password for the first time, enter the letter "z"; otherwise enter the current system password. Then, choose a password and enter it twice, once in the "New Password" box and again in the "Confirm Password" box. Passwords may be any combination of letters or numbers.

4.4 STANDARDIZATION

4.4.1 Standardization Procedure

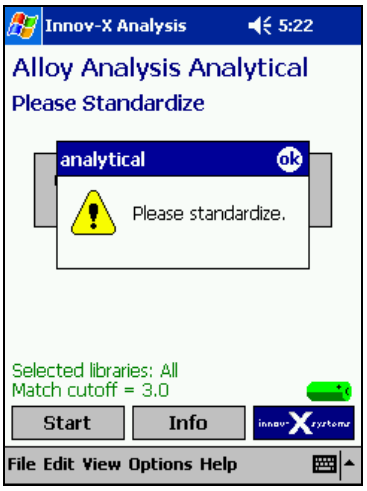
Before performing tests, it is necessary to standardize the instrument. This automated procedure involves collecting a spectrum on a known standard (Alloy 316) and comparing a variety of parameters to values stored when the instrument was calibrated at the factory. If there are any problems with the instrument, they will be indicated by an error message.

The standardization procedure takes about 1 minute. Standardization must be done any time the analyzer hardware is initiated or restarted and must be repeated if the instrument is operating for more than 4 hours.

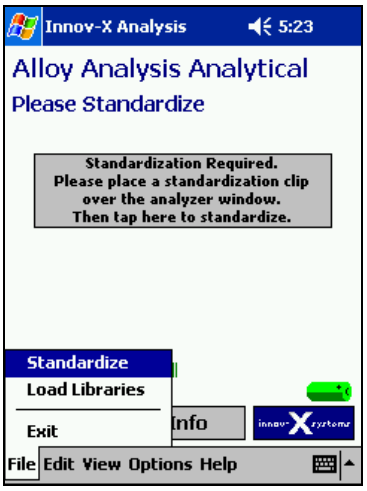
It is possible to re-standardize the instrument at any point while the software is running. Standardization is always initiated from the Analysis Screen of any Mode.

If the analyzer is restarted, you will be required to standardize the instrument before performing any measurements. This is indicated by the message "**Standardization Required. Please place a standardization clip over the analyzer window. Then tap here to standardize."** on the analysis screen

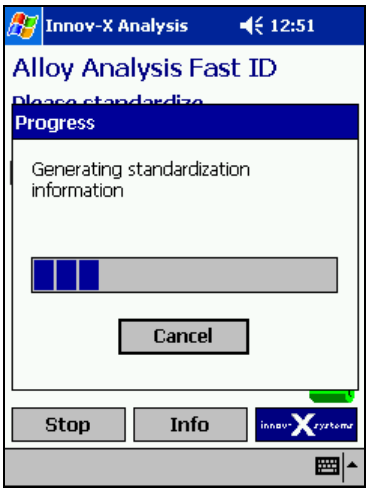
It is not possible to start a test before standardization. If the trigger is pulled before the standardization procedure is completed, a message box will appear. Press **ok** to acknowledge and clear the message.



To initiate the standardization procedure, snap the standardization piece on the front of the instrument. Verify that it completely covers the analyzer window. When using a standardization mask with a weld collimator, be sure that the solid portion of the mask covers the analyzer window. Tap the grey box in the center of the screen or select ***File→Standardize*** to begin.



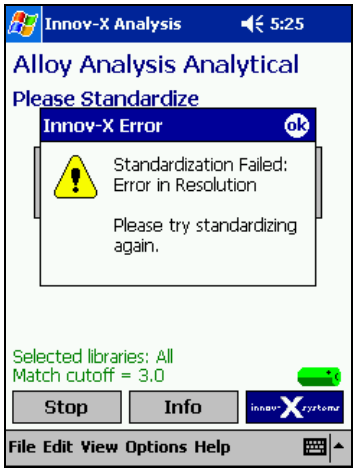
When standardization is in progress, the red light on the top of the instrument will blink, indicating that the X-ray tube is energized and the shutter is open. In addition, a status bar will appear, tracking the progress of the measurement.

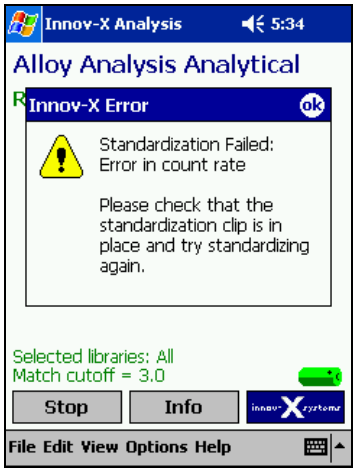


When standardization is complete, the message "Successful Standardization" will appear, along with the resolution of the instrument. Tap **ok** to acknowledge and clear the message. The instrument is ready for testing.

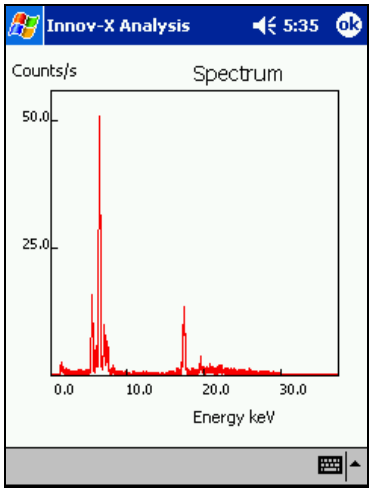
4.4.2 Standardization Errors

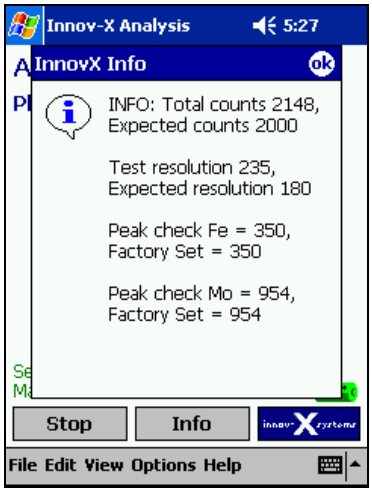
The analyzer performs several diagnostic checks during the standardization process. If the standardization fails, the instrument will prompt the user regarding the next step. Several errors could occur while standardizing: "Wrong Standardization Material," "Error in Resolution" or "Error in Count Rate"





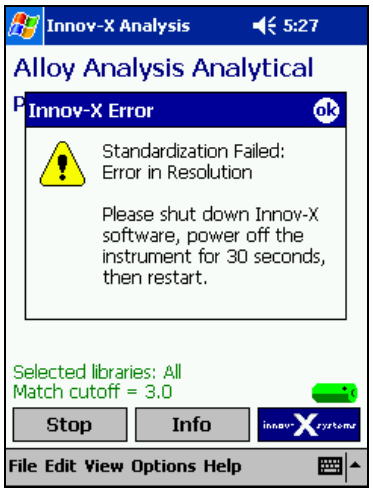
After closing the Standardization Failed message, two additional screens will appear. The first is a picture of the spectrum generated during the standardization. The second is a summary comparing factory set values for resolution, count rate, and peak positions to values calculated during the standardization.

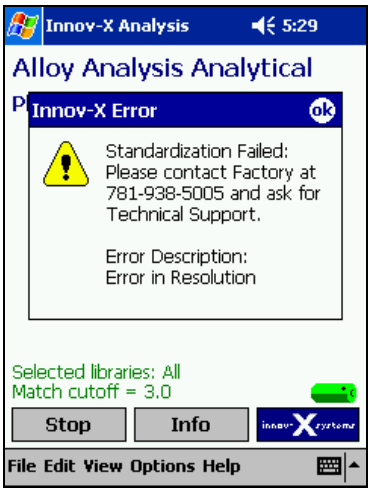




When standardization fails, verify that the standardization mask is in place, and attempt standardization again. To restandardize after a failure, tap the grey box in the center of the display, or choose ***File→Standardize***. If you are using a weld collimator, make sure that the solid part of the mask is covering the window.

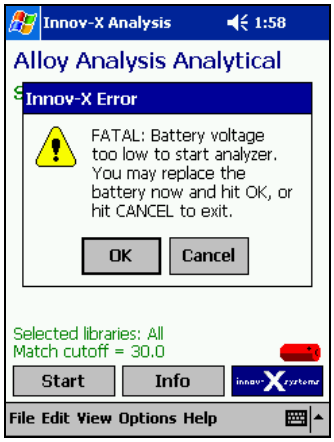
If standardization fails again, exit the analysis screen and power off the instrument. Restart and restandardize. If the standardization fails a 3rd time, you will be prompted to perform a soft reset of the iPAQ. Selecting Yes on this screen will automatically soft reset the IPAQ. You should also power cycle the instrument. Restart and restandardize. If the standardization fails again, replace the battery in the instrument and attempt another standardization. If this fails, please contact the Innov-X Systems service center at **781-938-5005.**





4.4.3 Battery Replacement and Initialization/Standardization

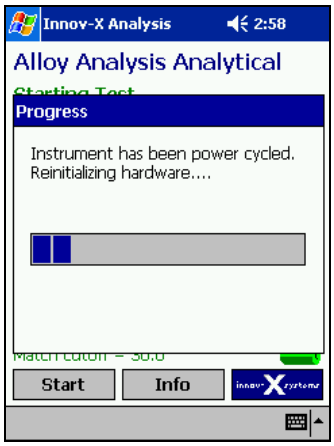
When the battery is too low to take a measurement, an error message will appear:



In order to continue testing, replace the battery immediately, and then tap "OK." The analysis screen will remain open, and the instrument will reinitialize. This process will take 1 minute. It is not necessary to re-standardize, provided that less than 4 hours has elapsed since the last standardization and the battery swap is completed within 10 minutes.

After re-initialization is completed, testing can continue.

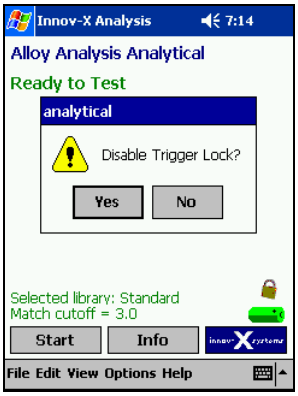
If the battery is not replaced, and cancel is selected, the Analysis screen will close. When the software is restarted, the instrument will go through a complete 1 minute initialization and will require standardization.



4.5 THE SOFTWARE TRIGGER LOCK

Innov-X analyzers are equipped with a software trigger lock which prevents the trigger from being actuated unintentionally. The lock is released by tapping an icon on the iPAQ screen. Once the lock is released, it will remain unlocked for subsequent tests, until more than five minutes has elapsed between tests. At that point, the trigger lock will be activated and will need to be disabled before additional testing can commence.

Tap the lock icon located directly above the battery indicator.



Select yes to disable the trigger lock

The open lock icon indicates when the trigger is disabled.

4.6 TEST INFORMATION - LABEL INPUT

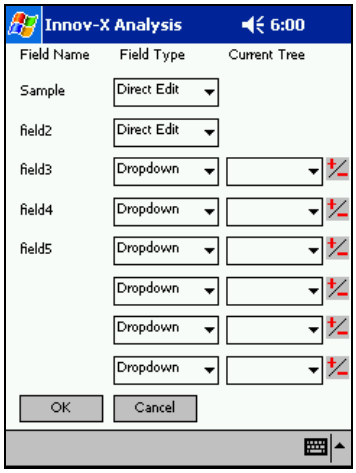
Information such as sample name, and identifying characteristics can be stored with each measurement. This is done from the test information (Test Info) screen which can be accessed from the **Analysis Screen** of any mode by tapping the **Info** button, or selecting ***Edit→Edit Test Information***.

The **Test Info** screen consists of eight fields. The name and format of each field can be changed by using the **Modify Test Info Template** feature described in section ***4*.6.1 Modifying the Test Info Template**. The process of entering test information prior to each analysis is described in section **4.6.2 Entering Test Information**. Finally, the process of entering or changing test information after the analysis has been completed is described in section **4.6.3 Editing Test Info from the Results Screen**.

4.6.1 Modifying the Test Info Template

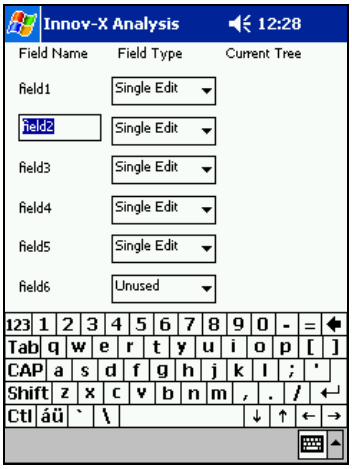
Test Info fields are modified via the Modify Test Info Template option found in the edit menu on the analysis screen in every software mode. Each field can be designated to be Direct Entry, Drop-down, or Tree. Direct entry fields allow users to enter characters directly from the virtual keyboard, or a bar code reader. Drop down menus provide a list of options to choose from. Trees are more complicated drop-downs; which allow users to subdivide large numbers of choices for ease in quickly locating the correct label. For example, a user may set up a tree with several parts for a main assembly. Subassemblies for the parts can be linked to their parent parts.

To make any changes to the Test Info format, select ***Edit →Modify Test Info Template*** from the analysis screen of any Mode. Modifications of Test Info screens are specific to each mode, and will need to be made to each mode if more than one is used.



4.6.1a Changing Field Names

Field names can be edited by tapping on the current name. This will open an editable text box. A new name can be entered with the virtual keyboard. Selecting another cell or tapping **ok** will save this info.

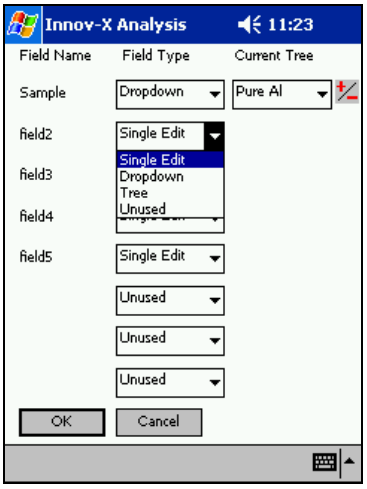


4.6.1b Selecting Field Type

From the Modify Test Info screen, the type of field can be selected from a drop-down menu. Simply tap the arrow in the Field Type box for the field being modified.

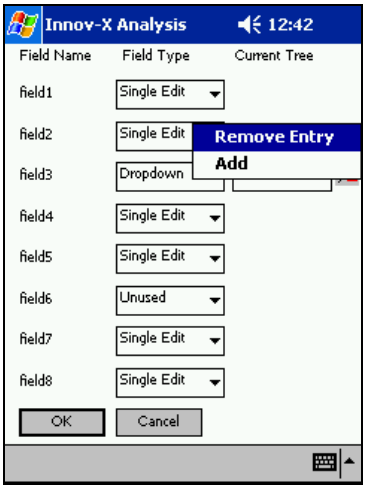
- Select **Direct Edit** for a text field which will accept data from the virtual keyboard, or a bar code scanner.
- Select **Drop-down** for a drop-down list
- Select **Tree** for a Drop-down menu with many choices, some of which may be grouped into categories and subcategories.

Select **Unused** to eliminate the field from the Test Info screen.

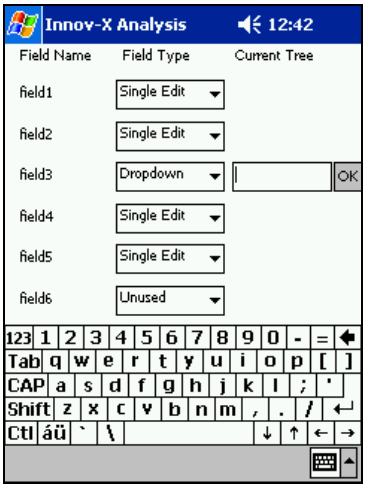


4.6.1c Changing Drop-down Menu Entries

Once a field has been designated a drop-down menu, entries can be added or deleted by clicking the +/- symbol to the right of the field. Two choices will appear; **Remove Entry** and **Add**.
To delete a drop-down entry, first select the label to be deleted, then press +/- and tap **Remove Entry**.

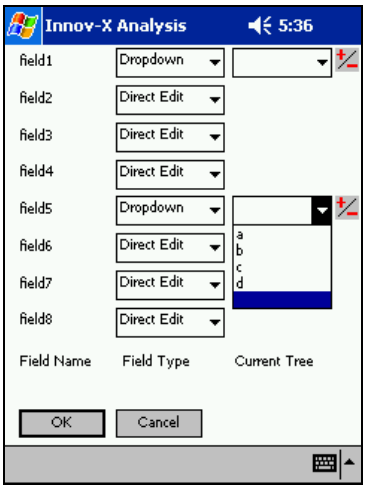


To add an entry from a drop-down list, tap the +/- symbol next to appropriate field, and select **Add**. Type the new info into the blank text box that appears. Select **OK** and the entry will be added to the drop-down menu.



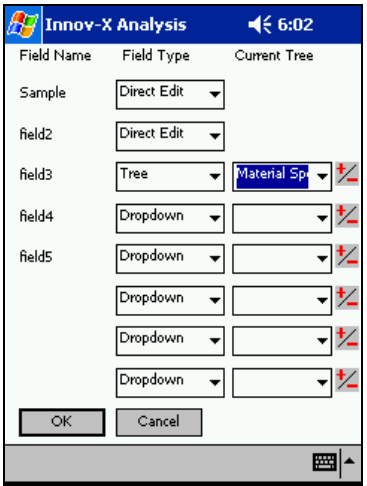
Repeat the process above to complete the complete drop-down list.

If it is anticipated that a drop-down field will not be used for all samples, enter an empty field as a choice so you can choose to leave the field blank.



4.6.1d Changing Tree lists.

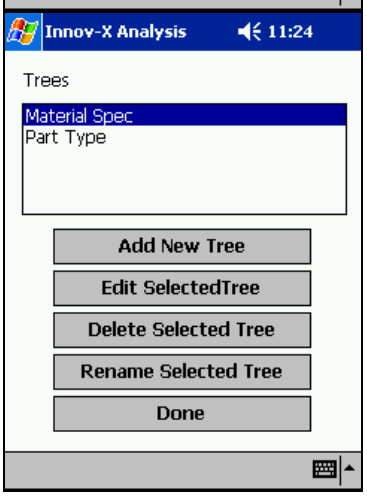
Once a field has been designated a tree, modifications to the contents of the tree can be made by tapping the +/- symbol to the right of the tree.



All modifications to trees are made from the menu shown on the right.

It is possible to add, edit, delete or rename trees. Select the appropriate choice from the menu to perform any of these functions.

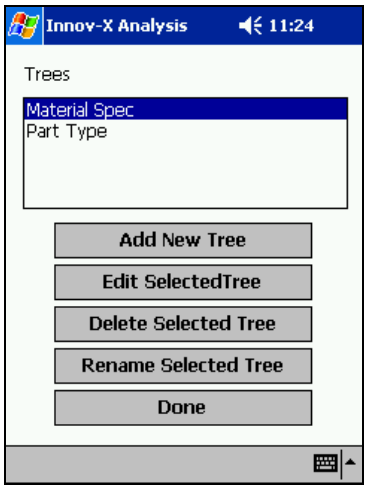
When you have finished creating/editing your tree, highlight it and select **Done.**



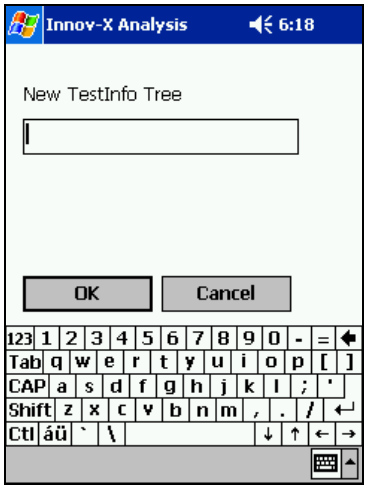
The following is an example of how a user might create a tree:
A manufacturer of tubes and valves tests all parts to ensure that they're made of the proper material. The company's QC procedure involves labeling each test with the part number of the item. Rather than forcing operators to look through a long list of part numbers, a tree is created in order to subdivide the parts number into groups based on part type.

The procedure for creating the tree is as follows:

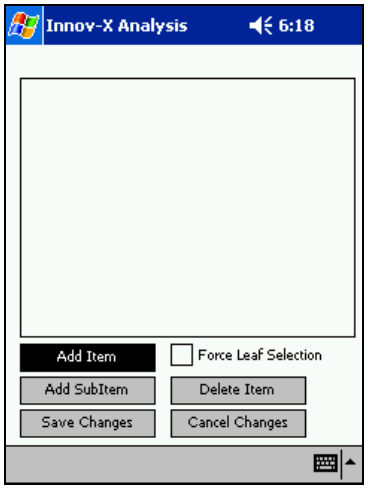
Select: Add New Tree:



Enter the Name of the Tree in the text box and select OK.



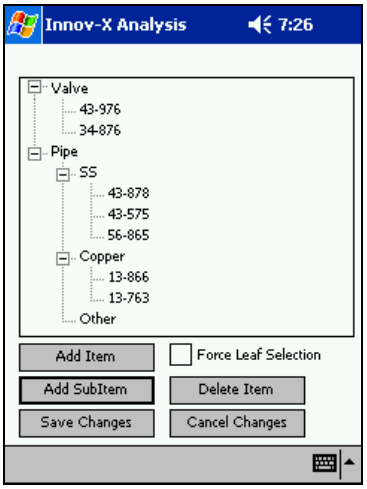
Tap Add to add the first item



Enter the name of the item

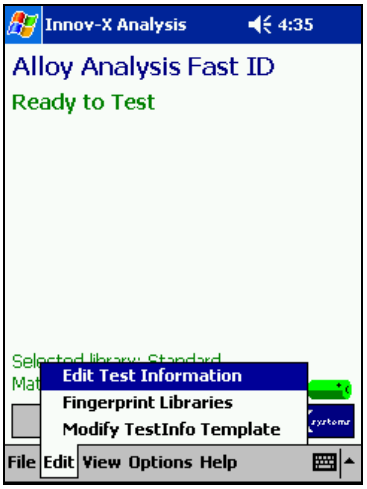
Once the tree is started, continue to Tap Add Item to add a top level menu item, or select an item and tap Add SubItem to link a subcategory to the item. Continue until all items have been added.

In this example, the part numbers for pipes and valves are separated into categories. The pipes are further subdivided by material type.

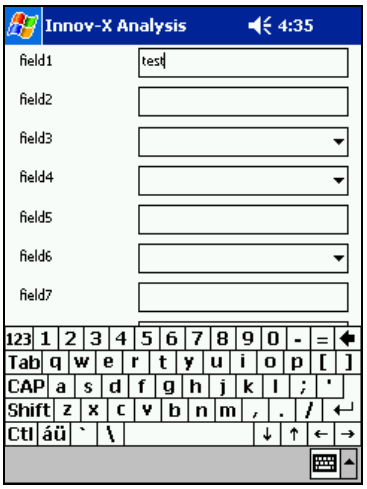


4.6.2 Entering Test Information

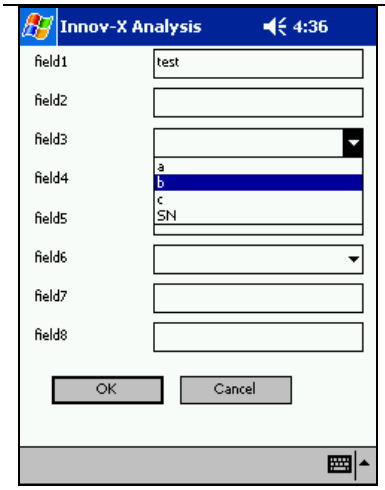
1. To enter the Test Info screen, you must be in the Analysis Screen. If the Results Screen is open, tap the ⊗ in the upper right hand corner to return to the Analysis Screen. From the Analysis Screen, select ***Edit→Edit Test Information,*** or tap the **Info** icon.



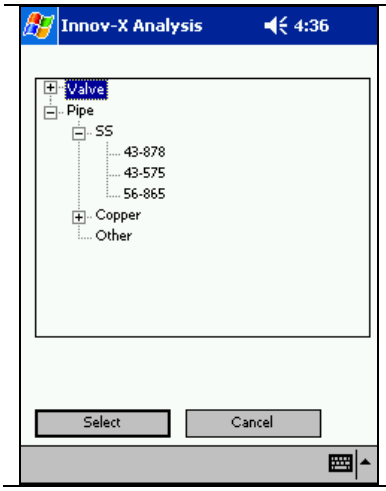
2. To enter a unique sample name or number, select a direct entry field by tapping anywhere within the field. Use the virtual keyboard to enter the information.



3. To select information from one of the drop-down menus, tap the arrow to the right of the box. Select the desired entry.



4. Some drop-down fields are formatted as trees. To select information from these fields, tap the arrow to the right of the box. A screen will appear showing options. The plus (+) symbol will appear before some choices indicating the presence of sub-items. Tap on the + symbol to expand the menu. Tap on any item or sub-item to select it, then press **Select**.

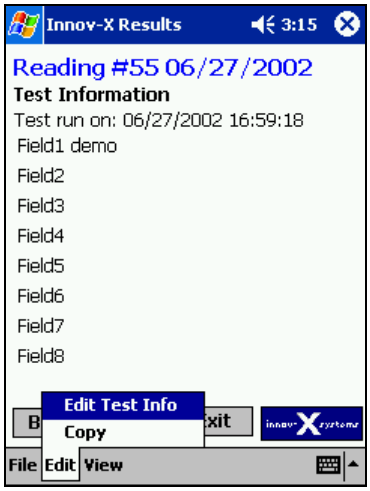


5. When all the necessary data have been entered. select OK
6. The information entered in the test info screen will be saved with each reading until the test info screen is modified again.

4.6.3 Editing Test Info from the results screen

Test information can be edited, or added to a test after its completion.

- From the results screen, scroll to the reading to be modified.
- Select ***View →Test Info*** to see in the information which is already stored.
- Select ***Edit → Edit Test Info*** to bring up the editing menu.



You will then be presented with the same test information screen described in **Section 4.5.2: Entering Test Information.**

4.7 EXPORTING AND ERASING DATA

Because the memory of the iPAQ is limited, you should periodically backup the data on your analyzer, and erase the memory. Depending on test volume, it is recommended that all data is erased on a weekly or monthly basis.

4.7.1 Installing ActiveSync

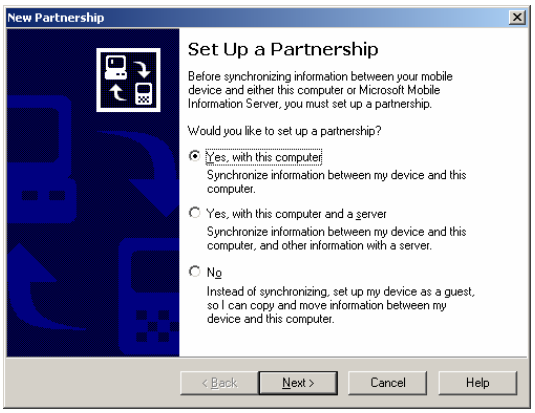
In order to copy files between the iPAQ and a desktop PC, Microsoft Active Sync Software must be installed on the desktop PC. Innov-X strongly recommends that you download the latest version of ActiveSync from the internet. ActiveSync v3.7 may be downloaded from http://www.microsoft.com/windowsmobile/resources/downloads/pocketpc/activesync37.mspx

If it is not possible to download the latest version, an ActiveSync CD (v3.5) was shipped with your analyzer. Check behind the foam in the instrument case.

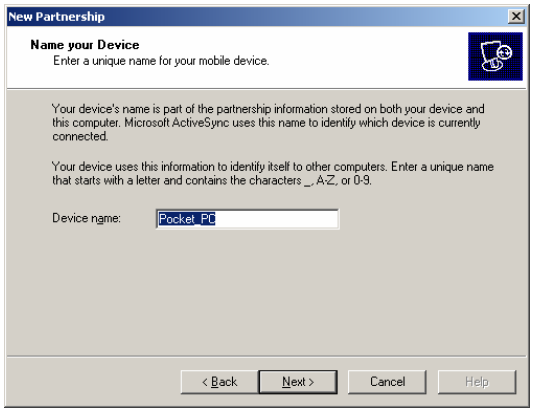
The iPAQ cradle should be hooked up to the USB port on the desktop computer before installing software.

The Procedure for installing and setting up ActiveSync is as follows:

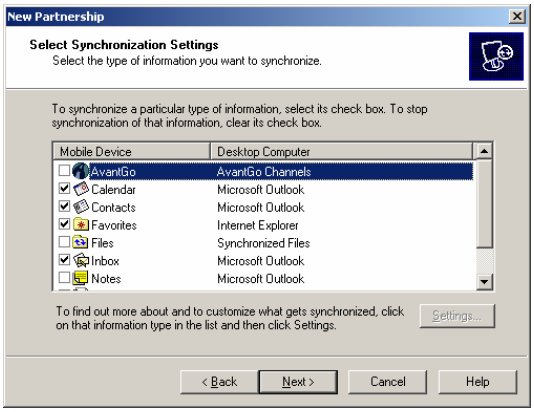
1. Insert the ActiveSync CD in your CD Drive. It will start automatically. The CD contains information about Getting Started with Your Pocket PC. This changes periodically, so it's difficult to describe exactly what the screens will look like. Step through the screens until you see the option "Install ActiveSync." Select this to start the installation process.
2. Follow the prompts on the screen. When given the choice, select "Run this program from its current location" and click OK.
3. Complete the install process. You will be required to restart your computer in order to complete the installation.
4. After restarting your computer, dock the iPAQ in the cradle. The iPAQ should automatically communicate with your computer. If it doesn't, check the connections and try removing the iPAQ and reseating it. If that doesn't work, try doing a soft reset on the iPAQ
5. When the computer communicates, you will be prompted to "Set Up a Partnership." Select "Yes, with this computer"



6. Enter a name for your iPAQ and click next.



7. You will be prompted to "Select Synchronization Settings." **Select "Files" only**. ***It is important to make sure that* Files *is the only item checked. Otherwise, the files such as address books and emails will be copied from the desktop computer to the iPAQ.***



8. Step through the rest of the process.

9. A folder will automatically be created on the PC's desktop with the name of the device entered in step 8 above. Results files saved on the iPAQ will automatically be synched and will be stored in this folder. Opening this folder and clicking on the name of the file will open the file in Excel.

10. After ActiveSync is set up correctly, copying results to a desktop computer will consist of

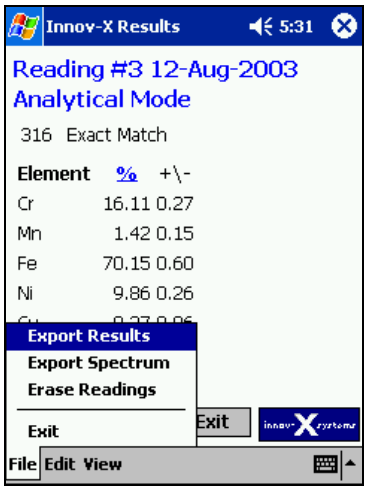
a. Exporting results on the iPAQ. (described in section 4.6.2)
b. Synching the iPAQ to the computer
c. Opening the results in Excel for viewing, or printing.

4.7.2 Exporting Results

All data from your Innov-X Systems analyzer can be exported as a comma delimited text file (csv). This format allows the data to be easily exported to spreadsheet programs. It is possible to export all data from a single day, or to export all data saved in the iPAQ. Results and spectra are exported separately.

To export or erase data, you must be in the Results Screen. This is automatically opened when a reading is taken, or can be accessed by choosing ***View→Results*** from any analysis screen.

From the results screen, select ***File→Export Results***

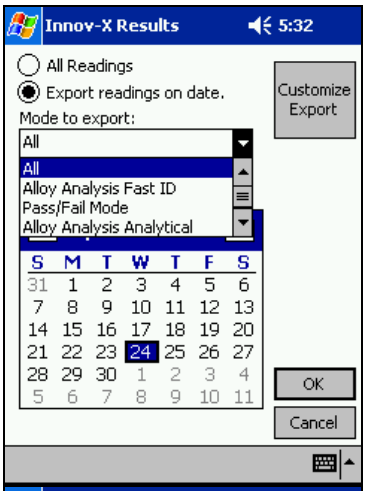


You can choose to export All Readings or just Readings on a specific date. Choosing **All Readings**: will export all readings saved in memory and is a good choice if you want to backup all data stored on the instrument before deleting. If a large number of readings stored, this option will take several minutes.

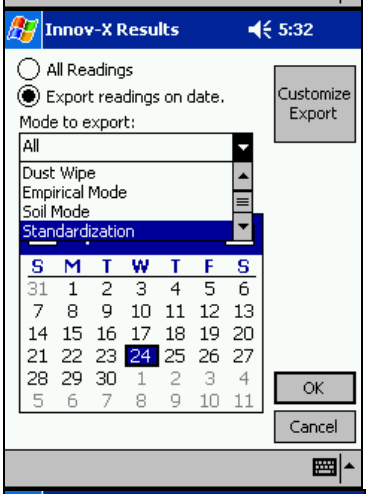
Choosing **Export Readings on date** requires that you pick a date from the calendar below. It is strongly recommended that you use this option and export data on a daily basis.

The customize export option allows users with administrative password privileges to customize the format in which data is exported. This is described in **Section 4.7.3: Customizing Results Export**.

After choosing which readings to export, you may choose to export all data, or just data from a specific mode. Selecting the arrow to the right of the mode to export will open a drop-down menu. Select the mode for which you want to export data.

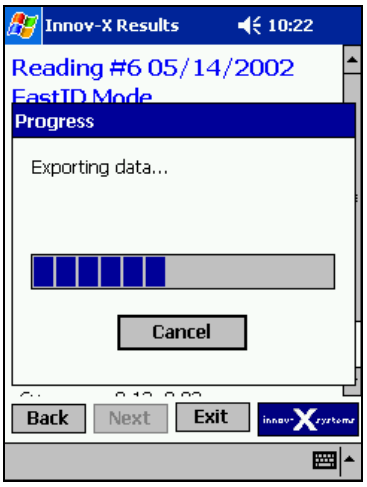


All standardization data are stored as results files. These data are automatically included in exported results files when the selected "Mode to export" is **All.** Additionally, it is possible to export only the standardization data by selecting **Standardization** as the "Mode to export."

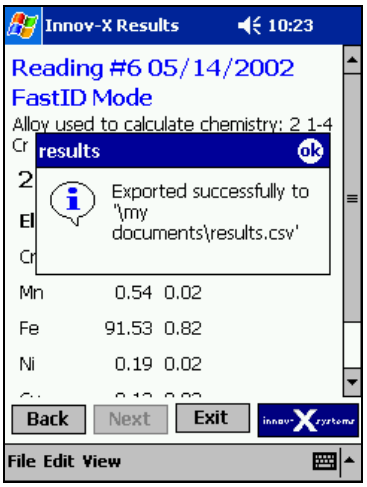


When the proper selections have been made, select **OK**. A **Save A**s box will appear. Select the folder in which you want to save the data, and name the file. The file Type will always be **Comma Separated Values**. The recommended Location is Main memory and Folder is **None.** This will export files into the "My Documents" folder in the main Memory of the iPAQ.
If you select a File Name which already exists, you will be asked if you want to replace the existing file. If you do, select **Yes**. Otherwise select **No** and choose another file name.

A status bar will indicate the progress of the export. It may take several minutes to export many readings. Daily downloading and weekly erasing of data simplifies and shortens this procedure.



When all readings are exported, a message will appear confirming the export. Tap **ok** to acknowledge and clear the reading.



4.7.3 Customizing Results Export

All units come with a standard results export format which reports a variety of information relevant to a test. Users can select which fields are exported as well as modify the order.

To modify exported results files, select **File →Export Readings** from the Results screen.

Tap the **Customize Export** box.

Enter the administrative level password when prompted.

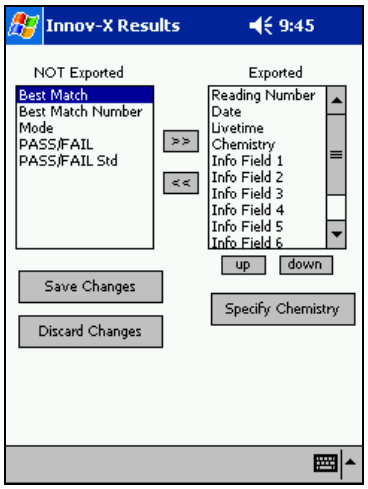
Two columns appear on the screen; the column on the left lists fields which will NOT be exported, and the right-hand column lists fields which will be exported.

Fields can be moved from one column to another via the >> and << buttons located in the center of the screen

Exported field order can be changed by using the **Up/Down** buttons. Select a field and move it up or down as desired

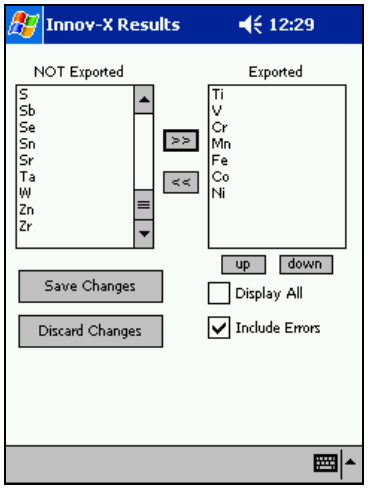
Once all changes have been made, choose **Specify Chemistry** if changes need to be made to the list of exported elements.

In chemistry is not edited, select **Save Changes** to keep the modified settings, or **Discard Changes** to ignore any changes.



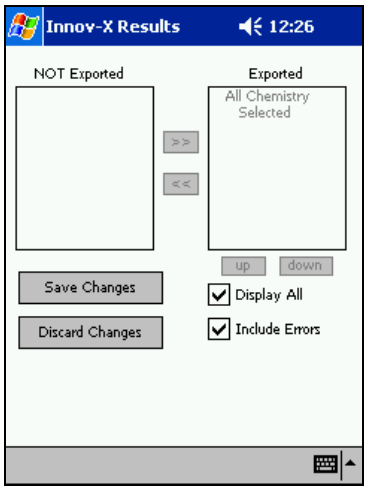
The Specify Chemistry screen resembles the previous screen. Move elements to the appropriate column, depending on whether or not an element should appear in exported files.

Select **Include Errors** to export the error associated with each measurement.



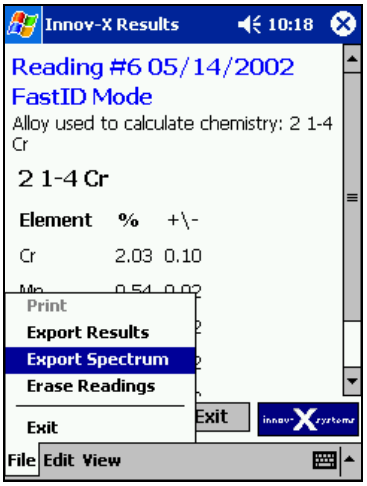
Select **Display All** to include all measured elements. *This setting is recommended, as it will ensure that all data measured with the instrument is exported.*

When all changes have been made, tap **Save Changes** or **Discard changes,** depending on whether the changes should be saved.

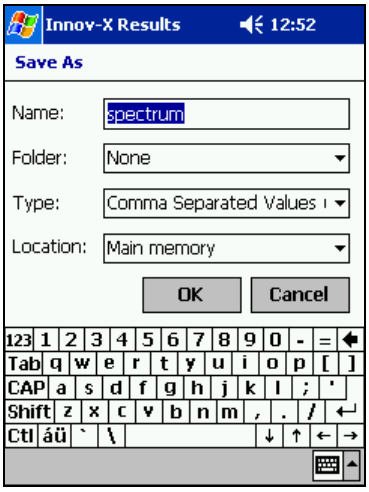


4.7.4 Exporting spectra

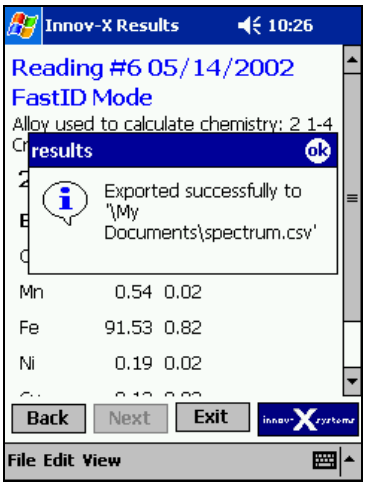
Only one spectrum may be exported at a time. In the results screen, scroll to the reading for which you wish to export the spectrum, and ***Select File→Export Spectrum***.



Choose the File name, and make sure that **Comma Separated Values** and **Main Memory** are selected. This will save the spectrum to the My Documents folder in the Main Memory of the iPAQ.



A message will appear indicating a successful export. Tap **ok** to acknowledge and clear the window.



4.7.5 Erasing readings

It is possible to erase a single reading, a range of readings, all readings from a specific data, or all readings before a specific date.

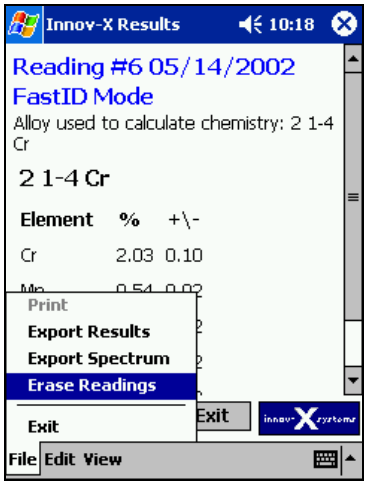
In order to erase a single reading, the reading to be erased must displayed on the screen before selecting delete. If necessary scroll to the reading you wish to delete.

In order to select a range of readings, you must have a reading open from the date you wish to delete the readings. If a reading from the desired date is not open, you may select ***View→Go to date***, and select the appropriate date.

The reading displayed in the results screen is not relevant if you want to delete all readings from a specific date, or all readings before a specific date .

From the results screen, select ***File→Erase Readings.***

A message box will appear prompting you to enter your password. Enter your administrative level password and select **OK**.

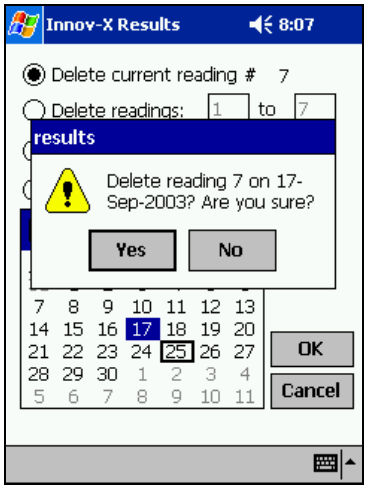


A dialogue box will appear allowing a choice of which results to delete. Select the appropriate choice:

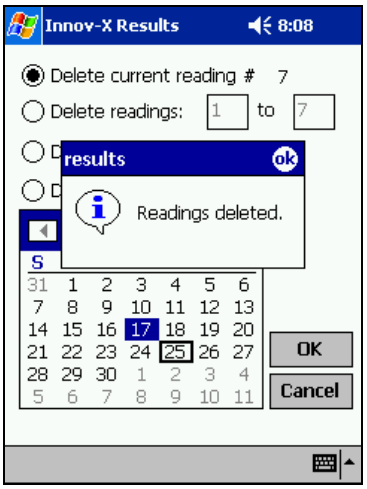
- Selecting **Delete current reading** will delete the reading that is currently open.
- Choosing **Delete readings XX to XX** will delete a range of readings from the date of the reading that is currently open.
- **Delete all readings on date** deletes all readings from a specific day.
- **Delete readings before date** deletes all readings taken prior to a specific day.

If you select **Delete all readings on date** or **Delete readings before date**, you must specify a date from the calendar. The default date is the current date.

When you've selected the readings to delete, Click **OK**. You will be asked if you're sure you want to proceed. If you want to proceed with the data erase, select **Yes**. Otherwise, click **No.**



A message will indicate the readings were successfully deleted. Tap **ok** to acknowledge and clear the message window.



Chapter 5 Soil Analysis

The Innov-X analyzer can be used to analyze in situ (directly on the ground), bagged or prepared soil samples. A guide to Soil analysis using field portable X-ray fluorescence is found in the appendix. This document summarizes EPA Method 6200 which is the standard protocol for field screening. It also provides information on prepared sample testing.

5.0 CHECK STANDARDS

It is recommended that a check standard is measured after each standardization, and periodically throughout the day. Innov-X provides several NIST certified standards for verification. The certified values for these samples are provided in the appendix. At least one standard should be measured for a minimum of 1 minute. Elemental concentrations for elements of interest plus or minus the error on the reading should be within 20% of the standard value. The Field screening guide in the appendix describes in more detail recommended quality assurance considerations.

The standards provided with the XRF analyzer are contained in XRF sample cups with a Mylar window (through which the soil can be viewed) on one side, and a solid cap on the other side. Samples should be measured in the sample cup, through the Mylar window. The best way to measure a prepared sample is using the test stand. If this is not available, the sample may be placed on the ground, and the analyzer may be pointed downwards in full contact with the soil cup. Do not hold the soil cup in your hand while measuring.

5.1 SAMPLE PRESENTATION

In situ testing:

In situ testing is performed by pointing the analyzer at the ground. Any grass or large rocks should be cleared away and the analyzer should be held such that the front of the probe head is held flush to the ground.

Since dirt can accumulate on the analyzer window, it is recommended that the window is wiped clean after each analysis. The window should also be checked to ensure it is not ripped or punctured. Instructions for replacing the window are found in the appendix.

Bagged or prepared sample testing:

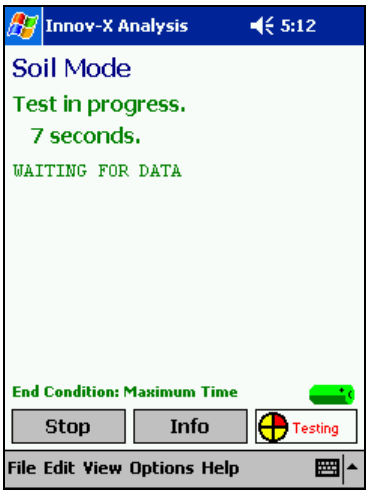
It is strongly recommended that all prepared samples be analyzed in the testing stand. Samples should be placed on top of the testing stand, completely covering the window. **Never hold prepared or bagged samples while testing,** as this could expose the operator to the x-ray beam.

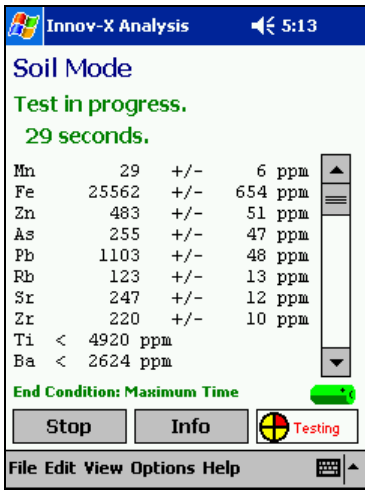
Avoid measuring very thin samples, as this can affect results. Prepare samples cups to contain at least 0.5 inches of packed samples. When analyzing bagged samples, make sure that sufficient sample exists in the bag to completely cover the window with a sample thickness of a minimum of 0.5 inches.

5.2 TESTING IN SOIL MODE

After the instrument has been standardized, testing can begin. Simply pull the trigger or press **Start** on the iPAQ screen to begin the test. The red warning light on the top of the instrument will blink, indicating X-rays are being emitted. The screen will display the words “Test in progress” and the time elapsed. The word “Testing” will blink on and off in the low right hand corner of the screen.

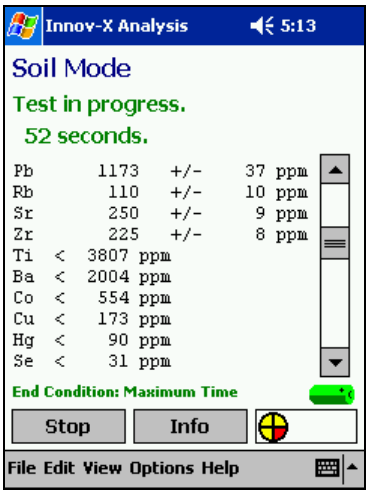
After a minimum time has elapsed, intermediate results will be displayed on the screen. Until this minimum time has elapsed, the words "WAITING FOR DATA" will appear instead. This minimum time can be set by the user by selecting ***Options→Set Testing Times***, which is described in **Section 5.4: Soil Mode Options.** Each line of the results display shows the name of an element, its calculated concentration and the error on the measurement. This error is the 1 sigma error on the counting statistics of the measurement. The error will decrease with increased testing time.





Too many elements are measured in soil mode to display them at one time. However, is possible to use the scroll bar located to the right of the chemistry display to view other elements. The complete display shows detected elements first, listed in order of emission line energy, from lowest to highest. Following the detected elements are the elements which are below the detection limit of the instrument. These elements are shown as less than a calculated LOD. This LOD is defined as three times the error on the counting statistics of the measurement.

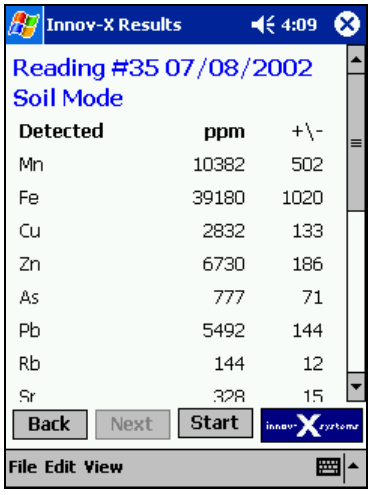
When the measurement is complete the results screen will open, displaying the final results of the measurement.

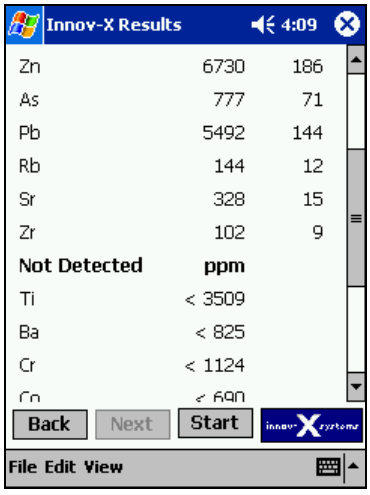


5.3 SOIL RESULTS SCREEN

5.3.1 Results View Menu

The standard Soil Mode results screen displays the concentration (in ppm) and error in measurement for detected elements, followed by the list of non-detected elements with the calculated limit of detection for each element for that test. If the display does not show soil chemistry results, change the display by selecting ***View→Results***.

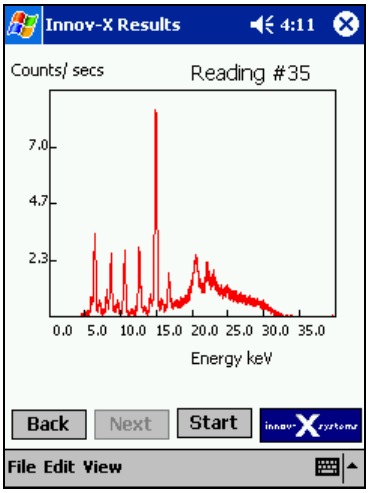




The standard soil chemistry display can be modified by using the View Menu. As with all Innov-X analytical modes, it is possible to view spectra and Test Information.

5.3.2 Spectrum Screen

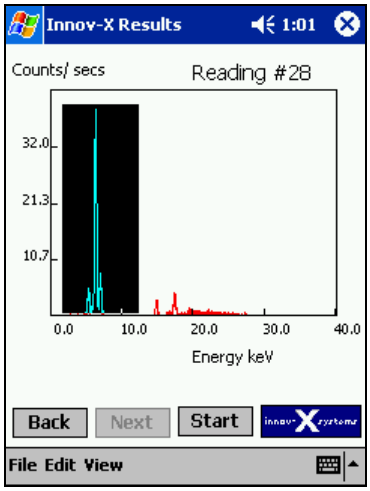
This screen displays a plot of the x-ray fluorescence spectrum for an individual test, plotting the intensity on the y-axis versus the energy of the fluorescence x-rays on the x-axis.

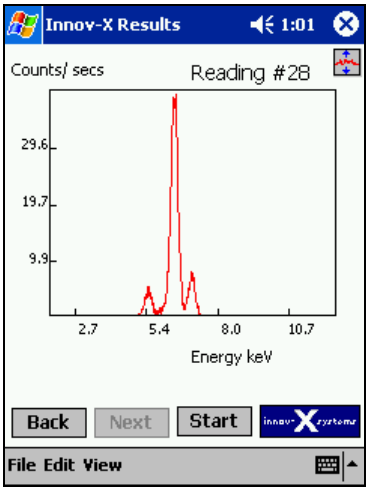


Tapping on the spectra will show the energy scale and counts rate at the selected point

It is possible to zoom in on certain areas of the graph by selecting one corner and drawing out the region

Tapping the symbol in the upper right hand corner beneath the X will restore the graph to full scale.





5.3.3 Test Info Screen

The test information screen shows any test information that was entered prior to the start of the test. Changes to that test information can be made by selecting **Edit→Test Information.**

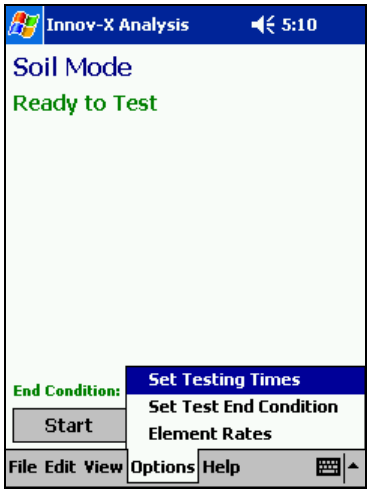
5.4 SOIL MODE OPTIONS

The length of tests in Soil Mode is user settable. Users may select a minimum testing time, and as well as choose from a variety of test end conditions.

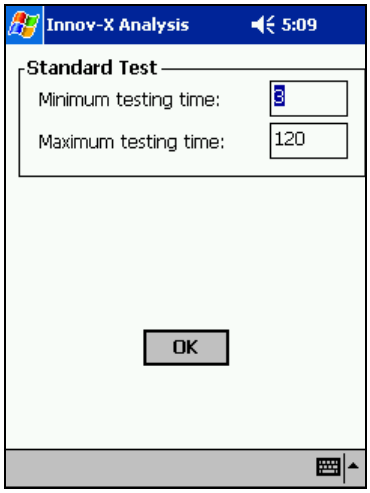
The options related to test time are contained in two menus: ***Options→Set Testing Times***, and ***Options→Set Test End Condition. Set Testing Times*** contains minimum and maximum testing time information, while ***Set Test End Condition*** allows the user to select test end conditions.

5.4.1 Set Testing Times

To set the minimum and maximum test lengths, select **Options→Set Testing Times**



A screen appears prompting you to enter a Minimum and Maximum Testing times. Instruments equipped with the optional LEAP package will be able to set Light Element Testing times in this screen, as well.



The minimum testing time is the required time that must elapse before results can be calculated. Live Update results will not be displayed on the screen until the minimum has elapsed, likewise a test must complete the minimum time before any test end condition can be used. If a test is stopped before the minimum testing time has elapsed, the test will be aborted, and no results will be calculated.

Maximum testing time is relevant only if "Maximum Testing Time" is selected from **Set Test End Condition**. This will automatically end the test at a preset testing time. Typically, the maximum testing time will be in excess of 30 seconds, and may be 1 or 2 minutes, depending on detection limits and desired precision.

It should be noted, that all testing times in this section refer to "Real Time," the time the measurement takes when timed on a normal clock. The time stored with each analytical result (accessible by selecting **View→Test Information** from the Results screen), refers to the test's "Live Time". This is the amount of time that the analyzer hardware was collecting spectra. Since there is some detector dead time associated with a measurement, the live time of a test will be slightly shorter than the preset "Real time".

5.4.2 Soil Mode Test End Condition

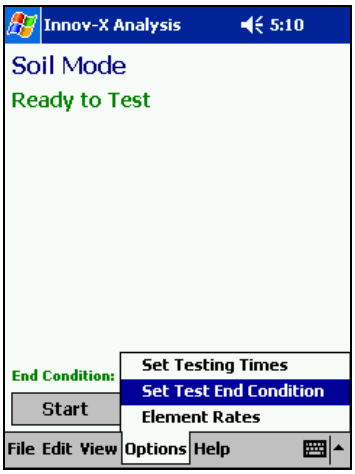
Four options exist for the test end criteria in soil mode. Depending on your application, you may choose to end the test manually, at a preset testing time, or when the uncertainty in the measurement is within a

specified relative standard deviation of the reading. Additionally, you can set up an action level for a single element. As soon as the measuring statistics are good enough to ensure that that the reading is above, below or at the action level, the test will end automatically. This allows for very rapid tests for elements that are well above or below an action level.

In all modes, pressing Stop, or pulling the trigger will end the test. If the minimum testing time has elapsed, results will be calculated. Otherwise the test will be aborted without calculating results.

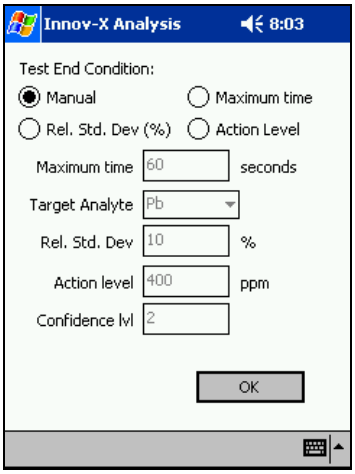
Changes to the test end condition are made by selecting ***Options→Set Test End Condition***

The currently selected end condition will be displayed at the bottom of the screen above the Start button on the Ready To Test screen.



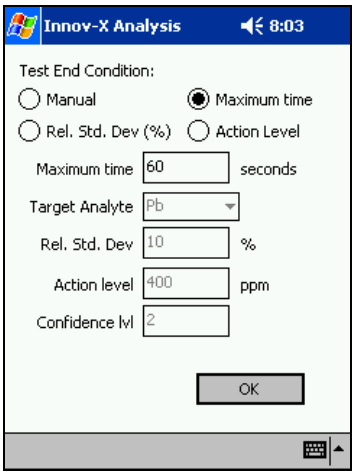
Manual: This option allows you to look at the results which are being continually updated on the screen and determine when the results look satisfactory. The test will continue until the trigger is pulled, or **Stop** is tapped on the iPAQ screen. Results will be calculated if the testing time has exceeded the Minimum Test time which is set up in ***Options→Set Testing Times***. In order to preserve battery life, the software will stop if the testing time exceeds 300 seconds, since there is little to no advantage to continuing a test beyond 300 seconds.

To use Manual Test End Condition, simply choose ***Options→Set Test End Condition*** and select **Manual**. Press **OK** to return to the analysis screen.



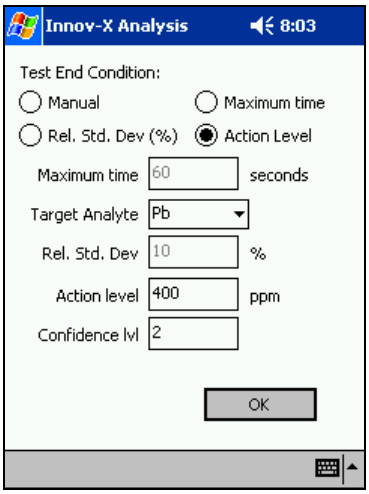
Maximum Time: If Maximum Time is selected, the test will continue until the preset time is reached. This is useful if you wish to do a set of measurements with the same testing time.

To choose to end test based on a maximum time, select ***Options→Set Test End Condition*** and select **Maximum Time**. Enter the desired testing time in the appropriate box. Tap OK to save your selections.



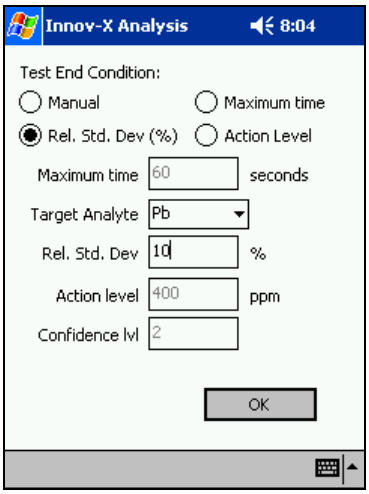
Action Level: System ends test when result for target analyte including chosen precision level is above or below pre-set action level.

To choose to end a test based on an Action Level, select ***Options→Set Test End Condition*** and select **Action Level**. Select a target analyte, specify an action level in ppm, and a confidence level. This confidence level refers to the number of sigma required for the precision. This should typically be set to 2. Tap **OK** to save your selections.



Relative Standard Deviation (RSD): When RSD is selected as a test end criteria, the system will end a test when the relative standard deviation on a target analyte reaches a pre-set level. This standard deviation is specified as a percentage of the reading. For example, if the measured value for an analyte was 1000 ppm, and the RSD was set to 10, the reading would stop when the error reached 100 ppm, or 10% of 1000.

To choose to end a test based on a Relative Standard Deviation, select ***Options→Set Test End Condition*** and select **Rel. Std. Dev (%).** Select a target analyte and the desired Relative Standard Deviation. Tap **OK** to save your selections.



5.5 LEAP Mode (Light Element Analysis Program):

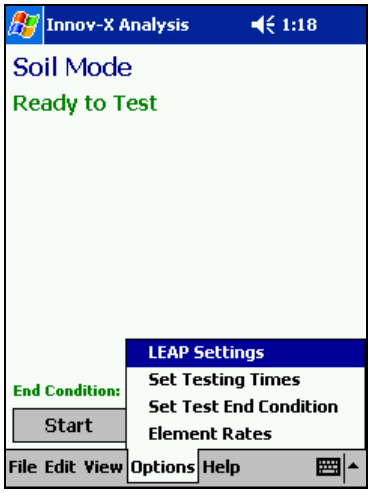
This is a factory installed optional module. Instruments can be upgraded to LEAP capabilities. Please contact the Innov-X Systems Sales department for information and pricing.

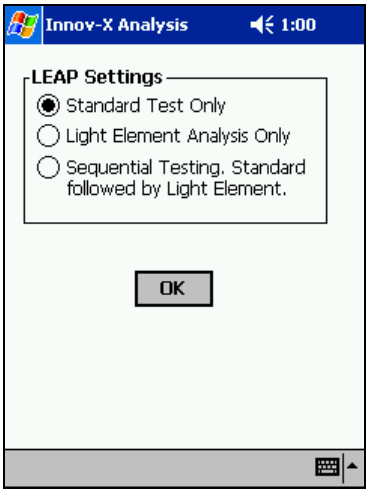
The LEAP module provides the lowest possible detection limits for elements lighter than iron. The standard LEAP package includes the elements Ti, Ba and Cr. Elements as low as Phosphorus can be detected with the Advanced LEAP package which includes a thin window detector.

The standard x-ray beam conditions used by Innov-X environmental analyzers are designed to provide good excitation for a wide range of detected elements. However it is not possible to select one beam condition which provides the absolute best excitation conditions for all elements of interest. Elements such as Chromium produce lower energy x-rays then other elements analyzed. These lower energy x-rays are not as effectively excited by the standard conditions. LEAP works by changing the X-ray tube beam conditions to settings which are optimized for the detection of elements lighter than iron. Instruments are factory calibrated with the LEAP beam conditions for all applicable elements.

5.5.1 LEAP Settings

To activate LEAP, select ***Options→LEAP Settings*** from the Soil analysis screen. This brings up the menu shown below on the right.



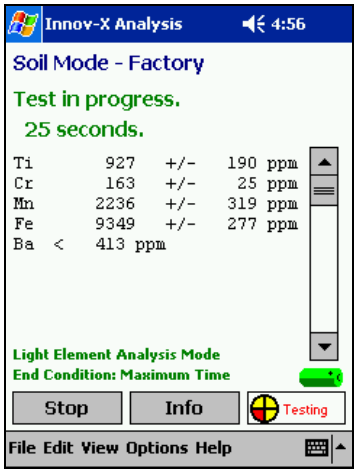


Standard Test Only: The analyzer will provide analysis for the standard suite of elements.

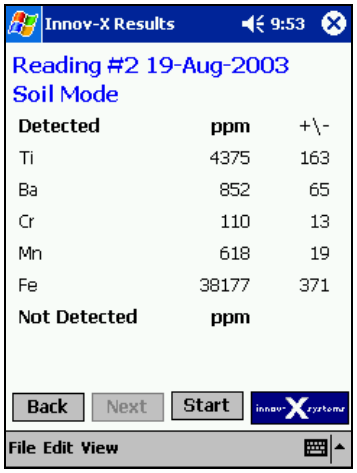
Light Element Analysis Only: The analyzer will provide analysis for elements in the LEAP suite (Typically Ti, Ba and Cr)

Sequential Testing: When sequential testing is selected, all tests will start with an analysis of elements in the standard suite. If that test ends due to reaching the selected end condition of Maximum Test Time, Action Level, or RSD, then the analyzer will immediately begin a second test analyzing the LEAP suite of elements. At the conclusion of this test, the Results screen will open with two new entries. The first summarizes the standard test results, while the second summarizes the LEAP results. For safety reasons, the second test will not begin if the test ends due to user intervention (pulling the trigger or hitting Stop). In this case, the Results screen will open with only one reading.

If Light Element Analysis Only is activated, the words "Light Element Analysis Mode" will appear above the currently selected End Condition. Instrument operation in this mode is identical to Standard (Non-LEAP) analysis. Tests can be started or stopped either by pulling the trigger, or by tapping the Start/Stop button on the iPAQ screen. The results screen for a test will show results for all elements analyzed with the LEAP mode.

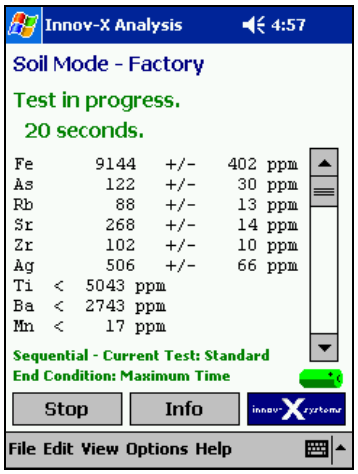


Test in progress screen, LEAP Only, Live Updates on

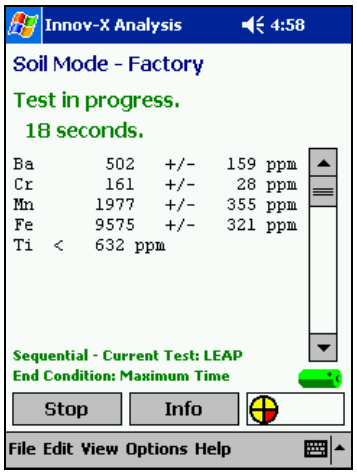


Results Screen Showing LEAP results

If Sequential testing is selected, the words “Sequential – Current Test: Standard” will appear above the currently selected End Condition. When a test is started, the instrument will appear to operate in the same manner as a Standard test. However, if the test ends according to the specified end condition (excluding Manual), the results screen will not open. Instead, the timer will reset to 0, and the description of the current test will change from “Standard” to “LEAP”. The live update screen will begin to show analysis for all LEAP elements.



Test in progress screen, Sequential.
First Test – Standard Analysis.

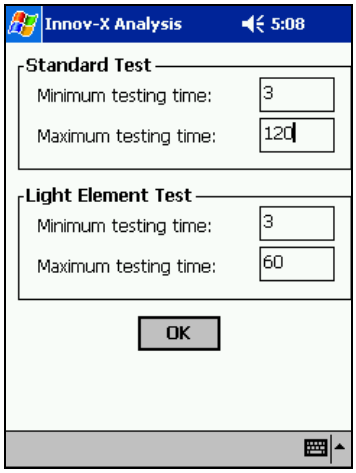


Test in progress screen, Sequential.
Second Test – LEAP Analysis

5.5.2 Testing Times

To set the minimum and maximum test lengths for LEAP analysis, select **Options→Set Testing Times.**

The testing time screen includes an extra section labeled “Light Element Test” that is not found on non-LEAP systems. These are the minimum and maximum test lengths for any LEAP tests.



As with standard tests, the minimum testing time is the required time that must elapse before results can be calculated. Live Update results will not be displayed on the screen until the minimum has elapsed, likewise a test must complete the minimum time before any test end condition can be used. If a test is stopped before the minimum testing time has elapsed, the test will be aborted, and no results will be calculated.

Appendix 1: Troubleshooting Guide—Soil Analysis

Problem	Possible Solutions
Software won't start: Software will not start when the Innov-X Systems Icon is tapped.	The flash card or the iPAQ may not be correctly seated in the black external sleeve. Remove the flash card and press it firmly into its holder. Press the iPAQ down into the black sleeve.
Software won't start: Software doesn't start when the Innov-X System icon is tapped; instead, the following error message occurs: "Cannot find 'startup' (or one of its components). Make sure the path and filename are correct and all the required libraries are available"	The flash card or the iPAQ may not be correctly seated in the black external sleeve. Remove the flash card and press it firmly into its holder. Press the iPAQ down into the black sleeve.
IPAQ locks up: iPAQ screen "locks up" and doesn't respond when screen is tapped or buttons are pressed	Remove the iPAQ from the analyzer and perform a soft reset by pressing the tip of the stylus into the small indentation found on the bottom of the iPAQ. If the iPAQ is lying flat on a table with the screen facing upwards, the reset button is found to the extreme right of the side containing the power plug and connector. See Page 4 of the Compaq "Getting Started" manual for an illustration showing the location of the reset button.

Analyzer will not standardize	Try again. Choose File -> Standardize to attempt a new standardization. Also be sure the standardization cap is on correctly, and that the solid half is in front of the window. It is OK to try this 2-3 times in the event of a failure. If a repeat attempt fails: Change the battery. In some cases the battery may be too low to provide enough power for tube startup. Follow this procedure: Reset the iPAQ; Turn off the analyzer and remove the battery. Verify that the battery is completely charged. If it is not, replace it with a fresh battery. Even if the battery has been recently recharged, remove it, and replace it in the analyzer. Restart the analyzer and software. Wait several minutes after the software has initialized before attempting standardization.
Results screen doesn't show new readings after a test is completed	Check the date on the iPAQ. The Innov-X Systems software indexes stored results by date. If the date is incorrect, results may not be displayed in the correct order.
Serial Communication Error Message: Serial Communication error occurs because iPAQ has been removed from instrument or cradle, with the software open and the instrument standardized.	This error reflects the temporary loss in communications when the iPAQ was removed. To avoid this problem, always use the **File / Exit** command to exit the software properly. Try simply removing and reseating the iPAQ to solve this problem. If that fails, see steps 1 – 4 below.
Serial communication error on startup, or while testing.	1. If the analysis screen is still open, attempt another test. 2. Verify that the iPAQ is correctly seated in the analyzer by removing and replacing it. 3. Remove the iPAQ and perform a soft reset. Replace iPAQ and restart software. 4. Turn the analyzer off and restart it.

Results take a very long time to display on the first test of the day.	There may be too many readings stored in memory. Erase readings from the results screen by selecting ***File → Delete Readings***.
Trigger will not start test.	Verify that the trigger lock is off. Reset the instrument. If this fails, call Innov-X Systems Technical Support at 781-938-5005.
Broken Kapton Window	The window is designed as a barrier to dust and dirt. If it is damaged, it should be replaced. To change the window: Turn off the analyzer Remove the screws holding the front plate in place. Remove the old kapton and adhesive, replace with new kapton and replace front plate. **Important Note:** It is very important to avoid getting dirt and sharp objects within the probe, due to the close proximity of the detector. Do not use the analyzer without a kapton window for any length of time. Also, be very careful when removing/replacing screws in face plate so as to not accidentally damage the detector. If the detector is damaged, the instrument will require factory service.
Results screen shows message "Error in calculation: No Results"	The soil mode calculation is only valid for "soil-like" samples which contain primarily light elements such as carbon, oxygen and silicon. If a dense, highly metallic sample is analyzed, the calculation fails. Make sure the sample being analyzed is a soil sample, if it is and this message occurs repeatedly; call Innov-X technical support.

Appendix 2:

Metals in Soil Analysis Using Field Portable X-ray Fluorescence

A guideline to using portable XRF according to EPA Method 6200, basic overview of the technique of x-ray fluorescence (XRF), appropriate data quality assurance protocols and sample preparation steps for operators analyzing prepared soil samples.

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Section 1: Regulatory Status for Field Portable XRF

EPA Reference Method 6200 has been incorporated into SW486 under RCRA, and is now available for field portable XRF analysis of soils and sediments. Please call or email Innov-X Systems for a copy of Method 6200.

Method 6200: Field Portable XRF Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment.

Features of this method:

1. It is a field screening method, for analysis of *in-situ* or bagged samples.
2. The method provides basic quality assurance methods, including calibration verification, determination of instrument precision, accuracy and limit of detection.
3. The method recognizes the some XRF instruments do not require site-specific calibrations by the operator, that is, the factory calibration provides appropriate data quality.
4. The method recommends that a minimum of 5-10% of samples tested by XRF be confirmed by an outside laboratory using a total-digestion EPA analytical reference method.

The purpose of EPA Method 6200 is NOT to replace laboratory analysis. There are two primary sources of error in assessing a site for metal concentration: **Analytical error** and **Sampling error**. Analytical error is the error in the analysis of any one sample by whatever technique is used, for example XRF, ICP, or AA. Sampling error arises when too few samples are collected and tested. In this case an incomplete picture of the extent of metals contamination may be obtained. Although any one sample may be analyzed with very high analytical accuracy, measuring too few samples may result in contamination plumes being mis-judged in size, or depth into the soil. In extreme cases contamination may missed entirely.

EPA Method 6200 was developed to reduce Sampling Errors by increasing the number of samples measured. In general, a large number of screening-level measurements provide a better characterization of contamination than a small number of measurements produced by sample removal and analytical analysis. Portable XRF is an ideal tool to make a large quantity of measurements in a short period of time. A large number of in-situ samples provides detailed data on contamination profiles, depth (provided surface soil is moved aside), and approximate contamination levels. Portable XRF also can provide results with a high degree of analytical accuracy on any given sample. Please see Section 2 “Overview of Field Usage” for this discussion.

Section 2: Overview of Field Usage:

Field portable XRF is generally used in three ways to test for metals in soil:

- **In-situ soil testing:** The XRF is placed directly onto the ground for soil testing. Operators remove any plant growth and foreign objects so that the analyzer probe is flush to the soil.
- **Bagged soil sample testing.** A soil sample is collected in a thin plastic bag (i.e. a "Baggie") and testing directly through the Baggie. Except for a few elements – namely Cr, V and Ba – testing through the thin plastic used for a plastic bag has little effect on the test result. Results for Cr, V and Ba will be lower by 20-30%.
- **Prepared soil sample testing.** Prepared sample testing assures the operator of the maximum possible accuracy. Prepared sample tests require a sample to be collected, dried if necessary, sieved and ground into a powder. The prepared sample is then placed into a baggie or XRF cup for analysis. **A complete Soil Preparation Guide is provided in Appendix 1.**

All analytical methods require a uniform, homogenous sample for the best results. **XRF is no different!** The methods described in EPA Method 6200, namely In-situ and bagged sample testing, are considered *field-screening methods*. Although a field-screening method, in-situ testing is a valuable technique because it generates a great deal of data very quickly. Prepared soil samples generally offer the best accuracy, albeit with several minutes of sample preparation required per sample.

Figure 1. Use of a field portable XRF for in-situ soil testing.

Subsection 2-A: Data Quality Objectives.

The objectives of the testing generally determine the mixture of in-situ versus prepared sample testing. It is important to understand your data quality objectives (DQO) in order to determine the appropriate mix of field screening and prepared sample testing.

In-situ testing usually provides only screening-level data quality. This is because analytical testing always requires a uniform, homogeneous sample matrix. A laboratory achieves this by digesting the sample into a hot acid before analysis. Testing directly on the ground does not ensure uniformity is met. Preparing a sample provides a uniform sample and likely better analytical data quality, although several minutes of testing time is required.

Most portable XRF operators use a mixture of in-situ and prepared sample testing. Several examples are described below. The exact mixture of in-situ and prepared sample testing depends upon the goals of the soil testing. The examples below serve as guidelines. Please contact Innov-X (1-866-4 Innov-X or 866-446-6689) to discuss your specific testing requirements.

Example 1: Initial site investigation to provide detailed contamination data with efficient use of laboratory analysis costs.

Problem: Site needs to be assessed for metals contamination. Little information is available about what metals are present, likely contamination levels or geographic profile of contamination.

The goal of testing is to determine what metals are present at what levels, both in area and in depth into soil. Additionally, testing will locate possible contamination plumes and/or possible sources of contamination.

Recommended Testing Plan: This example uses predominately in-situ testing. The analyst will perform in-situ testing, and gather samples into plastic bags for XRF analysis. A testing grid should be established in two or three dimensions, every several feet. XRF tests can be taken at each location or bagged samples can be collected from each location for later analysis. The in-situ data for each element analyzed may be plotted in a 2-dimensional grid (X, Y coordinates versus elemental concentration) to profile a site. These concentration profiles are ideal for showing contamination patterns, boundaries and plumes. Combining this data with historical use data from the site often allows the operator to deduce sources of contamination. Obtaining this level of geographic data with purely laboratory analysis would produce excessive analytical costs.

Prepared sample analysis should also be done to confirm the regions where in-situ data indicates low or non-detected levels of metal contaminant. There is little need to prepare areas where in-situ testing indicates high concentration levels. Innov-X recommends the same procedure as EPA Method 6200. For locations where in-situ tested indicate low or non-detected concentrations, calculate the total number of in-situ tests, collect 5% of this number of tests from the various locations, and prepare these samples according to Appendix 1. Use these prepared samples to confirm the findings of the in-situ testing. Send a subset of these prepared samples to a laboratory for confirmatory results.

Cost Justification. To adequately characterize a site may require 100-200 samples/acre to be sure the contaminated areas are firmly established. This work may be done with in-situ testing to generate laboratory savings of $5,000 - $10,000/acre depending upon the number of elements being analyzed. The cost reduction in off-site analysis often justifies the price of the XRF.

Example 2: Monitor remediation efforts and assure site meets clearance levels before contractors leave the site.

Goal: Minimize remediation costs by only treating contaminated soil, and obtain immediate verification that various site locations meet clearance objectives.

Recommended Testing Plan: This type of project uses a lot of both in-situ and prepared sample testing. Use in-situ testing to thoroughly delineate contamination regions in both area and depth. To determine depth profiles, test surface soil, remove at least 1-2 inches, and retest. Repeat this step as necessary to profile contamination depth to guide remediation activities. (XRF is a surface technique and only analysis the first few mm of soil sample). As part of clearance, collect several samples from "cleared" area. Prepare samples according to Appendix 1 and test with portable XRF.

If XRF indicates that concentration levels are in excess of clearance requirements, then continue remediation efforts.

If XRF indicates that concentration levels are below clearance requirements, then discontinue remediation efforts, and send a subset of the samples to an analytical laboratory to confirm results. Most operators safely assume that the cleanup requirements have been met for the elements in question, but await final analysis from the laboratory.

If XRF lists concentration levels as non-detected, but the detection level reported exceeds clearance requirements, send samples to a laboratory for final results.

Cost Justification: In-situ results are used to guide remediation efforts, in order to obtain maximum efficiency. Efficiency is produced because contamination boundaries are firmly established, thus avoiding remediation efforts with "clean" soil. Prepared sample testing is used to assure that clearance requirements are met on-site in near real-time (pending laboratory confirmation). Costs savings are generated by avoiding clearance failures. The contractors can leave the site earlier and will not be called back to the site for additional cleanup.

Important Note: Never clear a site based solely on in-situ testing. Always use well-prepared samples to make a clearance decision.

Example 3: Minimize volume of hazardous waste for treatment or disposal.

Goal: For some cleanup projects, the cost of soil disposal in a hazardous waste landfill is much greater than disposal in a standard landfill. Testing soil samples with XRF may minimize the amount of "clean" soil that is inadvertently shipped to a hazardous-waste landfill.

Recommended Testing Plan: This example is almost entirely prepared sample testing. Representative samples are removed from the soil being hauled to landfill. Obtaining an accurate analysis of the samples is crucial for making a hazardous versus non-hazardous determination. For this reason, prepared sample testing is strongly recommended.

Important Note: These types of samples are subject to TCLP procedures for the landfill determination. In general, 20 times the XRF result should be less than the allowable limit for the metal in question. Please contact Innov-X Systems for more details on testing samples versus TCLP regulatory requirements.

Section 3: Quality Assurance.

Quality assurance is detailed for both the proper use of the analyzer (which is also provided in Method 6200) and for verifying the data quality of in-situ testing. All operators should perform the QC procedure, regardless of their data quality objectives. Method 6200 has strict requirements about quality assurance. Additionally, Innov-X recommends that operators verify the data quality of in-situ test results, if they are using in-situ data to guide their reporting or remediation decisions. Procedures are listed below:

3.1: Proper verification of instrument operation

These procedures are taken from EPA Method 6200 and updated to be specific to the Innov-X analyzer. Quality assurance here consists of testing known standards to verify calibration, as well as testing blank standards to determine limits of detection and to check for sample cross-contamination or instrument contamination. EPA Method 6200 provides a detailed procedure, which is provided here in abbreviated form.

Components of instrument QC:

1. An energy calibration check sample at least twice daily
2. An instrument blank for every 20 environmental samples
3. A method blank for every 20 prepared samples
4. A calibration verification check sample for every 20 samples
5. A precision sample at least one per day.
6. A confirmatory sample for every 10 environmental samples

Energy Calibration Check: The Innov-X analyzer performs this automatically; this is the purpose of the standardization check when the analyzer is started. The software does not allow the analyzer to be used if the standardization is not completed.

Instrument Blank: The operator should use the SiO_2 (silicon dioxide) blank provided with the analyzer. The purpose of this test is to verify there is no contamination on the analyzer window or other component that is "seen" by the x-rays. Method 6200 recommends an instrument blank at least once per day, preferably every 20 samples. For either in-situ or prepared-sample testing, the operator should just test the SiO_2 blank to be sure there are no reported contaminant metals.

Method Blank: The purpose of the method blank is to verify that cross-contamination is not introduced into samples during the sample preparation process. Method 6200 recommends following the sample preparation procedures with clean SiO_2 once very 20 prepared samples. This QC step is not required if the operator is not preparing samples.

Calibration Verification: Innov-X provides NIST standard reference samples for calibration check by operator. The operator should perform a 2-minute test on a NIST standard. The difference between the XRF result for an element and the value of the standard should be 20% or less. Calibration Verification should be performed upon instrument startup and periodically during testing. Note: Innov-X recommends a calibration check every 4 hours. EPA Method 6200 recommends a calibration check every 20 samples NIST reference standards are generally applicable for Pb, As, Cr, Cu, Zn. Innov-X provides additional reference standards for other RCRA or Priority Pollutant metals including Cd, Se, Ag, Hg, Ag, Ba, Sn, Sb, and Ni.

Precision Verification: Quoting from EPA "A minimum of one precision sample should be run per day by conducting from 7 to 10 replicate measurements of the sample. The precision is assessed by calculating a relative standard deviation (RSD) of the replicate measurements for the analyte. The RSD values should be less than 20 percent for most analytes, except chromium, for which the value should be less than 30 percent.

Confirmatory Sample: It is recommended that one confirmatory sample is run for every 10 samples collected. According to EPA Method 6200: "Confirmatory samples are collected from the same sample material that is analyzed on site, but are sent to an off-site laboratory for formal analysis. The purpose of a confirmatory sample is to judge the accuracy of the data obtained by analysis on site and to allow corrections, if necessary."

Important Notes about confirmatory samples:

Innov-X always recommends that customers compare prepared-sample results to laboratory results. To do this, collect and prepare a sample following the protocols of Appendix 1. Take a subsample and submit to the laboratory for analysis. The single largest error in XRF analysis is lack of sample preparation. For the best comparison, always use prepared samples.

3.2: Determining data quality of in-situ testing:

For operators relying extensively on in-situ testing, it is important to determine the data quality of this testing at a given site. *This protocol is not intended for every sample, but rather for a small percentage of samples considered representative of the site.* If the operator can demonstrate that quantitative data is achieved with little or no sample preparation, then the site characterization will be completed much more quickly but correctly.

For example, an operator may be able to demonstrate that the XRF result changes considerably when samples are passed through a 2 mm sieve, but that XRF results do NOT change appreciably upon finer sieving. In this case the operator can conclude that good XRF data is achievable with only 2 mm sieving. Sieving only to this level requires far less time than a more robust sample preparation. A protocol to determine the appropriate level of sample preparation is the following:

1. Delineate a region of soil approximately 4" x 4".
2. Perform several in-situ tests in this area, or collect the top (approximately) quarter inch of soil from this region, bag the soil, test through the bag. In either case, average the results.
3. If you did not bag the in-situ test sample, collect the top (approximately) quarter inch of soil from this region and sieve through the 2 mm sieve provided. Otherwise sieve the bagged sample used for the in-situ test. Thoroughly mix the sieved sample, and place some of the sieved material into an XRF cup, and perform a test of this sample.
4. If the results of this prepared sample differ less than 20% with the average in-situ result, this indicates the soil in this region is reasonably homogeneous. The data quality in this case is probably at the semi-quantitative level, rather than just screening data.
5. If the results differ by more than 20%, this indicates the soil is not very homogeneous, and there are serious particle size effects affecting your in-situ measurements.
6. In this case, sieve the sample through the 250 ~m sieve. Mix this sample and place a sub-sample into an XRF cup for testing. If this result differs from the previous by less than 20% then this indicates that at a minimum the 2mm sieving is necessary to achieve higher data quality.

7. If this result differs by more than 20% from the sample sieved through 2 mm, then particle size effects are still affecting the XRF result. In this case samples should be sieved through 125 µm to assure data quality at the quantitative level.

Section 4: Calibration for Innov-X Portable XRF

The Innov-X analyzer may run three different calibration methods, described below. In nearly all cases, customers use the Compton Normalization method. This method (recognized in EPA 6200) offers speed, ease of use, and generally good accuracy for concentration ranges from the ppm level up to 2-3% concentrations. As most field-testing is seeking to remediate or locate environmental contaminants, the upper limit of the calibration (2-3%) is generally not a limitation. If customers do require a calibration up to 100% concentration (i.e. a pure element) then Innov-X recommends they also include the Fundamental Parameters (FP) software module with the analyzer. The FP module may be added at time of purchase or as an upgrade at any later date.

Note: In general customers do not need to calibrate the Innov-X analyzer for soil testing. The analyzer is delivered with a factory calibration, generally based upon the Compton Normalization (CN) method. The CN method has been proven over the past several years to provide a robust calibration generally independent of site-specific soil matrix chemistry. The operator may calibrate the Innov-X system if desired, but calibration is not required to use the analyzer effectively. All customers should follow the QC procedure described in Section 3, which includes a check of the calibration.

The final model is the empirical calibration. In this case, customers run standards to generate calibration curves for various elements in specific soil matrices. Provided the sample is well-prepared, the empirical method generally yields the most accurate result. In our experience, the accuracy gains going from Compton Normalization to Empirical Mode are small and not worth the extra effort in setting up calibration curves. (The greatest source of error for in-field XRF analysis of soil is lack of adequate sample preparation, thus there is little gained in developing a sophisticated empirical calibration if the operator does to grind and homogenize the all measured samples). The empirical calibration module is an optional software package, available for an upgrade fee at the time of purchase, or as an upgrade at any later date.

Calibration Requirements:

The concentration of an element in a soil sample is well-described by the formula:

$$w_i = \frac{k_i}{M(Z,i)} I_i$$

k_i = calibration constant for element "i"

ω_i = concentration of element "i" – the quantity being measured.

I_i = measured x-ray intensity from element "i"

M(Z,I) = Soil matrix value

The factory calibration determines the value of the calibration constants k_i for each element, and a typical value M(Z,I). The calibration method – either CN, fundamental parameters, or empirical – performs the necessary corrections to the value M(Z,I) that are important for the site-specific soil chemistry. The XRF analyzer uses the measured intensity of each element's fluorescence from the sample, and the calibration data, to produce elemental concentrations.

Compton Normalization:

The Compton Normalization method calibration consists of the analysis of a single, well-characterized standard, such as an SRM or SSCS. The standard data are normalized to the Compton peak. The Compton peak is produced from incoherent backscattering of X-ray radiation from the excitation source and is present in the spectrum of every sample. The matrix affects the way in which source radiation is scattered off the samples. This scatter is directly related to the intensity of the Compton peak. For that reason, normalizing to the Compton peak can reduce problems with matrix effects that vary among samples. Compton normalization is similar to the use of internal standards in analysis for organic analytes.

Fundamental Parameters Calibration:

The fundamental parameters (FP) calibration is a "standardless" calibration. Rather than establishing a unit's calibration curve by measuring its response to standards that contain analytes of known concentrations, FP calibration relies on the known physics of the spectrometer's response to pure elements to set the calibration. Built-in mathematical algorithms are used to adjust the calibration for analysis of soil samples and to compensate for the effects of the soil matrix. The FP calibration is performed by the manufacturer, but the analyst can adjust the calibration curves (slope and y-intercept) on the bases of results of analyses of check samples, such as SRMs which are analyzed in the field.

Empirical Calibration:

The empirical calibration method requires that a number of site-specific calibration standards (SSCS) are used to establish calibration parameters. The instrument response to known analytes is measured and used to create calibration curves. Empirical calibration is effective because the samples used closely match the sample matrix. SSCSs are well-prepared samples collected from the site of interest in which the concentrations of analytes have been determined by inductively coupled plasma (ICP), atomic absorption (AA), or other methods approved by the US Environmental Protection Agency (EPA). The standards should contain all the analytes of interest and interfering analytes. Manufacturers recommend that 10 to 20 calibration samples be used to generate a calibration curve. The empirical method is the least desirable calibration method as it requires that new standards and curves are generated for each site that is analyzed.

Section 5: Effects of Moisture on XRF Results:

Sample moisture has two effects on XRF results:

- It alters the soil chemistry, since water is another chemical compound that comprises the soil matrix.
- Moisture impedes the ability to properly prepare samples.

- Laboratory results are provided on a “dry weight” basis.

Effect on Soil Chemistry:

While the presence of significant moisture does impact the soil chemistry, modern XRF analyzers all perform automatic corrections for variations in soil chemistry from site to site. Indeed, such variations are expected, and that is the reason analyzers use Compton Normalization or fundamental parameters, in order to correct for moisture content changes as well as other differences in soil geochemistry.

EPA Method 6200 states “Moisture content above 20 percent may cause problems, since moisture alters the soil matrix for which the FPXRF has been calibrated.” However, the Compton Normalization or fundamental parameters methods are implemented in order to automatically correct results for changes to the soil matrix. Thus, we believe that soil moisture is not a significant effect on accuracy due to effects of soil matrix, except for the “dilution” effect that can cause discrepancies with laboratory results which is described below.

Sample preparation issues:

The inability to adequately prepare a wet sample is, we believe, the single biggest contributor to errors when testing wet samples. It is very difficult to grind or sieve a wet sample. The highest quality XRF results are generally obtained from prepared samples. If the operator is unwilling to dry the sample to prepare it, comparisons to the laboratory may yield poorer correlation since the samples are not homogeneous.

Laboratory Tests on Dry-Weigh Basis:

Laboratories always dry samples prior to analysis. They report percent weight content based upon a dry sample basis. Portable XRF may often be used to analyze wet samples in the field, and results are thus reported that include the moisture content. Thus, with all other factors the same, the laboratory will report results higher than portable XRF. The results will be higher by the amount of moisture content in the sample. For example laboratory results will be 10% higher compared to XRF results, if the sample contained 10% by weight water when it was tested with XRF. Recall, this applies to samples where other possible sources of error are the same or negligible.

Section 6: Comparing XRF Results to Laboratory Results:

Innov-X strongly recommends that operators compare prepared sample results to laboratory results. This is because prepared-sample results yield the best possible accuracy with portable XRF. Moreover, the most common source of error is due to non-uniform samples. The XRF technique, nor can any analytical technique, properly account for non-uniform sample types.

To perform a comparison between XRF results and laboratory:

1. Collect a sample and prepare it according to the sample preparation guide in Appendix 1.

2. Take a sub-sample (5-10 grams) of the fully-prepared sample, place it into an XRF cup and perform at least a one-minute test on that sample.

3. Send the same sample to the laboratory for wet chemistry analysis.

4. Require the laboratory to use a total-digestion method. If the laboratory does not use a total digestion method, they may not extract all of the elemental metal from the sample. In this case, the lab result will be lower than the XRF result. Incomplete sample digestion is one of the most commons sources of laboratory error, thus it is very important to request a total digestion method.

Example of Error: The operator collects a bag of sample, performs XRF analysis on one part of the bag, and sends the bag, or part of the bag of sample to a laboratory for analysis. The laboratory reports a very different value than the operator obtained with the XRF.

Problem: Since the sample is very non-homogeneous, the operator did not obtain a result that was representative of the entire bag of sample. The lab analyzed a different part of the sample and obtained a very different result due to the non-uniformity of the sample. The solution to this problem is, at a minimum, to test several locations in the bag of sample and report the average value. Also note the differences between the tests, as this is indicative of the non-uniformity of the sample. Operator should send entire bag of sample to the lab, and instruct lab to prepare the sample before removing sub-sample for lab analysis.

Best Practice: The operator should homogenize and prepare the entire bag of sample, and then collect a sub sample for XRF testing. After testing, the same sample should be sent to the lab.

Section 7: Common Interferences:

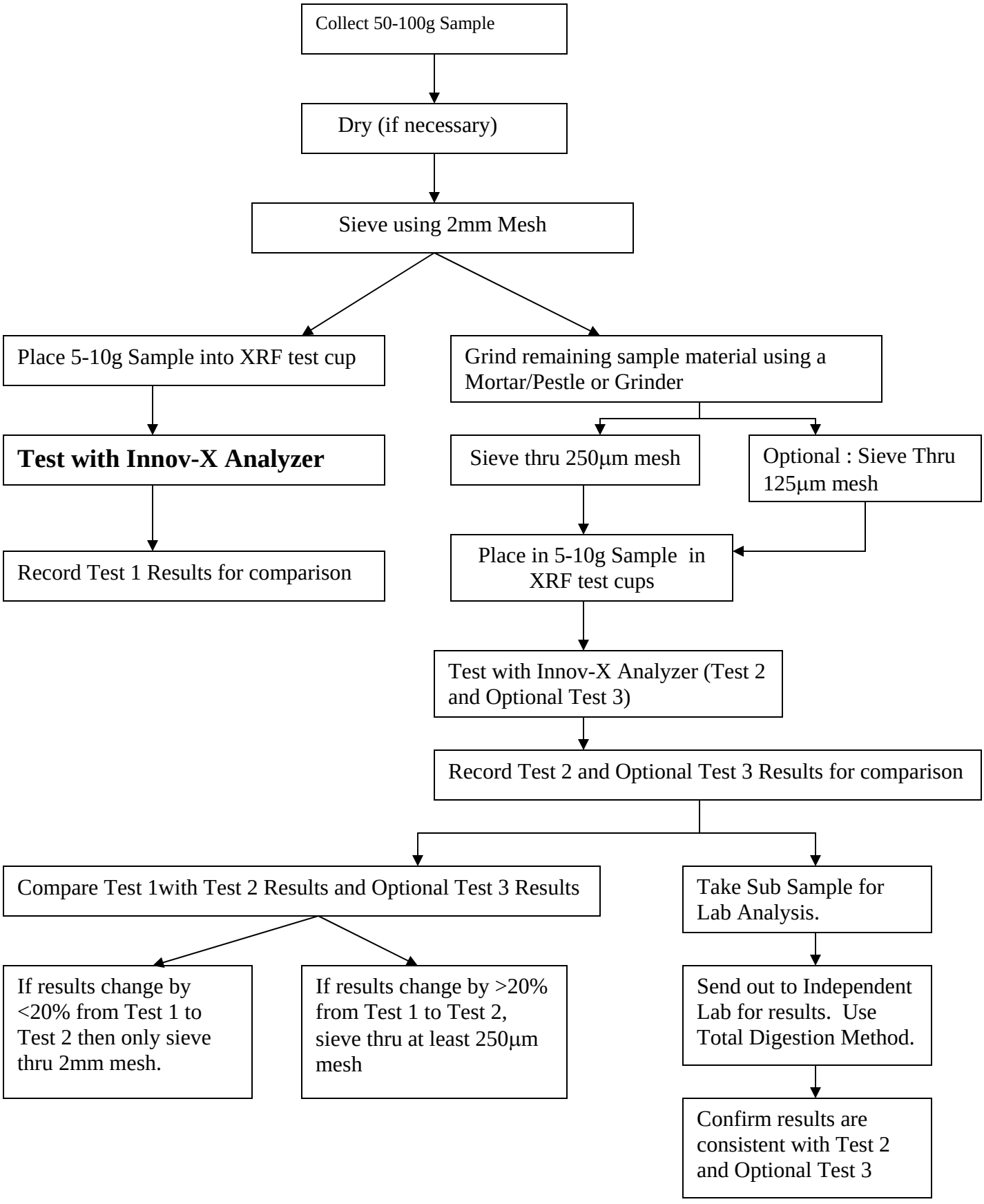
An interference occurs when the spectral peak from one element overlaps either partially or completely with the spectral peak of another. If the XRF is calibrated for both elements (CASE 1) i.e. the one causing the interference and the one being interfered with, it is generally capable of correctly handling the interference. In this case, the element being interfered with may be measured with a poorer detection limit or poorer precision, but the analytical results should still be acceptable for field-portable XRF. If the XRF is not calibrated for the element causing the interference (CASE 2), then the XRF may report the presence of elements not in the sample, or greatly elevated concentrations of elements in or not in the sample.

Example CASE 1: Lead and arsenic. Most XRFs are calibrated for lead and arsenic. Lead interferes with arsenic (not vice-versa though). The net effect is a worsened detection limit for arsenic, and poorer precision. The XRF handles the correction automatically, but the precision is affected. The loss of precision is also reported by the XRF. (Please refer to Innov-X Applications Sheet: *In-field Analysis of Lead and Arsenic in Soil Using Portable XRF* for more detail).

Example CASE 2: Bromine in the sample, but XRF is not calibrated for bromine. Bromine, as a fire retardant, is being seen more and more in soil and other sample types. For this reason, Innov-X analyzers include Br in the calibration data. If Br is not calibrated, but is present in the sample, the analyzer will report highly elevated levels of Pb, Hg and As. The levels will depend upon the concentration of Br in the sample.

Interferences between elements can be broadly categorized into a) Z, Z-1, Z+1 interferences, and b) K/L interferences. Interference type “a” occurs when high levels of an element of atomic number Z are present. This can cause elevated levels of elements with atomic number Z-1 or Z+1. Generally, portable XRFs have good correction methods, so this interference only causes problems with very high levels of the element in question. Example: High concentrations of Fe (Z=26) in excess of 10% may cause elevated levels of Mn or Co (Z=25 or Z=27 respectively).

The type “b” interference occurs when the L-shell line of one element overlaps with the K-shell spectral line of another element. The most common example is the lead/arsenic interference where the L-alpha line of lead is in nearly the exact same location as the K-alpha line of arsenic.


Collect 50-100g Sample
Dry (if necessary)
Sieve using 2mm Mesh
Place 5-10g Sample into XRF test cup
Grind remaining sample material using a Mortar/Pestle or Grinder
Test with Innov-X Analyzer
Sieve thru 250µm mesh
Optional : Sieve Thru 125µm mesh
Record Test 1 Results for comparison
Place in 5-10g Sample in XRF test cups
Test with Innov-X Analyzer (Test 2 and Optional Test 3)
Record Test 2 and Optional Test 3 Results for comparison
Compare Test 1with Test 2 Results and Optional Test 3 Results
Take Sub Sample for Lab Analysis.
If results change by <20% from Test 1 to Test 2 then only sieve thru 2mm mesh.
If results change by >20% from Test 1 to Test 2, sieve thru at least 250µm mesh
Send out to Independent Lab for results. Use Total Digestion Method.
Confirm results are consistent with Test 2 and Optional Test 3

Appendix 3: Guide to Product Registration

Generally, the Innov-X portable XRF system must be registered in the state of usage. Registration requirements are somewhat state dependent, but there are many similarities. You may contact Innov-X at 866-4-Innov-X (781-938-5005) to receive specific registration information. Innov-X also maintains sample registrations for every state that we can forward to you.

Common Registration Features:

Most states require the following for registering an x-ray emitting device that does NOT use radioactive sources:

1. Registration within 30 days of receipt of the analyzer.
2. Annual fee ranging from $25 to $100, depending upon the state.
3. Basic registration form with main information described below.

Common information required on Registration Form, and responses:

Company name, address, phone/fax numbers.

Name of responsible person:	Generally the person designated as the Radiation Safety Officer (RSO).
Name of the manufacturer:	Innov-X Systems, Inc., Woburn, MA
Model of Analyzer:	Alpha XXXX
Tube Operating Parameters:	40 kV, 20 uA current.
Type of Analysis:	Choose Analytical or Industrial
	(as opposed to radiography, medical, dental, veterinarian, etc.)
Utilization Mode:	Portable or Mobile assuming you will carry system to different locations.
	Fixed or stationary ONLY if you will always use the analyzer in the docking station

General Appendix 1

Technical Specifications

Description:

Innov-X Systems analyzers are hand-held, battery operated energy dispersive x-ray fluorescence analyzers. They are utilized for the detection and quantification of elements ranging from phosphorus (atomic number 15) though uranium (atomic number 92). Measurable concentrations of elements range from ppm to 100%.

Weight:	2.625 lbs (Base wt.) 3.375 lbs (1.6 kg) with batteries
Excitation Source:	X-ray tube, Ag or W anode, 10-40 kV, 5-50 uA, 5 filter positions
Detector:	Si PiN diode, thermoelectrically cooled, resolution < 280 eV.
Power:	Li-ion batteries, or AC power with Testing Stand
Battery Life:	4-8 hours, depending on duty cycle.
Display:	Color, high-resolution touch screen with variable backlighting on analyzer. Software available for PC/laptop operation also.
Data Storage:	10,000 tests with spectra minimum, expandable to 100,000+ with 1 Gb flash card.
Computer:	HP iPAQ with Intel processor, 64 Mb minimum memory, Windows CE operating system (unless operated from PC).
Optional Accessories:	Bluetooth wireless printing and data transfer, integrated bar-code reader, wireless LAN, other standard PDA accessories.

Operating Conditions

Temp 0 – 40° C
Humidity 10 – 90 % RH, no condensation
Altitude rating 2000 meters

Innov-X Analyzer Limited Warranty

General Terms

EXCEPT AS EXPRESSLY SET FORTH IN THIS LIMITED WARRANTY, INNOV-X SYSTEMS, INC. (INNOV-X) MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. INNOV-X EXPRESSLY DISCLAIMS ALL WARRANTIES AND CONDITIONS NOT STATED IN THIS LIMITED WARRANTY. ANY IMPLIED WARRANTIES THAT MAY BE IMPOSED BY LAW ARE LIMITED IN DURATION TO THE LIMITED WARRANTY PERIOD.

This Limited Warranty applies to Innov-X analyzers sold or leased from Innov-X its affiliates, authorized resellers, or country distributors (collectively referred to in this Limited Warranty as (“Innov-X”)).

Innov-X warrants that the analyzer and all its internal components that you have purchased are free from defects in materials or workmanship under normal use during the Limited Warranty Period. The Limited Warranty Period starts on the date of shipment by Innov-X. You may be required to provide proof of purchase or lease as a condition of receiving warranty service. You are entitled to warranty service according to the terms and conditions of this document if a repair to your Innov-X analyzer is required within the Limited Warranty Period.

During the Limited Warranty Period, Innov-X will repair or replace the defective component parts. All component parts removed under this Limited Warranty become the property of Innov-X. In the unlikely event that your Innov-X analyzer has a recurring failure, Innov-X, at its discretion, may elect to provide you with a replacement unit of Innov-X’s choosing that is at least equivalent to your Innov-X analyzer. This is your exclusive remedy for defective products. The repaired or replacement analyzer is warranted for the remainder of the limited Warranty Period.

YOU SHOULD MAKE PERIODIC BACKUP COPIES OF THE DATA STORED ON YOUR ANALYZER AS A PRECAUTION AGAINST POSSIBLE FAILURES, ALTERATION, OR LOSS OF THE DATA. BEFORE RETURNING ANY UNIT FOR SERVICE, BE SURE TO BACK UP DATA AND REMOVE ANY CONFIDENTIAL, PROPRIETARY, OR PERSONAL INFORMATION. INNOV-X IS NOT RESPONSIBLE FOR DAMAGE TO OR LOSS OF ANY PROGRAMS, OR DATA. INNOV-X IS NOT RESPONSIBLE FOR THE RESTORATION OR REINSTALLATION OF ANY PROGRAMS OR DATA OTHER THAN SOFTWARE INSTALLED BY INNOV-X WHEN THE ANALYZER IS MANUFACTURED.

Innov-X does not warrant that the operation of this analyzer will be uninterrupted or error-free. Innov-X is not responsible for damage that occurs as a result of your failure to follow the instructions that came with the Innov-X analyzer.

This Limited Warranty does not apply to expendable parts. This Limited Warranty does not extend to any analyzer from which the serial number has been removed or that has been damaged or rendered defective (A) as a result of accident, misuse, abuse, or other external causes; (b) by operation outside the usage parameters stated in user documentation that shipped with the product; (c) by modification or service by anyone other than (i) Innov-X, or(ii) a Innov-X authorized service provider, (d) installation of software not approved by Innov-X.

These terms and conditions constitute the complete and exclusive warranty agreement between you and Innov-X regarding the Innov-X analyzer you have purchased or leased. These terms and conditions supersede any prior agreements or representations --- including representations made in Innov-X sales literature or advice given to you by Innov-X or any agent or employee of Innov-X --- that may have been made in connection with your purchase or lease of the Innov-X analyzer. No change to the conditions of this Limited Warranty is valid unless it is made in writing and signed by an authorized representative of Innov-X.

Limitation of Liability

IF YOUR INNOV-X ANALYZER FAILS TO WORK AS WARRANTED ABOVE, YOUR SOLE AND EXCLUSIVE REMEDY SHALL BE REPAIR OR REPLACEMENT. INNOV-X'S MAXIMUM LIABILITY UNDER THIS LIMITED WARRANTY IS EXPRESSLY LIMITED TO THE LESSER OF THE PRICE YOU HAVE PAID FOR THE ANALYZER OR THE COST OF REPAIR OR REPLACEMENT OF ANY COMPONENTS THAT MALFUNCTION IN CONDITION OF NORMAL USE.

INNOV-X IS NOT LIABLE FOR ANY DAMAGE CAUSED BY THE PRODUCT OR THE FAILURE OF THE PRODUCT TO PERFORM INCLUDING ANY LOST PROFITS OR SAVINGS OR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. INNOV-X IS NOT LIABLE FOR ANY CLAIM MADE BY A THIRD PARTY OR MADE BY YOU FOR A THIRD PARTY.

THIS LIMITATION OF LIABILITY APPLIES WHETHER DAMAGE ARE SOUGHT, OR A CLAIM MADE, UNDER THIS LIMITED WARRATNY OR AS A TORT CLAIM (INCLUDING NEGLIGENCE AND STRICT PRODUCT LIABILITY), A CONTRACT CLAIM, OR ANY OTHER CLAIM. THIS LIMITATION OF LIABILITY CANNOT BE WAIVED OR AMENDED BY ANY PERSON. THIS LIMITATION OF LIABILITY WILL BE EFFECTIVE EVEN IF YOU HAVE ADVISED INNOV-X OR AN AUTHORIZED REPRESENTATIVE OF INNOV-X OF THE POSSIBILITY OF ANY SUCH DAMAGES.

Software

This Limited Warranty does not warrant software products. The Innov-X software installed on your analyzer is covered by the Innov-X Software License.

Warranty Period

The warranty period for a Model XT-245 or Model XT-260 Innov-X analyzer is two years or four thousand hours of use, whichever occurs first. The warranty for all other analyzers is one year or two thousands hours of use whichever occurs first. This warranty does not extend to expendable parts. Extended warranties are available from Innov-X.

Warranty Returns

A Return Material Authorization (RMA) Number must be obtained from the INNOV-X Service Department before any items can be shipped to the factory. Returned goods will not be accepted without an RMA Number. Customer will bear all shipping charges for warranty repairs. All goods returned to the factory for warranty repair should be properly packed to avoid damage and clearly marked with the RMA Number.

Warranty Repairs

Warranty repairs will be done either at the customer's site or at the INNOV-X plant, at our option. All service rendered by INNOV-X will be performed in a professional manner by qualified personnel.

Contacting Innov-X

Be sure to have the following information available before you call Innov-X:

- Analyzer serial number, model name, and model number
- Applicable error messages
- Description of problem
- Detailed questions

Methods of Contact

- Phone: 781-635-5005
- Fax 781-938-0128
- Email service@Innov-Xsys.com
- Mail & Shipping Address: Innov-X Systems, Inc. 10 Gill Street, Suite Q. Woburn MA 01801