Memo

Date:	Friday, July 15, 2016
Project:	Peninsula Blvd OU2
To:	Gloria Sosa, USEPA
From:	Michael P. Musso and Mayble M. Abraham, HDR
Subject:	Risk Assessment Screening (potential source sites)

Introduction

This memorandum was prepared to present the risk assessment screening of the data associated with the Remedial Investigation (RI) sampling events conducted by the United States Environmental Protection Agency (USEPA) at the Peninsula Boulevard Operable Unit 2 (OU2) – potential source sites.

The risk assessment screening information provided herein will also be presented in the OU2 Feasibility Study (FS) report being prepared by HDR, with revisions based on comments from USEPA staff and further reviews of the RI data available.

The risk assessment screening attachments includes the following components:

- Figures 1 and 2 – OU1 groundwater tetrachloroethylene (PCE) plume;
- Figure 3 – HHRA conceptual site model;
- Tables 1 to 5 – Risk screening calculations;
- Attachment A – ProUCL documentation for risk calculations;
- Attachment B – USEPA RSL table excerpts (May 2016);
- Attachment C – USEPA RSL Calculator outputs for a construction worker; and
- Attachment D – Sensitivity analysis for groundwater risks at Cedarwood/Vacant Lot.

Site Background

The Peninsula Boulevard OU2 Site consists of areas impacted by groundwater contamination in the Upper Glacial Aquifer (UGA) located in the Village of Hewlett, Town of Hempstead, Nassau County, New York. The contamination includes chlorinated VOCs (CVOCs) originating from existing or former dry cleaning facilities. The area consists of a mix of commercial and residential properties, with the majority of the commercial properties being located along Mill Road, Peninsula Boulevard, Broadway and West Broadway (Figure 1).The area of the Site is serviced by the Long Island American Water Company (LIAWC). Since 1991, LIAWC has been treating groundwater pumped from its well field with an air stripper prior to distribution to the water supply system. Private wells are not utilized for drinking water in the area.

A. Site History – OU1 (Area-Wide)

A series of investigations and removal actions completed from 1991 to 1999 on behalf of the owner of the former Grove Cleaners and the New York State Department of Environmental Conservation (NYSDEC) revealed a groundwater contaminant plume extending both to the north and south of Peninsula Boulevard, primarily consisting of PCE. On March 7, 2004, USEPA proposed inclusion of the Site on the National Priorities List (NPL); it was placed on the NPL on July 22, 2004.

USEPA conducted an RI for OU1 (area-wide plume) from 2005 through 2010. The results of the OU1 RI indicate that the shallow and deep portions of the UGA have been impacted by CVOC contamination. In OU1, the shallow UGA groundwater [generally 0 to 20 feet below ground surface (ft bgs)] PCE plume is approximately 3,500 ft long, oriented in a north-south direction. South of Peninsula Boulevard, the plume is approximately 1,000 ft wide and north of Peninsula Boulevard the plume is approximately 400 ft wide. The deep UGA (40 to 75 ft bgs) groundwater plume is approximately 1,110 ft long, oriented in a northeast-southwest direction. See Figures 1 and 2 for the PCE plumes of the shallow and deep UGA.

Supplemental OU1 RI work was conducted at the Site in 2010 that included the development of a baseline human health risk assessment (HHRA). The HHRA evaluated health effects that could result from exposure to contaminated media through use of groundwater for potable purposes (including inhalation of vapors in the bathroom after showering), direct exposure to groundwater in an excavation trench, wading in Site waterways, direct contact exposure to surface (0 to 2 ft) soil and subsurface (2 to 10 ft) soil, and inhalation of vapors from soils. Based on the current zoning and anticipated future land use in the area, the HHRA included current and future recreational users, residents, commercial workers and construction workers. The HHRA concluded an excess lifetime cancer risk of 2×10^{-1} for the future adult and child resident and 2×10^{-2} for the future commercial worker. The calculated noncancer hazard quotients (HQs) were also elevated, with a HQ of 300 for a future adult resident, HQ of 600 for a future child resident and HQ of 50 for a future commercial worker. These cancer risks and noncancer health hazards indicate that there is significant potential risk to potentially exposed populations from direct exposure to groundwater. The contaminants in groundwater that contribute most significantly to the cancer risks and noncancer hazards are cis-1,2-dichloroethene (DCE), PCE, trichloroethene (TCE) and vinyl chloride (VC).

The 2011 RI identified groundwater contamination with PCE, PCE breakdown products and low levels of other VOCs; however, the source(s) of the PCE groundwater contamination identified in OU1 was not identified.

B. Site History – OU2 (Source Identification)

The purpose of OU2 is to investigate potential source areas of the PCE groundwater contamination plume.

The potential OU2 source sites – existing or former dry cleaning establishments – and the OU1 groundwater plume in the shallow and deep UGA are shown on Figures 1 and 2, and include:

- Cedarwood Cleaners and Vacant Lot
- Piermont Cleaners

C. Site Hydrogeology

Generalized descriptions of the unconsolidated materials encountered during OU2 RI drilling are as follows (Lockheed 2016):

- 0 to 36.5 ft-bgs — Shallow Upper Glacial Aquifer: mixture of sands and gravels.
- 36.5 to 39.5 ft-bgs — Upper Silt of 20-Foot Clay: silt with little fine-grained sand.
- 39.5 to 48 ft-bgs — Silty Sand of 20-Foot Clay: fine-grained sand with little silt.
- 48 to 58 ft-bgs — Lower Silt of 20-Foot Clay: high plasticity silt with little clay.
- 58 to 94.5 ft-bgs — Deep Upper Glacial Aquifer: mixture of sands and gravels.
- >94.5 ft-bgs — Gardiners Clay: high plasticity silt with little fine- to coarse-grained sand and clay.

Due to the variability in thickness, the bottom of each unit listed above indicates the maximum depth at which it was found in the boreholes.

Groundwater level measurements were manually collected from site-related monitoring wells in 2016. On April 27, 2016, groundwater was measured in the shallow UGA under unconfined conditions at depths between 4.32 and 20.33 feet below top of casing (BTOC) (elevations of 3.62 to 8.17 feet Mean Sea Level [MSL]) and under confined conditions in the deep UGA at depths between 5.74 and 25.78 feet BTOC (elevations of 1.26 to 2.04 feet MSL). Groundwater flow in the shallow UGA on that date was to the north - northwest in the areas of Cedarwood and Piermont Cleaners. As of the date of this memorandum, EPA is continuing its OU2 evaluation of groundwater flow characteristics in the shallow and deep UGA.

D. Data Collection

The risk assessment screening evaluates the available OU2 RI data, including those associated with the eight OU2 RI sampling events, completed since the OU1 HHRA was performed in 2010. The OU2 RI sampling conducted to-date includes investigations of subsurface media at potential contaminant source sites, as follows:

- February 2012 (Soil Gas and Groundwater sampling)
- June 2013 (Membrane Interface-Hydraulic Profiling Tool [MiHPT] sampling)
- March – April 2014 (Soil sampling)
- September – October 2014 (Groundwater sampling)
- February 2015 (Soil and Groundwater sampling)
- April 2015 (Soil and Groundwater sampling)
- November – December 2015 (Soil sampling)
- January 2016 (Soil sampling)
- February 2016 (Groundwater sampling)

The February 2012 soil gas data and June 2013 MiHPT data were not evaluated quantitatively in this risk assessment screening (USEPA 2014a). Soil gas data is being evaluated separately by USEPA and the June 2013 MiHPT data do not have laboratory analytical data associated with that field event. In addition to the OU2 RI sampling events, the risk assessment screening includes groundwater analytical data from the OU1 Remedial Design treatability study; during three sampling events (July 2012, May 2013 and December

2013), samples were collected at locations MW-27D and MW-27S (located near Cedarwood Cleaners). Samples from the OU1 treatability study that were collected from injection, pumping and observation wells were not included in the risk assessment screening.

USEPA is developing an OU2 RI report based on these sampling events and data. It is understood that field sampling methodologies, data quality (e.g., validation), and physical/geological characteristics observed at the OU2 potential source sites (e.g., field logs) will be discussed further in the RI report.

Risk Assessment Screening

The OU2 risk assessment screening evaluates the potential for OU2 source site contaminants to pose a current or future risk to human health and the environment in the absence of any remedial action. The OU2 risk assessment screening uses exposure point concentrations (EPCs) and available risk-based screening levels, i.e., USEPA May 2016 Regional Screening Levels (RSLs, USEPA 2016d) at a target risk of 1×10^{-6} and target HQ of 1 to calculate facility-specific cancer risks and noncancer HQs. The RSLs incorporate assumptions on potential exposure scenarios and human receptors, along with contaminant-specific toxicological information. CVOCs that were identified in the OU1 area-wide HHRA as the contaminants of potential concern (COPCs) are included in this OU2 risk assessment screening: cis-1,2-DCE, PCE, TCE and VC.

A. Conceptual Site Model

The conceptual site model (CSM) is a dynamic tool for understanding site conditions and potential exposure scenarios for human receptors that may be exposed to site-related contamination that may change as new information is provided. An exposure pathway consists of:

- A source (i.e., discharge) and mechanism of contaminant release from source;
- A retention or transport medium (i.e., groundwater) for the contaminant;
- A point of contact (e.g., drinking water) between the human receptor and the medium; and
- A route of exposure (e.g., ingestion) for the potential human receptor at the contact point

An exposure pathway is considered complete only if all four components are present. The 2010 HHRA for OU1 described the exposure pathways and receptors that may be present on-site or in the future in its CSM, which has been refined for this OU2 risk assessment screening as presented in Figure 3. The CSM includes exposure to CVOCs in soil via the ingestion, dermal contact and inhalation pathways for a current/future resident (adult and child), current/future commercial/industrial worker and current/future construction worker. The resident and commercial/industrial worker are expected to contact surface soil (0 to 2 ft bgs), while a construction worker is expected to contact soil with a depth of 0 to 10 ft bgs. The CSM also includes a future resident's exposure to CVOCs in groundwater via ingestion, dermal contact and inhalation of tap water (where groundwater is an untreated source of tap water). Currently, treated groundwater is supplied via public wells for use; private wells are not used for potable water.

B. Exposure Point Concentrations

The EPCs used in this risk assessment screening are the lower of the maximum detected concentration and the calculated 95% upper confidence limit (UCL) of the arithmetic mean for a given data set and COPC. Calculation of the 95% UCL is conducted in accordance with USEPA guidance (USEPA 2002, 2015b and c)

and using ProUCL software, version 5.1.00 (USEPA 2016). ProUCL identifies the distribution of the data (e.g., normal, gamma), calculates UCLs using different statistical methods and recommends a UCL as part of the output.

Determination of Soil EPCs

The soil data includes one data set of surface samples (0 to 2 ft bgs) and another including soil samples with a depth of 0 to 10 ft bgs. Soil EPCs were calculated for each dry cleaner facility by depth for the four CVOCs as follows:

- Cedarwood Cleaners/Vacant Lot surface soil (0 to 2 ft bgs);
- Cedarwood Cleaners/Vacant Lot all soil (0 to 10 ft bgs);
- Piermont Cleaners surface soil (0 to 2 ft bgs); and
- Piermont Cleaners all soil (0 to 10 ft bgs).

A total of 35 soil samples (depth range of 0 to 10 ft bgs) were collected from Cedarwood Cleaners/Vacant Lot; of these samples, 30 normal samples and two field duplicates were collected from Cedarwood Cleaners and three normal samples were collected from the Vacant Lot. There were 43 normal samples and four field duplicates collected from Piermont Cleaners in the same depth range.

The maximum of the field duplicate result and the parent sample result was chosen in the determination of EPCs. Rejected data were excluded from the risk assessment screening.

The soil EPCs are summarized in Table 1 (attached) and the supplemental information including the ProUCL outputs are presented in Attachment A.

Determination of Groundwater EPCs

The USEPA memorandum *Determining Groundwater Exposure Point Concentrations, Supplemental Guidance* (USEPA, 2014c) provides a recommended approach to improve the quality and consistency in calculating groundwater EPCs. The approach recommends evaluating data from the "core/center of the plume," which is defined as the three-dimensional core/center zone of highest concentrations of each contaminant within a delineated groundwater plume. The guidance also defines what type of groundwater data should be used in the calculation of the EPC.

A total of 103 groundwater samples were collected from Cedarwood Cleaners/Vacant Lot; of these samples, 43 normal samples and one field duplicate were collected from Cedarwood Cleaners and 52 normal samples and seven field duplicates were collected from Vacant Lot. There were 66 normal samples and four field duplicates collected from Piermont Cleaners.

The maximum of the field duplicate result and the parent sample result was chosen in the determination of EPCs. Rejected data were excluded from the risk assessment screening.

For purposes of this OU2 risk assessment screening, due to the defined area involved, it was determined that use of USEPA memorandum *Determining Groundwater Exposure Point Concentrations, Supplemental Guidance* (2014c) was not necessary and has not been applied to this risk assessment screening.

The groundwater EPCs were calculated using full data sets for Piermont and Cedarwood Cleaners/Vacant

Lot. The groundwater EPCs are summarized in Table 1 (attached). Supplemental information including the ProUCL outputs is presented in Attachment A.

C. Exposure Factors and Toxicity Values

The risk assessment screening uses soil and groundwater EPCs and USEPA RSLs to calculate cancer risks and noncancer HQs. The RSLs incorporate exposure factors (e.g., body weight) for each receptor and contaminant-specific toxicity values that are used to determine concentration levels at which there are low or no potential adverse effect to human receptors.

The exposure factor values used in deriving the RSLs (USEPA 2016d) are from USEPA *Risk Assessment Guidelines for Superfund* (RAGS) (USEPA 1989) and other more recent applicable risk guidance, e.g., 2011 *Exposure Factors Handbook* (USEPA 2011a) and 2014 OSWER (now Office of Land and Emergency Management [OLAM]) Directive 9200.1-120 *Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors* (USEPA 2014d). The exposure factors for a current/future resident adult/child, current/future commercial/industrial worker and current/future construction worker that are incorporated in the RSLs are presented in Table 2 (attached).

The USEPA RSL tables (USEPA 2016d) include cancer and noncancer toxicity values in accordance with USEPA's OSWER Directive 9285.7-53, *Human Health Toxicity Values in Superfund Risk Assessments* (USEPA 2003), which identified a descending hierarchy of sources for applying toxicity values as follows:

- Tier 1 – USEPA's Integrated Risk Information System (IRIS, USEPA 2016a).
- Tier 2 – USEPA's Provisional Peer Reviewed Toxicity Values (PPRTVs) – The Superfund Health Risk Technical Support Center develops PPRTVs on a contaminant-specific basis when requested by USEPA's Superfund program (USEPA 2014e).
- Tier 3 – Other Toxicity Values – Tier 3 includes additional USEPA and non-USEPA sources of toxicity information (ATSDR 2014, Cal EPA 2007 and USEPA 2011b). Priority is given to sources of information that are the most current, transparent, publicly available and those which have been peer reviewed.

The toxicity values that are incorporated in the RSLs for cis-1,2-DCE, PCE, TCE and VC are presented in Table 3 (attached). Under the *Guidelines for Carcinogenic Risk Assessment*, TCE and VC are considered carcinogenic to humans, PCE is likely to be carcinogenic to humans and there is inadequate information to assess carcinogenic potential for cis-1,2-DCE (USEPA 2005); therefore, evaluating these COPCs as human carcinogens in this risk assessment screening is appropriate and conservative.

D. Risk Assessment Methodology

For each receptor, the risk assessment screening compared the soil and groundwater EPCs to the respective USEPA RSLs, which are presented in Attachments B and C as follows:

- Resident – surface soil (0 to 2 ft bgs) EPCs compared to USEPA Residential Soil RSL and groundwater EPCs compared to USEPA Tapwater RSL (Attachment B);
- Commercial/Industrial Worker – surface soil (0 to 2 ft bgs) EPCs compared to USEPA Industrial Soil RSL (Attachment B); and

- Construction Worker – all soil (0 to 10 ft bgs) EPCs compared to Site-Specific Construction Worker Soil RSLs that were calculated using the RSL Calculator's Construction Worker - Other Construction Activities scenario. Site-specific adjustments were made for the inhalation of soil particulates in this scenario by assuming a 100% of the facility area to be used as the aerial extent of dozing, grading, tilling and excavation; a sensitivity analysis performed using 50% of the facility area, which is presented in Attachment C, indicated no appreciable difference in the resulting cancer and noncancer RSLs. Other site-specific assumptions provided by EPA Region 2 include use of a Caterpillar dozer blade of 92 inches (2.337 meters; CAT 2016), a grader blade of 60 inches (1.524 meters; CAT 2016), and assuming an average excavation depth of 10 ft bgs (3.048 meters) with the site being dozed and graded once. The input for the site area defaulted to 0.5 acres unless the facility area was greater than 0.5 acres; Cedarwood Cleaners/Vacant Lot are a combined area of 1.115 acres and Piermont Cleaners is 0.17 acres. The facilities are relatively small and would have construction work constraints due to nearby property lines, roads and neighboring land uses. The RSL calculator inputs and outputs are provided in Attachment C.

The cancer risk and noncancer HQ for each COPC were determined using the following equations, where the target risk is $1x10^{-6}$ and target HQ is 1 for the RSL:

$$Risk = \frac{EPC \times Target\ Risk}{RSL_{cancer}} \quad \text{and} \quad HQ = \frac{EPC \times Target\ HQ}{RSL_{noncancer}}$$

The cumulative cancer risk from exposure to the combination of contaminants in an environmental medium and also across all media for a receptor is estimated following USEPA guidance (USEPA 1989) and the following general equation:

$$Cumulative\ Risk\ = \sum_i Risk_i$$

For known or suspected carcinogens, USEPA considers acceptable exposure levels to generally be concentration levels that represent an excess lifetime cancer risk (ELCR) to an individual of between one in ten thousand ($1x10^{-4}$) and one in a million ($1x10^{-6}$).

The cumulative noncancer hazard index (HI) from exposure to the combination of COPCs in an environmental medium and across all media for a receptor is estimated using the following equation (USEPA 1989):

$$Hazard\ Index\ = \sum_i HQ_i$$

When the HI for a COPC exceeds unity (one), there may be concern for potential noncancer effects from that COPC. The HI is an indicator that potential hazard for a specific receptor exposed to a COPC in the environment cannot be ruled out, if it is greater than one, not that the hazard actually exists.

E. Risk Assessment Screening Results

A summary of the risk assessment screening results by medium and receptor for Cedarwood Cleaners/Vacant Lot is presented in Table A below and the results for Piermont Cleaners are in Table B below. The actual risk and HQ calculations are presented in Tables 5 and 6 (attached).

Cedarwood Cleaners/Vacant Lot

Table A. Cancer Risks and Noncancer HQs for Cedarwood Cleaners/Vacant Lot

	Resident		Commercial / Industrial Worker	Construction Worker
	Surface Soil 0-2ft	Groundwater	Surface Soil 0-2ft	All Soil 0-10ft
Cancer				
cis-1,2-DCE	No RSL	No RSL	No RSL	No RSL
PCE	5.0E-08	1.6E-02	1.2E-08	1.3E-09
TCE	ND	1.6E-03	ND	ND
VC	ND	8.8E-04	ND	ND
Total	5.0E-08	**1.9E-02**	1.2E-08	1.3E-09
Noncancer				
cis-1,2-DCE	4.1E-05	6.2E+00	2.9E-06	9.7E-07
PCE	1.5E-02	4.3E+03	3.1E-03	2.6E-03
TCE	ND	2.8E+02	ND	ND
VC	ND	3.8E-01	ND	ND
Total	1.5E-02	**4.6E+03**	3.1E-03	2.6E-03

The ELCR and HI are within the acceptable limits for current/future resident's, current/future commercial/industrial worker's and current/future construction worker's exposures to COPCs in soil. A future resident's exposure to COPCs in groundwater results in a cancer risk of 1.9×10^{-2} and HI of 4.6×10^{3} with PCE as the primary contributor.

Refer to Table 4 (attached) for the risk calculations.

Piermont Cleaners

Table B. Cancer Risks and Noncancer HQs for Piermont Cleaners

	Resident		Commercial / Industrial Worker	Construction Worker
	Surface Soil 0-2ft	Groundwater	Surface Soil 0-2ft	All Soil 0-10ft
Cancer				
cis-1,2-DCE	No RSL	No RSL	No RSL	No RSL
PCE	1.6E-10	6.1E-05	3.7E-11	1.9E-11
TCE	6.2E-10	5.7E-06	9.7E-11	1.6E-11
VC	ND	8.0E-05	ND	ND
Total	7.8E-10	**1.5E-04**	1.3E-10	3.5E-11
Noncancer				
cis-1,2-DCE	2.0E-06	1.7E-01	1.4E-07	4.7E-08
PCE	4.6E-05	1.6E+01	9.6E-06	3.6E-05
TCE	1.4E-04	1.0E+00	3.1E-05	1.4E-04
VC	ND	3.4E-02	ND	ND
Total	1.9E-04	**1.8E+01**	4.0E-05	1.8E-04

The ELCR and HI are within the acceptable limits for current/future resident's, current/future commercial/industrial worker's and current/future construction worker's exposures to COPCs in soil. A future resident's exposure to COPCs in groundwater results in a cancer risk of 1.5×10^{-4} and HI of 1.8×10^{1} with PCE and VC as the primary contributors.

Refer to Table 5 (attached) for the risk calculations.

F. Sensitivity Analysis (Groundwater – Cedarwood Cleaners and Vacant Lot)

Since a future resident's exposure to COPCs in groundwater results in a cancer risk of 1.9×10^{-2} and HI of 4.6×10^{3} based on the data collected from both Cedarwood Cleaners and Vacant Lot, a sensitivity analysis was performed to evaluate the risks from each part of the AOC (namely, considering data collected at the Cedarwood Cleaners property separately from groundwater data collected from the Vacant Lot area). Groundwater EPCs were determined for each portion and are presented in Attachment D. The analysis indicates a cancer risk of 6.2×10^{-3} and HI of 9.2×10^{2} for the Cedarwood Cleaners property, and a cancer risk of 3.0×10^{-2} and HI of 7.7×10^{3} for the Vacant Lot area (based on the groundwater data groupings). PCE is noted to be the main contributor of cancer risk at the Vacant Lot area while PCE, TCE and VC all contribute to the cancer risk at the Cedarwood Cleaners property. Supporting tables are presented in Attachment D.

G. Conclusions

Based on the screening-level risk assessment of the OU2 RI data available, the risks and hazards calculated for the two OU2 AOCs (Cedarwood Cleaners and Piermont Cleaners) for the groundwater medium are above the cancer and noncancer target thresholds.

Based on the OU2 RI data reviewed and the risk assessment screening described in this memorandum, it appears that surface soils (0 to 2 ft bgs) and all soil (0 to 10 ft bgs) at the OU2 potential source sites do not warrant further action. It is understood that EPA is evaluating OU2 soil gas data.

The OU2 RI data demonstrates impacts to UGA groundwater at the potential source sites, with risks and hazards associated with the future residential receptor calculated to be above target levels. The COPCs that contribute to elevated cancer risks and/or noncancer hazards and that are now considered contaminants of concern (COCs) are 1,2-DCE, PCE, TCE and VC.

H. References

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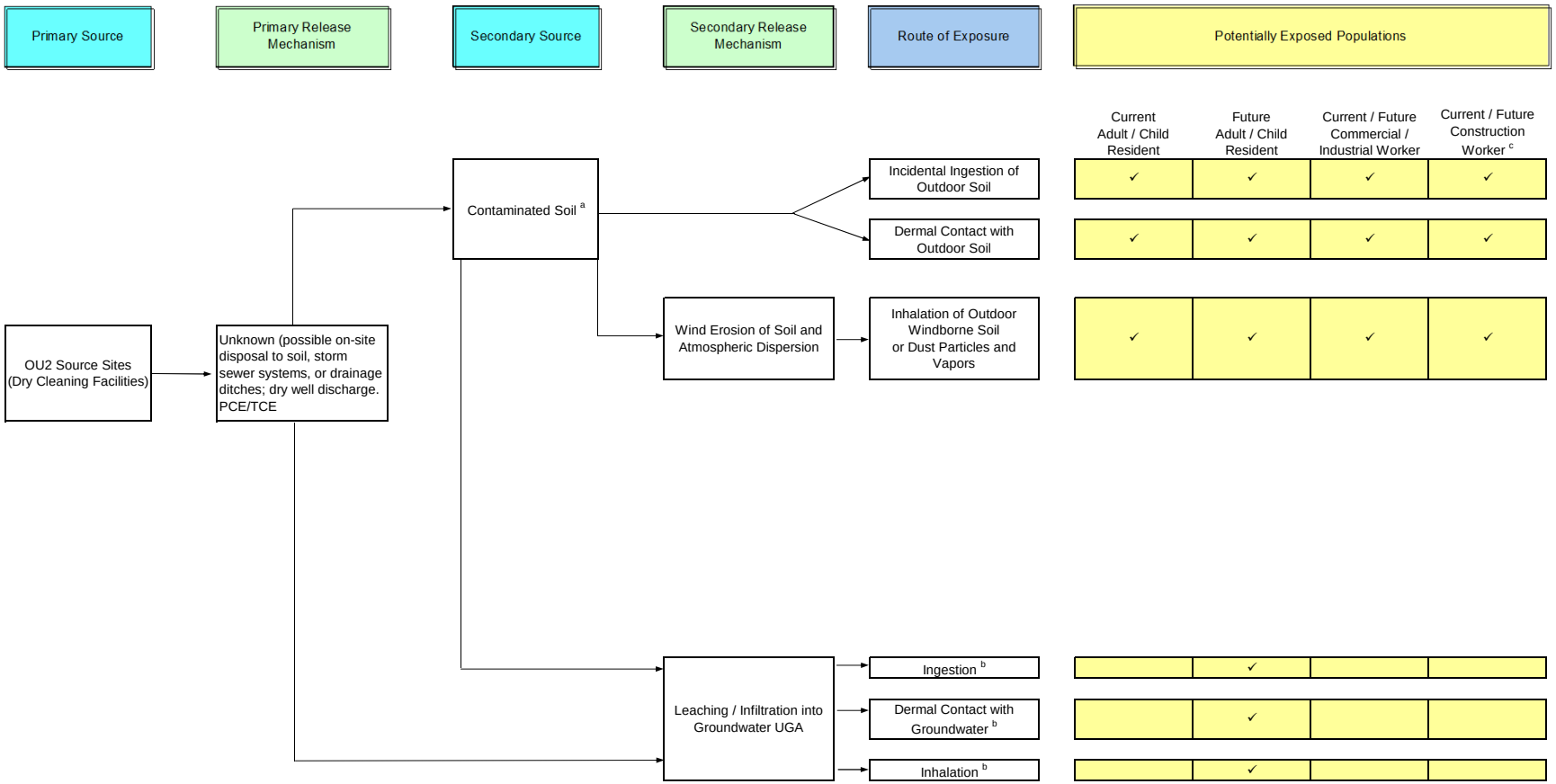
RISK SCREENING FIGURES

Figure 3
Conceptual Site Model
Peninsula Boulevard OU2, Hempstead, NY



Legend:

→ Complete exposure pathway

✓ Quantitative Assessment (Risk Assessment Screening)

Notes:

a. The resident and commercial/industrial worker receptors are assumed to be exposed to surface soil 0-2 ft and a construction worker to 0-10 ft soil.
b. Untreated groundwater supplied via private wells is not used for potable water while treated groundwater supplied via public wells is.
c. Direct contact and inhalation with groundwater for construction workers involved in excavation activities are not evaluated, as there are no USEPA RSLs available for this scenario.
PCE - Tetrachloroethylene
TCE - Trichloroethylene
UGA - Upper Glacial Aquifer

RISK SCREENING TABLES

Table 1: Exposure Point Concentrations
Peninsula Boulevard OU2, Hempstead, NY

Facility	Matrix	Chem Group	COPC	CASRN	Units	Detection Ratio	Detection Frequency (%)	Max Detect	Qualifier	Location of Max Detect	Detection Limit Range	95% UCL	UCL Method	EPC	EPC Type
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	1 / 13	8	0.0066		ERT-10	0.004 - 0.0061	NA	ProUCL did not calculate UCL; one detect	0.0066	Max
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	10 / 13	77	1.2	D	ERT-14	0.004 - 0.054	1.3	95% KM Bootstrap t UCL	1.2	Max
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	Trichloroethylene	79-01-6	mg/kg	0 / 13	0				0.004 - 0.0061	NA	ProUCL did not calculate UCL; nondetect	0	Max
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	Vinyl chloride	75-01-4	mg/kg	0 / 13	0				0.004 - 0.0061	NA	ProUCL did not calculate UCL; nondetect	0	Max
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	1 / 33	3	0.0066		ERT-10	0.004 - 0.036	NA	ProUCL did not calculate UCL; one detect	0.0066	Max
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	17 / 33	52	1.2	D	ERT-14	0.004 - 0.054	0.22	Gamma Adjusted KM-UCL	0.22	UCL
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	Trichloroethylene	79-01-6	mg/kg	0 / 33	0				0.004 - 0.036	NA	ProUCL did not calculate UCL; nondetect	0	Max
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	Vinyl chloride	75-01-4	mg/kg	0 / 33	0				0.004 - 0.036	NA	ProUCL did not calculate UCL; nondetect	0	Max
Cedarwood & Vacant Lot	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	24 / 93	26	2600		MW-27D	5 - 20000	222	95% KM (Chebyshev) UCL	222	UCL
Cedarwood & Vacant Lot	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	84 / 95	88	800000		ERT-GW-38	5 - 20000	176216	99% KM (Chebyshev) UCL	176216	UCL
Cedarwood & Vacant Lot	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	40 / 93	43	6300		MW-27D	5 - 20000	785	95% KM Approximate Gamma UCL	785	UCL
Cedarwood & Vacant Lot	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	5 / 93	5	300		MW-27D	0.5 - 20000	17	95% KM (t) UCL	17	UCL
Piermont	Surface Soil 0-2ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	1 / 24	4	0.00032	J	ERT-37	0.0046 - 0.0066	NA	ProUCL did not calculate UCL; one detect	0.00032	Max
Piermont	Surface Soil 0-2ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	10 / 24	42	0.013		ERT-34	0.0046 - 0.0066	0.0037	95% KM (t) UCL	0.0037	UCL
Piermont	Surface Soil 0-2ft	VOC	Trichloroethylene	79-01-6	mg/kg	4 / 24	17	0.00066	J	ERT-34	0.0046 - 0.0066	0.00058	95% KM (t) UCL	0.00058	UCL
Piermont	Surface Soil 0-2ft	VOC	Vinyl chloride	75-01-4	mg/kg	0 / 24	0				0.0046 - 0.0066	NA	ProUCL did not calculate UCL; nondetect	0	Max
Piermont	All Soil 0-10ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	1 / 43	2	0.00032	J	ERT-37	0.0046 - 0.0082	NA	ProUCL did not calculate UCL; one detect	0.00032	Max
Piermont	All Soil 0-10ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	15 / 43	35	0.013		ERT-34	0.0046 - 0.0082	0.0031	Gamma Adjusted KM-UCL	0.0031	UCL
Piermont	All Soil 0-10ft	VOC	Trichloroethylene	79-01-6	mg/kg	5 / 43	12	0.00066	J	ERT-34	0.0046 - 0.0082	0.00055	95% KM (t) UCL	0.00055	UCL
Piermont	All Soil 0-10ft	VOC	Vinyl chloride	75-01-4	mg/kg	0 / 43	0				0.0046 - 0.0082	NA	ProUCL did not calculate UCL; nondetect	0	Max
Piermont	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	48 / 66	73	51		ERT-GW-28	5 - 50	6.2	KM H-UCL	6.2	UCL
Piermont	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	49 / 66	74	4260		UNIT003_GW2	5 - 100	674	97.5% KM (Chebyshev) UCL	674	UCL
Piermont	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	31 / 66	47	21	J	ERT-GW-03	5 - 50	2.8	KM H-UCL	2.8	UCL
Piermont	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	14 / 66	21	12		ERT-GW-35	5 - 50	1.5	KM H-UCL	1.5	UCL

Notes:
1. Concentrations and RSLs are presented in mg/kg for soil and in ug/L for groundwater.
2. The surface soil data includes samples with a depth of 0 to 2 ft for residential and commercial/industrial worker exposure scenarios and the all soil data includes samples with a depth of 0 to 10 ft for the construction worker exposure scenario.
3. Upper Confidence Limits (UCLs) are calculated using ProUCL 5.1 with a 95% confidence level and 2,000 bootstrap operations. The maximum of the parent and field duplicate sample results was applied. See Attachment A.
4. The UCL was applied as the EPC, except for when the UCL is greater than the maximum detected concentration, as indicated by the ProUCL output. See Attachment A.

Abbreviations:
Chem Group -- Chemical group
COPC -- Contaminants of potential concern
D -- Diluted concentration
EPC -- Exposure point concentration
ft -- Feet
J -- Estimated concentration
KM -- Kaplan Meier
NA -- Not applicable
ND -- Nondetect
UCL -- Upper confidence limit

References:
EPA. 2016. ProUCL Version 5.1.00. Last Updated May 18. Available online: https://www.epa.gov/land-research/proucl-software
EPA. 2015. ProUCL Version 5.1 Technical Guide. EPA/600/R-07/041. October. Available online: https://www.epa.gov/sites/production/files/2016-05/documents/proucl_5.1_tech-guide.pdf

Table 2: Exposure Factors
Peninsula Boulevard OU2, Hempstead, NY

		Current/Future			
		Resident Child [1]	Resident Adult [1,2]	Commercial / Industrial Worker [1]	Construction Worker [3]
Soil Ingestion					
Ingestion Rate (mg/d)	IR	200	100	100	330
Conversion Factor (kg/mg)	CF	0.000001	0.000001	0.000001	0.000001
Fraction Contacted (unitless)	FC	1	1	1	1
Exposure Frequency (d/yr)	EF	350	350	250	250
Exposure Duration (yr)	ED	6	26	25	1
Body Weight (kg-bw)	BW	15	80	80	80
Averaging Time, carc (d)	AT_c	25,550	25,550	25,550	25,550
Averaging Time, noncarc (d)	AT_{nc}	2,190	9,490	9,125	365
Soil Dermal Contact					
Adherence Factor (mg/cm^2)	AD	0.2	0.07	0.12	0.3
Skin Surface Area (cm^2/d)	SA	2,373	6,032	3,527	3,527
Fraction Absorbed in GI Tract	GIABS	chem-specific	chem-specific	chem-specific	chem-specific
Dermal Fraction Absorbed	ABS_d	chem-specific	chem-specific	chem-specific	chem-specific
Conversion Factor (kg/mg)	CF	0.000001	0.000001	0.000001	0.000001
Fraction Contacted (unitless)	FC	1	1	1	1
Exposure Frequency (d/yr)	EF	350	350	250	250
Exposure Duration (yr)	ED	6	26	25	1
Body Weight (kg-bw)	BW	15	80	80	80
Averaging Time, carc (d)	AT_c	25,550	25,550	25,550	25,550
Averaging Time, noncarc (d)	AT_{nc}	2,190	9,490	9,125	365
Soil Vapor/Particulate Inhalation					
Fraction Contacted (unitless)	FC	1	1	1	1
Volatilization Factor (m^3/kg)	VF_s	chem-specific	chem-specific	chem-specific	chem-specific
Particulate Emission Factor (m^3/kg)	PEF_w	1.36E+09	1.36E+09	1.36E+09	site-specific
Exposure Time (hours/day)	ET	24	24	8	8
Exposure Frequency (d/yr)	EF	350	350	250	250
Exposure Duration (yr)	ED	6	26	25	1
Averaging Time, carc (d)	AT_c	25,550	25,550	25,550	25,550
Averaging Time, noncarc (d)	AT_{nc}	127,750	9,490	91,250	91,250
Groundwater Ingestion					
Drinking Rate (L/d)	DR	0.78	2.5	NA	NA
Exposure Frequency (d/yr)	EF	350	350	NA	NA
Exposure Duration (yr)	ED	6	26	NA	NA
Body Weight (kg-bw)	BW	15	80	NA	NA
Averaging Time, canc (d)	AT_c	25,550	25,550	NA	NA
Averaging Time, noncanc (d)	AT_{nc}	2,190	9,490	NA	NA

Table 2: Exposure Factors
Peninsula Boulevard OU2, Hempstead, NY

		Current/Future			
		Resident Child [1]	Resident Adult [1,2]	Commercial / Industrial Worker [1]	Construction Worker [3]
Groundwater Dermal Contact					
Dose Absorbed (ug/cm^2-event)	DA_{event}	chem-specific	chem-specific	NA	NA
Dermal Permeability Constant (cm/h)	Kp	chem-specific	chem-specific	NA	NA
Fraction Absorbed	FA	chem-specific	chem-specific	NA	NA
Exposure Time for organics (h)	ET	0.54	0.71	NA	NA
Exposure Frequency (d/yr)	EF	350	350	NA	NA
Exposure Duration (yr)	ED	6	26	NA	NA
Body Weight (kg-bw)	BW	15	80	NA	NA
Averaging Time, canc (d)	AT_c	25,550	25,550	NA	NA
Averaging Time, noncanc (d)	AT_{nc}	2,190	9,490	NA	NA
Groundwater Vapor Inhalation					
Andelman Volatilization Factor (L/m^3)	K	0.5	0.5	NA	NA
Exposure Time (h)	ET	24	24	NA	NA
Exposure Frequency (d/yr)	EF	350	350	NA	NA
Exposure Duration (yr)	ED	6	26	NA	NA
Averaging Time, canc (d)	AT_c	25,550	25,550	NA	NA
Averaging Time, noncanc (d)	AT_{nc}	2,190	9,490	NA	NA

Note:

1. The exposure factors for a resident and commercial/industrial worker are from the May 2016 USEPA Standard Default Factors in Table 1 of the User's Guide (https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide-may-2016), which reflect the new exposure factors presented in the February 2014 OSWER Directive 9200.1-120 Update of Standard Default Exposure Factors.

2. The exposure duration for an adult is applied as 20 years for the cancer scenario and 26 years for a noncancer scenario, as presented in the May 2016 USEPA RSL equations: https://www.epa.gov/risk/regional-screening-levels-rsls-equations-may-2016

3. The exposure factors for a construction worker are from the May 2016 USEPA Regional Screening Level Calculator using an "Other Construction Activities" scenario reflecting wind erosion and soil excavation, grading, tilling and dozing. The Particulate Emission Factor was generated using the RSL calculator based on site-specific area assumptions. See Attachment C for more detail.

Table 3: Toxicity Values
Peninsula Boulevard OU2, Hempstead, NY

			Cancer					Noncancer			
Chem Group	COPC	CASRN	Mutagen	Oral Slope Factor (SF_o) $(mg/kg\text{-}day)^{-1}$	GIABS	Dermal Slope Factor $(mg/kg\text{-}day)^{-1}$	Inhalation Unit Risk (IUR) $(ug/m3)^{-1}$	Oral Reference Dose (RfD_o) (mg/kg-day)	GIABS	Dermal Reference Dose (mg/kg-day)	Inhalation Reference Concentration (RfC_i) (mg/m^3)
VOC	cis-1,2-Dichloroethylene	156-59-2	No		1			0.002	1	0.002	
VOC	Tetrachloroethylene	127-18-4	No	0.0021	1	0.0021	0.00000026	0.006	1	0.006	0.04
VOC	Trichloroethylene	79-01-6	Yes	0.046	1	0.046	0.0000041	0.0005	1	0.0005	0.002
VOC	Vinyl chloride	75-01-4	Yes	0.72	1	0.72	0.0000044	0.003	1	0.003	0.1

Abbreviations:
Chem Group -- Chemical group
COPC -- Contaminants of potential concern
NA -- Not available

Notes:
The absorbed RfD for dermal is calculated by the following equation: RfD-oral x GIABS.
The absorbed SFd for dermal is calculated by the following equation: SF-oral / GIABS.

Reference:
USEPA 2016. Regional Screening Level (RSL) Generic Tables. May. Available online: https://www.epa.gov/risk/regional-screening-levels-rsls

Table 4: Cancer Risks and Noncancer Hazard Quotients in Soil and Groundwater
Cedarwood Cleaners; Peninsula Boulevard OU2, Hempstead, NY

Facility	Matrix	Chem Group	COPC	CASRN	Units	EPC	EPC Type	Soil							
								Current/Future Resident				Current/Future Commercial/Industrial Worker			
								USEPA RSL Residential Soil		Risk Estimates		USEPA RSL Industrial Soil		Risk Estimates	
								Cancer	Noncancer	Cancer Risk	Noncancer HQ	Cancer	Noncancer	Cancer Risk	Noncancer HQ
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	6.6E-03	Max	NA	1.6E+02	No RSL	4.1E-05	NA	2.3E+03	No RSL	2.9E-06
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	1.2E+00	Max	2.4E+01	8.1E+01	5.0E-08	1.5E-02	1.0E+02	3.9E+02	1.2E-08	3.1E-03
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	Trichloroethylene	79-01-6	mg/kg	ND	-	9.4E-01	4.1E+00	ND	ND	6.0E+00	1.9E+01	ND	ND
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	Vinyl chloride	75-01-4	mg/kg	ND	-	5.9E-02	7.0E+01	ND	ND	1.7E+00	3.7E+02	ND	ND
Cumulative Risk Estimates for Selected COPCs:										5.0E-08	1.5E-02			1.2E-08	3.1E-03
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	6.6E-03	Max	NA	NA	NA	NA	NA	NA	NA	NA
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	2.2E-01	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	Trichloroethylene	79-01-6	mg/kg	ND	-	NA	NA	NA	NA	NA	NA	NA	NA
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	Vinyl chloride	75-01-4	mg/kg	ND	-	NA	NA	NA	NA	NA	NA	NA	NA
Cumulative Risk Estimates for Selected COPCs:															
Cedarwood & Vacant Lot	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	2.2E+02	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Cedarwood & Vacant Lot	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	1.8E+05	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Cedarwood & Vacant Lot	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	7.8E+02	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Cedarwood & Vacant Lot	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	1.7E+01	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Cumulative Risk Estimates for Selected COPCs:															

Notes:
1. Concentrations and RSLs are presented in mg/kg for soil and in ug/L for groundwater.
2. The surface soil data includes samples with a depth of 0 to 2 ft for residential and commercial/industrial worker exposure scenarios and the all soil data includes samples with a depth of 0 to 10 ft for the construction worker exposure scenario.
3. Groundwater concentrations at Unit 001 include concentrations that were historically collected in nearby offsite monitoring well MW-27D/S as part of of the OU1 Remedial Design.
4. The May 2016 USEPA Regional Screening Levels (RSLs) are calculated at a target cancer risk of 1x10-6 and hazard quotient (HQ) of 1.
5. The construction worker RSLs were calculated using the USEPA RSL calculator. See supporting information in Attachment C.
6. Risk estimates greater than the acceptable range of 1x10-4 to 1x10-6 for cumulative cancer risk and 1 for noncancer HI are shaded bold.

Abbreviations:
Chem Group -- Chemical group
COPC -- Contaminants of potential concern
EPC -- Exposure point concentration
HQ -- Hazard quotient
NA -- Not applicable because the receptor exposure scenario is not evaluated for this medium.
ND -- Not detected
RSL -- Regional screening level
UCL -- Upper confidence limit
USEPA -- United States Environmental Protection Agency
VOC -- Volatile organic compound

Equations:

$$Cancer\ Risk = \frac{EPC\ *\ 1x10^{-6}}{RSL_c}$$

$$Noncancer\ HQ = \frac{EPC\ *1}{RSL_{nc}}$$

Table 4: Cancer Risks and Noncancer Hazard Quotients in Soil and Groundwater
Cedarwood Cleaners; Peninsula Boulevard OU2, Hempstead, NY

Facility	Matrix	Chem Group	COPC	CASRN	Units	EPC	EPC Type	Soil				Groundwater			
								Current/Future Construction Worker				Future Resident			
								USEPA RSL Construction Soil		Risk Estimates		USEPA RSL Residential Tapwater		Risk Estimates	
								Cancer	Noncancer	Cancer Risk	Noncancer HQ	Cancer	Noncancer	Cancer Risk	Noncancer HQ
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	6.6E-03	Max	NA	NA	NA	NA	NA	NA	NA	NA
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	1.2E+00	Max	NA	NA	NA	NA	NA	NA	NA	NA
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	Trichloroethylene	79-01-6	mg/kg	ND	-	NA	NA	NA	NA	NA	NA	NA	NA
Cedarwood & Vacant Lot	Surface Soil 0-2ft	VOC	Vinyl chloride	75-01-4	mg/kg	ND	-	NA	NA	NA	NA	NA	NA	NA	NA
Cumulative Risk Estimates for Selected COPCs:															
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	6.6E-03	Max	NA	6.79E+03	No RSL	9.7E-07	NA	NA	NA	NA
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	2.2E-01	UCL	1.64E+02	8.54E+01	1.3E-09	2.6E-03	NA	NA	NA	NA
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	Trichloroethylene	79-01-6	mg/kg	ND	-	3.36E+01	3.93E+00	ND	ND	NA	NA	NA	NA
Cedarwood & Vacant Lot	All Soil 0-10ft	VOC	Vinyl chloride	75-01-4	mg/kg	ND	-	1.02E+01	6.27E+01	ND	ND	NA	NA	NA	NA
Cumulative Risk Estimates for Selected COPCs:										1.3E-09	2.6E-03				
Cedarwood & Vacant Lot	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	2.2E+02	UCL	NA	NA	NA	NA	NA	3.6E+01	No RSL	6.2E+00
Cedarwood & Vacant Lot	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	1.8E+05	UCL	NA	NA	NA	NA	1.1E+01	4.1E+01	1.6E-02	4.3E+03
Cedarwood & Vacant Lot	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	7.8E+02	UCL	NA	NA	NA	NA	4.9E-01	2.8E+00	1.6E-03	2.8E+02
Cedarwood & Vacant Lot	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	1.7E+01	UCL	NA	NA	NA	NA	1.9E-02	4.4E+01	8.8E-04	3.8E-01
Cumulative Risk Estimates for Selected COPCs:														**1.9E-02**	**4.6E+03**

Notes:
1. Concentrations and RSLs are presented in mg/kg for soil and in ug/L for groundwater.
2. The surface soil data includes samples with a depth of 0 to 2 ft for residential and commercial/industrial worker exposure scenarios and the all soil data includes samples with a depth of 0 to 10 ft for the construction worker exposure scenario.
3. Groundwater concentrations at Unit 001 include concentrations that were historically collected in nearby offsite monitoring well MW-27D/S as part of of the OU1 Remedial Design.
4. The May 2016 USEPA Regional Screening Levels (RSLs) are calculated at a target cancer risk of 1x10-6 and hazard quotient (HQ) of 1.
5. The construction worker RSLs were calculated using the USEPA RSL calculator. See supporting information in Attachment C.
6. Risk estimates greater than the acceptable range of 1x10-4 to 1x10-6 for cumulative cancer risk and 1 for noncancer HI are shade

Abbreviations:
Chem Group -- Chemical group
COPC -- Contaminants of potential concern
EPC -- Exposure point concentration
HQ -- Hazard quotient
NA -- Not applicable because the receptor exposure scenario is not evaluated for this medium.
ND -- Not detected
RSL -- Regional screening level
UCL -- Upper confidence limit
USEPA -- United States Environmental Protection Agency
VOC -- Volatile organic compound

Equations:

$$Cancer\ Risk = \frac{EPC\ *\ 1x10^{-6}}{RSL_c}$$

$$Noncancer\ HQ = \frac{EPC\ *1}{RSL_{nc}}$$

Table 5: Cancer Risks and Noncancer Hazard Quotients in Soil and Groundwater
Piermont Cleaners; Peninsula Boulevard OU2, Hempstead, NY

Facility	Matrix	Chem Group	COPC	CASRN	Units	EPC	EPC Type	Soil							
								Current/Future Resident				Current/Future Commercial/Industrial Worker			
								USEPA RSL Residential Soil		Risk Estimates		USEPA RSL Industrial Soil		Risk Estimates	
								Cancer	Noncancer	Cancer Risk	Noncancer HQ	Cancer	Noncancer	Cancer Risk	Noncancer HQ
Piermont	Surface Soil 0-2ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	3.2E-04	Max	NA	1.60E+02	No RSL	2.0E-06	NA	2.3E+03	No RSL	1.4E-07
Piermont	Surface Soil 0-2ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	3.7E-03	UCL	2.40E+01	8.10E+01	1.6E-10	4.6E-05	1.0E+02	3.9E+02	3.7E-11	9.6E-06
Piermont	Surface Soil 0-2ft	VOC	Trichloroethylene	79-01-6	mg/kg	5.8E-04	UCL	9.40E-01	4.10E+00	6.2E-10	1.4E-04	6.0E+00	1.9E+01	9.7E-11	3.1E-05
Piermont	Surface Soil 0-2ft	VOC	Vinyl chloride	75-01-4	mg/kg	ND	-	5.90E-02	7.00E+01	ND	ND	1.7E+00	3.7E+02	ND	ND
Cumulative Risk Estimates for Selected COPCs:										7.8E-10	1.9E-04			1.3E-10	4.0E-05
Piermont	All Soil 0-10ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	3.2E-04	Max	NA	NA	NA	NA	NA	NA	NA	NA
Piermont	All Soil 0-10ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	3.1E-03	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Piermont	All Soil 0-10ft	VOC	Trichloroethylene	79-01-6	mg/kg	5.5E-04	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Piermont	All Soil 0-10ft	VOC	Vinyl chloride	75-01-4	mg/kg	ND	-	NA	NA	NA	NA	NA	NA	NA	NA
Cumulative Risk Estimates for Selected COPCs:															
Piermont	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	6.2E+00	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Piermont	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	6.7E+02	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Piermont	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	2.8E+00	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Piermont	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	1.5E+00	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Cumulative Risk Estimates for Selected COPCs:															

Notes:

1. Concentrations and RSLs are presented in mg/kg for soil and in ug/L for groundwater.
2. The surface soil data includes samples with a depth of 0 to 2 ft for residential and commercial/industrial worker exposure scenarios and the all soil data includes samples with a depth of 0 to 10 ft for the construction worker exposure scenario.
3. The May 2016 USEPA Regional Screening Levels (RSLs) are calculated at a target cancer risk of 1x10-6 and hazard quotient (HQ) of 1.
4. The construction worker RSLs were calculated using the USEPA RSL calculator. See supporting information in Attachment C.
5. Risk estimates greater than the acceptable range of 1x10-4 to 1x10-6 for cumulative cancer risk and 1 for noncancer HI are shaded bold.

Abbreviations:

Chem Group -- Chemical group
COPC -- Contaminants of potential concern
EPC -- Exposure point concentration
HQ -- Hazard quotient
NA -- Not applicable because the receptor exposure scenario is not evaluated for this medium.
ND -- Not detected
RSL -- Regional screening level
UCL -- Upper confidence limit
USEPA -- United States Environmental Protection Agency
VOC -- Volatile organic compound

Equations:

$$Cancer\ Risk = \frac{EPC\ * 1x10^{-6}}{RSL_c}$$

$$Noncancer\ HQ = \frac{EPC\ * 1}{RSL_{nc}}$$

Table 5: Cancer Risks and Noncancer Hazard Quotients in Soil and Groundwater
Piermont Cleaners; Peninsula Boulevard OU2, Hempstead, NY

Facility	Matrix	Chem Group	COPC	CASRN	Units	EPC	EPC Type	Soil				Groundwater			
								Current/Future Construction Worker				Future Resident			
								USEPA RSL Construction Soil		Risk Estimates		USEPA RSL Tapwater		Risk Estimates	
								Cancer	Noncancer	Cancer Risk	Noncancer HQ	Cancer	Noncancer	Cancer Risk	Noncancer HQ
Piermont	Surface Soil 0-2ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	3.2E-04	Max	NA	NA	NA	NA	NA	NA	NA	NA
Piermont	Surface Soil 0-2ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	3.7E-03	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Piermont	Surface Soil 0-2ft	VOC	Trichloroethylene	79-01-6	mg/kg	5.8E-04	UCL	NA	NA	NA	NA	NA	NA	NA	NA
Piermont	Surface Soil 0-2ft	VOC	Vinyl chloride	75-01-4	mg/kg	ND	-	NA	NA	NA	NA	NA	NA	NA	NA
Cumulative Risk Estimates for Selected COPCs:															
Piermont	All Soil 0-10ft	VOC	cis-1,2-Dichloroethylene	156-59-2	mg/kg	3.2E-04	Max	NA	6.79E+03	No RSL	4.7E-08	NA	NA	NA	NA
Piermont	All Soil 0-10ft	VOC	Tetrachloroethylene	127-18-4	mg/kg	3.1E-03	UCL	1.64E+02	8.54E+01	1.9E-11	3.6E-05	NA	NA	NA	NA
Piermont	All Soil 0-10ft	VOC	Trichloroethylene	79-01-6	mg/kg	5.5E-04	UCL	3.36E+01	3.93E+00	1.6E-11	1.4E-04	NA	NA	NA	NA
Piermont	All Soil 0-10ft	VOC	Vinyl chloride	75-01-4	mg/kg	ND	-	1.02E+01	6.27E+01	ND	ND	NA	NA	NA	NA
Cumulative Risk Estimates for Selected COPCs:										3.5E-11	1.8E-04				
Piermont	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	6.2E+00	UCL	NA	NA	NA	NA	NA	3.6E+01	No RSL	1.7E-01
Piermont	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	6.7E+02	UCL	NA	NA	NA	NA	1.1E+01	4.1E+01	6.1E-05	1.6E+01
Piermont	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	2.8E+00	UCL	NA	NA	NA	NA	4.9E-01	2.8E+00	5.7E-06	1.0E+00
Piermont	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	1.5E+00	UCL	NA	NA	NA	NA	1.9E-02	4.4E+01	8.0E-05	3.4E-02
Cumulative Risk Estimates for Selected COPCs:														**1.5E-04**	**1.8E+01**

Notes:

1. Concentrations and RSLs are presented in mg/kg for soil and in ug/L for groundwater.
2. The surface soil data includes samples with a depth of 0 to 2 ft for residential and commercial/industrial worker exposure scenarios and the all soil data includes samples with a depth of 0 to 10 ft for the construction worker exposure scenario.
3. The May 2016 USEPA Regional Screening Levels (RSLs) are calculated at a target cancer risk of 1x10-6 and hazard quotient (HQ) of 1.
4. The construction worker RSLs were calculated using the USEPA RSL calculator. See supporting information in Attachment C.
5. Risk estimates greater than the acceptable range of 1x10-4 to 1x10-6 for cumulative cancer risk and 1 for noncancer HI are shac

Abbreviations:

Chem Group -- Chemical group
COPC -- Contaminants of potential concern
EPC -- Exposure point concentration
HQ -- Hazard quotient
NA -- Not applicable because the receptor exposure scenario is not evaluated for this medium.
ND -- Not detected
RSL -- Regional screening level
UCL -- Upper confidence limit
USEPA -- United States Environmental Protection Agency
VOC -- Volatile organic compound

Equations:

$$Cancer\ Risk = \frac{EPC\ * 1x10^{-6}}{RSL_c}$$

$$Noncancer\ HQ = \frac{EPC\ * 1}{RSL_{nc}}$$

ATTACHMENT A

PROUCL SUPPORTING DOCUMENTATION

Table A-1: 95% Upper Confidence Limits for COPCs
Peninsula Boulevard OU2, Hempstead, NY

Site	Matrix	COPC	UCL	UCL Method	Warning	Sample Count	Detect Count	% Detects
Cedarwood Cleaners	Surface Soil (0-2ft)	cis-1,2-Dichloroethene	NA	ProUCL did not calculate UCL; one detect	b, e	13	1	8
		Tetrachloroethene	1.3	95% KM Bootstrap t UCL	a, g	13	10	77
		Trichloroethene	NA	ProUCL did not calculate UCL; nondetect	e, h	13	0	0
		Vinyl Chloride	NA	ProUCL did not calculate UCL; nondetect	e, h	13	0	0
	All Soil (0-10ft)	cis-1,2-Dichloroethene	NA	ProUCL did not calculate UCL; one detect	b, e	33	1	3
		Tetrachloroethene	0.22	Gamma Adjusted KM-UCL		33	17	52
		Trichloroethene	NA	ProUCL did not calculate UCL; nondetect	e, h	33	0	0
		Vinyl Chloride	NA	ProUCL did not calculate UCL; nondetect	e, h	33	0	0
	Groundwater	cis-1,2-Dichloroethene	222	95% KM (Chebyshev) UCL		93	24	26
		Tetrachloroethene	176216	99% KM (Chebyshev) UCL		95	84	88
		Trichloroethene	785	95% KM Approximate Gamma UCL		93	40	43
		Vinyl Chloride	17	95% KM (t) UCL		93	5	5
Piermont Cleaners	Surface (0-2ft)	cis-1,2-Dichloroethene	NA	ProUCL did not calculate UCL; one detect	b, e	24	1	4
		Tetrachloroethene	0.0037	95% KM (t) UCL		24	10	42
		Trichloroethene	0.00058	95% KM (t) UCL		24	4	17
		Vinyl Chloride	NA	ProUCL did not calculate UCL; nondetect	e, h	24	0	0
	All Soil (0-10ft)	cis-1,2-Dichloroethene	NA	ProUCL did not calculate UCL; one detect	b, e	43	1	2
		Tetrachloroethene	0.0031	Gamma Adjusted KM-UCL		43	15	35
		Trichloroethene	0.00055	95% KM (t) UCL		43	5	12
		Vinyl Chloride	NA	ProUCL did not calculate UCL; nondetect	e, h	43	0	0
	Groundwater	cis-1,2-Dichloroethene	6.2	KM H-UCL		66	48	73
		Tetrachloroethene	674	97.5% KM (Chebyshev) UCL		66	49	74
		Trichloroethene	2.8	KM H-UCL		66	31	47
		Vinyl Chloride	1.5	KM H-UCL		66	14	21

Notes:
1. Concentrations and UCLs for soil are presented in mg/kg and for groundwater in ug/L.
2. Upper Confidence Limits (UCLs) were calculated using ProUCL 5.1.00 with a 95% confidence level and 2,000 bootstrap operations.
3. The surface soil data includes samples with a depth of 0-2ft for residential and commercial/industrial worker exposure scenarios and the all soil data includes samples with a depth of 0-10ft for the construction worker exposure scenario.

Abbreviations:
COPC -- Contaminants of potential concern
ft -- Feet
NA -- Not applicable
ND -- Nondetect
UCL -- Upper confidence limit

ProUCL Warnings:
a. The lowest UCL was taken when ProUCL recommended more than one UCL.
b. Only one distinct data value was detected.
e. The data set was not processed.
g. Recommended UCL exceeds the maximum observation.
h. All concentrations are nondetect.

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.17/11/2016 11:42:51 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

result (cedarwood & vacant & all soil 0-10ft & cis-1,2-dichloroethylene)

General Statistics

Total Number of Observations	33	Number of Distinct Observations	20
Number of Detects	1	Number of Non-Detects	32
Number of Distinct Detects	1	Number of Distinct Non-Detects	20

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (cedarwood & vacant & all soil 0-10ft & cis-1,2-dichloroethylene) was not processed!

result (cedarwood & vacant & all soil 0-10ft & tetrachloroethylene)

General Statistics

Total Number of Observations	33	Number of Distinct Observations	30
Number of Detects	17	Number of Non-Detects	16
Number of Distinct Detects	17	Number of Distinct Non-Detects	13
Minimum Detect	0.002	Minimum Non-Detect	0.0042
Maximum Detect	1.2	Maximum Non-Detect	0.036
Variance Detects	0.0853	Percent Non-Detects	48.48%
Mean Detects	0.148	SD Detects	0.292
Median Detects	0.022	CV Detects	1.978
Skewness Detects	3.273	Kurtosis Detects	11.77
Mean of Logged Detects	-3.581	SD of Logged Detects	2.059

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.546	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.309	Lilliefors GOF Test
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0778	KM Standard Error of Mean	0.0387
KM SD	0.216	95% KM (BCA) UCL	0.156
95% KM (t) UCL	0.143	95% KM (Percentile Bootstrap) UCL	0.15
95% KM (z) UCL	0.142	95% KM Bootstrap t UCL	0.262
90% KM Chebyshev UCL	0.194	95% KM Chebyshev UCL	0.247
97.5% KM Chebyshev UCL	0.32	99% KM Chebyshev UCL	0.463

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.821	Anderson-Darling GOF Test
5% A-D Critical Value	0.821	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.205	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.224	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.395	k star (bias corrected MLE)	0.365
Theta hat (MLE)	0.374	Theta star (bias corrected MLE)	0.405
nu hat (MLE)	13.44	nu star (bias corrected)	12.4

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Mean (detects)	0.148

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.002	Mean	0.0809
Maximum	1.2	Median	0.01
SD	0.218	CV	2.694
k hat (MLE)	0.418	k star (bias corrected MLE)	0.4
Theta hat (MLE)	0.194	Theta star (bias corrected MLE)	0.202
nu hat (MLE)	27.58	nu star (bias corrected)	26.41
Adjusted Level of Significance (β)	0.0419		
Approximate Chi Square Value (26.41, α)	15.69	Adjusted Chi Square Value (26.41, β)	15.27
95% Gamma Approximate UCL (use when n>=50)	0.136	95% Gamma Adjusted UCL (use when n<50)	0.14

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0778	SD (KM)	0.216
Variance (KM)	0.0465	SE of Mean (KM)	0.0387
k hat (KM)	0.13	k star (KM)	0.139
nu hat (KM)	8.589	nu star (KM)	9.141
theta hat (KM)	0.598	theta star (KM)	0.562
80% gamma percentile (KM)	0.079	90% gamma percentile (KM)	0.228
95% gamma percentile (KM)	0.435	99% gamma percentile (KM)	1.045

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (9.14, α)	3.413	Adjusted Chi Square Value (9.14, β)	3.234
95% Gamma Approximate KM-UCL (use when n>=50)	0.208	95% Gamma Adjusted KM-UCL (use when n<50)	0.22

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.908	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.204	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0781	Mean in Log Scale	-4.54
SD in Original Scale	0.219	SD in Log Scale	1.797
95% t UCL (assumes normality of ROS data)	0.143	95% Percentile Bootstrap UCL	0.148
95% BCA Bootstrap UCL	0.194	95% Bootstrap t UCL	0.27
95% H-UCL (Log ROS)	0.165		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.599	KM Geo Mean	0.0101
KM SD (logged)	1.792	95% Critical H Value (KM-Log)	3.533
KM Standard Error of Mean (logged)	0.33	95% H-UCL (KM -Log)	0.154
KM SD (logged)	1.792	95% Critical H Value (KM-Log)	3.533
KM Standard Error of Mean (logged)	0.33		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0779	Mean in Log Scale	-4.643
SD in Original Scale	0.219	SD in Log Scale	1.861
95% t UCL (Assumes normality)	0.142	95% H-Stat UCL	0.18

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Suggested UCL to Use

Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50	0.22

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (cedarwood & vacant & all soil 0-10ft & trichloroethylene)

General Statistics

Total Number of Observations	33	Number of Distinct Observations	21
Number of Detects	0	Number of Non-Detects	33
Number of Distinct Detects	0	Number of Distinct Non-Detects	21

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (cedarwood & vacant & all soil 0-10ft & trichloroethylene) was not processed!

result (cedarwood & vacant & all soil 0-10ft & vinyl chloride)

General Statistics

Total Number of Observations	33	Number of Distinct Observations	21
Number of Detects	0	Number of Non-Detects	33
Number of Distinct Detects	0	Number of Distinct Non-Detects	21

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (cedarwood & vacant & all soil 0-10ft & vinyl chloride) was not processed!

result (cedarwood & vacant & groundwater & cis-1,2-dichloroethylene)

General Statistics

Total Number of Observations	93	Number of Distinct Observations	37
Number of Detects	24	Number of Non-Detects	69
Number of Distinct Detects	23	Number of Distinct Non-Detects	14
Minimum Detect	0.96	Minimum Non-Detect	5
Maximum Detect	2600	Maximum Non-Detect	20000
Variance Detects	378521	Percent Non-Detects	74.19%
Mean Detects	222.7	SD Detects	615.2
Median Detects	5.75	CV Detects	2.762
Skewness Detects	3.14	Kurtosis Detects	10.06
Mean of Logged Detects	2.492	SD of Logged Detects	2.202

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.416	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.916	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.491	Lilliefors GOF Test
5% Lilliefors Critical Value	0.177	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	64.84	KM Standard Error of Mean	36.14
KM SD	330.4	95% KM (BCA) UCL	124

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

95% KM (t) UCL	124.9	95% KM (Percentile Bootstrap) UCL	133.7
95% KM (z) UCL	124.3	95% KM Bootstrap t UCL	181.7
90% KM Chebyshev UCL	173.3	95% KM Chebyshev UCL	222.4
97.5% KM Chebyshev UCL	290.5	99% KM Chebyshev UCL	424.4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	3.632	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.878	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.36	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.196	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.245	k star (bias corrected MLE)	0.242
Theta hat (MLE)	910.6	Theta star (bias corrected MLE)	921.1
nu hat (MLE)	11.74	nu star (bias corrected)	11.61
Mean (detects)	222.7		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	59.9
Maximum	2600	Median	0.01
SD	322.8	CV	5.388
k hat (MLE)	0.122	k star (bias corrected MLE)	0.126
Theta hat (MLE)	489.7	Theta star (bias corrected MLE)	477.1
nu hat (MLE)	22.75	nu star (bias corrected)	23.35
Adjusted Level of Significance (β)	0.0474		
Approximate Chi Square Value (23.35, α)	13.36	Adjusted Chi Square Value (23.35, β)	13.24
95% Gamma Approximate UCL (use when n>=50)	104.7	95% Gamma Adjusted UCL (use when n<50)	105.7

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	64.84	SD (KM)	330.4
Variance (KM)	109157	SE of Mean (KM)	36.14
k hat (KM)	0.0385	k star (KM)	0.0444
nu hat (KM)	7.165	nu star (KM)	8.267
theta hat (KM)	1683	theta star (KM)	1459
80% gamma percentile (KM)	5.625	90% gamma percentile (KM)	83.74
95% gamma percentile (KM)	328.6	99% gamma percentile (KM)	1476

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (8.27, α)	2.891	Adjusted Chi Square Value (8.27, β)	2.841
95% Gamma Approximate KM-UCL (use when n>=50)	185.5	95% Gamma Adjusted KM-UCL (use when n<50)	188.7

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.85	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.916	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.177	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	60.73	Mean in Log Scale	1.292
SD in Original Scale	322.3	SD in Log Scale	1.679
95% t UCL (assumes normality of ROS data)	116.3	95% Percentile Bootstrap UCL	127.1
95% BCA Bootstrap UCL	144.4	95% Bootstrap t UCL	172.9
95% H-UCL (Log ROS)	25.18		

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.396	KM Geo Mean	4.038
KM SD (logged)	1.496	95% Critical H Value (KM-Log)	2.781
KM Standard Error of Mean (logged)	0.221	95% H-UCL (KM -Log)	19.08
KM SD (logged)	1.496	95% Critical H Value (KM-Log)	2.781
KM Standard Error of Mean (logged)	0.221		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	467.8	Mean in Log Scale	3.099
SD in Original Scale	1578	SD in Log Scale	2.513
95% t UCL (Assumes normality)	739.6	95% H-Stat UCL	1514

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 222.4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (cedarwood & vacant & groundwater & tetrachloroethylene)

General Statistics

Total Number of Observations	95	Number of Distinct Observations	79
Number of Detects	84	Number of Non-Detects	11
Number of Distinct Detects	78	Number of Distinct Non-Detects	1
Minimum Detect	1.2	Minimum Non-Detect	5
Maximum Detect	800000	Maximum Non-Detect	5
Variance Detects	2.027E+10	Percent Non-Detects	11.58%
Mean Detects	43885	SD Detects	142360
Median Detects	4100	CV Detects	3.244
Skewness Detects	4.518	Kurtosis Detects	20.04
Mean of Logged Detects	6.974	SD of Logged Detects	3.778

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.333	Normal GOF Test on Detected Observations Only
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.379	Lilliefors GOF Test
5% Lilliefors Critical Value	0.0968	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	38804	KM Standard Error of Mean	13811
KM SD	133805	95% KM (BCA) UCL	63731
95% KM (t) UCL	61746	95% KM (Percentile Bootstrap) UCL	62844
95% KM (z) UCL	61520	95% KM Bootstrap t UCL	77658
90% KM Chebyshev UCL	80235	95% KM Chebyshev UCL	99002
97.5% KM Chebyshev UCL	125050	99% KM Chebyshev UCL	176216

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.501	Anderson-Darling GOF Test
5% A-D Critical Value	0.917	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.125	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.108	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Gamma Statistics on Detected Data Only

k hat (MLE)	0.198	k star (bias corrected MLE)	0.199
Theta hat (MLE)	221270	Theta star (bias corrected MLE)	220322
nu hat (MLE)	33.32	nu star (bias corrected)	33.46
Mean (detects)	43885		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	38803
Maximum	800000	Median	1700
SD	134514	CV	3.467
k hat (MLE)	0.155	k star (bias corrected MLE)	0.157
Theta hat (MLE)	250264	Theta star (bias corrected MLE)	246886
nu hat (MLE)	29.46	nu star (bias corrected)	29.86
Adjusted Level of Significance (β)	0.0475		
Approximate Chi Square Value (29.86, α)	18.38	Adjusted Chi Square Value (29.86, β)	18.25
95% Gamma Approximate UCL (use when n>=50)	63028	95% Gamma Adjusted UCL (use when n<50)	63508

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	38804	SD (KM)	133805
Variance (KM)	1.790E+10	SE of Mean (KM)	13811
k hat (KM)	0.0841	k star (KM)	0.0885
nu hat (KM)	15.98	nu star (KM)	16.81
theta hat (KM)	461392	theta star (KM)	438642
80% gamma percentile (KM)	22193	90% gamma percentile (KM)	97502
95% gamma percentile (KM)	226105	99% gamma percentile (KM)	654836

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (16.81, α)	8.535	Adjusted Chi Square Value (16.81, β)	8.444
95% Gamma Approximate KM-UCL (use when n>=50)	76414	95% Gamma Adjusted KM-UCL (use when n<50)	77238

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.9	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	3.0980E-7	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.149	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0968	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	38804	Mean in Log Scale	6.253
SD in Original Scale	134514	SD in Log Scale	4.11
95% t UCL (assumes normality of ROS data)	61730	95% Percentile Bootstrap UCL	61747
95% BCA Bootstrap UCL	70274	95% Bootstrap t UCL	78083
95% H-UCL (Log ROS)	34887796		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	6.289	KM Geo Mean	538.9
KM SD (logged)	4.009	95% Critical H Value (KM-Log)	6.157
KM Standard Error of Mean (logged)	0.414	95% H-UCL (KM -Log)	21257132
KM SD (logged)	4.009	95% Critical H Value (KM-Log)	6.157
KM Standard Error of Mean (logged)	0.414		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	38804	Mean in Log Scale	6.272
SD in Original Scale	134514	SD in Log Scale	4.05
95% t UCL (Assumes normality)	61730	95% H-Stat UCL	25896615

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

99% KM (Chebyshev) UCL 176216

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (cedarwood & vacant & groundwater & trichloroethylene)

General Statistics

Total Number of Observations	93	Number of Distinct Observations	45
Number of Detects	40	Number of Non-Detects	53
Number of Distinct Detects	37	Number of Distinct Non-Detects	12
Minimum Detect	0.78	Minimum Non-Detect	5
Maximum Detect	6300	Maximum Non-Detect	20000
Variance Detects	2517604	Percent Non-Detects	56.99%
Mean Detects	1090	SD Detects	1587
Median Detects	265	CV Detects	1.456
Skewness Detects	1.751	Kurtosis Detects	2.507
Mean of Logged Detects	5.276	SD of Logged Detects	2.398

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.726	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.94	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.262	Lilliefors GOF Test
5% Lilliefors Critical Value	0.139	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	498.9	KM Standard Error of Mean	126.3
KM SD	1177	95% KM (BCA) UCL	730.4
95% KM (t) UCL	708.7	95% KM (Percentile Bootstrap) UCL	717
95% KM (z) UCL	706.6	95% KM Bootstrap t UCL	760.2
90% KM Chebyshev UCL	877.7	95% KM Chebyshev UCL	1049
97.5% KM Chebyshev UCL	1287	99% KM Chebyshev UCL	1755

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.613	Anderson-Darling GOF Test
5% A-D Critical Value	0.839	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.111	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.15	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.385	k star (bias corrected MLE)	0.373
Theta hat (MLE)	2827	Theta star (bias corrected MLE)	2920
nu hat (MLE)	30.83	nu star (bias corrected)	29.85
Mean (detects)	1090		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Minimum	0.01	Mean	472.2
Maximum	6300	Median	0.01
SD	1166	CV	2.469
k hat (MLE)	0.125	k star (bias corrected MLE)	0.128
Theta hat (MLE)	3776	Theta star (bias corrected MLE)	3683
nu hat (MLE)	23.26	nu star (bias corrected)	23.84
Adjusted Level of Significance (β)	0.0474		
Approximate Chi Square Value (23.84, α)	13.73	Adjusted Chi Square Value (23.84, β)	13.61
95% Gamma Approximate UCL (use when n>=50)	820	95% Gamma Adjusted UCL (use when n<50)	827.3

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	498.9	SD (KM)	1177
Variance (KM)	1385013	SE of Mean (KM)	126.3
k hat (KM)	0.18	k star (KM)	0.181
nu hat (KM)	33.43	nu star (KM)	33.68
theta hat (KM)	2776	theta star (KM)	2755
80% gamma percentile (KM)	621.3	90% gamma percentile (KM)	1505
95% gamma percentile (KM)	2635	99% gamma percentile (KM)	5800

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (33.68, α)	21.41	Adjusted Chi Square Value (33.68, β)	21.26
95% Gamma Approximate KM-UCL (use when n>=50)	784.9	95% Gamma Adjusted KM-UCL (use when n<50)	790.5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.94	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.11	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.139	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	473.3	Mean in Log Scale	2.776
SD in Original Scale	1165	SD in Log Scale	3.033
95% t UCL (assumes normality of ROS data)	674	95% Percentile Bootstrap UCL	676.6
95% BCA Bootstrap UCL	708.8	95% Bootstrap t UCL	727.7
95% H-UCL (Log ROS)	7243		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.975	KM Geo Mean	19.6
KM SD (logged)	2.773	95% Critical H Value (KM-Log)	4.421
KM Standard Error of Mean (logged)	0.389	95% H-UCL (KM -Log)	3294
KM SD (logged)	2.773	95% Critical H Value (KM-Log)	4.421
KM Standard Error of Mean (logged)	0.389		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	815.5	Mean in Log Scale	3.72
SD in Original Scale	1853	SD in Log Scale	2.881
95% t UCL (Assumes normality)	1135	95% H-Stat UCL	10314

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL 784.9

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

result (cedarwood & vacant & groundwater & vinyl chloride)

General Statistics

Total Number of Observations	93	Number of Distinct Observations	19
Number of Detects	5	Number of Non-Detects	88
Number of Distinct Detects	4	Number of Distinct Non-Detects	15
Minimum Detect	12	Minimum Non-Detect	0.5
Maximum Detect	300	Maximum Non-Detect	20000
Variance Detects	13999	Percent Non-Detects	94.62%
Mean Detects	102.6	SD Detects	118.3
Median Detects	79	CV Detects	1.153
Skewness Detects	1.558	Kurtosis Detects	2.547
Mean of Logged Detects	3.949	SD of Logged Detects	1.424

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.826	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.275	Lilliefors GOF Test
5% Lilliefors Critical Value	0.343	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	8.231	KM Standard Error of Mean	5.134
KM SD	38.41	95% KM (BCA) UCL	N/A
95% KM (t) UCL	16.76	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	16.68	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	23.63	95% KM Chebyshev UCL	30.61
97.5% KM Chebyshev UCL	40.29	99% KM Chebyshev UCL	59.31

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.354	Anderson-Darling GOF Test
5% A-D Critical Value	0.695	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.261	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.366	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.862	k star (bias corrected MLE)	0.478
Theta hat (MLE)	119.1	Theta star (bias corrected MLE)	214.6
nu hat (MLE)	8.617	nu star (bias corrected)	4.78
Mean (detects)	102.6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	5.526
Maximum	300	Median	0.01
SD	33.91	CV	6.137
k hat (MLE)	0.133	k star (bias corrected MLE)	0.136
Theta hat (MLE)	41.4	Theta star (bias corrected MLE)	40.53
nu hat (MLE)	24.83	nu star (bias corrected)	25.36
Adjusted Level of Significance (β)	0.0474		
Approximate Chi Square Value (25.36, α)	14.89	Adjusted Chi Square Value (25.36, β)	14.76
95% Gamma Approximate UCL (use when n>=50)	9.413	95% Gamma Adjusted UCL (use when n<50)	9.493

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	8.231	SD (KM)	38.41

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Variance (KM)	1475	SE of Mean (KM)	5.134
k hat (KM)	0.0459	k star (KM)	0.0516
nu hat (KM)	8.542	nu star (KM)	9.6
theta hat (KM)	179.2	theta star (KM)	159.5
80% gamma percentile (KM)	1.246	90% gamma percentile (KM)	13.08
95% gamma percentile (KM)	44.26	99% gamma percentile (KM)	176.8

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (9.60, α)	3.693	Adjusted Chi Square Value (9.60, β)	3.635
95% Gamma Approximate KM-UCL (use when n>=50)	21.4	95% Gamma Adjusted KM-UCL (use when n<50)	21.73

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.882	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.248	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.085	Mean in Log Scale	-2.045
SD in Original Scale	33.84	SD in Log Scale	2.678
95% t UCL (assumes normality of ROS data)	11.92	95% Percentile Bootstrap UCL	12.21
95% BCA Bootstrap UCL	15.75	95% Bootstrap t UCL	25.37
95% H-UCL (Log ROS)	15.46		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.293	KM Geo Mean	0.746
KM SD (logged)	1.324	95% Critical H Value (KM-Log)	2.585
KM Standard Error of Mean (logged)	0.193	95% H-UCL (KM -Log)	2.56
KM SD (logged)	1.324	95% Critical H Value (KM-Log)	2.585
KM Standard Error of Mean (logged)	0.193		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	400.7	Mean in Log Scale	3.066
SD in Original Scale	1542	SD in Log Scale	2.433
95% t UCL (Assumes normality)	666.4	95% H-Stat UCL	1133

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	16.76

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (cedarwood & vacant & surface soil 0-2ft & cis-1,2-dichloroethylene)

General Statistics

Total Number of Observations	13	Number of Distinct Observations	12
Number of Detects	1	Number of Non-Detects	12
Number of Distinct Detects	1	Number of Distinct Non-Detects	11

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

The data set for variable result (cedarwood & vacant & surface soil 0-2ft & cis-1,2-dichloroethylene) was not processed!

result (cedarwood & vacant & surface soil 0-2ft & tetrachloroethylene)

General Statistics

Total Number of Observations	13	Number of Distinct Observations	13
Number of Detects	10	Number of Non-Detects	3
Number of Distinct Detects	10	Number of Distinct Non-Detects	3
Minimum Detect	0.0031	Minimum Non-Detect	0.0042
Maximum Detect	1.2	Maximum Non-Detect	0.0051
Variance Detects	0.141	Percent Non-Detects	23.08%
Mean Detects	0.18	SD Detects	0.376
Median Detects	0.016	CV Detects	2.085
Skewness Detects	2.703	Kurtosis Detects	7.544
Mean of Logged Detects	-3.607	SD of Logged Detects	2.087

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.555	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.353	Lilliefors GOF Test
5% Lilliefors Critical Value	0.262	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.14	KM Standard Error of Mean	0.094
KM SD	0.322	95% KM (BCA) UCL	0.289
95% KM (t) UCL	0.307	95% KM (Percentile Bootstrap) UCL	0.299
95% KM (z) UCL	0.294	95% KM Bootstrap t UCL	1.217
90% KM Chebyshev UCL	0.422	95% KM Chebyshev UCL	0.549
97.5% KM Chebyshev UCL	0.727	99% KM Chebyshev UCL	1.075

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.812	Anderson-Darling GOF Test
5% A-D Critical Value	0.804	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.235	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.286	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.354	k star (bias corrected MLE)	0.315
Theta hat (MLE)	0.509	Theta star (bias corrected MLE)	0.573
nu hat (MLE)	7.085	nu star (bias corrected)	6.293
Mean (detects)	0.18		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0031	Mean	0.141
Maximum	1.2	Median	0.01
SD	0.334	CV	2.369
k hat (MLE)	0.357	k star (bias corrected MLE)	0.326
Theta hat (MLE)	0.395	Theta star (bias corrected MLE)	0.433
nu hat (MLE)	9.277	nu star (bias corrected)	8.469
Adjusted Level of Significance (β)	0.0301		
Approximate Chi Square Value (8.47, α)	3.01	Adjusted Chi Square Value (8.47, β)	2.565
95% Gamma Approximate UCL (use when n>=50)	0.397	95% Gamma Adjusted UCL (use when n<50)	0.466

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.14	SD (KM)	0.322
Variance (KM)	0.103	SE of Mean (KM)	0.094
k hat (KM)	0.188	k star (KM)	0.196
nu hat (KM)	4.899	nu star (KM)	5.102
theta hat (KM)	0.741	theta star (KM)	0.711
80% gamma percentile (KM)	0.182	90% gamma percentile (KM)	0.422
95% gamma percentile (KM)	0.723	99% gamma percentile (KM)	1.553

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (5.10, α)	1.199	Adjusted Chi Square Value (5.10, β)	0.955
95% Gamma Approximate KM-UCL (use when n>=50)	0.594	95% Gamma Adjusted KM-UCL (use when n<50)	0.746

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.896	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.186	Lilliefors GOF Test
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.139	Mean in Log Scale	-4.179
SD in Original Scale	0.335	SD in Log Scale	2.111
95% t UCL (assumes normality of ROS data)	0.305	95% Percentile Bootstrap UCL	0.308
95% BCA Bootstrap UCL	0.404	95% Bootstrap t UCL	1.249
95% H-UCL (Log ROS)	3.091		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.064	KM Geo Mean	0.0172
KM SD (logged)	1.928	95% Critical H Value (KM-Log)	4.625
KM Standard Error of Mean (logged)	0.565	95% H-UCL (KM -Log)	1.444
KM SD (logged)	1.928	95% Critical H Value (KM-Log)	4.625
KM Standard Error of Mean (logged)	0.565		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.139	Mean in Log Scale	-4.169
SD in Original Scale	0.335	SD in Log Scale	2.099
95% t UCL (Assumes normality)	0.305	95% H-Stat UCL	2.946

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Bootstrap t UCL	1.252	95% Hall's Bootstrap	1.444

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (cedarwood & vacant & surface soil 0-2ft & trichloroethylene)

General Statistics

Total Number of Observations	13	Number of Distinct Observations	12
Number of Detects	0	Number of Non-Detects	13
Number of Distinct Detects	0	Number of Distinct Non-Detects	12

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (cedarwood & vacant & surface soil 0-2ft & trichloroethylene) was not processed!

result (cedarwood & vacant & surface soil 0-2ft & vinyl chloride)

General Statistics

Total Number of Observations	13	Number of Distinct Observations	12
Number of Detects	0	Number of Non-Detects	13
Number of Distinct Detects	0	Number of Distinct Non-Detects	12

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (cedarwood & vacant & surface soil 0-2ft & vinyl chloride) was not processed!

result (piermont & all soil 0-10ft & cis-1,2-dichloroethylene)

General Statistics

Total Number of Observations	43	Number of Distinct Observations	21
Number of Detects	1	Number of Non-Detects	42
Number of Distinct Detects	1	Number of Distinct Non-Detects	20

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (piermont & all soil 0-10ft & cis-1,2-dichloroethylene) was not processed!

result (piermont & all soil 0-10ft & tetrachloroethylene)

General Statistics

Total Number of Observations	43	Number of Distinct Observations	31
Number of Detects	15	Number of Non-Detects	28
Number of Distinct Detects	14	Number of Distinct Non-Detects	17
Minimum Detect	2.1000E-4	Minimum Non-Detect	0.0047
Maximum Detect	0.013	Maximum Non-Detect	0.0082
Variance Detects	1.3848E-5	Percent Non-Detects	65.12%
Mean Detects	0.00333	SD Detects	0.00372
Median Detects	0.0018	CV Detects	1.116
Skewness Detects	1.758	Kurtosis Detects	2.44
Mean of Logged Detects	-6.245	SD of Logged Detects	1.124

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.76	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.276	Lilliefors GOF Test
5% Lilliefors Critical Value	0.22	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00227	KM Standard Error of Mean	4.5965E-4
KM SD	0.00243	95% KM (BCA) UCL	0.00309
95% KM (t) UCL	0.00304	95% KM (Percentile Bootstrap) UCL	0.00303
95% KM (z) UCL	0.00303	95% KM Bootstrap t UCL	0.0033

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

90% KM Chebyshev UCL	0.00365	95% KM Chebyshev UCL	0.00427
97.5% KM Chebyshev UCL	0.00514	99% KM Chebyshev UCL	0.00684

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.412	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.762	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.176	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.228	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.06	k star (bias corrected MLE)	0.892
Theta hat (MLE)	0.00315	Theta star (bias corrected MLE)	0.00374
nu hat (MLE)	31.79	nu star (bias corrected)	26.76
Mean (detects)	0.00333		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.1000E-4	Mean	0.00767
Maximum	0.013	Median	0.01
SD	0.00387	CV	0.504
k hat (MLE)	1.776	k star (bias corrected MLE)	1.667
Theta hat (MLE)	0.00432	Theta star (bias corrected MLE)	0.0046
nu hat (MLE)	152.7	nu star (bias corrected)	143.4
Adjusted Level of Significance (β)	0.0444		
Approximate Chi Square Value (143.40, α)	116.7	Adjusted Chi Square Value (143.40, β)	115.9
95% Gamma Approximate UCL (use when n>=50)	0.00943	95% Gamma Adjusted UCL (use when n<50)	0.0095

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00227	SD (KM)	0.00243
Variance (KM)	5.9023E-6	SE of Mean (KM)	4.5965E-4
k hat (KM)	0.872	k star (KM)	0.827
nu hat (KM)	75.01	nu star (KM)	71.11
theta hat (KM)	0.0026	theta star (KM)	0.00274
80% gamma percentile (KM)	0.0037	90% gamma percentile (KM)	0.00547
95% gamma percentile (KM)	0.00727	99% gamma percentile (KM)	0.0115

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (71.11, α)	52.7	Adjusted Chi Square Value (71.11, β)	52.15
95% Gamma Approximate KM-UCL (use when n>=50)	0.00306	95% Gamma Adjusted KM-UCL (use when n<50)	0.00309

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.134	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0021	Mean in Log Scale	-6.494
SD in Original Scale	0.00239	SD in Log Scale	0.754
95% t UCL (assumes normality of ROS data)	0.00271	95% Percentile Bootstrap UCL	0.00271
95% BCA Bootstrap UCL	0.00293	95% Bootstrap t UCL	0.00327
95% H-UCL (Log ROS)	0.00257		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-6.504	KM Geo Mean	0.0015

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

KM SD (logged)	0.937	95% Critical H Value (KM-Log)	2.294
KM Standard Error of Mean (logged)	0.24	95% H-UCL (KM -Log)	0.00324
KM SD (logged)	0.937	95% Critical H Value (KM-Log)	2.294
KM Standard Error of Mean (logged)	0.24		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00296	Mean in Log Scale	-6.018
SD in Original Scale	0.00218	SD in Log Scale	0.676
95% t UCL (Assumes normality)	0.00352	95% H-Stat UCL	0.00379

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50	0.00309

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (piermont & all soil 0-10ft & trichloroethylene)

General Statistics

Total Number of Observations	43	Number of Distinct Observations	25
Number of Detects	5	Number of Non-Detects	38
Number of Distinct Detects	5	Number of Distinct Non-Detects	20
Minimum Detect	2.8000E-4	Minimum Non-Detect	0.0046
Maximum Detect	6.6000E-4	Maximum Non-Detect	0.0082
Variance Detects	1.8670E-8	Percent Non-Detects	88.37%
Mean Detects	4.4800E-4	SD Detects	1.3664E-4
Median Detects	4.4000E-4	CV Detects	0.305
Skewness Detects	0.773	Kurtosis Detects	2.108
Mean of Logged Detects	-7.748	SD of Logged Detects	0.305

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.294	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.4800E-4	KM Standard Error of Mean	6.1106E-5
KM SD	1.2221E-4	95% KM (BCA) UCL	5.5000E-4
95% KM (t) UCL	5.5078E-4	95% KM (Percentile Bootstrap) UCL	5.5250E-4
95% KM (z) UCL	5.4851E-4	95% KM Bootstrap t UCL	5.9998E-4
90% KM Chebyshev UCL	6.3132E-4	95% KM Chebyshev UCL	7.1436E-4
97.5% KM Chebyshev UCL	8.2961E-4	99% KM Chebyshev UCL	0.00106

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.339	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.679	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.258	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.357	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	13.7	k star (bias corrected MLE)	5.612

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Theta hat (MLE)	3.2711E-5	Theta star (bias corrected MLE)	7.9834E-5
nu hat (MLE)	137	nu star (bias corrected)	56.12
Mean (detects)	4.4800E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.8000E-4	Mean	0.00889
Maximum	0.01	Median	0.01
SD	0.0031	CV	0.349
k hat (MLE)	2.171	k star (bias corrected MLE)	2.035
Theta hat (MLE)	0.00409	Theta star (bias corrected MLE)	0.00437
nu hat (MLE)	186.7	nu star (bias corrected)	175
Adjusted Level of Significance (β)	0.0444		
Approximate Chi Square Value (175.00, α)	145.4	Adjusted Chi Square Value (175.00, β)	144.5
95% Gamma Approximate UCL (use when n>=50)	0.0107	95% Gamma Adjusted UCL (use when n<50)	0.0108

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.4800E-4	SD (KM)	1.2221E-4
Variance (KM)	1.4936E-8	SE of Mean (KM)	6.1106E-5
k hat (KM)	13.44	k star (KM)	12.52
nu hat (KM)	1156	nu star (KM)	1076
theta hat (KM)	3.3339E-5	theta star (KM)	3.5795E-5
80% gamma percentile (KM)	5.4964E-4	90% gamma percentile (KM)	6.1601E-4
95% gamma percentile (KM)	6.7458E-4	99% gamma percentile (KM)	7.9386E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	1001	Adjusted Chi Square Value (N/A, β)	998.7
95% Gamma Approximate KM-UCL (use when n>=50)	4.8163E-4	95% Gamma Adjusted KM-UCL (use when n<50)	4.8284E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.246	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.343	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.4041E-4	Mean in Log Scale	-7.748
SD in Original Scale	8.9546E-5	SD in Log Scale	0.202
95% t UCL (assumes normality of ROS data)	4.6338E-4	95% Percentile Bootstrap UCL	4.6275E-4
95% BCA Bootstrap UCL	4.6208E-4	95% Bootstrap t UCL	4.6439E-4
95% H-UCL (Log ROS)	4.6473E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-7.748	KM Geo Mean	4.3175E-4
KM SD (logged)	0.273	95% Critical H Value (KM-Log)	1.753
KM Standard Error of Mean (logged)	0.136	95% H-UCL (KM -Log)	4.8246E-4
KM SD (logged)	0.273	95% Critical H Value (KM-Log)	1.753
KM Standard Error of Mean (logged)	0.136		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00249	Mean in Log Scale	-6.116
SD in Original Scale	8.1762E-4	SD in Log Scale	0.616
95% t UCL (Assumes normality)	0.0027	95% H-Stat UCL	0.00322

DL/2 is not a recommended method, provided for comparisons and historical reasons

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 5.5078E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (piermont & all soil 0-10ft & vinyl chloride)

General Statistics

Total Number of Observations	43	Number of Distinct Observations	20
Number of Detects	0	Number of Non-Detects	43
Number of Distinct Detects	0	Number of Distinct Non-Detects	20

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (piermont & all soil 0-10ft & vinyl chloride) was not processed!

result (piermont & groundwater & cis-1,2-dichloroethylene)

General Statistics

Total Number of Observations	66	Number of Distinct Observations	47
Number of Detects	48	Number of Non-Detects	18
Number of Distinct Detects	45	Number of Distinct Non-Detects	2
Minimum Detect	0.23	Minimum Non-Detect	5
Maximum Detect	51	Maximum Non-Detect	50
Variance Detects	125.6	Percent Non-Detects	27.27%
Mean Detects	6.092	SD Detects	11.21
Median Detects	1.85	CV Detects	1.84
Skewness Detects	2.952	Kurtosis Detects	8.521
Mean of Logged Detects	0.709	SD of Logged Detects	1.455

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.55	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.947	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.305	Lilliefors GOF Test
5% Lilliefors Critical Value	0.127	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.892	KM Standard Error of Mean	1.222
KM SD	9.736	95% KM (BCA) UCL	7.024
95% KM (t) UCL	6.93	95% KM (Percentile Bootstrap) UCL	7.043
95% KM (z) UCL	6.901	95% KM Bootstrap t UCL	8.022
90% KM Chebyshev UCL	8.557	95% KM Chebyshev UCL	10.22
97.5% KM Chebyshev UCL	12.52	99% KM Chebyshev UCL	17.05

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.226	Anderson-Darling GOF Test
5% A-D Critical Value	0.808	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.16	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.135	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Gamma Statistics on Detected Data Only

k hat (MLE)	0.567	k star (bias corrected MLE)	0.546
Theta hat (MLE)	10.74	Theta star (bias corrected MLE)	11.16
nu hat (MLE)	54.47	nu star (bias corrected)	52.4
Mean (detects)	6.092		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	4.92
Maximum	51	Median	1.35
SD	9.814	CV	1.995
k hat (MLE)	0.417	k star (bias corrected MLE)	0.408
Theta hat (MLE)	11.81	Theta star (bias corrected MLE)	12.06
nu hat (MLE)	55.01	nu star (bias corrected)	53.84
Adjusted Level of Significance (β)	0.0464		
Approximate Chi Square Value (53.84, α)	37.98	Adjusted Chi Square Value (53.84, β)	37.69
95% Gamma Approximate UCL (use when n>=50)	6.974	95% Gamma Adjusted UCL (use when n<50)	7.029

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.892	SD (KM)	9.736
Variance (KM)	94.8	SE of Mean (KM)	1.222
k hat (KM)	0.252	k star (KM)	0.251
nu hat (KM)	33.32	nu star (KM)	33.14
theta hat (KM)	19.38	theta star (KM)	19.49
80% gamma percentile (KM)	7.115	90% gamma percentile (KM)	14.68
95% gamma percentile (KM)	23.65	99% gamma percentile (KM)	47.51

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (33.14, α)	20.98	Adjusted Chi Square Value (33.14, β)	20.76
95% Gamma Approximate KM-UCL (use when n>=50)	7.728	95% Gamma Adjusted KM-UCL (use when n<50)	7.808

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.947	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0876	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.127	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.882	Mean in Log Scale	0.551
SD in Original Scale	9.76	SD in Log Scale	1.357
95% t UCL (assumes normality of ROS data)	6.886	95% Percentile Bootstrap UCL	7.028
95% BCA Bootstrap UCL	7.702	95% Bootstrap t UCL	8.147
95% H-UCL (Log ROS)	6.339		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.535	KM Geo Mean	1.708
KM SD (logged)	1.352	95% Critical H Value (KM-Log)	2.22
KM Standard Error of Mean (logged)	0.183	95% H-UCL (KM -Log)	6.177
KM SD (logged)	1.352	95% Critical H Value (KM-Log)	2.22
KM Standard Error of Mean (logged)	0.183		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	5.453	Mean in Log Scale	0.8
SD in Original Scale	9.964	SD in Log Scale	1.276
95% t UCL (Assumes normality)	7.5	95% H-Stat UCL	7.09

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 6.177

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (piermont & groundwater & tetrachloroethylene)

General Statistics

Total Number of Observations	66	Number of Distinct Observations	44
Number of Detects	49	Number of Non-Detects	17
Number of Distinct Detects	43	Number of Distinct Non-Detects	1
Minimum Detect	0.21	Minimum Non-Detect	5
Maximum Detect	4260	Maximum Non-Detect	5
Variance Detects	488067	Percent Non-Detects	25.76%
Mean Detects	271.6	SD Detects	698.6
Median Detects	29	CV Detects	2.572
Skewness Detects	4.487	Kurtosis Detects	23.12
Mean of Logged Detects	3.138	SD of Logged Detects	2.677

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.443	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.947	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.349	Lilliefors GOF Test
5% Lilliefors Critical Value	0.126	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	201.9	KM Standard Error of Mean	75.54
KM SD	607.4	95% KM (BCA) UCL	329.3
95% KM (t) UCL	327.9	95% KM (Percentile Bootstrap) UCL	341.3
95% KM (z) UCL	326.1	95% KM Bootstrap t UCL	514.8
90% KM Chebyshev UCL	428.5	95% KM Chebyshev UCL	531.2
97.5% KM Chebyshev UCL	673.7	99% KM Chebyshev UCL	953.5

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.348	Anderson-Darling GOF Test
5% A-D Critical Value	0.871	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.15	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.138	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.282	k star (bias corrected MLE)	0.279
Theta hat (MLE)	961.7	Theta star (bias corrected MLE)	974.4
nu hat (MLE)	27.68	nu star (bias corrected)	27.32
Mean (detects)	271.6		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Minimum	0.01	Mean	201.6
Maximum	4260	Median	7.5
SD	612.2	CV	3.036
k hat (MLE)	0.18	k star (bias corrected MLE)	0.182
Theta hat (MLE)	1122	Theta star (bias corrected MLE)	1110
nu hat (MLE)	23.72	nu star (bias corrected)	23.98
Adjusted Level of Significance (β)	0.0464		
Approximate Chi Square Value (23.98, α)	13.83	Adjusted Chi Square Value (23.98, β)	13.66
95% Gamma Approximate UCL (use when n>=50)	349.5	95% Gamma Adjusted UCL (use when n<50)	354

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	201.9	SD (KM)	607.4
Variance (KM)	368967	SE of Mean (KM)	75.54
k hat (KM)	0.11	k star (KM)	0.116
nu hat (KM)	14.58	nu star (KM)	15.25
theta hat (KM)	1828	theta star (KM)	1747
80% gamma percentile (KM)	169.4	90% gamma percentile (KM)	565.7
95% gamma percentile (KM)	1157	99% gamma percentile (KM)	2980

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (15.25, α)	7.436	Adjusted Chi Square Value (15.25, β)	7.314
95% Gamma Approximate KM-UCL (use when n>=50)	414	95% Gamma Adjusted KM-UCL (use when n<50)	420.9

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.947	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.11	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.126	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	202.1	Mean in Log Scale	2.264
SD in Original Scale	612	SD in Log Scale	2.846
95% t UCL (assumes normality of ROS data)	327.8	95% Percentile Bootstrap UCL	334.3
95% BCA Bootstrap UCL	395	95% Bootstrap t UCL	478.9
95% H-UCL (Log ROS)	1948		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.225	KM Geo Mean	9.257
KM SD (logged)	2.787	95% Critical H Value (KM-Log)	3.478
KM Standard Error of Mean (logged)	0.354	95% H-UCL (KM -Log)	1496
KM SD (logged)	2.787	95% Critical H Value (KM-Log)	3.478
KM Standard Error of Mean (logged)	0.354		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	202.3	Mean in Log Scale	2.566
SD in Original Scale	611.9	SD in Log Scale	2.5
95% t UCL (Assumes normality)	328	95% H-Stat UCL	788.9

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	673.7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

result (piermont & groundwater & trichloroethylene)

General Statistics

Total Number of Observations	66	Number of Distinct Observations	33
Number of Detects	31	Number of Non-Detects	35
Number of Distinct Detects	31	Number of Distinct Non-Detects	2
Minimum Detect	0.22	Minimum Non-Detect	5
Maximum Detect	21	Maximum Non-Detect	50
Variance Detects	22.74	Percent Non-Detects	53.03%
Mean Detects	3.302	SD Detects	4.769
Median Detects	1.4	CV Detects	1.444
Skewness Detects	2.37	Kurtosis Detects	5.808
Mean of Logged Detects	0.419	SD of Logged Detects	1.243

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.659	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.929	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.298	Lilliefors GOF Test
5% Lilliefors Critical Value	0.156	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.252	KM Standard Error of Mean	0.458
KM SD	3.464	95% KM (BCA) UCL	3.035
95% KM (t) UCL	3.016	95% KM (Percentile Bootstrap) UCL	3.072
95% KM (z) UCL	3.005	95% KM Bootstrap t UCL	3.347
90% KM Chebyshev UCL	3.625	95% KM Chebyshev UCL	4.247
97.5% KM Chebyshev UCL	5.11	99% KM Chebyshev UCL	6.805

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.212	Anderson-Darling GOF Test
5% A-D Critical Value	0.787	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.181	Kolmogorov-Smirnov GOF
5% K-S Critical Value	0.164	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.769	k star (bias corrected MLE)	0.716
Theta hat (MLE)	4.295	Theta star (bias corrected MLE)	4.613
nu hat (MLE)	47.67	nu star (bias corrected)	44.39
Mean (detects)	3.302		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	2.394
Maximum	21	Median	1.102
SD	3.629	CV	1.516
k hat (MLE)	0.475	k star (bias corrected MLE)	0.464
Theta hat (MLE)	5.034	Theta star (bias corrected MLE)	5.159
nu hat (MLE)	62.76	nu star (bias corrected)	61.25
Adjusted Level of Significance (β)	0.0464		
Approximate Chi Square Value (61.25, α)	44.25	Adjusted Chi Square Value (61.25, β)	43.92
95% Gamma Approximate UCL (use when n>=50)	3.313	95% Gamma Adjusted UCL (use when n<50)	3.338

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.252	SD (KM)	3.464

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Variance (KM)	12	SE of Mean (KM)	0.458
k hat (KM)	0.423	k star (KM)	0.414
nu hat (KM)	55.81	nu star (KM)	54.6
theta hat (KM)	5.327	theta star (KM)	5.445
80% gamma percentile (KM)	3.648	90% gamma percentile (KM)	6.323
95% gamma percentile (KM)	9.249	99% gamma percentile (KM)	16.58

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (54.60, α)	38.62	Adjusted Chi Square Value (54.60, β)	38.32
95% Gamma Approximate KM-UCL (use when n>=50)	3.184	95% Gamma Adjusted KM-UCL (use when n<50)	3.209

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.929	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.09	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.156	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.308	Mean in Log Scale	0.189
SD in Original Scale	3.483	SD in Log Scale	1.101
95% t UCL (assumes normality of ROS data)	3.023	95% Percentile Bootstrap UCL	3.048
95% BCA Bootstrap UCL	3.236	95% Bootstrap t UCL	3.404
95% H-UCL (Log ROS)	3.017		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.173	KM Geo Mean	1.189
KM SD (logged)	1.059	95% Critical H Value (KM-Log)	2.263
KM Standard Error of Mean (logged)	0.176	95% H-UCL (KM -Log)	2.803
KM SD (logged)	1.059	95% Critical H Value (KM-Log)	2.263
KM Standard Error of Mean (logged)	0.176		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	3.218	Mean in Log Scale	0.717
SD in Original Scale	4.251	SD in Log Scale	0.934
95% t UCL (Assumes normality)	4.091	95% H-Stat UCL	4.097

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	2.803

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (piermont & groundwater & vinyl chloride)

General Statistics

Total Number of Observations	66	Number of Distinct Observations	19
Number of Detects	14	Number of Non-Detects	52
Number of Distinct Detects	14	Number of Distinct Non-Detects	5
Minimum Detect	0.56	Minimum Non-Detect	5
Maximum Detect	12	Maximum Non-Detect	50
Variance Detects	14.55	Percent Non-Detects	78.79%
Mean Detects	2.589	SD Detects	3.814
Median Detects	1.115	CV Detects	1.473

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Skewness Detects	2.225	Kurtosis Detects	3.647
Mean of Logged Detects	0.338	SD of Logged Detects	0.997

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.551	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.418	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.433	KM Standard Error of Mean	0.283
KM SD	1.897	95% KM (BCA) UCL	1.961
95% KM (t) UCL	1.906	95% KM (Percentile Bootstrap) UCL	1.907
95% KM (z) UCL	1.899	95% KM Bootstrap t UCL	2.192
90% KM Chebyshev UCL	2.283	95% KM Chebyshev UCL	2.668
97.5% KM Chebyshev UCL	3.203	99% KM Chebyshev UCL	4.252

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.764	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.762	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.313	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.236	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.948	k star (bias corrected MLE)	0.792
Theta hat (MLE)	2.731	Theta star (bias corrected MLE)	3.267
nu hat (MLE)	26.54	nu star (bias corrected)	22.19
Mean (detects)	2.589		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.721
Maximum	12	Median	0.953
SD	2.34	CV	1.36
k hat (MLE)	0.501	k star (bias corrected MLE)	0.488
Theta hat (MLE)	3.435	Theta star (bias corrected MLE)	3.524
nu hat (MLE)	66.14	nu star (bias corrected)	64.46
Adjusted Level of Significance (β)	0.0464		
Approximate Chi Square Value (64.46, α)	46.99	Adjusted Chi Square Value (64.46, β)	46.66
95% Gamma Approximate UCL (use when n>=50)	2.361	95% Gamma Adjusted UCL (use when n<50)	2.378

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.433	SD (KM)	1.897
Variance (KM)	3.599	SE of Mean (KM)	0.283
k hat (KM)	0.571	k star (KM)	0.555
nu hat (KM)	75.36	nu star (KM)	73.27
theta hat (KM)	2.511	theta star (KM)	2.582
80% gamma percentile (KM)	2.361	90% gamma percentile (KM)	3.793
95% gamma percentile (KM)	5.304	99% gamma percentile (KM)	8.986

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (73.27, α)	54.56	Adjusted Chi Square Value (73.27, β)	54.2
95% Gamma Approximate KM-UCL (use when n>=50)	1.925	95% Gamma Adjusted KM-UCL (use when n<50)	1.938

Lognormal GOF Test on Detected Observations Only

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Shapiro Wilk Test Statistic	0.799	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.218	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.617	Mean in Log Scale	0.121
SD in Original Scale	1.977	SD in Log Scale	0.789
95% t UCL (assumes normality of ROS data)	2.023	95% Percentile Bootstrap UCL	2.035
95% BCA Bootstrap UCL	2.224	95% Bootstrap t UCL	2.426
95% H-UCL (Log ROS)	1.889		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.0657	KM Geo Mean	1.068
KM SD (logged)	0.628	95% Critical H Value (KM-Log)	1.957
KM Standard Error of Mean (logged)	0.146	95% H-UCL (KM -Log)	1.515
KM SD (logged)	0.628	95% Critical H Value (KM-Log)	1.957
KM Standard Error of Mean (logged)	0.146		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	3.201	Mean in Log Scale	0.895
SD in Original Scale	3.577	SD in Log Scale	0.66
95% t UCL (Assumes normality)	3.935	95% H-Stat UCL	3.58

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 1.515

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (piermont & surface soil 0-2ft & cis-1,2-dichloroethylene)

General Statistics

Total Number of Observations	24	Number of Distinct Observations	14
Number of Detects	1	Number of Non-Detects	23
Number of Distinct Detects	1	Number of Distinct Non-Detects	13

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (piermont & surface soil 0-2ft & cis-1,2-dichloroethylene) was not processed!

result (piermont & surface soil 0-2ft & tetrachloroethylene)

General Statistics

Total Number of Observations	24	Number of Distinct Observations	18
Number of Detects	10	Number of Non-Detects	14
Number of Distinct Detects	10	Number of Distinct Non-Detects	8
Minimum Detect	2.1000E-4	Minimum Non-Detect	0.0047
Maximum Detect	0.013	Maximum Non-Detect	0.0066
Variance Detects	1.8749E-5	Percent Non-Detects	58.33%

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Mean Detects	0.00361	SD Detects	0.00433
Median Detects	0.0017	CV Detects	1.199
Skewness Detects	1.589	Kurtosis Detects	1.566
Mean of Logged Detects	-6.316	SD of Logged Detects	1.322

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.77	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.255	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00248	KM Standard Error of Mean	7.3474E-4
KM SD	0.00299	95% KM (BCA) UCL	0.00376
95% KM (t) UCL	0.00374	95% KM (Percentile Bootstrap) UCL	0.00371
95% KM (z) UCL	0.00369	95% KM Bootstrap t UCL	0.00421
90% KM Chebyshev UCL	0.00469	95% KM Chebyshev UCL	0.00569
97.5% KM Chebyshev UCL	0.00707	99% KM Chebyshev UCL	0.00979

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.273	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.163	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.275	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.85	k star (bias corrected MLE)	0.662
Theta hat (MLE)	0.00425	Theta star (bias corrected MLE)	0.00546
nu hat (MLE)	17	nu star (bias corrected)	13.23
Mean (detects)	0.00361		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.1000E-4	Mean	0.00734
Maximum	0.013	Median	0.01
SD	0.00421	CV	0.573
k hat (MLE)	1.382	k star (bias corrected MLE)	1.237
Theta hat (MLE)	0.00531	Theta star (bias corrected MLE)	0.00593
nu hat (MLE)	66.34	nu star (bias corrected)	59.38
Adjusted Level of Significance (β)	0.0392		
Approximate Chi Square Value (59.38, α)	42.66	Adjusted Chi Square Value (59.38, β)	41.66
95% Gamma Approximate UCL (use when n>=50)	0.0102	95% Gamma Adjusted UCL (use when n<50)	0.0105

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00248	SD (KM)	0.00299
Variance (KM)	8.9326E-6	SE of Mean (KM)	7.3474E-4
k hat (KM)	0.691	k star (KM)	0.632
nu hat (KM)	33.14	nu star (KM)	30.33
theta hat (KM)	0.0036	theta star (KM)	0.00393
80% gamma percentile (KM)	0.00409	90% gamma percentile (KM)	0.00638
95% gamma percentile (KM)	0.00877	99% gamma percentile (KM)	0.0145

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (30.33, α)	18.76	Adjusted Chi Square Value (30.33, β)	18.12
95% Gamma Approximate KM-UCL (use when n>=50)	0.00402	95% Gamma Adjusted KM-UCL (use when n<50)	0.00416

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.977	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0983	Lilliefors GOF Test
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00226	Mean in Log Scale	-6.583
SD in Original Scale	0.00299	SD in Log Scale	0.943
95% t UCL (assumes normality of ROS data)	0.00331	95% Percentile Bootstrap UCL	0.00328
95% BCA Bootstrap UCL	0.00374	95% Bootstrap t UCL	0.00515
95% H-UCL (Log ROS)	0.00351		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-6.583	KM Geo Mean	0.00138
KM SD (logged)	1.114	95% Critical H Value (KM-Log)	2.696
KM Standard Error of Mean (logged)	0.354	95% H-UCL (KM -Log)	0.00481
KM SD (logged)	1.114	95% Critical H Value (KM-Log)	2.696
KM Standard Error of Mean (logged)	0.354		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00306	Mean in Log Scale	-6.093
SD in Original Scale	0.00276	SD in Log Scale	0.851
95% t UCL (Assumes normality)	0.00402	95% H-Stat UCL	0.00492

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.00374

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (piermont & surface soil 0-2ft & trichloroethylene)

General Statistics

Total Number of Observations	24	Number of Distinct Observations	16
Number of Detects	4	Number of Non-Detects	20
Number of Distinct Detects	4	Number of Distinct Non-Detects	12
Minimum Detect	2.8000E-4	Minimum Non-Detect	0.0046
Maximum Detect	6.6000E-4	Maximum Non-Detect	0.0066
Variance Detects	2.4892E-8	Percent Non-Detects	83.33%
Mean Detects	4.4750E-4	SD Detects	1.5777E-4
Median Detects	4.2500E-4	CV Detects	0.353
Skewness Detects	0.822	Kurtosis Detects	1.715
Mean of Logged Detects	-7.758	SD of Logged Detects	0.351

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.949	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.269	Lilliefors GOF Test

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

5% Lilliefors Critical Value	0.375	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.4750E-4	KM Standard Error of Mean	7.8885E-5
KM SD	1.3663E-4	95% KM (BCA) UCL	N/A
95% KM (t) UCL	5.8270E-4	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	5.7726E-4	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	6.8416E-4	95% KM Chebyshev UCL	7.9135E-4
97.5% KM Chebyshev UCL	9.4014E-4	99% KM Chebyshev UCL	0.00123

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.262	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.657	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.232	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.395	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	10.99	k star (bias corrected MLE)	2.914
Theta hat (MLE)	4.0720E-5	Theta star (bias corrected MLE)	1.5356E-4
nu hat (MLE)	87.92	nu star (bias corrected)	23.31
Mean (detects)	4.4750E-4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.8000E-4	Mean	0.00841
Maximum	0.01	Median	0.01
SD	0.00364	CV	0.433
k hat (MLE)	1.566	k star (bias corrected MLE)	1.398
Theta hat (MLE)	0.00537	Theta star (bias corrected MLE)	0.00601
nu hat (MLE)	75.17	nu star (bias corrected)	67.11
Adjusted Level of Significance (β)	0.0392		
Approximate Chi Square Value (67.11, α)	49.25	Adjusted Chi Square Value (67.11, β)	48.18
95% Gamma Approximate UCL (use when n>=50)	0.0115	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.4750E-4	SD (KM)	1.3663E-4
Variance (KM)	1.8669E-8	SE of Mean (KM)	7.8885E-5
k hat (KM)	10.73	k star (KM)	9.414
nu hat (KM)	514.9	nu star (KM)	451.9
theta hat (KM)	4.1718E-5	theta star (KM)	4.7537E-5
80% gamma percentile (KM)	5.6340E-4	90% gamma percentile (KM)	6.4162E-4
95% gamma percentile (KM)	7.1125E-4	99% gamma percentile (KM)	8.5454E-4

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (451.86, α)	403.6	Adjusted Chi Square Value (451.86, β)	400.4
95% Gamma Approximate KM-UCL (use when n>=50)	5.0104E-4	95% Gamma Adjusted KM-UCL (use when n<50)	5.0505E-4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.976	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.217	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.375	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Table A-2: ProUCL Output
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Mean in Original Scale	4.3857E-4	Mean in Log Scale	-7.758
SD in Original Scale	1.0341E-4	SD in Log Scale	0.233
95% t UCL (assumes normality of ROS data)	4.7474E-4	95% Percentile Bootstrap UCL	4.7170E-4
95% BCA Bootstrap UCL	4.7428E-4	95% Bootstrap t UCL	4.7754E-4
95% H-UCL (Log ROS)	4.7882E-4		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-7.758	KM Geo Mean	4.2730E-4
KM SD (logged)	0.304	95% Critical H Value (KM-Log)	1.829
KM Standard Error of Mean (logged)	0.176	95% H-UCL (KM -Log)	5.0261E-4
KM SD (logged)	0.304	95% Critical H Value (KM-Log)	1.829
KM Standard Error of Mean (logged)	0.176		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.00226	Mean in Log Scale	-6.25
SD in Original Scale	8.5489E-4	SD in Log Scale	0.705
95% t UCL (Assumes normality)	0.00256	95% H-Stat UCL	0.00341

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 5.8270E-4

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (piermont & surface soil 0-2ft & vinyl chloride)

General Statistics

Total Number of Observations	24	Number of Distinct Observations	13
Number of Detects	0	Number of Non-Detects	24
Number of Distinct Detects	0	Number of Distinct Non-Detects	13

Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (piermont & surface soil 0-2ft & vinyl chloride) was not processed!

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0005	3/31/2014	0.5	0.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0068	4/3/2014	1.25	1.25	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0021	3/31/2014	1.5	1.5	0.0066	1		0.0045	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0009	3/31/2014	0.5	0.5	0.0043	0	U	0.0043	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0014	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0064	4/3/2014	0.5	0.5	0.0061	0	U	0.0061	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0003	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0001	3/31/2014	1	1	0.0051	0	U	0.0051	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0016	3/31/2014	0.5	0.5	0.004	0	U	0.004	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0011	3/31/2014	0.5	0.5	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0061	4/3/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0018	3/31/2014	1	1	0.0042	0	U	0.0042	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0007	3/31/2014	0.5	0.5	0.0044	0	U	0.0044	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0007	3/31/2014	0.5	0.5	0.0052	1		0.0044	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0068	4/3/2014	1.25	1.25	1.2	1	D	0.054	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0005	3/31/2014	0.5	0.5	0.054	1		0.0056	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0061	4/3/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0021	3/31/2014	1.5	1.5	0.0099	1		0.0045	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0003	3/31/2014	0.5	0.5	0.0048	1	J	0.0049	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0018	3/31/2014	1	1	0.0042	0	U	0.0042	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0016	3/31/2014	0.5	0.5	0.0031	1	J	0.004	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0009	3/31/2014	0.5	0.5	0.0041	1	J	0.0043	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0001	3/31/2014	1	1	0.0051	0	U	0.0051	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0064	4/3/2014	0.5	0.5	0.13	1		0.0061	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0011	3/31/2014	0.5	0.5	0.022	1		0.0057	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Tetrachloroethylene	PB-0014	3/31/2014	0.5	0.5	0.37	1	D	0.026	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0014	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0068	4/3/2014	1.25	1.25	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0064	4/3/2014	0.5	0.5	0.0061	0	U	0.0061	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0001	3/31/2014	1	1	0.0051	0	U	0.0051	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0003	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0011	3/31/2014	0.5	0.5	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0007	3/31/2014	0.5	0.5	0.0044	0	U	0.0044	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0061	4/3/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0009	3/31/2014	0.5	0.5	0.0043	0	U	0.0043	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0018	3/31/2014	1	1	0.0042	0	U	0.0042	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0016	3/31/2014	0.5	0.5	0.004	0	U	0.004	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0005	3/31/2014	0.5	0.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Trichloroethylene	PB-0021	3/31/2014	1.5	1.5	0.0045	0	U	0.0045	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0016	3/31/2014	0.5	0.5	0.004	0	U	0.004	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0018	3/31/2014	1	1	0.0042	0	U	0.0042	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0003	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0011	3/31/2014	0.5	0.5	0.0057	0	U	0.0057	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0064	4/3/2014	0.5	0.5	0.0061	0	U	0.0061	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0007	3/31/2014	0.5	0.5	0.0044	0	U	0.0044	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0021	3/31/2014	1.5	1.5	0.0045	0	U	0.0045	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0061	4/3/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0005	3/31/2014	0.5	0.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0009	3/31/2014	0.5	0.5	0.0043	0	U	0.0043	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0001	3/31/2014	1	1	0.0051	0	U	0.0051	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0014	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & Surface Soil 0-2ft & Vinyl chloride	PB-0068	4/3/2014	1.25	1.25	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0005	3/31/2014	0.5	0.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0068	4/3/2014	1.25	1.25	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0021	3/31/2014	1.5	1.5	0.0066	1		0.0045	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0009	3/31/2014	0.5	0.5	0.0043	0	U	0.0043	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0014	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0064	4/3/2014	0.5	0.5	0.0061	0	U	0.0061	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0003	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0001	3/31/2014	1	1	0.0051	0	U	0.0051	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0016	3/31/2014	0.5	0.5	0.004	0	U	0.004	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0011	3/31/2014	0.5	0.5	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0061	4/3/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0018	3/31/2014	1	1	0.0042	0	U	0.0042	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0007	3/31/2014	0.5	0.5	0.0044	0	U	0.0044	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0004	3/31/2014	7.75	7.75	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0066	4/3/2014	3.5	3.5	0.0048	0	U	0.0048	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0006	3/31/2014	8	8	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0067	4/3/2014	6.5	6.5	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0019	3/31/2014	9	9	0.0066	0	U	0.0066	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0062	4/3/2014	3.5	3.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0065	4/3/2014	3	3	0.0055	0	U	0.0055	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0063	4/3/2014	7.5	7.5	0.036	0	UJ	0.036	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0008	3/31/2014	8	8	0.0054	0	U	0.0054	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0418	11/19/2015	7.5	7.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0015	3/31/2014	8	8	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0458	12/1/2015	5.5	5.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0002	3/31/2014	8	8	0.0062	0	U	0.0062	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0069	4/3/2014	3.5	3.5	0.0075	0	U	0.0075	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0070	4/3/2014	6.5	6.5	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0017	3/31/2014	8.5	8.5	0.0062	0	U	0.0062	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0013	3/31/2014	9	9	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0503	12/9/2015	7.5	7.5	0.0053	0	U	0.0053	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0022	3/31/2014	8	8	0.006	0	U	0.006	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0010	3/31/2014	9	9	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0007	3/31/2014	0.5	0.5	0.0052	1		0.0044	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0068	4/3/2014	1.25	1.25	1.2	1	D	0.054	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0005	3/31/2014	0.5	0.5	0.054	1		0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0061	4/3/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0021	3/31/2014	1.5	1.5	0.0099	1		0.0045	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0003	3/31/2014	0.5	0.5	0.0048	1	J	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0018	3/31/2014	1	1	0.0042	0	U	0.0042	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0016	3/31/2014	0.5	0.5	0.0031	1	J	0.004	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0009	3/31/2014	0.5	0.5	0.0041	1	J	0.0043	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0001	3/31/2014	1	1	0.0051	0	U	0.0051	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0064	4/3/2014	0.5	0.5	0.13	1		0.0061	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0011	3/31/2014	0.5	0.5	0.022	1		0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0014	3/31/2014	0.5	0.5	0.37	1	D	0.026	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0418	11/19/2015	7.5	7.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0002	3/31/2014	8	8	0.0062	0	U	0.0062	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0006	3/31/2014	8	8	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0013	3/31/2014	9	9	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0070	4/3/2014	6.5	6.5	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0022	3/31/2014	8	8	0.006	0	U	0.006	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0069	4/3/2014	3.5	3.5	0.22	1		0.0075	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0008	3/31/2014	8	8	0.0054	0	U	0.0054	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0066	4/3/2014	3.5	3.5	0.088	1		0.0048	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0062	4/3/2014	3.5	3.5	0.002	1	J	0.005	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0010	3/31/2014	9	9	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0065	4/3/2014	3	3	0.25	1	D	0.01	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0063	4/3/2014	7.5	7.5	0.036	0	UJ	0.036	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0004	3/31/2014	7.75	7.75	0.0027	1	J	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0503	12/9/2015	7.5	7.5	0.0053	0	U	0.0053	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0015	3/31/2014	8	8	0.0046	1	J	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0067	4/3/2014	6.5	6.5	0.14	1		0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0458	12/1/2015	5.5	5.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0019	3/31/2014	9	9	0.0066	0	U	0.0066	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Tetrachloroethylene	PB-0017	3/31/2014	8.5	8.5	0.0062	0	U	0.0062	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0014	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0068	4/3/2014	1.25	1.25	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0064	4/3/2014	0.5	0.5	0.0061	0	U	0.0061	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0001	3/31/2014	1	1	0.0051	0	U	0.0051	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0003	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0011	3/31/2014	0.5	0.5	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0007	3/31/2014	0.5	0.5	0.0044	0	U	0.0044	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0061	4/3/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0009	3/31/2014	0.5	0.5	0.0043	0	U	0.0043	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0018	3/31/2014	1	1	0.0042	0	U	0.0042	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0016	3/31/2014	0.5	0.5	0.004	0	U	0.004	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0005	3/31/2014	0.5	0.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0021	3/31/2014	1.5	1.5	0.0045	0	U	0.0045	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0063	4/3/2014	7.5	7.5	0.036	0	UJ	0.036	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0010	3/31/2014	9	9	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0006	3/31/2014	8	8	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0070	4/3/2014	6.5	6.5	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0418	11/19/2015	7.5	7.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0062	4/3/2014	3.5	3.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0458	12/1/2015	5.5	5.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0019	3/31/2014	9	9	0.0066	0	U	0.0066	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0017	3/31/2014	8.5	8.5	0.0062	0	U	0.0062	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0002	3/31/2014	8	8	0.0062	0	U	0.0062	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0067	4/3/2014	6.5	6.5	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0503	12/9/2015	7.5	7.5	0.0053	0	U	0.0053	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0008	3/31/2014	8	8	0.0054	0	U	0.0054	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0015	3/31/2014	8	8	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0066	4/3/2014	3.5	3.5	0.0048	0	U	0.0048	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0013	3/31/2014	9	9	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0065	4/3/2014	3	3	0.0055	0	U	0.0055	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0004	3/31/2014	7.75	7.75	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0022	3/31/2014	8	8	0.006	0	U	0.006	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Trichloroethylene	PB-0069	4/3/2014	3.5	3.5	0.0075	0	U	0.0075	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0016	3/31/2014	0.5	0.5	0.004	0	U	0.004	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0018	3/31/2014	1	1	0.0042	0	U	0.0042	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0003	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0011	3/31/2014	0.5	0.5	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0064	4/3/2014	0.5	0.5	0.0061	0	U	0.0061	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0007	3/31/2014	0.5	0.5	0.0044	0	U	0.0044	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0021	3/31/2014	1.5	1.5	0.0045	0	U	0.0045	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0061	4/3/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0005	3/31/2014	0.5	0.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0009	3/31/2014	0.5	0.5	0.0043	0	U	0.0043	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0001	3/31/2014	1	1	0.0051	0	U	0.0051	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0014	3/31/2014	0.5	0.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0068	4/3/2014	1.25	1.25	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0070	4/3/2014	6.5	6.5	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0010	3/31/2014	9	9	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0065	4/3/2014	3	3	0.0055	0	U	0.0055	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0069	4/3/2014	3.5	3.5	0.0075	0	U	0.0075	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0008	3/31/2014	8	8	0.0054	0	U	0.0054	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0067	4/3/2014	6.5	6.5	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0066	4/3/2014	3.5	3.5	0.0048	0	U	0.0048	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0004	3/31/2014	7.75	7.75	0.0056	0	U	0.0056	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0022	3/31/2014	8	8	0.006	0	U	0.006	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0019	3/31/2014	9	9	0.0066	0	U	0.0066	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0002	3/31/2014	8	8	0.0062	0	U	0.0062	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0015	3/31/2014	8	8	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0013	3/31/2014	9	9	0.0057	0	U	0.0057	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0017	3/31/2014	8.5	8.5	0.0062	0	U	0.0062	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0006	3/31/2014	8	8	0.0059	0	U	0.0059	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0062	4/3/2014	3.5	3.5	0.005	0	U	0.005	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0503	12/9/2015	7.5	7.5	0.0053	0	U	0.0053	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0063	4/3/2014	7.5	7.5	0.036	0	UJ	0.036	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0418	11/19/2015	7.5	7.5	0.0049	0	U	0.0049	mg/kg
Cedarwood & Vacant & All Soil 0-10ft & Vinyl chloride	PB-0458	12/1/2015	5.5	5.5	0.0056	0	U	0.0056	mg/kg
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	149-1001	2/6/2012	18	18	13.3	1			ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	149-1006	2/9/2012	14.8	14.8	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	149-1007	2/9/2012	15	15	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	GW-MW27D-70_07182012	7/18/2012	70	70	2600	1			ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	GW-MW27S-25_07182012	7/18/2012	25	25	1.2	1			ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	MW-27D-20130516	5/16/2013	70	70	1300	1			ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	MW-27D-20131219	12/19/2013	70	70	1200	1			ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	MW-27S-20130516	5/16/2013	25	25	0.96	1			ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	MW-27S-20131219	12/19/2013	25	25	16	1			ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0223	2/4/2015	41	45	5000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0211	10/2/2014	34	38	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0212	10/2/2014	29	33	22	1	J	500	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0213	10/2/2014	22	26	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0226	2/4/2015	36	40	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0227	2/4/2015	28	32	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0228	2/4/2015	36	40	2000	0	U	2000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0229	2/4/2015	28	32	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0230	2/4/2015	22	26	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0231	2/4/2015	36	40	42	1	J	200	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0232	2/4/2015	28	32	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0233	2/4/2015	22	26	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0234	2/4/2015	36	40	39	1	J	100	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0235	2/4/2015	28	32	5.1	1	J	100	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0236	2/4/2015	22	26	1.4	1	J	10	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0245	2/5/2015	36	40	40	1	J	100	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0246	2/5/2015	28	32	3.9	1	J	50	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0247	2/5/2015	22	26	1.3	1	J	10	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0248	2/5/2015	36	40	24	1	J	50	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0249	2/5/2015	28	32	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0250	2/5/2015	22	26	1.6	1	J	25	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0251	4/27/2015	41	45	2000	0	U	2000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0252	4/27/2015	36	40	2500	0	U	2500	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0253	4/27/2015	28	32	10000	0	U	10000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0255	4/27/2015	41	45	5	0	U	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0256	4/27/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0257	4/27/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0259	4/27/2015	41	45	3.8	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0260	4/27/2015	36	40	4.6	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0261	4/27/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0262	4/28/2015	41	45	6.4	1	J	13	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0263	4/28/2015	0	0	2500	0	U	2500	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0264	4/28/2015	0	0	13	0	U	13	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0265	4/28/2015	41	45	4.2	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0266	4/28/2015	36	40	20000	0	U	20000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0267	4/28/2015	28	32	2.9	1	J	2000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0269	4/28/2015	41	45	6.8	1		5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0270	4/28/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0271	4/28/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0272	4/28/2015	41	45	5.1	1		5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0273	4/28/2015	36	40	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0274	4/28/2015	28	32	100	0	U	100	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0277	4/29/2015	36	40	20000	0	U	20000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0279	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0280	4/29/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0281	4/29/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0282	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0283	4/29/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0284	4/29/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0286	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0288	4/29/2015	0	0	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0289	4/29/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0933	2/23/2016	36.5	38.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0934	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0935	2/23/2016	71.5	73.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0936	2/23/2016	66.5	68.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0901	2/22/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0902	2/22/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0903	2/22/2016	60.5	62.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0904	2/22/2016	65.5	67.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0905	2/22/2016	24	26	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0906	2/22/2016	68	70	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0907	2/22/2016	69.5	71.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0908	2/22/2016	64.5	66.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0911	2/22/2016	25	27	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0912	2/22/2016	28.5	30.5	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0913	2/22/2016	23.5	25.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0914	2/22/2016	71.5	73.5	2500	0	U	2500	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0915	2/22/2016	66.5	68.5	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0916	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0917	2/22/2016	26.5	28.5	25	0	U	25	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0918	2/22/2016	30	30	250	0	U	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0919	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0920	2/22/2016	26.5	28.5	25	0	U	25	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0921	2/22/2016	69.5	71.5	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0922	2/22/2016	64.5	66.5	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0925	2/23/2016	31.5	33.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0926	2/23/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0927	2/23/2016	71.5	73.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0928	2/23/2016	66.5	68.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0929	2/23/2016	32.5	34.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0930	2/23/2016	27.5	29.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0931	2/23/2016	70.5	72.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0932	2/23/2016	65.5	67.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	149-1001	2/6/2012	18	18	266	1			ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	149-1006	2/9/2012	14.8	14.8	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	149-1007	2/9/2012	15	15	3.48	1	J		ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	GW-MW27D-70_07182012	7/18/2012	70	70	31000	1			ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	GW-MW27S-25_07182012	7/18/2012	25	25	1.2	1			ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	MW-27D-20130516	5/16/2013	70	70	22000	1			ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	MW-27D-20131219	12/19/2013	70	70	36000	1			ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	MW-27S-20130516	5/16/2013	25	25	39	1			ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	MW-27S-20131219	12/19/2013	25	25	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0223	2/4/2015	41	45	55000	1	D	5000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0211	10/2/2014	34	38	65000	1		5000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0212	10/2/2014	29	33	38000	1		2500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0213	10/2/2014	22	26	6100	1		250	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0226	2/4/2015	36	40	73000	1	D	5000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0227	2/4/2015	28	32	19000	1	D	5000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0228	2/4/2015	36	40	130000	1	D	10000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0229	2/4/2015	28	32	12000	1	D	1000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0230	2/4/2015	22	26	3300	1	D	500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0231	2/4/2015	36	40	23000	1	D	1000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0232	2/4/2015	28	32	16000	1	D	1000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0233	2/4/2015	22	26	3100	1	D	500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0234	2/4/2015	36	40	4200	1	D	500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0235	2/4/2015	28	32	6400	1	D	500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0236	2/4/2015	22	26	930	1	D	250	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0245	2/5/2015	36	40	30000	1	E	100	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0246	2/5/2015	28	32	10000	1	D	500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0247	2/5/2015	22	26	2700	1	D	100	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0248	2/5/2015	36	40	8500	1	D	500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0249	2/5/2015	28	32	34000	1	D	2000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0250	2/5/2015	22	26	4400	1	D	250	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0251	4/27/2015	41	45	52000	1		2000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0252	4/27/2015	36	40	78000	1		2500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0253	4/27/2015	28	32	370000	1		10000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0255	4/27/2015	41	45	19	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0256	4/27/2015	36	40	26	1		5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0257	4/27/2015	28	32	4.7	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0259	4/27/2015	41	45	7.4	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0260	4/27/2015	36	40	29	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0261	4/27/2015	28	32	2.1	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0262	4/28/2015	41	45	300	1		13	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0263	4/28/2015	0	0	74000	1		2500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0264	4/28/2015	0	0	480	1		13	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0265	4/28/2015	41	45	10	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0266	4/28/2015	36	40	730000	1		20000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0267	4/28/2015	28	32	57000	1		2000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0269	4/28/2015	41	45	140	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0270	4/28/2015	36	40	4.8	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0271	4/28/2015	28	32	4.1	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0272	4/28/2015	41	45	35	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0273	4/28/2015	36	40	6800	1		200	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0274	4/28/2015	28	32	4000	1		100	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0276	4/29/2015	41	45	690000	1	J	20000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0277	4/29/2015	36	40	800000	1		20000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0278	4/29/2015	28	32	8200	1	J	250	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0279	4/29/2015	41	45	24	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0280	4/29/2015	36	40	17	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0281	4/29/2015	28	32	7.2	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0282	4/29/2015	41	45	5.2	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0283	4/29/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0284	4/29/2015	28	32	2	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0286	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0288	4/29/2015	0	0	4	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0289	4/29/2015	28	32	2.2	1	J	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0933	2/23/2016	36.5	38.5	9.9	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0934	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0935	2/23/2016	71.5	73.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0936	2/23/2016	66.5	68.5	14	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0901	2/22/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0902	2/22/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0903	2/22/2016	60.5	62.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0904	2/22/2016	65.5	67.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0905	2/22/2016	24	26	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0906	2/22/2016	68	70	9200	1		250	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0907	2/22/2016	69.5	71.5	10	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0908	2/22/2016	64.5	66.5	9.3	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0911	2/22/2016	25	27	29	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0912	2/22/2016	28.5	30.5	20000	1		1000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0913	2/22/2016	23.5	25.5	11000	1		500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0914	2/22/2016	71.5	73.5	22000	1		2500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0915	2/22/2016	66.5	68.5	20000	1		1000	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0916	2/22/2016	31.5	33.5	8000	1		250	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0917	2/22/2016	26.5	28.5	380	1		25	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0918	2/22/2016	30	30	7600	1		250	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0919	2/22/2016	31.5	33.5	5400	1		250	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0920	2/22/2016	26.5	28.5	430	1		25	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0921	2/22/2016	69.5	71.5	1700	1		250	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0922	2/22/2016	64.5	66.5	830	1		50	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0925	2/23/2016	31.5	33.5	2500	1		500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0926	2/23/2016	26.5	28.5	110	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0927	2/23/2016	71.5	73.5	13000	1		500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0928	2/23/2016	66.5	68.5	24000	1		2500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0929	2/23/2016	32.5	34.5	9.9	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0930	2/23/2016	27.5	29.5	9.8	1		5	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0931	2/23/2016	70.5	72.5	15000	1		2500	ug/l
Cedarwood & Vacant & Groundwater & Tetrachloroethylene	PB-0932	2/23/2016	65.5	67.5	20000	1		500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	149-1001	2/6/2012	18	18	13.8	1			ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	149-1006	2/9/2012	14.8	14.8	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	149-1007	2/9/2012	15	15	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	GW-MW27D-70_07182012	7/18/2012	70	70	6300	1			ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	GW-MW27S-25_07182012	7/18/2012	25	25	0.78	1			ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	MW-27D-20130516	5/16/2013	70	70	4000	1			ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	MW-27D-20131219	12/19/2013	70	70	4800	1			ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	MW-27S-20130516	5/16/2013	25	25	4.9	1			ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	MW-27S-20131219	12/19/2013	25	25	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0211	10/2/2014	34	38	640	1	J	1000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0212	10/2/2014	29	33	330	1	J	500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0213	10/2/2014	22	26	26	1	J	50	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0223	2/4/2015	41	45	1800	1		1000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0226	2/4/2015	36	40	1600	1		1000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0227	2/4/2015	28	32	110	1	J	250	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0228	2/4/2015	36	40	1300	1	J	2000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0229	2/4/2015	28	32	13	1	J	200	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0230	2/4/2015	22	26	13	1	J	50	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0231	2/4/2015	36	40	1600	1		200	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0232	2/4/2015	28	32	200	1	J	200	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0233	2/4/2015	22	26	88	1		50	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0234	2/4/2015	36	40	450	1		100	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0235	2/4/2015	28	32	74	1	J	100	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0236	2/4/2015	22	26	20	1		10	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0245	2/5/2015	36	40	2100	1		100	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0246	2/5/2015	28	32	200	1		50	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0247	2/5/2015	22	26	80	1		10	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0248	2/5/2015	36	40	610	1		50	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0249	2/5/2015	28	32	930	1		200	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0250	2/5/2015	22	26	93	1		25	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0251	4/27/2015	41	45	2000	0	U	2000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0252	4/27/2015	36	40	2500	0	U	2500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0253	4/27/2015	28	32	10000	0	U	10000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0255	4/27/2015	41	45	3.2	1	J	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0256	4/27/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0257	4/27/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0259	4/27/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0260	4/27/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0261	4/27/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0262	4/28/2015	41	45	8.1	1	J	13	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0263	4/28/2015	0	0	2500	0	U	2500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0264	4/28/2015	0	0	13	0	U	13	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0265	4/28/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0266	4/28/2015	36	40	20000	0	U	20000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0267	4/28/2015	28	32	2000	0	U	2000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0269	4/28/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0270	4/28/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0271	4/28/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0272	4/28/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0273	4/28/2015	36	40	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0274	4/28/2015	28	32	100	0	U	100	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0277	4/29/2015	36	40	20000	0	U	20000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0279	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0280	4/29/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0281	4/29/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0282	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0283	4/29/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0284	4/29/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0286	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0288	4/29/2015	0	0	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0289	4/29/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0932	2/23/2016	65.5	67.5	3500	1		500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0933	2/23/2016	36.5	38.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0934	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0935	2/23/2016	71.5	73.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0936	2/23/2016	66.5	68.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0901	2/22/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0902	2/22/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0903	2/22/2016	60.5	62.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0904	2/22/2016	65.5	67.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0905	2/22/2016	24	26	9.3	1		5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0906	2/22/2016	68	70	380	1		250	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0907	2/22/2016	69.5	71.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0908	2/22/2016	64.5	66.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0911	2/22/2016	25	27	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0912	2/22/2016	28.5	30.5	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0913	2/22/2016	23.5	25.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0914	2/22/2016	71.5	73.5	2500	0	U	2500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0915	2/22/2016	66.5	68.5	2000	1		1000	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0916	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0917	2/22/2016	26.5	28.5	25	0	U	25	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0918	2/22/2016	30	30	10	1	L	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0919	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0920	2/22/2016	26.5	28.5	46	1		25	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0921	2/22/2016	69.5	71.5	500	1		250	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0922	2/22/2016	64.5	66.5	130	1		50	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0925	2/23/2016	31.5	33.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0926	2/23/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0927	2/23/2016	71.5	73.5	2300	1		500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0928	2/23/2016	66.5	68.5	2700	1		500	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0929	2/23/2016	32.5	34.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0930	2/23/2016	27.5	29.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Trichloroethylene	PB-0931	2/23/2016	70.5	72.5	4600	1		500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	149-1001	2/6/2012	18	18	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	149-1006	2/9/2012	14.8	14.8	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	149-1007	2/9/2012	15	15	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	GW-MW27D-70_07182012	7/18/2012	70	70	300	1			ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	GW-MW27S-25_07182012	7/18/2012	25	25	0.5	0	U	0.5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	MW-27D-20130516	5/16/2013	70	70	79	1			ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	MW-27D-20131219	12/19/2013	70	70	110	1			ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	MW-27S-20130516	5/16/2013	25	25	0.5	0	U	0.5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	MW-27S-20131219	12/19/2013	25	25	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0223	2/4/2015	41	45	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0211	10/2/2014	34	38	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0212	10/2/2014	29	33	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0213	10/2/2014	22	26	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0226	2/4/2015	36	40	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0227	2/4/2015	28	32	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0228	2/4/2015	36	40	2000	0	U	2000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0229	2/4/2015	28	32	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0230	2/4/2015	22	26	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0231	2/4/2015	36	40	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0232	2/4/2015	28	32	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0233	2/4/2015	22	26	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0234	2/4/2015	36	40	100	0	U	100	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0235	2/4/2015	28	32	100	0	U	100	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0236	2/4/2015	22	26	10	0	U	10	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0245	2/5/2015	36	40	100	0	U	100	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0246	2/5/2015	28	32	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0247	2/5/2015	22	26	10	0	U	10	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0248	2/5/2015	36	40	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0249	2/5/2015	28	32	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0250	2/5/2015	22	26	25	0	U	25	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0251	4/27/2015	41	45	2000	0	U	2000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0252	4/27/2015	36	40	2500	0	U	2500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0253	4/27/2015	28	32	10000	0	U	10000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0255	4/27/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0256	4/27/2015	36	40	5	0	U	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0257	4/27/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0259	4/27/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0260	4/27/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0261	4/27/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0262	4/28/2015	41	45	13	0	U	13	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0263	4/28/2015	0	0	2500	0	U	2500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0264	4/28/2015	0	0	13	0	U	13	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0265	4/28/2015	41	45	12	1		5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0266	4/28/2015	36	40	20000	0	U	20000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0267	4/28/2015	28	32	12	1		2000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0269	4/28/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0270	4/28/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0271	4/28/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0272	4/28/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0273	4/28/2015	36	40	200	0	U	200	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0274	4/28/2015	28	32	100	0	U	100	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0277	4/29/2015	36	40	20000	0	U	20000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0279	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0280	4/29/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0281	4/29/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0282	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0283	4/29/2015	36	40	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0284	4/29/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0286	4/29/2015	41	45	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0288	4/29/2015	0	0	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0289	4/29/2015	28	32	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0932	2/23/2016	65.5	67.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0933	2/23/2016	36.5	38.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0934	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0935	2/23/2016	71.5	73.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0936	2/23/2016	66.5	68.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0901	2/22/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0902	2/22/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0903	2/22/2016	60.5	62.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0904	2/22/2016	65.5	67.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0905	2/22/2016	24	26	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0906	2/22/2016	68	70	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0907	2/22/2016	69.5	71.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0908	2/22/2016	64.5	66.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0911	2/22/2016	25	27	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0912	2/22/2016	28.5	30.5	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0913	2/22/2016	23.5	25.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0914	2/22/2016	71.5	73.5	2500	0	U	2500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0915	2/22/2016	66.5	68.5	1000	0	U	1000	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0916	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0917	2/22/2016	26.5	28.5	25	0	U	25	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0918	2/22/2016	30	30	250	0	U	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0919	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0920	2/22/2016	26.5	28.5	25	0	U	25	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0921	2/22/2016	69.5	71.5	250	0	U	250	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0922	2/22/2016	64.5	66.5	50	0	U	50	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0925	2/23/2016	31.5	33.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0926	2/23/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0927	2/23/2016	71.5	73.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0928	2/23/2016	66.5	68.5	500	0	U	500	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0929	2/23/2016	32.5	34.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0930	2/23/2016	27.5	29.5	5	0	U	5	ug/l
Cedarwood & Vacant & Groundwater & Vinyl chloride	PB-0931	2/23/2016	70.5	72.5	500	0	U	500	ug/l
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0077	4/7/2014	1	1	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0079	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0135	2/3/2015	0	0.5	0.0047	0	U	0.0047	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0136	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0219	2/3/2015	0	0.5	0.0053	0	U	0.0053	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0214	2/3/2015	0	0.5	0.00032	1	J	0.0054	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0220	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0216	2/3/2015	1	1.5	0.0049	0	U	0.0049	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0132	2/3/2015	1	1.5	0.0059	0	U	0.0059	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0222	2/3/2015	1	1.5	0.0047	0	U	0.0047	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0075	4/7/2014	1	1	0.0048	0	U	0.0048	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0221	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0073	4/7/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0127	2/3/2015	0.5	1	0.0056	0	U	0.0056	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0071	4/7/2014	1	1	0.0051	0	U	0.0051	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0131	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0110	4/8/2014	1	1	0.0057	0	U	0.0057	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0126	2/3/2015	0	0.5	0.0066	0	U	0.0066	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0114	4/8/2014	1	1	0.0054	0	U	0.0054	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0101	4/8/2014	1	1	0.0066	0	U	0.0066	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0128	2/3/2015	1.5	2	0.0046	0	U	0.0046	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0081	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0111	4/8/2014	0	0	0.0057	0	U	0.0057	mg/kg
Piermont & Surface Soil 0-2ft & cis-1,2-Dichloroethylene	PB-0112	4/8/2014	1	1	0.0053	0	U	0.0053	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0111	4/8/2014	0	0	0.0057	0	U	0.0057	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0114	4/8/2014	1	1	0.0054	0	U	0.0054	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0220	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0073	4/7/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0221	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0110	4/8/2014	1	1	0.0057	0	U	0.0057	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0075	4/7/2014	1	1	0.0021	1	J	0.0048	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0071	4/7/2014	1	1	0.0051	0	U	0.0051	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0222	2/3/2015	1	1.5	0.0047	0	U	0.0047	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0079	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0135	2/3/2015	0	0.5	0.0033	1	J	0.0047	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0126	2/3/2015	0	0.5	0.013	1		0.0066	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0216	2/3/2015	1	1.5	0.00083	1	J	0.0049	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0077	4/7/2014	1	1	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0101	4/8/2014	1	1	0.0066	0	U	0.0066	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0214	2/3/2015	0	0.5	0.0041	1	J	0.0054	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0127	2/3/2015	0.5	1	0.0097	1		0.0056	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0128	2/3/2015	1.5	2	0.0013	1	J	0.0046	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0136	2/3/2015	1	1.5	0.00021	1	J	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0081	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0112	4/8/2014	1	1	0.0053	0	U	0.0053	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0131	2/3/2015	0	0.5	0.0012	1	J	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0132	2/3/2015	1	1.5	0.00038	1	J	0.0059	mg/kg
Piermont & Surface Soil 0-2ft & Tetrachloroethylene	PB-0219	2/3/2015	0	0.5	0.0053	0	U	0.0053	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0131	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0101	4/8/2014	1	1	0.0066	0	U	0.0066	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0214	2/3/2015	0	0.5	0.00041	1	J	0.0054	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0081	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0071	4/7/2014	1	1	0.0051	0	U	0.0051	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0216	2/3/2015	1	1.5	0.0049	0	U	0.0049	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0132	2/3/2015	1	1.5	0.0059	0	U	0.0059	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0112	4/8/2014	1	1	0.0053	0	U	0.0053	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0114	4/8/2014	1	1	0.0054	0	U	0.0054	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0110	4/8/2014	1	1	0.0057	0	U	0.0057	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0135	2/3/2015	0	0.5	0.00028	1	J	0.0047	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0077	4/7/2014	1	1	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0079	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0220	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0075	4/7/2014	1	1	0.0048	0	U	0.0048	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0126	2/3/2015	0	0.5	0.00044	1	J	0.0066	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0136	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0221	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0073	4/7/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0127	2/3/2015	0.5	1	0.00066	1	J	0.0056	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0111	4/8/2014	0	0	0.0057	0	U	0.0057	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0222	2/3/2015	1	1.5	0.0047	0	U	0.0047	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0128	2/3/2015	1.5	2	0.0046	0	U	0.0046	mg/kg
Piermont & Surface Soil 0-2ft & Trichloroethylene	PB-0219	2/3/2015	0	0.5	0.0053	0	U	0.0053	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0114	4/8/2014	1	1	0.0054	0	U	0.0054	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0136	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0135	2/3/2015	0	0.5	0.0047	0	U	0.0047	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0132	2/3/2015	1	1.5	0.0059	0	U	0.0059	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0126	2/3/2015	0	0.5	0.0066	0	U	0.0066	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0127	2/3/2015	0.5	1	0.0056	0	U	0.0056	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0128	2/3/2015	1.5	2	0.0046	0	U	0.0046	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0101	4/8/2014	1	1	0.0066	0	U	0.0066	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0081	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0071	4/7/2014	1	1	0.0051	0	U	0.0051	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0222	2/3/2015	1	1.5	0.0047	0	U	0.0047	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0073	4/7/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0221	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0075	4/7/2014	1	1	0.0048	0	U	0.0048	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0220	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0077	4/7/2014	1	1	0.005	0	U	0.005	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0219	2/3/2015	0	0.5	0.0053	0	U	0.0053	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0079	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0112	4/8/2014	1	1	0.0053	0	U	0.0053	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0216	2/3/2015	1	1.5	0.0049	0	U	0.0049	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0214	2/3/2015	0	0.5	0.0054	0	U	0.0054	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0110	4/8/2014	1	1	0.0057	0	U	0.0057	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0131	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & Surface Soil 0-2ft & Vinyl chloride	PB-0111	4/8/2014	0	0	0.0057	0	U	0.0057	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0077	4/7/2014	1	1	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0079	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0135	2/3/2015	0	0.5	0.0047	0	U	0.0047	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0136	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0219	2/3/2015	0	0.5	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0214	2/3/2015	0	0.5	0.00032	1	J	0.0054	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0220	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0216	2/3/2015	1	1.5	0.0049	0	U	0.0049	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0132	2/3/2015	1	1.5	0.0059	0	U	0.0059	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0222	2/3/2015	1	1.5	0.0047	0	U	0.0047	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0075	4/7/2014	1	1	0.0048	0	U	0.0048	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0221	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0073	4/7/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0127	2/3/2015	0.5	1	0.0056	0	U	0.0056	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0071	4/7/2014	1	1	0.0051	0	U	0.0051	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0131	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0110	4/8/2014	1	1	0.0057	0	U	0.0057	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0126	2/3/2015	0	0.5	0.0066	0	U	0.0066	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0114	4/8/2014	1	1	0.0054	0	U	0.0054	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0101	4/8/2014	1	1	0.0066	0	U	0.0066	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0128	2/3/2015	1.5	2	0.0046	0	U	0.0046	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0081	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0111	4/8/2014	0	0	0.0057	0	U	0.0057	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0112	4/8/2014	1	1	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0133	2/3/2015	2	2.5	0.0058	0	U	0.0058	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0138	2/3/2015	3	3.5	0.0049	0	U	0.0049	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0134	2/3/2015	3	3.5	0.0059	0	U	0.0059	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0123	2/3/2015	6.5	7	0.0056	0	U	0.0056	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0137	2/3/2015	2	2.5	0.0054	0	U	0.0054	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0218	2/3/2015	2	2.5	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0122	2/3/2015	5.5	6	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0080	4/7/2014	8.5	8.5	0.0062	0	U	0.0062	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0129	2/3/2015	3	3.5	0.007	0	U	0.007	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0078	4/7/2014	8.5	8.5	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0113	4/8/2014	8.5	8.5	0.0056	0	U	0.0056	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0082	4/7/2014	9	9	0.0082	0	U	0.0082	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0076	4/7/2014	8	8	0.0063	0	U	0.0063	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0102	4/8/2014	8	8	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0074	4/7/2014	8	8	0.006	0	U	0.006	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0124	2/3/2015	2.5	3	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0072	4/7/2014	8.5	8.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0125	2/3/2015	4	4.5	0.0062	0	U	0.0062	mg/kg
Piermont & All Soil 0-10ft & cis-1,2-Dichloroethylene	PB-0115	4/8/2014	8.5	8.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0111	4/8/2014	0	0	0.0057	0	U	0.0057	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0114	4/8/2014	1	1	0.0054	0	U	0.0054	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0220	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0073	4/7/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0221	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0110	4/8/2014	1	1	0.0057	0	U	0.0057	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0075	4/7/2014	1	1	0.0021	1	J	0.0048	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0071	4/7/2014	1	1	0.0051	0	U	0.0051	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0222	2/3/2015	1	1.5	0.0047	0	U	0.0047	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0079	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0135	2/3/2015	0	0.5	0.0033	1	J	0.0047	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0126	2/3/2015	0	0.5	0.013	1		0.0066	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0216	2/3/2015	1	1.5	0.00083	1	J	0.0049	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0077	4/7/2014	1	1	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0101	4/8/2014	1	1	0.0066	0	U	0.0066	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0214	2/3/2015	0	0.5	0.0041	1	J	0.0054	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0127	2/3/2015	0.5	1	0.0097	1		0.0056	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0128	2/3/2015	1.5	2	0.0013	1	J	0.0046	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0136	2/3/2015	1	1.5	0.00021	1	J	0.005	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0081	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0112	4/8/2014	1	1	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0131	2/3/2015	0	0.5	0.0012	1	J	0.0052	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0132	2/3/2015	1	1.5	0.00038	1	J	0.0059	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0219	2/3/2015	0	0.5	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0076	4/7/2014	8	8	0.0063	0	U	0.0063	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0074	4/7/2014	8	8	0.006	0	U	0.006	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0078	4/7/2014	8.5	8.5	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0080	4/7/2014	8.5	8.5	0.0062	0	U	0.0062	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0218	2/3/2015	2	2.5	0.0023	1	J	0.0055	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0072	4/7/2014	8.5	8.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0082	4/7/2014	9	9	0.0082	0	U	0.0082	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0124	2/3/2015	2.5	3	0.0013	1	J	0.0053	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0138	2/3/2015	3	3.5	0.0049	0	U	0.0049	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0113	4/8/2014	8.5	8.5	0.0056	0	U	0.0056	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0137	2/3/2015	2	2.5	0.0054	0	U	0.0054	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0115	4/8/2014	8.5	8.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0122	2/3/2015	5.5	6	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0134	2/3/2015	3	3.5	0.0059	0	U	0.0059	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0123	2/3/2015	6.5	7	0.007	1		0.0056	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0133	2/3/2015	2	2.5	0.0058	0	U	0.0058	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0125	2/3/2015	4	4.5	0.0018	1	J	0.0062	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0129	2/3/2015	3	3.5	0.0015	1	J	0.007	mg/kg
Piermont & All Soil 0-10ft & Tetrachloroethylene	PB-0102	4/8/2014	8	8	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0131	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0101	4/8/2014	1	1	0.0066	0	U	0.0066	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0214	2/3/2015	0	0.5	0.00041	1	J	0.0054	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0081	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0071	4/7/2014	1	1	0.0051	0	U	0.0051	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0216	2/3/2015	1	1.5	0.0049	0	U	0.0049	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0132	2/3/2015	1	1.5	0.0059	0	U	0.0059	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0112	4/8/2014	1	1	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0114	4/8/2014	1	1	0.0054	0	U	0.0054	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0110	4/8/2014	1	1	0.0057	0	U	0.0057	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0135	2/3/2015	0	0.5	0.00028	1	J	0.0047	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0077	4/7/2014	1	1	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0079	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0220	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0075	4/7/2014	1	1	0.0048	0	U	0.0048	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0126	2/3/2015	0	0.5	0.00044	1	J	0.0066	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0136	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0221	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0073	4/7/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0127	2/3/2015	0.5	1	0.00066	1	J	0.0056	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0111	4/8/2014	0	0	0.0057	0	U	0.0057	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0222	2/3/2015	1	1.5	0.0047	0	U	0.0047	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0128	2/3/2015	1.5	2	0.0046	0	U	0.0046	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0219	2/3/2015	0	0.5	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0122	2/3/2015	5.5	6	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0218	2/3/2015	2	2.5	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0138	2/3/2015	3	3.5	0.0049	0	U	0.0049	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0137	2/3/2015	2	2.5	0.0054	0	U	0.0054	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0134	2/3/2015	3	3.5	0.0059	0	U	0.0059	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0133	2/3/2015	2	2.5	0.0058	0	U	0.0058	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0129	2/3/2015	3	3.5	0.007	0	U	0.007	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0125	2/3/2015	4	4.5	0.0062	0	U	0.0062	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0124	2/3/2015	2.5	3	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0123	2/3/2015	6.5	7	0.00045	1	J	0.0056	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0115	4/8/2014	8.5	8.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0113	4/8/2014	8.5	8.5	0.0056	0	U	0.0056	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0078	4/7/2014	8.5	8.5	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0072	4/7/2014	8.5	8.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0082	4/7/2014	9	9	0.0082	0	U	0.0082	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0074	4/7/2014	8	8	0.006	0	U	0.006	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0080	4/7/2014	8.5	8.5	0.0062	0	U	0.0062	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0076	4/7/2014	8	8	0.0063	0	U	0.0063	mg/kg
Piermont & All Soil 0-10ft & Trichloroethylene	PB-0102	4/8/2014	8	8	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0114	4/8/2014	1	1	0.0054	0	U	0.0054	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0136	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0135	2/3/2015	0	0.5	0.0047	0	U	0.0047	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0132	2/3/2015	1	1.5	0.0059	0	U	0.0059	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0126	2/3/2015	0	0.5	0.0066	0	U	0.0066	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0127	2/3/2015	0.5	1	0.0056	0	U	0.0056	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0128	2/3/2015	1.5	2	0.0046	0	U	0.0046	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0101	4/8/2014	1	1	0.0066	0	U	0.0066	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0081	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0071	4/7/2014	1	1	0.0051	0	U	0.0051	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0222	2/3/2015	1	1.5	0.0047	0	U	0.0047	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0073	4/7/2014	0.5	0.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0221	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0075	4/7/2014	1	1	0.0048	0	U	0.0048	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0220	2/3/2015	1	1.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0077	4/7/2014	1	1	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0219	2/3/2015	0	0.5	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0079	4/7/2014	1	1	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0112	4/8/2014	1	1	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0216	2/3/2015	1	1.5	0.0049	0	U	0.0049	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0214	2/3/2015	0	0.5	0.0054	0	U	0.0054	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0110	4/8/2014	1	1	0.0057	0	U	0.0057	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0131	2/3/2015	0	0.5	0.0052	0	U	0.0052	mg/kg

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0111	4/8/2014	0	0	0.0057	0	U	0.0057	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0218	2/3/2015	2	2.5	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0074	4/7/2014	8	8	0.006	0	U	0.006	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0138	2/3/2015	3	3.5	0.0049	0	U	0.0049	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0137	2/3/2015	2	2.5	0.0054	0	U	0.0054	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0076	4/7/2014	8	8	0.0063	0	U	0.0063	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0134	2/3/2015	3	3.5	0.0059	0	U	0.0059	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0133	2/3/2015	2	2.5	0.0058	0	U	0.0058	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0123	2/3/2015	6.5	7	0.0056	0	U	0.0056	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0080	4/7/2014	8.5	8.5	0.0062	0	U	0.0062	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0125	2/3/2015	4	4.5	0.0062	0	U	0.0062	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0124	2/3/2015	2.5	3	0.0053	0	U	0.0053	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0078	4/7/2014	8.5	8.5	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0082	4/7/2014	9	9	0.0082	0	U	0.0082	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0072	4/7/2014	8.5	8.5	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0122	2/3/2015	5.5	6	0.005	0	U	0.005	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0115	4/8/2014	8.5	8.5	0.0052	0	U	0.0052	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0102	4/8/2014	8	8	0.0055	0	U	0.0055	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0113	4/8/2014	8.5	8.5	0.0056	0	U	0.0056	mg/kg
Piermont & All Soil 0-10ft & Vinyl chloride	PB-0129	2/3/2015	3	3.5	0.007	0	U	0.007	mg/kg
Piermont & Groundwater & cis-1,2-Dichloroethylene	149-1004	2/8/2012	20	20	2.39	1	J		ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	149-1005	2/8/2012	25	25	5.76	1			ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0140	9/29/2014	36	40	4.6	1	J	10	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0141	9/29/2014	18	22	0.55	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0142	9/29/2014	18	22	2.2	1	J	20	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0143	9/29/2014	36	40	42	1		5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0144	9/29/2014	26	30	6.3	1		5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0145	9/29/2014	18	22	2.9	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0146	9/29/2014	36	40	16	1	J	25	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0147	9/29/2014	26	30	1.4	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0148	9/29/2014	18	22	0.99	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0150	9/29/2014	36	40	18	1		10	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0151	9/29/2014	26	30	1.8	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0152	9/29/2014	18	22	0.75	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0153	9/29/2014	36	40	2.8	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0154	9/29/2014	26	30	0.25	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0155	9/29/2014	18	22	0.53	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0156	9/30/2014	33	37	0.28	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0157	9/30/2014	28	32	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0158	9/30/2014	23	27	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0159	9/30/2014	33	37	11	1		5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0160	9/30/2014	28	32	0.44	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0161	9/30/2014	23	27	0.51	1	J	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0163	9/30/2014	36	40	15	1		5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0164	9/30/2014	33	37	15	1		5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0165	9/30/2014	28	32	1.3	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0166	9/30/2014	19	23	0.56	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0167	9/30/2014	36	40	8.1	1		5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0168	9/30/2014	26	30	0.95	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0169	9/30/2014	20	24	0.48	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0170	10/1/2014	41	45	0.71	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0172	10/1/2014	36	40	43	1		5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0173	10/1/2014	26	30	1.1	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0174	10/1/2014	21	25	1	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0175	10/1/2014	36	40	3.8	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0176	10/1/2014	26	30	0.61	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0177	10/1/2014	21	25	2.2	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0178	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0179	10/1/2014	31	35	5.7	1		5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0180	10/1/2014	21	25	0.31	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0181	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0182	10/1/2014	31	35	1.9	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0183	10/1/2014	22	26	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0185	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0186	10/1/2014	31	35	2.7	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0187	10/1/2014	22	26	0.3	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0188	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0189	10/1/2014	31	35	4.7	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0190	10/1/2014	22	26	0.23	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0191	10/1/2014	36	40	0.58	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0192	10/1/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0194	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0195	10/1/2014	31	35	1.6	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0196	10/1/2014	21	25	0.35	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0237	2/5/2015	36	40	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0239	2/5/2015	26	30	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0241	2/5/2015	19	23	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0242	2/5/2015	36	40	51	1		5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0243	2/5/2015	26	30	4.6	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0244	2/5/2015	19	23	3.2	1	J	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0937	2/23/2016	25	27	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0938	2/23/2016	69	71	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0939	2/23/2016	36.5	38.5	50	0	U	50	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0940	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0941	2/23/2016	86.5	88.5	5	0	U	5	ug/l
Piermont & Groundwater & cis-1,2-Dichloroethylene	PB-0942	2/23/2016	81.5	83.5	5	0	U	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & Groundwater & Tetrachloroethylene	149-1004	2/8/2012	20	20	193	1			ug/l
Piermont & Groundwater & Tetrachloroethylene	149-1005	2/8/2012	25	25	4260	1			ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0140	9/29/2014	36	40	880	1		50	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0141	9/29/2014	18	22	140	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0142	9/29/2014	18	22	1200	1		100	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0143	9/29/2014	36	40	140	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0144	9/29/2014	26	30	29	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0145	9/29/2014	18	22	520	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0146	9/29/2014	36	40	2100	1		100	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0147	9/29/2014	26	30	510	1		25	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0148	9/29/2014	18	22	220	1		10	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0150	9/29/2014	36	40	950	1		50	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0151	9/29/2014	26	30	150	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0152	9/29/2014	18	22	66	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0153	9/29/2014	36	40	0.61	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0154	9/29/2014	26	30	0.53	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0155	9/29/2014	18	22	0.88	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0156	9/30/2014	33	37	4.2	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0157	9/30/2014	28	32	1.2	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0158	9/30/2014	23	27	1	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0159	9/30/2014	33	37	43	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0160	9/30/2014	28	32	6.4	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0161	9/30/2014	23	27	5.1	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0163	9/30/2014	36	40	170	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0164	9/30/2014	33	37	260	1		10	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0165	9/30/2014	28	32	52	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0166	9/30/2014	19	23	29	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0167	9/30/2014	36	40	71	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0168	9/30/2014	26	30	57	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0169	9/30/2014	20	24	18	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0170	10/1/2014	41	45	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0172	10/1/2014	36	40	320	1		20	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0173	10/1/2014	26	30	43	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0174	10/1/2014	21	25	8.4	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0175	10/1/2014	36	40	66	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0176	10/1/2014	26	30	10	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0177	10/1/2014	21	25	29	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0178	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0179	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0180	10/1/2014	21	25	0.45	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0181	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0182	10/1/2014	31	35	0.21	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0183	10/1/2014	22	26	5	0	U	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & Groundwater & Tetrachloroethylene	PB-0185	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0186	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0187	10/1/2014	22	26	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0188	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0189	10/1/2014	31	35	0.32	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0190	10/1/2014	22	26	0.55	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0191	10/1/2014	36	40	1	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0192	10/1/2014	26	30	0.22	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0194	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0195	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0196	10/1/2014	21	25	0.97	1	J	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0237	2/5/2015	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0239	2/5/2015	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0241	2/5/2015	19	23	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0242	2/5/2015	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0243	2/5/2015	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0244	2/5/2015	19	23	5	0	U	5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0937	2/23/2016	25	27	12	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0938	2/23/2016	69	71	9.1	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0939	2/23/2016	36.5	38.5	680	1		50	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0940	2/23/2016	31.5	33.5	34	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0941	2/23/2016	86.5	88.5	8.3	1		5	ug/l
Piermont & Groundwater & Tetrachloroethylene	PB-0942	2/23/2016	81.5	83.5	6.7	1		5	ug/l
Piermont & Groundwater & Trichloroethylene	149-1004	2/8/2012	20	20	1.96	1	J		ug/l
Piermont & Groundwater & Trichloroethylene	149-1005	2/8/2012	25	25	3.28	1	J		ug/l
Piermont & Groundwater & Trichloroethylene	PB-0140	9/29/2014	36	40	12	1		10	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0141	9/29/2014	18	22	1.4	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0142	9/29/2014	18	22	2.5	1	J	20	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0143	9/29/2014	36	40	3.3	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0144	9/29/2014	26	30	0.64	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0145	9/29/2014	18	22	1.9	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0146	9/29/2014	36	40	21	1	J	25	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0147	9/29/2014	26	30	1.7	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0148	9/29/2014	18	22	1.3	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0150	9/29/2014	36	40	9.4	1	J	10	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0151	9/29/2014	26	30	1.1	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0152	9/29/2014	18	22	0.6	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0153	9/29/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0154	9/29/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0155	9/29/2014	18	22	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0156	9/30/2014	33	37	0.38	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0157	9/30/2014	28	32	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0158	9/30/2014	23	27	5	0	U	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & Groundwater & Trichloroethylene	PB-0159	9/30/2014	33	37	3.4	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0160	9/30/2014	28	32	0.3	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0161	9/30/2014	23	27	0.32	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0163	9/30/2014	36	40	9	1		5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0164	9/30/2014	33	37	13	1		5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0165	9/30/2014	28	32	1.6	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0166	9/30/2014	19	23	0.72	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0167	9/30/2014	36	40	0.86	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0168	9/30/2014	26	30	0.22	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0169	9/30/2014	20	24	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0170	10/1/2014	41	45	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0172	10/1/2014	36	40	5.6	1		5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0173	10/1/2014	26	30	0.55	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0174	10/1/2014	21	25	0.66	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0175	10/1/2014	36	40	2	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0176	10/1/2014	26	30	0.43	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0177	10/1/2014	21	25	1	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0178	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0179	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0180	10/1/2014	21	25	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0181	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0182	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0183	10/1/2014	22	26	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0185	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0186	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0187	10/1/2014	22	26	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0188	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0189	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0190	10/1/2014	22	26	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0191	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0192	10/1/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0194	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0195	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0196	10/1/2014	21	25	0.25	1	J	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0237	2/5/2015	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0239	2/5/2015	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0241	2/5/2015	19	23	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0242	2/5/2015	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0243	2/5/2015	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0244	2/5/2015	19	23	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0937	2/23/2016	25	27	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0938	2/23/2016	69	71	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0939	2/23/2016	36.5	38.5	50	0	U	50	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & Groundwater & Trichloroethylene	PB-0940	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0941	2/23/2016	86.5	88.5	5	0	U	5	ug/l
Piermont & Groundwater & Trichloroethylene	PB-0942	2/23/2016	81.5	83.5	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	149-1004	2/8/2012	20	20	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	149-1005	2/8/2012	25	25	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0140	9/29/2014	36	40	10	0	U	10	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0141	9/29/2014	18	22	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0142	9/29/2014	18	22	20	0	U	20	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0143	9/29/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0144	9/29/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0145	9/29/2014	18	22	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0146	9/29/2014	36	40	25	0	U	25	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0147	9/29/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0148	9/29/2014	18	22	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0150	9/29/2014	36	40	10	0	U	10	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0151	9/29/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0152	9/29/2014	18	22	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0153	9/29/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0154	9/29/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0155	9/29/2014	18	22	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0156	9/30/2014	33	37	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0157	9/30/2014	28	32	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0158	9/30/2014	23	27	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0159	9/30/2014	33	37	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0160	9/30/2014	28	32	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0161	9/30/2014	23	27	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0163	9/30/2014	36	40	0.93	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0164	9/30/2014	33	37	0.67	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0165	9/30/2014	28	32	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0166	9/30/2014	19	23	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0167	9/30/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0168	9/30/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0169	9/30/2014	20	24	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0170	10/1/2014	41	45	12	1		5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0172	10/1/2014	36	40	1.4	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0173	10/1/2014	26	30	0.59	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0174	10/1/2014	21	25	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0175	10/1/2014	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0176	10/1/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0177	10/1/2014	21	25	0.74	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0178	10/1/2014	36	40	1.8	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0179	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0180	10/1/2014	21	25	5	0	U	5	ug/l

Table A-3: ProUCL Data Input
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Piermont & Groundwater & Vinyl chloride	PB-0181	10/1/2014	36	40	2	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0182	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0183	10/1/2014	22	26	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0185	10/1/2014	36	40	0.66	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0186	10/1/2014	31	35	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0187	10/1/2014	22	26	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0188	10/1/2014	36	40	1.9	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0189	10/1/2014	31	35	0.69	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0190	10/1/2014	22	26	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0191	10/1/2014	36	40	11	1		5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0192	10/1/2014	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0194	10/1/2014	36	40	1.3	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0195	10/1/2014	31	35	0.56	1	J	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0196	10/1/2014	21	25	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0237	2/5/2015	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0239	2/5/2015	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0241	2/5/2015	19	23	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0242	2/5/2015	36	40	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0243	2/5/2015	26	30	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0244	2/5/2015	19	23	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0937	2/23/2016	25	27	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0938	2/23/2016	69	71	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0939	2/23/2016	36.5	38.5	50	0	U	50	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0940	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0941	2/23/2016	86.5	88.5	5	0	U	5	ug/l
Piermont & Groundwater & Vinyl chloride	PB-0942	2/23/2016	81.5	83.5	5	0	U	5	ug/l

ATTACHMENT B

USEPA REGIONAL SCREENING LEVELS – MAY 2016

CIS-1,2-DCE, PCE, TCE AND VC

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	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
											1.4E+09		0.013		Chromium, Total	7440-47-3								
				1.3E-02	I						1.4E+09		1	0.1	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				1.4E+09		1		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						1.4E+09		1		Copper	7440-50-8					3.1E+03			3.1E+03
				5.0E-02	I	6.0E-01	C				1.4E+09		1	0.1	Cresol, m-	108-39-4					3.9E+03	1.6E+04	8.5E+08	3.2E+03
				5.0E-02	I	6.0E-01	C				1.4E+09		1	0.1	Cresol, o-	95-48-7					3.9E+03	1.6E+04	8.5E+08	3.2E+03
				1.0E-01	A	6.0E-01	C				1.4E+09		1	0.1	Cresol, p-	106-44-5					7.8E+03	3.3E+04	8.5E+08	6.3E+03
				1.0E-01	A						1.4E+09		1	0.1	Cresol, p-chloro-m-	59-50-7					7.8E+03	3.3E+04		6.3E+03
				1.0E-01	A	6.0E-01	C				1.4E+09		1	0.1	Cresols	1319-77-3					7.8E+03	3.3E+04	8.5E+08	6.3E+03
1.9E+00	H			1.0E-03	P			V		1.7E+04	1.4E+09	1.9E+04	1		Crotonaldehyde, trans-	123-73-9	3.7E-01			3.7E-01	7.8E+01			7.8E+01
				1.0E-01	I	4.0E-01	I	V		2.7E+02	1.4E+09	6.2E+03	1		Cumene	98-82-8					7.8E+03		2.6E+03	1.9E+03
2.2E-01	C	6.3E-05	C								1.4E+09		1	0.1	Cupferron	135-20-6	3.2E+00	1.1E+01	6.1E+04	2.5E+00				
8.4E-01	H			2.0E-03	H						1.4E+09		1	0.1	Cyanazine	21725-46-2	8.3E-01	2.9E+00		6.5E-01	1.6E+02	6.6E+02		1.3E+02
															Cyanides									
				1.0E-03	I						1.4E+09		1		~Calcium Cyanide	592-01-8					7.8E+01			7.8E+01
				5.0E-03	I						1.4E+09		1		~Copper Cyanide	544-92-3					3.9E+02			3.9E+02
				6.0E-04	I	8.0E-04	S	V		9.5E+05	1.4E+09	5.3E+04	1		~Cyanide (CN-)	57-12-5					4.7E+01		4.4E+01	2.3E+01
				1.0E-03	I			V			1.4E+09		1		~Cyanogen	460-19-5					7.8E+01			7.8E+01
				9.0E-02	I			V			1.4E+09		1		~Cyanogen Bromide	506-68-3					7.0E+03			7.0E+03
				5.0E-02	I			V			1.4E+09		1		~Cyanogen Chloride	506-77-4					3.9E+03			3.9E+03
				6.0E-04	I	8.0E-04	I	V		1.0E+07	1.4E+09	5.2E+04	1		~Hydrogen Cyanide	74-90-8					4.7E+01		4.4E+01	2.3E+01
				2.0E-03	I						1.4E+09		1		~Potassium Cyanide	151-50-8					1.6E+02			1.6E+02
				5.0E-03	I						1.4E+09		0.04		~Potassium Silver Cyanide	506-61-6					3.9E+02			3.9E+02
				1.0E-01	I						1.4E+09		0.04		~Silver Cyanide	506-64-9					7.8E+03			7.8E+03
				1.0E-03	I						1.4E+09		1		~Sodium Cyanide	143-33-9					7.8E+01			7.8E+01
				2.0E-04	P						1.4E+09		1		~Thiocyanates	NA					1.6E+01			1.6E+01
				2.0E-04	X			V			1.4E+09		1		~Thiocyanic Acid	463-56-9					1.6E+01			1.6E+01
				5.0E-02	I						1.4E+09		1		~Zinc Cyanide	557-21-1					3.9E+03			3.9E+03
						6.0E+00	I	V		1.2E+02	1.4E+09	1.0E+03	1		Cyclohexane	110-82-7							6.5E+03	6.5E+03
2.3E-02	H										1.4E+09		1	0.1	Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	3.0E+01	1.1E+02		2.4E+01				
				5.0E+00	I	7.0E-01	P	V		5.1E+03	1.4E+09	4.2E+04	1		Cyclohexanone	108-94-1					3.9E+05		3.0E+04	2.8E+04
				5.0E-03	P	1.0E+00	X	V		2.8E+02	1.4E+09	1.5E+03	1		Cyclohexene	110-83-8					3.9E+02		1.5E+03	3.1E+02
				2.0E-01	I			V		2.9E+05	1.4E+09	7.5E+04	1		Cyclohexylamine	108-91-8					1.6E+04			1.6E+04
				2.5E-02	I						1.4E+09		1	0.1	Cyfluthrin	68359-37-5					2.0E+03	8.2E+03		1.6E+03
				5.0E-03	I						1.4E+09		1	0.1	Cyhalothrin	68085-85-8					3.9E+02	1.6E+03		3.2E+02
				1.0E-02	I						1.4E+09		1	0.1	Cypermethrin	52315-07-8					7.8E+02	3.3E+03		6.3E+02
				7.5E-03	I						1.4E+09		1	0.1	Cyromazine	66215-27-8					5.9E+02	2.5E+03		4.7E+02
2.4E-01	I	6.9E-05	C								1.4E+09		1	0.1	DDD	72-54-8	2.9E+00	1.0E+01	5.5E+04	2.3E+00				
3.4E-01	I	9.7E-05	C					V			1.4E+09	2.1E+06	1		DDE, p,p'-	72-55-9	2.0E+00		6.1E+01	2.0E+00				
3.4E-01	I	9.7E-05	I	5.0E-04	I						1.4E+09		1	0.03	DDT	50-29-3	2.0E+00	2.4E+01	3.9E+04	1.9E+00	3.9E+01	5.5E+02		3.7E+01
				3.0E-02	I						1.4E+09		1	0.1	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						1.4E+09		1	0.1	Daminozide	1596-84-5	3.9E+01	1.4E+02	7.5E+05	3.0E+01	1.2E+04	4.9E+04		9.5E+03
7.0E-04	I			7.0E-03	I						1.4E+09		1	0.1	Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	9.9E+02	3.5E+03		7.8E+02	5.5E+02	2.3E+03		4.4E+02
				4.0E-05	I						1.4E+09		1	0.1	Demeton	8065-48-3					3.1E+00	1.3E+01		2.5E+00
1.2E-03	I			6.0E-01	I						1.4E+09		1	0.1	Di(2-ethylhexyl)adipate	103-23-1	5.8E+02	2.1E+03		4.5E+02	4.7E+04	2.0E+05		3.8E+04
6.1E-02	H										1.4E+09		1	0.1	Diallate	2303-16-4	1.1E+01	4.1E+01		8.9E+00				
				7.0E-04	A						1.4E+09		1	0.1	Diazinon	333-41-5					5.5E+01	2.3E+02		4.4E+01
				1.0E-02	X			V			1.4E+09	5.2E+05	1		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	9.8E+02	1.4E+09	3.2E+04	1		Dibromo-3-chloropropane, 1,2-	96-12-8	1.9E-01		5.4E-03	5.3E-03	1.6E+01		6.7E+00	4.7E+00
				4.0E-04	X			V		1.6E+02	1.4E+09	1.9E+04	1		Dibromobenzene, 1,3-	108-36-1					3.1E+01			3.1E+01
				1.0E-02	I			V			1.4E+09	2.2E+04	1		Dibromobenzene, 1,4-	106-37-6					7.8E+02			7.8E+02
8.4E-02	I			2.0E-02	I			V		8.0E+02	1.4E+09	8.0E+03	1		Dibromochloromethane	124-48-1	8.3E+00			8.3E+00	1.6E+03			1.6E+03
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1.3E+03	1.4E+09	8.6E+03	1		Dibromoethane, 1,2-	106-93-4	3.5E-01		4.0E-02	3.6E-02	7.0E+02		8.1E+01	7.3E+01
						4.0E-03	X	V		2.8E+03	1.4E+09	5.6E+03	1		Dibromomethane (Methylene Bromide)	74-95-3							2.4E+01	2.4E+01
				3.0E-04	P						1.4E+09		1	0.1	Dibutyltin Compounds	NA					2.3E+01	9.9E+01		1.9E+01
				3.0E-02	I						1.4E+09		1	0.1	Dicamba	1918-00-9					2.3E+03	9.9E+03		1.9E+03
		4.2E-03	P					V		5.5E+02	1.4E+09	3.2E+03	1		Dichloro-2-butene, 1,4-	764-41-0			2.1E-03	2.1E-03				
		4.2E-03	P					V		5.2E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, cis-1,4-	1476-11-5			7.4E-03	7.4E-03				
		4.2E-03	P					V		7.6E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, trans-1,4-	110-57-6			7.4E-03	7.4E-03				
5.0E-02	I			4.0E-03	I						1.4E+09		1	0.1	Dichloroacetic Acid	79-43-6	1.4E+01	4.9E+01		1.1E+01	3.1E+02	1.3E+03		2.5E+02
				9.0E-02	I	2.0E-01	H	V		3.8E+02	1.4E+09	1.2E+04	1		Dichlorobenzene, 1,2-	95-50-1					7.0E+03		2.4E+03	1.8E+03
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V			1.4E+09	1.0E+04	1		Dichlorobenzene, 1,4-	106-46-7	1.3E+02		2.7E+00	2.6E+00	5.5E+03		8.7E+03	3.4E+03
4.5E-01	I	3.4E-04	C								1.4E+09		1	0.1	Dichlorobenzidine, 3,3'-	91-94-1	1.5E+00	5.5E+00	1.1E+04	1.2E+00				
				9.0E-03	X						1.4E+09		1	0.1	Dichlorobenzophenone, 4,4'-	90-98-2					7.0E+02	3.0E+03		5.7E+02
				2.0E-01	I	1.0E-01	X	V		8.5E+02	1.4E+09	8.4E+02	1		Dichlorodifluoromethane	75-71-8					1.6E+04		8.8E+01	8.7E+01
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1.7E+03	1.4E+09	2.1E+03	1		Dichloroethane, 1,1-	75-34-3	1.2E+02		3.7E+00	3.6E+00	1.6E+04			1.6E+04
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		3.0E+03	1.4E+09	4.6E+03	1		Dichloroethane, 1,2-	107-06-2	7.6E+00		4.9E-01	4.6E-01	4.7E+02		3.3E+01	3.1E+01
				5.0E-02	I	2.0E-01	I	V		1.2E+03	1.4E+09	1.2E+03	1		Dichloroethylene, 1,1-	75-35-4					3.9E+03		2.4E+02	2.3E+02
				2.0E-03	I			V		2.4E+03	1.4E+09	2.5E+03	1		Dichloroethylene, 1,2-cis-	156-59-2					1.6E+02			1.6E+02
				2.0E-02	I			V		1.9E+03	1.4E+09	1.8E+03	1		Dichloroethylene, 1,2-trans-	156-60-5					1.6E+03			1.6E+03
				3.0E-03	I						1.4E+09		1	0.1	Dichlorophenol, 2,4-	120-83-2					2.3E+02	9.9E+02		1.9E+02
				1.0E-02	I						1.4E+09		1	0.05	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					7.8E+02	6.6E+03		7.0E+02
				8.0E-03	I						1.4E+09		1	0.1	Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6					6.3E+02	2.6E+03		5.1E+02
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1.4E+03	1.4E+09	3.8E+03	1		Dichloropropane, 1,2-	78-87-5	1.9E+01		1.1E+00	1.0E+00	7.0E+03		1.6E+01	1.6E+01

TR=1E-06
HQ=1.0

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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	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				5.0E-03	I	2.0E-02	C				1.4E+09		1		Selenium	7782-49-2					3.9E+02		2.8E+07	3.9E+02
				5.0E-03	C	2.0E-02	C				1.4E+09		1		Selenium Sulfide	7446-34-6					3.9E+02		2.8E+07	3.9E+02
				9.0E-02	I						1.4E+09		1	0.1	Sethoxydim	74051-80-2					7.0E+03	3.0E+04		5.7E+03
						3.0E-03	C				1.4E+09		1		Silica (crystalline, respirable)	7631-86-9							4.3E+06	4.3E+06
				5.0E-03	I						1.4E+09		0.04		Silver	7440-22-4					3.9E+02			3.9E+02
1.2E-01	H			5.0E-03	I						1.4E+09		1	0.1	Simazine	122-34-9	5.8E+00	2.1E+01		4.5E+00	3.9E+02	1.6E+03		3.2E+02
				1.3E-02	I						1.4E+09		1	0.1	Sodium Acifluorfen	62476-59-9					1.0E+03	4.3E+03		8.2E+02
				4.0E-03	I						1.4E+09		1		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		1.4E+09		0.025		Sodium Dichromate	10588-01-9	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
2.7E-01	H			3.0E-02	I						1.4E+09		1	0.1	Sodium Diethyldithiocarbamate	148-18-5	2.6E+00	9.2E+00		2.0E+00	2.3E+03	9.9E+03		1.9E+03
				5.0E-02	A	1.3E-02	C				1.4E+09		1		Sodium Fluoride	7681-49-4					3.9E+03		1.8E+07	3.9E+03
				2.0E-05	I						1.4E+09		1	0.1	Sodium Fluoroacetate	62-74-8					1.6E+00	6.6E+00		1.3E+00
				1.0E-03	H						1.4E+09		1		Sodium Metavanadate	13718-26-8					7.8E+01			7.8E+01
				8.0E-04	P						1.4E+09		1		Sodium Tungstate	13472-45-2					6.3E+01			6.3E+01
				8.0E-04	P						1.4E+09		1		Sodium Tungstate Dihydrate	10213-10-2					6.3E+01			6.3E+01
2.4E-02	H			3.0E-02	I						1.4E+09		1	0.1	Stirofos (Tetrachlorovinphos)	961-11-5	2.9E+01	1.0E+02		2.3E+01	2.3E+03	9.9E+03		1.9E+03
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Strontium Chromate	7789-06-2	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
				6.0E-01	I						1.4E+09		1		Strontium, Stable	7440-24-6					4.7E+04			4.7E+04
				3.0E-04	I						1.4E+09		1	0.1	Strychnine	57-24-9					2.3E+01	9.9E+01		1.9E+01
				2.0E-01	I	1.0E+00	I	V		8.7E+02	1.4E+09	9.4E+03	1		Styrene	100-42-5					1.6E+04		9.7E+03	6.0E+03
				3.0E-03	P						1.4E+09		1	0.1	Styrene-Acrylonitrile (SAN) Trimer	NA					2.3E+02	9.9E+02		1.9E+02
				1.0E-03	P	2.0E-03	X				1.4E+09		1	0.1	Sulfolane	126-33-0					7.8E+01	3.3E+02	2.8E+06	6.3E+01
				8.0E-04	P						1.4E+09		1	0.1	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					6.3E+01	2.6E+02		5.1E+01
						1.0E-03	C	V			1.4E+09		1		Sulfur Trioxide	7446-11-9							1.4E+06	1.4E+06
						1.0E-03	C				1.4E+09		1		Sulfuric Acid	7664-93-9							1.4E+06	1.4E+06
2.5E-02	I	7.1E-06	I	5.0E-02	H						1.4E+09		1	0.1	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	2.8E+01	9.9E+01	5.4E+05	2.2E+01	3.9E+03	1.6E+04		3.2E+03
				3.0E-02	H						1.4E+09		1	0.1	TCMTB	21564-17-0					2.3E+03	9.9E+03		1.9E+03
				7.0E-02	I						1.4E+09		1	0.1	Tebuthiuron	34014-18-1					5.5E+03	2.3E+04		4.4E+03
				2.0E-02	H						1.4E+09		1	0.1	Temephos	3383-96-8					1.6E+03	6.6E+03		1.3E+03
				1.3E-02	I						1.4E+09		1	0.1	Terbacil	5902-51-2					1.0E+03	4.3E+03		8.2E+02
				2.5E-05	H			V		3.1E+01	1.4E+09	2.6E+05	1		Terbufos	13071-79-9					2.0E+00			2.0E+00
				1.0E-03	I						1.4E+09		1	0.1	Terbutryn	886-50-0					7.8E+01	3.3E+02		6.3E+01
				1.0E-04	I						1.4E+09		1	0.1	Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					7.8E+00	3.3E+01		6.3E+00
				3.0E-04	I			V			1.4E+09	5.1E+04	1		Tetrachlorobenzene, 1,2,4,5-	95-94-3					2.3E+01			2.3E+01
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		6.8E+02	1.4E+09	5.7E+03	1		Tetrachloroethane, 1,1,1,2-	630-20-6	2.7E+01		2.2E+00	2.0E+00	2.3E+03			2.3E+03
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1.9E+03	1.4E+09	1.5E+04	1		Tetrachloroethane, 1,1,2,2-	79-34-5	3.5E+00		7.3E-01	6.0E-01	1.6E+03			1.6E+03
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		1.7E+02	1.4E+09	2.4E+03	1		Tetrachloroethylene	127-18-4	3.3E+02		2.5E+01	2.4E+01	4.7E+02		9.8E+01	8.1E+01
				3.0E-02	I						1.4E+09		1	0.1	Tetrachlorophenol, 2,3,4,6-	58-90-2					2.3E+03	9.9E+03		1.9E+03
2.0E+01	H							V			1.4E+09	1.1E+05	1		Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.5E-02			3.5E-02				
				5.0E-04	I						1.4E+09		1	0.1	Tetraethyl Dithiopyrophosphate	3689-24-5					3.9E+01	1.6E+02		3.2E+01
						8.0E+01	I	V		2.1E+03	1.4E+09	1.2E+03	1		Tetrafluoroethane, 1,1,1,2-	811-97-2							1.0E+05	1.0E+05
				2.0E-03	P						1.4E+09		1	0.0007	Tetryl (Trinitrophenylmethylnitramine)	479-45-8					1.6E+02	1.0E+05		1.6E+02
				2.0E-05	S						1.4E+09		1		Thallic Oxide	1314-32-5					1.6E+00			1.6E+00
				1.0E-05	X						1.4E+09		1		Thallium (I) Nitrate	10102-45-1					7.8E-01			7.8E-01
				1.0E-05	X						1.4E+09		1		Thallium (Soluble Salts)	7440-28-0					7.8E-01			7.8E-01
				1.0E-05	X			V			1.4E+09		1		Thallium Acetate	563-68-8					7.8E-01			7.8E-01
				2.0E-05	X			V			1.4E+09		1		Thallium Carbonate	6533-73-9					1.6E+00			1.6E+00
				1.0E-05	X						1.4E+09		1		Thallium Chloride	7791-12-0					7.8E-01			7.8E-01
				1.0E-05	S						1.4E+09		1		Thallium Selenite	12039-52-0					7.8E-01			7.8E-01
				2.0E-05	X						1.4E+09		1		Thallium Sulfate	7446-18-6					1.6E+00			1.6E+00
				1.3E-02	I						1.4E+09		1	0.1	Thifensulfuron-methyl	79277-27-3					1.0E+03	4.3E+03		8.2E+02
				1.0E-02	I						1.4E+09		1	0.1	Thiobencarb	28249-77-6					7.8E+02	3.3E+03		6.3E+02
				7.0E-02	X						1.4E+09		1	0.0075	Thiodiglycol	111-48-8					5.5E+03	3.1E+05		5.4E+03
				3.0E-04	H						1.4E+09		1	0.1	Thiofanox	39196-18-4					2.3E+01	9.9E+01		1.9E+01
				8.0E-02	I						1.4E+09		1	0.1	Thiophanate, Methyl	23564-05-8					6.3E+03	2.6E+04		5.1E+03
				5.0E-03	I						1.4E+09		1	0.1	Thiram	137-26-8					3.9E+02	1.6E+03		3.2E+02
				6.0E-01	H						1.4E+09		1		Tin	7440-31-5					4.7E+04			4.7E+04
						1.0E-04	A	V			1.4E+09		1		Titanium Tetrachloride	7550-45-0							1.4E+05	1.4E+05
				8.0E-02	I	5.0E+00	I	V		8.2E+02	1.4E+09	4.3E+03	1		Toluene	108-88-3					6.3E+03		2.2E+04	4.9E+03
		1.1E-05	C			8.0E-06	C	V			1.4E+09	7.6E+05	1		Toluene-2,4-diisocyante	584-84-9			1.9E+02	1.9E+02			6.4E+00	6.4E+00
1.8E-01	X			2.0E-04	X						1.4E+09		1	0.1	Toluene-2,5-diamine	95-70-5	3.9E+00	1.4E+01		3.0E+00	1.6E+01	6.6E+01		1.3E+01
		1.1E-05	C			8.0E-06	C	V		1.7E+03	1.4E+09	6.3E+05	1		Toluene-2,6-diisocyante	91-08-7			1.6E+02	1.6E+02			5.3E+00	5.3E+00
1.6E-02	P	5.1E-05	C								1.4E+09		1	0.1	Toluidine, o- (Methylaniline, 2-)	95-53-4	4.3E+01	1.5E+02	7.5E+04	3.4E+01				
3.0E-02	P			4.0E-03	X						1.4E+09		1	0.1	Toluidine, p-	106-49-0	2.3E+01	8.2E+01		1.8E+01	3.1E+02	1.3E+03		2.5E+02
				3.0E+00	P			V		3.4E-01	1.4E+09	1.1E+03	1		Total Petroleum Hydrocarbons (Aliphatic High)	NA					2.3E+05			2.3E+05
						6.0E-01	P	V		1.4E+02	1.4E+09	8.3E+02	1		Total Petroleum Hydrocarbons (Aliphatic Low)	NA							5.2E+02	5.2E+02
				1.0E-02	X	1.0E-01	P	V		6.9E+00	1.4E+09	1.0E+03	1		Total Petroleum Hydrocarbons (Aliphatic Medium)	NA					7.8E+02		1.1E+02	9.6E+01
				4.0E-02	P						1.4E+09		1	0.1	Total Petroleum Hydrocarbons (Aromatic High)	NA					3.1E+03	1.3E+04		2.5E+03
				4.0E-03	P	3.0E-02	P	V		1.8E+03	1.4E+09	3.5E+03	1		Total Petroleum Hydrocarbons (Aromatic Low)	NA					3.1E+02		1.1E+02	8.2E+01
				4.0E-03	P	3.0E-03	P	V			1.4E+09	5.2E+04	1		Total Petroleum Hydrocarbons (Aromatic Medium)	NA					3.1E+02		1.6E+02	1.1E+02
1.1E+00	I	3.2E-04	I								1.4E+09		1	0.1	Toxaphene	8001-35-2	6.3E-01	2.2E+00	1.2E+04	4.9E-01				
				7.5E-03	I						1.4E+09		1	0.1	Tralomethrin	66841-25-6					5.9E+02	2.5E+03		4.7E+02
				3.0E-04	A			V			1.4E+09	3.4E+03	1		Tri-n-butyltin	688-73-3					2.3E+01			2.3E+01
				8.0E+01	X						1.4E+09		1	0.1	Triacetin	102-76-1					6.3E+06	2.6E+07		5.1E+06
				3.0E-02	I						1.4E+09		1	0.1	Triadimefon	43121-43-3					2.3E+03	9.9E+03		1.9E+03

TR=1E-0
THQ=1.0

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	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
				1.3E-02	I			V			1.4E+09	3.6E+05	1		Triallate	2303-17-5					1.0E+03			1.0E+03
				1.0E-02	I						1.4E+09		1	0.1	Triasulfuron	82097-50-5					7.8E+02	3.3E+03		6.3E+02
				8.0E-03	I						1.4E+09		1	0.1	Tribenuron-methyl	101200-48-0					6.3E+02	2.6E+03		5.1E+02
				5.0E-03	I			V			1.4E+09	4.8E+04	1		Tribromobenzene, 1,2,4-	615-54-3					3.9E+02			3.9E+02
9.0E-03	P			1.0E-02	P						1.4E+09		1	0.1	Tributyl Phosphate	126-73-8	7.7E+01	2.7E+02		6.0E+01	7.8E+02	3.3E+03		6.3E+02
				3.0E-04	P						1.4E+09		1	0.1	Tributyltin Compounds	NA					2.3E+01	9.9E+01		1.9E+01
				3.0E-04	I						1.4E+09		1	0.1	Tributyltin Oxide	56-35-9					2.3E+01	9.9E+01		1.9E+01
				3.0E+01	I	3.0E+01	H	V		9.1E+02	1.4E+09	1.3E+03	1		Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					2.3E+06		4.0E+04	4.0E+04
7.0E-02	I			2.0E-02	I						1.4E+09		1	0.1	Trichloroacetic Acid	76-03-9	9.9E+00	3.5E+01		7.8E+00	1.6E+03	6.6E+03		1.3E+03
2.9E-02	H										1.4E+09		1	0.1	Trichloroaniline HCl, 2,4,6-	33663-50-2	2.4E+01	8.5E+01		1.9E+01				
7.0E-03	X			3.0E-05	X						1.4E+09		1	0.1	Trichloroaniline, 2,4,6-	634-93-5	9.9E+01	3.5E+02		7.8E+01	2.3E+00	9.9E+00		1.9E+00
				8.0E-04	X			V			1.4E+09	3.2E+04	1		Trichlorobenzene, 1,2,3-	87-61-6					6.3E+01			6.3E+01
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		4.0E+02	1.4E+09	3.0E+04	1		Trichlorobenzene, 1,2,4-	120-82-1	2.4E+01			2.4E+01	7.8E+02		6.2E+01	5.8E+01
				2.0E+00	I	5.0E+00	I	V		6.4E+02	1.4E+09	1.7E+03	1		Trichloroethane, 1,1,1-	71-55-6					1.6E+05		8.6E+03	8.1E+03
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		2.2E+03	1.4E+09	7.2E+03	1		Trichloroethane, 1,1,2-	79-00-5	1.2E+01		1.3E+00	1.1E+00	3.1E+02		1.5E+00	1.5E+00
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	6.9E+02	1.4E+09	2.2E+03	1		Trichloroethylene	79-01-6	8.8E+00		1.1E+00	9.4E-01	3.9E+01		4.6E+00	4.1E+00
				3.0E-01	I			V		1.2E+03	1.4E+09	1.0E+03	1		Trichlorofluoromethane	75-69-4					2.3E+04			2.3E+04
				1.0E-01	I						1.4E+09		1	0.1	Trichlorophenol, 2,4,5-	95-95-4					7.8E+03	3.3E+04		6.3E+03
1.1E-02	I	3.1E-06	I	1.0E-03	P						1.4E+09		1	0.1	Trichlorophenol, 2,4,6-	88-06-2	6.3E+01	2.2E+02	1.2E+06	4.9E+01	7.8E+01	3.3E+02		6.3E+01
				1.0E-02	I						1.4E+09		1	0.1	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					7.8E+02	3.3E+03		6.3E+02
				8.0E-03	I						1.4E+09		1	0.1	Trichlorophenoxypropionic acid, -2,4,5	93-72-1					6.3E+02	2.6E+03		5.1E+02
				5.0E-03	I			V		1.3E+03	1.4E+09	1.5E+04	1		Trichloropropane, 1,1,2-	598-77-6					3.9E+02			3.9E+02
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1.4E+03	1.4E+09	1.6E+04	1		Trichloropropane, 1,2,3-	96-18-4	5.1E-03			5.1E-03	3.1E+02		4.9E+00	4.8E+00
				3.0E-03	X	3.0E-04	P	V		3.1E+02	1.4E+09	2.3E+03	1		Trichloropropene, 1,2,3-	96-19-5					2.3E+02		7.3E-01	7.3E-01
				2.0E-02	A						1.4E+09		1	0.1	Tricresyl Phosphate (TCP)	1330-78-5					1.6E+03	6.6E+03		1.3E+03
				3.0E-03	I						1.4E+09		1	0.1	Tridiphane	58138-08-2					2.3E+02	9.9E+02		1.9E+02
						7.0E-03	I	V		2.8E+04	1.4E+09	1.6E+04	1		Triethylamine	121-44-8							1.2E+02	1.2E+02
				2.0E+00	P						1.4E+09		1	0.1	Triethylene Glycol	112-27-6					1.6E+05	6.6E+05		1.3E+05
						2.0E+01	P	V		4.8E+03	1.4E+09	7.1E+02	1		Trifluoroethane, 1,1,1-	420-46-2							1.5E+04	1.5E+04
7.7E-03	I			7.5E-03	I			V			1.4E+09	5.1E+05	1		Trifluralin	1582-09-8	9.0E+01			9.0E+01	5.9E+02			5.9E+02
2.0E-02	P			1.0E-02	P						1.4E+09		1	0.1	Trimethyl Phosphate	512-56-1	3.5E+01	1.2E+02		2.7E+01	7.8E+02	3.3E+03		6.3E+02
						5.0E-03	P	V		2.9E+02	1.4E+09	9.4E+03	1		Trimethylbenzene, 1,2,3-	526-73-8							4.9E+01	4.9E+01
						7.0E-03	P	V		2.2E+02	1.4E+09	7.9E+03	1		Trimethylbenzene, 1,2,4-	95-63-6							5.8E+01	5.8E+01
				1.0E-02	X			V		1.8E+02	1.4E+09	6.6E+03	1		Trimethylbenzene, 1,3,5-	108-67-8					7.8E+02			7.8E+02
				1.0E-02	X			V		3.0E+01	1.4E+09	1.0E+03	1		Trimethylpentene, 2,4,4-	25167-70-8					7.8E+02			7.8E+02
				3.0E-02	I						1.4E+09		1	0.019	Trinitrobenzene, 1,3,5-	99-35-4					2.3E+03	5.2E+04		2.2E+03
3.0E-02	I			5.0E-04	I						1.4E+09		1	0.032	Trinitrotoluene, 2,4,6-	118-96-7	2.3E+01	2.6E+02		2.1E+01	3.9E+01	5.2E+02		3.6E+01
				2.0E-02	P						1.4E+09		1	0.1	Triphenylphosphine Oxide	791-28-6					1.6E+03	6.6E+03		1.3E+03
				2.0E-02	A						1.4E+09		1	0.1	Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					1.6E+03	6.6E+03		1.3E+03
				1.0E-02	X						1.4E+09		1	0.1	Tris(1-chloro-2-propyl)phosphate	13674-84-5					7.8E+02	3.3E+03		6.3E+02
2.3E+00	C	6.6E-04	C					V		4.7E+02	1.4E+09	9.0E+05	1		Tris(2,3-dibromopropyl)phosphate	126-72-7	3.0E-01		3.8E+00	2.8E-01				
2.0E-02	P			7.0E-03	P						1.4E+09		1	0.1	Tris(2-chloroethyl)phosphate	115-96-8	3.5E+01	1.2E+02		2.7E+01	5.5E+02	2.3E+03		4.4E+02
3.2E-03	P			1.0E-01	P						1.4E+09		1	0.1	Tris(2-ethylhexyl)phosphate	78-42-2	2.2E+02	7.7E+02		1.7E+02	7.8E+03	3.3E+04		6.3E+03
				8.0E-04	P						1.4E+09		1		Tungsten	7440-33-7					6.3E+01			6.3E+01
				3.0E-03	I	4.0E-05	A				1.4E+09		1		Uranium (Soluble Salts)	NA					2.3E+02		5.7E+04	2.3E+02
1.0E+00	C	2.9E-04	C						M		1.4E+09		1	0.1	Urethane	51-79-6	1.5E-01	6.0E-01	4.8E+03	1.2E-01				
		8.3E-03	P	9.0E-03	I	7.0E-06	P				1.4E+09		0.026		Vanadium Pentoxide	1314-62-1			4.6E+02	4.6E+02	7.0E+02		9.9E+03	6.6E+02
				5.0E-03	S	1.0E-04	A				1.4E+09		0.026		Vanadium and Compounds	7440-62-2					3.9E+02		1.4E+05	3.9E+02
				1.0E-03	I			V			1.4E+09	1.2E+05	1		Vernolate	1929-77-7					7.8E+01			7.8E+01
				2.5E-02	I						1.4E+09		1	0.1	Vinclozolin	50471-44-8					2.0E+03	8.2E+03		1.6E+03
				1.0E+00	H	2.0E-01	I	V		2.8E+03	1.4E+09	4.4E+03	1		Vinyl Acetate	108-05-4					7.8E+04		9.2E+02	9.1E+02
		3.2E-05	H			3.0E-03	I	V		2.5E+03	1.4E+09	1.4E+03	1		Vinyl Bromide	593-60-2			1.2E-01	1.2E-01			4.3E+00	4.3E+00
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	3.9E+03	1.4E+09	9.6E+02	1		Vinyl Chloride	75-01-4	9.4E-02		1.6E-01	5.9E-02	2.3E+02		1.0E+02	7.0E+01
				3.0E-04	I						1.4E+09		1	0.1	Warfarin	81-81-2					2.3E+01	9.9E+01		1.9E+01
				2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.6E+03	1		Xylene, P-	106-42-3					1.6E+04		5.8E+02	5.6E+02
				2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.5E+03	1		Xylene, m-	108-38-3					1.6E+04		5.7E+02	5.5E+02
				2.0E-01	S	1.0E-01	S	V		4.3E+02	1.4E+09	6.5E+03	1		Xylene, o-	95-47-6					1.6E+04		6.7E+02	6.5E+02
				2.0E-01	I	1.0E-01	I	V		2.6E+02	1.4E+09	5.7E+03	1		Xylenes	1330-20-7					1.6E+04		6.0E+02	5.8E+02
				3.0E-04	I						1.4E+09		1		Zinc Phosphide	1314-84-7					2.3E+01			2.3E+01
				3.0E-01	I						1.4E+09		1		Zinc and Compounds	7440-66-6					2.3E+04			2.3E+04
				5.0E-02	I						1.4E+09		1	0.1	Zineb	12122-67-7					3.9E+03	1.6E+04		3.2E+03
				8.0E-05	X						1.4E+09		1		Zirconium	7440-67-7					6.3E+00			6.3E+00

TR=1E-0
HQ=1.0

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	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
		9.0E-03	P	3.0E-04	P	6.0E-06	P				1.4E+09		1		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						1.4E+09		1		Copper	7440-50-8					4.7E+04			4.7E+04
				5.0E-02	I	6.0E-01	C				1.4E+09		1	0.1	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				1.4E+09		1	0.1	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				1.4E+09		1	0.1	Cresol, p-	106-44-5					1.2E+05	2.8E+05	3.6E+09	8.2E+04
				1.0E-01	A						1.4E+09		1	0.1	Cresol, p-chloro-m-	59-50-7					1.2E+05	2.8E+05		8.2E+04
				1.0E-01	A	6.0E-01	C				1.4E+09		1	0.1	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		1.7E+04	1.4E+09	1.9E+04	1		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		2.7E+02	1.4E+09	6.2E+03	1		Cumene	98-82-8					1.2E+05		1.1E+04	9.9E+03
2.2E-01	C	6.3E-05	C								1.4E+09		1	0.1	Cupferron	135-20-6	1.5E+01	3.5E+01	2.6E+05	1.0E+01				
8.4E-01	H			2.0E-03	H						1.4E+09		1	0.1	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						1.4E+09		1		~Calcium Cyanide	592-01-8					1.2E+03			1.2E+03
				5.0E-03	I						1.4E+09		1		~Copper Cyanide	544-92-3					5.8E+03			5.8E+03
				6.0E-04	I	8.0E-04	S	V		9.5E+05	1.4E+09	5.3E+04	1		~Cyanide (CN-)	57-12-5					7.0E+02		1.9E+02	1.5E+02
				1.0E-03	I			V			1.4E+09		1		~Cyanogen	460-19-5					1.2E+03			1.2E+03
				9.0E-02	I			V			1.4E+09		1		~Cyanogen Bromide	506-68-3					1.1E+05			1.1E+05
				5.0E-02	I			V			1.4E+09		1		~Cyanogen Chloride	506-77-4					5.8E+04			5.8E+04
				6.0E-04	I	8.0E-04	I	V		1.0E+07	1.4E+09	5.2E+04	1		~Hydrogen Cyanide	74-90-8					7.0E+02		1.8E+02	1.5E+02
				2.0E-03	I						1.4E+09		1		~Potassium Cyanide	151-50-8					2.3E+03			2.3E+03
				5.0E-03	I						1.4E+09		0.04		~Potassium Silver Cyanide	506-61-6					5.8E+03			5.8E+03
				1.0E-01	I						1.4E+09		0.04		~Silver Cyanide	506-64-9					1.2E+05			1.2E+05
				1.0E-03	I						1.4E+09		1		~Sodium Cyanide	143-33-9					1.2E+03			1.2E+03
				2.0E-04	P						1.4E+09		1		~Thiocyanates	NA					2.3E+02			2.3E+02
				2.0E-04	X			V			1.4E+09		1		~Thiocyanic Acid	463-56-9					2.3E+02			2.3E+02
				5.0E-02	I						1.4E+09		1		~Zinc Cyanide	557-21-1					5.8E+04			5.8E+04
						6.0E+00	I	V		1.2E+02	1.4E+09	1.0E+03	1		Cyclohexane	110-82-7							2.7E+04	2.7E+04
2.3E-02	H										1.4E+09		1	0.1	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		5.1E+03	1.4E+09	4.2E+04	1		Cyclohexanone	108-94-1					5.8E+06		1.3E+05	1.3E+05
				5.0E-03	P	1.0E+00	X	V		2.8E+02	1.4E+09	1.5E+03	1		Cyclohexene	110-83-8					5.8E+03		6.4E+03	3.1E+03
				2.0E-01	I			V		2.9E+05	1.4E+09	7.5E+04	1		Cyclohexylamine	108-91-8					2.3E+05			2.3E+05
				2.5E-02	I						1.4E+09		1	0.1	Cyfluthrin	68359-37-5					2.9E+04	6.9E+04		2.1E+04
				5.0E-03	I						1.4E+09		1	0.1	Cyhalothrin	68085-85-8					5.8E+03	1.4E+04		4.1E+03
				1.0E-02	I						1.4E+09		1	0.1	Cypermethrin	52315-07-8					1.2E+04	2.8E+04		8.2E+03
				7.5E-03	I						1.4E+09		1	0.1	Cyromazine	66215-27-8					8.8E+03	2.1E+04		6.2E+03
2.4E-01	I	6.9E-05	C								1.4E+09		1	0.1	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			1.4E+09	2.1E+06	1		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						1.4E+09		1	0.03	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						1.4E+09		1	0.1	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						1.4E+09		1	0.1	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						1.4E+09		1	0.1	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
				4.0E-05	I						1.4E+09		1	0.1	Demeton	8065-48-3					4.7E+01	1.1E+02		3.3E+01
1.2E-03	I			6.0E-01	I						1.4E+09		1	0.1	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										1.4E+09		1	0.1	Diallate	2303-16-4	5.4E+01	1.3E+02		3.8E+01				
				7.0E-04	A						1.4E+09		1	0.1	Diazinon	333-41-5					8.2E+02	1.9E+03		5.7E+02
				1.0E-02	X			V			1.4E+09	5.2E+05	1		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	9.8E+02	1.4E+09	3.2E+04	1		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		1.6E+02	1.4E+09	1.9E+04	1		Dibromobenzene, 1,3-	108-36-1					4.7E+02			4.7E+02
				1.0E-02	I			V			1.4E+09	2.2E+04	1		Dibromobenzene, 1,4-	106-37-6					1.2E+04			1.2E+04
8.4E-02	I			2.0E-02	I			V		8.0E+02	1.4E+09	8.0E+03	1		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		1.3E+03	1.4E+09	8.6E+03	1		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		2.8E+03	1.4E+09	5.6E+03	1		Dibromomethane (Methylene Bromide)	74-95-3							9.9E+01	9.9E+01
				3.0E-04	P						1.4E+09		1	0.1	Dibutyltin Compounds	NA					3.5E+02	8.3E+02		2.5E+02
				3.0E-02	I						1.4E+09		1	0.1	Dicamba	1918-00-9					3.5E+04	8.3E+04		2.5E+04
		4.2E-03	P					V		5.5E+02	1.4E+09	3.2E+03	1		Dichloro-2-butene, 1,4-	764-41-0			9.4E-03	9.4E-03				
		4.2E-03	P					V		5.2E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, cis-1,4-	1476-11-5			3.2E-02	3.2E-02				
		4.2E-03	P					V		7.6E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, trans-1,4-	110-57-6			3.2E-02	3.2E-02				
5.0E-02	I			4.0E-03	I						1.4E+09		1	0.1	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		3.8E+02	1.4E+09	1.2E+04	1		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			1.4E+09	1.0E+04	1		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								1.4E+09		1	0.1	Dichlorobenzidine, 3,3'-	91-94-1	7.3E+00	1.7E+01	4.9E+04	5.1E+00				
				9.0E-03	X						1.4E+09		1	0.1	Dichlorobenzophenone, 4,4'-	90-98-2					1.1E+04	2.5E+04		7.4E+03
				2.0E-01	I	1.0E-01	X	V		8.5E+02	1.4E+09	8.4E+02	1		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		1.7E+03	1.4E+09	2.1E+03	1		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		3.0E+03	1.4E+09	4.6E+03	1		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		1.2E+03	1.4E+09	1.2E+03	1		Dichloroethylene, 1,1-	75-35-4					5.8E+04		1.0E+03	1.0E+03
				2.0E-03	I			V		2.4E+03	1.4E+09	2.5E+03	1		Dichloroethylene, 1,2-cis-	156-59-2					2.3E+03			2.3E+03
				2.0E-02	I			V		1.9E+03	1.4E+09	1.8E+03	1		Dichloroethylene, 1,2-trans-	156-60-5					2.3E+04			2.3E+04
				3.0E-03	I						1.4E+09		1	0.1	Dichlorophenol, 2,4-	120-83-2					3.5E+03	8.3E+03		2.5E+03
				1.0E-02	I						1.4E+09		1	0.05	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					1.2E+04	5.5E+04		9.6E+03
				8.0E-03	I						1.4E+09		1	0.1	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		1.4E+03	1.4E+09	3.8E+03	1		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		1.5E+03	1.4E+09	6.8E+03	1		Dichloropropane, 1,3-	142-28-9					2.3E+04			2.3E+04
				3.0E-03	I						1.4E+09		1	0.1	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		1.6E+03	1.4E+09	3.6E+03	1		Dichloropropene, 1,3-	542-75-6	3.3E+01		1.1E+01	8.2E+00	3.5E+04		3.1E+02	3.1E+02

TR=1E-06
HQ=1.0

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	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
2.7E-01	H			3.0E-02	I						1.4E+09		1	0.1	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				1.4E+09		1		Sodium Fluoride	7681-49-4					5.8E+04		7.7E+07	5.8E+04
				2.0E-05	I						1.4E+09		1	0.1	Sodium Fluoroacetate	62-74-8					2.3E+01	5.5E+01		1.6E+01
				1.0E-03	H						1.4E+09		1		Sodium Metavanadate	13718-26-8					1.2E+03			1.2E+03
				8.0E-04	P						1.4E+09		1		Sodium Tungstate	13472-45-2					9.3E+02			9.3E+02
				8.0E-04	P						1.4E+09		1		Sodium Tungstate Dihydrate	10213-10-2					9.3E+02			9.3E+02
2.4E-02	H			3.0E-02	I						1.4E+09		1	0.1	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		1.4E+09		0.025		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						1.4E+09		1		Strontium, Stable	7440-24-6					7.0E+05			7.0E+05
				3.0E-04	I						1.4E+09		1	0.1	Strychnine	57-24-9					3.5E+02	8.3E+02		2.5E+02
				2.0E-01	I	1.0E+00	I	V		8.7E+02	1.4E+09	9.4E+03	1		Styrene	100-42-5					2.3E+05		4.1E+04	3.5E+04
				3.0E-03	P						1.4E+09		1	0.1	Styrene-Acrylonitrile (SAN) Trimer	NA					3.5E+03	8.3E+03		2.5E+03
				1.0E-03	P	2.0E-03	X				1.4E+09		1	0.1	Sulfolane	126-33-0					1.2E+03	2.8E+03	1.2E+07	8.2E+02
				8.0E-04	P						1.4E+09		1	0.1	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					9.3E+02	2.2E+03		6.6E+02
						1.0E-03	C	V			1.4E+09		1		Sulfur Trioxide	7446-11-9							6.0E+06	6.0E+06
						1.0E-03	C				1.4E+09		1		Sulfuric Acid	7664-93-9							6.0E+06	6.0E+06
2.5E-02	I	7.1E-06	I	5.0E-02	H						1.4E+09		1	0.1	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	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						1.4E+09		1	0.1	TCMTB	21564-17-0					3.5E+04	8.3E+04		2.5E+04
				7.0E-02	I						1.4E+09		1	0.1	Tebuthiuron	34014-18-1					8.2E+04	1.9E+05		5.7E+04
				2.0E-02	H						1.4E+09		1	0.1	Temephos	3383-96-8					2.3E+04	5.5E+04		1.6E+04
				1.3E-02	I						1.4E+09		1	0.1	Terbacil	5902-51-2					1.5E+04	3.6E+04		1.1E+04
				2.5E-05	H			V		3.1E+01	1.4E+09	2.6E+05	1		Terbufos	13071-79-9					2.9E+01			2.9E+01
				1.0E-03	I						1.4E+09		1	0.1	Terbutryn	886-50-0					1.2E+03	2.8E+03		8.2E+02
				1.0E-04	I						1.4E+09		1	0.1	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			1.4E+09	5.1E+04	1		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		6.8E+02	1.4E+09	5.7E+03	1		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		1.9E+03	1.4E+09	1.5E+04	1		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		1.7E+02	1.4E+09	2.4E+03	1		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						1.4E+09		1	0.1	Tetrachlorophenol, 2,3,4,6-	58-90-2					3.5E+04	8.3E+04		2.5E+04
2.0E+01	H							V			1.4E+09	1.1E+05	1		Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	1.6E-01			1.6E-01				
				5.0E-04	I						1.4E+09		1	0.1	Tetraethyl Dithiopyrophosphate	3689-24-5					5.8E+02	1.4E+03		4.1E+02
						8.0E+01	I	V		2.1E+03	1.4E+09	1.2E+03	1		Tetrafluoroethane, 1,1,1,2-	811-97-2							4.3E+05	4.3E+05
				2.0E-03	P						1.4E+09		1	0.0007	Tetryl (Trinitrophenylmethylnitramine)	479-45-8					2.3E+03	8.5E+05		2.3E+03
				2.0E-05	S						1.4E+09		1		Thallic Oxide	1314-32-5					2.3E+01			2.3E+01
				1.0E-05	X						1.4E+09		1		Thallium (I) Nitrate	10102-45-1					1.2E+01			1.2E+01
				1.0E-05	X						1.4E+09		1		Thallium (Soluble Salts)	7440-28-0					1.2E+01			1.2E+01
				1.0E-05	X			V			1.4E+09		1		Thallium Acetate	563-68-8					1.2E+01			1.2E+01
				2.0E-05	X			V			1.4E+09		1		Thallium Carbonate	6533-73-9					2.3E+01			2.3E+01
				1.0E-05	X						1.4E+09		1		Thallium Chloride	7791-12-0					1.2E+01			1.2E+01
				1.0E-05	S						1.4E+09		1		Thallium Selenite	12039-52-0					1.2E+01			1.2E+01
				2.0E-05	X						1.4E+09		1		Thallium Sulfate	7446-18-6					2.3E+01			2.3E+01
				1.3E-02	I						1.4E+09		1	0.1	Thifensulfuron-methyl	79277-27-3					1.5E+04	3.6E+04		1.1E+04
				1.0E-02	I						1.4E+09		1	0.1	Thiobencarb	28249-77-6					1.2E+04	2.8E+04		8.2E+03
				7.0E-02	X						1.4E+09		1	0.0075	Thiodiglycol	111-48-8					8.2E+04	2.6E+06		7.9E+04
				3.0E-04	H						1.4E+09		1	0.1	Thiofanox	39196-18-4					3.5E+02	8.3E+02		2.5E+02
				8.0E-02	I						1.4E+09		1	0.1	Thiophanate, Methyl	23564-05-8					9.3E+04	2.2E+05		6.6E+04
				5.0E-03	I						1.4E+09		1	0.1	Thiram	137-26-8					5.8E+03	1.4E+04		4.1E+03
				6.0E-01	H						1.4E+09		1		Tin	7440-31-5					7.0E+05			7.0E+05
						1.0E-04	A	V			1.4E+09		1		Titanium Tetrachloride	7550-45-0							6.0E+05	6.0E+05
				8.0E-02	I	5.0E+00	I	V		8.2E+02	1.4E+09	4.3E+03	1		Toluene	108-88-3					9.3E+04		9.4E+04	4.7E+04
		1.1E-05	C			8.0E-06	C	V			1.4E+09	7.6E+05	1		Toluene-2,4-diisocyante	584-84-9			8.5E+02	8.5E+02			2.7E+01	2.7E+01
1.8E-01	X			2.0E-04	X						1.4E+09		1	0.1	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
		1.1E-05	C			8.0E-06	C	V		1.7E+03	1.4E+09	6.3E+05	1		Toluene-2,6-diisocyante	91-08-7			7.0E+02	7.0E+02			2.2E+01	2.2E+01
1.6E-02	P	5.1E-05	C								1.4E+09		1	0.1	Toluidine, o- (Methylaniline, 2-)	95-53-4	2.0E+02	4.8E+02	3.3E+05	1.4E+02				
3.0E-02	P			4.0E-03	X						1.4E+09		1	0.1	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		3.4E-01	1.4E+09	1.1E+03	1		Total Petroleum Hydrocarbons (Aliphatic High)	NA					3.5E+06			3.5E+06
						6.0E-01	P	V		1.4E+02	1.4E+09	8.3E+02	1		Total Petroleum Hydrocarbons (Aliphatic Low)	NA							2.2E+03	2.2E+03
				1.0E-02	X	1.0E-01	P	V		6.9E+00	1.4E+09	1.0E+03	1		Total Petroleum Hydrocarbons (Aliphatic Medium)	NA					1.2E+04		4.6E+02	4.4E+02
				4.0E-02	P						1.4E+09		1	0.1	Total Petroleum Hydrocarbons (Aromatic High)	NA					4.7E+04	1.1E+05		3.3E+04
				4.0E-03	P	3.0E-02	P	V		1.8E+03	1.4E+09	3.5E+03	1		Total Petroleum Hydrocarbons (Aromatic Low)	NA					4.7E+03		4.6E+02	4.2E+02
				4.0E-03	P	3.0E-03	P	V			1.4E+09	5.2E+04	1		Total Petroleum Hydrocarbons (Aromatic Medium)	NA					4.7E+03		6.9E+02	6.0E+02
1.1E+00	I	3.2E-04	I								1.4E+09		1	0.1	Toxaphene	8001-35-2	3.0E+00	7.0E+00	5.2E+04	2.1E+00				
				7.5E-03	I						1.4E+09		1	0.1	Tralomethrin	66841-25-6					8.8E+03	2.1E+04		6.2E+03
				3.0E-04	A			V			1.4E+09	3.4E+03	1		Tri-n-butyltin	688-73-3					3.5E+02			3.5E+02
				8.0E+01	X						1.4E+09		1	0.1	Triacetin	102-76-1					9.3E+07	2.2E+08		6.6E+07
				3.0E-02	I						1.4E+09		1	0.1	Triadimefon	43121-43-3					3.5E+04	8.3E+04		2.5E+04
				1.3E-02	I			V			1.4E+09	3.6E+05	1		Triallate	2303-17-5					1.5E+04			1.5E+04
				1.0E-02	I						1.4E+09		1	0.1	Triasulfuron	82097-50-5					1.2E+04	2.8E+04		8.2E+03
				8.0E-03	I						1.4E+09		1	0.1	Tribenuron-methyl	101200-48-0					9.3E+03	2.2E+04		6.6E+03
				5.0E-03	I			V			1.4E+09	4.8E+04	1		Tribromobenzene, 1,2,4-	615-54-3					5.8E+03			5.8E+03
9.0E-03	P			1.0E-02	P						1.4E+09		1	0.1	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						1.4E+09		1	0.1	Tributyltin Compounds	NA					3.5E+02	8.3E+02		2.5E+02
				3.0E-04	I						1.4E+09		1	0.1	Tributyltin Oxide	56-35-9					3.5E+02	8.3E+02		2.5E+02
				3.0E+01	I	3.0E+01	H	V		9.1E+02	1.4E+09	1.3E+03	1		Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					3.5E+07		1.7E+05	1.7E+05
7.0E-02	I			2.0E-02	I						1.4E+09		1	0.1	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										1.4E+09		1	0.1	Trichloroaniline HCl, 2,4,6-	33663-50-2	1.1E+02	2.7E+02		7.9E+01				

TR=1E-06
HQ=1.0

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	Volatile	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Noncarcinogenic SL THI=1 (mg/kg)
7.0E-03	X			3.0E-05	X						1.4E+09		1	0.1	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			1.4E+09	3.2E+04	1		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		4.0E+02	1.4E+09	3.0E+04	1		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		6.4E+02	1.4E+09	1.7E+03	1		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		2.2E+03	1.4E+09	7.2E+03	1		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	6.9E+02	1.4E+09	2.2E+03	1		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		1.2E+03	1.4E+09	1.0E+03	1		Trichlorofluoromethane	75-69-4					3.5E+05			3.5E+05
				1.0E-01	I						1.4E+09		1	0.1	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						1.4E+09		1	0.1	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						1.4E+09		1	0.1	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					1.2E+04	2.8E+04		8.2E+03
				8.0E-03	I						1.4E+09		1	0.1	Trichlorophenoxypropionic acid, -2,4,5	93-72-1					9.3E+03	2.2E+04		6.6E+03
				5.0E-03	I			V		1.3E+03	1.4E+09	1.5E+04	1		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	1.4E+03	1.4E+09	1.6E+04	1		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		3.1E+02	1.4E+09	2.3E+03	1		Trichloropropene, 1,2,3-	96-19-5					3.5E+03		3.1E+00	3.1E+00
				2.0E-02	A						1.4E+09		1	0.1	Tricresyl Phosphate (TCP)	1330-78-5					2.3E+04	5.5E+04		1.6E+04
				3.0E-03	I						1.4E+09		1	0.1	Tridiphane	58138-08-2					3.5E+03	8.3E+03		2.5E+03
						7.0E-03	I	V		2.8E+04	1.4E+09	1.6E+04	1		Triethylamine	121-44-8							4.8E+02	4.8E+02
				2.0E+00	P						1.4E+09		1	0.1	Triethylene Glycol	112-27-6					2.3E+06	5.5E+06		1.6E+06
						2.0E+01	P	V		4.8E+03	1.4E+09	7.1E+02	1		Trifluoroethane, 1,1,1-	420-46-2							6.2E+04	6.2E+04
7.7E-03	I			7.5E-03	I			V			1.4E+09	5.1E+05	1		Trifluralin	1582-09-8	4.2E+02			4.2E+02	8.8E+03			8.8E+03
2.0E-02	P			1.0E-02	P						1.4E+09		1	0.1	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		2.9E+02	1.4E+09	9.4E+03	1		Trimethylbenzene, 1,2,3-	526-73-8							2.1E+02	2.1E+02
						7.0E-03	P	V		2.2E+02	1.4E+09	7.9E+03	1		Trimethylbenzene, 1,2,4-	95-63-6							2.4E+02	2.4E+02
				1.0E-02	X			V		1.8E+02	1.4E+09	6.6E+03	1		Trimethylbenzene, 1,3,5-	108-67-8					1.2E+04			1.2E+04
				1.0E-02	X			V		3.0E+01	1.4E+09	1.0E+03	1		Trimethylpentene, 2,4,4-	25167-70-8					1.2E+04			1.2E+04
				3.0E-02	I						1.4E+09		1	0.019	Trinitrobenzene, 1,3,5-	99-35-4					3.5E+04	4.4E+05		3.2E+04
3.0E-02	I			5.0E-04	I						1.4E+09		1	0.032	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						1.4E+09		1	0.1	Triphenylphosphine Oxide	791-28-6					2.3E+04	5.5E+04		1.6E+04
				2.0E-02	A						1.4E+09		1	0.1	Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					2.3E+04	5.5E+04		1.6E+04
				1.0E-02	X						1.4E+09		1	0.1	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		4.7E+02	1.4E+09	9.0E+05	1		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						1.4E+09		1	0.1	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						1.4E+09		1	0.1	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						1.4E+09		1		Tungsten	7440-33-7					9.3E+02			9.3E+02
				3.0E-03	I	4.0E-05	A				1.4E+09		1		Uranium (Soluble Salts)	NA					3.5E+03		2.4E+05	3.5E+03
1.0E+00	C	2.9E-04	C						M		1.4E+09		1	0.1	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				1.4E+09		0.026		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				1.4E+09		0.026		Vanadium and Compounds	7440-62-2					5.9E+03		6.0E+05	5.8E+03
				1.0E-03	I			V			1.4E+09	1.2E+05	1		Vernolate	1929-77-7					1.2E+03			1.2E+03
				2.5E-02	I						1.4E+09		1	0.1	Vinclozolin	50471-44-8					2.9E+04	6.9E+04		2.1E+04
				1.0E+00	H	2.0E-01	I	V		2.8E+03	1.4E+09	4.4E+03	1		Vinyl Acetate	108-05-4					1.2E+06		3.9E+03	3.8E+03
		3.2E-05	H			3.0E-03	I	V		2.5E+03	1.4E+09	1.4E+03	1		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	3.9E+03	1.4E+09	9.6E+02	1		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						1.4E+09		1	0.1	Warfarin	81-81-2					3.5E+02	8.3E+02		2.5E+02
				2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.6E+03	1		Xylene, P-	106-42-3					2.3E+05		2.4E+03	2.4E+03
				2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.5E+03	1		Xylene, m-	108-38-3					2.3E+05		2.4E+03	2.4E+03
				2.0E-01	S	1.0E-01	S	V		4.3E+02	1.4E+09	6.5E+03	1		Xylene, o-	95-47-6					2.3E+05		2.8E+03	2.8E+03
				2.0E-01	I	1.0E-01	I	V		2.6E+02	1.4E+09	5.7E+03	1		Xylenes	1330-20-7					2.3E+05		2.5E+03	2.5E+03
				3.0E-04	I						1.4E+09		1		Zinc Phosphide	1314-84-7					3.5E+02			3.5E+02
				3.0E-01	I						1.4E+09		1		Zinc and Compounds	7440-66-6					3.5E+05			3.5E+05
				5.0E-02	I						1.4E+09		1	0.1	Zineb	12122-67-7					5.8E+04	1.4E+05		4.1E+04
				8.0E-05	X						1.4E+09		1		Zirconium	7440-67-7					9.3E+01			9.3E+01

TR=1E-06
THQ=1.0

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	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)
											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	
				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

TR=1E-0
THQ=1.0

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	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)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				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	
				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	
				2.0E-05	S						1	0.9	Yes	Thallic Oxide	1314-32-5					4.0E-01	9.1E+01		4.0E-01	
				1.0E-05	X						1	1	Yes	Thallium (I) Nitrate	10102-45-1					2.0E-01	4.6E+01		2.0E-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
				1.0E-05	X			V		-0.17	1	1	Yes	Thallium Acetate	563-68-8					2.0E-01	1.7E+02		2.0E-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	
				1.0E-05	X						1	1	Yes	Thallium Chloride	7791-12-0					2.0E-01	4.6E+01		2.0E-01	
				1.0E-05	S						1	1	Yes	Thallium Selenite	12039-52-0					2.0E-01	4.6E+01		2.0E-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
		1.1E-05	C			8.0E-06	C	V		3.74	1	1	Yes	Toluene-2,4-diisocyante	584-84-9			5.1E-01	5.1E-01			1.7E-02	1.7E-02	
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	
		1.1E-05	C			8.0E-06	C	V		3.74	1	1	Yes	Toluene-2,6-diisocyante	91-08-7			5.1E-01	5.1E-01			1.7E-02	1.7E-02	
1.6E-02	P	5.1E-05	C							1.32	1	1	Yes	Toluidine, o- (Methylaniline, 2-)	95-53-4	4.9E+00	1.4E+02		4.7E+00					
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	

TR=1E-0
THQ=1.0

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	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)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)
				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	
				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	1.38	1	1	Yes	Vinyl Chloride	75-01-4	2.1E-02	2.8E-01	3.4E-01	1.9E-02	6.0E+01	8.9E+02	2.1E+02	4.4E+01	2.0E+00
				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	

TR=1E-06
HQ=1.0

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	(atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
Dibromo-3-chloropropane, 1,2-	96-12-8	2.4E+02	PHYSPROP	6.0E-03	1.5E-04	EPI	5.8E-01	PHYSPROP	6.0E+00	PHYSPROP	2.1E+00	CRC89	3.2E-02	8.9E-06	WATER9			1.2E+02	EPI	3.0E+00	PHYSPROP	1.2E+03	PHYSPROP	4.1E-02	2.2E+00	5.3E+00	6.9E-03	EPI
Dibromobenzene, 1,3	108-36-1	2.4E+02	PHYSPROP	5.1E-02	1.2E-03	EPI	2.7E-01	PHYSPROP	-7.0E+00	PHYSPROP	2.0E+00	CRC89	3.1E-02	8.5E-06	WATER9			3.8E+02	EPI	3.8E+00	PHYSPROP	6.8E+01	PHYSPROP	1.4E-01	2.2E+00	5.3E+00	2.3E-02	EPI
Dibromobenzene, 1,4-	106-37-6	2.4E+02	PHYSPROP	3.7E-02	8.9E-04	EPI	5.8E-02	PHYSPROP	8.7E+01	PHYSPROP	2.3E+00	CRC89	3.3E-02	9.3E-06	WATER9			3.8E+02	EPI	3.8E+00	PHYSPROP	2.0E+01	PHYSPROP	1.4E-01	2.2E+00	5.3E+00	2.5E-02	EPI
Dibromochloromethane	124-48-1	2.1E+02	PHYSPROP	3.2E-02	7.8E-04	PHYSPROP	5.5E+00	PHYSPROP	-2.0E+01	PHYSPROP	2.5E+00	CRC89	3.7E-02	1.1E-05	WATER9			3.2E+01	EPI	2.2E+00	PHYSPROP	2.7E+03	PHYSPROP	1.6E-02	1.5E+00	3.7E+00	2.9E-03	EPI
Dibromoethane, 1,2	106-93-4	1.9E+02	PHYSPROP	2.7E-02	6.5E-04	PHYSPROP	1.1E+01	PHYSPROP	9.9E+00	PHYSPROP	2.2E+00	CRC89	4.3E-02	1.0E-05	WATER9			4.0E+01	EPI	2.0E+00	PHYSPROP	3.9E+03	PHYSPROP	1.5E-02	1.2E+00	2.8E+00	2.8E-03	EPI
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	WATER9			1.5E+02	SSL	3.1E+00	PHYSPROP	5.6E+03	PHYSPROP	1.0E-01	8.6E-01	2.1E+00	2.1E-02	EPI
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	2.2E+02	PHYSPROP	1.4E-06	3.5E-08	EPI	8.3E-05	PHYSPROP	1.4E+02	PHYSPROP	1.4E+00	PubChem	2.8E-02	7.3E-06	WATER9			3.0E+01	EPI	2.8E+00	PHYSPROP	6.8E+02	PHYSPROP	3.8E-02	1.8E+00	4.4E+00	6.6E-03	EPI
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	2.5E+02	PHYSPROP	9.4E-08	2.3E-09	PHYSPROP	1.1E-05	PHYSPROP	1.2E+02	PHYSPROP	1.4E+00	ChemNet	2.6E-02	6.7E-06	WATER9			3.7E+02	PubChem	3.5E+00	PHYSPROP	4.6E+01	PHYSPROP	8.4E-02	2.6E+00	6.3E+00	1.4E-02	EPI
Dichloropropane, 1,2-	78-87-5	1.1E+02	PHYSPROP	1.2E-01	2.8E-03	PHYSPROP	5.3E+01	PHYSPROP	-1.0E+02	PHYSPROP	1.2E+00	PERRY	7.3E-02	9.7E-06	WATER9			6.1E+01	EPI	2.0E+00	PHYSPROP	2.8E+03	PHYSPROP	3.1E-02	4.5E-01	1.1E+00	7.5E-03	EPI
Dichloropropane, 1,3-	142-28-9	1.1E+02	PHYSPROP	4.0E-02	9.8E-04	PHYSPROP	1.8E+01	PHYSPROP	-1.0E+02	PHYSPROP	1.2E+00	CRC89	7.4E-02	9.8E-06	WATER9			7.2E+01	EPI	2.0E+00	PHYSPROP	2.8E+03	PHYSPROP	3.2E-02	4.5E-01	1.1E+00	7.8E-03	EPI
Dichloropropanol, 2,3-	616-23-9	1.3E+02	PHYSPROP	1.5E-07	3.6E-09	PHYSPROP	1.8E-01	PHYSPROP	-2.5E+01	EPI	1.4E+00	CRC89	6.8E-02	9.9E-06	WATER9			5.6E+00	EPI	7.8E-01	PHYSPROP	6.4E+04	PHYSPROP	4.3E-03	5.5E-01	1.3E+00	9.8E-04	EPI
Dichloropropene, 1,3-	542-75-6	1.1E+02	PHYSPROP	1.5E-01	3.6E-03	PHYSPROP	3.4E+01	PHYSPROP	-5.0E+01	PHYSPROP	1.2E+00	LANGE	7.6E-02	1.0E-05	WATER9			7.2E+01	EPI	2.0E+00	PHYSPROP	2.8E+03	PHYSPROP	3.4E-02	4.4E-01	1.1E+00	8.3E-03	EPI
Dichlorvos	62-73-7	2.2E+02	PHYSPROP	2.4E-05	5.7E-07	EPI	1.6E-02	PHYSPROP	-6.0E+01	PHYSPROP	1.4E+00	CRC89	2.8E-02	7.3E-06	WATER9			5.4E+01	EPI	1.4E+00	PHYSPROP	8.0E+03	PHYSPROP	4.6E-03	1.8E+00	4.4E+00	8.0E-04	EPI
Dicrotophos	141-66-2	2.4E+02	PHYSPROP	2.1E-09	5.0E-11	PHYSPROP	1.6E-04	PHYSPROP	7.9E+01	EPI	1.2E+00	CRC89	2.5E-02	6.4E-06	WATER9			1.7E+01	EPI	0.0E+00	PHYSPROP	1.0E+06	PHYSPROP	4.3E-04	2.2E+00	5.4E+00	7.3E-05	EPI
Dicyclopentadiene	77-73-6	1.3E+02	PHYSPROP	2.6E+00	6.3E-02	PHYSPROP	2.3E+00	EPI	-1.0E+00	PHYSPROP	9.3E-01	LANGE	5.6E-02	7.8E-06	WATER9			1.5E+03	EPI	3.2E+00	PHYSPROP	2.6E+01	PHYSPROP	1.6E-01	5.8E-01	1.4E+00	3.6E-02	EPI
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	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	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	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	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	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	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	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	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	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	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	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	3.4E-02	6.6E-06	WATER9			4.2E+01	EPI	1.0E+00	PHYSPROP	1.5E+03	PHYSPROP	3.8E-03	1.1E+00	2.6E+00	7.4E-04	EPI
Dimethipin	55290-64-7	2.1E+02	PHYSPROP	9.4E-10	2.3E-11	EPI	3.8E-07	PHYSPROP	1.7E+02	PHYSPROP			5.4E-02	6.3E-06	WATER9			1.0E+01	EPI	-1.7E-01	PHYSPROP	4.6E+03	PHYSPROP	4.5E-04	1.6E+00	3.8E+00	8.0E-05	EPI
Dimethoate	60-51-5	2.3E+02	PHYSPROP	9.9E-09	2.4E-10	EPI	1.9E-05	PHYSPROP	5.2E+01	PHYSPROP	1.3E+00	CRC89	2.6E-02	6.7E-06	WATER9			1.3E+01	EPI	7.8E-01	PHYSPROP	2.3E+04	PHYSPROP	1.6E-03	2.0E+00	4.9E+00	2.7E-04	EPI
Dimethoxybenzidine, 3,3'-	119-90-4	2.4E+02	PHYSPROP	1.9E-09	4.7E-11	PHYSPROP	1.3E-07	PHYSPROP	1.4E+02	PHYSPROP			4.9E-02	5.7E-06	WATER9			5.1E+02	EPI	1.8E+00	PHYSPROP	6.0E+01	PHYSPROP	6.4E-03	2.5E+00	5.9E+00	1.1E-03	EPI
Dimethyl methylphosphonate	756-79-6	1.2E+02	PHYSPROP	5.6E-06	1.4E-07	PHYSPROP	8.3E-01	PHYSPROP	-4.8E+01	EPI	1.2E+00	CRC89	6.7E-02	9.2E-06	WATER9			5.4E+00	EPI	-6.1E-01	PHYSPROP	1.0E+06	PHYSPROP	5.3E-04	5.2E-01	1.2E+00	1.2E-04	EPI
Dimethylamino azobenzene [p-	60-11-7	2.3E+02	PHYSPROP	1.6E-08	4.0E-10	PHYSPROP	7.0E-08	EPI	1.2E+02	PHYSPROP			5.1E-02	6.0E-06	WATER9			2.0E+03	EPI	4.6E+00	PHYSPROP	2.3E-01	PHYSPROP	5.4E-01	1.9E+00	4.6E+00	9.4E-02	EPI
Dimethylaniline HCl, 2,4-	21436-96-4	1.2E+02	PHYSPROP	9.5E-05	2.3E-06	PHYSPROP	1.8E-01	PHYSPROP	1.6E+02	EPI			7.8E-02	9.1E-06	WATER9			3.5E+02	EPI	2.2E+00	PHYSPROP	3.7E+03	PHYSPROP	8.6E-05	5.0E-01	1.2E+00	2.0E-05	EPI
Dimethylaniline, 2,4-	95-68-1	1.2E+02	PHYSPROP	1.0E-04	2.5E-06	PHYSPROP	1.3E-01	PHYSPROP	-1.4E+01	PHYSPROP	9.7E-01	CRC89	6.3E-02	8.4E-06	WATER9			1.8E+02	EPI	1.7E+00	PHYSPROP	6.1E+03	PHYSPROP	1.8E-02	5.0E-01	1.2E+00	4.3E-03	EPI
Dimethylaniline, N,N	121-69-7	1.2E+02	PHYSPROP	2.3E-03	5.7E-05	EPI	7.0E-01	PHYSPROP	2.5E+00	PHYSPROP	9.6E-01	CRC89	6.3E-02	8.3E-06	WATER9			7.9E+01	EPI	2.3E+00	PHYSPROP	1.5E+03	PHYSPROP	4.7E-02	5.0E-01	1.2E+00	1.1E-02	EPI
Dimethylbenzidine, 3,3'-	119-93-7	2.1E+02	PHYSPROP	2.6E-09	6.3E-11	PHYSPROP	6.9E-07	PHYSPROP	1.3E+02	PHYSPROP			5.3E-02	6.2E-06	WATER9			3.2E+03	EPI	2.3E+00	PHYSPROP	1.3E+03	PHYSPROP	2.0E-02	1.6E+00	3.9E+00	3.6E-03	EPI
Dimethylformamide	68-12-2	7.3E+01	PHYSPROP	3.0E-06	7.4E-08	PHYSPROP	3.9E+00	PHYSPROP	-6.0E+01	PHYSPROP	9.4E-01	CRC89	9.7E-02	1.1E-05	WATER9			1.0E+00	EPI	-1.0E+00	PHYSPROP	1.0E+06	PHYSPROP	4.3E-04	2.7E-01	6.5E-01	1.3E-04	EPI
Dimethylhydrazine, 1,1-	57-14-7	6.0E+01	PHYSPROP	5.3E-04	1.3E-05	PHYSPROP	1.6E+02	PHYSPROP	-5.8E+01	PHYSPROP	7.9E-01	CRC89	1.0E-01	1.1E-05	WATER9			1.2E+01	EPI	-1.2E+00	PHYSPROP	1.0E+06	PHYSPROP	2.2E-04	2.3E-01	5.5E-01	7.3E-05	RAGS
Dimethylhydrazine, 1,2-	540-73-8	6.0E+01	PHYSPROP	2.8E-06	7.0E-08	PHYSPROP	7.0E+01	PHYSPROP	-9.0E+00	PHYSPROP	8.3E-01	CRC89	1.1E-01	1.2E-05	WATER9			1.5E+01	EPI	-5.4E-01	PHYSPROP	1.0E+06	PHYSPROP	9.5E-04	2.3E-01	5.5E-01	3.2E-04	EPI
Dimethylphenol, 2,4-	105-67-9	1.2E+02	PHYSPROP	3.9E-05	9.5E-07	PHYSPROP	1.0E-01	PHYSPROP	2.5E+01	PHYSPROP	9.7E-01	CRC89	6.2E-02	8.3E-06	WATER9			4.9E+02	EPI	2.3E+00	PHYSPROP	7.9E+03	PHYSPROP	4.6E-02	5.1E-01	1.2E+00	1.1E-02	EPI
Dimethylphenol, 2,6	576-26-1	1.2E+02	PHYSPROP	2.7E-04	6.7E-06	PHYSPROP	1.7E-01	EPI	4.6E+01	PHYSPROP			7.7E-02	9.0E-06	WATER9			5.0E+02	EPI	2.4E+00	PHYSPROP	6.1E+03	PHYSPROP	5.1E-02	5.1E-01	1.2E+00	1.2E-02	EPI
Dimethylphenol, 3,4-	95-65-8	1.2E+02	PHYSPROP	1.7E-05	4.2E-07	PHYSPROP	3.6E-02	EPI	6.1E+01	PHYSPROP	9.8E-01	CRC89	6.3E-02	8.4E-06	WATER9			4.9E+02	EPI	2.2E+00	PHYSPROP	4.8E+03	PHYSPROP	4.2E-02	5.1E-01	1.2E+00	9.8E-03	EPI
Dimethylvinylchloride	513-37-1	9.1E+01	PHYSPROP	4.8E-02	1.2E-03	CRC89	2.1E+02	PHYSPROP	-1.0E+02	EPI	9.2E-01	CRC89	8.1E-02	9.7E-06	WATER9			6.1E+01	EPI	2.6E+00	PHYSPROP	1.0E+03	PHYSPROP	9.3E-02	3.4E-01	8.1E-01	2.5E-02	EPI
Dinitro-o-cresol, 4,6-	534-52-1	2.0E+02	PHYSPROP	5.7E-05	1.4E-06	PHYSPROP	1.2E-04	PHYSPROP	8.7E+01	PHYSPROP			5.6E-02	6.5E-06	WATER9			7.5E+02	EPI	2.1E+00	PHYSPROP	2.0E+02	PHYSPROP	1.7E-02	1.4E+00	3.2E+00	3.2E-03	EPI
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	2.7E+02	PHYSPROP	2.3E-06	5.5E-08	PHYSPROP	4.2E-08	PHYSPROP	1.1E+02	PHYSPROP			4.6E-02	5.4E-06	WATER9			1.7E+04	EPI	4.1E+00	PHYSPROP	1.5E+01	PHYSPROP	1.7E-01	3.3E+00	7.8E+00	2.8E-02	EPI
Dinitrobenzene, 1,2-	528-29-0	1.7E+02	PHYSPROP	2.2E-06	5.3E-08	EPI	4.6E-05	EPI	1.2E+02	PHYSPROP	1.3E+00	CRC89	4.5E-02	8.3E-06	WATER9			3.6E+02	EPI	1.7E+00	PHYSPROP	1.3E+02	PHYSPROP	1.2E-02	9.2E-01	2.2E+00	2.4E-03	EPI
Dinitrobenzene, 1,3-	99-65-0	1.7E+02	PHYSPROP	2.0E-06	4.9E-08	PHYSPROP	9.0E-04	EPI	9.0E+01	PHYSPROP	1.6E+00	CRC89	4.8E-02	9.2E-06	WATER9			3.5E+02	EPI	1.5E+00	PHYSPROP	5.3E+02	PHYSPROP	8.7E-03	9.2E-01	2.2E+00	1.7E-03	EPI
Dinitrobenzene, 1,4-	100-25-4	1.7E+02	PHYSPROP	3.4E-06	8.4E-08	PHYSPROP	2.6E-05	PHYSPROP	1.7E+02	PHYSPROP	1.6E+00	CRC89	4.9E-02	9.4E-06	WATER9			3.5E+02	EPI	1.5E+00	PHYSPROP	6.9E+01	PHYSPROP	8.3E-03	9.2E-01	2.2E+00	1.7E-03	EPI
Dinitrophenol, 2,4-	51-28-5	1.8E+02	PHYSPROP	3.5E-06	8.6E-08	PHYSPROP	3.9E-04	PHYSPROP	1.1E+02	PHYSPROP	1.7E+00	CRC89	4.1E-02	9.1E-06	WATER9			4.6E+02	EPI	1.7E+00	PHYSPROP	2.8E+03	PHYSPROP	9.8E-03	1.1E+00	2.7E+00	1.9E-03	EPI
Dinitrotoluene Mixture, 2,4/2,6	NA	1.8E+02	EPI	1.6E-05	4.0E-07	EPI	2.2E-03	EPI	6.0E+01	EPI			5.9E-02	6.9E-06	WATER9			5.9E+02	EPI	2.2E+00	EPI	2.7E+02	EPI	2.2E-02	1.1E+00	2.6E+00	4.2E-03	EPI
Dinitrotoluene, 2,4-	121-14-2	1.8E+02	PHYSPROP	2.2E-06	5.4E-08	PHYSPROP	1.5E-04	PHYSPROP	7.1E+01	PHYSPROP	1.3E+00	CRC89	3.8E-02	7.9E-06	WATER9			5.8E+02	EPI	2.0E+00	PHYSPROP	2.0E+02	PHYSPROP	1.6E-02	1.1E+00	2.6E+00	3.1E-03	EPI
Dinitrotoluene, 2,6-	606-20-2	1.8E+02	PHYSPROP	3.1E-05	7.5E-07	EPI	5.7E-04	PHYSPROP	6.6E+01	PHYSPROP	1.3E+00	CRC89	3.7E-02	7.8E-06	WATER9			5.9E+02	EPI	2.1E+00	PHYSPROP	1.8E+02	PHYSPROP	1.9E-02	1.1E+00	2.6E+00	3.7E-03	EPI
Dinitrotoluene, 2-Amino-4,6	35572-78-2	2.0E+02	PHYSPROP	1.3E-09	3.3E-11	PHYSPROP	1.1E-05	PHYSPROP	1.7E+02	PHYSPROP			5.6E-02	6.6E-06	WATER9			2.8E+02	EPI	1.8E+00	PHYSPROP	1.2E+03	PHYSPROP	1.1E-02	1.3E+00	3.2E+00	2.0E-03	EPI
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	2.0E+02	PHYSPROP	1.3E-09	3.3E-11	PHYSPROP	1.1E-05	PHYSPROP	1.7E+02	PHYSPROP			5.6E-02	6.6E-06	WATER9			2.8E+02	EPI	1.8E+00	PHYSPROP	1.2E+03	PHYSPROP	1.1E-02	1.3E+00	3.2E+00	2.0E-03	EPI
Dinitrotoluene, Technical grade	25321-14-6	5.5E+02	PHYSPROP	3.8E-06	9.3E-08	PHYSPROP	4.0E-04	PHYSPROP	6.0E+01	EPI			2.8E-02	3.3E-06	WATER9			5.9E+02	EPI	2.2E+00	PHYSPROP	2.7E+02	PHYSPROP	3.7E-02	1.2E+02	2.9E+02	4.2E-03	EPI
Dinoseb	88-85-7	2.4E+02	PHYSPROP	1.9E-05	4.6E-07	EPI	7.5E-05	PHYSPROP	4.0E+01	PHYSPROP	1.3E+00	CRC89	2.5E-02	6.5E-06	WATER9			4.3E+03	EPI	3.6E+00	PHYSPROP	5.2E+01	PHYSPROP	9.7E-02	2.3E+00	5.6E+00	1.6E-02	EPI
Dioxane, 1,4-	123-91-1	8.8E+01	PHYSPROP	2.0E-04	4.8E-06	PHYSPROP	3.8E+01	PHYSPROP	1.2E+01	PHYSPROP	1.0E+00	CRC89	8.7E-02	1.1E-05	WATER9			2.6E+00	EPI	-2.7E-01	PHYSPROP	1.0E+06	PHYSPROP	1.2E-03	3.3E-01	7.9E-01	3.3E-04	EPI
Dioxins																												
~Hexachlorodibenzo-p-dioxin, Mixture	NA	3.9E+02	EPI	2.3E-04	5.7E-06	EPI	4.4E-11	EPI	2.5E+02	EPI			4.3E-02	4.2E-06	WATER9			7.0E+05	EPI	8.2E+00	EPI	4.0E-06	EPI	2.2E+01	1.6E+01	7.5E+01	2.9E+00	EPI
~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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	RAGS
Ethephon	16672-87-0	1.4E+02	PHYSPROP	2.3E-10	5.7E-12	PHYSPROP	9.8E-08	PHYSPROP	7.4E+01	PHYSPROP	1.2E+00	CRC89	5.5E-02	8.6E-06	WATER9			5.0E+00	EPI	-2.2E-01	PHYSPROP	1.0E+06	PHYSPROP	8.0E-04	6.8E-01	1.6E+00	1.7E-04	EPI
Ethion	563-12-2	3.8E+02	PHYSPROP	1.6E-05	3.8E-07	EPI	1.5E-06	PHYSPROP	-1.3E+01	PHYSPROP	1.2E+00	CRC89	1.9E-02	4.8E-06	WATER9			8.8E+02	EPI	5.1E+00	PHYSPROP	2.0E+00	PHYSPROP	1.9E-01	1.5E+01	3.6E+01	2.6E-02	EPI

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H` (unitless)	(atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
Styrene	100-42-5	1.0E+02	PHYSPRO	1.1E-01	2.8E-03	PHYSPROP	6.4E+00	PHYSPROP	-3.1E+01	PHYSPROP	9.0E-01	CRC89	7.1E-02	8.8E-06	WATER9			4.5E+02	EPI	3.0E+00	PHYSPRO	3.1E+02	PHYSPROP	1.5E-01	4.0E-01	9.7E-01	3.7E-02	EPI
Styrene-Acrylonitrile (SAN) Trime	NA	2.1E+02	OTHEF								1.1E+00	PPRTV	2.6E-02	6.5E-06	WATER9					3.1E+00	OTHEF	8.5E+01	PPRTV	6.6E-02	1.6E+00	3.8E+00	1.2E-02	RAGS
Sulfolane	126-33-0	1.2E+02	PHYSPRO	2.0E-04	4.9E-06	PHYSPROP	4.1E-03	EPI	2.8E+01	PHYSPROP	1.3E+00	CRC89	7.2E-02	9.9E-06	WATER9			9.1E+00	EPI	-7.7E-01	PHYSPRO	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	PHYSPRO	5.6E-06	1.4E-07	PHYSPROP	8.1E-07	PHYSPROP	1.5E+02	PHYSPROP			4.4E-02	5.1E-06	WATER9			2.9E+03	EPI	3.9E+00	PHYSPRO	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	PHYSPRC				2.6E+02	PHYSPROF	1.7E+01	PHYSPROF	1.9E+00	CRC89	1.2E-01	1.6E-05	WATER9									3.4E-03	3.0E-01	7.1E-01	1.0E-03	RAGS
Sulfuric Acid	7664-93-9	9.8E+01	PHYSPRO				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	RAGS
Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl	140-57-8	3.3E+02	PHYSPRO	7.8E-06	1.9E-07	PHYSPROP	2.2E-07	PHYSPROP	-3.2E+01	PHYSPROP	1.1E+00	CRC89	2.0E-02	5.0E-06	WATER9			5.6E+03	EPI	4.8E+00	PHYSPRO	5.9E-01	PHYSPROP	2.3E-01	7.9E+00	1.9E+01	3.3E-02	EPI
TCMTE	21564-17-0	2.4E+02	PHYSPRC	2.7E-10	6.5E-12	PHYSPROF	3.1E-07	PHYSPROF	1.5E+02	EPI			4.9E-02	5.8E-06	WATER9			3.4E+03	EPI	3.3E+00	PHYSPRC	1.3E+02	PHYSPROF	6.7E-02	2.3E+00	5.5E+00	1.1E-02	EPI
Tebuthiuron	34014-18-1	2.3E+02	PHYSPRO	4.9E-09	1.2E-10	PHYSPROP	3.0E-07	PHYSPROP	1.6E+02	PHYSPROP			5.1E-02	5.9E-06	WATER9			4.2E+01	EPI	1.8E+00	PHYSPRO	2.5E+03	PHYSPROP	7.4E-03	2.0E+00	4.8E+00	1.3E-03	EPI
Temephos	3383-96-8	4.7E+02	PHYSPRO	8.0E-08	2.0E-09	PHYSPROP	7.9E-08	PHYSPROP	3.0E+01	PHYSPROP	1.3E+00	CRC89	1.8E-02	4.5E-06	WATER9			9.5E+04	EPI	6.0E+00	PHYSPRO	2.7E-01	PHYSPROP	2.9E-01	4.3E+01	1.0E+02	3.5E-02	EPI
Terbacil	5902-51-2	2.2E+02	PHYSPRC	4.9E-09	1.2E-10	EPI	4.7E-07	PHYSPROF	1.8E+02	PHYSPROF	1.3E+00	CRC89	2.7E-02	7.2E-06	WATER9			5.0E+01	EPI	1.9E+00	PHYSPRC	7.1E+02	PHYSPROF	9.7E-03	1.7E+00	4.1E+00	1.7E-03	EPI
Terbufos	13071-79-9	2.9E+02	PHYSPRO	9.8E-04	2.4E-05	EPI	3.2E-04	PHYSPROP	-2.9E+01	PHYSPROP	1.1E+00	CRC89	2.2E-02	5.4E-06	WATER9			1.0E+03	EPI	4.5E+00	PHYSPRO	5.1E+00	PHYSPROP	2.3E-01	4.3E+00	1.0E+01	3.6E-02	EPI
Terbutryn	886-50-0	2.4E+02	PHYSPRO	8.8E-07	2.2E-08	EPI	1.7E-06	PHYSPROP	1.0E+02	PHYSPROP	1.1E+00	CRC89	2.4E-02	6.0E-06	WATER9			6.1E+02	EPI	3.7E+00	PHYSPRO	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	PHYSPRC	1.2E-04	3.0E-06	PHYSPROF	7.0E-08	EPI	1.6E+02	EPI			3.1E-02	3.6E-06	WATER9			1.3E+04	EPI	6.8E+00	PHYSPRC	1.5E-03	PHYSPROF	7.9E-01	5.5E+01	2.1E+02	9.3E-02	EPI
Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.2E+02	PHYSPRO	4.1E-02	1.0E-03	PHYSPROP	5.4E-03	EPI	1.4E+02	PHYSPROP	1.9E+00	CRC89	3.2E-02	8.8E-06	WATER9			2.2E+03	EPI	4.6E+00	PHYSPRO	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	PHYSPRO	1.0E-01	2.5E-03	PHYSPROP	1.2E+01	PHYSPROP	-7.0E+01	PHYSPROP	1.5E+00	CRC89	4.8E-02	9.1E-06	WATER9			8.6E+01	EPI	2.9E+00	PHYSPRO	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	PHYSPRC	1.5E-02	3.7E-04	PHYSPROF	4.6E+00	PHYSPROF	-4.4E+01	PHYSPROF	1.6E+00	CRC89	4.9E-02	9.3E-06	WATER9			9.5E+01	EPI	2.4E+00	PHYSPRC	2.8E+03	PHYSPROF	3.5E-02	9.2E-01	2.2E+00	6.9E-03	EPI
Tetrachloroethylene	127-18-4	1.7E+02	PHYSPRO	7.2E-01	1.8E-02	PHYSPROP	1.9E+01	PHYSPROP	-2.2E+01	PHYSPROP	1.6E+00	CRC89	5.0E-02	9.5E-06	WATER9			9.5E+01	EPI	3.4E+00	PHYSPRO	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	PHYSPRO	3.6E-04	8.8E-06	EPI	6.7E-04	EPI	7.0E+01	PHYSPROP			5.0E-02	5.9E-06	WATER9			2.8E+02	SSL	4.5E+00	PHYSPRO	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	PHYSPRC	7.9E-03	1.9E-04	PHYSPROF	3.8E-02	PHYSPROF	4.0E+01	EPI	1.4E+00	CRC89	2.8E-02	7.3E-06	WATER9			1.6E+03	EPI	4.5E+00	PHYSPRC	4.0E+00	PHYSPROF	4.9E-01	2.0E+00	4.9E+00	8.4E-02	EPI
Tetraethyl Dithiopyrophosphate	3689-24-5	3.2E+02	PHYSPRO	1.8E-04	4.5E-06	EPI	1.1E-04	PHYSPROP	-3.2E+01	EPI	1.2E+00	CRC89	2.1E-02	5.3E-06	WATER9			2.7E+02	EPI	4.0E+00	PHYSPRO	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	PHYSPRO	2.0E+00	5.0E-02	PHYSPROP	5.0E+03	PHYSPROP	-1.0E+02	PHYSPROP	1.2E+00	CRC89	8.2E-02	1.1E-05	WATER9			8.6E+01	EPI	1.7E+00	PHYSPRO	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	PHYSPRC	1.1E-07	2.7E-09	PHYSPROF	5.7E-08	PHYSPROF	1.3E+02	PHYSPROF	1.6E+00	CRC89	2.6E-02	6.7E-06	WATER9			4.6E+03	EPI	1.6E+00	PHYSPRC	7.4E+01	PHYSPROF	3.1E-03	4.3E+00	1.0E+01	4.7E-04	EPI
Thallic Oxide	1314-32-5	4.6E+02	CRC89						8.3E+02	CRC89	1.0E+01	CRC89												8.2E-03	3.8E+01	9.1E+01	1.0E-03	RAGS
Thallium (I) Nitrate	10102-45-1	2.7E+02	PHYSPRO						2.1E+02	PHYSPROP	5.6E+00	CRC89										9.6E+04	PHYSPROP	6.3E-03	3.3E+00	7.9E+00	1.0E-03	RAGS
Thallium (Soluble Salts	7440-28-0	2.1E+02	PHYSPRC						3.0E+02	PHYSPROF	1.2E+01	CRC89				7.1E+01	SSL							5.5E-03	1.5E+00	3.6E+00	1.0E-03	RAGS
Thallium Acetate	563-68-8	2.6E+02	PHYSPRO				1.5E+01	PHYSPROP	1.3E+02	CRC89	3.7E+00	CRC89	3.9E-02	1.2E-05	WATER9			1.5E+00	EPI	-1.7E-01	PHYSPRO	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	PHYSPRO				5.8E+00	PHYSPROP	2.7E+02	PHYSPROP	7.1E+00	CRC89	3.9E-02	1.2E-05	WATER9			2.9E+00	EPI	-8.6E-01	PHYSPRO	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	PHYSPRC						4.3E+02	PHYSPROF	7.0E+00	CRC89	5.2E-02	1.8E-05	WATER9							2.9E+03	PHYSPROF	6.0E-03	2.3E+00	5.6E+00	1.0E-03	RAGS
Thallium Selenite	12039-52-0	2.8E+02	EPI						3.3E+02	CRC89														6.5E-03	4.1E+00	9.7E+00	1.0E-03	RAGS
Thallium Sulfate	7446-18-6	5.0E+02	PHYSPRO						6.3E+02	PHYSPROP	6.8E+00	CRC89										5.5E+04	CRC89	8.6E-03	7.1E+01	1.7E+02	1.0E-03	RAGS
Thifensulfuron-methy	79277-27-3	3.9E+02	PHYSPRC	1.7E-12	4.1E-14	PHYSPROF	1.3E-10	PHYSPROF	1.8E+02	PHYSPROF			3.6E-02	4.2E-06	WATER9			5.1E+01	EPI	1.6E+00	PHYSPRC	2.2E+03	PHYSPROF	8.6E-04	1.6E+01	3.7E+01	1.1E-04	EPI
Thiobencarb	28249-77-6	2.6E+02	PHYSPRO	1.1E-05	2.7E-07	EPI	2.2E-05	PHYSPROP	3.3E+00	PHYSPROP	1.2E+00	CRC89	2.3E-02	5.9E-06	WATER9			1.6E+03	EPI	3.4E+00	PHYSPRO	2.8E+01	PHYSPROP	6.3E-02	2.9E+00	7.0E+00	1.0E-02	EPI
Thiodiglycol	111-48-8	1.2E+02	PHYSPRO	7.6E-08	1.9E-09	PHYSPROP	3.2E-03	PHYSPROP	-1.0E+01	PHYSPROP	1.2E+00	CRC89	6.8E-02	9.4E-06	WATER9			1.0E+00	EPI	-6.3E-01	PHYSPRO	1.0E+06	PHYSPROP	5.2E-04	5.1E-01	1.2E+00	1.2E-04	EPI
Thiofanox	39196-18-4	2.2E+02	PHYSPRC	3.8E-07	9.4E-09	EPI	1.7E-04	PHYSPROF	5.7E+01	PHYSPROF			5.2E-02	6.1E-06	WATER9			7.2E+01	EPI	2.2E+00	PHYSPRC	5.2E+03	PHYSPROF	3.6E-02	1.8E+00	4.2E+00	6.3E-03	EPI
Thiophanate, Methyl	23564-05-8	3.4E+02	PHYSPRO	4.9E-08	1.2E-09	EPI	7.1E-08	PHYSPROP	1.7E+02	EPI			3.9E-02	4.5E-06	WATER9			3.3E+02	EPI	1.4E+00	PHYSPRO	2.7E+01	PHYSPROP	1.1E-03	8.7E+00	2.1E+01	1.6E-04	EPI
Thiram	137-26-8	2.4E+02	PHYSPRO	7.4E-06	1.8E-07	EPI	1.7E-05	PHYSPROP	1.6E+02	PHYSPROP	1.3E+00	PERRY	2.6E-02	6.6E-06	WATER9			6.1E+02	EPI	1.7E+00	PHYSPRO	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	RAGS
Titanium Tetrachloride	7550-45-0	1.9E+02	CRC89				1.0E+01	ATSDR	-2.4E+01	CRC89	1.7E+00	CRC89	3.8E-02	9.1E-06	WATER9									5.3E-03	1.2E+00	2.9E+00	1.0E-03	RAGS
Toluene	108-88-3	9.2E+01	PHYSPRO	2.7E-01	6.6E-03	PHYSPROP	2.8E+01	PHYSPROP	-9.5E+01	PHYSPROP	8.6E-01	CRC89	7.8E-02	9.2E-06	WATER9			2.3E+02	EPI	2.7E+00	PHYSPRO	5.3E+02	PHYSPROP	1.1E-01	3.5E-01	8.3E-01	3.1E-02	EPI
Toluene-2,4-diisocyante	584-84-9	1.7E+02	EPI	4.5E-04	1.1E-05	EPI	8.0E-03	EPI	2.1E+01	EPI	1.2E+00	CRC89	4.0E-02	7.8E-06	WATER9			7.4E+03	EPI	3.7E+00	EPI	3.8E+01	EPI	2.6E+00	9.9E-01	4.1E+00	5.1E-01	EPI
Toluene-2,5-diamine	95-70-5	1.2E+02	PHYSPRO	3.0E-07	7.4E-09	PHYSPROP	3.4E-03	PHYSPROP	6.4E+01	PHYSPROP			7.7E-02	9.0E-06	WATER9			5.5E+01	EPI	1.6E-01	PHYSPRO	7.7E+04	PHYSPROP	1.7E-03	5.1E-01	1.2E+00	4.1E-04	EPI
Toluene-2,6-diisocyante	91-08-7	1.7E+02	EPI	4.5E-04	1.1E-05	EPI	2.1E-02	EPI	1.8E+01	EPI			6.1E-02	7.1E-06	WATER9			7.6E+03	EPI	3.7E+00	EPI	3.8E+01	EPI	2.6E-01	9.9E-01	2.4E+00	5.1E-02	EPI
Toluidine, o- (Methylaniline, 2-	95-53-4	1.1E+02	PHYSPRC	8.1E-05	2.0E-06	PHYSPROF	2.6E-01	PHYSPROF	-1.4E+01	PHYSPROF	1.0E+00	CRC89	7.2E-02	9.2E-06	WATER9			1.2E+02	EPI	1.3E+00	PHYSPRC	1.7E+04	PHYSPROF	1.2E-02	4.2E-01	1.0E+00	3.0E-03	EPI
Toluidine, p-	106-49-0	1.1E+02	PHYSPRO	8.3E-05	2.0E-06	PHYSPROP	2.9E-01	PHYSPROP	4.4E+01	PHYSPROP	9.6E-01	CRC89	7.1E-02	9.0E-06	WATER9			1.1E+02	EPI	1.4E+00	PHYSPRO	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	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	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	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	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	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	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	PHYSPRO	2.5E-04	6.0E-06	PHYSPROP	6.7E-06	PHYSPROP	7.7E+01	PHYSPROP			3.2E-02	3.8E-06	WATER9			7.7E+04	EPI	5.9E+00	PHYSPRO	5.5E-01	PHYSPROP	4.2E-01	3.4E+01	8.2E+01	5.2E-02	EPI
Tralomethrin	66841-25-6	6.7E+02	PHYSPRC	1.6E-08	3.9E-10	EPI	3.6E-11	PHYSPROF	1.4E+02	PHYSPROF			2.5E-02	2.9E-06	WATER9			1.9E+05	EPI	7.6E+00	PHYSPRC	8.0E-02	PHYSPROF	3.0E-01	5.6E+02	1.3E+03	3.1E-02	EPI
Tri-n-butyltin	688-73-3	2.9E+02	PHYSPRO	6.2E+01	1.5E+00	PHYSPROP	4.0E-02	PHYSPROP	2.9E+01	EPI	1.1E+00	CRC89	2.1E-02	5.4E-06	WATER9			8.1E+03	EPI	4.1E+00	PHYSPRO	7.3E-03	PHYSPROP	1.3E-01	4.5E+00	1.1E+01	1.9E-02	EPI
Triacetin	102-76-1	2.2E+02	PHYSPRO	5.0E-07	1.2E-08	EPI	2.5E-03	PHYSPROP	7.8E+01	PHYSPROP	1.2E+00	CRC89	2.6E-02	6.6E-06	WATER9			4.1E+01	EPI	2.5E-01	PHYSPRO	5.8E+04	PHYSPROP	7.8E-04	1.8E+00	4.2E+00	1.4E-04	EPI
Triadimefon	43121-43-3	2.9E+02	PHYSPRC	3.3E-09	8.1E-11	EPI	1.5E-08	PHYSPROF	8.2E+01	PHYSPROF	1.2E+00	CRC89	2.2E-02	5.7E-06	WATER9			3.0E+02	EPI	2.8E+00	PHYSPRC	7.2E+01	PHYSPROF	1.6E-02	4.6E+00	1.1E+01	2.4E-03	EPI
Triallate	2303-17-5	3.0E+02	PHYSPRO	4.9E-04	1.2E-05	EPI	1.2E-04	PHYSPROP	2.9E+01	PHYSPROP	1.3E+00	CRC89	2.2E-02	5.7E-06	WATER9			1.0E+03	EPI	4.6E+00	PHYSPRO	4.0E+00	PHYSPROP	2.3E-01	5.3E+00	1.3E+01	3.5E-02	EPI
Triasulfuron	82097-50-5	4.0E+02	PHYSPRO	1.3E-11	3.2E-13	PHYSPROP	5.5E-12	PHYSPROP	1.9E+02	PHYSPROP			3.5E-02	4.1E-06	WATER9			4.3E+02	EPI	1.1E+00	PHYSPRO	3.2E+01	PHYSPROP	3.6E-04	1.9E+01	4.5E+01	4.7E-05	EPI
Tribenuron-methy	101200-48-	4.0E+02	PHYSPRC	4.2E-12	1.0E-13	PHYSPROF	3.9E-10	PHYSPROF	1.4E+02	PHYSPROF			3.5E-02	4.1E-06	WATER9			9.5E+01	EPI	7.8E-01	PHYSPRC	5.0E+01	PHYSPROF	3.6E-03	1.7E+01	4.1E+01	4.7E-04	EPI
Tribromobenzene, 1,2,4-	615-54-3	3.1E+02	PHYSPRO	1.4E-02	3.4E-04	PHYSPROP	5.5E-03	PHYSPROP	4.5E+01	PHYSPROP	2.3E+00	ChemNet	2.9E-02	7.9E-06	WATER9			6.1E+02	EPI	4.7E+00	PHYSPRO	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	PHYSPRO	5.8E-05	1.4E-06	EPI	1.1E-03	PHYSPROP	-7.9E+01	PHYSPROP	9.7E-01	CRC89	2.1E-02	5.2E-06	WATER9			2.4E+03	EPI	4.0E+00	PHYSPRO	2.8E+02	PHYSPROP	1.4E-01	3.3E+00	7.8E+00	2.3E-02	EPI
Tributyltin Compound	NA																											
Tributyltin Oxide	56-35-9	6.0E+02	PHYSPRO	1.2E-05	3.0E-07	EPI	7.5E-06	PHYSPROP	-4.5E+01	PHYSPROP	1.2E+00	CRC89	1.5E-02	3.6E-06	WATER9			2.6E+07	EPI	4.1E+00	PHYSPRO	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	PHYSPRO	2.2E+01	5.3E-01	EPI	3.6E+02	PHYSPROP	-3.5E+01	PHYSPROP	1.6E+00	CRC89	3.8E-02	8.6E-06	WATER9			2.0E+02	EPI	3.2E+00	PHYSPRO	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	PHYSPRC	5.5E-07	1.4E-08	PHYSPROF	6.0E-02	EPI	5.8E+01	PHYSPROF	1.6E+00	CRC89	5.2E-02	9.5E-06	WATER9			3.2E+00	EPI	1.3E+00	PHYSPRC	5.5E+04	PHYSPROF	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	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	PHYSPRO	5.5E-05	1.3E-06	PHYSPROP	4.4E-03	PHYSPROP	7.9E+01	PHYSPROP			5.6E-02	6.6E-06	WATER9			4.4E+03	EPI	3.5E+00	PHYSPRO	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	PHYSPRC	5.1E-02	1.3E-03	PHYSPROF	2.1E-01	PHYSPROF	5.4E+01	PHYSPROF	1.5E+00	CRC89	4.0E-02	8.4E-06	WATER9			1.4E+03	EPI	4.1E+00	PHYSPRC	1.8E+01	PHYSPROF	3.8E-01	1.1E+00	2.6E+00	7.4E-02	EPI
Trichlorobenzene, 1,2,4-	120-82-1	1.8E+02	PHYSPRO	5.8E-02	1.4E-03	PHYSPROP	4.6E-01	PHYSPROP	1.7E+01	PHYSPROP	1.5E+00	CRC89	4.0E-02	8.4E-06	WATER9			1.4E+03	EPI	4.0E+00	PHYSPRO	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	PHYSPRO	7.0E-01	1.7E-02	PHYSPROP	1.2E+02	PHYSPROP	-3.0E+01	PHYSPROP	1.3E+00	CRC89	6.5E-02	9.6E-06	WATER9			4.4E+01	EPI	2.5E+00	PHYSPRO	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	PHYSPRC	3.4E-02	8.2E-04	PHYSPROF	2.3E+01	PHYSPROF	-3.7E+01	PHYSPROF	1.4E+00	CRC89	6.7E-02	1.0E-05	WATER9			6.1E+01	EPI	1.9E+00	PHYSPRC	4.6E+03	PHYSPROF	2.2E-02	5.9E-01	1.4E+00	5.0E-03	EPI
Trichloroethylene	79-01-6	1.3E+02	PHYSPRO	4.0E-01	9.9E-03	PHYSPROP	6.9E+01	PHYSPROP	-8.5E+01	PHYSPROP	1.5E+00	CRC89	6.9E-02	1.0E-05	WATER9			6.1E+01	EPI	2.4E+00	PHYSPRO	1.3E+03	PHYSPROP	5.1E-02	5.7E-01	1.4E+00	1.2E-02	EPI
Trichlorofluoromethane	75-69-4	1.4E+02	PHYSPRO	4.0E+00	9.7E-02	PHYSPROP	8.0E+02	PHYSPROP	-1.1E+02	PHYSPROP	1.5E+00	CRC89	6.5E-02	1.0E-05	WATER9			4.4E+01	EPI	2.5E+00	PHYSPRO	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	PHYSPRC	6.6E-05	1.6E-06	EPI	7.5E-03	EPI	6.9E+01	PHYSPROF	1.5E+00	PERRY	3.1E-02	8.1E-06	WATER9			1.6E+03	SSL	3.7E+00	PHYSPRC	1.2E+03	PHYSPROF	2.0E-01	1.3E+00	3.2E+00	3.6E-02	EPI
Trichlorophenol, 2,4,6-	88-06-2	2.0E+02	PHYSPRO	1.1E-04	2.6E-06	EPI	8.0E-03	EPI	6.9E+01	PHYSPROP	1.5E+00	CRC89	3.1E-02	8.1E-06	WATER9			3.8E+02	SSL	3.7E+00	PHYSPRO	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	PHYSPRO	3.5E-07	8.7E-09	PHYSPROP	3.8E-05	EPI	1.5E+02	PHYSPROP	1.8E+00	PubChem	2.9E-02	7.8E-06	WATER9			1.1E+02	EPI	3.3E+00	PHYSPRO	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	PHYSPRC	3.7E-07	9.1E-09	PHYSPROF	1.0E-05	PHYSPROF	1.8E+02	PHYSPROF	1.2E+00	PubChem	2.3E-02	5.9E-06	WATER9			1.8E+02	EPI	3.8E+00	PHYSPRC	7.1E+01	PHYSPROF	1.0E-01	3.4E+00	8.2E+00	1.6E-02	EPI
Trichloropropane, 1,1,2-	598-77-6	1.5E+02	PHYSPRO	1.3E-02	3.2E-04	EPI	3.1E+00	PHYSPROP	-6.5E+01	EPI	1.4E+00	CRC89	5.7E-02	9.2E-06	WATER9			9.5E+01	EPI	2.4E+00	PHYSPRO	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	PHYSPRO	1.4E-02	3.4E-04	PHYSPROP	3.7E+00	PHYSPROP	-1.5E+01	PHYSPROP	1.4E+00	CRC89	5.7E-02	9.2E-06	WATER9			1.2E+02	EPI	2.3E+00	PHYSPRO	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	PHYSPRC	7.2E-01	1.8E-02	PHYSPROF	4.4E+00	PHYSPROF	-5.6E+01	EPI	1.4E+00	CRC89	5.9E-02	9.4E-06	WATER9			1.2E+02	EPI	2.8E+00	PHYSPRC	3.3E+02	PHYSPROF	7.8E-02	6.9E-01	1.6E+00	1.7E-02	EPI
Tricresyl Phosphate (TCP)	1330-78-5	3.7E+02	PHYSPRO	3.3E-05	8.1E-07	EPI	6.0E-07	EPI	-3.3E+01	PHYSPROP	1.2E+00	Yaws	1.9E-02	4.8E-06	WATER9			4.7E+04	EPI	5.1E+00	PHYSPRO	3.6E-01	PHYSPROP	2.5E-01	1.2E+01	2.9E+01	3.3E-02	EPI
Tridiphane	58138-08-2	3.2E+02	PHYSPRO	1.7E-05	4.1E-07	PHYSPROP	3.9E-04	PHYSPROP	4.3E+01	PHYSPROP			4.1E-02	4.7E-06	WATER9			3.4E+03	EPI	5.2E+00	PHYSPRO	1.1E+00	PHYSPROP	4.7E-01	6.6E+00	1.6E+01	6.9E-02	EPI
Triethylamine	121-44-8	1.0E+02	PHYSPRC	6.1E-03	1.5E-04	PHYSPROF	5.7E+01	PHYSPROF	-1.1E+02	PHYSPROF	7.3E-01	CRC89	6.6E-02	7.9E-06	WATER9			5.1E+01	EPI	1.5E+00	PHYSPRC	6.9E+04	PHYSPROF	1.5E-02	3.9E-01	9.3E-01	3.9E-03	EPI
Triethylene Glycol	112-27-6	1.5E+02	PHYSPRO	1.3E-09	3.2E-11	PHYSPROP	1.3E-03	PHYSPROP	-7.0E+00	PHYSPROP	1.1E+00	CRC89	5.1E-02	8.1E-06	WATER9			1.0E+01	EPI	-1.8E+00	PHYSPRO	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	PHYSPRO	3.1E+01	7.7E-01	PHYSPROP	9.5E+03	PHYSPROP	-1.1E+02	PHYSPROP			9.9E-02	1.2E-05	WATER9			4.4E+01	EPI	1.7E+00	PHYSPRO	7.6E+02	PHYSPROP	2.7E-02	3.1E-01	7.5E-01	7.6E-03	EPI
Trifluralin	1582-09-8	3.4E+02	PHYSPRC	4.2E-03	1.0E-04	PHYSPROF	4.6E-05	PHYSPROF	4.9E+01	PHYSPROF	1.4E+00	PubChem	2.2E-02	5.6E-06	WATER9			1.6E+04	EPI	5.3E+00	PHYSPRC	1.8E-01	PHYSPROF	5.1E-01	7.9E+00	1.9E+01	7.3E-02	EPI
Trimethyl Phosphate	512-56-1	1.4E+02	PHYSPRO	2.9E-07	7.2E-09	PHYSPROP	8.5E-01	EPI	-4.6E+01	PHYSPROP	1.2E+00	CRC89	5.8E-02	8.8E-06	WATER9			1.1E+01	EPI	-6.5E-01	PHYSPRO	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	PHYSPRO	1.8E-01	4.4E-03	PHYSPROP	1.7E+00	PHYSPROP	-2.5E+01	PHYSPROP	8.9E-01	CRC89	6.1E-02	8.0E-06	WATER9			6.3E+02	EPI	3.7E+00	PHYSPRO	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	PHYSPRC	2.5E-01	6.2E-03	PHYSPROF	2.1E+00	PHYSPROF	-4.4E+01	PHYSPROF	8.8E-01	CRC89	6.1E-02	7.9E-06	WATER9			6.1E+02	EPI	3.6E+00	PHYSPRC	5.7E+01	PHYSPROF	3.6E-01	5.0E-01	1.2E+00	8.6E-02	EPI
Trimethylbenzene, 1,3,5-	108-67-8	1.2E+02	PHYSPRO	3.6E-01	8.8E-03	PHYSPROP	2.5E+00	PHYSPROP	-4.5E+01	PHYSPROP	8.6E-01	CRC89	6.0E-02	7.8E-06	WATER9			6.0E+02	EPI	3.4E+00	PHYSPRO	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	PHYSPRO	3.0E+01	7.5E-01	PHYSPROP	7.1E+01	PHYSPROP	-8.4E+01	EPI	7.2E-01	PubChem	6.0E-02	7.3E-06	WATER9			2.4E+02	EPI	4.1E+00	PHYSPRO	4.0E+00	PHYSPROP	7.7E-01	4.5E-01	1.7E+00	1.9E-01	RAGS
Trinitrobenzene, 1,3,5-	99-35-4	2.1E+02	PHYSPRC	2.7E-07	6.5E-09	EPI	6.4E-06	EPI	1.2E+02	PHYSPROF	1.5E+00	CRC89	2.9E-02	7.7E-06	WATER9			1.7E+03	EPI	1.2E+00	PHYSPRC	2.8E+02	PHYSPROF	3.4E-03	1.6E+00	3.9E+00	6.1E-04	EPI
Trinitrotoluene, 2,4,6-	118-96-7	2.3E+02	PHYSPRO	8.5E-07	2.1E-08	EPI	8.0E-06	PHYSPROP	8.0E+01	PHYSPROP	1.7E+00	CRC89	3.0E-02	7.9E-06	WATER9			2.8E+03	EPI	1.6E+00	PHYSPRO	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	PHYSPRO	2.2E-08	5.3E-10	PHYSPROP	2.6E-09	EPI	1.6E+02	PHYSPROP	1.2E+00	CRC89	2.3E-02	5.8E-06	WATER9			2.0E+03	EPI	2.8E+00	PHYSPRO	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	PHYSPRC	1.1E-07	2.6E-09	PHYSPROF	7.4E-08	PHYSPROF	2.7E+01	PHYSPROF			3.3E-02	3.9E-06	WATER9			1.1E+04	EPI	3.7E+00	PHYSPRC	7.0E+00	PHYSPROF	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	PHYSPRO	2.4E-06	6.0E-08	PHYSPROP	2.0E-05	PHYSPROP	-4.0E+01	PHYSPROP			4.0E-02	4.7E-06	WATER9			1.6E+03	EPI	2.6E+00	PHYSPRO	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	PHYSPRO	8.9E-04	2.2E-05	EPI	1.9E-04	PHYSPROP	5.5E+00	PHYSPROP	2.3E+00	PubChem	1.9E-02	4.9E-06	WATER9			9.7E+03	EPI	4.3E+00	PHYSPRO	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	PHYSPRC	1.3E-04	3.3E-06	EPI	6.1E-02	PHYSPROF	-5.5E+01	PHYSPROF	1.4E+00	CRC89	2.4E-02	6.2E-06	WATER9			3.9E+02	EPI	1.4E+00	PHYSPRC	7.0E+03	PHYSPROF	2.3E-03	4.2E+00	1.0E+01	3.6E-04	EPI
Tris(2-ethylhexyl)phosphate	78-42-2	4.3E+02	PHYSPRO	3.2E-06	7.9E-08	EPI	8.3E-08	PHYSPROP	-7.4E+01	PHYSPROP	9.9E-01	CRC89	1.6E-02	3.9E-06	WATER9			2.5E+06	EPI	9.5E+00	PHYSPRO	6.0E-01	PHYSPROP	9.3E+01	2.9E+01	1.3E+02	1.2E+01	EPI

Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
Analyte	CAS No.	MW	MW Ref	H' (unitless)	(atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t^* (hr)	K_p (cm/hr)	K Ref
Tungsten	7440-33-7	1.8E+02	PHYSPRO				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	RAGS
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	RAGS
Urethane	51-79-6	8.9E+01	PHYSPRO	2.6E-06	6.4E-08	EPI	2.6E-01	EPI	4.9E+01	PHYSPROP	9.9E-01	CRC89	8.5E-02	1.0E-05	WATER9			1.2E+01	EPI	-1.5E-01	PHYSPRO	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	RAGS
Vanadium and Compound	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	RAGS
Vernolate	1929-77-7	2.0E+02	PHYSPRO	1.3E-03	3.1E-05	EPI	1.0E-02	PHYSPROP	7.1E+01	EPI	9.5E-01	CRC89	2.4E-02	6.1E-06	WATER9			3.0E+02	EPI	3.8E+00	PHYSPRO	9.0E+01	PHYSPROP	2.2E-01	1.4E+00	3.5E+00	4.0E-02	EPI
Vinclozolin	50471-44-8	2.9E+02	PHYSPRO	7.1E-07	1.7E-08	EPI	1.2E-07	PHYSPROP	1.1E+02	PHYSPROP	1.5E+00	CRC89	2.5E-02	6.5E-06	WATER9			2.8E+02	EPI	3.1E+00	PHYSPRO	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	PHYSPRO	2.1E-02	5.1E-04	EPI	9.0E+01	PHYSPROP	-9.3E+01	PHYSPROP	9.3E-01	CRC89	8.5E-02	1.0E-05	WATER9			5.6E+00	EPI	7.3E-01	PHYSPRO	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	PHYSPRO	5.0E-01	1.2E-02	PHYSPROP	1.0E+03	PHYSPROP	-1.4E+02	PHYSPROP	1.5E+00	CRC89	8.6E-02	1.2E-05	WATER9			2.2E+01	EPI	1.6E+00	PHYSPRO	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	PHYSPRO	1.1E+00	2.8E-02	PHYSPROP	3.0E+03	EPI	-1.5E+02	PHYSPROP	9.1E-01	CRC89	1.1E-01	1.2E-05	WATER9			2.2E+01	EPI	1.4E+00	CRC89	8.8E+03	PHYSPROP	2.5E-02	2.4E-01	5.7E-01	8.4E-03	EPI
Warfarin	81-81-2	3.1E+02	PHYSPRO	1.1E-07	2.8E-09	EPI	1.2E-07	PHYSPROP	1.6E+02	PHYSPROP			4.2E-02	4.9E-06	WATER9			4.3E+02	EPI	2.7E+00	PHYSPRO	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	PHYSPRO	2.8E-01	6.9E-03	PHYSPROP	8.8E+00	PHYSPROP	1.3E+01	PHYSPROP	8.6E-01	CRC89	6.8E-02	8.4E-06	WATER9			3.8E+02	EPI	3.2E+00	PHYSPRO	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	PHYSPRO	2.9E-01	7.2E-03	PHYSPROP	8.3E+00	PHYSPROP	-4.8E+01	PHYSPROP	8.6E-01	CRC89	6.8E-02	8.4E-06	WATER9			3.8E+02	EPI	3.2E+00	PHYSPRO	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	PHYSPRO	2.1E-01	5.2E-03	PHYSPROP	6.6E+00	PHYSPROP	-2.5E+01	PHYSPROP	8.8E-01	CRC89	6.9E-02	8.5E-06	WATER9			3.8E+02	EPI	3.1E+00	PHYSPRO	1.8E+02	PHYSPROP	1.9E-01	4.1E-01	9.9E-01	4.7E-02	EPI
Xylenes	1330-20-7	1.1E+02	PHYSPRO	2.7E-01	6.6E-03	PHYSPROP	8.0E+00	PHYSPROP	-2.5E+01	EPI	8.6E-01	ATSDR	6.9E-02	8.5E-06	WATER9			3.8E+02	EPI	3.2E+00	PHYSPRO	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	RAGS
Zinc and Compounds	7440-66-6	6.5E+01	PHYSPRO						4.2E+02	PHYSPROP	7.1E+00	CRC89				6.2E+01	SSL							1.9E-03	2.4E-01	5.9E-01	6.0E-04	RAGS
Zineb	12122-67-7	2.8E+02	PHYSPRO	1.1E-07	2.7E-09	PHYSPROP	7.5E-08	PHYSPROP	1.6E+02	EPI			4.5E-02	5.2E-06	WATER9			1.3E+03	EPI	1.3E+00	PHYSPRO	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	RAGS

ATTACHMENT C

USEPA RSL CALCULATOR DOCUMENTATION

CONSTRUCTION WORKER – OTHER CONSTRUCTION ACTIVITIES SCENARIO

Attachment C-1
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 100% of Site Area
Construction Worker Equation Inputs for Soil - Other Construction Activities

Variable	Value	Site-Specific?
TR (target cancer risk) unitless	0.000001	
THQ (target hazard quotient) unitless	1	HQ of 1
EFcw (exposure frequency - construction worker) day/yr	250	
EDcw (exposure duration - construction worker) yr	1	
ETcw (exposure time - construction worker) hr/day	8	
LT (lifetime) yr	70	
BWcw (body weight - construction worker) kg	80	
IRcw (soil ingestion rate - construction worker) mg/day	330	
SAcw (surface area - construction worker) cm2/day	3527	
AFcw (skin adherence factor - construction worker) mg/cm2	0.3	
ATcw (averaging time - construction worker)	365	
EWcw (overall duration of construction) weeks/year	50	
DWcw (days worked - construction worker) days/week	5	
Ac (acres)	1.115	Site-Specific
Atill (areal extent of tilling) acres	1.115	Site-Specific
Aexcav (area of excavation site) m2	4512.3	Site-Specific
Ac-grade (areal extent of grading) acres	1.115	Site-Specific
Ac-doz (areal extent of dozing) acres	1.115	Site-Specific
Mm-doz (Gravimetric soil moisture content) %	7.9	
Mm-excav (Gravimetric soil moisture content) %	12	
ρsoil (density) g/cm3 - chemical-specific	1.68	
NA-dump (number of times soil is dumped)	2	
NA-till (number of times soil is tilled)	2	
still (soil silt content) %	18	
sdoz (soil silt content) %	6.9	
Bl (dozing blade length) m	2.337	Site-Specific
Bl (grading blade length) m	1.524	Site-Specific
NA-doz (number of times site was dozed)	1	Site-Specific
NA-grade (number of times site was graded)	1	Site-Specific
Sdoz (dozing speed) kph	11.4	
Sgrade (dozing speed) kph	11.4	
dexcav (average depth of excavation site) m	3.048	Site-Specific
V (fraction of vegetative cover)	0	
Um (mean annual wind speed) m/s	4.69	
Ut (equivalent threshold value) m/s	11.32	
tc (overall duration of construction) hours	8400	
FD Unitless Dispersion Correction Factor	0.185837208	
T (time over which traffic occurs) s	7200000	
J`T (g/m2s)	9.92406E-07	
F(x) (function dependant on Um/Ut derived using Cowherd et al. (1985))	0.194	
Mwind (dust emitted by wind erosion) g	19632.72721	
Mdoz (dust emitted from dozing operations) g	57.37384998	
Mtill (dust emitted from tilling operations) g	5623.338872	
Mgrade (dust emitted from grading operations) g	1292.921284	
Mexcav (dust emitted from excavation soil dumping) g	5635.126801	
ΣVKTdoz (sum of fleet vehicle km traveled) km	1.930853659	

Attachment C-1
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 100% of Site Area
Construction Worker Equation Inputs for Soil - Other Construction Activities

Variable	Value	Site-Specific?
ΣVKTgrade (sum of fleet vehicle km traveled) km	2.960895669	
Q/Csa (inverse of the ratio of the geometric mean air concentration to the emission flu	12.30146759	
PEF`sc (particulate emission factor) m3/kg	66701365.04	
A (PEF Dispersion Constant)	2.4538	
B (PEF Dispersion Constant)	17.566	
C (PEF Dispersion Constant)	189.0426	
Asurf (areal extent of site) m2	4512.2489	
As (VFulim-sc acres)	0.5	
T (temperature) °C	25	
foc (fraction organic carbon in soil) g/g	0.006	
ρb (dry soil bulk density) g/cm3	1.5	
ρs (soil particle density) g/cm3	2.65	
θw (water-filled soil porosity) Lwater/Lsoil	0.15	
A (VF Dispersion Constant)	2.4538	
B (VF Dispersion Constant)	17.566	
C (VF Dispersion Constant)	189.0426	
Q/Csa (inverse of the ratio of the geometric mean air concentration to the emission flu	14.31407	
n (total soil porosity) Lpore/Lsoil	0.43396	
θa (air-filled soil porosity) Lair/Lsoil	0.28396	
As (VFmlim-sc acres)	0.5	
ρb (dry soil bulk density) g/cm3	1.5	
ds (average source depth) m	.	
Q/Cvol (inverse of the ratio of the geometric mean air concentration to the emission fl	14.31407	
VFmlim-sc (volatilization factor) m3air/kgsoil	0	

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Attachment C-2
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 100% of Site Area

Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide),
sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Subchronic RfD (mg/kg-day)	Subchronic RfD Ref
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-		-		2.00E-02	P
Tetrachloroethylene	127-18-4	No	Yes	2.10E-03	I	2.60E-07	I	1.00E-01	H
Trichloroethylene	79-01-6	Yes	Yes	4.60E-02	I	4.10E-06	I	5.00E-04	I
Vinyl Chloride	75-01-4	Yes	Yes	7.20E-01	I	4.40E-06	I	3.00E-03	I

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Attachment C-2
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 100% of Site Area

Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide),
sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Subchronic RfC (mg/m^3)	Subchronic RfC Ref	GIABS	ABS	RBA
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-		1	-	1
Tetrachloroethylene	127-18-4	No	Yes	4.00E-02	I	1	-	1
Trichloroethylene	79-01-6	Yes	Yes	2.00E-03	I	1	-	1
Vinyl Chloride	75-01-4	Yes	Yes	7.67E-02	A	1	-	1

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Attachment C-2
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 100% of Site Area

Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide),
sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	5.42E+02	2.37E+03	6.67E+07	-
Tetrachloroethylene	127-18-4	No	Yes	5.09E+02	1.66E+02	6.67E+07	1.18E+04
Trichloroethylene	79-01-6	Yes	Yes	4.79E+02	6.92E+02	6.67E+07	5.39E+02
Vinyl Chloride	75-01-4	Yes	Yes	2.07E+02	3.92E+03	6.67E+07	3.44E+01

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Attachment C-2
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 100% of Site Area

Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide),
sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Dermal SL TR=1.0E-6 (mg/kg)	Inhalation SL TR=1.0E-6 (mg/kg)	Applied in Risk Screening Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL THQ=1 (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-	-	-	6.79E+03
Tetrachloroethylene	127-18-4	No	Yes	-	1.66E+02	1.64E+02	3.39E+04
Trichloroethylene	79-01-6	Yes	Yes	-	3.58E+01	3.36E+01	1.70E+02
Vinyl Chloride	75-01-4	Yes	Yes	-	1.44E+01	1.02E+01	1.02E+03

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Attachment C-2
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 100% of Site Area

Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide),
sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Applied in Risk Screening Noncarcinogenic SL THI=1 (mg/kg)	Screening Level (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-	-	6.79E+03	6.79E+03 sat
Tetrachloroethylene	127-18-4	No	Yes	-	8.56E+01	8.54E+01	8.54E+01 Ssat
Trichloroethylene	79-01-6	Yes	Yes	-	4.03E+00	3.93E+00	3.93E+00 nc
Vinyl Chloride	75-01-4	Yes	Yes	-	6.68E+01	6.27E+01	1.02E+01 ca**

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Attachment C-3
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 100% of Site Area
Construction Worker Equation Inputs for Soil - Other Construction Activities

Variable	Value	Site-Specific?
TR (target cancer risk) unitless	0.000001	
THQ (target hazard quotient) unitless	1	HQ of 1
EFcw (exposure frequency - construction worker) day/yr	250	
EDcw (exposure duration - construction worker) yr	1	
ETcw (exposure time - construction worker) hr/day	8	
LT (lifetime) yr	70	
BWcw (body weight - construction worker) kg	80	
IRcw (soil ingestion rate - construction worker) mg/day	330	
SAcw (surface area - construction worker) cm2/day	3527	
AFcw (skin adherence factor - construction worker) mg/cm2	0.3	
ATcw (averaging time - construction worker)	365	
EWcw (overall duration of construction) weeks/year	50	
DWcw (days worked - construction worker) days/week	5	
Ac (acres)	0.5	Site-Specific
Atill (areal extent of tilling) acres	0.17	Site-Specific
Aexcav (area of excavation site) m2	687	Site-Specific
Ac-grade (areal extent of grading) acres	0.17	Site-Specific
Ac-doz (areal extent of dozing) acres	0.17	Site-Specific
Mm-doz (Gravimetric soil moisture content) %	7.9	
Mm-excav (Gravimetric soil moisture content) %	12	
ρsoil (density) g/cm3 - chemical-specific	1.68	
NA-dump (number of times soil is dumped)	2	
NA-till (number of times soil is tilled)	2	
still (soil silt content) %	18	
sdoz (soil silt content) %	6.9	
Bl (dozing blade length) m	2.337	Site-Specific
Bl (grading blade length) m	1.524	Site-Specific
NA-doz (number of times site was dozed)	1	Site-Specific
NA-grade (number of times site was graded)	1	Site-Specific
Sdoz (dozing speed) kph	11.4	
Sgrade (dozing speed) kph	11.4	
dexcav (average depth of excavation site) m	3.048	Site-Specific
V (fraction of vegetative cover)	0	
Um (mean annual wind speed) m/s	4.69	
Ut (equivalent threshold value) m/s	11.32	
tc (overall duration of construction) hours	8400	
FD Unitless Dispersion Correction Factor	0.185837208	
T (time over which traffic occurs) s	7200000	
J`T (g/m2s)	7.36175E-07	
F(x) (function dependant on Um/Ut derived using Cowherd et al. (1985))	0.194	
Mwind (dust emitted by wind erosion) g	8803.913546	
Mdoz (dust emitted from dozing operations) g	8.747582509	
Mtill (dust emitted from tilling operations) g	857.3700523	
Mgrade (dust emitted from grading operations) g	197.1270119	
Mexcav (dust emitted from excavation soil dumping) g	857.9509591	
ΣVKTdoz (sum of fleet vehicle km traveled) km	0.294390244	

Attachment C-3
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 100% of Site Area
Construction Worker Equation Inputs for Soil - Other Construction Activities

Variable	Value	Site-Specific?
ΣVKTgrade (sum of fleet vehicle km traveled) km	0.451437008	
Q/Csa (inverse of the ratio of the geometric mean air concentration to the emission flu	14.31406677	
PEF`sc (particulate emission factor) m3/kg	104628338.1	
A (PEF Dispersion Constant)	2.4538	
B (PEF Dispersion Constant)	17.566	
C (PEF Dispersion Constant)	189.0426	
Asurf (areal extent of site) m2	2023.43	
As (VFulim-sc acres)	0.5	
T (temperature) °C	25	
foc (fraction organic carbon in soil) g/g	0.006	
ρb (dry soil bulk density) g/cm3	1.5	
ρs (soil particle density) g/cm3	2.65	
θw (water-filled soil porosity) Lwater/Lsoil	0.15	
A (VF Dispersion Constant)	2.4538	
B (VF Dispersion Constant)	17.566	
C (VF Dispersion Constant)	189.0426	
Q/Csa (inverse of the ratio of the geometric mean air concentration to the emission flu	14.31407	
n (total soil porosity) Lpore/Lsoil	0.43396	
θa (air-filled soil porosity) Lair/Lsoil	0.28396	
As (VFmlim-sc acres)	0.5	
ρb (dry soil bulk density) g/cm3	1.5	
ds (average source depth) m	.	
Q/Cvol (inverse of the ratio of the geometric mean air concentration to the emission fl	14.31407	
VFmlim-sc (volatilization factor) m3air/kgsoil	0	

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Attachment C-4
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 100% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Subchronic RfD (mg/kg-day)	Subchronic RfD Ref	Subchronic RfC (mg/m^3)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-		-		2.00E-02	P	-
Tetrachloroethylene	127-18-4	No	Yes	2.10E-03	I	2.60E-07	I	1.00E-01	H	4.00E-02
Trichloroethylene	79-01-6	Yes	Yes	4.60E-02	I	4.10E-06	I	5.00E-04	I	2.00E-03
Vinyl Chloride	75-01-4	Yes	Yes	7.20E-01	I	4.40E-06	I	3.00E-03	I	7.67E-02

Output generated 11JUL2016:10:50:18

Attachment C-4
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 100% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Subchronic RfC Ref	GIABS	ABS	RBA	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes		1	-	1	5.42E+02	2.37E+03
Tetrachloroethylene	127-18-4	No	Yes	I	1	-	1	5.09E+02	1.66E+02
Trichloroethylene	79-01-6	Yes	Yes	I	1	-	1	4.79E+02	6.92E+02
Vinyl Chloride	75-01-4	Yes	Yes	A	1	-	1	2.07E+02	3.92E+03

Output generated 11JUL2016:10:50:18

Attachment C-4
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 100% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Applied in Risk Screening

Chemical	CAS Number	Mutagen?	VOC?	**Particulate** Emission Factor (m^3/kg)	**Ingestion SL TR=1.0E-6 (mg/kg)**	**Dermal SL TR=1.0E-6 (mg/kg)**	**Inhalation SL TR=1.0E-6 (mg/kg)**	**Carcinogenic SL TR=1.0E-6 (mg/kg)**
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	1.05E+08	-	-	-	-
Tetrachloroethylene	127-18-4	No	Yes	1.05E+08	1.18E+04	-	1.66E+02	1.64E+02
Trichloroethylene	79-01-6	Yes	Yes	1.05E+08	5.39E+02	-	3.58E+01	3.36E+01
Vinyl Chloride	75-01-4	Yes	Yes	1.05E+08	3.44E+01	-	1.44E+01	1.02E+01

Output generated 11JUL2016:10:50:18

Attachment C-4
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 100% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)	Applied in Risk Screening Noncarcinogenic SL THI=1 (mg/kg)	Screening Level (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	6.79E+03	-	-	6.79E+03	6.79E+03 sat
Tetrachloroethylene	127-18-4	No	Yes	3.39E+04	-	8.56E+01	8.54E+01	8.54E+01 Ssat
Trichloroethylene	79-01-6	Yes	Yes	1.70E+02	-	4.03E+00	3.93E+00	3.93E+00 nc
Vinyl Chloride	75-01-4	Yes	Yes	1.02E+03	-	6.68E+01	6.27E+01	1.02E+01 ca**

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Attachment C-5
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 50% of Site Area
Construction Worker Equation Inputs for Soil - Other Construction Activities

Variable	Value	Site-Specific?
TR (target cancer risk) unitless	0.000001	
THQ (target hazard quotient) unitless	1	HQ of 1
EFcw (exposure frequency - construction worker) day/yr	250	
EDcw (exposure duration - construction worker) yr	1	
ETcw (exposure time - construction worker) hr/day	8	
LT (lifetime) yr	70	
BWcw (body weight - construction worker) kg	80	
IRcw (soil ingestion rate - construction worker) mg/day	330	
SAcw (surface area - construction worker) cm2/day	3527	
AFcw (skin adherence factor - construction worker) mg/cm2	0.3	
ATcw (averaging time - construction worker)	365	
EWcw (overall duration of construction) weeks/year	50	
DWcw (days worked - construction worker) days/week	5	
Ac (acres)	0.55751	Site-Specific
Atill (areal extent of tilling) acres	0.55751	Site-Specific
Aexcav (area of excavation site) m2	2256.1	Site-Specific
Ac-grade (areal extent of grading) acres	0.55751	Site-Specific
Ac-doz (areal extent of dozing) acres	0.55751	Site-Specific
Mm-doz (Gravimetric soil moisture content) %	7.9	
Mm-excav (Gravimetric soil moisture content) %	12	
ρsoil (density) g/cm3 - chemical-specific	1.68	
NA-dump (number of times soil is dumped)	2	
NA-till (number of times soil is tilled)	2	
still (soil silt content) %	18	
sdoz (soil silt content) %	6.9	
Bl (dozing blade length) m	2.337	Site-Specific
Bl (grading blade length) m	1.524	Site-Specific
NA-doz (number of times site was dozed)	1	Site-Specific
NA-grade (number of times site was graded)	1	Site-Specific
Sdoz (dozing speed) kph	11.4	
Sgrade (dozing speed) kph	11.4	
dexcav (average depth of excavation site) m	3.048	Site-Specific
V (fraction of vegetative cover)	0	
Um (mean annual wind speed) m/s	4.69	
Ut (equivalent threshold value) m/s	11.32	
tc (overall duration of construction) hours	8400	
FD Unitless Dispersion Correction Factor	0.185837208	
T (time over which traffic occurs) s	7200000	
J`T (g/m2s)	9.92399E-07	
F(x) (function dependant on Um/Ut derived using Cowherd et al. (1985))	0.194	
Mwind (dust emitted by wind erosion) g	9816.539682	
Mdoz (dust emitted from dozing operations) g	28.68743955	
Mtill (dust emitted from tilling operations) g	2811.71987	
Mgrade (dust emitted from grading operations) g	646.4722377	
Mexcav (dust emitted from excavation soil dumping) g	2817.500959	
ΣVKTdoz (sum of fleet vehicle km traveled) km	0.965444146	

Attachment C-5
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 50% of Site Area
Construction Worker Equation Inputs for Soil - Other Construction Activities

Variable	Value	Site-Specific?
ΣVKTgrade (sum of fleet vehicle km traveled) km	1.48047439	
Q/Csa (inverse of the ratio of the geometric mean air concentration to the emission flu	14.01704426	
PEF`sc (particulate emission factor) m3/kg	76004145.93	
A (PEF Dispersion Constant)	2.4538	
B (PEF Dispersion Constant)	17.566	
C (PEF Dispersion Constant)	189.0426	
Asurf (areal extent of site) m2	2256.164919	
As (VFulim-sc acres)	0.5	
T (temperature) °C	25	
foc (fraction organic carbon in soil) g/g	0.006	
ρb (dry soil bulk density) g/cm3	1.5	
ρs (soil particle density) g/cm3	2.65	
θw (water-filled soil porosity) Lwater/Lsoil	0.15	
A (VF Dispersion Constant)	2.4538	
B (VF Dispersion Constant)	17.566	
C (VF Dispersion Constant)	189.0426	
Q/Csa (inverse of the ratio of the geometric mean air concentration to the emission flu	14.31407	
n (total soil porosity) Lpore/Lsoil	0.43396	
θa (air-filled soil porosity) Lair/Lsoil	0.28396	
As (VFmlim-sc acres)	0.5	
ρb (dry soil bulk density) g/cm3	1.5	
ds (average source depth) m	.	
Q/Cvol (inverse of the ratio of the geometric mean air concentration to the emission fl	14.31407	
VFmlim-sc (volatilization factor) m3air/kgsoil	0	

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Attachment C-6
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Subchronic RfD (mg/kg-day)	Subchronic RfD Ref
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-		-		2.00E-02	P
Tetrachloroethylene	127-18-4	No	Yes	2.10E-03	I	2.60E-07	I	1.00E-01	H
Trichloroethylene	79-01-6	Yes	Yes	4.60E-02	I	4.10E-06	I	5.00E-04	I
Vinyl Chloride	75-01-4	Yes	Yes	7.20E-01	I	4.40E-06	I	3.00E-03	I

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Attachment C-6
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Subchronic RfC (mg/m^3)	Subchronic RfC Ref	GIABS	ABS	RBA
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-		1	-	1
Tetrachloroethylene	127-18-4	No	Yes	4.00E-02	I	1	-	1
Trichloroethylene	79-01-6	Yes	Yes	2.00E-03	I	1	-	1
Vinyl Chloride	75-01-4	Yes	Yes	7.67E-02	A	1	-	1

Output generated 11JUL2016:10:48:53

Attachment C-6
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	5.42E+02	2.37E+03	7.60E+07	-	-
Tetrachloroethylene	127-18-4	No	Yes	5.09E+02	1.66E+02	7.60E+07	1.18E+04	-
Trichloroethylene	79-01-6	Yes	Yes	4.79E+02	6.92E+02	7.60E+07	5.39E+02	-
Vinyl Chloride	75-01-4	Yes	Yes	2.07E+02	3.92E+03	7.60E+07	3.44E+01	-

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Attachment C-6
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

					Applied in Risk Screening			
Chemical	**CAS Number**	**Mutagen?**	**VOC?**	**Inhalation SL TR=1.0E-6 (mg/kg)**	**Carcinogenic SL TR=1.0E-6 (mg/kg)**	**Ingestion SL THQ=1 (mg/kg)**	**Dermal SL THQ=1 (mg/kg)**	**Inhalation SL THQ=1 (mg/kg)**
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-	-	6.79E+03	-	-
Tetrachloroethylene	127-18-4	No	Yes	1.66E+02	1.64E+02	3.39E+04	-	8.56E+01
Trichloroethylene	79-01-6	Yes	Yes	3.58E+01	3.36E+01	1.70E+02	-	4.03E+00
Vinyl Chloride	75-01-4	Yes	Yes	1.44E+01	1.02E+01	1.02E+03	-	6.68E+01

Output generated 11JUL2016:10:48:53

Attachment C-6
USEPA Regional Screening Level Calculator, May 2016
Site-specific Cedarwood Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Applied in Risk Screening Noncarcinogenic SL THI=1 (mg/kg)	Screening Level (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	6.79E+03	6.79E+03 sat
Tetrachloroethylene	127-18-4	No	Yes	8.54E+01	8.54E+01 Ssat
Trichloroethylene	79-01-6	Yes	Yes	3.93E+00	3.93E+00 nc
Vinyl Chloride	75-01-4	Yes	Yes	6.27E+01	1.02E+01 ca**

Output generated 11JUL2016:10:48:53

Attachment C-7
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 50% of Site Area
Construction Worker Equation Inputs for Soil - Other Construction Activities

Variable	Value	Site-Specific?
TR (target cancer risk) unitless	0.000001	
THQ (target hazard quotient) unitless	1	HQ of 1
EFcw (exposure frequency - construction worker) day/yr	250	
EDcw (exposure duration - construction worker) yr	1	
ETcw (exposure time - construction worker) hr/day	8	
LT (lifetime) yr	70	
BWcw (body weight - construction worker) kg	80	
IRcw (soil ingestion rate - construction worker) mg/day	330	
SAcw (surface area - construction worker) cm2/day	3527	
AFcw (skin adherence factor - construction worker) mg/cm2	0.3	
ATcw (averaging time - construction worker)	365	
EWcw (overall duration of construction) weeks/year	50	
DWcw (days worked - construction worker) days/week	5	
Ac (acres)	0.5	Site-Specific
Atill (areal extent of tilling) acres	0.085	Site-Specific
Aexcav (area of excavation site) m2	344	Site-Specific
Ac-grade (areal extent of grading) acres	0.085	Site-Specific
Ac-doz (areal extent of dozing) acres	0.085	Site-Specific
Mm-doz (Gravimetric soil moisture content) %	7.9	
Mm-excav (Gravimetric soil moisture content) %	12	
ρsoil (density) g/cm3 - chemical-specific	1.68	
NA-dump (number of times soil is dumped)	2	
NA-till (number of times soil is tilled)	2	
still (soil silt content) %	18	
sdoz (soil silt content) %	6.9	
Bl (dozing blade length) m	2.337	Site-Specific
Bl (grading blade length) m	1.524	Site-Specific
NA-doz (number of times site was dozed)	1	Site-Specific
NA-grade (number of times site was graded)	1	Site-Specific
Sdoz (dozing speed) kph	11.4	
Sgrade (dozing speed) kph	11.4	
dexcav (average depth of excavation site) m	3.048	Site-Specific
V (fraction of vegetative cover)	0	
Um (mean annual wind speed) m/s	4.69	
Ut (equivalent threshold value) m/s	11.32	
tc (overall duration of construction) hours	8400	
FD Unitless Dispersion Correction Factor	0.185837208	
T (time over which traffic occurs) s	7200000	
J`T (g/m2s)	6.70282E-07	
F(x) (function dependant on Um/Ut derived using Cowherd et al. (1985))	0.194	
Mwind (dust emitted by wind erosion) g	8803.913546	
Mdoz (dust emitted from dozing operations) g	4.373791254	
Mtill (dust emitted from tilling operations) g	428.6850262	
Mgrade (dust emitted from grading operations) g	98.56350595	
Mexcav (dust emitted from excavation soil dumping) g	429.599898	
ΣVKTdoz (sum of fleet vehicle km traveled) km	0.147195122	
ΣVKTgrade (sum of fleet vehicle km traveled) km	0.225718504	

Attachment C-7
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 50% of Site Area
Construction Worker Equation Inputs for Soil - Other Construction Activities

Variable	Value	Site-Specific?
Q/Csa (inverse of the ratio of the geometric mean air concentration to the emission flu	14.31406677	
PEF`sc (particulate emission factor) m3/kg	114913952.3	
A (PEF Dispersion Constant)	2.4538	
B (PEF Dispersion Constant)	17.566	
C (PEF Dispersion Constant)	189.0426	
Asurf (areal extent of site) m2	2023.43	
As (VFulim-sc acres)	0.5	
T (temperature) °C	25	
foc (fraction organic carbon in soil) g/g	0.006	
ρb (dry soil bulk density) g/cm3	1.5	
ρs (soil particle density) g/cm3	2.65	
θw (water-filled soil porosity) Lwater/Lsoil	0.15	
A (VF Dispersion Constant)	2.4538	
B (VF Dispersion Constant)	17.566	
C (VF Dispersion Constant)	189.0426	
Q/Csa (inverse of the ratio of the geometric mean air concentration to the emission flu	14.31407	
n (total soil porosity) Lpore/Lsoil	0.43396	
θa (air-filled soil porosity) Lair/Lsoil	0.28396	
As (VFmlim-sc acres)	0.5	
ρb (dry soil bulk density) g/cm3	1.5	
ds (average source depth) m	.	
Q/Cvol (inverse of the ratio of the geometric mean air concentration to the emission fl	14.31407	
VFmlim-sc (volatilization factor) m3air/kgsoil	0	

Output generated 11JUL2016:10:51:10

Attachment C-8
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Ingestion SF $(mg/kg\text{-}day)^{-1}$	SFO Ref	Inhalation Unit Risk $(ug/m^3)^{-1}$	IUR Ref	Subchronic RfD (mg/kg-day)	Subchronic RfD Ref
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-		-		2.00E-02	P
Tetrachloroethylene	127-18-4	No	Yes	2.10E-03	I	2.60E-07	I	1.00E-01	H
Trichloroethylene	79-01-6	Yes	Yes	4.60E-02	I	4.10E-06	I	5.00E-04	I
Vinyl Chloride	75-01-4	Yes	Yes	7.20E-01	I	4.40E-06	I	3.00E-03	I

Output generated 11JUL2016:10:51:10

Attachment C-8
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Subchronic RfC (mg/m^3)	Subchronic RfC Ref	GIABS	ABS	RBA
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-		1	-	1
Tetrachloroethylene	127-18-4	No	Yes	4.00E-02	I	1	-	1
Trichloroethylene	79-01-6	Yes	Yes	2.00E-03	I	1	-	1
Vinyl Chloride	75-01-4	Yes	Yes	7.67E-02	A	1	-	1

Output generated 11JUL2016:10:51:10

Attachment C-8
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Volatilization Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	Particulate Emission Factor (m^3/kg)	Ingestion SL TR=1.0E-6 (mg/kg)	Dermal SL TR=1.0E-6 (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	5.42E+02	2.37E+03	1.15E+08	-	-
Tetrachloroethylene	127-18-4	No	Yes	5.09E+02	1.66E+02	1.15E+08	1.18E+04	-
Trichloroethylene	79-01-6	Yes	Yes	4.79E+02	6.92E+02	1.15E+08	5.39E+02	-
Vinyl Chloride	75-01-4	Yes	Yes	2.07E+02	3.92E+03	1.15E+08	3.44E+01	-

Output generated 11JUL2016:10:51:10

Attachment C-8
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Inhalation SL TR=1.0E-6 (mg/kg)	Applied in Risk Screening Carcinogenic SL TR=1.0E-6 (mg/kg)	Ingestion SL THQ=1 (mg/kg)	Dermal SL THQ=1 (mg/kg)	Inhalation SL THQ=1 (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	-	-	6.79E+03	-	-
Tetrachloroethylene	127-18-4	No	Yes	1.66E+02	1.64E+02	3.39E+04	-	8.56E+01
Trichloroethylene	79-01-6	Yes	Yes	3.58E+01	3.36E+01	1.70E+02	-	4.03E+00
Vinyl Chloride	75-01-4	Yes	Yes	1.44E+01	1.02E+01	1.02E+03	-	6.68E+01

Output generated 11JUL2016:10:51:10

Attachment C-8
USEPA Regional Screening Level Calculator, May 2016
Site-specific Piermont Cleaners, 50% of Site Area
Construction Worker Screening Levels (RSL) for Soil - Other Construction Activities

ca=Cancer, nc=Noncancer, ca* (Where nc SL < 100 x ca SL),
ca** (Where nc SL < 10 x ca SL), max=SL exceeds ceiling limit (see User's Guide), sat=SL exceeds csat,
Smax=Soil SL exceeds ceiling limit and has been substituted with the max value (see User's Guide),
Ssat=Soil inhalation SL exceeds csat and has been substituted with the csat
CSAT substitution for soil inhalation pathway has been enabled.
Substitution for threshold maximum in soil has been enabled.

Chemical	CAS Number	Mutagen?	VOC?	Applied in Risk Screening Noncarcinogenic SL THI=1 (mg/kg)	Screening Level (mg/kg)
Dichloroethylene, 1,2-cis-	156-59-2	No	Yes	6.79E+03	6.79E+03 sat
Tetrachloroethylene	127-18-4	No	Yes	8.54E+01	8.54E+01 Ssat
Trichloroethylene	79-01-6	Yes	Yes	3.93E+00	3.93E+00 nc
Vinyl Chloride	75-01-4	Yes	Yes	6.27E+01	1.02E+01 ca**

Output generated 11JUL2016:10:51:10

ATTACHMENT D

SENSITIVITY ANALYSIS

CEDARWOOD AND VACANT LOT GROUNDWATER

Table D-1: Exposure Point Concentrations
Peninsula Boulevard OU2, Hempstead, NY

Facility	Matrix	Chem Group	COPC	CASRN	Units	Detection Ratio	Detection Frequency (%)	Max Detect	Qualifier	Location of Max Detect	Detection Limit Range	95% UCL	UCL Method	EPC	EPC Type
Cedarwood	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	17 / 43	40	2600		MW-27D	5 - 1000	581.7	97.5% KM (Chebyshev) UCL	582	UCL
Cedarwood	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	39 / 43	91	65000		ERT-GW-22	5 - 5000	15388	Gamma Adjusted KM-UCL	15388	UCL
Cedarwood	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	29 / 43	67	6300		MW-27D	5 - 1000	1473	Gamma Adjusted KM-UCL	1473	UCL
Cedarwood	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	3 / 43	7	300		MW-27D	0.5 - 1000	34.8	95% KM (t) UCL	35	UCL
Vacant Lot	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	7 / 50	14	6.8		ERT-GW-36	5 - 20000	4.7	95% KM (t) UCL	4.7	UCL
Vacant Lot	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	45 / 52	87	800000		ERT-GW-38	5 - 20000	309334	99% KM (Chebyshev) UCL	309334	UCL
Vacant Lot	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	11 / 50	22	2000		ERT-MW-04D	5 - 20000	383.3	95% KM Approximate Gamma UCL	383	UCL
Vacant Lot	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	2 / 50	4	12		ERT-GW-35	5 - 20000	NA	ProUCL did not calculate UCL	12	Max

Notes:
1. Concentrations are presented in ug/L for groundwater.
2. Upper Confidence Limits (UCLs) are calculated using ProUCL 5.1 with a 95% confidence level and 2,000 bootstrap operations. The maximum of the parent and field duplicate sample results was applied. See Attachment A.
3. The UCL was applied as the EPC, except for when the UCL is greater than the maximum detected concentration, as indicated by the ProUCL output.

Abbreviations:
Chem Group -- Chemical group
COPC -- Contaminants of potential concern
EPC -- Exposure point concentration
KM -- Kaplan Meier
NA -- Not applicable
UCL -- Upper confidence limit

References:
EPA. 2016. ProUCL Version 5.1.00. Last Updated May 18. Available online: https://www.epa.gov/land-research/proucl-software
EPA. 2015. ProUCL Version 5.1 Technical Guide. EPA/600/R-07/041. October. Available online: https://www.epa.gov/sites/production/files/2016-05/documents/proucl_5.1_tech-guide.pdf

Table D-2: Exposure Factors
Peninsula Boulevard OU2, Hempstead, NY

		Current/Future	
		Resident Child [1]	Resident Adult [1,2]
Groundwater Ingestion			
Drinking Rate (L/d)	DR	0.78	2.5
Exposure Frequency (d/yr)	EF	350	350
Exposure Duration (yr)	ED	6	26
Body Weight (kg-bw)	BW	15	80
Averaging Time, canc (d)	AT_c	25,550	25,550
Averaging Time, noncanc (d)	AT_{nc}	2,190	9,490
Groundwater Dermal Contact			
Dose Absorbed (ug/cm^2-event)	DA_{event}	chem-specific	chem-specific
Dermal Permeability Constant (cm/h)	Kp	chem-specific	chem-specific
Fraction Absorbed	FA	chem-specific	chem-specific
Exposure Time for organics (h)	ET	0.54	0.71
Exposure Frequency (d/yr)	EF	350	350
Exposure Duration (yr)	ED	6	26
Body Weight (kg-bw)	BW	15	80
Averaging Time, canc (d)	AT_c	25,550	25,550
Averaging Time, noncanc (d)	AT_{nc}	2,190	9,490
Groundwater Vapor Inhalation			
Andelman Volatilization Factor (L/m^3)	K	0.5	0.5
Exposure Time (h)	ET	24	24
Exposure Frequency (d/yr)	EF	350	350
Exposure Duration (yr)	ED	6	26
Averaging Time, canc (d)	AT_c	25,550	25,550
Averaging Time, noncanc (d)	AT_{nc}	2,190	9,490

Note:

1. The exposure factors for a resident are from the May 2016 USEPA Standard Default Factors in Table 1 of the User's Guide (https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide-may-2016), which reflect the new exposure factors presented in the February 2014 OSWER Directive 9200.1-120 Update of Standard Default Exposure Factors.

2. The exposure duration for an adult is applied as 20 years for the cancer scenario and 26 years for a noncancer scenario, as presented in the May 2016 USEPA RSL equations: https://www.epa.gov/risk/regional-screening-levels-rsls-equations-may-2016

Table D-3: Toxicity Values
Peninsula Boulevard OU2, Hempstead, NY

			Cancer					Noncancer			
Chem Group	COPC	CASRN	Mutagen	Oral Slope Factor (SF_o) $(mg/kg\text{-}day)^{-1}$	GIABS	Dermal Slope Factor $(mg/kg\text{-}day)^{-1}$	Inhalation Unit Risk (IUR) $(ug/m3)^{-1}$	Oral Reference Dose (RfD_o) (mg/kg-day)	GIABS	Dermal Reference Dose (mg/kg-day)	Inhalation Reference Concentration (RfC_i) (mg/m^3)
VOC	cis-1,2-Dichloroethylene	156-59-2	No		1			0.002	1	0.002	
VOC	Tetrachloroethylene	127-18-4	No	0.0021	1	0.0021	0.00000026	0.006	1	0.006	0.04
VOC	Trichloroethylene	79-01-6	Yes	0.046	1	0.046	0.0000041	0.0005	1	0.0005	0.002
VOC	Vinyl chloride	75-01-4	Yes	0.72	1	0.72	0.0000044	0.003	1	0.003	0.1

Abbreviations:
Chem Group -- Chemical group
COPC -- Contaminants of potential concern
NA -- Not available

Notes:
The absorbed RfD for dermal is calculated by the following equation: RfD-oral x GIABS.
The absorbed SFd for dermal is calculated by the following equation: SF-oral / GIABS.

Reference:
USEPA 2016. Regional Screening Level (RSL) Generic Tables. May. Available online: https://www.epa.gov/risk/regional-screening-levels-rsls

Table D-4: Cancer Risks and Noncancer Hazard Quotients in Groundwater Sensitivity Analysis
Cedarwood Cleaners; Peninsula Boulevard OU2, Hempstead, NY

Facility	Matrix	Chem Group	COPC	CASRN	Units	EPC	EPC Type	Groundwater			
								Future Resident			
								USEPA RSL Residential Tapwater		Risk Estimates	
								Cancer	Noncancer	Cancer Risk	Noncancer HQ
Cedarwood	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	5.8E+02	UCL	NA	3.6E+01	No RSL	1.6E+01
Cedarwood	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	1.5E+04	UCL	1.1E+01	4.1E+01	1.4E-03	3.8E+02
Cedarwood	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	1.5E+03	UCL	4.9E-01	2.8E+00	3.0E-03	5.3E+02
Cedarwood	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	3.5E+01	UCL	1.9E-02	4.4E+01	1.8E-03	7.9E-01
Cumulative Risk Estimates for Selected COPCs:										**6.2E-03**	**9.2E+02**

Notes:
1. Concentrations and RSLs are presented in ug/L for groundwater.
2. This sensitivity analysis evaluates groundwater samples collected at Cedarwood Cleaners and does not include groundwater samples collected from Vacant Lot.
3. Groundwater concentrations at Cedarwood Cleaners include concentrations that were historically collected in nearby offsite monitoring well MW-27D/S as part of of the OU1 Remedial Design.
4. The May 2016 USEPA Regional Screening Levels (RSLs) are calculated at a target cancer risk of 1x10-6 and hazard quotient (HQ) of 1.
5. Risk estimates greater than the acceptable range of 1x10-4 to 1x10-6 for cumulative cancer risk and 1 for noncancer HI are shaded bold.

Abbreviations:
Chem Group -- Chemical group
COPC -- Contaminants of potential concern
EPC -- Exposure point concentration
HQ -- Hazard quotient
ND -- Not detected
RSL -- Regional screening level
UCL -- Upper confidence limit
USEPA -- United States Environmental Protection Agency
VOC -- Volatile organic compound

Equations:

$$Cancer\ Risk = \frac{EPC\ *\ 1x10^{-6}}{RSL_c}$$

$$Noncancer\ HQ = \frac{EPC\ *1}{RSL_{nc}}$$

Table D-5: Cancer Risks and Noncancer Hazard Quotients in Groundwater Sensitivity Analysis
Vacant Lot; Peninsula Boulevard OU2, Hempstead, NY

Facility	Matrix	Chem Group	COPC	CASRN	Units	EPC	EPC Type	Groundwater			
								Future Resident			
								USEPA RSL Residential Tapwater		Risk Estimates	
								Cancer	Noncancer	Cancer Risk	Noncancer HQ
Vacant Lot	Groundwater	VOC	cis-1,2-Dichloroethylene	156-59-2	ug/l	4.7E+00	UCL	NA	3.6E+01	No RSL	1.3E-01
Vacant Lot	Groundwater	VOC	Tetrachloroethylene	127-18-4	ug/l	3.1E+05	UCL	1.1E+01	4.1E+01	2.8E-02	7.5E+03
Vacant Lot	Groundwater	VOC	Trichloroethylene	79-01-6	ug/l	3.8E+02	UCL	4.9E-01	2.8E+00	7.8E-04	1.4E+02
Vacant Lot	Groundwater	VOC	Vinyl chloride	75-01-4	ug/l	1.2E+01	Max	1.9E-02	4.4E+01	6.3E-04	2.7E-01
Cumulative Risk Estimates for Selected COPCs:										**3.0E-02**	**7.7E+03**

Notes:
1. Concentrations and RSLs are presented in ug/L for groundwater.
2. This sensitivity analysis evaluates groundwater samples collected at Vacant Lot and does not include groundwater samples collected from Cedarwood Cleaners.
3. The May 2016 USEPA Regional Screening Levels (RSLs) are calculated at a target cancer risk of 1x10-6 and hazard quotient (HQ) of 1.
4. Risk estimates greater than the acceptable range of 1x10-4 to 1x10-6 for cumulative cancer risk and 1 for noncancer HI are shaded bold.

Abbreviations:
Chem Group -- Chemical group
COPC -- Contaminants of potential concern
EPC -- Exposure point concentration
HQ -- Hazard quotient
ND -- Not detected
RSL -- Regional screening level
UCL -- Upper confidence limit
USEPA -- United States Environmental Protection Agency
VOC -- Volatile organic compound

Equations:

$$Cancer\ Risk = \frac{EPC\ *\ 1x10^{-6}}{RSL_c}$$

$$Noncancer\ HQ = \frac{EPC\ *1}{RSL_{nc}}$$

Table D-6: 95% Upper Confidence Limits for COPCs Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Site	Matrix	COPC	UCL	UCL Method	Warning	Sample Count	Detect Count	% Detects
Cedarwood Cleaners	Groundwater	cis-1,2-Dichloroethene	581.7	97.5% KM (Chebyshev) UCL		43	17	40
		Tetrachloroethene	15388	Gamma Adjusted KM-UCL		43	39	91
		Trichloroethene	1473	Gamma Adjusted KM-UCL		43	29	67
		Vinyl Chloride	34.82	95% KM (t) UCL	d	43	3	7
Vacant Lot	Groundwater	cis-1,2-Dichloroethene	4.661	95% KM (t) UCL		50	7	14
		Tetrachloroethene	309334	99% KM (Chebyshev) UCL		52	45	87
		Trichloroethene	383.3	95% KM Approximate Gamma UCL		50	11	22
		Vinyl Chloride	NA	ProUCL did not calculate UCL	b, e	50	2	4

Notes:
1. Concentrations and UCLs for groundwater are presented in units of ug/L.
2. Upper Confidence Limits (UCLs) were calculated using ProUCL 5.1 with a 95% confidence level and 2,000 bootstrap operations.

Abbreviations:
COPC -- Contaminants of potential concern
NA -- Not applicable
UCL -- Upper confidence limit

ProUCL Warnings:
b. Only one distinct data value was detected.
d. Data set has only 3 Detected Values.
e. The data set was not processed.

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

User Selected Options
Date/Time of Computation ProUCL 5.16/24/2016 2:03:53 PM
From File WorkSheet.xls
Full Precision OFF
Confidence Coefficient 95%
Number of Bootstrap Operations 2000

result (cedarwood & groundwater & cis-1,2-dichloroethylene)

General Statistics

Total Number of Observations	43	Number of Distinct Observations	24
Number of Detects	17	Number of Non-Detects	26
Number of Distinct Detects	17	Number of Distinct Non-Detects	7
Minimum Detect	0.96	Minimum Non-Detect	5
Maximum Detect	2600	Maximum Non-Detect	1000
Variance Detects	514796	Percent Non-Detects	60.47%
Mean Detects	312.5	SD Detects	717.5
Median Detects	16	CV Detects	2.296
Skewness Detects	2.543	Kurtosis Detects	6.331
Mean of Logged Detects	2.885	SD of Logged Detects	2.525

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.505	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.47	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	127.5	KM Standard Error of Mean	72.74
KM SD	462.6	95% KM (BCA) UCL	270.5
95% KM (t) UCL	249.8	95% KM (Percentile Bootstrap) UCL	248.8
95% KM (z) UCL	247.1	95% KM Bootstrap t UCL	369.2
90% KM Chebyshev UCL	345.7	95% KM Chebyshev UCL	444.5
97.5% KM Chebyshev UCL	581.7	99% KM Chebyshev UCL	851.2

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.858	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.864	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.353	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.229	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.249	k star (bias corrected MLE)	0.244
Theta hat (MLE)	1257	Theta star (bias corrected MLE)	1281
nu hat (MLE)	8.453	nu star (bias corrected)	8.295
Mean (detects)	312.5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	129.1
Maximum	2600	Median	0.01
SD	468.2	CV	3.626
k hat (MLE)	0.132	k star (bias corrected MLE)	0.139
Theta hat (MLE)	975.8	Theta star (bias corrected MLE)	931.7
nu hat (MLE)	11.38	nu star (bias corrected)	11.92
Adjusted Level of Significance (β)	0.0444		

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Approximate Chi Square Value (11.92, α)	5.174	Adjusted Chi Square Value (11.92, β)	5.02
95% Gamma Approximate UCL (use when n>=50)	297.5	95% Gamma Adjusted UCL (use when n<50)	306.6

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	127.5	SD (KM)	462.6
Variance (KM)	214001	SE of Mean (KM)	72.74
k hat (KM)	0.0759	k star (KM)	0.0861
nu hat (KM)	6.529	nu star (KM)	7.406
theta hat (KM)	1679	theta star (KM)	1480
80% gamma percentile (KM)	69.57	90% gamma percentile (KM)	315.7
95% gamma percentile (KM)	742.6	99% gamma percentile (KM)	2179

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (7.41, α)	2.396	Adjusted Chi Square Value (7.41, β)	2.298
95% Gamma Approximate KM-UCL (use when n>=50)	393.9	95% Gamma Adjusted KM-UCL (use when n<50)	410.7

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.885	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.191	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	127.2	Mean in Log Scale	1.741
SD in Original Scale	468.1	SD in Log Scale	2.114
95% t UCL (assumes normality of ROS data)	247.3	95% Percentile Bootstrap UCL	248.1
95% BCA Bootstrap UCL	307.8	95% Bootstrap t UCL	363.3
95% H-UCL (Log ROS)	185.7		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.733	KM Geo Mean	5.657
KM SD (logged)	2.015	95% Critical H Value (KM-Log)	3.685
KM Standard Error of Mean (logged)	0.37	95% H-UCL (KM -Log)	135.6
KM SD (logged)	2.015	95% Critical H Value (KM-Log)	3.685
KM Standard Error of Mean (logged)	0.37		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	183.4	Mean in Log Scale	3.124
SD in Original Scale	465.4	SD in Log Scale	2.192
95% t UCL (Assumes normality)	302.7	95% H-Stat UCL	954.1

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL 581.7

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (cedarwood & groundwater & tetrachloroethylene)

General Statistics

Total Number of Observations	43	Number of Distinct Observations	39
Number of Detects	39	Number of Non-Detects	4
Number of Distinct Detects	38	Number of Distinct Non-Detects	1

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Minimum Detect	1.2	Minimum Non-Detect	5
Maximum Detect	65000	Maximum Non-Detect	5
Variance Detects	2.134E+8	Percent Non-Detects	9.302%
Mean Detects	11298	SD Detects	14608
Median Detects	5400	CV Detects	1.293
Skewness Detects	1.77	Kurtosis Detects	3.535
Mean of Logged Detects	7.504	SD of Logged Detects	2.988

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.778	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.22	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	10248	KM Standard Error of Mean	2181
KM SD	14119	95% KM (BCA) UCL	13925
95% KM (t) UCL	13916	95% KM (Percentile Bootstrap) UCL	14002
95% KM (z) UCL	13835	95% KM Bootstrap t UCL	14621
90% KM Chebyshev UCL	16791	95% KM Chebyshev UCL	19755
97.5% KM Chebyshev UCL	23870	99% KM Chebyshev UCL	31951

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.543	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.843	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0872	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.152	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.365	k star (bias corrected MLE)	0.354
Theta hat (MLE)	30941	Theta star (bias corrected MLE)	31902
nu hat (MLE)	28.48	nu star (bias corrected)	27.62
Mean (detects)	11298		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.2	Mean	10321
Maximum	65000	Median	4200
SD	14234	CV	1.379
k hat (MLE)	0.368	k star (bias corrected MLE)	0.357
Theta hat (MLE)	28083	Theta star (bias corrected MLE)	28880
nu hat (MLE)	31.61	nu star (bias corrected)	30.74
Adjusted Level of Significance (β)	0.0444		
Approximate Chi Square Value (30.74, α)	19.07	Adjusted Chi Square Value (30.74, β)	18.75
95% Gamma Approximate UCL (use when n>=50)	16633	95% Gamma Adjusted UCL (use when n<50)	16917

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	10248	SD (KM)	14119
Variance (KM)	1.993E+8	SE of Mean (KM)	2181
k hat (KM)	0.527	k star (KM)	0.506
nu hat (KM)	45.3	nu star (KM)	43.48
theta hat (KM)	19453	theta star (KM)	20271
80% gamma percentile (KM)	16838	90% gamma percentile (KM)	27662
95% gamma percentile (KM)	39211	99% gamma percentile (KM)	67584

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (43.48, α)	29.36	Adjusted Chi Square Value (43.48, β)	28.95
95% Gamma Approximate KM-UCL (use when n>=50)	15176	95% Gamma Adjusted KM-UCL (use when n<50)	15388

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.863	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.939	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.184	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	10248	Mean in Log Scale	6.991
SD in Original Scale	14286	SD in Log Scale	3.281
95% t UCL (assumes normality of ROS data)	13912	95% Percentile Bootstrap UCL	13995
95% BCA Bootstrap UCL	14122	95% Bootstrap t UCL	14691
95% H-UCL (Log ROS)	4004565		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	6.872	KM Geo Mean	964.9
KM SD (logged)	3.436	95% Critical H Value (KM-Log)	5.826
KM Standard Error of Mean (logged)	0.533	95% H-UCL (KM -Log)	7759565
KM SD (logged)	3.436	95% Critical H Value (KM-Log)	5.826
KM Standard Error of Mean (logged)	0.533		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	10248	Mean in Log Scale	6.891
SD in Original Scale	14286	SD in Log Scale	3.439
95% t UCL (Assumes normality)	13912	95% H-Stat UCL	8033156

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 15388

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (cedarwood & groundwater & trichloroethylene)

General Statistics

Total Number of Observations	43	Number of Distinct Observations	31
Number of Detects	29	Number of Non-Detects	14
Number of Distinct Detects	28	Number of Distinct Non-Detects	4
Minimum Detect	0.78	Minimum Non-Detect	5
Maximum Detect	6300	Maximum Non-Detect	500
Variance Detects	3159738	Percent Non-Detects	32.56%
Mean Detects	1253	SD Detects	1778
Median Detects	330	CV Detects	1.418
Skewness Detects	1.515	Kurtosis Detects	1.307
Mean of Logged Detects	5.522	SD of Logged Detects	2.333

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.734	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.926	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.29	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.161	Detected Data Not Normal at 5% Significance Level

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	849.5	KM Standard Error of Mean	240.3
KM SD	1548	95% KM (BCA) UCL	1288
95% KM (t) UCL	1254	95% KM (Percentile Bootstrap) UCL	1257
95% KM (z) UCL	1245	95% KM Bootstrap t UCL	1421
90% KM Chebyshev UCL	1570	95% KM Chebyshev UCL	1897
97.5% KM Chebyshev UCL	2350	99% KM Chebyshev UCL	3240

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.45	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.832	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.119	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.174	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.407	k star (bias corrected MLE)	0.388
Theta hat (MLE)	3079	Theta star (bias corrected MLE)	3231
nu hat (MLE)	23.61	nu star (bias corrected)	22.5
Mean (detects)	1253		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	845.3
Maximum	6300	Median	74
SD	1568	CV	1.855
k hat (MLE)	0.167	k star (bias corrected MLE)	0.171
Theta hat (MLE)	5047	Theta star (bias corrected MLE)	4935
nu hat (MLE)	14.4	nu star (bias corrected)	14.73
Adjusted Level of Significance (β)	0.0444		
Approximate Chi Square Value (14.73, α)	7.075	Adjusted Chi Square Value (14.73, β)	6.89
95% Gamma Approximate UCL (use when n>=50)	1760	95% Gamma Adjusted UCL (use when n<50)	1807

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	849.5	SD (KM)	1548
Variance (KM)	2395931	SE of Mean (KM)	240.3
k hat (KM)	0.301	k star (KM)	0.296
nu hat (KM)	25.9	nu star (KM)	25.43
theta hat (KM)	2821	theta star (KM)	2873
80% gamma percentile (KM)	1298	90% gamma percentile (KM)	2510
95% gamma percentile (KM)	3904	99% gamma percentile (KM)	7534

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (25.43, α)	14.94	Adjusted Chi Square Value (25.43, β)	14.66
95% Gamma Approximate KM-UCL (use when n>=50)	1446	95% Gamma Adjusted KM-UCL (use when n<50)	1473

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.926	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0972	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.161	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	847.9	Mean in Log Scale	4.169

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

SD in Original Scale	1567	SD in Log Scale	2.85
95% t UCL (assumes normality of ROS data)	1250	95% Percentile Bootstrap UCL	1253
95% BCA Bootstrap UCL	1348	95% Bootstrap t UCL	1366
95% H-UCL (Log ROS)	32679		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	4.07	KM Geo Mean	58.57
KM SD (logged)	2.926	95% Critical H Value (KM-Log)	5.041
KM Standard Error of Mean (logged)	0.505	95% H-UCL (KM -Log)	41200
KM SD (logged)	2.926	95% Critical H Value (KM-Log)	5.041
KM Standard Error of Mean (logged)	0.505		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	857.8	Mean in Log Scale	4.349
SD in Original Scale	1562	SD in Log Scale	2.74
95% t UCL (Assumes normality)	1258	95% H-Stat UCL	24668

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 1473

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (cedarwood & groundwater & vinyl chloride)

General Statistics

Total Number of Observations	43	Number of Distinct Observations	13
Number of Detects	3	Number of Non-Detects	40
Number of Distinct Detects	3	Number of Distinct Non-Detects	10
Minimum Detect	79	Minimum Non-Detect	0.5
Maximum Detect	300	Maximum Non-Detect	1000
Variance Detects	14317	Percent Non-Detects	93.02%
Mean Detects	163	SD Detects	119.7
Median Detects	110	CV Detects	0.734
Skewness Detects	1.602	Kurtosis Detects	N/A
Mean of Logged Detects	4.925	SD of Logged Detects	0.695

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.338	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	15.69	KM Standard Error of Mean	11.38
KM SD	54.02	95% KM (BCA) UCL	N/A
95% KM (t) UCL	34.82	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	34.4	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	49.82	95% KM Chebyshev UCL	65.28
97.5% KM Chebyshev UCL	86.73	99% KM Chebyshev UCL	128.9

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	3.112	k star (bias corrected MLE)	N/A
Theta hat (MLE)	52.38	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	18.67	nu star (bias corrected)	N/A
Mean (detects)	163		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	11.38
Maximum	300	Median	0.01
SD	49.47	CV	4.346
k hat (MLE)	0.124	k star (bias corrected MLE)	0.131
Theta hat (MLE)	91.85	Theta star (bias corrected MLE)	87.04
nu hat (MLE)	10.66	nu star (bias corrected)	11.25
Adjusted Level of Significance (β)	0.0444		
Approximate Chi Square Value (11.25, α)	4.735	Adjusted Chi Square Value (11.25, β)	4.588
95% Gamma Approximate UCL (use when n>=50)	27.03	95% Gamma Adjusted UCL (use when n<50)	N/A

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	15.69	SD (KM)	54.02
Variance (KM)	2918	SE of Mean (KM)	11.38
k hat (KM)	0.0843	k star (KM)	0.094
nu hat (KM)	7.253	nu star (KM)	8.081
theta hat (KM)	186	theta star (KM)	167
80% gamma percentile (KM)	9.906	90% gamma percentile (KM)	40.62
95% gamma percentile (KM)	91.31	99% gamma percentile (KM)	257

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (8.08, α)	2.782	Adjusted Chi Square Value (8.08, β)	2.675
95% Gamma Approximate KM-UCL (use when n>=50)	45.57	95% Gamma Adjusted KM-UCL (use when n<50)	47.4

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.293	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	20.26	Mean in Log Scale	2.002
SD in Original Scale	48.27	SD in Log Scale	1.294
95% t UCL (assumes normality of ROS data)	32.64	95% Percentile Bootstrap UCL	34.2
95% BCA Bootstrap UCL	39.76	95% Bootstrap t UCL	55.18
95% H-UCL (Log ROS)	29.34		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.13	KM Geo Mean	0.878
KM SD (logged)	1.683	95% Critical H Value (KM-Log)	3.219
KM Standard Error of Mean (logged)	0.379	95% H-UCL (KM -Log)	8.339
KM SD (logged)	1.683	95% Critical H Value (KM-Log)	3.219
KM Standard Error of Mean (logged)	0.379		

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	84.64	Mean in Log Scale	3.097
SD in Original Scale	112.2	SD in Log Scale	2.04
95% t UCL (Assumes normality)	113.4	95% H-Stat UCL	571.8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 34.82

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (vacant & groundwater & cis-1,2-dichloroethylene)

General Statistics

Total Number of Observations	50	Number of Distinct Observations	20
Number of Detects	7	Number of Non-Detects	43
Number of Distinct Detects	7	Number of Distinct Non-Detects	13
Minimum Detect	2.9	Minimum Non-Detect	5
Maximum Detect	6.8	Maximum Non-Detect	20000
Variance Detects	1.942	Percent Non-Detects	86%
Mean Detects	4.829	SD Detects	1.394
Median Detects	4.6	CV Detects	0.289
Skewness Detects	0.262	Kurtosis Detects	-0.907
Mean of Logged Detects	1.538	SD of Logged Detects	0.297

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.96	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.156	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.098	KM Standard Error of Mean	0.336
KM SD	0.925	95% KM (BCA) UCL	4.672
95% KM (t) UCL	4.661	95% KM (Percentile Bootstrap) UCL	4.687
95% KM (z) UCL	4.651	95% KM Bootstrap t UCL	4.739
90% KM Chebyshev UCL	5.107	95% KM Chebyshev UCL	5.564
97.5% KM Chebyshev UCL	6.198	99% KM Chebyshev UCL	7.444

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.193	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.708	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.167	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.312	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	13.7	k star (bias corrected MLE)	7.925
Theta hat (MLE)	0.352	Theta star (bias corrected MLE)	0.609
nu hat (MLE)	191.8	nu star (bias corrected)	111
Mean (detects)	4.829		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.287	Mean	4.033
Maximum	6.8	Median	3.968
SD	0.862	CV	0.214
k hat (MLE)	23.14	k star (bias corrected MLE)	21.77
Theta hat (MLE)	0.174	Theta star (bias corrected MLE)	0.185
nu hat (MLE)	2314	nu star (bias corrected)	2177
Adjusted Level of Significance (β)	0.0452		
Approximate Chi Square Value (N/A, α)	2069	Adjusted Chi Square Value (N/A, β)	2066
95% Gamma Approximate UCL (use when n>=50)	4.242	95% Gamma Adjusted UCL (use when n<50)	4.249

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.098	SD (KM)	0.925
Variance (KM)	0.855	SE of Mean (KM)	0.336
k hat (KM)	19.63	k star (KM)	18.46
nu hat (KM)	1963	nu star (KM)	1846
theta hat (KM)	0.209	theta star (KM)	0.222
80% gamma percentile (KM)	4.871	90% gamma percentile (KM)	5.357
95% gamma percentile (KM)	5.782	99% gamma percentile (KM)	6.636

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	1748	Adjusted Chi Square Value (N/A, β)	1745
95% Gamma Approximate KM-UCL (use when n>=50)	4.329	95% Gamma Adjusted KM-UCL (use when n<50)	4.336

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.144	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.017	Mean in Log Scale	1.371
SD in Original Scale	0.832	SD in Log Scale	0.2
95% t UCL (assumes normality of ROS data)	4.214	95% Percentile Bootstrap UCL	4.214
95% BCA Bootstrap UCL	4.223	95% Bootstrap t UCL	4.226
95% H-UCL (Log ROS)	4.231		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.386	KM Geo Mean	4
KM SD (logged)	0.218	95% Critical H Value (KM-Log)	1.823
KM Standard Error of Mean (logged)	0.0886	95% H-UCL (KM -Log)	4.335
KM SD (logged)	0.218	95% Critical H Value (KM-Log)	1.823
KM Standard Error of Mean (logged)	0.0886		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	712.5	Mean in Log Scale	3.077
SD in Original Scale	2087	SD in Log Scale	2.781
95% t UCL (Assumes normality)	1207	95% H-Stat UCL	6859

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	4.661

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (vacant & groundwater & tetrachloroethylene)

General Statistics

Total Number of Observations	52	Number of Distinct Observations	43
Number of Detects	45	Number of Non-Detects	7
Number of Distinct Detects	42	Number of Distinct Non-Detects	1
Minimum Detect	2	Minimum Non-Detect	5
Maximum Detect	800000	Maximum Non-Detect	5
Variance Detects	3.629E+10	Percent Non-Detects	13.46%
Mean Detects	72126	SD Detects	190496
Median Detects	480	CV Detects	2.641
Skewness Detects	3.172	Kurtosis Detects	9.096
Mean of Logged Detects	6.515	SD of Logged Detects	4.33

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.426	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.945	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.377	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.131	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	62417	KM Standard Error of Mean	24816
KM SD	176951	95% KM (BCA) UCL	108574
95% KM (t) UCL	103991	95% KM (Percentile Bootstrap) UCL	103771
95% KM (z) UCL	103236	95% KM Bootstrap t UCL	127463
90% KM Chebyshev UCL	136865	95% KM Chebyshev UCL	170588
97.5% KM Chebyshev UCL	217393	99% KM Chebyshev UCL	309334

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.164	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.947	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.213	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.148	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.163	k star (bias corrected MLE)	0.167
Theta hat (MLE)	443597	Theta star (bias corrected MLE)	433011
nu hat (MLE)	14.63	nu star (bias corrected)	14.99
Mean (detects)	72126		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	62417
Maximum	800000	Median	32
SD	178678	CV	2.863
k hat (MLE)	0.13	k star (bias corrected MLE)	0.135
Theta hat (MLE)	479430	Theta star (bias corrected MLE)	460644
nu hat (MLE)	13.54	nu star (bias corrected)	14.09
Adjusted Level of Significance (β)	0.0454		
Approximate Chi Square Value (14.09, α)	6.634	Adjusted Chi Square Value (14.09, β)	6.488
95% Gamma Approximate UCL (use when n>=50)	132579	95% Gamma Adjusted UCL (use when n<50)	135569

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	62417	SD (KM)	176951
Variance (KM)	3.131E+10	SE of Mean (KM)	24816
k hat (KM)	0.124	k star (KM)	0.13
nu hat (KM)	12.94	nu star (KM)	13.53
theta hat (KM)	501654	theta star (KM)	479892
80% gamma percentile (KM)	59661	90% gamma percentile (KM)	180416
95% gamma percentile (KM)	352182	99% gamma percentile (KM)	866381

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (13.53, α)	6.249	Adjusted Chi Square Value (13.53, β)	6.107
95% Gamma Approximate KM-UCL (use when n>=50)	135117	95% Gamma Adjusted KM-UCL (use when n<50)	138246

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.874	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.945	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.197	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.131	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	62417	Mean in Log Scale	5.655
SD in Original Scale	178678	SD in Log Scale	4.628
95% t UCL (assumes normality of ROS data)	103928	95% Percentile Bootstrap UCL	105034
95% BCA Bootstrap UCL	121324	95% Bootstrap t UCL	129532
95% H-UCL (Log ROS)	1.610E+9		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	5.794	KM Geo Mean	328.4
KM SD (logged)	4.384	95% Critical H Value (KM-Log)	7.091
KM Standard Error of Mean (logged)	0.615	95% H-UCL (KM -Log)	3.813E+8
KM SD (logged)	4.384	95% Critical H Value (KM-Log)	7.091
KM Standard Error of Mean (logged)	0.615		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	62417	Mean in Log Scale	5.761
SD in Original Scale	178678	SD in Log Scale	4.461
95% t UCL (Assumes normality)	103928	95% H-Stat UCL	6.006E+8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

99% KM (Chebyshev) UCL 309334

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (vacant & groundwater & trichloroethylene)

General Statistics

Total Number of Observations	50	Number of Distinct Observations	18
Number of Detects	11	Number of Non-Detects	39
Number of Distinct Detects	10	Number of Distinct Non-Detects	10
Minimum Detect	3.2	Minimum Non-Detect	5
Maximum Detect	2000	Maximum Non-Detect	20000
Variance Detects	688624	Percent Non-Detects	78%

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Mean Detects	657.9	SD Detects	829.8
Median Detects	110	CV Detects	1.261
Skewness Detects	0.74	Kurtosis Detects	-1.505
Mean of Logged Detects	4.627	SD of Logged Detects	2.56

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.756	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.291	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	173.5	KM Standard Error of Mean	79.31
KM SD	493.3	95% KM (BCA) UCL	309.1
95% KM (t) UCL	306.4	95% KM (Percentile Bootstrap) UCL	305.7
95% KM (z) UCL	303.9	95% KM Bootstrap t UCL	379.9
90% KM Chebyshev UCL	411.4	95% KM Chebyshev UCL	519.2
97.5% KM Chebyshev UCL	668.8	99% KM Chebyshev UCL	962.6

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.818	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.808	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.265	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.274	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.36	k star (bias corrected MLE)	0.322
Theta hat (MLE)	1829	Theta star (bias corrected MLE)	2042
nu hat (MLE)	7.911	nu star (bias corrected)	7.087
Mean (detects)	657.9		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	146
Maximum	2000	Median	0.01
SD	464.8	CV	3.184
k hat (MLE)	0.109	k star (bias corrected MLE)	0.116
Theta hat (MLE)	1342	Theta star (bias corrected MLE)	1263
nu hat (MLE)	10.88	nu star (bias corrected)	11.56
Adjusted Level of Significance (β)	0.0452		
Approximate Chi Square Value (11.56, α)	4.94	Adjusted Chi Square Value (11.56, β)	4.811
95% Gamma Approximate UCL (use when n>=50)	341.7	95% Gamma Adjusted UCL (use when n<50)	350.8

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	173.5	SD (KM)	493.3
Variance (KM)	243321	SE of Mean (KM)	79.31
k hat (KM)	0.124	k star (KM)	0.13
nu hat (KM)	12.37	nu star (KM)	12.96
theta hat (KM)	1403	theta star (KM)	1339
80% gamma percentile (KM)	165.2	90% gamma percentile (KM)	500.9
95% gamma percentile (KM)	979.3	99% gamma percentile (KM)	2413

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (12.96, α)	5.863	Adjusted Chi Square Value (12.96, β)	5.722
95% Gamma Approximate KM-UCL (use when n>=50)	383.3	95% Gamma Adjusted KM-UCL (use when n<50)	392.8

Table D-7: ProUCL Output Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

UCL Statistics for Data Sets with Non-Detects

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.848	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.244	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	147.2	Mean in Log Scale	0.897
SD in Original Scale	464.3	SD in Log Scale	2.927
95% t UCL (assumes normality of ROS data)	257.3	95% Percentile Bootstrap UCL	261.9
95% BCA Bootstrap UCL	283.1	95% Bootstrap t UCL	327.2
95% H-UCL (Log ROS)	1423		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	2.094	KM Geo Mean	8.114
KM SD (logged)	1.968	95% Critical H Value (KM-Log)	3.575
KM Standard Error of Mean (logged)	0.32	95% H-UCL (KM -Log)	153.6
KM SD (logged)	1.968	95% Critical H Value (KM-Log)	3.575
KM Standard Error of Mean (logged)	0.32		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	779.2	Mean in Log Scale	3.18
SD in Original Scale	2086	SD in Log Scale	2.916
95% t UCL (Assumes normality)	1274	95% H-Stat UCL	13300

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Approximate Gamma UCL 383.3

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

result (vacant & groundwater & vinyl chloride)

General Statistics

Total Number of Observations	50	Number of Distinct Observations	13
Number of Detects	2	Number of Non-Detects	48
Number of Distinct Detects	1	Number of Distinct Non-Detects	12

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).

The data set for variable result (vacant & groundwater & vinyl chloride) was not processed!

Table D-8: ProUCL Data Input Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0930	2/23/2016	27.5	29.5	5	0	U	5	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0935	2/23/2016	71.5	73.5	5	0	U	5	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0232	2/4/2015	28	32	200	0	U	200	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	MW-27S-20131219	12/19/2013	25	25	16	1			ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	MW-27S-20130516	5/16/2013	25	25	0.96	1			ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0925	2/23/2016	31.5	33.5	500	0	U	500	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	MW-27D-20131219	12/19/2013	70	70	1200	1			ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0933	2/23/2016	36.5	38.5	5	0	U	5	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	MW-27D-20130516	5/16/2013	70	70	1300	1			ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0932	2/23/2016	65.5	67.5	500	0	U	500	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	GW-MW27S-25_07182012	7/18/2012	25	25	1.2	1			ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	GW-MW27D-70_07182012	7/18/2012	70	70	2600	1			ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0233	2/4/2015	22	26	50	0	U	50	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	149-1007	2/9/2012	15	15	5	0	U	5	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0934	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0916	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0929	2/23/2016	32.5	34.5	5	0	U	5	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0917	2/22/2016	26.5	28.5	25	0	U	25	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0918	2/22/2016	30	30	250	0	U	5	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0928	2/23/2016	66.5	68.5	500	0	U	500	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0919	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0927	2/23/2016	71.5	73.5	500	0	U	500	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0920	2/22/2016	26.5	28.5	25	0	U	25	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0921	2/22/2016	69.5	71.5	250	0	U	250	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0926	2/23/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0922	2/22/2016	64.5	66.5	50	0	U	50	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0931	2/23/2016	70.5	72.5	500	0	U	500	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	149-1006	2/9/2012	14.8	14.8	5	0	U	5	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0248	2/5/2015	36	40	24	1	J	50	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0245	2/5/2015	36	40	40	1	J	100	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0211	10/2/2014	34	38	1000	0	U	1000	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0246	2/5/2015	28	32	3.9	1	J	50	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0212	10/2/2014	29	33	22	1	J	500	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0231	2/4/2015	36	40	42	1	J	200	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0213	10/2/2014	22	26	50	0	U	50	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0236	2/4/2015	22	26	1.4	1	J	10	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0249	2/5/2015	28	32	200	0	U	200	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0235	2/4/2015	28	32	5.1	1	J	100	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0250	2/5/2015	22	26	1.6	1	J	25	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0247	2/5/2015	22	26	1.3	1	J	10	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	149-1001	2/6/2012	18	18	13.3	1			ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0234	2/4/2015	36	40	39	1	J	100	ug/l
Cedarwood & Groundwater & cis-1,2-Dichloroethylene	PB-0936	2/23/2016	66.5	68.5	5	0	U	5	ug/l

Table D-8: ProUCL Data Input Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Groundwater & Tetrachloroethylene	PB-0918	2/22/2016	30	30	7600	1		250	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0247	2/5/2015	22	26	2700	1	D	100	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0248	2/5/2015	36	40	8500	1	D	500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0919	2/22/2016	31.5	33.5	5400	1		250	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0920	2/22/2016	26.5	28.5	430	1		25	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0921	2/22/2016	69.5	71.5	1700	1		250	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0250	2/5/2015	22	26	4400	1	D	250	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0922	2/22/2016	64.5	66.5	830	1		50	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0925	2/23/2016	31.5	33.5	2500	1		500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0249	2/5/2015	28	32	34000	1	D	2000	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0211	10/2/2014	34	38	65000	1		5000	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0233	2/4/2015	22	26	3100	1	D	500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0235	2/4/2015	28	32	6400	1	D	500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0232	2/4/2015	28	32	16000	1	D	1000	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	MW-27S-20131219	12/19/2013	25	25	5	0	U	5	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0236	2/4/2015	22	26	930	1	D	250	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	MW-27D-20131219	12/19/2013	70	70	36000	1			ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0246	2/5/2015	28	32	10000	1	D	500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	MW-27D-20130516	5/16/2013	70	70	22000	1			ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0917	2/22/2016	26.5	28.5	380	1		25	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	GW-MW27S-25_07182012	7/18/2012	25	25	1.2	1			ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0245	2/5/2015	36	40	30000	1	E	100	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	GW-MW27D-70_07182012	7/18/2012	70	70	31000	1			ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0234	2/4/2015	36	40	4200	1	D	500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	149-1007	2/9/2012	15	15	3.48	1	J		ug/l
Cedarwood & Groundwater & Tetrachloroethylene	MW-27S-20130516	5/16/2013	25	25	39	1			ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0916	2/22/2016	31.5	33.5	8000	1		250	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	149-1001	2/6/2012	18	18	266	1			ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0930	2/23/2016	27.5	29.5	9.8	1		5	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0213	10/2/2014	22	26	6100	1		250	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0929	2/23/2016	32.5	34.5	9.9	1		5	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0933	2/23/2016	36.5	38.5	9.9	1		5	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0231	2/4/2015	36	40	23000	1	D	1000	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0928	2/23/2016	66.5	68.5	24000	1		2500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0212	10/2/2014	29	33	38000	1		2500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0934	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	149-1006	2/9/2012	14.8	14.8	5	0	U	5	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0935	2/23/2016	71.5	73.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0932	2/23/2016	65.5	67.5	20000	1		500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0926	2/23/2016	26.5	28.5	110	1		5	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0931	2/23/2016	70.5	72.5	15000	1		2500	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0936	2/23/2016	66.5	68.5	14	1		5	ug/l
Cedarwood & Groundwater & Tetrachloroethylene	PB-0927	2/23/2016	71.5	73.5	13000	1		500	ug/l

Table D-8: ProUCL Data Input Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Groundwater & Trichloroethylene	GW-MW27S-25_07182012	7/18/2012	25	25	0.78	1			ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0932	2/23/2016	65.5	67.5	3500	1		500	ug/l
Cedarwood & Groundwater & Trichloroethylene	MW-27D-20130516	5/16/2013	70	70	4000	1			ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0249	2/5/2015	28	32	930	1		200	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0250	2/5/2015	22	26	93	1		25	ug/l
Cedarwood & Groundwater & Trichloroethylene	MW-27D-20131219	12/19/2013	70	70	4800	1			ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0232	2/4/2015	28	32	200	1	J	200	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0211	10/2/2014	34	38	640	1	J	1000	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0931	2/23/2016	70.5	72.5	4600	1		500	ug/l
Cedarwood & Groundwater & Trichloroethylene	MW-27S-20130516	5/16/2013	25	25	4.9	1			ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0236	2/4/2015	22	26	20	1		10	ug/l
Cedarwood & Groundwater & Trichloroethylene	MW-27S-20131219	12/19/2013	25	25	5	0	U	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0231	2/4/2015	36	40	1600	1		200	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0934	2/23/2016	31.5	33.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0235	2/4/2015	28	32	74	1	J	100	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0936	2/23/2016	66.5	68.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0234	2/4/2015	36	40	450	1		100	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0935	2/23/2016	71.5	73.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0233	2/4/2015	22	26	88	1		50	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0933	2/23/2016	36.5	38.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0917	2/22/2016	26.5	28.5	25	0	U	25	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0920	2/22/2016	26.5	28.5	46	1		25	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0212	10/2/2014	29	33	330	1	J	500	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0919	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0246	2/5/2015	28	32	200	1		50	ug/l
Cedarwood & Groundwater & Trichloroethylene	GW-MW27D-70_07182012	7/18/2012	70	70	6300	1			ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0921	2/22/2016	69.5	71.5	500	1		250	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0928	2/23/2016	66.5	68.5	2700	1		500	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0918	2/22/2016	30	30	10	1	L	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0926	2/23/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0925	2/23/2016	31.5	33.5	500	0	U	500	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0927	2/23/2016	71.5	73.5	2300	1		500	ug/l
Cedarwood & Groundwater & Trichloroethylene	149-1006	2/9/2012	14.8	14.8	5	0	U	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0916	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Groundwater & Trichloroethylene	149-1007	2/9/2012	15	15	5	0	U	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0248	2/5/2015	36	40	610	1		50	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0929	2/23/2016	32.5	34.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0213	10/2/2014	22	26	26	1	J	50	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0922	2/22/2016	64.5	66.5	130	1		50	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0245	2/5/2015	36	40	2100	1		100	ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0247	2/5/2015	22	26	80	1		10	ug/l
Cedarwood & Groundwater & Trichloroethylene	149-1001	2/6/2012	18	18	13.8	1			ug/l
Cedarwood & Groundwater & Trichloroethylene	PB-0930	2/23/2016	27.5	29.5	5	0	U	5	ug/l

Table D-8: ProUCL Data Input Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Cedarwood & Groundwater & Vinyl chloride	PB-0245	2/5/2015	36	40	100	0	U	100	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0231	2/4/2015	36	40	200	0	U	200	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0936	2/23/2016	66.5	68.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0234	2/4/2015	36	40	100	0	U	100	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0235	2/4/2015	28	32	100	0	U	100	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0246	2/5/2015	28	32	50	0	U	50	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0236	2/4/2015	22	26	10	0	U	10	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0925	2/23/2016	31.5	33.5	500	0	U	500	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0247	2/5/2015	22	26	10	0	U	10	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0249	2/5/2015	28	32	200	0	U	200	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0211	10/2/2014	34	38	1000	0	U	1000	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0248	2/5/2015	36	40	50	0	U	50	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0250	2/5/2015	22	26	25	0	U	25	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0213	10/2/2014	22	26	50	0	U	50	ug/l
Cedarwood & Groundwater & Vinyl chloride	149-1001	2/6/2012	18	18	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	MW-27S-20131219	12/19/2013	25	25	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0917	2/22/2016	26.5	28.5	25	0	U	25	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0933	2/23/2016	36.5	38.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	MW-27D-20130516	5/16/2013	70	70	79	1			ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0932	2/23/2016	65.5	67.5	500	0	U	500	ug/l
Cedarwood & Groundwater & Vinyl chloride	GW-MW27D-70_07182012	7/18/2012	70	70	300	1			ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0931	2/23/2016	70.5	72.5	500	0	U	500	ug/l
Cedarwood & Groundwater & Vinyl chloride	149-1007	2/9/2012	15	15	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0930	2/23/2016	27.5	29.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	149-1006	2/9/2012	14.8	14.8	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	MW-27D-20131219	12/19/2013	70	70	110	1			ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0929	2/23/2016	32.5	34.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	GW-MW27S-25_07182012	7/18/2012	25	25	0.5	0	U	0.5	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0918	2/22/2016	30	30	250	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0928	2/23/2016	66.5	68.5	500	0	U	500	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0919	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0927	2/23/2016	71.5	73.5	500	0	U	500	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0920	2/22/2016	26.5	28.5	25	0	U	25	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0926	2/23/2016	26.5	28.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0921	2/22/2016	69.5	71.5	250	0	U	250	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0922	2/22/2016	64.5	66.5	50	0	U	50	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0916	2/22/2016	31.5	33.5	250	0	U	250	ug/l
Cedarwood & Groundwater & Vinyl chloride	MW-27S-20130516	5/16/2013	25	25	0.5	0	U	0.5	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0233	2/4/2015	22	26	50	0	U	50	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0232	2/4/2015	28	32	200	0	U	200	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0212	10/2/2014	29	33	500	0	U	500	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0935	2/23/2016	71.5	73.5	5	0	U	5	ug/l
Cedarwood & Groundwater & Vinyl chloride	PB-0934	2/23/2016	31.5	33.5	5	0	U	5	ug/l

Table D-8: ProUCL Data Input Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0223	2/4/2015	41	45	5000	0	U	1000	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0286	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0279	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0257	4/27/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0266	4/28/2015	36	40	20000	0	U	20000	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0284	4/29/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0911	2/22/2016	25	27	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0226	2/4/2015	36	40	1000	0	U	1000	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0265	4/28/2015	41	45	4.2	1	J	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0283	4/29/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0914	2/22/2016	71.5	73.5	2500	0	U	2500	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0253	4/27/2015	28	32	10000	0	U	10000	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0272	4/28/2015	41	45	5.1	1		5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0904	2/22/2016	65.5	67.5	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0269	4/28/2015	41	45	6.8	1		5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0256	4/27/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0915	2/22/2016	66.5	68.5	1000	0	U	1000	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0282	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0280	4/29/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0270	4/28/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0229	2/4/2015	28	32	200	0	U	200	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0281	4/29/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0905	2/22/2016	24	26	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0907	2/22/2016	69.5	71.5	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0271	4/28/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0230	2/4/2015	22	26	50	0	U	50	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0289	4/29/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0906	2/22/2016	68	70	250	0	U	250	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0260	4/27/2015	36	40	4.6	1	J	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0228	2/4/2015	36	40	2000	0	U	2000	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0252	4/27/2015	36	40	2500	0	U	2500	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0277	4/29/2015	36	40	20000	0	U	20000	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0902	2/22/2016	31.5	33.5	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0261	4/27/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0274	4/28/2015	28	32	100	0	U	100	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0255	4/27/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0912	2/22/2016	28.5	30.5	1000	0	U	1000	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0901	2/22/2016	26.5	28.5	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0262	4/28/2015	41	45	6.4	1	J	13	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0903	2/22/2016	60.5	62.5	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0227	2/4/2015	28	32	250	0	U	250	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0267	4/28/2015	28	32	2.9	1	J	2000	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0251	4/27/2015	41	45	2000	0	U	2000	ug/l

Table D-8: ProUCL Data Input Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0263	4/28/2015	0	0	2500	0	U	2500	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0913	2/22/2016	23.5	25.5	500	0	U	500	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0908	2/22/2016	64.5	66.5	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0259	4/27/2015	41	45	3.8	1	J	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0264	4/28/2015	0	0	13	0	U	13	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0288	4/29/2015	0	0	5	0	U	5	ug/l
Vacant & Groundwater & cis-1,2-Dichloroethylene	PB-0273	4/28/2015	36	40	200	0	U	200	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0279	4/29/2015	41	45	24	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0280	4/29/2015	36	40	17	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0907	2/22/2016	69.5	71.5	10	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0906	2/22/2016	68	70	9200	1		250	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0278	4/29/2015	28	32	8200	1	J	250	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0288	4/29/2015	0	0	4	1	J	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0277	4/29/2015	36	40	800000	1		20000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0903	2/22/2016	60.5	62.5	5	0	U	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0911	2/22/2016	25	27	29	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0902	2/22/2016	31.5	33.5	5	0	U	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0912	2/22/2016	28.5	30.5	20000	1		1000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0913	2/22/2016	23.5	25.5	11000	1		500	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0901	2/22/2016	26.5	28.5	5	0	U	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0914	2/22/2016	71.5	73.5	22000	1		2500	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0904	2/22/2016	65.5	67.5	5	0	U	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0281	4/29/2015	28	32	7.2	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0286	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0908	2/22/2016	64.5	66.5	9.3	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0284	4/29/2015	28	32	2	1	J	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0905	2/22/2016	24	26	5	0	U	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0283	4/29/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0915	2/22/2016	66.5	68.5	20000	1		1000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0282	4/29/2015	41	45	5.2	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0289	4/29/2015	28	32	2.2	1	J	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0276	4/29/2015	41	45	690000	1	J	20000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0252	4/27/2015	36	40	78000	1		2500	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0270	4/28/2015	36	40	4.8	1	J	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0264	4/28/2015	0	0	480	1		13	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0223	2/4/2015	41	45	55000	1	D	5000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0263	4/28/2015	0	0	74000	1		2500	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0269	4/28/2015	41	45	140	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0229	2/4/2015	28	32	12000	1	D	1000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0226	2/4/2015	36	40	73000	1	D	5000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0267	4/28/2015	28	32	57000	1		2000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0259	4/27/2015	41	45	7.4	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0266	4/28/2015	36	40	730000	1		20000	ug/l

Table D-8: ProUCL Data Input Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Vacant & Groundwater & Tetrachloroethylene	PB-0261	4/27/2015	28	32	2.1	1	J	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0251	4/27/2015	41	45	52000	1		2000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0265	4/28/2015	41	45	10	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0230	2/4/2015	22	26	3300	1	D	500	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0262	4/28/2015	41	45	300	1		13	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0253	4/27/2015	28	32	370000	1		10000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0260	4/27/2015	36	40	29	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0227	2/4/2015	28	32	19000	1	D	5000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0271	4/28/2015	28	32	4.1	1	J	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0257	4/27/2015	28	32	4.7	1	J	5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0274	4/28/2015	28	32	4000	1		100	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0228	2/4/2015	36	40	130000	1	D	10000	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0272	4/28/2015	41	45	35	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0273	4/28/2015	36	40	6800	1		200	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0255	4/27/2015	41	45	19	1		5	ug/l
Vacant & Groundwater & Tetrachloroethylene	PB-0256	4/27/2015	36	40	26	1		5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0901	2/22/2016	26.5	28.5	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0253	4/27/2015	28	32	10000	0	U	10000	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0261	4/27/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0913	2/22/2016	23.5	25.5	500	0	U	500	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0262	4/28/2015	41	45	8.1	1	J	13	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0907	2/22/2016	69.5	71.5	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0289	4/29/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0230	2/4/2015	22	26	13	1	J	50	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0908	2/22/2016	64.5	66.5	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0906	2/22/2016	68	70	380	1		250	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0257	4/27/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0272	4/28/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0904	2/22/2016	65.5	67.5	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0252	4/27/2015	36	40	2500	0	U	2500	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0255	4/27/2015	41	45	3.2	1	J	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0259	4/27/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0912	2/22/2016	28.5	30.5	1000	0	U	1000	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0903	2/22/2016	60.5	62.5	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0905	2/22/2016	24	26	9.3	1		5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0911	2/22/2016	25	27	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0256	4/27/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0251	4/27/2015	41	45	2000	0	U	2000	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0260	4/27/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0266	4/28/2015	36	40	20000	0	U	20000	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0271	4/28/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0226	2/4/2015	36	40	1600	1		1000	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0280	4/29/2015	36	40	5	0	U	5	ug/l

Table D-8: ProUCL Data Input Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Vacant & Groundwater & Trichloroethylene	PB-0270	4/28/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0223	2/4/2015	41	45	1800	1		1000	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0281	4/29/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0228	2/4/2015	36	40	1300	1	J	2000	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0227	2/4/2015	28	32	110	1	J	250	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0273	4/28/2015	36	40	200	0	U	200	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0282	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0267	4/28/2015	28	32	2000	0	U	2000	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0279	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0283	4/29/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0286	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0263	4/28/2015	0	0	2500	0	U	2500	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0288	4/29/2015	0	0	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0914	2/22/2016	71.5	73.5	2500	0	U	2500	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0902	2/22/2016	31.5	33.5	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0277	4/29/2015	36	40	20000	0	U	20000	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0264	4/28/2015	0	0	13	0	U	13	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0269	4/28/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0229	2/4/2015	28	32	13	1	J	200	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0265	4/28/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0284	4/29/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0274	4/28/2015	28	32	100	0	U	100	ug/l
Vacant & Groundwater & Trichloroethylene	PB-0915	2/22/2016	66.5	68.5	2000	1		1000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0252	4/27/2015	36	40	2500	0	U	2500	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0227	2/4/2015	28	32	250	0	U	250	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0228	2/4/2015	36	40	2000	0	U	2000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0908	2/22/2016	64.5	66.5	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0911	2/22/2016	25	27	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0226	2/4/2015	36	40	1000	0	U	1000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0914	2/22/2016	71.5	73.5	2500	0	U	2500	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0912	2/22/2016	28.5	30.5	1000	0	U	1000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0230	2/4/2015	22	26	50	0	U	50	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0229	2/4/2015	28	32	200	0	U	200	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0251	4/27/2015	41	45	2000	0	U	2000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0915	2/22/2016	66.5	68.5	1000	0	U	1000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0913	2/22/2016	23.5	25.5	500	0	U	500	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0223	2/4/2015	41	45	1000	0	U	1000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0281	4/29/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0260	4/27/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0284	4/29/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0266	4/28/2015	36	40	20000	0	U	20000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0283	4/29/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0267	4/28/2015	28	32	12	1		2000	ug/l

Table D-8: ProUCL Data Input Sensitivity Analysis
Peninsula Boulevard OU2, Hempstead, NY

Dataset	Sample ID	Sample Date	Start Depth (ft)	End Depth (ft)	Result	d_result for ProUCL	Qualifier	Reporting Detection Limit	Unit
Vacant & Groundwater & Vinyl chloride	PB-0282	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0286	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0270	4/28/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0264	4/28/2015	0	0	13	0	U	13	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0271	4/28/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0280	4/29/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0272	4/28/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0279	4/29/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0273	4/28/2015	36	40	200	0	U	200	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0277	4/29/2015	36	40	20000	0	U	20000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0274	4/28/2015	28	32	100	0	U	100	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0269	4/28/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0903	2/22/2016	60.5	62.5	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0907	2/22/2016	69.5	71.5	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0906	2/22/2016	68	70	250	0	U	250	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0255	4/27/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0905	2/22/2016	24	26	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0256	4/27/2015	36	40	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0257	4/27/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0265	4/28/2015	41	45	12	1		5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0259	4/27/2015	41	45	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0253	4/27/2015	28	32	10000	0	U	10000	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0902	2/22/2016	31.5	33.5	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0261	4/27/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0901	2/22/2016	26.5	28.5	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0262	4/28/2015	41	45	13	0	U	13	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0289	4/29/2015	28	32	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0263	4/28/2015	0	0	2500	0	U	2500	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0288	4/29/2015	0	0	5	0	U	5	ug/l
Vacant & Groundwater & Vinyl chloride	PB-0904	2/22/2016	65.5	67.5	5	0	U	5	ug/l