

**Final
NAF Atsugi, Japan
Human Health Risk Assessment**

Submitted To:

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Acronyms and Abbreviations

ADD	Average Daily Dose
AOC	Area of Concern
CALEPA	California Environmental Protection Agency
CDC	Child Development Center, Building 2910
COC	Constituent of Concern
CR	Carcinogenic Risk
CROP	Compound Rules of Precedence
CSF	Cancer Slope Factor
EPC	Exposure Point Concentration
GEMB	Ground Electronics Maintenance Building
HEAST	Health Effects Assessment Summary Tables
HI	Hazard Index
HQ	Hazard Quotient
IEUBK	Integrate Exposure Uptake Biokinetic Model for Lead
IRIS	Integrated Risk Information System
LADD	Lifetime average daily dose
LOAEL	Lowest Observed Adverse Effects Level
LOEL	Lowest Observed Effects Level
mg/kg	milligrams per kilogram
mg/m ³	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards (U.S.)
NAF	Naval Air Facility
NAF Atsugi	Naval Air Facility – Atsugi, Japan
NCEA	National Center for Environmental Assessment (U.S. EPA)
NEHC	Navy Environmental Health Center
NOAEL	No Observed Adverse Effects Level
NOEL	No Observed Effects Level
PCBs	Polychlorinated biphenyls
PIONEER	PIONEER Technologies Corporation
PM ₁₀	Particulate matter less than 10 micrometers in diameter
Radian	Raidan International, LLC
RBSC	Risk-based screening concentration
RfC	Reference Concentration
RfD	Reference Dose
RME	Reasonable Maximum Exposure
SIC	Shinkampo Incineration Complex
TEF	Toxicity Equivalency Factor
Total 2,3,7,8-TCDD TEQs	2,3,7,8-TCDD Toxic Equivalency
U.S. EPA	U.S. Environmental Protection Agency
ug/dl	Micrograms per deciliter

Section 1

Final Human Health Risk Assessment

1.0 INTRODUCTION

In 1995 an air quality and impact study was conducted at Naval Air Facility (NAF) Atsugi, Japan by the Naval Facilities Engineering Service Center, Port Hueneme, California to evaluate potential health effects associated with emissions from the neighboring Shinkampo Incineration Complex (SIC). The Naval Environmental Health Center (NEHC), at the request of the Base Environmental Office at NAF Atsugi, Japan, performed an initial screening level human health risk assessment. The results of the assessment indicated that air quality at NAF Atsugi could increase the excess lifetime cancer risk to levels higher than the U.S. Environmental Protection Agency's (U.S. EPA) acceptable risk range (i.e., 1 in 10,000 to 1 in 1,000,000) and the non-cancer hazard indices to higher than the benchmark of 1. Based on the results of the initial assessment, a comprehensive environmental sampling program was conducted by Radian International LLC (Radian), from March 1998 through June 1999, in order to support a more complete assessment of potential impacts of emissions from the SIC on human health. PIONEER Technologies Corporation (PIONEER) was contracted by NEHC to perform a baseline human health risk assessment at NAF Atsugi, Japan based on the results of the comprehensive sampling program carried out by Radian.

1.1 PURPOSE

The purpose of this baseline human health risk assessment is to:

1. Estimate the potential human health risks to U.S. Navy personnel and their families and other individuals living and working on NAF Atsugi, Japan resulting from exposure to constituents of concern (COCs) in soil, ambient air, indoor air, and indoor dust. This estimate focuses solely on COCs that are likely associated with air emissions from point and non-point sources impacting the air quality at NAF Atsugi.
2. Estimate the contribution of the risk attributable to emissions from the SIC.

Health risks were calculated for adults and children living on the base for 3-years, 6-years, and 30-years. Industrial, residential, day care, elementary school, and recreational golfer exposure scenarios were evaluated.

This report utilizes information presented in several documents including:

- Air Quality and Impact Study and Human Health Preliminary Risk Evaluation of Shinkampo Incineration Complex Activities on Naval Air Facility Atsugi, Japan (NEHC/NAVAFAC, 1995).
- Technical Memorandum. Screening Level Air Human Health Risk Assessment - NAF Atsugi, Japan (NEHC, 1998).
- Results of March 1998 Soil Sampling - NAF Atsugi, Japan (Radian, 1998).
- Phase II Soil Sampling Report Addendum to the March 1998 Report - NAF Atsugi, Japan (Radian, 1999).
- Exposure Pathways Analysis Shinkampo Incineration Complex - NAF Atsugi, Japan (Radian, 2000a).
- NAF Atsugi, Japan Ambient Air Monitoring Summary 21 April 1998 – 01 June 1999 (Radian, 2000b).

1.2 SITE SETTING AND BACKGROUND INFORMATION

NAF Atsugi is located in the Kanto Plain area on the island of Honshu, Japan (Figure 1-1). The Japanese Navy constructed the base in 1941 and it was commissioned in 1950 as U.S. Air Station Atsugi. In 1971, the name of the base was changed to NAF Atsugi and the official joint use of the base with the Japanese Maritime Self Defense Force began.

Figure 1-2 presents the current layout of NAF Atsugi. The base occupies approximately 1,240 acres and is level except for a small ravine formed by the Tade River which generally runs north-south and divides the facility into east and west sectors. Residential areas are located on the southern and western portions of the base. An elementary school, youth center, and a day care are located near the residential areas on the south side of the base. The parade grounds, two gymnasiums, softball fields, volleyball courts, a nature trail, and various parks are located in the western sector. Recreational areas on the eastern sector include the golf course and shooting range. The runway, aircraft maintenance, shipping, storage, and other aviation-related areas occupy the eastern sector of the base.

1.2.1 Shinkampo Incineration Complex

The Japanese owned and operated Shinkampo Incineration Complex (SIC) is located in the Tade River Valley, approximately 150 meters south of the NAF Atsugi fence line. This complex is approximately 5 acres in size and is comprised of three incinerators, a waste staging area, and an ash holding area (Photograph 1-1). The discharge heights of the incinerator stacks are only slightly higher than the ground surface of the plateau on which NAF Atsugi is located. Due to the complex topography and short incinerator stack height relative to the plateau, emissions from the incineration complex are carried parallel to the stack height downwind towards the base resulting in a fumigation condition. Concerns have been raised at NAF Atsugi regarding health impacts due to exposure to pollutants emitted from the SIC. The SIC emission plumes generally have the greatest impact on air quality at NAF Atsugi during the late spring, summer, and early fall when the wind blows predominantly from the south toward the base (a wind rose is presented in Figure 1-3).

Emissions from the complex are primarily the result of the combustion of municipal and industrial waste and may include wood products, plastics, construction debris, alkalines, waste oils, and numerous other materials. Fugitive emissions also occur from the stockpiles of waste and ash. The facility is permitted to burn 30 tons of waste during a 24-hour period and is currently requesting an increase to 90 tons of waste per day. The incinerators are equipped with pollution control equipment consisting of a dry quench, an acid gas reaction chamber, an electrostatic precipitator, cyclone separators, and a wet quench scrubber. However, based on numerous visual observations, plant operation frequently bypasses the incinerator's air pollution control equipment by discharging emissions via the bypass stacks located on each incinerator.

Figure 1-1 Location of NAF Atsugi, Japan

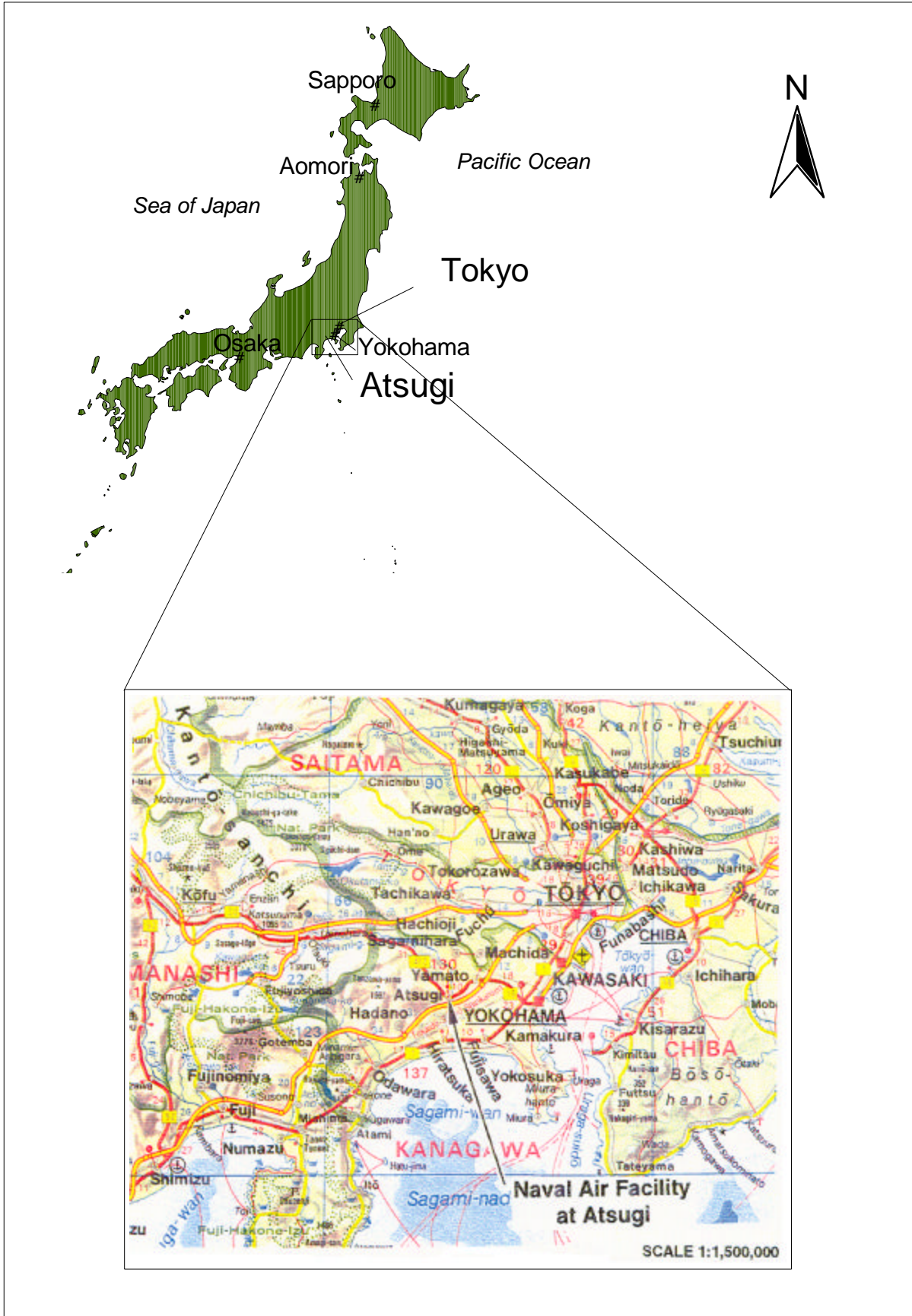
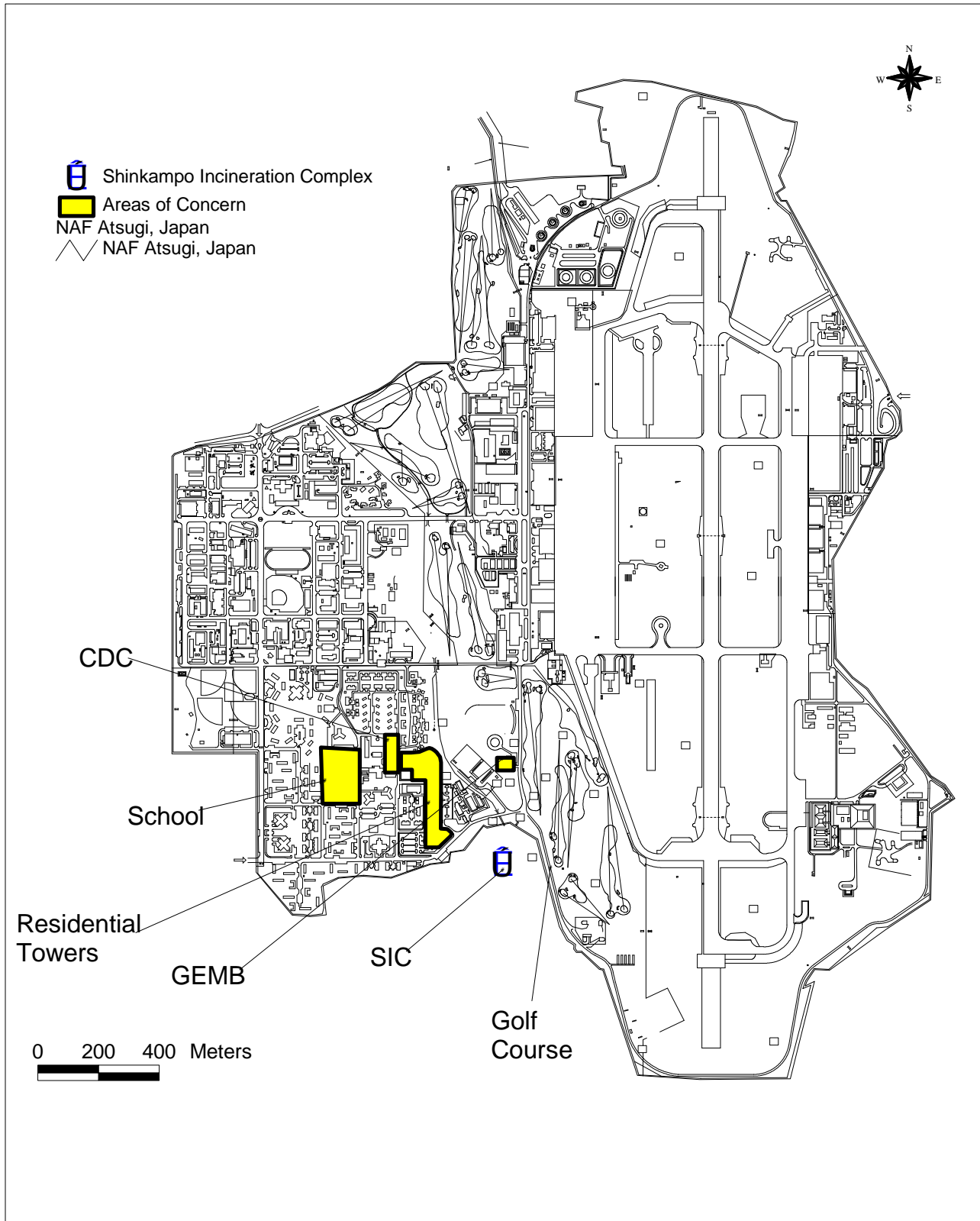


Figure 1-2
Layout of NAF Atsugi, Japan
and Location of AOCs



Photograph 1-1
Shinkampo Incineration Complex



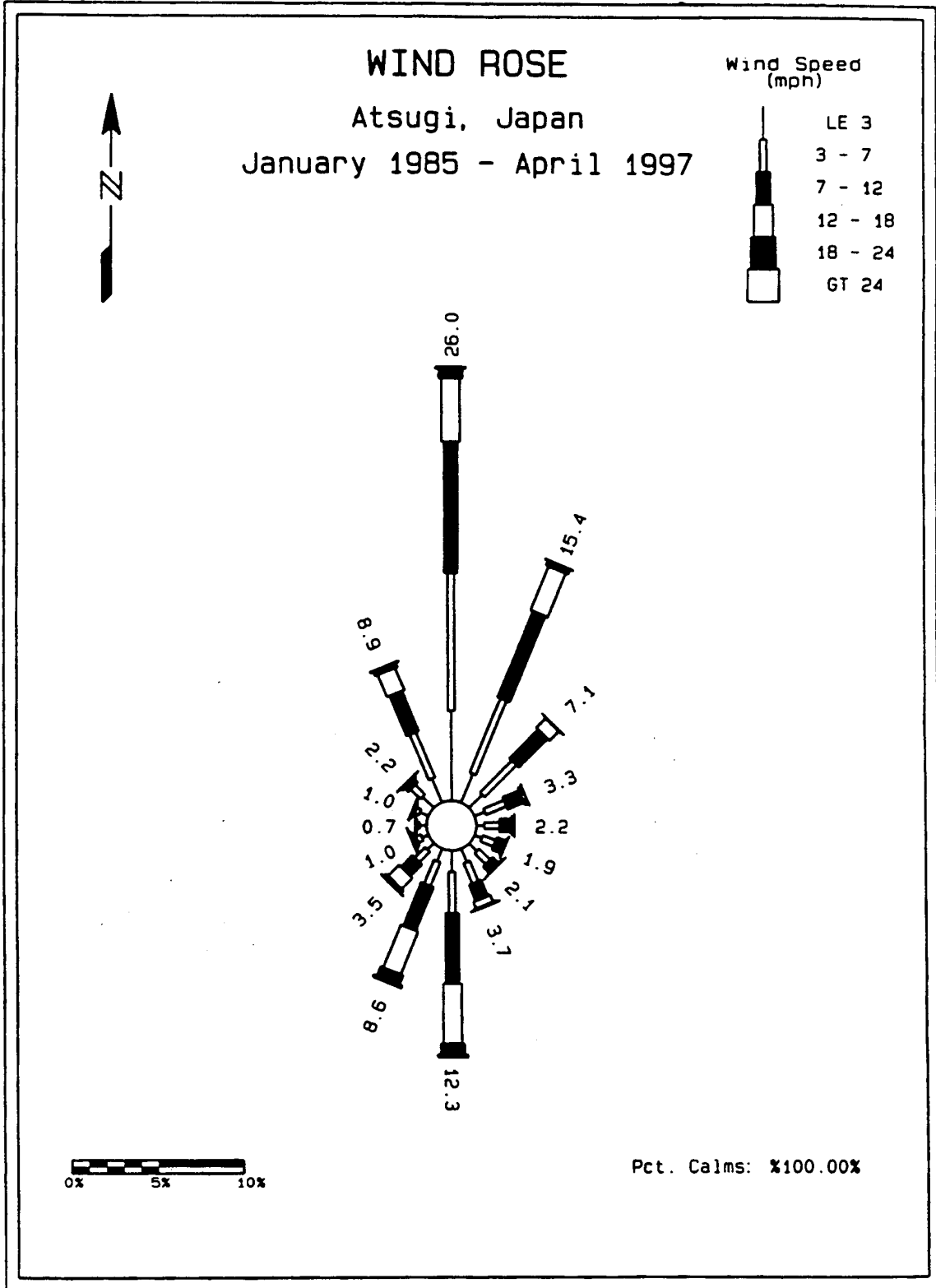


Figure 1-3. NAF Atsugi Windrose

1.3 AREAS OF CONCERN (AOCS)

This risk assessment focuses on areas of NAF Atsugi likely to be frequented by sensitive receptors (i.e., children and other representative sub-populations) which were identified in the *Exposure Pathways Analysis Shinkampo Incineration Complex - NAF Atsugi, Japan* (Radian, 2000a). Figure 1-2 presents the locations of the AOCs and each location is described below.

1.3.1 AOCs Quantitatively Evaluated in the Risk Assessment

- ***The Child Development Center, Building 2910***

The child development center (CDC) is located approximately 450 meters northwest of the SIC. Approximately 400 infants to pre-school age children stay at this facility for a maximum of 10 hours per day. Children are typically outside two times a day for 45 minutes each excursion. Outdoor activities are restricted during bad weather or when emissions from the incinerator are blowing toward the base. Central air conditioning is used for temperature control in the buildings, except for April through May when the weather conditions are cool enough to allow the windows to be opened. Children and adult workers are exposed to indoor air and dust while indoors and to soil and ambient air while outdoors.

- ***Shirley Lanham Elementary School, Building 993***

The elementary school is located approximately 500 meters northwest of the SIC. The elementary school holds class for 180 days per year for approximately 800 Kindergarten through 6th grade students. The school year runs from the end of August to the beginning of June. Children are typically outside before and after school, during recess, and lunch. Outdoor activities are restricted during bad weather or when emissions from the incinerator are blowing towards the base, however children are still outside before and after school. Air conditioning is used to cool the rooms from April to the end of the school year. Steam heat is used to warm the rooms during the colder months; however, at times the rooms get too warm and the windows are opened to cool them. During the springtime, the windows are opened to cool the rooms. Each room is equipped with air filters. Students and adult workers are exposed to indoor air and dust while indoors and to soil and ambient air while outdoors.

- ***Residential Towers, Buildings 3101 and 3102***

Buildings 3101 and 3012 are located approximately 300 meters northwest of the SIC. American military and government civilian employees live in apartments in this building. The Residential Towers are frequently fumigated by emissions from the incinerator. Child and adult residents are exposed to indoor air and dust while at home and to soil and ambient air while outdoors.

- ***Ground Electronics Maintenance, Building 1061***

Building 1061 (GEMB) is located approximately 300 meters north of the SIC and is generally believed to represent the maximum incinerator impact site. A total of eight American and Japanese Military Personnel work at the GEMB. The military workers are typically rotated every two to three years. However one of the Japanese workers has worked at the site for over eight years. Workers are exposed to indoor air and dust while working at the GEMB and to soil and ambient air while outdoors.

- ***Golf Course***

The base golf course is located to the north and east of the SIC. Hole 9 is closest to the SIC and occasionally receives emissions from the incinerator stacks. Golfers are exposed to soil and ambient air during golf outings.

1.3.2 Sample Location Not Evaluated in the Risk Assessment

- **Criteria Site**

The criteria site is located southeast of the SIC. No workers, residents, or recreational users are located at this site. Therefore, it was not evaluated in the risk assessment, however the sampling results were discussed in the *NAF Atsugi, Japan Ambient Air Monitoring Summary 21 April 1998 – 01 June 1999* (Radian, 2000b).

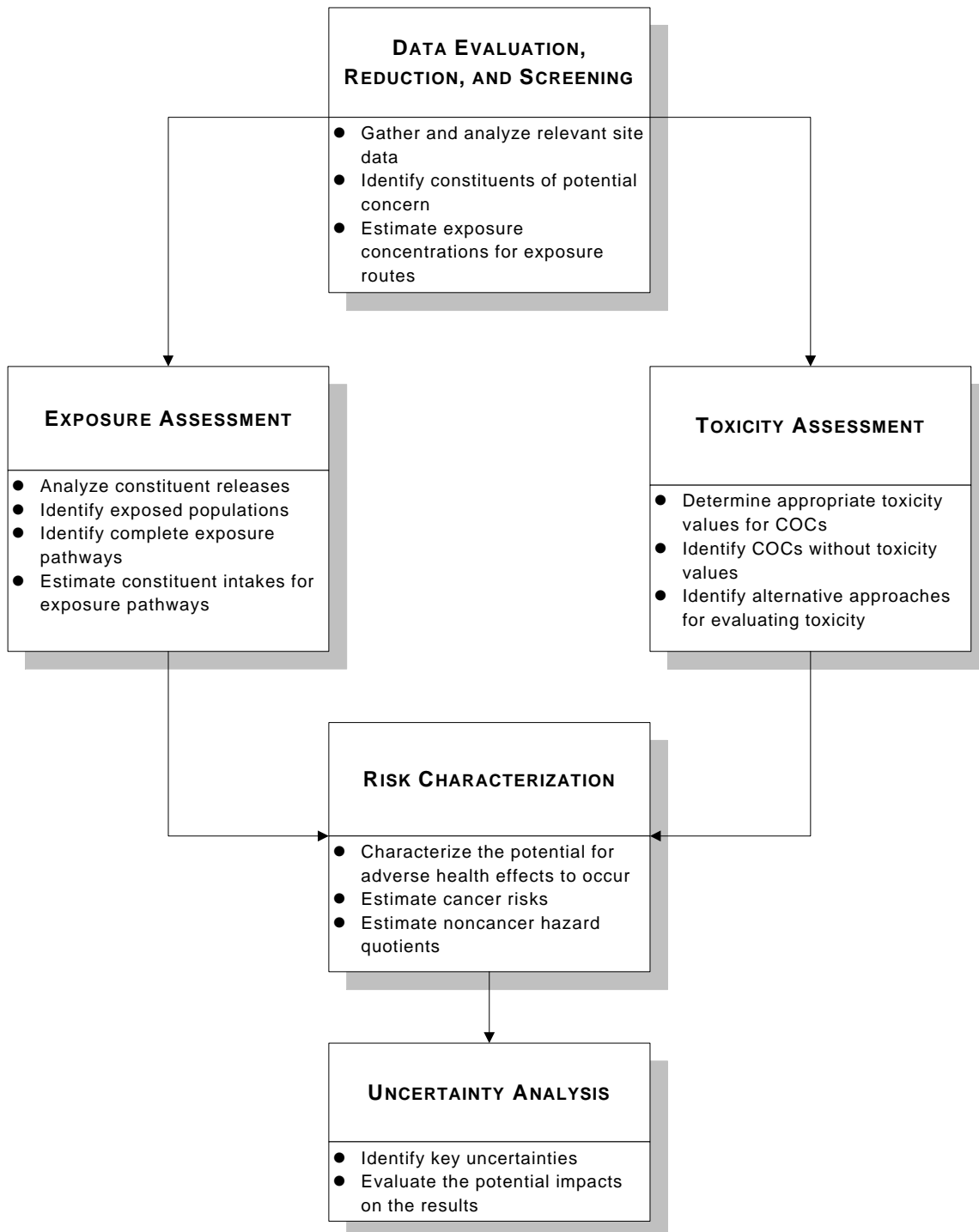
1.4 OVERVIEW OF RISK ASSESSMENT METHODOLOGY

Risk assessment is an established approach to evaluate the potential for adverse health effects from exposure to toxic constituents. Risk assessment is a management-decision tool and does not provide absolute statements about possible human health effects. Risk assessments typically focus on constituents and exposure pathways directly related to a site (i.e., the incremental risks due to emissions from an incinerator). These assessments do not address risks from other sources of exposure (e.g., dietary exposures) or risks from other constituents that are not associated with the site under evaluation. The general approach used in preparing this baseline risk assessment is presented in U.S. EPA's *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual* (U.S. EPA, 1989) and the *U.S. EPA Region VI Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities* (U.S. EPA, 1998). *Note: the conceptual site model identified in the U.S. EPA Region VI Protocol is not appropriate for the exposed populations evaluated in this risk assessment.*

The human health risk assessment process is comprised of the following five tasks, outlined in Figure 1-4:

1. **Data Evaluation, Reduction, and Screening.** This task identifies potential constituents of concern from analytical data obtained from the field sampling program. Constituents detected in at least one sample during the field investigation are identified and screened against risk-based screening concentrations to obtain a final list of constituents to be evaluated in the risk assessment (Section 2).
2. **Exposure Assessment.** This task identifies potentially-exposed populations (e.g., children and adults), exposure scenarios, exposure pathways, and exposure factors. The algorithms used to calculate intake are also presented in this section (Section 3).
3. **Toxicity Assessment.** This task identifies toxicity values for the COCs identified in task 1. Toxicity values include noncarcinogenic reference doses and carcinogenic slope factors (Section 4).
4. **Risk Characterization.** This task presents the human health risks associated with exposure to the COCs that were calculated using the information developed in tasks 1 - 3 (Section 5).
5. **Uncertainty Analysis.** This task identifies key uncertainties inherent in the evaluation that should be considered when assessing the risks presented in this document (Section 6).

Figure 1-4
Human Health Risk Assessment Process



1.5 REFERENCES

- NEHC. 1998. Navy Environmental Health Center. Draft Technical Memorandum. Screening Level Air Human Health Risk Assessment - NAF Atsugi, Japan
- NEHC/NAVFAC. 1995. Navy Environmental Health Center and Naval Facilities Engineering Service Center, October 1995. Air Quality and Impact Study and Human Health Preliminary Risk Evaluation of Shinkampo Incineration Complex Activities on Naval Air Facility Atsugi, Japan.
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Section 2

Data Evaluation, Reduction, and Screening

2.0 PURPOSE

The purpose of this section is to identify the COCs that will be evaluated in the risk assessment. Constituents detected in soil, ambient air, indoor air, and indoor dust samples were evaluated using a screening approach to determine if they should be further evaluated in the risk assessment. The process that was used to identify COCs is presented below.

2.1 SOURCES AND USES OF DATA

A comprehensive, multi-media sampling program was instituted in March of 1998 to characterize the nature and extent of contamination in soil, ambient air, indoor air, and indoor dust at NAF Atsugi, Japan. Table 2-1 summarizes the media sampled by AOC.

AOC	Soil Samples (0-3")	Ambient Air Samples	Indoor Air Samples ¹	Indoor Dust Samples ²
Child Development Center	●	--	●	●
Elementary School	●	●	●	●
Ground Electronics Maintenance Building	--	●	●	●
Apartment in Residential Towers (3101/3102)	●	●	●	●
Corridor in Residential Towers (3101/3102)	●	●	●	●
Residential Towers (3043)	--	--	●	●
Residential Townhouse (3025)	--	--	●	●
Golf Course	--	●	--	--
Criteria Site ³	--	●	--	--

-- = Media not sampled at this location.

¹The results of the indoor air samples were qualitatively evaluated in the NEHC 2000 report.

²Indoor dust samples were only analyzed for Dioxins/Furans.

³There are no exposed populations at this location. Therefore, this site was not evaluated in the risk assessment.

2.1.1 Soil Data

2.1.1.1 Soil Samples

In March of 1998 approximately 140 soil samples were collected at NAF Atsugi including:

- **Focused Samples** – Collected to determine the concentrations of COCs at each AOC.
- **Trend Analysis Samples** – Collected to determine the extent of contamination on the base.

The results of the soil sampling program, including analytical data validation, are described in the *Results of March 1998 Soil Sampling NAF Atsugi, Japan prepared by Radian International LLC, August 1998*

(Radian, 1999b) and *Phase II Soil Sampling Report Addendum to the March 1998 Report - NAF Atsugi, Japan* (Radian, 1999a). Soil samples were collected from 0 to 3 inches and from 3 to 12 inches and were analyzed for multiple constituents including metals, semi-volatile organic compounds, pesticides, polychlorinated biphenyls, volatile organic compounds, and dioxins/furans. The depth interval over which soil samples are collected is an important consideration for incinerator risk assessments because airborne COCs are deposited on the surface of the soil. They can migrate deeper into the soil by mixing, tilling, digging, or, to a limited extent, natural processes. COC concentrations in soil generally decrease with depth due to dilution resulting from mixing with clean soil. Therefore, collecting a soil sample deeper than humans will come in contact with may underestimate the risks by diluting the sample, and collecting a soil sample at a shallower depth than people regularly come in contact with may overestimate the risks. The samples collected from 0 to 3 inches were evaluated in the risk assessment. This depth interval was selected because it is representative of the portion of the soil column that most people routinely contact.

2.1.1.2 Soil Trend Analysis

The purpose of the trend analysis of soil samples collected from NAF Atsugi was to determine if a spatial correlation between concentration and distance exists for COCs in soil. Specifically, do the concentrations of COCs in soil decrease as the distance from the SIC increases on NAF Atsugi? Two approaches were used to determine if such a spatial correlation exists:

1. **Thiessan Polygons** - Thiessan Polygons (TPs) are a graphical data visualization technique that facilitate the identification of spatial trends in data sets. TPs are created using the spatial distribution of the sample stations to create a polygon around each sample station. The size and shape of the polygon depends on the location of all surrounding sample stations. The higher the sample density (i.e., the closer the sample stations are to one another) the smaller the size of the TPs that are created. After the TPs have been created, the analytical results associated with the sample station that is contained in the TP are assigned to the area in the TP. It is important to note that, unlike kriging, the size and shape of the TPs that are created are based solely on the spatial distribution of the sample stations and not on the concentration.
2. **Kriging Analysis** - Kriging is a geostatistical technique that is used to predict concentrations of COCs at an unsampled location based on the analytical results of nearby sample stations. The fundamental assumption in all kriging analyses is that distance or direction between sample points shows spatial correlation with concentration. Before analytical data can be kriged, the data must be evaluated to determine if it is suitable for kriging (i.e., do the data exhibit a spatial correlation between concentration and distance or direction?). The process for determining whether or not analytical data are suitable for kriging is the development of a semi-variogram. A semi-variogram is the plot of the variance of paired sample measurements as a function of the distance or direction between samples. Semi-variograms provide a means of quantifying whether or not samples close together tend to be more similar to each other than they are to samples far apart. Analytical data sets that exhibit this relationship are suitable for kriging because there is a correlation between concentration and distance or direction.

An overview of the results of the trend analysis is presented below. A detailed discussion of the soil trend analysis is presented in Appendix E.

Three COCs were selected for the trend analysis based on their relative toxicity and because they represent different chemical classes (i.e., inorganics, semi-volatile organics, and dioxins/furans):

- Arsenic
- The Total Benzo(a)pyrene equivalent concentration (Total BaP TEQ)
- The Total 2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) equivalent concentration (Total 2,3,7,8-TCDD TEQ)

The results of the Thiessan Polygon and Kriging analysis were consistent. Elevated concentrations of arsenic were observed throughout the base but no clear pattern of contamination was seen. Total BaP TEQs also did not exhibit any spatial trends in concentration and distance from the SIC, but elevated

concentrations were observed sporadically in the soil across the base. The concentrations of 2,3,7,8-TCDD TEQ clearly decrease as the distance from the SIC increases. Elevated concentrations of Total 2,3,7,8-TCDD TEQs in subsurface soil were typically collocated with elevated concentrations in surface soil.

2.1.2 Ambient Air

2.1.2.1 Ambient Air Monitoring

In April, 1998 a 14-month ambient air monitoring program was instituted at NAF Atsugi to characterize the health effects associated with exposure to ambient air. The sampling occurred on a six-day cycle for the first twelve months of sampling. For the final two months focused sampling was implemented: samples were collected during forecasted downwind (from the SIC) events. For more information on the details of the sampling plan see the Radian, 2000 *Sampling Plan and Site Characterization*. Over two thousand ambient air samples were collected and the results are described in the *NAF Atsugi, Japan Ambient Air Monitoring Summary 21 April 1998 – 01 June 1999* (Radian, 2000). The samples were analyzed for multiple constituents including metals, semi-volatile organic compounds, pesticides, polychlorinated biphenyls, volatile organic compounds, and dioxins/furans.

2.1.2.2 Ambient Air Dispersion Modeling

Knowledge of the airborne concentrations is integral to characterizing the risks associated with inhalation of pollutants. Exposure point concentrations are required in risk assessment calculations to estimate risks associated with the emissions from a facility. Two approaches that may be followed to obtain airborne pollutant concentrations are air monitoring and air dispersion modeling. Air monitoring requires sampling ambient air over long periods of time. Although this approach provides excellent characterization of pollutant concentrations, it is time consuming, costly, and is limited to a few receptor locations. The second approach is to use air dispersion modeling to estimate pollutant concentrations in ambient air. Air dispersion modeling is relatively inexpensive and provides greater flexibility in terms of receptor locations and characterization of concentrations over greater spatial extents.

A combination of ambient air monitoring and air dispersion modeling was used to characterize airborne pollutant concentrations across NAF Atsugi. The purpose of air dispersion modeling was to calculate ground-level air concentrations at locations throughout the base resulting from emissions from the SIC. The air dispersion model provides the ability to evaluate potential health risks at locations that were not included in the ambient air sampling program. For example, the potential health risks associated with exposure to airborne pollutants at the point on the base closest to the SIC and the point on the base furthest away can be compared by using the dispersion model to calculate air concentrations at these locations. The results of the air dispersion modeling evaluation are summarized in Section 7 and are presented in the *NAF Atsugi, Japan Ambient Air Monitoring Summary 21 April 1998 – 01 June 1999* (Radian, 2000). Typically, stack sample data are used to develop air dispersion models. However, since the U.S Navy does not have access to the SIC's stacks, the model inputs were back calculated from the measured ambient air data.

Note: The ambient air samples were used in the risk assessment to calculate the risks associated with exposure to airborne COCs. The results of the air dispersion modeling were used for risk management and base planning purposes.

2.1.3 Indoor Air and Indoor Dust

As part of the 14-month ambient air monitoring program, over 500 indoor air and 14 indoor dust samples were collected to characterize the health effects associated with exposure to indoor air and indoor dust. The results of the sampling effort are presented in the *NAF Atsugi, Japan Ambient Air Monitoring Summary 21 April 1998 – 01 June 1999* (Radian, 2000). The indoor air samples were analyzed for multiple COCs including metals, semi-volatile organic compounds, pesticides, polychlorinated biphenyls, volatile organic compounds, and dioxins/furans. The indoor dust samples were only analyzed for dioxins/furans.

The results of the indoor air sampling effort were qualitatively evaluated in the NEHC 2000 assessment, but not used in this risk assessment. For the purposes of this risk assessment, ambient (outdoor) air concentrations were used as surrogate indoor air concentrations. The rationale for this decision was as follows:

1. The objective of collecting the indoor air samples stated in the *Sampling and QA/QC Plan to Assess Health Risks Related to Air Quality at NAF Atsugi, Japan* (Radian, 1998) was to make a comparison between concentrations found indoors in the United States with concentrations found indoors at NAF Atsugi. The indoor air samples were not intended to determine the contribution of emissions from the SIC to concentrations of COCs in indoor air.
2. Air concentrations of the majority of the COCs exceeding Risk Based Screening Concentrations (RBSCs) were higher indoors than outdoors indicating probable indoor air sources (e.g., insulation, carpets, and household chemicals).
3. Passive ventilation systems are used at most locations which make attempts to quantify the contribution of risk attributable to emissions from the SIC highly uncertain.
4. Ambient air is the source of COCs in indoor air that are associated with emissions from the SIC.

2.2 SOIL, AMBIENT AIR, INDOOR AIR, AND INDOOR DUST DATA ANALYSIS AND REDUCTION

The analytical data for soil, ambient air, indoor air, and indoor dust were analyzed using SiteSTAT™ Statistical Software, and a preliminary list of COCs was identified for each medium based on the following criterion:

- The COC was detected in at least one sample for a given location.

Analytical data were converted to a useable format for the risk assessment as follows:

- Air field duplicate results were not included in the determination of exposure concentrations because only mercury was collected at every site; field duplicate samples for all other COCs were only collected at one location (the GEMB). Soil field duplicate results were collected at every area of concern and were treated as discrete observations when calculating summary statistics for each location.

Note: Treating soil field duplicate samples as discrete samples impacts the summary statistics by over weighting the results from the field duplicate location. However, this did not have a significant impact on the results of this assessment because soil exposure pathways did not significantly contribute to the health risks (see Section 5 for information on the exposure pathways responsible for the majority of the risks).

- Data were only summarized for COCs that were detected in at least one sample for a specific location. Per U.S. EPA Risk Assessment Guidance for Superfund, if a COC was detected in a sample, then one-half the sample quantitation limit was substituted as the concentration for all of the non-detected values when calculating exposure point concentrations (U.S. EPA, 1989).
- Analytical results that were qualified "R" (i.e., rejected) were eliminated from the dataset because the data did not meet quality control criteria.
- Analytical results that were qualified "K" (i.e., the pesticide was not confirmed on the second gas chromatograph column) were qualified as not detected and the sample quantitation limit was used in statistical calculations. This only impacts air samples that were analyzed for pesticides.

- The total 2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) equivalent concentration was calculated for each sample based on the analytical results of the isomers and congeners of dioxins and furans. This calculation was performed by multiplying the concentration of the isomer/congener by its corresponding 2,3,7,8-TCDD toxicity equivalency factor and then summing the results. The 2,3,7,8-TCDD toxicity equivalency factors are presented in Table 4-6 in Section 4.
- The total Benzo(a)pyrene equivalent concentration was calculated for each sample based on the analytical results of all carcinogenic polycyclic aromatic hydrocarbons (PAHs). This calculation was performed by multiplying the concentration of the PAH by its corresponding Benzo(a)pyrene toxicity equivalency factor and then summing the results. The Benzo(a)pyrene toxicity equivalency factors are presented in Table 4-7 in Section 4.
- In instances where analytical overlap occurred (i.e., results for a COC were reported by different analytical methods for the same sample), a set of decision rules developed by PIONEER, called Compound Rules of Precedence (CROP), were applied to the data to select the concentration that should be used for risk assessment purposes (i.e., development of exposure point concentrations). The CROP rules used to reduce the analytical data and develop the exposure point concentrations presented in Section 2.5 are described below. Analytical overlap was identified only in ambient air data and the overlap was resolved using the CROP Level of Precedence for analytical methods. CROP Level of Precedence: 1 methods were given priority over CROP Level of Precedence: 2 methods. When a COC was not detected in the CROP Level of Precedence: 1 method but was detected in the CROP Level of Precedence: 2 method, the result of the CROP Level of Precedence: 2 method was used to develop the EPC.

Analytical Method, (CROP Level of Precedence: 1)	«	Analytical Method, (CROP Level of Precedence: 2)
Gas Chromatography/Mass Spectroscopy (GC/MS; EPA Method TO-15)	overlapped with	Semi-Volatile Organic Compound (SVOC; SW8270)
GC/MS (EPA Method TO-15)	overlapped with	Aldehydes/Ketones (EPA Method TO-11)
Mercury (Gold foil amalgamation)	overlapped with	Hopcolite-Resin Mercury

The analytical data for all media are presented in the following reports:

- Results of March 1998 Soil Sampling NAF Atsugi, Japan prepared by Radian International LLC, August 1998 (Radian, 1999b).
- Phase II Soil Sampling Report Addendum to the March 1998 Report - NAF Atsugi, Japan (Radian, 1999a).
- NAF Atsugi, Japan Ambient Air Monitoring Summary 21 April 1998 – 01 June 1999 (Radian, 2000).

Analytical data summary statistics for each AOC, media, and COC are presented in Appendix A.

2.3 BACKGROUND SCREENING OF COCS

Screening of media concentrations of COCs versus site-specific background or reference area concentrations is an important step in the identification of COCs to be carried through the risk assessment. The purpose of background screening is to focus the risk assessment on COCs that are related to SIC activities and eliminate COCs that are present at background or reference area concentrations. In order to establish background concentrations for inorganic and organic COCs, it is important that the background sampling station is not impacted by site activities. At NAF Atsugi

the selection of a site-specific background sampling location was severely limited because the sampling location had to be located on the Naval Air Facility.

2.3.1 Soil

A suitable site-specific background soil location was identified as described in the *Phase II Soil Sampling Report Addendum to the March 1998 Report - NAF Atsugi, Japan* (Radian, 1999a). In summary, a list of optimum location criteria was developed. This list included several screening factors, with the main two being: 1) soils should be located under an impervious, protected cover; and 2) the cover should have been in place since before initiation of SIC operations (i.e., pre-1985). Multiple candidate background soil sites were identified and ultimately Building 47 – the Former Bachelor's Enlisted Quarters, located on the northwest portion of NAF Atsugi, was selected as the background sampling site. A total of twelve soil samples were collected from beneath the building. The maximum detected concentration in these data was compared to the maximum detected soil concentration for each of the AOCs. If the maximum detected concentration in soil exceeded the background concentration, then the COC was retained for further evaluation in the risk assessment. If the maximum detected concentration in soil was less than or equal to the background concentration, then the COC was eliminated from further consideration in the risk assessment.

2.3.2 Ambient Air, Indoor Air, and Indoor Dust

Site-specific background concentrations for ambient air, indoor air, and indoor dust were not available because it was not possible to identify a location on the base that was not impacted by emissions from the SIC. Therefore, site-specific background screening of these media was not performed.

2.4 RISK-BASED SCREENING OF COCS

The purpose of risk-based screening of COCs is to focus the risk assessment on those COCs that could pose a significant risk to human health. The maximum detected concentrations of the COCs in each AOC were compared to 1/10th the appropriate U.S. EPA Region III RBSCs (U.S. EPA, 1998) (i.e., soil and indoor dust concentrations were compared to soil RBSCs and ambient air and indoor air concentrations were compared to ambient air RBSCs). These values correspond to a cancer risk of 1E-07 and a noncancer hazard index of 0.1 calculated for a residential exposure scenario. If the maximum detected concentration for a COC was greater than the U.S. EPA Region III RBSC, then the COC was retained for further consideration in the risk assessment. In addition, COCs lacking an RBSC were retained for evaluation in the risk assessment. The results of the risk-based screening step are presented in Appendix B.

2.5 EXPOSURE POINT CONCENTRATIONS

The exposure point concentration is the concentration of the COC in soil, ambient air, indoor air, or indoor dust at the location of potential contact with the receptor. The objective of this risk assessment is to evaluate the risks to the average exposed individual and the reasonable maximum exposed (RME) individual. The RME individual is the "highest exposure that is reasonably expected to occur at the site" (U.S. EPA, 1989).

The exposure point concentration for the average exposed individual was calculated based on the following criteria:

1. The arithmetic mean concentration.
2. The maximum detected concentration in instances where the arithmetic mean concentration exceeded the maximum detected concentration.

The exposure point concentration for the RME individual was calculated based on the following criteria:

1. The 95% Upper Confidence Limit (95% UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95% UCL of the mean concentration for all lognormally distributed data sets.

- The maximum detected concentration in instances where the 95% UCL or Log 95% UCL exceeded the maximum detected concentration.

Analytical data summary statistics for each AOC, medium, and COC are presented in Appendix A. The exposure point concentrations calculated for this assessment are presented in Appendix B. The underlying distribution for each COC was determined using either the Shapiro-Wilk test (in cases when there were less than 50 data points) or D'Agostino's test (when there were more than 50 data points). The alpha level for each test was 0.05. Results identified in Appendix A as "Unknown" mean that the distribution is not normal or lognormal at the 0.05 significance level.

2.6 STATISTICAL FORMULAS

This section presents the statistical formulas that were used to calculate the summary statistics presented in Appendix A and Appendix B.

Lognormal Mean – (Geometric Mean)

Returns the mean value of the natural logarithm transformed values. The geometric mean is calculated as follows:

$$\hat{m} = e(\bar{y})$$

Note: The geometric mean is used as an estimate of the lognormal mean. This estimate is biased low for distributions with high variance.

Logarithmic Upper Confidence Limit for the Mean

Returns the one-sided natural logarithm upper confidence limit on the mean. The upper confidence limit on the lognormal mean is calculated as follows:

$$UL_{1-a} = e\left(\bar{y} + 0.5s_y^2 + \frac{s_y H_{1-a}}{\sqrt{n-1}}\right)$$

Values of the H statistic not found in the lookup table were calculated using 4-Point Lagrangian Interpolation. Lagrangian interpolation is calculated as follows:

$$y_i = \sum_{i=0}^n \frac{H_n(X)}{(X - X_i)H'(X_i)} y_i, \quad i = 0, 1, \dots, n,$$

$$H(x) = (X - X_0)(X - X_1) \cdots (X - X_n)$$

$$H'(X) = \frac{d}{d_x} H_n(X)$$

Mean (arithmetic)

Returns the arithmetic mean of the values. The mean is calculated as follows:

$$\bar{X} = \sum \frac{X_i}{n}$$

Median

Returns the median value of the distribution. The median is the value that divides a distribution exactly in half. The median is also referred to as the 50th percentile. The median is calculated as follows:

- Order data from lowest to highest to obtain sample order statistics.

$$X_{[1]} \leq X_{[2]} \leq \dots \leq X_{[n]}$$

2. If n is odd the sample median is the $\frac{(n+1)}{2}$ th value.
3. If n is even the sample median is the average of the $\frac{n}{2}$ th and the $\frac{(n+2)}{2}$ th values.

Maximum Detected Value

Returns the maximum detected value in the distribution.

Maximum Non-Detected Value

Returns the maximum non-detected value in the distribution.

Minimum Detected Value

Returns the minimum detected value in the distribution.

Minimum Non-Detected Value

Returns the minimum non-detected value in the distribution.

Mode

Returns the most frequently occurring score in the distribution.

Sample Standard Deviation

The standard deviation returns the deviation of the sample distribution. The sample standard deviation is calculated as follows:

$$s = \sqrt{\frac{SS}{n-1}}$$

Where,

s	=	Sample standard deviation
SS	=	Sum of Squared deviations
n	=	Number of scores in the sample

The sum of squared deviations is calculated using the following formula:

$$SS = \sum X_i^2 - \frac{(\sum X_i)^2}{N}$$

Upper Confidence Limit for the Mean

Returns the one-sided upper confidence limit on the mean using the following formula. The t-statistic is used to estimate the location of the mean in a sample distribution when the population standard deviation (s) and the population mean (μ) are unknown. The t-statistic is calculated as follows:

$$\mu = \bar{X} \pm t s_x$$

The standard error of a distribution of sample means is calculated as follows.

$$s_{\bar{X}} = \frac{s}{\sqrt{n}}$$

How well the sample standard deviation (s) estimates the population standard deviation depends mainly on sample size which is described in terms of degrees of freedom. The degrees of freedom describes the number of scores in a sample that are free to vary. The degrees of freedom is calculated as follows.

$$df = n - 1$$

Shapiro and Wilk Test (W Test)

The W statistic tests the null hypothesis (H_0) that the data have been drawn from a normal distribution. The alternative (H_1) is that the underlying population is not normally distributed. This test is applicable when the sample size is ≤ 50 . The W statistic is calculated as follows:

1. Compute the denominator of the W test statistic.

$$d = \sum_{i=1}^n (X_i - \bar{X})^2$$

2. Order data from lowest to highest to obtain sample order statistics.

$$X_{[1]} \leq X_{[2]} \leq \dots \leq X_{[n]}$$

Where,

$$X_{[1]} = \text{Lowest score}$$

$$X_{[n]} = \text{Highest score}$$

3. Compute K .

$$K = \frac{n}{2} \text{ if } n \text{ is even}$$

$$K = \frac{n-1}{2} \text{ if } n \text{ is odd}$$

4. Get coefficients for a_i from a lookup table based on the K value.
5. Compute W statistic.

$$W = \frac{1}{d} \left[\sum_{i=1}^K a_i (X_{[n-i+1]} - X_{[i]}) \right]^2$$

6. Reject H_0 at the α significance level (an α of 0.05 was used) if W is less than the quantile provided in the lookup table.

Note: To test the Null Hypothesis

H_0 : The population has a lognormal distribution

versus

H_1 : The population does not have a lognormal distribution

The W Test can also be used to test the null hypothesis (H_0) that the data have been drawn from a lognormal distribution by using $Y_i = \ln X_i$ in place of X_i in the calculations.

D'Agostino's Test

The D statistic, calculated in D'Agostino's Test, is a compliment to the W Test in that it also tests the null hypothesis of normality or lognormality. However the D statistic is applicable to sample sizes between 50 and 1,000. The D statistic is calculated as follows:

1. Order data from lowest to highest to obtain sample order statistics.

$$X_{[1]} \leq X_{[2]} \leq \dots \leq X_{[n]}$$

Where,

$$X_{[1]} = \text{Lowest score}$$

$$X_{[n]} = \text{Highest score}$$

2. Compute the D statistic.

$$D = \frac{\sum_{i=1}^n [i - \frac{1}{2}(n+1)] X_{[i]}}{n^2 S}$$

Where,

$$S = \left[\frac{1}{n} \sum_{i=1}^n (X_i - \bar{X})^2 \right]^{\frac{1}{2}}$$

3. Transform D to the Y statistic by performing the following computation.

$$Y = \frac{D - 0.28209479}{0.02998598 \div \sqrt{n}}$$

4. Reject at the α significance level (an α of 0.05 was used) the null hypothesis that the data were drawn from a normal distribution if Y is less than $\frac{\alpha}{2}$ quantile or greater than the $1 - \frac{\alpha}{2}$ quantile distribution of Y. The quantiles are obtained from a lookup table.

Values of quantities of the y statistic not found in the lookup table are calculated using linear interpolation. Linear interpolation is performed as follows:

$$fp = (1-p)f_o + pf_1,$$

$$p = \frac{(X - X_o)}{(X_1 - X_o)}$$

Note: The Y statistic can also be used to test the null hypothesis of a lognormal population by using $Y_i = \ln X_i$ in place of X_i in the calculations.

2.7 REFERENCES

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2.8 REFERENCES FOR STATISTICAL FORMULAS

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Sections 3 and 4

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Section 3

Exposure Assessment

3.0 PURPOSE

The purpose of the exposure assessment is to evaluate potential human exposure to COCs present in soil, ambient air, indoor air, and indoor dust at NAF Atsugi by identifying complete exposure pathways. In order for a COC to pose a risk to human health, a complete exposure pathway must be present. A complete exposure pathway consists of the following four elements:

1. A source and mechanism of COC release to the environment (e.g., an incinerator).
2. An environmental transport medium for the released COC (e.g., air).
3. An exposure point (i.e., a point of potential human contact with the contaminated medium) that includes a location where humans are present and where there is activity that results in exposure (referred to as an "exposure scenario").
4. An exposure route at the point of exposure (e.g., inhalation).

This section describes the current land uses, potentially exposed populations, and possible exposure routes. Daily intakes (i.e., the amount of COCs that an individual would be exposed to each day [mg/kg-day]) were calculated for each route of exposure. Daily intakes for each exposed population were calculated by using population specific exposure factors. The exposure setting consists of the physical features of the site (presented in Sections 1.2 and 1.3) and the potentially exposed populations which are discussed below.

3.1 POTENTIALLY EXPOSED POPULATIONS AT NAF ATSUGI

This section summarizes the potentially exposed populations at NAF Atsugi. A detailed discussion of the exposed populations and exposure pathways at NAF Atsugi is presented in the *Exposure Pathways Analysis Shinkampo Incineration Complex - NAF Atsugi, Japan* (Radian, 2000). NAF Atsugi is a high-security facility and public access is restricted. Entrance to the facility requires military clearance, making unauthorized access highly improbable. The NAF Atsugi population consists of military personnel and their families who live and work on the facility, civilian personnel, and Navy contractors who work on the facility. Military personnel are typically stationed at NAF Atsugi for 3 years (1 Tour of Duty), however the tour can be extended to 6 years (2 Tours of Duty) or more.

Table 3-1 presents the potentially exposed populations identified at NAF Atsugi and the exposure pathways that were evaluated in this assessment. Figure 3-1 presents a conceptual site model that depicts the sources, migration pathways, impacted media, and exposure routes. Individuals may be exposed to emissions from the SIC both directly and indirectly. Direct exposures include inhalation of ambient and indoor air. Indirect exposures include incidental soil ingestion, dermal contact with soil, and ingestion of foods (e.g., ingestion of pork, cattle, eggs, fruits, vegetables, dairy, etc.). These indirect exposures occur as a result of deposition of airborne material onto soils and surface water and subsequent uptake by plants, animals, and humans.

A multi-pathway exposure analysis was conducted to determine exposure pathways of concern at NAF Atsugi (Radian, 2000). The analysis determined that exposure pathways related to ambient air, indoor air, indoor dust, and soil were of potential concern. Risks associated with these exposure pathways were evaluated in the risk assessment. The multi-pathway analysis also determined that exposure pathways related to groundwater, surface water, and foods were not complete. Groundwater is the source of potable water on base and routine sampling is conducted to ensure that it meets drinking water standards. The results of the drinking water sampling indicate that the groundwater has not been impacted by

emissions from the SIC (Personal Communication with Michelle Norman, 1998). The Tade River runs through the base, however the river is known to be polluted from the surrounding industries, and therefore, is not used for swimming. Exposures to locally grown food products (e.g., pork, eggs, fruits, vegetable, etc.), which are typically significant when evaluating bioaccumulative contaminants (like dioxins/furans), were not evaluated in the risk assessment. This was based on the information presented in the *Exposure Pathways Analysis Shinkampo Incineration Complex - NAF Atsugi, Japan* (Radian, 2000) which indicated that the vast majority of food consumed by base personnel and their families is purchased at the commissary because it is much less expensive than at the local markets. Most of the food at the commissary comes from the United States, and none of the food is purchased from local growers. Commissary produce labeled as “local” is purchased from large-scale production farms that are located in northern and southern Japan and is not purchased from local growers.

As described in Section 1.3, site-specific exposure scenarios were developed for each AOC based on the activities that occur at that location. Indoor and outdoor exposures were evaluated based on the percentage of time that individuals spend indoors and outdoors. Exposures at each AOC were evaluated independently (i.e., exposures were not combined across AOCs).

**Table 3-1
Summary of Exposed Populations at NAF Atsugi**

Exposed Population	Incidental Soil Ingestion	Dermal Contact with Soil	Inhalation of Particulates and Vapors in Ambient Air	Inhalation of Particulates and Vapors in Indoor Air ²	Incidental Indoor Dust Ingestion ³
Child Development Center, Building 291					
Child at Day Care (0-6)	•	•	• ¹	•	•
Adult Child Care Provider	•	•	• ¹	•	•
Elementary School, Building 993					
Adolescent at School (6-18)	•	•	•	•	•
Adult Worker	•	•	•	•	•
Residential Towers, Building 3101/3102					
Child at Home (0-6)	•	•	•	•	•
Adult Resident	•	•	•	•	•
Ground Electronics Maintenance Building, Building 1061					
Adult Worker	• ⁴	•	•	•	•
Golf Course					
Adult Recreator (Golfer)	• ⁴	○	•	NC	NC

• = Exposure pathway evaluated in this assessment.

○ = Not considered a significant exposure pathway for this receptor. Dermal exposure is highly dependent on activity patterns and is typically associated with activities that require direct contact with soil (e.g., landscaping). Since golfers typically don't directly contact soil or the ground while golfing, except with the golf club or while teeing-up the ball, this is not considered a significant pathway of exposure.

NC = Not a complete exposure pathway.

¹Ambient air concentrations were not collected from this location. However, for the purposes of the risk assessment the ambient air concentrations from the Elementary School were used as the exposure point concentration at this site because the Elementary School is the closest ambient air monitoring site at approximately 200 meters.

²Ambient air concentrations were used as surrogates for indoor air concentrations. The actual measured indoor air concentrations collected during the 14-month monitoring study were qualitatively evaluated to determine if indoor air concentrations at Atsugi are comparable with indoor air concentrations in the United States in NEHC 2000.

³Indoor dust samples were only analyzed for Dioxins/Furans. Consequently, outdoor soil concentrations were used as surrogate indoor dust concentrations for all other analytes. The ingestion rates for Incidental Soil Ingestion (outdoor) and Incidental Dust Ingestion (indoor) were partitioned such that 30% of total exposure comes from outdoors and 70% of exposure comes indoors. This is calculated assuming that a person spends a total of 5 out of 16 hours outdoors per day ($5/16 = 0.31$). The five hours outdoors is based on the U.S. EPA Standard Default Residential Inhalation value which assumes 5 hours outdoors per day (U.S. EPA, 1991b).

⁴Soil samples collected for the trend analysis were used to evaluate the risks associated with exposure to soil at these locations.

Notes:

1. All exposed populations were evaluated based on Average and Upper-Bound (RME) exposure point concentrations.
2. Residents were evaluated in the risk assessment assuming 3-year, 6-year, and 30-year exposure durations. The 3-year and 6-year exposure durations correspond with 1 and 2 tours of duty, respectively. The 30-year exposure duration corresponds to the U.S. EPA standard default residential exposure duration.
3. Workers were evaluated in the risk assessment assuming 3-year, 6-year, and 30-year exposure durations. The 3-year and 6-year exposure durations correspond with 1 and 2 tours of duty, respectively. The 30-year exposure duration corresponds to the U.S. EPA standard default industrial worker exposure duration.
4. Recreators (Golfers) were evaluated in the risk assessment assuming 3-year, 6-year, and 30-year exposure durations. The 3-year and 6-year exposure durations correspond with 1 and 2 tours of duty, respectively. The 30-year exposure duration corresponds to the U.S. EPA standard default residential exposure duration.

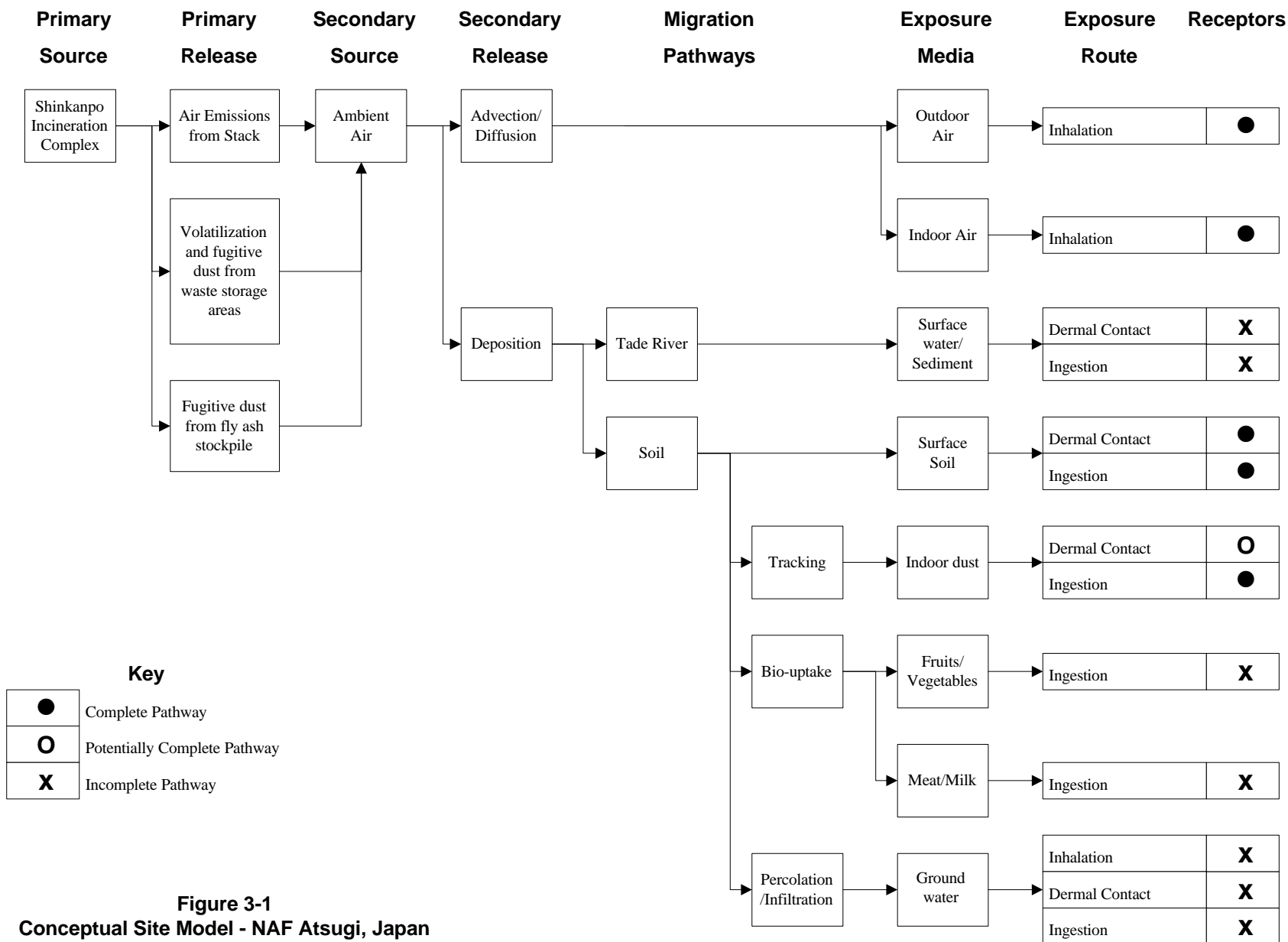


Figure 3-1
Conceptual Site Model - NAF Atsugi, Japan

3.2 QUANTIFYING EXPOSURE

Quantifying the magnitude, frequency, and duration of exposure for the selected populations and exposure pathways is the last step in the exposure assessment. The basic equation used to calculate human intake of a chemical is:

$$DI \equiv C \times HIF \times MF$$

where,

Parameter	Definition
DI =	Daily intake (mg of COC per kg of body weight per day [mg/kg-day])
C =	Concentration of the COC (mg/kg or mg/m ³)
HIF =	Human intake factor (day) ⁻¹
MF =	Exposure Pathway and COC Specific Modifying Factors (e.g., percutaneous absorption rate) (unitless, unless the units of C or HIF vary from units listed above)

Each variable in this equation has a range of possible values associated with it. The intake variable values for a given pathway are selected so that the combination of all intake variables results in a realistic upper bound estimate (or RME) of the possible exposure by that pathway.

Quantitative characterization of carcinogenic and noncarcinogenic effects requires estimating the potential human exposure levels for each COC. Exposure levels for carcinogens are averaged over the lifetime of the exposed individual (i.e., 70 years). This assumes that exposure to a carcinogen could cause cancer to develop subsequent to exposure, at any time in a person's lifetime. Exposure levels for noncarcinogens are averaged over the duration of exposure, which assumes that the effects of exposure to a noncarcinogen are seen at the time of exposure, and are directly related to the period of exposure. This concept is incorporated into intake calculations as the Averaging Time (AT) parameter. Calculation of the AT is shown in Tables 3-2 through 3-6.

The intake of a COC is estimated from at least six basic factors: exposure frequency, exposure duration, contact rate, COC concentration, body weight, and averaging time. In this assessment, intake is normalized for time and body weight, and is expressed in milligrams of COC per kilogram of body weight per day (mg/kg-day). The exposure factors and algorithms used in this assessment to quantify exposure are presented in Tables 3-2 through 3-6. The average daily dose (ADD) and lifetime average daily dose (LADD) are presented in Appendix C.

Table 3-2
Exposure Parameters^(a) - Incidental Soil Ingestion

$\text{Ingestion Daily Intake (mg/kg-day)} = \frac{C_s \times FI \times IR \times EF \times ED \times CF}{BW \times AT}$										
$\text{(b) Integrated Ingestion Daily Intake (mg/kg-day)} = C_s \times \frac{\left[\left(\frac{IR_{child} \times EF_{child}}{BW_{child}} \right) \times ED_{child} \right] + \left[\left(\frac{IR_{adult} \times EF_{adult}}{BW_{adult}} \right) \times ED_{adult} \right]}{AT} \times FI \times CF$										
Exposure Parameter	Definition	Units	Area							
			Child Development Center		Elementary School		Residential Towers (3101/3102)		GEMB	Golf Course
			Child (0-6) Student	Adult Care Provider	Adolescent (6 - 12) Student	Adult Teacher	Child (0 - 6) Resident	Adult Resident	Adult Worker	Adult Recreator (Golfer)
C _s	Constituent concentration in soil ^(c)	mg/kg	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME
FI	Fraction of ingested soil/dust from outdoor source ^(d)	%	25%	20%	25%	20%	30%	30%	20%	100%
IR	Ingestion rate	mg/day	200	50	150 ^(e)	50	200	100	50	100
ED	Exposure duration	years	3 or 6	3 or 6	3 or 6	3 or 6	3, 6, or 30 ^(f)	3,6, or 30 ^(f)	3,6, or 30	3,6, or 30
EF	Exposure frequency	days/year	185 ^(g)	185 ^(g)	180 ^(h)	180 ^(h)	350	350	250	37 ⁽ⁱ⁾
CF	Conversion factor	kg/mg	1E-06	1E-06	1E-06	1E-06	1E-06	1E-06	1E-06	1E-06
BW	Body weight	kg	15	70	38 ^(j)	70	15	70	70	70
At _{nc}	Averaging time ^(k) - noncarcinogenic (Calculated as the Exposure Duration x 365 days/year)	days	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190; 10,950	1,095; 2,190; 10,950	1,095; 2,190; 10,950	1,095; 2,190; 10,950
At _c	Averaging time ^(k) - carcinogenic (lifetime) (Calculated as a 70 year life expectancy x 365 days/year)	days	25,550	25,550	25,550	25,550	25,550	25,550	25,550	25,550

^(a)Exposure factors without footnotes are U.S. Environmental Protection Agency Standard Defaults (U.S. EPA, 1991b).

^(b)For the 30-year residential exposure scenario (i.e., 6 years as a child and 24 years as an adult) the integrated intake equation was used to calculate intake. For all other exposure scenarios the standard intake equation was used to calculate intake.

^(c)The Average and RME concentrations were calculated as described in the Exposure Point Concentrations section of this report.

^(d)Outdoor and indoor exposure to soil and dust were partitioned based on the amount of time an individual is outdoors. For adult and child residents it was assumed that 30% of time is spent outdoors. This value is based on information presented in the Standard Default Exposure Factors which indicates that residents spend 5 out of 16 waking hours outdoors. For all other exposure scenarios it was assumed that an individual spends a total of 2 hours outdoors per day.

^(e)The adolescent incidental soil ingestion rate was chosen as the midpoint between the residential child and adult values (i.e., 200 mg/day and 100 mg/day). It was assumed that an adolescent would potentially receive more soil contact than an adult, but that this contact was likely to be less than a child under age 6.

^(f)Exposure duration is based on tours of duty of 3 or 6 years or 30 years for a civilian worker. For the 30-year residential exposure scenario the integrated ingestion daily intake equation (e.g., 6 years as a child and 24 years as an adult) was used to calculate intake. For all other exposure scenarios the standard ingestion daily intake equation was used to calculate intake.

^(g)5 days per week at the day care for 37 weeks each year (52 weeks/year - (2 weeks for vacation + 2 weeks rain + 11 weeks cold weather)).

^(h)School days per year.

⁽ⁱ⁾Assumes that an individual plays golf once a week for 37 weeks each year (52 weeks/year - (2 weeks for vacation + 2 weeks rain + 11 weeks cold weather))

^(j)Adolescent body weight was determined by averaging the average weight for boys and girls combined from year 6 through 12 (U.S. EPA, 1996).

^(k)For integrated non-carcinogenic exposures the AT_{nc} for adults and children were added to calculate AT. For carcinogenic exposures 25,550 days was used for AT.

Table 3-3
Exposure Parameters^(a) - Incidental Indoor Dust Ingestion

$\text{Ingestion Daily Intake (mg/kg-day)} = \frac{C_d \times FI \times IR \times EF \times ED \times CF}{BW \times AT}$									
$\text{(b) Integrated Ingestion Daily Intake (mg/kg-day)} = C_d \times \left[\left\{ \left(\frac{IR_{child} \times EF_{child}}{BW_{child}} \right) \times ED_{child} \right\} + \left\{ \left(\frac{IR_{adult} \times EF_{adult}}{BW_{adult}} \right) \times ED_{adult} \right\} \right] \times FI \times CF$									
Exposure Parameter	Definition	Units	Area						
			Child Development Center		Elementary School		Residential Towers (3101/3102)		GEMB
			Child (0-6) Student	Adult Care Provider	Adolescent (6 - 12) Student	Adult Teacher	Child (0 - 6) Resident	Adult Resident	Adult Worker
C _d	Constituent concentration in indoor dust ^(c)	mg/kg	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME
FI	Fraction of ingested soil/dust from indoor source ^(d)	%	75%	80%	75%	80%	70%	70%	80%
IR	Ingestion rate	mg/day	200	50	150 ^(e)	50	200	100	50
ED	Exposure duration	years	3 or 6	3 or 6	3 or 6	3 or 6	3, 6, or 30 ^(f)	3,6, or 30 ^(f)	3,6, or 30
EF	Exposure frequency	days/year	250 ^(g)	250 ^(g)	180 ^(h)	180 ^(h)	350	350	250
CF	Conversion factor	kg/mg	1E-06	1E-06	1E-06	1E-06	1E-06	1E-06	1E-06
BW	Body weight	kg	15	70	38 ⁽ⁱ⁾	70	15	70	70
At _{nc}	Averaging time ^(j) – noncarcinogenic (Calculated as the Exposure Duration x 365 days/year)	days	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190; 10,950	1,095; 2,190; 10,950	1,095; 2,190; 10,950
At _c	Averaging time ^(j) - carcinogenic (lifetime) (Calculated as a 70 year life expectancy x 365 days/year)	days	25,550	25,550	25,550	25,550	25,550	25,550	25,550

^(a)Exposure factors without footnotes are U.S. Environmental Protection Agency Standard Defaults (U.S. EPA, 1991b).

^(b)For the 30-year residential exposure scenario (i.e., 6 years as a child and 24 years as an adult) the integrated intake equation was used to calculate intake. For all other exposure scenarios the standard intake equation was used to calculate intake.

^(c)The Average and RME concentrations were calculated as described in the Exposure Point Concentrations section of this report.

^(d)Outdoor and indoor exposure to soil and dust were partitioned based on the amount of time an individual is outdoors. For adult and child residents it was assumed that 30% of time is spent outdoors. This value is based on information presented in the Standard Default Exposure Factors which indicates that residents spend 5 out of 16 waking hours outdoors. For all other exposure scenarios it was assumed that an individual spends a total of 2 hours outdoors per day.

^(e) The adolescent incidental soil and dust ingestion rate was chosen as the midpoint between the residential child and adult values (i.e., 200 mg/day and 100 mg/day). It was assumed that an adolescent would potentially receive more soil and dust contact than an adult, but that this contact was likely to be less than a child under age 6.

^(f)Exposure duration is based on tours of duty of 3 or 6 years or 30 years for a civilian worker. For the 30-year residential exposure scenario the integrated ingestion daily intake equation (e.g., 6 years as a child and 24 years as an adult) was used to calculate intake. For all other exposure scenarios the standard ingestion daily intake equation was used to calculate intake.

^(g)5 days per week at the day care for 50 weeks each year (52 weeks/year – 2 weeks for vacation).

^(h)School days per year.

⁽ⁱ⁾Adolescent body weight was determined by averaging the average weight for boys and girls combined from year 6 through 12 (U.S. EPA, 1996).

^(j)For integrated non-carcinogenic exposures the AT_{nc} for adults and children were added to calculate AT. For carcinogenic exposures 25,550 days was used for AT.

Table 3-4
Exposure Parameters^(a) - Dermal Contact With Soil

$\text{Daily Intake} \left(\frac{\text{mg}}{\text{kg-day}} \right) = \frac{C_s \times CR \times SA \times AB \times ED \times EF \times FI \times CF}{BW \times AT}$									
$^{(b)} \text{Integrated Adult and Child Daily Intake} \left(\frac{\text{mg}}{\text{kg-day}} \right) = C_s \times FI \times CF \times AB \times \left\{ \left(\frac{CR_{\text{child}} \times SA_{\text{child}} \times EF_{\text{child}}}{BW_{\text{child}}} \right) \times ED_{\text{child}} \right\} + \left\{ \left(\frac{CR_{\text{adult}} \times SA_{\text{adult}} \times EF_{\text{adult}}}{BW_{\text{adult}}} \right) \times ED_{\text{adult}} \right\} \times AT$									
Exposure Parameter	Definition	Units	Area						
			Child Development Center		Elementary School		Residential Towers (3101/3102)		GEMB
			Child (0-6) Student	Adult Care Provider	Adolescent (6 - 12) Student	Adult Teacher	Child (0 - 6) Resident	Adult Resident	Adult Worker
C _s	Constituent concentration in soil ^(c)	mg/kg	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME
FI	Fraction from contaminated source	%	100%	100%	100%	100%	100%	100%	100%
CR	Contact rate	mg/cm ²	1.0	1.0	1.0	1.0	1.0	1.0	1.0
AB	Absorbance factor	%	CSAB ^(d)	CSAB ^(d)	CSAB ^(d)	CSAB ^(d)	CSAB ^(d)	CSAB ^(d)	CSAB ^(d)
SA	Skin surface area	cm ²	3,900 ^(e)	2,900 ^(e)	3,325 ^(f)	2,900 ^(e)	3,900 ^(e)	2,900 ^(e)	2,000 ^(g)
ED	Exposure duration	years	3 or 6	3 or 6	3 or 6	3 or 6	3, 6, or 30 ^(h)	3, 6, or 30 ^(h)	3, 6, or 30
EF	Exposure frequency	days/year	185 ⁽ⁱ⁾	185 ⁽ⁱ⁾	180 ^(j)	180 ^(j)	350	350	250
CF	Conversion factor	kg/mg	1E-06	1E-06	1E-06	1E-06	1E-06	1E-06	1E-06
BW	Body weight	kg	15	70	38 ^(k)	70	15	70	70
At _{nc}	Averaging time ^(l) - noncarcinogenic (Calculated as the Exposure Duration x 365 days/year)	days	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190; 10,950	1,095; 2,190; 10,950	1,095; 2,190; 10,950
At _c	Averaging time ^(l) - carcinogenic (lifetime) (Calculated as a 70 year life expectancy x 365 days/year)	days	25,550	25,550	25,550	25,550	25,550	25,550	25,550

^(a) Exposure factors without footnotes are U.S. Environmental Protection Agency Standard Defaults (U.S. EPA, 1991b).

^(b) For the 30-year residential exposure scenario (i.e., 6 years as a child and 24 years as an adult) the integrated intake equation was used to calculate intake. For all other exposure scenarios the standard intake equation was used to calculate intake.

^(c) The Average and RME concentrations were calculated as described in the Exposure Point Concentrations section of this report.

^(d) Chemical-Specific Absorption Factor (See Table 3-7).

^(e) Values are U.S. EPA Region X Standard Defaults. The child exposure value is based on the assumption that the arms, legs, hands, and feet of a child are exposed. Adult surface area assumes 25% of the time at 5,000 cm² and 75% of the time at 1,900 cm² (U.S. EPA, 1991b).

^(f) Skin Surface area available for exposure was determined based on the data presented in the *Exposure Factors Handbook: Volume I - General Factors* (U.S. EPA, 1996). Assumed that a 6 to 12 year-old adolescent arms and hands were exposed during 75% of the year and that their arms, legs, and feet were exposed for 25% (i.e., summer) of the year.

^(g) Skin Surface area available for exposure was determined based on the data presented in the *Exposure Factors Handbook: Volume I - General Factors* (U.S. EPA, 1996). Value is based on the head and hands of an adult.

^(h) Exposure duration is based on tours of duty of 3 or 6 years or 30 years for a civilian worker. For the 30-year residential exposure scenario the integrated dermal daily intake equation (e.g., 6 years as a child and 24 years as an adult) was used to calculate intake. For all other exposure scenarios the standard inhalation daily intake equation was used to calculate intake.

⁽ⁱ⁾ 5 days per week at the day care for 37 weeks each year (52 weeks/year - (2 weeks for vacation + 2 weeks rain + 11 weeks cold weather)).

^(j) School days per year.

^(k) Adolescent body weight was determined by averaging the average weight for boys and girls combined from year 6 through 12 (U.S. EPA, 1996).

^(l) For integrated non-carcinogenic exposures the AT_{nc} for adults and children were added to calculate AT. For carcinogenic exposures 25,550 days was used for AT.

Table 3-5
Exposure Parameters^(a) - Inhalation of Particulates and Vapors in Ambient Air

$\text{Inhalation Daily Intake (mg/kg-day)} = \frac{C_a \times IR \times ET \times ED \times EF \times FI}{BW \times AT}$										
$\text{(b) Integrated Child and Adult Inhalation Daily Intake (mg/kg-day)} = C_a \times FI \times \frac{\left\{ \left(\frac{IR_{child} \times EF_{child} \times ET_{child}}{BW_{child}} \right) \times ED_{child} \right\} + \left\{ \left(\frac{IR_{adult} \times EF_{adult} \times ET_{adult}}{BW_{adult}} \right) \times ED_{adult} \right\}}{AT}$										
Exposure Parameter	Definition	Units	Area							
			Child Development Center		Elementary School		Residential Towers (3101/3102)		GEMB	Golf Course
			Child (0-6) Student	Adult Care Provider	Adolescent (6 - 12) Student	Adult Teacher	Child (0 - 6) Resident	Adult Resident	Adult Worker	Adult Recreator (Golfer)
C _a	Constituent concentration in ambient air ^(c)	mg/m ³	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME
FI	Fraction from contaminated source	%	100%	100%	100%	100%	100%	100%	100%	100%
IR	Inhalation rate	m ³ /hour	1.0 ^(d)	0.833	1.0 ^(d)	0.833	0.5	0.833	0.833	0.833
ET	Exposure time ^(e)	hours/day	2	2	2	2	5	5	2	5 ^(f)
ED	Exposure duration	years	3 or 6	3 or 6	3 or 6	3 or 6	3, 6, or 30 ^(g)	3, 6, or 30 ^(g)	3, 6, or 30	3, 6, or 30
EF	Exposure frequency	days/year	185 ^(h)	185 ^(h)	180 ⁽ⁱ⁾	180 ⁽ⁱ⁾	350	350	250	37 ^(j)
BW	Body weight	kg	15	70	38 ^(k)	70	15	70	70	70
At _{nc}	Averaging time ^(l) – noncarcinogenic (Calculated as the Exposure Duration x 365 days/year)	days	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190; 10,950	1,095; 2,190; 10,950	1,095; 2,190; 10,950	1,095; 2,190; 10,950
At _c	Averaging time ^(l) - carcinogenic (lifetime) (Calculated as a 70 year life expectancy x 365 days/year)	days	25,550	25,550	25,550	25,550	25,550	25,550	25,550	25,550

^(a)Exposure factors without footnotes are U.S. Environmental Protection Agency Standard Defaults (U.S. EPA, 1991b).

^(b)For the 30-year residential exposure scenario (i.e., 6 years as a child and 24 years as an adult) the integrated intake equation was used to calculate intake. For all other exposure scenarios the standard intake equation was used to calculate intake.

^(c)The Average and RME concentrations were calculated as described in the Exposure Point Concentrations section of this report.

^(d)Inhalation rate for light activities for adults and children (U.S. EPA, 1996).

^(e)Outdoor and indoor inhalation exposures were partitioned based on the amount of time an individual is outdoors. For adult and child residents it was assumed that 30% of time is spent outdoors. This value is based on information presented in the Standard Default Exposure Factors which indicates that residents spend 5 out of 16 waking hours outdoors. For all other exposure scenarios it was assumed that an individual spends a total of 2 hours outdoors per day.

^(f)Assumes that it takes 5 hours to complete 18 holes of golf.

^(g)Exposure duration is based on tours of duty of 3 or 6 years or 30 years for a civilian worker. For the 30-year residential exposure scenario the integrated inhalation daily intake equation (e.g., 6 years as a child and 24 years as an adult) was used to calculate intake. For all other exposure scenarios the standard inhalation daily intake equation was used to calculate intake.

^(h)5 days per week at the day care for 37 weeks each year (52 weeks/year - (2 weeks for vacation + 2 weeks rain + 11 weeks cold weather)).

⁽ⁱ⁾School days per year.

^(j)Assumes that an individual plays golf once a week for 37 weeks each year (52 weeks/year - (2 weeks for vacation + 2 weeks rain + 11 weeks cold weather))

^(k)Adolescent body weight was determined by averaging the average weight for boys and girls combined from year 6 through 12 (U.S. EPA, 1996).

^(l)For integrated non-carcinogenic exposures the AT_{nc} for adults and children were added to calculate AT. For carcinogenic exposures 25,550 days was used for AT.

Table 3-6
Exposure Parameters^(a) - Inhalation of Particulates and Vapors in Indoor Air

$\text{Inhalation Daily Intake (mg/kg-day)} = \frac{C_a \times IR \times ET \times ED \times EF \times FI}{BW \times AT}$									
$\text{(b) Integrated Child and Adult Inhalation Daily Intake (mg/kg-day)} = C_a \times FI \times \frac{\left\{ \left(\frac{IR_{child} \times EF_{child} \times ET_{child}}{BW_{child}} \right) \times ED_{child} \right\} + \left\{ \left(\frac{IR_{adult} \times EF_{adult} \times ET_{adult}}{BW_{adult}} \right) \times ED_{adult} \right\}}{AT}$									
Exposure Parameter	Definition	Units	Area						
			Child Development Center		Elementary School		Residential Towers (3101/3102)		GEMB
			Child (0-6) Student	Adult Care Provider	Adolescent (6-12) Student	Adult Teacher	Child (0-6) Resident	Adult Resident	Adult Worker
C _a	Constituent concentration in indoor air ^(c)	mg/m ³	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME	Average or RME
FI	Fraction from contaminated source	%	100%	100%	100%	100%	100%	100%	100%
IR	Inhalation rate	m ³ /hour	1.0 ^(d)	0.833	1.0 ^(d)	0.833	0.5	0.833	0.833
ET	Exposure time ^(e)	hours/day	6	8	6	8	19	19	8
ED	Exposure duration	years	3 or 6	3 or 6	3 or 6	3 or 6	3, 6, or 30 ^(f)	3, 6, or 30 ^(f)	3, 6, or 30
EF	Exposure frequency	days/year	250 ^(g)	250 ^(g)	180 ^(h)	180 ^(h)	350	350	250
BW	Body weight	kg	15	70	38 ⁽ⁱ⁾	70	15	70	70
AT _{nc}	Averaging time ^(j) – noncarcinogenic (Calculated as the Exposure Duration x 365 days/year)	days	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190	1,095; 2,190; 10,950	1,095; 2,190; 10,950	1,095; 2,190; 10,950
AT _c	Averaging time ^(j) - carcinogenic (lifetime) (Calculated as a 70 year life expectancy x 365 days/year)	days	25,550	25,550	25,550	25,550	25,550	25,550	25,550

^(a)Exposure factors without footnotes are U.S. Environmental Protection Agency Standard Defaults (U.S. EPA, 1991b).

^(b)For the 30-year residential exposure scenario (i.e., 6 years as a child and 24 years as an adult) the integrated intake equation was used to calculate intake. For all other exposure scenarios the standard intake equation was used to calculate intake.

^(c)The Average and RME concentrations were calculated as described in the Exposure Point Concentrations section of this report.

^(d)Inhalation rate for light activities for adults and children (U.S. EPA, 1996).

^(e)Outdoor and indoor inhalation exposures were partitioned based on the amount of time an individual is outdoors. For adult and child residents it was assumed that 30% of time is spent outdoors. This value is based on information presented in the Standard Default Exposure Factors which indicates that residents spend 5 out of 16 waking hours outdoors. For all other exposure scenarios it was assumed that an individual spends a total of 2 hours outdoors per day.

^(f)Exposure duration is based on tours of duty of 3 or 6 years or 30 years for a civilian worker. For the 30-year residential exposure scenario the integrated inhalation daily intake equation (e.g., 6 years as a child and 24 years as an adult) was used to calculate intake. For all other exposure scenarios the standard inhalation daily intake equation was used to calculate intake.

^(g)5 days per week at the day care for 50 weeks each year (52 weeks/year – 2 weeks for vacation).

^(h)School days per year.

⁽ⁱ⁾Adolescent body weight was determined by averaging the average weight for boys and girls combined from year 6 through 12 (U.S. EPA, 1996).

^(j)For integrated non-carcinogenic exposures the AT_{nc} for adults and children were added to calculate AT. For carcinogenic exposures 25,550 days was used for AT.

3.3 PERCUTANEOUS ABSORPTION RATES

Table 3-7 presents the percutaneous absorption rates that were used to calculate intake via dermal contact with soil in this assessment. These values were obtained from U.S. EPA's *Dermal Exposure Assessment: Principles and Applications* (U.S. EPA, 1992). Experimentally-derived percutaneous absorption factors, based on soil applications of 0.2 to 1.0 mg/cm², were available for only a few COCs (e.g., Dioxins, PCBs, and Tetrachlorobiphenyl). For COCs lacking experimentally-derived percutaneous absorption rates, a default value of 6% was assumed. This value reflects the highest empirically-derived percutaneous absorption rate for all COCs evaluated with soil applications from 0.2 to 1.0 mg/cm² and exposure durations less than 24 hours (U.S. EPA, 1992). VOCs were not assessed via dermal absorption from soil because at soil-loading rates of 1.0 mg/cm², volatilization is expected to negate dermal absorption. Metals also were not assessed via dermal absorption from soil because their absorption potential in soil is considered negligible (i.e., <1 percent). In addition, carcinogenic PAHs were not evaluated for carcinogenic risks associated with dermal exposure. According to U.S. EPA's *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual*, "It is inappropriate to use the oral slope factor to evaluate risks associated with dermal exposure to carcinogens such as benzo(a)pyrene, which cause skin cancer through direct action at the point of application" (U.S. EPA, 1989).

Table 3-7
Dermal Absorption Rates via Soil

Analyte	Percutaneous Absorption Factor (ABS in %)
Semivolatile Organic Compounds	6%
Dioxins/Furans	3%
PCBs	3%

3.4 REFERENCES

- Personal communication between Vera Wang, Environmental Engineer, NEHC, and Michelle Norman, Environmental Engineer, Atsugi Environmental Office. October 15, 1998.
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Section 4

Toxicity Assessment

4.0 PURPOSE

The purpose of the toxicity assessment is to identify COC and route-specific toxicity criteria for each COC in order to quantify the potential health impacts to people exposed to COCs in the environment. These toxicity values are used in conjunction with the information presented in the exposure assessment to calculate risks.

4.1 HEALTH CRITERIA

Both carcinogenic and noncarcinogenic health effects must be considered when evaluating potential human health impacts. Cancer toxicity values (carcinogenic slope factors [CSFs]) and noncarcinogenic toxicity values (reference doses [RfDs]) are derived through an evaluation of the relationship between the amount of an agent (either administered, absorbed, or believed to be effective) and changes in certain aspects of the biological system (usually toxic effects) in the exposed population (animals and/or humans), in response to that agent. U.S. EPA has evaluated numerous chemicals and has published the corresponding toxicity values, which have undergone peer review. The following sources were consulted to identify toxicity values for this assessment:

- The Integrated Risk Information System (IRIS) (U.S. EPA, 1999b).
- The Health Effects Assessment Summary Tables—Annual Update (HEAST) (U.S. EPA, 1997).
- Provisional Toxicity Values Available from the National Center for Environmental Assessment (NCEA) Superfund Health Risk Technical Support Center (NCEA-CIN) (U.S. EPA, 1999a).
- California EPA Toxicity Values (CALEPA). Sources include:
 1. Technical Support Document for Describing Available Cancer Potency Factors and Hot Spots Unit Risk and Summary Table of Cancer Potency Values (CALEPA, 1999a).
 2. Technical Support Document for the Determination of Noncancer Chronic Reference Exposure Levels and Proposed OEHHA Chronic Inhalation REL Summary (CALEPA, 1999b).

IRIS is a U.S. EPA database containing Agency consensus scientific positions on potential adverse human health effects that may result from chronic (or lifetime) exposure to environmental contaminants. IRIS contains chemical-specific summaries of qualitative and quantitative health information. This information includes the reference dose for non-cancer health effects resulting from oral exposure (the RfD) and the reference concentration for non-cancer effects resulting from inhalation exposure (the RfC) and the carcinogen assessment information. Many of the toxicological summaries on IRIS were developed prior to 1996 and the information and values presented were verified by either the U.S. EPA Reference Dose/Reference Concentration (RfD/RfC) Work Group or the U.S. EPA Carcinogen Risk Assessment Verification Endeavor (CRAVE) group. IRIS entries from 1997 to the present represent U.S. EPA consensus information. Chemical-specific health assessment information on IRIS is a result of a comprehensive review of chronic toxicity data by U.S. EPA health scientists from several Program Offices, Regional Offices, and the Office of Research and Development.

The toxicity values presented in the HEAST document are considered “provisional” by U.S. EPA because they have not been verified by an agency work group (U.S. EPA, 1997). Provisional values are not listed in IRIS. Additional provisional and internal U.S. EPA toxicity values were obtained from U.S. EPA. The values provided by NCEA-CIN include chronic and subchronic toxicity values, unit risks, and slope factors. The values that have been peer reviewed are considered provisional, while the values that have not been

peer reviewed are considered internal U.S. EPA values. The cancer unit risk and potency factor values developed by CALEPA were reviewed by a CALEPA working group to ensure agency-wide consistency and harmonization. The CALEPA inhalation exposure levels (i.e., noncarcinogenic toxicity values) are intended to protect the public from a lifetime of exposure to hazardous airborne substances. These health-based chronic exposure levels are intended for risk characterization of routine industrial emissions.

Since multiple toxicity values were available for some COCs, the sources of toxicity information were prioritized as follows to select the toxicity values used in the assessment to calculate risk:

1. IRIS values.
2. HEAST values.
3. U.S. EPA provisional values.
4. U.S. EPA internal values.
5. U.S. EPA provisional subchronic noncancer toxicity values, (which were converted to chronic toxicity values by dividing the subchronic value by 10).
6. U.S. EPA internal subchronic noncancer toxicity values, (which were converted to chronic toxicity values by dividing the subchronic value by 10.)
7. CALEPA toxicity values.

The potential for producing carcinogenic effects is limited to certain COCs (i.e., carcinogens), while adverse noncarcinogenic health effects can potentially result from exposure to any COC. Therefore, where available, cancer toxicity values were obtained for those constituents identified by U.S. EPA as carcinogens and noncancer toxicity values were obtained for each of the COCs.

The toxicity of any COC depends on its route of entry into the body. In some cases a COC may produce toxicity only at or near a specific route of entry and may not be toxic through other routes of exposure. Therefore, the route-specific toxicity value was used for each COC.

4.2 CARCINOGENIC HEALTH CRITERIA

The mechanism for carcinogenesis is referred to as a “non-threshold” process, since any level of exposure to a COC considered to be a carcinogen poses a small, but finite, probability of generating a carcinogenic response. Since risk at low exposure levels cannot be measured directly either by animal experiments or by epidemiologic studies, a number of mathematical models and procedures have been developed for use in extrapolating from high to low doses. Different extrapolation models or procedures, while they may reasonably fit the observed data, may lead to large differences in the projected risk at low doses. It is assumed by U.S. EPA in developing CSFs that the risk of cancer is linearly related to dose. This means that relatively high doses that are often used in animal studies can be extrapolated downward to extremely small doses, with some incremental risk of cancer always possible. This assumes that even a small number of molecules (possibly a single molecule) of a carcinogen may cause changes in a single cell that could result in the cell dividing in an uncontrolled manner, eventually leading to cancer.

There is some dispute as to whether extrapolation from high to low doses is a realistic approach. It has been argued that at low doses, cells may have the ability to detoxify carcinogens or repair cellular damage. It is important to recognize the possibility that some carcinogens may have a threshold for toxicity.

CSFs are usually derived by U.S. EPA by means of a linearized multistage model and reflect the upper-bound limit of cancer potency of any COC. As a result, the calculated carcinogenic risk is likely to represent a plausible upper limit to the risk. The actual risk is unknown but is likely to be lower than the predicted risk, and may be as low as zero (U.S. EPA, 1989).

CSFs were used in this assessment to evaluate carcinogenic risks. A CSF is a numerical estimate of the potency of a COC, which, when multiplied by the average lifetime dose, gives the probability of an individual developing cancer over a lifetime. CSFs are expressed in units of the inverse of milligrams of COC per kilogram of body weight per day (kg-day/mg).

U.S. EPA uses a weight-of-evidence approach to classify the likelihood that a COC is a human carcinogen. Each COC is placed in one of the weight-of-evidence groups presented in Table 4-1.

Table 4-1
U.S. EPA Weight-of-Evidence Categories for Carcinogenicity^(a)

U.S. EPA Group	Description of Group	Description of Evidence
Group A	Human carcinogen.	Sufficient evidence from epidemiological studies to support a causal association between exposure and cancer.
Group B	Probable human carcinogen.	B1: Limited evidence of carcinogenicity in humans from epidemiological studies; sufficient evidence in animals. B2: Sufficient evidence of carcinogenicity in animals and no or inadequate evidence in humans.
Group C	Possible human carcinogen.	Limited evidence of carcinogenicity in animals.
Group D	Not classified.	Inadequate evidence of carcinogenicity in animals.
Group E	No evidence of carcinogenicity in humans.	No evidence of carcinogenicity in at least two adequate animal tests or in both epidemiological and animal studies.

(a)Although the U.S. EPA weight-of-evidence categories are still operative it should be noted that the Agency is moving toward a more narrative carcinogen characterization, as described in the 1996 Draft Carcinogen Guidelines.

Toxicity values for a COC can be presented in several ways with different units. For the purposes of this evaluation, inhalation unit risks were converted to CSFs by multiplying the unit risk ($m^3/\mu g$) by 70 (kg *body weight*) and 1,000 ($\mu g/mg$ *conversion factor*) and dividing by 20 (m^3/day *inhalation rate*), as follows:

$$CSF (kg - day/mg) = \frac{\text{Unit Risk } (m^3/\mu g) * \text{Body Weight } (70 \text{ kg}) * \text{Conversion Factor } (1,000 \mu g/mg)}{\text{Inhalation Rate } (20 m^3/day)}$$

4.3 NONCARCINOGENIC HEALTH CRITERIA

4.3.1 Reference Doses

The term RfD was developed by U.S. EPA to refer to a daily intake of a COC to which an individual, including sensitive subpopulations, can be exposed without any expectation of adverse noncarcinogenic health effects (e.g., organ damage, biochemical alterations, birth defects). RfDs have been developed by the U.S. EPA for the following situations;

- Subchronic or Short-term Exposures - Multiple or continuous exposures occurring usually over 3 months.
- Chronic Exposures - Multiple exposures occurring over an extended period of time, or a significant fraction of the animal's or the individual's life-time.

An RfD is defined as "An estimate (with uncertainty spanning perhaps an order of magnitude or greater) of a daily exposure level for the human population, including sensitive subgroups, that is likely to be without an appreciable risk of deleterious effects during a portion of the lifetime" (U.S. EPA, 1989). RfDs are expressed in units of mg/kg-day.

4.3.2 Derivation of Oral Reference Doses and Inhalation Reference Concentrations

Noncarcinogenic COCs are thought to exhibit threshold characteristics. That is, exposures less than a specific threshold dose will not result in adverse health effects, whereas exposures exceeding the threshold dose may produce adverse health effects. The assumption of a threshold for toxicity is based on the concept that the body has certain protective mechanisms that must be overcome before adverse effects are manifest. For example, there could be a large number of cells performing the same or similar function whose population must be significantly depleted before the effect is seen.

The threshold concept is important in the regulatory context. The individual threshold hypothesis holds that a range of exposures from zero to some finite value can be tolerated by the organism with essentially no chance of expression of the toxic effect. Further, it is often prudent to focus on the most sensitive members of the population; therefore, regulatory efforts are generally made to keep exposures below the population threshold, which is defined as the lowest of the thresholds of the individuals within a population (U.S. EPA, 1999b).

In general, an RfD is derived from a no-observed-adverse-effects-level (NOAEL) or a lowest-observed-adverse-effects-level (LOAEL) obtained from animal studies (however, occasionally they may be derived from human studies) by the application of standard order-of-magnitude uncertainty factors. In certain cases, an additional modifying factor is employed to account for professional assessment of scientific uncertainties in the available data (U.S. EPA, 1989).

The Inhalation Reference Concentration (RfC) is analogous to the oral RfD and is likewise based on the assumption that thresholds exist for certain toxic effects such as cellular necrosis. The inhalation RfC considers toxic effects for both the respiratory system (portal-of-entry) and for effects peripheral to the respiratory system (extrarespiratory effects). Inhalation RfCs were derived according to the Interim Methods for Development of Inhalation Reference Doses (EPA/600/8-88/066F August 1989) and subsequently according to Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry (EPA/600/8-90/066F October 1994).

A NOAEL is an experimentally determined dose at which there was no statistically or biologically significant indication of the toxic effect of concern. The study chosen to establish the NOAEL is based on the criterion that the measured endpoint represents the most sensitive target organ or tissue (i.e., critical organ) for that COC. In an experiment with several NOAELs, generally the lowest one is chosen as the critical NOAEL. Since many COCs can produce toxic effects on several organ systems, with each toxic effect possibly having a separate threshold dose, the distinction of the critical toxic effect provides added confidence that the NOAEL is protective of human health.

Once the critical NOAEL is identified, the next step is to derive the RfD by dividing the NOAEL by safety factors as follows:

$$RfD \text{ (average daily human dose)} = \frac{NOAEL_{\text{Experimental Dose}}}{\text{Safety Factors} + \text{Modifying Factor}}$$

Generally, each uncertainty factor represents a specific area of uncertainty inherent in the available data and accounts for uncertainties such as:

- Differences in responsiveness between humans and animals in prolonged exposure studies (factor of 10) (U.S. EPA, 1999b).
- Variation in susceptibility among individuals in the human population (factor of 10) (U.S. EPA, 1999b).
- Incomplete databases (e.g., those for which only the results of subchronic studies are available) (factor of 10) (U.S. EPA, 1999b).

In addition to the safety factors, a modifying factor is applied in some instances. Modifying factors range from 0 to 10 and are included to reflect a qualitative professional assessment of additional uncertainties in the critical study and in the entire database for the constituent not explicitly addressed by the uncertainty factors. The default value for the modifying factor is 1 (U.S. EPA, 1997).

Toxicity values for a COC can be presented in several ways. For the purposes of this evaluation, inhalation reference concentrations (RfC)s were converted to RfDs by multiplying the RfC by 20 (m^3/day *inhalation rate*) and dividing by 70 (kg *body weight*).

$$\text{RfD (mg/kg - day)} = \frac{\text{RfC (mg/m}^3\text{)} * \text{Inhalation Rate (20 m}^3\text{/day)} * \text{Absorption Factor (100\%)}}{\text{Body Weight (70 kg)}}$$

4.4 TOXICITY VALUES

Tables 4-2 and 4-3 present ingestion and inhalation COC-specific toxicity values for COCs assessed in the human health evaluation. The number and type of toxicity values identified for this evaluation can be characterized as follows:

- Oral RfDs were available for 95 of the 246 COCs.
- Inhalation RfDs were available for 58 of the 246 COCs.
- Oral carcinogenic slope factors were available for 44 of the 246 COCs.
- Inhalation carcinogenic slope factors were available for 43 of the 246 COCs.

Toxicity values for 86 of the 246 COCs were not available (see Table 4-4) and these COCs were not evaluated further in the risk assessment because of the lack of toxicity information.

4.5 NONCARCINOGENIC TOXIC ENDPOINTS AND CRITICAL EFFECTS

For non-cancer health effects, hazard quotients are added across COCs when they target the same organ, or produce the same critical effect, to calculate a segregated hazard index. Segregation of hazard indices requires the identification of the major effects of each COC, including effects seen at higher doses than the critical effect (e.g., the COC may cause liver damage at a dose of 100 mg/kg-day and neurotoxicity at a dose of 250 mg/kg-day). Major effect categories include:

- Neurotoxicity
- Developmental toxicity
- Reproductive toxicity
- Immunotoxicity
- Adverse effects by target organ (i.e., hepatic renal, respiratory, cardiovascular, gastrointestinal, hematological, musculoskeletal, and dermal/ocular effects).

Although higher exposure levels may be required to produce adverse health effects other than the critical effect, the RfD can be used as the toxicity value for each effect category as a conservative and simplifying step (U.S. EPA, 1989). The toxic endpoints and critical effects for the COCs comprising the majority of the noncarcinogenic hazard indices are presented in Table 4-5.

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
Acid Gases									
Hydrogen Chloride	7647-01-0					--			--
Sulfuric Acid	7664-93-9					--			--
Aldehydes & Ketones									
Acetaldehyde	75-07-0					--	B2	Increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.	--
Acetone	67-64-1	0.10	Increased liver and kidney weights and nephrotoxicity	1000	IRIS	D		Lack of data concerning carcinogenicity in humans or animals.	--
Acrolein	107-02-8	0.020	NOAEL	1000	HEAST1	C		Increased incidence of adrenal cortical adenomas to female rats and carcinogenic potential of an acrolein metabolite. Acrolein is mutagenic in bacteria and is structurally similar to probable or known human carcinogens.	--
Benzaldehyde	100-52-7	0.10	Forestomach lesions, kidney toxicity	1000	IRIS				--
Crotonaldehyde	123-73-9					--	C	No human data & increased incidence of hepatocellular carcinomas & hepatic nodules (combined) in F344 rats. The possible carcinogenicity of crotonaldehyde is supported by genotoxic activity & the expected reactivity of croton oil & aldehyde.	1.9
Formaldehyde	50-00-0	0.20	Reduced weight gain, histopathology in rats	100	IRIS	B1		Limited evidence in humans, and sufficient evidence in animals. Human data include nine studies that show statistically significant association between site-specific respiratory neoplasms and exposure to formaldehyde.	--
Methyl Ethyl Ketone	78-93-3	0.6	Decreased fetal birth weight	3000	IRIS	D		No human carcinogenicity data and inadequate animal data.	--
Conventional Parameters									
Nitrite	14797-65-0	0.10	Methemoglobinemia	1	IRIS				--
Dioxins/Furans									

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	DIOXIN-TEQ				--	B2		150,000	HEAST1
GC/MS Organics									
Acetonitrile	75-05-8				--	D	There is a lack of human evidence and the animal evidence is equivocal.		--
Acrylonitrile	107-13-1	0.0010	Testes - Decreased sperm counts; Testes - Seminiferous tubule degeneration	1000	HEAST1	B1	Statistically significant increase in incidence of lung cancer in exposed workers and observation of tumors, generally astrocytomas in the brain, in studies in two rat strains exposed by various routes (drinking water, gavage, and inhalation).	0.5	IRIS
Benzene	71-43-2				--	A	Several studies of increased incidence of nonlymphocytic leukemia from occupational exposure, increased incidence of neoplasia in rats and mice exposed by inhalation and gavage, and some supporting data form the basis for this classification.	0.029	IRIS
Benzyl Chloride	100-44-7				--	B2	Inadequate human data and sufficient evidence of carcinogenicity in animals; namely significantly increased incidences of benign and malignant tumors at multiple sites in both sexes of mice and a significant increase in thyroid tumors.	0.17	IRIS
Bromochloromethane	74-97-5				--	D	Lack of data regarding the carcinogenicity of bromochloromethane in humans or animals; however there are data indicative of genotoxic effects and structural relationships to halogenated methanes classified as B2 probable human carcinogens.		--
Bromodichloromethane	75-27-4	0.020	Renal cytomegaly	1000	IRIS	B2	Inadequate human data and sufficient evidence of carcinogenicity in two animal species (mice and rats) as shown by increased incidence of kidney tumors in male mice, and liver tumors in female mice.	0.062	IRIS
Bromoform	75-25-2	0.020	Hepatic lesions	1000	IRIS	B2	Inadequate human data and sufficient evidence of carcinogenicity in animals,	0.0079	IRIS

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							namely an increased incidence of tumors after oral administration of bromoform in rats and intraperitoneal administration in mice.		
Bromomethane	74-83-9	0.0014	Epithelial hyperplasia of the forestomach	1000	IRIS	D	Inadequate human and animal data; a single mortality study from which direct exposure associations could not be deduced and studies in several animal species with too few animals, too brief exposure or observation time for adequate power.		--
Butadiene, 1,3-	106-99-0				--	B2	Inadequate human data and sufficient rodent (mouse and rat) studies in which exposure to airborne concentrations of 1,3-butadiene caused multiple tumors and tumor types. Related compounds are carcinogenic and mutagenic.		--
Butanol, n-	71-36-3	0.10	Hypoactivity and ataxia	1000	IRIS	D	No human and no animal cancer data.		--
Butylbenzene, n-	104-51-8	0.04			NCEA-CIN				--
Butylbenzene, t-	98-06-6	0.04			NCEA-CIN				--
Carbon Tetrachloride	56-23-5	0.00070	Liver lesions	1000	IRIS	B2	Carcinogenicity in rats, mice, and hamsters.	0.13	IRIS
Chloro-1,3-Butadiene, 2-	126-99-8	0.020	Hair - Alopecia; Whole body - Decreased weight gain	100	HEAST2				--
Chlorobenzene	108-90-7	0.020	Histopathologic changes in liver	1000	IRIS	D	No human data, inadequate animal data and predominantly negative genetic toxicity data in bacterial yeast, and mouse lymphoma cells.		--
Chloroform	67-66-3	0.010	Fatty cyst formation in liver	1000	IRIS	B2	Based on increased incidence of several tumor types in rats and three strains of mice.	0.0061	IRIS
Chloromethane	74-87-3				--	C		0.013	HEAST1
Chlorotoluene, o-	95-49-8	0.020	Decrease in body weight gain	1000	IRIS				--
Cumene	98-82-8	0.10	Increased average kidney weight in female rats	1000	IRIS	D	Under the current Risk Assessment Guidelines (U.S. EPA, 1987a), cumene is assigned carcinogen category D, not classifiable, indicating no or inadequate human or animal data.		--
Dibromochloromethane	124-48-1	0.020	Hepatic lesions	1000	IRIS	C	Inadequate human data and limited evidence of carcinogenicity in animals;	0.084	IRIS

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							namely, positive carcinogenic evidence in B6C3F1 mice (males and females), together with positive mutagenicity data, and structural similarity to other trihalomethanes.		
Dibromoethane, 1,2-	106-93-4				--	B2	Increased incidence of a variety of tumors in rats and mice in both sexes by three routes of administration at both sites of application and at distant sites. EDB is mutagenic in various in vitro and in vivo assays.	85	IRIS
Dichlorodifluoromethane	75-71-8	0.20	Reduced body weight	100	IRIS				--
Dichloroethane, 1,1-	75-34-3	0.10	None observed	1000	HEAST1	C	No human data and limited evidence of carcinogenicity in two animal species (rats & mice) as shown by an increased incidence of mammary gland adenocarcinomas & hemangiosarcomas in female rats & an increased incidence of hepatocellular carcinomas.		--
Dichloroethane, 1,2-	107-06-2				--	B2	Induction of several tumor types in rats and mice treated by gavage and lung papillomas in mice after topical application.	0.091	IRIS
Dichloroethene, 1,1-	75-35-4	0.0090	Hepatic lesions	1000	IRIS	C	Tumors observed in one mouse strain after inhalation exposure. Other studies were of inadequate design. Vinylidene chloride is mutagenic, and a metabolite is known to alkylate and to bind covalently to DNA.	0.6	IRIS
Dichloroethylene, Cis-1,2-	156-59-2	0.010	Blood - Decreased hematocrit; Blood - Decreased hemoglobin	3000	HEAST1	D	No data in humans or animals and generally nonpositive results in mutagenicity assays.		--
Dichloroethylene, Trans-1,2-	156-60-5	0.020	Increased serum alkaline phosphatase in male mice	1000	IRIS				--
Dichloromethane	75-09-2	0.060	Liver toxicity	100	IRIS	B2	Inadequate human data and sufficient evidence of carcinogenicity in animals: increased incidence of hepatocellular neoplasms and alveolar/bronchiolar neoplasms in male and female mice, and increased incidence of benign	0.0075	IRIS

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							mammary tumors in both sexes.		
Dichloropropane, 1,2-	78-87-5				--	B2		0.068	HEAST1
Dichloropropene, Cis-1,3-	10061-01-5				--				--
Dichloropropene, Trans-1,3-	10061-02-6				--				--
Dioxane, 1,4-	123-91-1				--	B2	Induction of nasal cavity and liver carcinomas in multiple strains of rats, liver carcinomas in mice, and gall bladder carcinomas in guinea pigs.	0.011	IRIS
Ethyl Benzene	100-41-4	0.10	Liver and kidney toxicity	1000	IRIS	D	Nonclassifiable due to lack of animal bioassays and human studies.		--
Ethyl Chloride	75-00-3				--				--
Ethyltoluene, m-	620-14-4				--				--
Ethyltoluene, o-	611-14-3				--				--
Ethyltoluene, p-	622-96-8				--				--
Heptane, n-	142-82-5				--	D	No human data and no animal data available.		--
Hexane, n-	110-54-3	0.060	Nervous system - Neuropathy; Testis - Atrophy	10000	HEAST1				--
Methyl Isobutyl Ketone	108-10-1	0.080	Whole body - Lethargy; Liver - Increased relative and absolute weight in females; Kidney - Increased relative and absolute weight in females; Kidney - Increased urinary protein in females	3000	HEAST1				--
Methyl tert-Butyl Ether	1634-04-4				--				--
Methylcyclohexane	108-87-2				--				--
Pentane, N-	109-66-0				--				--
Propanol, 2-	67-63-0				--				--
Propyl Alcohol, N-	71-23-8				--				--
Propylbenzene, N-	103-65-1	0.04				NCEA-CIN			--
Propylene	115-07-1				--				--
Styrene	100-42-5	0.20	Red blood cell and liver effects	1000	IRIS				--
Tetrachloroethane, 1,1,2,2-	79-34-5	0.06				NCEA-CIN	C	Increased incidence of hepatocellular carcinomas in mice.	0.20
Tetrachloroethylene	127-18-4	0.010	Hepatotoxicity in mice, weight gain in rats	1000	IRIS			0.052	NCEA-CIN
Tetrafluoroethane, 1,1,1,2-	811-97-2				--				--
Toluene	108-88-3	0.20	Changes in liver and kidney weights	1000	IRIS	D	No human data and inadequate animal data. Toluene did not produce positive		--

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							results in the majority of genotoxic assays.		
Trichloro-1,2,2-trifluoroethane, 1,1,2-(CFC-113)	76-13-1	30	Psychomotor impairment	10	IRIS				--
Trichloroethane, 1,1,1,-	71-55-6	0.28 ^(a)			NCEA-CIN	D	There are no reported human data and animal studies (one lifetime gavage, one intermediate-term inhalation) have not demonstrated carcinogenicity. Technical grade 1,1,1-trichloroethane has been shown to be weakly mutagenic.		--
Trichloroethane, 1,1,2-	79-00-5	0.0040	Clinical serum chemistry	1000	IRIS	C	Hepatocellular carcinomas and pheochromocytomas in one strain of mice. Carcinogenicity was not shown in rats. 1,1,2-Trichloroethane is structurally related 1,2-dichloroethane, a probable human carcinogen.	0.057	IRIS
Trichloroethylene	79-01-6				--			0.011	NCEA-CIN
Trichlorofluoromethane	75-69-4	0.30	Survival and histopathology	1000	IRIS				--
Trimethylpentane, 2,2,4-	540-84-1				--				--
Trimethylbenzene, 1,2,4-	95-63-6	0.05 ^(a)			NCEA-CIN				--
Trimethylbenzene, 1,3,5-	108-67-8	0.05 ^(a)			NCEA-CIN				--
Vinyl Acetate	108-05-4	1.0	Whole body - Altered weight; Kidney - Altered weight	100	HEAST1				--
Vinyl Chloride	75-01-4				--	A		1.9	HEAST1
Xylene, o-	95-47-6	2.0	CNS - Hyperactivity: Whole body - Decreased weight	100	HEAST1				--
Inorganics									
Aluminum	7429-90-5	1.0			NCEA-CIN				--
Antimony (metallic)	7440-36-0	0.00040	Longevity, blood glucose, and cholesterol	1000	IRIS				--
Arsenic (inorganic)	7440-38-2	0.00030	Hyperpigmentation, keratosis and possible vascular complications.	3	IRIS	A	Based on sufficient evidence from human data. Increased lung cancer mortality was observed in multiple human populations exposed primarily through inhalation. Also, increased mortality from multiple internal organ cancers.	1.5	IRIS
Barium	7440-39-3	0.070	None. RfD is based on NOAEL.	3	IRIS	D	Oral exposure studies in rats and mice did not find significant increases in		--

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							tumor incidence following chronic exposure. Inhalation exposure and intratracheal studies are inadequate for carcinogenicity evaluation.		
Beryllium	7440-41-7	0.0020	Small intestinal lesions	300	IRIS	B1	Limited evidence of carcinogenicity in humans exposed to airborne beryllium (lung cancer) and sufficient evidence of carcinogenicity in animals.		--
Cadmium (food)	7440-43-9F	0.0010	Human studies involving chronic exposures.	10	IRIS	B1	Limited evidence from occupational epidemiologic studies of cadmium is consistent across investigators and study populations. There is sufficient evidence of carcinogenicity in rats and mice by inhalation, intramuscular, and subcutaneous routes.		--
Cadmium (water)	7440-43-9W	0.00050	Significant proteinuria	10	IRIS	B1	Limited evidence from occupational epidemiologic studies of cadmium is consistent across investigators and study populations. There is sufficient evidence of carcinogenicity in rats and mice by inhalation, intramuscular, and subcutaneous routes.		--
Calcium	7440-70-2				--				--
Chromium (Total)	7440-47-3	1.5	No effects observed	100	Assumed value for Cr III-IRIS	D	Data addressing exposures to Cr(III) alone are not available, and data are inadequate for an evaluation of human carcinogen potential.		--
Cobalt	7440-48-4				--				--
Copper	7440-50-8	0.037	Gastrointestinal system - Irritation	1	HEAST1	D	No human data, inadequate animal data from assays of copper compounds, and equivocal mutagenicity data.		--
Cyanide (free)	57-12-5	0.020	Rat chronic oral study	100	IRIS	D	Pertinent data regarding carcinogenicity have not been located in the available literature.		--
Iron	7439-89-6	0.3			NCEA-CIN				--
Lead (and compounds) (inorganic)	7439-92-1				--	B2	Sufficient animal evidence. Ten rat bioassays and one mouse assay have shown statistically significant increases in renal tumors with dietary and subcutaneous exposure to several		--

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							soluble lead salts.		
Magnesium	7439-95-4				--				--
Manganese (food)	7439-96-5F	0.14	Central nervous system effects	1	IRIS	D	Existing studies are inadequate to assess the carcinogenicity of manganese.		--
Manganese (water)	7439-96-5W	0.047	Central nervous system effects	1	IRIS	D	Existing studies are inadequate to assess the carcinogenicity of manganese.		--
Nickel (soluble salts)	7440-02-0	0.020	Decreased body and organ weights	300	IRIS				--
Potassium	7440-09-7				--				--
Selenium (and compounds)	7782-49-2	0.0050	Clinical selenosis	3	IRIS	D	Inadequate human data & inadequate evidence of carcinogenicity in animals. The evidence for various selenium compounds in animal & mutagenicity studies is conflicting & difficult to interpret; however evidence for selenium sulfide is sufficient.		--
Silver	7440-22-4	0.0050	Argyria	3	IRIS	D	In animals, local sarcomas have induced after implantation of foils and discs of silver. However, the interpretation of these findings has been questioned due to the phenomenon of solid-state carcinogenesis.		--
Sodium	7440-23-5				--				--
Thallium	7440-28-0				--				--
Vanadium	7440-62-2	0.0070	NOAEL	100	HEAST1				--
Zinc and Compounds	7440-66-6	0.30	47% decrease in erythrocyte superoxide dismutase (ESOD) concentration in adult females after 10 weeks of zinc exposure	3	IRIS	D	Inadequate evidence in humans and animals.		--
Mercury									
Mercury (inorganic)	7439-97-6				--	D	No human data are available. Animal and supporting data are inadequate.		--
Pesticides/PCBs									
Aldrin	309-00-2	0.000030	Liver toxicity	1000	IRIS	B2	Orally administered aldrin produced significant increases in tumor responses in three different strains of mice in both males and females.	17	IRIS

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							Tumor induction has been observed for structurally related chemicals, including dieldrin, a metabolite.		
Aroclor 1254	11097-69-1	0.000020	Ocular exudate, inflamed and prominent Meibomian glands, distorted growth of finger and toe nails; decreased antibody (IgG and IgM) response to sheep erythrocytes.	300	IRIS				--
Aroclor 1260	11096-82-5				--				--
Chlordane, alpha	5103-71-9				--				--
Chlordane, gamma	5103-74-2				--				--
Chlordane, gamma (as technical)	12789-09-6	0.00050	Hepatic necrosis	300	IRIS	B2	Human epidemiology studies showing non-Hodgkin's lymphoma in farmers exposed to chlordane and case reports of aplastic anemia, chlordane associated with home use are inadequate to demonstrate carcinogenicity.	0.35	IRIS
DDD (p,p'-Dichlorodiphenyldichloroethane)	72-54-8				--	B2	Increased incidence of lung tumors in male and female mice, liver tumors in male mice and thyroid tumors in male rats. DDD is structurally similar to, and is a known metabolite of DDT, a probable human carcinogen.	0.24	IRIS
DDE (p,p'-Dichlorodiphenyldichloroethylene)	72-55-9				--	B2	Increased incidence of liver tumors including carcinomas in two strains of mice and in hamsters and of thyroid tumors in female rats by diet.	0.34	IRIS
DDT (p,p'-Dichlorodiphenyltrichloroethane)	50-29-3	0.00050	Liver lesions	100	IRIS	B2	Observation of tumors (generally of the liver) in seven studies in various mouse strains and three in rats. DDT is structurally similar to other probable carcinogens, such as DDD and DDE.	0.34	IRIS
Dieldrin	60-57-1	0.00005	Liver lesions	100	IRIS	B2	Carcinogenic in seven strains of mice when administered orally. Structurally related to compounds (aldrin, chlordane, heptachlor, heptachlor epoxide, and chorendic acid) that produce tumors in rodents.	16	IRIS
Endosulfan I	959-98-8				--				--

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
Endosulfan II	33213-65-9				--				--
Endosulfan sulfate	1031-07-8				--				--
Endrin	72-20-8	0.00030	Mild histological lesions in liver, occasional convulsion	100	IRIS	D	Oral administration did not produce carcinogenic effects in either of two strains of rats and three strains of mice. An NCI bioassay was suggestive of responses in male and female rats although NCI reported a no evidence conclusion.		--
Endrin aldehyde	7421-36-3				--				--
Endrin Ketone	53494-70-5				--				--
Heptachlor	76-44-8	0.00050	Liver weight increase in males	300	IRIS	B2	Inadequate human data, but sufficient evidence exists from studies in which benign and malignant liver tumors were induced in three strains of mice of both sexes. Several structurally related compounds are liver carcinogens.	4.5	IRIS
Heptachlor Epoxide	1024-57-3	0.00013	Increased liver/body weight ratio in both males and females.	1000	IRIS	B2	Sufficient evidence exists from rodent studies in which liver carcinomas were induced in two strains of mice of both sexes and in CFN female rats. Several structurally related compounds are liver carcinogens.	9.1	IRIS
Hexachlorocyclohexane, alpha-	319-84-6				--	B2		6.3	IRIS
Hexachlorocyclohexane, beta-	319-85-7				--	C	Increases in benign liver tumors in CF1 mice fed beta-HCH.	1.8	IRIS
Hexachlorocyclohexane, delta-	319-86-8				--	D	Not classifiable as to human carcinogenicity.		--
Hexachlorocyclohexane, gamma	58-89-9	0.00030	Liver and kidney toxicity	1000	IRIS	B2-C		1.3	HEAST1
PM₁₀									
PM ₁₀	PM10				--				--
Semi-Volatile Organic Compounds									
Acenaphthene	83-32-9	0.060	Hepatotoxicity	3000	IRIS				--
Acenaphthylene	208-96-8				--	D	No human data and inadequate data from animal bioassays.		--
Acetophenone	98-86-2	0.10	General toxicity	3000	IRIS	D	No human data and no animal data.		--
Aniline	62-53-3				--	B2	Induction of tumors of the spleen and the body cavity in two strains of rat, and	0.0057	IRIS

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							some supporting genetic toxicological evidence.		
Anthracene	120-12-7	0.30	No observed effects	3000	IRIS	D	No human data and inadequate data from animal bioassays.		--
Benzo(g,h,i)perylene	191-24-2				--	D	No human data and inadequate data from lung implant, skin-painting and subcutaneous injection bioassays.		--
Benzoic Acid	65-85-0	4.0	No adverse effects observed	1	IRIS	D	No human data and inadequate data from animal bioassays.		--
Benzyl Alcohol	100-51-6	0.30	Forestomach - Epithelial Hyperplasia	1000	HEAST1				--
Bis(2-ethylhexyl)Phthalate (DEHP)	117-81-7	0.020	Increased relative liver weight	1000	IRIS	B2	Orally administered DEHP produced significant dose-related increases in liver tumor responses in rats and mice of both sexes.	0.014	IRIS
Butyl Benzyl Phthalate, N-	85-68-7	0.20	Significantly increased liver/body weight and liver/brain weight ratios	1000	IRIS	C	Statistically significant increase in mononuclear cell leukemia in female rats; the response in male rats was inconclusive and there was no such response in mice.		--
Carbazole	86-74-8				--	B2		0.020	HEAST1
Dibenzofuran	132-64-9	0.004 ^(a)			NCEA-CIN	D	No human data and no animal data for dibenzofuran alone.		--
Dibutyl Phthalate	84-74-2	0.10	Increased mortality	1000	IRIS	D	Pertinent data regarding carcinogenicity was not located in the available literature.		--
Dichlorobenzene, 1,2-	95-50-1	0.090	No adverse effects observed	1000	IRIS	D	No human data and evidence of both negative and positive trends for carcinogenic responses in rats and mice.		--
Dichlorobenzene, 1,3-	541-73-1	0.0009			NCEA-CIN	D	No human data, no animal data and limited genetic data.		--
Dichlorobenzene, 1,4-	106-46-7				--	C		0.024	HEAST1
Diethyl Phthalate	84-66-2	0.8	Decreased growth rate, food consumption and altered organ weights	1000	IRIS	D	Pertinent data regarding carcinogenicity were not located in the available literature.		--
Dimethyl Phthalate	131-11-3				--	D	Pertinent data regarding carcinogenicity was not located in the available literature.		--
Di-n-Octylphthalate	117-84-0	0.020	Kidney - Increased weight; Liver -	1000	HEAST1				--

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
			Increased weight; Liver - Increased SGOT activity; Liver - Increased SGPT activity						
Fluoranthene	206-44-0	0.040	Nephropathy, increased liver weights, hematological alterations, and clinical effects	3000	IRIS	D	No human data and inadequate data from animal bioassays.		--
Fluorene	86-73-7	0.040	Decreased RBC, packed cell volume and hemoglobin	3000	IRIS	D	No human data and inadequate data from animal bioassays.		--
Hexachlorobenzene	118-74-1	0.00080	Liver effects	100	IRIS	B2	When administered orally, has been shown to induce tumors in the liver, thyroid and kidney in three rabbit species.	1.6	IRIS
Hexachlorobutadiene	87-68-3	0.00020	Renal tubules - Regeneration	1000	HEAST1	C	Observation of renal neoplasms in male and female rats in one study.	0.078	IRIS
Isophorone	78-59-1	0.20	No observed effects	1000	IRIS	C	No data in humans; limited evidence of carcinogenicity of one tumor type in one sex of one animal species as shown by an increase of preputial gland carcinomas in male rats.	0.0010	IRIS
Methylphenol, 2-	95-48-7	0.050	Decreased body weights and neurotoxicity	1000	IRIS	C	Increased incidence of skin papillomas in mice in an initiation-promotion study. The three cresol isomers produced positive results in genetic toxicity studies both alone and in combination.		--
Naphthalene	91-20-3	0.020	Decreased mean terminal body weight in males	3000	IRIS	C	Inadequate data of carcinogenicity in humans exposed to naphthalene via the oral and inhalation routes, and the limited evidence of carcinogenicity in animals via the inhalation route.		--
Nitrobenzene	98-95-3	0.00050	Hematologic, adrenal, renal and hepatic lesions	10000	IRIS	D	No data concerning carcinogenicity in humans or animals.		--
Nitrophenol, 4-	100-02-7				--				--
Nitrosodiphenylamine, N-	86-30-6				--	B2	Increased incidence of bladder tumors in male and female rats and reticulum cell sarcomas in mice, and structural relationship to carcinogenic nitrosamines.	0.0049	IRIS
Oxybis(1-chloropropane), 2-2'	108-60-1				--	C		0.070	HEAST1
Pentachlorobenzene	608-93-5	0.00080	Liver and kidney toxicity	10000	IRIS	D	No human data and no animal data available.		--

Table 4-2
Oral Noncarcinogenic and Carcinogenic Toxicity Values

Constituent	CAS Number	Chronic Oral RfD				Oral Slope Factor			
		mg/kg-day	Endpoint/Target Organ System	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
Phenanthrene	85-01-8				--	D	No human data and inadequate data from a single gavage study in rats and skin painting and injection studies in mice.		--
Phenol	108-95-2	0.6	Reduced fetal body weights in rats	100	IRIS	D	No human carcinogenicity data and inadequate animal data.		--
Pyrene	129-00-0	0.030	Kidney effects (renal tubular pathology, decreased kidney weights)	3000	IRIS	D	No human data and inadequate data from animal bioassays.		--
Tetrachlorobenzene, 1,2,4,5-	95-94-3	0.00030	Kidney lesions	1000	IRIS				--
Total Carcinogenic PAHS (BaP TEQs)	CPAH-TEQ				--	B2	Human data specifically linking BaP to a carcinogenic effect are lacking. There are, however, multiple animal studies in many species demonstrating BaP to be carcinogenic following administration by numerous routes.	7.3	IRIS
Trichlorobenzene, 1,2,4-	120-82-1	0.010	Increased adrenal weights; vacuolization of zona fasciculata in the cortex	1000	IRIS	D	A dermal exposure study in mice was found inadequate for drawing conclusions as to carcinogenicity in humans.		--

-- No Toxicity Information was available.

^(a)Provisional Values that have undergone external peer review.

IRIS = Integrated Risk Information System (U.S. EPA, 1999b).

HEAST = Health Effects Assessment Summary Tables (HEAST) (U.S. EPA, 1997).

HEAST1 = HEAST Tables 1 & 3 (U.S. EPA, 1997).

HEAST2 = HEAST Table 2 (U.S. EPA, 1997).

NCEA-CIN = Provisional Toxicity Values obtained from the NCEA-CIN Superfund Health Risk Technical Support Center (U.S. EPA, 1999a).

Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
Acid Gases									
Hydrogen Chloride	7647-01-0	0.0057	Hyperplasia of nasal mucosa, larynx and trachea	300	IRIS				--
Sulfuric Acid	7664-93-9				--				--
Aldehydes & Ketones									
Acetaldehyde	75-07-0	0.0026	Degeneration of olfactory epithelium	1000	IRIS	B2	Increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.	0.0077	IRIS
Acetone	67-64-1				--	D	Lack of data concerning carcinogenicity in humans or animals.		--
Acrolein	107-02-8	0.000006	Squamous metaplasia and neutrophilic infiltration of nasal epithelium	1000	IRIS	C	Increased incidence of adrenal cortical adenomas to female rats and carcinogenic potential of an acrolein metabolite. Acrolein is mutagenic in bacteria and is structurally similar to probable or known human carcinogens.		--
Benzaldehyde	100-52-7				--				--
Crotonaldehyde	123-73-9				--	C	No human data & increased incidence of hepatocellular carcinomas & hepatic nodules (combined) in F344 rats. The possible carcinogenicity of crotonaldehyde is supported by genotoxic activity & the expected reactivity of croton oil & aldehyde.		--
Formaldehyde	50-00-0	0.00086	Upper and lower airway irritation; eye irritation in humans Hazard index target(s) Respiratory system; eyes		CALEPA	B1	Limited evidence in humans, and sufficient evidence in animals. Human data include nine studies that show statistically significant association between site-specific respiratory neoplasms and exposure to formaldehyde.	0.046	IRIS
Methyl Ethyl Ketone	78-93-3	0.29	Decreased fetal birth weight	1000	IRIS	D	No human carcinogenicity data and inadequate animal data.		--
Conventional Parameters									
Nitrite	14797-65-0				--				--
Dioxins/Furans									

Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	DIOXIN-TEQ					--	B2	150,000	HEAST1
GC/MS Organics									
Acetonitrile	75-05-8	0.017	NOAEL	100	IRIS	D	There is a lack of human evidence and the animal evidence is equivocal.		--
Acrylonitrile	107-13-1	0.00057	Degeneration and inflammation of nasal respiratory epithelium; hyperplasia of mucous secreting cells	1000	IRIS	B1	Statistically significant increase in incidence of lung cancer in exposed workers and observation of tumors, generally astrocytomas in the brain, in studies in two rat strains exposed by various routes (drinking water, gavage, and inhalation).	0.24	IRIS
Benzene	71-43-2	0.017	Lowered red and white blood cell counts in occupationally exposed humans <i>Hazard index target(s)</i> Circulatory system; teratogenicity; nervous system; immune system		CALEPA	A	Several studies of increased incidence of nonlymphocytic leukemia from occupational exposure, increased incidence of neoplasia in rats and mice exposed by inhalation and gavage, and some supporting data form the basis for this classification.	0.029	IRIS
Benzyl Chloride	100-44-7				--	B2	Inadequate human data and sufficient evidence of carcinogenicity in animals; namely significantly increased incidences of benign and malignant tumors at multiple sites in both sexes of mice and a significant increase in thyroid tumors.	0.17	CALEPA
Bromochloromethane	74-97-5				--	D	Lack of data regarding the carcinogenicity of bromochloromethane in humans or animals; however there are data indicative of genotoxic effects and structural relationships to halogenated methanes classified as B2 probable human carcinogens.		--
Bromodichloromethane	75-27-4				--	B2	Inadequate human data and sufficient evidence of carcinogenicity in two animal species (mice and rats) as shown by increased incidence of kidney tumors in male mice, and liver tumors in female mice.		--
Bromoform	75-25-2				--	B2	Inadequate human data and sufficient	0.0039	IRIS

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							evidence of carcinogenicity in animals, namely an increased incidence of tumors after oral administration of bromoform in rats and intraperitoneal administration in mice.		
Bromomethane	74-83-9	0.0014	Degenerative and proliferative lesions of the olfactory epithelium of the nasal cavity	100	IRIS	D	Inadequate human and animal data; a single mortality study from which direct exposure associations could not be deduced and studies in several animal species with too few animals, too brief exposure or observation time for adequate power.		--
Butadiene, 1,3-	106-99-0				--	B2	Inadequate human data and sufficient rodent (mouse and rat) studies in which exposure to airborne concentrations of 1,3-butadiene caused multiple tumors and tumor types. Related compounds are carcinogenic and mutagenic.	0.98	IRIS
Butanol, n-	71-36-3				--	D	No human and no animal cancer data.		--
Butylbenzene, n-	104-51-8				--				--
Butylbenzene, t-	98-06-6	--			--				--
Carbon Tetrachloride	56-23-5	0.00057 ^(b,c)			NCEA-CIN	B2	Carcinogenicity in rats, mice, and hamsters.	0.053	IRIS
Chloro-1,3-Butadiene, 2-	126-99-8	0.0020	Olfactory epithelium - Degeneration	300	HEAST1				--
Chlorobenzene	108-90-7	0.0057	Liver - Effects; Kidney - Effects	10000	HEAST2	D	No human data, inadequate animal data and predominantly negative genetic toxicity data in bacterial yeast, and mouse lymphoma cells.		--
Chloroform	67-66-3	0.086	Alimentary System, Kidney, developmental		CALEPA	B2	Based on increased incidence of several tumor types in rats and three strains of mice.	0.081	IRIS
Chloromethane	74-87-3	0.086 ^(b)			NCEA-CIN	C		0.0035 ^(b)	NCEA-CIN
Chlorotoluene, o-	95-49-8				--				--
Cumene	98-82-8	0.11	Increased kidney weights in female rats and adrenal weights in male and female rats	1000	IRIS	D	Under the current Risk Assessment Guidelines (U.S. EPA, 1987a), cumene is assigned carcinogen category D, not classifiable, indicating no or inadequate human or animal data.		--
Dibromochloromethane	124-48-1				--	C	Inadequate human data and limited		--

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							evidence of carcinogenicity in animals; namely, positive carcinogenic evidence in B6C3F1 mice (males and females), together with positive mutagenicity data, and structural similarity to other trihalomethanes.		
Dibromoethane, 1,2-	106-93-4	0.000057	Sperm - Effects	1000	HEAST1	B2	Increased incidence of a variety of tumors in rats and mice in both sexes by three routes of administration at both sites of application and at distant sites. EDB is mutagenic in various in vitro and in vivo assays.	0.77	IRIS
Dichlorodifluoromethane	75-71-8	0.057	Liver - Lesions	10000	HEAST2				--
Dichloroethane, 1,1-	75-34-3	0.14	Kidney - Damage	1000	HEAST2	C	No human data and limited evidence of carcinogenicity in two animal species (rats & mice) as shown by an increased incidence of mammary gland adenocarcinomas & hemangiosarcomas in female rats & an increased incidence of hepatocellular carcinomas.		--
Dichloroethane, 1,2-	107-06-2				--	B2	Induction of several tumor types in rats and mice treated by gavage and lung papillomas in mice after topical application.	0.091	IRIS
Dichloroethene, 1,1-	75-35-4				--	C	Tumors observed in one mouse strain after inhalation exposure. Other studies were of inadequate design. Vinylidene chloride is mutagenic, and a metabolite is known to alkylate and to bind covalently to DNA.	0.18	IRIS
Dichloroethylene, Cis-1,2-	156-59-2				--	D	No data in humans or animals and generally nonpositive results in mutagenicity assays.		--
Dichloroethylene, Trans-1,2-	156-60-5				--				--
Dichloromethane	75-09-2	0.9	Liver - Toxicity	100	HEAST1	B2	Inadequate human data and sufficient evidence of carcinogenicity in animals: increased incidence of hepatocellular neoplasms and alveolar/bronchiolar neoplasms in male and female mice, and increased incidence of benign	0.0016	IRIS

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							mammary tumors in both sexes.		
Dichloropropane, 1,2-	78-87-5	0.0011	Hyperplasia of nasal mucosa		IRIS	B2			--
Dichloropropene, Cis-1,3-	10061-01-5				--				--
Dichloropropene, Trans-1,3-	10061-02-6				--				--
Dioxane, 1,4-	123-91-1	0.86	Alimentary System, Kidney, Cardiovascular System		CALEPA	B2	Induction of nasal cavity and liver carcinomas in multiple strains of rats, liver carcinomas in mice, and gall bladder carcinomas in guinea pigs.	0.027	CALEPA
Ethyl Benzene	100-41-4	0.29	Developmental toxicity	300	IRIS	D	Nonclassifiable due to lack of animal bioassays and human studies.	0.0039 ^(b)	NCEA-CIN
Ethyl Chloride	75-00-3	2.9	Delayed fetal ossification	300	IRIS				--
Ethyltoluene, m-	620-14-4				--				--
Ethyltoluene, o-	611-14-3				--				--
Ethyltoluene, p-	622-96-8				--				--
Heptane, n-	142-82-5				--	D	No human data and no animal data available.		--
Hexane, n-	110-54-3	0.057	Neurotoxicity, electrophysiological alterations	300	IRIS				--
Methyl Isobutyl Ketone	108-10-1	0.023	Liver - Increased weight; Kidney - Effects	1000	HEAST2				--
Methyl tert-Butyl Ether	1634-04-4	0.9	Increased absolute & relative liver & kidney weights & increased severity of spontaneous renal lesions (females), increased prostration (females), & swollen periocular tissue (males and females)	100	IRIS				--
Methylcyclohexane	108-87-2	0.9	Kidney - Mineralization; Kidney - Papillary hyperplasia	100	HEAST1				--
Pentane, N-	109-66-0				--				--
Propanol, 2-	67-63-0	2.0	Kidney		CALEPA				--
Propyl Alcohol, N-	71-23-8				--				--
Propylbenzene, N-	103-65-1	--			--				--
Propylene	115-07-1	0.86	Respiratory system		CALEPA				--
Styrene	100-42-5	0.29	CNS effects	30	IRIS				--
Tetrachloroethane, 1,1,2,2-	79-34-5				--	C	Increased incidence of hepatocellular carcinomas in mice.	0.20	IRIS
Tetrachloroethylene	127-18-4				--			0.002	NCEA-CIN

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
Tetrafluoroethane, 1,1,1,2-	811-97-2	23	Leydig cell hyperplasia	100	IRIS				--
Toluene	108-88-3	0.11	Neurological effects	300	IRIS	D	No human data and inadequate animal data. Toluene did not produce positive results in the majority of genotoxic assays.		--
Trichloro-1,2,2-trifluoroethane, 1,1,2-(CFC-113)	76-13-1	8.6	Whole body - Decreased weight	100	HEAST1				--
Trichloroethane, 1,1,1-	71-55-6	0.63			NCEA-CIN	D	There are no reported human data and animal studies (one lifetime gavage, one intermediate-term inhalation) have not demonstrated carcinogenicity. Technical grade 1,1,1-trichloroethane has been shown to be weakly mutagenic.		--
Trichloroethane, 1,1,2-	79-00-5				--	C	Hepatocellular carcinomas and pheochromocytomas in one strain of mice. Carcinogenicity was not shown in rats. 1,1,2-Trichloroethane is structurally related 1,2-dichloroethane, a probable human carcinogen.	0.056	IRIS
Trichloroethylene	79-01-6				--			0.006	NCEA-CIN
Trichlorofluoromethane	75-69-4	0.20	Kidney - Increased BUN; Lung - Inflammation	10000	HEAST2				--
Trimethylbenzene, 1,2,4-	95-63-6	0.0017 ^(b)			NCEA-CIN				--
Trimethylbenzene, 1,3,5-	108-67-8	0.0017 ^(b)			NCEA-CIN				--
Trimethylpentane, 2,2,4-	540-84-1				--				--
Vinyl Acetate	108-05-4	0.057	Nasal epithelial lesions	30	IRIS				--
Vinyl Chloride	75-01-4				--	A		0.30	HEAST1
Xylene, o-	95-47-6				--				--
Inorganics									
Aluminum	7429-90-5	0.0014			NCEA-CIN				--
Antimony (metallic)	7440-36-0	0.000011 ^(b,c)			NCEA-CIN				--
Arsenic (inorganic)	7440-38-2				--	A	Based on sufficient evidence from human data. Increased lung cancer mortality was observed in multiple human populations exposed primarily through inhalation. Also, increased mortality from multiple internal organ cancers.	15	IRIS

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
Barium	7440-39-3	0.00014	Fetus - Fetotoxicity	1000	HEAST2	D	Oral exposure studies in rats and mice did not find significant increases in tumor incidence following chronic exposure. Inhalation exposure and intratracheal studies are inadequate for carcinogenicity evaluation.		--
Beryllium	7440-41-7	0.0057	Beryllium sensitization and progression to CBD	10	IRIS	B1	Limited evidence of carcinogenicity in humans exposed to airborne beryllium (lung cancer) and sufficient evidence of carcinogenicity in animals.	8.4	IRIS
Cadmium (food)	7440-43-9F	0.000026 ^(b,c)			NCEA-CIN	B1	Limited evidence from occupational epidemiologic studies of cadmium is consistent across investigators and study populations. There is sufficient evidence of carcinogenicity in rats and mice by inhalation, intramuscular, and subcutaneous routes.	6.3	IRIS
Cadmium (water)	7440-43-9W	0.000026 ^(b,c)			NCEA-CIN	B1	Limited evidence from occupational epidemiologic studies of cadmium is consistent across investigators and study populations. There is sufficient evidence of carcinogenicity in rats and mice by inhalation, intramuscular, and subcutaneous routes.	6.3	IRIS
Calcium	7440-70-2				--				--
Chromium (Total)	7440-47-3				--	D	Data addressing exposures to Cr(III) alone are not available, and data are inadequate for an evaluation of human carcinogen potential.		--
Cobalt	7440-48-4				--				--
Copper	7440-50-8				--	D	No human data, inadequate animal data from assays of copper compounds, and equivocal mutagenicity data.		--
Cyanide (free)	57-12-5				--	D	Pertinent data regarding carcinogenicity have not been located in the available literature.		--
Iron	7439-89-6				--				--
Lead (and compounds) (inorganic)	7439-92-1				--	B2	Sufficient animal evidence. Ten rat bioassays and one mouse assay have		--

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							shown statistically significant increases in renal tumors with dietary and subcutaneous exposure to several soluble lead salts.		
Magnesium	7439-95-4				--				--
Manganese (food)	7439-96-5F	0.000014	Impairment of neurobehavioral function	1000	IRIS	D	Existing studies are inadequate to assess the carcinogenicity of manganese.		--
Manganese (water)	7439-96-5W	0.000014	Impairment of neurobehavioral function	1000	IRIS	D	Existing studies are inadequate to assess the carcinogenicity of manganese.		--
Nickel (soluble salts)	7440-02-0	0.000014	Respiratory system, immune system		CALEPA			0.91	CALEPA
Potassium	7440-09-7				--				--
Selenium (and compounds)	7782-49-2				--	D	Inadequate human data & inadequate evidence of carcinogenicity in animals. The evidence for various selenium compounds in animal & mutagenicity studies is conflicting & difficult to interpret; however evidence for selenium sulfide is sufficient.		--
Silver	7440-22-4				--	D	In animals, local sarcomas have induced after implantation of foils and discs of silver. However, the interpretation of these findings has been questioned due to the phenomenon of solid-state carcinogenesis.		--
Sodium	7440-23-5				--				--
Thallium	7440-28-0				--				--
Vanadium	7440-62-2				--				--
Zinc and Compounds	7440-66-6				--	D	Inadequate evidence in humans and animals.		--
Mercury									
Mercury (inorganic)	7439-97-6	0.000086	Hand tremor; increases in memory disturbances; slight subjective and objective evidence of autonomic dysfunction	30	IRIS	D	No human data are available. Animal and supporting data are inadequate.		--
Pesticides/PCBs									

Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
Aldrin	309-00-2				--	B2	Orally administered aldrin produced significant increases in tumor responses in three different strains of mice in both males and females. Tumor induction has been observed for structurally related chemicals, including dieldrin, a metabolite.	17	IRIS
Aroclor 1254	11097-69-1				--				--
Aroclor 1260	11096-82-5				--				--
Chlordane, alpha	5103-71-9				--				--
Chlordane, gamma	5103-74-2				--				--
Chlordane, gamma (as technical)	12789-09-6	0.00020	Hepatic effects	1000	IRIS	B2	Human epidemiology studies showing non-Hodgkin's lymphoma in farmers exposed to chlordane and case reports of aplastic anemia, chlordane associated with home use are inadequate to demonstrate carcinogenicity.	0.35	IRIS
DDD (p,p'-Dichlorodiphenyldichloroethane)	72-54-8				--	B2	Increased incidence of lung tumors in male and female mice, liver tumors in male mice and thyroid tumors in male rats. DDD is structurally similar to, and is a known metabolite of DDT, a probable human carcinogen.		--
DDE (p,p'-Dichlorodiphenyldichloroethylene)	72-55-9				--	B2	Increased incidence of liver tumors including carcinomas in two strains of mice and in hamsters and of thyroid tumors in female rats by diet.		--
DDT (p,p'-Dichlorodiphenyltrichloroethane)	50-29-3				--	B2	Observation of tumors (generally of the liver) in seven studies in various mouse strains and three in rats. DDT is structurally similar to other probable carcinogens, such as DDD and DDE.	0.34	IRIS
Dieldrin	60-57-1				--	B2	Carcinogenic in seven strains of mice when administered orally. Structurally related to compounds (aldrin, chlordane, heptachlor, heptachlor epoxide, and chorenadic acid) that produce tumors in rodents.	16	IRIS
Endosulfan I	959-98-8				--				--

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor				
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source	
Endosulfan II	33213-65-9				--				--	
Endosulfan sulfate	1031-07-8				--				--	
Endrin	72-20-8				--	D	Oral administration did not produce carcinogenic effects in either of two strains of rats and three strains of mice. An NCI bioassay was suggestive of responses in male and female rats although NCI reported a no evidence conclusion.		--	
Endrin aldehyde	7421-36-3				--				--	
Endrin Ketone	53494-70-5				--				--	
Heptachlor	76-44-8				--	B2	Inadequate human data, but sufficient evidence exists from studies in which benign and malignant liver tumors were induced in three strains of mice of both sexes. Several structurally related compounds are liver carcinogens.	4.6	IRIS	
Heptachlor Epoxide	1024-57-3				--	B2	Sufficient evidence exists from rodent studies in which liver carcinomas were induced in two strains of mice of both sexes and in CFN female rats. Several structurally related compounds are liver carcinogens.	9.1	IRIS	
Hexachlorocyclohexane, alpha-	319-84-6				--	B2		6.3	IRIS	
Hexachlorocyclohexane, beta-	319-85-7				--	C	Increases in benign liver tumors in CF1 mice fed beta-HCH.	1.9	IRIS	
Hexachlorocyclohexane, delta-	319-86-8				--	D	Not classifiable as to human carcinogenicity.		--	
Hexachlorocyclohexane, gamma	58-89-9				--	B2-C		1.1	CALEPA	
PM10										
PM ₁₀ ^(d)	PM10	0.014	Respiratory system			NAAQS, 1997			--	
Semi-Volatile Organic Compounds										
Acenaphthene	83-32-9				--				--	
Acenaphthylene	208-96-8				--	D	No human data and inadequate data from animal bioassays.		--	
Acetophenone	98-86-2				--	D	No human data and no animal data.		--	
Aniline	62-53-3	0.00029	Lack of spleen toxicity	3000		IRIS	B2	Induction of tumors of the spleen and	0.0057	CALEPA

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							the body cavity in two strains of rat, and some supporting genetic toxicological evidence.		
Anthracene	120-12-7				--	D	No human data and inadequate data from animal bioassays.		--
Benzo(g,h,i)perylene	191-24-2				--	D	No human data and inadequate data from lung implant, skin-painting and subcutaneous injection bioassays.		--
Benzoic Acid	65-85-0				--	D	No human data and inadequate data from animal bioassays.		--
Benzyl Alcohol	100-51-6				--				--
Bis(2-ethylhexyl)Phthalate (DEHP)	117-81-7	0.0029	Alimentary System, Respiratory System		--	B2	Orally administered DEHP produced significant dose-related increases in liver tumor responses in rats and mice of both sexes.	0.0084	CALEPA
Butyl Benzyl Phthalate, N-	85-68-7				--	C	Statistically significant increase in mononuclear cell leukemia in female rats; the response in male rats was inconclusive and there was no such response in mice.		--
Carbazole	86-74-8				--	B2			--
Dibenzofuran	132-64-9				--	D	No human data and no animal data for dibenzofuran alone.		--
Dibutyl Phthalate	84-74-2				--	D	Pertinent data regarding carcinogenicity was not located in the available literature.		--
Dichlorobenzene, 1,2-	95-50-1	0.057				HEAST2	No human data and evidence of both negative and positive trends for carcinogenic responses in rats and mice.		--
Dichlorobenzene, 1,3-	541-73-1				--	D	No human data, no animal data and limited genetic data.		--
Dichlorobenzene, 1,4-	106-46-7	0.23	Increased liver weights in P1 males	100	IRIS	C		0.04	CALEPA
Diethyl Phthalate	84-66-2				--	D	Pertinent data regarding carcinogenicity were not located in the available literature.		--
Dimethyl Phthalate	131-11-3				--	D	Pertinent data regarding carcinogenicity was not located in the available literature.		--

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/ kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg- day/mg	Source
Di-n-Octylphthalate	117-84-0				--				--
Fluoranthene	206-44-0				--	D	No human data and inadequate data from animal bioassays.		--
Fluorene	86-73-7				--	D	No human data and inadequate data from animal bioassays.		--
Hexachlorobenzene	118-74-1				--	B2	When administered orally, has been shown to induce tumors in the liver, thyroid and kidney in three rabbit species.	1.6	IRIS
Hexachlorobutadiene	87-68-3				--	C	Observation of renal neoplasms in male and female rats in one study.	0.077	IRIS
Isophorone	78-59-1				--	C	No data in humans; limited evidence of carcinogenicity of one tumor type in one sex of one animal species as shown by an increase of preputial gland carcinomas in male rats.		--
Methylphenol, 2-	95-48-7				--	C	Increased incidence of skin papillomas in mice in an initiation-promotion study. The three cresol isomers produced positive results in genetic toxicity studies both alone and in combination.		--
Naphthalene	91-20-3	0.00086	Nasal effects: hyperplasia and metaplasia in respiratory and olfactory epithelium, respectively	3000	IRIS	C	Inadequate data of carcinogenicity in humans exposed to naphthalene via the oral and inhalation routes, and the limited evidence of carcinogenicity in animals via the inhalation route.		--
Nitrobenzene	98-95-3	0.00057	Blood - Hematological effects; Adrenal, Kidney & Liver - Lesions	10000	HEAST2	D	No data concerning carcinogenicity in humans or animals.		--
Nitrophenol, 4-	100-02-7				--				--
Nitrosodiphenylamine, N-	86-30-6				--	B2	Increased incidence of bladder tumors in male and female rats and reticulum cell sarcomas in mice, and structural relationship to carcinogenic nitrosamines.	0.0090	CALEPA
Oxybis(1-chloropropane), 2-2'	108-60-1				--	C		0.035	HEAST1
Pentachlorobenzene	608-93-5				--	D	No human data and no animal data available.		--
Phenanthrene	85-01-8				--	D	No human data and inadequate data from a single gavage study in rats and skin painting and injection studies in		--

**Table 4-3
Inhalation Noncarcinogenic and Carcinogenic Toxicity Values^(a)**

Constituent	CAS Number	Inhalation RfD				Inhalation Slope Factor			
		mg/kg-day	Endpoint	Uncertainty Factor	Source	Weight of Evidence	Basis	kg-day/mg	Source
							mice.		
Phenol	108-95-2	0.17	Alimentary system, cardiovascular system, kidney, nervous system	CALEPA	--	D	No human carcinogenicity data and inadequate animal data.		--
Pyrene	129-00-0				--	D	No human data and inadequate data from animal bioassays.		--
Tetrachlorobenzene, 1,2,4,5-	95-94-3				--				--
Total Carcinogenic PAHS (BaP TEQs)	CPAH-TEQ				--	B2	Human data specifically linking BAP to a carcinogenic effect are lacking. There are, however, multiple animal studies in many species demonstrating BAP to be carcinogenic following administration by numerous routes.		--
Trichlorobenzene, 1,2,4-	120-82-1	0.057	Liver - Non-adverse weight changes	1000	HEAST1	D	A dermal exposure study in mice was found inadequate for drawing conclusions as to carcinogenicity in humans.		--

-- No Toxicity Information was available on IRIS (4th Quarter) (U.S. EPA, 1999b) or HEAST 1997 (U.S. EPA, 1997).

^(a) Reference Concentrations (RfCs) and Unit Risks were converted to RfDs and Cancer Slope factors, respectively, for use in risk calculations.

^(b) Provisional Values that have undergone external peer review.

^(c) Value was obtained by converting a subchronic value (subchronic value was divided by 10). This was done in the absence of a chronic value.

^(d) PM₁₀ refers to particulate matter less than 10 microns in diameter. Particles larger than 10 microns are not respirable (i.e., they are too large to reach the lung). The current annual air standard for PM₁₀ is 50 ug/m³. The inhalation RfD was derived as follows: 50 ug/m³ * 20 m³/day * 1/70 kg * 1 mg/1000 ug.

CALEPA = California EPA Toxicity Values (CALEPA, 1999a) and (CALEPA, 1999b).

HEAST1 = HEAST Tables 1 & 3 (U.S. EPA, 1997).

HEAST2 = HEAST Table 2 (U.S. EPA, 1997).

NAAQs, 1997 = National Ambient Air Quality Standards (U.S. EPA, 1997).

NCEA-CIN = Provisional Toxicity Values were obtained from the NCEA-CIN Superfund Health Risk Technical Support Center (U.S. EPA, 1999a).

Table 4-4
Constituents for Which There Were No Available Toxicity Information

CAS Number	Constituent
Acid Gases	
7664-39-3	Hydrofluoric Acid
Aldehydes & Ketones	
66-25-1	Hexanal
590-86-3	Isovaleraldehyde
123-72-8	n-Butyraldehyde
123-38-6	Propionaldehyde
529-20-4	Tolualdehyde
110-62-3	Valeraldehyde
Conventional Parameters	
16887-00-6	Chloride
16984-48-8	Fluoride
SULFATE	Sulfate
GC/MS Organics	
526-73-8	1,2,3-Trimethylbenzene
872-05-9	1-Decene
592-76-7	1-Heptene
592-41-6	1-Hexene
124-11-8	1-Nonene
111-66-0	1-Octene
109-67-1	1-Pentene
821-95-4	1-Undecene
564-02-3	2,2,3-Trimethylpentane
3522-94-9	2,2,5-Trimethylhexane
565-75-3	2,3,4-Trimethylpentane
79-29-8	2,3-Dimethylbutane
565-59-3	2,3-Dimethylpentane
107-39-1	2,4,4-Trimethyl-1-Pentene
108-08-7	2,4-Dimethylpentane
592-13-2	2,5-Dimethylhexane
760-21-4	2-Ethyl-1-Butene
763-29-1	2-Methyl-1-Pentene

CAS Number	Constituent
625-27-4	2-Methyl-2-Pentene
592-27-8	2-Methylheptane
563-45-1	3-Methyl-1-Butene
589-81-1	3-Methylheptane
589-34-4	3-Methylhexane
96-14-0	3-Methylpentane
691-37-2	4-Methyl-1-Pentene
106-44-5/108-39	4-Methylphenol/3-Methylphenol
2198-23-4	4-Nonene
80-56-8	a-Pinene
127-91-3	b-Pinene
141-32-2	Butyl Acrylate
590-18-1	c-2-Butene
7688-21-3	c-2-Hexene
7642-04-8	c-2-Octene
627-20-3	c-2-Pentene
7642-09-3	c-3-Hexene
922-61-2	c-3-Methyl-2-Pentene
75-45-6	Chlorodifluoromethane
110-82-7	Cyclohexane
110-83-8	Cyclohexene
287-92-3	Cyclopentane
142-29-0	Cyclopentene
75-43-4	Dichlorofluoromethane
64-17-5	Ethanol
76-14-2	Freon 114
111-71-7	Heptanal
496-11-7	Indan
95-13-6	Indene
75-28-5	Isobutane
115-11-7/106-98	Isobutene + 1-Butene
538-93-2	Isobutylbenzene
591-76-4	Isoheptane

CAS Number	Constituent
73513-42-5	Isohexane
78-78-4	Isopentane
78-79-5	Isoprene
141-93-5	m-Diethylbenzene
96-37-7	Methylcyclopentane
27476-50-2	Methylcyclopentene
106-97-8	n-Butane
124-18-5	n-Decane
75-83-2	Neohexane
463-82-1	Neopentane
111-84-2	n-Nonane
111-65-9	n-Octane
1120-21-4	n-Undecane
105-05-5	p-Diethylbenzene
99-87-6	p-Isopropyltoluene
74-98-6	Propane
106-42-3/108-38	p-Xylene + m-Xylene
624-64-6	t-2-Butene
4050-45-7	t-2-Hexene
646-04-8	t-2-Pentene
Pesticides/PCBs	
465-73-6	Isodrin
PM2.5	
PM2.5	PM-2.5
Semi-Volatile Organic Compounds	
134-32-7	1-Naphthylamine
91-57-6	2-Methylnaphthalene
88-75-5	2-Nitrophenol

Notes: The following sources were consulted to identify toxicity values for this assessment:

1. The Integrated Risk Information System (IRIS) (U.S. EPA, 1999b).
2. The Health Effects Assessment Summary Tables—Annual Update (HEAST) (U.S. EPA, 1997).
3. Provisional Toxicity Values Available from the National Center for Environmental Assessment (NCEA) Superfund Health Risk Technical Support Center (NCEA-CIN) (U.S. EPA, 1999a).
4. California EPA Toxicity Values (CALEPA). Sources include:
 - a. Technical Support Document for Describing Available Cancer Potency Factors and Hot Spots Unit Risk and Summary – Table of Cancer Potency Values (CALEPA, 1999a).
 - b. Technical Support Document for the Determination of Noncancer Chronic Reference Exposure Levels and Proposed OEHHA Chronic Inhalation REL Summary (CALEPA, 1999b).

**Table 4-5
Noncarcinogenic Target Organs and Critical Effects**

Class	CAS Number	Constituent	Oral RfD Endpoint	Inhalation RfD Endpoint
GC/MS	95-63-6	1,2,4-Trimethylbenzene	• Not Provided	• Not Provided
GC/MS	108-67-8	1,3,5-Trimethylbenzene	• Not Provided	• Not Provided
ALD/KET	75-07-0	Acetaldehyde	• No RfD	• Respiratory
GC/MS	75-05-8	Acetonitrile	• No RfD	• Not Classifiable - NOAEL
ALD/KET	107-02-8	Acrolein	• Not Classifiable – NOAEL	• Respiratory
GC/MS	107-13-1	Acrylonitrile	• Reproductive	• Respiratory
GC/MS	71-43-2	Benzene	• No RfD	• Developmental • Neurotoxicity • Immunotoxicity • Hematological
GC/MS	106-93-4	1,2-Dibromoethane	• No RfD	• Reproductive
ALD/KET	50-00-0	Formaldehyde	• Body Weight	• Respiratory • Dermal/Ocular
ACID GAS	7647-01-0	Hydrogen Chloride	• No RfD	• Respiratory
SVOC	91-20-3	Naphthalene	• Body Weight	• Respiratory
PM10	PM10	PM ₁₀	• No RfD	• Respiratory
GC/MS	108-88-3	Toluene	• Liver • Kidney	• Neurotoxicity
GC/MS	108-05-4	Vinyl Acetate	• Body Weight • Kidney	• Respiratory

Not Classifiable – NOAEL: The target organ critical effect of the toxicity study that was used to develop the RfD or RfC was based on a No observed Adverse Effects Level.

Not Provided: The target organ critical effect of the toxicity study that was used to develop the RfD or RfC was not provided or identified in the study.

4.6 DIOXINS AND FURANS

Polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) are chemically classified as halogenated aromatic hydrocarbons. There are 75 individual compounds comprising the PCDDs, depending on the positioning of the chlorine(s), and 135 different PCDFs. These are called individual congeners. The most widely studied of these compounds is 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). This compound, often called simply dioxin, represents the reference compound for this class of compounds. Only 7 of the 75 congeners of PCDDs are thought to have dioxin-like toxicity; these are ones with chlorine substitutions in, at least, the 2, 3, 7, and 8 positions. Only 10 of the 135 possible congeners of PCDFs are thought to have dioxin-like toxicity; these also are ones with substitutions in the 2, 3, 7, and 8 positions (U.S. EPA, 1994).

For purposes of this assessment, dioxin-like compounds are defined to include the subset of this class of compounds, which are generally agreed to produce dioxin-like toxicity. These compounds are assigned individual toxicity equivalence factor (TEF) values as defined by international convention (U.S. EPA, 1994). Results of *in vitro* and *in vivo* laboratory studies contribute to the assignment of a relative toxicity value. TEFs are estimates of the toxicity of dioxin-like compounds relative to the toxicity of TCDD, which is assigned a TEF of 1.0. All PCDDs and PCDFs with chlorines substituted in the 2,3,7, and 8 positions are assigned TEF values. The TEF values used in this assessment are presented in Table 4-6.

Table 4-6
Toxicity Equivalency Factors (TEF) for Polychlorinated Dibenzo Dioxins and Polychlorinated Dibenzo Furans^(a)

Constituent	TEF – WHO, 1998 ^(b)
<i>Dibenzo dioxins</i>	
Mono-, Di-, and Tri-CDDs	0
2,3,7,8-TCDD	1.0
Other TCDDs	0
2,3,7,8-PeCDD	1.0
Other PeCDDs	0
2,3,7,8-HxCDD	0.1
Other HxCDDs	0
2,3,7,8-HpCDD	0.01
Other HpCDDs	0
OCDD	0.0001
<i>Dibenzo furans</i>	
Mono-, Di-, and Tri-CDFs	0
2,3,7,8-TCDF	0.1
Other TCDFs	0
1,2,3,7,8-PeCDF	0.05
2,3,4,7,8-PeCDF	0.5
Other PeCDFs	0
2,3,7,8-HxCDF	0.1
Other HxCDFs	0
2,3,7,8-HpCDF	0.01
Other HpCDFs	0
OCDF	0.0001

^(a) Health Assessment Document for 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) and Related Compounds Volume III of III. Interim procedures for estimating risks associated with exposures to mixtures of chlorinated dibenzo-p-dioxins and dibenzofurans (CDDs and CDFs) and 1989 update (U.S. EPA, 1994).

^(b) Van Leeuwen, 1997.

4.7 POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)

Polycyclic Aromatic Hydrocarbons (PAHs) are generally found together in a mixture of structurally related compounds. U.S. EPA classifies seven of the PAHs as probable human carcinogens with sufficient animal evidence but limited human evidence. The toxicity of these carcinogenic PAHs (cPAHs) were evaluated in this assessment using TEF values defined by U.S. EPA. The TEF values used in this assessment are presented in Table 4-7.

**Table 4-7
Toxicity Equivalency Factors (TEF) for Carcinogenic PAHs**

Constituent	TEF ^(a)
Benzo(a)pyrene	1.0
Benzo(a)anthracene	0.1
Benzo(b)fluoranthene	0.1
Benzo(k)fluoranthene	0.01
Chrysene	0.001
Dibenz(a,h)anthracene	1.0
Indeno(1,2,3-cd)pyrene	0.1

^(a)U.S. EPA Region III Risk Based Concentrations Table (U.S. EPA, 1998). Supplemental guidance to RAGS, Region 4 Bulletins, Human Health Risk Assessment (U.S. EPA, 1995). Risk assessment for PAH mixtures (U.S. EPA, 1993). PAH Scoring Exercise (U.S. EPA, 1992).

4.8 PM₁₀

The National Ambient Air Quality Standards (NAAQS) have been developed by U.S. EPA for any air pollutant which, if present in air, may reasonably be anticipated to endanger public health or welfare and whose presence in the air results from numerous or diverse mobile and/or stationary sources. NAAQS have been promulgated for carbon monoxide, lead, nitrogen dioxide, particulate matter less than 10 microns in size (PM₁₀), ozone, and sulfur dioxide. U.S. EPA recommends that “since the primary NAAQS and the inhalation RfC serve essentially the same function, and the primary NAAQS have extensive data bases rigorously reviewed, the primary NAAQS with annual averaging times should be used *in lieu* of an inhalation RfC, except for lead” (U.S. EPA, 1997). Therefore, in order to evaluate the potential health impacts of particulate matter, the NAAQS for PM₁₀ was converted to an RfD.

4.9 LEAD

The traditional risk assessment approach for evaluating noncancer effects from exposure to COCs involves comparison of COC intakes to an RfD. This approach is inappropriate for lead because a NOAEL for lead has not been identified (i.e., there is no RfD for lead). Noncancer risks for lead exposures were evaluated using U.S. EPA’s Integrated Exposure Uptake Biokinetic Model for Lead (IEUBK).

Blood lead concentrations are accepted as the preferred measure of cumulative lead exposures. Blood lead concentrations provide an index for evaluating the likelihood of adverse effects from lead exposure. A blood lead level of 10 µg/dL has been identified by the Centers for Disease Control as a benchmark for evaluating exposure to lead. As a risk management decision, U.S. EPA defines a greater-than-5-percent probability of exceeding the 10 µg/dL criterion value as posing an unacceptable threat to human health.

4.10 DERMAL TOXICITY VALUES

There are, at present, no U.S. EPA-derived RfDs or CSFs for the dermal route of exposure. Dermal RfDs and CSFs are based on an absorbed dose, while oral RfDs and CSFs are based on an administered dose. In order to account for this difference in deriving dermal toxicity values, the oral RfDs and CSFs are adjusted by gastrointestinal absorption factors to derive dermal toxicity values that represent the toxicity of the absorbed dose. This approach assumes that the toxicity of a substance is the same whether it is absorbed by the oral or dermal route. Data on COC-specific gastrointestinal absorption were not available. Therefore, the oral RfDs and CSFs were used, unadjusted to assess the risks via dermal

exposure. This approach results in less conservative risk estimates and is highly uncertain as adjusted dermal RfDs and CSFs will be more protective than oral toxicity values.

Carcinogenic PAHs were not evaluated for carcinogenic risks associated with dermal exposure. According to U.S. EPA's *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual*, "It is inappropriate to use the oral slope factor to evaluate risks associated with dermal exposure to carcinogens such as benzo(a)pyrene, which cause skin cancer through direct action at the point of application" (U.S. EPA, 1989).

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Sections 5 through 7

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Section 5

Risk Characterization

5.0 PURPOSE

This section presents the results of the risk calculations. Risk characterization requires integrating exposure and toxicity information into a quantitative estimate of noncarcinogenic hazard indices and carcinogenic risks. Risk estimates for the Average and RME individual were calculated for each COC, exposure pathway, and AOC. The exposure parameters used to calculate human health risks for the Average and RME exposed individual were identical. The only difference between the calculations is the exposure point concentration used to calculate intake. The approach for calculating exposure point concentrations is described in the Data Evaluation and Reduction section of this report (Section 2). The risks associated with each COC and exposure pathway were summed for each AOC to estimate the total human health risks.

In order to put the risk estimates in perspective, the following “acceptable” risk estimates (i.e., benchmarks) are included for comparison with the risk estimates presented in this report.

- The U.S. EPA has typically used a hazard index of 1 or greater as a benchmark for evaluating noncarcinogenic hazard indices for both industrial and residential scenarios. In practice, the RfD is viewed by many (including risk managers) as an “acceptable” level of exposure, and, by inference, any exposure resulting in a hazard index of greater than 1 is seen as “unacceptable”. This strict demarcation between what is “acceptable” and what is “unacceptable” is contrary to the views of most toxicologists, who typically interpret the RfD (and the associated hazard index) as an estimate of a level of chronic exposure below which adverse effects are not expected to occur in humans. Risk assessors generally view the RfD as a “soft” estimate, whose bounds of uncertainty can span an order of magnitude or more. That is, within reasonable limits, while exposures somewhat higher than the RfD are associated with increased chance of adverse effects, that chance is not a certainty. Similarly, while the RfD is seen as a level below which adverse effects are not expected, the absence of all risk to all people cannot be assured at this level.
- For carcinogenic risk, U.S. EPA’s approach “emphasizes the use of 1 chance in one million (i.e., 1E-06) as the point of departure while allowing site or remedy-specific factors, including potential future uses, to enter into the evaluation of what is appropriate at a given site.” As risks increase above 1 chance in 1,000,000, they become less desirable, and the risk to individuals generally should not exceed 1 in 10,000 (i.e., 1E-04) (40 CFR 300.430[e][2]). For the industrial scenario, U.S. EPA has typically used 1 chance in 10,000 as a benchmark for carcinogenic risk. For the residential scenario, U.S. EPA has typically used 1 chance in 1,000,000 as a benchmark for carcinogenic risk.

5.1 EVALUATION OF NONCARCINOGENIC EFFECTS

Adverse noncarcinogenic effects from exposure to a COC are quantitatively expressed as a hazard quotient. The hazard quotient is the ratio of the estimated dose of a particular constituent that a human receives to the RfD.

$$HQ \equiv ADD \div RfD$$

where,

Parameter	Definition
HQ =	Hazard Quotient. The ratio of the estimated dose of a COC to the RfD.

Parameter	Definition
ADD =	Average daily dose to COC (mg/kg-day).
RfD =	Reference dose for COC (mg/kg-day).

The RfD is the threshold dose for a particular COC below which it is unlikely that even sensitive subpopulations would experience adverse health effects. Only chronic hazard quotients were evaluated in this assessment, as the subchronic effects within a given exposure scenario are typically less than or equal to the chronic effects for the same scenario.

All hazard quotients for COCs were summed to yield a total hazard index. If the total hazard index is less than 1.0, it indicates that adverse noncarcinogenic health effects are unlikely. If the total hazard index is greater than 1.0, it indicates that adverse health effects are possible. However, the hazard index does not represent a probability of occurrence or a quantification of the magnitude of noncarcinogenic health effects.

Note: For the purposes of this evaluation, inhalation reference concentrations (RfC)s were converted to RfDs by multiplying the RfC by 20 (m³/day inhalation rate) and dividing by 70 (kg body weight).

5.2 EVALUATION OF CARCINOGENIC EFFECTS

This risk of cancer from exposure to a COC is described in terms of the probability that an exposed individual will develop cancer during a lifetime from that exposure. The risk estimate is calculated by multiplying the daily intake of a particular COC over a lifetime by the carcinogenic slope factor.

$$RISK \equiv LADD \times SF$$

where,

Parameter	Definition
RISK =	Lifetime probability of developing cancer due to exposure to a COC in the environment.
LADD =	Lifetime average daily dose to COC (mg/kg-day).
SF =	Carcinogenic slope factor for COC (mg/kg-day) ⁻¹ .

All carcinogenic risks for COCs for each scenario and receptor were summed to yield the total carcinogenic risk. A 1 in 1,000,000 cancer risk (i.e., 1E-06) means that in a population of 1,000,000 people exposed under an identical exposure scenario (i.e., had exactly the same daily intake of a carcinogen over the same period), there could be one additional case of cancer in the population.

Note: For the purposes of this evaluation, inhalation unit risks were converted to CSFs by multiplying the unit risk (m³/μg) by 70 (kg body weight) and 1,000 (μg/mg conversion factor) and dividing by 20 (m³/day inhalation rate).

5.3 NAF ATSUGI HUMAN HEALTH RISKS

Human health risks were calculated for exposure scenarios applicable to each of the AOCs as described in the Exposure Assessment section of this report using SmartRISK™ Software. Indoor and outdoor exposures were evaluated based on the percentage of time that individuals are indoors and outdoors. It is important to note that the human health risks presented in Sections 5.3.1 and 5.3.2 are not directly comparable between AOCs because different site-specific exposure scenarios were evaluated at each location (Section 5.3.3 presents risks that are directly comparable). For example, the risks to an adult resident exposed at the Residential Towers are not comparable to the risks to an adult teacher exposed at the Elementary School because a 24 hour per day, 350 day per year exposure is assumed for the adult resident and a 10 hour per day, 180 day per year exposure is assumed for the adult teacher. Furthermore, exposures at each AOC were evaluated independently (i.e., exposures were not combined across AOCs). In other words, an adult who works at the GEMB and also lives at the Residential Towers was not directly evaluated in this assessment. It is not possible to evaluate every combination of exposure

that may occur at NAF Atsugi. However, plausible upper bound risk estimates of these exposure combinations are presented in Section 5.3.3.

Table 5-1 presents the hazard indices and carcinogenic risks for each AOC. Exposure Scenario, pathway, and COC-specific hazard quotient and carcinogenic risk detail reports are presented in Appendix C. Tables 5-2 and 5-3 present the hazard quotients and carcinogenic risks summed by exposure pathway. Table 5-4 presents the results of segregating the hazard indices by target organ and/or critical effect. Target organs/critical effects were identified for all COCs with a hazard quotient greater than 0.1. The methodology for grouping COCs into the respective target organ/critical effect categories is presented in Table 4-5 of Section 4.0 – Toxicity Assessment.

5.3.1 Noncarcinogenic Risk Results Summary

The noncarcinogenic hazard indices for every exposure scenario are greater than the regulatory benchmark of 1 except for the Recreational Golfer Scenario. The segregated hazard indices were also greater than the regulatory benchmark of 1 for the respiratory system for every exposure scenario except the Recreational Golfer Scenario. The highest average hazard index calculated for the average exposed individual is 53 at the Residential Towers for the child 3-year and 6-year residential exposure scenarios. The highest hazard index calculated for the reasonable maximum exposed individual is 67 at the Residential Towers for the child 3-year and 6-year residential exposure scenarios. The child residential scenarios have higher hazard indices than all other exposure scenarios. The inhalation exposure pathways account for greater than 95% of the hazard index at each location.

Table 5-5 identifies the COCs that are responsible for the majority of the hazard index for each scenario and location. Acetaldehyde and acrolein are responsible for the majority of the hazard index for each AOC. Other COCs contributing significantly to the hazard indices at one or more of the AOCs are acetonitrile, aluminum, 1,2-dibromomethane, formaldehyde, PM₁₀, and 1,2,4-trimethylbenzene. The inhalation reference doses for acetaldehyde and acrolein were obtained from IRIS, which has the highest priority and overall confidence of any of the sources of toxicity values used in this assessment. The noncarcinogenic health effects of acetaldehyde and acrolein are summarized below:

Acetaldehyde – Exposure to low concentrations may produce eye, nose, and throat irritation. At high concentrations, acetaldehyde exposure may result in eye, skin, and respiratory tract burning, and a build-up of fluid in the lungs. Repeated or long-term exposure may produce chronic eye irritation leading to permanent damage, skin allergy, and can affect the central nervous system producing chronic alcohol-like intoxication.

Acrolein – Exposure to low concentrations may produce mild irritation of the eyes and throat causing coughing and wheezing. Symptoms of exposure at high concentrations can include eye, skin, and mucous membrane burning, decreased lung function, and accumulation of fluid in the lung. High concentrations can produce labored breathing and a burning sensation in the throat. Repeated or long-term exposure can cause drying and cracking of the skin and permanent lung damage.

Oral RfDs were only available for 95 of the 246 COCs and Inhalation RfDs were only available for 58 of the 246 COCs, so the noncarcinogenic risks are underestimated.

5.3.2 Carcinogenic Risk Results Summary

The carcinogenic risks for every exposure scenario are less than the regulatory benchmark of 1E-04 except for the residential scenario at the Residential Towers and the industrial scenario at the GEMB. The carcinogenic risks at the Residential Towers exceed 1E-04 for both the average and RME child resident based on a 3-year and 6-year exposure. The carcinogenic risks at the GEMB only exceed 1E-04 for the adult worker (both average and RME case) based on a 30-year exposure. The highest carcinogenic risk is 5.2E-04 at the Residential Towers, assuming a 30-year residential exposure. The inhalation exposure pathways account for greater than 80% of the carcinogenic risk at each location with the exception of the Golf Course.

The percentage of risk contributed by individual COCs for each location is presented in Table 5-6. Acetaldehyde, 1,3-butadiene, and 2,3,7,8-TCDD TEQs are responsible for the majority of the carcinogenic risks at each AOC. All three analytes are classified as Group B2 Probable Human Carcinogens by the U.S. EPA (i.e., there is sufficient evidence of carcinogenicity in animals and no, or inadequate, evidence of carcinogenicity in humans). The inhalation slope factors for acetaldehyde and 1,3-butadiene were obtained from IRIS, which has the highest priority and overall confidence of any of the sources of toxicity values used in this assessment. The inhalation slope factor for 2,3,7,8-TCDD TEQs was obtained from HEAST. While the U.S. EPA considers the slope factor as “provisional”, 2,3,7,8-TCDD TEQs have been, and are currently being, extensively evaluated for their carcinogenic potential. Consequently, the confidence in the inhalation slope factor for 2,3,7,8-TCDD TEQs is much higher than other “provisional” toxicity values.

Oral slope factors were available for only 44 of the 246 COCs and inhalation slope factors were available for only 43 of the 246 COCs, which may result in an underestimation of the carcinogenic risks.

**Table 5-1
Total Average and Reasonable Maximum Noncarcinogenic and Carcinogenic Risks for the AOCs
at NAF Atsugi, Japan**

Scenario	Receptor	Exposure Duration	Location	Hazard Index ¹		Cancer Risk ¹	
				Average	RME	Average	RME
Residential	Child (0 - 6)	3-year	Residential Towers	53	67	6.2E-05	1.1E-04
Residential	Child (0 - 6)	6-year	Residential Towers	53	67	1.2E-04	2.3E-04
Range				53 – 67		6.2E-05 – 2.3E-04	
Residential	Adult	3-year	Residential Towers	19	24	2.0E-05	3.7E-05
Residential	Adult	6-year	Residential Towers	19	24	4.0E-05	7.4E-05
Residential	Child & Adult	30-year	Residential Towers	26	33	2.8E-04	5.2E-04
Range				19 – 33		2.0E-05 – 5.2E-04	
Day Care	Child (0 - 6)	3-year	Child Development Center	30	42	2.7E-05	3.4E-05
Day Care	Child (0 - 6)	6-year	Child Development Center	30	42	5.3E-05	6.7E-05
Range				30 – 42		2.7E-05 – 6.7E-05	
Day Care	Adult Care Provider	3-year	Child Development Center	7	10	5.7E-06	7.2E-06
Day Care	Adult Care Provider	6-year	Child Development Center	7	10	1.1E-05	1.4E-05
Range				7 – 10		5.7E-06 – 1.5E-05	
Elementary School	Adolescent (6 - 12)	3-year	Elementary School	9	13	8.2E-06	1.1E-05
Elementary School	Adolescent (6 - 12)	6-year	Elementary School	9	13	1.6E-05	2.2E-05
Range				9 – 13		8.2E-06 – 2.2E-05	
Elementary School	Adult Teacher	3-year	Elementary School	5	7	4.4E-06	5.9E-06
Elementary School	Adult Teacher	6-year	Elementary School	5	7	8.7E-06	1.2E-05
Range				5 – 7		4.4E-06 – 1.2E-05	
Recreational Golfer	Adult	3-year	Golf Course	0.6	0.8	7.3E-07	1.3E-06
Recreational Golfer	Adult	6-year	Golf Course	0.6	0.8	1.5E-06	2.6E-06
Recreational Golfer	Adult	30-year	Golf Course	0.6	0.8	7.3E-06	1.3E-05
Range				0.6 – 0.8		7.3E-07 – 1.3E-05	

**Table 5-1
 Total Average and Reasonable Maximum Noncarcinogenic and Carcinogenic Risks for the AOCs
 at NAF Atsugi, Japan**

Scenario	Receptor	Exposure Duration	Location	Hazard Index ¹		Cancer Risk ¹	
				Average	RME	Average	RME
Military/Industrial Worker	Adult	3-year	Ground Electronics Maintenance	8	13	9.2E-06	1.2E-05
Military/Industrial Worker	Adult	6-year	Ground Electronics Maintenance	8	13	1.8E-05	2.3E-05
Military/Industrial Worker	Adult	30-year	Ground Electronics Maintenance	8	13	9.2E-05	1.2E-04
Range				8 – 13		9.2E-06 – 1.2E-04	

Note: The risks are not directly comparable between AOCs because different site-specific exposure scenarios were evaluated at each location.

¹Shaded values indicate risks that exceed the regulatory benchmarks of a hazard index of 1 and/or a carcinogenic risk of 1E-04.

**Table 5-2
Hazard Indices by Exposure Pathway**

Scenario	Case	Exposure Duration	Location	Child Hazard Indices (HI) ¹						Adult Hazard Indices (HI)					
				Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total HI	Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total HI
Day Care	Average	3-year	Child Development Center	6.0	24.3	0	0	0	30.3	1.1	5.8	0	0	0	6.9
Day Care	Average	6-year	Child Development Center	6.0	24.3	0	0	0	30.3	1.1	5.8	0	0	0	6.9
Day Care	RME	3-year	Child Development Center	8.3	33.8	0	0	0	42.1	1.5	8.0	0	0	0	9.5
Day Care	RME	6-year	Child Development Center	8.3	33.8	0	0	0	42.1	1.5	8.0	0	0	0	9.5
Recreational Golfer	Average	3-year	Golf Course	--	--	--	--	--	--	0.6	--	--	0.02	--	0.6
Recreational Golfer	Average	6-year	Golf Course	--	--	--	--	--	--	0.6	--	--	0.02	--	0.6
Recreational Golfer	Average	30-year	Golf Course	--	--	--	--	--	--	0.6	--	--	0.02	--	0.6
Recreational Golfer	RME	3-year	Golf Course	--	--	--	--	--	--	0.7	--	--	0.02	--	0.8
Recreational Golfer	RME	6-year	Golf Course	--	--	--	--	--	--	0.7	--	--	0.02	--	0.8
Recreational Golfer	RME	30-year	Golf Course	--	--	--	--	--	--	0.7	--	--	0.02	--	0.8
Commercial Worker	Average	3-year	GEMB	--	--	--	--	--	--	1.7	6.7	0.000009	0.000002	0	8.4
Commercial Worker	Average	6-year	GEMB	--	--	--	--	--	--	1.7	6.7	0.000009	0.000002	0	8.4
Commercial Worker	Average	30-year	GEMB	--	--	--	--	--	--	1.7	6.7	0.000009	0.000002	0	8.4
Commercial Worker	RME	3-year	GEMB	--	--	--	--	--	--	2.6	10.3	0.000009	0.000002	0	12.8
Commercial Worker	RME	6-year	GEMB	--	--	--	--	--	--	2.6	10.3	0.000009	0.000002	0	12.8
Commercial Worker	RME	30-year	GEMB	--	--	--	--	--	--	2.6	10.3	0.000009	0.000002	0	12.8
Elementary School	Average	3-year	Elementary School	2.3	6.9	0.0004	0.0001	0.0003	9.2	1.0	4.2	0.00007	0.00002	0.0001	5.2

**Table 5-2
Hazard Indices by Exposure Pathway**

Scenario	Case	Exposure Duration	Location	Child Hazard Indices (HI) ¹						Adult Hazard Indices (HI)					
				Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total HI	Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total HI
Elementary School	Average	6-year	Elementary School	2.3	6.9	0.0004	0.0001	0.0003	9.2	1.0	4.2	0.00007	0.00002	0.0001	5.2
Elementary School	RME	3-year	Elementary School	3.2	9.6	0.003	0.001	0.003	12.8	1.4	5.8	0.0006	0.0001	0.001	7.2
Elementary School	RME	6-year	Elementary School	3.2	9.6	0.003	0.001	0.003	12.8	1.4	5.8	0.0006	0.0001	0.001	7.2
Residential	Average	3-year	Residential Towers	11.0	41.7	0.01	0.006	0.001	52.7	3.9	14.9	0.002	0.0007	0.0002	18.8
Residential	Average	6-year	Residential Towers	11.0	41.7	0.01	0.006	0.001	52.7	3.9	14.9	0.002	0.0007	0.0002	18.8
Residential	Average	30-year	Residential Towers	--	--	--	--	--	--	5.3	20.3	0.004	0.002	0.0005	25.6
Residential	RME	3-year	Residential Towers	14.0	53.3	0.03	0.01	0.002	67.3	5.0	19.0	0.003	0.001	0.0004	24.0
Residential	RME	6-year	Residential Towers	14.0	53.3	0.03	0.01	0.002	67.3	5.0	19.0	0.003	0.001	0.0004	24.0
Residential	RME	30-year	Residential Towers	--	--	--	--	--	--	6.8	25.9	0.007	0.003	0.0008	32.7

Note: The risks are not directly comparable between AOCs because different site-specific exposure scenarios were evaluated at each location.

--Receptor and/or exposure pathway was not evaluated at this location.

¹A child (0-6) was evaluated at the Child Development Center and the Residential Towers. An adolescent (6-12) was evaluated at the Elementary School.

**Table 5-3
Carcinogenic Risks by Exposure Pathway**

Scenario	Case	Exposure Duration	Location	Child Carcinogenic Risks (CR) ¹						Adult Carcinogenic Risks (CR)					
				Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total (CR)	Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total (CR)
Day Care	Average	3-year	Child Development Center	4.8E-6	2.0E-5	1.7E-6	1.6E-7	3.6E-7	2.7E-5	8.6E-7	4.7E-6	9.5E-8	6.6E-9	5.8E-8	5.7E-6
Day Care	Average	6-year	Child Development Center	9.6E-6	3.9E-5	3.3E-6	3.1E-7	7.2E-7	5.3E-5	1.7E-6	9.3E-6	1.9E-7	1.3E-8	1.2E-7	1.1E-5

**Table 5-3
Carcinogenic Risks by Exposure Pathway**

Scenario	Case	Exposure Duration	Location	Child Carcinogenic Risks (CR) ¹						Adult Carcinogenic Risks (CR)					
				Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total (CR)	Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total (CR)
Day Care	RME	3-year	Child Development Center	6.2E-6	2.5E-5	1.7E-6	2.3E-7	5.3E-7	3.4E-5	1.1E-6	5.9E-6	9.5E-8	9.7E-9	8.4E-8	7.2E-6
Day Care	RME	6-year	Child Development Center	1.2E-5	5.0E-5	3.3E-6	4.5E-7	1.1E-6	6.7E-5	2.2E-6	1.2E-5	1.9E-7	1.9E-8	1.7E-7	1.5E-5
Recreational Golfer	Average	3-year	Golf Course	--	--	--	--	--	--	5.0E-7	--	--	2.3E-7	--	7.3E-7
Recreational Golfer	Average	6-year	Golf Course	--	--	--	--	--	--	1.0E-6	--	--	4.6E-7	--	1.5E-6
Recreational Golfer	Average	30-year	Golf Course	--	--	--	--	--	--	5.0E-6	--	--	2.3E-6	--	7.3E-6
Recreational Golfer	RME	3-year	Golf Course	--	--	--	--	--	--	6.5E-7	--	--	6.2E-7	--	1.3E-6
Recreational Golfer	RME	6-year	Golf Course	--	--	--	--	--	--	1.3E-6	--	--	1.2E-6	--	2.6E-6
Recreational Golfer	RME	30-year	Golf Course	--	--	--	--	--	--	6.5E-6	--	--	6.2E-6	--	1.3E-5
Commercial Worker	Average	3-year	GEMB	--	--	--	--	--	--	1.7E-6	6.8E-6	4.2E-7	4.4E-8	2.6E-7	9.2E-6
Commercial Worker	Average	6-year	GEMB	--	--	--	--	--	--	3.4E-6	1.4E-5	8.4E-7	8.8E-8	5.3E-7	1.8E-5
Commercial Worker	Average	30-year	GEMB	--	--	--	--	--	--	1.7E-5	6.8E-5	4.2E-6	4.4E-7	2.6E-6	9.2E-5
Commercial Worker	RME	3-year	GEMB	--	--	--	--	--	--	2.2E-6	8.7E-6	4.2E-7	4.4E-8	2.6E-7	1.2E-5
Commercial Worker	RME	6-year	GEMB	--	--	--	--	--	--	4.4E-6	1.7E-5	8.4E-7	8.8E-8	5.3E-7	2.3E-5
Commercial Worker	RME	30-year	GEMB	--	--	--	--	--	--	2.2E-5	8.7E-5	4.2E-6	4.4E-7	2.6E-6	1.2E-4
Elementary School	Average	3-year	Elementary School	1.9E-6	5.6E-6	5.7E-7	5.8E-8	1.4E-7	8.2E-6	8.4E-7	3.4E-6	1.1E-7	8.5E-9	6.4E-8	4.4E-6
Elementary School	Average	6-year	Elementary School	3.7E-6	1.1E-5	1.1E-6	1.2E-7	2.7E-7	1.6E-5	1.7E-6	6.7E-6	2.2E-7	1.7E-8	1.3E-7	8.7E-6
Elementary School	RME	3-year	Elementary School	2.4E-6	7.1E-6	5.8E-7	3.1E-7	7.9E-7	1.1E-5	1.1E-6	4.3E-6	1.1E-7	4.5E-8	3.7E-7	5.9E-6
Elementary School	RME	6-year	Elementary School	4.7E-6	1.4E-5	1.2E-6	6.1E-7	1.6E-6	2.2E-5	2.1E-6	8.6E-6	2.3E-7	8.9E-8	7.4E-7	1.2E-5

**Table 5-3
Carcinogenic Risks by Exposure Pathway**

Scenario	Case	Exposure Duration	Location	Child Carcinogenic Risks (CR) ¹						Adult Carcinogenic Risks (CR)					
				Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total (CR)	Inhalation of Ambient Air	Inhalation of Indoor Air	Ingestion of Indoor Dust	Ingestion of Soil	Dermal Contact with Soil	Total (CR)
Residential	Average	3-year	Residential Towers	1.1E-5	4.1E-5	8.0E-6	6.2E-7	1.0E-6	6.2E-5	3.9E-6	1.5E-5	8.6E-7	6.6E-8	1.7E-7	2.0E-5
Residential	Average	6-year	Residential Towers	2.2E-5	8.3E-5	1.6E-5	1.2E-6	2.1E-6	1.2E-4	7.8E-6	3.0E-5	1.7E-6	1.3E-7	3.3E-7	4.0E-5
Residential	Average	30-year	Residential Towers	--	--	--	--	--	--	5.3E-5	2.0E-4	2.3E-5	1.8E-6	3.4E-6	2.8E-4
Residential	RME	3-year	Residential Towers	2.0E-5	7.8E-5	8.1E-6	2.4E-6	4.4E-6	1.1E-4	7.3E-6	2.8E-5	8.7E-7	2.5E-7	7.0E-7	3.7E-5
Residential	RME	6-year	Residential Towers	4.1E-5	1.5E-4	1.6E-5	4.8E-6	8.8E-6	2.3E-4	1.5E-5	5.5E-5	1.7E-6	5.1E-7	1.4E-6	7.4E-5
Residential	RME	30-year	Residential Towers	--	--	--	--	--	--	9.9E-5	3.8E-4	2.3E-5	6.8E-6	1.4E-5	5.2E-4

Note: The risks are not directly comparable between AOCs because different site-specific exposure scenarios were evaluated at each location.

--Receptor and/or exposure pathway was not evaluated at this location.

¹A child (0-6) was evaluated at the Child Development Center and the Residential Towers. An adolescent (6-12) was evaluated at the Elementary School.

Table 5-4
Summary of Hazard Indices by Target Organ/Critical Effect at Each Location

Target Organ/Critical Effect	Scenario	Receptor	Exposure Duration	Hazard Index Average	Hazard Index RME
Child Development Center					
Body Weight	Day Care	Child (0-6)	3 or 6 Years	1.4	1.9
Dermal/Ocular	Day Care	Child (0-6)	3 or 6 Years	1.2	1.5
Developmental	Day Care	Child (0-6)	3 or 6 Years	0.08	0.08
Hematological	Day Care	Child (0-6)	3 or 6 Years	0.08	0.08
Immunotoxicity	Day Care	Child (0-6)	3 or 6 Years	0.08	0.08
Kidney	Day Care	Child (0-6)	3 or 6 Years	0.06	0.07
Liver	Day Care	Child (0-6)	3 or 6 Years	0.06	0.07
Neurotoxicity	Day Care	Child (0-6)	3 or 6 Years	0.14	0.15
Not Classifiable – NOAEL	Day Care	Child (0-6)	3 or 6 Years	21.5	30.0
Not Provided	Day Care	Child (0-6)	3 or 6 Years	0.51	0.59
Reproductive	Day Care	Child (0-6)	3 or 6 Years	1.2	1.3
Respiratory	Day Care	Child (0-6)	3 or 6 Years	27.8	38.7
Body Weight	Day Care	Adult Care Provider	3 or 6 Years	0.31	0.43
Dermal/Ocular	Day Care	Adult Care Provider	3 or 6 Years	0.28	0.35
Developmental	Day Care	Adult Care Provider	3 or 6 Years	0.02	0.02
Hematological	Day Care	Adult Care Provider	3 or 6 Years	0.02	0.02
Immunotoxicity	Day Care	Adult Care Provider	3 or 6 Years	0.02	0.02
Kidney	Day Care	Adult Care Provider	3 or 6 Years	0.01	0.02
Liver	Day Care	Adult Care Provider	3 or 6 Years	0.01	0.02
Neurotoxicity	Day Care	Adult Care Provider	3 or 6 Years	0.03	0.04
Not Classifiable – NOAEL	Day Care	Adult Care Provider	3 or 6 Years	4.9	6.8
Not Provided	Day Care	Adult Care Provider	3 or 6 Years	0.12	0.13
Reproductive	Day Care	Adult Care Provider	3 or 6 Years	0.27	0.30
Respiratory	Day Care	Adult Care Provider	3 or 6 Years	6.3	8.8
Elementary School					
Body Weight	Elementary School	Adolescent (6-12)	3 or 6 Years	0.42	0.58
Dermal/Ocular	Elementary School	Adolescent (6-12)	3 or 6 Years	0.37	0.47
Developmental	Elementary School	Adolescent (6-12)	3 or 6 Years	0.02	0.03
Hematological	Elementary School	Adolescent (6-12)	3 or 6 Years	0.02	0.03
Immunotoxicity	Elementary School	Adolescent (6-12)	3 or 6 Years	0.02	0.03
Kidney	Elementary School	Adolescent (6-12)	3 or 6 Years	0.02	0.02
Liver	Elementary School	Adolescent (6-12)	3 or 6 Years	0.02	0.02
Neurotoxicity	Elementary School	Adolescent (6-12)	3 or 6 Years	0.04	0.05
Not Classifiable – NOAEL	Elementary School	Adolescent (6-12)	3 or 6 Years	6.5	9.1
Not Provided	Elementary School	Adolescent (6-12)	3 or 6 Years	0.16	0.18
Reproductive	Elementary School	Adolescent (6-12)	3 or 6 Years	0.36	0.41
Respiratory	Elementary School	Adolescent (6-12)	3 or 6 Years	8.4	11.8
Body Weight	Elementary School	Adult Teacher	3 or 6 Years	0.24	0.33
Dermal/Ocular	Elementary School	Adult Teacher	3 or 6 Years	0.21	0.27

Table 5-4
Summary of Hazard Indices by Target Organ/Critical Effect at Each Location

Target Organ/Critical Effect	Scenario	Receptor	Exposure Duration	Hazard Index Average	Hazard Index RME
Developmental	Elementary School	Adult Teacher	3 or 6 Years	0.01	0.01
Hematological	Elementary School	Adult Teacher	3 or 6 Years	0.01	0.01
Immunotoxicity	Elementary School	Adult Teacher	3 or 6 Years	0.01	0.01
Kidney	Elementary School	Adult Teacher	3 or 6 Years	0.01	0.01
Liver	Elementary School	Adult Teacher	3 or 6 Years	0.01	0.01
Neurotoxicity	Elementary School	Adult Teacher	3 or 6 Years	0.02	0.03
Not Classifiable – NOAEL	Elementary School	Adult Teacher	3 or 6 Years	3.7	5.2
Not Provided	Elementary School	Adult Teacher	3 or 6 Years	0.09	0.10
Reproductive	Elementary School	Adult Teacher	3 or 6 Years	0.20	0.23
Respiratory	Elementary School	Adult Teacher	3 or 6 Years	4.8	6.7
Residential Towers					
Body Weight	Residential	Child (0-6)	3 or 6 Years	2.4	3.4
Dermal/Ocular	Residential	Child (0-6)	3 or 6 Years	2.1	2.7
Developmental	Residential	Child (0-6)	3 or 6 Years	0.15	0.17
Hematological	Residential	Child (0-6)	3 or 6 Years	0.15	0.17
Immunotoxicity	Residential	Child (0-6)	3 or 6 Years	0.15	0.17
Kidney	Residential	Child (0-6)	3 or 6 Years	0.21	0.29
Liver	Residential	Child (0-6)	3 or 6 Years	0.21	0.29
Neurotoxicity	Residential	Child (0-6)	3 or 6 Years	0.36	0.45
Not Classifiable – NOAEL	Residential	Child (0-6)	3 or 6 Years	35.8	43.4
Not Provided	Residential	Child (0-6)	3 or 6 Years	1.2	1.4
Reproductive	Residential	Child (0-6)	3 or 6 Years	1.4	1.5
Respiratory	Residential	Child (0-6)	3 or 6 Years	48.6	62.4
Body Weight	Residential	Adult	3 or 6 Years	0.87	1.2
Dermal/Ocular	Residential	Adult	3 or 6 Years	0.75	0.98
Developmental	Residential	Adult	3 or 6 Years	0.05	0.06
Hematological	Residential	Adult	3 or 6 Years	0.05	0.06
Immunotoxicity	Residential	Adult	3 or 6 Years	0.05	0.06
Kidney	Residential	Adult	3 or 6 Years	0.08	0.10
Liver	Residential	Adult	3 or 6 Years	0.08	0.10
Neurotoxicity	Residential	Adult	3 or 6 Years	0.13	0.16
Not Classifiable – NOAEL	Residential	Adult	3 or 6 Years	12.8	15.5
Not Provided	Residential	Adult	3 or 6 Years	0.44	0.51
Reproductive	Residential	Adult	3 or 6 Years	0.50	0.52
Respiratory	Residential	Adult	3 or 6 Years	17.3	22.3
Body Weight	Residential	Child & Adult	30 years	1.2	1.6
Dermal/Ocular	Residential	Child & Adult	30 years	1.0	1.3
Developmental	Residential	Child & Adult	30 years	0.07	0.08
Hematological	Residential	Child & Adult	30 years	0.07	0.08
Immunotoxicity	Residential	Child & Adult	30 years	0.07	0.08
Kidney	Residential	Child & Adult	30 years	0.10	0.14

Table 5-4
Summary of Hazard Indices by Target Organ/Critical Effect at Each Location

Target Organ/Critical Effect	Scenario	Receptor	Exposure Duration	Hazard Index Average	Hazard Index RME
Liver	Residential	Child & Adult	30 years	0.10	0.14
Neurotoxicity	Residential	Child & Adult	30 years	0.18	0.22
Not Classifiable – NOAEL	Residential	Child & Adult	30 years	17.4	21.1
Not Provided	Residential	Child & Adult	30 years	0.60	0.69
Reproductive	Residential	Child & Adult	30 years	0.68	0.71
Respiratory	Residential	Child & Adult	30 years	23.6	30.3
Golf Course					
Body Weight	Recreational Golfer	Adult	3, 6, or 30 Years	0.02	0.02
Dermal/Ocular	Recreational Golfer	Adult	3, 6, or 30 Years	0.01	0.02
Developmental	Recreational Golfer	Adult	3, 6, or 30 Years	0.001	0.002
Hematological	Recreational Golfer	Adult	3, 6, or 30 Years	0.001	0.002
Immunotoxicity	Recreational Golfer	Adult	3, 6, or 30 Years	0.001	0.002
Kidney	Recreational Golfer	Adult	3, 6, or 30 Years	0.001	0.001
Liver	Recreational Golfer	Adult	3, 6, or 30 Years	0.001	0.001
Neurotoxicity	Recreational Golfer	Adult	3, 6, or 30 Years	0.003	0.003
Not Classifiable – NOAEL	Recreational Golfer	Adult	3, 6, or 30 Years	0.38	0.49
Not Provided	Recreational Golfer	Adult	3, 6, or 30 Years	0.010	0.01
Reproductive	Recreational Golfer	Adult	3, 6, or 30 Years	0.02	0.02
Respiratory	Recreational Golfer	Adult	3, 6, or 30 Years	0.50	0.65
GEMB					
Body Weight	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.30	0.42
Dermal/Ocular	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.26	0.33
Developmental	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.02	0.02
Hematological	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.02	0.02
Immunotoxicity	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.02	0.02
Kidney	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.02	0.02
Liver	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.02	0.02
Neurotoxicity	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.04	0.04
Not Classifiable – NOAEL	Military/Industrial Worker	Adult	3, 6, or 30 Years	5.5	8.3
Not Provided	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.13	0.14
Reproductive	Military/Industrial Worker	Adult	3, 6, or 30 Years	0.32	0.39
Respiratory	Military/Industrial Worker	Adult	3, 6, or 30 Years	7.4	11.3

Note: The risks are not directly comparable between AOCs because different site-specific exposure scenarios were evaluated at each location.

Not Classifiable – NOAEL: The target organ critical effect of the toxicity study that was used to develop the RfD or RfC was based on a No observed Adverse Effects Level.

Not Provided: The target organ critical effect of the toxicity study that was used to develop the RfD or RfC was not provided or identified in the study.

Table 5-5
Percentage that COCs Contribute to the Hazard Indices at Each Location

COC	Child Development Center, Building 2910	Elementary School, Building 993	Residential Towers, Building. 3101 - Residence	Golf Course	Ground Electronics Maintenance, Building 1061
Acetaldehyde	11.8	14.0	17.1	16.2	15.2
Acetonitrile	1.3	1.5	0.3	5.9	0.5
Acrolein	69.8	69.8	64.2	59.4	64.3
Aluminum	--	--	--	1.5	--
1,2-Dibromoethane	2.8	2.8	1.5	2.6	2.6
Formaldehyde	3.7	3.7	4.1	2.5	2.6
PM ₁₀	3.5	3.5	5.2	5.8	4.2
1,2,4-Trimethylbenzene	1.1	1.1	1.6	1.2	0.9
All other constituents	6.0	3.6	6.0	4.9	9.7
Total Percentage	100%	100%	100%	100%	100%
Total Hazard Index	9.5	7.2	24.0	0.8	12.8

Notes: Percentages are calculated based on an RME Adult stationed at NAF Atsugi for 6-years (i.e., 2 tours of duty). Also, the risks are not directly comparable between AOCs because different site-specific exposure scenarios were evaluated at each location.

-- = Not a COC for this location.

Table 5-6
Percentage that COCs Contribute to the Carcinogenic Risk at Each Location

COC	Child Development Center, Building 2910	Elementary School, Building 993	Residential Towers, Building. 3101 - Residence	Golf Course	Ground Electronics Maintenance, Building 1061
Acetaldehyde	15.6	14.6	9.5	8.2	14.3
Acrylonitrile	2.9	2.7	2.4	1.6	2.6
Arsenic	1.6	1.5	1.1	1.0	2.0
Benzene	5.6	5.3	3.4	2.7	3.8
Benzyl Chloride	--	--	8.6	1.4	--
1,3-Butadiene	22.2	20.7	14.1	14.8	18.4
Cadmium	0.6	0.6	1.0	0.3	6.2
Carbon Tetrachloride	1.5	1.5	1.1	0.8	1.1
1,2-Dibromoethane	7.0	6.5	1.9	2.9	5.5
1,4-Dichlorobenzene	3.1	2.9	2.4	1.4	2.1
Methylene Chloride	0.8	0.8	0.7	1.3	0.4
1,4-Dioxane	1.6	1.5	1.1	0.5	0.9
Formaldehyde	8.1	7.6	4.5	2.5	4.7
Hexachlorobutadiene	6.3	5.9	27.2	2.7	2.9
1,1,2,2-Tetrachloroethane	4.8	4.5	3.6	2.2	3.0
Total 2,3,7,8-TCDD TEQs	11.0	16.7	11.9	52.5	26.8
Vinyl Chloride	1.8	1.6	1.2	0.7	1.2
All other constituents	5.5	5.1	4.3	2.5	4.1
Total Percentage	100%	100%	100%	100%	100%
Total Carcinogenic Risk	1.4E-05	1.2E-05	7.4E-05	2.5E-06	2.3E-05

Notes: Percentages are calculated based on an RME Adult stationed at NAF Atsugi for 6-years (i.e., 2 tours of duty). Also, the risks are not directly comparable between AOCs because different site-specific exposure scenarios were evaluated at each location.

-- = Not a COC for this location.

5.3.3 Comparison of Risks Between AOCs Using Identical Exposure Assumptions

The risks presented in Sections 5.3.1 and 5.3.2 are based on site-specific exposure scenarios that were developed specifically for each AOC. The purpose of the site-specific exposure scenarios is to model the human activity patterns at each location in order to estimate exposure and risk. For example, the risks for a military worker who works 10 hours per day for 250 days per year were calculated for the GEMB. At the Residential Towers, the risks for child (0 – 6 years) and adults who reside at the site for 24 hours per day for 350 days per year were calculated. Children were not evaluated at the GEMB because there are no children present at this location. Since the risks at each AOC were calculated using different exposure scenarios, they are not directly comparable because different exposed populations and different exposure assumptions were used to calculate the risks.

The purpose of this section is to present a comparison of the risks at each AOC when calculated under identical exposure scenarios. In other words, are the health risks at the Golf Course significantly different than the health risks at the Child Development Center or the GEMB? The risks presented in this section also provide an estimate of the plausible upper bound risks at NAF Atsugi that may occur for individuals who routinely spend 24 hours per day at NAF Atsugi (e.g., an individual who resides at the Residential Towers and works at the GEMB, or a child who lives in a residential area on the base and attends elementary school).

For the purposes of this evaluation, the inhalation risks for an RME child (0 to 6 years old) and adult stationed at NAF Atsugi for 3-years (i.e., 1 tour of duty) were calculated at each AOC assuming a residential scenario. A 24-hour per day, 350 day per year exposure was evaluated. To make this comparison without conducting actual risk calculations for the myriad of exposures conditions that could occur, only the risks due to inhalation were evaluated because they are responsible for the majority of risk at each location (i.e., >=80%).

Table 5-7 presents a comparison of the total inhalation risks between AOCs calculated using identical assumptions. The results indicate that the risks at each AOC evaluated at NAF Atsugi are comparable. The highest hazard index and cancer risk were calculated at the GEMB. However, these risks are within the same order of magnitude as all other AOCs and are, therefore, not substantially different.

Furthermore, regardless of the exposure combinations being evaluated, the plausible upper bound hazard index for children and adults is approximately 121 and 43, respectively. The plausible upper bound cancer risk for children and adults, for a 3-year exposure, is approximately 2.1E-04, and 7.3E-05, respectively.

**Table 5-7
Comparison of Total Inhalation Risks Between AOCs
Calculated Using Identical Exposure Assumptions**

Risk	Child Development Center, Building 2910		Elementary School, Building 993		Residential Towers, Building. 3101 - Residence		Golf Course		Ground Electronics Maintenance, Building 1061	
	Child (0-6)	Adult	Child (0-6)	Adult	Child (0-6)	Adult	Child (0-6)	Adult	Child (0-6)	Adult
Hazard Index	95	34	95	34	67	24	94	34	121	43
Cancer Risk	1.4E-04	5.0E-05	1.4E-04	5.0E-05	2.0E-04	7.0E-05	1.7E-04	5.9E-05	2.1E-04	7.3E-05

Notes: Risks were calculated based on an RME child and adult stationed at NAF Atsugi for 3-years (i.e., 1 tour of duty). The risks were calculated using identical exposure parameters and assuming a 24-hour exposure to ambient air at each location. The only difference between the calculations was the exposure point concentrations used to calculate the risks.

5.3.4 Lead Evaluation

The traditional risk assessment approach for evaluating noncancer effects from exposure to COCs involves comparison of COC intakes to an RfD. This approach is inappropriate for lead because a NOAEL for lead has not been identified (i.e., there is no RfD for lead). Noncancer risks for lead exposures were evaluated using U.S. EPA's Integrated Exposure Uptake Biokinetic Model for Lead (IEUBK).

Blood lead concentrations are accepted as the preferred measure of cumulative lead exposures. Blood lead concentrations provide an index for evaluating the likelihood of adverse effects from lead exposure. A blood lead level of 10 µg/dL has been identified by the Centers for Disease Control as a benchmark for evaluating exposure to lead. As a risk management decision, U.S. EPA defines a greater than 5 percent probability of exceeding the 10 µg/dL criterion value as posing an unacceptable threat to human health.

The site-wide RME concentrations of lead in soil and air for NAF Atsugi (i.e., 26.5 mg/kg and 0.39 µg/m³, respectively) were evaluated using the IEUBK model to determine the potential for health effects associated with exposure to lead. The results of the modeling effort indicated that there is a 0.02% probability of a blood lead level of 10 µg/dL at NAF Atsugi for children. This value is well below the Centers for Disease Control benchmark of greater-than-5 percent probability. Furthermore, the Atsugi Branch Medical Clinic was contacted regarding pediatric blood lead levels measured in children as part of the Pediatric Lead Poisoning Prevention (PLPP) Program. The current PLPP Program policy is to administer a "lead risk" questionnaire to parents rather than to routinely draw pediatric blood for testing. Family practice physicians review the questionnaire and, based on the results, order blood lead testing of children who are potentially at risk (*Note: pediatric blood lead may also be drawn if specifically requested by the parent*). Of the 372 children tested under the PLPP Program at Atsugi between 1995 – 1999, one child (over 6 years old) who lived on base, was found to have a blood lead between 10 – 19 µg/dL in 1997. The source of the elevation (e.g., housing, diet, habit, hobby, etc.) was not identified in the PLPP Program summary report compiled by NEHC. The Branch Medical Clinic Atsugi personnel would have evaluated this slight elevation. Due to this low incidence of on-base blood-lead elevation, it is most likely not attributable to lead concentrations associated with air quality.

Note: The Department of Defense policy on the assessment of health risk from lead is that blood lead levels of 10-19 µg/dl require confirmatory blood lead determination within one month of the first result. Confirmed 10-19 µg/dl blood lead results require a reassessment of the risk factors for exposure, education concerning diet and personal hygiene. If levels persist the policy requires the initiation of individual case management, environmental investigation, and lead hazard abatement. Rescreening is also required every 3 months. Upon confirmatory blood lead determination the child was found to have a blood lead level of less than 10 µg/dl.

5.4 CONTRIBUTION OF EMISSIONS FROM THE SIC ON THE RISK ESTIMATES

The purpose of this section is to identify the potential contribution of emissions from the SIC on the risk estimates presented in Section 5.3. A variety of evaluation alternatives have been considered and/or implemented by various groups during this project. Some of these alternatives include:

1. Comparing the concentrations of COCs in ambient air when the SIC is ON to the concentrations when the SIC is OFF (Radian, 2000).
2. Comparing the concentrations of COCs in ambient air at a downwind site when the SIC is ON to the concentrations when the SIC is OFF (Radian, 2000).
3. Comparing the concentrations of COCs in ambient air at a site downwind of the SIC when the SIC is ON, to the concentrations when the site is not downwind of the SIC and the SIC is ON (Radian, 2000).
4. Using the results of the correlation analysis to model concentrations, and subsequently calculate and compare risks, when a site is downwind of the SIC and when the site is not downwind of the SIC (not performed but considered).

5. Comparing the risks due to COCs in ambient air at a site downwind of the SIC to risks at another site which is upwind of the SIC on the same days (when the SIC is ON) (i.e., an “Upwind” versus “Downwind” evaluation).

For the purposes of this risk assessment, the “Upwind” versus “Downwind” approach was selected to quantify the contribution of SIC emissions to the risk estimates.

5.4.1 Why Was the Upwind vs. Downwind Method, Rather Than The Correlation Analysis Method or Air Dispersion Modeling Method, Used to Determine the Risks Attributable to the SIC?

One of the primary goals of the risk assessment was to determine the fraction of health risks at NAF Atsugi attributable to emissions from the Shinkampo Incineration Complex (SIC). The “Upwind vs. Downwind” method was used to determine the risks attributable to the SIC because it is the only method that accounts for the risks associated with all COCs potentially being emitted from the SIC. If the correlation analysis method and/or air dispersion modeling methods had been used only six of the 240 COCs that were detected in ambient air would have been evaluated (i.e., hydrochloric acid, dioxin 2,3,7,8-TCDD-TEQ, lead, cadmium, arsenic, and PM10 [see below for an explanation]). This would have resulted in an underestimate of the risks attributable to emissions from the SIC, especially for non-cancer health effects, because a large number of COCs being emitted from the SIC would not have been evaluated. Cancer risks would have also been underestimated. However, the level of underestimation for cancer risks is not expected to be significant because dioxin-2,3,7,8-TCDD-TEQ, which typically dominates the cancer risks, is one of the six COCs that would have been evaluated. The rationale for the decision to use the Upwind vs. Downwind method was based on experience from previous risk assessments performed on municipal waste incinerators that indicate that multiple chemicals (i.e., 50 – 100s), some of which are highly toxic, are likely being emitted from the SIC (U.S. EPA, 1998a).

5.4.2 Background Information on the Correlation Analysis and Air Dispersion Modeling Methods

The basis of the correlation analysis is the assumption that there is a linear relationship between concentration and the percentage of time a sample location is downwind (i.e., percent downwind) of the SIC. In other words, if a COC is associated with emissions from the SIC, then the concentration measured at a location downwind of the SIC should increase as the percentage of time downwind increases. For example, if a COC exhibits a positive correlation between concentration and percent downwind, then the concentration should increase as the percent downwind increases from 20% to 50% to 100%. Only six COCs exhibited a statistically significant correlation between concentration and percent downwind at NAF Atsugi, Japan: hydrochloric acid, dioxin 2,3,7,8-TCDD-TEQ, lead, cadmium, arsenic, and PM10. This is surprising since numerous COCs (50 – 100s) are typically present in stack samples of municipal waste incinerators in the United States (U.S. EPA, 1998a).

The fundamental assumption underlying the correlation analysis is that the chemical composition of the feedstock (i.e., the municipal waste that is burned in the incinerator), and consequently the stack emissions, are consistent from day to day so that a correlation can be established. However, the SIC is a municipal waste incinerator. Municipal waste incinerators typically have highly variable feedstock, and thus, the analytical composition of the stack emissions are also highly variable for some COCs (i.e., COCs that are not formed during the combustion process). This significantly impacts the effectiveness of the correlation analysis because our hypothesis – that the concentrations of COCs that are associated with emissions from the SIC increase as the percentage of time downwind increases – is only true if the chemical composition necessary to emit the analyte is present in the feedstock.

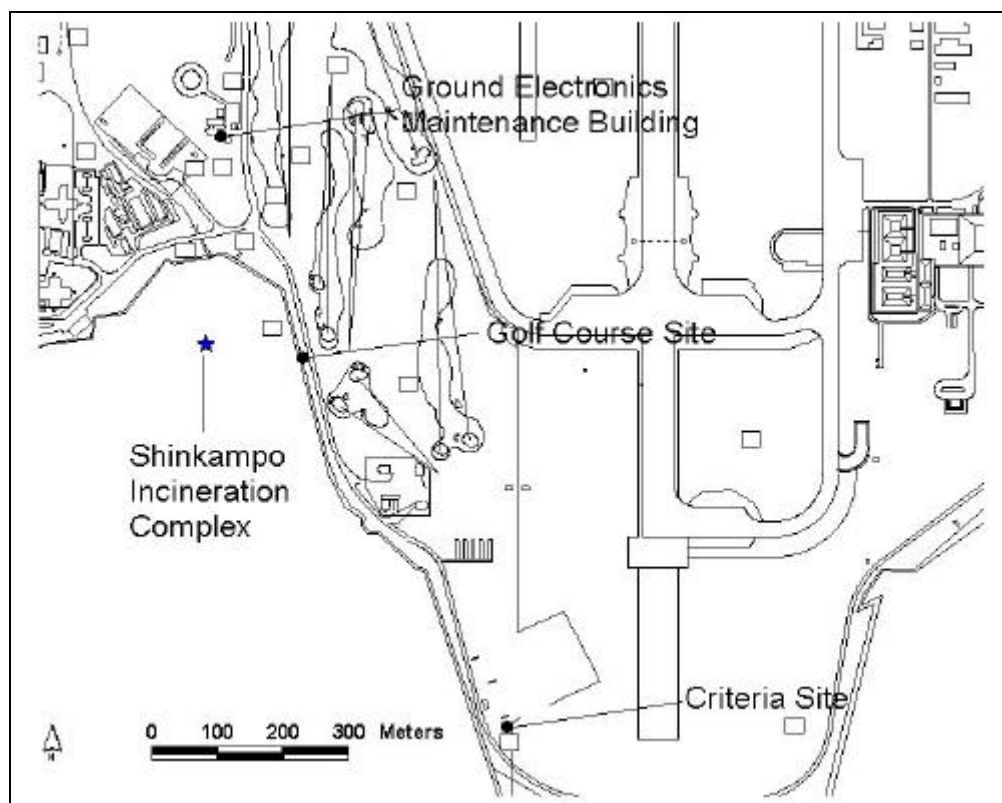
The limitations of the correlation analysis method also impacted the air dispersion modeling method because the results of the correlation analysis were used to select the COCs for which air dispersion modeling was performed. Therefore, only the six COCs that exhibited a statistically significant correlation between concentration and percent downwind were evaluated using the air dispersion modeling. If the Navy had been able to obtain stack test data from the SIC, or if more analytes had been identified as having a statistically significant relationship between concentration and percent downwind of the SIC, then the air dispersion modeling approach could have been used to assess the health risks attributable to emissions from the SIC – without significantly underestimating the health risks.

5.4.3 Detailed Information on the Upwind vs. Downwind Approach

There are many site-specific factors that make the task of identifying COCs that are associated with emissions from the SIC challenging. For example, NAF Atsugi is located in a heavily industrialized area proximate to multiple point and non-point sources of airborne COCs (Radian, 2000a). Furthermore, Japan's primary mechanism for disposing of waste is incineration, which results in high background concentrations of many airborne COCs such as particulates and dioxins.

The approach used to identify COCs that are associated with emissions from the SIC involves comparing the risks at a site that was downwind of the SIC (i.e., the GEMB) with the risks for a site that was upwind of the SIC (i.e., the Golf Course) on the same days. It is important to note the terms downwind and upwind are relative to wind direction. For example, if the GEMB, which is located north of the SIC, is downwind of the SIC 100% of the time on a given day, then the Golf Course, which is located east of the SIC, is upwind of the SIC 100% of the time on that same day (see Figure 5-1).

Figure 5-1
Upwind/Downwind Sample Locations



Both the Golf Course and Criteria Site are considered “upwind” of the SIC when the wind is blowing from the south to the north (as was the case with the data selected for this analysis). The Golf Course site was selected for the Upwind vs. Downwind comparison because it is closer to the SIC than the Criteria Site and would potentially be impacted by emission sources that are located between the Criteria Site and the SIC. If the Criteria Site was used in the comparison, then the risks attributable to the SIC could potentially be overestimated because the Criteria Site is not impacted by emission sources located between it and the SIC.

The goal of this “paired” comparison is to minimize, to the maximum extent possible, the potential contribution of other point and non-point sources on the concentrations being evaluated. Ideally the upwind site would be downwind of the SIC 0% of the time during the day while the downwind site would be

100% downwind of the SIC. The components of the concentrations measured at the downwind and upwind sites under these ideal conditions are presented in Table 5-8.

**Table 5-8
Components of Airborne Concentrations When the GEMB is 100% Downwind of the SIC**

Site	Components of Airborne Concentrations
Golf Course Site Concentrations =	Background + Other Point and Non-Point Sources ¹ (emissions)
GEMB Site Concentrations =	Background + Other Point and Non-Point Sources ¹ (emissions) + SIC (emissions)

¹Only point and non-point sources located south of the SIC could impact the concentrations because the wind is blowing from the south to the north 100% of the time.

Note that background does not mean “pristine” or “unimpacted”. Rather, the background concentrations reflect anthropogenic sources of airborne contaminants that are located proximate and remote from the SIC. As indicated in Table 5-8, the only difference between the airborne concentrations, and consequently risk, at the GEMB and the airborne concentrations at the Golf Course should be emissions associated with the SIC.

The null and alternate hypothesis are as follows:

H_0 : The risks observed at the GEMB (downwind site) are higher than the risks observed at the Golf Course (upwind site). In other words, the concentrations, and therefore risks, observed at the GEMB have been “enriched” by emissions from the SIC when compared to the Golf Course.

H_a : The risks observed at the GEMB (downwind site) are not higher than the risks observed at the Golf Course (upwind site). In other words, the concentrations, and therefore risks, observed at the GEMB have not been “enriched” by emissions from the SIC when compared to the Golf Course.

The statistical approach for evaluating the null hypothesis is as follows:

For all COCs that were detected in at least one sample:

1. The days when samples were collected at the GEMB when it was $\geq 80\%$ downwind from the SIC were identified. Samples collected at the Golf Course for the corresponding days were also identified (these samples were downwind of the SIC $< 5\%$ of the time).
2. The average and RME concentrations were calculated for both sets of data (see the text box below for detailed information on how the average and RME concentrations were calculated) .
3. The risks were calculated using identical exposure assumptions for 3, 6, and 30 year exposures. The only difference between the assumptions used to calculate the risks at both sites were the exposure point concentrations. In addition, only the risks from inhalation of ambient air were evaluated.

Calculation of the Average and RME Exposure Point Concentration Used in the Upwind vs. Downwind Analysis

The exposure point concentration for the average exposed individual was calculated based on the following criteria:

1. The arithmetic mean concentration.
2. The maximum detected concentration in instances where the arithmetic mean concentration exceeded the maximum detected concentration.

The exposure point concentration for the RME individual was calculated based on the following criteria:

Calculation of the Average and RME Exposure Point Concentration Used in the Upwind vs. Downwind Analysis

1. The 95% Upper Confidence Limit (95% UCL) on the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95% UCL of the mean concentration for all lognormally distributed data sets.
3. The maximum detected concentration in instances where the 95% UCL or Log 95% UCL exceeded the maximum detected concentration.

5.4.4 Uncertainties Associated with this Approach

As with any statistical approach involving hypothesis testing, there is a possibility of making a Type I error or Type II error. A Type I error is rejecting a true null hypothesis. A Type II error is failing to reject a false null hypothesis.

The two main site-specific uncertainties associated with the Upwind vs. Downwind approach are the sample size and the location of the Golf Course site. First, there are a limited number of samples (i.e., 2 – 7 depending on the analytical method) that meet the percent downwind criteria presented above. This decreases the overall confidence in the results by increasing the probability of committing Type II errors. Unfortunately, the only way to increase the sample size used in the comparison is to modify the percent downwind criteria (e.g., reduce the percent downwind criteria at the GEMB from 80% to 60%). The problem with this approach is that while we have reduced uncertainty by increasing sample size, we have also increased uncertainty significantly because we would not be able to discern how much of the measured concentrations were associated with the SIC + Background + Other Point Source Emissions (from the south) and the potential contribution from Other Point Sources located in the vectors that the wind was blowing from the remaining 40% of the time that the samples were collected. Second, based on the component analysis presented in Table 5-8, the hypothesis is that the difference in the concentrations between the GEMB and the Golf Course is due solely to emissions from the SIC. The highest degree of uncertainty associated with this hypothesis is the assumption that the value for the Other Point Source Component of the airborne concentrations is consistent between the GEMB and Golf Course. The reason for this uncertainty is that the Golf Course is located due east of the SIC. In order to fully minimize the uncertainties associated with this approach, an upwind monitoring station would have to have been placed due south of the SIC so that, when winds are blowing from the south to the north, we would be capturing all air data that are in this vector prior to, and immediately after, contact with the SIC. The Criteria Site is located southeast of the SIC. It was not selected for the evaluation because it is too far south and therefore not impacted by emission sources located between it and the SIC. Unfortunately, it was not possible to place a monitoring station due south of the incinerator because this land is not under the control of the U.S. Navy. Choosing the Golf Course (due east of the SIC) eliminates the uncertainty from sources between it and the SIC but doesn't capture the air immediately prior to contact with the SIC. While this uncertainty is acknowledged its impact on the statistical evaluation in considered minimal because no significant point sources have been identified immediately south of the SIC (Radian, 2000a). Consequently, based on its proximity to the SIC (i.e., approximately 150 meters) the airborne concentrations at the SIC and the Golf Course are expected to have similar component compositions.

5.4.5 Results of the Downwind vs. Upwind Analysis

For the purposes of this evaluation, only the risks from inhalation of ambient air were evaluated. The risks at the GEMB and the Golf Course were calculated using identical exposure parameters (i.e., a 3, 6, and 30-year child and adult residential exposure scenario). The only difference between the assumptions used to calculate the risks at both sites were the exposure point concentrations. Table 5-9 presents a comparison of the risks calculated at the GEMB and Golf Course for the downwind and upwind evaluation. The ambient air data, including date sampled, used in these calculations are presented in Appendix D.

**Table 5-9
Comparison of Downwind Versus Upwind Risks at NAF Atsugi, Japan**

	Hazard Index		Cancer Risk	
	Average	RME	Average	RME
Child (0-6) – 3-Year Residential Exposure				
GEMB – Downwind	133	265	1.8E-04	3.2E-04
Golf Course – Upwind	65	100	4.8E-05	8.5E-05
Potential Incremental Risk Attributable to Emissions from the SIC	68	165	1.3E-04	2.4E-04
Child (0-6) – 6-Year Residential Exposure				
GEMB – Downwind	133	265	3.7E-04	6.4E-04
Golf Course – Upwind	65	100	9.6E-05	1.7E-04
Potential Incremental Risk Attributable to Emissions from the SIC	68	165	2.7E-04	4.7E-04
Adult – 3-Year Residential Exposure				
GEMB – Downwind	47	95	6.5E-05	1.1E-04
Golf Course – Upwind	23	36	1.7E-05	3.1E-05
Potential Incremental Risk Attributable to Emissions from the SIC	24	59	4.8E-05	7.9E-05
Adult – 6-Year Residential Exposure				
GEMB – Downwind	47	95	1.3E-04	2.3E-04
Golf Course – Upwind	23	36	3.4E-05	6.1E-05
Potential Incremental Risk Attributable to Emissions from the SIC	24	59	9.6E-05	1.7E-04
Integrated Child and Adult – 30-Year Residential Exposure				
GEMB – Downwind	64	129	8.9E-04	1.5E-03
Golf Course – Upwind	31	49	2.3E-04	4.2E-04
Potential Incremental Risk Attributable to Emissions from the SIC	33	80	6.6E-04	1.1E-03

Notes: Ambient air samples at the GEMB were greater than or equal to 81% downwind of the SIC. Ambient air samples at the Golf Course were less than or equal to 4% downwind of the SIC.

5.4.6 Downwind vs. Upwind – Noncarcinogenic Risk Results Summary

The noncarcinogenic hazard indices are notably higher at the downwind location (i.e., GEMB) than the upwind location (i.e., Golf Course). Table 5-10 identifies the COCs that are responsible for the majority of the hazard index for each location. Acetaldehyde, acetonitrile, acrolein, and PM₁₀ contribute the majority of the hazard index for each location. The most notable increase in risk at the downwind location was observed for acrolein. The hazard index increased from 15.9 at the upwind location to 63.0 at the downwind location.

Table 5-10
Percentage that COCs Contribute to the Hazard Indices at the Upwind and Downwind Locations

COC	Golf Course (Upwind) Exposure Point Conc. (mg/m ³)	Golf Course (Upwind) Hazard Index	Golf Course (Upwind) % of Total Hazard Index	GEMB (Downwind) Exposure Point Conc. (mg/m ³)	GEMB (Downwind) Hazard Index	GEMB (Downwind) % of Total Hazard Index
Acetaldehyde	7.93E-02	8.5	23.6	8.22E-02	8.7	9.3
Acetonitrile	2.19E-01	3.5	9.8	7.51E-03	0.1	0.1
Acrolein	3.31E-04	15.9	44.4	1.31E-03	63.0	66.6
Acrylonitrile	5.61E-04	0.3	0.8	2.21E-03	1.1	1.1
Antimony	7.84E-06	0.2	0.5	3.63E-04	8.7	9.2
1,2-Dibromoethane	2.30E-04	1.1	3.1	7.66E-05	0.4	0.4
Formaldehyde	8.84E-04	0.3	0.8	2.24E-03	0.7	0.8
Hydrochloric Acid	2.10E-03	0.1	0.3	2.43E-02	1.2	1.2
Nickel	1.82E-05	0.4	1.0	9.34E-05	1.8	1.9
PM ₁₀	2.31E-01	4.4	12.4	2.34E-01	4.5	4.8
All other COCs	--	1.1	3.3	--	4.5	4.6
Total	--	35.8	100%	--	94.8	100%

Notes: Percentages were calculated based on an RME Adult stationed at NAF Atsugi for 6 years (i.e., 2 tours of duty).

5.4.7 Downwind vs. Upwind – Carcinogenic Risk Results Summary

The carcinogenic risks are notably higher at the downwind location (i.e., GEMB) than the upwind location (i.e., Golf Course). Table 5-11 identifies the COCs that are responsible for the majority of the carcinogenic risk for each location. Acetaldehyde, 1,3-butadiene, hexachlorobutadiene, and Total 2,3,7,8-TCDD TEQs are responsible for the majority of the risks at the Golf Course. Cadmium and Total 2,3,7,8-TCDD TEQs are responsible for the majority of the risks at the GEMB. The most significant increase in risk at the downwind location was observed for 2,3,7,8-TCDD TEQs. The carcinogenic increased from 6.5E-06 at the upwind location to 1.0E-04 at the downwind location, greater than one order of magnitude difference.

Table 5-11
Percentage that COCs Contribute to the Carcinogenic Risk at the Upwind and Downwind Locations

COC	Golf Course (Upwind) Exposure Point Conc. (mg/m ³)	Golf Course (Upwind) Carcinogenic Risk	Golf Course (Upwind) % of Total Carcinogenic Risk	GEMB (Downwind) Exposure Point Conc. (mg/m ³)	GEMB (Downwind) Carcinogenic Risk	GEMB (Downwind) % of Total Carcinogenic Risk
Acetaldehyde	7.93E-02	1.4E-05	23.5	8.22E-02	1.5E-05	6.6
Acrylonitrile	5.61E-04	3.1E-06	5.1	2.21E-03	1.2E-05	5.5
Arsenic	5.77E-06	2.0E-06	3.4	3.62E-05	1.3E-05	5.7
Benzene	3.00E-03	2.0E-06	3.4	4.63E-03	3.2E-06	1.4
1,3-Butadiene	4.45E-04	1.0E-05	16.8	7.51E-04	1.7E-05	7.6
Cadmium	1.22E-06	1.8E-07	0.3	2.54E-04	3.8E-05	16.6
1,2-Dibromoethane	2.30E-04	4.2E-06	6.8	7.66E-05	1.4E-06	0.6
1,4-Dichlorobenzene	1.58E-03	1.5E-06	2.4	1.18E-03	1.1E-06	0.5
1,4-Dioxane	1.85E-03	1.2E-06	1.9	8.88E-03	5.6E-06	2.5
Formaldehyde	8.84E-04	9.4E-07	1.6	2.24E-03	2.4E-06	1.1
Hexachlorobutadiene	3.51E-03	6.3E-06	10.4	9.58E-04	1.7E-06	0.8
Nickel	1.82E-05	3.9E-07	0.6	9.34E-05	2.0E-06	0.9
1,1,2,2-Tetrachloroethane	9.40E-04	4.5E-06	7.4	7.87E-04	3.8E-06	1.7
Total 2,3,7,8-TCDD TEQs	1.85E-09	6.5E-06	10.7	2.92E-08	1.0E-04	45.3
All other COCs	--	4.2E-06	5.7	--	1.0E-05	3.2
Total	--	6.1E-05	100%	--	2.3E-04	100%

Notes: Percentages are calculated based on an RME Adult stationed at NAF Atsugi for 6 years (i.e., 2 tours of duty).

5.5 REFERENCES

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Section 6

Uncertainty Analysis

6.0 PURPOSE

This section presents an evaluation of the uncertainties that enter the risk assessment at each step of the process. The risks presented in this assessment are conditional estimates based on a number of assumptions about exposure and toxicity given a particular land-use scenario. Uncertainties are created in a risk assessment because a range of values could be used for each assumption (i.e., parameter). Consistent with U.S. EPA policy, more conservative (i.e., upper bound) values are generally chosen for each parameter, while other values (i.e., values closer to the central tendency) may be more representative of site-specific conditions (U.S. EPA, 1989). Choosing upper bound values for each parameter typically results in overly conservative risks that do not reflect site-specific conditions. Uncertainties are used to “bracket” the range of risks that could result from choosing alternate values for the parameters used in calculating risks.

6.1 UNCERTAINTIES

Sources of uncertainty identified in the human health evaluation and professional judgment regarding the direction and magnitude of the impacts on the risk results are presented in Table 6-1. The direction and magnitude are those assumed to remain after any actions listed in the comment field have been implemented.

Table 6-1
Summary of Uncertainties in the Human Health Evaluation and Site-Specific Characteristics

Source of Uncertainty	Direction ^(a)	Magnitude ^{(b),(c)}	Comment
Data Evaluation			
Identification of COCs present in soil at the Base	+/-	0	Used site-specific information to develop sampling work plan and focus sampling efforts.
Identification of COCs present in ambient air at the Base	+/-	0	Used site-specific information to develop sampling work plan and focus sampling efforts. Samples were collected over a 14-month time frame to reflect temporal and seasonal changes in weather patterns at the base.
Identification of COCs present in indoor air at the Base	+/-	2	Used ambient air concentrations as surrogate indoor air concentrations for quantitative evaluation in the risk assessment. This may result in an underestimation or overestimation of the risks.
Identification of COCs present in indoor dust at the Base	+/-	2	The indoor dust samples were only analyzed for dioxins/furans. Used soil concentrations as surrogate indoor dust concentrations for all other COCs. This may result in an underestimation or overestimation of the risks.
Treatment of soil sample duplicates as discrete values	+/-	0	Assumed that since the risk contribution was >80% from air, double weighting caused by the use of soil sample field duplicates as discrete samples did not

Table 6-1
Summary of Uncertainties in the Human Health Evaluation and Site-Specific Characteristics

Source of Uncertainty	Direction ^(a)	Magnitude ^{(b),(c)}	Comment
			contribute to a significant change in the total risk.
Quality of Analytical Data	+/-	0	Used quality-assured data in evaluation.
Exposure Assessment			
No attenuation or enrichment of COC concentrations in soil or indoor dust occurs over time	+/-	2	Assumed that no attenuation or enrichment of soil concentrations occur over time. This may result in an underestimation or overestimation of the risks.
Exposure Assumptions	+/-	2	Used site-specific and U.S. EPA Standard Default Exposure Factors in the evaluation.
Experimental Dermal Absorption Rates	+/-	2	Used experimentally derived dermal absorption rates to evaluate dermal contact with soil.
Toxicity Assessment			
Failure to include all COCs because of lack of U.S. EPA approved toxicity values	-	3	Results in an underestimation of the risks. Oral RfDs were available for 95 of the 246 COCs and Inhalation RfDs were available for 48 of the 246 COCs. Oral slope factors were available for 44 of the 246 COCs and inhalation slope factors were available for 43 of the 246 COCs.
Extrapolation from animal studies to human toxicity	+	3	Used U.S. EPA's conservative approach incorporating safety factors and upper-bound estimates.
Lack of COC-specific dermal toxicity values	-	1	Used oral toxicity values as surrogates for dermal toxicity values in order to evaluate risks associated with dermal exposure. This may result in an underestimation of the risks.
Using dose-response information from homogeneous animal populations or healthy human populations to predict effects that may occur in the general population, including sensitive subpopulations.	-	1	This may underestimate the risks.
Calculation of Risks			
Assumed that health effects of COCs are additive	+/-	3	Assumed that health effects of COCs are additive in risk calculations. Antagonistic and synergistic effects of COC mixtures were not evaluated.

^(a)Direction of Effect on Risk Calculations

+ = May result risks that are overly conservative.

- = May result in risks that are not conservative.

^(b)Magnitude of Effect on Risk Calculations

0 = Negligible impact on risk calculations.

1 = Small effect on risks calculations.

2 = Medium effect on risk calculations.

3 = Large effect on risk calculations.

^(c)Direction and Magnitude values based on professional judgment.

6.2 REFERENCES

U.S. EPA. 1989. U.S. Environmental Protection Agency. Risk Assessment Guidance for Superfund: Human Health Evaluation Manual Part A. Interim Final. Office of Emergency and Remedial Response. Washington, D.C. 9285.701A. EPA/540/1-89/002.

Section 7

Findings and Conclusions

7.0 FINDINGS

Health risks were calculated for adults and children living on the base for 3 years, 6 years, and 30 years. Specifically, industrial, residential, day care, elementary school, and recreational golfer exposure scenarios were evaluated. Site-specific exposure parameters were used to model human exposure to COCs in the environment. This information was combined with toxicity information to quantify potential risks. The majority of exposure to COCs occurs via inhalation of air. The inhalation route of exposure constitutes the vast majority of the noncarcinogenic and carcinogenic risks (i.e., typically greater than 95% of the hazard index and 80% of the carcinogenic risk, respectively).

Noncarcinogenic Risk

The inhalation exposure pathways account for greater than 95% of the hazard index at each location. The hazard indices for every exposure scenario are greater than the U.S. EPA benchmark of 1 except for the Recreational Golfer Scenario. The highest hazard index for the average exposed individual is 53 at the Residential Towers for the child 3-year and 6-year residential exposure scenarios. The highest hazard index calculated for the reasonable maximum exposed individual is 67 at the Residential Towers for the child 3-year and 6-year residential exposure scenarios. The child residential scenarios have higher hazard indices than all other exposure scenarios. Acetaldehyde and acrolein are responsible for the majority of the hazard index for each AOC. Other COCs contributing significantly to the hazard indices are acetonitrile, aluminum, 1,2-dibromomethane, formaldehyde, PM₁₀, and 1,2,4-trimethylbenzene. Oral RfDs were only available for 95 of the 246 COCs and Inhalation RfDs were only available for 58 of the 246 COCs, so the noncarcinogenic risks are underestimated.

Carcinogenic Risk

The inhalation exposure pathways account for greater than 80% of the carcinogenic risk at each location. Among all the scenarios evaluated the carcinogenic risk was found to be above the U.S. EPA acceptable risk range of 1E-04 to 1E-06 for a 0-6 year old child residential scenario for the RME exposure on a three year tour (1.1E-04); the 0-6 year old child residential scenario for the average and RME exposure on a 6 year tour (1.2E-04 and 2.3E-04, respectively) and the adult residential scenario assuming a 30-year residential exposure (5.2E-04). Acetaldehyde, 1,3-butadiene, and 2,3,7,8-TCDD TEQs are responsible for the majority of the carcinogenic risks at each AOC. Oral slope factors were available for only 44 of the 243 COCs and inhalation slope factors were available for only 43 of the 243 COCs which may result in an underestimation of the carcinogenic risks.

7.1 CONCLUSIONS

The conclusions from this risk assessment are presented below and are focused on the key components of the evaluation.

Given that the primary objective of this human health risk assessment was to evaluate the potential health impacts to people at NAF Atsugi, sampling sites were selected in areas where sensitive populations lived and worked. The location on the base known to be most impacted from incinerator emissions (i.e., the GEMB) was selected as a sampling site in order to evaluate the potential impacts to the maximum exposed populations.

In order to as accurately as possible assess the health risks at NAF Atsugi, sampling was conducted over a fourteen month period to account for changes in incinerator feedstock, meteorological conditions, and seasonal variations. It is thought that the sampling conducted was of sufficient duration to be

representative of the variable feedstock and other changing conditions. However, if the feedstock or waste handling practices dramatically change, then the calculated risks are also expected to change.

Indirect exposure pathways (e.g., ingestion of locally grown pork, eggs, fruits, vegetables, dairy, etc.) were not evaluated in the risk assessment because the vast majority of food products consumed by individuals stationed at NAF Atsugi are purchased at the commissary, which receives food products from the United States.

The soil trend analysis indicates that a spatial correlation between concentration and distance from the SIC is evident for Total 2,3,7,8-TCDD TEQs (see Figure 7-1). Consequently, concentrations of Total 2,3,7,8-TCDD TEQs in soil samples on the base typically increase as the distance from the SIC decreases. The soil trend analysis also indicates that the concentrations of Total 2,3,7,8-TCDD TEQs exceeded RBSCs throughout the base for 0 to 3-inch soil samples, and approximately 1/2 the base for 3 to 12-inch soil samples.

The results of the ambient air dispersion modeling, presented in Figure 7-2, indicate that the maximum impacts occur just north of the SIC in the vicinity of the GEMB. The lowest modeled impacts occur east of the SIC on the eastern NAF Atsugi property line. Using emissions rates, which were back-calculated from the ambient air monitoring samples, the dispersion modeling predicted Total 2,3,7,8-TCDD TEQ air concentrations at levels higher than RBSCs across the entire base. Based on the modeling, arsenic concentrations exceeded the RBSC at approximately 2/3 of the modeled receptor locations. Lead and PM₁₀ concentrations were greater than the quarterly and annual U.S. EPA NAAQS, respectively, in a small area north of the SIC and hydrochloric acid (HCl) concentrations were below the RBSC at all locations (Radian, 2000).

The comparative risk evaluation (i.e., based on the calculated risks at each AOC using identical exposure assumptions and toxicity values) indicated that the hazard indices and cancer risks were consistent between the AOCs. For the purposes of the evaluation, inhalation risks were calculated at each location assuming a 24-hour per day, 350 day per year residential exposure. The plausible upper bound hazard index for children and adults are approximately 121 and 43, respectively. The plausible upper bound cancer risk for children and adults, for a 3-year exposure, are approximately 2.1E-04, and 7.3E-04, respectively.

An "Upwind/Downwind" evaluation indicated that the hazard indices and cancer risks at the site "Downwind" of the SIC are approximately 2 to 4 times higher than a site that is "Upwind" of the SIC using identical exposure assumptions and samples that were collected on the same day and time. Furthermore, the contribution of dioxin to the carcinogenic risk increases from approximately 11% of the total risk at the upwind site to 45% of the total risk at the downwind site. These results indicate that the human health risks increase as the amount of time spent downwind from the incinerator increases.

Figure 7-1
 Kriged Total 2,3,7,8-TCDD TEQ
 Soil Concentrations (mg/kg)

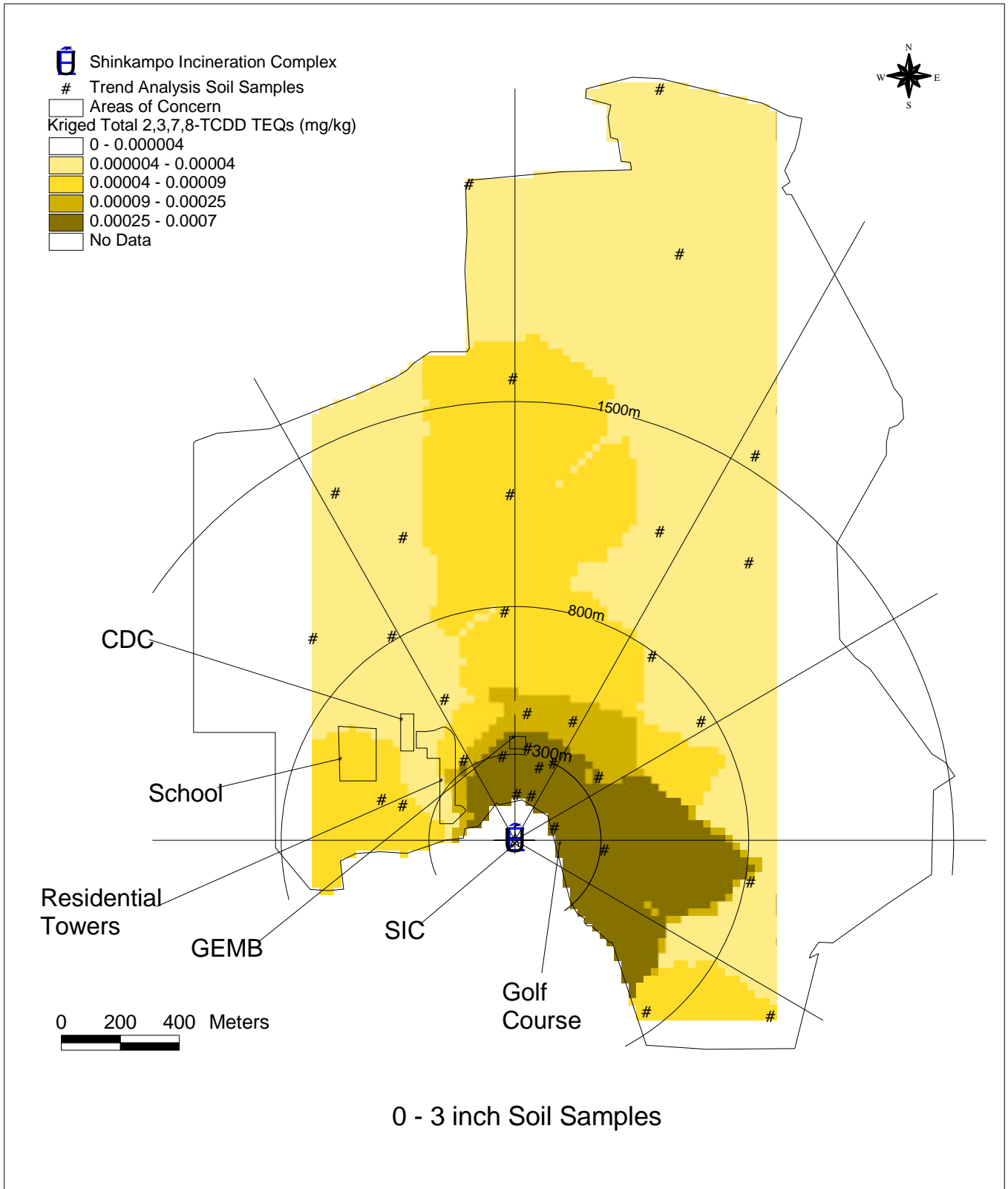
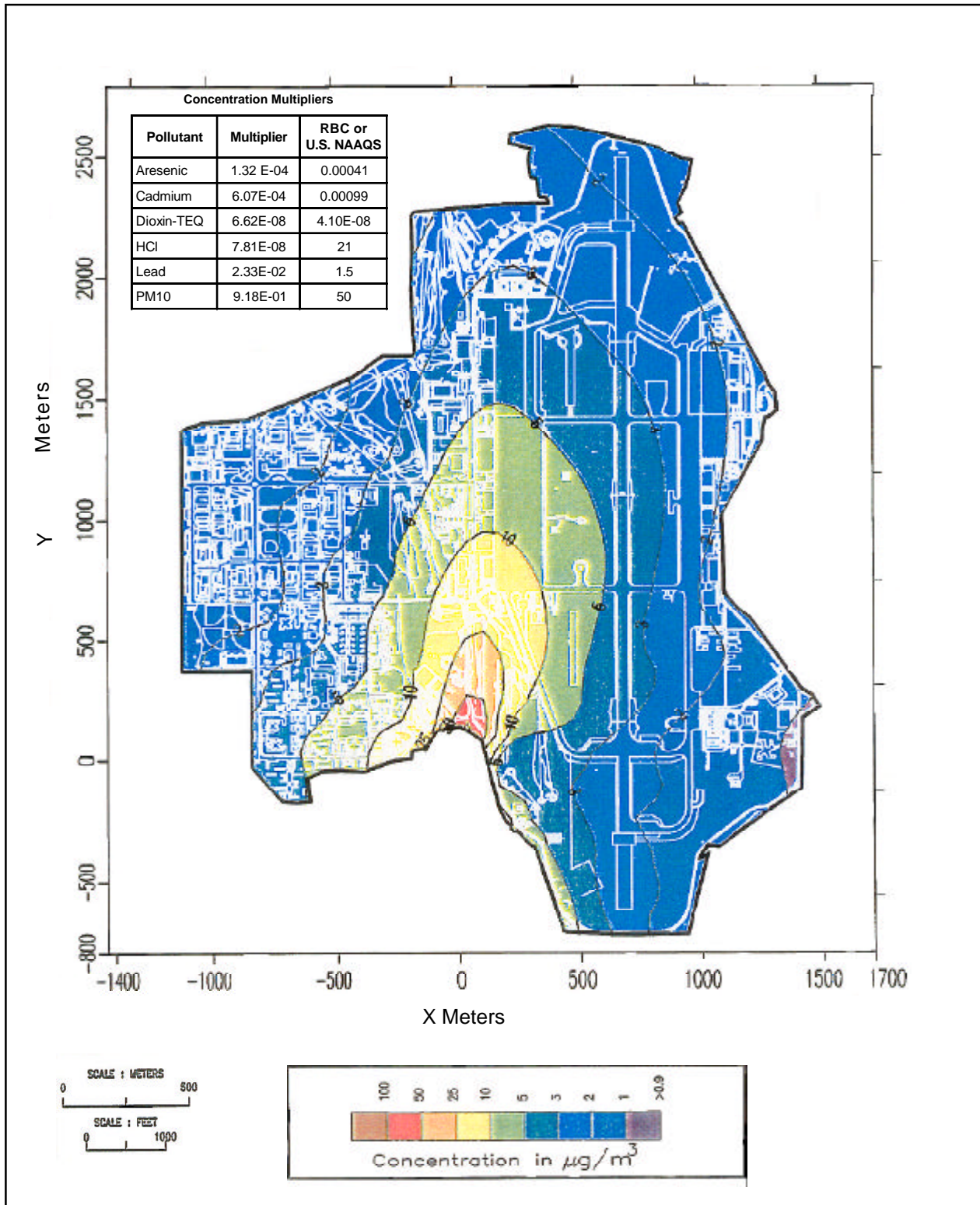


Figure 7-2 Results of the Ambient Air Dispersion Modeling



7.3 REFERENCES

Radian. 2000. (Radian International LLC. NAF Atsugi, Japan Ambient Air Monitoring Summary 21 April 1998 – 01 June 1999.

Appendix A

[Click Here for Direct Link to Appendix A.PDF](#)

Appendix B

[Click Here for Direct Link to Appendix B.PDF](#)

Appendix C

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Appendix D

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Appendix E

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Appendix F

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Appendix A

Statistical Summaries

Table Number	Media	Description
A-1	Soil (0-3")	Child Development Center, Building 2910
A-2	Soil (0-3")	Elementary School, Building 993
A-3	Soil (0-3")	Residential Towers, Building 3101/3102
A-4	Soil (0-3")	GEMB
A-5	Soil (0-3")	Golf Course
A-6	Ambient Air	Elementary School, Building 993
A-7	Ambient Air	Residential Towers, Building 3101/3102
A-8	Ambient Air	GEMB
A-9	Ambient Air	Golf Course
A-10	Ambient Air	GEMB (On Dates when the GEMB is \geq 81% Downwind of the SIC)
A-11	Ambient Air	Golf Course (On Dates when the GEMB is \geq 81% Downwind of the SIC)
A-12	Indoor Dust	Child Development Center, Building 2910
A-13	Indoor Dust	Elementary School, Building 993
A-14	Indoor Dust	Residential Towers, Building 3101/3102
A-15	Indoor Dust	GEMB

Note: The analytical data utilized to calculate the summary statistics presented in this appendix are presented in the following documents:

1. Radian. 1999. Radian International LLC. Phase II Soil Sampling Report Addendum to the March 1998 Report - NAF Atsugi, Japan.
2. Radian. 1999. Radian International LLC. Results of March 1998 Soil Sampling NAF Atsugi, Japan prepared by Radian International LLC, August 1998 and Phase II Soil Sampling Report Addendum to the March 1998 Report - NAF Atsugi, Japan.
3. Radian. 2000. Radian International LLC. NAF Atsugi, Japan Ambient Air Monitoring Summary 21 April 1998 – 01 June 1999.

Table A-1 - Child Development Center Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Anions										
Chloride	mg/kg	1	100.00			1.15	1.15	1.15	1.15	
Fluoride	mg/kg	1	100.00			2.04	2.04	2.04	2.04	
Sulfate	mg/kg	1	100.00			7.28	7.28	7.28	7.28	
Nitrate										
Nitrate	mg/kg	1	100.00			6.36	6.36	6.36	6.36	
pH										
pH	pH units	9	100.00			5.25	9.14	6.87	6.83	
Particle Size Distribution										
%Clay	%	2	100.00			0.20	4.80	2.50	2.50	
%Gravel	%	2	100.00			1.30	17.90	9.60	9.60	
%Sand	%	2	100.00			80.60	84.60	82.60	82.60	
%Silt	%	2	100.00			1.30	9.30	5.30	5.30	
Mean Particle Size(mm)	%	2	100.00			0.51	0.60	0.56	0.56	
Percent Moisture/Percent Solids										
Percent moisture	percent	9	100.00			6.30	39.80	16.23	12.00	
Inorganics										
Aluminum	mg/kg	9	100.00			6530.00	44000.00	21428.89	16200.00	
Antimony	mg/kg	9	33.33	0.02	0.43	0.63	1.80	0.44	0.17	
Arsenic	mg/kg	9	100.00			1.10	3.70	2.78	3.30	
Barium	mg/kg	9	100.00			12.10	79.60	32.69	17.60	
Beryllium	mg/kg	9	66.67	0.16	0.22	0.009	0.21	0.07	0.06	
Cadmium	mg/kg	9	100.00			0.12	1.10	0.56	0.43	
Calcium	mg/kg	9	100.00			3130.00	12200.00	8505.56	7900.00	
Chromium	mg/kg	9	100.00			5.00	26.10	12.11	7.80	
Cobalt	mg/kg	9	100.00			2.20	17.30	7.82	4.50	

Table A-1 - Child Development Center Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Inorganics										
Copper	mg/kg	9	100.00			8.20	92.00	35.50	14.20	
Cyanide	mg/kg	9	100.00			0.43	0.97	0.63	0.56	
Iron	mg/kg	9	100.00			6090.00	38700.00	19191.11	14500.00	
Lead	mg/kg	9	100.00			3.10	23.80	13.17	14.50	
Magnesium	mg/kg	9	100.00			1370.00	7400.00	3992.22	3050.00	
Manganese	mg/kg	9	100.00			76.40	767.00	326.07	203.00	
Mercury	mg/kg	9	77.78	0.02	0.02	0.01	0.15	0.04	0.03	0.01
Nickel	mg/kg	9	100.00			4.20	24.00	11.20	6.30	
Potassium	mg/kg	9	100.00			252.00	1000.00	585.33	637.00	
Selenium	mg/kg	9	11.11	0.04	0.30	0.40	0.40	0.12	0.09	
Silver	mg/kg	9	88.89	0.15	0.15	0.008	0.29	0.12	0.09	
Sodium	mg/kg	9	100.00			340.00	1200.00	770.89	864.00	
Thallium	mg/kg	9	66.67	0.54	0.59	0.15	0.79	0.39	0.28	
Vanadium	mg/kg	9	100.00			19.10	151.00	67.74	43.00	19.10
Zinc	mg/kg	9	100.00			26.50	125.00	75.36	63.20	
Total Organic Carbon										
Total Organic Carbon	mg/kg	1	100.00			12800.00	12800.00	12800.00	12800.00	
Organics										
4,4'-DDE	mg/kg	9	77.78	0.0002	0.0002	0.0006	0.03	0.01	0.01	
4,4'-DDT	mg/kg	9	77.78	0.0002	0.0002	0.002	0.05	0.02	0.008	
Butylbenzylphthalate	mg/kg	9	11.11	0.04	0.04	0.13	0.13	0.03	0.02	
Dieldrin	mg/kg	9	11.11	0.0002	0.0003	0.002	0.002	0.0003	0.00010	0.00009
alpha-Chlordane	mg/kg	9	44.44	0.0002	0.0002	0.0008	0.0010	0.0004	0.0001	0.00009
bis(2-Ethylhexyl)phthalate	mg/kg	9	88.89	0.04	0.04	0.09	0.46	0.22	0.22	
di-n-Butylphthalate	mg/kg	9	44.44	0.04	0.06	0.05	0.20	0.06	0.03	
di-n-Octylphthalate	mg/kg	9	11.11	0.04	0.06	0.05	0.05	0.02	0.02	
gamma-Chlordane	mg/kg	9	33.33	0.0002	0.0002	0.0009	0.001	0.0004	0.0001	0.00009

Table A-1 - Child Development Center Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Dioxins/Furans										
1,2,3,4,6,7,8,9-OCDD	mg/kg	9	100.00			0.00001	0.0010	0.0003	0.0003	
1,2,3,4,6,7,8,9-OCDF	mg/kg	9	88.89	0.0000010	0.0000010	0.000002	0.0001	0.00005	0.00005	
1,2,3,4,6,7,8-HpCDD	mg/kg	9	100.00			0.000001	0.0001	0.00005	0.00004	
1,2,3,4,6,7,8-HpCDF	mg/kg	9	100.00			0.000001	0.00009	0.00005	0.00003	
1,2,3,4,7,8,9-HpCDF	mg/kg	9	77.78	0.0000007	0.0000008	0.000003	0.00002	0.000009	0.000006	
1,2,3,4,7,8-HxCDD	mg/kg	9	77.78	0.0000006	0.0000006	0.000001	0.000005	0.000002	0.000002	0.0000003
1,2,3,4,7,8-HxCDF	mg/kg	9	100.00			0.0000008	0.00004	0.00002	0.00002	
1,2,3,6,7,8-HxCDD	mg/kg	9	77.78	0.0000006	0.0000006	0.000003	0.00001	0.000005	0.000003	0.0000003
1,2,3,6,7,8-HxCDF	mg/kg	9	77.78	0.0000004	0.0000004	0.000004	0.00002	0.000009	0.000008	0.0000002
1,2,3,7,8,9-HxCDD	mg/kg	9	77.78	0.0000006	0.0000006	0.000004	0.00001	0.000007	0.000005	0.0000003
1,2,3,7,8,9-HxCDF	mg/kg	9	66.67	0.0000005	0.0000007	0.0000008	0.000004	0.000001	0.000001	
1,2,3,7,8-PeCDD	mg/kg	9	77.78	0.0000004	0.0000005	0.0000010	0.000006	0.000002	0.000002	
1,2,3,7,8-PeCDF	mg/kg	9	77.78	0.0000004	0.0000004	0.000002	0.00002	0.000005	0.000004	0.0000002
2,3,4,6,7,8-HxCDF	mg/kg	9	88.89	0.0000005	0.0000005	0.0000009	0.00004	0.00002	0.00001	
2,3,4,7,8-PeCDF	mg/kg	9	77.78	0.0000004	0.0000004	0.000003	0.00002	0.000007	0.000006	0.0000002
2,3,7,8-TCDD	mg/kg	9	44.44	0.0000003	0.0000004	0.0000004	0.0000006	0.0000003	0.0000002	0.0000002
2,3,7,8-TCDF	mg/kg	9	100.00			0.0000007	0.00001	0.000004	0.000003	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	9	100.00			0.0000009	0.00003	0.00001	0.00001	
Total HpCDD	mg/kg	9	100.00			0.000003	0.0002	0.0001	0.00008	
Total HpCDF	mg/kg	9	100.00			0.000001	0.0002	0.00009	0.00008	
Total HxCDD	mg/kg	9	88.89	0.0000006	0.0000006	0.000002	0.0002	0.00006	0.00006	
Total HxCDF	mg/kg	9	100.00			0.000002	0.0002	0.0001	0.0001	
Total PeCDD	mg/kg	9	100.00			0.0000008	0.0006	0.00010	0.00002	
Total PeCDF	mg/kg	9	100.00			0.0000009	0.0002	0.00010	0.00009	
Total TCDD	mg/kg	9	88.89	0.0000004	0.0000004	0.0000008	0.003	0.0004	0.00002	
Total TCDF	mg/kg	9	100.00			0.0000007	0.0003	0.00008	0.00006	

Table A-1 - Child Development Center Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Anions								
Chloride	mg/kg		1.15	1.15	1.15			Unknown
Fluoride	mg/kg		2.04	2.04	2.04			Unknown
Sulfate	mg/kg		7.28	7.28	7.28			Unknown
Nitrate								
Nitrate	mg/kg		6.36	6.36	6.36			Unknown
pH								
pH	pH units	1.36	6.87	7.71	6.75	7.71	7.85	Normal/Lognormal
Particle Size Distribution								
%Clay	%	3.25	2.50	4.80	0.98	17.02	.18574138254	Unknown
%Gravel	%	11.74	9.60	17.90	4.82	62.01	.11047898969	Unknown
%Sand	%	2.83	82.60	84.60	82.58	95.23	92.92	Unknown
%Silt	%	5.66	5.30	9.30	3.48	30.56	.22568173971	Unknown
Mean Particle Size(mm)	%	0.06	0.56	0.60	0.56	0.83	0.86	Unknown
Percent Moisture/Percent Solids								
Percent moisture	percent	11.18	16.23	23.17	13.33	23.17	29.92	Normal/Lognormal
Inorganics								
Aluminum	mg/kg	13472.02	21428.89	29781.54	17457.70	29781.54	43396.96	Normal/Lognormal
Antimony	mg/kg	0.58	0.44	1.80	0.20	0.80	6.05	Lognormal
Arsenic	mg/kg	0.96	2.78	3.37	2.58	3.37	4.05	Unknown
Barium	mg/kg	23.83	32.69	65.79	25.90	47.46	65.79	Lognormal
Beryllium	mg/kg	0.06	0.07	0.11	0.05	0.11	0.24	Normal/Lognormal
Cadmium	mg/kg	0.34	0.56	0.77	0.45	0.77	1.17	Normal/Lognormal
Calcium	mg/kg	3213.29	8505.56	10497.79	7828.59	10497.79	12570.58	Normal/Lognormal
Chromium	mg/kg	7.60	12.11	16.83	10.15	16.83	21.54	Normal/Lognormal
Cobalt	mg/kg	5.66	7.82	11.33	6.00	11.33	18.12	Normal/Lognormal

Table A-1 - Child Development Center Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Inorganics								
Copper	mg/kg	31.38	35.50	92.00	23.73	54.96	114.24	Lognormal
Cyanide	mg/kg	0.18	0.63	0.74	0.61	0.74	0.76	Normal/Lognormal
Iron	mg/kg	11474.03	19191.11	26305.01	15926.19	26305.01	37265.95	Normal/Lognormal
Lead	mg/kg	7.96	13.17	18.10	10.20	18.10	34.79	Normal
Magnesium	mg/kg	2247.70	3992.22	5385.80	3383.86	5385.80	7277.14	Normal/Lognormal
Manganese	mg/kg	243.20	326.07	476.85	245.24	476.85	811.53	Normal/Lognormal
Mercury	mg/kg	0.04	0.04	0.12	0.02	0.07	0.12	Lognormal
Nickel	mg/kg	7.32	11.20	15.74	9.19	15.74	21.11	Normal/Lognormal
Potassium	mg/kg	231.64	585.33	728.95	540.88	728.95	836.52	Normal/Lognormal
Selenium	mg/kg	0.11	0.12	0.40	0.09	0.19	0.32	Lognormal
Silver	mg/kg	0.09	0.12	0.17	0.08	0.17	0.56	Normal/Lognormal
Sodium	mg/kg	326.64	770.89	973.40	700.03	973.40	1164.40	Normal/Lognormal
Thallium	mg/kg	0.22	0.39	0.62	0.35	0.53	0.62	Lognormal
Vanadium	mg/kg	48.47	67.74	97.80	52.07	97.80	158.29	Normal/Lognormal
Zinc	mg/kg	38.76	75.36	99.39	65.44	99.39	129.36	Normal/Lognormal
Total Organic Carbon								
Total Organic Carbon	mg/kg		12800.00	12800.00	12800.00			Unknown
Organics								
4,4'-DDE	mg/kg	0.01	0.01	0.02	0.003	0.02	21.68	Normal/Lognormal
4,4'-DDT	mg/kg	0.02	0.02	0.05	0.004	0.03	20.89	Lognormal
Butylbenzylphthalate	mg/kg	0.04	0.03	0.13	0.02	0.05	0.05	Unknown
Dieldrin	mg/kg	0.0007	0.0003	0.002	0.0001	0.0008	0.0009	Unknown
alpha-Chlordane	mg/kg	0.0004	0.0004	0.0007	0.0003	0.0007	0.002	Unknown
bis(2-Ethylhexyl)phthalate	mg/kg	0.13	0.22	0.31	0.17	0.31	0.77	Normal/Lognormal
di-n-Butylphthalate	mg/kg	0.06	0.06	0.15	0.04	0.10	0.15	Lognormal
di-n-Octylphthalate	mg/kg	0.01	0.02	0.05	0.02	0.03	0.03	Unknown
gamma-Chlordane	mg/kg	0.0004	0.0004	0.0007	0.0002	0.0007	0.002	Unknown

Table A-1 - Child Development Center Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Dioxins/Furans								
1,2,3,4,6,7,8,9-OCDD	mg/kg	0.0003	0.0003	0.0005	0.0002	0.0005	0.007	Normal/Lognormal
1,2,3,4,6,7,8,9-OCDF	mg/kg	0.00004	0.00005	0.00007	0.00002	0.00007	0.005	Normal
1,2,3,4,6,7,8-HpCDD	mg/kg	0.00004	0.00005	0.00008	0.00003	0.00008	0.001	Normal
1,2,3,4,6,7,8-HpCDF	mg/kg	0.00004	0.00005	0.00007	0.00002	0.00007	0.001	Normal
1,2,3,4,7,8,9-HpCDF	mg/kg	0.000007	0.000009	0.00001	0.000004	0.00001	0.0002	Normal/Lognormal
1,2,3,4,7,8-HxCDD	mg/kg	0.000002	0.000002	0.000003	0.000002	0.000003	0.00001	Normal/Lognormal
1,2,3,4,7,8-HxCDF	mg/kg	0.00002	0.00002	0.00003	0.00001	0.00003	0.0005	Normal
1,2,3,6,7,8-HxCDD	mg/kg	0.000004	0.000005	0.000007	0.000003	0.000007	0.00005	Normal/Lognormal
1,2,3,6,7,8-HxCDF	mg/kg	0.000007	0.000009	0.00001	0.000004	0.00001	0.0006	Normal
1,2,3,7,8,9-HxCDD	mg/kg	0.000005	0.000007	0.000010	0.000004	0.000010	0.0001	Normal
1,2,3,7,8,9-HxCDF	mg/kg	0.000001	0.000001	0.000002	0.0000010	0.000002	0.000005	Normal/Lognormal
1,2,3,7,8-PeCDD	mg/kg	0.000002	0.000002	0.000003	0.000001	0.000003	0.00001	Normal/Lognormal
1,2,3,7,8-PeCDF	mg/kg	0.000005	0.000005	0.000008	0.000002	0.000008	0.00010	Normal/Lognormal
2,3,4,6,7,8-HxCDF	mg/kg	0.00001	0.00002	0.00003	0.000008	0.00003	0.0009	Normal
2,3,4,7,8-PeCDF	mg/kg	0.000006	0.000007	0.00001	0.000004	0.00001	0.0003	Normal
2,3,7,8-TCDD	mg/kg	0.0000002	0.0000003	0.0000005	0.0000003	0.0000004	0.0000005	Lognormal
2,3,7,8-TCDF	mg/kg	0.000003	0.000004	0.000005	0.000003	0.000005	0.000010	Normal/Lognormal
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	0.00001	0.00001	0.00002	0.000009	0.00002	0.0001	Normal
Total HpCDD	mg/kg	0.00008	0.0001	0.0002	0.00005	0.0002	0.002	Normal
Total HpCDF	mg/kg	0.00007	0.00009	0.0001	0.00004	0.0001	0.009	Normal
Total HxCDD	mg/kg	0.00005	0.00006	0.00010	0.00003	0.00010	0.02	Normal
Total HxCDF	mg/kg	0.00008	0.0001	0.0002	0.00005	0.0002	0.007	Normal
Total PeCDD	mg/kg	0.0002	0.00010	0.0006	0.00002	0.0002	0.02	Lognormal
Total PeCDF	mg/kg	0.00008	0.00010	0.0001	0.00004	0.0001	0.05	Normal
Total TCDD	mg/kg	0.001	0.0004	0.003	0.00002	0.001	0.77	Lognormal
Total TCDF	mg/kg	0.00009	0.00008	0.0001	0.00003	0.0001	0.03	Unknown

Table A-2 - Elementary School Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Anions										
Chloride	mg/kg	2	100.00			0.67	8.17	4.42	4.42	
Fluoride	mg/kg	2	50.00	0.27	0.27	1.63	1.63	0.88	0.88	
Sulfate	mg/kg	2	100.00			0.27	13.40	6.83	6.83	
Nitrate										
Nitrate	mg/kg	2	100.00			0.71	16.30	8.51	8.51	
pH										
pH	pH units	9	100.00			6.74	8.98	8.00	8.43	
Particle Size Distribution										
%Clay	%	2	100.00			0.80	4.10	2.45	2.45	
%Gravel	%	2	100.00			2.30	15.70	9.00	9.00	
%Sand	%	2	100.00			80.70	81.80	81.25	81.25	
%Silt	%	2	100.00			1.70	12.90	7.30	7.30	
Mean Particle Size(mm)	%	2	100.00			0.33	0.61	0.47	0.47	
Percent Moisture/Percent Solids										
Percent moisture	percent	9	100.00			3.60	50.20	19.16	10.50	
Inorganics										
Aluminum	mg/kg	9	100.00			8290.00	72600.00	28632.22	19000.00	
Antimony	mg/kg	9	66.67	0.32	0.42	0.46	2.50	0.77	0.46	
Arsenic	mg/kg	9	100.00			1.80	6.50	3.96	3.80	
Barium	mg/kg	9	100.00			12.50	143.00	44.42	18.80	
Beryllium	mg/kg	9	100.00			0.07	0.35	0.15	0.11	
Cadmium	mg/kg	9	100.00			0.14	1.30	0.46	0.25	
Calcium	mg/kg	9	100.00			9570.00	18700.00	12395.56	11400.00	
Chromium	mg/kg	9	100.00			4.90	51.40	15.96	10.20	
Cobalt	mg/kg	9	100.00			2.90	27.60	10.89	7.70	

Table A-2 - Elementary School Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Inorganics										
Copper	mg/kg	9	100.00			7.10	152.00	49.30	26.70	
Cyanide	mg/kg	9	11.11	0.22	0.48	0.16	0.16	0.15	0.13	
Iron	mg/kg	9	100.00			10000.00	64100.00	26088.89	19600.00	
Lead	mg/kg	9	100.00			2.70	61.50	12.81	3.70	
Magnesium	mg/kg	9	100.00			2140.00	9970.00	5822.22	5480.00	
Manganese	mg/kg	9	100.00			128.00	1140.00	446.67	294.00	
Mercury	mg/kg	9	44.44	0.02	0.02	0.01	0.13	0.03	0.01	0.01
Nickel	mg/kg	9	100.00			4.20	37.50	15.21	13.60	
Potassium	mg/kg	9	100.00			492.00	1060.00	723.22	640.00	
Selenium	mg/kg	9	22.22	0.005	0.31	0.51	0.91	0.23	0.14	
Silver	mg/kg	9	100.00			0.01	0.50	0.15	0.09	
Sodium	mg/kg	9	100.00			502.00	1210.00	795.44	781.00	
Thallium	mg/kg	9	22.22	0.07	0.62	1.40	1.60	0.52	0.28	
Vanadium	mg/kg	9	100.00			25.10	263.00	92.56	56.40	
Zinc	mg/kg	9	100.00			22.10	274.00	66.71	37.40	
Total Organic Carbon										
Total Organic Carbon	mg/kg	2	100.00			2360.00	11700.00	7030.00	7030.00	
Organics										
4,4'-DDD	mg/kg	9	11.11	0.0002	0.0003	0.12	0.12	0.01	0.00010	
4,4'-DDE	mg/kg	9	44.44	0.0002	0.0002	0.003	0.04	0.008	0.00010	
4,4'-DDT	mg/kg	9	44.44	0.0002	0.0002	0.003	0.05	0.009	0.00010	
Aroclor-1254	mg/kg	9	11.11	0.0002	0.0003	0.04	0.04	0.005	0.00010	
Butylbenzylphthalate	mg/kg	9	11.11	0.04	0.05	0.10	0.10	0.03	0.02	0.02
Chrysene	mg/kg	9	11.11	0.04	0.05	0.07	0.07	0.03	0.02	0.02
Diethylphthalate	mg/kg	9	11.11	0.04	0.07	0.05	0.05	0.02	0.02	
Heptachlor	mg/kg	9	11.11	0.0002	0.0003	0.01	0.01	0.001	0.00010	
Total Carcinogenic PAHS (BaP TEQs)	mg/kg	9	11.11	0.08	0.12	0.08	0.08	0.05	0.04	0.04

Table A-2 - Elementary School Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Organics										
alpha-Chlordane	mg/kg	9	22.22	0.0002	0.0003	0.003	0.22	0.02	0.00010	
bis(2-Ethylhexyl)phthalate	mg/kg	9	100.00			0.14	0.98	0.36	0.24	
di-n-Butylphthalate	mg/kg	9	33.33	0.04	0.05	0.09	0.35	0.10	0.02	0.02
gamma-Chlordane	mg/kg	9	11.11	0.0002	0.0003	0.22	0.22	0.02	0.00010	
Dioxins/Furans										
1,2,3,4,6,7,8,9-OCDD	mg/kg	9	100.00			0.00001	0.002	0.0006	0.00003	
1,2,3,4,6,7,8,9-OCDF	mg/kg	9	100.00			0.000002	0.0003	0.00006	0.00006	
1,2,3,4,6,7,8-HpCDD	mg/kg	9	100.00			0.000002	0.0004	0.00007	0.00005	
1,2,3,4,6,7,8-HpCDF	mg/kg	9	100.00			0.000002	0.0003	0.00005	0.00007	
1,2,3,4,7,8,9-HpCDF	mg/kg	9	55.56	0.0000003	0.000002	0.000001	0.00007	0.000010	0.00001	
1,2,3,4,7,8-HxCDD	mg/kg	9	44.44	0.0000003	0.000002	0.000001	0.00002	0.00003	0.000008	0.000002
1,2,3,4,7,8-HxCDF	mg/kg	9	100.00			0.0000010	0.0001	0.00002	0.00003	
1,2,3,6,7,8-HxCDD	mg/kg	9	55.56	0.0000002	0.000001	0.0000004	0.00003	0.000005	0.000007	
1,2,3,6,7,8-HxCDF	mg/kg	9	100.00			0.0000005	0.00006	0.000009	0.00002	
1,2,3,7,8,9-HxCDD	mg/kg	9	66.67	0.0000002	0.000001	0.0000003	0.00005	0.00008	0.000007	
1,2,3,7,8,9-HxCDF	mg/kg	9	44.44	0.0000003	0.000001	0.0000005	0.00007	0.00001	0.000005	0.000002
1,2,3,7,8-PeCDD	mg/kg	9	44.44	0.0000002	0.000001	0.000002	0.00001	0.00002	0.000006	
1,2,3,7,8-PeCDF	mg/kg	9	55.56	0.0000003	0.0000010	0.0000008	0.00003	0.00006	0.000008	0.000002
2,3,4,6,7,8-HxCDF	mg/kg	9	100.00			0.0000010	0.0002	0.00002	0.00003	
2,3,4,7,8-PeCDF	mg/kg	9	100.00			0.0000004	0.00005	0.000009	0.00001	
2,3,7,8-TCDD	mg/kg	9	33.33	0.0000003	0.0000008	0.0000003	0.00002	0.000004	0.000003	0.000002
2,3,7,8-TCDF	mg/kg	9	88.89	0.0000008	0.0000008	0.0000002	0.00002	0.000005	0.000005	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	9	100.00			0.0000008	0.00009	0.00002	0.00003	
Total HpCDD	mg/kg	9	100.00			0.000004	0.0007	0.0001	0.00009	
Total HpCDF	mg/kg	9	100.00			0.000004	0.0007	0.0001	0.00010	
Total HxCDD	mg/kg	9	100.00			0.000002	0.0005	0.00007	0.00005	
Total HxCDF	mg/kg	9	100.00			0.000003	0.0008	0.0001	0.00001	
Total PeCDD	mg/kg	9	100.00			0.0000006	0.0002	0.00002	0.00003	

Table A-2 - Elementary School Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Dioxins/Furans										
Total PeCDF	mg/kg	9	100.00			0.000003	0.0006	0.0001	0.000010	
Total TCDD	mg/kg	9	100.00			0.0000005	0.0002	0.00002	0.000005	
Total TCDF	mg/kg	9	100.00			0.000001	0.0005	0.00008	0.00001	

Table A-2 - Elementary School Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Anions								
Chloride	mg/kg	5.31	4.42	8.17	2.33	28.11	.13131494930	Unknown
Fluoride	mg/kg	1.06	0.88	1.63	0.47	5.60	.76918335162	Unknown
Sulfate	mg/kg	9.29	6.83	13.40	1.88	48.30	.19603881299	Unknown
Nitrate								
Nitrate	mg/kg	11.02	8.51	16.30	3.41	57.72	.92654081815	Unknown
pH								
pH	pH units	0.89	8.00	8.55	7.95	8.55	8.62	Normal/Lognormal
Particle Size Distribution								
%Clay	%	2.33	2.45	4.10	1.81	12.87	441837427294	Unknown
%Gravel	%	9.48	9.00	15.70	6.01	51.30	.29190321012	Unknown
%Sand	%	0.78	81.25	81.80	81.25	84.72	83.89	Unknown
%Silt	%	7.92	7.30	12.90	4.68	42.66	.86326223114	Unknown
Mean Particle Size(mm)	%	0.20	0.47	0.61	0.45	1.36	75.73	Unknown
Percent Moisture/Percent Solids								
Percent moisture	percent	15.77	19.16	28.93	13.90	28.93	51.22	Normal/Lognormal
Inorganics								
Aluminum	mg/kg	22029.43	28632.22	42290.47	22375.68	42290.47	59316.18	Normal/Lognormal
Antimony	mg/kg	0.78	0.77	2.37	0.51	1.26	2.37	Lognormal
Arsenic	mg/kg	1.34	3.96	4.79	3.75	4.79	5.21	Normal/Lognormal
Barium	mg/kg	44.20	44.42	115.87	30.42	71.82	115.87	Lognormal
Beryllium	mg/kg	0.10	0.15	0.24	0.13	0.21	0.24	Lognormal
Cadmium	mg/kg	0.40	0.46	1.00	0.35	0.71	1.00	Lognormal
Calcium	mg/kg	2924.87	12395.56	14208.97	12122.49	14208.97	14406.23	Normal/Lognormal
Chromium	mg/kg	14.99	15.96	34.16	11.83	25.25	34.16	Lognormal
Cobalt	mg/kg	8.85	10.89	16.38	8.21	16.38	24.87	Normal/Lognormal

Table A-2 - Elementary School Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Inorganics								
Copper	mg/kg	52.23	49.30	152.00	29.48	81.68	204.99	Lognormal
Cyanide	mg/kg	0.04	0.15	0.16	0.14	0.17	0.17	Unknown
Iron	mg/kg	18456.94	26088.89	46598.57	21500.38	37532.19	46598.57	Lognormal
Lead	mg/kg	18.97	12.81	44.14	6.84	24.57	44.14	Lognormal
Magnesium	mg/kg	2828.79	5822.22	7576.07	5126.66	7576.07	9703.28	Normal/Lognormal
Manganese	mg/kg	350.77	446.67	664.14	346.35	664.14	935.58	Normal/Lognormal
Mercury	mg/kg	0.04	0.03	0.06	0.02	0.06	0.11	Unknown
Nickel	mg/kg	11.33	15.21	22.24	11.93	22.24	32.30	Normal/Lognormal
Potassium	mg/kg	212.40	723.22	854.91	697.52	854.91	884.39	Normal/Lognormal
Selenium	mg/kg	0.29	0.23	0.91	0.09	0.41	19.41	Lognormal
Silver	mg/kg	0.15	0.15	0.25	0.10	0.25	0.71	Normal/Lognormal
Sodium	mg/kg	260.46	795.44	956.93	760.13	956.93	1002.65	Normal/Lognormal
Thallium	mg/kg	0.57	0.52	1.60	0.31	0.87	2.29	Lognormal
Vanadium	mg/kg	82.98	92.56	218.71	67.33	144.01	218.71	Lognormal
Zinc	mg/kg	79.58	66.71	137.02	46.67	116.05	137.02	Lognormal
Total Organic Carbon								
Total Organic Carbon	mg/kg	6604.38	7030.00	11700.00	5254.71	36516.38	.27731160789	Unknown
Organics								
4,4'-DDD	mg/kg	0.04	0.01	0.12	0.0002	0.04	0.94	Unknown
4,4'-DDE	mg/kg	0.01	0.008	0.02	0.0008	0.02	34.91	Unknown
4,4'-DDT	mg/kg	0.02	0.009	0.02	0.0008	0.02	39.02	Unknown
Aroclor-1254	mg/kg	0.01	0.005	0.04	0.0002	0.01	0.09	Unknown
Butylbenzylphthalate	mg/kg	0.03	0.03	0.10	0.02	0.04	0.04	Unknown
Chrysene	mg/kg	0.02	0.03	0.07	0.02	0.04	0.04	Unknown
Diethylphthalate	mg/kg	0.010	0.02	0.05	0.02	0.03	0.03	Lognormal
Heptachlor	mg/kg	0.004	0.001	0.01	0.0002	0.004	0.008	Unknown
Total Carcinogenic PAHS (BaP TEQs)	mg/kg	0.01	0.05	0.08	0.05	0.06	0.06	Unknown

Table A-2 - Elementary School Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Organics								
alpha-Chlordane	mg/kg	0.07	0.02	0.07	0.0003	0.07	14.93	Unknown
bis(2-Ethylhexyl)phthalate	mg/kg	0.27	0.36	0.61	0.30	0.53	0.61	Lognormal
di-n-Butylphthalate	mg/kg	0.14	0.10	0.18	0.04	0.18	0.57	Unknown
gamma-Chlordane	mg/kg	0.07	0.02	0.22	0.0002	0.07	4.30	Unknown
Dioxins/Furans								
1,2,3,4,6,7,8,9-OCDD	mg/kg	0.0010	0.0006	0.002	0.0001	0.001	0.11	Lognormal
1,2,3,4,6,7,8,9-OCDF	mg/kg	0.0001	0.00006	0.0003	0.00001	0.0001	0.003	Lognormal
1,2,3,4,6,7,8-HpCDD	mg/kg	0.0001	0.00007	0.0004	0.00002	0.0001	0.003	Lognormal
1,2,3,4,6,7,8-HpCDF	mg/kg	0.0001	0.00005	0.0003	0.00001	0.0001	0.0008	Lognormal
1,2,3,4,7,8,9-HpCDF	mg/kg	0.00002	0.000010	0.00007	0.000002	0.00002	0.0004	Lognormal
1,2,3,4,7,8-HxCDD	mg/kg	0.000006	0.000003	0.00002	0.0000008	0.000007	0.00004	Lognormal
1,2,3,4,7,8-HxCDF	mg/kg	0.00004	0.00002	0.0001	0.000006	0.00005	0.0002	Lognormal
1,2,3,6,7,8-HxCDD	mg/kg	0.00001	0.000005	0.00003	0.000001	0.00001	0.0003	Lognormal
1,2,3,6,7,8-HxCDF	mg/kg	0.00002	0.000009	0.00006	0.000003	0.00002	0.00009	Lognormal
1,2,3,7,8,9-HxCDD	mg/kg	0.00002	0.000008	0.00005	0.000002	0.00002	0.0006	Lognormal
1,2,3,7,8,9-HxCDF	mg/kg	0.000002	0.000001	0.000007	0.0000006	0.000003	0.000010	Lognormal
1,2,3,7,8-PeCDD	mg/kg	0.000004	0.000002	0.00001	0.0000008	0.000005	0.00003	Lognormal
1,2,3,7,8-PeCDF	mg/kg	0.00001	0.000006	0.00003	0.000001	0.00001	0.0003	Lognormal
2,3,4,6,7,8-HxCDF	mg/kg	0.00005	0.00002	0.0002	0.000006	0.00005	0.0003	Lognormal
2,3,4,7,8-PeCDF	mg/kg	0.00002	0.000009	0.00005	0.000003	0.00002	0.0001	Lognormal
2,3,7,8-TCDD	mg/kg	0.0000005	0.0000004	0.0000007	0.0000003	0.0000007	0.0000008	Unknown
2,3,7,8-TCDF	mg/kg	0.000008	0.000005	0.00002	0.000001	0.000010	0.0001	Lognormal
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	0.00003	0.00002	0.00009	0.000005	0.00003	0.0002	Lognormal
Total HpCDD	mg/kg	0.0002	0.0001	0.0007	0.00003	0.0003	0.006	Lognormal
Total HpCDF	mg/kg	0.0002	0.0001	0.0007	0.00003	0.0003	0.003	Lognormal
Total HxCDD	mg/kg	0.0002	0.00007	0.0005	0.00001	0.0002	0.004	Lognormal
Total HxCDF	mg/kg	0.0002	0.0001	0.0008	0.00003	0.0003	0.004	Lognormal
Total PeCDD	mg/kg	0.00005	0.00002	0.0002	0.000005	0.00006	0.0010	Lognormal

Table A-2 - Elementary School Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Dioxins/Furans								
Total PeCDF	mg/kg	0.0002	0.0001	0.0006	0.00002	0.0002	0.005	Lognormal
Total TCDD	mg/kg	0.00005	0.00002	0.0002	0.000005	0.00006	0.0008	Lognormal
Total TCDF	mg/kg	0.0002	0.00008	0.0005	0.00001	0.0002	0.01	Lognormal

Table A-3 - Residential Towers (3101/3102) Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Anions										
Chloride	mg/kg	3	100.00			2.29	11.40	7.54	8.93	
Fluoride	mg/kg	3	66.67	0.27	0.27	0.14	1.65	0.64	0.14	
Sulfate	mg/kg	3	100.00			33.30	53.10	43.77	44.90	
Nitrate										
Nitrate	mg/kg	3	100.00			4.24	25.80	17.71	23.10	
pH										
pH	pH units	13	100.00			6.02	8.88	7.26	7.54	
Particle Size Distribution										
%Clay	%	3	100.00			5.20	10.00	7.13	6.20	
%Gravel	%	1	100.00			4.80	4.80	4.80	4.80	
%Sand	%	3	100.00			58.90	85.70	68.57	61.10	
%Silt	%	3	100.00			9.10	34.90	22.70	24.10	
Mean Particle Size(mm)	%	3	100.00			0.14	0.49	0.28	0.22	
Percent Moisture/Percent Solids										
Percent moisture	percent	13	100.00			6.70	51.80	32.37	37.60	
Inorganics										
Aluminum	mg/kg	13	100.00			13500.00	78800.00	49469.23	55100.00	
Antimony	mg/kg	13	84.62	0.29	0.42	0.77	2.70	1.44	1.40	
Arsenic	mg/kg	13	100.00			2.60	8.30	4.27	3.90	
Barium	mg/kg	13	100.00			13.80	609.00	108.72	86.20	
Beryllium	mg/kg	13	53.85	0.15	0.25	0.09	0.36	0.17	0.12	
Cadmium	mg/kg	13	100.00			0.14	2.30	1.00	0.96	
Calcium	mg/kg	13	100.00			3520.00	27700.00	14239.23	11600.00	
Chromium	mg/kg	13	100.00			6.30	47.90	30.14	36.50	
Cobalt	mg/kg	13	100.00			3.50	29.00	19.55	21.90	

Table A-3 - Residential Towers (3101/3102) Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Inorganics										
Copper	mg/kg	13	100.00			7.50	150.00	97.61	107.00	
Cyanide	mg/kg	13	84.62	0.17	0.23	0.09	1.90	0.61	0.37	
Iron	mg/kg	13	100.00			11100.00	64400.00	43430.77	52700.00	
Lead	mg/kg	13	100.00			3.00	97.50	28.39	23.40	
Magnesium	mg/kg	13	100.00			2450.00	11700.00	8179.23	8990.00	
Manganese	mg/kg	13	100.00			173.00	1200.00	775.62	891.00	
Mercury	mg/kg	13	100.00			0.01	0.14	0.06	0.05	0.01
Nickel	mg/kg	13	100.00			5.70	38.80	26.19	31.40	
Potassium	mg/kg	13	100.00			198.00	1110.00	696.08	676.00	
Selenium	mg/kg	13	15.38	0.02	0.45	0.40	0.74	0.20	0.15	
Silver	mg/kg	13	100.00			0.05	0.43	0.27	0.30	
Sodium	mg/kg	13	100.00			533.00	1970.00	1158.54	1240.00	
Thallium	mg/kg	13	76.92	0.16	0.99	0.14	2.50	1.23	1.20	
Vanadium	mg/kg	13	100.00			34.80	287.00	173.87	190.00	
Zinc	mg/kg	13	100.00			25.50	246.00	107.35	94.30	
Total Organic Carbon										
Total Organic Carbon	mg/kg	3	100.00			9170.00	124000.00	82390.00	114000.00	
Organics										
4,4'-DDD	mg/kg	13	38.46	0.0002	0.0003	0.004	0.02	0.003	0.0001	0.00009
4,4'-DDE	mg/kg	13	84.62	0.0002	0.0002	0.002	0.17	0.04	0.02	
4,4'-DDT	mg/kg	13	84.62	0.0002	0.0002	0.002	0.24	0.05	0.04	
Benzo(a)anthracene	mg/kg	13	7.69	0.04	0.07	0.14	0.14	0.03	0.03	
Benzo(a)pyrene	mg/kg	13	7.69	0.04	0.07	0.23	0.23	0.04	0.03	
Benzo(b)fluoranthene	mg/kg	13	7.69	0.04	0.07	0.18	0.18	0.04	0.03	
Benzo(g,h,i)perylene	mg/kg	13	7.69	0.04	0.07	0.17	0.17	0.04	0.03	
Benzo(k)fluoranthene	mg/kg	13	7.69	0.04	0.07	0.20	0.20	0.04	0.03	
Butylbenzylphthalate	mg/kg	13	15.38	0.04	0.07	0.09	0.10	0.04	0.03	

Table A-3 - Residential Towers (3101/3102) Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Organics										
Chrysene	mg/kg	13	15.38	0.04	0.07	0.05	0.17	0.04	0.03	
Diethylphthalate	mg/kg	13	15.38	0.04	0.06	0.08	0.11	0.04	0.03	
Fluoranthene	mg/kg	13	38.46	0.04	0.07	0.06	0.11	0.04	0.03	
Heptachlor	mg/kg	13	7.69	0.0002	0.0004	0.0009	0.0009	0.0002	0.0001	0.00009
Heptachlor epoxide	mg/kg	13	15.38	0.0002	0.0004	0.001	0.002	0.0003	0.0001	0.00009
Pyrene	mg/kg	13	53.85	0.04	0.06	0.06	0.16	0.05	0.06	
Total Carcinogenic PAHS (BaP TEQs)	mg/kg	13	15.38	0.08	0.16	0.06	0.29	0.08	0.06	
alpha-Chlordane	mg/kg	13	38.46	0.0002	0.0004	0.002	0.008	0.002	0.0001	0.00009
bis(2-Ethylhexyl)phthalate	mg/kg	13	100.00			0.06	0.76	0.29	0.20	
di-n-Butylphthalate	mg/kg	13	53.85	0.04	0.06	0.06	0.20	0.08	0.06	
gamma-Chlordane	mg/kg	13	38.46	0.0002	0.0004	0.002	0.008	0.002	0.0001	0.00009
Dioxins/Furans										
1,2,3,4,6,7,8,9-OCDD	mg/kg	13	100.00			0.00001	0.003	0.0009	0.0006	
1,2,3,4,6,7,8,9-OCDF	mg/kg	13	100.00			0.000002	0.0006	0.0001	0.00005	
1,2,3,4,6,7,8-HpCDD	mg/kg	13	100.00			0.000002	0.0004	0.0001	0.00004	
1,2,3,4,6,7,8-HpCDF	mg/kg	13	100.00			0.000003	0.0003	0.00008	0.00003	
1,2,3,4,7,8,9-HpCDF	mg/kg	13	100.00			0.0000006	0.00007	0.00001	0.000005	
1,2,3,4,7,8-HxCDD	mg/kg	13	92.31	0.0000002	0.0000002	0.0000002	0.00002	0.000004	0.000001	
1,2,3,4,7,8-HxCDF	mg/kg	13	100.00			0.0000010	0.0001	0.00003	0.000010	
1,2,3,6,7,8-HxCDD	mg/kg	13	92.31	0.0000002	0.0000002	0.0000003	0.00004	0.000009	0.000004	
1,2,3,6,7,8-HxCDF	mg/kg	13	100.00			0.0000006	0.00006	0.00001	0.000004	
1,2,3,7,8,9-HxCDD	mg/kg	13	92.31	0.0000002	0.0000002	0.0000004	0.00005	0.00001	0.000007	
1,2,3,7,8,9-HxCDF	mg/kg	13	69.23	0.0000002	0.0000009	0.0000006	0.000006	0.000002	0.0000007	0.0000010
1,2,3,7,8-PeCDD	mg/kg	13	84.62	0.0000002	0.0000002	0.000001	0.00001	0.000003	0.000002	0.0000010
1,2,3,7,8-PeCDF	mg/kg	13	100.00			0.0000003	0.00003	0.000006	0.000002	
2,3,4,6,7,8-HxCDF	mg/kg	13	100.00			0.0000009	0.0001	0.00003	0.000008	
2,3,4,7,8-PeCDF	mg/kg	13	92.31	0.0000002	0.0000002	0.0000007	0.00004	0.000010	0.000004	
2,3,7,8-TCDD	mg/kg	13	53.85	0.0000002	0.0000008	0.0000002	0.000002	0.0000006	0.0000004	0.0000010

Table A-3 - Residential Towers (3101/3102) Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Dioxins/Furans										
2,3,7,8-TCDF	mg/kg	13	84.62	0.0000006	0.0000009	0.0000007	0.00002	0.000004	0.000002	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	13	100.00			0.0000007	0.00009	0.00002	0.000009	
Total HpCDD	mg/kg	13	100.00			0.000002	0.0008	0.0002	0.00008	
Total HpCDF	mg/kg	13	100.00			0.000005	0.0007	0.0002	0.00007	
Total HxCDD	mg/kg	13	100.00			0.000002	0.0004	0.00010	0.00004	
Total HxCDF	mg/kg	13	100.00			0.000004	0.0007	0.0002	0.00006	
Total PeCDD	mg/kg	13	100.00			0.0000004	0.0001	0.00004	0.00002	
Total PeCDF	mg/kg	13	100.00			0.000003	0.0006	0.0001	0.00004	
Total TCDD	mg/kg	13	100.00			0.0000003	0.0003	0.00005	0.00001	
Total TCDF	mg/kg	13	100.00			0.0000010	0.0004	0.00010	0.00004	

Table A-3 - Residential Towers (3101/3102) Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Anions								
Chloride	mg/kg	4.71	7.54	11.40	6.15	15.48	8858.22	Normal/Lognormal
Fluoride	mg/kg	0.87	0.64	1.65	0.31	2.11	169821125.13	Unknown
Sulfate	mg/kg	9.95	43.77	53.10	42.98	60.54	80.11	Normal/Lognormal
Nitrate								
Nitrate	mg/kg	11.75	17.71	25.80	13.62	37.52	290218.63	Normal/Lognormal
pH								
pH	pH units	1.02	7.26	7.76	7.19	7.76	7.81	Normal/Lognormal
Particle Size Distribution								
%Clay	%	2.53	7.13	10.00	6.86	11.40	21.35	Normal/Lognormal
%Gravel	%		4.80	4.80	4.80			Unknown
%Sand	%	14.88	68.57	85.70	67.56	93.65	112.49	Normal/Lognormal
%Silt	%	12.96	22.70	34.90	19.71	44.54	2128.37	Normal/Lognormal
Mean Particle Size(mm)	%	0.18	0.28	0.49	0.24	0.59	13.04	Normal/Lognormal
Percent Moisture/Percent Solids								
Percent moisture	percent	14.44	32.37	39.50	27.63	39.50	54.62	Unknown
Inorganics								
Aluminum	mg/kg	22987.91	49469.23	60830.73	42206.01	60830.73	81664.73	Normal
Antimony	mg/kg	0.81	1.44	1.85	1.11	1.85	3.40	Normal
Arsenic	mg/kg	1.52	4.27	5.09	4.06	5.02	5.09	Lognormal
Barium	mg/kg	154.07	108.72	184.87	64.37	184.87	261.05	Unknown
Beryllium	mg/kg	0.10	0.17	0.22	0.15	0.22	0.25	Unknown
Cadmium	mg/kg	0.63	1.00	1.31	0.77	1.31	2.07	Normal/Lognormal
Calcium	mg/kg	6901.14	14239.23	20066.04	12714.09	17650.03	20066.04	Lognormal
Chromium	mg/kg	14.85	30.14	37.48	24.99	37.48	53.93	Unknown
Cobalt	mg/kg	9.47	19.55	24.23	15.93	24.23	38.05	Unknown

Table A-3 - Residential Towers (3101/3102) Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Inorganics								
Copper	mg/kg	52.51	97.61	123.56	69.76	123.56	325.48	Unknown
Cyanide	mg/kg	0.61	0.61	1.61	0.38	0.92	1.61	Lognormal
Iron	mg/kg	19641.72	43430.77	53138.45	37195.16	53138.45	71451.89	Unknown
Lead	mg/kg	29.78	28.39	83.55	17.20	43.11	83.55	Lognormal
Magnesium	mg/kg	3385.12	8179.23	9852.29	7173.14	9852.29	12727.92	Unknown
Manganese	mg/kg	374.85	775.62	960.88	638.55	960.88	1443.30	Unknown
Mercury	mg/kg	0.04	0.06	0.08	0.04	0.08	0.14	Normal/Lognormal
Nickel	mg/kg	12.04	26.19	32.14	21.92	32.14	46.88	Unknown
Potassium	mg/kg	278.37	696.08	833.66	630.60	833.66	974.19	Normal/Lognormal
Selenium	mg/kg	0.19	0.20	0.52	0.14	0.29	0.52	Lognormal
Silver	mg/kg	0.13	0.27	0.33	0.21	0.33	0.52	Normal
Sodium	mg/kg	439.45	1158.54	1375.73	1078.13	1375.73	1480.49	Normal/Lognormal
Thallium	mg/kg	0.84	1.23	1.65	0.83	1.65	4.06	Normal
Vanadium	mg/kg	88.70	173.87	217.71	141.57	217.71	328.44	Normal
Zinc	mg/kg	69.65	107.35	141.78	86.41	141.78	184.37	Normal/Lognormal
Total Organic Carbon								
Total Organic Carbon	mg/kg	63607.20	82390.00	124000.00	50609.49	189623.02	929968119188	Normal/Lognormal
Organics								
4,4'-DDD	mg/kg	0.005	0.003	0.006	0.0006	0.006	0.15	Unknown
4,4'-DDE	mg/kg	0.05	0.04	0.07	0.01	0.07	16.47	Unknown
4,4'-DDT	mg/kg	0.06	0.05	0.08	0.01	0.08	20.29	Unknown
Benzo(a)anthracene	mg/kg	0.03	0.03	0.14	0.03	0.05	0.05	Unknown
Benzo(a)pyrene	mg/kg	0.06	0.04	0.23	0.03	0.07	0.06	Unknown
Benzo(b)fluoranthene	mg/kg	0.04	0.04	0.18	0.03	0.06	0.05	Unknown
Benzo(g,h,i)perylene	mg/kg	0.04	0.04	0.17	0.03	0.06	0.05	Unknown
Benzo(k)fluoranthene	mg/kg	0.05	0.04	0.20	0.03	0.06	0.05	Unknown
Butylbenzylphthalate	mg/kg	0.03	0.04	0.05	0.03	0.05	0.05	Unknown

Table A-3 - Residential Towers (3101/3102) Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Organics								
Chrysene	mg/kg	0.04	0.04	0.06	0.03	0.06	0.05	Unknown
Diethylphthalate	mg/kg	0.03	0.04	0.05	0.03	0.05	0.05	Unknown
Fluoranthene	mg/kg	0.03	0.04	0.06	0.04	0.06	0.06	Lognormal
Heptachlor	mg/kg	0.0002	0.0002	0.0009	0.0001	0.0003	0.0002	Unknown
Heptachlor epoxide	mg/kg	0.0005	0.0003	0.0006	0.0002	0.0006	0.0006	Unknown
Pyrene	mg/kg	0.04	0.05	0.08	0.04	0.07	0.08	Lognormal
Total Carcinogenic PAHS (BaP TEQs)	mg/kg	0.07	0.08	0.11	0.07	0.11	0.10	Unknown
alpha-Chlordane	mg/kg	0.002	0.002	0.003	0.0004	0.003	0.02	Unknown
bis(2-Ethylhexyl)phthalate	mg/kg	0.22	0.29	0.40	0.21	0.40	0.57	Normal/Lognormal
di-n-Butylphthalate	mg/kg	0.07	0.08	0.16	0.05	0.11	0.16	Lognormal
gamma-Chlordane	mg/kg	0.002	0.002	0.003	0.0004	0.003	0.02	Unknown
Dioxins/Furans								
1,2,3,4,6,7,8,9-OCDD	mg/kg	0.001	0.0009	0.003	0.0003	0.001	0.02	Lognormal
1,2,3,4,6,7,8,9-OCDF	mg/kg	0.0002	0.0001	0.0006	0.00005	0.0002	0.001	Lognormal
1,2,3,4,6,7,8-HpCDD	mg/kg	0.0001	0.0001	0.0004	0.00004	0.0002	0.001	Lognormal
1,2,3,4,6,7,8-HpCDF	mg/kg	0.0001	0.00008	0.0003	0.00003	0.0001	0.0005	Lognormal
1,2,3,4,7,8,9-HpCDF	mg/kg	0.00002	0.00001	0.00006	0.000006	0.00002	0.00006	Lognormal
1,2,3,4,7,8-HxCDD	mg/kg	0.000006	0.000004	0.00002	0.000002	0.000007	0.00002	Lognormal
1,2,3,4,7,8-HxCDF	mg/kg	0.00005	0.00003	0.0001	0.00001	0.00005	0.0002	Lognormal
1,2,3,6,7,8-HxCDD	mg/kg	0.00001	0.000009	0.00004	0.000004	0.00002	0.00009	Lognormal
1,2,3,6,7,8-HxCDF	mg/kg	0.00002	0.00001	0.00006	0.000005	0.00002	0.00006	Lognormal
1,2,3,7,8,9-HxCDD	mg/kg	0.00001	0.00001	0.00005	0.000005	0.00002	0.0002	Lognormal
1,2,3,7,8,9-HxCDF	mg/kg	0.000002	0.000002	0.000006	0.0000007	0.000003	0.000006	Lognormal
1,2,3,7,8-PeCDD	mg/kg	0.000004	0.000003	0.00001	0.000002	0.000006	0.00002	Lognormal
1,2,3,7,8-PeCDF	mg/kg	0.000008	0.000006	0.00002	0.000002	0.000010	0.00002	Lognormal
2,3,4,6,7,8-HxCDF	mg/kg	0.00004	0.00003	0.0001	0.000009	0.00005	0.0002	Lognormal
2,3,4,7,8-PeCDF	mg/kg	0.00001	0.000010	0.00004	0.000004	0.00002	0.00009	Lognormal
2,3,7,8-TCDD	mg/kg	0.0000007	0.0000006	0.000001	0.0000004	0.0000009	0.000001	Lognormal

Table A-3 - Residential Towers (3101/3102) Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Dioxins/Furans								
2,3,7,8-TCDF	mg/kg	0.000006	0.000004	0.00001	0.000002	0.000007	0.00001	Lognormal
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	0.00003	0.00002	0.00009	0.000009	0.00004	0.0001	Lognormal
Total HpCDD	mg/kg	0.0003	0.0002	0.0008	0.00007	0.0003	0.004	Lognormal
Total HpCDF	mg/kg	0.0002	0.0002	0.0007	0.00007	0.0003	0.001	Lognormal
Total HxCDD	mg/kg	0.0001	0.00010	0.0004	0.00004	0.0002	0.0007	Lognormal
Total HxCDF	mg/kg	0.0002	0.0002	0.0007	0.00006	0.0003	0.001	Lognormal
Total PeCDD	mg/kg	0.00005	0.00004	0.0001	0.00001	0.00006	0.0006	Lognormal
Total PeCDF	mg/kg	0.0002	0.0001	0.0006	0.00004	0.0002	0.001	Lognormal
Total TCDD	mg/kg	0.00008	0.00005	0.0003	0.00001	0.00010	0.002	Lognormal
Total TCDF	mg/kg	0.0001	0.00010	0.0004	0.00003	0.0002	0.002	Lognormal

Table A-4 - GEMB Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
pH										
pH	pH units	1	100.00			7.07	7.07	7.07	7.07	
Percent Moisture/Percent Solids										
Percent moisture	percent	1	100.00			30.00	30.00	30.00	30.00	
Inorganics										
Aluminum	mg/kg	1	100.00			49300.00	49300.00	49300.00	49300.00	
Antimony	mg/kg	1	100.00			1.40	1.40	1.40	1.40	
Arsenic	mg/kg	1	100.00			3.30	3.30	3.30	3.30	
Barium	mg/kg	1	100.00			85.10	85.10	85.10	85.10	
Beryllium	mg/kg	1	100.00			0.33	0.33	0.33	0.33	
Cadmium	mg/kg	1	100.00			0.80	0.80	0.80	0.80	
Calcium	mg/kg	1	100.00			9550.00	9550.00	9550.00	9550.00	
Chromium	mg/kg	1	100.00			33.10	33.10	33.10	33.10	
Cobalt	mg/kg	1	100.00			19.30	19.30	19.30	19.30	
Copper	mg/kg	1	100.00			98.10	98.10	98.10	98.10	
Cyanide	mg/kg	1	100.00			0.55	0.55	0.55	0.55	
Iron	mg/kg	1	100.00			44400.00	44400.00	44400.00	44400.00	
Lead	mg/kg	1	100.00			43.60	43.60	43.60	43.60	
Magnesium	mg/kg	1	100.00			7950.00	7950.00	7950.00	7950.00	
Manganese	mg/kg	1	100.00			778.00	778.00	778.00	778.00	
Mercury	mg/kg	1	100.00			0.07	0.07	0.07	0.07	
Nickel	mg/kg	1	100.00			28.90	28.90	28.90	28.90	
Potassium	mg/kg	1	100.00			783.00	783.00	783.00	783.00	
Selenium	mg/kg	1	100.00			0.94	0.94	0.94	0.94	
Silver	mg/kg	1	100.00			0.29	0.29	0.29	0.29	
Sodium	mg/kg	1	100.00			737.00	737.00	737.00	737.00	
Vanadium	mg/kg	1	100.00			165.00	165.00	165.00	165.00	
Zinc	mg/kg	1	100.00			191.00	191.00	191.00	191.00	

Table A-4 - GEMB Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Organics										
4,4'-DDE	mg/kg	1	100.00			0.007	0.007	0.007	0.007	
4,4'-DDT	mg/kg	1	100.00			0.01	0.01	0.01	0.01	
Benzo(a)pyrene	mg/kg	1	100.00			0.03	0.03	0.03	0.03	
Pyrene	mg/kg	1	100.00			0.06	0.06	0.06	0.06	
Total Carcinogenic PAHS (BaP TEQs)	mg/kg	1	100.00			0.06	0.06	0.06	0.06	
bis(2-Ethylhexyl)phthalate	mg/kg	1	100.00			0.23	0.23	0.23	0.23	
di-n-Butylphthalate	mg/kg	1	100.00			0.12	0.12	0.12	0.12	
Dioxins/Furans										
1,2,3,4,6,7,8,9-OCDD	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
1,2,3,4,6,7,8,9-OCDF	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
1,2,3,4,6,7,8-HpCDD	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
1,2,3,4,6,7,8-HpCDF	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
1,2,3,4,7,8,9-HpCDF	mg/kg	1	100.00			0.00004	0.00004	0.00004	0.00004	
1,2,3,4,7,8-HxCDD	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
1,2,3,4,7,8-HxCDF	mg/kg	1	100.00			0.0001	0.0001	0.0001	0.0001	
1,2,3,6,7,8-HxCDD	mg/kg	1	100.00			0.00003	0.00003	0.00003	0.00003	
1,2,3,6,7,8-HxCDF	mg/kg	1	100.00			0.00004	0.00004	0.00004	0.00004	
1,2,3,7,8,9-HxCDD	mg/kg	1	100.00			0.00005	0.00005	0.00005	0.00005	
1,2,3,7,8,9-HxCDF	mg/kg	1	100.00			0.00006	0.00006	0.00006	0.00006	
1,2,3,7,8-PeCDD	mg/kg	1	100.00			0.000010	0.000010	0.000010	0.000010	
1,2,3,7,8-PeCDF	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
2,3,4,6,7,8-HxCDF	mg/kg	1	100.00			0.00008	0.00008	0.00008	0.00008	
2,3,4,7,8-PeCDF	mg/kg	1	100.00			0.00004	0.00004	0.00004	0.00004	
2,3,7,8-TCDD	mg/kg	1	100.00			0.000002	0.000002	0.000002	0.000002	
2,3,7,8-TCDF	mg/kg	1	100.00			0.000009	0.000009	0.000009	0.000009	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	1	100.00			0.00007	0.00007	0.00007	0.00007	
Total HpCDD	mg/kg	1	100.00			0.0006	0.0006	0.0006	0.0006	
Total HpCDF	mg/kg	1	100.00			0.0004	0.0004	0.0004	0.0004	

Table A-4 - GEMB Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Dioxins/Furans										
Total HxCDD	mg/kg	1	100.00			0.0005	0.0005	0.0005	0.0005	
Total HxCDF	mg/kg	1	100.00			0.0005	0.0005	0.0005	0.0005	
Total PeCDD	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
Total PeCDF	mg/kg	1	100.00			0.0004	0.0004	0.0004	0.0004	
Total TCDD	mg/kg	1	100.00			0.0001	0.0001	0.0001	0.0001	
Total TCDF	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	

Table A-4 - GEMB Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
pH								
pH	pH units		7.07	7.07	7.07			Unknown
Percent Moisture/Percent Solids								
Percent moisture	percent		30.00	30.00	30.00			Unknown
Inorganics								
Aluminum	mg/kg		49300.00	49300.00	49300.00			Unknown
Antimony	mg/kg		1.40	1.40	1.40			Unknown
Arsenic	mg/kg		3.30	3.30	3.30			Unknown
Barium	mg/kg		85.10	85.10	85.10			Unknown
Beryllium	mg/kg		0.33	0.33	0.33			Unknown
Cadmium	mg/kg		0.80	0.80	0.80			Unknown
Calcium	mg/kg		9550.00	9550.00	9550.00			Unknown
Chromium	mg/kg		33.10	33.10	33.10			Unknown
Cobalt	mg/kg		19.30	19.30	19.30			Unknown
Copper	mg/kg		98.10	98.10	98.10			Unknown
Cyanide	mg/kg		0.55	0.55	0.55			Unknown
Iron	mg/kg		44400.00	44400.00	44400.00			Unknown
Lead	mg/kg		43.60	43.60	43.60			Unknown
Magnesium	mg/kg		7950.00	7950.00	7950.00			Unknown
Manganese	mg/kg		778.00	778.00	778.00			Unknown
Mercury	mg/kg		0.07	0.07	0.07			Unknown
Nickel	mg/kg		28.90	28.90	28.90			Unknown
Potassium	mg/kg		783.00	783.00	783.00			Unknown
Selenium	mg/kg		0.94	0.94	0.94			Unknown
Silver	mg/kg		0.29	0.29	0.29			Unknown
Sodium	mg/kg		737.00	737.00	737.00			Unknown
Vanadium	mg/kg		165.00	165.00	165.00			Unknown
Zinc	mg/kg		191.00	191.00	191.00			Unknown

Table A-4 - GEMB Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Organics								
4,4'-DDE	mg/kg		0.007	0.007	0.007			Unknown
4,4'-DDT	mg/kg		0.01	0.01	0.01			Unknown
Benzo(a)pyrene	mg/kg		0.03	0.03	0.03			Unknown
Pyrene	mg/kg		0.06	0.06	0.06			Unknown
Total Carcinogenic PAHS (BaP TEQs)	mg/kg		0.06	0.06	0.06			Unknown
bis(2-Ethylhexyl)phthalate	mg/kg		0.23	0.23	0.23			Unknown
di-n-Butylphthalate	mg/kg		0.12	0.12	0.12			Unknown
Dioxins/Furans								
1,2,3,4,6,7,8,9-OCDD	mg/kg		0.001	0.001	0.001			Unknown
1,2,3,4,6,7,8,9-OCDF	mg/kg		0.0002	0.0002	0.0002			Unknown
1,2,3,4,6,7,8-HpCDD	mg/kg		0.0003	0.0003	0.0003			Unknown
1,2,3,4,6,7,8-HpCDF	mg/kg		0.0003	0.0003	0.0003			Unknown
1,2,3,4,7,8,9-HpCDF	mg/kg		0.00004	0.00004	0.00004			Unknown
1,2,3,4,7,8-HxCDD	mg/kg		0.00002	0.00002	0.00002			Unknown
1,2,3,4,7,8-HxCDF	mg/kg		0.0001	0.0001	0.0001			Unknown
1,2,3,6,7,8-HxCDD	mg/kg		0.00003	0.00003	0.00003			Unknown
1,2,3,6,7,8-HxCDF	mg/kg		0.00004	0.00004	0.00004			Unknown
1,2,3,7,8,9-HxCDD	mg/kg		0.00005	0.00005	0.00005			Unknown
1,2,3,7,8,9-HxCDF	mg/kg		0.00006	0.00006	0.00006			Unknown
1,2,3,7,8-PeCDD	mg/kg		0.00010	0.00010	0.00010			Unknown
1,2,3,7,8-PeCDF	mg/kg		0.00002	0.00002	0.00002			Unknown
2,3,4,6,7,8-HxCDF	mg/kg		0.00008	0.00008	0.00008			Unknown
2,3,4,7,8-PeCDF	mg/kg		0.00004	0.00004	0.00004			Unknown
2,3,7,8-TCDD	mg/kg		0.00002	0.00002	0.00002			Unknown
2,3,7,8-TCDF	mg/kg		0.00009	0.00009	0.00009			Unknown
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg		0.00007	0.00007	0.00007			Unknown
Total HpCDD	mg/kg		0.0006	0.0006	0.0006			Unknown
Total HpCDF	mg/kg		0.0004	0.0004	0.0004			Unknown

Table A-4 - GEMB Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Dioxins/Furans								
Total HxCDD	mg/kg		0.0005	0.0005	0.0005			Unknown
Total HxCDF	mg/kg		0.0005	0.0005	0.0005			Unknown
Total PeCDD	mg/kg		0.0002	0.0002	0.0002			Unknown
Total PeCDF	mg/kg		0.0004	0.0004	0.0004			Unknown
Total TCDD	mg/kg		0.0001	0.0001	0.0001			Unknown
Total TCDF	mg/kg		0.0003	0.0003	0.0003			Unknown

Table A-5 - Golf Course Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Anions										
Chloride	mg/kg	3	100.00			3.96	5.18	4.61	4.70	
Fluoride	mg/kg	3	100.00			1.68	2.71	2.21	2.24	
Sulfate	mg/kg	3	100.00			37.50	108.00	81.63	99.40	
Nitrate										
Nitrate	mg/kg	3	33.33	0.99	1.01	10.90	10.90	3.97	0.51	
pH										
pH	pH units	7	100.00			4.89	6.12	5.72	5.77	
Particle Size Distribution										
%Clay	%	3	100.00			6.20	9.80	7.77	7.30	
%Sand	%	3	100.00			52.30	63.20	56.63	54.40	
%Silt	%	3	100.00			27.00	41.50	35.60	38.30	
Mean Particle Size(mm)	%	3	100.00			0.09	0.21	0.14	0.11	
Percent Moisture/Percent Solids										
Percent moisture	percent	7	100.00			33.90	52.30	46.46	48.20	
Inorganics										
Aluminum	mg/kg	7	100.00			40800.00	88100.00	63457.14	62000.00	
Antimony	mg/kg	7	100.00			1.50	7.50	4.06	3.20	
Arsenic	mg/kg	7	100.00			3.70	6.70	4.97	4.90	
Barium	mg/kg	7	100.00			62.00	129.00	86.97	76.00	
Beryllium	mg/kg	7	57.14	0.24	0.28	0.25	0.49	0.27	0.25	
Cadmium	mg/kg	7	100.00			1.60	2.90	1.94	1.80	1.60
Calcium	mg/kg	7	100.00			2460.00	9340.00	5955.71	6040.00	
Chromium	mg/kg	7	100.00			20.60	72.10	43.81	42.80	
Cobalt	mg/kg	7	100.00			18.30	34.60	25.50	26.70	
Copper	mg/kg	7	100.00			97.80	181.00	152.11	163.00	

Table A-5 - Golf Course Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Inorganics										
Cyanide	mg/kg	7	100.00			0.39	1.50	0.84	0.92	
Iron	mg/kg	7	100.00			36800.00	75400.00	53957.14	54100.00	
Lead	mg/kg	7	100.00			42.40	100.00	72.26	65.40	
Magnesium	mg/kg	7	100.00			7650.00	10600.00	8580.00	8430.00	
Manganese	mg/kg	7	100.00			733.00	1250.00	985.57	1060.00	
Mercury	mg/kg	7	100.00			0.12	0.33	0.18	0.16	
Nickel	mg/kg	7	100.00			25.40	110.00	48.10	42.30	
Potassium	mg/kg	7	100.00			324.00	848.00	519.00	431.00	
Selenium	mg/kg	7	100.00			0.52	2.40	1.37	1.30	
Silver	mg/kg	7	100.00			0.28	2.10	0.78	0.50	
Sodium	mg/kg	7	100.00			381.00	1630.00	755.29	513.00	
Thallium	mg/kg	7	42.86	0.81	1.10	2.40	4.30	1.61	0.55	
Vanadium	mg/kg	7	100.00			141.00	351.00	234.71	235.00	
Zinc	mg/kg	7	100.00			116.00	264.00	192.14	186.00	
Total Organic Carbon										
Total Organic Carbon	mg/kg	3	100.00			126000.00	178000.00	153666.67	157000.00	
Organics										
4,4'-DDE	mg/kg	7	14.29	0.0003	0.0004	0.003	0.003	0.0006	0.0002	
4,4'-DDT	mg/kg	7	14.29	0.0003	0.0004	0.003	0.003	0.0005	0.0002	
Benzo(a)pyrene	mg/kg	7	14.29	0.02	0.07	0.04	0.04	0.03	0.03	0.009
Benzo(b)fluoranthene	mg/kg	7	14.29	0.05	0.07	0.13	0.13	0.05	0.03	
Benzo(g,h,i)perylene	mg/kg	7	14.29	0.06	0.07	0.05	0.05	0.04	0.03	
Butylbenzylphthalate	mg/kg	7	28.57	0.05	0.07	0.11	0.11	0.05	0.03	
Chrysene	mg/kg	7	28.57	0.06	0.07	0.05	0.15	0.05	0.03	
Fluoranthene	mg/kg	7	42.86	0.06	0.07	0.06	0.21	0.07	0.03	
Phenanthrene	mg/kg	7	14.29	0.05	0.07	0.08	0.08	0.04	0.03	
Pyrene	mg/kg	7	57.14	0.06	0.07	0.07	0.21	0.08	0.07	

Table A-5 - Golf Course Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Organics										
Total Carcinogenic PAHS (BaP TEQs)	mg/kg	7	28.57	0.11	0.16	0.07	0.08	0.07	0.07	0.05
bis(2-Ethylhexyl)phthalate	mg/kg	7	100.00			0.18	0.39	0.29	0.32	
di-n-Butylphthalate	mg/kg	7	100.00			0.10	0.49	0.20	0.18	
Dioxins/Furans										
1,2,3,4,6,7,8,9-OCDD	mg/kg	7	100.00			0.001	0.004	0.002	0.002	
1,2,3,4,6,7,8,9-OCDF	mg/kg	7	100.00			0.0002	0.004	0.001	0.0005	
1,2,3,4,6,7,8-HpCDD	mg/kg	7	100.00			0.0003	0.001	0.0007	0.0003	
1,2,3,4,6,7,8-HpCDF	mg/kg	7	100.00			0.0003	0.003	0.0009	0.0004	
1,2,3,4,7,8,9-HpCDF	mg/kg	7	100.00			0.00003	0.0009	0.0002	0.00008	
1,2,3,4,7,8-HxCDD	mg/kg	7	100.00			0.00002	0.00009	0.00005	0.00002	
1,2,3,4,7,8-HxCDF	mg/kg	7	100.00			0.0001	0.002	0.0005	0.0002	
1,2,3,6,7,8-HxCDD	mg/kg	7	100.00			0.00003	0.0001	0.00008	0.00004	
1,2,3,6,7,8-HxCDF	mg/kg	7	100.00			0.00004	0.0004	0.0002	0.00007	
1,2,3,7,8,9-HxCDD	mg/kg	7	100.00			0.00004	0.0002	0.0001	0.00006	
1,2,3,7,8,9-HxCDF	mg/kg	7	100.00			0.000006	0.0002	0.00004	0.00002	
1,2,3,7,8-PeCDD	mg/kg	7	100.00			0.00001	0.00007	0.00003	0.00001	
1,2,3,7,8-PeCDF	mg/kg	7	100.00			0.00002	0.0006	0.0001	0.00006	
2,3,4,6,7,8-HxCDF	mg/kg	7	100.00			0.00008	0.0005	0.0002	0.0001	
2,3,4,7,8-PeCDF	mg/kg	7	100.00			0.00003	0.0003	0.0001	0.00005	
2,3,7,8-TCDD	mg/kg	7	100.00			0.000002	0.00002	0.000005	0.000002	
2,3,7,8-TCDF	mg/kg	7	100.00			0.00002	0.0005	0.0001	0.00005	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	7	100.00			0.00007	0.0007	0.0002	0.0001	
Total HpCDD	mg/kg	7	100.00			0.0006	0.003	0.001	0.0007	
Total HpCDF	mg/kg	7	100.00			0.0005	0.005	0.002	0.0006	
Total HxCDD	mg/kg	7	100.00			0.0004	0.002	0.001	0.0005	
Total HxCDF	mg/kg	7	100.00			0.0006	0.004	0.002	0.0007	
Total PeCDD	mg/kg	7	100.00			0.0001	0.001	0.0007	0.0003	
Total PeCDF	mg/kg	7	100.00			0.0004	0.003	0.001	0.0006	

Table A-5 - Golf Course Surface Soil (0-3") Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Dioxins/Furans										
Total TCDD	mg/kg	7	100.00			0.0001	0.001	0.0004	0.0002	
Total TCDF	mg/kg	7	100.00			0.0003	0.002	0.0008	0.0005	

Table A-5 - Golf Course Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Anions								
Chloride	mg/kg	0.61	4.61	5.18	4.59	5.65	6.13	Normal/Lognormal
Fluoride	mg/kg	0.52	2.21	2.71	2.17	3.08	4.11	Normal/Lognormal
Sulfate	mg/kg	38.46	81.63	108.00	73.84	146.47	2116.58	Normal/Lognormal
Nitrate								
Nitrate	mg/kg	6.00	3.97	10.90	1.40	14.09	346604486898	Unknown
pH								
pH	pH units	0.42	5.72	6.03	5.70	6.03	6.06	Normal/Lognormal
Particle Size Distribution								
%Clay	%	1.84	7.77	9.80	7.63	10.88	13.97	Normal/Lognormal
%Sand	%	5.78	56.63	63.20	56.44	66.38	68.88	Normal/Lognormal
%Silt	%	7.62	35.60	41.50	35.01	48.44	63.26	Normal/Lognormal
Mean Particle Size(mm)	%	0.06	0.14	0.21	0.13	0.24	0.73	Normal/Lognormal
Percent Moisture/Percent Solids								
Percent moisture	percent	6.14	46.46	50.96	46.06	50.96	52.23	Normal
Inorganics								
Aluminum	mg/kg	18616.20	63457.14	77128.60	61158.35	77128.60	82300.92	Normal/Lognormal
Antimony	mg/kg	2.39	4.06	5.81	3.49	5.81	8.05	Normal/Lognormal
Arsenic	mg/kg	1.19	4.97	5.85	4.85	5.85	6.10	Normal/Lognormal
Barium	mg/kg	25.26	86.97	105.52	84.13	105.52	110.12	Normal/Lognormal
Beryllium	mg/kg	0.15	0.27	0.38	0.23	0.38	0.53	Normal/Lognormal
Cadmium	mg/kg	0.48	1.94	2.33	1.90	2.29	2.33	Lognormal
Calcium	mg/kg	2701.57	5955.71	7939.70	5343.36	7939.70	10660.49	Normal/Lognormal
Chromium	mg/kg	18.15	43.81	57.14	40.54	57.14	67.42	Normal/Lognormal
Cobalt	mg/kg	6.65	25.50	30.38	24.76	30.38	32.02	Normal/Lognormal
Copper	mg/kg	36.82	152.11	179.15	147.66	179.15	193.70	Unknown

Table A-5 - Golf Course Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Inorganics								
Cyanide	mg/kg	0.41	0.84	1.14	0.75	1.14	1.46	Normal/Lognormal
Iron	mg/kg	15264.76	53957.14	65167.35	52163.84	65167.35	68928.89	Normal/Lognormal
Lead	mg/kg	21.01	72.26	87.69	69.53	87.69	94.98	Normal/Lognormal
Magnesium	mg/kg	954.45	8580.00	9304.08	8538.38	9280.93	9304.08	Lognormal
Manganese	mg/kg	217.85	985.57	1145.56	964.50	1145.56	1192.92	Normal/Lognormal
Mercury	mg/kg	0.07	0.18	0.24	0.18	0.24	0.25	Normal/Lognormal
Nickel	mg/kg	29.51	48.10	81.64	42.39	69.77	81.64	Lognormal
Potassium	mg/kg	198.10	519.00	664.48	488.61	664.48	735.28	Normal/Lognormal
Selenium	mg/kg	0.64	1.37	1.84	1.24	1.84	2.35	Normal/Lognormal
Silver	mg/kg	0.61	0.78	1.62	0.64	1.23	1.62	Lognormal
Sodium	mg/kg	473.70	755.29	1103.17	653.63	1103.17	1374.12	Normal/Lognormal
Thallium	mg/kg	1.52	1.61	4.30	1.05	2.72	7.81	Lognormal
Vanadium	mg/kg	85.17	234.71	297.26	221.92	297.26	328.49	Normal/Lognormal
Zinc	mg/kg	58.66	192.14	235.22	184.26	235.22	255.78	Normal/Lognormal
Total Organic Carbon								
Total Organic Carbon	mg/kg	26159.77	153666.67	178000.00	152135.33	197768.44	227607.22	Normal/Lognormal
Organics								
4,4'-DDE	mg/kg	0.001	0.0006	0.003	0.0002	0.001	0.003	Unknown
4,4'-DDT	mg/kg	0.0010	0.0005	0.003	0.0002	0.001	0.003	Unknown
Benzo(a)pyrene	mg/kg	0.01	0.03	0.04	0.02	0.03	0.06	Unknown
Benzo(b)fluoranthene	mg/kg	0.04	0.05	0.13	0.04	0.07	0.08	Unknown
Benzo(g,h,i)perylene	mg/kg	0.008	0.04	0.05	0.03	0.04	0.04	Unknown
Butylbenzylphthalate	mg/kg	0.04	0.05	0.08	0.04	0.08	0.11	Unknown
Chrysene	mg/kg	0.04	0.05	0.08	0.04	0.08	0.09	Unknown
Fluoranthene	mg/kg	0.07	0.07	0.11	0.05	0.11	0.15	Unknown
Phenanthrene	mg/kg	0.02	0.04	0.08	0.04	0.05	0.05	Unknown
Pyrene	mg/kg	0.06	0.08	0.17	0.06	0.12	0.17	Lognormal

Table A-5 - Golf Course Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Organics								
Total Carcinogenic PAHS (BaP TEQs)	mg/kg	0.01	0.07	0.08	0.07	0.08	0.08	Normal/Lognormal
bis(2-Ethylhexyl)phthalate	mg/kg	0.08	0.29	0.35	0.28	0.35	0.38	Normal/Lognormal
di-n-Butylphthalate	mg/kg	0.13	0.20	0.35	0.18	0.30	0.35	Lognormal
Dioxins/Furans								
1,2,3,4,6,7,8,9-OCDD	mg/kg	0.001	0.002	0.004	0.002	0.003	0.005	Lognormal
1,2,3,4,6,7,8,9-OCDF	mg/kg	0.001	0.001	0.004	0.0006	0.002	0.005	Lognormal
1,2,3,4,6,7,8-HpCDD	mg/kg	0.0005	0.0007	0.001	0.0006	0.001	0.002	Unknown
1,2,3,4,6,7,8-HpCDF	mg/kg	0.0009	0.0009	0.003	0.0006	0.002	0.003	Lognormal
1,2,3,4,7,8,9-HpCDF	mg/kg	0.0003	0.0002	0.0009	0.0001	0.0004	0.001	Lognormal
1,2,3,4,7,8-HxCDD	mg/kg	0.00003	0.00005	0.00009	0.00004	0.00007	0.0001	Lognormal
1,2,3,4,7,8-HxCDF	mg/kg	0.0005	0.0005	0.002	0.0003	0.0008	0.002	Lognormal
1,2,3,6,7,8-HxCDD	mg/kg	0.00005	0.00008	0.0001	0.00006	0.0001	0.0002	Unknown
1,2,3,6,7,8-HxCDF	mg/kg	0.0001	0.0002	0.0004	0.0001	0.0003	0.0005	Lognormal
1,2,3,7,8,9-HxCDD	mg/kg	0.00008	0.0001	0.0002	0.00009	0.0002	0.0003	Unknown
1,2,3,7,8,9-HxCDF	mg/kg	0.00006	0.00004	0.0002	0.00002	0.00008	0.0002	Lognormal
1,2,3,7,8-PeCDD	mg/kg	0.00002	0.00003	0.00005	0.00002	0.00005	0.00009	Unknown
1,2,3,7,8-PeCDF	mg/kg	0.0002	0.0001	0.0006	0.00007	0.0003	0.0009	Lognormal
2,3,4,6,7,8-HxCDF	mg/kg	0.0002	0.0002	0.0005	0.0002	0.0004	0.0007	Lognormal
2,3,4,7,8-PeCDF	mg/kg	0.0001	0.0001	0.0002	0.00009	0.0002	0.0004	Normal/Lognormal
2,3,7,8-TCDD	mg/kg	0.000005	0.000005	0.00002	0.000004	0.000009	0.00002	Lognormal
2,3,7,8-TCDF	mg/kg	0.0002	0.0001	0.0005	0.00005	0.0003	0.0009	Lognormal
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	0.0002	0.0002	0.0007	0.0002	0.0004	0.0008	Lognormal
Total HpCDD	mg/kg	0.001	0.001	0.002	0.001	0.002	0.004	Unknown
Total HpCDF	mg/kg	0.002	0.002	0.005	0.001	0.003	0.005	Lognormal
Total HxCDD	mg/kg	0.0008	0.001	0.002	0.0009	0.002	0.003	Unknown
Total HxCDF	mg/kg	0.001	0.002	0.004	0.001	0.003	0.005	Lognormal
Total PeCDD	mg/kg	0.0005	0.0007	0.001	0.0004	0.001	0.003	Normal/Lognormal
Total PeCDF	mg/kg	0.001	0.001	0.002	0.0010	0.002	0.004	Normal/Lognormal

Table A-5 - Golf Course Surface Soil (0-3") Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Dioxins/Furans								
Total TCDD	mg/kg	0.0004	0.0004	0.001	0.0003	0.0006	0.001	Lognormal
Total TCDF	mg/kg	0.0007	0.0008	0.002	0.0006	0.001	0.002	Lognormal

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Hydrochloric Acid	mg/m3	72	100.00			0.0008	0.01	0.003	0.002	
Hydrofluoric Acid	mg/m3	72	93.06	0.000005	0.0010	0.00003	0.002	0.0003	0.0002	
Sulfuric Acid	mg/m3	72	97.22	0.008	0.009	0.002	0.02	0.01	0.009	
2-Butanone	mg/m3	71	100.00			0.0002	0.04	0.007	0.004	
Acetaldehyde	mg/m3	71	100.00			0.0008	0.28	0.03	0.005	
Acetone	mg/m3	71	100.00			0.002	0.25	0.03	0.007	
Acrolein	mg/m3	44	79.55	0.00009	0.0003	0.00008	0.004	0.0004	0.0002	0.00005
Benzaldehyde	mg/m3	71	95.77	0.00009	0.0003	0.00008	0.01	0.002	0.0007	
Crotonaldehyde	mg/m3	25	4.00	0.00009	0.0001	0.00009	0.00009	0.00005	0.00005	
Formaldehyde	mg/m3	44	100.00			0.0004	0.02	0.003	0.002	
Hexanal	mg/m3	71	94.37	0.00009	0.003	0.00009	0.04	0.005	0.001	
Isovaleraldehyde	mg/m3	44	18.18	0.00008	0.0003	0.00009	0.0005	0.00008	0.00005	
Propionaldehyde	mg/m3	44	97.73	0.0001	0.0001	0.0002	0.004	0.0007	0.0005	
Tolualdehyde	mg/m3	44	84.09	0.00008	0.0003	0.0001	0.03	0.002	0.0007	
Valeraldehyde	mg/m3	44	77.27	0.00009	0.0003	0.00008	0.0009	0.0002	0.0002	0.00005
n-Butyraldehyde	mg/m3	71	100.00			0.00009	0.09	0.009	0.001	
1,2,3,4,6,7,8,9-OCDD	mg/m3	63	100.00			0.000000001	0.000002	0.00000003	0.00000003	
1,2,3,4,6,7,8,9-OCDF	mg/m3	63	100.00			0.000000000	0.00000006	0.00000005	0.00000003	
1,2,3,4,6,7,8-HpCDD	mg/m3	63	100.00			0.000000000	0.00000008	0.00000003	0.00000001	
1,2,3,4,6,7,8-HpCDF	mg/m3	63	100.00			0.0000000002	0.00000003	0.00000005	0.00000003	
1,2,3,4,7,8,9-HpCDF	mg/m3	63	100.00			0.000000000	0.00000008	0.00000001	0.00000006	
1,2,3,4,7,8-HxCDD	mg/m3	63	98.41	0.000000000	0.000000000	0.000000000	0.00000002	0.00000002	0.00000001	
1,2,3,4,7,8-HxCDF	mg/m3	63	100.00			0.000000000	0.00000007	0.00000007	0.00000005	
1,2,3,6,7,8-HxCDD	mg/m3	63	98.41	0.000000000	0.000000000	0.000000000	0.00000002	0.00000003	0.00000002	
1,2,3,6,7,8-HxCDF	mg/m3	63	100.00			0.000000000	0.00000005	0.00000007	0.00000005	

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,2,3,7,8,9-HxCDD	mg/m3	63	98.41	0.0000000000	0.0000000000	0.0000000000	0.0000000002	0.0000000002	0.0000000001	
1,2,3,7,8,9-HxCDF	mg/m3	63	100.00			0.0000000000	0.0000000003	0.0000000006	0.0000000003	
1,2,3,7,8-PeCDD	mg/m3	63	98.41	0.0000000000	0.0000000000	0.0000000000	0.0000000007	0.0000000000	0.0000000000	
1,2,3,7,8-PeCDF	mg/m3	63	100.00			0.0000000000	0.0000000002	0.0000000002	0.0000000002	
2,3,4,6,7,8-HxCDF	mg/m3	63	100.00			0.0000000000	0.0000000010	0.0000000002	0.0000000001	
2,3,4,7,8-PeCDF	mg/m3	63	100.00			0.0000000000	0.0000000005	0.0000000006	0.0000000005	
2,3,7,8-TCDD	mg/m3	63	57.14	0.0000000000	0.0000000000	0.0000000000	0.0000000002	0.0000000000	0.0000000000	0.0000000000
2,3,7,8-TCDF	mg/m3	63	100.00			0.0000000000	0.0000000001	0.0000000001	0.0000000001	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	63	100.00			0.0000000000	0.0000000007	0.0000000010	0.0000000007	
Total HpCDD	mg/m3	63	100.00			0.0000000001	0.0000000002	0.0000000006	0.0000000002	
Total HpCDF	mg/m3	63	100.00			0.0000000004	0.0000000006	0.0000000001	0.0000000006	
Total HxCDD	mg/m3	63	100.00			0.0000000003	0.0000000007	0.0000000005	0.0000000003	
Total HxCDF	mg/m3	63	100.00			0.0000000008	0.0000000006	0.0000000010	0.0000000006	
Total PeCDD	mg/m3	63	100.00			0.0000000002	0.0000000006	0.0000000003	0.0000000002	
Total PeCDF	mg/m3	63	100.00			0.0000000008	0.0000000007	0.0000000008	0.0000000006	
Total TCDD	mg/m3	63	100.00			0.0000000003	0.0000000008	0.0000000003	0.0000000001	
Total TCDF	mg/m3	63	100.00			0.0000000001	0.0000000008	0.0000000008	0.0000000006	
1,1,1-Trichloroethane	mg/m3	69	97.10	0.0003	0.0003	0.0003	0.001	0.0006	0.0005	
1,1,2,2-Tetrachloroethane	mg/m3	69	26.09	0.0002	0.001	0.0004	0.002	0.0004	0.0003	
1,1,2-Trichloroethane	mg/m3	69	4.35	0.00010	0.0010	0.00005	0.0004	0.0002	0.0002	
1,1-Dichloroethylene	mg/m3	69	15.94	0.00008	0.0008	0.00005	0.0002	0.0001	0.0001	
1,2,3-Trimethylbenzene	mg/m3	69	81.16	0.00010	0.001	0.00008	0.002	0.0004	0.0004	
1,2,4-Trimethylbenzene	mg/m3	69	100.00			0.0004	0.01	0.002	0.001	
1,2-Dibromoethane	mg/m3	69	5.80	0.00008	0.0008	0.0001	0.0006	0.0002	0.0002	
1,2-Dichloroethane	mg/m3	69	10.14	0.0001	0.0009	0.00008	0.0004	0.0002	0.0002	
1,2-Dichloropropane	mg/m3	69	4.35	0.00007	0.0006	0.00009	0.0003	0.0001	0.00009	
1,3,5-Trimethylbenzene	mg/m3	69	86.96	0.0003	0.0009	0.0001	0.003	0.0006	0.0004	

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,3-Butadiene	mg/m3	69	82.61	0.00009	0.0006	0.00008	0.004	0.0004	0.0003	
1,4-Dioxane	mg/m3	69	31.88	0.0005	0.006	0.0002	0.01	0.001	0.0006	
1-Butanol	mg/m3	69	95.65	0.0004	0.002	0.001	0.11	0.02	0.01	
1-Decene	mg/m3	69	17.39	0.0002	0.008	0.0001	0.004	0.0006	0.0002	
1-Heptene	mg/m3	69	43.48	0.0002	0.0008	0.00007	0.003	0.0004	0.0003	
1-Hexene	mg/m3	69	55.07	0.0001	0.001	0.0002	0.002	0.0005	0.0004	
1-Nonene	mg/m3	69	30.43	0.0002	0.001	0.00006	0.001	0.0003	0.0002	
1-Octene	mg/m3	69	28.99	0.0001	0.002	0.0002	0.001	0.0004	0.0003	
1-Pentene	mg/m3	69	88.41	0.00006	0.0006	0.0002	0.002	0.0006	0.0005	
1-Propanol	mg/m3	69	20.29	0.0005	0.05	0.0005	0.02	0.008	0.006	
1-Undecene	mg/m3	69	15.94	0.00006	0.002	0.0002	0.003	0.0003	0.00009	0.00003
2,2,3-Trimethylpentane	mg/m3	69	26.09	0.0001	0.001	0.00006	0.001	0.0002	0.0002	
2,2,4-Trimethylpentane	mg/m3	69	82.61	0.00007	0.0005	0.0002	0.003	0.0005	0.0004	
2,2,5-Trimethylhexane	mg/m3	69	1.45	0.0001	0.002	0.00008	0.00008	0.0004	0.0003	
2,3,4-Trimethylpentane	mg/m3	69	21.74	0.00004	0.0006	0.0004	0.002	0.0004	0.0002	
2,3-Dimethylbutane	mg/m3	69	71.01	0.0001	0.0005	0.00008	0.005	0.0005	0.0003	
2,3-Dimethylpentane	mg/m3	69	50.72	0.00004	0.004	0.00007	0.01	0.0005	0.0002	
2,4,4-Trimethyl-1-Pentene	mg/m3	69	26.09	0.0002	0.001	0.00006	0.0006	0.0002	0.0002	
2,4-Dimethylpentane	mg/m3	69	37.68	0.00008	0.0009	0.0001	0.001	0.0002	0.0002	
2,5-Dimethylhexane	mg/m3	69	30.43	0.0001	0.001	0.00006	0.001	0.0002	0.0002	
2-Ethyl-1-Butene	mg/m3	69	2.90	0.00007	0.0010	0.00005	0.0003	0.0002	0.0002	
2-Methyl-1-Pentene	mg/m3	69	15.94	0.00009	0.002	0.00004	0.0004	0.0002	0.0001	
2-Methyl-2-Pentene	mg/m3	69	18.84	0.00010	0.0010	0.00005	0.0007	0.0002	0.0002	
2-Methylheptane	mg/m3	69	34.78	0.0001	0.0005	0.00008	0.002	0.0004	0.0002	
2-Propanol	mg/m3	69	100.00			0.002	0.05	0.009	0.007	
3-Methyl-1-Butene	mg/m3	69	10.14	0.00005	0.0007	0.0001	0.0008	0.0001	0.0001	
3-Methylheptane	mg/m3	69	21.74	0.0001	0.0010	0.0001	0.0006	0.0002	0.0002	
3-Methylhexane	mg/m3	69	49.28	0.00004	0.0005	0.0005	0.06	0.002	0.0002	

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
3-Methylpentane	mg/m3	69	89.86	0.0001	0.0006	0.0005	0.009	0.002	0.001	
4-Methyl-1-Pentene	mg/m3	69	5.80	0.00010	0.0010	0.00004	0.0001	0.0001	0.0001	
4-Nonene	mg/m3	69	2.90	0.0001	0.002	0.0005	0.0008	0.0002	0.0002	
Acetonitrile	mg/m3	69	53.62	0.0002	0.005	0.0003	0.70	0.01	0.0010	
Acrylonitrile	mg/m3	69	8.70	0.00009	0.002	0.00010	0.0010	0.0002	0.0001	
Benzene	mg/m3	69	100.00			0.0009	0.02	0.004	0.003	
Bromomethane	mg/m3	69	36.23	0.00008	0.0007	0.00004	0.0007	0.0002	0.0001	
Butyl Acrylate	mg/m3	69	1.45	0.00010	0.005	0.0002	0.0002	0.0005	0.0003	
Carbon Tetrachloride	mg/m3	69	95.65	0.0002	0.0004	0.0003	0.001	0.0006	0.0006	
Chlorobenzene	mg/m3	69	27.54	0.00006	0.0005	0.0001	0.0007	0.0002	0.0001	
Chlorodifluoromethane	mg/m3	69	98.55	0.0003	0.0003	0.0007	0.01	0.003	0.002	
Chloroethane	mg/m3	69	10.14	0.00006	0.0006	0.0002	0.001	0.0002	0.0001	
Chloroform	mg/m3	69	66.67	0.00010	0.001	0.00007	0.0006	0.0002	0.0002	
Chloromethane	mg/m3	69	100.00			0.0010	0.003	0.002	0.002	
Cumene	mg/m3	69	28.99	0.00004	0.001	0.00010	0.0007	0.0003	0.0002	
Cyclohexane	mg/m3	69	73.91	0.00007	0.0006	0.0002	0.005	0.0007	0.0006	
Cyclohexene	mg/m3	69	14.49	0.0001	0.0009	0.00010	0.001	0.0002	0.0002	
Cyclopentane	mg/m3	69	57.97	0.00009	0.0006	0.00009	0.001	0.0003	0.0002	
Cyclopentene	mg/m3	69	13.04	0.00006	0.0005	0.00006	0.0003	0.0001	0.0001	
Dichlorodifluoromethane	mg/m3	69	100.00			0.002	0.04	0.004	0.003	
Ethanol	mg/m3	69	100.00			0.009	0.14	0.03	0.03	
Ethylbenzene	mg/m3	69	100.00			0.0008	0.02	0.005	0.004	
Freon 113	mg/m3	69	98.55	0.0004	0.0004	0.0005	0.002	0.0008	0.0007	
Freon 114	mg/m3	69	14.49	0.0001	0.007	0.00007	0.0001	0.0002	0.0002	
Halocarbon 134A	mg/m3	69	46.38	0.0002	0.0009	0.00008	0.003	0.0003	0.0002	
Heptanal	mg/m3	69	34.78	0.0001	0.05	0.002	0.03	0.008	0.007	
Indan	mg/m3	69	28.99	0.00006	0.0009	0.00006	0.0007	0.0002	0.0002	
Indene	mg/m3	69	1.45	0.00009	0.002	0.0003	0.0003	0.0002	0.0001	0.00005

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Isobutane	mg/m3	69	100.00			0.0007	0.03	0.004	0.003	
Isobutene + 1-Butene	mg/m3	69	100.00			0.0007	0.01	0.002	0.002	
Isobutylbenzene	mg/m3	69	1.45	0.0001	0.002	0.00007	0.00007	0.0002	0.0002	
Isoheptane	mg/m3	69	84.06	0.00006	0.0007	0.0003	0.04	0.002	0.0008	
Isohexane	mg/m3	69	72.46	0.00006	0.0007	0.0005	0.02	0.002	0.002	
Isopentane	mg/m3	66	96.97	0.00008	0.0005	0.001	0.03	0.008	0.007	
Isoprene	mg/m3	69	66.67	0.00007	0.0006	0.00005	0.0010	0.0002	0.0002	
Methyl t-Butylether	mg/m3	69	21.74	0.0001	0.0010	0.00006	0.0006	0.0002	0.0002	
Methylcyclohexane	mg/m3	69	63.77	0.0001	0.0007	0.0001	0.002	0.0004	0.0003	
Methylcyclopentane	mg/m3	68	80.88	0.00007	0.0004	0.0002	0.005	0.0007	0.0005	0.00003
Methylcyclopentene	mg/m3	69	1.45	0.00007	0.0007	0.0002	0.0002	0.0001	0.0001	
Methylene Chloride	mg/m3	69	100.00			0.001	0.13	0.008	0.005	
Methylisobutylketone	mg/m3	69	86.96	0.0003	0.001	0.0003	0.005	0.001	0.001	
Neohexane	mg/m3	69	55.07	0.00009	0.0007	0.00005	0.002	0.0004	0.0003	
Neopentane	mg/m3	69	4.35	0.00004	0.0006	0.00003	0.0002	0.00008	0.00007	
Propane	mg/m3	69	100.00			0.003	0.09	0.02	0.01	
Propylene	mg/m3	69	100.00			0.0005	0.20	0.007	0.002	
Styrene	mg/m3	69	88.41	0.0004	0.0008	0.0001	0.002	0.0005	0.0004	
Tetrachloroethylene	mg/m3	69	88.41	0.0005	0.0008	0.00007	0.005	0.001	0.0007	
Toluene	mg/m3	69	100.00			0.006	0.10	0.02	0.02	
Trichloroethylene	mg/m3	69	94.20	0.0002	0.0008	0.0003	0.010	0.001	0.001	
Trichlorofluoromethane	mg/m3	69	100.00			0.001	0.003	0.002	0.002	
Vinyl Acetate	mg/m3	69	50.72	0.00005	0.0003	0.001	0.04	0.005	0.001	
Vinyl Chloride	mg/m3	69	2.90	0.00007	0.0005	0.0001	0.0006	0.0001	0.0001	
a-Pinene	mg/m3	69	55.07	0.0002	0.0008	0.00009	0.003	0.0003	0.0002	
c-1,2-Dichloroethylene	mg/m3	69	2.90	0.00009	0.004	0.00008	0.0001	0.0002	0.0002	
c-1,3-Dichloropropene	mg/m3	69	13.04	0.00009	0.005	0.00009	0.0005	0.0002	0.0002	
c-2-Butene	mg/m3	69	91.30	0.0002	0.0005	0.0001	0.003	0.0004	0.0003	

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
c-2-Octene	mg/m3	69	1.45	0.00009	0.003	0.00007	0.00007	0.0006	0.0005	
c-2-Pentene	mg/m3	69	39.13	0.00006	0.0006	0.00008	0.001	0.0002	0.0001	
c-3-Hexene	mg/m3	69	13.04	0.00007	0.0008	0.0001	0.0007	0.0002	0.0001	
c-3-Methyl-2-Pentene	mg/m3	69	2.90	0.0001	0.0009	0.0002	0.0003	0.0002	0.0002	
m-Diethylbenzene	mg/m3	69	17.39	0.00007	0.001	0.00007	0.002	0.0003	0.0002	
m-Ethyltoluene	mg/m3	69	98.55	0.0007	0.0007	0.0002	0.006	0.001	0.0009	
n-Butane	mg/m3	69	100.00			0.002	0.04	0.007	0.006	
n-Butylbenzene	mg/m3	69	13.04	0.0001	0.0009	0.00009	0.0006	0.0002	0.0002	0.00005
n-Decane	mg/m3	69	100.00			0.0003	0.01	0.002	0.002	
n-Heptane	mg/m3	69	94.20	0.00008	0.0005	0.0003	0.04	0.002	0.0009	
n-Hexane	mg/m3	69	100.00			0.0005	0.02	0.003	0.002	
n-Nonane	mg/m3	69	89.86	0.0003	0.002	0.0005	0.005	0.001	0.0009	
n-Octane	mg/m3	69	88.41	0.0001	0.0005	0.0002	0.003	0.0007	0.0006	
n-Pentane	mg/m3	69	100.00			0.0008	0.02	0.004	0.004	
n-Propylbenzene	mg/m3	69	66.67	0.0001	0.002	0.0001	0.002	0.0004	0.0004	
n-Undecane	mg/m3	69	85.51	0.0001	0.0009	0.0002	0.006	0.001	0.0008	
o-Ethyltoluene	mg/m3	69	81.16	0.0003	0.0009	0.0001	0.003	0.0005	0.0004	
o-Xylene	mg/m3	69	100.00			0.0003	0.01	0.002	0.002	
p-Diethylbenzene	mg/m3	69	4.35	0.0002	0.002	0.0003	0.0009	0.0003	0.0002	
p-Ethyltoluene	mg/m3	69	86.96	0.0006	0.0009	0.0001	0.003	0.0006	0.0004	
p-Isopropyltoluene	mg/m3	69	8.70	0.0001	0.002	0.0001	0.0003	0.0002	0.0002	
p-Xylene + m-Xylene	mg/m3	69	100.00			0.0008	0.03	0.006	0.005	
t-1,2-Dichloroethylene	mg/m3	69	2.90	0.00009	0.0008	0.00010	0.0001	0.0001	0.0002	
t-1,3-Dichloropropene	mg/m3	69	5.80	0.0001	0.0004	0.00009	0.0003	0.0001	0.0001	
t-2-Butene	mg/m3	69	92.75	0.0001	0.0003	0.00009	0.003	0.0005	0.0004	
t-2-Hexene	mg/m3	69	2.90	0.00007	0.0008	0.00004	0.0002	0.0001	0.0001	
t-2-Pentene	mg/m3	69	72.46	0.00007	0.0006	0.00007	0.002	0.0003	0.0002	

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Mercury	mg/m3	72	54.17	0.0000003	0.0000003	0.0000004	0.000004	0.000006	0.000005	0.0000002
Aldrin	mg/m3	41	12.20	0.0000001	0.0000001	0.0000005	0.0000001	0.0000002	0.0000008	
Dieldrin	mg/m3	41	26.83	0.0000001	0.0000005	0.0000002	0.0000007	0.0000002	0.0000002	
Endosulfan I	mg/m3	41	7.32	0.00000008	0.0000010	0.0000003	0.0000005	0.0000001	0.0000006	
Endosulfan II	mg/m3	41	2.44	0.0000001	0.0000001	0.0000004	0.0000004	0.0000002	0.0000002	
Endosulfan Sulfate	mg/m3	41	7.32	0.0000002	0.0000008	0.0000002	0.0000001	0.0000002	0.0000002	
Endrin	mg/m3	41	9.76	0.0000005	0.0000002	0.0000005	0.0000001	0.0000005	0.0000004	
Heptachlor	mg/m3	41	43.90	0.00000008	0.0000006	0.00000004	0.0000001	0.0000002	0.0000009	
Heptachlor epoxide	mg/m3	41	4.88	0.0000001	0.0000007	0.0000004	0.0000004	0.0000002	0.0000002	
Isodrin	mg/m3	41	24.39	0.00000008	0.0000005	0.0000003	0.0000006	0.0000002	0.0000005	
alpha-BHC	mg/m3	41	26.83	0.00000006	0.0000002	0.0000003	0.0000001	0.0000002	0.0000006	
alpha-Chlordane	mg/m3	41	39.02	0.00000008	0.0000005	0.0000001	0.0000002	0.0000004	0.0000002	
gamma-BHC	mg/m3	40	37.50	0.00000009	0.0000003	0.0000002	0.0000002	0.0000003	0.0000007	
gamma-Chlordane	mg/m3	41	63.41	0.00000006	0.0000005	0.00000001	0.0000001	0.0000003	0.0000002	
Antimony	mg/m3	46	95.65	0.0000002	0.0000002	0.00000009	0.0000002	0.0000007	0.0000006	
Arsenic	mg/m3	46	93.48	0.0000002	0.0000002	0.00000002	0.0000007	0.0000002	0.0000002	
Beryllium	mg/m3	46	82.61	0.00000005	0.0000001	0.000000008	0.0000001	0.0000002	0.0000007	
Cadmium	mg/m3	46	100.00			0.0000003	0.0000006	0.0000002	0.0000002	
Chromium	mg/m3	46	100.00			0.0000001	0.0000008	0.0000004	0.0000003	
Copper	mg/m3	46	100.00			0.0000001	0.0000001	0.0000005	0.0000005	
Lead	mg/m3	46	100.00			0.0000009	0.0000003	0.0000007	0.0000005	
Nickel	mg/m3	46	100.00			0.0000001	0.0000009	0.0000004	0.0000004	
PM-10	mg/m3	46	100.00			0.007	0.18	0.05	0.05	
Selenium	mg/m3	46	80.43	0.0000001	0.0000002	0.00000004	0.0000004	0.0000001	0.0000001	
Silver	mg/m3	45	88.89	0.00000003	0.0000009	0.00000006	0.0000001	0.0000002	0.0000009	

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Thallium	mg/m3	46	78.26	0.000002	0.000004	0.00000004	0.000004	0.000001	0.000001	
Zinc	mg/m3	46	100.00			0.00004	0.0006	0.0002	0.0001	
1,2,4-Trichlorobenzene	mg/m3	71	36.62	0.000002	0.01	0.000003	0.001	0.0007	0.0002	
1,2-Dichlorobenzene	mg/m3	71	29.58	0.000002	0.003	0.00001	0.0007	0.0002	0.00003	
1,3-Dichlorobenzene	mg/m3	71	11.27	0.0000010	0.002	0.00006	0.0008	0.0002	0.00006	
1,4-Dichlorobenzene	mg/m3	71	100.00			0.0001	0.004	0.001	0.001	
2-Methylnaphthalene	mg/m3	40	100.00			0.00002	0.0002	0.00009	0.00008	
2-Methylphenol	mg/m3	40	40.00	0.000006	0.00002	0.00001	0.00005	0.00002	0.00001	
2-Nitrophenol	mg/m3	40	67.50	0.000005	0.00003	0.00002	0.0002	0.00004	0.00004	
4-Methylphenol/3-Methylphenol	mg/m3	40	50.00	0.000006	0.00002	0.00001	0.00008	0.00002	0.00001	
4-Nitrophenol	mg/m3	40	2.50	0.00003	0.0007	0.00002	0.00002	0.0001	0.0001	
Acenaphthene	mg/m3	40	17.50	0.000002	0.000009	0.000003	0.000008	0.000003	0.000003	
Acenaphthylene	mg/m3	40	50.00	0.000004	0.00001	0.000002	0.00003	0.000007	0.000005	
Acetophenone	mg/m3	40	42.50	0.000004	0.000010	0.0001	0.0007	0.0001	0.000005	
Benzo(b)fluoranthene	mg/m3	40	5.00	0.0000010	0.00002	0.0000010	0.000002	0.000005	0.000005	
Benzo(k)fluoranthene	mg/m3	40	5.00	0.000002	0.00001	0.0000010	0.000002	0.000004	0.000003	0.0000010
Benzoic acid	mg/m3	40	100.00			0.00009	0.002	0.0006	0.0005	
Benzyl alcohol	mg/m3	40	72.50	0.000004	0.00002	0.00002	0.0010	0.00006	0.00003	
Chrysene	mg/m3	40	5.00	0.000003	0.00001	0.000002	0.000002	0.000003	0.000002	0.000002
Di-n-butylphthalate	mg/m3	40	82.50	0.000003	0.000008	0.000009	0.00010	0.00003	0.00002	
Di-n-octylphthalate	mg/m3	40	2.50	0.0000010	0.000008	0.000005	0.000005	0.000003	0.000004	0.0000005
Dibenzofuran	mg/m3	40	65.00	0.000004	0.000008	0.000009	0.00003	0.00001	0.00001	
Diethylphthalate	mg/m3	40	45.00	0.000002	0.000007	0.000005	0.0008	0.00003	0.000003	
Dimethylphthalate	mg/m3	40	27.50	0.000003	0.000009	0.00001	0.00007	0.000009	0.000004	
Fluoranthene	mg/m3	40	30.00	0.000004	0.000008	0.000003	0.00001	0.000004	0.000004	
Fluorene	mg/m3	40	57.50	0.000005	0.000009	0.000007	0.00002	0.000008	0.000008	
Hexachloro-1,3-Butadiene	mg/m3	71	26.76	0.000002	0.01	0.0002	0.002	0.0009	0.0004	

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Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Isophorone	mg/m3	40	82.50	0.000006	0.000009	0.000010	0.00007	0.00003	0.00002	
Naphthalene	mg/m3	71	61.97	0.00003	0.0006	0.00006	0.002	0.0003	0.0002	
Phenanthrene	mg/m3	40	95.00	0.000008	0.000009	0.000010	0.00004	0.00002	0.00002	
Phenol	mg/m3	40	90.00	0.000010	0.00001	0.00001	0.0003	0.00009	0.00008	
Pyrene	mg/m3	40	27.50	0.000002	0.000009	0.000002	0.000008	0.000003	0.000003	
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	40	7.50	0.0000008	0.000003	0.0000002	0.0000008	0.000001	0.000001	
bis(2-Ethylhexyl)phthalate	mg/m3	40	77.50	0.000006	0.00002	0.00001	0.00006	0.00003	0.00003	

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Hydrochloric Acid	mg/m3	0.002	0.003	0.003	0.002	0.003	0.003	Lognormal
Hydrofluoric Acid	mg/m3	0.0003	0.0003	0.0004	0.0002	0.0004	0.0005	Unknown
Sulfuric Acid	mg/m3	0.005	0.01	0.01	0.009	0.01	0.01	Normal/Lognormal
2-Butanone	mg/m3	0.007	0.007	0.009	0.004	0.008	0.009	Lognormal
Acetaldehyde	mg/m3	0.05	0.03	0.04	0.009	0.04	0.04	Lognormal
Acetone	mg/m3	0.05	0.03	0.04	0.01	0.04	0.04	Lognormal
Acrolein	mg/m3	0.0005	0.0004	0.0005	0.0002	0.0005	0.0005	Unknown
Benzaldehyde	mg/m3	0.002	0.002	0.002	0.0007	0.002	0.003	Unknown
Crotonaldehyde	mg/m3	0.000010	0.00005	0.00009	0.00005	0.00006	0.00005	Unknown
Formaldehyde	mg/m3	0.004	0.003	0.004	0.002	0.004	0.004	Lognormal
Hexanal	mg/m3	0.007	0.005	0.006	0.001	0.006	0.02	Unknown
Isovaleraldehyde	mg/m3	0.00009	0.00008	0.0001	0.00006	0.0001	0.00009	Unknown
Propionaldehyde	mg/m3	0.0006	0.0007	0.0008	0.0005	0.0008	0.0008	Lognormal
Tolualdehyde	mg/m3	0.005	0.002	0.004	0.0006	0.003	0.004	Lognormal
Valeraldehyde	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Unknown
n-Butyraldehyde	mg/m3	0.01	0.009	0.03	0.002	0.01	0.03	Lognormal
1,2,3,4,6,7,8,9-OCDD	mg/m3	0.0000002	0.0000003	0.0000007	0.00000004	0.00000007	0.00000001	Unknown
1,2,3,4,6,7,8,9-OCDF	mg/m3	0.00000009	0.00000005	0.00000008	0.00000003	0.00000007	0.00000008	Lognormal
1,2,3,4,6,7,8-HpCDD	mg/m3	0.00000010	0.00000003	0.00000005	0.00000001	0.00000005	0.00000003	Unknown
1,2,3,4,6,7,8-HpCDF	mg/m3	0.00000006	0.00000005	0.00000006	0.00000003	0.00000006	0.00000006	Lognormal
1,2,3,4,7,8,9-HpCDF	mg/m3	0.00000001	0.00000001	0.00000002	0.000000006	0.00000001	0.00000002	Lognormal
1,2,3,4,7,8-HxCDD	mg/m3	0.000000003	0.000000002	0.000000002	0.000000001	0.000000002	0.000000002	Unknown
1,2,3,4,7,8-HxCDF	mg/m3	0.000000009	0.000000007	0.000000008	0.000000005	0.000000009	0.000000008	Lognormal
1,2,3,6,7,8-HxCDD	mg/m3	0.000000004	0.000000003	0.000000004	0.000000002	0.000000004	0.000000004	Unknown
1,2,3,6,7,8-HxCDF	mg/m3	0.000000007	0.000000007	0.000000009	0.000000005	0.000000009	0.000000009	Lognormal

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,2,3,7,8,9-HxCDD	mg/m3	0.0000000003	0.0000000002	0.0000000003	0.0000000001	0.0000000003	0.0000000002	Unknown
1,2,3,7,8,9-HxCDF	mg/m3	0.0000000006	0.0000000006	0.0000000008	0.0000000004	0.0000000007	0.0000000008	Lognormal
1,2,3,7,8-PeCDD	mg/m3	0.0000000001	0.0000000000	0.0000000001	0.0000000000	0.0000000001	0.0000000001	Unknown
1,2,3,7,8-PeCDF	mg/m3	0.0000000003	0.0000000002	0.0000000003	0.0000000002	0.0000000003	0.0000000003	Unknown
2,3,4,6,7,8-HxCDF	mg/m3	0.0000000002	0.0000000002	0.0000000003	0.0000000001	0.0000000002	0.0000000003	Lognormal
2,3,4,7,8-PeCDF	mg/m3	0.0000000007	0.0000000006	0.0000000007	0.0000000005	0.0000000008	0.0000000007	Lognormal
2,3,7,8-TCDD	mg/m3	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	Lognormal
2,3,7,8-TCDF	mg/m3	0.0000000002	0.0000000001	0.0000000002	0.0000000001	0.0000000002	0.0000000002	Unknown
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	0.0000000001	0.0000000010	0.0000000001	0.0000000007	0.0000000001	0.0000000001	Lognormal
Total HpCDD	mg/m3	0.0000000002	0.0000000006	0.0000000001	0.0000000003	0.0000000001	0.0000000006	Unknown
Total HpCDF	mg/m3	0.0000000001	0.0000000001	0.0000000001	0.0000000006	0.0000000001	0.0000000001	Lognormal
Total HxCDD	mg/m3	0.0000000009	0.0000000005	0.0000000007	0.0000000003	0.0000000007	0.0000000005	Unknown
Total HxCDF	mg/m3	0.0000000001	0.0000000010	0.0000000001	0.0000000007	0.0000000001	0.0000000001	Lognormal
Total PeCDD	mg/m3	0.0000000007	0.0000000003	0.0000000004	0.0000000002	0.0000000004	0.0000000003	Unknown
Total PeCDF	mg/m3	0.0000000010	0.0000000008	0.0000000009	0.0000000006	0.0000000001	0.0000000009	Lognormal
Total TCDD	mg/m3	0.0000000001	0.0000000003	0.0000000005	0.0000000002	0.0000000005	0.0000000003	Unknown
Total TCDF	mg/m3	0.0000000001	0.0000000008	0.0000000001	0.0000000006	0.0000000001	0.0000000009	Unknown
1,1,1-Trichloroethane	mg/m3	0.0002	0.0006	0.0006	0.0005	0.0006	0.0006	Lognormal
1,1,2,2-Tetrachloroethane	mg/m3	0.0004	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
1,1,2-Trichloroethane	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0003	0.0003	Normal/Lognormal
1,1-Dichloroethylene	mg/m3	0.00007	0.0001	0.0001	0.0001	0.0001	0.0001	Lognormal
1,2,3-Trimethylbenzene	mg/m3	0.0004	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
1,2,4-Trimethylbenzene	mg/m3	0.002	0.002	0.002	0.002	0.002	0.002	Lognormal
1,2-Dibromoethane	mg/m3	0.00010	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
1,2-Dichloroethane	mg/m3	0.00009	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
1,2-Dichloropropane	mg/m3	0.00005	0.0001	0.0001	0.00009	0.0001	0.0001	Lognormal
1,3,5-Trimethylbenzene	mg/m3	0.0005	0.0006	0.0007	0.0005	0.0007	0.0007	Lognormal

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,3-Butadiene	mg/m3	0.0005	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
1,4-Dioxane	mg/m3	0.002	0.001	0.001	0.0007	0.001	0.001	Unknown
1-Butanol	mg/m3	0.02	0.02	0.02	0.01	0.02	0.03	Unknown
1-Decene	mg/m3	0.0008	0.0006	0.0007	0.0003	0.0007	0.0006	Unknown
1-Heptene	mg/m3	0.0004	0.0004	0.0004	0.0003	0.0004	0.0004	Lognormal
1-Hexene	mg/m3	0.0004	0.0005	0.0006	0.0004	0.0006	0.0006	Lognormal
1-Nonene	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
1-Octene	mg/m3	0.0003	0.0004	0.0005	0.0003	0.0004	0.0005	Lognormal
1-Pentene	mg/m3	0.0004	0.0006	0.0007	0.0005	0.0007	0.0008	Unknown
1-Propanol	mg/m3	0.008	0.008	0.02	0.003	0.009	0.02	Lognormal
1-Undecene	mg/m3	0.0006	0.0003	0.0004	0.0001	0.0005	0.0004	Lognormal
2,2,3-Trimethylpentane	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
2,2,4-Trimethylpentane	mg/m3	0.0005	0.0005	0.0006	0.0004	0.0006	0.0007	Unknown
2,2,5-Trimethylhexane	mg/m3	0.0003	0.00008	0.00008	0.0003	0.0004	0.0005	Normal/Lognormal
2,3,4-Trimethylpentane	mg/m3	0.0005	0.0004	0.0005	0.0002	0.0005	0.0005	Lognormal
2,3-Dimethylbutane	mg/m3	0.0006	0.0005	0.0006	0.0003	0.0006	0.0006	Lognormal
2,3-Dimethylpentane	mg/m3	0.002	0.0005	0.0005	0.0002	0.0008	0.0005	Lognormal
2,4,4-Trimethyl-1-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2,4-Dimethylpentane	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Unknown
2,5-Dimethylhexane	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Unknown
2-Ethyl-1-Butene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Normal/Lognormal
2-Methyl-1-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
2-Methyl-2-Pentene	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0002	0.0003	Lognormal
2-Methylheptane	mg/m3	0.0005	0.0004	0.0004	0.0002	0.0005	0.0004	Lognormal
2-Propanol	mg/m3	0.007	0.009	0.01	0.008	0.01	0.01	Lognormal
3-Methyl-1-Butene	mg/m3	0.0001	0.0001	0.0001	0.00010	0.0001	0.0001	Lognormal
3-Methylheptane	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
3-Methylhexane	mg/m3	0.007	0.002	0.002	0.0003	0.003	0.002	Lognormal

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
3-Methylpentane	mg/m3	0.001	0.002	0.002	0.001	0.002	0.002	Unknown
4-Methyl-1-Pentene	mg/m3	0.00009	0.0001	0.0001	0.0001	0.0002	0.0002	Unknown
4-Nonene	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Unknown
Acetonitrile	mg/m3	0.08	0.01	0.03	0.001	0.03	0.010	Unknown
Acrylonitrile	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
Benzene	mg/m3	0.002	0.004	0.004	0.003	0.004	0.004	Lognormal
Bromomethane	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
Butyl Acrylate	mg/m3	0.0005	0.0002	0.0002	0.0003	0.0005	0.0006	Lognormal
Carbon Tetrachloride	mg/m3	0.0002	0.0006	0.0006	0.0006	0.0006	0.0007	Normal
Chlorobenzene	mg/m3	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
Chlorodifluoromethane	mg/m3	0.003	0.003	0.004	0.002	0.004	0.004	Lognormal
Chloroethane	mg/m3	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	Unknown
Chloroform	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Chloromethane	mg/m3	0.0005	0.002	0.002	0.002	0.002	0.002	Unknown
Cumene	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0004	Normal
Cyclohexane	mg/m3	0.0007	0.0007	0.0009	0.0005	0.0008	0.0009	Lognormal
Cyclohexene	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Unknown
Cyclopentane	mg/m3	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
Cyclopentene	mg/m3	0.00006	0.0001	0.0001	0.00010	0.0001	0.0001	Lognormal
Dichlorodifluoromethane	mg/m3	0.004	0.004	0.004	0.003	0.004	0.004	Unknown
Ethanol	mg/m3	0.02	0.03	0.04	0.03	0.04	0.04	Lognormal
Ethylbenzene	mg/m3	0.003	0.005	0.005	0.004	0.005	0.005	Lognormal
Freon 113	mg/m3	0.0002	0.0008	0.0008	0.0008	0.0008	0.0008	Unknown
Freon 114	mg/m3	0.0004	0.0001	0.0001	0.0002	0.0003	0.0002	Unknown
Halocarbon 134A	mg/m3	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	Unknown
Heptanal	mg/m3	0.008	0.008	0.03	0.003	0.009	0.03	Lognormal
Indan	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Indene	mg/m3	0.0001	0.0002	0.0003	0.0001	0.0002	0.0002	Unknown

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Isobutane	mg/m3	0.004	0.004	0.005	0.003	0.005	0.005	Lognormal
Isobutene + 1-Butene	mg/m3	0.002	0.002	0.002	0.002	0.003	0.002	Lognormal
Isobutylbenzene	mg/m3	0.0001	0.00007	0.00007	0.0001	0.0002	0.0002	Lognormal
Isoheptane	mg/m3	0.005	0.002	0.002	0.0007	0.002	0.002	Unknown
Isohexane	mg/m3	0.002	0.002	0.003	0.0010	0.003	0.006	Unknown
Isopentane	mg/m3	0.005	0.008	0.009	0.006	0.009	0.01	Unknown
Isoprene	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
Methyl t-Butylether	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	Normal/Lognormal
Methylcyclohexane	mg/m3	0.0004	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
Methylcyclopentane	mg/m3	0.0007	0.0007	0.001	0.0004	0.0008	0.001	Lognormal
Methylcyclopentene	mg/m3	0.00006	0.0001	0.0002	0.0001	0.0001	0.0001	Lognormal
Methylene Chloride	mg/m3	0.02	0.008	0.01	0.005	0.01	0.008	Unknown
Methylisobutylketone	mg/m3	0.0008	0.001	0.002	0.0010	0.001	0.002	Lognormal
Neohexane	mg/m3	0.0004	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
Neopentane	mg/m3	0.00005	0.00008	0.00010	0.00007	0.00010	0.00010	Lognormal
Propane	mg/m3	0.02	0.02	0.02	0.01	0.02	0.02	Unknown
Propylene	mg/m3	0.03	0.007	0.01	0.002	0.01	0.004	Unknown
Styrene	mg/m3	0.0004	0.0005	0.0006	0.0004	0.0006	0.0005	Unknown
Tetrachloroethylene	mg/m3	0.0010	0.001	0.001	0.0008	0.001	0.001	Lognormal
Toluene	mg/m3	0.01	0.02	0.02	0.02	0.02	0.02	Lognormal
Trichloroethylene	mg/m3	0.001	0.001	0.002	0.001	0.002	0.002	Lognormal
Trichlorofluoromethane	mg/m3	0.0003	0.002	0.002	0.002	0.002	0.002	Unknown
Vinyl Acetate	mg/m3	0.007	0.005	0.04	0.0006	0.006	0.06	Lognormal
Vinyl Chloride	mg/m3	0.00008	0.0001	0.0001	0.00010	0.0001	0.0001	Unknown
a-Pinene	mg/m3	0.0004	0.0003	0.0004	0.0002	0.0004	0.0003	Unknown
c-1,2-Dichloroethylene	mg/m3	0.0003	0.0001	0.0001	0.0001	0.0003	0.0002	Unknown
c-1,3-Dichloropropene	mg/m3	0.0003	0.0002	0.0003	0.0002	0.0003	0.0002	Unknown
c-2-Butene	mg/m3	0.0004	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
c-2-Octene	mg/m3	0.0005	0.00007	0.00007	0.0004	0.0007	0.0009	Normal/Lognormal
c-2-Pentene	mg/m3	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
c-3-Hexene	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
c-3-Methyl-2-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Normal/Lognormal
m-Diethylbenzene	mg/m3	0.0003	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
m-Ethyltoluene	mg/m3	0.0010	0.001	0.001	0.0009	0.001	0.001	Lognormal
n-Butane	mg/m3	0.005	0.007	0.008	0.006	0.008	0.008	Unknown
n-Butylbenzene	mg/m3	0.00009	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
n-Decane	mg/m3	0.002	0.002	0.002	0.002	0.002	0.002	Lognormal
n-Heptane	mg/m3	0.005	0.002	0.003	0.0009	0.003	0.002	Unknown
n-Hexane	mg/m3	0.003	0.003	0.003	0.002	0.003	0.003	Unknown
n-Nonane	mg/m3	0.0008	0.001	0.001	0.0010	0.001	0.001	Unknown
n-Octane	mg/m3	0.0005	0.0007	0.0008	0.0006	0.0008	0.0008	Unknown
n-Pentane	mg/m3	0.003	0.004	0.005	0.004	0.005	0.005	Lognormal
n-Propylbenzene	mg/m3	0.0003	0.0004	0.0005	0.0004	0.0005	0.0005	Lognormal
n-Undecane	mg/m3	0.0009	0.001	0.001	0.0007	0.001	0.001	Lognormal
o-Ethyltoluene	mg/m3	0.0004	0.0005	0.0006	0.0004	0.0006	0.0006	Lognormal
o-Xylene	mg/m3	0.002	0.002	0.003	0.002	0.003	0.003	Lognormal
p-Diethylbenzene	mg/m3	0.0003	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
p-Ethyltoluene	mg/m3	0.0005	0.0006	0.0007	0.0005	0.0007	0.0007	Lognormal
p-Isopropyltoluene	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
p-Xylene + m-Xylene	mg/m3	0.005	0.006	0.007	0.005	0.007	0.007	Lognormal
t-1,2-Dichloroethylene	mg/m3	0.00006	0.0001	0.0001	0.0001	0.0002	0.0002	Lognormal
t-1,3-Dichloropropene	mg/m3	0.00005	0.0001	0.0001	0.0001	0.0001	0.0001	Normal/Lognormal
t-2-Butene	mg/m3	0.0004	0.0005	0.0006	0.0004	0.0006	0.0006	Lognormal
t-2-Hexene	mg/m3	0.00007	0.0001	0.0002	0.0001	0.0002	0.0002	Normal/Lognormal
t-2-Pentene	mg/m3	0.0003	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Mercury	mg/m3	0.000008	0.000006	0.000008	0.000001	0.000008	0.00003	Unknown
Aldrin	mg/m3	0.0000003	0.0000002	0.0000003	0.0000001	0.0000003	0.0000002	Unknown
Dieldrin	mg/m3	0.0000001	0.0000002	0.0000003	0.0000002	0.0000003	0.0000003	Lognormal
Endosulfan I	mg/m3	0.0000001	0.0000001	0.0000002	0.00000009	0.0000002	0.0000002	Unknown
Endosulfan II	mg/m3	0.00000009	0.0000002	0.0000004	0.0000002	0.0000002	0.0000002	Unknown
Endosulfan Sulfate	mg/m3	0.0000002	0.0000002	0.0000003	0.0000002	0.0000003	0.0000003	Unknown
Endrin	mg/m3	0.0000002	0.0000005	0.0000005	0.0000004	0.0000005	0.0000005	Unknown
Heptachlor	mg/m3	0.0000003	0.0000002	0.0000003	0.0000001	0.0000003	0.0000003	Unknown
Heptachlor epoxide	mg/m3	0.00000009	0.0000002	0.0000002	0.0000002	0.0000002	0.0000002	Unknown
Isodrin	mg/m3	0.0000002	0.0000002	0.0000002	0.00000009	0.0000002	0.0000002	Unknown
alpha-BHC	mg/m3	0.0000003	0.0000002	0.0000003	0.00000010	0.0000003	0.0000003	Unknown
alpha-Chlordane	mg/m3	0.0000004	0.0000004	0.0000005	0.0000002	0.0000005	0.0000006	Unknown
gamma-BHC	mg/m3	0.0000004	0.0000003	0.0000004	0.0000001	0.0000004	0.0000005	Unknown
gamma-Chlordane	mg/m3	0.0000003	0.0000003	0.0000006	0.0000002	0.0000004	0.0000006	Lognormal
Antimony	mg/m3	0.000005	0.000007	0.000008	0.000005	0.000008	0.00001	Unknown
Arsenic	mg/m3	0.000001	0.000002	0.000002	0.000001	0.000002	0.000004	Unknown
Beryllium	mg/m3	0.0000003	0.0000002	0.0000003	0.00000010	0.0000003	0.0000003	Unknown
Cadmium	mg/m3	0.000001	0.000002	0.000002	0.000001	0.000002	0.000002	Lognormal
Chromium	mg/m3	0.000002	0.000004	0.000004	0.000003	0.000004	0.000004	Lognormal
Copper	mg/m3	0.00003	0.00005	0.00006	0.00005	0.00006	0.00006	Lognormal
Lead	mg/m3	0.00006	0.00007	0.00009	0.00005	0.00009	0.00009	Lognormal
Nickel	mg/m3	0.000002	0.000004	0.000005	0.000004	0.000005	0.000005	Unknown
PM-10	mg/m3	0.03	0.05	0.06	0.05	0.06	0.06	Unknown
Selenium	mg/m3	0.0000010	0.000001	0.000002	0.0000009	0.000002	0.000002	Unknown
Silver	mg/m3	0.000002	0.000002	0.000004	0.0000009	0.000003	0.000004	Lognormal

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Thallium	mg/m3	0.0000009	0.000001	0.000001	0.0000009	0.000001	0.000002	Unknown
Zinc	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
1,2,4-Trichlorobenzene	mg/m3	0.002	0.0007	0.001	0.00007	0.001	0.01	Lognormal
1,2-Dichlorobenzene	mg/m3	0.0004	0.0002	0.0003	0.00004	0.0003	0.001	Unknown
1,3-Dichlorobenzene	mg/m3	0.0003	0.0002	0.0008	0.00003	0.0003	0.002	Lognormal
1,4-Dichlorobenzene	mg/m3	0.0009	0.001	0.002	0.001	0.002	0.002	Lognormal
2-Methylnaphthalene	mg/m3	0.00005	0.00009	0.0001	0.00008	0.0001	0.0001	Lognormal
2-Methylphenol	mg/m3	0.00001	0.00002	0.00002	0.00001	0.00002	0.00002	Unknown
2-Nitrophenol	mg/m3	0.00004	0.00004	0.00006	0.00003	0.00006	0.00009	Unknown
4-Methylphenol/3-Methylphenol	mg/m3	0.00002	0.00002	0.00003	0.00001	0.00002	0.00003	Lognormal
4-Nitrophenol	mg/m3	0.00008	0.00002	0.00002	0.00007	0.0001	0.0002	Unknown
Acenaphthene	mg/m3	0.000002	0.000003	0.000004	0.000003	0.000004	0.000004	Unknown
Acenaphthylene	mg/m3	0.000006	0.000007	0.000009	0.000005	0.000009	0.000009	Unknown
Acetophenone	mg/m3	0.0002	0.0001	0.0002	0.00002	0.0002	0.0008	Unknown
Benzo(b)fluoranthene	mg/m3	0.000003	0.000002	0.000002	0.000004	0.000006	0.000006	Unknown
Benzo(k)fluoranthene	mg/m3	0.000002	0.000002	0.000002	0.000003	0.000004	0.000004	Unknown
Benzoic acid	mg/m3	0.0003	0.0006	0.0007	0.0005	0.0007	0.0007	Unknown
Benzyl alcohol	mg/m3	0.0002	0.00006	0.00009	0.00003	0.0001	0.00009	Lognormal
Chrysene	mg/m3	0.0000010	0.000002	0.000002	0.000003	0.000003	0.000003	Unknown
Di-n-butylphthalate	mg/m3	0.00002	0.00003	0.00004	0.00002	0.00004	0.00005	Unknown
Di-n-octylphthalate	mg/m3	0.0000009	0.000003	0.000005	0.000003	0.000004	0.000004	Unknown
Dibenzofuran	mg/m3	0.000008	0.00001	0.00001	0.000009	0.00001	0.00002	Unknown
Diethylphthalate	mg/m3	0.0001	0.00003	0.00006	0.00006	0.00006	0.00002	Unknown
Dimethylphthalate	mg/m3	0.00001	0.000009	0.00001	0.000005	0.00001	0.00001	Unknown
Fluoranthene	mg/m3	0.000003	0.000004	0.000005	0.000004	0.000005	0.000005	Unknown
Fluorene	mg/m3	0.000005	0.000008	0.000010	0.000007	0.000010	0.00001	Unknown
Hexachloro-1,3-Butadiene	mg/m3	0.002	0.0009	0.002	0.00010	0.001	0.03	Lognormal

Table A-6 - Elementary School Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Isophorone	mg/m3	0.00002	0.00003	0.00003	0.00002	0.00003	0.00004	Unknown
Naphthalene	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0004	Unknown
Phenanthrene	mg/m3	0.000008	0.00002	0.00002	0.00002	0.00002	0.00002	Normal
Phenol	mg/m3	0.00007	0.00009	0.0001	0.00007	0.0001	0.0002	Unknown
Pyrene	mg/m3	0.000001	0.000003	0.000004	0.000003	0.000004	0.000004	Unknown
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	0.0000004	0.0000008	0.0000008	0.000001	0.000001	0.000001	Unknown
bis(2-Ethylhexyl)phthalate	mg/m3	0.00002	0.00003	0.00003	0.00002	0.00003	0.00004	Normal

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Hydrochloric Acid	mg/m3	72	100.00			0.0007	0.04	0.004	0.003	
Hydrofluoric Acid	mg/m3	72	95.83	0.000006	0.001	0.00003	0.002	0.0003	0.0002	
Sulfuric Acid	mg/m3	72	97.22	0.006	0.01	0.0009	0.04	0.01	0.01	
2-Butanone	mg/m3	73	100.00			0.0008	0.02	0.007	0.006	
Acetaldehyde	mg/m3	73	100.00			0.0008	0.12	0.02	0.004	
Acetone	mg/m3	73	100.00			0.002	0.28	0.03	0.008	
Acrolein	mg/m3	44	70.45	0.00008	0.0001	0.00010	0.0009	0.0003	0.0002	
Benzaldehyde	mg/m3	73	98.63	0.0001	0.0001	0.00009	0.02	0.002	0.001	
Crotonaldehyde	mg/m3	25	4.00	0.00009	0.0001	0.0001	0.0001	0.00005	0.00005	
Formaldehyde	mg/m3	44	100.00			0.0003	0.006	0.002	0.002	
Hexanal	mg/m3	73	97.26	0.00009	0.0001	0.00009	0.06	0.006	0.005	
Isovaleraldehyde	mg/m3	44	11.36	0.00008	0.0001	0.00009	0.0004	0.00007	0.00005	
Propionaldehyde	mg/m3	44	100.00			0.0002	0.002	0.0006	0.0006	
Tolualdehyde	mg/m3	44	86.36	0.00008	0.00009	0.0001	0.006	0.001	0.0006	
Valeraldehyde	mg/m3	44	75.00	0.00008	0.00010	0.00008	0.004	0.0003	0.0002	
n-Butyraldehyde	mg/m3	73	98.63	0.0001	0.0001	0.00010	0.03	0.008	0.001	
1,2,3,4,6,7,8,9-OCDD	mg/m3	70	100.00			0.000000005	0.0000007	0.00000001	0.00000004	
1,2,3,4,6,7,8,9-OCDF	mg/m3	70	100.00			0.000000002	0.00000009	0.00000006	0.00000003	
1,2,3,4,6,7,8-HpCDD	mg/m3	70	100.00			0.000000002	0.00000003	0.00000003	0.00000001	
1,2,3,4,6,7,8-HpCDF	mg/m3	70	100.00			0.000000003	0.00000004	0.00000006	0.00000004	
1,2,3,4,7,8,9-HpCDF	mg/m3	70	100.00			0.000000000	0.00000001	0.00000001	0.000000006	
1,2,3,4,7,8-HxCDD	mg/m3	70	100.00			0.000000000	0.000000001	0.000000002	0.000000001	
1,2,3,4,7,8-HxCDF	mg/m3	70	100.00			0.000000001	0.000000007	0.000000009	0.000000006	
1,2,3,6,7,8-HxCDD	mg/m3	70	100.00			0.000000000	0.000000002	0.000000003	0.000000002	
1,2,3,6,7,8-HxCDF	mg/m3	70	100.00			0.000000001	0.000000005	0.000000009	0.000000006	

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,2,3,7,8,9-HxCDD	mg/m3	70	100.00			0.000000000	0.000000001	0.000000002	0.000000001	
1,2,3,7,8,9-HxCDF	mg/m3	70	100.00			0.000000000	0.000000004	0.000000007	0.000000004	
1,2,3,7,8-PeCDD	mg/m3	70	100.00			0.000000000	0.000000008	0.000000001	0.000000000	
1,2,3,7,8-PeCDF	mg/m3	70	100.00			0.000000000	0.000000003	0.000000004	0.000000002	
2,3,4,6,7,8-HxCDF	mg/m3	70	100.00			0.000000002	0.000000001	0.000000002	0.000000001	
2,3,4,7,8-PeCDF	mg/m3	70	100.00			0.000000001	0.000000005	0.000000008	0.000000005	
2,3,7,8-TCDD	mg/m3	68	75.00	0.000000000	0.000000000	0.000000000	0.000000002	0.000000000	0.000000000	0.000000000
2,3,7,8-TCDF	mg/m3	70	100.00			0.000000000	0.000000002	0.000000002	0.000000001	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	70	100.00			0.000000002	0.000000008	0.000000001	0.000000008	
Total HpCDD	mg/m3	70	100.00			0.000000004	0.000000007	0.000000005	0.000000003	
Total HpCDF	mg/m3	70	100.00			0.000000006	0.000000008	0.000000001	0.000000007	
Total HxCDD	mg/m3	70	100.00			0.000000007	0.000000006	0.000000006	0.000000003	
Total HxCDF	mg/m3	70	100.00			0.000000001	0.000000007	0.000000001	0.000000007	
Total PeCDD	mg/m3	70	100.00			0.000000005	0.000000006	0.000000004	0.000000002	
Total PeCDF	mg/m3	70	100.00			0.000000002	0.000000008	0.000000001	0.000000007	
Total TCDD	mg/m3	70	100.00			0.000000006	0.000000009	0.000000004	0.000000002	
Total TCDF	mg/m3	70	100.00			0.000000003	0.000000010	0.000000001	0.000000008	
1,1,1-Trichloroethane	mg/m3	73	98.63	0.0003	0.0003	0.0002	0.004	0.0006	0.0005	
1,1,2,2-Tetrachloroethane	mg/m3	73	27.40	0.0002	0.001	0.0002	0.004	0.0004	0.0002	
1,1,2-Trichloroethane	mg/m3	73	2.74	0.00009	0.0010	0.0001	0.0006	0.0002	0.0002	0.00005
1,1-Dichloroethylene	mg/m3	73	17.81	0.00008	0.0008	0.00005	0.0002	0.0001	0.0001	0.00004
1,2,3-Trimethylbenzene	mg/m3	73	86.30	0.0002	0.002	0.00005	0.001	0.0005	0.0004	
1,2,4-Trimethylbenzene	mg/m3	73	100.00			0.0005	0.006	0.002	0.002	
1,2-Dibromoethane	mg/m3	73	2.74	0.00008	0.001	0.00008	0.00008	0.0002	0.0001	
1,2-Dichloroethane	mg/m3	73	17.81	0.0001	0.0008	0.0001	0.0005	0.0002	0.0002	
1,2-Dichloropropane	mg/m3	73	4.11	0.00007	0.0005	0.0001	0.0003	0.00010	0.00008	0.00003
1,3,5-Trimethylbenzene	mg/m3	73	94.52	0.0006	0.0009	0.0001	0.002	0.0006	0.0005	

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Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,3-Butadiene	mg/m3	73	89.04	0.0001	0.0005	0.0001	0.002	0.0004	0.0003	
1,4-Dioxane	mg/m3	73	35.62	0.0005	0.004	0.0001	0.009	0.001	0.0006	
1-Butanol	mg/m3	73	98.63	0.001	0.001	0.002	0.07	0.01	0.01	
1-Decene	mg/m3	73	38.36	0.0002	0.008	0.0001	0.005	0.0007	0.0002	
1-Heptene	mg/m3	73	34.25	0.0001	0.001	0.0001	0.003	0.0003	0.0002	
1-Hexene	mg/m3	73	56.16	0.0001	0.001	0.0001	0.001	0.0004	0.0003	0.00007
1-Nonene	mg/m3	73	26.03	0.0002	0.001	0.0001	0.001	0.0002	0.0002	0.00008
1-Octene	mg/m3	73	36.99	0.0001	0.002	0.00006	0.003	0.0004	0.0003	
1-Pentene	mg/m3	73	82.19	0.0001	0.0004	0.0002	0.002	0.0005	0.0005	
1-Propanol	mg/m3	73	27.40	0.0005	0.05	0.0002	0.008	0.007	0.003	
1-Undecene	mg/m3	73	17.81	0.00006	0.002	0.00007	0.003	0.0003	0.00008	0.00003
2,2,3-Trimethylpentane	mg/m3	73	17.81	0.00010	0.0009	0.00009	0.001	0.0002	0.0002	
2,2,4-Trimethylpentane	mg/m3	73	80.82	0.00008	0.0005	0.0001	0.008	0.0005	0.0004	
2,2,5-Trimethylhexane	mg/m3	73	6.85	0.0002	0.002	0.00008	0.0008	0.0003	0.0003	0.00008
2,3,4-Trimethylpentane	mg/m3	73	21.92	0.00005	0.0005	0.0005	0.003	0.0004	0.0001	0.00002
2,3-Dimethylbutane	mg/m3	73	71.23	0.0001	0.0006	0.0001	0.004	0.0005	0.0003	
2,3-Dimethylpentane	mg/m3	73	50.68	0.00004	0.004	0.0001	0.0007	0.0003	0.0002	0.00002
2,4,4-Trimethyl-1-Pentene	mg/m3	73	46.58	0.0001	0.0009	0.00007	0.0006	0.0002	0.0002	0.00007
2,4-Dimethylpentane	mg/m3	73	28.77	0.00008	0.0008	0.0001	0.001	0.0002	0.0002	0.00004
2,5-Dimethylhexane	mg/m3	73	28.77	0.0001	0.001	0.00008	0.001	0.0002	0.0002	
2-Methyl-1-Pentene	mg/m3	73	19.18	0.0001	0.001	0.00005	0.0003	0.0002	0.0002	
2-Methyl-2-Pentene	mg/m3	73	15.07	0.0001	0.0009	0.00004	0.0004	0.0002	0.0002	
2-Methylheptane	mg/m3	73	27.40	0.00009	0.005	0.0001	0.010	0.0005	0.0002	
2-Propanol	mg/m3	73	100.00			0.003	1.96	0.04	0.009	
3-Methyl-1-Butene	mg/m3	73	10.96	0.00005	0.0006	0.00004	0.0005	0.0001	0.0001	
3-Methylheptane	mg/m3	73	23.29	0.0001	0.0008	0.00006	0.008	0.0003	0.0002	
3-Methylhexane	mg/m3	73	47.95	0.00004	0.0005	0.0004	0.01	0.0008	0.0002	
3-Methylpentane	mg/m3	73	98.63	0.0002	0.0002	0.0004	0.007	0.002	0.001	

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
4-Methyl-1-Pentene	mg/m3	73	6.85	0.0001	0.0010	0.00006	0.0003	0.0001	0.0001	0.00005
4-Nonene	mg/m3	73	8.22	0.0001	0.002	0.00007	0.001	0.0002	0.0002	
Acetonitrile	mg/m3	73	53.42	0.0002	0.002	0.0007	0.09	0.003	0.001	
Acrylonitrile	mg/m3	73	20.55	0.00009	0.002	0.00004	0.002	0.0003	0.0002	
Benzene	mg/m3	73	100.00			0.0009	0.01	0.003	0.003	
Benzyl Chloride	mg/m3	71	1.41	0.00010	0.005	0.002	0.002	0.0003	0.0001	
Bromomethane	mg/m3	73	38.36	0.00008	0.004	0.00005	0.0005	0.0002	0.0001	0.00004
Carbon Tetrachloride	mg/m3	73	97.26	0.0002	0.0002	0.0003	0.001	0.0006	0.0006	
Chlorobenzene	mg/m3	73	32.88	0.00006	0.0004	0.00006	0.002	0.0002	0.0001	
Chlorodifluoromethane	mg/m3	73	100.00			0.0007	0.06	0.004	0.002	
Chloroethane	mg/m3	73	13.70	0.00005	0.0006	0.0002	0.001	0.0002	0.0002	
Chloroform	mg/m3	73	76.71	0.0001	0.0010	0.00008	0.0007	0.0002	0.0002	
Chloromethane	mg/m3	73	100.00			0.001	0.003	0.002	0.002	
Cumene	mg/m3	73	38.36	0.00004	0.001	0.00008	0.001	0.0003	0.0003	
Cyclohexane	mg/m3	73	89.04	0.0002	0.0005	0.0003	0.02	0.002	0.001	
Cyclohexene	mg/m3	73	30.14	0.0001	0.0007	0.00005	0.0007	0.0002	0.0002	
Cyclopentane	mg/m3	73	63.01	0.00008	0.0006	0.00008	0.009	0.0004	0.0002	
Cyclopentene	mg/m3	73	5.48	0.00006	0.0005	0.00004	0.0002	0.0001	0.00010	0.00003
Dichlorodifluoromethane	mg/m3	73	100.00			0.002	0.006	0.003	0.003	
Dichlorofluoromethane	mg/m3	73	1.37	0.00008	0.004	0.0001	0.0001	0.0006	0.0005	0.00004
Ethanol	mg/m3	73	100.00			0.009	25.21	0.38	0.03	
Ethylbenzene	mg/m3	73	100.00			0.001	0.05	0.006	0.005	
Freon 113	mg/m3	73	100.00			0.0003	0.002	0.0008	0.0008	
Freon 114	mg/m3	73	26.03	0.00007	0.001	0.00007	0.0001	0.0002	0.0001	
Halocarbon 134A	mg/m3	73	56.16	0.0001	0.004	0.0001	0.02	0.0006	0.0002	
Heptanal	mg/m3	73	32.88	0.0002	0.04	0.001	0.02	0.007	0.007	0.00009
Indan	mg/m3	73	35.62	0.00005	0.0008	0.00005	0.0007	0.0002	0.0001	0.00002
Indene	mg/m3	73	1.37	0.00009	0.0006	0.00006	0.00006	0.0001	0.0001	0.00005

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Isobutane	mg/m3	73	100.00			0.0009	0.18	0.007	0.004	
Isobutene + 1-Butene	mg/m3	73	100.00			0.0007	0.01	0.002	0.002	
Isoheptane	mg/m3	73	91.78	0.00006	0.0003	0.0002	0.008	0.001	0.0008	
Isohexane	mg/m3	72	72.22	0.00006	0.0007	0.0008	0.01	0.002	0.002	
Isopentane	mg/m3	71	92.96	0.00009	0.0005	0.002	0.18	0.009	0.006	
Isoprene	mg/m3	73	73.97	0.00007	0.0005	0.00007	0.001	0.0002	0.0002	
Methyl t-Butylether	mg/m3	73	15.07	0.0001	0.0009	0.00005	0.0004	0.0002	0.0002	
Methylcyclohexane	mg/m3	73	61.64	0.00008	0.0006	0.00008	0.007	0.0004	0.0002	0.00004
Methylcyclopentane	mg/m3	72	79.17	0.00007	0.0004	0.0002	0.02	0.0009	0.0006	0.00003
Methylcyclopentene	mg/m3	73	1.37	0.00007	0.0005	0.0003	0.0003	0.0001	0.00010	
Methylene Chloride	mg/m3	73	100.00			0.002	0.14	0.009	0.005	
Methylisobutylketone	mg/m3	73	93.15	0.0002	0.0004	0.0005	0.01	0.002	0.002	
Neohexane	mg/m3	73	54.79	0.0001	0.0006	0.0002	0.001	0.0004	0.0003	
Neopentane	mg/m3	73	5.48	0.00005	0.0006	0.00003	0.0004	0.00008	0.00006	
Propane	mg/m3	73	100.00			0.003	0.07	0.01	0.01	
Propylene	mg/m3	73	100.00			0.0005	0.14	0.005	0.002	
Styrene	mg/m3	73	91.78	0.0004	0.001	0.0001	0.004	0.0007	0.0005	
Tetrachloroethylene	mg/m3	73	90.41	0.0005	0.0007	0.0001	0.01	0.001	0.0008	
Toluene	mg/m3	73	100.00			0.007	0.52	0.03	0.02	
Trichloroethylene	mg/m3	73	100.00			0.0002	0.005	0.002	0.001	
Trichlorofluoromethane	mg/m3	73	100.00			0.001	0.04	0.002	0.002	
Vinyl Acetate	mg/m3	72	62.50	0.00005	0.0003	0.0008	0.03	0.004	0.003	
Vinyl Chloride	mg/m3	73	8.22	0.00007	0.0004	0.0001	0.0004	0.0001	0.00009	
a-Pinene	mg/m3	73	47.95	0.0002	0.0009	0.0001	0.04	0.0008	0.0002	
b-Pinene	mg/m3	73	1.37	0.0001	0.001	0.0002	0.0002	0.0002	0.0001	
c-1,2-Dichloroethylene	mg/m3	73	1.37	0.00008	0.004	0.00008	0.00008	0.0002	0.0001	0.00004
c-1,3-Dichloropropene	mg/m3	73	10.96	0.0001	0.005	0.00008	0.0005	0.0002	0.0001	
c-2-Butene	mg/m3	73	89.04	0.0002	0.0004	0.00010	0.001	0.0004	0.0003	

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
c-2-Hexene	mg/m3	73	1.37	0.00007	0.0007	0.0002	0.0002	0.0001	0.0001	0.00003
c-2-Pentene	mg/m3	73	38.36	0.00008	0.0006	0.00006	0.0006	0.0002	0.0001	
c-3-Hexene	mg/m3	73	6.85	0.00007	0.0008	0.0001	0.0003	0.0002	0.0001	0.00003
m-Diethylbenzene	mg/m3	73	23.29	0.00006	0.003	0.0001	0.0010	0.0003	0.0002	0.00003
m-Ethyltoluene	mg/m3	73	97.26	0.0005	0.0005	0.0003	0.003	0.001	0.001	
n-Butane	mg/m3	73	100.00			0.002	0.03	0.007	0.006	
n-Butylbenzene	mg/m3	73	15.07	0.0001	0.0007	0.0001	0.0007	0.0002	0.0001	0.00005
n-Decane	mg/m3	73	97.26	0.0010	0.001	0.0006	0.08	0.003	0.002	
n-Heptane	mg/m3	73	86.30	0.00008	0.0005	0.0003	0.009	0.001	0.0009	0.00004
n-Hexane	mg/m3	73	100.00			0.0003	0.02	0.003	0.002	
n-Nonane	mg/m3	73	93.15	0.0006	0.002	0.0004	0.005	0.001	0.001	
n-Octane	mg/m3	73	94.52	0.0002	0.0005	0.0002	0.02	0.0009	0.0006	
n-Pentane	mg/m3	73	98.63	0.0005	0.0005	0.0007	0.29	0.008	0.003	
n-Propylbenzene	mg/m3	73	79.45	0.0003	0.002	0.0001	0.001	0.0004	0.0004	
n-Undecane	mg/m3	73	94.52	0.0002	0.0007	0.0002	0.10	0.003	0.001	
o-Ethyltoluene	mg/m3	73	90.41	0.0005	0.002	0.0001	0.002	0.0006	0.0005	
o-Xylene	mg/m3	73	100.00			0.0006	0.02	0.003	0.002	
p-Diethylbenzene	mg/m3	73	4.11	0.0002	0.003	0.0001	0.0006	0.0003	0.0002	
p-Ethyltoluene	mg/m3	73	93.15	0.0006	0.002	0.0002	0.002	0.0007	0.0006	
p-Isopropyltoluene	mg/m3	73	13.70	0.0001	0.001	0.00009	0.0007	0.0002	0.0002	
p-Xylene + m-Xylene	mg/m3	73	100.00			0.002	0.06	0.007	0.006	
t-1,2-Dichloroethylene	mg/m3	73	1.37	0.00008	0.0008	0.00008	0.00008	0.0001	0.0001	0.00004
t-1,3-Dichloropropene	mg/m3	73	5.48	0.0001	0.0008	0.00006	0.0004	0.0001	0.0001	0.00006
t-2-Butene	mg/m3	73	90.41	0.0002	0.0003	0.00008	0.002	0.0004	0.0003	
t-2-Hexene	mg/m3	73	1.37	0.00007	0.0007	0.00009	0.00009	0.0001	0.0001	0.00003
t-2-Pentene	mg/m3	73	63.01	0.00006	0.0006	0.00007	0.001	0.0003	0.0002	0.00003
t-Butylbenzene	mg/m3	73	2.74	0.0001	0.005	0.0003	0.0004	0.0003	0.0001	0.00005

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Mercury	mg/m3	70	52.86	0.0000003	0.0000007	0.0000004	0.000009	0.000006	0.000004	0.0000002
4,4'-DDE	mg/m3	39	2.56	0.0000002	0.0000010	0.00000004	0.00000004	0.0000002	0.0000002	
4,4'-DDT	mg/m3	39	2.56	0.0000001	0.0000004	0.0000006	0.0000006	0.0000001	0.0000001	
Aldrin	mg/m3	39	2.56	0.00000008	0.000001	0.000001	0.000001	0.0000001	0.00000009	
Dieldrin	mg/m3	39	15.38	0.00000010	0.0000006	0.0000002	0.0000007	0.0000002	0.0000001	
Endosulfan I	mg/m3	39	5.13	0.00000005	0.0000010	0.0000004	0.0000005	0.0000002	0.00000006	
Endosulfan II	mg/m3	39	2.56	0.0000001	0.000001	0.00000008	0.00000008	0.0000002	0.0000002	
Endosulfan Sulfate	mg/m3	39	5.13	0.0000002	0.0000008	0.0000003	0.0000004	0.0000002	0.0000002	
Endrin	mg/m3	39	5.13	0.0000004	0.000002	0.0000004	0.0000005	0.0000004	0.0000004	
Endrin Aldehyde	mg/m3	39	2.56	0.00000010	0.000001	0.0000009	0.0000009	0.0000003	0.0000002	
Endrin Ketone	mg/m3	39	2.56	0.00000009	0.0000008	0.00000009	0.00000009	0.0000002	0.0000002	
Heptachlor	mg/m3	39	30.77	0.00000006	0.0000006	0.00000003	0.0000007	0.0000002	0.00000009	
Heptachlor epoxide	mg/m3	39	7.69	0.00000008	0.0000006	0.0000003	0.0000007	0.0000002	0.0000002	
Isodrin	mg/m3	39	17.95	0.00000004	0.0000005	0.0000003	0.000001	0.0000001	0.00000005	
alpha-BHC	mg/m3	39	20.51	0.00000007	0.0000002	0.0000006	0.000001	0.0000002	0.00000006	
alpha-Chlordane	mg/m3	39	38.46	0.00000008	0.0000005	0.0000001	0.000002	0.0000004	0.0000002	
beta-BHC	mg/m3	39	2.56	0.00000004	0.0000004	0.00000008	0.00000008	0.0000001	0.0000001	
delta-BHC	mg/m3	39	7.69	0.00000001	0.0000006	0.0000005	0.0000008	0.0000001	0.00000009	
gamma-BHC	mg/m3	38	34.21	0.00000009	0.0000003	0.0000001	0.000004	0.0000004	0.00000007	
gamma-Chlordane	mg/m3	39	56.41	0.00000005	0.0000005	0.00000003	0.000001	0.0000003	0.0000003	
Antimony	mg/m3	47	100.00			0.0000006	0.00006	0.00001	0.000010	
Arsenic	mg/m3	47	93.62	0.000002	0.000002	0.00000010	0.000006	0.000002	0.000001	
Beryllium	mg/m3	46	86.96	0.00000005	0.000001	0.00000002	0.000001	0.0000002	0.00000008	
Cadmium	mg/m3	47	100.00			0.0000001	0.00003	0.000003	0.000002	
Chromium	mg/m3	47	100.00			0.000002	0.00001	0.000005	0.000004	

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Copper	mg/m3	47	100.00			0.00002	0.0003	0.00007	0.00005	
Lead	mg/m3	47	100.00			0.00001	0.0008	0.0001	0.00006	
Nickel	mg/m3	47	100.00			0.000001	0.00001	0.000005	0.000005	
PM-10	mg/m3	47	100.00			0.008	0.17	0.06	0.05	
Selenium	mg/m3	47	87.23	0.000001	0.000002	0.00000008	0.000004	0.000001	0.0000009	
Silver	mg/m3	46	91.30	0.0000003	0.0000007	0.00000008	0.00001	0.000002	0.000001	
Thallium	mg/m3	47	70.21	0.000003	0.000004	0.00000009	0.000004	0.000001	0.000001	
Zinc	mg/m3	47	100.00			0.00005	0.0009	0.0002	0.0002	
1,2,4,5-Tetrachlorobenzene	mg/m3	40	2.50	0.000002	0.00003	0.000003	0.000003	0.000004	0.000004	
1,2,4-Trichlorobenzene	mg/m3	73	43.84	0.000003	0.009	0.000004	0.009	0.0006	0.0002	
1,2-Dichlorobenzene	mg/m3	73	27.40	0.000002	0.003	0.00001	0.003	0.0002	0.00002	
1,3-Dichlorobenzene	mg/m3	73	12.33	0.0000010	0.003	0.00006	0.002	0.0002	0.00006	
1,4-Dichlorobenzene	mg/m3	73	100.00			0.0001	0.005	0.002	0.001	
2-Methylnaphthalene	mg/m3	40	100.00			0.00003	0.0002	0.00009	0.00008	
2-Methylphenol	mg/m3	40	37.50	0.000007	0.00005	0.00001	0.00007	0.00002	0.00001	
2-Nitrophenol	mg/m3	40	60.00	0.000005	0.0001	0.00003	0.0002	0.00004	0.00004	
4-Methylphenol/3-Methylphenol	mg/m3	40	57.50	0.000007	0.00005	0.00002	0.00008	0.00003	0.00003	
4-Nitrophenol	mg/m3	40	5.00	0.00003	0.001	0.00003	0.00004	0.0001	0.0001	
Acenaphthene	mg/m3	40	20.00	0.000002	0.00002	0.000006	0.00003	0.00006	0.00003	
Acenaphthylene	mg/m3	40	37.50	0.000002	0.00004	0.000003	0.00003	0.00007	0.00006	
Acetophenone	mg/m3	40	37.50	0.000004	0.00003	0.0001	0.0009	0.0001	0.00005	
Benz(a)anthracene	mg/m3	40	7.50	0.000002	0.00003	0.0000010	0.000007	0.00004	0.00004	0.0000010
Benzo(b)fluoranthene	mg/m3	40	5.00	0.000003	0.00004	0.000002	0.000003	0.00006	0.00005	
Benzo(k)fluoranthene	mg/m3	40	5.00	0.000002	0.00003	0.000002	0.000003	0.00004	0.00003	
Benzoic acid	mg/m3	40	90.00	0.00009	0.0002	0.0002	0.001	0.0005	0.0005	
Benzyl alcohol	mg/m3	40	65.00	0.000005	0.00004	0.00002	0.0001	0.00003	0.00003	
Butylbenzylphthalate	mg/m3	40	10.00	0.0000010	0.00002	0.000002	0.00003	0.00005	0.00003	

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Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Carbazole	mg/m3	40	2.50	0.0000010	0.00003	0.000002	0.000002	0.000005	0.000005	0.0000005
Chrysene	mg/m3	40	7.50	0.000002	0.00003	0.000003	0.000008	0.000003	0.000002	
Di-n-butylphthalate	mg/m3	40	92.50	0.000006	0.00002	0.00002	0.0002	0.00006	0.00004	
Di-n-octylphthalate	mg/m3	40	2.50	0.0000010	0.00003	0.00001	0.00001	0.000004	0.000004	0.0000005
Dibenzofuran	mg/m3	40	80.00	0.000004	0.00003	0.000008	0.00005	0.00002	0.00002	
Diethylphthalate	mg/m3	40	45.00	0.000003	0.00001	0.000006	0.0002	0.00001	0.000004	
Dimethylphthalate	mg/m3	40	25.00	0.000003	0.00003	0.00001	0.00003	0.000008	0.000004	
Fluoranthene	mg/m3	40	32.50	0.000003	0.00002	0.000004	0.00002	0.000005	0.000004	
Fluorene	mg/m3	40	50.00	0.000005	0.00002	0.000008	0.00003	0.000010	0.000009	
Hexachloro-1,3-Butadiene	mg/m3	73	30.14	0.000002	0.01	0.0001	0.01	0.0009	0.0004	
Isophorone	mg/m3	40	72.50	0.000006	0.00003	0.00001	0.00007	0.00003	0.00002	
Naphthalene	mg/m3	73	69.86	0.00003	0.001	0.0002	0.0007	0.0003	0.0003	
Pentachlorobenzene	mg/m3	40	2.50	0.000002	0.00003	0.000003	0.000003	0.000003	0.000003	
Phenanthrene	mg/m3	40	92.50	0.000006	0.00003	0.00001	0.00007	0.00002	0.00002	
Phenol	mg/m3	40	97.50	0.00003	0.00003	0.00004	0.0004	0.0001	0.00010	
Pyrene	mg/m3	40	30.00	0.000002	0.00003	0.000002	0.00001	0.000004	0.000003	
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	40	7.50	0.0000008	0.000008	0.0000004	0.000001	0.000001	0.000001	
bis(2-Ethylhexyl)phthalate	mg/m3	40	70.00	0.000005	0.00003	0.00002	0.00009	0.00003	0.00003	

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Hydrochloric Acid	mg/m3	0.005	0.004	0.005	0.003	0.005	0.004	Unknown
Hydrofluoric Acid	mg/m3	0.0004	0.0003	0.0004	0.0002	0.0004	0.0005	Unknown
Sulfuric Acid	mg/m3	0.007	0.01	0.01	0.01	0.01	0.01	Unknown
2-Butanone	mg/m3	0.005	0.007	0.008	0.005	0.008	0.009	Normal/Lognormal
Acetaldehyde	mg/m3	0.03	0.02	0.04	0.008	0.03	0.04	Lognormal
Acetone	mg/m3	0.05	0.03	0.04	0.01	0.04	0.04	Lognormal
Acrolein	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0004	Unknown
Benzaldehyde	mg/m3	0.003	0.002	0.003	0.001	0.003	0.003	Lognormal
Crotonaldehyde	mg/m3	0.00001	0.00005	0.0001	0.00005	0.00006	0.00005	Unknown
Formaldehyde	mg/m3	0.002	0.002	0.003	0.002	0.003	0.003	Lognormal
Hexanal	mg/m3	0.009	0.006	0.02	0.002	0.008	0.02	Lognormal
Isovaleraldehyde	mg/m3	0.00007	0.00007	0.00009	0.00006	0.00009	0.00007	Unknown
Propionaldehyde	mg/m3	0.0004	0.0006	0.0008	0.0006	0.0007	0.0008	Lognormal
Tolualdehyde	mg/m3	0.002	0.001	0.002	0.0006	0.002	0.003	Unknown
Valeraldehyde	mg/m3	0.0007	0.0003	0.0005	0.0002	0.0005	0.0004	Unknown
n-Butyraldehyde	mg/m3	0.009	0.008	0.03	0.002	0.009	0.03	Lognormal
1,2,3,4,6,7,8,9-OCDD	mg/m3	0.00000008	0.00000001	0.00000003	0.00000004	0.00000003	0.00000010	Unknown
1,2,3,4,6,7,8,9-OCDF	mg/m3	0.00000001	0.000000006	0.000000007	0.000000003	0.000000008	0.000000007	Lognormal
1,2,3,4,6,7,8-HpCDD	mg/m3	0.000000004	0.000000003	0.000000003	0.000000002	0.000000003	0.000000003	Lognormal
1,2,3,4,6,7,8-HpCDF	mg/m3	0.000000006	0.000000006	0.000000007	0.000000004	0.000000007	0.000000007	Lognormal
1,2,3,4,7,8,9-HpCDF	mg/m3	0.000000002	0.000000001	0.000000002	0.000000007	0.000000002	0.000000002	Lognormal
1,2,3,4,7,8-HxCDD	mg/m3	0.000000002	0.000000002	0.000000003	0.000000001	0.000000003	0.000000003	Lognormal
1,2,3,4,7,8-HxCDF	mg/m3	0.000000001	0.000000009	0.000000001	0.000000006	0.000000001	0.000000001	Lognormal
1,2,3,6,7,8-HxCDD	mg/m3	0.000000004	0.000000003	0.000000004	0.000000002	0.000000004	0.000000004	Lognormal
1,2,3,6,7,8-HxCDF	mg/m3	0.000000009	0.000000009	0.000000001	0.000000006	0.000000001	0.000000001	Lognormal

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,2,3,7,8,9-HxCDD	mg/m3	0.0000000002	0.0000000002	0.0000000003	0.0000000002	0.0000000003	0.0000000003	Lognormal
1,2,3,7,8,9-HxCDF	mg/m3	0.0000000007	0.0000000007	0.0000000009	0.0000000004	0.0000000008	0.0000000009	Lognormal
1,2,3,7,8-PeCDD	mg/m3	0.0000000001	0.0000000001	0.0000000001	0.0000000000	0.0000000001	0.0000000001	Lognormal
1,2,3,7,8-PeCDF	mg/m3	0.0000000004	0.0000000004	0.0000000005	0.0000000003	0.0000000005	0.0000000004	Unknown
2,3,4,6,7,8-HxCDF	mg/m3	0.0000000002	0.0000000002	0.0000000003	0.0000000001	0.0000000003	0.0000000003	Lognormal
2,3,4,7,8-PeCDF	mg/m3	0.0000000009	0.0000000008	0.0000000010	0.0000000006	0.0000000001	0.0000000010	Lognormal
2,3,7,8-TCDD	mg/m3	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	Lognormal
2,3,7,8-TCDF	mg/m3	0.0000000003	0.0000000002	0.0000000003	0.0000000002	0.0000000003	0.0000000002	Unknown
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	0.0000000001	0.0000000001	0.0000000001	0.0000000009	0.0000000001	0.0000000001	Lognormal
Total HpCDD	mg/m3	0.0000000009	0.0000000005	0.0000000006	0.0000000003	0.0000000007	0.0000000006	Lognormal
Total HpCDF	mg/m3	0.0000000001	0.0000000001	0.0000000001	0.0000000007	0.0000000001	0.0000000001	Lognormal
Total HxCDD	mg/m3	0.0000000008	0.0000000006	0.0000000007	0.0000000004	0.0000000007	0.0000000007	Lognormal
Total HxCDF	mg/m3	0.0000000001	0.0000000001	0.0000000001	0.0000000008	0.0000000001	0.0000000001	Lognormal
Total PeCDD	mg/m3	0.0000000008	0.0000000004	0.0000000005	0.0000000002	0.0000000005	0.0000000004	Unknown
Total PeCDF	mg/m3	0.0000000001	0.0000000001	0.0000000001	0.0000000008	0.0000000001	0.0000000001	Lognormal
Total TCDD	mg/m3	0.0000000001	0.0000000004	0.0000000007	0.0000000002	0.0000000007	0.0000000004	Unknown
Total TCDF	mg/m3	0.0000000002	0.0000000001	0.0000000002	0.0000000009	0.0000000002	0.0000000001	Unknown
1,1,1-Trichloroethane	mg/m3	0.0005	0.0006	0.0007	0.0005	0.0007	0.0007	Unknown
1,1,2,2-Tetrachloroethane	mg/m3	0.0006	0.0004	0.0006	0.0003	0.0006	0.0005	Unknown
1,1,2-Trichloroethane	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	Normal/Lognormal
1,1-Dichloroethylene	mg/m3	0.00007	0.0001	0.0001	0.00010	0.0001	0.0001	Lognormal
1,2,3-Trimethylbenzene	mg/m3	0.0003	0.0005	0.0006	0.0004	0.0005	0.0006	Lognormal
1,2,4-Trimethylbenzene	mg/m3	0.001	0.002	0.002	0.002	0.002	0.002	Lognormal
1,2-Dibromoethane	mg/m3	0.0001	0.00008	0.00008	0.0001	0.0002	0.0002	Unknown
1,2-Dichloroethane	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
1,2-Dichloropropane	mg/m3	0.00005	0.00010	0.0001	0.00009	0.0001	0.0001	Lognormal
1,3,5-Trimethylbenzene	mg/m3	0.0004	0.0006	0.0007	0.0005	0.0007	0.0007	Lognormal

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,3-Butadiene	mg/m3	0.0002	0.0004	0.0005	0.0003	0.0004	0.0005	Lognormal
1,4-Dioxane	mg/m3	0.001	0.001	0.001	0.0007	0.001	0.001	Unknown
1-Butanol	mg/m3	0.01	0.01	0.02	0.01	0.02	0.02	Unknown
1-Decene	mg/m3	0.0010	0.0007	0.0008	0.0004	0.0008	0.0008	Unknown
1-Heptene	mg/m3	0.0004	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
1-Hexene	mg/m3	0.0003	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
1-Nonene	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0003	0.0003	Unknown
1-Octene	mg/m3	0.0004	0.0004	0.0004	0.0003	0.0004	0.0004	Lognormal
1-Pentene	mg/m3	0.0003	0.0005	0.0006	0.0004	0.0006	0.0006	Lognormal
1-Propanol	mg/m3	0.007	0.007	0.008	0.003	0.008	0.01	Lognormal
1-Undecene	mg/m3	0.0004	0.0003	0.0003	0.0001	0.0003	0.0003	Unknown
2,2,3-Trimethylpentane	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2,2,4-Trimethylpentane	mg/m3	0.0009	0.0005	0.0007	0.0003	0.0007	0.0006	Unknown
2,2,5-Trimethylhexane	mg/m3	0.0002	0.0003	0.0004	0.0003	0.0004	0.0004	Normal/Lognormal
2,3,4-Trimethylpentane	mg/m3	0.0006	0.0004	0.0005	0.0002	0.0005	0.0005	Lognormal
2,3-Dimethylbutane	mg/m3	0.0007	0.0005	0.0006	0.0003	0.0006	0.0006	Lognormal
2,3-Dimethylpentane	mg/m3	0.0004	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
2,4,4-Trimethyl-1-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2,4-Dimethylpentane	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2,5-Dimethylhexane	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0002	Unknown
2-Methyl-1-Pentene	mg/m3	0.00008	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
2-Methyl-2-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Normal/Lognormal
2-Methylheptane	mg/m3	0.001	0.0005	0.0007	0.0002	0.0007	0.0005	Unknown
2-Propanol	mg/m3	0.23	0.04	0.08	0.01	0.08	0.02	Unknown
3-Methyl-1-Butene	mg/m3	0.00008	0.0001	0.0001	0.00009	0.0001	0.0001	Lognormal
3-Methylheptane	mg/m3	0.0009	0.0003	0.0005	0.0002	0.0005	0.0003	Unknown
3-Methylhexane	mg/m3	0.001	0.0008	0.002	0.0003	0.001	0.002	Lognormal
3-Methylpentane	mg/m3	0.001	0.002	0.002	0.001	0.002	0.002	Unknown

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
4-Methyl-1-Pentene	mg/m3	0.00010	0.0001	0.0002	0.0001	0.0002	0.0001	Unknown
4-Nonene	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Unknown
Acetonitrile	mg/m3	0.01	0.003	0.004	0.0008	0.005	0.004	Lognormal
Acrylonitrile	mg/m3	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
Benzene	mg/m3	0.002	0.003	0.004	0.003	0.004	0.004	Lognormal
Benzyl Chloride	mg/m3	0.0005	0.0003	0.002	0.0002	0.0004	0.0004	Unknown
Bromomethane	mg/m3	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	Unknown
Carbon Tetrachloride	mg/m3	0.0002	0.0006	0.0007	0.0006	0.0007	0.0007	Normal
Chlorobenzene	mg/m3	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
Chlorodifluoromethane	mg/m3	0.007	0.004	0.005	0.002	0.005	0.004	Unknown
Chloroethane	mg/m3	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
Chloroform	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Chloromethane	mg/m3	0.0004	0.002	0.002	0.002	0.002	0.002	Lognormal
Cumene	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0004	Unknown
Cyclohexane	mg/m3	0.003	0.002	0.003	0.001	0.002	0.003	Lognormal
Cyclohexene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Cyclopentane	mg/m3	0.001	0.0004	0.0006	0.0002	0.0006	0.0004	Unknown
Cyclopentene	mg/m3	0.00005	0.0001	0.0001	0.00009	0.0001	0.0001	Lognormal
Dichlorodifluoromethane	mg/m3	0.0005	0.003	0.003	0.003	0.003	0.003	Unknown
Dichlorofluoromethane	mg/m3	0.0005	0.0001	0.0001	0.0004	0.0007	0.0009	Lognormal
Ethanol	mg/m3	2.95	0.38	0.96	0.04	0.96	0.07	Unknown
Ethylbenzene	mg/m3	0.006	0.006	0.007	0.005	0.007	0.007	Lognormal
Freon 113	mg/m3	0.0002	0.0008	0.0009	0.0008	0.0009	0.0009	Unknown
Freon 114	mg/m3	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	Lognormal
Halocarbon 134A	mg/m3	0.002	0.0006	0.001	0.0003	0.001	0.0006	Unknown
Heptanal	mg/m3	0.006	0.007	0.008	0.003	0.008	0.03	Normal
Indan	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
Indene	mg/m3	0.00007	0.00006	0.00006	0.0001	0.0001	0.0002	Normal/Lognormal

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Isobutane	mg/m3	0.02	0.007	0.01	0.004	0.01	0.007	Unknown
Isobutene + 1-Butene	mg/m3	0.002	0.002	0.003	0.002	0.003	0.002	Unknown
Isoheptane	mg/m3	0.001	0.001	0.001	0.0007	0.001	0.001	Unknown
Isohexane	mg/m3	0.002	0.002	0.002	0.0009	0.002	0.007	Unknown
Isopentane	mg/m3	0.02	0.009	0.01	0.005	0.01	0.01	Unknown
Isoprene	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
Methyl t-Butylether	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Normal/Lognormal
Methylcyclohexane	mg/m3	0.0008	0.0004	0.0005	0.0002	0.0005	0.0004	Unknown
Methylcyclopentane	mg/m3	0.002	0.0009	0.001	0.0005	0.001	0.001	Unknown
Methylcyclopentene	mg/m3	0.00006	0.0001	0.0003	0.0001	0.0001	0.0001	Lognormal
Methylene Chloride	mg/m3	0.02	0.009	0.01	0.006	0.01	0.010	Unknown
Methylisobutylketone	mg/m3	0.002	0.002	0.002	0.001	0.002	0.003	Unknown
Neohexane	mg/m3	0.0003	0.0004	0.0004	0.0003	0.0004	0.0004	Lognormal
Neopentane	mg/m3	0.00007	0.00008	0.00010	0.00007	0.00010	0.00010	Lognormal
Propane	mg/m3	0.01	0.01	0.01	0.01	0.02	0.01	Lognormal
Propylene	mg/m3	0.02	0.005	0.009	0.002	0.009	0.003	Unknown
Styrene	mg/m3	0.0006	0.0007	0.0008	0.0005	0.0008	0.0008	Lognormal
Tetrachloroethylene	mg/m3	0.001	0.001	0.001	0.0009	0.001	0.001	Lognormal
Toluene	mg/m3	0.06	0.03	0.04	0.02	0.04	0.03	Unknown
Trichloroethylene	mg/m3	0.0009	0.002	0.002	0.001	0.002	0.002	Lognormal
Trichlorofluoromethane	mg/m3	0.004	0.002	0.003	0.002	0.003	0.002	Unknown
Vinyl Acetate	mg/m3	0.005	0.004	0.03	0.0009	0.006	0.06	Lognormal
Vinyl Chloride	mg/m3	0.00007	0.0001	0.0001	0.00009	0.0001	0.0001	Unknown
a-Pinene	mg/m3	0.005	0.0008	0.002	0.0002	0.002	0.0004	Unknown
b-Pinene	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
c-1,2-Dichloroethylene	mg/m3	0.0004	0.00008	0.00008	0.0001	0.0003	0.0002	Unknown
c-1,3-Dichloropropene	mg/m3	0.0004	0.0002	0.0003	0.0002	0.0003	0.0002	Unknown
c-2-Butene	mg/m3	0.0002	0.0004	0.0004	0.0003	0.0004	0.0004	Lognormal

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
c-2-Hexene	mg/m3	0.00006	0.0001	0.0002	0.00010	0.0001	0.0001	Lognormal
c-2-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
c-3-Hexene	mg/m3	0.00009	0.0002	0.0002	0.0001	0.0002	0.0002	Normal/Lognormal
m-Diethylbenzene	mg/m3	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
m-Ethyltoluene	mg/m3	0.0008	0.001	0.001	0.001	0.001	0.001	Lognormal
n-Butane	mg/m3	0.004	0.007	0.008	0.006	0.008	0.008	Lognormal
n-Butylbenzene	mg/m3	0.00009	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
n-Decane	mg/m3	0.009	0.003	0.005	0.002	0.005	0.003	Unknown
n-Heptane	mg/m3	0.001	0.001	0.001	0.0007	0.001	0.001	Unknown
n-Hexane	mg/m3	0.003	0.003	0.003	0.002	0.003	0.003	Unknown
n-Nonane	mg/m3	0.0007	0.001	0.001	0.001	0.001	0.001	Lognormal
n-Octane	mg/m3	0.002	0.0009	0.001	0.0006	0.001	0.0009	Unknown
n-Pentane	mg/m3	0.03	0.008	0.01	0.003	0.01	0.006	Unknown
n-Propylbenzene	mg/m3	0.0003	0.0004	0.0005	0.0004	0.0005	0.0005	Lognormal
n-Undecane	mg/m3	0.01	0.003	0.005	0.001	0.005	0.002	Unknown
o-Ethyltoluene	mg/m3	0.0003	0.0006	0.0006	0.0005	0.0006	0.0006	Lognormal
o-Xylene	mg/m3	0.003	0.003	0.003	0.002	0.003	0.003	Unknown
p-Diethylbenzene	mg/m3	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
p-Ethyltoluene	mg/m3	0.0004	0.0007	0.0007	0.0006	0.0007	0.0007	Lognormal
p-Isopropyltoluene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
p-Xylene + m-Xylene	mg/m3	0.007	0.007	0.008	0.005	0.008	0.007	Unknown
t-1,2-Dichloroethylene	mg/m3	0.00007	0.00008	0.00008	0.0001	0.0001	0.0001	Lognormal
t-1,3-Dichloropropene	mg/m3	0.00007	0.0001	0.0001	0.0001	0.0001	0.0001	Unknown
t-2-Butene	mg/m3	0.0003	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
t-2-Hexene	mg/m3	0.00007	0.00009	0.00009	0.0001	0.0001	0.0001	Lognormal
t-2-Pentene	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
t-Butylbenzene	mg/m3	0.0004	0.0003	0.0004	0.0002	0.0004	0.0003	Unknown

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Mercury	mg/m3	0.00001	0.000006	0.000009	0.000001	0.000009	0.00003	Unknown
4,4'-DDE	mg/m3	0.0000007	0.0000004	0.0000004	0.000002	0.000003	0.000003	Unknown
4,4'-DDT	mg/m3	0.0000007	0.0000001	0.0000006	0.000001	0.000002	0.000002	Unknown
Aldrin	mg/m3	0.0000002	0.0000001	0.000001	0.000001	0.000002	0.000002	Unknown
Dieldrin	mg/m3	0.0000001	0.0000002	0.0000002	0.000002	0.000002	0.000002	Lognormal
Endosulfan I	mg/m3	0.0000002	0.0000002	0.0000002	0.0000010	0.000002	0.000002	Unknown
Endosulfan II	mg/m3	0.0000009	0.0000008	0.0000008	0.000002	0.000002	0.000002	Unknown
Endosulfan Sulfate	mg/m3	0.0000006	0.0000002	0.0000002	0.000002	0.000002	0.000002	Normal
Endrin	mg/m3	0.0000002	0.0000004	0.0000005	0.000004	0.000005	0.000005	Unknown
Endrin Aldehyde	mg/m3	0.0000001	0.0000003	0.0000009	0.000002	0.000003	0.000003	Unknown
Endrin Ketone	mg/m3	0.0000010	0.0000009	0.0000009	0.000002	0.000002	0.000003	Unknown
Heptachlor	mg/m3	0.0000002	0.0000002	0.0000003	0.000001	0.000003	0.000003	Unknown
Heptachlor epoxide	mg/m3	0.0000001	0.0000002	0.0000003	0.000002	0.000003	0.000003	Unknown
Isodrin	mg/m3	0.0000002	0.0000001	0.0000002	0.0000008	0.000002	0.000002	Unknown
alpha-BHC	mg/m3	0.0000003	0.0000002	0.0000003	0.0000009	0.000003	0.000003	Unknown
alpha-Chlordane	mg/m3	0.0000004	0.0000004	0.0000005	0.000002	0.000005	0.000007	Unknown
beta-BHC	mg/m3	0.0000003	0.0000008	0.0000008	0.0000010	0.000001	0.000001	Unknown
delta-BHC	mg/m3	0.0000002	0.0000001	0.0000002	0.0000009	0.000002	0.000002	Unknown
gamma-BHC	mg/m3	0.0000006	0.0000004	0.0000005	0.000001	0.000005	0.000006	Unknown
gamma-Chlordane	mg/m3	0.0000003	0.0000003	0.0000004	0.000002	0.000004	0.000006	Unknown
Antimony	mg/m3	0.00001	0.00001	0.00002	0.000009	0.00002	0.00002	Lognormal
Arsenic	mg/m3	0.000001	0.000002	0.000002	0.000001	0.000002	0.000003	Unknown
Beryllium	mg/m3	0.0000002	0.0000002	0.0000002	0.0000001	0.000002	0.000003	Unknown
Cadmium	mg/m3	0.000005	0.000003	0.000005	0.000002	0.000005	0.000005	Lognormal
Chromium	mg/m3	0.000002	0.000005	0.000005	0.000004	0.000005	0.000005	Lognormal

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Copper	mg/m3	0.00006	0.00007	0.00009	0.00006	0.00009	0.00008	Unknown
Lead	mg/m3	0.0002	0.0001	0.0002	0.00008	0.0002	0.0002	Unknown
Nickel	mg/m3	0.000002	0.000005	0.000006	0.000004	0.000006	0.000006	Lognormal
PM-10	mg/m3	0.03	0.06	0.06	0.05	0.06	0.06	Lognormal
Selenium	mg/m3	0.0000009	0.000001	0.000001	0.0000009	0.000001	0.000002	Unknown
Silver	mg/m3	0.000002	0.000002	0.000003	0.000001	0.000003	0.000004	Unknown
Thallium	mg/m3	0.0000007	0.000001	0.000001	0.0000009	0.000001	0.000002	Unknown
Zinc	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
1,2,4,5-Tetrachlorobenzene	mg/m3	0.000002	0.000003	0.000003	0.000004	0.000004	0.000004	Unknown
1,2,4-Trichlorobenzene	mg/m3	0.001	0.0006	0.007	0.00010	0.0009	0.007	Lognormal
1,2-Dichlorobenzene	mg/m3	0.0004	0.0002	0.0003	0.00003	0.0003	0.0008	Unknown
1,3-Dichlorobenzene	mg/m3	0.0003	0.0002	0.001	0.00003	0.0003	0.001	Lognormal
1,4-Dichlorobenzene	mg/m3	0.001	0.002	0.002	0.001	0.002	0.002	Lognormal
2-Methylnaphthalene	mg/m3	0.00004	0.00009	0.0001	0.00009	0.0001	0.0001	Lognormal
2-Methylphenol	mg/m3	0.00002	0.00002	0.00002	0.00001	0.00002	0.00002	Unknown
2-Nitrophenol	mg/m3	0.00004	0.00004	0.00005	0.00003	0.00005	0.00008	Unknown
4-Methylphenol/3-Methylphenol	mg/m3	0.00002	0.00003	0.00003	0.00002	0.00003	0.00004	Unknown
4-Nitrophenol	mg/m3	0.0001	0.00004	0.00004	0.00008	0.0002	0.0002	Unknown
Acenaphthene	mg/m3	0.000007	0.000006	0.000008	0.000004	0.000008	0.000007	Unknown
Acenaphthylene	mg/m3	0.000006	0.000007	0.000009	0.000005	0.000008	0.000009	Lognormal
Acetophenone	mg/m3	0.0002	0.0001	0.0002	0.00002	0.0002	0.0008	Unknown
Benz(a)anthracene	mg/m3	0.000002	0.000004	0.000004	0.000003	0.000004	0.000004	Unknown
Benzo(b)fluoranthene	mg/m3	0.000004	0.000003	0.000003	0.000005	0.000007	0.000007	Lognormal
Benzo(k)fluoranthene	mg/m3	0.000002	0.000003	0.000003	0.000004	0.000005	0.000005	Lognormal
Benzoic acid	mg/m3	0.0003	0.0005	0.0006	0.0004	0.0006	0.0008	Normal
Benzyl alcohol	mg/m3	0.00003	0.00003	0.00004	0.00002	0.00004	0.00005	Unknown
Butylbenzylphthalate	mg/m3	0.000006	0.000005	0.000006	0.000004	0.000006	0.000005	Unknown

Table A-7 - Residential Towers (3101/3102) Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Carbazole	mg/m3	0.000002	0.000002	0.000002	0.000004	0.000006	0.000006	Unknown
Chrysene	mg/m3	0.000002	0.000003	0.000004	0.000003	0.000004	0.000004	Unknown
Di-n-butylphthalate	mg/m3	0.00004	0.00006	0.00007	0.00004	0.00007	0.00008	Unknown
Di-n-octylphthalate	mg/m3	0.000002	0.000004	0.00001	0.000003	0.000005	0.000005	Unknown
Dibenzofuran	mg/m3	0.00001	0.00002	0.00002	0.00001	0.00002	0.00002	Unknown
Diethylphthalate	mg/m3	0.00003	0.00001	0.00002	0.000006	0.00002	0.00002	Unknown
Dimethylphthalate	mg/m3	0.000009	0.000008	0.00001	0.000005	0.00001	0.00001	Unknown
Fluoranthene	mg/m3	0.000004	0.000005	0.000006	0.000004	0.000006	0.000006	Lognormal
Fluorene	mg/m3	0.000007	0.000010	0.00001	0.000007	0.00001	0.00001	Unknown
Hexachloro-1,3-Butadiene	mg/m3	0.002	0.0009	0.01	0.0001	0.001	0.02	Lognormal
Isophorone	mg/m3	0.00002	0.00003	0.00003	0.00002	0.00003	0.00004	Unknown
Naphthalene	mg/m3	0.0002	0.0003	0.0003	0.0003	0.0003	0.0004	Normal
Pentachlorobenzene	mg/m3	0.000002	0.000003	0.000003	0.000003	0.000004	0.000004	Unknown
Phenanthrene	mg/m3	0.00001	0.00002	0.00003	0.00002	0.00003	0.00003	Lognormal
Phenol	mg/m3	0.00007	0.0001	0.0001	0.00010	0.0001	0.0001	Lognormal
Pyrene	mg/m3	0.000003	0.000004	0.000005	0.000003	0.000005	0.000005	Unknown
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	0.0000007	0.000001	0.000001	0.000001	0.000001	0.000001	Lognormal
bis(2-Ethylhexyl)phthalate	mg/m3	0.00002	0.00003	0.00004	0.00002	0.00004	0.00005	Unknown

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Hydrochloric Acid	mg/m3	75	100.00			0.0008	0.04	0.006	0.004	
Hydrofluoric Acid	mg/m3	75	96.00	0.000005	0.0002	0.00001	0.003	0.0003	0.0002	
Sulfuric Acid	mg/m3	75	98.67	0.01	0.01	0.001	0.04	0.01	0.01	
2-Butanone	mg/m3	74	100.00			0.0010	0.03	0.008	0.005	
Acetaldehyde	mg/m3	74	100.00			0.0008	0.19	0.03	0.004	
Acetone	mg/m3	74	100.00			0.003	0.18	0.03	0.009	
Acrolein	mg/m3	45	84.44	0.00009	0.0001	0.00009	0.002	0.0004	0.0003	0.00005
Benzaldehyde	mg/m3	74	98.65	0.0001	0.0001	0.00010	0.01	0.002	0.0008	
Crotonaldehyde	mg/m3	26	3.85	0.00009	0.0002	0.00009	0.00009	0.00005	0.00005	
Formaldehyde	mg/m3	45	100.00			0.0002	0.008	0.003	0.002	
Hexanal	mg/m3	74	97.30	0.0001	0.001	0.00009	0.08	0.009	0.004	
Isovaleraldehyde	mg/m3	45	15.56	0.00008	0.0002	0.00009	0.0003	0.00007	0.00005	
Propionaldehyde	mg/m3	45	100.00			0.0001	0.002	0.0006	0.0006	
Tolualdehyde	mg/m3	45	84.44	0.00008	0.0001	0.0001	0.004	0.0009	0.0006	
Valeraldehyde	mg/m3	45	64.44	0.00009	0.0001	0.0001	0.001	0.0002	0.0002	0.00005
n-Butyraldehyde	mg/m3	74	98.65	0.00009	0.00009	0.00010	0.08	0.01	0.004	
1,2,3,4,6,7,8,9-OCDD	mg/m3	76	100.00			0.000000007	0.0000008	0.0000002	0.00000008	
1,2,3,4,6,7,8,9-OCDF	mg/m3	76	100.00			0.000000004	0.0000002	0.00000001	0.00000005	
1,2,3,4,6,7,8-HpCDD	mg/m3	76	100.00			0.000000003	0.00000006	0.00000006	0.00000003	
1,2,3,4,6,7,8-HpCDF	mg/m3	76	100.00			0.000000009	0.0000002	0.00000002	0.00000007	
1,2,3,4,7,8,9-HpCDF	mg/m3	76	100.00			0.000000001	0.00000003	0.00000002	0.00000001	
1,2,3,4,7,8-HxCDD	mg/m3	76	100.00			0.000000000	0.000000005	0.000000006	0.000000003	
1,2,3,4,7,8-HxCDF	mg/m3	76	100.00			0.000000003	0.00000004	0.00000003	0.00000001	
1,2,3,6,7,8-HxCDD	mg/m3	76	100.00			0.000000000	0.000000010	0.00000001	0.000000005	
1,2,3,6,7,8-HxCDF	mg/m3	76	100.00			0.000000002	0.00000003	0.00000003	0.00000001	

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,2,3,7,8,9-HxCDD	mg/m3	76	100.00			0.000000000	0.000000005	0.000000006	0.000000003	
1,2,3,7,8,9-HxCDF	mg/m3	76	100.00			0.000000001	0.000000002	0.000000002	0.000000009	
1,2,3,7,8-PeCDD	mg/m3	76	100.00			0.000000000	0.000000004	0.000000004	0.000000002	
1,2,3,7,8-PeCDF	mg/m3	76	100.00			0.000000001	0.000000001	0.000000001	0.000000005	
2,3,4,6,7,8-HxCDF	mg/m3	76	100.00			0.000000003	0.000000007	0.000000005	0.000000003	
2,3,4,7,8-PeCDF	mg/m3	76	100.00			0.000000002	0.000000003	0.000000003	0.000000001	
2,3,7,8-TCDD	mg/m3	76	90.79	0.000000000	0.000000000	0.000000000	0.000000006	0.000000000	0.000000000	0.000000000
2,3,7,8-TCDF	mg/m3	76	100.00			0.000000000	0.000000006	0.000000007	0.000000003	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	76	100.00			0.000000003	0.000000004	0.000000004	0.000000002	
Total HpCDD	mg/m3	76	100.00			0.000000007	0.000000001	0.000000001	0.000000006	
Total HpCDF	mg/m3	76	100.00			0.000000002	0.000000003	0.000000003	0.000000001	
Total HxCDD	mg/m3	76	100.00			0.000000001	0.000000001	0.000000002	0.000000008	
Total HxCDF	mg/m3	76	100.00			0.000000003	0.000000004	0.000000003	0.000000002	
Total PeCDD	mg/m3	76	100.00			0.000000006	0.000000001	0.000000001	0.000000005	
Total PeCDF	mg/m3	76	100.00			0.000000003	0.000000004	0.000000004	0.000000002	
Total TCDD	mg/m3	76	100.00			0.000000006	0.000000009	0.000000001	0.000000005	
Total TCDF	mg/m3	76	100.00			0.000000003	0.000000004	0.000000004	0.000000002	
1,1,1-Trichloroethane	mg/m3	73	100.00				0.0003	0.002	0.0007	0.0006
1,1,2,2-Tetrachloroethane	mg/m3	73	31.51	0.0002	0.001	0.0003	0.002	0.0004	0.0003	
1,1,2-Trichloroethane	mg/m3	73	6.85	0.0001	0.0009	0.0005	0.001	0.0002	0.0002	
1,1-Dichloroethane	mg/m3	73	1.37	0.0004	0.0007	0.0008	0.0008	0.0001	0.0009	0.00002
1,1-Dichloroethylene	mg/m3	73	30.14	0.0008	0.0009	0.0007	0.0007	0.0001	0.0001	0.00004
1,2,3-Trimethylbenzene	mg/m3	73	91.78	0.0001	0.0009	0.00010	0.002	0.0005	0.0004	
1,2,4-Trimethylbenzene	mg/m3	73	100.00				0.0006	0.009	0.002	0.002
1,2-Dibromoethane	mg/m3	73	9.59	0.0008	0.0008	0.0008	0.002	0.0002	0.0002	0.00004
1,2-Dichloroethane	mg/m3	73	10.96	0.0001	0.0009	0.0002	0.001	0.0002	0.0002	
1,2-Dichloropropane	mg/m3	73	16.44	0.0007	0.0005	0.0001	0.001	0.0002	0.0001	

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Table A-8 - GEMB Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,3,5-Trimethylbenzene	mg/m3	73	97.26	0.0003	0.0007	0.0002	0.003	0.0006	0.0005	
1,3-Butadiene	mg/m3	73	97.26	0.0006	0.0006	0.0001	0.004	0.0005	0.0004	
1,4-Dioxane	mg/m3	73	31.51	0.0004	0.005	0.0003	0.009	0.0010	0.0007	
1-Butanol	mg/m3	73	98.63	0.002	0.002	0.0010	0.27	0.03	0.02	
1-Decene	mg/m3	73	31.51	0.0002	0.008	0.0002	0.009	0.0005	0.0002	
1-Heptene	mg/m3	73	52.05	0.0002	0.001	0.0002	0.003	0.0005	0.0003	
1-Hexene	mg/m3	73	68.49	0.0002	0.001	0.0003	0.002	0.0006	0.0005	
1-Nonene	mg/m3	73	31.51	0.0002	0.001	0.00008	0.001	0.0003	0.0002	
1-Octene	mg/m3	73	49.32	0.0001	0.002	0.00010	0.002	0.0004	0.0003	
1-Pentene	mg/m3	73	93.15	0.0004	0.0005	0.0002	0.002	0.0007	0.0007	
1-Propanol	mg/m3	73	32.88	0.0006	0.05	0.001	0.009	0.007	0.003	
1-Undecene	mg/m3	73	30.14	0.00007	0.002	0.0002	0.005	0.0005	0.0002	
2,2,3-Trimethylpentane	mg/m3	73	28.77	0.0001	0.001	0.00006	0.0006	0.0002	0.0002	
2,2,4-Trimethylpentane	mg/m3	73	80.82	0.00005	0.0004	0.00006	0.003	0.0005	0.0004	
2,2,5-Trimethylhexane	mg/m3	73	1.37	0.0002	0.003	0.0001	0.0001	0.0004	0.0003	0.00008
2,3,4-Trimethylpentane	mg/m3	73	20.55	0.00005	0.0006	0.0006	0.002	0.0003	0.0002	0.00002
2,3-Dimethylbutane	mg/m3	73	73.97	0.0001	0.0008	0.0001	0.006	0.0006	0.0004	
2,3-Dimethylpentane	mg/m3	73	50.68	0.00004	0.004	0.00007	0.002	0.0004	0.0002	0.00002
2,4,4-Trimethyl-1-Pentene	mg/m3	73	42.47	0.0002	0.0009	0.00007	0.002	0.0003	0.0002	
2,4-Dimethylpentane	mg/m3	73	32.88	0.00008	0.0009	0.0001	0.001	0.0002	0.0002	0.00004
2,5-Dimethylhexane	mg/m3	73	32.88	0.0001	0.001	0.0001	0.0005	0.0002	0.0002	
2-Methyl-1-Pentene	mg/m3	73	24.66	0.0001	0.001	0.00008	0.0006	0.0002	0.0002	0.00005
2-Methyl-2-Pentene	mg/m3	73	16.44	0.0001	0.001	0.00006	0.0007	0.0002	0.0002	0.00005
2-Methylheptane	mg/m3	73	50.68	0.00009	0.005	0.00008	0.004	0.0005	0.0002	
2-Propanol	mg/m3	73	100.00			0.003	0.04	0.010	0.008	
3-Methyl-1-Butene	mg/m3	73	17.81	0.00006	0.0007	0.00009	0.0007	0.0001	0.0001	
3-Methylheptane	mg/m3	73	19.18	0.0001	0.0008	0.0001	0.001	0.0002	0.0002	0.00007
3-Methylhexane	mg/m3	73	52.05	0.00004	0.0005	0.0002	0.005	0.0008	0.0005	

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
3-Methylpentane	mg/m3	73	95.89	0.0004	0.0006	0.0005	0.008	0.002	0.002	
4-Methyl-1-Pentene	mg/m3	73	4.11	0.0001	0.0010	0.0002	0.0006	0.0002	0.0001	0.00005
4-Nonene	mg/m3	73	4.11	0.0002	0.002	0.0003	0.0007	0.0002	0.0002	0.00008
Acetonitrile	mg/m3	73	61.64	0.0002	0.007	0.0003	0.29	0.01	0.001	
Acrylonitrile	mg/m3	73	23.29	0.00009	0.002	0.00010	0.002	0.0003	0.0003	
Benzene	mg/m3	73	100.00			0.001	0.02	0.004	0.004	
Bromochloromethane	mg/m3	73	1.37	0.0001	0.005	0.0008	0.0008	0.0003	0.0001	
Bromodichloromethane	mg/m3	73	1.37	0.0001	0.007	0.0009	0.0009	0.0003	0.0002	
Bromoform	mg/m3	73	1.37	0.0004	0.01	0.001	0.001	0.0007	0.0005	
Bromomethane	mg/m3	73	43.84	0.00008	0.0007	0.00006	0.0006	0.0002	0.0002	0.00004
Carbon Tetrachloride	mg/m3	73	100.00			0.0002	0.002	0.0007	0.0006	
Chlorobenzene	mg/m3	73	46.58	0.00006	0.0004	0.00006	0.001	0.0002	0.0001	
Chlorodifluoromethane	mg/m3	73	98.63	0.0003	0.0003	0.0007	0.02	0.003	0.002	
Chloroethane	mg/m3	73	19.18	0.00007	0.0008	0.0001	0.0009	0.0002	0.0002	
Chloroform	mg/m3	73	87.67	0.0002	0.001	0.00009	0.001	0.0003	0.0002	
Chloromethane	mg/m3	73	100.00			0.001	0.003	0.002	0.002	
Chloroprene	mg/m3	73	1.37	0.00007	0.004	0.0006	0.0006	0.0003	0.0002	0.00004
Cumene	mg/m3	73	47.95	0.00004	0.001	0.00010	0.001	0.0003	0.0002	
Cyclohexane	mg/m3	73	80.82	0.0001	0.0005	0.0002	0.004	0.001	0.0009	
Cyclohexene	mg/m3	73	34.25	0.0001	0.0005	0.00007	0.0008	0.0002	0.0002	
Cyclopentane	mg/m3	73	64.38	0.00009	0.0007	0.0001	0.001	0.0003	0.0002	
Cyclopentene	mg/m3	73	17.81	0.00006	0.0005	0.00008	0.0005	0.0001	0.0001	0.00003
Dibromochloromethane	mg/m3	73	1.37	0.0002	0.009	0.001	0.001	0.0004	0.0002	0.00009
Dichlorodifluoromethane	mg/m3	73	100.00			0.002	0.008	0.003	0.003	
Dichlorofluoromethane	mg/m3	73	10.96	0.0001	0.004	0.00004	0.0003	0.0007	0.0005	
Ethanol	mg/m3	73	100.00			0.009	0.12	0.04	0.03	
Ethylbenzene	mg/m3	73	100.00			0.001	0.02	0.005	0.005	
Freon 113	mg/m3	73	100.00			0.0005	0.003	0.0010	0.0009	

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Freon 114	mg/m3	73	19.18	0.00007	0.001	0.00007	0.0003	0.0002	0.0001	
Halocarbon 134A	mg/m3	73	49.32	0.0002	0.0008	0.0001	0.002	0.0003	0.0002	
Heptanal	mg/m3	73	42.47	0.0002	0.05	0.002	0.06	0.009	0.008	
Indan	mg/m3	73	41.10	0.00005	0.001	0.00005	0.0006	0.0002	0.0002	
Indene	mg/m3	73	1.37	0.00009	0.0008	0.0001	0.0001	0.0001	0.0001	0.00005
Isobutane	mg/m3	73	100.00			0.001	0.03	0.004	0.003	
Isobutene + 1-Butene	mg/m3	73	100.00			0.001	0.01	0.003	0.002	
Isoheptane	mg/m3	73	83.56	0.00006	0.004	0.0003	0.007	0.001	0.0008	
Isohexane	mg/m3	73	73.97	0.00007	0.0007	0.0006	0.01	0.003	0.002	0.00004
Isopentane	mg/m3	72	91.67	0.0001	0.002	0.002	0.03	0.007	0.007	
Isoprene	mg/m3	73	80.82	0.00006	0.0006	0.00008	0.002	0.0003	0.0002	
Methyl t-Butylether	mg/m3	73	21.92	0.0001	0.001	0.00005	0.0005	0.0002	0.0002	
Methylcyclohexane	mg/m3	73	64.38	0.00008	0.0006	0.0001	0.002	0.0004	0.0003	0.00004
Methylcyclopentane	mg/m3	72	76.39	0.00007	0.0005	0.0002	0.005	0.0008	0.0006	0.00003
Methylcyclopentene	mg/m3	73	2.74	0.00007	0.0006	0.0001	0.0002	0.0001	0.0001	
Methylene Chloride	mg/m3	73	100.00			0.002	0.04	0.007	0.006	
Methylisobutylketone	mg/m3	73	95.89	0.0002	0.0004	0.0003	0.009	0.002	0.002	
Neohexane	mg/m3	73	60.27	0.0001	0.0007	0.0001	0.002	0.0004	0.0003	0.00005
Neopentane	mg/m3	73	1.37	0.00003	0.0006	0.00005	0.00005	0.00009	0.00006	
Propane	mg/m3	73	100.00			0.005	0.08	0.02	0.01	
Propylene	mg/m3	73	100.00			0.0009	0.16	0.006	0.002	
Styrene	mg/m3	73	94.52	0.0005	0.0010	0.00010	0.004	0.0008	0.0006	
Tetrachloroethylene	mg/m3	73	100.00			0.0002	0.006	0.001	0.001	
Toluene	mg/m3	73	100.00			0.008	0.10	0.03	0.02	
Trichloroethylene	mg/m3	73	100.00			0.0004	0.009	0.002	0.002	
Trichlorofluoromethane	mg/m3	73	100.00			0.001	0.009	0.003	0.002	
Vinyl Acetate	mg/m3	73	52.05	0.00005	0.0004	0.00009	0.04	0.007	0.001	
Vinyl Chloride	mg/m3	73	9.59	0.00008	0.0005	0.0001	0.0004	0.0001	0.00009	0.00004

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
a-Pinene	mg/m3	73	54.79	0.0001	0.0009	0.00006	0.003	0.0003	0.0002	
b-Pinene	mg/m3	73	4.11	0.0001	0.001	0.0006	0.001	0.0002	0.0001	
c-1,2-Dichloroethylene	mg/m3	73	4.11	0.00008	0.004	0.00008	0.0009	0.0002	0.0001	
c-1,3-Dichloropropene	mg/m3	73	16.44	0.00009	0.005	0.00007	0.001	0.0002	0.0001	
c-2-Butene	mg/m3	73	97.26	0.0003	0.0005	0.0001	0.003	0.0004	0.0004	
c-2-Hexene	mg/m3	73	2.74	0.00007	0.0008	0.0001	0.0006	0.0001	0.0001	0.00003
c-2-Octene	mg/m3	73	1.37	0.00009	0.005	0.0008	0.0008	0.0006	0.0005	
c-2-Pentene	mg/m3	72	41.67	0.00009	0.0007	0.00007	0.001	0.0002	0.0001	0.00004
c-3-Hexene	mg/m3	73	13.70	0.00007	0.0010	0.00009	0.0008	0.0002	0.0001	0.00003
c-3-Methyl-2-Pentene	mg/m3	73	4.11	0.0001	0.001	0.00004	0.0002	0.0002	0.0002	
m-Diethylbenzene	mg/m3	73	20.55	0.00007	0.001	0.00007	0.002	0.0003	0.0002	
m-Ethyltoluene	mg/m3	73	100.00			0.0003	0.005	0.001	0.001	
n-Butane	mg/m3	73	100.00			0.002	0.04	0.007	0.006	
n-Butylbenzene	mg/m3	73	17.81	0.0001	0.0008	0.00007	0.0005	0.0002	0.0001	0.00005
n-Decane	mg/m3	73	97.26	0.0009	0.001	0.0008	0.01	0.002	0.002	
n-Heptane	mg/m3	73	94.52	0.00008	0.0005	0.0004	0.005	0.001	0.001	0.00004
n-Hexane	mg/m3	73	100.00			0.0008	0.01	0.003	0.002	
n-Nonane	mg/m3	73	95.89	0.0007	0.002	0.0005	0.005	0.001	0.001	
n-Octane	mg/m3	73	94.52	0.0002	0.0004	0.0003	0.003	0.0008	0.0007	
n-Pentane	mg/m3	73	100.00			0.001	0.02	0.004	0.004	
n-Propylbenzene	mg/m3	73	76.71	0.0002	0.002	0.0001	0.002	0.0005	0.0004	
n-Undecane	mg/m3	73	89.04	0.0001	0.0008	0.0004	0.007	0.001	0.0009	
o-Ethyltoluene	mg/m3	73	89.04	0.0003	0.0009	0.0001	0.002	0.0006	0.0005	
o-Xylene	mg/m3	73	100.00			0.0010	0.009	0.002	0.002	
p-Diethylbenzene	mg/m3	73	2.74	0.0002	0.001	0.0004	0.0006	0.0003	0.0002	
p-Ethyltoluene	mg/m3	73	95.89	0.0003	0.0007	0.0002	0.003	0.0007	0.0006	
p-Isopropyltoluene	mg/m3	73	5.48	0.0001	0.001	0.00005	0.0003	0.0002	0.0002	
p-Xylene + m-Xylene	mg/m3	73	100.00			0.002	0.02	0.006	0.005	

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
t-1,2-Dichloroethylene	mg/m3	73	2.74	0.00008	0.0009	0.0001	0.0006	0.0001	0.0001	
t-1,3-Dichloropropene	mg/m3	73	6.85	0.00009	0.0009	0.0002	0.001	0.0001	0.0001	0.00005
t-2-Butene	mg/m3	73	95.89	0.0003	0.0004	0.0001	0.003	0.0005	0.0004	
t-2-Hexene	mg/m3	73	8.22	0.00007	0.0008	0.00004	0.0006	0.0001	0.00010	0.00003
t-2-Pentene	mg/m3	73	72.60	0.00006	0.0007	0.00008	0.002	0.0003	0.0003	
t-Butylbenzene	mg/m3	73	1.37	0.0001	0.006	0.0002	0.0002	0.0003	0.0002	0.00005
Mercury	mg/m3	73	60.27	0.0000003	0.0000003	0.000003	0.00004	0.000007	0.000006	0.0000002
4,4'-DDD	mg/m3	42	2.38	0.0000008	0.0000004	0.0000002	0.0000002	0.0000001	0.0000009	
Aldrin	mg/m3	42	7.14	0.0000008	0.000001	0.0000006	0.000001	0.0000002	0.0000009	
Dieldrin	mg/m3	42	16.67	0.0000001	0.0000007	0.0000002	0.0000006	0.0000002	0.0000002	
Endosulfan I	mg/m3	42	11.90	0.0000006	0.0000009	0.0000001	0.0000005	0.0000001	0.0000006	
Endosulfan Sulfate	mg/m3	42	7.14	0.0000002	0.0000006	0.0000002	0.0000005	0.0000002	0.0000002	
Endrin	mg/m3	42	4.76	0.0000004	0.000002	0.0000009	0.000001	0.0000005	0.0000004	
Endrin Aldehyde	mg/m3	42	4.76	0.0000003	0.000001	0.0000003	0.0000008	0.0000003	0.0000003	
Heptachlor	mg/m3	42	35.71	0.0000008	0.0000008	0.0000002	0.000001	0.0000003	0.0000001	
Heptachlor epoxide	mg/m3	42	7.14	0.0000001	0.0000009	0.0000004	0.0000006	0.0000002	0.0000002	
Isodrin	mg/m3	42	16.67	0.0000004	0.0000008	0.0000003	0.000002	0.0000002	0.0000005	
alpha-BHC	mg/m3	42	35.71	0.00000005	0.0000002	0.0000003	0.000001	0.0000003	0.0000007	
alpha-Chlordane	mg/m3	42	47.62	0.0000008	0.0000004	0.0000001	0.000002	0.0000004	0.0000002	
beta-BHC	mg/m3	42	2.38	0.0000001	0.0000003	0.0000004	0.0000004	0.0000001	0.0000001	
delta-BHC	mg/m3	42	2.38	0.00000001	0.0000006	0.0000005	0.0000005	0.0000001	0.0000009	
gamma-BHC	mg/m3	41	41.46	0.00000008	0.0000003	0.0000002	0.000001	0.0000003	0.0000009	
gamma-Chlordane	mg/m3	42	57.14	0.00000006	0.0000005	0.0000006	0.000002	0.0000004	0.0000003	

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Antimony	mg/m3	50	100.00			0.0000002	0.0004	0.00005	0.00002	
Arsenic	mg/m3	50	92.00	0.0000009	0.000002	0.0000003	0.00006	0.000004	0.00002	
Beryllium	mg/m3	49	81.63	0.00000004	0.000001	0.00000001	0.0000010	0.0000002	0.0000001	
Cadmium	mg/m3	50	100.00			0.0000007	0.0003	0.00002	0.00005	
Chromium	mg/m3	50	100.00			0.000002	0.0001	0.000009	0.00006	
Copper	mg/m3	50	100.00			0.00002	0.006	0.0004	0.00010	
Lead	mg/m3	50	100.00			0.00002	0.02	0.0009	0.0002	
Nickel	mg/m3	50	100.00			0.000001	0.0001	0.000010	0.00006	
PM-10	mg/m3	50	100.00			0.009	0.24	0.08	0.07	
Selenium	mg/m3	50	90.00	0.000001	0.000002	0.0000002	0.00004	0.000003	0.00002	
Silver	mg/m3	49	95.92	0.0000003	0.0000008	0.00000006	0.00005	0.000006	0.00003	
Thallium	mg/m3	47	65.96	0.000003	0.00002	0.00000007	0.000003	0.000002	0.00001	
Zinc	mg/m3	50	100.00			0.00004	0.01	0.001	0.0004	
1,2,4,5-Tetrachlorobenzene	mg/m3	42	2.38	0.000002	0.00001	0.000009	0.000009	0.000004	0.000004	0.000010
1,2,4-Trichlorobenzene	mg/m3	75	61.33	0.000002	0.005	0.000004	0.004	0.0004	0.0002	
1,2-Dichlorobenzene	mg/m3	75	40.00	0.000002	0.002	0.00001	0.002	0.0002	0.00004	
1,3-Dichlorobenzene	mg/m3	75	21.33	0.000002	0.002	0.000005	0.002	0.0002	0.0001	
1,4-Dichlorobenzene	mg/m3	75	100.00			0.0002	0.005	0.001	0.001	
2-Methylnaphthalene	mg/m3	42	100.00			0.00005	0.0004	0.0001	0.0001	
2-Methylphenol	mg/m3	42	42.86	0.000006	0.00002	0.00001	0.00008	0.00002	0.00001	
2-Nitrophenol	mg/m3	42	59.52	0.000005	0.00004	0.00003	0.0002	0.00004	0.00003	
4-Methylphenol/3-Methylphenol	mg/m3	42	73.81	0.000007	0.00002	0.00002	0.00007	0.00003	0.00003	
4-Nitrophenol	mg/m3	42	2.38	0.00003	0.0007	0.00002	0.00002	0.0001	0.0001	
Acenaphthene	mg/m3	42	45.24	0.000003	0.000006	0.000003	0.00005	0.00001	0.00003	
Acenaphthylene	mg/m3	42	57.14	0.000004	0.00001	0.000004	0.00004	0.00001	0.00006	
Acetophenone	mg/m3	42	35.71	0.000004	0.000010	0.0001	0.0009	0.0001	0.00004	
Anthracene	mg/m3	42	11.90	0.000002	0.000009	0.0000009	0.000009	0.000004	0.00004	

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Table A-8 - GEMB Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Benz(a)anthracene	mg/m3	42	2.38	0.000002	0.00001	0.000002	0.000002	0.000003	0.000004	
Benzo(b)fluoranthene	mg/m3	42	2.38	0.0000010	0.00002	0.000004	0.000004	0.000005	0.000005	
Benzo(k)fluoranthene	mg/m3	42	2.38	0.000002	0.00001	0.000004	0.000004	0.000004	0.000003	0.0000010
Benzoic acid	mg/m3	42	100.00			0.0002	0.002	0.0005	0.0005	
Benzyl alcohol	mg/m3	42	61.90	0.000005	0.00002	0.00002	0.0002	0.00004	0.00002	
Butylbenzylphthalate	mg/m3	42	9.52	0.0000010	0.000008	0.000004	0.00002	0.000004	0.000003	0.0000005
Carbazole	mg/m3	42	2.38	0.0000010	0.00001	0.000002	0.000002	0.000004	0.000005	0.0000005
Chrysene	mg/m3	42	4.76	0.000003	0.00001	0.000002	0.000004	0.000003	0.000002	0.000002
Di-n-butylphthalate	mg/m3	42	80.95	0.000004	0.000007	0.00001	0.00010	0.00003	0.00002	
Di-n-octylphthalate	mg/m3	42	2.38	0.0000010	0.000009	0.000010	0.000010	0.000004	0.000004	0.0000005
Dibenzofuran	mg/m3	42	76.19	0.000005	0.000007	0.000010	0.00007	0.00002	0.00002	
Diethylphthalate	mg/m3	42	33.33	0.000003	0.000007	0.000005	0.0004	0.00002	0.000003	
Dimethylphthalate	mg/m3	42	33.33	0.000003	0.000009	0.00001	0.00004	0.00001	0.000004	
Fluoranthene	mg/m3	42	45.24	0.000003	0.000008	0.000005	0.00002	0.000007	0.000004	
Fluorene	mg/m3	42	73.81	0.000006	0.000009	0.000007	0.00005	0.00001	0.00001	
Hexachloro-1,3-Butadiene	mg/m3	75	40.00	0.000002	0.01	0.0001	0.006	0.0009	0.0004	
Hexachlorobenzene	mg/m3	42	2.38	0.0000010	0.00001	0.000005	0.000005	0.000004	0.000004	
Indeno(1,2,3-cd)pyrene	mg/m3	42	2.38	0.0000010	0.000007	0.0000010	0.0000010	0.000003	0.000003	
Isophorone	mg/m3	42	88.10	0.000007	0.000009	0.000010	0.00008	0.00003	0.00003	
Naphthalene	mg/m3	75	77.33	0.00004	0.0005	0.0002	0.001	0.0004	0.0003	
Pentachlorobenzene	mg/m3	42	2.38	0.000003	0.00002	0.00001	0.00001	0.000003	0.000002	
Phenanthrene	mg/m3	42	100.00			0.00001	0.0001	0.00003	0.00003	
Phenol	mg/m3	42	92.86	0.000009	0.00001	0.00001	0.0003	0.0001	0.00010	
Pyrene	mg/m3	42	38.10	0.000002	0.000010	0.000003	0.00002	0.000005	0.000004	
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	42	4.76	0.000001	0.000004	0.0000002	0.0000007	0.000001	0.000001	
bis(2-Ethylhexyl)phthalate	mg/m3	42	85.71	0.000007	0.00002	0.00001	0.00009	0.00003	0.00003	

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Hydrochloric Acid	mg/m3	0.007	0.006	0.007	0.004	0.008	0.007	Lognormal
Hydrofluoric Acid	mg/m3	0.0005	0.0003	0.0004	0.0002	0.0004	0.0006	Unknown
Sulfuric Acid	mg/m3	0.007	0.01	0.01	0.01	0.01	0.01	Normal/Lognormal
2-Butanone	mg/m3	0.007	0.008	0.009	0.005	0.009	0.01	Unknown
Acetaldehyde	mg/m3	0.05	0.03	0.06	0.01	0.04	0.06	Lognormal
Acetone	mg/m3	0.04	0.03	0.05	0.02	0.04	0.05	Lognormal
Acrolein	mg/m3	0.0004	0.0004	0.0006	0.0002	0.0005	0.0006	Lognormal
Benzaldehyde	mg/m3	0.002	0.002	0.002	0.0009	0.002	0.003	Unknown
Crotonaldehyde	mg/m3	0.00001	0.00005	0.00009	0.00005	0.00006	0.00006	Unknown
Formaldehyde	mg/m3	0.002	0.003	0.003	0.002	0.003	0.003	Lognormal
Hexanal	mg/m3	0.01	0.009	0.04	0.002	0.01	0.04	Lognormal
Isovaleraldehyde	mg/m3	0.00005	0.00007	0.00008	0.00006	0.00008	0.00008	Unknown
Propionaldehyde	mg/m3	0.0003	0.0006	0.0008	0.0006	0.0007	0.0008	Lognormal
Tolualdehyde	mg/m3	0.0009	0.0009	0.001	0.0005	0.001	0.002	Unknown
Valeraldehyde	mg/m3	0.0002	0.0002	0.0003	0.0001	0.0003	0.0003	Unknown
n-Butyraldehyde	mg/m3	0.02	0.01	0.08	0.003	0.02	0.09	Lognormal
1,2,3,4,6,7,8,9-OCDD	mg/m3	0.0000009	0.0000002	0.0000004	0.00000008	0.0000004	0.0000002	Unknown
1,2,3,4,6,7,8,9-OCDF	mg/m3	0.0000002	0.0000001	0.0000001	0.00000005	0.0000002	0.0000001	Lognormal
1,2,3,4,6,7,8-HpCDD	mg/m3	0.00000010	0.00000006	0.00000008	0.00000003	0.00000008	0.00000008	Lognormal
1,2,3,4,6,7,8-HpCDF	mg/m3	0.00000003	0.00000002	0.00000002	0.00000007	0.00000002	0.00000002	Lognormal
1,2,3,4,7,8,9-HpCDF	mg/m3	0.00000004	0.00000002	0.00000003	0.00000001	0.00000003	0.00000003	Lognormal
1,2,3,4,7,8-HxCDD	mg/m3	0.000000009	0.000000006	0.000000008	0.000000003	0.000000008	0.000000008	Lognormal
1,2,3,4,7,8-HxCDF	mg/m3	0.000000005	0.000000003	0.000000004	0.000000002	0.000000004	0.000000004	Lognormal
1,2,3,6,7,8-HxCDD	mg/m3	0.000000002	0.000000001	0.000000001	0.000000005	0.000000001	0.000000001	Lognormal
1,2,3,6,7,8-HxCDF	mg/m3	0.000000005	0.000000003	0.000000004	0.000000001	0.000000004	0.000000004	Lognormal

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,2,3,7,8,9-HxCDD	mg/m3	0.000000009	0.000000006	0.000000008	0.000000003	0.000000008	0.000000008	Lognormal
1,2,3,7,8,9-HxCDF	mg/m3	0.000000003	0.000000002	0.000000002	0.000000008	0.000000002	0.000000002	Lognormal
1,2,3,7,8-PeCDD	mg/m3	0.000000006	0.000000004	0.000000005	0.000000002	0.000000005	0.000000005	Lognormal
1,2,3,7,8-PeCDF	mg/m3	0.000000002	0.000000001	0.000000001	0.000000006	0.000000002	0.000000001	Lognormal
2,3,4,6,7,8-HxCDF	mg/m3	0.000000009	0.000000005	0.000000007	0.000000003	0.000000007	0.000000007	Lognormal
2,3,4,7,8-PeCDF	mg/m3	0.000000005	0.000000003	0.000000003	0.000000001	0.000000004	0.000000003	Lognormal
2,3,7,8-TCDD	mg/m3	0.000000001	0.000000000	0.000000001	0.000000000	0.000000001	0.000000001	Lognormal
2,3,7,8-TCDF	mg/m3	0.000000010	0.000000007	0.000000008	0.000000004	0.000000009	0.000000008	Lognormal
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	0.000000006	0.000000004	0.000000005	0.000000002	0.000000005	0.000000005	Lognormal
Total HpCDD	mg/m3	0.000000002	0.000000001	0.000000002	0.000000006	0.000000002	0.000000002	Lognormal
Total HpCDF	mg/m3	0.000000004	0.000000003	0.000000004	0.000000001	0.000000003	0.000000004	Lognormal
Total HxCDD	mg/m3	0.000000003	0.000000002	0.000000002	0.000000009	0.000000002	0.000000002	Lognormal
Total HxCDF	mg/m3	0.000000006	0.000000003	0.000000004	0.000000002	0.000000004	0.000000004	Lognormal
Total PeCDD	mg/m3	0.000000002	0.000000001	0.000000002	0.000000006	0.000000002	0.000000002	Lognormal
Total PeCDF	mg/m3	0.000000006	0.000000004	0.000000005	0.000000002	0.000000005	0.000000005	Lognormal
Total TCDD	mg/m3	0.000000002	0.000000001	0.000000002	0.000000006	0.000000002	0.000000002	Lognormal
Total TCDF	mg/m3	0.000000007	0.000000004	0.000000005	0.000000002	0.000000006	0.000000005	Lognormal
1,1,1-Trichloroethane	mg/m3	0.0003	0.0007	0.0007	0.0006	0.0007	0.0007	Unknown
1,1,2,2-Tetrachloroethane	mg/m3	0.0003	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
1,1,2-Trichloroethane	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
1,1-Dichloroethane	mg/m3	0.0001	0.0001	0.0008	0.0001	0.0001	0.0001	Unknown
1,1-Dichloroethylene	mg/m3	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	Lognormal
1,2,3-Trimethylbenzene	mg/m3	0.0003	0.0005	0.0005	0.0004	0.0005	0.0005	Lognormal
1,2,4-Trimethylbenzene	mg/m3	0.001	0.002	0.002	0.002	0.002	0.002	Lognormal
1,2-Dibromoethane	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Unknown
1,2-Dichloroethane	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
1,2-Dichloropropane	mg/m3	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	Unknown

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,3,5-Trimethylbenzene	mg/m3	0.0004	0.0006	0.0007	0.0005	0.0007	0.0007	Lognormal
1,3-Butadiene	mg/m3	0.0004	0.0005	0.0006	0.0005	0.0006	0.0006	Unknown
1,4-Dioxane	mg/m3	0.001	0.0010	0.001	0.0007	0.001	0.001	Lognormal
1-Butanol	mg/m3	0.05	0.03	0.06	0.02	0.04	0.06	Lognormal
1-Decene	mg/m3	0.001	0.0005	0.0008	0.0003	0.0008	0.0005	Unknown
1-Heptene	mg/m3	0.0004	0.0005	0.0006	0.0003	0.0006	0.0006	Lognormal
1-Hexene	mg/m3	0.0004	0.0006	0.0008	0.0005	0.0007	0.0008	Lognormal
1-Nonene	mg/m3	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	Unknown
1-Octene	mg/m3	0.0003	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
1-Pentene	mg/m3	0.0003	0.0007	0.0008	0.0006	0.0007	0.0008	Lognormal
1-Propanol	mg/m3	0.007	0.007	0.009	0.003	0.008	0.01	Lognormal
1-Undecene	mg/m3	0.0009	0.0005	0.0007	0.0002	0.0007	0.0007	Lognormal
2,2,3-Trimethylpentane	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2,2,4-Trimethylpentane	mg/m3	0.0004	0.0005	0.0006	0.0003	0.0006	0.0006	Lognormal
2,2,5-Trimethylhexane	mg/m3	0.0003	0.0001	0.0001	0.0003	0.0004	0.0005	Lognormal
2,3,4-Trimethylpentane	mg/m3	0.0005	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
2,3-Dimethylbutane	mg/m3	0.001	0.0006	0.0008	0.0004	0.0008	0.0008	Lognormal
2,3-Dimethylpentane	mg/m3	0.0005	0.0004	0.0005	0.0002	0.0005	0.0005	Lognormal
2,4,4-Trimethyl-1-Pentene	mg/m3	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	Unknown
2,4-Dimethylpentane	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
2,5-Dimethylhexane	mg/m3	0.00010	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
2-Methyl-1-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2-Methyl-2-Pentene	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
2-Methylheptane	mg/m3	0.0006	0.0005	0.0008	0.0003	0.0007	0.0008	Lognormal
2-Propanol	mg/m3	0.006	0.010	0.01	0.008	0.01	0.01	Lognormal
3-Methyl-1-Butene	mg/m3	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	Lognormal
3-Methylheptane	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Unknown
3-Methylhexane	mg/m3	0.001	0.0008	0.002	0.0003	0.001	0.002	Lognormal

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
3-Methylpentane	mg/m3	0.001	0.002	0.002	0.001	0.002	0.002	Lognormal
4-Methyl-1-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Unknown
4-Nonene	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Unknown
Acetonitrile	mg/m3	0.04	0.01	0.01	0.001	0.02	0.01	Lognormal
Acrylonitrile	mg/m3	0.0003	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
Benzene	mg/m3	0.002	0.004	0.004	0.004	0.004	0.004	Lognormal
Bromochloromethane	mg/m3	0.0005	0.0003	0.0008	0.0002	0.0004	0.0003	Unknown
Bromodichloromethane	mg/m3	0.0006	0.0003	0.0009	0.0002	0.0004	0.0003	Unknown
Bromoform	mg/m3	0.0010	0.0007	0.001	0.0005	0.0009	0.0007	Unknown
Bromomethane	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Carbon Tetrachloride	mg/m3	0.0002	0.0007	0.0007	0.0006	0.0007	0.0007	Unknown
Chlorobenzene	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Chlorodifluoromethane	mg/m3	0.003	0.003	0.004	0.002	0.004	0.004	Unknown
Chloroethane	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
Chloroform	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	Unknown
Chloromethane	mg/m3	0.0005	0.002	0.002	0.002	0.002	0.002	Lognormal
Chloroprene	mg/m3	0.0003	0.0003	0.0006	0.0002	0.0003	0.0003	Unknown
Cumene	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	Unknown
Cyclohexane	mg/m3	0.0009	0.001	0.002	0.0007	0.001	0.002	Lognormal
Cyclohexene	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Cyclopentane	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
Cyclopentene	mg/m3	0.00007	0.0001	0.0001	0.0001	0.0001	0.0001	Lognormal
Dibromochloromethane	mg/m3	0.0008	0.0004	0.001	0.0002	0.0005	0.0003	Unknown
Dichlorodifluoromethane	mg/m3	0.0008	0.003	0.003	0.003	0.003	0.003	Unknown
Dichlorofluoromethane	mg/m3	0.0006	0.0003	0.0003	0.0004	0.0008	0.0010	Lognormal
Ethanol	mg/m3	0.02	0.04	0.04	0.03	0.04	0.04	Lognormal
Ethylbenzene	mg/m3	0.003	0.005	0.006	0.004	0.006	0.006	Lognormal
Freon 113	mg/m3	0.0004	0.0010	0.001	0.0009	0.001	0.001	Unknown

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Freon 114	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Halocarbon 134A	mg/m3	0.0003	0.0003	0.0003	0.0002	0.0004	0.0003	Lognormal
Heptanal	mg/m3	0.009	0.009	0.01	0.003	0.01	0.04	Unknown
Indan	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
Indene	mg/m3	0.00007	0.0001	0.0001	0.0001	0.0002	0.0002	Lognormal
Isobutane	mg/m3	0.004	0.004	0.005	0.004	0.005	0.005	Lognormal
Isobutene + 1-Butene	mg/m3	0.001	0.003	0.003	0.002	0.003	0.003	Lognormal
Isoheptane	mg/m3	0.001	0.001	0.001	0.0007	0.001	0.002	Unknown
Isohexane	mg/m3	0.003	0.003	0.003	0.001	0.003	0.009	Unknown
Isopentane	mg/m3	0.005	0.007	0.008	0.005	0.008	0.01	Unknown
Isoprene	mg/m3	0.0003	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
Methyl t-Butylether	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0002	0.0003	Lognormal
Methylcyclohexane	mg/m3	0.0004	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
Methylcyclopentane	mg/m3	0.0007	0.0008	0.0009	0.0005	0.0009	0.001	Unknown
Methylcyclopentene	mg/m3	0.00005	0.0001	0.0001	0.0001	0.0001	0.0001	Lognormal
Methylene Chloride	mg/m3	0.006	0.007	0.009	0.006	0.009	0.009	Lognormal
Methylisobutylketone	mg/m3	0.001	0.002	0.002	0.001	0.002	0.002	Unknown
Neohexane	mg/m3	0.0004	0.0004	0.0006	0.0003	0.0005	0.0006	Lognormal
Neopentane	mg/m3	0.00006	0.00005	0.00005	0.00008	0.00010	0.0001	Unknown
Propane	mg/m3	0.01	0.02	0.02	0.01	0.02	0.02	Unknown
Propylene	mg/m3	0.02	0.006	0.01	0.003	0.01	0.004	Unknown
Styrene	mg/m3	0.0006	0.0008	0.0009	0.0006	0.0009	0.0009	Lognormal
Tetrachloroethylene	mg/m3	0.0010	0.001	0.002	0.001	0.002	0.002	Lognormal
Toluene	mg/m3	0.01	0.03	0.03	0.02	0.03	0.03	Lognormal
Trichloroethylene	mg/m3	0.001	0.002	0.002	0.002	0.002	0.002	Unknown
Trichlorofluoromethane	mg/m3	0.002	0.003	0.003	0.003	0.003	0.003	Lognormal
Vinyl Acetate	mg/m3	0.009	0.007	0.04	0.0007	0.008	0.13	Lognormal
Vinyl Chloride	mg/m3	0.00008	0.0001	0.0001	0.0001	0.0001	0.0001	Lognormal

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
a-Pinene	mg/m3	0.0005	0.0003	0.0004	0.0002	0.0004	0.0004	Unknown
b-Pinene	mg/m3	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	Unknown
c-1,2-Dichloroethylene	mg/m3	0.0003	0.0002	0.0003	0.0001	0.0003	0.0002	Unknown
c-1,3-Dichloropropene	mg/m3	0.0003	0.0002	0.0003	0.0002	0.0003	0.0002	Unknown
c-2-Butene	mg/m3	0.0003	0.0004	0.0005	0.0004	0.0005	0.0005	Lognormal
c-2-Hexene	mg/m3	0.00009	0.0001	0.0001	0.0001	0.0001	0.0001	Unknown
c-2-Octene	mg/m3	0.0005	0.0006	0.0008	0.0004	0.0007	0.0009	Lognormal
c-2-Pentene	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
c-3-Hexene	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
c-3-Methyl-2-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Unknown
m-Diethylbenzene	mg/m3	0.0003	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
m-Ethyltoluene	mg/m3	0.0008	0.001	0.001	0.001	0.001	0.001	Lognormal
n-Butane	mg/m3	0.005	0.007	0.008	0.006	0.008	0.008	Lognormal
n-Butylbenzene	mg/m3	0.00009	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
n-Decane	mg/m3	0.002	0.002	0.003	0.002	0.003	0.003	Lognormal
n-Heptane	mg/m3	0.0009	0.001	0.001	0.001	0.001	0.002	Unknown
n-Hexane	mg/m3	0.002	0.003	0.003	0.002	0.003	0.003	Lognormal
n-Nonane	mg/m3	0.0007	0.001	0.001	0.001	0.001	0.001	Lognormal
n-Octane	mg/m3	0.0004	0.0008	0.0009	0.0007	0.0009	0.0009	Unknown
n-Pentane	mg/m3	0.003	0.004	0.005	0.004	0.005	0.005	Lognormal
n-Propylbenzene	mg/m3	0.0003	0.0005	0.0005	0.0004	0.0005	0.0005	Lognormal
n-Undecane	mg/m3	0.001	0.001	0.001	0.0009	0.001	0.002	Unknown
o-Ethyltoluene	mg/m3	0.0004	0.0006	0.0006	0.0005	0.0006	0.0006	Lognormal
o-Xylene	mg/m3	0.001	0.002	0.003	0.002	0.003	0.003	Lognormal
p-Diethylbenzene	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
p-Ethyltoluene	mg/m3	0.0004	0.0007	0.0008	0.0006	0.0008	0.0008	Lognormal
p-Isopropyltoluene	mg/m3	0.00010	0.0002	0.0002	0.0002	0.0002	0.0002	Unknown
p-Xylene + m-Xylene	mg/m3	0.004	0.006	0.007	0.005	0.007	0.007	Lognormal

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
t-1,2-Dichloroethylene	mg/m3	0.00009	0.0001	0.0002	0.0001	0.0002	0.0002	Unknown
t-1,3-Dichloropropene	mg/m3	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	Unknown
t-2-Butene	mg/m3	0.0004	0.0005	0.0006	0.0004	0.0006	0.0006	Lognormal
t-2-Hexene	mg/m3	0.00009	0.0001	0.0002	0.0001	0.0002	0.0002	Lognormal
t-2-Pentene	mg/m3	0.0003	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
t-Butylbenzene	mg/m3	0.0005	0.0002	0.0002	0.0002	0.0004	0.0003	Unknown
Mercury	mg/m3	0.000009	0.000007	0.000009	0.000002	0.000009	0.00004	Unknown
4,4'-DDD	mg/m3	0.0000004	0.0000001	0.0000002	0.00000010	0.0000001	0.0000001	Unknown
Aldrin	mg/m3	0.0000002	0.0000002	0.0000002	0.0000001	0.0000002	0.0000002	Unknown
Dieldrin	mg/m3	0.0000001	0.0000002	0.0000002	0.0000002	0.0000002	0.0000003	Unknown
Endosulfan I	mg/m3	0.0000001	0.0000001	0.0000002	0.00000008	0.0000002	0.0000002	Unknown
Endosulfan Sulfate	mg/m3	0.00000007	0.0000002	0.0000002	0.0000002	0.0000002	0.0000002	Unknown
Endrin	mg/m3	0.0000002	0.0000005	0.0000005	0.0000004	0.0000005	0.0000005	Unknown
Endrin Aldehyde	mg/m3	0.0000001	0.0000003	0.0000003	0.0000002	0.0000003	0.0000003	Unknown
Heptachlor	mg/m3	0.0000003	0.0000003	0.0000003	0.0000002	0.0000003	0.0000004	Unknown
Heptachlor epoxide	mg/m3	0.0000001	0.0000002	0.0000003	0.0000002	0.0000003	0.0000003	Unknown
Isodrin	mg/m3	0.0000003	0.0000002	0.0000003	0.00000009	0.0000003	0.0000002	Unknown
alpha-BHC	mg/m3	0.0000003	0.0000003	0.0000003	0.0000001	0.0000003	0.0000004	Unknown
alpha-Chlordane	mg/m3	0.0000004	0.0000004	0.0000005	0.0000002	0.0000005	0.0000006	Unknown
beta-BHC	mg/m3	0.00000002	0.00000004	0.00000004	0.00000010	0.0000001	0.0000001	Unknown
delta-BHC	mg/m3	0.00000009	0.0000001	0.0000005	0.00000008	0.0000001	0.0000002	Unknown
gamma-BHC	mg/m3	0.0000004	0.0000003	0.0000004	0.0000002	0.0000004	0.0000005	Unknown
gamma-Chlordane	mg/m3	0.0000004	0.0000004	0.0000005	0.0000002	0.0000005	0.0000007	Unknown

Table A-8 - GEMB Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Antimony	mg/m3	0.00008	0.00005	0.00010	0.00002	0.00007	0.00010	Lognormal
Arsenic	mg/m3	0.000008	0.000004	0.000004	0.000002	0.000005	0.000004	Lognormal
Beryllium	mg/m3	0.0000003	0.0000002	0.0000004	0.0000001	0.0000003	0.0000004	Lognormal
Cadmium	mg/m3	0.00005	0.00002	0.00003	0.000005	0.00003	0.00003	Unknown
Chromium	mg/m3	0.00002	0.000009	0.00001	0.000006	0.00001	0.000010	Unknown
Copper	mg/m3	0.0010	0.0004	0.0006	0.0001	0.0006	0.0004	Unknown
Lead	mg/m3	0.002	0.0009	0.001	0.0002	0.001	0.001	Unknown
Nickel	mg/m3	0.00002	0.000010	0.00001	0.000006	0.00001	0.00001	Unknown
PM-10	mg/m3	0.05	0.08	0.09	0.07	0.09	0.09	Lognormal
Selenium	mg/m3	0.000006	0.000003	0.000004	0.000002	0.000004	0.000004	Lognormal
Silver	mg/m3	0.000009	0.000006	0.00001	0.000002	0.000008	0.00001	Lognormal
Thallium	mg/m3	0.000002	0.000002	0.000002	0.000001	0.000002	0.000002	Unknown
Zinc	mg/m3	0.002	0.001	0.002	0.0004	0.002	0.002	Unknown
1,2,4,5-Tetrachlorobenzene	mg/m3	0.000001	0.000004	0.000009	0.000003	0.000004	0.000004	Unknown
1,2,4-Trichlorobenzene	mg/m3	0.0007	0.0004	0.0006	0.0001	0.0006	0.004	Unknown
1,2-Dichlorobenzene	mg/m3	0.0004	0.0002	0.0003	0.00005	0.0003	0.001	Unknown
1,3-Dichlorobenzene	mg/m3	0.0004	0.0002	0.002	0.00004	0.0003	0.002	Lognormal
1,4-Dichlorobenzene	mg/m3	0.001	0.001	0.002	0.001	0.002	0.002	Lognormal
2-Methylnaphthalene	mg/m3	0.00006	0.0001	0.0001	0.0001	0.0001	0.0001	Lognormal
2-Methylphenol	mg/m3	0.00002	0.00002	0.00002	0.00001	0.00002	0.00002	Unknown
2-Nitrophenol	mg/m3	0.00004	0.00004	0.00005	0.00003	0.00005	0.00007	Unknown
4-Methylphenol/3-Methylphenol	mg/m3	0.00002	0.00003	0.00004	0.00002	0.00004	0.00005	Unknown
4-Nitrophenol	mg/m3	0.00008	0.00002	0.00002	0.00008	0.0001	0.0002	Unknown
Acenaphthene	mg/m3	0.00001	0.00001	0.00001	0.000006	0.00001	0.00002	Unknown
Acenaphthylene	mg/m3	0.000009	0.00001	0.00001	0.000007	0.00001	0.00001	Unknown
Acetophenone	mg/m3	0.0002	0.0001	0.0002	0.00002	0.0002	0.0008	Unknown
Anthracene	mg/m3	0.000001	0.000004	0.000004	0.000003	0.000004	0.000004	Unknown

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Table A-8 - GEMB Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Benz(a)anthracene	mg/m3	0.0000009	0.000002	0.000002	0.000003	0.000004	0.000004	Normal
Benzo(b)fluoranthene	mg/m3	0.000002	0.000004	0.000004	0.000004	0.000006	0.000006	Unknown
Benzo(k)fluoranthene	mg/m3	0.000002	0.000004	0.000004	0.000003	0.000004	0.000004	Unknown
Benzoic acid	mg/m3	0.0003	0.0005	0.0006	0.0005	0.0006	0.0006	Lognormal
Benzyl alcohol	mg/m3	0.00005	0.00004	0.00006	0.00002	0.00005	0.00006	Lognormal
Butylbenzylphthalate	mg/m3	0.000003	0.000004	0.000005	0.000003	0.000005	0.000005	Unknown
Carbazole	mg/m3	0.000001	0.000002	0.000002	0.000004	0.000005	0.000005	Unknown
Chrysene	mg/m3	0.0000010	0.000003	0.000003	0.000003	0.000003	0.000003	Unknown
Di-n-butylphthalate	mg/m3	0.00002	0.00003	0.00003	0.00002	0.00003	0.00005	Unknown
Di-n-octylphthalate	mg/m3	0.000001	0.000004	0.000010	0.000003	0.000004	0.000004	Unknown
Dibenzofuran	mg/m3	0.00002	0.00002	0.00002	0.00001	0.00002	0.00003	Unknown
Diethylphthalate	mg/m3	0.00006	0.00002	0.00003	0.000004	0.00003	0.00001	Unknown
Dimethylphthalate	mg/m3	0.00001	0.00001	0.00002	0.000006	0.00002	0.00002	Unknown
Fluoranthene	mg/m3	0.000006	0.000007	0.000008	0.000005	0.000008	0.000008	Lognormal
Fluorene	mg/m3	0.00001	0.00001	0.00002	0.00001	0.00002	0.00002	Unknown
Hexachloro-1,3-Butadiene	mg/m3	0.002	0.0009	0.001	0.0002	0.001	0.02	Unknown
Hexachlorobenzene	mg/m3	0.000001	0.000004	0.000005	0.000004	0.000004	0.000004	Normal
Indeno(1,2,3-cd)pyrene	mg/m3	0.0000007	0.0000010	0.0000010	0.000003	0.000003	0.000003	Unknown
Isophorone	mg/m3	0.00002	0.00003	0.00004	0.00002	0.00004	0.00005	Normal
Naphthalene	mg/m3	0.0002	0.0004	0.0004	0.0003	0.0004	0.0004	Unknown
Pentachlorobenzene	mg/m3	0.000002	0.000003	0.00001	0.000003	0.000004	0.000004	Unknown
Phenanthrene	mg/m3	0.00002	0.00003	0.00004	0.00003	0.00004	0.00004	Lognormal
Phenol	mg/m3	0.00007	0.0001	0.0001	0.00008	0.0001	0.0002	Normal
Pyrene	mg/m3	0.000004	0.000005	0.000006	0.000004	0.000006	0.000006	Unknown
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	0.0000004	0.0000007	0.0000007	0.000001	0.000001	0.000001	Unknown
bis(2-Ethylhexyl)phthalate	mg/m3	0.00002	0.00003	0.00004	0.00003	0.00004	0.00005	Normal

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Hydrochloric Acid	mg/m3	66	100.00			0.0005	0.04	0.003	0.002	
Hydrofluoric Acid	mg/m3	66	92.42	0.000004	0.002	0.00003	0.003	0.0004	0.0002	
Sulfuric Acid	mg/m3	66	96.97	0.0007	0.01	0.005	0.05	0.01	0.009	
2-Butanone	mg/m3	61	100.00			0.0006	0.02	0.007	0.005	
Acetaldehyde	mg/m3	61	100.00			0.001	0.19	0.03	0.005	
Acetone	mg/m3	61	100.00			0.002	0.20	0.03	0.007	
Acrolein	mg/m3	38	81.58	0.00009	0.0001	0.00009	0.001	0.0004	0.0003	0.00005
Benzaldehyde	mg/m3	61	96.72	0.0001	0.0002	0.00009	0.007	0.002	0.0008	
Crotonaldehyde	mg/m3	20	10.00	0.00009	0.0002	0.00010	0.0001	0.00006	0.00005	
Formaldehyde	mg/m3	38	100.00			0.0003	0.006	0.002	0.001	
Hexanal	mg/m3	61	96.72	0.00010	0.0001	0.00008	0.04	0.007	0.004	
Isovaleraldehyde	mg/m3	38	18.42	0.00009	0.0002	0.00008	0.0004	0.00008	0.00005	
Propionaldehyde	mg/m3	38	100.00			0.0002	0.002	0.0007	0.0006	
Tolualdehyde	mg/m3	38	84.21	0.00008	0.00010	0.00009	0.001	0.0006	0.0005	
Valeraldehyde	mg/m3	38	71.05	0.00009	0.0001	0.00008	0.0004	0.0002	0.0002	0.00005
n-Butyraldehyde	mg/m3	61	100.00			0.0002	0.05	0.01	0.001	
1,2,3,4,6,7,8,9-OCDD	mg/m3	62	100.00			0.00000001	0.0000009	0.00000002	0.00000004	
1,2,3,4,6,7,8,9-OCDF	mg/m3	62	100.00			0.000000008	0.00000007	0.00000006	0.00000003	
1,2,3,4,6,7,8-HpCDD	mg/m3	62	100.00			0.000000004	0.00000004	0.00000003	0.00000002	
1,2,3,4,6,7,8-HpCDF	mg/m3	62	100.00			0.000000008	0.00000003	0.00000005	0.00000003	
1,2,3,4,7,8,9-HpCDF	mg/m3	62	100.00			0.000000001	0.00000009	0.00000001	0.00000006	
1,2,3,4,7,8-HxCDD	mg/m3	62	100.00			0.000000000	0.000000010	0.000000002	0.000000001	
1,2,3,4,7,8-HxCDF	mg/m3	62	100.00			0.000000002	0.00000004	0.000000008	0.000000006	
1,2,3,6,7,8-HxCDD	mg/m3	62	100.00			0.000000000	0.000000001	0.000000003	0.000000002	
1,2,3,6,7,8-HxCDF	mg/m3	62	100.00			0.000000002	0.00000003	0.000000008	0.000000006	

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,2,3,7,8,9-HxCDD	mg/m3	62	100.00			0.000000000	0.000000001	0.000000002	0.000000002	
1,2,3,7,8,9-HxCDF	mg/m3	62	100.00			0.000000000	0.000000003	0.000000006	0.000000004	
1,2,3,7,8-PeCDD	mg/m3	62	100.00			0.000000000	0.000000004	0.000000001	0.000000000	
1,2,3,7,8-PeCDF	mg/m3	62	100.00			0.000000001	0.000000001	0.000000003	0.000000002	
2,3,4,6,7,8-HxCDF	mg/m3	62	100.00			0.000000003	0.000000001	0.000000002	0.000000001	
2,3,4,7,8-PeCDF	mg/m3	62	100.00			0.000000002	0.000000003	0.000000007	0.000000005	
2,3,7,8-TCDD	mg/m3	61	75.41	0.000000000	0.000000000	0.000000000	0.000000001	0.000000000	0.000000000	0.000000000
2,3,7,8-TCDF	mg/m3	62	100.00			0.000000000	0.000000009	0.000000002	0.000000001	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	62	100.00			0.000000003	0.000000005	0.000000001	0.000000008	
Total HpCDD	mg/m3	62	100.00			0.000000008	0.000000009	0.000000006	0.000000003	
Total HpCDF	mg/m3	62	100.00			0.000000002	0.000000007	0.000000001	0.000000006	
Total HxCDD	mg/m3	62	100.00			0.000000001	0.000000003	0.000000005	0.000000003	
Total HxCDF	mg/m3	62	100.00			0.000000002	0.000000005	0.000000001	0.000000007	
Total PeCDD	mg/m3	62	100.00			0.000000006	0.000000003	0.000000003	0.000000002	
Total PeCDF	mg/m3	62	100.00			0.000000002	0.000000005	0.000000009	0.000000006	
Total TCDD	mg/m3	62	100.00			0.000000007	0.000000004	0.000000003	0.000000002	
Total TCDF	mg/m3	62	100.00			0.000000003	0.000000005	0.000000009	0.000000007	
1,1,1-Trichloroethane	mg/m3	61	100.00				0.0003	0.001	0.0007	0.0006
1,1,2,2-Tetrachloroethane	mg/m3	61	47.54	0.0002	0.002	0.0001	0.002	0.0004	0.0003	
1,1,2-Trichloroethane	mg/m3	61	6.56	0.0002	0.0008	0.0008	0.0001	0.0002	0.0002	
1,1-Dichloroethylene	mg/m3	61	21.31	0.0008	0.0006	0.0007	0.0005	0.0001	0.0001	0.00004
1,2,3-Trimethylbenzene	mg/m3	61	91.80	0.0004	0.001	0.0001	0.001	0.0005	0.0004	
1,2,4-Trimethylbenzene	mg/m3	61	100.00				0.0005	0.006	0.002	0.002
1,2-Dibromoethane	mg/m3	61	22.95	0.0008	0.0009	0.0008	0.0005	0.0002	0.0001	0.00004
1,2-Dichloroethane	mg/m3	61	19.67	0.0001	0.0005	0.0001	0.0006	0.0002	0.0002	
1,2-Dichloropropane	mg/m3	61	9.84	0.0008	0.0005	0.0009	0.0003	0.00010	0.00009	
1,3,5-Trimethylbenzene	mg/m3	61	98.36	0.0010	0.0010	0.0001	0.002	0.0006	0.0005	

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Table A-9- Golf Course Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,3-Butadiene	mg/m3	61	95.08	0.00010	0.0001	0.0002	0.006	0.0006	0.0005	
1,4-Dioxane	mg/m3	61	32.79	0.0005	0.004	0.0004	0.005	0.0009	0.0007	
1-Butanol	mg/m3	61	93.44	0.0006	0.001	0.002	0.05	0.02	0.01	
1-Decene	mg/m3	61	36.07	0.0002	0.001	0.00009	0.008	0.0005	0.0002	
1-Heptene	mg/m3	61	45.90	0.0002	0.0009	0.0002	0.002	0.0004	0.0003	0.00008
1-Hexene	mg/m3	61	57.38	0.0001	0.0007	0.0004	0.002	0.0005	0.0005	
1-Nonene	mg/m3	61	27.87	0.0002	0.001	0.0001	0.0006	0.0002	0.0002	
1-Octene	mg/m3	61	50.82	0.0001	0.003	0.0002	0.0008	0.0004	0.0003	
1-Pentene	mg/m3	61	96.72	0.0002	0.0005	0.0002	0.002	0.0007	0.0006	
1-Propanol	mg/m3	61	29.51	0.0006	0.04	0.0002	0.02	0.007	0.002	
1-Undecene	mg/m3	61	29.51	0.00006	0.002	0.00009	0.005	0.0004	0.0002	
2,2,3-Trimethylpentane	mg/m3	61	16.39	0.0001	0.001	0.00010	0.0003	0.0002	0.0002	0.00007
2,2,4-Trimethylpentane	mg/m3	61	77.05	0.00007	0.0004	0.0001	0.001	0.0005	0.0004	
2,2,5-Trimethylhexane	mg/m3	61	8.20	0.0002	0.003	0.00006	0.0003	0.0003	0.0003	
2,3,4-Trimethylpentane	mg/m3	61	24.59	0.00005	0.0005	0.0003	0.002	0.0003	0.0001	0.00002
2,3-Dimethylbutane	mg/m3	61	68.85	0.0001	0.0003	0.0001	0.005	0.0005	0.0003	
2,3-Dimethylpentane	mg/m3	61	50.82	0.00004	0.004	0.00009	0.0009	0.0003	0.0002	0.00002
2,4,4-Trimethyl-1-Pentene	mg/m3	61	31.15	0.0001	0.0008	0.00006	0.0005	0.0002	0.0002	
2,4-Dimethylpentane	mg/m3	61	37.70	0.00008	0.0004	0.0001	0.0008	0.0002	0.0002	0.00004
2,5-Dimethylhexane	mg/m3	61	31.15	0.0002	0.001	0.00006	0.0004	0.0002	0.0002	
2-Ethyl-1-Butene	mg/m3	61	3.28	0.00007	0.001	0.00009	0.0001	0.0002	0.0001	
2-Methyl-1-Pentene	mg/m3	61	14.75	0.00010	0.0006	0.0001	0.0004	0.0001	0.0001	
2-Methyl-2-Pentene	mg/m3	61	18.03	0.0001	0.002	0.0001	0.0004	0.0002	0.0002	
2-Methylheptane	mg/m3	61	44.26	0.0001	0.005	0.0003	0.001	0.0005	0.0002	
2-Propanol	mg/m3	61	100.00			0.003	0.04	0.010	0.008	
3-Methyl-1-Butene	mg/m3	61	18.03	0.00005	0.0006	0.0002	0.0004	0.0001	0.0001	
3-Methylheptane	mg/m3	61	19.67	0.0001	0.001	0.0001	0.0008	0.0002	0.0002	
3-Methylhexane	mg/m3	61	40.98	0.00007	0.0005	0.0005	0.004	0.0007	0.0001	0.00003

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
3-Methylpentane	mg/m3	61	95.08	0.0002	0.0006	0.0005	0.005	0.002	0.002	
4-Methyl-1-Pentene	mg/m3	61	9.84	0.0001	0.0010	0.00005	0.0002	0.0001	0.0001	
4-Nonene	mg/m3	61	3.28	0.0001	0.002	0.0002	0.0003	0.0002	0.0002	
Acetonitrile	mg/m3	61	77.05	0.0002	0.004	0.0007	0.56	0.04	0.002	
Acrylonitrile	mg/m3	61	29.51	0.00009	0.002	0.00005	0.001	0.0003	0.0002	
Benzene	mg/m3	61	100.00			0.001	0.01	0.004	0.004	
Benzyl Chloride	mg/m3	59	6.78	0.00009	0.005	0.0003	0.001	0.0003	0.0001	
Bromomethane	mg/m3	61	42.62	0.00008	0.004	0.00005	0.001	0.0002	0.0001	0.00004
Carbon Tetrachloride	mg/m3	61	98.36	0.0002	0.0002	0.0004	0.001	0.0007	0.0007	
Chlorobenzene	mg/m3	61	59.02	0.0001	0.0006	0.00008	0.0009	0.0002	0.0002	
Chlorodifluoromethane	mg/m3	61	100.00			0.0007	0.02	0.003	0.002	
Chloroethane	mg/m3	61	11.48	0.00005	0.0008	0.0001	0.0006	0.0001	0.0001	
Chloroform	mg/m3	61	77.05	0.0002	0.0004	0.00010	0.0008	0.0002	0.0002	
Chloromethane	mg/m3	61	100.00			0.001	0.003	0.002	0.002	
Cumene	mg/m3	61	39.34	0.0002	0.001	0.0001	0.0006	0.0003	0.0002	0.00008
Cyclohexane	mg/m3	61	75.41	0.00007	0.0005	0.0002	0.006	0.0010	0.0008	
Cyclohexene	mg/m3	61	37.70	0.0001	0.0009	0.00005	0.0008	0.0002	0.0002	
Cyclopentane	mg/m3	61	65.57	0.00008	0.0003	0.00010	0.0009	0.0003	0.0002	
Cyclopentene	mg/m3	61	19.67	0.00006	0.0004	0.00006	0.0002	0.00010	0.00009	
Dichlorodifluoromethane	mg/m3	61	100.00			0.002	0.004	0.003	0.003	
Dichlorofluoromethane	mg/m3	61	9.84	0.0001	0.005	0.00007	0.0003	0.0006	0.0005	
Ethanol	mg/m3	61	100.00			0.01	0.08	0.04	0.03	
Ethylbenzene	mg/m3	61	100.00			0.001	0.01	0.005	0.004	
Freon 113	mg/m3	61	96.72	0.0002	0.0003	0.0006	0.02	0.001	0.0008	
Freon 114	mg/m3	61	21.31	0.0001	0.007	0.00007	0.0002	0.0002	0.0001	
Halocarbon 134A	mg/m3	61	57.38	0.0002	0.004	0.00010	0.001	0.0003	0.0002	
Heptanal	mg/m3	61	32.79	0.0002	0.08	0.003	0.03	0.009	0.008	
Indan	mg/m3	61	44.26	0.00005	0.001	0.00009	0.0004	0.0002	0.0002	

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Indene	mg/m3	61	1.64	0.00009	0.0008	0.0001	0.0001	0.0001	0.0001	0.00005
Isobutane	mg/m3	61	100.00			0.001	0.01	0.004	0.003	
Isobutene + 1-Butene	mg/m3	61	100.00			0.001	0.006	0.003	0.002	
Isoheptane	mg/m3	61	86.89	0.00008	0.0006	0.0003	0.007	0.001	0.0009	0.00004
Isohexane	mg/m3	60	63.33	0.00006	0.0007	0.001	0.01	0.002	0.002	
Isopentane	mg/m3	60	88.33	0.00009	0.0010	0.002	0.02	0.007	0.006	
Isoprene	mg/m3	61	75.41	0.00006	0.0004	0.00004	0.001	0.0003	0.0002	
Methyl t-Butylether	mg/m3	61	13.11	0.0001	0.002	0.00008	0.0006	0.0002	0.0002	
Methylcyclohexane	mg/m3	61	68.85	0.00008	0.0006	0.00006	0.001	0.0003	0.0003	
Methylcyclopentane	mg/m3	61	73.77	0.00007	0.0003	0.0002	0.003	0.0007	0.0006	0.00003
Methylcyclopentene	mg/m3	61	1.64	0.00009	0.0006	0.0002	0.0002	0.0001	0.00010	
Methylene Chloride	mg/m3	61	100.00			0.002	0.68	0.02	0.005	
Methylisobutylketone	mg/m3	61	95.08	0.0003	0.0005	0.0004	0.006	0.002	0.001	
Neohexane	mg/m3	61	50.82	0.00010	0.0005	0.0002	0.001	0.0004	0.0002	0.00005
Neopentane	mg/m3	61	6.56	0.00005	0.0006	0.00003	0.00007	0.00008	0.00006	
Propane	mg/m3	61	100.00			0.005	0.06	0.01	0.01	
Propylene	mg/m3	61	100.00			0.0008	0.11	0.004	0.002	
Styrene	mg/m3	61	96.72	0.0007	0.0007	0.0002	0.002	0.0008	0.0007	
Tetrachloroethylene	mg/m3	61	96.72	0.0005	0.0005	0.0001	0.004	0.001	0.001	
Toluene	mg/m3	61	100.00			0.007	0.07	0.02	0.02	
Trichloroethylene	mg/m3	61	98.36	0.0004	0.0004	0.0005	0.006	0.002	0.002	
Trichlorofluoromethane	mg/m3	61	100.00			0.001	0.009	0.003	0.002	
Vinyl Acetate	mg/m3	60	58.33	0.00005	0.0002	0.002	0.03	0.007	0.005	
Vinyl Chloride	mg/m3	61	4.92	0.00007	0.0003	0.0002	0.0005	0.00010	0.00008	
a-Pinene	mg/m3	61	59.02	0.0002	0.0006	0.00007	0.001	0.0003	0.0002	
c-1,2-Dichloroethylene	mg/m3	61	4.92	0.0001	0.004	0.00008	0.0002	0.0002	0.0001	
c-1,3-Dichloropropene	mg/m3	61	11.48	0.0001	0.005	0.0001	0.0003	0.0002	0.0001	
c-2-Butene	mg/m3	61	98.36	0.0003	0.0003	0.0001	0.002	0.0005	0.0003	

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
c-2-Octene	mg/m3	61	1.64	0.00009	0.005	0.00005	0.00005	0.0005	0.0005	0.00005
c-2-Pentene	mg/m3	61	45.90	0.00008	0.0006	0.0001	0.0006	0.0002	0.0001	
c-3-Hexene	mg/m3	61	18.03	0.00007	0.0008	0.00005	0.0003	0.0002	0.0001	
c-3-Methyl-2-Pentene	mg/m3	61	3.28	0.0001	0.001	0.00006	0.0002	0.0002	0.0002	
m-Diethylbenzene	mg/m3	61	31.15	0.0001	0.002	0.00005	0.001	0.0003	0.0002	
m-Ethyltoluene	mg/m3	61	98.36	0.0008	0.0008	0.0003	0.004	0.001	0.0010	
n-Butane	mg/m3	61	100.00			0.003	0.02	0.007	0.006	
n-Butylbenzene	mg/m3	61	22.95	0.0001	0.0009	0.00008	0.0004	0.0002	0.0002	0.00005
n-Decane	mg/m3	61	96.72	0.0001	0.002	0.0007	0.006	0.002	0.002	
n-Heptane	mg/m3	61	91.80	0.0002	0.0005	0.0002	0.003	0.001	0.001	
n-Hexane	mg/m3	61	100.00			0.0005	0.01	0.003	0.002	
n-Nonane	mg/m3	61	95.08	0.0010	0.002	0.0005	0.004	0.001	0.001	
n-Octane	mg/m3	61	93.44	0.0001	0.0004	0.0003	0.002	0.0008	0.0007	
n-Pentane	mg/m3	61	100.00			0.0009	0.01	0.004	0.003	
n-Propylbenzene	mg/m3	61	75.41	0.0003	0.001	0.0001	0.001	0.0004	0.0004	
n-Undecane	mg/m3	61	90.16	0.0001	0.0007	0.0004	0.005	0.001	0.001	
o-Ethyltoluene	mg/m3	61	90.16	0.0002	0.001	0.0001	0.002	0.0006	0.0005	
o-Xylene	mg/m3	61	100.00			0.0005	0.006	0.002	0.002	
p-Diethylbenzene	mg/m3	61	6.56	0.0001	0.002	0.0001	0.0007	0.0003	0.0002	
p-Ethyltoluene	mg/m3	61	95.08	0.0005	0.001	0.0001	0.002	0.0007	0.0005	
p-Isopropyltoluene	mg/m3	61	11.48	0.0002	0.001	0.0001	0.0002	0.0002	0.0002	
p-Xylene + m-Xylene	mg/m3	61	100.00			0.001	0.02	0.006	0.005	
t-1,2-Dichloroethylene	mg/m3	61	1.64	0.0001	0.0004	0.0001	0.0001	0.0001	0.0001	
t-1,3-Dichloropropene	mg/m3	61	9.84	0.0001	0.0005	0.0001	0.0003	0.0001	0.0001	
t-2-Butene	mg/m3	61	96.72	0.00009	0.0002	0.0001	0.002	0.0005	0.0004	
t-2-Hexene	mg/m3	61	8.20	0.00007	0.0008	0.00010	0.0003	0.0001	0.0001	0.00003
t-2-Pentene	mg/m3	61	72.13	0.00006	0.0003	0.00006	0.001	0.0003	0.0003	
t-Butylbenzene	mg/m3	61	1.64	0.0001	0.0007	0.0002	0.0002	0.0001	0.0001	0.00005

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Mercury	mg/m3	63	58.73	0.0000003	0.0000003	0.0000004	0.000008	0.00001	0.000005	0.0000002
4,4'-DDT	mg/m3	39	2.56	0.0000001	0.0000003	0.0000005	0.0000005	0.0000001	0.0000001	
Aldrin	mg/m3	39	12.82	0.00000008	0.0000001	0.0000001	0.0000001	0.0000002	0.00000009	
Dieldrin	mg/m3	39	28.21	0.00000009	0.0000006	0.0000001	0.0000006	0.0000002	0.0000002	
Endosulfan I	mg/m3	39	5.13	0.00000006	0.0000009	0.0000002	0.0000005	0.0000001	0.00000005	
Endosulfan II	mg/m3	39	2.56	0.00000001	0.0000001	0.0000003	0.0000003	0.0000002	0.0000002	
Endosulfan Sulfate	mg/m3	39	5.13	0.00000002	0.0000008	0.0000002	0.0000001	0.0000002	0.0000002	
Endrin	mg/m3	39	2.56	0.00000004	0.0000002	0.0000004	0.0000004	0.0000004	0.0000004	
Endrin Ketone	mg/m3	39	2.56	0.00000009	0.0000007	0.0000004	0.0000004	0.0000002	0.0000002	
Heptachlor	mg/m3	39	30.77	0.00000006	0.0000005	0.0000001	0.0000009	0.0000002	0.00000009	
Heptachlor epoxide	mg/m3	39	10.26	0.00000001	0.0000005	0.0000003	0.0000005	0.0000002	0.0000002	
Isodrin	mg/m3	39	17.95	0.00000004	0.0000004	0.0000003	0.0000007	0.0000001	0.00000005	
alpha-BHC	mg/m3	39	33.33	0.00000006	0.0000001	0.0000003	0.0000001	0.0000003	0.00000006	
alpha-Chlordane	mg/m3	39	48.72	0.00000008	0.0000005	0.0000006	0.0000003	0.0000004	0.0000002	
beta-BHC	mg/m3	39	5.13	0.00000010	0.0000003	0.0000002	0.0000003	0.0000001	0.0000001	
delta-BHC	mg/m3	39	7.69	0.00000001	0.0000006	0.0000005	0.0000009	0.0000001	0.00000009	
gamma-BHC	mg/m3	39	35.90	0.00000008	0.0000003	0.0000002	0.0000001	0.0000003	0.00000006	
gamma-Chlordane	mg/m3	39	53.85	0.00000009	0.0000005	0.0000005	0.0000002	0.0000003	0.0000002	
Antimony	mg/m3	40	100.00			0.0000003	0.000006	0.000001	0.000008	
Arsenic	mg/m3	40	95.00	0.0000002	0.0000002	0.0000004	0.0000007	0.0000002	0.0000002	
Beryllium	mg/m3	40	85.00	0.00000005	0.0000001	0.000000008	0.0000001	0.0000003	0.0000003	
Cadmium	mg/m3	40	100.00			0.0000007	0.0000007	0.0000002	0.0000002	
Chromium	mg/m3	40	100.00			0.0000002	0.000004	0.000001	0.000008	
Copper	mg/m3	40	100.00			0.000003	0.0004	0.0001	0.0001	
Lead	mg/m3	40	100.00			0.000003	0.0004	0.0001	0.00007	

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Nickel	mg/m3	40	100.00			0.000001	0.00002	0.000008	0.000007	
PM-10	mg/m3	39	100.00			0.02	0.23	0.09	0.07	
Selenium	mg/m3	40	82.50	0.000001	0.000002	0.00000001	0.000006	0.000001	0.0000009	
Silver	mg/m3	39	94.87	0.0000003	0.0000003	0.00000005	0.00001	0.000003	0.000002	
Thallium	mg/m3	39	61.54	0.000003	0.000004	0.0000001	0.000005	0.000002	0.000002	
Zinc	mg/m3	40	100.00			0.00010	0.0008	0.0003	0.0002	
1,2,4-Trichlorobenzene	mg/m3	62	67.74	0.000003	0.01	0.000003	0.005	0.001	0.0004	
1,2-Dichlorobenzene	mg/m3	62	48.39	0.000002	0.003	0.00001	0.001	0.0003	0.0002	
1,3-Dichlorobenzene	mg/m3	62	43.55	0.0000010	0.003	0.00006	0.001	0.0003	0.0002	
1,4-Dichlorobenzene	mg/m3	62	100.00			0.0001	0.005	0.001	0.001	
2-Methylnaphthalene	mg/m3	35	100.00			0.00004	0.0008	0.0001	0.0001	
2-Methylphenol	mg/m3	35	54.29	0.000007	0.00002	0.00002	0.00008	0.00002	0.00002	
2-Nitrophenol	mg/m3	35	60.00	0.000005	0.00004	0.00002	0.0002	0.00004	0.00003	
4-Methylphenol/3-Methylphenol	mg/m3	35	80.00	0.000007	0.00002	0.00002	0.0001	0.00005	0.00005	
4-Nitrophenol	mg/m3	35	5.71	0.00003	0.0007	0.00002	0.00003	0.0001	0.0001	
Acenaphthene	mg/m3	35	20.00	0.000002	0.000008	0.000005	0.00002	0.000004	0.000003	0.0000010
Acenaphthylene	mg/m3	35	60.00	0.000004	0.00001	0.000004	0.00003	0.00001	0.000007	
Acetophenone	mg/m3	35	31.43	0.0000010	0.00001	0.00009	0.0008	0.0001	0.000004	
Aniline	mg/m3	35	2.86	0.000002	0.00004	0.00001	0.00001	0.00001	0.000010	0.0000010
Anthracene	mg/m3	35	8.57	0.000002	0.000010	0.0000009	0.000005	0.000004	0.000004	
Benz(a)anthracene	mg/m3	35	2.86	0.000002	0.000010	0.0000010	0.0000010	0.000003	0.000004	0.0000010
Benzo(b)fluoranthene	mg/m3	35	2.86	0.0000010	0.00002	0.0000010	0.0000010	0.000005	0.000005	
Benzo(k)fluoranthene	mg/m3	35	2.86	0.000002	0.00001	0.0000010	0.0000010	0.000004	0.000003	0.0000010
Benzoic acid	mg/m3	35	100.00			0.00010	0.001	0.0005	0.0005	
Benzyl alcohol	mg/m3	35	62.86	0.000004	0.00002	0.00002	0.0001	0.00003	0.00003	
Butylbenzylphthalate	mg/m3	35	2.86	0.0000010	0.000009	0.000003	0.000003	0.000003	0.000003	0.0000005
Chrysene	mg/m3	35	5.71	0.000003	0.00001	0.000002	0.000003	0.000003	0.000002	0.000002

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Di-n-butylphthalate	mg/m3	35	85.71	0.000004	0.000007	0.000007	0.00007	0.00002	0.00003	
Di-n-octylphthalate	mg/m3	35	8.57	0.0000010	0.000009	0.000007	0.000008	0.000004	0.000003	0.0000005
Dibenzofuran	mg/m3	35	80.00	0.000004	0.000009	0.00001	0.00004	0.00002	0.00001	
Diethylphthalate	mg/m3	35	28.57	0.000003	0.000007	0.000005	0.00006	0.000006	0.000003	
Dimethylphthalate	mg/m3	35	20.00	0.000003	0.000010	0.00001	0.00005	0.000008	0.000004	
Fluoranthene	mg/m3	35	48.57	0.000003	0.000009	0.000004	0.00002	0.000006	0.000004	
Fluorene	mg/m3	35	62.86	0.000005	0.000009	0.000009	0.00003	0.00001	0.000010	
Hexachloro-1,3-Butadiene	mg/m3	62	53.23	0.000002	0.02	0.0002	0.005	0.001	0.0007	
Isophorone	mg/m3	35	85.71	0.000004	0.000009	0.00001	0.00007	0.00003	0.00003	
Naphthalene	mg/m3	62	74.19	0.0002	0.001	0.0002	0.0008	0.0003	0.0003	
Phenanthrene	mg/m3	35	100.00			0.00001	0.00006	0.00003	0.00003	
Phenol	mg/m3	35	85.71	0.000008	0.00002	0.00005	0.0003	0.0001	0.00010	
Pyrene	mg/m3	35	48.57	0.000002	0.00001	0.000003	0.00001	0.000005	0.000004	
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	35	5.71	0.000001	0.000004	0.0000002	0.0000003	0.000001	0.000001	
bis(2-Ethylhexyl)phthalate	mg/m3	35	91.43	0.000009	0.00002	0.00002	0.00009	0.00004	0.00004	

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Hydrochloric Acid	mg/m3	0.005	0.003	0.004	0.003	0.004	0.004	Unknown
Hydrofluoric Acid	mg/m3	0.0004	0.0004	0.0005	0.0002	0.0005	0.0007	Unknown
Sulfuric Acid	mg/m3	0.006	0.01	0.01	0.009	0.01	0.01	Unknown
2-Butanone	mg/m3	0.005	0.007	0.009	0.005	0.008	0.009	Lognormal
Acetaldehyde	mg/m3	0.04	0.03	0.05	0.01	0.04	0.05	Lognormal
Acetone	mg/m3	0.04	0.03	0.04	0.01	0.04	0.04	Lognormal
Acrolein	mg/m3	0.0003	0.0004	0.0004	0.0002	0.0004	0.0006	Unknown
Benzaldehyde	mg/m3	0.002	0.002	0.002	0.0008	0.002	0.003	Unknown
Crotonaldehyde	mg/m3	0.00002	0.00006	0.00006	0.00005	0.00006	0.00006	Unknown
Formaldehyde	mg/m3	0.001	0.002	0.003	0.001	0.002	0.003	Lognormal
Hexanal	mg/m3	0.009	0.007	0.04	0.002	0.009	0.04	Lognormal
Isovaleraldehyde	mg/m3	0.00007	0.00008	0.00010	0.00006	0.00010	0.00009	Unknown
Propionaldehyde	mg/m3	0.0004	0.0007	0.0008	0.0006	0.0008	0.0008	Lognormal
Tolualdehyde	mg/m3	0.0004	0.0006	0.0007	0.0004	0.0007	0.001	Unknown
Valeraldehyde	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Unknown
n-Butyraldehyde	mg/m3	0.01	0.01	0.05	0.003	0.01	0.05	Lognormal
1,2,3,4,6,7,8,9-OCDD	mg/m3	0.0000001	0.00000002	0.00000005	0.00000005	0.00000005	0.00000001	Unknown
1,2,3,4,6,7,8,9-OCDF	mg/m3	0.000000010	0.000000006	0.000000007	0.000000004	0.000000008	0.000000007	Lognormal
1,2,3,4,6,7,8-HpCDD	mg/m3	0.000000005	0.000000003	0.000000004	0.000000002	0.000000004	0.000000003	Unknown
1,2,3,4,6,7,8-HpCDF	mg/m3	0.000000005	0.000000005	0.000000007	0.000000004	0.000000007	0.000000007	Lognormal
1,2,3,4,7,8,9-HpCDF	mg/m3	0.000000001	0.000000001	0.000000002	0.000000008	0.000000002	0.000000002	Lognormal
1,2,3,4,7,8-HxCDD	mg/m3	0.0000000002	0.0000000002	0.0000000002	0.0000000001	0.0000000002	0.0000000002	Lognormal
1,2,3,4,7,8-HxCDF	mg/m3	0.0000000007	0.0000000008	0.0000000010	0.0000000006	0.0000000010	0.0000000010	Lognormal
1,2,3,6,7,8-HxCDD	mg/m3	0.0000000003	0.0000000003	0.0000000004	0.0000000003	0.0000000004	0.0000000004	Lognormal
1,2,3,6,7,8-HxCDF	mg/m3	0.0000000007	0.0000000008	0.0000000010	0.0000000006	0.0000000010	0.0000000010	Lognormal

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,2,3,7,8,9-HxCDD	mg/m3	0.0000000002	0.0000000002	0.0000000003	0.0000000002	0.0000000003	0.0000000003	Lognormal
1,2,3,7,8,9-HxCDF	mg/m3	0.0000000006	0.0000000006	0.0000000008	0.0000000004	0.0000000008	0.0000000008	Lognormal
1,2,3,7,8-PeCDD	mg/m3	0.0000000000	0.0000000001	0.0000000001	0.0000000000	0.0000000001	0.0000000001	Lognormal
1,2,3,7,8-PeCDF	mg/m3	0.0000000002	0.0000000003	0.0000000003	0.0000000002	0.0000000003	0.0000000003	Lognormal
2,3,4,6,7,8-HxCDF	mg/m3	0.0000000002	0.0000000002	0.0000000003	0.0000000001	0.0000000003	0.0000000003	Lognormal
2,3,4,7,8-PeCDF	mg/m3	0.0000000006	0.0000000007	0.0000000008	0.0000000005	0.0000000008	0.0000000008	Lognormal
2,3,7,8-TCDD	mg/m3	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	Lognormal
2,3,7,8-TCDF	mg/m3	0.0000000001	0.0000000002	0.0000000002	0.0000000001	0.0000000002	0.0000000002	Lognormal
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	0.0000000009	0.0000000001	0.0000000001	0.0000000009	0.0000000001	0.0000000001	Lognormal
Total HpCDD	mg/m3	0.0000000001	0.0000000006	0.0000000008	0.0000000004	0.0000000008	0.0000000006	Unknown
Total HpCDF	mg/m3	0.0000000001	0.0000000001	0.0000000001	0.0000000008	0.0000000001	0.0000000001	Lognormal
Total HxCDD	mg/m3	0.0000000005	0.0000000005	0.0000000006	0.0000000004	0.0000000006	0.0000000006	Lognormal
Total HxCDF	mg/m3	0.0000000010	0.0000000001	0.0000000001	0.0000000008	0.0000000001	0.0000000001	Lognormal
Total PeCDD	mg/m3	0.0000000004	0.0000000003	0.0000000003	0.0000000002	0.0000000004	0.0000000003	Lognormal
Total PeCDF	mg/m3	0.0000000008	0.0000000009	0.0000000001	0.0000000007	0.0000000001	0.0000000001	Lognormal
Total TCDD	mg/m3	0.0000000005	0.0000000003	0.0000000004	0.0000000002	0.0000000004	0.0000000003	Unknown
Total TCDF	mg/m3	0.0000000008	0.0000000009	0.0000000001	0.0000000007	0.0000000001	0.0000000001	Lognormal
1,1,1-Trichloroethane	mg/m3	0.0002	0.0007	0.0007	0.0006	0.0007	0.0007	Lognormal
1,1,2,2-Tetrachloroethane	mg/m3	0.0004	0.0004	0.0005	0.0003	0.0005	0.0005	Lognormal
1,1,2-Trichloroethane	mg/m3	0.00009	0.0001	0.0001	0.0002	0.0002	0.0002	Normal/Lognormal
1,1-Dichloroethylene	mg/m3	0.00008	0.0001	0.0001	0.00010	0.0001	0.0001	Unknown
1,2,3-Trimethylbenzene	mg/m3	0.0003	0.0005	0.0005	0.0004	0.0005	0.0005	Lognormal
1,2,4-Trimethylbenzene	mg/m3	0.001	0.002	0.002	0.002	0.002	0.002	Lognormal
1,2-Dibromoethane	mg/m3	0.00010	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal
1,2-Dichloroethane	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
1,2-Dichloropropane	mg/m3	0.00005	0.00010	0.0001	0.00009	0.0001	0.0001	Lognormal
1,3,5-Trimethylbenzene	mg/m3	0.0004	0.0006	0.0008	0.0005	0.0007	0.0008	Lognormal

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,3-Butadiene	mg/m3	0.0007	0.0006	0.0007	0.0004	0.0007	0.0007	Unknown
1,4-Dioxane	mg/m3	0.0007	0.0009	0.0010	0.0007	0.001	0.0010	Lognormal
1-Butanol	mg/m3	0.01	0.02	0.02	0.01	0.02	0.03	Normal
1-Decene	mg/m3	0.0010	0.0005	0.0007	0.0003	0.0007	0.0005	Unknown
1-Heptene	mg/m3	0.0003	0.0004	0.0005	0.0003	0.0005	0.0005	Unknown
1-Hexene	mg/m3	0.0004	0.0005	0.0006	0.0004	0.0006	0.0007	Normal/Lognormal
1-Nonene	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
1-Octene	mg/m3	0.0002	0.0004	0.0005	0.0003	0.0004	0.0005	Lognormal
1-Pentene	mg/m3	0.0003	0.0007	0.0007	0.0006	0.0007	0.0008	Unknown
1-Propanol	mg/m3	0.007	0.007	0.02	0.003	0.008	0.02	Lognormal
1-Undecene	mg/m3	0.0008	0.0004	0.0006	0.0002	0.0006	0.0006	Lognormal
2,2,3-Trimethylpentane	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2,2,4-Trimethylpentane	mg/m3	0.0003	0.0005	0.0005	0.0003	0.0005	0.0007	Normal/Lognormal
2,2,5-Trimethylhexane	mg/m3	0.0003	0.0003	0.0003	0.0003	0.0004	0.0004	Lognormal
2,3,4-Trimethylpentane	mg/m3	0.0004	0.0003	0.0005	0.0002	0.0004	0.0005	Lognormal
2,3-Dimethylbutane	mg/m3	0.0009	0.0005	0.0006	0.0003	0.0007	0.0006	Lognormal
2,3-Dimethylpentane	mg/m3	0.0004	0.0003	0.0005	0.0002	0.0004	0.0005	Lognormal
2,4,4-Trimethyl-1-Pentene	mg/m3	0.00010	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2,4-Dimethylpentane	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2,5-Dimethylhexane	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
2-Ethyl-1-Butene	mg/m3	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	Lognormal
2-Methyl-1-Pentene	mg/m3	0.00008	0.0001	0.0002	0.0001	0.0002	0.0002	Lognormal
2-Methyl-2-Pentene	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0002	0.0003	Lognormal
2-Methylheptane	mg/m3	0.0005	0.0005	0.0007	0.0003	0.0006	0.0007	Lognormal
2-Propanol	mg/m3	0.006	0.010	0.01	0.009	0.01	0.01	Lognormal
3-Methyl-1-Butene	mg/m3	0.00010	0.0001	0.0001	0.00009	0.0001	0.0001	Lognormal
3-Methylheptane	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0002	0.0003	Lognormal
3-Methylhexane	mg/m3	0.0009	0.0007	0.001	0.0002	0.0009	0.001	Lognormal

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
3-Methylpentane	mg/m3	0.0010	0.002	0.002	0.001	0.002	0.002	Unknown
4-Methyl-1-Pentene	mg/m3	0.00008	0.0001	0.0001	0.0001	0.0001	0.0001	Unknown
4-Nonene	mg/m3	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	Unknown
Acetonitrile	mg/m3	0.09	0.04	0.13	0.004	0.05	0.13	Lognormal
Acrylonitrile	mg/m3	0.0003	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
Benzene	mg/m3	0.002	0.004	0.005	0.004	0.004	0.005	Lognormal
Benzyl Chloride	mg/m3	0.0005	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
Bromomethane	mg/m3	0.0004	0.0002	0.0003	0.0001	0.0003	0.0002	Unknown
Carbon Tetrachloride	mg/m3	0.0002	0.0007	0.0007	0.0007	0.0007	0.0008	Unknown
Chlorobenzene	mg/m3	0.0002	0.0002	0.0003	0.0002	0.0003	0.0003	Lognormal
Chlorodifluoromethane	mg/m3	0.003	0.003	0.004	0.003	0.004	0.004	Lognormal
Chloroethane	mg/m3	0.00009	0.0001	0.0002	0.0001	0.0002	0.0002	Lognormal
Chloroform	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Chloromethane	mg/m3	0.0004	0.002	0.002	0.002	0.002	0.002	Lognormal
Cumene	mg/m3	0.0001	0.0003	0.0003	0.0002	0.0003	0.0003	Normal/Lognormal
Cyclohexane	mg/m3	0.001	0.0010	0.002	0.0006	0.001	0.002	Lognormal
Cyclohexene	mg/m3	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
Cyclopentane	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	Unknown
Cyclopentene	mg/m3	0.00005	0.00010	0.0001	0.00008	0.0001	0.0001	Normal/Lognormal
Dichlorodifluoromethane	mg/m3	0.0004	0.003	0.003	0.003	0.003	0.003	Normal/Lognormal
Dichlorofluoromethane	mg/m3	0.0005	0.0003	0.0003	0.0003	0.0007	0.0009	Lognormal
Ethanol	mg/m3	0.02	0.04	0.04	0.03	0.04	0.04	Normal/Lognormal
Ethylbenzene	mg/m3	0.003	0.005	0.006	0.004	0.006	0.006	Lognormal
Freon 113	mg/m3	0.003	0.001	0.002	0.0009	0.002	0.001	Unknown
Freon 114	mg/m3	0.0004	0.0002	0.0002	0.0001	0.0003	0.0002	Unknown
Halocarbon 134A	mg/m3	0.0003	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
Heptanal	mg/m3	0.009	0.009	0.01	0.003	0.01	0.05	Unknown
Indan	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Lognormal

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Indene	mg/m3	0.00007	0.0001	0.0001	0.0001	0.0001	0.0001	Lognormal
Isobutane	mg/m3	0.003	0.004	0.005	0.004	0.005	0.005	Lognormal
Isobutene + 1-Butene	mg/m3	0.001	0.003	0.003	0.002	0.003	0.003	Lognormal
Isoheptane	mg/m3	0.001	0.001	0.001	0.0007	0.001	0.002	Unknown
Isohexane	mg/m3	0.003	0.002	0.01	0.0008	0.003	0.01	Lognormal
Isopentane	mg/m3	0.004	0.007	0.008	0.004	0.008	0.02	Normal
Isoprene	mg/m3	0.0002	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
Methyl t-Butylether	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0002	0.0003	Lognormal
Methylcyclohexane	mg/m3	0.0002	0.0003	0.0004	0.0003	0.0004	0.0005	Normal/Lognormal
Methylcyclopentane	mg/m3	0.0007	0.0007	0.001	0.0004	0.0009	0.001	Lognormal
Methylcyclopentene	mg/m3	0.00006	0.0001	0.0002	0.00010	0.0001	0.0001	Lognormal
Methylene Chloride	mg/m3	0.09	0.02	0.04	0.007	0.04	0.01	Unknown
Methylisobutylketone	mg/m3	0.001	0.002	0.002	0.001	0.002	0.002	Unknown
Neohexane	mg/m3	0.0004	0.0004	0.0005	0.0003	0.0005	0.0005	Unknown
Neopentane	mg/m3	0.00006	0.00007	0.00007	0.00006	0.00009	0.00009	Lognormal
Propane	mg/m3	0.010	0.01	0.02	0.01	0.02	0.02	Lognormal
Propylene	mg/m3	0.01	0.004	0.007	0.002	0.007	0.004	Unknown
Styrene	mg/m3	0.0004	0.0008	0.0009	0.0007	0.0009	0.0009	Normal
Tetrachloroethylene	mg/m3	0.0008	0.001	0.002	0.001	0.001	0.002	Lognormal
Toluene	mg/m3	0.01	0.02	0.03	0.02	0.03	0.03	Lognormal
Trichloroethylene	mg/m3	0.001	0.002	0.002	0.002	0.002	0.002	Lognormal
Trichlorofluoromethane	mg/m3	0.002	0.003	0.003	0.003	0.003	0.003	Lognormal
Vinyl Acetate	mg/m3	0.008	0.007	0.008	0.0010	0.008	0.23	Unknown
Vinyl Chloride	mg/m3	0.00007	0.00010	0.0001	0.00008	0.0001	0.0001	Unknown
a-Pinene	mg/m3	0.0002	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
c-1,2-Dichloroethylene	mg/m3	0.0003	0.0002	0.0002	0.0001	0.0002	0.0002	Unknown
c-1,3-Dichloropropene	mg/m3	0.0004	0.0002	0.0003	0.0002	0.0003	0.0002	Unknown
c-2-Butene	mg/m3	0.0003	0.0005	0.0005	0.0004	0.0005	0.0005	Lognormal

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
c-2-Octene	mg/m3	0.0005	0.00005	0.00005	0.0003	0.0006	0.0009	Lognormal
c-2-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0001	0.0002	0.0002	Normal
c-3-Hexene	mg/m3	0.00009	0.0002	0.0002	0.0001	0.0002	0.0002	Normal/Lognormal
c-3-Methyl-2-Pentene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
m-Diethylbenzene	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	Lognormal
m-Ethyltoluene	mg/m3	0.0008	0.001	0.001	0.0010	0.001	0.001	Lognormal
n-Butane	mg/m3	0.004	0.007	0.008	0.007	0.008	0.008	Lognormal
n-Butylbenzene	mg/m3	0.00008	0.0002	0.0002	0.0001	0.0002	0.0002	Normal/Lognormal
n-Decane	mg/m3	0.001	0.002	0.003	0.002	0.003	0.003	Normal
n-Heptane	mg/m3	0.0006	0.001	0.001	0.0009	0.001	0.001	Normal
n-Hexane	mg/m3	0.003	0.003	0.004	0.002	0.004	0.004	Lognormal
n-Nonane	mg/m3	0.0006	0.001	0.001	0.001	0.001	0.001	Lognormal
n-Octane	mg/m3	0.0003	0.0008	0.0008	0.0007	0.0008	0.0009	Normal
n-Pentane	mg/m3	0.002	0.004	0.005	0.004	0.005	0.005	Lognormal
n-Propylbenzene	mg/m3	0.0003	0.0004	0.0005	0.0004	0.0005	0.0005	Normal/Lognormal
n-Undecane	mg/m3	0.0009	0.001	0.002	0.001	0.002	0.002	Unknown
o-Ethyltoluene	mg/m3	0.0003	0.0006	0.0007	0.0005	0.0006	0.0007	Lognormal
o-Xylene	mg/m3	0.001	0.002	0.003	0.002	0.003	0.003	Normal/Lognormal
p-Diethylbenzene	mg/m3	0.0002	0.0003	0.0004	0.0002	0.0003	0.0004	Lognormal
p-Ethyltoluene	mg/m3	0.0004	0.0007	0.0008	0.0006	0.0008	0.0008	Lognormal
p-Isopropyltoluene	mg/m3	0.00009	0.0002	0.0002	0.0002	0.0002	0.0002	Lognormal
p-Xylene + m-Xylene	mg/m3	0.003	0.006	0.007	0.005	0.007	0.007	Normal/Lognormal
t-1,2-Dichloroethylene	mg/m3	0.00004	0.0001	0.0001	0.0001	0.0001	0.0001	Normal/Lognormal
t-1,3-Dichloropropene	mg/m3	0.00006	0.0001	0.0001	0.0001	0.0001	0.0001	Lognormal
t-2-Butene	mg/m3	0.0004	0.0005	0.0006	0.0004	0.0006	0.0006	Lognormal
t-2-Hexene	mg/m3	0.00007	0.0001	0.0001	0.0001	0.0001	0.0001	Lognormal
t-2-Pentene	mg/m3	0.0002	0.0003	0.0004	0.0002	0.0004	0.0004	Lognormal
t-Butylbenzene	mg/m3	0.00008	0.0001	0.0002	0.0001	0.0002	0.0002	Lognormal

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Mercury	mg/m3	0.00002	0.00001	0.00001	0.000002	0.00001	0.00008	Unknown
4,4'-DDT	mg/m3	0.0000006	0.0000001	0.0000005	0.0000001	0.0000002	0.0000001	Unknown
Aldrin	mg/m3	0.0000002	0.0000002	0.0000002	0.0000001	0.0000002	0.0000002	Unknown
Dieldrin	mg/m3	0.0000001	0.0000002	0.0000003	0.0000002	0.0000003	0.0000003	Lognormal
Endosulfan I	mg/m3	0.0000001	0.0000001	0.0000002	0.00000008	0.0000002	0.0000001	Unknown
Endosulfan II	mg/m3	0.00000009	0.0000002	0.0000003	0.0000002	0.0000002	0.0000002	Unknown
Endosulfan Sulfate	mg/m3	0.0000001	0.0000002	0.0000003	0.0000002	0.0000003	0.0000002	Unknown
Endrin	mg/m3	0.0000001	0.0000004	0.0000004	0.0000004	0.0000005	0.0000005	Unknown
Endrin Ketone	mg/m3	0.00000009	0.0000002	0.0000004	0.0000002	0.0000002	0.0000003	Unknown
Heptachlor	mg/m3	0.0000002	0.0000002	0.0000003	0.0000001	0.0000003	0.0000003	Unknown
Heptachlor epoxide	mg/m3	0.0000001	0.0000002	0.0000002	0.0000002	0.0000002	0.0000003	Unknown
Isodrin	mg/m3	0.0000002	0.0000001	0.0000002	0.00000008	0.0000002	0.0000002	Unknown
alpha-BHC	mg/m3	0.0000004	0.0000003	0.0000004	0.0000001	0.0000004	0.0000006	Unknown
alpha-Chlordane	mg/m3	0.0000006	0.0000004	0.0000008	0.0000002	0.0000006	0.0000008	Lognormal
beta-BHC	mg/m3	0.00000004	0.0000001	0.0000001	0.00000010	0.0000001	0.0000001	Unknown
delta-BHC	mg/m3	0.0000002	0.0000001	0.0000002	0.00000009	0.0000002	0.0000002	Unknown
gamma-BHC	mg/m3	0.0000003	0.0000003	0.0000004	0.0000001	0.0000004	0.0000005	Unknown
gamma-Chlordane	mg/m3	0.0000004	0.0000003	0.0000004	0.0000002	0.0000004	0.0000005	Unknown
Antimony	mg/m3	0.00001	0.00001	0.00002	0.00001	0.00002	0.00002	Unknown
Arsenic	mg/m3	0.000002	0.000002	0.000003	0.000002	0.000003	0.000003	Lognormal
Beryllium	mg/m3	0.0000003	0.0000003	0.0000004	0.0000002	0.0000004	0.0000008	Unknown
Cadmium	mg/m3	0.000002	0.000002	0.000003	0.000002	0.000003	0.000003	Lognormal
Chromium	mg/m3	0.000008	0.00001	0.00001	0.000008	0.00001	0.00001	Lognormal
Copper	mg/m3	0.00007	0.0001	0.0001	0.0001	0.0001	0.0001	Lognormal
Lead	mg/m3	0.00008	0.0001	0.0001	0.00008	0.0001	0.0001	Unknown

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Nickel	mg/m3	0.000006	0.000008	0.00001	0.000007	0.000010	0.00001	Lognormal
PM-10	mg/m3	0.05	0.09	0.10	0.07	0.10	0.10	Lognormal
Selenium	mg/m3	0.000001	0.000001	0.000002	0.0000009	0.000002	0.000003	Unknown
Silver	mg/m3	0.000003	0.000003	0.000006	0.000001	0.000003	0.000006	Lognormal
Thallium	mg/m3	0.0000010	0.000002	0.000002	0.000001	0.000002	0.000002	Unknown
Zinc	mg/m3	0.0002	0.0003	0.0003	0.0002	0.0003	0.0003	Unknown
1,2,4-Trichlorobenzene	mg/m3	0.001	0.001	0.001	0.0002	0.001	0.01	Unknown
1,2-Dichlorobenzene	mg/m3	0.0004	0.0003	0.001	0.00007	0.0004	0.003	Lognormal
1,3-Dichlorobenzene	mg/m3	0.0003	0.0003	0.0004	0.00009	0.0004	0.003	Unknown
1,4-Dichlorobenzene	mg/m3	0.0009	0.001	0.002	0.001	0.002	0.002	Lognormal
2-Methylnaphthalene	mg/m3	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	Lognormal
2-Methylphenol	mg/m3	0.00002	0.00002	0.00003	0.00002	0.00003	0.00003	Unknown
2-Nitrophenol	mg/m3	0.00004	0.00004	0.00006	0.00003	0.00006	0.00008	Unknown
4-Methylphenol/3-Methylphenol	mg/m3	0.00003	0.00005	0.00006	0.00004	0.00006	0.00008	Normal
4-Nitrophenol	mg/m3	0.00008	0.00003	0.00003	0.00009	0.0001	0.0002	Unknown
Acenaphthene	mg/m3	0.000004	0.000004	0.000005	0.000003	0.000005	0.000005	Unknown
Acenaphthylene	mg/m3	0.000007	0.00001	0.00001	0.000008	0.00001	0.00001	Lognormal
Acetophenone	mg/m3	0.0002	0.0001	0.0002	0.00001	0.0002	0.0005	Unknown
Aniline	mg/m3	0.000005	0.00001	0.00001	0.000008	0.00001	0.00001	Normal
Anthracene	mg/m3	0.000001	0.000004	0.000004	0.000003	0.000004	0.000004	Unknown
Benz(a)anthracene	mg/m3	0.0000009	0.0000010	0.0000010	0.000003	0.000004	0.000004	Normal
Benzo(b)fluoranthene	mg/m3	0.000002	0.0000010	0.0000010	0.000004	0.000006	0.000007	Normal
Benzo(k)fluoranthene	mg/m3	0.000002	0.0000010	0.0000010	0.000003	0.000004	0.000005	Unknown
Benzoic acid	mg/m3	0.0002	0.0005	0.0006	0.0005	0.0006	0.0006	Normal/Lognormal
Benzyl alcohol	mg/m3	0.00002	0.00003	0.00003	0.00002	0.00003	0.00005	Unknown
Butylbenzylphthalate	mg/m3	0.0000009	0.000003	0.000003	0.000003	0.000003	0.000004	Unknown
Chrysene	mg/m3	0.0000010	0.000003	0.000003	0.000003	0.000003	0.000003	Unknown

Table A-9- Golf Course Ambient Air Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Di-n-butylphthalate	mg/m3	0.00002	0.00002	0.00003	0.00002	0.00003	0.00004	Normal
Di-n-octylphthalate	mg/m3	0.000002	0.000004	0.000004	0.000003	0.000004	0.000005	Unknown
Dibenzofuran	mg/m3	0.000009	0.00002	0.00002	0.00001	0.00002	0.00002	Normal
Diethylphthalate	mg/m3	0.00001	0.000006	0.000010	0.000004	0.000010	0.000007	Unknown
Dimethylphthalate	mg/m3	0.00001	0.000008	0.00001	0.000005	0.00001	0.00001	Unknown
Fluoranthene	mg/m3	0.000004	0.000006	0.000007	0.000005	0.000007	0.000008	Unknown
Fluorene	mg/m3	0.000007	0.00001	0.00001	0.000009	0.00001	0.00001	Unknown
Hexachloro-1,3-Butadiene	mg/m3	0.002	0.001	0.002	0.0003	0.002	0.04	Unknown
Isophorone	mg/m3	0.00002	0.00003	0.00004	0.00002	0.00004	0.00005	Normal
Naphthalene	mg/m3	0.0002	0.0003	0.0004	0.0003	0.0004	0.0004	Normal
Phenanthrene	mg/m3	0.00001	0.00003	0.00003	0.00003	0.00003	0.00003	Lognormal
Phenol	mg/m3	0.00009	0.0001	0.0001	0.00008	0.0001	0.0003	Normal
Pyrene	mg/m3	0.000003	0.000005	0.000006	0.000004	0.000006	0.000006	Unknown
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	0.0000004	0.0000003	0.0000003	0.000001	0.000001	0.000001	Normal
bis(2-Ethylhexyl)phthalate	mg/m3	0.00002	0.00004	0.00005	0.00003	0.00005	0.00005	Unknown

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Acid Gases										
Hydrochloric Acid	mg/m3	7	100.00			0.009	0.03	0.02	0.02	
Hydrofluoric Acid	mg/m3	7	100.00			0.00007	0.001	0.0006	0.0003	
Sulfuric Acid	mg/m3	7	100.00			0.008	0.03	0.02	0.02	
Aldehydes and Ketones										
2-Butanone	mg/m3	7	100.00			0.002	0.02	0.008	0.005	
Acetaldehyde	mg/m3	7	100.00			0.001	0.13	0.04	0.003	
Acetone	mg/m3	7	100.00			0.005	0.18	0.05	0.010	
Acrolein	mg/m3	5	100.00			0.0001	0.002	0.0006	0.0002	
Benzaldehyde	mg/m3	7	100.00			0.0002	0.006	0.002	0.0009	
Formaldehyde	mg/m3	5	100.00			0.001	0.003	0.002	0.002	0.001
Hexanal	mg/m3	7	100.00			0.0002	0.08	0.02	0.0005	
Propionaldehyde	mg/m3	5	100.00			0.0002	0.0010	0.0005	0.0004	
Tolualdehyde	mg/m3	5	80.00	0.0001	0.0001	0.0007	0.004	0.001	0.0009	
Valeraldehyde	mg/m3	5	60.00	0.0001	0.0001	0.0002	0.001	0.0004	0.0002	
n-Butyraldehyde	mg/m3	7	100.00			0.0002	0.05	0.01	0.001	
Dioxins/Furans										
1,2,3,4,6,7,8,9-OCDD	mg/m3	6	100.00			0.00000001	0.0000001	0.00000005	0.00000004	
1,2,3,4,6,7,8,9-OCDF	mg/m3	6	100.00			0.000000009	0.0000002	0.00000005	0.00000003	
1,2,3,4,6,7,8-HpCDD	mg/m3	6	100.00			0.000000007	0.00000006	0.00000003	0.00000002	
1,2,3,4,6,7,8-HpCDF	mg/m3	6	100.00			0.000000002	0.0000002	0.00000007	0.00000006	
1,2,3,4,7,8,9-HpCDF	mg/m3	6	100.00			0.000000003	0.00000003	0.00000001	0.00000008	
1,2,3,4,7,8-HxCDD	mg/m3	6	100.00			0.0000000006	0.000000005	0.000000003	0.000000003	
1,2,3,4,7,8-HxCDF	mg/m3	6	100.00			0.0000000005	0.00000004	0.00000002	0.00000001	
1,2,3,6,7,8-HxCDD	mg/m3	6	100.00			0.0000000009	0.000000010	0.000000005	0.000000004	
1,2,3,6,7,8-HxCDF	mg/m3	6	100.00			0.0000000003	0.000000003	0.000000001	0.00000001	
1,2,3,7,8,9-HxCDD	mg/m3	6	100.00			0.0000000005	0.000000005	0.000000003	0.000000003	
1,2,3,7,8,9-HxCDF	mg/m3	6	100.00			0.0000000002	0.000000002	0.000000007	0.000000005	

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Dioxins/Furans										
1,2,3,7,8-PeCDD	mg/m3	6	100.00			0.000000003	0.000000004	0.000000002	0.000000002	
1,2,3,7,8-PeCDF	mg/m3	6	100.00			0.000000001	0.000000001	0.000000006	0.000000005	
2,3,4,6,7,8-HxCDF	mg/m3	6	100.00			0.000000005	0.000000007	0.000000002	0.000000002	
2,3,4,7,8-PeCDF	mg/m3	6	100.00			0.000000003	0.000000003	0.000000001	0.000000001	
2,3,7,8-TCDD	mg/m3	6	100.00			0.0000000001	0.0000000006	0.0000000003	0.0000000003	
2,3,7,8-TCDF	mg/m3	6	100.00			0.0000000009	0.0000000006	0.0000000003	0.0000000003	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	6	100.00			0.0000000004	0.0000000004	0.0000000002	0.0000000001	
Total HpCDD	mg/m3	6	100.00			0.000000001	0.000000001	0.000000006	0.000000004	
Total HpCDF	mg/m3	6	100.00			0.000000003	0.000000003	0.000000001	0.000000009	
Total HxCDD	mg/m3	6	100.00			0.000000002	0.000000001	0.000000008	0.000000007	
Total HxCDF	mg/m3	6	100.00			0.000000004	0.000000004	0.000000002	0.000000001	
Total PeCDD	mg/m3	6	100.00			0.000000001	0.000000001	0.000000006	0.000000005	
Total PeCDF	mg/m3	6	100.00			0.000000005	0.000000004	0.000000002	0.000000001	
Total TCDD	mg/m3	6	100.00			0.000000001	0.000000009	0.000000005	0.000000005	
Total TCDF	mg/m3	6	100.00			0.000000007	0.000000004	0.000000002	0.000000002	
GC/MS Organics										
1,1,1-Trichloroethane	mg/m3	7	100.00				0.0004	0.002	0.0009	0.0007
1,1,1,2-Tetrachloroethane	mg/m3	7	42.86	0.0003	0.001	0.0005	0.001	0.0005	0.0005	
1,1-Dichloroethylene	mg/m3	7	14.29	0.0001	0.0009	0.0002	0.0002	0.0002	0.0002	
1,2,3-Trimethylbenzene	mg/m3	7	85.71	0.0001	0.0001	0.0002	0.0007	0.0004	0.0003	
1,2,4-Trimethylbenzene	mg/m3	7	100.00			0.0009	0.003	0.002	0.002	
1,2-Dibromoethane	mg/m3	7	14.29	0.0002	0.0008	0.00008	0.00008	0.0002	0.0002	
1,2-Dichloropropane	mg/m3	7	42.86	0.00008	0.0005	0.0007	0.0009	0.0004	0.0002	
1,3,5-Trimethylbenzene	mg/m3	7	100.00			0.0003	0.001	0.0006	0.0004	
1,3-Butadiene	mg/m3	7	85.71	0.0006	0.0006	0.0004	0.001	0.0005	0.0004	
1,4-Dioxane	mg/m3	7	57.14	0.0009	0.002	0.001	0.009	0.002	0.001	
1-Butanol	mg/m3	7	100.00			0.002	0.16	0.05	0.04	

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
GC/MS Organics										
1-Decene	mg/m3	7	42.86	0.0004	0.008	0.0005	0.009	0.002	0.0005	
1-Heptene	mg/m3	7	57.14	0.0004	0.0008	0.0005	0.002	0.0006	0.0005	
1-Hexene	mg/m3	7	71.43	0.0004	0.0004	0.0003	0.002	0.0006	0.0005	
1-Nonene	mg/m3	7	42.86	0.0004	0.0009	0.0004	0.001	0.0005	0.0004	
1-Octene	mg/m3	7	42.86	0.0003	0.0008	0.0003	0.002	0.0005	0.0003	
1-Pentene	mg/m3	7	100.00			0.0003	0.001	0.0006	0.0005	
1-Propanol	mg/m3	7	57.14	0.0007	0.003	0.003	0.006	0.003	0.003	
1-Undecene	mg/m3	7	42.86	0.0003	0.001	0.0005	0.004	0.0010	0.0005	
2,2,3-Trimethylpentane	mg/m3	7	14.29	0.0003	0.0007	0.0001	0.0001	0.0002	0.0002	
2,2,4-Trimethylpentane	mg/m3	7	57.14	0.0001	0.0002	0.0002	0.002	0.0004	0.0002	
2,3,4-Trimethylpentane	mg/m3	7	28.57	0.0001	0.0006	0.0008	0.002	0.0005	0.0002	
2,3-Dimethylbutane	mg/m3	7	28.57	0.0001	0.0008	0.0003	0.006	0.001	0.0002	
2,3-Dimethylpentane	mg/m3	7	42.86	0.0001	0.004	0.00007	0.0003	0.0004	0.00008	
2,4,4-Trimethyl-1-Pentene	mg/m3	7	71.43	0.0005	0.0007	0.0002	0.002	0.0006	0.0003	
2,5-Dimethylhexane	mg/m3	7	28.57	0.0004	0.0008	0.0002	0.0005	0.0003	0.0003	
2-Methyl-1-Pentene	mg/m3	7	28.57	0.0002	0.001	0.0002	0.0003	0.0003	0.0002	
2-Methyl-2-Pentene	mg/m3	7	14.29	0.0002	0.0007	0.0001	0.0001	0.0002	0.0002	
2-Methylheptane	mg/m3	7	57.14	0.0001	0.0003	0.0008	0.004	0.0009	0.0008	
2-Propanol	mg/m3	7	100.00			0.006	0.02	0.01	0.02	
3-Methyl-1-Butene	mg/m3	7	14.29	0.0001	0.0007	0.0001	0.0001	0.0001	0.0001	
3-Methylheptane	mg/m3	7	14.29	0.0002	0.0008	0.0001	0.0001	0.0002	0.0001	
3-Methylhexane	mg/m3	7	57.14	0.0001	0.0005	0.0002	0.001	0.0004	0.0002	
3-Methylpentane	mg/m3	7	85.71	0.0006	0.0006	0.0005	0.002	0.0010	0.001	
Acetonitrile	mg/m3	7	57.14	0.0006	0.007	0.001	0.01	0.004	0.003	
Acrylonitrile	mg/m3	7	42.86	0.0002	0.0006	0.0007	0.002	0.0007	0.0003	
Benzene	mg/m3	7	100.00			0.003	0.007	0.004	0.003	
Bromomethane	mg/m3	7	42.86	0.0002	0.0007	0.00008	0.0003	0.0002	0.0002	
Carbon Tetrachloride	mg/m3	7	100.00			0.0005	0.0008	0.0006	0.0006	

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
GC/MS Organics										
Chlorobenzene	mg/m3	7	71.43	0.0002	0.0004	0.00009	0.0006	0.0003	0.0002	
Chlorodifluoromethane	mg/m3	7	85.71	0.0003	0.0003	0.002	0.007	0.003	0.002	
Chloroethane	mg/m3	7	42.86	0.0002	0.0007	0.0003	0.0009	0.0003	0.0003	
Chloroform	mg/m3	7	100.00			0.0002	0.0009	0.0004	0.0003	
Chloromethane	mg/m3	7	100.00			0.002	0.003	0.002	0.002	
Cumene	mg/m3	7	42.86	0.0001	0.0010	0.0002	0.0004	0.0003	0.0002	
Cyclohexane	mg/m3	7	85.71	0.0002	0.0002	0.0008	0.004	0.002	0.002	
Cyclohexene	mg/m3	7	57.14	0.0003	0.0005	0.0002	0.0008	0.0003	0.0002	
Cyclopentane	mg/m3	7	28.57	0.00009	0.0007	0.0002	0.0006	0.0002	0.0001	
Cyclopentene	mg/m3	7	14.29	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	
Dichlorodifluoromethane	mg/m3	7	100.00			0.003	0.004	0.003	0.003	
Ethanol	mg/m3	7	100.00			0.04	0.08	0.06	0.05	
Ethylbenzene	mg/m3	7	100.00			0.004	0.010	0.006	0.005	0.004
Freon 113	mg/m3	7	100.00			0.0005	0.003	0.001	0.0008	
Freon 114	mg/m3	7	28.57	0.0003	0.001	0.00007	0.00007	0.0002	0.0001	0.00007
Halocarbon 134A	mg/m3	7	28.57	0.0002	0.0006	0.0002	0.0003	0.0002	0.0002	
Heptanal	mg/m3	7	57.14	0.0004	0.002	0.007	0.06	0.01	0.007	
Indan	mg/m3	7	57.14	0.0002	0.0005	0.0001	0.0002	0.0002	0.0001	
Isobutane	mg/m3	7	100.00			0.001	0.01	0.004	0.002	
Isobutene + 1-Butene	mg/m3	7	100.00			0.001	0.007	0.003	0.002	
Isoheptane	mg/m3	7	71.43	0.00007	0.0002	0.0004	0.001	0.0005	0.0006	
Isohexane	mg/m3	7	42.86	0.0001	0.0007	0.0009	0.004	0.001	0.0004	
Isopentane	mg/m3	7	85.71	0.0005	0.0005	0.002	0.007	0.004	0.003	
Isoprene	mg/m3	7	71.43	0.0004	0.0006	0.0002	0.0010	0.0004	0.0003	
Methyl t-Butylether	mg/m3	7	14.29	0.0003	0.0007	0.00010	0.00010	0.0002	0.0002	
Methylcyclohexane	mg/m3	7	42.86	0.0002	0.0004	0.0002	0.0009	0.0003	0.0002	
Methylcyclopentane	mg/m3	7	57.14	0.0002	0.0005	0.0005	0.001	0.0005	0.0005	
Methylene Chloride	mg/m3	7	100.00			0.002	0.03	0.008	0.004	

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
GC/MS Organics										
Methylisobutylketone	mg/m3	7	100.00			0.002	0.009	0.004	0.003	
Propane	mg/m3	7	100.00			0.005	0.08	0.02	0.010	
Propylene	mg/m3	7	100.00			0.001	0.16	0.03	0.002	
Styrene	mg/m3	7	100.00			0.0009	0.004	0.002	0.001	
Tetrachloroethylene	mg/m3	7	100.00			0.0005	0.003	0.001	0.001	
Toluene	mg/m3	7	100.00			0.02	0.03	0.02	0.02	
Trichloroethylene	mg/m3	7	100.00			0.001	0.009	0.003	0.002	
Trichlorofluoromethane	mg/m3	7	100.00			0.002	0.006	0.004	0.004	
Vinyl Acetate	mg/m3	7	71.43	0.0001	0.0001	0.009	0.03	0.01	0.009	
Vinyl Chloride	mg/m3	7	14.29	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	
a-Pinene	mg/m3	7	57.14	0.0004	0.0009	0.0003	0.003	0.0007	0.0004	
b-Pinene	mg/m3	7	14.29	0.0001	0.001	0.0006	0.0006	0.0003	0.0002	
c-1,3-Dichloropropene	mg/m3	7	14.29	0.0002	0.0005	0.0004	0.0004	0.0002	0.0001	
c-2-Butene	mg/m3	7	85.71	0.0005	0.0005	0.0002	0.0006	0.0003	0.0002	
c-2-Octene	mg/m3	7	14.29	0.0003	0.002	0.0008	0.0008	0.0004	0.0003	
c-2-Pentene	mg/m3	7	14.29	0.0001	0.0007	0.0001	0.0001	0.0002	0.0001	
m-Diethylbenzene	mg/m3	7	14.29	0.00007	0.001	0.001	0.001	0.0004	0.0002	
m-Ethyltoluene	mg/m3	7	100.00			0.0005	0.002	0.001	0.0008	
n-Butane	mg/m3	7	100.00			0.003	0.01	0.005	0.005	
n-Decane	mg/m3	7	100.00			0.001	0.005	0.003	0.003	
n-Heptane	mg/m3	7	85.71	0.0002	0.0002	0.0006	0.004	0.002	0.002	
n-Hexane	mg/m3	7	100.00			0.001	0.01	0.004	0.002	
n-Nonane	mg/m3	7	100.00			0.0006	0.003	0.001	0.001	
n-Octane	mg/m3	7	100.00			0.0004	0.002	0.0008	0.0007	
n-Pentane	mg/m3	7	100.00			0.001	0.007	0.003	0.002	
n-Propylbenzene	mg/m3	7	57.14	0.0006	0.0009	0.0003	0.0006	0.0004	0.0004	
n-Undecane	mg/m3	7	85.71	0.0003	0.0003	0.0007	0.007	0.002	0.001	
o-Ethyltoluene	mg/m3	7	71.43	0.0006	0.0009	0.0003	0.0008	0.0005	0.0005	

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
GC/MS Organics										
o-Xylene	mg/m3	7	100.00			0.002	0.006	0.003	0.002	
p-Ethyltoluene	mg/m3	7	100.00			0.0003	0.001	0.0006	0.0005	
p-Isopropyltoluene	mg/m3	7	28.57	0.0001	0.0005	0.0002	0.0003	0.0002	0.0002	
p-Xylene + m-Xylene	mg/m3	7	100.00			0.004	0.01	0.006	0.006	
t-2-Butene	mg/m3	7	85.71	0.0004	0.0004	0.0002	0.0006	0.0003	0.0003	
t-2-Hexene	mg/m3	7	14.29	0.0001	0.0008	0.00008	0.00008	0.0002	0.00009	
t-2-Pentene	mg/m3	7	42.86	0.0001	0.0007	0.0002	0.0003	0.0002	0.0002	
t-Butylbenzene	mg/m3	7	14.29	0.0003	0.006	0.0002	0.0002	0.0007	0.0003	
Mercury										
Mercury	mg/m3	7	71.43	0.0000003	0.0000003	0.000004	0.00003	0.00001	0.00001	0.0000002
Pesticides/PCBs										
4,4'-DDD	mg/m3	4	25.00	0.0000002	0.0000004	0.0000002	0.0000002	0.0000001	0.0000001	
Dieldrin	mg/m3	4	50.00	0.0000004	0.0000005	0.0000004	0.0000006	0.0000004	0.0000003	
Endosulfan I	mg/m3	4	25.00	0.0000001	0.0000008	0.0000003	0.0000003	0.0000002	0.0000002	
Endrin Aldehyde	mg/m3	4	50.00	0.0000005	0.0000006	0.0000003	0.0000008	0.0000004	0.0000003	
Heptachlor	mg/m3	4	50.00	0.00000010	0.0000002	0.0000009	0.000001	0.0000005	0.0000005	
Isodrin	mg/m3	4	25.00	0.00000008	0.0000002	0.0000003	0.0000003	0.0000001	0.00000008	
alpha-BHC	mg/m3	4	50.00	0.00000007	0.00000007	0.0000006	0.0000008	0.0000004	0.0000003	
alpha-Chlordane	mg/m3	4	50.00	0.0000002	0.0000004	0.0000001	0.0000004	0.0000002	0.0000002	
gamma-BHC	mg/m3	4	25.00	0.0000001	0.0000002	0.0000002	0.0000002	0.0000001	0.00000009	
gamma-Chlordane	mg/m3	4	75.00	0.0000002	0.0000002	0.00000006	0.0000006	0.0000003	0.0000003	
PM-10										
Antimony	mg/m3	5	100.00			0.00008	0.0004	0.0002	0.0003	
Arsenic	mg/m3	5	100.00			0.000003	0.00006	0.00001	0.000004	
Beryllium	mg/m3	5	80.00	0.0000007	0.0000007	0.00000003	0.0000006	0.0000003	0.0000003	
Cadmium	mg/m3	5	100.00			0.00004	0.0003	0.0001	0.00006	

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
PM-10										
Chromium	mg/m3	5	100.00			0.00001	0.0001	0.00004	0.00002	
Copper	mg/m3	5	100.00			0.0005	0.006	0.002	0.001	
Lead	mg/m3	5	100.00			0.001	0.02	0.006	0.004	
Nickel	mg/m3	5	100.00			0.00001	0.0001	0.00004	0.00001	
PM-10	mg/m3	5	100.00			0.11	0.24	0.17	0.15	
Selenium	mg/m3	5	100.00			0.0000007	0.00004	0.00001	0.000004	
Silver	mg/m3	5	100.00			0.000006	0.00005	0.00002	0.00002	
Thallium	mg/m3	5	40.00	0.000003	0.00002	0.0000002	0.000002	0.000003	0.000001	
Zinc	mg/m3	5	100.00			0.002	0.01	0.006	0.005	
Semi-Volatile Organic Compounds										
1,2,4,5-Tetrachlorobenzene	mg/m3	4	25.00	0.000007	0.000008	0.000009	0.000009	0.000005	0.000004	
1,2,4-Trichlorobenzene	mg/m3	7	71.43	0.000003	0.0007	0.00002	0.0004	0.0002	0.0003	
1,2-Dichlorobenzene	mg/m3	7	71.43	0.000003	0.002	0.00001	0.0001	0.0002	0.00004	
1,3-Dichlorobenzene	mg/m3	7	14.29	0.000005	0.002	0.000005	0.000005	0.0002	0.000005	
1,4-Dichlorobenzene	mg/m3	7	100.00			0.0003	0.002	0.0008	0.0005	
2-Methylnaphthalene	mg/m3	4	100.00			0.00005	0.0001	0.00010	0.0001	
2-Methylphenol	mg/m3	4	50.00	0.000007	0.00001	0.00003	0.00004	0.00002	0.00002	
2-Nitrophenol	mg/m3	4	25.00	0.000006	0.00003	0.00010	0.00010	0.00003	0.00002	
4-Methylphenol/3-Methylphenol	mg/m3	4	75.00	0.000007	0.000007	0.00004	0.00007	0.00004	0.00005	
Acenaphthene	mg/m3	4	75.00	0.000004	0.000004	0.000003	0.00005	0.00002	0.00001	
Acenaphthylene	mg/m3	4	75.00	0.000004	0.000004	0.00002	0.00004	0.00002	0.00002	
Acetophenone	mg/m3	4	25.00	0.000005	0.000009	0.0008	0.0008	0.0002	0.000005	
Anthracene	mg/m3	4	50.00	0.000005	0.000009	0.000003	0.000009	0.000005	0.000004	
Benz(a)anthracene	mg/m3	4	25.00	0.000006	0.000008	0.000002	0.000002	0.000003	0.000003	
Benzo(b)fluoranthene	mg/m3	4	25.00	0.000006	0.00001	0.000004	0.000004	0.000004	0.000005	
Benzo(k)fluoranthene	mg/m3	4	25.00	0.000004	0.000005	0.000004	0.000004	0.000003	0.000003	
Benzoic acid	mg/m3	4	100.00			0.0004	0.0007	0.0005	0.0005	

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Semi-Volatile Organic Compounds										
Benzyl alcohol	mg/m3	4	100.00			0.00008	0.0002	0.0001	0.0001	
Butylbenzylphthalate	mg/m3	4	25.00	0.000005	0.000007	0.000004	0.000004	0.000003	0.000004	
Carbazole	mg/m3	4	25.00	0.000008	0.00001	0.000002	0.000002	0.000004	0.000004	
Chrysene	mg/m3	4	25.00	0.000005	0.000008	0.000004	0.000004	0.000004	0.000004	
Di-n-butylphthalate	mg/m3	4	100.00			0.00004	0.00005	0.00004	0.00004	
Dibenzofuran	mg/m3	4	100.00			0.00001	0.00005	0.00003	0.00003	
Diethylphthalate	mg/m3	4	50.00	0.000005	0.000005	0.000006	0.000010	0.000005	0.000004	
Dimethylphthalate	mg/m3	4	50.00	0.000003	0.000008	0.00004	0.00004	0.00002	0.00002	
Fluoranthene	mg/m3	4	100.00			0.000005	0.00002	0.00002	0.00002	
Fluorene	mg/m3	4	100.00			0.000008	0.00004	0.00003	0.00003	
Hexachloro-1,3-Butadiene	mg/m3	7	28.57	0.000002	0.01	0.0005	0.0010	0.001	0.0003	
Hexachlorobenzene	mg/m3	4	25.00	0.000005	0.00001	0.000005	0.000005	0.000005	0.000005	
Indeno(1,2,3-cd)pyrene	mg/m3	4	25.00	0.000004	0.000006	0.0000010	0.0000010	0.000002	0.000003	
Isophorone	mg/m3	4	75.00	0.000007	0.000007	0.00002	0.00007	0.00003	0.00003	
Naphthalene	mg/m3	7	85.71	0.0005	0.0005	0.0002	0.0005	0.0004	0.0003	
Pentachlorobenzene	mg/m3	4	25.00	0.000005	0.000010	0.00001	0.00001	0.000006	0.000005	
Phenanthrene	mg/m3	4	100.00			0.00002	0.0001	0.00007	0.00007	
Phenol	mg/m3	4	100.00			0.00009	0.0002	0.0002	0.0002	
Pyrene	mg/m3	4	75.00	0.000002	0.000002	0.00001	0.00001	0.00001	0.00001	
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	4	25.00	0.000002	0.000003	0.0000007	0.0000007	0.000001	0.000001	
bis(2-Ethylhexyl)phthalate	mg/m3	4	100.00			0.00004	0.00006	0.00005	0.00005	

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Acid Gases								
Hydrochloric Acid	mg/m3	0.008	0.02	0.02	0.02	0.02	0.03	Normal/Lognormal
Hydrofluoric Acid	mg/m3	0.0004	0.0006	0.0008	0.0004	0.0008	0.003	Normal/Lognormal
Sulfuric Acid	mg/m3	0.006	0.02	0.02	0.02	0.02	0.03	Normal
Aldehydes and Ketones								
2-Butanone	mg/m3	0.006	0.008	0.01	0.006	0.01	0.03	Normal/Lognormal
Acetaldehyde	mg/m3	0.06	0.04	0.08	0.007	0.08	16.04	Unknown
Acetone	mg/m3	0.07	0.05	0.18	0.02	0.10	0.90	Lognormal
Acrolein	mg/m3	0.0008	0.0006	0.001	0.0003	0.001	0.03	Normal/Lognormal
Benzaldehyde	mg/m3	0.002	0.002	0.004	0.001	0.004	0.02	Normal/Lognormal
Formaldehyde	mg/m3	0.0006	0.002	0.002	0.002	0.002	0.002	Unknown
Hexanal	mg/m3	0.03	0.02	0.08	0.002	0.04	563.93	Lognormal
Propionaldehyde	mg/m3	0.0003	0.0005	0.0008	0.0004	0.0008	0.001	Normal/Lognormal
Tolualdehyde	mg/m3	0.001	0.001	0.003	0.0008	0.003	1.36	Normal/Lognormal
Valeraldehyde	mg/m3	0.0005	0.0004	0.0008	0.0002	0.0008	0.03	Normal/Lognormal
n-Butyraldehyde	mg/m3	0.02	0.01	0.05	0.003	0.03	55.56	Lognormal
Dioxins/Furans								
1,2,3,4,6,7,8,9-OCDD	mg/m3	0.00000004	0.00000005	0.00000009	0.00000004	0.00000009	0.0000002	Normal/Lognormal
1,2,3,4,6,7,8,9-OCDF	mg/m3	0.00000006	0.00000005	0.0000002	0.00000003	0.00000010	0.0000004	Lognormal
1,2,3,4,6,7,8-HpCDD	mg/m3	0.00000002	0.00000003	0.00000004	0.00000002	0.00000004	0.00000010	Normal/Lognormal
1,2,3,4,6,7,8-HpCDF	mg/m3	0.00000006	0.00000007	0.0000001	0.00000006	0.0000001	0.0000002	Normal/Lognormal
1,2,3,4,7,8,9-HpCDF	mg/m3	0.00000009	0.00000001	0.00000003	0.00000008	0.00000002	0.00000003	Lognormal
1,2,3,4,7,8-HxCDD	mg/m3	0.00000002	0.00000003	0.00000004	0.00000002	0.00000004	0.00000001	Normal/Lognormal
1,2,3,4,7,8-HxCDF	mg/m3	0.00000001	0.00000002	0.00000003	0.00000001	0.00000003	0.00000005	Normal/Lognormal
1,2,3,6,7,8-HxCDD	mg/m3	0.00000003	0.00000005	0.00000008	0.00000004	0.00000008	0.00000003	Normal/Lognormal
1,2,3,6,7,8-HxCDF	mg/m3	0.00000001	0.00000001	0.00000002	0.00000001	0.00000002	0.00000006	Normal/Lognormal
1,2,3,7,8,9-HxCDD	mg/m3	0.00000002	0.00000003	0.00000004	0.00000002	0.00000004	0.00000001	Normal/Lognormal
1,2,3,7,8,9-HxCDF	mg/m3	0.00000006	0.00000007	0.0000002	0.00000006	0.00000001	0.00000003	Lognormal

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Dioxins/Furans								
1,2,3,7,8-PeCDD	mg/m3	0.00000001	0.00000002	0.00000003	0.00000001	0.00000003	0.00000007	Normal/Lognormal
1,2,3,7,8-PeCDF	mg/m3	0.00000004	0.00000006	0.00000009	0.00000005	0.00000009	0.00000002	Normal/Lognormal
2,3,4,6,7,8-HxCDF	mg/m3	0.00000002	0.00000002	0.00000007	0.00000002	0.00000004	0.00000010	Lognormal
2,3,4,7,8-PeCDF	mg/m3	0.00000001	0.00000001	0.00000002	0.00000001	0.00000002	0.00000005	Normal/Lognormal
2,3,7,8-TCDD	mg/m3	0.000000002	0.000000003	0.000000005	0.000000003	0.000000005	0.000000008	Normal/Lognormal
2,3,7,8-TCDF	mg/m3	0.000000002	0.000000003	0.000000005	0.000000003	0.000000005	0.000000008	Normal/Lognormal
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	0.00000001	0.00000002	0.00000003	0.00000001	0.00000003	0.00000007	Normal/Lognormal
Total HpCDD	mg/m3	0.00000004	0.00000006	0.00000009	0.00000004	0.00000009	0.00000002	Normal/Lognormal
Total HpCDF	mg/m3	0.00000010	0.00000001	0.00000002	0.00000009	0.00000002	0.00000004	Normal/Lognormal
Total HxCDD	mg/m3	0.00000005	0.00000008	0.00000001	0.00000007	0.00000001	0.00000003	Normal/Lognormal
Total HxCDF	mg/m3	0.00000001	0.00000002	0.00000003	0.00000001	0.00000003	0.00000005	Normal/Lognormal
Total PeCDD	mg/m3	0.00000003	0.00000006	0.00000009	0.00000005	0.00000009	0.00000002	Normal/Lognormal
Total PeCDF	mg/m3	0.00000001	0.00000002	0.00000003	0.00000002	0.00000003	0.00000006	Normal/Lognormal
Total TCDD	mg/m3	0.00000003	0.00000005	0.00000008	0.00000005	0.00000008	0.00000001	Normal/Lognormal
Total TCDF	mg/m3	0.00000001	0.00000002	0.00000003	0.00000002	0.00000003	0.00000005	Normal/Lognormal
GC/MS Organics								
1,1,1-Trichloroethane	mg/m3	0.0006	0.0009	0.002	0.0008	0.001	0.002	Lognormal
1,1,2,2-Tetrachloroethane	mg/m3	0.0003	0.0005	0.0008	0.0004	0.0008	0.001	Normal/Lognormal
1,1-Dichloroethylene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0003	0.0004	Normal/Lognormal
1,2,3-Trimethylbenzene	mg/m3	0.0002	0.0004	0.0005	0.0003	0.0005	0.001	Normal/Lognormal
1,2,4-Trimethylbenzene	mg/m3	0.0009	0.002	0.002	0.002	0.002	0.003	Normal/Lognormal
1,2-Dibromoethane	mg/m3	0.0001	0.00008	0.00008	0.0002	0.0003	0.0004	Normal/Lognormal
1,2-Dichloropropane	mg/m3	0.0004	0.0004	0.0007	0.0002	0.0007	0.005	Normal/Lognormal
1,3,5-Trimethylbenzene	mg/m3	0.0003	0.0006	0.0008	0.0005	0.0008	0.0009	Normal/Lognormal
1,3-Butadiene	mg/m3	0.0002	0.0005	0.0008	0.0005	0.0007	0.0008	Lognormal
1,4-Dioxane	mg/m3	0.003	0.002	0.009	0.001	0.005	0.009	Lognormal
1-Butanol	mg/m3	0.05	0.05	0.16	0.02	0.09	1.20	Lognormal

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
GC/MS Organics								
1-Decene	mg/m3	0.003	0.002	0.009	0.0008	0.004	0.05	Lognormal
1-Heptene	mg/m3	0.0005	0.0006	0.0010	0.0005	0.0010	0.002	Normal/Lognormal
1-Hexene	mg/m3	0.0005	0.0006	0.001	0.0005	0.001	0.002	Normal/Lognormal
1-Nonene	mg/m3	0.0003	0.0005	0.0008	0.0004	0.0007	0.0008	Lognormal
1-Octene	mg/m3	0.0005	0.0005	0.002	0.0004	0.0009	0.002	Lognormal
1-Pentene	mg/m3	0.0003	0.0006	0.0008	0.0005	0.0008	0.0010	Normal/Lognormal
1-Propanol	mg/m3	0.002	0.003	0.005	0.002	0.005	0.02	Normal/Lognormal
1-Undecene	mg/m3	0.001	0.0010	0.004	0.0005	0.002	0.006	Lognormal
2,2,3-Trimethylpentane	mg/m3	0.00008	0.0001	0.0001	0.0002	0.0003	0.0003	Normal/Lognormal
2,2,4-Trimethylpentane	mg/m3	0.0006	0.0004	0.002	0.0002	0.0008	0.003	Lognormal
2,3,4-Trimethylpentane	mg/m3	0.0005	0.0005	0.002	0.0002	0.0008	0.004	Lognormal
2,3-Dimethylbutane	mg/m3	0.002	0.001	0.006	0.0003	0.003	0.02	Lognormal
2,3-Dimethylpentane	mg/m3	0.0007	0.0003	0.0003	0.0002	0.0009	0.004	Unknown
2,4,4-Trimethyl-1-Pentene	mg/m3	0.0007	0.0006	0.001	0.0004	0.001	0.001	Unknown
2,5-Dimethylhexane	mg/m3	0.0001	0.0003	0.0004	0.0003	0.0004	0.0004	Normal/Lognormal
2-Methyl-1-Pentene	mg/m3	0.0002	0.0003	0.0003	0.0003	0.0004	0.0005	Normal/Lognormal
2-Methyl-2-Pentene	mg/m3	0.00009	0.0001	0.0001	0.0002	0.0003	0.0003	Normal/Lognormal
2-Methylheptane	mg/m3	0.001	0.0009	0.004	0.0004	0.002	0.03	Lognormal
2-Propanol	mg/m3	0.006	0.01	0.02	0.01	0.02	0.02	Normal/Lognormal
3-Methyl-1-Butene	mg/m3	0.0001	0.0001	0.0001	0.0001	0.0002	0.0003	Lognormal
3-Methylheptane	mg/m3	0.0001	0.0001	0.0001	0.0002	0.0003	0.0003	Normal/Lognormal
3-Methylhexane	mg/m3	0.0004	0.0004	0.0007	0.0003	0.0007	0.003	Normal/Lognormal
3-Methylpentane	mg/m3	0.0004	0.0010	0.001	0.0008	0.001	0.002	Normal/Lognormal
Acetonitrile	mg/m3	0.004	0.004	0.008	0.002	0.008	0.09	Normal/Lognormal
Acrylonitrile	mg/m3	0.0008	0.0007	0.002	0.0004	0.001	0.005	Lognormal
Benzene	mg/m3	0.001	0.004	0.005	0.003	0.005	0.005	Unknown
Bromomethane	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0003	0.0004	Normal/Lognormal
Carbon Tetrachloride	mg/m3	0.00009	0.0006	0.0007	0.0006	0.0007	0.0007	Normal/Lognormal

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
GC/MS Organics								
Chlorobenzene	mg/m3	0.0002	0.0003	0.0004	0.0002	0.0004	0.0009	Normal/Lognormal
Chlorodifluoromethane	mg/m3	0.002	0.003	0.004	0.002	0.004	0.03	Normal/Lognormal
Chloroethane	mg/m3	0.0003	0.0003	0.0009	0.0002	0.0005	0.001	Lognormal
Chloroform	mg/m3	0.0003	0.0004	0.0009	0.0003	0.0006	0.001	Lognormal
Chloromethane	mg/m3	0.0007	0.002	0.003	0.002	0.003	0.003	Normal/Lognormal
Cumene	mg/m3	0.0001	0.0003	0.0004	0.0002	0.0004	0.0006	Normal/Lognormal
Cyclohexane	mg/m3	0.001	0.002	0.003	0.001	0.003	0.03	Normal/Lognormal
Cyclohexene	mg/m3	0.0002	0.0003	0.0006	0.0003	0.0005	0.0006	Lognormal
Cyclopentane	mg/m3	0.0002	0.0002	0.0003	0.0001	0.0003	0.0007	Normal/Lognormal
Cyclopentene	mg/m3	0.00007	0.0001	0.0001	0.0001	0.0002	0.0002	Lognormal
Dichlorodifluoromethane	mg/m3	0.0004	0.003	0.003	0.003	0.003	0.003	Unknown
Ethanol	mg/m3	0.01	0.06	0.07	0.06	0.07	0.07	Normal/Lognormal
Ethylbenzene	mg/m3	0.002	0.006	0.007	0.005	0.007	0.008	Normal/Lognormal
Freon 113	mg/m3	0.0008	0.001	0.002	0.0009	0.002	0.002	Lognormal
Freon 114	mg/m3	0.0002	0.00007	0.00007	0.0002	0.0004	0.0007	Lognormal
Halocarbon 134A	mg/m3	0.00007	0.0002	0.0003	0.0002	0.0003	0.0003	Normal/Lognormal
Heptanal	mg/m3	0.02	0.01	0.06	0.003	0.03	17.60	Lognormal
Indan	mg/m3	0.00007	0.0002	0.0002	0.0001	0.0002	0.0003	Normal/Lognormal
Isobutane	mg/m3	0.004	0.004	0.01	0.003	0.007	0.01	Lognormal
Isobutene + 1-Butene	mg/m3	0.002	0.003	0.005	0.002	0.004	0.005	Lognormal
Isoheptane	mg/m3	0.0004	0.0005	0.0008	0.0003	0.0008	0.008	Normal/Lognormal
Isohexane	mg/m3	0.001	0.001	0.004	0.0004	0.002	0.14	Lognormal
Isopentane	mg/m3	0.002	0.004	0.005	0.003	0.005	0.03	Normal
Isoprene	mg/m3	0.0003	0.0004	0.0008	0.0003	0.0006	0.0008	Lognormal
Methyl t-Butylether	mg/m3	0.0001	0.00010	0.00010	0.0002	0.0003	0.0004	Normal/Lognormal
Methylcyclohexane	mg/m3	0.0003	0.0003	0.0007	0.0002	0.0005	0.0007	Lognormal
Methylcyclopentane	mg/m3	0.0004	0.0005	0.0008	0.0004	0.0008	0.004	Normal/Lognormal
Methylene Chloride	mg/m3	0.009	0.008	0.02	0.005	0.01	0.02	Lognormal

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
GC/MS Organics								
Methylisobutylketone	mg/m3	0.002	0.004	0.006	0.003	0.006	0.007	Normal/Lognormal
Propane	mg/m3	0.03	0.02	0.04	0.01	0.04	0.06	Unknown
Propylene	mg/m3	0.06	0.03	0.07	0.004	0.07	1.00	Unknown
Styrene	mg/m3	0.001	0.002	0.003	0.001	0.003	0.003	Lognormal
Tetrachloroethylene	mg/m3	0.0010	0.001	0.002	0.001	0.002	0.003	Normal/Lognormal
Toluene	mg/m3	0.005	0.02	0.03	0.02	0.03	0.03	Normal/Lognormal
Trichloroethylene	mg/m3	0.003	0.003	0.005	0.002	0.005	0.006	Unknown
Trichlorofluoromethane	mg/m3	0.002	0.004	0.005	0.004	0.005	0.006	Normal/Lognormal
Vinyl Acetate	mg/m3	0.01	0.01	0.02	0.003	0.02	4272.26	Normal
Vinyl Chloride	mg/m3	0.00006	0.0001	0.0001	0.0001	0.0002	0.0002	Normal/Lognormal
a-Pinene	mg/m3	0.001	0.0007	0.002	0.0004	0.002	0.003	Unknown
b-Pinene	mg/m3	0.0002	0.0003	0.0006	0.0002	0.0004	0.0009	Normal/Lognormal
c-1,3-Dichloropropene	mg/m3	0.00010	0.0002	0.0004	0.0002	0.0003	0.0003	Normal/Lognormal
c-2-Butene	mg/m3	0.0001	0.0003	0.0004	0.0003	0.0004	0.0004	Lognormal
c-2-Octene	mg/m3	0.0004	0.0004	0.0008	0.0003	0.0007	0.001	Lognormal
c-2-Pentene	mg/m3	0.00009	0.0001	0.0001	0.0001	0.0002	0.0003	Normal/Lognormal
m-Diethylbenzene	mg/m3	0.0005	0.0004	0.001	0.0002	0.0007	0.006	Lognormal
m-Ethyltoluene	mg/m3	0.0005	0.001	0.001	0.0009	0.001	0.002	Normal/Lognormal
n-Butane	mg/m3	0.002	0.005	0.008	0.005	0.007	0.008	Lognormal
n-Decane	mg/m3	0.001	0.003	0.004	0.003	0.004	0.004	Normal/Lognormal
n-Heptane	mg/m3	0.001	0.002	0.003	0.001	0.003	0.03	Normal/Lognormal
n-Hexane	mg/m3	0.004	0.004	0.01	0.003	0.007	0.01	Lognormal
n-Nonane	mg/m3	0.0006	0.001	0.002	0.001	0.002	0.002	Normal/Lognormal
n-Octane	mg/m3	0.0005	0.0008	0.001	0.0008	0.001	0.001	Lognormal
n-Pentane	mg/m3	0.002	0.003	0.006	0.002	0.004	0.006	Lognormal
n-Propylbenzene	mg/m3	0.0001	0.0004	0.0005	0.0004	0.0005	0.0005	Normal/Lognormal
n-Undecane	mg/m3	0.002	0.002	0.007	0.001	0.003	0.01	Lognormal
o-Ethyltoluene	mg/m3	0.0002	0.0005	0.0006	0.0005	0.0006	0.0007	Normal/Lognormal

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
GC/MS Organics								
o-Xylene	mg/m3	0.001	0.003	0.004	0.002	0.004	0.004	Lognormal
p-Ethyltoluene	mg/m3	0.0003	0.0006	0.0007	0.0005	0.0007	0.0008	Normal/Lognormal
p-Isopropyltoluene	mg/m3	0.00007	0.0002	0.0003	0.0002	0.0003	0.0004	Normal
p-Xylene + m-Xylene	mg/m3	0.003	0.006	0.009	0.006	0.009	0.009	Lognormal
t-2-Butene	mg/m3	0.0001	0.0003	0.0004	0.0003	0.0004	0.0005	Normal/Lognormal
t-2-Hexene	mg/m3	0.0001	0.00008	0.00008	0.0001	0.0003	0.0004	Lognormal
t-2-Pentene	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0003	0.0005	Normal/Lognormal
t-Butylbenzene	mg/m3	0.0010	0.0002	0.0002	0.0004	0.001	0.005	Lognormal
Mercury								
Mercury	mg/m3	0.000010	0.00001	0.00002	0.000004	0.00002	0.05	Normal
Pesticides/PCBs								
4,4'-DDD	mg/m3	0.00000007	0.0000001	0.0000002	0.0000001	0.0000002	0.0000005	Normal/Lognormal
Dieldrin	mg/m3	0.0000002	0.0000004	0.0000006	0.0000003	0.0000006	0.0000009	Normal/Lognormal
Endosulfan I	mg/m3	0.0000002	0.0000002	0.0000003	0.0000001	0.0000004	0.000003	Normal/Lognormal
Endrin Aldehyde	mg/m3	0.0000002	0.0000004	0.0000008	0.0000004	0.0000007	0.000001	Lognormal
Heptachlor	mg/m3	0.0000006	0.0000005	0.000001	0.0000003	0.000001	0.01	Normal/Lognormal
Isodrin	mg/m3	0.0000001	0.0000001	0.0000003	0.00000009	0.0000003	0.000007	Normal/Lognormal
alpha-BHC	mg/m3	0.0000004	0.0000004	0.0000008	0.0000002	0.0000009	0.08	Normal/Lognormal
alpha-Chlordane	mg/m3	0.0000001	0.0000002	0.0000004	0.0000002	0.0000004	0.000001	Normal/Lognormal
gamma-BHC	mg/m3	0.00000007	0.0000001	0.0000002	0.0000001	0.0000002	0.0000004	Normal/Lognormal
gamma-Chlordane	mg/m3	0.0000003	0.0000003	0.0000006	0.0000002	0.0000007	0.000009	Normal/Lognormal
PM-10								
Antimony	mg/m3	0.0001	0.0002	0.0004	0.0002	0.0004	0.0009	Normal/Lognormal
Arsenic	mg/m3	0.00002	0.00001	0.00004	0.000007	0.00004	0.0005	Unknown
Beryllium	mg/m3	0.0000002	0.0000003	0.0000005	0.0000002	0.0000005	0.00001	Normal/Lognormal
Cadmium	mg/m3	0.0001	0.0001	0.0003	0.00009	0.0003	0.001	Normal/Lognormal

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
PM-10								
Chromium	mg/m3	0.00004	0.00004	0.00008	0.00002	0.00008	0.0003	Unknown
Copper	mg/m3	0.002	0.002	0.005	0.002	0.005	0.03	Normal/Lognormal
Lead	mg/m3	0.006	0.006	0.02	0.004	0.01	0.06	Lognormal
Nickel	mg/m3	0.00006	0.00004	0.00009	0.00002	0.00009	0.0005	Unknown
PM-10	mg/m3	0.07	0.17	0.23	0.16	0.23	0.29	Normal/Lognormal
Selenium	mg/m3	0.00002	0.00001	0.00004	0.000004	0.00003	0.004	Lognormal
Silver	mg/m3	0.00002	0.00002	0.00004	0.00002	0.00004	0.0001	Normal/Lognormal
Thallium	mg/m3	0.000005	0.000002	0.000002	0.000001	0.000007	0.0006	Lognormal
Zinc	mg/m3	0.004	0.006	0.009	0.005	0.009	0.03	Normal/Lognormal
Semi-Volatile Organic Compounds								
1,2,4,5-Tetrachlorobenzene	mg/m3	0.000003	0.000005	0.000009	0.000005	0.000008	0.00001	Unknown
1,2,4-Trichlorobenzene	mg/m3	0.0002	0.0002	0.0003	0.00009	0.0003	0.34	Normal
1,2-Dichlorobenzene	mg/m3	0.0004	0.0001	0.0001	0.00004	0.0004	0.09	Lognormal
1,3-Dichlorobenzene	mg/m3	0.0003	0.000005	0.000005	0.00002	0.0004	0.59	Lognormal
1,4-Dichlorobenzene	mg/m3	0.0005	0.0008	0.001	0.0007	0.001	0.002	Normal/Lognormal
2-Methylnaphthalene	mg/m3	0.00003	0.00010	0.0001	0.00009	0.0001	0.0002	Normal/Lognormal
2-Methylphenol	mg/m3	0.00002	0.00002	0.00004	0.00001	0.00004	0.005	Normal/Lognormal
2-Nitrophenol	mg/m3	0.00004	0.00003	0.00010	0.00002	0.00009	0.17	Normal/Lognormal
4-Methylphenol/3-Methylphenol	mg/m3	0.00003	0.00004	0.00007	0.00003	0.00008	0.10	Normal/Lognormal
Acenaphthene	mg/m3	0.00002	0.00002	0.00005	0.000009	0.00005	0.55	Normal/Lognormal
Acenaphthylene	mg/m3	0.00001	0.00002	0.00004	0.00001	0.00004	0.01	Normal/Lognormal
Acetophenone	mg/m3	0.0004	0.0002	0.0008	0.00001	0.0007	791488394.08	Unknown
Anthracene	mg/m3	0.000003	0.000005	0.000008	0.000004	0.000008	0.00002	Normal/Lognormal
Benz(a)anthracene	mg/m3	0.0000009	0.000002	0.000002	0.000003	0.000004	0.000005	Normal/Lognormal
Benzo(b)fluoranthene	mg/m3	0.000001	0.000004	0.000004	0.000004	0.000006	0.000007	Normal/Lognormal
Benzo(k)fluoranthene	mg/m3	0.0000008	0.000003	0.000004	0.000003	0.000004	0.000004	Normal/Lognormal
Benzoic acid	mg/m3	0.0002	0.0005	0.0007	0.0005	0.0007	0.0008	Normal/Lognormal

Table A-10 - GEMB Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Semi-Volatile Organic Compounds								
Benzyl alcohol	mg/m3	0.00007	0.0001	0.0002	0.0001	0.0002	0.0005	Normal/Lognormal
Butylbenzylphthalate	mg/m3	0.0000005	0.000003	0.000004	0.000003	0.000004	0.000004	Normal/Lognormal
Carbazole	mg/m3	0.000001	0.000002	0.000002	0.000004	0.000006	0.000009	Normal/Lognormal
Chrysene	mg/m3	0.0000008	0.000004	0.000004	0.000003	0.000004	0.000005	Unknown
Di-n-butylphthalate	mg/m3	0.000003	0.00004	0.00005	0.00004	0.00005	0.00005	Normal/Lognormal
Dibenzofuran	mg/m3	0.00002	0.00003	0.00005	0.00003	0.00005	0.0002	Normal/Lognormal
Diethylphthalate	mg/m3	0.000003	0.000005	0.000009	0.000005	0.000009	0.00003	Normal/Lognormal
Dimethylphthalate	mg/m3	0.00002	0.00002	0.00004	0.00001	0.00005	2.07	Normal/Lognormal
Fluoranthene	mg/m3	0.000008	0.00002	0.00002	0.00001	0.00003	0.0001	Normal/Lognormal
Fluorene	mg/m3	0.00001	0.00003	0.00004	0.00002	0.00004	0.0003	Normal/Lognormal
Hexachloro-1,3-Butadiene	mg/m3	0.002	0.0010	0.0010	0.00008	0.002	31559.51	Lognormal
Hexachlorobenzene	mg/m3	0.000001	0.000005	0.000005	0.000004	0.000006	0.000009	Normal
Indeno(1,2,3-cd)pyrene	mg/m3	0.000001	0.0000010	0.0000010	0.000002	0.000004	0.000008	Normal/Lognormal
Isophorone	mg/m3	0.00003	0.00003	0.00006	0.00002	0.00006	0.02	Normal/Lognormal
Naphthalene	mg/m3	0.0001	0.0004	0.0005	0.0003	0.0005	0.0005	Unknown
Pentachlorobenzene	mg/m3	0.000004	0.000006	0.00001	0.000005	0.00001	0.00003	Normal/Lognormal
Phenanthrene	mg/m3	0.00004	0.00007	0.0001	0.00005	0.0001	0.0009	Normal/Lognormal
Phenol	mg/m3	0.00007	0.0002	0.0002	0.0001	0.0002	0.0004	Normal/Lognormal
Pyrene	mg/m3	0.000006	0.00001	0.00001	0.000008	0.00002	0.005	Normal
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	0.0000003	0.0000007	0.0000007	0.0000010	0.000001	0.000002	Normal/Lognormal
bis(2-Ethylhexyl)phthalate	mg/m3	0.000009	0.00005	0.00006	0.00005	0.00006	0.00007	Normal/Lognormal

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Hydrochloric Acid	mg/m3	5	100.00			0.001	0.002	0.002	0.002	
Hydrofluoric Acid	mg/m3	5	80.00	0.000006	0.000006	0.0004	0.001	0.0006	0.0004	
Sulfuric Acid	mg/m3	5	100.00			0.005	0.02	0.009	0.006	
2-Butanone	mg/m3	4	100.00			0.0006	0.01	0.006	0.006	
Acetaldehyde	mg/m3	4	100.00			0.001	0.08	0.04	0.04	
Acetone	mg/m3	4	100.00			0.002	0.09	0.04	0.04	
Acrolein	mg/m3	2	100.00			0.0002	0.0003	0.0003	0.0003	
Benzaldehyde	mg/m3	4	100.00			0.0001	0.005	0.003	0.003	
Formaldehyde	mg/m3	2	100.00			0.0008	0.0009	0.0009	0.0009	
Hexanal	mg/m3	4	100.00			0.01	0.02	0.02	0.02	
Propionaldehyde	mg/m3	2	100.00			0.0002	0.0003	0.0003	0.0003	
Tolualdehyde	mg/m3	2	50.00	0.00009	0.00009	0.0004	0.0004	0.0002	0.0002	
Valeraldehyde	mg/m3	2	50.00	0.0001	0.0001	0.00009	0.00009	0.00007	0.00007	
n-Butyraldehyde	mg/m3	4	100.00			0.0002	0.03	0.02	0.02	
1,2,3,4,6,7,8,9-OCDD	mg/m3	5	100.00			0.00000004	0.00000008	0.00000006	0.00000005	
1,2,3,4,6,7,8,9-OCDF	mg/m3	5	100.00			0.00000003	0.00000001	0.00000006	0.00000004	
1,2,3,4,6,7,8-HpCDD	mg/m3	5	100.00			0.00000001	0.00000003	0.00000002	0.00000002	
1,2,3,4,6,7,8-HpCDF	mg/m3	5	100.00			0.00000002	0.00000008	0.00000005	0.00000005	
1,2,3,4,7,8,9-HpCDF	mg/m3	5	100.00			0.000000006	0.00000002	0.000000009	0.000000006	
1,2,3,4,7,8-HxCDD	mg/m3	5	100.00			0.000000001	0.000000003	0.000000002	0.000000002	
1,2,3,4,7,8-HxCDF	mg/m3	5	100.00			0.000000003	0.00000002	0.000000009	0.000000006	
1,2,3,6,7,8-HxCDD	mg/m3	5	100.00			0.000000002	0.000000004	0.000000003	0.000000002	
1,2,3,6,7,8-HxCDF	mg/m3	5	100.00			0.000000003	0.00000002	0.000000009	0.000000006	
1,2,3,7,8,9-HxCDD	mg/m3	5	100.00			0.000000001	0.000000003	0.000000002	0.000000002	
1,2,3,7,8,9-HxCDF	mg/m3	5	100.00			0.000000002	0.000000010	0.000000005	0.000000006	

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,2,3,7,8-PeCDD	mg/m3	5	100.00			0.000000000	0.000000003	0.000000001	0.000000000	
1,2,3,7,8-PeCDF	mg/m3	5	100.00			0.000000001	0.000000001	0.000000004	0.000000002	
2,3,4,6,7,8-HxCDF	mg/m3	5	100.00			0.000000007	0.000000003	0.000000002	0.000000002	
2,3,4,7,8-PeCDF	mg/m3	5	100.00			0.000000002	0.000000002	0.000000007	0.000000005	
2,3,7,8-TCDD	mg/m3	4	75.00	0.000000000	0.000000000	0.000000000	0.000000001	0.000000000	0.000000000	
2,3,7,8-TCDF	mg/m3	5	100.00			0.000000000	0.000000006	0.000000002	0.000000000	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	5	100.00			0.000000004	0.000000002	0.000000001	0.000000008	
Total HpCDD	mg/m3	5	100.00			0.000000002	0.000000007	0.000000004	0.000000004	
Total HpCDF	mg/m3	5	100.00			0.000000004	0.000000002	0.000000009	0.000000008	
Total HxCDD	mg/m3	5	100.00			0.000000002	0.000000005	0.000000004	0.000000003	
Total HxCDF	mg/m3	5	100.00			0.000000004	0.000000002	0.000000001	0.000000009	
Total PeCDD	mg/m3	5	100.00			0.000000009	0.000000003	0.000000002	0.000000002	
Total PeCDF	mg/m3	5	100.00			0.000000003	0.000000002	0.000000009	0.000000007	
Total TCDD	mg/m3	5	100.00			0.000000001	0.000000003	0.000000002	0.000000002	
Total TCDF	mg/m3	5	100.00			0.000000004	0.000000002	0.000000009	0.000000006	
1,1,1-Trichloroethane	mg/m3	4	100.00			0.0005	0.0008	0.0007	0.0008	
1,1,2,2-Tetrachloroethane	mg/m3	4	50.00	0.0004	0.001	0.0006	0.0010	0.0006	0.0006	
1,1,2-Trichloroethane	mg/m3	4	25.00	0.0003	0.0006	0.0001	0.0001	0.0002	0.0002	
1,2,3-Trimethylbenzene	mg/m3	4	100.00			0.0002	0.0003	0.0003	0.0003	
1,2,4-Trimethylbenzene	mg/m3	4	100.00			0.0007	0.001	0.001	0.001	
1,2-Dibromoethane	mg/m3	4	25.00	0.0003	0.0005	0.0002	0.0002	0.0002	0.0002	
1,2-Dichloroethane	mg/m3	4	25.00	0.0002	0.0004	0.0002	0.0002	0.0001	0.0001	
1,3,5-Trimethylbenzene	mg/m3	4	100.00			0.0002	0.0004	0.0003	0.0003	
1,3-Butadiene	mg/m3	4	75.00	0.00010	0.00010	0.0002	0.0005	0.0002	0.0002	
1,4-Dioxane	mg/m3	4	50.00	0.001	0.002	0.001	0.002	0.001	0.0010	
1-Butanol	mg/m3	4	75.00	0.0006	0.0006	0.01	0.04	0.02	0.02	
1-Decene	mg/m3	4	50.00	0.0004	0.0005	0.0005	0.002	0.0007	0.0004	

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1-Heptene	mg/m3	4	75.00	0.0002	0.0002	0.0005	0.0006	0.0005	0.0006	
1-Hexene	mg/m3	4	50.00	0.0003	0.0003	0.0005	0.0010	0.0004	0.0003	
1-Nonene	mg/m3	4	25.00	0.0002	0.0004	0.0005	0.0005	0.0002	0.0002	
1-Octene	mg/m3	4	100.00			0.0003	0.0006	0.0004	0.0004	
1-Pentene	mg/m3	4	100.00			0.0004	0.0007	0.0005	0.0005	
1-Propanol	mg/m3	4	50.00	0.001	0.001	0.003	0.02	0.007	0.002	
1-Undecene	mg/m3	4	25.00	0.00006	0.0006	0.003	0.003	0.0008	0.0003	
2,2,4-Trimethylpentane	mg/m3	4	50.00	0.0001	0.0002	0.0001	0.0005	0.0002	0.0001	
2,3,4-Trimethylpentane	mg/m3	4	25.00	0.0001	0.0003	0.001	0.001	0.0004	0.0001	
2,3-Dimethylbutane	mg/m3	4	75.00	0.0002	0.0002	0.0001	0.005	0.001	0.0003	
2,4,4-Trimethyl-1-Pentene	mg/m3	4	50.00	0.0002	0.0004	0.0001	0.0002	0.0002	0.0002	
2-Methylheptane	mg/m3	4	50.00	0.0001	0.0002	0.0006	0.0006	0.0003	0.0004	
2-Propanol	mg/m3	4	100.00			0.005	0.04	0.02	0.02	
3-Methylhexane	mg/m3	4	25.00	0.0001	0.0002	0.0005	0.0005	0.0002	0.00007	
3-Methylpentane	mg/m3	4	75.00	0.0002	0.0002	0.0006	0.0008	0.0005	0.0006	
Acetonitrile	mg/m3	4	75.00	0.0002	0.0002	0.001	0.25	0.08	0.04	
Acrylonitrile	mg/m3	4	50.00	0.0002	0.0002	0.0002	0.0006	0.0003	0.0002	
Benzene	mg/m3	4	100.00			0.001	0.003	0.002	0.002	
Bromomethane	mg/m3	4	25.00	0.0002	0.0003	0.0002	0.0002	0.0001	0.0001	
Carbon Tetrachloride	mg/m3	4	100.00			0.0005	0.0008	0.0007	0.0007	
Chlorobenzene	mg/m3	4	75.00	0.0002	0.0002	0.0001	0.0005	0.0003	0.0003	
Chlorodifluoromethane	mg/m3	4	100.00			0.001	0.004	0.003	0.003	
Chloroethane	mg/m3	4	25.00	0.0001	0.0003	0.0002	0.0002	0.0001	0.0001	
Chloroform	mg/m3	4	50.00	0.0002	0.0003	0.0001	0.0002	0.0002	0.0001	
Chloromethane	mg/m3	4	100.00			0.001	0.002	0.002	0.002	
Cumene	mg/m3	4	25.00	0.0003	0.0008	0.0002	0.0002	0.0002	0.0002	
Cyclohexane	mg/m3	4	75.00	0.0002	0.0002	0.0003	0.0009	0.0005	0.0005	
Cyclohexene	mg/m3	4	50.00	0.0002	0.0003	0.0002	0.0005	0.0002	0.0002	

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Cyclopentane	mg/m3	4	25.00	0.00009	0.0002	0.0001	0.0001	0.00008	0.00008	
Dichlorodifluoromethane	mg/m3	4	100.00			0.003	0.003	0.003	0.003	
Ethanol	mg/m3	4	100.00			0.03	0.04	0.03	0.04	
Ethylbenzene	mg/m3	4	100.00			0.002	0.005	0.003	0.003	
Freon 113	mg/m3	4	100.00			0.0007	0.0009	0.0008	0.0008	
Freon 114	mg/m3	4	25.00	0.0002	0.0004	0.00007	0.00007	0.0001	0.0001	
Halocarbon 134A	mg/m3	4	75.00	0.0003	0.0003	0.0001	0.0001	0.0001	0.0001	
Heptanal	mg/m3	4	50.00	0.0003	0.0004	0.01	0.02	0.008	0.007	
Indan	mg/m3	4	25.00	0.0001	0.0006	0.00010	0.00010	0.0001	0.00009	
Isobutane	mg/m3	4	100.00			0.001	0.003	0.002	0.002	
Isobutene + 1-Butene	mg/m3	4	100.00			0.002	0.002	0.002	0.002	
Isoheptane	mg/m3	4	100.00			0.0004	0.005	0.002	0.0005	
Isohexane	mg/m3	4	50.00	0.0001	0.0001	0.001	0.002	0.0009	0.0007	
Isopentane	mg/m3	4	50.00	0.0002	0.0004	0.002	0.005	0.002	0.001	
Isoprene	mg/m3	4	100.00			0.0002	0.0009	0.0004	0.0002	
Methylcyclohexane	mg/m3	4	25.00	0.0002	0.0002	0.00006	0.00006	0.00009	0.00010	
Methylcyclopentane	mg/m3	4	50.00	0.0001	0.0002	0.0005	0.0005	0.0003	0.0003	
Methylene Chloride	mg/m3	4	100.00			0.002	0.005	0.004	0.004	
Methylisobutylketone	mg/m3	4	100.00			0.001	0.004	0.002	0.002	
Propane	mg/m3	4	100.00			0.005	0.01	0.008	0.008	
Propylene	mg/m3	4	100.00			0.0008	0.002	0.001	0.002	
Styrene	mg/m3	4	100.00			0.0006	0.0008	0.0007	0.0007	
Tetrachloroethylene	mg/m3	4	50.00	0.0005	0.0005	0.001	0.002	0.0008	0.0007	
Toluene	mg/m3	4	100.00			0.007	0.01	0.010	0.010	
Trichloroethylene	mg/m3	4	100.00			0.0007	0.002	0.001	0.0009	
Trichlorofluoromethane	mg/m3	4	100.00			0.002	0.003	0.002	0.002	
Vinyl Acetate	mg/m3	4	75.00	0.0001	0.0001	0.005	0.01	0.008	0.009	
a-Pinene	mg/m3	4	75.00	0.0004	0.0004	0.0002	0.0005	0.0003	0.0003	

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
c-1,3-Dichloropropene	mg/m3	4	25.00	0.0002	0.0004	0.0002	0.0002	0.0002	0.0002	
c-2-Butene	mg/m3	4	75.00	0.0003	0.0003	0.0001	0.0003	0.0002	0.0002	
m-Ethyltoluene	mg/m3	4	100.00			0.0004	0.0008	0.0006	0.0006	
n-Butane	mg/m3	4	100.00			0.003	0.005	0.004	0.004	
n-Decane	mg/m3	4	100.00			0.001	0.002	0.002	0.002	
n-Heptane	mg/m3	4	75.00	0.0002	0.0002	0.0005	0.001	0.0006	0.0006	
n-Hexane	mg/m3	4	100.00			0.0006	0.002	0.001	0.001	
n-Nonane	mg/m3	4	100.00			0.0008	0.001	0.001	0.001	
n-Octane	mg/m3	4	100.00			0.0006	0.0007	0.0007	0.0007	
n-Pentane	mg/m3	4	100.00			0.001	0.002	0.002	0.002	
n-Propylbenzene	mg/m3	4	50.00	0.0005	0.0006	0.0003	0.0003	0.0003	0.0003	
n-Undecane	mg/m3	4	75.00	0.0002	0.0002	0.001	0.002	0.001	0.001	
o-Ethyltoluene	mg/m3	4	100.00			0.0002	0.0003	0.0003	0.0003	
o-Xylene	mg/m3	4	100.00			0.0009	0.003	0.002	0.001	
p-Ethyltoluene	mg/m3	4	100.00			0.0003	0.0004	0.0003	0.0003	
p-Isopropyltoluene	mg/m3	4	25.00	0.0004	0.0005	0.0001	0.0001	0.0002	0.0002	
p-Xylene + m-Xylene	mg/m3	4	100.00			0.002	0.007	0.004	0.004	
t-1,3-Dichloropropene	mg/m3	4	25.00	0.0002	0.0003	0.0002	0.0002	0.0001	0.0001	
t-2-Butene	mg/m3	4	75.00	0.00009	0.00009	0.0002	0.0003	0.0002	0.0003	
t-2-Pentene	mg/m3	4	25.00	0.0001	0.0003	0.00006	0.00006	0.00008	0.00006	
Mercury	mg/m3	5	60.00	0.0000003	0.0000003	0.000004	0.00002	0.000006	0.000004	0.0000002
4,4'-DDT	mg/m3	3	33.33	0.0000003	0.0000003	0.0000005	0.0000005	0.0000003	0.0000001	
Dieldrin	mg/m3	3	33.33	0.0000002	0.0000005	0.0000002	0.0000002	0.0000002	0.0000002	
Heptachlor	mg/m3	3	66.67	0.0000002	0.0000002	0.0000002	0.0000008	0.0000004	0.0000002	
Heptachlor epoxide	mg/m3	3	33.33	0.0000004	0.0000005	0.0000003	0.0000003	0.0000003	0.0000003	

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
Isodrin	mg/m3	3	66.67	0.00000008	0.00000008	0.00000006	0.00000006	0.00000004	0.00000006	
alpha-Chlordane	mg/m3	3	66.67	0.00000002	0.00000002	0.00000006	0.00000003	0.00000002	0.00000009	
gamma-BHC	mg/m3	3	66.67	0.00000001	0.00000001	0.00000002	0.00000006	0.00000003	0.00000002	
gamma-Chlordane	mg/m3	3	66.67	0.00000002	0.00000002	0.00000002	0.00000004	0.00000002	0.00000002	
Antimony	mg/m3	3	100.00			0.00000005	0.00000008	0.00000007	0.00000007	
Arsenic	mg/m3	3	66.67	0.00000002	0.00000002	0.00000010	0.00000006	0.00000003	0.00000010	
Beryllium	mg/m3	3	100.00			0.00000002	0.00000003	0.00000002	0.00000002	
Cadmium	mg/m3	3	100.00			0.00000007	0.00000001	0.00000009	0.00000010	
Chromium	mg/m3	3	100.00			0.00000001	0.00000002	0.00000001	0.00000001	
Copper	mg/m3	3	100.00			0.00000009	0.00000001	0.00000010	0.00000001	
Lead	mg/m3	3	100.00			0.00000004	0.00000010	0.00000006	0.00000004	
Nickel	mg/m3	3	100.00			0.00000007	0.00000002	0.00000001	0.00000008	
PM-10	mg/m3	3	100.00			0.07	0.23	0.13	0.07	
Selenium	mg/m3	3	33.33	0.00000001	0.00000001	0.00000001	0.00000001	0.00000005	0.00000007	
Silver	mg/m3	3	100.00			0.00000004	0.00000001	0.00000007	0.00000006	
Thallium	mg/m3	3	33.33	0.00000003	0.00000003	0.00000002	0.00000002	0.00000002	0.00000002	
Zinc	mg/m3	3	100.00			0.00000001	0.00000003	0.00000002	0.00000002	
1,2,4-Trichlorobenzene	mg/m3	5	100.00			0.00000001	0.004	0.0009	0.0002	
1,2-Dichlorobenzene	mg/m3	5	20.00	0.00000002	0.002	0.0007	0.0007	0.0003	0.000005	
1,3-Dichlorobenzene	mg/m3	5	20.00	0.00000010	0.001	0.0004	0.0004	0.0002	0.000004	
1,4-Dichlorobenzene	mg/m3	5	100.00			0.00000001	0.002	0.0009	0.0007	
2-Methylnaphthalene	mg/m3	3	100.00			0.00000004	0.00000009	0.00000006	0.00000006	
2-Methylphenol	mg/m3	3	33.33	0.00000001	0.00000001	0.00000004	0.00000004	0.00000002	0.00000005	
2-Nitrophenol	mg/m3	3	33.33	0.00000003	0.00000003	0.00000001	0.00000001	0.00000005	0.00000002	
4-Methylphenol/3-Methylphenol	mg/m3	3	100.00			0.00000004	0.00000006	0.00000006	0.00000006	

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
4-Nitrophenol	mg/m3	3	33.33	0.0003	0.0003	0.00003	0.00003	0.0001	0.0002	
Acenaphthylene	mg/m3	3	33.33	0.00001	0.00001	0.000010	0.000010	0.000007	0.000006	
Anthracene	mg/m3	3	33.33	0.000008	0.000009	0.000002	0.000002	0.000003	0.000004	
Benz(a)anthracene	mg/m3	3	33.33	0.000007	0.000008	0.0000010	0.0000010	0.000003	0.000004	
Benzoic acid	mg/m3	3	100.00			0.0002	0.0005	0.0003	0.0003	
Benzyl alcohol	mg/m3	3	33.33	0.000009	0.000009	0.00004	0.00004	0.00002	0.000005	
Butylbenzylphthalate	mg/m3	3	33.33	0.000007	0.000007	0.000003	0.000003	0.000003	0.000003	
Chrysene	mg/m3	3	33.33	0.000007	0.000008	0.000003	0.000003	0.000004	0.000004	
Di-n-butylphthalate	mg/m3	3	100.00			0.00003	0.00004	0.00003	0.00003	
Di-n-octylphthalate	mg/m3	3	33.33	0.0000010	0.000008	0.000007	0.000007	0.000004	0.000004	
Dibenzofuran	mg/m3	3	66.67	0.000008	0.000008	0.00001	0.00002	0.00001	0.00001	
Diethylphthalate	mg/m3	3	33.33	0.000005	0.000005	0.000005	0.000005	0.000003	0.000003	
Dimethylphthalate	mg/m3	3	66.67	0.000009	0.000009	0.00003	0.00003	0.00002	0.00003	
Fluoranthene	mg/m3	3	33.33	0.000004	0.000004	0.00001	0.00001	0.000006	0.000002	
Fluorene	mg/m3	3	33.33	0.000007	0.000007	0.00002	0.00002	0.000009	0.000004	
Hexachloro-1,3-Butadiene	mg/m3	5	40.00	0.000002	0.000009	0.0006	0.004	0.0008	0.000005	
Isophorone	mg/m3	3	66.67	0.000007	0.000007	0.00001	0.00007	0.00003	0.00001	
Naphthalene	mg/m3	5	80.00	0.0004	0.0004	0.0002	0.0005	0.0003	0.0002	
Phenanthrene	mg/m3	3	100.00			0.00001	0.00004	0.00002	0.00002	
Phenol	mg/m3	3	100.00			0.00005	0.0002	0.00010	0.00008	
Pyrene	mg/m3	3	33.33	0.000009	0.000009	0.000008	0.000008	0.000006	0.000005	
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	3	33.33	0.000002	0.000002	0.0000002	0.0000002	0.0000009	0.000001	
bis(2-Ethylhexyl)phthalate	mg/m3	3	66.67	0.000009	0.000009	0.00004	0.00007	0.00004	0.00004	

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Hydrochloric Acid	mg/m3	0.0004	0.002	0.002	0.002	0.002	0.002	Normal/Lognormal
Hydrofluoric Acid	mg/m3	0.0005	0.0006	0.0010	0.0002	0.0010	6441.10	Normal
Sulfuric Acid	mg/m3	0.006	0.009	0.01	0.008	0.01	0.03	Normal/Lognormal
2-Butanone	mg/m3	0.006	0.006	0.01	0.003	0.01	351.82	Normal/Lognormal
Acetaldehyde	mg/m3	0.04	0.04	0.08	0.010	0.09	471108541.14	Lognormal
Acetone	mg/m3	0.05	0.04	0.09	0.01	0.10	836606.83	Normal/Lognormal
Acrolein	mg/m3	0.0001	0.0003	0.0003	0.0002	0.0007	0.02	Unknown
Benzaldehyde	mg/m3	0.003	0.003	0.005	0.0009	0.006	18920.06	Normal/Lognormal
Formaldehyde	mg/m3	0.00004	0.0009	0.0009	0.0009	0.001	0.0010	Unknown
Hexanal	mg/m3	0.005	0.02	0.02	0.02	0.02	0.03	Normal/Lognormal
Propionaldehyde	mg/m3	0.0001	0.0003	0.0003	0.0002	0.0007	0.02	Unknown
Tolualdehyde	mg/m3	0.0003	0.0002	0.0004	0.0001	0.001	.30832215461	Unknown
Valeraldehyde	mg/m3	0.00003	0.00007	0.00009	0.00007	0.0002	0.002	Unknown
n-Butyraldehyde	mg/m3	0.01	0.02	0.03	0.006	0.03	105271303.73	Normal
1,2,3,4,6,7,8,9-OCDD	mg/m3	0.000000002	0.000000006	0.000000007	0.000000006	0.000000007	0.000000008	Normal/Lognormal
1,2,3,4,6,7,8,9-OCDF	mg/m3	0.000000005	0.000000006	0.000000010	0.000000005	0.000000010	0.000000002	Unknown
1,2,3,4,6,7,8-HpCDD	mg/m3	0.000000008	0.000000002	0.000000003	0.000000002	0.000000003	0.000000003	Normal/Lognormal
1,2,3,4,6,7,8-HpCDF	mg/m3	0.000000002	0.000000005	0.000000007	0.000000004	0.000000007	0.000000001	Normal/Lognormal
1,2,3,4,7,8,9-HpCDF	mg/m3	0.000000005	0.000000009	0.000000001	0.000000008	0.000000001	0.000000002	Normal/Lognormal
1,2,3,4,7,8-HxCDD	mg/m3	0.000000000	0.000000002	0.000000002	0.000000002	0.000000002	0.000000003	Normal/Lognormal
1,2,3,4,7,8-HxCDF	mg/m3	0.000000008	0.000000009	0.000000002	0.000000006	0.000000002	0.000000005	Normal/Lognormal
1,2,3,6,7,8-HxCDD	mg/m3	0.000000000	0.000000003	0.000000004	0.000000003	0.000000004	0.000000004	Normal/Lognormal
1,2,3,6,7,8-HxCDF	mg/m3	0.000000007	0.000000009	0.000000002	0.000000007	0.000000002	0.000000004	Normal/Lognormal
1,2,3,7,8,9-HxCDD	mg/m3	0.000000000	0.000000002	0.000000003	0.000000002	0.000000003	0.000000003	Normal/Lognormal
1,2,3,7,8,9-HxCDF	mg/m3	0.000000003	0.000000005	0.000000008	0.000000005	0.000000008	0.000000001	Normal/Lognormal

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,2,3,7,8-PeCDD	mg/m3	0.0000000001	0.0000000001	0.0000000003	0.0000000000	0.0000000002	0.0000000005	Lognormal
1,2,3,7,8-PeCDF	mg/m3	0.0000000005	0.0000000004	0.0000000001	0.0000000002	0.0000000008	0.0000000004	Lognormal
2,3,4,6,7,8-HxCDF	mg/m3	0.0000000001	0.0000000002	0.0000000003	0.0000000002	0.0000000003	0.0000000005	Normal/Lognormal
2,3,4,7,8-PeCDF	mg/m3	0.0000000006	0.0000000007	0.0000000001	0.0000000006	0.0000000001	0.0000000004	Normal/Lognormal
2,3,7,8-TCDD	mg/m3	0.0000000000	0.0000000000	0.0000000001	0.0000000000	0.0000000001	0.0000000009	Lognormal
2,3,7,8-TCDF	mg/m3	0.0000000002	0.0000000002	0.0000000004	0.0000000001	0.0000000004	0.0000000001	Unknown
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/m3	0.0000000008	0.0000000001	0.0000000002	0.0000000009	0.0000000002	0.0000000004	Normal/Lognormal
Total HpCDD	mg/m3	0.0000000002	0.0000000004	0.0000000006	0.0000000004	0.0000000006	0.0000000007	Normal/Lognormal
Total HpCDF	mg/m3	0.0000000005	0.0000000009	0.0000000001	0.0000000008	0.0000000001	0.0000000002	Normal/Lognormal
Total HxCDD	mg/m3	0.0000000001	0.0000000004	0.0000000005	0.0000000003	0.0000000005	0.0000000006	Normal/Lognormal
Total HxCDF	mg/m3	0.0000000006	0.0000000001	0.0000000002	0.0000000009	0.0000000002	0.0000000004	Normal/Lognormal
Total PeCDD	mg/m3	0.0000000009	0.0000000002	0.0000000003	0.0000000002	0.0000000003	0.0000000004	Normal/Lognormal
Total PeCDF	mg/m3	0.0000000007	0.0000000009	0.0000000002	0.0000000008	0.0000000002	0.0000000004	Normal/Lognormal
Total TCDD	mg/m3	0.0000000009	0.0000000002	0.0000000003	0.0000000002	0.0000000003	0.0000000003	Normal/Lognormal
Total TCDF	mg/m3	0.0000000006	0.0000000009	0.0000000001	0.0000000007	0.0000000001	0.0000000003	Normal/Lognormal
1,1,1-Trichloroethane	mg/m3	0.0001	0.0007	0.0008	0.0007	0.0009	0.0010	Normal/Lognormal
1,1,2,2-Tetrachloroethane	mg/m3	0.0003	0.0006	0.0009	0.0005	0.0009	0.003	Normal/Lognormal
1,1,2-Trichloroethane	mg/m3	0.0008	0.0001	0.0001	0.0002	0.0003	0.0004	Normal/Lognormal
1,2,3-Trimethylbenzene	mg/m3	0.0008	0.0003	0.0003	0.0002	0.0004	0.0005	Normal/Lognormal
1,2,4-Trimethylbenzene	mg/m3	0.0004	0.001	0.001	0.001	0.002	0.002	Normal/Lognormal
1,2-Dibromoethane	mg/m3	0.0005	0.0002	0.0002	0.0002	0.0003	0.0003	Normal/Lognormal
1,2-Dichloroethane	mg/m3	0.0004	0.0001	0.0002	0.0001	0.0002	0.0002	Normal/Lognormal
1,3,5-Trimethylbenzene	mg/m3	0.0001	0.0003	0.0004	0.0003	0.0005	0.0007	Normal/Lognormal
1,3-Butadiene	mg/m3	0.0002	0.0002	0.0004	0.0002	0.0004	0.01	Normal/Lognormal
1,4-Dioxane	mg/m3	0.0006	0.001	0.002	0.001	0.002	0.003	Normal/Lognormal
1-Butanol	mg/m3	0.02	0.02	0.04	0.009	0.04	31771135.84	Normal/Lognormal
1-Decene	mg/m3	0.0007	0.0007	0.002	0.0005	0.002	0.02	Normal/Lognormal

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1-Heptene	mg/m3	0.0003	0.0005	0.0006	0.0004	0.0008	0.03	Unknown
1-Hexene	mg/m3	0.0004	0.0004	0.0009	0.0003	0.0009	0.01	Normal/Lognormal
1-Nonene	mg/m3	0.0002	0.0002	0.0005	0.0002	0.0004	0.001	Normal/Lognormal
1-Octene	mg/m3	0.0002	0.0004	0.0006	0.0004	0.0006	0.0007	Normal/Lognormal
1-Pentene	mg/m3	0.0001	0.0005	0.0007	0.0005	0.0007	0.0008	Normal/Lognormal
1-Propanol	mg/m3	0.01	0.007	0.02	0.002	0.02	1910.50	Lognormal
1-Undecene	mg/m3	0.001	0.0008	0.003	0.0003	0.002	489.12	Lognormal
2,2,4-Trimethylpentane	mg/m3	0.0002	0.0002	0.0004	0.0001	0.0004	0.005	Normal/Lognormal
2,3,4-Trimethylpentane	mg/m3	0.0005	0.0004	0.001	0.0002	0.001	0.76	Lognormal
2,3-Dimethylbutane	mg/m3	0.002	0.001	0.005	0.0004	0.004	224.73	Lognormal
2,4,4-Trimethyl-1-Pentene	mg/m3	0.00005	0.0002	0.0002	0.0001	0.0002	0.0003	Normal/Lognormal
2-Methylheptane	mg/m3	0.0003	0.0003	0.0006	0.0002	0.0007	0.05	Normal/Lognormal
2-Propanol	mg/m3	0.02	0.02	0.04	0.02	0.04	0.59	Normal/Lognormal
3-Methylhexane	mg/m3	0.0002	0.0002	0.0005	0.0001	0.0004	0.009	Unknown
3-Methylpentane	mg/m3	0.0003	0.0005	0.0008	0.0004	0.0009	0.04	Normal/Lognormal
Acetonitrile	mg/m3	0.12	0.08	0.22	0.007	0.22	.31074799763	Normal/Lognormal
Acrylonitrile	mg/m3	0.0002	0.0003	0.0006	0.0002	0.0006	0.005	Normal/Lognormal
Benzene	mg/m3	0.0009	0.002	0.003	0.002	0.003	0.004	Normal/Lognormal
Bromomethane	mg/m3	0.00004	0.0001	0.0002	0.0001	0.0002	0.0002	Normal/Lognormal
Carbon Tetrachloride	mg/m3	0.0001	0.0007	0.0008	0.0007	0.0009	0.0010	Normal/Lognormal
Chlorobenzene	mg/m3	0.0002	0.0003	0.0005	0.0002	0.0005	0.003	Normal/Lognormal
Chlorodifluoromethane	mg/m3	0.001	0.003	0.004	0.002	0.004	0.008	Normal/Lognormal
Chloroethane	mg/m3	0.00008	0.0001	0.0002	0.0001	0.0002	0.0007	Normal/Lognormal
Chloroform	mg/m3	0.00006	0.0002	0.0002	0.0002	0.0002	0.0003	Normal/Lognormal
Chloromethane	mg/m3	0.0003	0.002	0.002	0.002	0.002	0.002	Normal/Lognormal
Cumene	mg/m3	0.0001	0.0002	0.0002	0.0002	0.0004	0.0005	Normal/Lognormal
Cyclohexane	mg/m3	0.0004	0.0005	0.0009	0.0004	0.0010	0.05	Normal/Lognormal
Cyclohexene	mg/m3	0.0002	0.0002	0.0005	0.0002	0.0005	0.003	Normal/Lognormal

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Cyclopentane	mg/m3	0.00003	0.00008	0.0001	0.00008	0.0001	0.0002	Normal/Lognormal
Dichlorodifluoromethane	mg/m3	0.0002	0.003	0.003	0.003	0.003	0.003	Normal/Lognormal
Ethanol	mg/m3	0.004	0.03	0.04	0.03	0.04	0.04	Normal/Lognormal
Ethylbenzene	mg/m3	0.001	0.003	0.004	0.003	0.004	0.006	Normal/Lognormal
Freon 113	mg/m3	0.00009	0.0008	0.0009	0.0008	0.0009	0.0009	Normal/Lognormal
Freon 114	mg/m3	0.00007	0.00007	0.00007	0.0001	0.0002	0.0004	Normal/Lognormal
Halocarbon 134A	mg/m3	0.00001	0.0001	0.0001	0.0001	0.0001	0.0001	Normal/Lognormal
Heptanal	mg/m3	0.009	0.008	0.02	0.002	0.02	1578911882.6	Normal/Lognormal
Indan	mg/m3	0.00010	0.00010	0.00010	0.0001	0.0002	0.0007	Lognormal
Isobutane	mg/m3	0.0007	0.002	0.003	0.002	0.003	0.004	Normal/Lognormal
Isobutene + 1-Butene	mg/m3	0.0004	0.002	0.002	0.002	0.002	0.002	Unknown
Isoheptane	mg/m3	0.002	0.002	0.004	0.0008	0.004	0.48	Unknown
Isohexane	mg/m3	0.001	0.0009	0.002	0.0003	0.002	4151.95	Normal/Lognormal
Isopentane	mg/m3	0.002	0.002	0.004	0.0007	0.004	2923.31	Normal/Lognormal
Isoprene	mg/m3	0.0003	0.0004	0.0008	0.0003	0.0008	0.003	Normal/Lognormal
Methylcyclohexane	mg/m3	0.00002	0.00006	0.00006	0.00009	0.0001	0.0001	Normal/Lognormal
Methylcyclopentane	mg/m3	0.0002	0.0003	0.0005	0.0002	0.0006	0.03	Normal/Lognormal
Methylene Chloride	mg/m3	0.001	0.004	0.005	0.004	0.005	0.007	Normal/Lognormal
Methylisobutylketone	mg/m3	0.001	0.002	0.004	0.002	0.004	0.007	Normal/Lognormal
Propane	mg/m3	0.003	0.008	0.01	0.007	0.01	0.02	Normal/Lognormal
Propylene	mg/m3	0.0005	0.001	0.002	0.001	0.002	0.003	Normal/Lognormal
Styrene	mg/m3	0.0001	0.0007	0.0008	0.0007	0.0008	0.0009	Normal/Lognormal
Tetrachloroethylene	mg/m3	0.0007	0.0008	0.002	0.0006	0.002	0.04	Normal/Lognormal
Toluene	mg/m3	0.002	0.010	0.01	0.010	0.01	0.01	Normal/Lognormal
Trichloroethylene	mg/m3	0.0003	0.001	0.001	0.0010	0.001	0.002	Normal/Lognormal
Trichlorofluoromethane	mg/m3	0.0006	0.002	0.003	0.002	0.003	0.003	Normal/Lognormal
Vinyl Acetate	mg/m3	0.007	0.008	0.01	0.003	0.02	2784198639.9	Normal/Lognormal
a-Pinene	mg/m3	0.0002	0.0003	0.0005	0.0003	0.0005	0.0010	Normal/Lognormal

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
c-1,3-Dichloropropene	mg/m3	0.00006	0.0002	0.0002	0.0002	0.0002	0.0003	Normal/Lognormal
c-2-Butene	mg/m3	0.00009	0.0002	0.0003	0.0002	0.0003	0.0005	Normal/Lognormal
m-Ethyltoluene	mg/m3	0.0002	0.0006	0.0008	0.0006	0.0008	0.0010	Normal/Lognormal
n-Butane	mg/m3	0.0008	0.004	0.005	0.004	0.005	0.006	Unknown
n-Decane	mg/m3	0.0005	0.002	0.002	0.002	0.002	0.003	Normal/Lognormal
n-Heptane	mg/m3	0.0004	0.0006	0.001	0.0004	0.001	0.007	Normal/Lognormal
n-Hexane	mg/m3	0.0006	0.001	0.002	0.001	0.002	0.004	Normal/Lognormal
n-Nonane	mg/m3	0.0003	0.001	0.001	0.001	0.001	0.002	Normal/Lognormal
n-Octane	mg/m3	0.00008	0.0007	0.0007	0.0007	0.0008	0.0008	Normal/Lognormal
n-Pentane	mg/m3	0.0005	0.002	0.002	0.002	0.002	0.003	Normal/Lognormal
n-Propylbenzene	mg/m3	0.00002	0.0003	0.0003	0.0003	0.0003	0.0003	Normal/Lognormal
n-Undecane	mg/m3	0.0009	0.001	0.002	0.0008	0.002	1.09	Normal/Lognormal
o-Ethyltoluene	mg/m3	0.00007	0.0003	0.0003	0.0003	0.0004	0.0004	Normal/Lognormal
o-Xylene	mg/m3	0.0010	0.002	0.003	0.002	0.003	0.006	Normal/Lognormal
p-Ethyltoluene	mg/m3	0.0001	0.0003	0.0004	0.0003	0.0005	0.0006	Normal/Lognormal
p-Isopropyltoluene	mg/m3	0.00006	0.0001	0.0001	0.0002	0.0003	0.0004	Normal/Lognormal
p-Xylene + m-Xylene	mg/m3	0.002	0.004	0.006	0.004	0.006	0.01	Normal/Lognormal
t-1,3-Dichloropropene	mg/m3	0.00003	0.0001	0.0002	0.0001	0.0002	0.0002	Normal/Lognormal
t-2-Butene	mg/m3	0.0001	0.0002	0.0003	0.0002	0.0004	0.009	Normal/Lognormal
t-2-Pentene	mg/m3	0.00003	0.00006	0.00006	0.00007	0.0001	0.0002	Normal/Lognormal
Mercury	mg/m3	0.000007	0.000006	0.00001	0.000002	0.00001	2.45	Normal/Lognormal
4,4'-DDT	mg/m3	0.0000002	0.0000003	0.0000005	0.0000002	0.0000006	0.00003	Lognormal
Dieldrin	mg/m3	0.00000008	0.0000002	0.0000002	0.0000002	0.0000003	0.000001	Normal/Lognormal
Heptachlor	mg/m3	0.0000004	0.0000004	0.0000008	0.0000003	0.000001	0.06	Normal/Lognormal
Heptachlor epoxide	mg/m3	0.00000007	0.0000003	0.0000003	0.0000003	0.0000004	0.0000005	Normal/Lognormal

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
Isodrin	mg/m3	0.0000003	0.0000004	0.0000006	0.0000002	0.0000010	7879.11	Normal/Lognormal
alpha-Chlordane	mg/m3	0.0000002	0.0000002	0.0000003	0.0000001	0.0000004	0.0004	Normal/Lognormal
gamma-BHC	mg/m3	0.0000003	0.0000003	0.0000006	0.0000002	0.0000008	1.00	Normal/Lognormal
gamma-Chlordane	mg/m3	0.0000001	0.0000002	0.0000004	0.0000002	0.0000005	0.00001	Normal/Lognormal
Antimony	mg/m3	0.000001	0.000007	0.000008	0.000007	0.000009	0.00001	Normal/Lognormal
Arsenic	mg/m3	0.000003	0.000003	0.000006	0.000002	0.000007	0.06	Lognormal
Beryllium	mg/m3	0.0000001	0.0000002	0.0000003	0.0000001	0.0000004	8.53	Normal/Lognormal
Cadmium	mg/m3	0.0000003	0.0000009	0.000001	0.0000009	0.000001	0.000002	Normal/Lognormal
Chromium	mg/m3	0.000004	0.00001	0.00002	0.00001	0.00002	0.00003	Normal/Lognormal
Copper	mg/m3	0.00001	0.00010	0.0001	0.00010	0.0001	0.0001	Normal/Lognormal
Lead	mg/m3	0.00004	0.00006	0.00010	0.00005	0.0001	0.001	Normal/Lognormal
Nickel	mg/m3	0.000006	0.00001	0.00002	0.00001	0.00002	0.0001	Normal/Lognormal
PM-10	mg/m3	0.09	0.13	0.23	0.11	0.28	8.42	Lognormal
Selenium	mg/m3	0.0000003	0.0000001	0.0000001	0.0000004	0.000001	0.006	Normal
Silver	mg/m3	0.0000005	0.0000007	0.000001	0.0000006	0.000002	0.00004	Normal/Lognormal
Thallium	mg/m3	0.0000004	0.000002	0.000002	0.000002	0.000003	0.000003	Normal/Lognormal
Zinc	mg/m3	0.00007	0.0002	0.0003	0.0002	0.0003	0.0007	Normal/Lognormal
1,2,4-Trichlorobenzene	mg/m3	0.002	0.0009	0.004	0.0002	0.002	45.42	Lognormal
1,2-Dichlorobenzene	mg/m3	0.0004	0.0003	0.0007	0.00003	0.0007	26379347.76	Lognormal
1,3-Dichlorobenzene	mg/m3	0.0003	0.0002	0.0004	0.00002	0.0006	58703870.32	Normal/Lognormal
1,4-Dichlorobenzene	mg/m3	0.0008	0.0009	0.002	0.0006	0.002	0.02	Normal/Lognormal
2-Methylnaphthalene	mg/m3	0.00002	0.00006	0.00009	0.00006	0.0001	0.0003	Normal/Lognormal
2-Methylphenol	mg/m3	0.00002	0.00002	0.00004	0.00001	0.00005	16.65	Unknown
2-Nitrophenol	mg/m3	0.00005	0.00005	0.0001	0.00003	0.0001	1.34	Lognormal
4-Methylphenol/3-Methylphenol	mg/m3	0.00001	0.00006	0.00006	0.00006	0.00007	0.00009	Normal/Lognormal

Table A-11 - Golf Course Ambient Air Data on Dates When the GEMB is >= 81% Downwind of the SIC

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
4-Nitrophenol	mg/m3	0.00007	0.00003	0.00003	0.00009	0.0002	0.85	Normal/Lognormal
Acenaphthylene	mg/m3	0.000002	0.000007	0.000010	0.000007	0.00001	0.00002	Normal/Lognormal
Anthracene	mg/m3	0.000001	0.000002	0.000002	0.000003	0.000006	0.00002	Normal/Lognormal
Benz(a)anthracene	mg/m3	0.000002	0.0000010	0.0000010	0.000002	0.000006	0.0008	Normal/Lognormal
Benzoic acid	mg/m3	0.0002	0.0003	0.0005	0.0003	0.0006	0.002	Normal/Lognormal
Benzyl alcohol	mg/m3	0.00002	0.00002	0.00004	0.000009	0.00005	117.30	Unknown
Butylbenzylphthalate	mg/m3	0.0000003	0.000003	0.000003	0.000003	0.000004	0.000004	Normal/Lognormal
Chrysene	mg/m3	0.0000005	0.000003	0.000003	0.000004	0.000004	0.000005	Normal/Lognormal
Di-n-butylphthalate	mg/m3	0.000006	0.00003	0.00004	0.00003	0.00004	0.00005	Normal/Lognormal
Di-n-octylphthalate	mg/m3	0.000003	0.000004	0.000007	0.000002	0.000009	208.46	Normal/Lognormal
Dibenzofuran	mg/m3	0.000009	0.00001	0.00002	0.000010	0.00003	0.02	Normal/Lognormal
Diethylphthalate	mg/m3	0.000001	0.000003	0.000005	0.000003	0.000006	0.00001	Normal/Lognormal
Dimethylphthalate	mg/m3	0.00002	0.00002	0.00003	0.00002	0.00005	8.31	Normal/Lognormal
Fluoranthene	mg/m3	0.000006	0.000006	0.00001	0.000004	0.00002	0.67	Unknown
Fluorene	mg/m3	0.000010	0.000009	0.00002	0.000006	0.00003	0.12	Lognormal
Hexachloro-1,3-Butadiene	mg/m3	0.002	0.0008	0.004	0.00003	0.002	128753989089	Lognormal
Isophorone	mg/m3	0.00004	0.00003	0.00007	0.00001	0.00009	86711.84	Normal/Lognormal
Naphthalene	mg/m3	0.0002	0.0003	0.0004	0.0002	0.0004	0.0006	Normal/Lognormal
Phenanthrene	mg/m3	0.00001	0.00002	0.00004	0.00002	0.00005	0.0004	Normal/Lognormal
Phenol	mg/m3	0.00006	0.00010	0.0002	0.00009	0.0002	0.002	Normal/Lognormal
Pyrene	mg/m3	0.000002	0.000006	0.000008	0.000005	0.000009	0.00002	Normal/Lognormal
Total Carcinogenic PAHS (BaP TEQs)	mg/m3	0.0000006	0.0000002	0.0000002	0.0000007	0.000002	0.01	Normal/Lognormal
bis(2-Ethylhexyl)phthalate	mg/m3	0.00003	0.00004	0.00007	0.00002	0.00010	15214.12	Normal/Lognormal

Table A-12 - Child Development Center Indoor Dust Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,2,3,4,6,7,8,9-OCDD	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
1,2,3,4,6,7,8,9-OCDF	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
1,2,3,4,6,7,8-HpCDD	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
1,2,3,4,6,7,8-HpCDF	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
1,2,3,4,7,8,9-HpCDF	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
1,2,3,4,7,8-HxCDD	mg/kg	1	100.00			0.000008	0.000008	0.000008	0.000008	
1,2,3,4,7,8-HxCDF	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
1,2,3,6,7,8-HxCDD	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
1,2,3,6,7,8-HxCDF	mg/kg	1	100.00			0.00003	0.00003	0.00003	0.00003	
1,2,3,7,8,9-HxCDD	mg/kg	1	100.00			0.00001	0.00001	0.00001	0.00001	
1,2,3,7,8,9-HxCDF	mg/kg	1	100.00			0.00001	0.00001	0.00001	0.00001	
1,2,3,7,8-PeCDD	mg/kg	1	100.00			0.000007	0.000007	0.000007	0.000007	
1,2,3,7,8-PeCDF	mg/kg	1	100.00			0.000008	0.000008	0.000008	0.000008	
2,3,4,6,7,8-HxCDF	mg/kg	1	100.00			0.00005	0.00005	0.00005	0.00005	
2,3,4,7,8-PeCDF	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
2,3,7,8-TCDF	mg/kg	1	100.00			0.000007	0.000007	0.000007	0.000007	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	1	100.00			0.00004	0.00004	0.00004	0.00004	
Total HpCDD	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
Total HpCDF	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
Total HxCDD	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
Total HxCDF	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
Total PeCDD	mg/kg	1	100.00			0.0001	0.0001	0.0001	0.0001	
Total PeCDF	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
Total TCDD	mg/kg	1	100.00			0.0001	0.0001	0.0001	0.0001	
Total TCDF	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	

Table A-12 - Child Development Center Indoor Dust Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,2,3,4,6,7,8,9-OCDD	mg/kg		0.001	0.001	0.001			Unknown
1,2,3,4,6,7,8,9-OCDF	mg/kg		0.0002	0.0002	0.0002			Unknown
1,2,3,4,6,7,8-HpCDD	mg/kg		0.0002	0.0002	0.0002			Unknown
1,2,3,4,6,7,8-HpCDF	mg/kg		0.0002	0.0002	0.0002			Unknown
1,2,3,4,7,8,9-HpCDF	mg/kg		0.00002	0.00002	0.00002			Unknown
1,2,3,4,7,8-HxCDD	mg/kg		0.000008	0.000008	0.000008			Unknown
1,2,3,4,7,8-HxCDF	mg/kg		0.00002	0.00002	0.00002			Unknown
1,2,3,6,7,8-HxCDD	mg/kg		0.00002	0.00002	0.00002			Unknown
1,2,3,6,7,8-HxCDF	mg/kg		0.00003	0.00003	0.00003			Unknown
1,2,3,7,8,9-HxCDD	mg/kg		0.00001	0.00001	0.00001			Unknown
1,2,3,7,8,9-HxCDF	mg/kg		0.00001	0.00001	0.00001			Unknown
1,2,3,7,8-PeCDD	mg/kg		0.000007	0.000007	0.000007			Unknown
1,2,3,7,8-PeCDF	mg/kg		0.000008	0.000008	0.000008			Unknown
2,3,4,6,7,8-HxCDF	mg/kg		0.00005	0.00005	0.00005			Unknown
2,3,4,7,8-PeCDF	mg/kg		0.00002	0.00002	0.00002			Unknown
2,3,7,8-TCDF	mg/kg		0.000007	0.000007	0.000007			Unknown
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg		0.00004	0.00004	0.00004			Unknown
Total HpCDD	mg/kg		0.0003	0.0003	0.0003			Unknown
Total HpCDF	mg/kg		0.0003	0.0003	0.0003			Unknown
Total HxCDD	mg/kg		0.0002	0.0002	0.0002			Unknown
Total HxCDF	mg/kg		0.0003	0.0003	0.0003			Unknown
Total PeCDD	mg/kg		0.0001	0.0001	0.0001			Unknown
Total PeCDF	mg/kg		0.0002	0.0002	0.0002			Unknown
Total TCDD	mg/kg		0.0001	0.0001	0.0001			Unknown
Total TCDF	mg/kg		0.0003	0.0003	0.0003			Unknown

Table A-13 - Elementary School Indoor Dust Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,2,3,4,6,7,8,9-OCDD	mg/kg	1	100.00			0.002	0.002	0.002	0.002	
1,2,3,4,6,7,8,9-OCDF	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
1,2,3,4,6,7,8-HpCDD	mg/kg	1	100.00			0.0007	0.0007	0.0007	0.0007	
1,2,3,4,6,7,8-HpCDF	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
1,2,3,4,7,8,9-HpCDF	mg/kg	1	100.00			0.00005	0.00005	0.00005	0.00005	
1,2,3,4,7,8-HxCDD	mg/kg	1	100.00			0.000010	0.000010	0.000010	0.000010	
1,2,3,4,7,8-HxCDF	mg/kg	1	100.00			0.00003	0.00003	0.00003	0.00003	
1,2,3,6,7,8-HxCDD	mg/kg	1	100.00			0.00006	0.00006	0.00006	0.00006	
1,2,3,6,7,8-HxCDF	mg/kg	1	100.00			0.00004	0.00004	0.00004	0.00004	
1,2,3,7,8,9-HxCDD	mg/kg	1	100.00			0.00004	0.00004	0.00004	0.00004	
1,2,3,7,8,9-HxCDF	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
1,2,3,7,8-PeCDD	mg/kg	1	100.00			0.000006	0.000006	0.000006	0.000006	
1,2,3,7,8-PeCDF	mg/kg	1	100.00			0.000009	0.000009	0.000009	0.000009	
2,3,4,6,7,8-HxCDF	mg/kg	1	100.00			0.00008	0.00008	0.00008	0.00008	
2,3,4,7,8-PeCDF	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
2,3,7,8-TCDF	mg/kg	1	100.00			0.000009	0.000009	0.000009	0.000009	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	1	100.00			0.00006	0.00006	0.00006	0.00006	
Total HpCDD	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
Total HpCDF	mg/kg	1	100.00			0.0004	0.0004	0.0004	0.0004	
Total HxCDD	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
Total HxCDF	mg/kg	1	100.00			0.0004	0.0004	0.0004	0.0004	
Total PeCDD	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
Total PeCDF	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
Total TCDD	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
Total TCDF	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	

Table A-13 - Elementary School Indoor Dust Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,2,3,4,6,7,8,9-OCDD	mg/kg		0.002	0.002	0.002			Unknown
1,2,3,4,6,7,8,9-OCDF	mg/kg		0.0003	0.0003	0.0003			Unknown
1,2,3,4,6,7,8-HpCDD	mg/kg		0.0007	0.0007	0.0007			Unknown
1,2,3,4,6,7,8-HpCDF	mg/kg		0.0002	0.0002	0.0002			Unknown
1,2,3,4,7,8,9-HpCDF	mg/kg		0.00005	0.00005	0.00005			Unknown
1,2,3,4,7,8-HxCDD	mg/kg		0.000010	0.000010	0.000010			Unknown
1,2,3,4,7,8-HxCDF	mg/kg		0.00003	0.00003	0.00003			Unknown
1,2,3,6,7,8-HxCDD	mg/kg		0.00006	0.00006	0.00006			Unknown
1,2,3,6,7,8-HxCDF	mg/kg		0.00004	0.00004	0.00004			Unknown
1,2,3,7,8,9-HxCDD	mg/kg		0.00004	0.00004	0.00004			Unknown
1,2,3,7,8,9-HxCDF	mg/kg		0.00002	0.00002	0.00002			Unknown
1,2,3,7,8-PeCDD	mg/kg		0.000006	0.000006	0.000006			Unknown
1,2,3,7,8-PeCDF	mg/kg		0.000009	0.000009	0.000009			Unknown
2,3,4,6,7,8-HxCDF	mg/kg		0.00008	0.00008	0.00008			Unknown
2,3,4,7,8-PeCDF	mg/kg		0.00002	0.00002	0.00002			Unknown
2,3,7,8-TCDF	mg/kg		0.000009	0.000009	0.000009			Unknown
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg		0.00006	0.00006	0.00006			Unknown
Total HpCDD	mg/kg		0.001	0.001	0.001			Unknown
Total HpCDF	mg/kg		0.0004	0.0004	0.0004			Unknown
Total HxCDD	mg/kg		0.001	0.001	0.001			Unknown
Total HxCDF	mg/kg		0.0004	0.0004	0.0004			Unknown
Total PeCDD	mg/kg		0.0003	0.0003	0.0003			Unknown
Total PeCDF	mg/kg		0.0003	0.0003	0.0003			Unknown
Total TCDD	mg/kg		0.0002	0.0002	0.0002			Unknown
Total TCDF	mg/kg		0.0003	0.0003	0.0003			Unknown

Table A-14 - Residential Towers (3101/3102) Indoor Dust Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,2,3,4,6,7,8,9-OCDD	mg/kg	1	100.00			0.003	0.003	0.003	0.003	
1,2,3,4,6,7,8,9-OCDF	mg/kg	1	100.00			0.0005	0.0005	0.0005	0.0005	
1,2,3,4,6,7,8-HpCDD	mg/kg	1	100.00			0.0007	0.0007	0.0007	0.0007	
1,2,3,4,6,7,8-HpCDF	mg/kg	1	100.00			0.0006	0.0006	0.0006	0.0006	
1,2,3,4,7,8,9-HpCDF	mg/kg	1	100.00			0.00009	0.00009	0.00009	0.00009	
1,2,3,4,7,8-HxCDD	mg/kg	1	100.00			0.00003	0.00003	0.00003	0.00003	
1,2,3,4,7,8-HxCDF	mg/kg	1	100.00			0.00009	0.00009	0.00009	0.00009	
1,2,3,6,7,8-HxCDD	mg/kg	1	100.00			0.00008	0.00008	0.00008	0.00008	
1,2,3,6,7,8-HxCDF	mg/kg	1	100.00			0.0001	0.0001	0.0001	0.0001	
1,2,3,7,8,9-HxCDD	mg/kg	1	100.00			0.00005	0.00005	0.00005	0.00005	
1,2,3,7,8,9-HxCDF	mg/kg	1	100.00			0.00005	0.00005	0.00005	0.00005	
1,2,3,7,8-PeCDD	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
1,2,3,7,8-PeCDF	mg/kg	1	100.00			0.00003	0.00003	0.00003	0.00003	
2,3,4,6,7,8-HxCDF	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
2,3,4,7,8-PeCDF	mg/kg	1	100.00			0.00007	0.00007	0.00007	0.00007	
2,3,7,8-TCDD	mg/kg	1	100.00			0.000004	0.000004	0.000004	0.000004	
2,3,7,8-TCDF	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	1	100.00			0.0001	0.0001	0.0001	0.0001	
Total HpCDD	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
Total HpCDF	mg/kg	1	100.00			0.0010	0.0010	0.0010	0.0010	
Total HxCDD	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
Total HxCDF	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
Total PeCDD	mg/kg	1	100.00			0.0004	0.0004	0.0004	0.0004	
Total PeCDF	mg/kg	1	100.00			0.0008	0.0008	0.0008	0.0008	
Total TCDD	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
Total TCDF	mg/kg	1	100.00			0.0006	0.0006	0.0006	0.0006	

Table A-14 - Residential Towers (3101/3102) Indoor Dust Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,2,3,4,6,7,8,9-OCDD	mg/kg		0.003	0.003	0.003			Unknown
1,2,3,4,6,7,8,9-OCDF	mg/kg		0.0005	0.0005	0.0005			Unknown
1,2,3,4,6,7,8-HpCDD	mg/kg		0.0007	0.0007	0.0007			Unknown
1,2,3,4,6,7,8-HpCDF	mg/kg		0.0006	0.0006	0.0006			Unknown
1,2,3,4,7,8,9-HpCDF	mg/kg		0.00009	0.00009	0.00009			Unknown
1,2,3,4,7,8-HxCDD	mg/kg		0.00003	0.00003	0.00003			Unknown
1,2,3,4,7,8-HxCDF	mg/kg		0.00009	0.00009	0.00009			Unknown
1,2,3,6,7,8-HxCDD	mg/kg		0.00008	0.00008	0.00008			Unknown
1,2,3,6,7,8-HxCDF	mg/kg		0.0001	0.0001	0.0001			Unknown
1,2,3,7,8,9-HxCDD	mg/kg		0.00005	0.00005	0.00005			Unknown
1,2,3,7,8,9-HxCDF	mg/kg		0.00005	0.00005	0.00005			Unknown
1,2,3,7,8-PeCDD	mg/kg		0.00002	0.00002	0.00002			Unknown
1,2,3,7,8-PeCDF	mg/kg		0.00003	0.00003	0.00003			Unknown
2,3,4,6,7,8-HxCDF	mg/kg		0.0002	0.0002	0.0002			Unknown
2,3,4,7,8-PeCDF	mg/kg		0.00007	0.00007	0.00007			Unknown
2,3,7,8-TCDD	mg/kg		0.000004	0.000004	0.000004			Unknown
2,3,7,8-TCDF	mg/kg		0.00002	0.00002	0.00002			Unknown
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg		0.0001	0.0001	0.0001			Unknown
Total HpCDD	mg/kg		0.001	0.001	0.001			Unknown
Total HpCDF	mg/kg		0.0010	0.0010	0.0010			Unknown
Total HxCDD	mg/kg		0.001	0.001	0.001			Unknown
Total HxCDF	mg/kg		0.001	0.001	0.001			Unknown
Total PeCDD	mg/kg		0.0004	0.0004	0.0004			Unknown
Total PeCDF	mg/kg		0.0008	0.0008	0.0008			Unknown
Total TCDD	mg/kg		0.0003	0.0003	0.0003			Unknown
Total TCDF	mg/kg		0.0006	0.0006	0.0006			Unknown

Table A-15 - GEMB Indoor Dust Data

Constituent	Units	Number of Samples Analyzed	Frequency of Detection	Minimum Non-Detected Value	Maximum Non-Detected Value	Minimum Detected Value	Maximum Detected Value	Mean	Median	Mode
1,2,3,4,6,7,8,9-OCDD	mg/kg	1	100.00			0.007	0.007	0.007	0.007	
1,2,3,4,6,7,8,9-OCDF	mg/kg	1	100.00			0.0008	0.0008	0.0008	0.0008	
1,2,3,4,6,7,8-HpCDD	mg/kg	1	100.00			0.0009	0.0009	0.0009	0.0009	
1,2,3,4,6,7,8-HpCDF	mg/kg	1	100.00			0.0007	0.0007	0.0007	0.0007	
1,2,3,4,7,8,9-HpCDF	mg/kg	1	100.00			0.0001	0.0001	0.0001	0.0001	
1,2,3,4,7,8-HxCDD	mg/kg	1	100.00			0.00004	0.00004	0.00004	0.00004	
1,2,3,4,7,8-HxCDF	mg/kg	1	100.00			0.00010	0.00010	0.00010	0.00010	
1,2,3,6,7,8-HxCDD	mg/kg	1	100.00			0.00009	0.00009	0.00009	0.00009	
1,2,3,6,7,8-HxCDF	mg/kg	1	100.00			0.0001	0.0001	0.0001	0.0001	
1,2,3,7,8,9-HxCDD	mg/kg	1	100.00			0.00007	0.00007	0.00007	0.00007	
1,2,3,7,8,9-HxCDF	mg/kg	1	100.00			0.00006	0.00006	0.00006	0.00006	
1,2,3,7,8-PeCDD	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
1,2,3,7,8-PeCDF	mg/kg	1	100.00			0.00004	0.00004	0.00004	0.00004	
2,3,4,6,7,8-HxCDF	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
2,3,4,7,8-PeCDF	mg/kg	1	100.00			0.00009	0.00009	0.00009	0.00009	
2,3,7,8-TCDD	mg/kg	1	100.00			0.000007	0.000007	0.000007	0.000007	
2,3,7,8-TCDF	mg/kg	1	100.00			0.00002	0.00002	0.00002	0.00002	
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg	1	100.00			0.0002	0.0002	0.0002	0.0002	
Total HpCDD	mg/kg	1	100.00			0.002	0.002	0.002	0.002	
Total HpCDF	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
Total HxCDD	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
Total HxCDF	mg/kg	1	100.00			0.001	0.001	0.001	0.001	
Total PeCDD	mg/kg	1	100.00			0.0006	0.0006	0.0006	0.0006	
Total PeCDF	mg/kg	1	100.00			0.0010	0.0010	0.0010	0.0010	
Total TCDD	mg/kg	1	100.00			0.0003	0.0003	0.0003	0.0003	
Total TCDF	mg/kg	1	100.00			0.0009	0.0009	0.0009	0.0009	

Table A-15 - GEMB Indoor Dust Data

Constituent	Units	Standard Deviation	Alternate	RME	Log Mean	95% UCL	Log 95% UCL	Distribution Test 5% Significance Level
1,2,3,4,6,7,8,9-OCDD	mg/kg		0.007	0.007	0.007			Unknown
1,2,3,4,6,7,8,9-OCDF	mg/kg		0.0008	0.0008	0.0008			Unknown
1,2,3,4,6,7,8-HpCDD	mg/kg		0.0009	0.0009	0.0009			Unknown
1,2,3,4,6,7,8-HpCDF	mg/kg		0.0007	0.0007	0.0007			Unknown
1,2,3,4,7,8,9-HpCDF	mg/kg		0.0001	0.0001	0.0001			Unknown
1,2,3,4,7,8-HxCDD	mg/kg		0.00004	0.00004	0.00004			Unknown
1,2,3,4,7,8-HxCDF	mg/kg		0.00010	0.00010	0.00010			Unknown
1,2,3,6,7,8-HxCDD	mg/kg		0.00009	0.00009	0.00009			Unknown
1,2,3,6,7,8-HxCDF	mg/kg		0.0001	0.0001	0.0001			Unknown
1,2,3,7,8,9-HxCDD	mg/kg		0.00007	0.00007	0.00007			Unknown
1,2,3,7,8,9-HxCDF	mg/kg		0.00006	0.00006	0.00006			Unknown
1,2,3,7,8-PeCDD	mg/kg		0.00002	0.00002	0.00002			Unknown
1,2,3,7,8-PeCDF	mg/kg		0.00004	0.00004	0.00004			Unknown
2,3,4,6,7,8-HxCDF	mg/kg		0.0002	0.0002	0.0002			Unknown
2,3,4,7,8-PeCDF	mg/kg		0.00009	0.00009	0.00009			Unknown
2,3,7,8-TCDD	mg/kg		0.000007	0.000007	0.000007			Unknown
2,3,7,8-TCDF	mg/kg		0.00002	0.00002	0.00002			Unknown
Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	mg/kg		0.0002	0.0002	0.0002			Unknown
Total HpCDD	mg/kg		0.002	0.002	0.002			Unknown
Total HpCDF	mg/kg		0.001	0.001	0.001			Unknown
Total HxCDD	mg/kg		0.001	0.001	0.001			Unknown
Total HxCDF	mg/kg		0.001	0.001	0.001			Unknown
Total PeCDD	mg/kg		0.0006	0.0006	0.0006			Unknown
Total PeCDF	mg/kg		0.0010	0.0010	0.0010			Unknown
Total TCDD	mg/kg		0.0003	0.0003	0.0003			Unknown
Total TCDF	mg/kg		0.0009	0.0009	0.0009			Unknown

APPENDIX B

BACKGROUND AND RISK-BASED SCREENING

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B.0 BACKGROUND SCREENING OF SOIL COCS

Surface soil (i.e., 0–3”) concentrations of inorganic constituents were compared with background concentrations to determine if site concentrations were elevated with respect to background. The purpose of background screening is to focus the risk assessment on COCs that are related to Shinkampo Incineration Complex activities and eliminate COCs that are present at background concentrations. Tables B-1 – B-5 presents the results of comparing the maximum detected concentration with the background screening concentrations.

B.1 RISK-BASED SCREENING OF COCS

The maximum detected concentrations of the COCs in each area sampled at NAF Atsugi were compared to 1/10th the Environmental Protection Agency (EPA) Region III Risk Based Screening Soil Concentrations. These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario or 25-year industrial scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment. The risk-based screening steps are presented in the following tables:

- Soil: Tables B-6 – B-10.
- Ambient Air: Tables B-7 – B-14.
- Indoor Dust: Table B-15.

Table B-1
Child Development Center
Constituents of Concern that Exceed Site-Specific Background Concentrations in Surface Soil (0–3“)

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Maximum Background Concentration ¹ (mg/kg)	Maximum Detected Concentration Exceed Maximum Background?
Aluminum	9	100.0	21428.89	29781.54	44000.00	88000	No
Antimony	9	33.3	0.44	1.80	1.80	--	--
Arsenic	9	100.0	2.78	3.37	3.70	12.7	No
Barium	9	100.0	32.69	65.79	79.60	107	No
Beryllium	9	66.7	0.07	0.11	0.21	1.64	No
Cadmium	9	100.0	0.56	0.77	1.10	1.40	No
Calcium	9	100.0	8505.56	10497.79	12200.00	13600	No
Chromium	9	100.0	12.11	16.83	26.10	31.2	No
Cobalt	9	100.0	7.82	11.33	17.30	33.2	No
Copper	9	100.0	35.50	92.00	92.00	167	No
Cyanide	9	100.0	0.63	0.74	0.97	0.56	Yes
Iron	9	100.0	19191.11	26305.01	38700.00	73500	No
Lead	9	100.0	13.17	18.10	23.80	31.2	No
Magnesium	9	100.0	3992.22	5385.80	7400.00	11200	No
Manganese	9	100.0	326.07	476.85	767.00	1630	No
Mercury	9	77.8	0.04	0.12	0.15	0.077	Yes
Nickel	9	100.0	11.20	15.74	24.00	33.1	No
Potassium	9	100.0	585.33	728.95	1000.00	1000	No
Selenium	9	11.1	0.12	0.40	0.40	3.84	No
Silver	9	88.9	0.12	0.17	0.29	0.578	No
Sodium	9	100.0	770.89	973.40	1200.00	7860	No
Thallium	9	66.7	0.39	0.62	0.79	1.1	No
Vanadium	9	100.0	67.74	97.80	151.00	306	No
Zinc	9	100.0	75.36	99.39	125.00	61.7	Yes

-- A site-specific background concentration was not available for this constituent.

¹Background screening concentrations were obtained from the *Phase II Soil Sampling Report Addendum to the March 1998 Report, NAF Atsugi, Japan. May 14, 1999. Radian International, LLC.*

Note: Bold and shaded rows identify constituents whose maximum detected concentration exceed background and therefore will be evaluated in the risk-based screening step to determine if they should be included in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

**Table B-2
Elementary School
Constituents of Concern that Exceed Site-Specific Background Concentrations in Surface Soil (0–3“)**

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Background Concentration ¹ (mg/kg)	Maximum Detected Concentration Exceed Background?
Aluminum	9	100.0	28632.22	42290.47	72600.00	88000	No
Antimony	9	66.7	0.77	2.37	2.50	--	--
Arsenic	9	100.0	3.96	4.79	6.50	12.7	No
Barium	9	100.0	44.42	115.87	143.00	107	Yes
Beryllium	9	100.0	0.15	0.24	0.35	1.64	No
Cadmium	9	100.0	0.46	1.00	1.30	1.40	No
Calcium	9	100.0	12395.56	14208.97	18700.00	13600	Yes
Chromium	9	100.0	15.96	34.16	51.40	31.2	Yes
Cobalt	9	100.0	10.89	16.38	27.60	33.2	No
Copper	9	100.0	49.30	152.00	152.00	167	No
Cyanide	9	11.1	0.15	0.16	0.16	0.56	No
Iron	9	100.0	26088.89	46598.57	64100.00	73500	No
Lead	9	100.0	12.81	44.14	61.50	31.2	Yes
Magnesium	9	100.0	5822.22	7576.07	9970.00	11200	No
Manganese	9	100.0	446.67	664.14	1140.00	1630	No
Mercury	9	44.4	0.03	0.06	0.13	0.077	Yes
Nickel	9	100.0	15.21	22.24	37.50	33.1	Yes
Potassium	9	100.0	723.22	854.91	1060.00	1000	Yes
Selenium	9	22.2	0.23	0.91	0.91	3.84	No
Silver	9	100.0	0.15	0.25	0.50	0.578	No
Sodium	9	100.0	795.44	956.93	1210.00	7860	No
Thallium	9	22.2	0.52	1.60	1.60	1.1	Yes
Vanadium	9	100.0	92.56	218.71	263.00	306	No
Zinc	9	100.0	66.71	137.02	274.00	61.7	Yes

-- A site-specific background concentration was not available for this constituent.

¹Background screening concentrations were obtained from the *Phase II Soil Sampling Report Addendum to the March 1998 Report, NAF Atsugi, Japan. May 14, 1999. Radian International, LLC.*

Note: Bold and shaded rows identify constituents whose maximum detected concentration exceeded background and therefore will be evaluated in the risk-based screening step to determine if they should be included in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-3
Residential Towers (3101/3102)
Constituents of Concern that Exceed Site-Specific Background Concentrations in Surface Soil (0–3“)

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Background Concentration ¹ (mg/kg)	Maximum Detected Concentration Exceed Background?
Aluminum	13	100.0	49469.23	60830.73	78800.00	88000	No
Antimony	13	84.6	1.44	1.85	2.70	--	--
Arsenic	13	100.0	4.27	5.09	8.30	12.7	No
Barium	13	100.0	108.72	184.87	609.00	107	Yes
Beryllium	13	53.9	0.17	0.22	0.36	1.64	No
Cadmium	13	100.0	1.00	1.31	2.30	1.40	Yes
Calcium	13	100.0	14239.23	20066.04	27700.00	13600	Yes
Chromium	13	100.0	30.14	37.48	47.90	31.2	Yes
Cobalt	13	100.0	19.55	24.23	29.00	33.2	No
Copper	13	100.0	97.61	123.56	150.00	167	No
Cyanide	13	84.6	0.61	1.61	1.90	0.56	Yes
Iron	13	100.0	43430.77	53138.45	64400.00	73500	No
Lead	13	100.0	28.39	83.55	97.50	31.2	Yes
Magnesium	13	100.0	8179.23	9852.29	11700.00	11200	Yes
Manganese	13	100.0	775.62	960.88	1200.00	1630	No
Mercury	13	100.0	0.06	0.08	0.14	0.077	Yes
Nickel	13	100.0	26.19	32.14	38.80	33.1	Yes
Potassium	13	100.0	696.08	833.66	1110.00	1000	Yes
Selenium	13	15.4	0.20	0.52	0.74	3.84	No
Silver	13	100.0	0.27	0.33	0.43	0.578	No
Sodium	13	100.0	1158.54	1375.73	1970.00	7860	No
Thallium	13	76.9	1.23	1.65	2.50	1.1	Yes
Vanadium	13	100.0	173.87	217.71	287.00	306	No
Zinc	13	100.0	107.35	141.78	246.00	61.7	Yes

-- A site-specific background concentration was not available for this constituent.

¹Background screening concentrations were obtained from the *Phase II Soil Sampling Report Addendum to the March 1998 Report, NAF Atsugi, Japan. May 14, 1999. Radian International, LLC.*

Note: Bold and shaded rows identify constituents whose maximum detected concentration exceeded background and therefore will be evaluated in the risk-based screening step to determine if they should be included in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-4
GEMB
Constituents of Concern that Exceed Site-Specific Background Concentrations in Surface Soil (0–3“)

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Background Concentration ¹ (mg/kg)	Maximum Detected Concentration Exceed Background?
Aluminum	1	100.0	49300.00	49300.00	49300.00	88000	No
Antimony	1	100.0	1.40	1.40	1.40	--	--
Arsenic	1	100.0	3.30	3.30	3.30	12.7	No
Barium	1	100.0	85.10	85.10	85.10	107	No
Beryllium	1	100.0	0.33	0.33	0.33	1.64	No
Cadmium	1	100.0	0.80	0.80	0.80	1.40	No
Calcium	1	100.0	9550.00	9550.00	9550.00	13600	No
Chromium	1	100.0	33.10	33.10	33.10	31.2	Yes
Cobalt	1	100.0	19.30	19.30	19.30	33.2	No
Copper	1	100.0	98.10	98.10	98.10	167	No
Cyanide	1	100.0	0.55	0.55	0.55	0.56	No
Iron	1	100.0	44400.00	44400.00	44400.00	73500	No
Lead	1	100.0	43.60	43.60	43.60	31.2	Yes
Magnesium	1	100.0	7950.00	7950.00	7950.00	11200	No
Manganese	1	100.0	778.00	778.00	778.00	1630	No
Mercury	1	100.0	0.07	0.07	0.07	0.077	No
Nickel	1	100.0	28.90	28.90	28.90	33.1	No
Potassium	1	100.0	783.00	783.00	783.00	1000	No
Selenium	1	100.0	0.94	0.94	0.94	3.84	No
Silver	1	100.0	0.29	0.29	0.29	0.578	No
Sodium	1	100.0	737.00	737.00	737.00	7860	No
Vanadium	1	100.0	165.00	165.00	165.00	306	No
Zinc	1	100.0	191.00	191.00	191.00	61.7	Yes

-- A site-specific background concentration was not available for this constituent.

¹Background screening concentrations were obtained from the *Phase II Soil Sampling Report Addendum to the March 1998 Report, NAF Atsugi, Japan. May 14, 1999. Radian International, LLC.*

Note: Bold and shaded rows identify constituents whose maximum detected concentration exceed background and therefore will be evaluated in the risk-based screening step to determine if they should be included in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

**Table B-5
Golf Course
Constituents of Concern that Exceed Site-Specific Background Concentrations in Surface Soil (0–3“)**

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Background Concentration ¹ (mg/kg)	Maximum Detected Concentration Exceed Background?
Aluminum	7	100.0	63457.14	77128.60	88100.00	88000	Yes
Antimony	7	100.0	4.06	5.81	7.50	--	--
Arsenic	7	100.0	4.97	5.85	6.70	12.7	No
Barium	7	100.0	86.97	105.52	129.00	107	Yes
Beryllium	7	57.1	0.27	0.38	0.49	1.64	No
Cadmium	7	100.0	1.94	2.33	2.90	1.40	Yes
Calcium	7	100.0	5955.71	7939.70	9340.00	13600	No
Chromium	7	100.0	43.81	57.14	72.10	31.2	Yes
Cobalt	7	100.0	25.50	30.38	34.60	33.2	Yes
Copper	7	100.0	152.11	179.15	181.00	167	Yes
Cyanide	7	100.0	0.84	1.14	1.50	0.56	Yes
Iron	7	100.0	53957.14	65167.35	75400.00	73500	Yes
Lead	7	100.0	72.26	87.69	100.00	31.2	Yes
Magnesium	7	100.0	8580.00	9304.08	10600.00	11200	No
Manganese	7	100.0	985.57	1145.56	1250.00	1630	No
Mercury	7	100.0	0.18	0.24	0.33	0.077	Yes
Nickel	7	100.0	48.10	81.64	110.00	33.1	Yes
Potassium	7	100.0	519.00	664.48	848.00	1000	No
Selenium	7	100.0	1.37	1.84	2.40	3.84	No
Silver	7	100.0	0.78	1.62	2.10	0.578	Yes
Sodium	7	100.0	755.29	1103.17	1630.00	7860	No
Thallium	7	42.9	1.61	4.30	4.30	1.1	Yes
Vanadium	7	100.0	234.71	297.26	351.00	306	Yes
Zinc	7	100.0	192.14	235.22	264.00	61.7	Yes

-- A site-specific background concentration was not available for this constituent.

¹Background screening concentrations were obtained from the *Phase II Soil Sampling Report Addendum to the March 1998 Report, NAF Atsugi, Japan. May 14, 1999. Radian International, LLC.*

Note: Bold and shaded rows identify constituents whose maximum detected concentration exceed background and therefore will be evaluated in the risk-based screening step to determine if they should be included in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-6
Child Development Center Constituents of Concern in Surface Soil (0–3”) that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	1/10 th EPA Region III Residential Soil Risk-Based Concentration ³ (mg/kg)	COC Evaluated in the Risk Assessment?
Inorganics							
Chloride	1	100.0	1.15	1.15	1.15	--	--
Fluoride	1	100.0	2.04	2.04	2.04	--	--
Sulfate	1	100.0	7.28	7.28	7.28	--	--
Nitrate	1	100.0	6.36	6.36	6.36	782.14	No
Antimony	9	33.3	0.44	1.80	1.80	3.13	No
Cyanide	9	100.0	0.63	0.74	0.97	156.43	No
Mercury	9	77.8	0.04	0.12	0.15	--	--
Zinc	9	100.0	75.36	99.39	125.00	2346.43	No
Pesticides/PCBs							
4,4'-DDE	9	77.8	0.01	0.02	0.03	0.19	No
4,4'-DDT	9	77.8	0.02	0.05	0.05	0.19	No
alpha-Chlordane	9	44.4	0.0004	0.0007	0.0010	0.18	No
gamma-Chlordane	9	33.3	0.0004	0.0007	0.001	0.18	No
Dieldrin	9	11.1	0.0003	0.002	0.002	0.004	No
Semi-Volatile Organic Compounds							
Bis(2-Ethylhexyl)phthalate	9	88.9	0.22	0.31	0.46	4.56	No
di-n-Butylphthalate	9	44.4	0.06	0.15	0.20	782.14	No
di-n-Octylphthalate	9	11.1	0.02	0.05	0.05	156.43	No
Butylbenzylphthalate	9	11.1	0.03	0.13	0.13	1564.29	No
Dioxins/Furans							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	9	100.0	0.00001	0.00002	0.00003	0.0000004	Yes

-- An EPA Region III RBSC was not available for this constituent.

Note: Calcium, magnesium, potassium, iron, and sodium are not considered toxic to humans and were eliminated from the risk assessment.

¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.

²The following carcinogenic polycyclic aromatic hydrocarbons were multiplied by the appropriate Benzo(a)pyrene Toxicity Equivalency Factor and then summed to calculate the Total Carcinogenic PAHS (BaP TEQs) Equivalent Concentration: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.

³These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

**Table B-7
Elementary School
Constituents of Concern in Surface Soil (0–3”) that Exceed EPA Region III RBSCs**

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	1/10 th EPA Region III Residential Soil Risk-Based Concentration ³ (mg/kg)	COC Evaluated in the Risk Assessment?
Inorganics							
Chloride	2	100.0	4.42	8.17	8.17	--	--
Fluoride	2	50.0	0.88	1.63	1.63	--	--
Sulfate	2	100.0	6.83	13.40	13.40	--	--
Nitrate	2	100.0	8.51	16.30	16.30	782.14	No
Antimony	9	66.7	0.77	2.37	2.50	3.13	No
Barium	9	100.0	44.42	115.87	143.00	547.50	No
Chromium	9	100.0	15.96	34.16	51.40	--	--
Lead	9	100.0	12.81	44.14	61.50	--	--
Mercury	9	44.4	0.03	0.06	0.13	--	--
Nickel	9	100.0	15.21	22.24	37.50	156.43	No
Thallium	9	22.2	0.52	1.60	1.60	0.55	Yes
Zinc	9	100.0	66.71	137.02	274.00	2346.43	No
Pesticides/PCBs							
4,4'-DDD	9	11.1	0.01	0.12	0.12	0.27	No
4,4'-DDE	9	44.4	0.008	0.02	0.04	0.19	No
4,4'-DDT	9	44.4	0.009	0.02	0.05	0.19	No
alpha-Chlordane	9	22.2	0.02	0.07	0.22	0.18	Yes
gamma-Chlordane	9	11.1	0.02	0.22	0.22	0.18	Yes
Heptachlor	9	11.1	0.001	0.01	0.01	0.01	No
Aroclor-1254	9	11.1	0.005	0.04	0.04	0.03	Yes
Semi-Volatile Organic Compounds							
bis(2-Ethylhexyl)phthalate	9	100.0	0.36	0.61	0.98	4.56	No
di-n-Butylphthalate	9	33.3	0.10	0.18	0.35	782.14	No
Butylbenzylphthalate	9	11.1	0.03	0.10	0.10	1564.29	No
Chrysene	9	11.1	0.03	0.07	0.07	8.75	No
Diethylphthalate	9	11.1	0.02	0.05	0.05	6257.14	No
Total Carcinogenic PAHS (BaP TEQs) ²	9	11.1	0.05	0.08	0.08	0.009	Yes
Dioxins/Furans							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	9	100.0	0.00002	0.00009	0.00009	0.0000004	Yes

-- An EPA Region III RBSC was not available for this constituent.

Note: Calcium, magnesium, potassium, iron, and sodium are not considered toxic to humans and were eliminated from the risk assessment.

¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.

²The following carcinogenic polycyclic aromatic hydrocarbons were multiplied by the appropriate Benzo(a)pyrene Toxicity Equivalency Factor and then summed to calculate the Total Carcinogenic PAHS (BaP TEQs) Equivalent Concentration: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.

³These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-8
Residential Towers (3101/3102)
Constituents of Concern in Surface Soil (0–3”) that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	1/10 th EPA Region III Residential Soil Risk-Based Concentration ³ (mg/kg)	COC Evaluated in the Risk Assessment?
Inorganics							
Chloride	3	100.0	7.54	11.40	11.40	--	--
Fluoride	3	66.7	0.64	1.65	1.65	--	--
Sulfate	3	100.0	43.77	53.10	53.10	--	--
Nitrate	3	100.0	17.71	25.80	25.80	782.14	No
Antimony	13	84.6	1.44	1.85	2.70	3.13	No
Barium	13	100.0	108.72	184.87	609.00	547.50	Yes
Cadmium	13	100.0	1.00	1.31	2.30	7.82	No
Chromium	13	100.0	30.14	37.48	47.90	--	--
Cyanide	13	84.6	0.61	1.61	1.90	156.43	No
Lead	13	100.0	28.39	83.55	97.50	--	--
Mercury	13	100.0	0.06	0.08	0.14	--	--
Nickel	13	100.0	26.19	32.14	38.80	156.43	No
Thallium	13	76.9	1.23	1.65	2.50	0.55	Yes
Zinc	13	100.0	107.35	141.78	246.00	2346.43	No
Pesticides/PCBs							
4,4'-DDD	13	38.5	0.003	0.006	0.02	0.27	No
4,4'-DDE	13	84.6	0.04	0.07	0.17	0.19	No
4,4'-DDT	13	84.6	0.05	0.08	0.24	0.19	Yes
alpha-Chlordane	13	38.5	0.002	0.003	0.008	0.18	No
gamma-Chlordane	13	38.5	0.002	0.003	0.008	0.18	No
Heptachlor	13	7.7	0.0002	0.0009	0.0009	0.01	No
Heptachlor epoxide	13	15.4	0.0003	0.0006	0.002	0.007	No
Semi-Volatile Organic Compounds							
bis(2-Ethylhexyl)phthalate	13	100.0	0.29	0.40	0.76	4.56	No
di-n-Butylphthalate	13	53.9	0.08	0.16	0.20	782.14	No
Benzo(a)anthracene	13	7.7	0.03	0.14	0.14	0.09	Yes
Benzo(a)pyrene	13	7.7	0.04	0.23	0.23	0.009	Yes
Benzo(b)fluoranthene	13	7.7	0.04	0.18	0.18	0.09	Yes
Benzo(g,h,i)perylene	13	7.7	0.04	0.17	0.17	--	--
Benzo(k)fluoranthene	13	7.7	0.04	0.20	0.20	0.87	No
Butylbenzylphthalate	13	15.4	0.04	0.05	0.10	1564.29	No
Chrysene	13	15.4	0.04	0.06	0.17	8.75	No
Diethylphthalate	13	15.4	0.04	0.05	0.11	6257.14	No
Fluoranthene	13	38.5	0.04	0.06	0.11	312.86	No
Pyrene	13	53.9	0.05	0.08	0.16	234.64	No

Table B-8
Residential Towers (3101/3102)
Constituents of Concern in Surface Soil (0–3“) that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	1/10 th EPA Region III Residential Soil Risk-Based Concentration ³ (mg/kg)	COC Evaluated in the Risk Assessment?
Total Carcinogenic PAHS (BaP TEQs) ²	13	15.4	0.08	0.11	0.29	0.009	Yes
Dioxins/Furans							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	13	100.0	0.00002	0.00009	0.00009	0.0000004	Yes

-- An EPA Region III RBSC was not available for this constituent.

Note: Calcium, magnesium, potassium, iron, and sodium are not considered toxic to humans and were eliminated from the risk assessment.

¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.

²The following carcinogenic polycyclic aromatic hydrocarbons were multiplied by the appropriate Benzo(a)pyrene Toxicity Equivalency Factor and then summed to calculate the Total Carcinogenic PAHS (BaP TEQs) Equivalent Concentration: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.

³These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

**Table B-9
GEMB
Constituents of Concern in Surface Soil (0–3“) that Exceed EPA Region III RBSCs**

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	1/10 th EPA Region III Industrial Soil Risk-Based Concentration ³ (mg/kg)	COC Evaluated in the Risk Assessment ?
Inorganics							
Antimony	1	100.0	1.40	1.40	1.40	81.76	No
Chromium	1	100.0	33.10	33.10	33.10	--	--
Lead	1	100.0	43.60	43.60	43.60	--	--
Zinc	1	100.0	191.00	191.00	191.00	61320.00	No
Pesticides/PCBs							
4,4'-DDE	1	100.0	0.007	0.007	0.007	1.68	No
4,4'-DDT	1	100.0	0.01	0.01	0.01	1.68	No
Semi-Volatile Organic Compounds							
Benzo(a)pyrene	1	100.0	0.03	0.03	0.03	0.08	No
Pyrene	1	100.0	0.06	0.06	0.06	6132.00	No
Total Carcinogenic PAHS (BaP TEQs) ²	1	100.0	0.06	0.06	0.06	0.08	No
bis(2-Ethylhexyl)phthalate	1	100.0	0.23	0.23	0.23	40.88	No
di-n-Butylphthalate	1	100.0	0.12	0.12	0.12	20440.00	No
Dioxins/Furans							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	1	100.0	0.00007	0.00007	0.00007	0.000004	Yes

-- An EPA Region III RBSC was not available for this constituent.

Note: Calcium, magnesium, potassium, iron, and sodium are not considered toxic to humans and were eliminated from the risk assessment.

¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.

²The following carcinogenic polycyclic aromatic hydrocarbons were multiplied by the appropriate Benzo(a)pyrene Toxicity Equivalency Factor and then summed to calculate the Total Carcinogenic PAHS (BaP TEQs) Equivalent Concentration: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.

³These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-10
Golf Course
Constituents of Concern in Surface Soil (0–3”) that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	1/10 th EPA Region III Residential Soil Risk-Based Concentration ³ (mg/kg)	COC Evaluated in the Risk Assessment?
Inorganics							
Chloride	3	100.0	4.61	5.18	5.18	--	--
Fluoride	3	100.0	2.21	2.71	2.71	--	--
Sulfate	3	100.0	81.63	108.00	108.00	--	--
Nitrate	3	33.3	3.97	10.90	10.90	782.14	No
Aluminum	7	100.0	63457.14	77128.60	88100.00	7821.43	Yes
Antimony	7	100.0	4.06	5.81	7.50	3.13	Yes
Barium	7	100.0	86.97	105.52	129.00	547.50	No
Cadmium	7	100.0	1.94	2.33	2.90	7.82	No
Chromium	7	100.0	43.81	57.14	72.10	--	--
Cobalt	7	100.0	25.50	30.38	34.60	469.29	No
Copper	7	100.0	152.11	179.15	181.00	312.86	No
Cyanide	7	100.0	0.84	1.14	1.50	156.43	No
Lead	7	100.0	72.26	87.69	100.00	--	--
Mercury	7	100.0	0.18	0.24	0.33	--	--
Nickel	7	100.0	48.10	81.64	110.00	156.43	No
Silver	7	100.0	0.78	1.62	2.10	39.11	No
Thallium	7	42.9	1.61	4.30	4.30	0.55	Yes
Vanadium	7	100.0	234.71	297.26	351.00	54.75	Yes
Zinc	7	100.0	192.14	235.22	264.00	2346.43	No
Pesticides/PCBs							
4,4'-DDE	7	14.3	0.0006	0.003	0.003	0.19	No
4,4'-DDT	7	14.3	0.0005	0.003	0.003	0.19	No
Semi-Volatile Organic Compounds							
Benzo(a)pyrene	7	14.3	0.03	0.04	0.04	0.009	Yes
Benzo(b)fluoranthene	7	14.3	0.05	0.13	0.13	0.09	Yes
Benzo(g,h,i)perylene	7	14.3	0.04	0.05	0.05	--	--
Butylbenzylphthalate	7	28.6	0.05	0.08	0.11	1564.29	No
Chrysene	7	28.6	0.05	0.08	0.15	8.75	No
Fluoranthene	7	42.9	0.07	0.11	0.21	312.86	No
Phenanthrene	7	14.3	0.04	0.08	0.08	--	--
Pyrene	7	57.1	0.08	0.17	0.21	234.64	No
Total Carcinogenic PAHS (BaP TEQs) ²	7	28.6	0.07	0.08	0.08	0.009	Yes
bis(2-Ethylhexyl)phthalate	7	100.0	0.29	0.35	0.39	4.56	No
di-n-Butylphthalate	7	100.0	0.20	0.35	0.49	782.14	No
Dioxins/Furans							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	7	100.0	0.0002	0.0007	0.0007	0.0000004	Yes

-- An EPA Region III RBSC was not available for this constituent.

Note: Calcium, magnesium, potassium, iron, and sodium are not considered toxic to humans and were eliminated from the risk assessment.

¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.

²The following carcinogenic polycyclic aromatic hydrocarbons were multiplied by the appropriate Benzo(a)pyrene Toxicity Equivalency Factor and then summed to calculate the Total Carcinogenic PAHS (BaP TEQs) Equivalent Concentration: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.

³These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-11
Elementary School
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Acid Gases							
Hydrochloric Acid	72	100.0	0.003	0.003	0.01	0.002	Yes
Hydrofluoric Acid	72	93.1	0.0003	0.0004	0.002	--	--
Sulfuric Acid	72	97.2	0.01	0.01	0.02	--	--
Aldehydes & Ketones							
2-Butanone	71	100.0	0.007	0.009	0.04	0.10	No
Acetaldehyde	71	100.0	0.03	0.04	0.28	0.00008	Yes
Acetone	71	100.0	0.03	0.04	0.25	0.04	Yes
Acrolein	44	79.6	0.0004	0.0005	0.004	0.000002	Yes
Benzaldehyde	71	95.8	0.002	0.002	0.01	0.04	No
Crotonaldehyde	25	4.0	0.00005	0.00009	0.00009	0.0000003	Yes
Formaldehyde	44	100.0	0.003	0.004	0.02	0.00001	Yes
Hexanal	71	94.4	0.005	0.006	0.04	--	--
Isovaleraldehyde	44	18.2	0.00008	0.0001	0.0005	--	--
Propionaldehyde	44	97.7	0.0007	0.0008	0.004	--	--
Tolualdehyde	44	84.1	0.002	0.004	0.03	--	--
Valeraldehyde	44	77.3	0.0002	0.0003	0.0009	--	--
n-Butyraldehyde	71	100.0	0.009	0.03	0.09	--	--
Dioxins/Furans							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	63	100.0	0.000000010	0.000000001	0.000000007	4E-12	Yes
GC/MS Organics							
1,1,1-Trichloroethane	69	97.1	0.0006	0.0006	0.001	0.10	No
1,1,2,2-Tetrachloroethane	69	26.1	0.0004	0.0005	0.002	0.000003	Yes
1,1,2-Trichloroethane	69	4.4	0.0002	0.0003	0.0004	0.00001	Yes
1,1-Dichloroethylene	69	15.9	0.0001	0.0001	0.0002	0.000004	Yes
1,2,3-Trimethylbenzene	69	81.2	0.0004	0.0005	0.002	--	--
1,2,4-Trimethylbenzene	69	100.0	0.002	0.002	0.01	0.0006	Yes
1,2-Dibromoethane	69	5.8	0.0002	0.0002	0.0006	0.0000008	Yes
1,2-Dichloroethane	69	10.1	0.0002	0.0002	0.0004	0.000007	Yes
1,2-Dichloropropane	69	4.4	0.0001	0.0001	0.0003	0.000009	Yes
1,3,5-Trimethylbenzene	69	87.0	0.0006	0.0007	0.003	0.0006	Yes
1,3-Butadiene	69	82.6	0.0004	0.0005	0.004	0.0000003	Yes
1,4-Dioxane	69	31.9	0.001	0.001	0.01	0.00006	Yes
1-Butanol	69	95.7	0.02	0.02	0.11	0.04	Yes
1-Decene	69	17.4	0.0006	0.0007	0.004	--	--
1-Heptene	69	43.5	0.0004	0.0004	0.003	--	--
1-Hexene	69	55.1	0.0005	0.0006	0.002	--	--
1-Nonene	69	30.4	0.0003	0.0003	0.001	--	--
1-Octene	69	29.0	0.0004	0.0005	0.001	--	--
1-Pentene	69	88.4	0.0006	0.0007	0.002	--	--

Table B-11
Elementary School
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
1-Propanol	69	20.3	0.008	0.02	0.02	--	--
1-Undecene	69	15.9	0.0003	0.0004	0.003	--	--
2,2,3-Trimethylpentane	69	26.1	0.0002	0.0003	0.001	--	--
2,2,4-Trimethylpentane	69	82.6	0.0005	0.0006	0.003	--	--
2,2,5-Trimethylhexane	69	1.5	0.0004	0.00008	0.00008	--	--
2,3,4-Trimethylpentane	69	21.7	0.0004	0.0005	0.002	--	--
2,3-Dimethylbutane	69	71.0	0.0005	0.0006	0.005	--	--
2,3-Dimethylpentane	69	50.7	0.0005	0.0005	0.01	--	--
2,4,4-Trimethyl-1-Pentene	69	26.1	0.0002	0.0002	0.0006	--	--
2,4-Dimethylpentane	69	37.7	0.0002	0.0003	0.001	--	--
2,5-Dimethylhexane	69	30.4	0.0002	0.0003	0.001	--	--
2-Ethyl-1-Butene	69	2.9	0.0002	0.0002	0.0003	--	--
2-Methyl-1-Pentene	69	15.9	0.0002	0.0002	0.0004	--	--
2-Methyl-2-Pentene	69	18.8	0.0002	0.0003	0.0007	--	--
2-Methylheptane	69	34.8	0.0004	0.0004	0.002	--	--
2-Propanol	69	100.0	0.009	0.01	0.05	--	--
3-Methyl-1-Butene	69	10.1	0.0001	0.0001	0.0008	--	--
3-Methylheptane	69	21.7	0.0002	0.0002	0.0006	--	--
3-Methylhexane	69	49.3	0.002	0.002	0.06	--	--
3-Methylpentane	69	89.9	0.002	0.002	0.009	--	--
4-Methyl-1-Pentene	69	5.8	0.0001	0.0001	0.0001	--	--
4-Nonene	69	2.9	0.0002	0.0002	0.0008	--	--
Acetonitrile	69	53.6	0.01	0.03	0.70	0.006	Yes
Acrylonitrile	69	8.7	0.0002	0.0003	0.0010	0.000003	Yes
Benzene	69	100.0	0.004	0.004	0.02	0.00002	Yes
Bromomethane	69	36.2	0.0002	0.0002	0.0007	0.0005	Yes
Butyl Acrylate	69	1.5	0.0005	0.0002	0.0002	--	--
Carbon Tetrachloride	69	95.7	0.0006	0.0006	0.001	0.00001	Yes
Chlorobenzene	69	27.5	0.0002	0.0002	0.0007	0.006	No
Chlorodifluoromethane	69	98.6	0.003	0.004	0.01	5.11	No
Chloroethane	69	10.1	0.0002	0.0002	0.001	0.0002	Yes
Chloroform	69	66.7	0.0002	0.0002	0.0006	0.000008	Yes
Chloromethane	69	100.0	0.002	0.002	0.003	0.0002	Yes
Cumene	69	29.0	0.0003	0.0003	0.0007	0.04	No
Cyclohexane	69	73.9	0.0007	0.0009	0.005	--	--
Cyclohexene	69	14.5	0.0002	0.0002	0.001	--	--
Cyclopentane	69	58.0	0.0003	0.0003	0.001	--	--
Cyclopentene	69	13.0	0.0001	0.0001	0.0003	--	--
Dichlorodifluoromethane	69	100.0	0.004	0.004	0.04	0.02	Yes
Ethanol	69	100.0	0.03	0.04	0.14	--	--
Ethylbenzene	69	100.0	0.005	0.005	0.02	0.11	No
Freon 113	69	98.6	0.0008	0.0008	0.002	3.14	No

Table B-11
Elementary School
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Freon 114	69	14.5	0.0002	0.0001	0.0001	--	--
Halocarbon 134A	69	46.4	0.0003	0.0003	0.003	8.36	No
Heptanal	69	34.8	0.008	0.03	0.03	--	--
Indan	69	29.0	0.0002	0.0002	0.0007	--	--
Indene	69	1.5	0.0002	0.0003	0.0003	--	--
Isobutane	69	100.0	0.004	0.005	0.03	--	--
Isobutene + 1-Butene	69	100.0	0.002	0.002	0.01	--	--
Isobutylbenzene	69	1.5	0.0002	0.00007	0.00007	--	--
Isoheptane	69	84.1	0.002	0.002	0.04	--	--
Isohexane	69	72.5	0.002	0.003	0.02	--	--
Isopentane	66	97.0	0.008	0.009	0.03	--	--
Isoprene	69	66.7	0.0002	0.0003	0.0010	--	--
Methyl t-Butylether	69	21.7	0.0002	0.0002	0.0006	0.31	No
Methylcyclohexane	69	63.8	0.0004	0.0005	0.002	0.31	No
Methylcyclopentane	68	80.9	0.0007	0.001	0.005	--	--
Methylcyclopentene	69	1.5	0.0001	0.0002	0.0002	--	--
Methylene Chloride	69	100.0	0.008	0.01	0.13	0.0004	Yes
Methylisobutylketone	69	87.0	0.001	0.002	0.005	0.007	No
Neohexane	69	55.1	0.0004	0.0005	0.002	--	--
Neopentane	69	4.4	0.00008	0.00010	0.0002	--	--
Propane	69	100.0	0.02	0.02	0.09	--	--
Propylene	69	100.0	0.007	0.01	0.20	--	--
Styrene	69	88.4	0.0005	0.0006	0.002	0.10	No
Tetrachloroethylene	69	88.4	0.001	0.001	0.005	0.0003	Yes
Toluene	69	100.0	0.02	0.02	0.10	0.04	Yes
Trichloroethylene	69	94.2	0.001	0.002	0.010	0.0001	Yes
Trichlorofluoromethane	69	100.0	0.002	0.002	0.003	0.07	No
Vinyl Acetate	69	50.7	0.005	0.04	0.04	0.02	Yes
Vinyl Chloride	69	2.9	0.0001	0.0001	0.0006	0.000002	Yes
a-Pinene	69	55.1	0.0003	0.0004	0.003	--	--
c-1,2-Dichloroethylene	69	2.9	0.0002	0.0001	0.0001	0.004	No
c-1,3-Dichloropropene	69	13.0	0.0002	0.0003	0.0005	--	--
c-2-Butene	69	91.3	0.0004	0.0005	0.003	--	--
c-2-Octene	69	1.5	0.0006	0.00007	0.00007	--	--
c-2-Pentene	69	39.1	0.0002	0.0002	0.001	--	--
c-3-Hexene	69	13.0	0.0002	0.0002	0.0007	--	--
c-3-Methyl-2-Pentene	69	2.9	0.0002	0.0002	0.0003	--	--
m-Diethylbenzene	69	17.4	0.0003	0.0004	0.002	--	--
m-Ethyltoluene	69	98.6	0.001	0.001	0.006	--	--
n-Butane	69	100.0	0.007	0.008	0.04	--	--
n-Butylbenzene	69	13.0	0.0002	0.0002	0.0006	0.004	No
n-Decane	69	100.0	0.002	0.002	0.01	--	--

Table B-11
Elementary School
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
n-Heptane	69	94.2	0.002	0.003	0.04	--	--
n-Hexane	69	100.0	0.003	0.003	0.02	0.02	Yes
n-Nonane	69	89.9	0.001	0.001	0.005	--	--
n-Octane	69	88.4	0.0007	0.0008	0.003	--	--
n-Pentane	69	100.0	0.004	0.005	0.02	--	--
n-Propylbenzene	69	66.7	0.0004	0.0005	0.002	--	--
n-Undecane	69	85.5	0.001	0.001	0.006	--	--
o-Ethyltoluene	69	81.2	0.0005	0.0006	0.003	--	--
o-Xylene	69	100.0	0.002	0.003	0.01	0.73	No
p-Diethylbenzene	69	4.4	0.0003	0.0004	0.0009	--	--
p-Ethyltoluene	69	87.0	0.0006	0.0007	0.003	--	--
p-Isopropyltoluene	69	8.7	0.0002	0.0002	0.0003	--	--
p-Xylene + m-Xylene	69	100.0	0.006	0.007	0.03	--	--
t-1,2-Dichloroethylene	69	2.9	0.0001	0.0001	0.0001	0.007	No
t-1,3-Dichloropropene	69	5.8	0.0001	0.0001	0.0003	--	--
t-2-Butene	69	92.8	0.0005	0.0006	0.003	--	--
t-2-Hexene	69	2.9	0.0001	0.0002	0.0002	--	--
t-2-Pentene	69	72.5	0.0003	0.0004	0.002	--	--
Semi-Volatile Organic Compounds							
1,2,4-Trichlorobenzene	71	36.6	0.0007	0.001	0.001	0.02	No
1,2-Dichlorobenzene	71	29.6	0.0002	0.0003	0.0007	0.003	No
1,3-Dichlorobenzene	71	11.3	0.0002	0.0008	0.0008	0.0003	Yes
1,4-Dichlorobenzene	71	100.0	0.001	0.002	0.004	0.00003	Yes
2-Methylnaphthalene	40	100.0	0.00009	0.0001	0.0002	0.007	No
2-Methylphenol	40	40.0	0.00002	0.00002	0.00005	0.02	No
2-Nitrophenol	40	67.5	0.00004	0.00006	0.0002	--	--
4-Methylphenol/3-Methylphenol	40	50.0	0.00002	0.00003	0.00008	--	--
4-Nitrophenol	40	2.5	0.0001	0.00002	0.00002	0.003	No
Acenaphthene	40	17.5	0.000003	0.000004	0.000008	0.02	No
Acenaphthylene	40	50.0	0.000007	0.000009	0.00003	--	--
Acetophenone	40	42.5	0.0001	0.0002	0.0007	0.000002	Yes
Benzo(b)fluoranthene	40	5.0	0.000005	0.000002	0.000002	0.0000009	Yes
Benzo(k)fluoranthene	40	5.0	0.000004	0.000002	0.000002	0.000009	No
Benzoic acid	40	100.0	0.0006	0.0007	0.002	1.46	No
Benzyl alcohol	40	72.5	0.00006	0.00009	0.0010	0.11	No
Chrysene	40	5.0	0.000003	0.000002	0.000002	0.00009	No
Di-n-butylphthalate	40	82.5	0.00003	0.00004	0.00010	0.04	No
Di-n-octylphthalate	40	2.5	0.000003	0.000005	0.000005	0.007	No
Dibenzofuran	40	65.0	0.00001	0.00001	0.00003	0.001	No
Diethylphthalate	40	45.0	0.00003	0.00006	0.0008	0.29	No
Dimethylphthalate	40	27.5	0.000009	0.00001	0.00007	3.65	No

**Table B-11
Elementary School
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs**

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Fluoranthene	40	30.0	0.000004	0.000005	0.00001	0.01	No
Fluorene	40	57.5	0.000008	0.000010	0.00002	0.01	No
Hexachloro-1,3-Butadiene	71	26.8	0.0009	0.002	0.002	0.000008	Yes
Isophorone	40	82.5	0.00003	0.00003	0.00007	0.0007	No
Naphthalene	71	62.0	0.0003	0.0003	0.002	0.0003	Yes
Phenanthrene	40	95.0	0.00002	0.00002	0.00004	--	--
Phenol	40	90.0	0.00009	0.0001	0.0003	0.22	No
Pyrene	40	27.5	0.000003	0.000004	0.000008	0.01	No
Total Carcinogenic PAHS (BaP TEQs) ²	40	7.5	0.000001	0.0000008	0.0000008	0.0000002	Yes
bis(2-Ethylhexyl)phthalate	40	77.5	0.00003	0.00003	0.00006	0.00004	Yes
Pesticides/PCBs							
Aldrin	41	12.2	0.0000002	0.0000003	0.000001	0.00000004	Yes
Dieldrin	41	26.8	0.0000002	0.0000003	0.0000007	0.00000004	Yes
Endosulfan I	41	7.3	0.0000001	0.0000002	0.0000005	--	--
Endosulfan II	41	2.4	0.0000002	0.0000004	0.0000004	--	--
Endosulfan Sulfate	41	7.3	0.0000002	0.0000003	0.000001	--	--
Endrin	41	9.8	0.0000005	0.0000005	0.000001	0.0001	No
Heptachlor	41	43.9	0.0000002	0.0000003	0.000001	0.0000001	Yes
Heptachlor epoxide	41	4.9	0.0000002	0.0000002	0.0000004	0.00000007	Yes
Isodrin	41	24.4	0.0000002	0.0000002	0.0000006	--	--
alpha-BHC	41	26.8	0.0000002	0.0000003	0.000001	0.00000010	Yes
alpha-Chlordane	41	39.0	0.0000004	0.0000005	0.000002	0.0000018	Yes
gamma-BHC	40	37.5	0.0000003	0.0000004	0.000002	0.0000005	Yes
gamma-Chlordane	41	63.4	0.0000003	0.0000006	0.000001	0.0000018	No
Mercury							
Mercury	72	54.2	0.000006	0.000008	0.00004	0.00003	Yes
Inorganics							
Antimony	46	95.7	0.000007	0.000008	0.00002	0.0001	No
Arsenic	46	93.5	0.000002	0.000002	0.000007	0.00000004	Yes
Beryllium	46	82.6	0.0000002	0.0000003	0.000001	0.00000007	Yes
Cadmium	46	100.0	0.000002	0.000002	0.000006	--	--
Chromium	46	100.0	0.000004	0.000004	0.000008	--	--
Copper	46	100.0	0.00005	0.00006	0.0001	0.01	No
Lead	46	100.0	0.00007	0.00009	0.0003	--	--
Nickel	46	100.0	0.000004	0.000005	0.000009	0.007	No
PM-10	46	100.0	0.05	0.06	0.18	--	--
Selenium	46	80.4	0.000001	0.000002	0.000004	0.002	No
Silver	45	88.9	0.000002	0.000004	0.00001	0.002	No
Thallium	46	78.3	0.000001	0.000001	0.000004	0.00003	No
Zinc	46	100.0	0.0002	0.0002	0.0006	0.11	No

-- An EPA Region III RBSC was not available for this constituent.

Note: Calcium, magnesium, potassium, iron, and sodium are not considered toxic to humans and were eliminated from the risk assessment.

- ¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.
- ²The following carcinogenic polycyclic aromatic hydrocarbons were multiplied by the appropriate Benzo(a)pyrene Toxicity Equivalency Factor and then summed to calculate the Total Carcinogenic PAHS (BaP TEQs) Equivalent Concentration: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoroanthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.
- ³These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment.
- The Average concentration was calculated based on the following decision rules:
1. The Average concentration.
 2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.
- The RME concentration was calculated based on the following decision rules:
1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
 2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
 3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-12
Residential Towers (3101/3102)
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Acid Gases							
Hydrochloric Acid	72	100.0	0.004	0.005	0.04	0.002	Yes
Hydrofluoric Acid	72	95.8	0.0003	0.0004	0.002	--	--
Sulfuric Acid	72	97.2	0.01	0.01	0.04	--	--
Aldehydes & Ketones							
2-Butanone	73	100.0	0.007	0.008	0.02	0.10	No
Acetaldehyde	73	100.0	0.02	0.04	0.12	0.00008	Yes
Acetone	73	100.0	0.03	0.04	0.28	0.04	Yes
Acrolein	44	70.5	0.0003	0.0003	0.0009	0.000002	Yes
Benzaldehyde	73	98.6	0.002	0.003	0.02	0.04	No
Crotonaldehyde	25	4.0	0.00005	0.0001	0.0001	0.0000003	Yes
Formaldehyde	44	100.0	0.002	0.003	0.006	0.00001	Yes
Hexanal	73	97.3	0.006	0.02	0.06	--	--
Isovaleraldehyde	44	11.4	0.00007	0.00009	0.0004	--	--
Propionaldehyde	44	100.0	0.0006	0.0008	0.002	--	--
Tolualdehyde	44	86.4	0.001	0.002	0.006	--	--
Valeraldehyde	44	75.0	0.0003	0.0005	0.004	--	--
n-Butyraldehyde	73	98.6	0.008	0.03	0.03	--	--
Dioxins/Furans							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	70	100.0	0.000000001	0.000000001	0.000000008	4E-12	Yes
GC/MS Organics							
1,1,1-Trichloroethane	73	98.6	0.0006	0.0007	0.004	0.10	No
1,1,2,2-Tetrachloroethane	73	27.4	0.0004	0.0006	0.004	0.000003	Yes
1,1,2-Trichloroethane	73	2.7	0.0002	0.0002	0.0006	0.00001	Yes
1,1-Dichloroethylene	73	17.8	0.0001	0.0001	0.0002	0.000004	Yes
1,2,3-Trimethylbenzene	73	86.3	0.0005	0.0006	0.001	--	--
1,2,4-Trimethylbenzene	73	100.0	0.002	0.002	0.006	0.0006	Yes
1,2-Dibromoethane	73	2.7	0.0002	0.00008	0.00008	0.0000008	Yes
1,2-Dichloroethane	73	17.8	0.0002	0.0002	0.0005	0.000007	Yes
1,2-Dichloropropane	73	4.1	0.00010	0.0001	0.0003	0.000009	Yes
1,3,5-Trimethylbenzene	73	94.5	0.0006	0.0007	0.002	0.0006	Yes
1,3-Butadiene	73	89.0	0.0004	0.0005	0.002	0.0000003	Yes
1,4-Dioxane	73	35.6	0.001	0.001	0.009	0.00006	Yes
1-Butanol	73	98.6	0.01	0.02	0.07	0.04	Yes
1-Decene	73	38.4	0.0007	0.0008	0.005	--	--
1-Heptene	73	34.3	0.0003	0.0004	0.003	--	--
1-Hexene	73	56.2	0.0004	0.0005	0.001	--	--
1-Nonene	73	26.0	0.0002	0.0003	0.001	--	--
1-Octene	73	37.0	0.0004	0.0004	0.003	--	--
1-Pentene	73	82.2	0.0005	0.0006	0.002	--	--

Table B-12
Residential Towers (3101/3102)
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
1-Propanol	73	27.4	0.007	0.008	0.008	--	--
1-Undecene	73	17.8	0.0003	0.0003	0.003	--	--
2,2,3-Trimethylpentane	73	17.8	0.0002	0.0002	0.001	--	--
2,2,4-Trimethylpentane	73	80.8	0.0005	0.0007	0.008	--	--
2,2,5-Trimethylhexane	73	6.9	0.0003	0.0004	0.0008	--	--
2,3,4-Trimethylpentane	73	21.9	0.0004	0.0005	0.003	--	--
2,3-Dimethylbutane	73	71.2	0.0005	0.0006	0.004	--	--
2,3-Dimethylpentane	73	50.7	0.0003	0.0004	0.0007	--	--
2,4,4-Trimethyl-1-Pentene	73	46.6	0.0002	0.0002	0.0006	--	--
2,4-Dimethylpentane	73	28.8	0.0002	0.0002	0.001	--	--
2,5-Dimethylhexane	73	28.8	0.0002	0.0003	0.001	--	--
2-Methyl-1-Pentene	73	19.2	0.0002	0.0002	0.0003	--	--
2-Methyl-2-Pentene	73	15.1	0.0002	0.0002	0.0004	--	--
2-Methylheptane	73	27.4	0.0005	0.0007	0.010	--	--
2-Propanol	73	100.0	0.04	0.08	1.96	--	--
3-Methyl-1-Butene	73	11.0	0.0001	0.0001	0.0005	--	--
3-Methylheptane	73	23.3	0.0003	0.0005	0.008	--	--
3-Methylhexane	73	48.0	0.0008	0.002	0.01	--	--
3-Methylpentane	73	98.6	0.002	0.002	0.007	--	--
4-Methyl-1-Pentene	73	6.9	0.0001	0.0002	0.0003	--	--
4-Nonene	73	8.2	0.0002	0.0002	0.001	--	--
Acetonitrile	73	53.4	0.003	0.004	0.09	0.006	Yes
Acrylonitrile	73	20.6	0.0003	0.0003	0.002	0.000003	Yes
Benzene	73	100.0	0.003	0.004	0.01	0.00002	Yes
Benzyl Chloride	71	1.4	0.0003	0.002	0.002	0.000004	Yes
Bromomethane	73	38.4	0.0002	0.0002	0.0005	0.0005	Yes
Carbon Tetrachloride	73	97.3	0.0006	0.0007	0.001	0.00001	Yes
Chlorobenzene	73	32.9	0.0002	0.0002	0.002	0.006	No
Chlorodifluoromethane	73	100.0	0.004	0.005	0.06	5.11	No
Chloroethane	73	13.7	0.0002	0.0002	0.001	0.0002	Yes
Chloroform	73	76.7	0.0002	0.0002	0.0007	0.000008	Yes
Chloromethane	73	100.0	0.002	0.002	0.003	0.0002	Yes
Cumene	73	38.4	0.0003	0.0003	0.001	0.04	No
Cyclohexane	73	89.0	0.002	0.003	0.02	--	--
Cyclohexene	73	30.1	0.0002	0.0002	0.0007	--	--
Cyclopentane	73	63.0	0.0004	0.0006	0.009	--	--
Cyclopentene	73	5.5	0.0001	0.0001	0.0002	--	--
Dichlorodifluoromethane	73	100.0	0.003	0.003	0.006	0.02	No
Dichlorofluoromethane	73	1.4	0.0006	0.0001	0.0001	--	--
Ethanol	73	100.0	0.38	0.96	25.21	--	--
Ethylbenzene	73	100.0	0.006	0.007	0.05	0.11	No
Freon 113	73	100.0	0.0008	0.0009	0.002	3.14	No

Table B-12
Residential Towers (3101/3102)
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Freon 114	73	26.0	0.0002	0.0001	0.0001	--	--
Halocarbon 134A	73	56.2	0.0006	0.001	0.02	8.36	No
Heptanal	73	32.9	0.007	0.008	0.02	--	--
Indan	73	35.6	0.0002	0.0002	0.0007	--	--
Indene	73	1.4	0.0001	0.00006	0.00006	--	--
Isobutane	73	100.0	0.007	0.01	0.18	--	--
Isobutene + 1-Butene	73	100.0	0.002	0.003	0.01	--	--
Isoheptane	73	91.8	0.001	0.001	0.008	--	--
Isohexane	72	72.2	0.002	0.002	0.01	--	--
Isopentane	71	93.0	0.009	0.01	0.18	--	--
Isoprene	73	74.0	0.0002	0.0003	0.001	--	--
Methyl t-Butylether	73	15.1	0.0002	0.0002	0.0004	0.31	No
Methylcyclohexane	73	61.6	0.0004	0.0005	0.007	0.31	No
Methylcyclopentane	72	79.2	0.0009	0.001	0.02	--	--
Methylcyclopentene	73	1.4	0.0001	0.0003	0.0003	--	--
Methylene Chloride	73	100.0	0.009	0.01	0.14	0.0004	Yes
Methylisobutylketone	73	93.2	0.002	0.002	0.01	0.007	Yes
Neohexane	73	54.8	0.0004	0.0004	0.001	--	--
Neopentane	73	5.5	0.00008	0.00010	0.0004	--	--
Propane	73	100.0	0.01	0.01	0.07	--	--
Propylene	73	100.0	0.005	0.009	0.14	--	--
Styrene	73	91.8	0.0007	0.0008	0.004	0.10	No
Tetrachloroethylene	73	90.4	0.001	0.001	0.01	0.0003	Yes
Toluene	73	100.0	0.03	0.04	0.52	0.04	Yes
Trichloroethylene	73	100.0	0.002	0.002	0.005	0.0001	Yes
Trichlorofluoromethane	73	100.0	0.002	0.003	0.04	0.07	No
Vinyl Acetate	72	62.5	0.004	0.03	0.03	0.02	Yes
Vinyl Chloride	73	8.2	0.0001	0.0001	0.0004	0.000002	Yes
a-Pinene	73	48.0	0.0008	0.002	0.04	--	--
b-Pinene	73	1.4	0.0002	0.0002	0.0002	--	--
c-1,2-Dichloroethylene	73	1.4	0.0002	0.00008	0.00008	0.004	No
c-1,3-Dichloropropene	73	11.0	0.0002	0.0003	0.0005	--	--
c-2-Butene	73	89.0	0.0004	0.0004	0.001	--	--
c-2-Hexene	73	1.4	0.0001	0.0002	0.0002	--	--
c-2-Pentene	73	38.4	0.0002	0.0002	0.0006	--	--
c-3-Hexene	73	6.9	0.0002	0.0002	0.0003	--	--
m-Diethylbenzene	73	23.3	0.0003	0.0003	0.0010	--	--
m-Ethyltoluene	73	97.3	0.001	0.001	0.003	--	--
n-Butane	73	100.0	0.007	0.008	0.03	--	--
n-Butylbenzene	73	15.1	0.0002	0.0002	0.0007	0.004	No
n-Decane	73	97.3	0.003	0.005	0.08	--	--
n-Heptane	73	86.3	0.001	0.001	0.009	--	--

Table B-12
Residential Towers (3101/3102)
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
n-Hexane	73	100.0	0.003	0.003	0.02	0.02	Yes
n-Nonane	73	93.2	0.001	0.001	0.005	--	--
n-Octane	73	94.5	0.0009	0.001	0.02	--	--
n-Pentane	73	98.6	0.008	0.01	0.29	--	--
n-Propylbenzene	73	79.5	0.0004	0.0005	0.001	--	--
n-Undecane	73	94.5	0.003	0.005	0.10	--	--
o-Ethyltoluene	73	90.4	0.0006	0.0006	0.002	--	--
o-Xylene	73	100.0	0.003	0.003	0.02	0.73	No
p-Diethylbenzene	73	4.1	0.0003	0.0003	0.0006	--	--
p-Ethyltoluene	73	93.2	0.0007	0.0007	0.002	--	--
p-Isopropyltoluene	73	13.7	0.0002	0.0002	0.0007	--	--
p-Xylene + m-Xylene	73	100.0	0.007	0.008	0.06	--	--
t-1,2-Dichloroethylene	73	1.4	0.0001	0.00008	0.00008	0.007	No
t-1,3-Dichloropropene	73	5.5	0.0001	0.0001	0.0004	--	--
t-2-Butene	73	90.4	0.0004	0.0005	0.002	--	--
t-2-Hexene	73	1.4	0.0001	0.00009	0.00009	--	--
t-2-Pentene	73	63.0	0.0003	0.0003	0.001	--	--
t-Butylbenzene	73	2.7	0.0003	0.0004	0.0004	0.004	No
Semi-Volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	40	2.5	0.000004	0.000003	0.000003	0.0001	No
1,2,4-Trichlorobenzene	73	43.8	0.0006	0.007	0.009	0.02	No
1,2-Dichlorobenzene	73	27.4	0.0002	0.0003	0.003	0.003	No
1,3-Dichlorobenzene	73	12.3	0.0002	0.001	0.002	0.0003	Yes
1,4-Dichlorobenzene	73	100.0	0.002	0.002	0.005	0.00003	Yes
2-Methylnaphthalene	40	100.0	0.00009	0.0001	0.0002	0.007	No
2-Methylphenol	40	37.5	0.00002	0.00002	0.00007	0.02	No
2-Nitrophenol	40	60.0	0.00004	0.00005	0.0002	--	--
4-Methylphenol/3-Methylphenol	40	57.5	0.00003	0.00003	0.00008	--	--
4-Nitrophenol	40	5.0	0.0001	0.00004	0.00004	0.003	No
Acenaphthene	40	20.0	0.000006	0.000008	0.00003	0.02	No
Acenaphthylene	40	37.5	0.000007	0.000009	0.00003	--	--
Acetophenone	40	37.5	0.0001	0.0002	0.0009	0.000002	Yes
Benz(a)anthracene	40	7.5	0.000004	0.000004	0.000007	0.0000009	Yes
Benzo(b)fluoranthene	40	5.0	0.000006	0.000003	0.000003	0.0000009	Yes
Benzo(k)fluoranthene	40	5.0	0.000004	0.000003	0.000003	0.0000009	No
Benzoic acid	40	90.0	0.0005	0.0006	0.001	1.46	No
Benzyl alcohol	40	65.0	0.00003	0.00004	0.0001	0.11	No
Butylbenzylphthalate	40	10.0	0.000005	0.000006	0.00003	0.07	No
Carbazole	40	2.5	0.000005	0.000002	0.000002	0.00003	No
Chrysene	40	7.5	0.000003	0.000004	0.000008	0.00009	No
Di-n-butylphthalate	40	92.5	0.00006	0.00007	0.0002	0.04	No

Table B-12
Residential Towers (3101/3102)
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Di-n-octylphthalate	40	2.5	0.000004	0.00001	0.00001	0.007	No
Dibenzofuran	40	80.0	0.00002	0.00002	0.00005	0.001	No
Diethylphthalate	40	45.0	0.00001	0.00002	0.0002	0.29	No
Dimethylphthalate	40	25.0	0.000008	0.00001	0.00003	3.65	No
Fluoranthene	40	32.5	0.000005	0.000006	0.00002	0.01	No
Fluorene	40	50.0	0.000010	0.00001	0.00003	0.01	No
Hexachloro-1,3-Butadiene	73	30.1	0.0009	0.01	0.01	0.000008	Yes
Isophorone	40	72.5	0.00003	0.00003	0.00007	0.0007	No
Naphthalene	73	69.9	0.0003	0.0003	0.0007	0.0003	Yes
Pentachlorobenzene	40	2.5	0.000003	0.000003	0.000003	0.0003	No
Phenanthrene	40	92.5	0.00002	0.00003	0.00007	--	--
Phenol	40	97.5	0.0001	0.0001	0.0004	0.22	No
Pyrene	40	30.0	0.000004	0.000005	0.00001	0.01	No
Total Carcinogenic PAHS (BaP TEQs) ²	40	7.5	0.000001	0.000001	0.000001	0.0000002	Yes
bis(2-Ethylhexyl)phthalate	40	70.0	0.00003	0.00004	0.00009	0.00004	Yes
Pesticides/PCBs							
4,4'-DDE	39	2.6	0.0000002	0.00000004	0.00000004	0.000002	No
4,4'-DDT	39	2.6	0.0000001	0.0000006	0.0000006	0.000002	No
Aldrin	39	2.6	0.0000001	0.000001	0.000001	0.00000004	Yes
Dieldrin	39	15.4	0.0000002	0.0000002	0.0000007	0.00000004	Yes
Endosulfan I	39	5.1	0.0000002	0.0000002	0.0000005	--	--
Endosulfan II	39	2.6	0.0000002	0.00000008	0.00000008	--	--
Endosulfan Sulfate	39	5.1	0.0000002	0.0000002	0.0000004	--	--
Endrin	39	5.1	0.0000004	0.0000005	0.0000005	0.0001	No
Endrin Aldehyde	39	2.6	0.0000003	0.0000009	0.0000009	--	--
Endrin Ketone	39	2.6	0.0000002	0.00000009	0.00000009	--	--
Heptachlor	39	30.8	0.0000002	0.0000003	0.0000007	0.0000001	Yes
Heptachlor epoxide	39	7.7	0.0000002	0.0000003	0.0000007	0.00000007	Yes
Isodrin	39	18.0	0.0000001	0.0000002	0.000001	--	--
alpha-BHC	39	20.5	0.0000002	0.0000003	0.000001	0.00000010	Yes
alpha-Chlordane	39	38.5	0.0000004	0.0000005	0.000002	0.00000018	Yes
beta-BHC	39	2.6	0.0000001	0.00000008	0.00000008	0.0000003	No
delta-BHC	39	7.7	0.0000001	0.0000002	0.0000008	--	--
gamma-BHC	38	34.2	0.0000004	0.0000005	0.000004	0.0000005	Yes
gamma-Chlordane	39	56.4	0.0000003	0.0000004	0.000001	0.00000018	No
Mercury							
Mercury	70	52.9	0.000006	0.000009	0.00009	0.00003	Yes
Inorganics							
Antimony	47	100.0	0.00001	0.00002	0.00006	0.0001	No
Arsenic	47	93.6	0.000002	0.000002	0.000006	0.00000004	Yes
Beryllium	46	87.0	0.0000002	0.0000002	0.000001	0.00000007	Yes

Table B-12
Residential Towers (3101/3102)
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Cadmium	47	100.0	0.000003	0.000005	0.00003	--	--
Chromium	47	100.0	0.000005	0.000005	0.00001	--	--
Copper	47	100.0	0.00007	0.00009	0.0003	0.01	No
Lead	47	100.0	0.0001	0.0002	0.0008	--	--
Nickel	47	100.0	0.000005	0.000006	0.00001	0.007	No
PM-10	47	100.0	0.06	0.06	0.17	--	--
Selenium	47	87.2	0.000001	0.000001	0.000004	0.002	No
Silver	46	91.3	0.000002	0.000003	0.00001	0.002	No
Thallium	47	70.2	0.000001	0.000001	0.000004	0.00003	No
Zinc	47	100.0	0.0002	0.0003	0.0009	0.11	No

-- An EPA Region III RBSC was not available for this constituent.

Note: Calcium, magnesium, potassium, iron, and sodium are not considered toxic to humans and were eliminated from the risk assessment.

¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.

²The following carcinogenic polycyclic aromatic hydrocarbons were multiplied by the appropriate Benzo(a)pyrene Toxicity Equivalency Factor and then summed to calculate the Total Carcinogenic PAHS (BaP TEQs) Equivalent Concentration: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.

³These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-13
GEMB
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Acid Gases							
Hydrochloric Acid	75	100.0	0.006	0.007	0.04	0.002	Yes
Hydrofluoric Acid	75	96.0	0.0003	0.0004	0.003	--	--
Sulfuric Acid	75	98.7	0.01	0.01	0.04	--	--
Aldehydes & Ketones							
2-Butanone	74	100.0	0.008	0.009	0.03	0.10	No
Acetaldehyde	74	100.0	0.03	0.06	0.19	0.00008	Yes
Acetone	74	100.0	0.03	0.05	0.18	0.04	Yes
Acrolein	45	84.4	0.0004	0.0006	0.002	0.000002	Yes
Benzaldehyde	74	98.7	0.002	0.002	0.01	0.04	No
Crotonaldehyde	26	3.9	0.00005	0.00009	0.00009	0.0000003	Yes
Formaldehyde	45	100.0	0.003	0.003	0.008	0.00001	Yes
Hexanal	74	97.3	0.009	0.04	0.08	--	--
Isovaleraldehyde	45	15.6	0.00007	0.00008	0.0003	--	--
Propionaldehyde	45	100.0	0.0006	0.0008	0.002	--	--
Tolualdehyde	45	84.4	0.0009	0.001	0.004	--	--
Valeraldehyde	45	64.4	0.0002	0.0003	0.001	--	--
n-Butyraldehyde	74	98.7	0.01	0.08	0.08	--	--
Dioxins/Furans							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	76	100.0	0.000000004	0.000000005	0.000000004	4E-12	Yes
GC/MS Organics							
1,1,1-Trichloroethane	73	100.0	0.0007	0.0007	0.002	0.10	No
1,1,2,2-Tetrachloroethane	73	31.5	0.0004	0.0005	0.002	0.000003	Yes
1,1,2-Trichloroethane	73	6.9	0.0002	0.0003	0.001	0.00001	Yes
1,1-Dichloroethane	73	1.4	0.0001	0.0008	0.0008	0.05	No
1,1-Dichloroethylene	73	30.1	0.0001	0.0002	0.0007	0.000004	Yes
1,2,3-Trimethylbenzene	73	91.8	0.0005	0.0005	0.002	--	--
1,2,4-Trimethylbenzene	73	100.0	0.002	0.002	0.009	0.0006	Yes
1,2-Dibromoethane	73	9.6	0.0002	0.0002	0.002	0.0000008	Yes
1,2-Dichloroethane	73	11.0	0.0002	0.0002	0.001	0.000007	Yes
1,2-Dichloropropane	73	16.4	0.0002	0.0002	0.001	0.000009	Yes
1,3,5-Trimethylbenzene	73	97.3	0.0006	0.0007	0.003	0.0006	Yes
1,3-Butadiene	73	97.3	0.0005	0.0006	0.004	0.0000003	Yes
1,4-Dioxane	73	31.5	0.0010	0.001	0.009	0.00006	Yes
1-Butanol	73	98.6	0.03	0.06	0.27	0.04	Yes
1-Decene	73	31.5	0.0005	0.0008	0.009	--	--
1-Heptene	73	52.1	0.0005	0.0006	0.003	--	--
1-Hexene	73	68.5	0.0006	0.0008	0.002	--	--
1-Nonene	73	31.5	0.0003	0.0003	0.001	--	--
1-Octene	73	49.3	0.0004	0.0005	0.002	--	--
1-Pentene	73	93.2	0.0007	0.0008	0.002	--	--

Table B-13
GEMB
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
1-Propanol	73	32.9	0.007	0.009	0.009	--	--
1-Undecene	73	30.1	0.0005	0.0007	0.005	--	--
2,2,3-Trimethylpentane	73	28.8	0.0002	0.0002	0.0006	--	--
2,2,4-Trimethylpentane	73	80.8	0.0005	0.0006	0.003	--	--
2,2,5-Trimethylhexane	73	1.4	0.0004	0.0001	0.0001	--	--
2,3,4-Trimethylpentane	73	20.6	0.0003	0.0004	0.002	--	--
2,3-Dimethylbutane	73	74.0	0.0006	0.0008	0.006	--	--
2,3-Dimethylpentane	73	50.7	0.0004	0.0005	0.002	--	--
2,4,4-Trimethyl-1-Pentene	73	42.5	0.0003	0.0003	0.002	--	--
2,4-Dimethylpentane	73	32.9	0.0002	0.0003	0.001	--	--
2,5-Dimethylhexane	73	32.9	0.0002	0.0003	0.0005	--	--
2-Methyl-1-Pentene	73	24.7	0.0002	0.0002	0.0006	--	--
2-Methyl-2-Pentene	73	16.4	0.0002	0.0003	0.0007	--	--
2-Methylheptane	73	50.7	0.0005	0.0008	0.004	--	--
2-Propanol	73	100.0	0.010	0.01	0.04	--	--
3-Methyl-1-Butene	73	17.8	0.0001	0.0002	0.0007	--	--
3-Methylheptane	73	19.2	0.0002	0.0003	0.001	--	--
3-Methylhexane	73	52.1	0.0008	0.002	0.005	--	--
3-Methylpentane	73	95.9	0.002	0.002	0.008	--	--
4-Methyl-1-Pentene	73	4.1	0.0002	0.0002	0.0006	--	--
4-Nonene	73	4.1	0.0002	0.0002	0.0007	--	--
Acetonitrile	73	61.6	0.01	0.01	0.29	0.006	Yes
Acrylonitrile	73	23.3	0.0003	0.0004	0.002	0.000003	Yes
Benzene	73	100.0	0.004	0.004	0.02	0.00002	Yes
Bromochloromethane	73	1.4	0.0003	0.0008	0.0008	--	--
Bromodichloromethane	73	1.4	0.0003	0.0009	0.0009	0.00001	Yes
Bromoform	73	1.4	0.0007	0.001	0.001	0.0002	Yes
Bromomethane	73	43.8	0.0002	0.0002	0.0006	0.0005	Yes
Carbon Tetrachloride	73	100.0	0.0007	0.0007	0.002	0.00001	Yes
Chlorobenzene	73	46.6	0.0002	0.0002	0.001	0.006	No
Chlorodifluoromethane	73	98.6	0.003	0.004	0.02	5.11	No
Chloroethane	73	19.2	0.0002	0.0002	0.0009	0.0002	Yes
Chloroform	73	87.7	0.0003	0.0003	0.001	0.000008	Yes
Chloromethane	73	100.0	0.002	0.002	0.003	0.0002	Yes
Chloroprene	73	1.4	0.0003	0.0006	0.0006	0.0007	No
Cumene	73	48.0	0.0003	0.0003	0.001	0.04	No
Cyclohexane	73	80.8	0.001	0.002	0.004	--	--
Cyclohexene	73	34.3	0.0002	0.0002	0.0008	--	--
Cyclopentane	73	64.4	0.0003	0.0003	0.001	--	--
Cyclopentene	73	17.8	0.0001	0.0001	0.0005	--	--
Dibromochloromethane	73	1.4	0.0004	0.001	0.001	0.000007	Yes
Dichlorodifluoromethane	73	100.0	0.003	0.003	0.008	0.02	No

Table B-13
GEMB
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Dichlorofluoromethane	73	11.0	0.0007	0.0003	0.0003	--	--
Ethanol	73	100.0	0.04	0.04	0.12	--	--
Ethylbenzene	73	100.0	0.005	0.006	0.02	0.11	No
Freon 113	73	100.0	0.0010	0.001	0.003	3.14	No
Freon 114	73	19.2	0.0002	0.0002	0.0003	--	--
Halocarbon 134A	73	49.3	0.0003	0.0003	0.002	8.36	No
Heptanal	73	42.5	0.009	0.01	0.06	--	--
Indan	73	41.1	0.0002	0.0002	0.0006	--	--
Indene	73	1.4	0.0001	0.0001	0.0001	--	--
Isobutane	73	100.0	0.004	0.005	0.03	--	--
Isobutene + 1-Butene	73	100.0	0.003	0.003	0.01	--	--
Isoheptane	73	83.6	0.001	0.001	0.007	--	--
Isohexane	73	74.0	0.003	0.003	0.01	--	--
Isopentane	72	91.7	0.007	0.008	0.03	--	--
Isoprene	73	80.8	0.0003	0.0004	0.002	--	--
Methyl t-Butylether	73	21.9	0.0002	0.0003	0.0005	0.31	No
Methylcyclohexane	73	64.4	0.0004	0.0005	0.002	0.31	No
Methylcyclopentane	72	76.4	0.0008	0.0009	0.005	--	--
Methylcyclopentene	73	2.7	0.0001	0.0001	0.0002	--	--
Methylene Chloride	73	100.0	0.007	0.009	0.04	0.0004	Yes
Methylisobutylketone	73	95.9	0.002	0.002	0.009	0.007	Yes
Neohexane	73	60.3	0.0004	0.0006	0.002	--	--
Neopentane	73	1.4	0.00009	0.00005	0.00005	--	--
Propane	73	100.0	0.02	0.02	0.08	--	--
Propylene	73	100.0	0.006	0.01	0.16	--	--
Styrene	73	94.5	0.0008	0.0009	0.004	0.10	No
Tetrachloroethylene	73	100.0	0.001	0.002	0.006	0.0003	Yes
Toluene	73	100.0	0.03	0.03	0.10	0.04	Yes
Trichloroethylene	73	100.0	0.002	0.002	0.009	0.0001	Yes
Trichlorofluoromethane	73	100.0	0.003	0.003	0.009	0.07	No
Vinyl Acetate	73	52.1	0.007	0.04	0.04	0.02	Yes
Vinyl Chloride	73	9.6	0.0001	0.0001	0.0004	0.000002	Yes
a-Pinene	73	54.8	0.0003	0.0004	0.003	--	--
b-Pinene	73	4.1	0.0002	0.0002	0.001	--	--
c-1,2-Dichloroethylene	73	4.1	0.0002	0.0003	0.0009	0.004	No
c-1,3-Dichloropropene	73	16.4	0.0002	0.0003	0.001	--	--
c-2-Butene	73	97.3	0.0004	0.0005	0.003	--	--
c-2-Hexene	73	2.7	0.0001	0.0001	0.0006	--	--
c-2-Octene	73	1.4	0.0006	0.0008	0.0008	--	--
c-2-Pentene	72	41.7	0.0002	0.0002	0.001	--	--
c-3-Hexene	73	13.7	0.0002	0.0002	0.0008	--	--
c-3-Methyl-2-Pentene	73	4.1	0.0002	0.0002	0.0002	--	--

Table B-13
GEMB
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
m-Diethylbenzene	73	20.6	0.0003	0.0004	0.002	--	--
m-Ethyltoluene	73	100.0	0.001	0.001	0.005	--	--
n-Butane	73	100.0	0.007	0.008	0.04	--	--
n-Butylbenzene	73	17.8	0.0002	0.0002	0.0005	0.004	No
n-Decane	73	97.3	0.002	0.003	0.01	--	--
n-Heptane	73	94.5	0.001	0.001	0.005	--	--
n-Hexane	73	100.0	0.003	0.003	0.01	0.02	No
n-Nonane	73	95.9	0.001	0.001	0.005	--	--
n-Octane	73	94.5	0.0008	0.0009	0.003	--	--
n-Pentane	73	100.0	0.004	0.005	0.02	--	--
n-Propylbenzene	73	76.7	0.0005	0.0005	0.002	--	--
n-Undecane	73	89.0	0.001	0.001	0.007	--	--
o-Ethyltoluene	73	89.0	0.0006	0.0006	0.002	--	--
o-Xylene	73	100.0	0.002	0.003	0.009	0.73	No
p-Diethylbenzene	73	2.7	0.0003	0.0003	0.0006	--	--
p-Ethyltoluene	73	95.9	0.0007	0.0008	0.003	--	--
p-Isopropyltoluene	73	5.5	0.0002	0.0002	0.0003	--	--
p-Xylene + m-Xylene	73	100.0	0.006	0.007	0.02	--	--
t-1,2-Dichloroethylene	73	2.7	0.0001	0.0002	0.0006	0.007	No
t-1,3-Dichloropropene	73	6.9	0.0001	0.0002	0.001	--	--
t-2-Butene	73	95.9	0.0005	0.0006	0.003	--	--
t-2-Hexene	73	8.2	0.0001	0.0002	0.0006	--	--
t-2-Pentene	73	72.6	0.0003	0.0004	0.002	--	--
t-Butylbenzene	73	1.4	0.0003	0.0002	0.0002	0.004	No
Semi-Volatile Organic Compounds							
1,2,4,5-Tetrachlorobenzene	42	2.4	0.000004	0.000009	0.000009	0.0001	No
1,2,4-Trichlorobenzene	75	61.3	0.0004	0.0006	0.004	0.02	No
1,2-Dichlorobenzene	75	40.0	0.0002	0.0003	0.002	0.003	No
1,3-Dichlorobenzene	75	21.3	0.0002	0.002	0.002	0.0003	Yes
1,4-Dichlorobenzene	75	100.0	0.001	0.002	0.005	0.00003	Yes
2-Methylnaphthalene	42	100.0	0.0001	0.0001	0.0004	0.007	No
2-Methylphenol	42	42.9	0.00002	0.00002	0.00008	0.02	No
2-Nitrophenol	42	59.5	0.00004	0.00005	0.0002	--	--
4-Methylphenol/3-Methylphenol	42	73.8	0.00003	0.00004	0.00007	--	--
4-Nitrophenol	42	2.4	0.0001	0.00002	0.00002	0.003	No
Acenaphthene	42	45.2	0.00001	0.00001	0.00005	0.02	No
Acenaphthylene	42	57.1	0.00001	0.00001	0.00004	--	--
Acetophenone	42	35.7	0.0001	0.0002	0.0009	0.000002	Yes
Anthracene	42	11.9	0.000004	0.000004	0.000009	0.11	No
Benz(a)anthracene	42	2.4	0.000003	0.000002	0.000002	0.0000009	Yes
Benzo(b)fluoranthene	42	2.4	0.000005	0.000004	0.000004	0.0000009	Yes

Table B-13
GEMB
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Benzo(k)fluoranthene	42	2.4	0.000004	0.000004	0.000004	0.000009	No
Benzoic acid	42	100.0	0.0005	0.0006	0.002	1.46	No
Benzyl alcohol	42	61.9	0.00004	0.00006	0.0002	0.11	No
Butylbenzylphthalate	42	9.5	0.000004	0.000005	0.00002	0.07	No
Carbazole	42	2.4	0.000004	0.000002	0.000002	0.00003	No
Chrysene	42	4.8	0.000003	0.000003	0.000004	0.00009	No
Di-n-butylphthalate	42	81.0	0.00003	0.00003	0.00010	0.04	No
Di-n-octylphthalate	42	2.4	0.000004	0.000010	0.000010	0.007	No
Dibenzofuran	42	76.2	0.00002	0.00002	0.00007	0.001	No
Diethylphthalate	42	33.3	0.00002	0.00003	0.0004	0.29	No
Dimethylphthalate	42	33.3	0.00001	0.00002	0.00004	3.65	No
Fluoranthene	42	45.2	0.000007	0.000008	0.00002	0.01	No
Fluorene	42	73.8	0.00001	0.00002	0.00005	0.01	No
Hexachloro-1,3-Butadiene	75	40.0	0.0009	0.001	0.006	0.000008	Yes
Hexachlorobenzene	42	2.4	0.000004	0.000005	0.000005	0.0000004	Yes
Indeno(1,2,3-cd)pyrene	42	2.4	0.000003	0.0000010	0.0000010	0.0000009	Yes
Isophorone	42	88.1	0.00003	0.00004	0.00008	0.0007	No
Naphthalene	75	77.3	0.0004	0.0004	0.001	0.0003	Yes
Pentachlorobenzene	42	2.4	0.000003	0.00001	0.00001	0.0003	No
Phenanthrene	42	100.0	0.00003	0.00004	0.0001	--	--
Phenol	42	92.9	0.0001	0.0001	0.0003	0.22	No
Pyrene	42	38.1	0.000005	0.000006	0.00002	0.01	No
Total Carcinogenic PAHS (BaP TEQs) ²	42	4.8	0.000001	0.0000007	0.0000007	0.0000002	Yes
bis(2-Ethylhexyl)phthalate	42	85.7	0.00003	0.00004	0.00009	0.00004	Yes
Pesticides/PCBs							
4,4'-DDD	42	2.4	0.0000001	0.0000002	0.0000002	0.000003	No
Aldrin	42	7.1	0.0000002	0.0000002	0.000001	0.00000004	Yes
Dieldrin	42	16.7	0.0000002	0.0000002	0.0000006	0.00000004	Yes
Endosulfan I	42	11.9	0.0000001	0.0000002	0.0000005	--	--
Endosulfan Sulfate	42	7.1	0.0000002	0.0000002	0.0000005	--	--
Endrin	42	4.8	0.0000005	0.0000005	0.000001	0.0001	No
Endrin Aldehyde	42	4.8	0.0000003	0.0000003	0.0000008	--	--
Heptachlor	42	35.7	0.0000003	0.0000003	0.000001	0.0000001	Yes
Heptachlor epoxide	42	7.1	0.0000002	0.0000003	0.0000006	0.00000007	Yes
Isodrin	42	16.7	0.0000002	0.0000003	0.000002	--	--
alpha-BHC	42	35.7	0.0000003	0.0000003	0.000001	0.00000010	Yes
alpha-Chlordane	42	47.6	0.0000004	0.0000005	0.000002	0.0000018	Yes
beta-BHC	42	2.4	0.0000001	0.00000004	0.00000004	0.0000003	No
delta-BHC	42	2.4	0.0000001	0.0000005	0.0000005	--	--
gamma-BHC	41	41.5	0.0000003	0.0000004	0.000001	0.0000005	Yes
gamma-Chlordane	42	57.1	0.0000004	0.0000005	0.000002	0.0000018	Yes

Table B-13
GEMB
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Mercury							
Mercury	73	60.3	0.000007	0.000009	0.00004	0.00003	Yes
Inorganics							
Antimony	50	100.0	0.00005	0.00010	0.0004	0.0001	Yes
Arsenic	50	92.0	0.000004	0.000004	0.00006	0.00000004	Yes
Beryllium	49	81.6	0.0000002	0.0000004	0.0000010	0.00000007	Yes
Cadmium	50	100.0	0.00002	0.00003	0.0003	--	--
Chromium	50	100.0	0.000009	0.00001	0.0001	--	--
Copper	50	100.0	0.0004	0.0006	0.006	0.01	No
Lead	50	100.0	0.0009	0.001	0.02	--	--
Nickel	50	100.0	0.000010	0.00001	0.0001	0.007	No
PM-10	50	100.0	0.08	0.09	0.24	--	--
Selenium	50	90.0	0.000003	0.000004	0.00004	0.002	No
Silver	49	95.9	0.000006	0.00001	0.00005	0.002	No
Thallium	47	66.0	0.000002	0.000002	0.000003	0.00003	No
Zinc	50	100.0	0.001	0.002	0.01	0.11	No

-- An EPA Region III RBSC was not available for this constituent.

Note: Calcium, magnesium, potassium, iron, and sodium are not considered toxic to humans and were eliminated from the risk assessment.

¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.

²The following carcinogenic polycyclic aromatic hydrocarbons were multiplied by the appropriate Benzo(a)pyrene Toxicity Equivalency Factor and then summed to calculate the Total Carcinogenic PAHS (BaP TEQs) Equivalent Concentration: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoroanthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.

³These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-14
Golf Course
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Acid Gases							
Hydrochloric Acid	66	100.0	0.003	0.004	0.04	0.002	Yes
Hydrofluoric Acid	66	92.4	0.0004	0.0005	0.003	--	--
Sulfuric Acid	66	97.0	0.01	0.01	0.05	--	--
Aldehydes & Ketones							
2-Butanone	61	100.0	0.007	0.009	0.02	0.10	No
Acetaldehyde	61	100.0	0.03	0.05	0.19	0.00008	Yes
Acetone	61	100.0	0.03	0.04	0.20	0.04	Yes
Acrolein	38	81.6	0.0004	0.0004	0.001	0.000002	Yes
Benzaldehyde	61	96.7	0.002	0.002	0.007	0.04	No
Crotonaldehyde	20	10.0	0.00006	0.00006	0.0001	0.0000003	Yes
Formaldehyde	38	100.0	0.002	0.003	0.006	0.00001	Yes
Hexanal	61	96.7	0.007	0.04	0.04	--	--
Isovaleraldehyde	38	18.4	0.00008	0.00010	0.0004	--	--
Propionaldehyde	38	100.0	0.0007	0.0008	0.002	--	--
Tolualdehyde	38	84.2	0.0006	0.0007	0.001	--	--
Valeraldehyde	38	71.1	0.0002	0.0002	0.0004	--	--
n-Butyraldehyde	61	100.0	0.01	0.05	0.05	--	--
Dioxins/Furans							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	62	100.0	0.000000001	0.000000001	0.000000005	4E-12	Yes
GC/MS Organics							
1,1,1-Trichloroethane	61	100.0	0.0007	0.0007	0.001	0.10	No
1,1,2,2-Tetrachloroethane	61	47.5	0.0004	0.0005	0.002	0.000003	Yes
1,1,2-Trichloroethane	61	6.6	0.0002	0.0001	0.0001	0.00001	Yes
1,1-Dichloroethylene	61	21.3	0.0001	0.0001	0.0005	0.000004	Yes
1,2,3-Trimethylbenzene	61	91.8	0.0005	0.0005	0.001	--	--
1,2,4-Trimethylbenzene	61	100.0	0.002	0.002	0.006	0.0006	Yes
1,2-Dibromoethane	61	23.0	0.0002	0.0002	0.0005	0.0000008	Yes
1,2-Dichloroethane	61	19.7	0.0002	0.0002	0.0006	0.000007	Yes
1,2-Dichloropropane	61	9.8	0.00010	0.0001	0.0003	0.000009	Yes
1,3,5-Trimethylbenzene	61	98.4	0.0006	0.0008	0.002	0.0006	Yes
1,3-Butadiene	61	95.1	0.0006	0.0007	0.006	0.0000003	Yes
1,4-Dioxane	61	32.8	0.0009	0.0010	0.005	0.00006	Yes
1-Butanol	61	93.4	0.02	0.02	0.05	0.04	Yes
1-Decene	61	36.1	0.0005	0.0007	0.008	--	--
1-Heptene	61	45.9	0.0004	0.0005	0.002	--	--
1-Hexene	61	57.4	0.0005	0.0006	0.002	--	--
1-Nonene	61	27.9	0.0002	0.0003	0.0006	--	--
1-Octene	61	50.8	0.0004	0.0005	0.0008	--	--
1-Pentene	61	96.7	0.0007	0.0007	0.002	--	--

Table B-14
Golf Course
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
1-Propanol	61	29.5	0.007	0.02	0.02	--	--
1-Undecene	61	29.5	0.0004	0.0006	0.005	--	--
2,2,3-Trimethylpentane	61	16.4	0.0002	0.0002	0.0003	--	--
2,2,4-Trimethylpentane	61	77.1	0.0005	0.0005	0.001	--	--
2,2,5-Trimethylhexane	61	8.2	0.0003	0.0003	0.0003	--	--
2,3,4-Trimethylpentane	61	24.6	0.0003	0.0005	0.002	--	--
2,3-Dimethylbutane	61	68.9	0.0005	0.0006	0.005	--	--
2,3-Dimethylpentane	61	50.8	0.0003	0.0005	0.0009	--	--
2,4,4-Trimethyl-1-Pentene	61	31.2	0.0002	0.0002	0.0005	--	--
2,4-Dimethylpentane	61	37.7	0.0002	0.0002	0.0008	--	--
2,5-Dimethylhexane	61	31.2	0.0002	0.0002	0.0004	--	--
2-Ethyl-1-Butene	61	3.3	0.0002	0.0001	0.0001	--	--
2-Methyl-1-Pentene	61	14.8	0.0001	0.0002	0.0004	--	--
2-Methyl-2-Pentene	61	18.0	0.0002	0.0003	0.0004	--	--
2-Methylheptane	61	44.3	0.0005	0.0007	0.001	--	--
2-Propanol	61	100.0	0.010	0.01	0.04	--	--
3-Methyl-1-Butene	61	18.0	0.0001	0.0001	0.0004	--	--
3-Methylheptane	61	19.7	0.0002	0.0003	0.0008	--	--
3-Methylhexane	61	41.0	0.0007	0.001	0.004	--	--
3-Methylpentane	61	95.1	0.002	0.002	0.005	--	--
4-Methyl-1-Pentene	61	9.8	0.0001	0.0001	0.0002	--	--
4-Nonene	61	3.3	0.0002	0.0002	0.0003	--	--
Acetonitrile	61	77.1	0.04	0.13	0.56	0.006	Yes
Acrylonitrile	61	29.5	0.0003	0.0003	0.001	0.000003	Yes
Benzene	61	100.0	0.004	0.005	0.01	0.00002	Yes
Benzyl Chloride	59	6.8	0.0003	0.0004	0.001	0.000004	Yes
Bromomethane	61	42.6	0.0002	0.0003	0.001	0.0005	Yes
Carbon Tetrachloride	61	98.4	0.0007	0.0007	0.001	0.00001	Yes
Chlorobenzene	61	59.0	0.0002	0.0003	0.0009	0.006	No
Chlorodifluoromethane	61	100.0	0.003	0.004	0.02	5.11	No
Chloroethane	61	11.5	0.0001	0.0002	0.0006	0.0002	Yes
Chloroform	61	77.1	0.0002	0.0002	0.0008	0.000008	Yes
Chloromethane	61	100.0	0.002	0.002	0.003	0.0002	Yes
Cumene	61	39.3	0.0003	0.0003	0.0006	0.04	No
Cyclohexane	61	75.4	0.0010	0.002	0.006	--	--
Cyclohexene	61	37.7	0.0002	0.0002	0.0008	--	--
Cyclopentane	61	65.6	0.0003	0.0003	0.0009	--	--
Cyclopentene	61	19.7	0.00010	0.0001	0.0002	--	--
Dichlorodifluoromethane	61	100.0	0.003	0.003	0.004	0.02	No
Dichlorofluoromethane	61	9.8	0.0006	0.0003	0.0003	--	--
Ethanol	61	100.0	0.04	0.04	0.08	--	--
Ethylbenzene	61	100.0	0.005	0.006	0.01	0.11	No

Table B-14
Golf Course
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Freon 113	61	96.7	0.001	0.002	0.02	3.14	No
Freon 114	61	21.3	0.0002	0.0002	0.0002	--	--
Halocarbon 134A	61	57.4	0.0003	0.0004	0.001	8.36	No
Heptanal	61	32.8	0.009	0.01	0.03	--	--
Indan	61	44.3	0.0002	0.0002	0.0004	--	--
Indene	61	1.6	0.0001	0.0001	0.0001	--	--
Isobutane	61	100.0	0.004	0.005	0.01	--	--
Isobutene + 1-Butene	61	100.0	0.003	0.003	0.006	--	--
Isoheptane	61	86.9	0.001	0.001	0.007	--	--
Isohexane	60	63.3	0.002	0.01	0.01	--	--
Isopentane	60	88.3	0.007	0.008	0.02	--	--
Isoprene	61	75.4	0.0003	0.0004	0.001	--	--
Methyl t-Butylether	61	13.1	0.0002	0.0003	0.0006	0.31	No
Methylcyclohexane	61	68.9	0.0003	0.0004	0.001	0.31	No
Methylcyclopentane	61	73.8	0.0007	0.001	0.003	--	--
Methylcyclopentene	61	1.6	0.0001	0.0002	0.0002	--	--
Methylene Chloride	61	100.0	0.02	0.04	0.68	0.0004	Yes
Methylisobutylketone	61	95.1	0.002	0.002	0.006	0.007	No
Neohexane	61	50.8	0.0004	0.0005	0.001	--	--
Neopentane	61	6.6	0.00008	0.00007	0.00007	--	--
Propane	61	100.0	0.01	0.02	0.06	--	--
Propylene	61	100.0	0.004	0.007	0.11	--	--
Styrene	61	96.7	0.0008	0.0009	0.002	0.10	No
Tetrachloroethylene	61	96.7	0.001	0.002	0.004	0.0003	Yes
Toluene	61	100.0	0.02	0.03	0.07	0.04	Yes
Trichloroethylene	61	98.4	0.002	0.002	0.006	0.0001	Yes
Trichlorofluoromethane	61	100.0	0.003	0.003	0.009	0.07	No
Vinyl Acetate	60	58.3	0.007	0.008	0.03	0.02	Yes
Vinyl Chloride	61	4.9	0.00010	0.0001	0.0005	0.000002	Yes
a-Pinene	61	59.0	0.0003	0.0004	0.001	--	--
c-1,2-Dichloroethylene	61	4.9	0.0002	0.0002	0.0002	0.004	No
c-1,3-Dichloropropene	61	11.5	0.0002	0.0003	0.0003	--	--
c-2-Butene	61	98.4	0.0005	0.0005	0.002	--	--
c-2-Octene	61	1.6	0.0005	0.00005	0.00005	--	--
c-2-Pentene	61	45.9	0.0002	0.0002	0.0006	--	--
c-3-Hexene	61	18.0	0.0002	0.0002	0.0003	--	--
c-3-Methyl-2-Pentene	61	3.3	0.0002	0.0002	0.0002	--	--
m-Diethylbenzene	61	31.2	0.0003	0.0003	0.001	--	--
m-Ethyltoluene	61	98.4	0.001	0.001	0.004	--	--
n-Butane	61	100.0	0.007	0.008	0.02	--	--
n-Butylbenzene	61	23.0	0.0002	0.0002	0.0004	0.004	No
n-Decane	61	96.7	0.002	0.003	0.006	--	--

Table B-14
Golf Course
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
n-Heptane	61	91.8	0.001	0.001	0.003	--	--
n-Hexane	61	100.0	0.003	0.004	0.01	0.02	No
n-Nonane	61	95.1	0.001	0.001	0.004	--	--
n-Octane	61	93.4	0.0008	0.0008	0.002	--	--
n-Pentane	61	100.0	0.004	0.005	0.01	--	--
n-Propylbenzene	61	75.4	0.0004	0.0005	0.001	--	--
n-Undecane	61	90.2	0.001	0.002	0.005	--	--
o-Ethyltoluene	61	90.2	0.0006	0.0007	0.002	--	--
o-Xylene	61	100.0	0.002	0.003	0.006	0.73	No
p-Diethylbenzene	61	6.6	0.0003	0.0004	0.0007	--	--
p-Ethyltoluene	61	95.1	0.0007	0.0008	0.002	--	--
p-Isopropyltoluene	61	11.5	0.0002	0.0002	0.0002	--	--
p-Xylene + m-Xylene	61	100.0	0.006	0.007	0.02	--	--
t-1,2-Dichloroethylene	61	1.6	0.0001	0.0001	0.0001	0.007	No
t-1,3-Dichloropropene	61	9.8	0.0001	0.0001	0.0003	--	--
t-2-Butene	61	96.7	0.0005	0.0006	0.002	--	--
t-2-Hexene	61	8.2	0.0001	0.0001	0.0003	--	--
t-2-Pentene	61	72.1	0.0003	0.0004	0.001	--	--
t-Butylbenzene	61	1.6	0.0001	0.0002	0.0002	0.004	No
Semi-Volatile Organic Compounds							
1,2,4-Trichlorobenzene	62	67.7	0.001	0.001	0.005	0.02	No
1,2-Dichlorobenzene	62	48.4	0.0003	0.001	0.001	0.003	No
1,3-Dichlorobenzene	62	43.6	0.0003	0.0004	0.001	0.0003	Yes
1,4-Dichlorobenzene	62	100.0	0.001	0.002	0.005	0.00003	Yes
2-Methylnaphthalene	35	100.0	0.0001	0.0002	0.0008	0.007	No
2-Methylphenol	35	54.3	0.00002	0.00003	0.00008	0.02	No
2-Nitrophenol	35	60.0	0.00004	0.00006	0.0002	--	--
4-Methylphenol/3-Methylphenol	35	80.0	0.00005	0.00006	0.0001	--	--
4-Nitrophenol	35	5.7	0.0001	0.00003	0.00003	0.003	No
Acenaphthene	35	20.0	0.000004	0.000005	0.00002	0.02	No
Acenaphthylene	35	60.0	0.00001	0.00001	0.00003	--	--
Acetophenone	35	31.4	0.0001	0.0002	0.0008	0.000002	Yes
Aniline	35	2.9	0.00001	0.00001	0.00001	0.0001	No
Anthracene	35	8.6	0.000004	0.000004	0.000005	0.11	No
Benz(a)anthracene	35	2.9	0.000003	0.000010	0.000010	0.0000009	Yes
Benzo(b)fluoranthene	35	2.9	0.000005	0.000010	0.000010	0.0000009	Yes
Benzo(k)fluoranthene	35	2.9	0.000004	0.000010	0.000010	0.0000009	No
Benzoic acid	35	100.0	0.0005	0.0006	0.001	1.46	No
Benzyl alcohol	35	62.9	0.00003	0.00003	0.0001	0.11	No
Butylbenzylphthalate	35	2.9	0.000003	0.000003	0.000003	0.07	No
Chrysene	35	5.7	0.000003	0.000003	0.000003	0.00009	No

Table B-14
Golf Course
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Di-n-butylphthalate	35	85.7	0.00002	0.00003	0.00007	0.04	No
Di-n-octylphthalate	35	8.6	0.00004	0.00004	0.00008	0.007	No
Dibenzofuran	35	80.0	0.00002	0.00002	0.00004	0.001	No
Diethylphthalate	35	28.6	0.00006	0.00010	0.00006	0.29	No
Dimethylphthalate	35	20.0	0.00008	0.00001	0.00005	3.65	No
Fluoranthene	35	48.6	0.00006	0.00007	0.00002	0.01	No
Fluorene	35	62.9	0.00001	0.00001	0.00003	0.01	No
Hexachloro-1,3-Butadiene	62	53.2	0.001	0.002	0.005	0.000008	Yes
Isophorone	35	85.7	0.00003	0.00004	0.00007	0.0007	No
Naphthalene	62	74.2	0.0003	0.0004	0.0008	0.0003	Yes
Phenanthrene	35	100.0	0.00003	0.00003	0.00006	--	--
Phenol	35	85.7	0.0001	0.0001	0.0003	0.22	No
Pyrene	35	48.6	0.00005	0.00006	0.00001	0.01	No
Total Carcinogenic PAHS (BaP TEQs) ²	35	5.7	0.00001	0.000003	0.000003	0.000002	Yes
Bis(2-Ethylhexyl)phthalate	35	91.4	0.00004	0.00005	0.00009	0.00004	Yes
Pesticides/PCBs							
4,4'-DDT	39	2.6	0.000001	0.000005	0.000005	0.000002	No
Aldrin	39	12.8	0.000002	0.000002	0.000001	0.0000004	Yes
Dieldrin	39	28.2	0.000002	0.000003	0.000006	0.0000004	Yes
Endosulfan I	39	5.1	0.000001	0.000002	0.000005	--	--
Endosulfan II	39	2.6	0.000002	0.000003	0.000003	--	--
Endosulfan Sulfate	39	5.1	0.000002	0.000003	0.000001	--	--
Endrin	39	2.6	0.000004	0.000004	0.000004	0.0001	No
Endrin Ketone	39	2.6	0.000002	0.000004	0.000004	--	--
Heptachlor	39	30.8	0.000002	0.000003	0.000009	0.0000001	Yes
Heptachlor epoxide	39	10.3	0.000002	0.000002	0.000005	0.0000007	Yes
Isodrin	39	18.0	0.000001	0.000002	0.000007	--	--
alpha-BHC	39	33.3	0.000003	0.000004	0.000001	0.0000010	Yes
alpha-Chlordane	39	48.7	0.000004	0.000008	0.000003	0.0000018	Yes
beta-BHC	39	5.1	0.000001	0.000001	0.000003	0.0000003	No
delta-BHC	39	7.7	0.000001	0.000002	0.000009	--	--
gamma-BHC	39	35.9	0.000003	0.000004	0.000001	0.0000005	Yes
gamma-Chlordane	39	53.9	0.000003	0.000004	0.000002	0.0000018	Yes
Mercury							
Mercury	63	58.7	0.00001	0.00001	0.00008	0.00003	Yes
Inorganics							
Antimony	40	100.0	0.00001	0.00002	0.00006	0.0001	No
Arsenic	40	95.0	0.00002	0.00003	0.00007	0.0000004	Yes
Beryllium	40	85.0	0.000003	0.000004	0.000001	0.0000007	Yes
Cadmium	40	100.0	0.00002	0.00003	0.00007	--	--
Chromium	40	100.0	0.00001	0.00001	0.00004	--	--

Table B-14
Golf Course
Constituents of Concern in Ambient Air that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/m ³)	RME Concentration (mg/m ³)	Maximum Detected Concentration (mg/m ³)	1/10 th EPA Region III Residential Air Risk-Based Concentration ³ (mg/m ³)	COC Evaluated in the Risk Assessment?
Copper	40	100.0	0.0001	0.0001	0.0004	0.01	No
Lead	40	100.0	0.0001	0.0001	0.0004	--	--
Nickel	40	100.0	0.000008	0.00001	0.00002	0.007	No
PM-10	39	100.0	0.09	0.10	0.23	--	--
Selenium	40	82.5	0.000001	0.000002	0.000006	0.002	No
Silver	39	94.9	0.000003	0.000006	0.00001	0.002	No
Thallium	39	61.5	0.000002	0.000002	0.000005	0.00003	No
Zinc	40	100.0	0.0003	0.0003	0.0008	0.11	No

-- An EPA Region III RBSC was not available for this constituent.

Note: Calcium, magnesium, potassium, iron, and sodium are not considered toxic to humans and were eliminated from the risk assessment.

¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.

²The following carcinogenic polycyclic aromatic hydrocarbons were multiplied by the appropriate Benzo(a)pyrene Toxicity Equivalency Factor and then summed to calculate the Total Carcinogenic PAHS (BaP TEQs) Equivalent Concentration: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoroanthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-c,d)pyrene.

³These values correspond to a cancer risk of 1E-07 and a noncancer risk of 0.1 calculated for a 30-year residential exposure scenario. If the maximum detected concentration for a constituent was greater than the EPA Region III Risk-Based Screening Concentration (RBSC) then the constituent was retained for further consideration in the risk assessment. In addition, constituents lacking a RBSC were retained for evaluation in the risk assessment.

The Average concentration was calculated based on the following decision rules:

1. The Average concentration.
2. The Maximum detected concentration in instances where the average concentration exceeded the maximum detected concentration.

The RME concentration was calculated based on the following decision rules:

1. The 95% Upper Confidence Limit (95%UCL) of the mean concentration for normally distributed and non-lognormally distributed data sets.
2. The Log 95%UCL of the mean concentration for all lognormally distributed data sets.
3. The Maximum detected concentration in instances where the 95%UCL or Log 95%UCL exceeded the maximum detected concentration.

Table B-15
Constituents of Concern in Indoor Carpet Dust that Exceed EPA Region III RBSCs

Analyte	Number of Samples Analyzed	Frequency of Detection (%)	Average Concentration (mg/kg)	RME Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	1/10 th EPA Region III EPA Region III Residential ² Soil RBSC (mg/kg)	COC Evaluated in the Risk Assessment?
Child Development Center							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	1	100.0	0.00004	0.00004	0.00004	0.0000004	Yes
Elementary School							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	1	100.0	0.00006	0.00006	0.00006	0.0000004	Yes
Residential Towers (3101 3102)							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	1	100.0	0.0001	0.0001	0.0001	0.0000004	Yes
GEMB							
Total Dioxin/Furans (2,3,7,8-TCDD TEQs) ¹	1	100.0	0.0002	0.0002	0.0002	0.0000004	Yes

Note: Carpte dust samples were only analyzed for dioxins and furans.

¹All Isomers and Congeners of 2,3,7,8-Tetrachlorodibenzo-p-dioxin were multiplied by the appropriate 2,3,7,8-TCDD Toxicity Equivalency Factor and then summed to calculate the 2,3,7,8-TCDD TEQ Equivalent Concentration.

² The Ground Maintenance Electronics Building is an industrial site and, therefore, the maximum detected concentration was compared to 1/10th the EPA Region III Industrial Soil RBSC.

Appendix C

Risk Detail Reports

Table Number	Area of Concern	Exposure Scenario	Exposure Duration (years)	Case	Receptors
C-1	Child Development Center	Day Care Scenario	3	Average	Child (0 - 6 years) Adult Child Care Provider
C-2	Child Development Center	Day Care Scenario	6	Average	Child (0 - 6 years) Adult Child Care Provider
C-3	Child Development Center	Day Care Scenario	3	RME	Child (0 - 6 years) Adult Child Care Provider
C-4	Child Development Center	Day Care Scenario	6	RME	Child (0 - 6 years) Adult Child Care Provider
C-5	Golf Course	Recreational Golfer	3	Average	Adult Golfer
C-6	Golf Course	Recreational Golfer	6	Average	Adult Golfer
C-7	Golf Course	Recreational Golfer	30	Average	Adult Golfer
C-8	Golf Course	Recreational Golfer	3	RME	Adult Golfer
C-9	Golf Course	Recreational Golfer	6	RME	Adult Golfer
C-10	Golf Course	Recreational Golfer	30	RME	Adult Golfer
C-11	GEMB	Commercial Worker	3	Average	Adult Worker
C-12	GEMB	Commercial Worker	6	Average	Adult Worker
C-13	GEMB	Commercial Worker	30	Average	Adult Worker
C-14	GEMB	Commercial Worker	3	RME	Adult Worker
C-15	GEMB	Commercial Worker	6	RME	Adult Worker
C-16	GEMB	Commercial Worker	30	RME	Adult Worker
C-17	Elementary School	School Scenario	3	Average	Adolescent (6 - 12 years) Adult Teacher
C-18	Elementary School	School Scenario	6	Average	Adolescent (6 - 12 years) Adult Teacher
C-19	Elementary School	School Scenario	3	RME	Adolescent (6 - 12 years) Adult Teacher
C-20	Elementary School	School Scenario	6	RME	Adolescent (6 - 12 years) Adult Teacher
C-21	Residential Towers	Residential Scenario	3	Average	Child (0 - 6 years) Adult
C-22	Residential Towers	Residential Scenario	6	Average	Child (0 - 6 years) Adult
C-23	Residential Towers	Residential Scenario	30	Average	Integrated Child and Adult (30 year Exposure)
C-24	Residential Towers	Residential Scenario	3	RME	Child (0 - 6 years) Adult
C-25	Residential Towers	Residential Scenario	6	RME	Child (0 - 6 years) Adult
C-26	Residential Towers	Residential Scenario	30	RME	Integrated Child and Adult (30 year Exposure)
C-27	GEMB Upwind/Downwind of SIC Evaluation	Residential Scenario	3	Average	Child (0 - 6 years) Adult
C-28	GEMB Upwind/Downwind of SIC Evaluation	Residential Scenario	6	Average	Child (0 - 6 years) Adult
C-29	GEMB Upwind/Downwind of SIC Evaluation	Residential Scenario	30	Average	Integrated Child and Adult (30 year Exposure)
C-30	GEMB Upwind/Downwind of SIC Evaluation	Residential Scenario	3	RME	Child (0 - 6 years) Adult
C-31	GEMB Upwind/Downwind	Residential	6	RME	Child (0 - 6 years)

Appendix C

Risk Detail Reports

Table Number	Area of Concern	Exposure Scenario	Exposure Duration (years)	Case	Receptors
	of SIC Evaluation	Scenario			Adult
C-32	GEMB Upwind/Downwind of SIC Evaluation	Residential Scenario	30	RME	Integrated Child and Adult (30 year Exposure)
C-33	Golf Course Upwind/Downwind of SIC Evaluation	Residential Scenario	3	Average	Child (0 - 6 years) Adult
C-34	Golf Course Upwind/Downwind of SIC Evaluation	Residential Scenario	6	Average	Child (0 - 6 years) Adult
C-35	Golf Course Upwind/Downwind of SIC Evaluation	Residential Scenario	30	Average	Integrated Child and Adult (30 year Exposure)
C-36	Golf Course Upwind/Downwind of SIC Evaluation	Residential Scenario	3	RME	Child (0 - 6 years) Adult
C-37	Golf Course Upwind/Downwind of SIC Evaluation	Residential Scenario	6	RME	Child (0 - 6 years) Adult
C-38	Golf Course Upwind/Downwind of SIC Evaluation	Residential Scenario	30	RME	Integrated Child and Adult (30 year Exposure)

Table C-1
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.34E-4	1.19E-4		2.83E-5		5.10E-6	1.03E-6	3.90	1.21E-6	2.46E-7	4.35		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.34E-4	2.93E-5		5.24E-6		1.25E-6	2.55E-7	0.96	2.24E-7	4.56E-8	0.80		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.27E-4	6.22E-5		1.48E-5		2.66E-6	1.49E-7	0.56	6.35E-7	3.55E-8	0.63		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.27E-4	1.53E-5		2.74E-6		6.57E-7	3.68E-8	0.14	1.17E-7	6.57E-9	0.12		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.24E-4	3.41E-5		8.13E-6		1.46E-6	2.56E-7	0.97	3.48E-7	6.10E-8	1.08		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.24E-4	8.43E-6		1.50E-6		3.61E-7	6.32E-8	0.24	6.45E-8	1.12E-8	0.20		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.00E-3	5.48E-4	0.32	1.06	1.30E-4	0.08	1.11		2.35E-5		5.59E-6		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.00E-3	1.35E-4	0.08	0.26	2.41E-5	0.01	0.21		5.80E-6		1.03E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	1.75E-4	4.81E-5	0.84	2.78	1.14E-5	0.20	2.92	2.06E-6	1.59E-6	5.99	4.91E-7	3.78E-7	6.67
1,2-Dibromoethane	Inhalation of Outdoor Air	1.75E-4	1.18E-5	0.21	0.69	2.12E-6	0.04	0.54	5.09E-7	3.92E-7	1.48	9.09E-8	7.00E-8	1.23
1,2-Dichloroethane	Inhalation of Indoor Air	1.79E-4	4.92E-5			1.17E-5			2.11E-6	1.92E-7	0.72	5.02E-7	4.57E-8	0.81
1,2-Dichloroethane	Inhalation of Outdoor Air	1.79E-4	1.21E-5			2.17E-6			5.20E-7	4.73E-8	0.18	9.30E-8	8.46E-9	0.15
1,2-Dichloropropane	Inhalation of Indoor Air	1.04E-4	2.85E-5	0.03	0.08	6.80E-6	<0.01	0.09	1.22E-6			2.91E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.04E-4	7.05E-6	<0.01	0.02	1.25E-6	<0.01	0.02	3.02E-7			5.39E-8		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	5.69E-4	1.56E-4	0.09	0.30	3.71E-5	0.02	0.32	6.69E-6			1.59E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	5.69E-4	3.85E-5	0.02	0.07	6.87E-6	<0.01	0.06	1.65E-6			2.94E-7		
1,3-Butadiene	Inhalation of Indoor Air	4.12E-4	1.13E-4			2.69E-5			4.84E-6	4.75E-6	17.89	1.15E-6	1.13E-6	19.93
1,3-Butadiene	Inhalation of Outdoor Air	4.12E-4	2.78E-5			4.98E-6			1.19E-6	1.17E-6	4.41	2.13E-7	2.09E-7	3.69
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.39E-3	3.83E-4	<0.01	0.01	9.12E-5	<0.01	0.01	1.64E-5	6.56E-7	2.47	3.90E-6	1.56E-7	2.76
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.39E-3	9.45E-5	<0.01	0.00	1.68E-5	<0.01	0.00	4.05E-6	1.62E-7	0.61	7.23E-7	2.89E-8	0.51
1,4-Dioxane	Inhalation of Indoor Air	1.00E-3	2.75E-4	<0.01	0.00	6.56E-5	<0.01	0.00	1.18E-5	3.19E-7	1.20	2.81E-6	7.59E-8	1.34
1,4-Dioxane	Inhalation of Outdoor Air	1.00E-3	6.80E-5	<0.01	0.00	1.21E-5	<0.01	0.00	2.91E-6	7.87E-8	0.30	5.20E-7	1.40E-8	0.25
2-Propanol	Inhalation of Indoor Air	9.38E-3	2.57E-3	<0.01	0.00	6.12E-4	<0.01	0.00	1.10E-4			2.62E-5		
2-Propanol	Inhalation of Outdoor Air	9.38E-3	6.34E-4	<0.01	0.00	1.13E-4	<0.01	0.00	2.71E-5			4.85E-6		
Acetaldehyde	Inhalation of Indoor Air	2.71E-2	7.44E-3	2.9	9.54	1.77E-3	0.69	10.04	3.18E-4	2.45E-6	9.25	7.59E-5	5.84E-7	10.31
Acetaldehyde	Inhalation of Outdoor Air	2.71E-2	1.83E-3	0.71	2.35	3.27E-4	0.13	1.86	7.86E-5	6.05E-7	2.28	1.40E-5	1.08E-7	1.91
Acetonitrile	Inhalation of Indoor Air	1.45E-2	3.99E-3	0.23	0.77	9.52E-4	0.06	0.81	1.71E-4			4.08E-5		

Table C-1
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.45E-2	9.86E-4	0.06	0.19	1.76E-4	0.01	0.15	4.22E-5			7.55E-6		
Acrolein	Inhalation of Indoor Air	3.55E-4	9.73E-5	17.0	56.19	2.31E-5	4.1	59.11	4.17E-6			9.93E-7		
Acrolein	Inhalation of Outdoor Air	3.55E-4	2.40E-5	4.2	13.86	4.29E-6	0.75	10.94	1.02E-6			1.83E-7		
Acrylonitrile	Inhalation of Indoor Air	2.25E-4	6.19E-5	0.11	0.36	1.47E-5	0.03	0.38	2.65E-6	6.31E-7	2.38	6.31E-7	1.50E-7	2.65
Acrylonitrile	Inhalation of Outdoor Air	2.25E-4	1.52E-5	0.03	0.09	2.72E-6	<0.01	0.07	6.54E-7	1.55E-7	0.59	1.16E-7	2.78E-8	0.49
Aldrin	Inhalation of Indoor Air	2.05E-7	5.61E-8			1.33E-8			2.40E-9	4.12E-8	0.16	5.73E-10	9.82E-9	0.17
Aldrin	Inhalation of Outdoor Air	2.05E-7	1.38E-8			2.47E-9			5.93E-10	1.01E-8	0.04	1.06E-10	1.81E-9	0.03
alpha-BHC	Inhalation of Indoor Air	2.13E-7	5.84E-8			1.39E-8			2.50E-9	1.57E-8	0.06	5.96E-10	3.75E-9	0.07
alpha-BHC	Inhalation of Outdoor Air	2.13E-7	1.44E-8			2.57E-9			6.17E-10	3.89E-9	0.01	1.10E-10	6.94E-10	0.01
Arsenic	Inhalation of Indoor Air	1.97E-6	5.41E-7			1.28E-7			2.31E-8	3.48E-7	1.31	5.52E-9	8.30E-8	1.46
Arsenic	Inhalation of Outdoor Air	1.97E-6	1.33E-7			2.38E-8			5.71E-9	8.60E-8	0.32	1.02E-9	1.53E-8	0.27
Benzene	Inhalation of Indoor Air	3.81E-3	1.04E-3	0.06	0.20	2.48E-4	0.01	0.21	4.47E-5	1.30E-6	4.90	1.06E-5	3.09E-7	5.46
Benzene	Inhalation of Outdoor Air	3.81E-3	2.57E-4	0.02	0.05	4.60E-5	<0.01	0.04	1.10E-5	3.20E-7	1.21	1.97E-6	5.72E-8	1.01
Beryllium	Inhalation of Indoor Air	2.08E-7	5.69E-8	<0.01	0.00	1.35E-8	<0.01	0.00	2.44E-9	2.05E-8	0.08	5.81E-10	4.88E-9	0.09
Beryllium	Inhalation of Outdoor Air	2.08E-7	1.40E-8	<0.01	0.00	2.51E-9	<0.01	0.00	6.02E-10	5.06E-9	0.02	1.07E-10	9.03E-10	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	2.85E-5	7.82E-6	<0.01	0.01	1.86E-6	<0.01	0.01	3.35E-7	2.81E-9	0.01	7.98E-8	6.70E-10	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	2.85E-5	1.93E-6	<0.01	0.00	3.44E-7	<0.01	0.00	8.27E-8	6.94E-10	0.00	1.47E-8	1.24E-10	0.00
Bromomethane	Inhalation of Indoor Air	1.72E-4	4.73E-5	0.03	0.11	1.12E-5	<0.01	0.11	2.02E-6			4.82E-7		
Bromomethane	Inhalation of Outdoor Air	1.72E-4	1.16E-5	<0.01	0.03	2.08E-6	<0.01	0.02	5.00E-7			8.93E-8		
Cadmium	Inhalation of Indoor Air	1.72E-6	4.71E-7	0.02	0.06	1.12E-7	<0.01	0.06	2.02E-8	1.27E-7	0.48	4.81E-9	3.03E-8	0.53
Cadmium	Inhalation of Outdoor Air	1.72E-6	1.16E-7	<0.01	0.01	2.07E-8	<0.01	0.01	4.98E-9	3.14E-8	0.12	8.90E-10	5.60E-9	0.10
Carbon Tetrachloride	Inhalation of Indoor Air	6.05E-4	1.65E-4	0.29	0.96	3.94E-5	0.07	1.01	7.10E-6	3.73E-7	1.41	1.69E-6	8.88E-8	1.57
Carbon Tetrachloride	Inhalation of Outdoor Air	6.05E-4	4.08E-5	0.07	0.24	7.30E-6	0.01	0.19	1.75E-6	9.20E-8	0.35	3.12E-7	1.64E-8	0.29
Chloroethane	Inhalation of Indoor Air	1.70E-4	4.67E-5	<0.01	0.00	1.11E-5	<0.01	0.00	2.00E-6			4.76E-7		
Chloroethane	Inhalation of Outdoor Air	1.70E-4	1.15E-5	<0.01	0.00	2.05E-6	<0.01	0.00	4.94E-7			8.82E-8		
Chloroform	Inhalation of Indoor Air	2.16E-4	5.94E-5	<0.01	0.00	1.41E-5	<0.01	0.00	2.54E-6	2.05E-7	0.77	6.06E-7	4.88E-8	0.86
Chloroform	Inhalation of Outdoor Air	2.16E-4	1.46E-5	<0.01	0.00	2.61E-6	<0.01	0.00	6.28E-7	5.05E-8	0.19	1.12E-7	9.03E-9	0.16

Table C-1
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloromethane	Inhalation of Indoor Air	1.70E-3	4.67E-4	<0.01	0.02	1.11E-4	<0.01	0.02	2.00E-5	1.26E-7	0.48	4.76E-6	3.00E-8	0.53
Chloromethane	Inhalation of Outdoor Air	1.70E-3	1.15E-4	<0.01	0.00	2.05E-5	<0.01	0.00	4.93E-6	3.11E-8	0.12	8.82E-7	5.55E-9	0.10
Dichlorodifluoromethane	Inhalation of Indoor Air	3.66E-3	1.00E-3	0.02	0.06	2.39E-4	<0.01	0.06	4.30E-5			1.02E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.66E-3	2.47E-4	<0.01	0.01	4.42E-5	<0.01	0.01	1.06E-5			1.89E-6		
Dieldrin	Inhalation of Indoor Air	2.28E-7	6.26E-8			1.49E-8			2.68E-9	4.32E-8	0.16	6.39E-10	1.02E-8	0.18
Dieldrin	Inhalation of Outdoor Air	2.28E-7	1.54E-8			2.76E-9			6.62E-10	1.06E-8	0.04	1.18E-10	1.90E-9	0.03
Formaldehyde	Inhalation of Indoor Air	3.06E-3	8.40E-4	0.98	3.23	2.00E-4	0.23	3.40	3.60E-5	1.63E-6	6.17	8.57E-6	3.90E-7	6.88
Formaldehyde	Inhalation of Outdoor Air	3.06E-3	2.07E-4	0.24	0.80	3.70E-5	0.04	0.63	8.88E-6	4.04E-7	1.52	1.58E-6	7.22E-8	1.27
gamma-BHC	Inhalation of Indoor Air	3.23E-7	8.85E-8			2.10E-8			3.79E-9	4.17E-9	0.02	9.03E-10	9.93E-10	0.02
gamma-BHC	Inhalation of Outdoor Air	3.23E-7	2.18E-8			3.90E-9			9.36E-10	1.02E-9	0.00	1.67E-10	1.83E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	1.98E-7	5.44E-8			1.29E-8			2.33E-9	2.12E-8	0.08	5.55E-10	5.05E-9	0.09
Heptachlor epoxide	Inhalation of Outdoor Air	1.98E-7	1.34E-8			2.39E-9			5.75E-10	5.23E-9	0.02	1.02E-10	9.34E-10	0.02
Heptachlor	Inhalation of Indoor Air	2.29E-7	6.29E-8			1.49E-8			2.69E-9	1.22E-8	0.05	6.42E-10	2.92E-9	0.05
Heptachlor	Inhalation of Outdoor Air	2.29E-7	1.55E-8			2.77E-9			6.65E-10	3.02E-9	0.01	1.18E-10	5.40E-10	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.97E-4	2.45E-4			5.85E-5			1.05E-5	8.11E-7	3.06	2.50E-6	1.93E-7	3.41
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.97E-4	6.06E-5			1.08E-5			2.60E-6	2.00E-7	0.75	4.64E-7	3.57E-8	0.63
Hydrochloric Acid	Inhalation of Indoor Air	2.67E-3	7.33E-4	0.13	0.42	1.74E-4	0.03	0.44	3.14E-5			7.47E-6		
Hydrochloric Acid	Inhalation of Outdoor Air	2.67E-3	1.80E-4	0.03	0.10	3.22E-5	<0.01	0.08	7.74E-6			1.38E-6		
Mercury	Inhalation of Indoor Air	6.12E-6	1.67E-6	0.02	0.06	3.99E-7	<0.01	0.07	7.19E-8			1.71E-8		
Mercury	Inhalation of Outdoor Air	6.12E-6	4.14E-7	<0.01	0.02	7.39E-8	<0.01	0.01	1.77E-8			3.17E-9		
Methylene Chloride	Inhalation of Indoor Air	7.87E-3	2.15E-3	<0.01	0.01	5.13E-4	<0.01	0.01	9.24E-5	1.52E-7	0.57	2.20E-5	3.62E-8	0.64
Methylene Chloride	Inhalation of Outdoor Air	7.87E-3	5.32E-4	<0.01	0.00	9.50E-5	<0.01	0.00	2.28E-5	3.75E-8	0.14	4.07E-6	6.70E-9	0.12
n-Hexane	Inhalation of Indoor Air	2.72E-3	7.47E-4	0.01	0.04	1.78E-4	<0.01	0.05	3.20E-5			7.63E-6		
n-Hexane	Inhalation of Outdoor Air	2.72E-3	1.84E-4	<0.01	0.01	3.29E-5	<0.01	0.01	7.90E-6			1.41E-6		
Naphthalene	Inhalation of Indoor Air	2.96E-4	8.12E-5	0.09	0.31	1.93E-5	0.02	0.33	3.48E-6			8.28E-7		
Naphthalene	Inhalation of Outdoor Air	2.96E-4	2.00E-5	0.02	0.08	3.57E-6	<0.01	0.06	8.58E-7			1.53E-7		
PM-10	Inhalation of Indoor Air	5.34E-2	1.46E-2	1.0	3.38	3.48E-3	0.24	3.56	6.27E-4			1.49E-4		

Table C-1
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
PM-10	Inhalation of Outdoor Air	5.34E-2	3.61E-3	0.25	0.83	6.45E-4	0.05	0.66	1.54E-4			2.76E-5		
Propylene	Inhalation of Indoor Air	7.21E-3	1.97E-3	<0.01	0.01	4.70E-4	<0.01	0.01	8.47E-5			2.01E-5		
Propylene	Inhalation of Outdoor Air	7.21E-3	4.87E-4	<0.01	0.00	8.71E-5	<0.01	0.00	2.09E-5			3.73E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.10E-3	3.02E-4			7.19E-5			1.29E-5	2.63E-8	0.10	3.08E-6	6.26E-9	0.11
Tetrachloroethylene	Inhalation of Outdoor Air	1.10E-3	7.45E-5			1.33E-5			3.19E-6	6.48E-9	0.02	5.70E-7	1.15E-9	0.02
Toluene	Inhalation of Indoor Air	2.08E-2	5.69E-3	0.05	0.16	1.35E-3	0.01	0.17	2.44E-4			5.81E-5		
Toluene	Inhalation of Outdoor Air	2.08E-2	1.40E-3	0.01	0.04	2.51E-4	<0.01	0.03	6.02E-5			1.07E-5		
Total Dioxin/Furans (2,3,7,8-T	Dermal Contact with Soil	1.42E-5	5.62E-11			8.96E-12			2.41E-12	3.61E-7	1.36	3.84E-13	5.76E-8	1.02
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Indoor Dust	3.78E-5	2.58E-10			1.47E-11			1.10E-11	1.66E-6	6.27	6.34E-13	9.51E-8	1.68
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	1.42E-5	2.40E-11			1.03E-12			1.03E-12	1.54E-7	0.58	4.41E-14	6.62E-9	0.12
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	9.92E-10	2.71E-10			6.47E-11			1.16E-11	1.74E-6	6.58	2.77E-12	4.16E-7	7.33
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	9.92E-10	6.70E-11			1.19E-11			2.87E-12	4.31E-7	1.62	5.13E-13	7.69E-8	1.36
Trichloroethylene	Inhalation of Indoor Air	1.42E-3	3.90E-4			9.28E-5			1.67E-5	9.94E-8	0.37	3.98E-6	2.36E-8	0.42
Trichloroethylene	Inhalation of Outdoor Air	1.42E-3	9.62E-5			1.71E-5			4.12E-6	2.45E-8	0.09	7.36E-7	4.38E-9	0.08
Vinyl Acetate	Inhalation of Indoor Air	4.72E-3	1.29E-3	0.02	0.07	3.08E-4	<0.01	0.08	5.55E-5			1.32E-5		
Vinyl Acetate	Inhalation of Outdoor Air	4.72E-3	3.19E-4	<0.01	0.02	5.70E-5	<0.01	0.01	1.36E-5			2.44E-6		
Vinyl Chloride	Inhalation of Indoor Air	1.10E-4	3.03E-5			7.23E-6			1.30E-6	3.90E-7	1.47	3.10E-7	9.30E-8	1.64
Vinyl Chloride	Inhalation of Outdoor Air	1.10E-4	7.49E-6			1.33E-6			3.21E-7	9.63E-8	0.36	5.73E-8	1.72E-8	0.30
Total Risk:				30.33	100.0		6.87	100.0		2.65E-5	100.0		5.67E-6	100.1

Table C-2
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.34E-4	1.19E-4		2.83E-5		1.02E-5	2.07E-6	3.90	2.42E-6	4.93E-7	4.35		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.34E-4	2.93E-5		5.24E-6		2.51E-6	5.10E-7	0.96	4.49E-7	9.12E-8	0.80		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.27E-4	6.22E-5		1.48E-5		5.33E-6	2.98E-7	0.56	1.27E-6	7.11E-8	0.63		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.27E-4	1.53E-5		2.74E-6		1.31E-6	7.36E-8	0.14	2.34E-7	1.31E-8	0.12		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.24E-4	3.41E-5		8.13E-6		2.92E-6	5.12E-7	0.97	6.97E-7	1.22E-7	1.08		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.24E-4	8.43E-6		1.50E-6		7.22E-7	1.26E-7	0.24	1.29E-7	2.25E-8	0.20		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.00E-3	5.48E-4	0.32	1.06	1.30E-4	0.08	1.11						
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.00E-3	1.35E-4	0.08	0.26	2.41E-5	0.01	0.21						
1,2-Dibromoethane	Inhalation of Indoor Air	1.75E-4	4.81E-5	0.84	2.78	1.14E-5	0.20	2.92	4.13E-6	3.18E-6	5.99	9.83E-7	7.57E-7	6.67
1,2-Dibromoethane	Inhalation of Outdoor Air	1.75E-4	1.18E-5	0.21	0.69	2.12E-6	0.04	0.54	1.01E-6	7.84E-7	1.48	1.81E-7	1.40E-7	1.23
1,2-Dichloroethane	Inhalation of Indoor Air	1.79E-4	4.92E-5			1.17E-5			4.22E-6	3.84E-7	0.72	1.00E-6	9.14E-8	0.81
1,2-Dichloroethane	Inhalation of Outdoor Air	1.79E-4	1.21E-5			2.17E-6			1.04E-6	9.47E-8	0.18	1.86E-7	1.69E-8	0.15
1,2-Dichloropropane	Inhalation of Indoor Air	1.04E-4	2.85E-5	0.03	0.08	6.80E-6	<0.01	0.09	2.44E-6			5.83E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.04E-4	7.05E-6	<0.01	0.02	1.25E-6	<0.01	0.02	6.04E-7			1.07E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	5.69E-4	1.56E-4	0.09	0.30	3.71E-5	0.02	0.32	1.33E-5			3.18E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	5.69E-4	3.85E-5	0.02	0.07	6.87E-6	<0.01	0.06	3.30E-6			5.89E-7		
1,3-Butadiene	Inhalation of Indoor Air	4.12E-4	1.13E-4			2.69E-5			9.69E-6	9.50E-6	17.89	2.30E-6	2.26E-6	19.93
1,3-Butadiene	Inhalation of Outdoor Air	4.12E-4	2.78E-5			4.98E-6			2.39E-6	2.34E-6	4.41	4.27E-7	4.18E-7	3.69
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.39E-3	3.83E-4	<0.01	0.01	9.12E-5	<0.01	0.01	3.28E-5	1.31E-6	2.47	7.81E-6	3.12E-7	2.76
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.39E-3	9.45E-5	<0.01	0.00	1.68E-5	<0.01	0.00	8.10E-6	3.24E-7	0.61	1.44E-6	5.78E-8	0.51
1,4-Dioxane	Inhalation of Indoor Air	1.00E-3	2.75E-4	<0.01	0.00	6.56E-5	<0.01	0.00	2.36E-5	6.38E-7	1.20	5.62E-6	1.51E-7	1.34
1,4-Dioxane	Inhalation of Outdoor Air	1.00E-3	6.80E-5	<0.01	0.00	1.21E-5	<0.01	0.00	5.82E-6	1.57E-7	0.30	1.04E-6	2.81E-8	0.25
2-Propanol	Inhalation of Indoor Air	9.38E-3	2.57E-3	<0.01	0.00	6.12E-4	<0.01	0.00	2.20E-4			5.24E-5		
2-Propanol	Inhalation of Outdoor Air	9.38E-3	6.34E-4	<0.01	0.00	1.13E-4	<0.01	0.00	5.43E-5			9.71E-6		
Acetaldehyde	Inhalation of Indoor Air	2.71E-2	7.44E-3	2.9	9.54	1.77E-3	0.69	10.04	6.37E-4	4.91E-6	9.25	1.51E-4	1.16E-6	10.31
Acetaldehyde	Inhalation of Outdoor Air	2.71E-2	1.83E-3	0.71	2.35	3.27E-4	0.13	1.86	1.57E-4	1.21E-6	2.28	2.81E-5	2.16E-7	1.91
Acetonitrile	Inhalation of Indoor Air	1.45E-2	3.99E-3	0.23	0.77	9.52E-4	0.06	0.81	3.42E-4			8.16E-5		

Table C-2
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.45E-2	9.86E-4	0.06	0.19	1.76E-4	0.01	0.15	8.45E-5			1.51E-5		
Acrolein	Inhalation of Indoor Air	3.55E-4	9.73E-5	17.0	56.19	2.31E-5	4.1	59.11	8.34E-6			1.98E-6		
Acrolein	Inhalation of Outdoor Air	3.55E-4	2.40E-5	4.2	13.86	4.29E-6	0.75	10.94	2.05E-6			3.67E-7		
Acrylonitrile	Inhalation of Indoor Air	2.25E-4	6.19E-5	0.11	0.36	1.47E-5	0.03	0.38	5.30E-6	1.26E-6	2.38	1.26E-6	3.00E-7	2.65
Acrylonitrile	Inhalation of Outdoor Air	2.25E-4	1.52E-5	0.03	0.09	2.72E-6	<0.01	0.07	1.30E-6	3.11E-7	0.59	2.33E-7	5.56E-8	0.49
Aldrin	Inhalation of Indoor Air	2.05E-7	5.61E-8			1.33E-8			4.81E-9	8.25E-8	0.16	1.14E-9	1.96E-8	0.17
Aldrin	Inhalation of Outdoor Air	2.05E-7	1.38E-8			2.47E-9			1.18E-9	2.03E-8	0.04	2.12E-10	3.63E-9	0.03
alpha-BHC	Inhalation of Indoor Air	2.13E-7	5.84E-8			1.39E-8			5.00E-9	3.15E-8	0.06	1.19E-9	7.51E-9	0.07
alpha-BHC	Inhalation of Outdoor Air	2.13E-7	1.44E-8			2.57E-9			1.23E-9	7.78E-9	0.01	2.20E-10	1.38E-9	0.01
Arsenic	Inhalation of Indoor Air	1.97E-6	5.41E-7			1.28E-7			4.63E-8	6.97E-7	1.31	1.10E-8	1.66E-7	1.46
Arsenic	Inhalation of Outdoor Air	1.97E-6	1.33E-7			2.38E-8			1.14E-8	1.72E-7	0.32	2.04E-9	3.07E-8	0.27
Benzene	Inhalation of Indoor Air	3.81E-3	1.04E-3	0.06	0.20	2.48E-4	0.01	0.21	8.95E-5	2.60E-6	4.90	2.13E-5	6.19E-7	5.46
Benzene	Inhalation of Outdoor Air	3.81E-3	2.57E-4	0.02	0.05	4.60E-5	<0.01	0.04	2.20E-5	6.41E-7	1.21	3.94E-6	1.14E-7	1.01
Beryllium	Inhalation of Indoor Air	2.08E-7	5.69E-8	<0.01	0.00	1.35E-8	<0.01	0.00	4.88E-9	4.10E-8	0.08	1.16E-9	9.77E-9	0.09
Beryllium	Inhalation of Outdoor Air	2.08E-7	1.40E-8	<0.01	0.00	2.51E-9	<0.01	0.00	1.20E-9	1.01E-8	0.02	2.15E-10	1.80E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	2.85E-5	7.82E-6	<0.01	0.01	1.86E-6	<0.01	0.01	6.70E-7	5.63E-9	0.01	1.59E-7	1.34E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	2.85E-5	1.93E-6	<0.01	0.00	3.44E-7	<0.01	0.00	1.65E-7	1.38E-9	0.00	2.95E-8	2.48E-10	0.00
Bromomethane	Inhalation of Indoor Air	1.72E-4	4.73E-5	0.03	0.11	1.12E-5	<0.01	0.11	4.05E-6			9.65E-7		
Bromomethane	Inhalation of Outdoor Air	1.72E-4	1.16E-5	<0.01	0.03	2.08E-6	<0.01	0.02	1.00E-6			1.78E-7		
Cadmium	Inhalation of Indoor Air	1.72E-6	4.71E-7	0.02	0.06	1.12E-7	<0.01	0.06	4.04E-8	2.54E-7	0.48	9.62E-9	6.06E-8	0.53
Cadmium	Inhalation of Outdoor Air	1.72E-6	1.16E-7	<0.01	0.01	2.07E-8	<0.01	0.01	9.96E-9	6.28E-8	0.12	1.78E-9	1.12E-8	0.10
Carbon Tetrachloride	Inhalation of Indoor Air	6.05E-4	1.65E-4	0.29	0.96	3.94E-5	0.07	1.01	1.42E-5	7.46E-7	1.41	3.38E-6	1.77E-7	1.57
Carbon Tetrachloride	Inhalation of Outdoor Air	6.05E-4	4.08E-5	0.07	0.24	7.30E-6	0.01	0.19	3.50E-6	1.84E-7	0.35	6.25E-7	3.28E-8	0.29
Chloroethane	Inhalation of Indoor Air	1.70E-4	4.67E-5	<0.01	0.00	1.11E-5	<0.01	0.00	4.00E-6			9.53E-7		
Chloroethane	Inhalation of Outdoor Air	1.70E-4	1.15E-5	<0.01	0.00	2.05E-6	<0.01	0.00	9.88E-7			1.76E-7		
Chloroform	Inhalation of Indoor Air	2.16E-4	5.94E-5	<0.01	0.00	1.41E-5	<0.01	0.00	5.09E-6	4.10E-7	0.77	1.21E-6	9.76E-8	0.86
Chloroform	Inhalation of Outdoor Air	2.16E-4	1.46E-5	<0.01	0.00	2.61E-6	<0.01	0.00	1.25E-6	1.01E-7	0.19	2.24E-7	1.80E-8	0.16

Table C-2
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloromethane	Inhalation of Indoor Air	1.70E-3	4.67E-4	<0.01	0.02	1.11E-4	<0.01	0.02	4.00E-5	2.52E-7	0.48	9.53E-6	6.00E-8	0.53
Chloromethane	Inhalation of Outdoor Air	1.70E-3	1.15E-4	<0.01	0.00	2.05E-5	<0.01	0.00	9.87E-6	6.22E-8	0.12	1.76E-6	1.11E-8	0.10
Dichlorodifluoromethane	Inhalation of Indoor Air	3.66E-3	1.00E-3	0.02	0.06	2.39E-4	<0.01	0.06	8.60E-5			2.04E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.66E-3	2.47E-4	<0.01	0.01	4.42E-5	<0.01	0.01	2.12E-5			3.79E-6		
Dieldrin	Inhalation of Indoor Air	2.28E-7	6.26E-8			1.49E-8			5.37E-9	8.65E-8	0.16	1.27E-9	2.05E-8	0.18
Dieldrin	Inhalation of Outdoor Air	2.28E-7	1.54E-8			2.76E-9			1.32E-9	2.13E-8	0.04	2.36E-10	3.81E-9	0.03
Formaldehyde	Inhalation of Indoor Air	3.06E-3	8.40E-4	0.98	3.23	2.00E-4	0.23	3.40	7.20E-5	3.27E-6	6.17	1.71E-5	7.80E-7	6.88
Formaldehyde	Inhalation of Outdoor Air	3.06E-3	2.07E-4	0.24	0.80	3.70E-5	0.04	0.63	1.77E-5	8.08E-7	1.52	3.17E-6	1.44E-7	1.27
gamma-BHC	Inhalation of Indoor Air	3.23E-7	8.85E-8			2.10E-8			7.58E-9	8.34E-9	0.02	1.80E-9	1.98E-9	0.02
gamma-BHC	Inhalation of Outdoor Air	3.23E-7	2.18E-8			3.90E-9			1.87E-9	2.05E-9	0.00	3.34E-10	3.67E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	1.98E-7	5.44E-8			1.29E-8			4.66E-9	4.24E-8	0.08	1.11E-9	1.01E-8	0.09
Heptachlor epoxide	Inhalation of Outdoor Air	1.98E-7	1.34E-8			2.39E-9			1.15E-9	1.04E-8	0.02	2.05E-10	1.86E-9	0.02
Heptachlor	Inhalation of Indoor Air	2.29E-7	6.29E-8			1.49E-8			5.39E-9	2.45E-8	0.05	1.28E-9	5.84E-9	0.05
Heptachlor	Inhalation of Outdoor Air	2.29E-7	1.55E-8			2.77E-9			1.33E-9	6.05E-9	0.01	2.37E-10	1.08E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.97E-4	2.45E-4			5.85E-5			2.10E-5	1.62E-6	3.06	5.01E-6	3.86E-7	3.41
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.97E-4	6.06E-5			1.08E-5			5.20E-6	4.00E-7	0.75	9.28E-7	7.14E-8	0.63
Hydrochloric Acid	Inhalation of Indoor Air	2.67E-3	7.33E-4	0.13	0.42	1.74E-4	0.03	0.44	6.28E-5			1.49E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	2.67E-3	1.80E-4	0.03	0.10	3.22E-5	<0.01	0.08	1.54E-5			2.76E-6		
Mercury	Inhalation of Indoor Air	6.12E-6	1.67E-6	0.02	0.06	3.99E-7	<0.01	0.07	1.43E-7			3.42E-8		
Mercury	Inhalation of Outdoor Air	6.12E-6	4.14E-7	<0.01	0.02	7.39E-8	<0.01	0.01	3.55E-8			6.34E-9		
Methylene Chloride	Inhalation of Indoor Air	7.87E-3	2.15E-3	<0.01	0.01	5.13E-4	<0.01	0.01	1.84E-4	3.04E-7	0.57	4.40E-5	7.24E-8	0.64
Methylene Chloride	Inhalation of Outdoor Air	7.87E-3	5.32E-4	<0.01	0.00	9.50E-5	<0.01	0.00	4.56E-5	7.50E-8	0.14	8.14E-6	1.34E-8	0.12
n-Hexane	Inhalation of Indoor Air	2.72E-3	7.47E-4	0.01	0.04	1.78E-4	<0.01	0.05	6.41E-5			1.52E-5		
n-Hexane	Inhalation of Outdoor Air	2.72E-3	1.84E-4	<0.01	0.01	3.29E-5	<0.01	0.01	1.58E-5			2.82E-6		
Naphthalene	Inhalation of Indoor Air	2.96E-4	8.12E-5	0.09	0.31	1.93E-5	0.02	0.33	6.96E-6			1.65E-6		
Naphthalene	Inhalation of Outdoor Air	2.96E-4	2.00E-5	0.02	0.08	3.57E-6	<0.01	0.06	1.71E-6			3.06E-7		
PM-10	Inhalation of Indoor Air	5.34E-2	1.46E-2	1.0	3.38	3.48E-3	0.24	3.56	1.25E-3			2.98E-4		

Table C-2
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
PM-10	Inhalation of Outdoor Air	5.34E-2	3.61E-3	0.25	0.83	6.45E-4	0.05	0.66	3.09E-4			5.53E-5		
Propylene	Inhalation of Indoor Air	7.21E-3	1.97E-3	<0.01	0.01	4.70E-4	<0.01	0.01	1.69E-4			4.03E-5		
Propylene	Inhalation of Outdoor Air	7.21E-3	4.87E-4	<0.01	0.00	8.71E-5	<0.01	0.00	4.18E-5			7.46E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.10E-3	3.02E-4			7.19E-5			2.59E-5	5.26E-8	0.10	6.17E-6	1.25E-8	0.11
Tetrachloroethylene	Inhalation of Outdoor Air	1.10E-3	7.45E-5			1.33E-5			6.39E-6	1.29E-8	0.02	1.14E-6	2.31E-9	0.02
Toluene	Inhalation of Indoor Air	2.08E-2	5.69E-3	0.05	0.16	1.35E-3	0.01	0.17	4.88E-4			1.16E-4		
Toluene	Inhalation of Outdoor Air	2.08E-2	1.40E-3	0.01	0.04	2.51E-4	<0.01	0.03	1.20E-4			2.15E-5		
Total Dioxin/Furans (2,3,7,8-T	Dermal Contact with Soil	1.42E-5	5.62E-11			8.96E-12			4.82E-12	7.23E-7	1.36	7.68E-13	1.15E-7	1.02
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Indoor Dust	3.78E-5	2.58E-10			1.47E-11			2.21E-11	3.32E-6	6.27	1.26E-12	1.90E-7	1.68
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	1.42E-5	2.40E-11			1.03E-12			2.06E-12	3.09E-7	0.58	8.83E-14	1.32E-8	0.12
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	9.92E-10	2.71E-10			6.47E-11			2.33E-11	3.49E-6	6.58	5.54E-12	8.32E-7	7.33
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	9.92E-10	6.70E-11			1.19E-11			5.74E-12	8.62E-7	1.62	1.02E-12	1.53E-7	1.36
Trichloroethylene	Inhalation of Indoor Air	1.42E-3	3.90E-4			9.28E-5			3.34E-5	1.98E-7	0.37	7.96E-6	4.73E-8	0.42
Trichloroethylene	Inhalation of Outdoor Air	1.42E-3	9.62E-5			1.71E-5			8.24E-6	4.90E-8	0.09	1.47E-6	8.76E-9	0.08
Vinyl Acetate	Inhalation of Indoor Air	4.72E-3	1.29E-3	0.02	0.07	3.08E-4	<0.01	0.08	1.11E-4			2.64E-5		
Vinyl Acetate	Inhalation of Outdoor Air	4.72E-3	3.19E-4	<0.01	0.02	5.70E-5	<0.01	0.01	2.73E-5			4.89E-6		
Vinyl Chloride	Inhalation of Indoor Air	1.10E-4	3.03E-5			7.23E-6			2.60E-6	7.81E-7	1.47	6.20E-7	1.86E-7	1.64
Vinyl Chloride	Inhalation of Outdoor Air	1.10E-4	7.49E-6			1.33E-6			6.42E-7	1.92E-7	0.36	1.14E-7	3.44E-8	0.30
Total Risk:				30.33	100.0		6.87	100.0		5.31E-5	100.0		1.13E-5	100.1

Table C-3
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.13E-4	1.40E-4		3.35E-5		6.03E-6	1.22E-6	3.65	1.43E-6	2.91E-7	4.03		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.13E-4	3.47E-5		6.19E-6		1.48E-6	3.01E-7	0.90	2.65E-7	5.39E-8	0.75		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.50E-4	6.85E-5		1.63E-5		2.93E-6	1.64E-7	0.49	6.99E-7	3.91E-8	0.54		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.50E-4	1.69E-5		3.01E-6		7.24E-7	4.05E-8	0.12	1.29E-7	7.24E-9	0.10		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.38E-4	3.80E-5		9.06E-6		1.63E-6	2.85E-7	0.85	3.88E-7	6.79E-8	0.94		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.38E-4	9.38E-6		1.67E-6		4.02E-7	7.03E-8	0.21	7.18E-8	1.25E-8	0.17		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.30E-3	6.31E-4	0.37	0.87	1.50E-4	0.09	0.92						
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.30E-3	1.55E-4	0.09	0.22	2.78E-5	0.02	0.17						
1,2-Dibromoethane	Inhalation of Indoor Air	1.97E-4	5.42E-5	0.95	2.25	1.29E-5	0.23	2.37	2.32E-6	1.78E-6	5.34	5.53E-7	4.26E-7	5.90
1,2-Dibromoethane	Inhalation of Outdoor Air	1.97E-4	1.33E-5	0.23	0.56	2.38E-6	0.04	0.44	5.73E-7	4.41E-7	1.32	1.02E-7	7.88E-8	1.09
1,2-Dichloroethane	Inhalation of Indoor Air	2.02E-4	5.54E-5			1.32E-5			2.37E-6	2.16E-7	0.65	5.66E-7	5.15E-8	0.71
1,2-Dichloroethane	Inhalation of Outdoor Air	2.02E-4	1.36E-5			2.44E-6			5.86E-7	5.33E-8	0.16	1.04E-7	9.53E-9	0.13
1,2-Dichloropropane	Inhalation of Indoor Air	1.17E-4	3.23E-5	0.03	0.07	7.69E-6	<0.01	0.07	1.38E-6			3.29E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.17E-4	7.97E-6	<0.01	0.02	1.42E-6	<0.01	0.01	3.41E-7			6.10E-8		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.53E-4	1.79E-4	0.10	0.25	4.26E-5	0.02	0.26	7.67E-6			1.82E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.53E-4	4.41E-5	0.03	0.06	7.88E-6	<0.01	0.05	1.89E-6			3.38E-7		
1,3-Butadiene	Inhalation of Indoor Air	4.93E-4	1.35E-4			3.21E-5			5.78E-6	5.67E-6	16.93	1.37E-6	1.35E-6	18.70
1,3-Butadiene	Inhalation of Outdoor Air	4.93E-4	3.33E-5			5.95E-6			1.42E-6	1.39E-6	4.18	2.55E-7	2.49E-7	3.46
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.70E-3	4.68E-4	<0.01	0.00	1.11E-4	<0.01	0.01	2.00E-5	8.02E-7	2.40	4.77E-6	1.91E-7	2.64
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.70E-3	1.15E-4	<0.01	0.00	2.06E-5	<0.01	0.00	4.94E-6	1.97E-7	0.59	8.83E-7	3.53E-8	0.49
1,4-Dioxane	Inhalation of Indoor Air	1.30E-3	3.58E-4	<0.01	0.00	8.54E-5	<0.01	0.00	1.53E-5	4.15E-7	1.24	3.66E-6	9.88E-8	1.37
1,4-Dioxane	Inhalation of Outdoor Air	1.30E-3	8.84E-5	<0.01	0.00	1.57E-5	<0.01	0.00	3.79E-6	1.02E-7	0.31	6.77E-7	1.82E-8	0.25
2-Propanol	Inhalation of Indoor Air	1.06E-2	2.91E-3	<0.01	0.00	6.95E-4	<0.01	0.00	1.25E-4			2.97E-5		
2-Propanol	Inhalation of Outdoor Air	1.06E-2	7.20E-4	<0.01	0.00	1.28E-4	<0.01	0.00	3.08E-5			5.51E-6		
Acetaldehyde	Inhalation of Indoor Air	4.42E-2	1.21E-2	4.7	11.20	2.88E-3	1.1	11.78	5.19E-4	4.00E-6	11.94	1.23E-4	9.52E-7	13.19
Acetaldehyde	Inhalation of Outdoor Air	4.42E-2	2.99E-3	1.2	2.76	5.34E-4	0.21	2.18	1.28E-4	9.86E-7	2.95	2.28E-5	1.76E-7	2.44
Acetonitrile	Inhalation of Indoor Air	3.16E-2	8.67E-3	0.51	1.20	2.06E-3	0.12	1.26	3.71E-4			8.85E-5		

Table C-3
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	3.16E-2	2.14E-3	0.12	0.30	3.82E-4	0.02	0.23	9.17E-5			1.63E-5		
Acrolein	Inhalation of Indoor Air	4.91E-4	1.34E-4	23.6	55.98	3.20E-5	5.6	58.89	5.77E-6			1.37E-6		
Acrolein	Inhalation of Outdoor Air	4.91E-4	3.32E-5	5.8	13.81	5.93E-6	1.0	10.89	1.42E-6			2.54E-7		
Acrylonitrile	Inhalation of Indoor Air	2.63E-4	7.21E-5	0.13	0.30	1.71E-5	0.03	0.32	3.09E-6	7.35E-7	2.20	7.35E-7	1.75E-7	2.42
Acrylonitrile	Inhalation of Outdoor Air	2.63E-4	1.77E-5	0.03	0.07	3.17E-6	<0.01	0.06	7.62E-7	1.81E-7	0.54	1.36E-7	3.24E-8	0.45
Aldrin	Inhalation of Indoor Air	2.89E-7	7.91E-8			1.88E-8			3.39E-9	5.82E-8	0.17	8.08E-10	1.38E-8	0.19
Aldrin	Inhalation of Outdoor Air	2.89E-7	1.95E-8			3.48E-9			8.37E-10	1.43E-8	0.04	1.49E-10	2.56E-9	0.04
alpha-BHC	Inhalation of Indoor Air	2.96E-7	8.11E-8			1.93E-8			3.47E-9	2.18E-8	0.07	8.27E-10	5.21E-9	0.07
alpha-BHC	Inhalation of Outdoor Air	2.96E-7	2.00E-8			3.57E-9			8.57E-10	5.40E-9	0.02	1.53E-10	9.64E-10	0.01
Arsenic	Inhalation of Indoor Air	2.32E-6	6.38E-7			1.51E-7			2.73E-8	4.11E-7	1.23	6.51E-9	9.80E-8	1.36
Arsenic	Inhalation of Outdoor Air	2.32E-6	1.57E-7			2.81E-8			6.74E-9	1.01E-7	0.30	1.20E-9	1.81E-8	0.25
Benzene	Inhalation of Indoor Air	4.22E-3	1.15E-3	0.07	0.16	2.75E-4	0.02	0.17	4.95E-5	1.43E-6	4.30	1.17E-5	3.42E-7	4.74
Benzene	Inhalation of Outdoor Air	4.22E-3	2.85E-4	0.02	0.04	5.09E-5	<0.01	0.03	1.22E-5	3.55E-7	1.06	2.18E-6	6.34E-8	0.88
Beryllium	Inhalation of Indoor Air	2.79E-7	7.66E-8	<0.01	0.00	1.82E-8	<0.01	0.00	3.28E-9	2.76E-8	0.08	7.82E-10	6.57E-9	0.09
Beryllium	Inhalation of Outdoor Air	2.79E-7	1.89E-8	<0.01	0.00	3.37E-9	<0.01	0.00	8.10E-10	6.81E-9	0.02	1.44E-10	1.21E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.28E-5	8.99E-6	<0.01	0.01	2.14E-6	<0.01	0.01	3.85E-7	3.23E-9	0.01	9.18E-8	7.71E-10	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.28E-5	2.21E-6	<0.01	0.00	3.96E-7	<0.01	0.00	9.51E-8	7.99E-10	0.00	1.69E-8	1.42E-10	0.00
Bromomethane	Inhalation of Indoor Air	1.97E-4	5.40E-5	0.04	0.09	1.28E-5	<0.01	0.09	2.31E-6			5.51E-7		
Bromomethane	Inhalation of Outdoor Air	1.97E-4	1.33E-5	<0.01	0.02	2.38E-6	<0.01	0.02	5.71E-7			1.02E-7		
Cadmium	Inhalation of Indoor Air	2.20E-6	6.05E-7	0.02	0.06	1.44E-7	<0.01	0.06	2.59E-8	1.63E-7	0.49	6.17E-9	3.88E-8	0.54
Cadmium	Inhalation of Outdoor Air	2.20E-6	1.49E-7	<0.01	0.01	2.66E-8	<0.01	0.01	6.39E-9	4.02E-8	0.12	1.14E-9	7.19E-9	0.10
Carbon Tetrachloride	Inhalation of Indoor Air	6.40E-4	1.75E-4	0.31	0.73	4.17E-5	0.07	0.77	7.51E-6	3.94E-7	1.18	1.79E-6	9.39E-8	1.30
Carbon Tetrachloride	Inhalation of Outdoor Air	6.40E-4	4.32E-5	0.08	0.18	7.72E-6	0.01	0.14	1.85E-6	9.73E-8	0.29	3.31E-7	1.73E-8	0.24
Chloroethane	Inhalation of Indoor Air	2.00E-4	5.50E-5	<0.01	0.00	1.31E-5	<0.01	0.00	2.35E-6			5.61E-7		
Chloroethane	Inhalation of Outdoor Air	2.00E-4	1.35E-5	<0.01	0.00	2.42E-6	<0.01	0.00	5.81E-7			1.03E-7		
Chloroform	Inhalation of Indoor Air	2.44E-4	6.69E-5	<0.01	0.00	1.59E-5	<0.01	0.00	2.86E-6	2.30E-7	0.69	6.83E-7	5.49E-8	0.76
Chloroform	Inhalation of Outdoor Air	2.44E-4	1.65E-5	<0.01	0.00	2.94E-6	<0.01	0.00	7.07E-7	5.69E-8	0.17	1.26E-7	1.01E-8	0.14

Table C-3
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloromethane	Inhalation of Indoor Air	1.80E-3	4.95E-4	<0.01	0.01	1.17E-4	<0.01	0.01	2.12E-5	1.33E-7	0.40	5.05E-6	3.18E-8	0.44
Chloromethane	Inhalation of Outdoor Air	1.80E-3	1.22E-4	<0.01	0.00	2.18E-5	<0.01	0.00	5.23E-6	3.29E-8	0.10	9.34E-7	5.88E-9	0.08
Dichlorodifluoromethane	Inhalation of Indoor Air	4.47E-3	1.22E-3	0.02	0.05	2.92E-4	<0.01	0.05	5.25E-5			1.25E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	4.47E-3	3.02E-4	<0.01	0.01	5.40E-5	<0.01	0.01	1.29E-5			2.31E-6		
Dieldrin	Inhalation of Indoor Air	2.76E-7	7.57E-8			1.80E-8			3.24E-9	5.22E-8	0.16	7.72E-10	1.24E-8	0.17
Dieldrin	Inhalation of Outdoor Air	2.76E-7	1.86E-8			3.33E-9			8.00E-10	1.28E-8	0.04	1.42E-10	2.30E-9	0.03
Formaldehyde	Inhalation of Indoor Air	3.88E-3	1.06E-3	1.2	2.95	2.53E-4	0.30	3.11	4.56E-5	2.07E-6	6.20	1.08E-5	4.94E-7	6.85
Formaldehyde	Inhalation of Outdoor Air	3.88E-3	2.62E-4	0.31	0.73	4.69E-5	0.05	0.57	1.12E-5	5.12E-7	1.53	2.01E-6	9.15E-8	1.27
gamma-BHC	Inhalation of Indoor Air	4.41E-7	1.20E-7			2.87E-8			5.17E-9	5.69E-9	0.02	1.23E-9	1.35E-9	0.02
gamma-BHC	Inhalation of Outdoor Air	4.41E-7	2.98E-8			5.32E-9			1.27E-9	1.40E-9	0.00	2.28E-10	2.50E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.22E-7	6.10E-8			1.45E-8			2.61E-9	2.37E-8	0.07	6.22E-10	5.66E-9	0.08
Heptachlor epoxide	Inhalation of Outdoor Air	2.22E-7	1.50E-8			2.68E-9			6.45E-10	5.87E-9	0.02	1.15E-10	1.04E-9	0.01
Heptachlor	Inhalation of Indoor Air	2.98E-7	8.18E-8			1.94E-8			3.50E-9	1.59E-8	0.05	8.35E-10	3.80E-9	0.05
Heptachlor	Inhalation of Outdoor Air	2.98E-7	2.01E-8			3.60E-9			8.65E-10	3.93E-9	0.01	1.54E-10	7.03E-10	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.78E-3	4.89E-4			1.16E-4			2.09E-5	1.61E-6	4.82	4.99E-6	3.84E-7	5.33
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.78E-3	1.20E-4			2.15E-5			5.17E-6	3.98E-7	1.19	9.24E-7	7.12E-8	0.99
Hydrochloric Acid	Inhalation of Indoor Air	2.97E-3	8.15E-4	0.14	0.34	1.94E-4	0.03	0.36	3.49E-5			8.32E-6		
Hydrochloric Acid	Inhalation of Outdoor Air	2.97E-3	2.01E-4	0.04	0.08	3.59E-5	<0.01	0.07	8.62E-6			1.54E-6		
Mercury	Inhalation of Indoor Air	7.75E-6	2.12E-6	0.02	0.06	5.05E-7	<0.01	0.06	9.10E-8			2.16E-8		
Mercury	Inhalation of Outdoor Air	7.75E-6	5.23E-7	<0.01	0.01	9.35E-8	<0.01	0.01	2.24E-8			4.00E-9		
Methylene Chloride	Inhalation of Indoor Air	1.11E-2	3.04E-3	<0.01	0.01	7.25E-4	<0.01	0.01	1.30E-4	2.14E-7	0.64	3.10E-5	5.11E-8	0.71
Methylene Chloride	Inhalation of Outdoor Air	1.11E-2	7.51E-4	<0.01	0.00	1.34E-4	<0.01	0.00	3.22E-5	5.30E-8	0.16	5.75E-6	9.46E-9	0.13
n-Hexane	Inhalation of Indoor Air	3.42E-3	9.37E-4	0.02	0.04	2.23E-4	<0.01	0.04	4.01E-5			9.56E-6		
n-Hexane	Inhalation of Outdoor Air	3.42E-3	2.31E-4	<0.01	0.01	4.12E-5	<0.01	0.01	9.91E-6			1.76E-6		
Naphthalene	Inhalation of Indoor Air	3.42E-4	9.38E-5	0.11	0.26	2.23E-5	0.03	0.27	4.02E-6			9.57E-7		
Naphthalene	Inhalation of Outdoor Air	3.42E-4	2.31E-5	0.03	0.06	4.13E-6	<0.01	0.05	9.92E-7			1.77E-7		
PM-10	Inhalation of Indoor Air	6.06E-2	1.66E-2	1.2	2.77	3.95E-3	0.28	2.91	7.12E-4			1.69E-4		

Table C-3
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
PM-10	Inhalation of Outdoor Air	6.06E-2	4.10E-3	0.29	0.68	7.32E-4	0.05	0.54	1.75E-4			3.13E-5		
Propylene	Inhalation of Indoor Air	1.31E-2	3.61E-3	<0.01	0.01	8.60E-4	<0.01	0.01	1.54E-4			3.68E-5		
Propylene	Inhalation of Outdoor Air	1.31E-2	8.91E-4	<0.01	0.00	1.59E-4	<0.01	0.00	3.82E-5			6.82E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.44E-3	3.96E-4			9.44E-5			1.70E-5	3.45E-8	0.10	4.04E-6	8.21E-9	0.11
Tetrachloroethylene	Inhalation of Outdoor Air	1.44E-3	9.78E-5			1.74E-5			4.19E-6	8.51E-9	0.03	7.48E-7	1.52E-9	0.02
Toluene	Inhalation of Indoor Air	2.36E-2	6.48E-3	0.06	0.13	1.54E-3	0.01	0.14	2.77E-4			6.61E-5		
Toluene	Inhalation of Outdoor Air	2.36E-2	1.59E-3	0.01	0.03	2.85E-4	<0.01	0.03	6.85E-5			1.22E-5		
Total Dioxin/Furans (2,3,7,8-T	Dermal Contact with Soil	2.08E-5	8.23E-11			1.31E-11			3.52E-12	5.29E-7	1.58	5.62E-13	8.43E-8	1.17
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Indoor Dust	3.78E-5	2.58E-10			1.47E-11			1.10E-11	1.66E-6	4.97	6.34E-13	9.51E-8	1.32
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	2.08E-5	3.51E-11			1.50E-12			1.50E-12	2.26E-7	0.68	6.46E-14	9.69E-9	0.13
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	1.21E-9	3.32E-10			7.90E-11			1.42E-11	2.13E-6	6.37	3.38E-12	5.08E-7	7.04
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.21E-9	8.19E-11			1.46E-11			3.51E-12	5.26E-7	1.57	6.26E-13	9.40E-8	1.30
Trichloroethylene	Inhalation of Indoor Air	1.73E-3	4.74E-4			1.13E-4			2.03E-5	1.21E-7	0.36	4.84E-6	2.88E-8	0.40
Trichloroethylene	Inhalation of Outdoor Air	1.73E-3	1.17E-4			2.09E-5			5.01E-6	2.98E-8	0.09	8.96E-7	5.33E-9	0.07
Vinyl Acetate	Inhalation of Indoor Air	3.58E-2	9.82E-3	0.17	0.41	2.33E-3	0.04	0.43	4.20E-4			1.00E-4		
Vinyl Acetate	Inhalation of Outdoor Air	3.58E-2	2.42E-3	0.04	0.10	4.32E-4	<0.01	0.08	1.03E-4			1.85E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.26E-4	3.47E-5			8.26E-6			1.48E-6	4.46E-7	1.33	3.54E-7	1.06E-7	1.47
Vinyl Chloride	Inhalation of Outdoor Air	1.26E-4	8.56E-6			1.52E-6			3.67E-7	1.10E-7	0.33	6.55E-8	1.96E-8	0.27
Total Risk:				42.11	100.0		9.53	100.0		3.35E-5	100.0		7.22E-6	100.0

Table C-4
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.13E-4	1.40E-4		3.35E-5		1.20E-5	2.44E-6	3.65	2.87E-6	5.82E-7	4.03		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.13E-4	3.47E-5		6.19E-6		2.97E-6	6.03E-7	0.90	5.31E-7	1.07E-7	0.75		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.50E-4	6.85E-5		1.63E-5		5.87E-6	3.29E-7	0.49	1.39E-6	7.83E-8	0.54		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.50E-4	1.69E-5		3.01E-6		1.44E-6	8.11E-8	0.12	2.58E-7	1.44E-8	0.10		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.38E-4	3.80E-5		9.06E-6		3.26E-6	5.70E-7	0.85	7.76E-7	1.35E-7	0.94		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.38E-4	9.38E-6		1.67E-6		8.04E-7	1.40E-7	0.21	1.43E-7	2.51E-8	0.17		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.30E-3	6.31E-4	0.37	0.87	1.50E-4	0.09	0.92		5.41E-5		1.28E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.30E-3	1.55E-4	0.09	0.22	2.78E-5	0.02	0.17		1.33E-5		2.38E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	1.97E-4	5.42E-5	0.95	2.25	1.29E-5	0.23	2.37		4.64E-6	3.57E-6	5.34		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.97E-4	1.33E-5	0.23	0.56	2.38E-6	0.04	0.44		1.14E-6	8.82E-7	1.32		
1,2-Dichloroethane	Inhalation of Indoor Air	2.02E-4	5.54E-5			1.32E-5				4.75E-6	4.32E-7	0.65		
1,2-Dichloroethane	Inhalation of Outdoor Air	2.02E-4	1.36E-5			2.44E-6				1.17E-6	1.06E-7	0.16		
1,2-Dichloropropane	Inhalation of Indoor Air	1.17E-4	3.23E-5	0.03	0.07	7.69E-6	<0.01	0.07		2.76E-6		6.59E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.17E-4	7.97E-6	<0.01	0.02	1.42E-6	<0.01	0.01		6.83E-7		1.22E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.53E-4	1.79E-4	0.10	0.25	4.26E-5	0.02	0.26		1.53E-5		3.65E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.53E-4	4.41E-5	0.03	0.06	7.88E-6	<0.01	0.05		3.78E-6		6.76E-7		
1,3-Butadiene	Inhalation of Indoor Air	4.93E-4	1.35E-4			3.21E-5				1.15E-5	1.13E-5	16.93		
1,3-Butadiene	Inhalation of Outdoor Air	4.93E-4	3.33E-5			5.95E-6				2.85E-6	2.79E-6	4.18		
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.70E-3	4.68E-4	<0.01	0.00	1.11E-4	<0.01	0.01		4.01E-5	1.60E-6	2.40		
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.70E-3	1.15E-4	<0.01	0.00	2.06E-5	<0.01	0.00		9.89E-6	3.95E-7	0.59		
1,4-Dioxane	Inhalation of Indoor Air	1.30E-3	3.58E-4	<0.01	0.00	8.54E-5	<0.01	0.00		3.07E-5	8.30E-7	1.24		
1,4-Dioxane	Inhalation of Outdoor Air	1.30E-3	8.84E-5	<0.01	0.00	1.57E-5	<0.01	0.00		7.58E-6	2.04E-7	0.31		
2-Propanol	Inhalation of Indoor Air	1.06E-2	2.91E-3	<0.01	0.00	6.95E-4	<0.01	0.00		2.50E-4		5.95E-5		
2-Propanol	Inhalation of Outdoor Air	1.06E-2	7.20E-4	<0.01	0.00	1.28E-4	<0.01	0.00		6.17E-5		1.10E-5		
Acetaldehyde	Inhalation of Indoor Air	4.42E-2	1.21E-2	4.7	11.20	2.88E-3	1.1	11.78		1.03E-3	8.00E-6	11.94		
Acetaldehyde	Inhalation of Outdoor Air	4.42E-2	2.99E-3	1.2	2.76	5.34E-4	0.21	2.18		2.56E-4	1.97E-6	2.95		
Acetonitrile	Inhalation of Indoor Air	3.16E-2	8.67E-3	0.51	1.20	2.06E-3	0.12	1.26		7.43E-4		1.77E-4		

Table C-4
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	3.16E-2	2.14E-3	0.12	0.30	3.82E-4	0.02	0.23	1.83E-4			3.27E-5		
Acrolein	Inhalation of Indoor Air	4.91E-4	1.34E-4	23.6	55.98	3.20E-5	5.6	58.89	1.15E-5			2.74E-6		
Acrolein	Inhalation of Outdoor Air	4.91E-4	3.32E-5	5.8	13.81	5.93E-6	1.0	10.89	2.84E-6			5.08E-7		
Acrylonitrile	Inhalation of Indoor Air	2.63E-4	7.21E-5	0.13	0.30	1.71E-5	0.03	0.32	6.18E-6	1.47E-6	2.20	1.47E-6	3.50E-7	2.42
Acrylonitrile	Inhalation of Outdoor Air	2.63E-4	1.77E-5	0.03	0.07	3.17E-6	<0.01	0.06	1.52E-6	3.62E-7	0.54	2.72E-7	6.48E-8	0.45
Aldrin	Inhalation of Indoor Air	2.89E-7	7.91E-8			1.88E-8			6.78E-9	1.16E-7	0.17	1.61E-9	2.77E-8	0.19
Aldrin	Inhalation of Outdoor Air	2.89E-7	1.95E-8			3.48E-9			1.67E-9	2.87E-8	0.04	2.99E-10	5.12E-9	0.04
alpha-BHC	Inhalation of Indoor Air	2.96E-7	8.11E-8			1.93E-8			6.95E-9	4.37E-8	0.07	1.65E-9	1.04E-8	0.07
alpha-BHC	Inhalation of Outdoor Air	2.96E-7	2.00E-8			3.57E-9			1.71E-9	1.08E-8	0.02	3.06E-10	1.92E-9	0.01
Arsenic	Inhalation of Indoor Air	2.32E-6	6.38E-7			1.51E-7			5.47E-8	8.23E-7	1.23	1.30E-8	1.96E-7	1.36
Arsenic	Inhalation of Outdoor Air	2.32E-6	1.57E-7			2.81E-8			1.34E-8	2.03E-7	0.30	2.40E-9	3.62E-8	0.25
Benzene	Inhalation of Indoor Air	4.22E-3	1.15E-3	0.07	0.16	2.75E-4	0.02	0.17	9.91E-5	2.87E-6	4.30	2.35E-5	6.85E-7	4.74
Benzene	Inhalation of Outdoor Air	4.22E-3	2.85E-4	0.02	0.04	5.09E-5	<0.01	0.03	2.44E-5	7.10E-7	1.06	4.36E-6	1.26E-7	0.88
Beryllium	Inhalation of Indoor Air	2.79E-7	7.66E-8	<0.01	0.00	1.82E-8	<0.01	0.00	6.57E-9	5.52E-8	0.08	1.56E-9	1.31E-8	0.09
Beryllium	Inhalation of Outdoor Air	2.79E-7	1.89E-8	<0.01	0.00	3.37E-9	<0.01	0.00	1.62E-9	1.36E-8	0.02	2.89E-10	2.43E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.28E-5	8.99E-6	<0.01	0.01	2.14E-6	<0.01	0.01	7.71E-7	6.47E-9	0.01	1.83E-7	1.54E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.28E-5	2.21E-6	<0.01	0.00	3.96E-7	<0.01	0.00	1.90E-7	1.59E-9	0.00	3.39E-8	2.85E-10	0.00
Bromomethane	Inhalation of Indoor Air	1.97E-4	5.40E-5	0.04	0.09	1.28E-5	<0.01	0.09	4.63E-6			1.10E-6		
Bromomethane	Inhalation of Outdoor Air	1.97E-4	1.33E-5	<0.01	0.02	2.38E-6	<0.01	0.02	1.14E-6			2.04E-7		
Cadmium	Inhalation of Indoor Air	2.20E-6	6.05E-7	0.02	0.06	1.44E-7	<0.01	0.06	5.18E-8	3.26E-7	0.49	1.23E-8	7.77E-8	0.54
Cadmium	Inhalation of Outdoor Air	2.20E-6	1.49E-7	<0.01	0.01	2.66E-8	<0.01	0.01	1.27E-8	8.05E-8	0.12	2.28E-9	1.43E-8	0.10
Carbon Tetrachloride	Inhalation of Indoor Air	6.40E-4	1.75E-4	0.31	0.73	4.17E-5	0.07	0.77	1.50E-5	7.89E-7	1.18	3.58E-6	1.87E-7	1.30
Carbon Tetrachloride	Inhalation of Outdoor Air	6.40E-4	4.32E-5	0.08	0.18	7.72E-6	0.01	0.14	3.70E-6	1.94E-7	0.29	6.62E-7	3.47E-8	0.24
Chloroethane	Inhalation of Indoor Air	2.00E-4	5.50E-5	<0.01	0.00	1.31E-5	<0.01	0.00	4.71E-6			1.12E-6		
Chloroethane	Inhalation of Outdoor Air	2.00E-4	1.35E-5	<0.01	0.00	2.42E-6	<0.01	0.00	1.16E-6			2.07E-7		
Chloroform	Inhalation of Indoor Air	2.44E-4	6.69E-5	<0.01	0.00	1.59E-5	<0.01	0.00	5.73E-6	4.61E-7	0.69	1.36E-6	1.09E-7	0.76
Chloroform	Inhalation of Outdoor Air	2.44E-4	1.65E-5	<0.01	0.00	2.94E-6	<0.01	0.00	1.41E-6	1.13E-7	0.17	2.52E-7	2.03E-8	0.14

Table C-4
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Chloromethane	Inhalation of Indoor Air	1.80E-3	4.95E-4	<0.01	0.01	1.17E-4	<0.01	0.01	4.24E-5	2.67E-7	0.40	1.01E-5	6.36E-8	0.44
Chloromethane	Inhalation of Outdoor Air	1.80E-3	1.22E-4	<0.01	0.00	2.18E-5	<0.01	0.00	1.04E-5	6.59E-8	0.10	1.86E-6	1.17E-8	0.08
Dichlorodifluoromethane	Inhalation of Indoor Air	4.47E-3	1.22E-3	0.02	0.05	2.92E-4	<0.01	0.05	1.05E-4			2.50E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	4.47E-3	3.02E-4	<0.01	0.01	5.40E-5	<0.01	0.01	2.59E-5			4.63E-6		
Dieldrin	Inhalation of Indoor Air	2.76E-7	7.57E-8			1.80E-8			6.49E-9	1.04E-7	0.16	1.54E-9	2.48E-8	0.17
Dieldrin	Inhalation of Outdoor Air	2.76E-7	1.86E-8			3.33E-9			1.60E-9	2.57E-8	0.04	2.85E-10	4.60E-9	0.03
Formaldehyde	Inhalation of Indoor Air	3.88E-3	1.06E-3	1.2	2.95	2.53E-4	0.30	3.11	9.13E-5	4.15E-6	6.20	2.17E-5	9.89E-7	6.85
Formaldehyde	Inhalation of Outdoor Air	3.88E-3	2.62E-4	0.31	0.73	4.69E-5	0.05	0.57	2.25E-5	1.02E-6	1.53	4.02E-6	1.83E-7	1.27
gamma-BHC	Inhalation of Indoor Air	4.41E-7	1.20E-7			2.87E-8			1.03E-8	1.13E-8	0.02	2.46E-9	2.71E-9	0.02
gamma-BHC	Inhalation of Outdoor Air	4.41E-7	2.98E-8			5.32E-9			2.55E-9	2.81E-9	0.00	4.56E-10	5.01E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.22E-7	6.10E-8			1.45E-8			5.23E-9	4.75E-8	0.07	1.24E-9	1.13E-8	0.08
Heptachlor epoxide	Inhalation of Outdoor Air	2.22E-7	1.50E-8			2.68E-9			1.29E-9	1.17E-8	0.02	2.30E-10	2.09E-9	0.01
Heptachlor	Inhalation of Indoor Air	2.98E-7	8.18E-8			1.94E-8			7.01E-9	3.19E-8	0.05	1.67E-9	7.60E-9	0.05
Heptachlor	Inhalation of Outdoor Air	2.98E-7	2.01E-8			3.60E-9			1.73E-9	7.87E-9	0.01	3.09E-10	1.40E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.78E-3	4.89E-4			1.16E-4			4.19E-5	3.23E-6	4.82	9.99E-6	7.69E-7	5.33
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.78E-3	1.20E-4			2.15E-5			1.03E-5	7.97E-7	1.19	1.84E-6	1.42E-7	0.99
Hydrochloric Acid	Inhalation of Indoor Air	2.97E-3	8.15E-4	0.14	0.34	1.94E-4	0.03	0.36	6.99E-5			1.66E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	2.97E-3	2.01E-4	0.04	0.08	3.59E-5	<0.01	0.07	1.72E-5			3.08E-6		
Mercury	Inhalation of Indoor Air	7.75E-6	2.12E-6	0.02	0.06	5.05E-7	<0.01	0.06	1.82E-7			4.33E-8		
Mercury	Inhalation of Outdoor Air	7.75E-6	5.23E-7	<0.01	0.01	9.35E-8	<0.01	0.01	4.49E-8			8.01E-9		
Methylene Chloride	Inhalation of Indoor Air	1.11E-2	3.04E-3	<0.01	0.01	7.25E-4	<0.01	0.01	2.61E-4	4.29E-7	0.64	6.21E-5	1.02E-7	0.71
Methylene Chloride	Inhalation of Outdoor Air	1.11E-2	7.51E-4	<0.01	0.00	1.34E-4	<0.01	0.00	6.44E-5	1.06E-7	0.16	1.15E-5	1.89E-8	0.13
n-Hexane	Inhalation of Indoor Air	3.42E-3	9.37E-4	0.02	0.04	2.23E-4	<0.01	0.04	8.03E-5			1.91E-5		
n-Hexane	Inhalation of Outdoor Air	3.42E-3	2.31E-4	<0.01	0.01	4.12E-5	<0.01	0.01	1.98E-5			3.53E-6		
Naphthalene	Inhalation of Indoor Air	3.42E-4	9.38E-5	0.11	0.26	2.23E-5	0.03	0.27	8.04E-6			1.91E-6		
Naphthalene	Inhalation of Outdoor Air	3.42E-4	2.31E-5	0.03	0.06	4.13E-6	<0.01	0.05	1.98E-6			3.54E-7		
PM-10	Inhalation of Indoor Air	6.06E-2	1.66E-2	1.2	2.77	3.95E-3	0.28	2.91	1.42E-3			3.39E-4		

Table C-4
Child Development Center
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Day Care Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
PM-10	Inhalation of Outdoor Air	6.06E-2	4.10E-3	0.29	0.68	7.32E-4	0.05	0.54	3.51E-4			6.27E-5		
Propylene	Inhalation of Indoor Air	1.31E-2	3.61E-3	<0.01	0.01	8.60E-4	<0.01	0.01	3.09E-4			7.37E-5		
Propylene	Inhalation of Outdoor Air	1.31E-2	8.91E-4	<0.01	0.00	1.59E-4	<0.01	0.00	7.64E-5			1.36E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.44E-3	3.96E-4			9.44E-5			3.40E-5	6.90E-8	0.10	8.09E-6	1.64E-8	0.11
Tetrachloroethylene	Inhalation of Outdoor Air	1.44E-3	9.78E-5			1.74E-5			8.38E-6	1.70E-8	0.03	1.49E-6	3.04E-9	0.02
Toluene	Inhalation of Indoor Air	2.36E-2	6.48E-3	0.06	0.13	1.54E-3	0.01	0.14	5.55E-4			1.32E-4		
Toluene	Inhalation of Outdoor Air	2.36E-2	1.59E-3	0.01	0.03	2.85E-4	<0.01	0.03	1.37E-4			2.44E-5		
Total Dioxin/Furans (2,3,7,8-T	Dermal Contact with Soil	2.08E-5	8.23E-11			1.31E-11			7.05E-12	1.05E-6	1.58	1.12E-12	1.68E-7	1.17
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Indoor Dust	3.78E-5	2.58E-10			1.47E-11			2.21E-11	3.32E-6	4.97	1.26E-12	1.90E-7	1.32
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	2.08E-5	3.51E-11			1.50E-12			3.01E-12	4.52E-7	0.68	1.29E-13	1.93E-8	0.13
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	1.21E-9	3.32E-10			7.90E-11			2.84E-11	4.27E-6	6.37	6.77E-12	1.01E-6	7.04
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.21E-9	8.19E-11			1.46E-11			7.02E-12	1.05E-6	1.57	1.25E-12	1.88E-7	1.30
Trichloroethylene	Inhalation of Indoor Air	1.73E-3	4.74E-4			1.13E-4			4.06E-5	2.42E-7	0.36	9.68E-6	5.76E-8	0.40
Trichloroethylene	Inhalation of Outdoor Air	1.73E-3	1.17E-4			2.09E-5			1.00E-5	5.97E-8	0.09	1.79E-6	1.06E-8	0.07
Vinyl Acetate	Inhalation of Indoor Air	3.58E-2	9.82E-3	0.17	0.41	2.33E-3	0.04	0.43	8.41E-4			2.00E-4		
Vinyl Acetate	Inhalation of Outdoor Air	3.58E-2	2.42E-3	0.04	0.10	4.32E-4	<0.01	0.08	2.07E-4			3.70E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.26E-4	3.47E-5			8.26E-6			2.97E-6	8.92E-7	1.33	7.08E-7	2.12E-7	1.47
Vinyl Chloride	Inhalation of Outdoor Air	1.26E-4	8.56E-6			1.52E-6			7.34E-7	2.20E-7	0.33	1.31E-7	3.93E-8	0.27
Total Risk:				42.11	100.0		9.53	100.0		6.70E-5	100.0		1.44E-5	100.0

Table C-5
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 1 Tour of Duty (3 Years)			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.32E-4	0			2.60E-6			0			1.11E-7	2.26E-8	3.10
1,1,2-Trichloroethane	Inhalation of Outdoor Air	1.08E-4	0			6.57E-7			0			2.81E-8	1.57E-9	0.22
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.14E-4	0			6.91E-7			0			2.96E-8	5.18E-9	0.71
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.11E-3	0			1.27E-5	<0.01	1.31	0			5.46E-7		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.63E-4	0			9.86E-7	0.02	3.05	0			4.22E-8	3.25E-8	4.45
1,2-Dichloroethane	Inhalation of Outdoor Air	1.78E-4	0			1.07E-6			0			4.62E-8	4.20E-9	0.57
1,2-Dichloropropane	Inhalation of Outdoor Air	9.98E-5	0			6.02E-7	<0.01	0.09	0			2.58E-8		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.46E-4	0			3.89E-6	<0.01	0.40	0			1.67E-7		
1,3-Butadiene	Inhalation of Outdoor Air	5.91E-4	0			3.56E-6			0			1.52E-7	1.49E-7	20.49
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.38E-3	0			8.36E-6	<0.01	0.01	0			3.58E-7	1.43E-8	1.96
1,4-Dioxane	Inhalation of Outdoor Air	8.61E-4	0			5.20E-6	<0.01	0.00	0			2.22E-7	6.01E-9	0.82
2-Propanol	Inhalation of Outdoor Air	9.92E-3	0			5.98E-5	<0.01	0.01	0			2.56E-6		
Acetaldehyde	Inhalation of Outdoor Air	2.83E-2	0			1.70E-4	0.07	11.73	0			7.32E-6	5.64E-8	7.71
Acetonitrile	Inhalation of Outdoor Air	3.51E-2	0			2.12E-4	0.01	2.18	0			9.08E-6		
Acrolein	Inhalation of Outdoor Air	3.52E-4	0			2.12E-6	0.37	65.72	0			9.12E-8		
Acrylonitrile	Inhalation of Outdoor Air	2.68E-4	0			1.62E-6	<0.01	0.50	0			6.95E-8	1.65E-8	2.26
Aldrin	Inhalation of Outdoor Air	1.76E-7	0			1.06E-9			0			4.56E-11	7.83E-10	0.11
alpha-BHC	Inhalation of Outdoor Air	3.21E-7	0			1.93E-9			0			8.30E-11	5.23E-10	0.07
Aluminum	Ingestion of Soil	6.34E+4	0			9.18E-3	<0.01	1.62	0			3.93E-4		
Antimony	Ingestion of Soil	4.05E+0	0			5.87E-7	<0.01	0.26	0			2.51E-8		
Arsenic	Inhalation of Outdoor Air	2.40E-6	0			1.44E-8			0			6.20E-10	9.34E-9	1.28
Benzene	Inhalation of Outdoor Air	4.01E-3	0			2.42E-5	<0.01	0.25	0			1.03E-6	3.01E-8	4.12
Benzyl Chloride	Inhalation of Outdoor Air	3.14E-4	0			1.89E-6			0			8.12E-8	1.38E-8	1.89
Beryllium	Inhalation of Outdoor Air	3.45E-7	0			2.08E-9	<0.01	0.00	0			8.93E-11	7.50E-10	0.10
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.94E-5	0			2.37E-7	<0.01	0.01	0			1.01E-8	8.56E-11	0.01

Table C-5
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Bromomethane	Inhalation of Outdoor Air	2.14E-4	0			1.29E-6	<0.01	0.16	0			5.53E-8		
Cadmium	Inhalation of Outdoor Air	2.21E-6	0			1.33E-8	<0.01	0.09	0			5.72E-10	3.60E-9	0.49
Carbon Tetrachloride	Inhalation of Outdoor Air	6.91E-4	0			4.17E-6	<0.01	1.29	0			1.78E-7	9.38E-9	1.28
Chloroethane	Inhalation of Outdoor Air	1.36E-4	0			8.23E-7	<0.01	0.00	0			3.53E-8		
Chloroform	Inhalation of Outdoor Air	2.21E-4	0			1.33E-6	<0.01	0.00	0			5.73E-8	4.61E-9	0.63
Chloromethane	Inhalation of Outdoor Air	1.73E-3	0			1.04E-5	<0.01	0.02	0			4.48E-7	2.82E-9	0.39
Chromium	Ingestion of Soil	4.38E+1	0			6.34E-6	<0.01	0.00	0			2.71E-7		
Dieldrin	Inhalation of Outdoor Air	2.39E-7	0			1.44E-9			0			6.18E-11	9.95E-10	0.14
Formaldehyde	Inhalation of Outdoor Air	1.92E-3	0			1.16E-5	0.01	2.39	0			4.98E-7	2.26E-8	3.10
gamma-BHC	Inhalation of Outdoor Air	2.83E-7	0			1.71E-9			0			7.34E-11	8.07E-11	0.01
Heptachlor epoxide	Inhalation of Outdoor Air	2.00E-7	0			1.21E-9			0			5.19E-11	4.72E-10	0.06
Heptachlor	Inhalation of Outdoor Air	2.12E-7	0			1.28E-9			0			5.49E-11	2.50E-10	0.03
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.39E-3	0			8.43E-6			0			3.61E-7	2.78E-8	3.81
Hydrochloric Acid	Inhalation of Outdoor Air	3.42E-3	0			2.06E-5	<0.01	0.64	0			8.85E-7		
Mercury	Inhalation of Outdoor Air	1.03E-5	0			6.24E-8	<0.01	0.13	0			2.67E-9		
Methylene Chloride	Inhalation of Outdoor Air	1.96E-2	0			1.18E-4	<0.01	0.02	0			5.07E-6	8.34E-9	1.14
Naphthalene	Inhalation of Outdoor Air	3.42E-4	0			2.06E-6	<0.01	0.43	0			8.85E-8		
PM-10	Inhalation of Outdoor Air	8.67E-2	0			5.23E-4	0.04	6.47	0			2.24E-5		
Propylene	Inhalation of Outdoor Air	4.32E-3	0			2.60E-5	<0.01	0.01	0			1.11E-6		
Tetrachloroethylene	Inhalation of Outdoor Air	1.23E-3	0			7.45E-6			0			3.19E-7	6.48E-10	0.09
Toluene	Inhalation of Outdoor Air	2.43E-2	0			1.46E-4	<0.01	0.23	0			6.29E-6		
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	6.84E-2	0			9.90E-9			0			4.24E-10	3.10E-9	0.42
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	2.44E-4	0			3.54E-11			0			1.52E-12	2.28E-7	31.17
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.11E-9	0			6.74E-12			0			2.88E-13	4.33E-8	5.93
Trichloroethylene	Inhalation of Outdoor Air	1.97E-3	0			1.18E-5			0			5.09E-7	3.03E-9	0.41

**Table C-5
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway**

Scenario: Recreational Golfer Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vanadium	Ingestion of Soil	2.34E+2	0			3.39E-5	<0.01	0.86	0			1.45E-6		
Vinyl Acetate	Inhalation of Outdoor Air	6.78E-3	0			4.09E-5	<0.01	0.13	0			1.75E-6		
Vinyl Chloride	Inhalation of Outdoor Air	9.54E-5	0			5.76E-7			0			2.46E-8	7.40E-9	1.01
Total Risk:				0	0.0		0.567	100.0			0.0		7.31E-7	100.0

Table C-6
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.32E-4	0			2.60E-6			0			2.23E-7	4.53E-8	3.10
1,1,2-Trichloroethane	Inhalation of Outdoor Air	1.08E-4	0			6.57E-7			0			5.63E-8	3.15E-9	0.22
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.14E-4	0			6.91E-7			0			5.92E-8	1.03E-8	0.71
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.11E-3	0			1.27E-5	<0.01	1.31	0			1.09E-6		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.63E-4	0			9.86E-7	0.02	3.05	0			8.45E-8	6.51E-8	4.45
1,2-Dichloroethane	Inhalation of Outdoor Air	1.78E-4	0			1.07E-6			0			9.24E-8	8.40E-9	0.57
1,2-Dichloropropane	Inhalation of Outdoor Air	9.98E-5	0			6.02E-7	<0.01	0.09	0			5.16E-8		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.46E-4	0			3.89E-6	<0.01	0.40	0			3.34E-7		
1,3-Butadiene	Inhalation of Outdoor Air	5.91E-4	0			3.56E-6			0			3.05E-7	2.99E-7	20.49
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.38E-3	0			8.36E-6	<0.01	0.01	0			7.17E-7	2.86E-8	1.96
1,4-Dioxane	Inhalation of Outdoor Air	8.61E-4	0			5.20E-6	<0.01	0.00	0			4.45E-7	1.20E-8	0.82
2-Propanol	Inhalation of Outdoor Air	9.92E-3	0			5.98E-5	<0.01	0.01	0			5.13E-6		
Acetaldehyde	Inhalation of Outdoor Air	2.83E-2	0			1.70E-4	0.07	11.73	0			1.46E-5	1.12E-7	7.71
Acetonitrile	Inhalation of Outdoor Air	3.51E-2	0			2.12E-4	0.01	2.18	0			1.81E-5		
Acrolein	Inhalation of Outdoor Air	3.52E-4	0			2.12E-6	0.37	65.72	0			1.82E-7		
Acrylonitrile	Inhalation of Outdoor Air	2.68E-4	0			1.62E-6	<0.01	0.50	0			1.39E-7	3.30E-8	2.26
Aldrin	Inhalation of Outdoor Air	1.76E-7	0			1.06E-9			0			9.13E-11	1.56E-9	0.11
alpha-BHC	Inhalation of Outdoor Air	3.21E-7	0			1.93E-9			0			1.66E-10	1.04E-9	0.07
Aluminum	Ingestion of Soil	6.34E+4	0			9.18E-3	<0.01	1.62	0			7.87E-4		
Antimony	Ingestion of Soil	4.05E+0	0			5.87E-7	<0.01	0.26	0			5.03E-8		
Arsenic	Inhalation of Outdoor Air	2.40E-6	0			1.44E-8			0			1.24E-9	1.86E-8	1.28
Benzene	Inhalation of Outdoor Air	4.01E-3	0			2.42E-5	<0.01	0.25	0			2.07E-6	6.02E-8	4.12
Benzyl Chloride	Inhalation of Outdoor Air	3.14E-4	0			1.89E-6			0			1.62E-7	2.76E-8	1.89
Beryllium	Inhalation of Outdoor Air	3.45E-7	0			2.08E-9	<0.01	0.00	0			1.78E-10	1.50E-9	0.10
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.94E-5	0			2.37E-7	<0.01	0.01	0			2.03E-8	1.71E-10	0.01

Table C-6
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Bromomethane	Inhalation of Outdoor Air	2.14E-4	0			1.29E-6	<0.01	0.16	0			1.10E-7		
Cadmium	Inhalation of Outdoor Air	2.21E-6	0			1.33E-8	<0.01	0.09	0			1.14E-9	7.21E-9	0.49
Carbon Tetrachloride	Inhalation of Outdoor Air	6.91E-4	0			4.17E-6	<0.01	1.29	0			3.57E-7	1.87E-8	1.28
Chloroethane	Inhalation of Outdoor Air	1.36E-4	0			8.23E-7	<0.01	0.00	0			7.06E-8		
Chloroform	Inhalation of Outdoor Air	2.21E-4	0			1.33E-6	<0.01	0.00	0			1.14E-7	9.22E-9	0.63
Chloromethane	Inhalation of Outdoor Air	1.73E-3	0			1.04E-5	<0.01	0.02	0			8.96E-7	5.64E-9	0.39
Chromium	Ingestion of Soil	4.38E+1	0			6.34E-6	<0.01	0.00	0			5.43E-7		
Dieldrin	Inhalation of Outdoor Air	2.39E-7	0			1.44E-9			0			1.23E-10	1.99E-9	0.14
Formaldehyde	Inhalation of Outdoor Air	1.92E-3	0			1.16E-5	0.01	2.39	0			9.97E-7	4.53E-8	3.10
gamma-BHC	Inhalation of Outdoor Air	2.83E-7	0			1.71E-9			0			1.46E-10	1.61E-10	0.01
Heptachlor epoxide	Inhalation of Outdoor Air	2.00E-7	0			1.21E-9			0			1.03E-10	9.45E-10	0.06
Heptachlor	Inhalation of Outdoor Air	2.12E-7	0			1.28E-9			0			1.09E-10	5.00E-10	0.03
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.39E-3	0			8.43E-6			0			7.22E-7	5.56E-8	3.81
Hydrochloric Acid	Inhalation of Outdoor Air	3.42E-3	0			2.06E-5	<0.01	0.64	0			1.77E-6		
Mercury	Inhalation of Outdoor Air	1.03E-5	0			6.24E-8	<0.01	0.13	0			5.35E-9		
Methylene Chloride	Inhalation of Outdoor Air	1.96E-2	0			1.18E-4	<0.01	0.02	0			1.01E-5	1.66E-8	1.14
Naphthalene	Inhalation of Outdoor Air	3.42E-4	0			2.06E-6	<0.01	0.43	0			1.77E-7		
PM-10	Inhalation of Outdoor Air	8.67E-2	0			5.23E-4	0.04	6.47	0			4.48E-5		
Propylene	Inhalation of Outdoor Air	4.32E-3	0			2.60E-5	<0.01	0.01	0			2.23E-6		
Tetrachloroethylene	Inhalation of Outdoor Air	1.23E-3	0			7.45E-6			0			6.39E-7	1.29E-9	0.09
Toluene	Inhalation of Outdoor Air	2.43E-2	0			1.46E-4	<0.01	0.23	0			1.25E-5		
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	6.84E-2	0			9.90E-9			0			8.49E-10	6.20E-9	0.42
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	2.44E-4	0			3.54E-11			0			3.04E-12	4.56E-7	31.17
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.11E-9	0			6.74E-12			0			5.77E-13	8.66E-8	5.93
Trichloroethylene	Inhalation of Outdoor Air	1.97E-3	0			1.18E-5			0			1.01E-6	6.06E-9	0.41

Table C-6
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vanadium	Ingestion of Soil	2.34E+2	0			3.39E-5	<0.01	0.86	0			2.91E-6		
Vinyl Acetate	Inhalation of Outdoor Air	6.78E-3	0			4.09E-5	<0.01	0.13	0			3.50E-6		
Vinyl Chloride	Inhalation of Outdoor Air	9.54E-5	0			5.76E-7			0			4.93E-8	1.48E-8	1.01
Total Risk:				0	0.0		0.567	100.0			0.0		1.46E-6	100.0

Table C-7
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.32E-4	0			2.60E-6			0			1.11E-6	2.26E-7	3.10
1,1,2-Trichloroethane	Inhalation of Outdoor Air	1.08E-4	0			6.57E-7			0			2.81E-7	1.57E-8	0.22
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.14E-4	0			6.91E-7			0			2.96E-7	5.18E-8	0.71
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.11E-3	0			1.27E-5	<0.01	1.31	0			5.46E-6		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.63E-4	0			9.86E-7	0.02	3.05	0			4.22E-7	3.25E-7	4.45
1,2-Dichloroethane	Inhalation of Outdoor Air	1.78E-4	0			1.07E-6			0			4.62E-7	4.20E-8	0.57
1,2-Dichloropropane	Inhalation of Outdoor Air	9.98E-5	0			6.02E-7	<0.01	0.09	0			2.58E-7		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.46E-4	0			3.89E-6	<0.01	0.40	0			1.67E-6		
1,3-Butadiene	Inhalation of Outdoor Air	5.91E-4	0			3.56E-6			0			1.52E-6	1.49E-6	20.49
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.38E-3	0			8.36E-6	<0.01	0.01	0			3.58E-6	1.43E-7	1.96
1,4-Dioxane	Inhalation of Outdoor Air	8.61E-4	0			5.20E-6	<0.01	0.00	0			2.22E-6	6.01E-8	0.82
2-Propanol	Inhalation of Outdoor Air	9.92E-3	0			5.98E-5	<0.01	0.01	0			2.56E-5		
Acetaldehyde	Inhalation of Outdoor Air	2.83E-2	0			1.70E-4	0.07	11.73	0			7.32E-5	5.64E-7	7.71
Acetonitrile	Inhalation of Outdoor Air	3.51E-2	0			2.12E-4	0.01	2.18	0			9.08E-5		
Acrolein	Inhalation of Outdoor Air	3.52E-4	0			2.12E-6	0.37	65.72	0			9.12E-7		
Acrylonitrile	Inhalation of Outdoor Air	2.68E-4	0			1.62E-6	<0.01	0.50	0			6.95E-7	1.65E-7	2.26
Aldrin	Inhalation of Outdoor Air	1.76E-7	0			1.06E-9			0			4.56E-10	7.83E-9	0.11
alpha-BHC	Inhalation of Outdoor Air	3.21E-7	0			1.93E-9			0			8.30E-10	5.23E-9	0.07
Aluminum	Ingestion of Soil	6.34E+4	0			9.18E-3	<0.01	1.62	0			3.93E-3		
Antimony	Ingestion of Soil	4.05E+0	0			5.87E-7	<0.01	0.26	0			2.51E-7		
Arsenic	Inhalation of Outdoor Air	2.40E-6	0			1.44E-8			0			6.20E-9	9.34E-8	1.28
Benzene	Inhalation of Outdoor Air	4.01E-3	0			2.42E-5	<0.01	0.25	0			1.03E-5	3.01E-7	4.12
Benzyl Chloride	Inhalation of Outdoor Air	3.14E-4	0			1.89E-6			0			8.12E-7	1.38E-7	1.89
Beryllium	Inhalation of Outdoor Air	3.45E-7	0			2.08E-9	<0.01	0.00	0			8.93E-10	7.50E-9	0.10
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.94E-5	0			2.37E-7	<0.01	0.01	0			1.01E-7	8.56E-10	0.01

Table C-7
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Bromomethane	Inhalation of Outdoor Air	2.14E-4	0			1.29E-6	<0.01	0.16	0			5.53E-7		
Cadmium	Inhalation of Outdoor Air	2.21E-6	0			1.33E-8	<0.01	0.09	0			5.72E-9	3.60E-8	0.49
Carbon Tetrachloride	Inhalation of Outdoor Air	6.91E-4	0			4.17E-6	<0.01	1.29	0			1.78E-6	9.38E-8	1.28
Chloroethane	Inhalation of Outdoor Air	1.36E-4	0			8.23E-7	<0.01	0.00	0			3.53E-7		
Chloroform	Inhalation of Outdoor Air	2.21E-4	0			1.33E-6	<0.01	0.00	0			5.73E-7	4.61E-8	0.63
Chloromethane	Inhalation of Outdoor Air	1.73E-3	0			1.04E-5	<0.01	0.02	0			4.48E-6	2.82E-8	0.39
Chromium	Ingestion of Soil	4.38E+1	0			6.34E-6	<0.01	0.00	0			2.71E-6		
Dieldrin	Inhalation of Outdoor Air	2.39E-7	0			1.44E-9			0			6.18E-10	9.95E-9	0.14
Formaldehyde	Inhalation of Outdoor Air	1.92E-3	0			1.16E-5	0.01	2.39	0			4.98E-6	2.26E-7	3.10
gamma-BHC	Inhalation of Outdoor Air	2.83E-7	0			1.71E-9			0			7.34E-10	8.07E-10	0.01
Heptachlor epoxide	Inhalation of Outdoor Air	2.00E-7	0			1.21E-9			0			5.19E-10	4.72E-9	0.06
Heptachlor	Inhalation of Outdoor Air	2.12E-7	0			1.28E-9			0			5.49E-10	2.50E-9	0.03
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.39E-3	0			8.43E-6			0			3.61E-6	2.78E-7	3.81
Hydrochloric Acid	Inhalation of Outdoor Air	3.42E-3	0			2.06E-5	<0.01	0.64	0			8.85E-6		
Mercury	Inhalation of Outdoor Air	1.03E-5	0			6.24E-8	<0.01	0.13	0			2.67E-8		
Methylene Chloride	Inhalation of Outdoor Air	1.96E-2	0			1.18E-4	<0.01	0.02	0			5.07E-5	8.34E-8	1.14
Naphthalene	Inhalation of Outdoor Air	3.42E-4	0			2.06E-6	<0.01	0.43	0			8.85E-7		
PM-10	Inhalation of Outdoor Air	8.67E-2	0			5.23E-4	0.04	6.47	0			2.24E-4		
Propylene	Inhalation of Outdoor Air	4.32E-3	0			2.60E-5	<0.01	0.01	0			1.11E-5		
Tetrachloroethylene	Inhalation of Outdoor Air	1.23E-3	0			7.45E-6			0			3.19E-6	6.48E-9	0.09
Toluene	Inhalation of Outdoor Air	2.43E-2	0			1.46E-4	<0.01	0.23	0			6.29E-5		
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	6.84E-2	0			9.90E-9			0			4.24E-9	3.10E-8	0.42
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	2.44E-4	0			3.54E-11			0			1.52E-11	2.28E-6	31.17
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.11E-9	0			6.74E-12			0			2.88E-12	4.33E-7	5.93
Trichloroethylene	Inhalation of Outdoor Air	1.97E-3	0			1.18E-5			0			5.09E-6	3.03E-8	0.41

**Table C-7
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway**

Scenario: Recreational Golfer Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vanadium	Ingestion of Soil	2.34E+2	0			3.39E-5	<0.01	0.86	0			1.45E-5		
Vinyl Acetate	Inhalation of Outdoor Air	6.78E-3	0			4.09E-5	<0.01	0.13	0			1.75E-5		
Vinyl Chloride	Inhalation of Outdoor Air	9.54E-5	0			5.76E-7			0			2.46E-7	7.40E-8	1.01
Total Risk:				0	0.0		0.567	100.0			0.0		7.31E-6	100.0

Table C-8
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.21E-4	0			3.14E-6			0			1.34E-7	2.73E-8	2.15
1,1,2-Trichloroethane	Inhalation of Outdoor Air	1.08E-4	0			6.57E-7			0			2.81E-8	1.57E-9	0.12
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.32E-4	0			7.97E-7			0			3.41E-8	5.97E-9	0.47
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.46E-3	0			1.49E-5	<0.01	1.15	0			6.38E-7		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.86E-4	0			1.12E-6	0.02	2.60	0			4.82E-8	3.71E-8	2.91
1,2-Dichloroethane	Inhalation of Outdoor Air	2.04E-4	0			1.23E-6			0			5.28E-8	4.80E-9	0.38
1,2-Dichloropropane	Inhalation of Outdoor Air	1.12E-4	0			6.77E-7	<0.01	0.08	0			2.90E-8		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	7.56E-4	0			4.56E-6	<0.01	0.35	0			1.95E-7		
1,3-Butadiene	Inhalation of Outdoor Air	7.45E-4	0			4.50E-6			0			1.92E-7	1.89E-7	14.84
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.71E-3	0			1.03E-5	<0.01	0.01	0			4.42E-7	1.76E-8	1.39
1,4-Dioxane	Inhalation of Outdoor Air	9.84E-4	0			5.94E-6	<0.01	0.00	0			2.54E-7	6.87E-9	0.54
2-Propanol	Inhalation of Outdoor Air	1.11E-2	0			6.71E-5	<0.01	0.00	0			2.87E-6		
Acetaldehyde	Inhalation of Outdoor Air	5.21E-2	0			3.14E-4	0.12	16.17	0			1.34E-5	1.03E-7	8.16
Acetonitrile	Inhalation of Outdoor Air	1.26E-1	0			7.65E-4	0.04	5.90	0			3.28E-5		
Acrolein	Inhalation of Outdoor Air	4.26E-4	0			2.57E-6	0.45	59.44	0			1.10E-7		
Acrylonitrile	Inhalation of Outdoor Air	3.23E-4	0			1.95E-6	<0.01	0.45	0			8.36E-8	1.98E-8	1.56
Aldrin	Inhalation of Outdoor Air	2.43E-7	0			1.46E-9			0			6.29E-11	1.07E-9	0.08
alpha-BHC	Inhalation of Outdoor Air	4.41E-7	0			2.66E-9			0			1.14E-10	7.19E-10	0.06
Aluminum	Ingestion of Soil	7.71E+4	0			1.11E-2	0.01	1.47	0			4.78E-4		
Antimony	Ingestion of Soil	5.80E+0	0			8.41E-7	<0.01	0.28	0			3.60E-8		
Arsenic	Inhalation of Outdoor Air	3.22E-6	0			1.94E-8			0			8.34E-10	1.25E-8	0.99
Benzene	Inhalation of Outdoor Air	4.51E-3	0			2.72E-5	<0.01	0.21	0			1.16E-6	3.39E-8	2.66
Benzyl Chloride	Inhalation of Outdoor Air	4.00E-4	0			2.41E-6			0			1.03E-7	1.75E-8	1.38
Beryllium	Inhalation of Outdoor Air	4.27E-7	0			2.57E-9	<0.01	0.00	0			1.10E-10	9.28E-10	0.07
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	4.55E-5	0			2.74E-7	<0.01	0.01	0			1.17E-8	9.89E-11	0.01

Table C-8
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Bromomethane	Inhalation of Outdoor Air	2.89E-4	0			1.74E-6	<0.01	0.16	0			7.47E-8		
Cadmium	Inhalation of Outdoor Air	2.66E-6	0			1.60E-8	<0.01	0.08	0			6.88E-10	4.33E-9	0.34
Carbon Tetrachloride	Inhalation of Outdoor Air	7.29E-4	0			4.40E-6	<0.01	1.02	0			1.88E-7	9.91E-9	0.78
Chloroethane	Inhalation of Outdoor Air	1.61E-4	0			9.74E-7	<0.01	0.00	0			4.17E-8		
Chloroform	Inhalation of Outdoor Air	2.44E-4	0			1.47E-6	<0.01	0.00	0			6.32E-8	5.08E-9	0.40
Chloromethane	Inhalation of Outdoor Air	1.82E-3	0			1.10E-5	<0.01	0.02	0			4.71E-7	2.97E-9	0.23
Chromium	Ingestion of Soil	5.71E+1	0			8.27E-6	<0.01	0.00	0			3.54E-7		
Dieldrin	Inhalation of Outdoor Air	2.95E-7	0			1.78E-9			0			7.63E-11	1.22E-9	0.10
Formaldehyde	Inhalation of Outdoor Air	2.70E-3	0			1.63E-5	0.02	2.51	0			6.99E-7	3.18E-8	2.50
gamma-BHC	Inhalation of Outdoor Air	3.77E-7	0			2.27E-9			0			9.76E-11	1.07E-10	0.01
Heptachlor epoxide	Inhalation of Outdoor Air	2.29E-7	0			1.38E-9			0			5.93E-11	5.40E-10	0.04
Heptachlor	Inhalation of Outdoor Air	2.73E-7	0			1.65E-9			0			7.07E-11	3.21E-10	0.03
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.74E-3	0			1.05E-5			0			4.51E-7	3.47E-8	2.73
Hydrochloric Acid	Inhalation of Outdoor Air	4.43E-3	0			2.67E-5	<0.01	0.62	0			1.14E-6		
Mercury	Inhalation of Outdoor Air	1.36E-5	0			8.22E-8	<0.01	0.13	0			3.52E-9		
Methylene Chloride	Inhalation of Outdoor Air	3.81E-2	0			2.30E-4	<0.01	0.04	0			9.86E-6	1.62E-8	1.27
Naphthalene	Inhalation of Outdoor Air	3.79E-4	0			2.29E-6	<0.01	0.35	0			9.82E-8		
PM-10	Inhalation of Outdoor Air	1.04E-1	0			6.28E-4	0.04	5.81	0			2.69E-5		
Propylene	Inhalation of Outdoor Air	7.32E-3	0			4.42E-5	<0.01	0.01	0			1.89E-6		
Tetrachloroethylene	Inhalation of Outdoor Air	1.52E-3	0			9.21E-6			0			3.94E-7	8.01E-10	0.06
Toluene	Inhalation of Outdoor Air	2.81E-2	0			1.69E-4	<0.01	0.20	0			7.26E-6		
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	7.69E-2	0			1.11E-8			0			4.77E-10	3.48E-9	0.27
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	6.63E-4	0			9.60E-11			0			4.11E-12	6.17E-7	48.45
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.33E-9	0			8.05E-12			0			3.45E-13	5.17E-8	4.06
Trichloroethylene	Inhalation of Outdoor Air	2.32E-3	0			1.40E-5			0			6.00E-7	3.57E-9	0.28

**Table C-8
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway**

Scenario: Recreational Golfer Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vanadium	Ingestion of Soil	2.97E+2	0			4.30E-5	<0.01	0.81	0			1.84E-6		
Vinyl Acetate	Inhalation of Outdoor Air	8.48E-3	0			5.11E-5	<0.01	0.12	0			2.19E-6		
Vinyl Chloride	Inhalation of Outdoor Air	1.11E-4	0			6.71E-7			0			2.87E-8	8.63E-9	0.68
Total Risk:				0	0.0		0.757	100.0			0.0		1.27E-6	100.0

Table C-9
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.21E-4	0			3.14E-6			0			2.69E-7	5.47E-8	2.15
1,1,2-Trichloroethane	Inhalation of Outdoor Air	1.08E-4	0			6.57E-7			0			5.63E-8	3.15E-9	0.12
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.32E-4	0			7.97E-7			0			6.83E-8	1.19E-8	0.47
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.46E-3	0			1.49E-5	<0.01	1.15	0			1.27E-6		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.86E-4	0			1.12E-6	0.02	2.60	0			9.64E-8	7.42E-8	2.91
1,2-Dichloroethane	Inhalation of Outdoor Air	2.04E-4	0			1.23E-6			0			1.05E-7	9.61E-9	0.38
1,2-Dichloropropane	Inhalation of Outdoor Air	1.12E-4	0			6.77E-7	<0.01	0.08	0			5.80E-8		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	7.56E-4	0			4.56E-6	<0.01	0.35	0			3.91E-7		
1,3-Butadiene	Inhalation of Outdoor Air	7.45E-4	0			4.50E-6			0			3.85E-7	3.78E-7	14.84
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.71E-3	0			1.03E-5	<0.01	0.01	0			8.84E-7	3.53E-8	1.39
1,4-Dioxane	Inhalation of Outdoor Air	9.84E-4	0			5.94E-6	<0.01	0.00	0			5.09E-7	1.37E-8	0.54
2-Propanol	Inhalation of Outdoor Air	1.11E-2	0			6.71E-5	<0.01	0.00	0			5.75E-6		
Acetaldehyde	Inhalation of Outdoor Air	5.21E-2	0			3.14E-4	0.12	16.17	0			2.69E-5	2.07E-7	8.16
Acetonitrile	Inhalation of Outdoor Air	1.26E-1	0			7.65E-4	0.04	5.90	0			6.56E-5		
Acrolein	Inhalation of Outdoor Air	4.26E-4	0			2.57E-6	0.45	59.44	0			2.20E-7		
Acrylonitrile	Inhalation of Outdoor Air	3.23E-4	0			1.95E-6	<0.01	0.45	0			1.67E-7	3.97E-8	1.56
Aldrin	Inhalation of Outdoor Air	2.43E-7	0			1.46E-9			0			1.25E-10	2.15E-9	0.08
alpha-BHC	Inhalation of Outdoor Air	4.41E-7	0			2.66E-9			0			2.28E-10	1.43E-9	0.06
Aluminum	Ingestion of Soil	7.71E+4	0			1.11E-2	0.01	1.47	0			9.57E-4		
Antimony	Ingestion of Soil	5.80E+0	0			8.41E-7	<0.01	0.28	0			7.21E-8		
Arsenic	Inhalation of Outdoor Air	3.22E-6	0			1.94E-8			0			1.66E-9	2.51E-8	0.99
Benzene	Inhalation of Outdoor Air	4.51E-3	0			2.72E-5	<0.01	0.21	0			2.33E-6	6.79E-8	2.66
Benzyl Chloride	Inhalation of Outdoor Air	4.00E-4	0			2.41E-6			0			2.07E-7	3.51E-8	1.38
Beryllium	Inhalation of Outdoor Air	4.27E-7	0			2.57E-9	<0.01	0.00	0			2.21E-10	1.85E-9	0.07
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	4.55E-5	0			2.74E-7	<0.01	0.01	0			2.35E-8	1.97E-10	0.01

Table C-9
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Bromomethane	Inhalation of Outdoor Air	2.89E-4	0			1.74E-6	<0.01	0.16	0			1.49E-7		
Cadmium	Inhalation of Outdoor Air	2.66E-6	0			1.60E-8	<0.01	0.08	0			1.37E-9	8.67E-9	0.34
Carbon Tetrachloride	Inhalation of Outdoor Air	7.29E-4	0			4.40E-6	<0.01	1.02	0			3.77E-7	1.98E-8	0.78
Chloroethane	Inhalation of Outdoor Air	1.61E-4	0			9.74E-7	<0.01	0.00	0			8.35E-8		
Chloroform	Inhalation of Outdoor Air	2.44E-4	0			1.47E-6	<0.01	0.00	0			1.26E-7	1.01E-8	0.40
Chloromethane	Inhalation of Outdoor Air	1.82E-3	0			1.10E-5	<0.01	0.02	0			9.43E-7	5.94E-9	0.23
Chromium	Ingestion of Soil	5.71E+1	0			8.27E-6	<0.01	0.00	0			7.09E-7		
Dieldrin	Inhalation of Outdoor Air	2.95E-7	0			1.78E-9			0			1.52E-10	2.45E-9	0.10
Formaldehyde	Inhalation of Outdoor Air	2.70E-3	0			1.63E-5	0.02	2.51	0			1.39E-6	6.36E-8	2.50
gamma-BHC	Inhalation of Outdoor Air	3.77E-7	0			2.27E-9			0			1.95E-10	2.14E-10	0.01
Heptachlor epoxide	Inhalation of Outdoor Air	2.29E-7	0			1.38E-9			0			1.18E-10	1.08E-9	0.04
Heptachlor	Inhalation of Outdoor Air	2.73E-7	0			1.65E-9			0			1.41E-10	6.43E-10	0.03
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.74E-3	0			1.05E-5			0			9.03E-7	6.95E-8	2.73
Hydrochloric Acid	Inhalation of Outdoor Air	4.43E-3	0			2.67E-5	<0.01	0.62	0			2.29E-6		
Mercury	Inhalation of Outdoor Air	1.36E-5	0			8.22E-8	<0.01	0.13	0			7.04E-9		
Methylene Chloride	Inhalation of Outdoor Air	3.81E-2	0			2.30E-4	<0.01	0.04	0			1.97E-5	3.24E-8	1.27
Naphthalene	Inhalation of Outdoor Air	3.79E-4	0			2.29E-6	<0.01	0.35	0			1.96E-7		
PM-10	Inhalation of Outdoor Air	1.04E-1	0			6.28E-4	0.04	5.81	0			5.38E-5		
Propylene	Inhalation of Outdoor Air	7.32E-3	0			4.42E-5	<0.01	0.01	0			3.78E-6		
Tetrachloroethylene	Inhalation of Outdoor Air	1.52E-3	0			9.21E-6			0			7.89E-7	1.60E-9	0.06
Toluene	Inhalation of Outdoor Air	2.81E-2	0			1.69E-4	<0.01	0.20	0			1.45E-5		
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	7.69E-2	0			1.11E-8			0			9.55E-10	6.97E-9	0.27
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	6.63E-4	0			9.60E-11			0			8.23E-12	1.23E-6	48.45
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.33E-9	0			8.05E-12			0			6.90E-13	1.03E-7	4.06
Trichloroethylene	Inhalation of Outdoor Air	2.32E-3	0			1.40E-5			0			1.20E-6	7.14E-9	0.28

**Table C-9
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway**

Scenario: Recreational Golfer Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vanadium	Ingestion of Soil	2.97E+2	0			4.30E-5	<0.01	0.81	0			3.68E-6		
Vinyl Acetate	Inhalation of Outdoor Air	8.48E-3	0			5.11E-5	<0.01	0.12	0			4.38E-6		
Vinyl Chloride	Inhalation of Outdoor Air	1.11E-4	0			6.71E-7			0			5.75E-8	1.72E-8	0.68
Total Risk:				0	0.0		0.757	100.0		0.0		2.54E-6		100.0

Table C-10
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.21E-4	0			3.14E-6			0			1.34E-6	2.73E-7	2.15
1,1,2-Trichloroethane	Inhalation of Outdoor Air	1.08E-4	0			6.57E-7			0			2.81E-7	1.57E-8	0.12
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.32E-4	0			7.97E-7			0			3.41E-7	5.97E-8	0.47
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.46E-3	0			1.49E-5	<0.01	1.15	0			6.38E-6		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.86E-4	0			1.12E-6	0.02	2.60	0			4.82E-7	3.71E-7	2.91
1,2-Dichloroethane	Inhalation of Outdoor Air	2.04E-4	0			1.23E-6			0			5.28E-7	4.80E-8	0.38
1,2-Dichloropropane	Inhalation of Outdoor Air	1.12E-4	0			6.77E-7	<0.01	0.08	0			2.90E-7		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	7.56E-4	0			4.56E-6	<0.01	0.35	0			1.95E-6		
1,3-Butadiene	Inhalation of Outdoor Air	7.45E-4	0			4.50E-6			0			1.92E-6	1.89E-6	14.84
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.71E-3	0			1.03E-5	<0.01	0.01	0			4.42E-6	1.76E-7	1.39
1,4-Dioxane	Inhalation of Outdoor Air	9.84E-4	0			5.94E-6	<0.01	0.00	0			2.54E-6	6.87E-8	0.54
2-Propanol	Inhalation of Outdoor Air	1.11E-2	0			6.71E-5	<0.01	0.00	0			2.87E-5		
Acetaldehyde	Inhalation of Outdoor Air	5.21E-2	0			3.14E-4	0.12	16.17	0			1.34E-4	1.03E-6	8.16
Acetonitrile	Inhalation of Outdoor Air	1.26E-1	0			7.65E-4	0.04	5.90	0			3.28E-4		
Acrolein	Inhalation of Outdoor Air	4.26E-4	0			2.57E-6	0.45	59.44	0			1.10E-6		
Acrylonitrile	Inhalation of Outdoor Air	3.23E-4	0			1.95E-6	<0.01	0.45	0			8.36E-7	1.98E-7	1.56
Aldrin	Inhalation of Outdoor Air	2.43E-7	0			1.46E-9			0			6.29E-10	1.07E-8	0.08
alpha-BHC	Inhalation of Outdoor Air	4.41E-7	0			2.66E-9			0			1.14E-9	7.19E-9	0.06
Aluminum	Ingestion of Soil	7.71E+4	0			1.11E-2	0.01	1.47	0			4.78E-3		
Antimony	Ingestion of Soil	5.80E+0	0			8.41E-7	<0.01	0.28	0			3.60E-7		
Arsenic	Inhalation of Outdoor Air	3.22E-6	0			1.94E-8			0			8.34E-9	1.25E-7	0.99
Benzene	Inhalation of Outdoor Air	4.51E-3	0			2.72E-5	<0.01	0.21	0			1.16E-5	3.39E-7	2.66
Benzyl Chloride	Inhalation of Outdoor Air	4.00E-4	0			2.41E-6			0			1.03E-6	1.75E-7	1.38
Beryllium	Inhalation of Outdoor Air	4.27E-7	0			2.57E-9	<0.01	0.00	0			1.10E-9	9.28E-9	0.07
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	4.55E-5	0			2.74E-7	<0.01	0.01	0			1.17E-7	9.89E-10	0.01

Table C-10
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Bromomethane	Inhalation of Outdoor Air	2.89E-4	0			1.74E-6	<0.01	0.16	0			7.47E-7		
Cadmium	Inhalation of Outdoor Air	2.66E-6	0			1.60E-8	<0.01	0.08	0			6.88E-9	4.33E-8	0.34
Carbon Tetrachloride	Inhalation of Outdoor Air	7.29E-4	0			4.40E-6	<0.01	1.02	0			1.88E-6	9.91E-8	0.78
Chloroethane	Inhalation of Outdoor Air	1.61E-4	0			9.74E-7	<0.01	0.00	0			4.17E-7		
Chloroform	Inhalation of Outdoor Air	2.44E-4	0			1.47E-6	<0.01	0.00	0			6.32E-7	5.08E-8	0.40
Chloromethane	Inhalation of Outdoor Air	1.82E-3	0			1.10E-5	<0.01	0.02	0			4.71E-6	2.97E-8	0.23
Chromium	Ingestion of Soil	5.71E+1	0			8.27E-6	<0.01	0.00	0			3.54E-6		
Dieldrin	Inhalation of Outdoor Air	2.95E-7	0			1.78E-9			0			7.63E-10	1.22E-8	0.10
Formaldehyde	Inhalation of Outdoor Air	2.70E-3	0			1.63E-5	0.02	2.51	0			6.99E-6	3.18E-7	2.50
gamma-BHC	Inhalation of Outdoor Air	3.77E-7	0			2.27E-9			0			9.76E-10	1.07E-9	0.01
Heptachlor epoxide	Inhalation of Outdoor Air	2.29E-7	0			1.38E-9			0			5.93E-10	5.40E-9	0.04
Heptachlor	Inhalation of Outdoor Air	2.73E-7	0			1.65E-9			0			7.07E-10	3.21E-9	0.03
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.74E-3	0			1.05E-5			0			4.51E-6	3.47E-7	2.73
Hydrochloric Acid	Inhalation of Outdoor Air	4.43E-3	0			2.67E-5	<0.01	0.62	0			1.14E-5		
Mercury	Inhalation of Outdoor Air	1.36E-5	0			8.22E-8	<0.01	0.13	0			3.52E-8		
Methylene Chloride	Inhalation of Outdoor Air	3.81E-2	0			2.30E-4	<0.01	0.04	0			9.86E-5	1.62E-7	1.27
Naphthalene	Inhalation of Outdoor Air	3.79E-4	0			2.29E-6	<0.01	0.35	0			9.82E-7		
PM-10	Inhalation of Outdoor Air	1.04E-1	0			6.28E-4	0.04	5.81	0			2.69E-4		
Propylene	Inhalation of Outdoor Air	7.32E-3	0			4.42E-5	<0.01	0.01	0			1.89E-5		
Tetrachloroethylene	Inhalation of Outdoor Air	1.52E-3	0			9.21E-6			0			3.94E-6	8.01E-9	0.06
Toluene	Inhalation of Outdoor Air	2.81E-2	0			1.69E-4	<0.01	0.20	0			7.26E-5		
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	7.69E-2	0			1.11E-8			0			4.77E-9	3.48E-8	0.27
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	6.63E-4	0			9.60E-11			0			4.11E-11	6.17E-6	48.45
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.33E-9	0			8.05E-12			0			3.45E-12	5.17E-7	4.06
Trichloroethylene	Inhalation of Outdoor Air	2.32E-3	0			1.40E-5			0			6.00E-6	3.57E-8	0.28

Table C-10
Golf Course
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Recreational Golfer Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vanadium	Ingestion of Soil	2.97E+2	0			4.30E-5	<0.01	0.81	0			1.84E-5		
Vinyl Acetate	Inhalation of Outdoor Air	8.48E-3	0			5.11E-5	<0.01	0.12	0			2.19E-5		
Vinyl Chloride	Inhalation of Outdoor Air	1.11E-4	0			6.71E-7			0			2.87E-7	8.63E-8	0.68
Total Risk:				0	0.0		0.757	100.0			0.0		1.27E-5	100.0

Table C-11
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.12E-4	0			2.69E-5			0			1.15E-6	2.34E-7	2.56
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.12E-4	0			6.73E-6			0			2.88E-7	5.85E-8	0.64
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.25E-4	0			1.46E-5			0			6.29E-7	3.52E-8	0.38
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.25E-4	0			3.67E-6			0			1.57E-7	8.80E-9	0.10
1,1-Dichloroethylene	Inhalation of Indoor Air	1.42E-4	0			9.27E-6			0			3.97E-7	6.95E-8	0.76
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.42E-4	0			2.31E-6			0			9.94E-8	1.73E-8	0.19
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.09E-3	0			1.36E-4	0.08	0.95	0			5.84E-6		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.09E-3	0			3.41E-5	0.02	0.24	0			1.46E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	1.94E-4	0			1.26E-5	0.22	2.64	0			5.42E-7	4.17E-7	4.56
1,2-Dibromoethane	Inhalation of Outdoor Air	1.94E-4	0			3.16E-6	0.06	0.66	0			1.35E-7	1.04E-7	1.14
1,2-Dichloroethane	Inhalation of Indoor Air	1.94E-4	0			1.27E-5			0			5.45E-7	4.96E-8	0.54
1,2-Dichloroethane	Inhalation of Outdoor Air	1.94E-4	0			3.17E-6			0			1.36E-7	1.24E-8	0.14
1,2-Dichloropropane	Inhalation of Indoor Air	1.79E-4	0			1.17E-5	0.01	0.12	0			5.01E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.79E-4	0			2.92E-6	<0.01	0.03	0			1.25E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.14E-4	0			4.00E-5	0.02	0.28	0			1.71E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.14E-4	0			1.00E-5	<0.01	0.07	0			4.29E-7		
1,3-Butadiene	Inhalation of Indoor Air	5.38E-4	0			3.51E-5			0			1.50E-6	1.47E-6	16.11
1,3-Butadiene	Inhalation of Outdoor Air	5.38E-4	0			8.78E-6			0			3.76E-7	3.69E-7	4.03
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.45E-3	0			9.52E-5	<0.01	0.00	0			4.08E-6	1.63E-7	1.78
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.45E-3	0			2.38E-5	<0.01	0.00	0			1.02E-6	4.08E-8	0.45
1,4-Dioxane	Inhalation of Indoor Air	9.56E-4	0			6.23E-5	<0.01	0.00	0			2.67E-6	7.21E-8	0.79
1,4-Dioxane	Inhalation of Outdoor Air	9.56E-4	0			1.55E-5	<0.01	0.00	0			6.68E-7	1.80E-8	0.20
2-Propanol	Inhalation of Indoor Air	9.53E-3	0			6.21E-4	<0.01	0.00	0			2.66E-5		
2-Propanol	Inhalation of Outdoor Air	9.53E-3	0			1.55E-4	<0.01	0.00	0			6.66E-6		
Acetaldehyde	Inhalation of Indoor Air	3.25E-2	0			2.12E-3	0.82	9.81	0			9.09E-5	6.99E-7	7.64
Acetaldehyde	Inhalation of Outdoor Air	3.25E-2	0			5.30E-4	0.21	2.45	0			2.27E-5	1.74E-7	1.91
Acetonitrile	Inhalation of Indoor Air	1.02E-2	0			6.66E-4	0.04	0.46	0			2.85E-5		

Table C-11
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.02E-2	0			1.66E-4	<0.01	0.12	0			7.13E-6		
Acrolein	Inhalation of Indoor Air	3.82E-4	0			2.49E-5	4.4	51.87	0			1.06E-6		
Acrolein	Inhalation of Outdoor Air	3.82E-4	0			6.23E-6	1.1	12.97	0			2.67E-7		
Acrylonitrile	Inhalation of Indoor Air	3.04E-4	0			1.98E-5	0.03	0.41	0			8.51E-7	2.02E-7	2.21
Acrylonitrile	Inhalation of Outdoor Air	3.04E-4	0			4.96E-6	<0.01	0.10	0			2.12E-7	5.06E-8	0.55
Aldrin	Inhalation of Indoor Air	1.66E-7	0			1.08E-8			0			4.66E-10	7.99E-9	0.09
Aldrin	Inhalation of Outdoor Air	1.66E-7	0			2.71E-9			0			1.16E-10	1.99E-9	0.02
alpha-BHC	Inhalation of Indoor Air	2.65E-7	0			1.73E-8			0			7.42E-10	4.67E-9	0.05
alpha-BHC	Inhalation of Outdoor Air	2.65E-7	0			4.33E-9			0			1.85E-10	1.16E-9	0.01
Antimony	Inhalation of Indoor Air	4.98E-5	0			3.24E-6	0.28	3.38	0			1.39E-7		
Antimony	Inhalation of Outdoor Air	4.98E-5	0			8.12E-7	0.07	0.85	0			3.48E-8		
Arsenic	Inhalation of Indoor Air	3.59E-6	0			2.34E-7			0			1.00E-8	1.51E-7	1.65
Arsenic	Inhalation of Outdoor Air	3.59E-6	0			5.86E-8			0			2.51E-9	3.78E-8	0.41
Benzene	Inhalation of Indoor Air	3.99E-3	0			2.60E-4	0.02	0.18	0			1.11E-5	3.24E-7	3.54
Benzene	Inhalation of Outdoor Air	3.99E-3	0			6.51E-5	<0.01	0.05	0			2.79E-6	8.11E-8	0.89
Beryllium	Inhalation of Indoor Air	2.36E-7	0			1.54E-8	<0.01	0.00	0			6.61E-10	5.55E-9	0.06
Beryllium	Inhalation of Outdoor Air	2.36E-7	0			3.85E-9	<0.01	0.00	0			1.65E-10	1.38E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.47E-5	0			2.26E-6	<0.01	0.01	0			9.71E-8	8.15E-10	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.47E-5	0			5.66E-7	<0.01	0.00	0			2.42E-8	2.03E-10	0.00
Bromoform	Inhalation of Indoor Air	6.83E-4	0			4.46E-5			0			1.91E-6	7.36E-9	0.08
Bromoform	Inhalation of Outdoor Air	6.83E-4	0			1.11E-5			0			4.78E-7	1.84E-9	0.02
Bromomethane	Inhalation of Indoor Air	1.79E-4	0			1.16E-5	<0.01	0.10	0			5.00E-7		
Bromomethane	Inhalation of Outdoor Air	1.79E-4	0			2.91E-6	<0.01	0.02	0			1.25E-7		
Cadmium	Inhalation of Indoor Air	1.96E-5	0			1.28E-6	0.05	0.59	0			5.49E-8	3.46E-7	3.78
Cadmium	Inhalation of Outdoor Air	1.96E-5	0			3.20E-7	0.01	0.15	0			1.37E-8	8.66E-8	0.95
Carbon Tetrachloride	Inhalation of Indoor Air	6.59E-4	0			4.30E-5	0.08	0.90	0			1.84E-6	9.68E-8	1.06
Carbon Tetrachloride	Inhalation of Outdoor Air	6.59E-4	0			1.07E-5	0.02	0.22	0			4.61E-7	2.42E-8	0.26

Table C-11
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Indoor Air	1.82E-4	0			1.18E-5	<0.01	0.00	0			5.09E-7		
Chloroethane	Inhalation of Outdoor Air	1.82E-4	0			2.97E-6	<0.01	0.00	0			1.27E-7		
Chloroform	Inhalation of Indoor Air	2.79E-4	0			1.82E-5	<0.01	0.00	0			7.82E-7	6.29E-8	0.69
Chloroform	Inhalation of Outdoor Air	2.79E-4	0			4.56E-6	<0.01	0.00	0			1.95E-7	1.57E-8	0.17
Chloromethane	Inhalation of Indoor Air	1.84E-3	0			1.20E-4	<0.01	0.02	0			5.16E-6	3.25E-8	0.36
Chloromethane	Inhalation of Outdoor Air	1.84E-3	0			3.01E-5	<0.01	0.00	0			1.29E-6	8.13E-9	0.09
Chromium	Ingestion of Indoor Dust	3.31E+1	0			1.29E-5	<0.01	0.00	0			5.55E-7		
Chromium	Ingestion of Soil	3.31E+1	0			3.23E-6	<0.01	0.00	0			1.38E-7		
Dieldrin	Inhalation of Indoor Air	2.16E-7	0			1.40E-8			0			6.04E-10	9.72E-9	0.11
Dieldrin	Inhalation of Outdoor Air	2.16E-7	0			3.52E-9			0			1.51E-10	2.43E-9	0.03
Formaldehyde	Inhalation of Indoor Air	2.69E-3	0			1.76E-4	0.21	2.44	0			7.54E-6	3.43E-7	3.75
Formaldehyde	Inhalation of Outdoor Air	2.69E-3	0			4.40E-5	0.05	0.61	0			1.88E-6	8.58E-8	0.94
gamma-BHC	Inhalation of Indoor Air	3.30E-7	0			2.15E-8			0			9.24E-10	1.01E-9	0.01
gamma-BHC	Inhalation of Outdoor Air	3.30E-7	0			5.39E-9			0			2.31E-10	2.54E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.20E-7	0			1.43E-8			0			6.15E-10	5.60E-9	0.06
Heptachlor epoxide	Inhalation of Outdoor Air	2.20E-7	0			3.59E-9			0			1.53E-10	1.40E-9	0.02
Heptachlor	Inhalation of Indoor Air	2.64E-7	0			1.72E-8			0			7.38E-10	3.35E-9	0.04
Heptachlor	Inhalation of Outdoor Air	2.64E-7	0			4.30E-9			0			1.84E-10	8.39E-10	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	9.36E-4	0			6.10E-5			0			2.61E-6	2.01E-7	2.20
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	9.36E-4	0			1.52E-5			0			6.54E-7	5.04E-8	0.55
Hexachlorobenzene	Inhalation of Indoor Air	3.81E-6	0			2.48E-7			0			1.06E-8	1.71E-8	0.19
Hexachlorobenzene	Inhalation of Outdoor Air	3.81E-6	0			6.21E-8			0			2.66E-9	4.28E-9	0.05
Hydrochloric Acid	Inhalation of Indoor Air	6.29E-3	0			4.10E-4	0.07	0.85	0			1.75E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	6.29E-3	0			1.02E-4	0.02	0.21	0			4.39E-6		
Mercury	Inhalation of Indoor Air	7.32E-6	0			4.78E-7	<0.01	0.07	0			2.04E-8		
Mercury	Inhalation of Outdoor Air	7.32E-6	0			1.19E-7	<0.01	0.02	0			5.12E-9		
Methylene Chloride	Inhalation of Indoor Air	7.45E-3	0			4.86E-4	<0.01	0.01	0			2.08E-5	3.43E-8	0.37

Table C-11
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methylene Chloride	Inhalation of Outdoor Air	7.45E-3	0			1.21E-4	<0.01	0.00	0			5.21E-6	8.57E-9	0.09
Methylisobutylketone	Inhalation of Indoor Air	1.85E-3	0			1.21E-4	<0.01	0.06	0			5.19E-6		
Methylisobutylketone	Inhalation of Outdoor Air	1.85E-3	0			3.03E-5	<0.01	0.02	0			1.29E-6		
Naphthalene	Inhalation of Indoor Air	3.53E-4	0			2.30E-5	0.03	0.32	0			9.87E-7		
Naphthalene	Inhalation of Outdoor Air	3.53E-4	0			5.75E-6	<0.01	0.08	0			2.46E-7		
PM-10	Inhalation of Indoor Air	7.83E-2	0			5.11E-3	0.36	4.26	0			2.19E-4		
PM-10	Inhalation of Outdoor Air	7.83E-2	0			1.27E-3	0.09	1.06	0			5.47E-5		
Propylene	Inhalation of Indoor Air	6.27E-3	0			4.09E-4	<0.01	0.01	0			1.75E-5		
Propylene	Inhalation of Outdoor Air	6.27E-3	0			1.02E-4	<0.01	0.00	0			4.38E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.32E-3	0			8.64E-5			0			3.70E-6	7.52E-9	0.08
Tetrachloroethylene	Inhalation of Outdoor Air	1.32E-3	0			2.16E-5			0			9.26E-7	1.88E-9	0.02
Toluene	Inhalation of Indoor Air	2.52E-2	0			1.64E-3	0.01	0.17	0			7.05E-5		
Toluene	Inhalation of Outdoor Air	2.52E-2	0			4.11E-4	<0.01	0.04	0			1.76E-5		
Total Dioxin/Furans (2,3,7,8-T)	Dermal Contact with Soil	6.96E-5	0			4.09E-11			0			1.75E-12	2.62E-7	2.87
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Indoor Dust	1.67E-4	0			6.55E-11			0			2.80E-12	4.21E-7	4.60
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Soil	6.96E-5	0			6.81E-12			0			2.92E-13	4.38E-8	0.48
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	3.65E-9	0			2.38E-10			0			1.02E-11	1.53E-6	16.71
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	3.65E-9	0			5.95E-11			0			2.55E-12	3.82E-7	4.18
Trichloroethylene	Inhalation of Indoor Air	1.86E-3	0			1.21E-4			0			5.21E-6	3.10E-8	0.34
Trichloroethylene	Inhalation of Outdoor Air	1.86E-3	0			3.04E-5			0			1.30E-6	7.75E-9	0.08
Vinyl Acetate	Inhalation of Indoor Air	6.52E-3	0			4.25E-4	<0.01	0.09	0			1.82E-5		
Vinyl Acetate	Inhalation of Outdoor Air	6.52E-3	0			1.06E-4	<0.01	0.02	0			4.56E-6		
Vinyl Chloride	Inhalation of Indoor Air	1.18E-4	0			7.72E-6			0			3.31E-7	9.93E-8	1.08
Vinyl Chloride	Inhalation of Outdoor Air	1.18E-4	0			1.93E-6			0			8.27E-8	2.48E-8	0.27
Total Risk:				0	0.0		8.41	100.0		0.0		9.16E-6	100.0	

Table C-12
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.12E-4	0			2.69E-5			0			2.30E-6	4.68E-7	2.56
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.12E-4	0			6.73E-6			0			5.77E-7	1.17E-7	0.64
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.25E-4	0			1.46E-5			0			1.25E-6	7.04E-8	0.38
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.25E-4	0			3.67E-6			0			3.14E-7	1.76E-8	0.10
1,1-Dichloroethylene	Inhalation of Indoor Air	1.42E-4	0			9.27E-6			0			7.95E-7	1.39E-7	0.76
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.42E-4	0			2.31E-6			0			1.98E-7	3.47E-8	0.19
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.09E-3	0			1.36E-4	0.08	0.95	0			1.16E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.09E-3	0			3.41E-5	0.02	0.24	0			2.92E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	1.94E-4	0			1.26E-5	0.22	2.64	0			1.08E-6	8.35E-7	4.56
1,2-Dibromoethane	Inhalation of Outdoor Air	1.94E-4	0			3.16E-6	0.06	0.66	0			2.71E-7	2.08E-7	1.14
1,2-Dichloroethane	Inhalation of Indoor Air	1.94E-4	0			1.27E-5			0			1.09E-6	9.92E-8	0.54
1,2-Dichloroethane	Inhalation of Outdoor Air	1.94E-4	0			3.17E-6			0			2.72E-7	2.48E-8	0.14
1,2-Dichloropropane	Inhalation of Indoor Air	1.79E-4	0			1.17E-5	0.01	0.12	0			1.00E-6		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.79E-4	0			2.92E-6	<0.01	0.03	0			2.50E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.14E-4	0			4.00E-5	0.02	0.28	0			3.43E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.14E-4	0			1.00E-5	<0.01	0.07	0			8.58E-7		
1,3-Butadiene	Inhalation of Indoor Air	5.38E-4	0			3.51E-5			0			3.01E-6	2.95E-6	16.11
1,3-Butadiene	Inhalation of Outdoor Air	5.38E-4	0			8.78E-6			0			7.53E-7	7.38E-7	4.03
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.45E-3	0			9.52E-5	<0.01	0.00	0			8.16E-6	3.26E-7	1.78
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.45E-3	0			2.38E-5	<0.01	0.00	0			2.04E-6	8.16E-8	0.45
1,4-Dioxane	Inhalation of Indoor Air	9.56E-4	0			6.23E-5	<0.01	0.00	0			5.34E-6	1.44E-7	0.79
1,4-Dioxane	Inhalation of Outdoor Air	9.56E-4	0			1.55E-5	<0.01	0.00	0			1.33E-6	3.60E-8	0.20
2-Propanol	Inhalation of Indoor Air	9.53E-3	0			6.21E-4	<0.01	0.00	0			5.32E-5		
2-Propanol	Inhalation of Outdoor Air	9.53E-3	0			1.55E-4	<0.01	0.00	0			1.33E-5		
Acetaldehyde	Inhalation of Indoor Air	3.25E-2	0			2.12E-3	0.82	9.81	0			1.81E-4	1.39E-6	7.64
Acetaldehyde	Inhalation of Outdoor Air	3.25E-2	0			5.30E-4	0.21	2.45	0			4.54E-5	3.49E-7	1.91
Acetonitrile	Inhalation of Indoor Air	1.02E-2	0			6.66E-4	0.04	0.46	0			5.71E-5		

Table C-12
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.02E-2	0			1.66E-4	<0.01	0.12	0			1.42E-5		
Acrolein	Inhalation of Indoor Air	3.82E-4	0			2.49E-5	4.4	51.87	0			2.13E-6		
Acrolein	Inhalation of Outdoor Air	3.82E-4	0			6.23E-6	1.1	12.97	0			5.34E-7		
Acrylonitrile	Inhalation of Indoor Air	3.04E-4	0			1.98E-5	0.03	0.41	0			1.70E-6	4.05E-7	2.21
Acrylonitrile	Inhalation of Outdoor Air	3.04E-4	0			4.96E-6	<0.01	0.10	0			4.25E-7	1.01E-7	0.55
Aldrin	Inhalation of Indoor Air	1.66E-7	0			1.08E-8			0			9.32E-10	1.59E-8	0.09
Aldrin	Inhalation of Outdoor Air	1.66E-7	0			2.71E-9			0			2.33E-10	3.99E-9	0.02
alpha-BHC	Inhalation of Indoor Air	2.65E-7	0			1.73E-8			0			1.48E-9	9.35E-9	0.05
alpha-BHC	Inhalation of Outdoor Air	2.65E-7	0			4.33E-9			0			3.71E-10	2.33E-9	0.01
Antimony	Inhalation of Indoor Air	4.98E-5	0			3.24E-6	0.28	3.38	0			2.78E-7		
Antimony	Inhalation of Outdoor Air	4.98E-5	0			8.12E-7	0.07	0.85	0			6.96E-8		
Arsenic	Inhalation of Indoor Air	3.59E-6	0			2.34E-7			0			2.01E-8	3.02E-7	1.65
Arsenic	Inhalation of Outdoor Air	3.59E-6	0			5.86E-8			0			5.02E-9	7.56E-8	0.41
Benzene	Inhalation of Indoor Air	3.99E-3	0			2.60E-4	0.02	0.18	0			2.23E-5	6.49E-7	3.54
Benzene	Inhalation of Outdoor Air	3.99E-3	0			6.51E-5	<0.01	0.05	0			5.58E-6	1.62E-7	0.89
Beryllium	Inhalation of Indoor Air	2.36E-7	0			1.54E-8	<0.01	0.00	0			1.32E-9	1.11E-8	0.06
Beryllium	Inhalation of Outdoor Air	2.36E-7	0			3.85E-9	<0.01	0.00	0			3.30E-10	2.77E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.47E-5	0			2.26E-6	<0.01	0.01	0			1.94E-7	1.63E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.47E-5	0			5.66E-7	<0.01	0.00	0			4.85E-8	4.07E-10	0.00
Bromoform	Inhalation of Indoor Air	6.83E-4	0			4.46E-5			0			3.82E-6	1.47E-8	0.08
Bromoform	Inhalation of Outdoor Air	6.83E-4	0			1.11E-5			0			9.56E-7	3.68E-9	0.02
Bromomethane	Inhalation of Indoor Air	1.79E-4	0			1.16E-5	<0.01	0.10	0			1.00E-6		
Bromomethane	Inhalation of Outdoor Air	1.79E-4	0			2.91E-6	<0.01	0.02	0			2.50E-7		
Cadmium	Inhalation of Indoor Air	1.96E-5	0			1.28E-6	0.05	0.59	0			1.09E-7	6.92E-7	3.78
Cadmium	Inhalation of Outdoor Air	1.96E-5	0			3.20E-7	0.01	0.15	0			2.74E-8	1.73E-7	0.95
Carbon Tetrachloride	Inhalation of Indoor Air	6.59E-4	0			4.30E-5	0.08	0.90	0			3.68E-6	1.93E-7	1.06
Carbon Tetrachloride	Inhalation of Outdoor Air	6.59E-4	0			1.07E-5	0.02	0.22	0			9.22E-7	4.84E-8	0.26

Table C-12
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Indoor Air	1.82E-4	0			1.18E-5	<0.01	0.00	0			1.01E-6		
Chloroethane	Inhalation of Outdoor Air	1.82E-4	0			2.97E-6	<0.01	0.00	0			2.54E-7		
Chloroform	Inhalation of Indoor Air	2.79E-4	0			1.82E-5	<0.01	0.00	0			1.56E-6	1.25E-7	0.69
Chloroform	Inhalation of Outdoor Air	2.79E-4	0			4.56E-6	<0.01	0.00	0			3.91E-7	3.14E-8	0.17
Chloromethane	Inhalation of Indoor Air	1.84E-3	0			1.20E-4	<0.01	0.02	0			1.03E-5	6.50E-8	0.36
Chloromethane	Inhalation of Outdoor Air	1.84E-3	0			3.01E-5	<0.01	0.00	0			2.58E-6	1.62E-8	0.09
Chromium	Ingestion of Indoor Dust	3.31E+1	0			1.29E-5	<0.01	0.00	0			1.11E-6		
Chromium	Ingestion of Soil	3.31E+1	0			3.23E-6	<0.01	0.00	0			2.77E-7		
Dieldrin	Inhalation of Indoor Air	2.16E-7	0			1.40E-8			0			1.20E-9	1.94E-8	0.11
Dieldrin	Inhalation of Outdoor Air	2.16E-7	0			3.52E-9			0			3.02E-10	4.86E-9	0.03
Formaldehyde	Inhalation of Indoor Air	2.69E-3	0			1.76E-4	0.21	2.44	0			1.50E-5	6.86E-7	3.75
Formaldehyde	Inhalation of Outdoor Air	2.69E-3	0			4.40E-5	0.05	0.61	0			3.77E-6	1.71E-7	0.94
gamma-BHC	Inhalation of Indoor Air	3.30E-7	0			2.15E-8			0			1.84E-9	2.03E-9	0.01
gamma-BHC	Inhalation of Outdoor Air	3.30E-7	0			5.39E-9			0			4.62E-10	5.08E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.20E-7	0			1.43E-8			0			1.23E-9	1.12E-8	0.06
Heptachlor epoxide	Inhalation of Outdoor Air	2.20E-7	0			3.59E-9			0			3.07E-10	2.80E-9	0.02
Heptachlor	Inhalation of Indoor Air	2.64E-7	0			1.72E-8			0			1.47E-9	6.71E-9	0.04
Heptachlor	Inhalation of Outdoor Air	2.64E-7	0			4.30E-9			0			3.69E-10	1.67E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	9.36E-4	0			6.10E-5			0			5.23E-6	4.03E-7	2.20
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	9.36E-4	0			1.52E-5			0			1.30E-6	1.00E-7	0.55
Hexachlorobenzene	Inhalation of Indoor Air	3.81E-6	0			2.48E-7			0			2.13E-8	3.43E-8	0.19
Hexachlorobenzene	Inhalation of Outdoor Air	3.81E-6	0			6.21E-8			0			5.32E-9	8.57E-9	0.05
Hydrochloric Acid	Inhalation of Indoor Air	6.29E-3	0			4.10E-4	0.07	0.85	0			3.51E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	6.29E-3	0			1.02E-4	0.02	0.21	0			8.79E-6		
Mercury	Inhalation of Indoor Air	7.32E-6	0			4.78E-7	<0.01	0.07	0			4.09E-8		
Mercury	Inhalation of Outdoor Air	7.32E-6	0			1.19E-7	<0.01	0.02	0			1.02E-8		
Methylene Chloride	Inhalation of Indoor Air	7.45E-3	0			4.86E-4	<0.01	0.01	0			4.17E-5	6.86E-8	0.37

Table C-12
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methylene Chloride	Inhalation of Outdoor Air	7.45E-3	0			1.21E-4	<0.01	0.00	0			1.04E-5	1.71E-8	0.09
Methylisobutylketone	Inhalation of Indoor Air	1.85E-3	0			1.21E-4	<0.01	0.06	0			1.03E-5		
Methylisobutylketone	Inhalation of Outdoor Air	1.85E-3	0			3.03E-5	<0.01	0.02	0			2.59E-6		
Naphthalene	Inhalation of Indoor Air	3.53E-4	0			2.30E-5	0.03	0.32	0			1.97E-6		
Naphthalene	Inhalation of Outdoor Air	3.53E-4	0			5.75E-6	<0.01	0.08	0			4.93E-7		
PM-10	Inhalation of Indoor Air	7.83E-2	0			5.11E-3	0.36	4.26	0			4.38E-4		
PM-10	Inhalation of Outdoor Air	7.83E-2	0			1.27E-3	0.09	1.06	0			1.09E-4		
Propylene	Inhalation of Indoor Air	6.27E-3	0			4.09E-4	<0.01	0.01	0			3.50E-5		
Propylene	Inhalation of Outdoor Air	6.27E-3	0			1.02E-4	<0.01	0.00	0			8.77E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.32E-3	0			8.64E-5			0			7.41E-6	1.50E-8	0.08
Tetrachloroethylene	Inhalation of Outdoor Air	1.32E-3	0			2.16E-5			0			1.85E-6	3.76E-9	0.02
Toluene	Inhalation of Indoor Air	2.52E-2	0			1.64E-3	0.01	0.17	0			1.41E-4		
Toluene	Inhalation of Outdoor Air	2.52E-2	0			4.11E-4	<0.01	0.04	0			3.52E-5		
Total Dioxin/Furans (2,3,7,8-T)	Dermal Contact with Soil	6.96E-5	0			4.09E-11			0			3.50E-12	5.25E-7	2.87
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Indoor Dust	1.67E-4	0			6.55E-11			0			5.61E-12	8.42E-7	4.60
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Soil	6.96E-5	0			6.81E-12			0			5.84E-13	8.76E-8	0.48
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	3.65E-9	0			2.38E-10			0			2.04E-11	3.06E-6	16.71
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	3.65E-9	0			5.95E-11			0			5.10E-12	7.65E-7	4.18
Trichloroethylene	Inhalation of Indoor Air	1.86E-3	0			1.21E-4			0			1.04E-5	6.20E-8	0.34
Trichloroethylene	Inhalation of Outdoor Air	1.86E-3	0			3.04E-5			0			2.60E-6	1.55E-8	0.08
Vinyl Acetate	Inhalation of Indoor Air	6.52E-3	0			4.25E-4	<0.01	0.09	0			3.64E-5		
Vinyl Acetate	Inhalation of Outdoor Air	6.52E-3	0			1.06E-4	<0.01	0.02	0			9.12E-6		
Vinyl Chloride	Inhalation of Indoor Air	1.18E-4	0			7.72E-6			0			6.62E-7	1.98E-7	1.08
Vinyl Chloride	Inhalation of Outdoor Air	1.18E-4	0			1.93E-6			0			1.65E-7	4.96E-8	0.27
Total Risk:				0	0.0		8.41	100.0		0.0		1.83E-5	100.0	

Table C-13
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.12E-4	0			2.69E-5			0			1.15E-5	2.34E-6	2.56
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.12E-4	0			6.73E-6			0			2.88E-6	5.85E-7	0.64
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.25E-4	0			1.46E-5			0			6.29E-6	3.52E-7	0.38
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.25E-4	0			3.67E-6			0			1.57E-6	8.80E-8	0.10
1,1-Dichloroethylene	Inhalation of Indoor Air	1.42E-4	0			9.27E-6			0			3.97E-6	6.95E-7	0.76
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.42E-4	0			2.31E-6			0			9.94E-7	1.73E-7	0.19
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.09E-3	0			1.36E-4	0.08	0.95	0			5.84E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.09E-3	0			3.41E-5	0.02	0.24	0			1.46E-5		
1,2-Dibromoethane	Inhalation of Indoor Air	1.94E-4	0			1.26E-5	0.22	2.64	0			5.42E-6	4.17E-6	4.56
1,2-Dibromoethane	Inhalation of Outdoor Air	1.94E-4	0			3.16E-6	0.06	0.66	0			1.35E-6	1.04E-6	1.14
1,2-Dichloroethane	Inhalation of Indoor Air	1.94E-4	0			1.27E-5			0			5.45E-6	4.96E-7	0.54
1,2-Dichloroethane	Inhalation of Outdoor Air	1.94E-4	0			3.17E-6			0			1.36E-6	1.24E-7	0.14
1,2-Dichloropropane	Inhalation of Indoor Air	1.79E-4	0			1.17E-5	0.01	0.12	0			5.01E-6		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.79E-4	0			2.92E-6	<0.01	0.03	0			1.25E-6		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.14E-4	0			4.00E-5	0.02	0.28	0			1.71E-5		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.14E-4	0			1.00E-5	<0.01	0.07	0			4.29E-6		
1,3-Butadiene	Inhalation of Indoor Air	5.38E-4	0			3.51E-5			0			1.50E-5	1.47E-5	16.11
1,3-Butadiene	Inhalation of Outdoor Air	5.38E-4	0			8.78E-6			0			3.76E-6	3.69E-6	4.03
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.45E-3	0			9.52E-5	<0.01	0.00	0			4.08E-5	1.63E-6	1.78
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.45E-3	0			2.38E-5	<0.01	0.00	0			1.02E-5	4.08E-7	0.45
1,4-Dioxane	Inhalation of Indoor Air	9.56E-4	0			6.23E-5	<0.01	0.00	0			2.67E-5	7.21E-7	0.79
1,4-Dioxane	Inhalation of Outdoor Air	9.56E-4	0			1.55E-5	<0.01	0.00	0			6.68E-6	1.80E-7	0.20
2-Propanol	Inhalation of Indoor Air	9.53E-3	0			6.21E-4	<0.01	0.00	0			2.66E-4		
2-Propanol	Inhalation of Outdoor Air	9.53E-3	0			1.55E-4	<0.01	0.00	0			6.66E-5		
Acetaldehyde	Inhalation of Indoor Air	3.25E-2	0			2.12E-3	0.82	9.81	0			9.09E-4	6.99E-6	7.64
Acetaldehyde	Inhalation of Outdoor Air	3.25E-2	0			5.30E-4	0.21	2.45	0			2.27E-4	1.74E-6	1.91
Acetonitrile	Inhalation of Indoor Air	1.02E-2	0			6.66E-4	0.04	0.46	0			2.85E-4		

Table C-13
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.02E-2	0			1.66E-4	<0.01	0.12	0			7.13E-5		
Acrolein	Inhalation of Indoor Air	3.82E-4	0			2.49E-5	4.4	51.87	0			1.06E-5		
Acrolein	Inhalation of Outdoor Air	3.82E-4	0			6.23E-6	1.1	12.97	0			2.67E-6		
Acrylonitrile	Inhalation of Indoor Air	3.04E-4	0			1.98E-5	0.03	0.41	0			8.51E-6	2.02E-6	2.21
Acrylonitrile	Inhalation of Outdoor Air	3.04E-4	0			4.96E-6	<0.01	0.10	0			2.12E-6	5.06E-7	0.55
Aldrin	Inhalation of Indoor Air	1.66E-7	0			1.08E-8			0			4.66E-9	7.99E-8	0.09
Aldrin	Inhalation of Outdoor Air	1.66E-7	0			2.71E-9			0			1.16E-9	1.99E-8	0.02
alpha-BHC	Inhalation of Indoor Air	2.65E-7	0			1.73E-8			0			7.42E-9	4.67E-8	0.05
alpha-BHC	Inhalation of Outdoor Air	2.65E-7	0			4.33E-9			0			1.85E-9	1.16E-8	0.01
Antimony	Inhalation of Indoor Air	4.98E-5	0			3.24E-6	0.28	3.38	0			1.39E-6		
Antimony	Inhalation of Outdoor Air	4.98E-5	0			8.12E-7	0.07	0.85	0			3.48E-7		
Arsenic	Inhalation of Indoor Air	3.59E-6	0			2.34E-7			0			1.00E-7	1.51E-6	1.65
Arsenic	Inhalation of Outdoor Air	3.59E-6	0			5.86E-8			0			2.51E-8	3.78E-7	0.41
Benzene	Inhalation of Indoor Air	3.99E-3	0			2.60E-4	0.02	0.18	0			1.11E-4	3.24E-6	3.54
Benzene	Inhalation of Outdoor Air	3.99E-3	0			6.51E-5	<0.01	0.05	0			2.79E-5	8.11E-7	0.89
Beryllium	Inhalation of Indoor Air	2.36E-7	0			1.54E-8	<0.01	0.00	0			6.61E-9	5.55E-8	0.06
Beryllium	Inhalation of Outdoor Air	2.36E-7	0			3.85E-9	<0.01	0.00	0			1.65E-9	1.38E-8	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.47E-5	0			2.26E-6	<0.01	0.01	0			9.71E-7	8.15E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.47E-5	0			5.66E-7	<0.01	0.00	0			2.42E-7	2.03E-9	0.00
Bromoform	Inhalation of Indoor Air	6.83E-4	0			4.46E-5			0			1.91E-5	7.36E-8	0.08
Bromoform	Inhalation of Outdoor Air	6.83E-4	0			1.11E-5			0			4.78E-6	1.84E-8	0.02
Bromomethane	Inhalation of Indoor Air	1.79E-4	0			1.16E-5	<0.01	0.10	0			5.00E-6		
Bromomethane	Inhalation of Outdoor Air	1.79E-4	0			2.91E-6	<0.01	0.02	0			1.25E-6		
Cadmium	Inhalation of Indoor Air	1.96E-5	0			1.28E-6	0.05	0.59	0			5.49E-7	3.46E-6	3.78
Cadmium	Inhalation of Outdoor Air	1.96E-5	0			3.20E-7	0.01	0.15	0			1.37E-7	8.66E-7	0.95
Carbon Tetrachloride	Inhalation of Indoor Air	6.59E-4	0			4.30E-5	0.08	0.90	0			1.84E-5	9.68E-7	1.06
Carbon Tetrachloride	Inhalation of Outdoor Air	6.59E-4	0			1.07E-5	0.02	0.22	0			4.61E-6	2.42E-7	0.26

Table C-13
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Indoor Air	1.82E-4	0			1.18E-5	<0.01	0.00	0			5.09E-6		
Chloroethane	Inhalation of Outdoor Air	1.82E-4	0			2.97E-6	<0.01	0.00	0			1.27E-6		
Chloroform	Inhalation of Indoor Air	2.79E-4	0			1.82E-5	<0.01	0.00	0			7.82E-6	6.29E-7	0.69
Chloroform	Inhalation of Outdoor Air	2.79E-4	0			4.56E-6	<0.01	0.00	0			1.95E-6	1.57E-7	0.17
Chloromethane	Inhalation of Indoor Air	1.84E-3	0			1.20E-4	<0.01	0.02	0			5.16E-5	3.25E-7	0.36
Chloromethane	Inhalation of Outdoor Air	1.84E-3	0			3.01E-5	<0.01	0.00	0			1.29E-5	8.13E-8	0.09
Chromium	Ingestion of Indoor Dust	3.31E+1	0			1.29E-5	<0.01	0.00	0			5.55E-6		
Chromium	Ingestion of Soil	3.31E+1	0			3.23E-6	<0.01	0.00	0			1.38E-6		
Dieldrin	Inhalation of Indoor Air	2.16E-7	0			1.40E-8			0			6.04E-9	9.72E-8	0.11
Dieldrin	Inhalation of Outdoor Air	2.16E-7	0			3.52E-9			0			1.51E-9	2.43E-8	0.03
Formaldehyde	Inhalation of Indoor Air	2.69E-3	0			1.76E-4	0.21	2.44	0			7.54E-5	3.43E-6	3.75
Formaldehyde	Inhalation of Outdoor Air	2.69E-3	0			4.40E-5	0.05	0.61	0			1.88E-5	8.58E-7	0.94
gamma-BHC	Inhalation of Indoor Air	3.30E-7	0			2.15E-8			0			9.24E-9	1.01E-8	0.01
gamma-BHC	Inhalation of Outdoor Air	3.30E-7	0			5.39E-9			0			2.31E-9	2.54E-9	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.20E-7	0			1.43E-8			0			6.15E-9	5.60E-8	0.06
Heptachlor epoxide	Inhalation of Outdoor Air	2.20E-7	0			3.59E-9			0			1.53E-9	1.40E-8	0.02
Heptachlor	Inhalation of Indoor Air	2.64E-7	0			1.72E-8			0			7.38E-9	3.35E-8	0.04
Heptachlor	Inhalation of Outdoor Air	2.64E-7	0			4.30E-9			0			1.84E-9	8.39E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	9.36E-4	0			6.10E-5			0			2.61E-5	2.01E-6	2.20
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	9.36E-4	0			1.52E-5			0			6.54E-6	5.04E-7	0.55
Hexachlorobenzene	Inhalation of Indoor Air	3.81E-6	0			2.48E-7			0			1.06E-7	1.71E-7	0.19
Hexachlorobenzene	Inhalation of Outdoor Air	3.81E-6	0			6.21E-8			0			2.66E-8	4.28E-8	0.05
Hydrochloric Acid	Inhalation of Indoor Air	6.29E-3	0			4.10E-4	0.07	0.85	0			1.75E-4		
Hydrochloric Acid	Inhalation of Outdoor Air	6.29E-3	0			1.02E-4	0.02	0.21	0			4.39E-5		
Mercury	Inhalation of Indoor Air	7.32E-6	0			4.78E-7	<0.01	0.07	0			2.04E-7		
Mercury	Inhalation of Outdoor Air	7.32E-6	0			1.19E-7	<0.01	0.02	0			5.12E-8		
Methylene Chloride	Inhalation of Indoor Air	7.45E-3	0			4.86E-4	<0.01	0.01	0			2.08E-4	3.43E-7	0.37

Table C-13
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methylene Chloride	Inhalation of Outdoor Air	7.45E-3	0			1.21E-4	<0.01	0.00	0			5.21E-5	8.57E-8	0.09
Methylisobutylketone	Inhalation of Indoor Air	1.85E-3	0			1.21E-4	<0.01	0.06	0			5.19E-5		
Methylisobutylketone	Inhalation of Outdoor Air	1.85E-3	0			3.03E-5	<0.01	0.02	0			1.29E-5		
Naphthalene	Inhalation of Indoor Air	3.53E-4	0			2.30E-5	0.03	0.32	0			9.87E-6		
Naphthalene	Inhalation of Outdoor Air	3.53E-4	0			5.75E-6	<0.01	0.08	0			2.46E-6		
PM-10	Inhalation of Indoor Air	7.83E-2	0			5.11E-3	0.36	4.26	0			2.19E-3		
PM-10	Inhalation of Outdoor Air	7.83E-2	0			1.27E-3	0.09	1.06	0			5.47E-4		
Propylene	Inhalation of Indoor Air	6.27E-3	0			4.09E-4	<0.01	0.01	0			1.75E-4		
Propylene	Inhalation of Outdoor Air	6.27E-3	0			1.02E-4	<0.01	0.00	0			4.38E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.32E-3	0			8.64E-5			0			3.70E-5	7.52E-8	0.08
Tetrachloroethylene	Inhalation of Outdoor Air	1.32E-3	0			2.16E-5			0			9.26E-6	1.88E-8	0.02
Toluene	Inhalation of Indoor Air	2.52E-2	0			1.64E-3	0.01	0.17	0			7.05E-4		
Toluene	Inhalation of Outdoor Air	2.52E-2	0			4.11E-4	<0.01	0.04	0			1.76E-4		
Total Dioxin/Furans (2,3,7,8-T)	Dermal Contact with Soil	6.96E-5	0			4.09E-11			0			1.75E-11	2.62E-6	2.87
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Indoor Dust	1.67E-4	0			6.55E-11			0			2.80E-11	4.21E-6	4.60
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Soil	6.96E-5	0			6.81E-12			0			2.92E-12	4.38E-7	0.48
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	3.65E-9	0			2.38E-10			0			1.02E-10	1.53E-5	16.71
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	3.65E-9	0			5.95E-11			0			2.55E-11	3.82E-6	4.18
Trichloroethylene	Inhalation of Indoor Air	1.86E-3	0			1.21E-4			0			5.21E-5	3.10E-7	0.34
Trichloroethylene	Inhalation of Outdoor Air	1.86E-3	0			3.04E-5			0			1.30E-5	7.75E-8	0.08
Vinyl Acetate	Inhalation of Indoor Air	6.52E-3	0			4.25E-4	<0.01	0.09	0			1.82E-4		
Vinyl Acetate	Inhalation of Outdoor Air	6.52E-3	0			1.06E-4	<0.01	0.02	0			4.56E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.18E-4	0			7.72E-6			0			3.31E-6	9.93E-7	1.08
Vinyl Chloride	Inhalation of Outdoor Air	1.18E-4	0			1.93E-6			0			8.27E-7	2.48E-7	0.27
Total Risk:				0	0.0		8.41	100.0		0.0		9.16E-5	100.0	

Table C-14
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.83E-4	0			3.15E-5			0			1.35E-6	2.74E-7	2.37
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.83E-4	0			7.88E-6			0			3.37E-7	6.86E-8	0.59
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.64E-4	0			1.72E-5			0			7.38E-7	4.13E-8	0.36
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.64E-4	0			4.30E-6			0			1.84E-7	1.03E-8	0.09
1,1-Dichloroethylene	Inhalation of Indoor Air	1.60E-4	0			1.04E-5			0			4.47E-7	7.83E-8	0.68
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.60E-4	0			2.61E-6			0			1.11E-7	1.95E-8	0.17
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.34E-3	0			1.52E-4	0.09	0.70	0			6.54E-6		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.34E-3	0			3.82E-5	0.02	0.17	0			1.63E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	2.37E-4	0			1.54E-5	0.27	2.11	0			6.63E-7	5.11E-7	4.41
1,2-Dibromoethane	Inhalation of Outdoor Air	2.37E-4	0			3.87E-6	0.07	0.53	0			1.65E-7	1.27E-7	1.10
1,2-Dichloroethane	Inhalation of Indoor Air	2.16E-4	0			1.41E-5			0			6.04E-7	5.50E-8	0.47
1,2-Dichloroethane	Inhalation of Outdoor Air	2.16E-4	0			3.52E-6			0			1.51E-7	1.37E-8	0.12
1,2-Dichloropropane	Inhalation of Indoor Air	2.26E-4	0			1.47E-5	0.01	0.10	0			6.32E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	2.26E-4	0			3.68E-6	<0.01	0.03	0			1.58E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.92E-4	0			4.51E-5	0.03	0.21	0			1.93E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.92E-4	0			1.12E-5	<0.01	0.05	0			4.83E-7		
1,3-Butadiene	Inhalation of Indoor Air	6.21E-4	0			4.05E-5			0			1.73E-6	1.70E-6	14.68
1,3-Butadiene	Inhalation of Outdoor Air	6.21E-4	0			1.01E-5			0			4.34E-7	4.25E-7	3.67
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.73E-3	0			1.13E-4	<0.01	0.00	0			4.85E-6	1.94E-7	1.67
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.73E-3	0			2.83E-5	<0.01	0.00	0			1.21E-6	4.85E-8	0.42
1,4-Dioxane	Inhalation of Indoor Air	1.07E-3	0			7.02E-5	<0.01	0.00	0			3.00E-6	8.12E-8	0.70
1,4-Dioxane	Inhalation of Outdoor Air	1.07E-3	0			1.75E-5	<0.01	0.00	0			7.52E-7	2.03E-8	0.18
2-Propanol	Inhalation of Indoor Air	1.03E-2	0			6.78E-4	<0.01	0.00	0			2.90E-5		
2-Propanol	Inhalation of Outdoor Air	1.03E-2	0			1.69E-4	<0.01	0.00	0			7.26E-6		
Acetaldehyde	Inhalation of Indoor Air	6.15E-2	0			4.01E-3	1.6	12.18	0			1.72E-4	1.32E-6	11.42
Acetaldehyde	Inhalation of Outdoor Air	6.15E-2	0			1.00E-3	0.39	3.04	0			4.30E-5	3.31E-7	2.85
Acetonitrile	Inhalation of Indoor Air	1.32E-2	0			8.61E-4	0.05	0.39	0			3.69E-5		

Table C-14
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.32E-2	0			2.15E-4	0.01	0.10	0			9.22E-6		
Acrolein	Inhalation of Indoor Air	5.77E-4	0			3.76E-5	6.6	51.40	0			1.61E-6		
Acrolein	Inhalation of Outdoor Air	5.77E-4	0			9.41E-6	1.6	12.85	0			4.03E-7		
Acrylonitrile	Inhalation of Indoor Air	3.60E-4	0			2.35E-5	0.04	0.32	0			1.00E-6	2.40E-7	2.07
Acrylonitrile	Inhalation of Outdoor Air	3.60E-4	0			5.88E-6	0.01	0.08	0			2.52E-7	6.00E-8	0.52
Aldrin	Inhalation of Indoor Air	2.21E-7	0			1.44E-8			0			6.18E-10	1.06E-8	0.09
Aldrin	Inhalation of Outdoor Air	2.21E-7	0			3.60E-9			0			1.54E-10	2.65E-9	0.02
alpha-BHC	Inhalation of Indoor Air	3.49E-7	0			2.27E-8			0			9.76E-10	6.15E-9	0.05
alpha-BHC	Inhalation of Outdoor Air	3.49E-7	0			5.69E-9			0			2.44E-10	1.53E-9	0.01
Antimony	Inhalation of Indoor Air	9.53E-5	0			6.21E-6	0.54	4.24	0			2.66E-7		
Antimony	Inhalation of Outdoor Air	9.53E-5	0			1.55E-6	0.14	1.06	0			6.66E-8		
Arsenic	Inhalation of Indoor Air	4.26E-6	0			2.78E-7			0			1.19E-8	1.79E-7	1.55
Arsenic	Inhalation of Outdoor Air	4.26E-6	0			6.96E-8			0			2.98E-9	4.49E-8	0.39
Benzene	Inhalation of Indoor Air	4.32E-3	0			2.82E-4	0.02	0.13	0			1.20E-5	3.51E-7	3.03
Benzene	Inhalation of Outdoor Air	4.32E-3	0			7.05E-5	<0.01	0.03	0			3.02E-6	8.78E-8	0.76
Beryllium	Inhalation of Indoor Air	3.76E-7	0			2.45E-8	<0.01	0.00	0			1.05E-9	8.83E-9	0.08
Beryllium	Inhalation of Outdoor Air	3.76E-7	0			6.13E-9	<0.01	0.00	0			2.63E-10	2.20E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	4.01E-5	0			2.62E-6	<0.01	0.01	0			1.12E-7	9.43E-10	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	4.01E-5	0			6.55E-7	<0.01	0.00	0			2.80E-8	2.35E-10	0.00
Bromoform	Inhalation of Indoor Air	1.31E-3	0			8.54E-5			0			3.66E-6	1.40E-8	0.12
Bromoform	Inhalation of Outdoor Air	1.31E-3	0			2.13E-5			0			9.15E-7	3.52E-9	0.03
Bromomethane	Inhalation of Indoor Air	2.04E-4	0			1.33E-5	<0.01	0.07	0			5.71E-7		
Bromomethane	Inhalation of Outdoor Air	2.04E-4	0			3.33E-6	<0.01	0.02	0			1.42E-7		
Cadmium	Inhalation of Indoor Air	3.23E-5	0			2.11E-6	0.08	0.64	0			9.05E-8	5.70E-7	4.92
Cadmium	Inhalation of Outdoor Air	3.23E-5	0			5.28E-7	0.02	0.16	0			2.26E-8	1.42E-7	1.23
Carbon Tetrachloride	Inhalation of Indoor Air	6.95E-4	0			4.53E-5	0.08	0.62	0			1.94E-6	1.02E-7	0.88
Carbon Tetrachloride	Inhalation of Outdoor Air	6.95E-4	0			1.13E-5	0.02	0.15	0			4.86E-7	2.55E-8	0.22

Table C-14
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Indoor Air	2.13E-4	0			1.39E-5	<0.01	0.00	0			5.95E-7		
Chloroethane	Inhalation of Outdoor Air	2.13E-4	0			3.47E-6	<0.01	0.00	0			1.48E-7		
Chloroform	Inhalation of Indoor Air	3.17E-4	0			2.06E-5	<0.01	0.00	0			8.86E-7	7.13E-8	0.61
Chloroform	Inhalation of Outdoor Air	3.17E-4	0			5.17E-6	<0.01	0.00	0			2.21E-7	1.78E-8	0.15
Chloromethane	Inhalation of Indoor Air	1.94E-3	0			1.26E-4	<0.01	0.01	0			5.42E-6	3.41E-8	0.29
Chloromethane	Inhalation of Outdoor Air	1.94E-3	0			3.16E-5	<0.01	0.00	0			1.35E-6	8.54E-9	0.07
Chromium	Ingestion of Indoor Dust	3.31E+1	0			1.29E-5	<0.01	0.00	0			5.55E-7		
Chromium	Ingestion of Soil	3.31E+1	0			3.23E-6	<0.01	0.00	0			1.38E-7		
Dieldrin	Inhalation of Indoor Air	2.45E-7	0			1.59E-8			0			6.85E-10	1.10E-8	0.10
Dieldrin	Inhalation of Outdoor Air	2.45E-7	0			3.99E-9			0			1.71E-10	2.75E-9	0.02
Formaldehyde	Inhalation of Indoor Air	3.44E-3	0			2.24E-4	0.26	2.04	0			9.62E-6	4.38E-7	3.78
Formaldehyde	Inhalation of Outdoor Air	3.44E-3	0			5.61E-5	0.07	0.51	0			2.40E-6	1.09E-7	0.94
gamma-BHC	Inhalation of Indoor Air	4.31E-7	0			2.81E-8			0			1.20E-9	1.32E-9	0.01
gamma-BHC	Inhalation of Outdoor Air	4.31E-7	0			7.03E-9			0			3.01E-10	3.31E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.53E-7	0			1.65E-8			0			7.07E-10	6.43E-9	0.06
Heptachlor epoxide	Inhalation of Outdoor Air	2.53E-7	0			4.12E-9			0			1.76E-10	1.60E-9	0.01
Heptachlor	Inhalation of Indoor Air	3.32E-7	0			2.17E-8			0			9.30E-10	4.23E-9	0.04
Heptachlor	Inhalation of Outdoor Air	3.32E-7	0			5.42E-9			0			2.32E-10	1.05E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.23E-3	0			8.07E-5			0			3.46E-6	2.66E-7	2.30
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.23E-3	0			2.01E-5			0			8.65E-7	6.66E-8	0.57
Hexachlorobenzene	Inhalation of Indoor Air	5.00E-6	0			3.26E-7			0			1.39E-8	2.25E-8	0.19
Hexachlorobenzene	Inhalation of Outdoor Air	5.00E-6	0			8.15E-8			0			3.49E-9	5.62E-9	0.05
Hydrochloric Acid	Inhalation of Indoor Air	7.45E-3	0			4.86E-4	0.09	0.66	0			2.08E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	7.45E-3	0			1.21E-4	0.02	0.17	0			5.21E-6		
Mercury	Inhalation of Indoor Air	9.05E-6	0			5.90E-7	<0.01	0.05	0			2.53E-8		
Mercury	Inhalation of Outdoor Air	9.05E-6	0			1.47E-7	<0.01	0.01	0			6.32E-9		
Methylene Chloride	Inhalation of Indoor Air	8.58E-3	0			5.60E-4	<0.01	0.01	0			2.40E-5	3.95E-8	0.34

Table C-14
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methylene Chloride	Inhalation of Outdoor Air	8.58E-3	0			1.40E-4	<0.01	0.00	0			6.00E-6	9.87E-9	0.09
Methylisobutylketone	Inhalation of Indoor Air	2.12E-3	0			1.38E-4	<0.01	0.05	0			5.93E-6		
Methylisobutylketone	Inhalation of Outdoor Air	2.12E-3	0			3.45E-5	<0.01	0.01	0			1.48E-6		
Naphthalene	Inhalation of Indoor Air	3.96E-4	0			2.58E-5	0.03	0.24	0			1.10E-6		
Naphthalene	Inhalation of Outdoor Air	3.96E-4	0			6.46E-6	<0.01	0.06	0			2.76E-7		
PM-10	Inhalation of Indoor Air	9.43E-2	0			6.15E-3	0.43	3.36	0			2.63E-4		
PM-10	Inhalation of Outdoor Air	9.43E-2	0			1.53E-3	0.11	0.84	0			6.59E-5		
Propylene	Inhalation of Indoor Air	1.06E-2	0			6.96E-4	<0.01	0.01	0			2.98E-5		
Propylene	Inhalation of Outdoor Air	1.06E-2	0			1.74E-4	<0.01	0.00	0			7.46E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.53E-3	0			9.98E-5			0			4.28E-6	8.69E-9	0.07
Tetrachloroethylene	Inhalation of Outdoor Air	1.53E-3	0			2.49E-5			0			1.07E-6	2.17E-9	0.02
Toluene	Inhalation of Indoor Air	2.77E-2	0			1.80E-3	0.02	0.12	0			7.75E-5		
Toluene	Inhalation of Outdoor Air	2.77E-2	0			4.52E-4	<0.01	0.03	0			1.93E-5		
Total Dioxin/Furans (2,3,7,8-T)	Dermal Contact with Soil	6.96E-5	0			4.09E-11			0			1.75E-12	2.62E-7	2.27
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Indoor Dust	1.67E-4	0			6.55E-11			0			2.80E-12	4.21E-7	3.63
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Soil	6.96E-5	0			6.81E-12			0			2.92E-13	4.38E-8	0.38
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	4.53E-9	0			2.95E-10			0			1.26E-11	1.90E-6	16.38
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	4.53E-9	0			7.39E-11			0			3.16E-12	4.75E-7	4.10
Trichloroethylene	Inhalation of Indoor Air	2.15E-3	0			1.40E-4			0			6.02E-6	3.58E-8	0.31
Trichloroethylene	Inhalation of Outdoor Air	2.15E-3	0			3.51E-5			0			1.50E-6	8.96E-9	0.08
Vinyl Acetate	Inhalation of Indoor Air	3.62E-2	0			2.36E-3	0.04	0.32	0			1.01E-4		
Vinyl Acetate	Inhalation of Outdoor Air	3.62E-2	0			5.90E-4	0.01	0.08	0			2.53E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.31E-4	0			8.57E-6			0			3.67E-7	1.10E-7	0.95
Vinyl Chloride	Inhalation of Outdoor Air	1.31E-4	0			2.14E-6			0			9.19E-8	2.75E-8	0.24
Total Risk:				0	0.0		12.82	100.0		0.0		1.16E-5	100.0	

Table C-15
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.83E-4	0			3.15E-5			0			2.70E-6	5.48E-7	2.37
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.83E-4	0			7.88E-6			0			6.75E-7	1.37E-7	0.59
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.64E-4	0			1.72E-5			0			1.47E-6	8.26E-8	0.36
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.64E-4	0			4.30E-6			0			3.69E-7	2.06E-8	0.09
1,1-Dichloroethylene	Inhalation of Indoor Air	1.60E-4	0			1.04E-5			0			8.95E-7	1.56E-7	0.68
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.60E-4	0			2.61E-6			0			2.23E-7	3.91E-8	0.17
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.34E-3	0			1.52E-4	0.09	0.70	0			1.30E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.34E-3	0			3.82E-5	0.02	0.17	0			3.27E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	2.37E-4	0			1.54E-5	0.27	2.11	0			1.32E-6	1.02E-6	4.41
1,2-Dibromoethane	Inhalation of Outdoor Air	2.37E-4	0			3.87E-6	0.07	0.53	0			3.31E-7	2.55E-7	1.10
1,2-Dichloroethane	Inhalation of Indoor Air	2.16E-4	0			1.41E-5			0			1.20E-6	1.10E-7	0.47
1,2-Dichloroethane	Inhalation of Outdoor Air	2.16E-4	0			3.52E-6			0			3.02E-7	2.75E-8	0.12
1,2-Dichloropropane	Inhalation of Indoor Air	2.26E-4	0			1.47E-5	0.01	0.10	0			1.26E-6		
1,2-Dichloropropane	Inhalation of Outdoor Air	2.26E-4	0			3.68E-6	<0.01	0.03	0			3.16E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.92E-4	0			4.51E-5	0.03	0.21	0			3.86E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.92E-4	0			1.12E-5	<0.01	0.05	0			9.67E-7		
1,3-Butadiene	Inhalation of Indoor Air	6.21E-4	0			4.05E-5			0			3.47E-6	3.40E-6	14.68
1,3-Butadiene	Inhalation of Outdoor Air	6.21E-4	0			1.01E-5			0			8.69E-7	8.51E-7	3.67
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.73E-3	0			1.13E-4	<0.01	0.00	0			9.70E-6	3.88E-7	1.67
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.73E-3	0			2.83E-5	<0.01	0.00	0			2.42E-6	9.70E-8	0.42
1,4-Dioxane	Inhalation of Indoor Air	1.07E-3	0			7.02E-5	<0.01	0.00	0			6.01E-6	1.62E-7	0.70
1,4-Dioxane	Inhalation of Outdoor Air	1.07E-3	0			1.75E-5	<0.01	0.00	0			1.50E-6	4.06E-8	0.18
2-Propanol	Inhalation of Indoor Air	1.03E-2	0			6.78E-4	<0.01	0.00	0			5.81E-5		
2-Propanol	Inhalation of Outdoor Air	1.03E-2	0			1.69E-4	<0.01	0.00	0			1.45E-5		
Acetaldehyde	Inhalation of Indoor Air	6.15E-2	0			4.01E-3	1.6	12.18	0			3.44E-4	2.64E-6	11.42
Acetaldehyde	Inhalation of Outdoor Air	6.15E-2	0			1.00E-3	0.39	3.04	0			8.60E-5	6.62E-7	2.85
Acetonitrile	Inhalation of Indoor Air	1.32E-2	0			8.61E-4	0.05	0.39	0			7.38E-5		

Table C-15
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.32E-2	0			2.15E-4	0.01	0.10	0			1.84E-5		
Acrolein	Inhalation of Indoor Air	5.77E-4	0			3.76E-5	6.6	51.40	0			3.22E-6		
Acrolein	Inhalation of Outdoor Air	5.77E-4	0			9.41E-6	1.6	12.85	0			8.06E-7		
Acrylonitrile	Inhalation of Indoor Air	3.60E-4	0			2.35E-5	0.04	0.32	0			2.01E-6	4.80E-7	2.07
Acrylonitrile	Inhalation of Outdoor Air	3.60E-4	0			5.88E-6	0.01	0.08	0			5.04E-7	1.20E-7	0.52
Aldrin	Inhalation of Indoor Air	2.21E-7	0			1.44E-8			0			1.23E-9	2.12E-8	0.09
Aldrin	Inhalation of Outdoor Air	2.21E-7	0			3.60E-9			0			3.09E-10	5.30E-9	0.02
alpha-BHC	Inhalation of Indoor Air	3.49E-7	0			2.27E-8			0			1.95E-9	1.23E-8	0.05
alpha-BHC	Inhalation of Outdoor Air	3.49E-7	0			5.69E-9			0			4.88E-10	3.07E-9	0.01
Antimony	Inhalation of Indoor Air	9.53E-5	0			6.21E-6	0.54	4.24	0			5.32E-7		
Antimony	Inhalation of Outdoor Air	9.53E-5	0			1.55E-6	0.14	1.06	0			1.33E-7		
Arsenic	Inhalation of Indoor Air	4.26E-6	0			2.78E-7			0			2.38E-8	3.59E-7	1.55
Arsenic	Inhalation of Outdoor Air	4.26E-6	0			6.96E-8			0			5.96E-9	8.98E-8	0.39
Benzene	Inhalation of Indoor Air	4.32E-3	0			2.82E-4	0.02	0.13	0			2.41E-5	7.02E-7	3.03
Benzene	Inhalation of Outdoor Air	4.32E-3	0			7.05E-5	<0.01	0.03	0			6.04E-6	1.75E-7	0.76
Beryllium	Inhalation of Indoor Air	3.76E-7	0			2.45E-8	<0.01	0.00	0			2.10E-9	1.76E-8	0.08
Beryllium	Inhalation of Outdoor Air	3.76E-7	0			6.13E-9	<0.01	0.00	0			5.26E-10	4.41E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	4.01E-5	0			2.62E-6	<0.01	0.01	0			2.24E-7	1.88E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	4.01E-5	0			6.55E-7	<0.01	0.00	0			5.61E-8	4.71E-10	0.00
Bromoform	Inhalation of Indoor Air	1.31E-3	0			8.54E-5			0			7.32E-6	2.81E-8	0.12
Bromoform	Inhalation of Outdoor Air	1.31E-3	0			2.13E-5			0			1.83E-6	7.04E-9	0.03
Bromomethane	Inhalation of Indoor Air	2.04E-4	0			1.33E-5	<0.01	0.07	0			1.14E-6		
Bromomethane	Inhalation of Outdoor Air	2.04E-4	0			3.33E-6	<0.01	0.02	0			2.85E-7		
Cadmium	Inhalation of Indoor Air	3.23E-5	0			2.11E-6	0.08	0.64	0			1.81E-7	1.14E-6	4.92
Cadmium	Inhalation of Outdoor Air	3.23E-5	0			5.28E-7	0.02	0.16	0			4.52E-8	2.85E-7	1.23
Carbon Tetrachloride	Inhalation of Indoor Air	6.95E-4	0			4.53E-5	0.08	0.62	0			3.89E-6	2.04E-7	0.88
Carbon Tetrachloride	Inhalation of Outdoor Air	6.95E-4	0			1.13E-5	0.02	0.15	0			9.72E-7	5.10E-8	0.22

Table C-15
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Indoor Air	2.13E-4	0			1.39E-5	<0.01	0.00	0			1.19E-6		
Chloroethane	Inhalation of Outdoor Air	2.13E-4	0			3.47E-6	<0.01	0.00	0			2.97E-7		
Chloroform	Inhalation of Indoor Air	3.17E-4	0			2.06E-5	<0.01	0.00	0			1.77E-6	1.42E-7	0.61
Chloroform	Inhalation of Outdoor Air	3.17E-4	0			5.17E-6	<0.01	0.00	0			4.43E-7	3.56E-8	0.15
Chloromethane	Inhalation of Indoor Air	1.94E-3	0			1.26E-4	<0.01	0.01	0			1.08E-5	6.83E-8	0.29
Chloromethane	Inhalation of Outdoor Air	1.94E-3	0			3.16E-5	<0.01	0.00	0			2.71E-6	1.70E-8	0.07
Chromium	Ingestion of Indoor Dust	3.31E+1	0			1.29E-5	<0.01	0.00	0			1.11E-6		
Chromium	Ingestion of Soil	3.31E+1	0			3.23E-6	<0.01	0.00	0			2.77E-7		
Dieldrin	Inhalation of Indoor Air	2.45E-7	0			1.59E-8			0			1.37E-9	2.20E-8	0.10
Dieldrin	Inhalation of Outdoor Air	2.45E-7	0			3.99E-9			0			3.42E-10	5.51E-9	0.02
Formaldehyde	Inhalation of Indoor Air	3.44E-3	0			2.24E-4	0.26	2.04	0			1.92E-5	8.76E-7	3.78
Formaldehyde	Inhalation of Outdoor Air	3.44E-3	0			5.61E-5	0.07	0.51	0			4.81E-6	2.19E-7	0.94
gamma-BHC	Inhalation of Indoor Air	4.31E-7	0			2.81E-8			0			2.41E-9	2.65E-9	0.01
gamma-BHC	Inhalation of Outdoor Air	4.31E-7	0			7.03E-9			0			6.03E-10	6.63E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.53E-7	0			1.65E-8			0			1.41E-9	1.28E-8	0.06
Heptachlor epoxide	Inhalation of Outdoor Air	2.53E-7	0			4.12E-9			0			3.53E-10	3.21E-9	0.01
Heptachlor	Inhalation of Indoor Air	3.32E-7	0			2.17E-8			0			1.86E-9	8.46E-9	0.04
Heptachlor	Inhalation of Outdoor Air	3.32E-7	0			5.42E-9			0			4.65E-10	2.11E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.23E-3	0			8.07E-5			0			6.92E-6	5.33E-7	2.30
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.23E-3	0			2.01E-5			0			1.73E-6	1.33E-7	0.57
Hexachlorobenzene	Inhalation of Indoor Air	5.00E-6	0			3.26E-7			0			2.79E-8	4.50E-8	0.19
Hexachlorobenzene	Inhalation of Outdoor Air	5.00E-6	0			8.15E-8			0			6.98E-9	1.12E-8	0.05
Hydrochloric Acid	Inhalation of Indoor Air	7.45E-3	0			4.86E-4	0.09	0.66	0			4.17E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	7.45E-3	0			1.21E-4	0.02	0.17	0			1.04E-5		
Mercury	Inhalation of Indoor Air	9.05E-6	0			5.90E-7	<0.01	0.05	0			5.06E-8		
Mercury	Inhalation of Outdoor Air	9.05E-6	0			1.47E-7	<0.01	0.01	0			1.26E-8		
Methylene Chloride	Inhalation of Indoor Air	8.58E-3	0			5.60E-4	<0.01	0.01	0			4.80E-5	7.90E-8	0.34

Table C-15
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methylene Chloride	Inhalation of Outdoor Air	8.58E-3	0			1.40E-4	<0.01	0.00	0			1.20E-5	1.97E-8	0.09
Methylisobutylketone	Inhalation of Indoor Air	2.12E-3	0			1.38E-4	<0.01	0.05	0			1.18E-5		
Methylisobutylketone	Inhalation of Outdoor Air	2.12E-3	0			3.45E-5	<0.01	0.01	0			2.96E-6		
Naphthalene	Inhalation of Indoor Air	3.96E-4	0			2.58E-5	0.03	0.24	0			2.21E-6		
Naphthalene	Inhalation of Outdoor Air	3.96E-4	0			6.46E-6	<0.01	0.06	0			5.53E-7		
PM-10	Inhalation of Indoor Air	9.43E-2	0			6.15E-3	0.43	3.36	0			5.27E-4		
PM-10	Inhalation of Outdoor Air	9.43E-2	0			1.53E-3	0.11	0.84	0			1.31E-4		
Propylene	Inhalation of Indoor Air	1.06E-2	0			6.96E-4	<0.01	0.01	0			5.96E-5		
Propylene	Inhalation of Outdoor Air	1.06E-2	0			1.74E-4	<0.01	0.00	0			1.49E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.53E-3	0			9.98E-5			0			8.56E-6	1.73E-8	0.07
Tetrachloroethylene	Inhalation of Outdoor Air	1.53E-3	0			2.49E-5			0			2.14E-6	4.34E-9	0.02
Toluene	Inhalation of Indoor Air	2.77E-2	0			1.80E-3	0.02	0.12	0			1.55E-4		
Toluene	Inhalation of Outdoor Air	2.77E-2	0			4.52E-4	<0.01	0.03	0			3.87E-5		
Total Dioxin/Furans (2,3,7,8-T)	Dermal Contact with Soil	6.96E-5	0			4.09E-11			0			3.50E-12	5.25E-7	2.27
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Indoor Dust	1.67E-4	0			6.55E-11			0			5.61E-12	8.42E-7	3.63
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Soil	6.96E-5	0			6.81E-12			0			5.84E-13	8.76E-8	0.38
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	4.53E-9	0			2.95E-10			0			2.53E-11	3.80E-6	16.38
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	4.53E-9	0			7.39E-11			0			6.33E-12	9.50E-7	4.10
Trichloroethylene	Inhalation of Indoor Air	2.15E-3	0			1.40E-4			0			1.20E-5	7.17E-8	0.31
Trichloroethylene	Inhalation of Outdoor Air	2.15E-3	0			3.51E-5			0			3.01E-6	1.79E-8	0.08
Vinyl Acetate	Inhalation of Indoor Air	3.62E-2	0			2.36E-3	0.04	0.32	0			2.02E-4		
Vinyl Acetate	Inhalation of Outdoor Air	3.62E-2	0			5.90E-4	0.01	0.08	0			5.06E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.31E-4	0			8.57E-6			0			7.35E-7	2.20E-7	0.95
Vinyl Chloride	Inhalation of Outdoor Air	1.31E-4	0			2.14E-6			0			1.83E-7	5.51E-8	0.24
Total Risk:				0	0.0		12.82	100.0		0.0		2.32E-5	100.0	

Table C-16
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.83E-4	0			3.15E-5			0			1.35E-5	2.74E-6	2.37
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.83E-4	0			7.88E-6			0			3.37E-6	6.86E-7	0.59
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.64E-4	0			1.72E-5			0			7.38E-6	4.13E-7	0.36
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.64E-4	0			4.30E-6			0			1.84E-6	1.03E-7	0.09
1,1-Dichloroethylene	Inhalation of Indoor Air	1.60E-4	0			1.04E-5			0			4.47E-6	7.83E-7	0.68
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.60E-4	0			2.61E-6			0			1.11E-6	1.95E-7	0.17
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.34E-3	0			1.52E-4	0.09	0.70	0			6.54E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.34E-3	0			3.82E-5	0.02	0.17	0			1.63E-5		
1,2-Dibromoethane	Inhalation of Indoor Air	2.37E-4	0			1.54E-5	0.27	2.11	0			6.63E-6	5.11E-6	4.41
1,2-Dibromoethane	Inhalation of Outdoor Air	2.37E-4	0			3.87E-6	0.07	0.53	0			1.65E-6	1.27E-6	1.10
1,2-Dichloroethane	Inhalation of Indoor Air	2.16E-4	0			1.41E-5			0			6.04E-6	5.50E-7	0.47
1,2-Dichloroethane	Inhalation of Outdoor Air	2.16E-4	0			3.52E-6			0			1.51E-6	1.37E-7	0.12
1,2-Dichloropropane	Inhalation of Indoor Air	2.26E-4	0			1.47E-5	0.01	0.10	0			6.32E-6		
1,2-Dichloropropane	Inhalation of Outdoor Air	2.26E-4	0			3.68E-6	<0.01	0.03	0			1.58E-6		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.92E-4	0			4.51E-5	0.03	0.21	0			1.93E-5		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.92E-4	0			1.12E-5	<0.01	0.05	0			4.83E-6		
1,3-Butadiene	Inhalation of Indoor Air	6.21E-4	0			4.05E-5			0			1.73E-5	1.70E-5	14.68
1,3-Butadiene	Inhalation of Outdoor Air	6.21E-4	0			1.01E-5			0			4.34E-6	4.25E-6	3.67
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.73E-3	0			1.13E-4	<0.01	0.00	0			4.85E-5	1.94E-6	1.67
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.73E-3	0			2.83E-5	<0.01	0.00	0			1.21E-5	4.85E-7	0.42
1,4-Dioxane	Inhalation of Indoor Air	1.07E-3	0			7.02E-5	<0.01	0.00	0			3.00E-5	8.12E-7	0.70
1,4-Dioxane	Inhalation of Outdoor Air	1.07E-3	0			1.75E-5	<0.01	0.00	0			7.52E-6	2.03E-7	0.18
2-Propanol	Inhalation of Indoor Air	1.03E-2	0			6.78E-4	<0.01	0.00	0			2.90E-4		
2-Propanol	Inhalation of Outdoor Air	1.03E-2	0			1.69E-4	<0.01	0.00	0			7.26E-5		
Acetaldehyde	Inhalation of Indoor Air	6.15E-2	0			4.01E-3	1.6	12.18	0			1.72E-3	1.32E-5	11.42
Acetaldehyde	Inhalation of Outdoor Air	6.15E-2	0			1.00E-3	0.39	3.04	0			4.30E-4	3.31E-6	2.85
Acetonitrile	Inhalation of Indoor Air	1.32E-2	0			8.61E-4	0.05	0.39	0			3.69E-4		

Table C-16
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.32E-2	0			2.15E-4	0.01	0.10	0			9.22E-5		
Acrolein	Inhalation of Indoor Air	5.77E-4	0			3.76E-5	6.6	51.40	0			1.61E-5		
Acrolein	Inhalation of Outdoor Air	5.77E-4	0			9.41E-6	1.6	12.85	0			4.03E-6		
Acrylonitrile	Inhalation of Indoor Air	3.60E-4	0			2.35E-5	0.04	0.32	0			1.00E-5	2.40E-6	2.07
Acrylonitrile	Inhalation of Outdoor Air	3.60E-4	0			5.88E-6	0.01	0.08	0			2.52E-6	6.00E-7	0.52
Aldrin	Inhalation of Indoor Air	2.21E-7	0			1.44E-8			0			6.18E-9	1.06E-7	0.09
Aldrin	Inhalation of Outdoor Air	2.21E-7	0			3.60E-9			0			1.54E-9	2.65E-8	0.02
alpha-BHC	Inhalation of Indoor Air	3.49E-7	0			2.27E-8			0			9.76E-9	6.15E-8	0.05
alpha-BHC	Inhalation of Outdoor Air	3.49E-7	0			5.69E-9			0			2.44E-9	1.53E-8	0.01
Antimony	Inhalation of Indoor Air	9.53E-5	0			6.21E-6	0.54	4.24	0			2.66E-6		
Antimony	Inhalation of Outdoor Air	9.53E-5	0			1.55E-6	0.14	1.06	0			6.66E-7		
Arsenic	Inhalation of Indoor Air	4.26E-6	0			2.78E-7			0			1.19E-7	1.79E-6	1.55
Arsenic	Inhalation of Outdoor Air	4.26E-6	0			6.96E-8			0			2.98E-8	4.49E-7	0.39
Benzene	Inhalation of Indoor Air	4.32E-3	0			2.82E-4	0.02	0.13	0			1.20E-4	3.51E-6	3.03
Benzene	Inhalation of Outdoor Air	4.32E-3	0			7.05E-5	<0.01	0.03	0			3.02E-5	8.78E-7	0.76
Beryllium	Inhalation of Indoor Air	3.76E-7	0			2.45E-8	<0.01	0.00	0			1.05E-8	8.83E-8	0.08
Beryllium	Inhalation of Outdoor Air	3.76E-7	0			6.13E-9	<0.01	0.00	0			2.63E-9	2.20E-8	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	4.01E-5	0			2.62E-6	<0.01	0.01	0			1.12E-6	9.43E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	4.01E-5	0			6.55E-7	<0.01	0.00	0			2.80E-7	2.35E-9	0.00
Bromoform	Inhalation of Indoor Air	1.31E-3	0			8.54E-5			0			3.66E-5	1.40E-7	0.12
Bromoform	Inhalation of Outdoor Air	1.31E-3	0			2.13E-5			0			9.15E-6	3.52E-8	0.03
Bromomethane	Inhalation of Indoor Air	2.04E-4	0			1.33E-5	<0.01	0.07	0			5.71E-6		
Bromomethane	Inhalation of Outdoor Air	2.04E-4	0			3.33E-6	<0.01	0.02	0			1.42E-6		
Cadmium	Inhalation of Indoor Air	3.23E-5	0			2.11E-6	0.08	0.64	0			9.05E-7	5.70E-6	4.92
Cadmium	Inhalation of Outdoor Air	3.23E-5	0			5.28E-7	0.02	0.16	0			2.26E-7	1.42E-6	1.23
Carbon Tetrachloride	Inhalation of Indoor Air	6.95E-4	0			4.53E-5	0.08	0.62	0			1.94E-5	1.02E-6	0.88
Carbon Tetrachloride	Inhalation of Outdoor Air	6.95E-4	0			1.13E-5	0.02	0.15	0			4.86E-6	2.55E-7	0.22

Table C-16
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 30 years			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Indoor Air	2.13E-4	0			1.39E-5	<0.01	0.00	0			5.95E-6		
Chloroethane	Inhalation of Outdoor Air	2.13E-4	0			3.47E-6	<0.01	0.00	0			1.48E-6		
Chloroform	Inhalation of Indoor Air	3.17E-4	0			2.06E-5	<0.01	0.00	0			8.86E-6	7.13E-7	0.61
Chloroform	Inhalation of Outdoor Air	3.17E-4	0			5.17E-6	<0.01	0.00	0			2.21E-6	1.78E-7	0.15
Chloromethane	Inhalation of Indoor Air	1.94E-3	0			1.26E-4	<0.01	0.01	0			5.42E-5	3.41E-7	0.29
Chloromethane	Inhalation of Outdoor Air	1.94E-3	0			3.16E-5	<0.01	0.00	0			1.35E-5	8.54E-8	0.07
Chromium	Ingestion of Indoor Dust	3.31E+1	0			1.29E-5	<0.01	0.00	0			5.55E-6		
Chromium	Ingestion of Soil	3.31E+1	0			3.23E-6	<0.01	0.00	0			1.38E-6		
Dieldrin	Inhalation of Indoor Air	2.45E-7	0			1.59E-8			0			6.85E-9	1.10E-7	0.10
Dieldrin	Inhalation of Outdoor Air	2.45E-7	0			3.99E-9			0			1.71E-9	2.75E-8	0.02
Formaldehyde	Inhalation of Indoor Air	3.44E-3	0			2.24E-4	0.26	2.04	0			9.62E-5	4.38E-6	3.78
Formaldehyde	Inhalation of Outdoor Air	3.44E-3	0			5.61E-5	0.07	0.51	0			2.40E-5	1.09E-6	0.94
gamma-BHC	Inhalation of Indoor Air	4.31E-7	0			2.81E-8			0			1.20E-8	1.32E-8	0.01
gamma-BHC	Inhalation of Outdoor Air	4.31E-7	0			7.03E-9			0			3.01E-9	3.31E-9	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.53E-7	0			1.65E-8			0			7.07E-9	6.43E-8	0.06
Heptachlor epoxide	Inhalation of Outdoor Air	2.53E-7	0			4.12E-9			0			1.76E-9	1.60E-8	0.01
Heptachlor	Inhalation of Indoor Air	3.32E-7	0			2.17E-8			0			9.30E-9	4.23E-8	0.04
Heptachlor	Inhalation of Outdoor Air	3.32E-7	0			5.42E-9			0			2.32E-9	1.05E-8	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.23E-3	0			8.07E-5			0			3.46E-5	2.66E-6	2.30
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.23E-3	0			2.01E-5			0			8.65E-6	6.66E-7	0.57
Hexachlorobenzene	Inhalation of Indoor Air	5.00E-6	0			3.26E-7			0			1.39E-7	2.25E-7	0.19
Hexachlorobenzene	Inhalation of Outdoor Air	5.00E-6	0			8.15E-8			0			3.49E-8	5.62E-8	0.05
Hydrochloric Acid	Inhalation of Indoor Air	7.45E-3	0			4.86E-4	0.09	0.66	0			2.08E-4		
Hydrochloric Acid	Inhalation of Outdoor Air	7.45E-3	0			1.21E-4	0.02	0.17	0			5.21E-5		
Mercury	Inhalation of Indoor Air	9.05E-6	0			5.90E-7	<0.01	0.05	0			2.53E-7		
Mercury	Inhalation of Outdoor Air	9.05E-6	0			1.47E-7	<0.01	0.01	0			6.32E-8		
Methylene Chloride	Inhalation of Indoor Air	8.58E-3	0			5.60E-4	<0.01	0.01	0			2.40E-4	3.95E-7	0.34

Table C-16
GEMB
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Commercial Worker Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Adult			Child			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methylene Chloride	Inhalation of Outdoor Air	8.58E-3	0			1.40E-4	<0.01	0.00	0			6.00E-5	9.87E-8	0.09
Methylisobutylketone	Inhalation of Indoor Air	2.12E-3	0			1.38E-4	<0.01	0.05	0			5.93E-5		
Methylisobutylketone	Inhalation of Outdoor Air	2.12E-3	0			3.45E-5	<0.01	0.01	0			1.48E-5		
Naphthalene	Inhalation of Indoor Air	3.96E-4	0			2.58E-5	0.03	0.24	0			1.10E-5		
Naphthalene	Inhalation of Outdoor Air	3.96E-4	0			6.46E-6	<0.01	0.06	0			2.76E-6		
PM-10	Inhalation of Indoor Air	9.43E-2	0			6.15E-3	0.43	3.36	0			2.63E-3		
PM-10	Inhalation of Outdoor Air	9.43E-2	0			1.53E-3	0.11	0.84	0			6.59E-4		
Propylene	Inhalation of Indoor Air	1.06E-2	0			6.96E-4	<0.01	0.01	0			2.98E-4		
Propylene	Inhalation of Outdoor Air	1.06E-2	0			1.74E-4	<0.01	0.00	0			7.46E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.53E-3	0			9.98E-5			0			4.28E-5	8.69E-8	0.07
Tetrachloroethylene	Inhalation of Outdoor Air	1.53E-3	0			2.49E-5			0			1.07E-5	2.17E-8	0.02
Toluene	Inhalation of Indoor Air	2.77E-2	0			1.80E-3	0.02	0.12	0			7.75E-4		
Toluene	Inhalation of Outdoor Air	2.77E-2	0			4.52E-4	<0.01	0.03	0			1.93E-4		
Total Dioxin/Furans (2,3,7,8-T)	Dermal Contact with Soil	6.96E-5	0			4.09E-11			0			1.75E-11	2.62E-6	2.27
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Indoor Dust	1.67E-4	0			6.55E-11			0			2.80E-11	4.21E-6	3.63
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Soil	6.96E-5	0			6.81E-12			0			2.92E-12	4.38E-7	0.38
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	4.53E-9	0			2.95E-10			0			1.26E-10	1.90E-5	16.38
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	4.53E-9	0			7.39E-11			0			3.16E-11	4.75E-6	4.10
Trichloroethylene	Inhalation of Indoor Air	2.15E-3	0			1.40E-4			0			6.02E-5	3.58E-7	0.31
Trichloroethylene	Inhalation of Outdoor Air	2.15E-3	0			3.51E-5			0			1.50E-5	8.96E-8	0.08
Vinyl Acetate	Inhalation of Indoor Air	3.62E-2	0			2.36E-3	0.04	0.32	0			1.01E-3		
Vinyl Acetate	Inhalation of Outdoor Air	3.62E-2	0			5.90E-4	0.01	0.08	0			2.53E-4		
Vinyl Chloride	Inhalation of Indoor Air	1.31E-4	0			8.57E-6			0			3.67E-6	1.10E-6	0.95
Vinyl Chloride	Inhalation of Outdoor Air	1.31E-4	0			2.14E-6			0			9.19E-7	2.75E-7	0.24
Total Risk:				0	0.0		12.82	100.0		0.0		1.16E-4	100.0	

Table C-17
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.34E-4	3.38E-5		2.04E-5		1.44E-6	2.94E-7	3.60	8.74E-7	1.77E-7	4.06		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.34E-4	1.12E-5		5.10E-6		4.83E-7	9.81E-8	1.20	2.18E-7	4.43E-8	1.02		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.27E-4	1.76E-5		1.06E-5		7.58E-7	4.24E-8	0.52	4.57E-7	2.56E-8	0.59		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.27E-4	5.89E-6		2.66E-6		2.52E-7	1.41E-8	0.17	1.14E-7	6.40E-9	0.15		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.24E-4	9.71E-6		5.85E-6		4.16E-7	7.28E-8	0.89	2.51E-7	4.39E-8	1.01		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.24E-4	3.23E-6		1.46E-6		1.38E-7	2.42E-8	0.30	6.27E-8	1.09E-8	0.25		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.00E-3	1.55E-4	0.09	0.99	9.40E-5	0.05	1.05		6.68E-6		4.03E-6		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.00E-3	5.19E-5	0.03	0.33	2.35E-5	0.01	0.26		2.22E-6		1.00E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	1.75E-4	1.36E-5	0.24	2.60	8.26E-6	0.14	2.77		5.86E-7	4.51E-7	5.53		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.75E-4	4.56E-6	0.08	0.87	2.06E-6	0.04	0.69		1.95E-7	1.50E-7	1.84		
1,2-Dichloroethane	Inhalation of Indoor Air	1.79E-4	1.40E-5			8.44E-6				6.00E-7	5.46E-8	0.67		
1,2-Dichloroethane	Inhalation of Outdoor Air	1.79E-4	4.66E-6			2.11E-6				2.00E-7	1.82E-8	0.22		
1,2-Dichloropropane	Inhalation of Indoor Air	1.04E-4	8.12E-6	<0.01	0.08	4.89E-6	<0.01	0.08		3.48E-7		2.09E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.04E-4	2.70E-6	<0.01	0.03	1.22E-6	<0.01	0.02		1.16E-7		5.24E-8		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	5.69E-4	4.43E-5	0.03	0.28	2.67E-5	0.02	0.30		1.90E-6		1.14E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	5.69E-4	1.47E-5	<0.01	0.09	6.69E-6	<0.01	0.07		6.33E-7		2.86E-7		
1,3-Butadiene	Inhalation of Indoor Air	4.12E-4	3.21E-5			1.93E-5				1.37E-6	1.35E-6	16.52		
1,3-Butadiene	Inhalation of Outdoor Air	4.12E-4	1.07E-5			4.84E-6				4.59E-7	4.50E-7	5.51		
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.39E-3	1.08E-4	<0.01	0.01	6.56E-5	<0.01	0.01		4.66E-6	1.86E-7	2.28		
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.39E-3	3.62E-5	<0.01	0.00	1.64E-5	<0.01	0.00		1.55E-6	6.22E-8	0.76		
1,4-Dioxane	Inhalation of Indoor Air	1.00E-3	7.83E-5	<0.01	0.00	4.72E-5	<0.01	0.00		3.35E-6	9.06E-8	1.11		
1,4-Dioxane	Inhalation of Outdoor Air	1.00E-3	2.61E-5	<0.01	0.00	1.18E-5	<0.01	0.00		1.11E-6	3.02E-8	0.37		
2-Propanol	Inhalation of Indoor Air	9.38E-3	7.31E-4	<0.01	0.00	4.40E-4	<0.01	0.00		3.13E-5		1.88E-5		
2-Propanol	Inhalation of Outdoor Air	9.38E-3	2.43E-4	<0.01	0.00	1.10E-4	<0.01	0.00		1.04E-5		4.72E-6		
Acetaldehyde	Inhalation of Indoor Air	2.71E-2	2.11E-3	0.82	8.92	1.27E-3	0.50	9.52		9.06E-5	6.98E-7	8.54		
Acetaldehyde	Inhalation of Outdoor Air	2.71E-2	7.05E-4	0.27	2.97	3.18E-4	0.12	2.38		3.02E-5	2.32E-7	2.85		
Acetonitrile	Inhalation of Indoor Air	1.45E-2	1.13E-3	0.07	0.72	6.85E-4	0.04	0.77		4.87E-5		2.93E-5		

Table C-17
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 1 Tour of Duty (3 Years)			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.45E-2	3.78E-4	0.02	0.24	1.71E-4	<0.01	0.19	1.62E-5			7.34E-6		
Acrolein	Inhalation of Indoor Air	3.55E-4	2.76E-5	4.8	52.53	1.66E-5	2.9	56.04	1.18E-6			7.15E-7		
Acrolein	Inhalation of Outdoor Air	3.55E-4	9.22E-6	1.6	17.51	4.17E-6	0.73	14.01	3.95E-7			1.78E-7		
Acrylonitrile	Inhalation of Indoor Air	2.25E-4	1.75E-5	0.03	0.33	1.06E-5	0.02	0.36	7.54E-7	1.79E-7	2.20	4.54E-7	1.08E-7	2.48
Acrylonitrile	Inhalation of Outdoor Air	2.25E-4	5.86E-6	0.01	0.11	2.65E-6	<0.01	0.09	2.51E-7	5.98E-8	0.73	1.13E-7	2.70E-8	0.62
Aldrin	Inhalation of Indoor Air	2.05E-7	1.59E-8			9.62E-9			6.84E-10	1.17E-8	0.14	4.12E-10	7.07E-9	0.16
Aldrin	Inhalation of Outdoor Air	2.05E-7	5.32E-9			2.40E-9			2.28E-10	3.91E-9	0.05	1.03E-10	1.76E-9	0.04
alpha-BHC	Inhalation of Indoor Air	2.13E-7	1.66E-8			1.00E-8			7.11E-10	4.48E-9	0.05	4.29E-10	2.70E-9	0.06
alpha-BHC	Inhalation of Outdoor Air	2.13E-7	5.53E-9			2.50E-9			2.37E-10	1.49E-9	0.02	1.07E-10	6.76E-10	0.02
Aroclor-1254	Dermal Contact with Soil	4.76E-3	6.16E-9	<0.01	0.00	2.91E-9	<0.01	0.00	2.64E-10			1.25E-10		
Aroclor-1254	Ingestion of Indoor Dust	4.76E-3	6.95E-9	<0.01	0.00	1.34E-9	<0.01	0.00	2.97E-10			5.75E-11		
Aroclor-1254	Ingestion of Soil	4.76E-3	2.31E-9	<0.01	0.00	3.35E-10	<0.01	0.00	9.93E-11			1.43E-11		
Arsenic	Inhalation of Indoor Air	1.97E-6	1.53E-7			9.27E-8			6.59E-9	9.91E-8	1.21	3.97E-9	5.98E-8	1.37
Arsenic	Inhalation of Outdoor Air	1.97E-6	5.12E-8			2.31E-8			2.19E-9	3.30E-8	0.40	9.93E-10	1.49E-8	0.34
Benzene	Inhalation of Indoor Air	3.81E-3	2.96E-4	0.02	0.19	1.79E-4	0.01	0.20	1.27E-5	3.69E-7	4.52	7.67E-6	2.22E-7	5.10
Benzene	Inhalation of Outdoor Air	3.81E-3	9.89E-5	<0.01	0.06	4.47E-5	<0.01	0.05	4.24E-6	1.23E-7	1.51	1.91E-6	5.57E-8	1.28
Beryllium	Inhalation of Indoor Air	2.08E-7	1.61E-8	<0.01	0.00	9.77E-9	<0.01	0.00	6.94E-10	5.83E-9	0.07	4.18E-10	3.51E-9	0.08
Beryllium	Inhalation of Outdoor Air	2.08E-7	5.39E-9	<0.01	0.00	2.44E-9	<0.01	0.00	2.31E-10	1.94E-9	0.02	1.04E-10	8.79E-10	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	2.85E-5	2.22E-6	<0.01	0.01	1.34E-6	<0.01	0.01	9.53E-8	8.00E-10	0.01	5.74E-8	4.82E-10	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	2.85E-5	7.41E-7	<0.01	0.00	3.35E-7	<0.01	0.00	3.17E-8	2.66E-10	0.00	1.43E-8	1.20E-10	0.00
Bromomethane	Inhalation of Indoor Air	1.72E-4	1.34E-5	<0.01	0.10	8.11E-6	<0.01	0.11	5.76E-7			3.47E-7		
Bromomethane	Inhalation of Outdoor Air	1.72E-4	4.48E-6	<0.01	0.03	2.02E-6	<0.01	0.03	1.92E-7			8.69E-8		
Cadmium	Inhalation of Indoor Air	1.72E-6	1.34E-7	<0.01	0.06	8.08E-8	<0.01	0.06	5.74E-9	3.61E-8	0.44	3.46E-9	2.18E-8	0.50
Cadmium	Inhalation of Outdoor Air	1.72E-6	4.46E-8	<0.01	0.02	2.02E-8	<0.01	0.02	1.91E-9	1.20E-8	0.15	8.66E-10	5.45E-9	0.12
Carbon Tetrachloride	Inhalation of Indoor Air	6.05E-4	4.71E-5	0.08	0.89	2.84E-5	0.05	0.95	2.01E-6	1.06E-7	1.30	1.21E-6	6.39E-8	1.46
Carbon Tetrachloride	Inhalation of Outdoor Air	6.05E-4	1.57E-5	0.03	0.30	7.10E-6	0.01	0.24	6.73E-7	3.53E-8	0.43	3.04E-7	1.59E-8	0.37
Chloroethane	Inhalation of Indoor Air	1.70E-4	1.32E-5	<0.01	0.00	8.01E-6	<0.01	0.00	5.69E-7			3.43E-7		

Table C-17
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 1 Tour of Duty (3 Years)			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m ³	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Outdoor Air	1.70E-4	4.42E-6	<0.01	0.00	2.00E-6	<0.01	0.00	1.89E-7			8.58E-8		
Chloroform	Inhalation of Indoor Air	2.16E-4	1.68E-5	<0.01	0.00	1.01E-5	<0.01	0.00	7.24E-7	5.82E-8	0.71	4.36E-7	3.51E-8	0.80
Chloroform	Inhalation of Outdoor Air	2.16E-4	5.63E-6	<0.01	0.00	2.54E-6	<0.01	0.00	2.41E-7	1.94E-8	0.24	1.09E-7	8.78E-9	0.20
Chloromethane	Inhalation of Indoor Air	1.70E-3	1.32E-4	<0.01	0.02	8.01E-5	<0.01	0.02	5.69E-6	3.58E-8	0.44	3.43E-6	2.16E-8	0.49
Chloromethane	Inhalation of Outdoor Air	1.70E-3	4.42E-5	<0.01	0.01	2.00E-5	<0.01	0.00	1.89E-6	1.19E-8	0.15	8.58E-7	5.40E-9	0.12
Chromium	Ingestion of Indoor Dust	1.59E+1	2.32E-5	<0.01	0.00	4.49E-6	<0.01	0.00	9.98E-7			1.92E-7		
Chromium	Ingestion of Soil	1.59E+1	7.76E-6	<0.01	0.00	1.12E-6	<0.01	0.00	3.32E-7			4.81E-8		
Dichlorodifluoromethane	Inhalation of Indoor Air	3.66E-3	2.85E-4	<0.01	0.05	1.72E-4	<0.01	0.06	1.22E-5			7.37E-6		
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.66E-3	9.51E-5	<0.01	0.02	4.30E-5	<0.01	0.01	4.07E-6			1.84E-6		
Dieldrin	Inhalation of Indoor Air	2.28E-7	1.78E-8			1.07E-8			7.63E-10	1.22E-8	0.15	4.60E-10	7.41E-9	0.17
Dieldrin	Inhalation of Outdoor Air	2.28E-7	5.93E-9			2.68E-9			2.54E-10	4.09E-9	0.05	1.15E-10	1.85E-9	0.04
Formaldehyde	Inhalation of Indoor Air	3.06E-3	2.38E-4	0.28	3.02	1.44E-4	0.17	3.22	1.02E-5	4.65E-7	5.70	6.17E-6	2.81E-7	6.43
Formaldehyde	Inhalation of Outdoor Air	3.06E-3	7.96E-5	0.09	1.01	3.60E-5	0.04	0.81	3.41E-6	1.55E-7	1.90	1.54E-6	7.02E-8	1.61
gamma-BHC	Inhalation of Indoor Air	3.23E-7	2.51E-8			1.51E-8			1.07E-9	1.18E-9	0.01	6.50E-10	7.15E-10	0.02
gamma-BHC	Inhalation of Outdoor Air	3.23E-7	8.38E-9			3.79E-9			3.59E-10	3.95E-10	0.00	1.62E-10	1.78E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	1.98E-7	1.54E-8			9.32E-9			6.62E-10	6.03E-9	0.07	3.99E-10	3.63E-9	0.08
Heptachlor epoxide	Inhalation of Outdoor Air	1.98E-7	5.15E-9			2.33E-9			2.20E-10	2.01E-9	0.02	9.99E-11	9.09E-10	0.02
Heptachlor	Inhalation of Indoor Air	2.29E-7	1.78E-8			1.07E-8			7.67E-10	3.49E-9	0.04	4.62E-10	2.10E-9	0.05
Heptachlor	Inhalation of Outdoor Air	2.29E-7	5.96E-9			2.69E-9			2.55E-10	1.16E-9	0.01	1.15E-10	5.26E-10	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.97E-4	6.99E-5			4.21E-5			2.99E-6	2.30E-7	2.82	1.80E-6	1.39E-7	3.18
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.97E-4	2.33E-5			1.05E-5			9.98E-7	7.68E-8	0.94	4.51E-7	3.47E-8	0.80
Hydrochloric Acid	Inhalation of Indoor Air	2.67E-3	2.08E-4	0.04	0.40	1.25E-4	0.02	0.42	8.92E-6			5.38E-6		
Hydrochloric Acid	Inhalation of Outdoor Air	2.67E-3	6.94E-5	0.01	0.13	3.14E-5	<0.01	0.11	2.97E-6			1.34E-6		
Mercury	Inhalation of Indoor Air	6.12E-6	4.77E-7	<0.01	0.06	2.87E-7	<0.01	0.06	2.04E-8			1.23E-8		
Mercury	Inhalation of Outdoor Air	6.12E-6	1.59E-7	<0.01	0.02	7.19E-8	<0.01	0.02	6.81E-9			3.08E-9		
Methylene Chloride	Inhalation of Indoor Air	7.87E-3	6.13E-4	<0.01	0.01	3.69E-4	<0.01	0.01	2.62E-5	4.32E-8	0.53	1.58E-5	2.60E-8	0.60
Methylene Chloride	Inhalation of Outdoor Air	7.87E-3	2.04E-4	<0.01	0.00	9.24E-5	<0.01	0.00	8.76E-6	1.44E-8	0.18	3.96E-6	6.52E-9	0.15

Table C-17
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)							
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult				
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
n-Hexane	Inhalation of Indoor Air	2.72E-3	2.12E-4	<0.01	0.04	1.28E-4	<0.01	0.04	9.11E-6			5.49E-6				
n-Hexane	Inhalation of Outdoor Air	2.72E-3	7.08E-5	<0.01	0.01	3.20E-5	<0.01	0.01	3.03E-6			1.37E-6				
Naphthalene	Inhalation of Indoor Air	2.96E-4	2.30E-5	0.03	0.29	1.39E-5	0.02	0.31	9.89E-7			5.96E-7				
Naphthalene	Inhalation of Outdoor Air	2.96E-4	7.69E-6	<0.01	0.10	3.48E-6	<0.01	0.08	3.29E-7			1.49E-7				
PM-10	Inhalation of Indoor Air	5.34E-2	4.16E-3	0.29	3.16	2.51E-3	0.18	3.37	1.78E-4			1.07E-4				
PM-10	Inhalation of Outdoor Air	5.34E-2	1.38E-3	0.10	1.05	6.27E-4	0.04	0.84	5.94E-5			2.69E-5				
Propylene	Inhalation of Indoor Air	7.21E-3	5.62E-4	<0.01	0.01	3.39E-4	<0.01	0.01	2.40E-5			1.45E-5				
Propylene	Inhalation of Outdoor Air	7.21E-3	1.87E-4	<0.01	0.00	8.47E-5	<0.01	0.00	8.03E-6			3.63E-6				
Tetrachloroethylene	Inhalation of Indoor Air	1.10E-3	8.59E-5			5.18E-5			3.68E-6	7.47E-9	0.09	2.22E-6	4.50E-9	0.10		
Tetrachloroethylene	Inhalation of Outdoor Air	1.10E-3	2.86E-5			1.29E-5			1.22E-6	2.49E-9	0.03	5.55E-7	1.12E-9	0.03		
Toluene	Inhalation of Indoor Air	2.08E-2	1.61E-3	0.01	0.15	9.77E-4	<0.01	0.16	6.94E-5			4.18E-5				
Toluene	Inhalation of Outdoor Air	2.08E-2	5.39E-4	<0.01	0.05	2.44E-4	<0.01	0.04	2.31E-5			1.04E-5				
Total Carcinogenic PAHS (BaP T	Ingestion of Indoor Dust	4.98E-2	7.27E-8			1.40E-8			3.11E-9	2.27E-8	0.28	6.01E-10	4.39E-9	0.10		
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	4.98E-2	2.42E-8			3.50E-9			1.03E-9	7.58E-9	0.09	1.50E-10	1.09E-9	0.03		
Total Dioxin/Furans (2,3,7,8-T	Dermal Contact with Soil	1.62E-5	2.10E-11			9.95E-12			9.00E-13	1.35E-7	1.65	4.26E-13	6.39E-8	1.46		
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Indoor Dust	5.83E-5	8.51E-11			1.64E-11			3.64E-12	5.47E-7	6.70	7.04E-13	1.05E-7	2.42		
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	1.62E-5	7.90E-12			1.14E-12			3.38E-13	5.08E-8	0.62	4.90E-14	7.35E-9	0.17		
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	9.92E-10	7.72E-11			4.66E-11			3.31E-12	4.96E-7	6.08	1.99E-12	2.99E-7	6.85		
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	9.92E-10	2.57E-11			1.16E-11			1.10E-12	1.65E-7	2.03	4.99E-13	7.49E-8	1.71		
Trichloroethylene	Inhalation of Indoor Air	1.42E-3	1.10E-4			6.68E-5			4.75E-6	2.82E-8	0.35	2.86E-6	1.70E-8	0.39		
Trichloroethylene	Inhalation of Outdoor Air	1.42E-3	3.69E-5			1.67E-5			1.58E-6	9.42E-9	0.12	7.16E-7	4.26E-9	0.10		
Vinyl Acetate	Inhalation of Indoor Air	4.72E-3	3.68E-4	<0.01	0.07	2.22E-4	<0.01	0.07	1.57E-5			9.51E-6				
Vinyl Acetate	Inhalation of Outdoor Air	4.72E-3	1.22E-4	<0.01	0.02	5.55E-5	<0.01	0.02	5.25E-6			2.37E-6				
Vinyl Chloride	Inhalation of Indoor Air	1.10E-4	8.63E-6			5.20E-6			3.70E-7	1.11E-7	1.36	2.23E-7	6.69E-8	1.53		
Vinyl Chloride	Inhalation of Outdoor Air	1.10E-4	2.87E-6			1.30E-6			1.23E-7	3.70E-8	0.45	5.58E-8	1.67E-8	0.38		
Total Risk:			9.22			5.21			8.17E-6			4.37E-6				
				100.0				100.0			99.9			100.0		

Table C-18
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.34E-4	3.38E-5		2.04E-5		2.89E-6	5.88E-7	3.60	1.74E-6	3.55E-7	4.06		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.34E-4	1.12E-5		5.10E-6		9.66E-7	1.96E-7	1.20	4.37E-7	8.87E-8	1.02		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.27E-4	1.76E-5		1.06E-5		1.51E-6	8.48E-8	0.52	9.14E-7	5.12E-8	0.59		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.27E-4	5.89E-6		2.66E-6		5.05E-7	2.82E-8	0.17	2.28E-7	1.28E-8	0.15		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.24E-4	9.71E-6		5.85E-6		8.32E-7	1.45E-7	0.89	5.02E-7	8.78E-8	1.01		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.24E-4	3.23E-6		1.46E-6		2.77E-7	4.85E-8	0.30	1.25E-7	2.19E-8	0.25		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.00E-3	1.55E-4	0.09	0.99	9.40E-5	0.05	1.05		8.06E-6				
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.00E-3	5.19E-5	0.03	0.33	2.35E-5	0.01	0.26		2.01E-6				
1,2-Dibromoethane	Inhalation of Indoor Air	1.75E-4	1.36E-5	0.24	2.60	8.26E-6	0.14	2.77		7.08E-7	5.45E-7	6.24		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.75E-4	4.56E-6	0.08	0.87	2.06E-6	0.04	0.69		1.77E-7	1.36E-7	1.56		
1,2-Dichloroethane	Inhalation of Indoor Air	1.79E-4	1.40E-5			8.44E-6				1.20E-6	1.09E-7	0.67		
1,2-Dichloroethane	Inhalation of Outdoor Air	1.79E-4	4.66E-6			2.11E-6				4.00E-7	3.64E-8	0.22		
1,2-Dichloropropane	Inhalation of Indoor Air	1.04E-4	8.12E-6	<0.01	0.08	4.89E-6	<0.01	0.08		6.96E-7		4.19E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.04E-4	2.70E-6	<0.01	0.03	1.22E-6	<0.01	0.02		2.32E-7		1.04E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	5.69E-4	4.43E-5	0.03	0.28	2.67E-5	0.02	0.30		3.80E-6		2.29E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	5.69E-4	1.47E-5	<0.01	0.09	6.69E-6	<0.01	0.07		1.26E-6		5.73E-7		
1,3-Butadiene	Inhalation of Indoor Air	4.12E-4	3.21E-5			1.93E-5				2.75E-6	2.70E-6	16.52		
1,3-Butadiene	Inhalation of Outdoor Air	4.12E-4	1.07E-5			4.84E-6				9.18E-7	9.00E-7	5.51		
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.39E-3	1.08E-4	<0.01	0.01	6.56E-5	<0.01	0.01		9.33E-6	3.73E-7	2.28		
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.39E-3	3.62E-5	<0.01	0.00	1.64E-5	<0.01	0.00		3.11E-6	1.24E-7	0.76		
1,4-Dioxane	Inhalation of Indoor Air	1.00E-3	7.83E-5	<0.01	0.00	4.72E-5	<0.01	0.00		6.71E-6	1.81E-7	1.11		
1,4-Dioxane	Inhalation of Outdoor Air	1.00E-3	2.61E-5	<0.01	0.00	1.18E-5	<0.01	0.00		2.23E-6	6.04E-8	0.37		
2-Propanol	Inhalation of Indoor Air	9.38E-3	7.31E-4	<0.01	0.00	4.40E-4	<0.01	0.00		6.26E-5		3.77E-5		
2-Propanol	Inhalation of Outdoor Air	9.38E-3	2.43E-4	<0.01	0.00	1.10E-4	<0.01	0.00		2.08E-5		9.44E-6		
Acetaldehyde	Inhalation of Indoor Air	2.71E-2	2.11E-3	0.82	8.92	1.27E-3	0.50	9.52		1.81E-4	1.39E-6	8.54		
Acetaldehyde	Inhalation of Outdoor Air	2.71E-2	7.05E-4	0.27	2.97	3.18E-4	0.12	2.38		6.04E-5	4.65E-7	2.85		
Acetonitrile	Inhalation of Indoor Air	1.45E-2	1.13E-3	0.07	0.72	6.85E-4	0.04	0.77		9.74E-5		5.87E-5		

Table C-18
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 2 Tours of Duty (6 Years)			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	1.45E-2	3.78E-4	0.02	0.24	1.71E-4	<0.01	0.19	3.24E-5			1.46E-5		
Acrolein	Inhalation of Indoor Air	3.55E-4	2.76E-5	4.8	52.53	1.66E-5	2.9	56.04	2.37E-6			1.43E-6		
Acrolein	Inhalation of Outdoor Air	3.55E-4	9.22E-6	1.6	17.51	4.17E-6	0.73	14.01	7.90E-7			3.57E-7		
Acrylonitrile	Inhalation of Indoor Air	2.25E-4	1.75E-5	0.03	0.33	1.06E-5	0.02	0.36	1.50E-6	3.58E-7	2.20	9.09E-7	2.16E-7	2.48
Acrylonitrile	Inhalation of Outdoor Air	2.25E-4	5.86E-6	0.01	0.11	2.65E-6	<0.01	0.09	5.02E-7	1.19E-7	0.73	2.27E-7	5.41E-8	0.62
Aldrin	Inhalation of Indoor Air	2.05E-7	1.59E-8			9.62E-9			1.36E-9	2.34E-8	0.14	8.25E-10	1.41E-8	0.16
Aldrin	Inhalation of Outdoor Air	2.05E-7	5.32E-9			2.40E-9			4.56E-10	7.82E-9	0.05	2.06E-10	3.53E-9	0.04
alpha-BHC	Inhalation of Indoor Air	2.13E-7	1.66E-8			1.00E-8			1.42E-9	8.96E-9	0.05	8.58E-10	5.40E-9	0.06
alpha-BHC	Inhalation of Outdoor Air	2.13E-7	5.53E-9			2.50E-9			4.74E-10	2.98E-9	0.02	2.14E-10	1.35E-9	0.02
Aroclor-1254	Dermal Contact with Soil	4.76E-3	6.16E-9	<0.01	0.00	2.91E-9	<0.01	0.00	5.28E-10			2.50E-10		
Aroclor-1254	Ingestion of Indoor Dust	4.76E-3	6.95E-9	<0.01	0.00	1.34E-9	<0.01	0.00	5.95E-10			1.15E-10		
Aroclor-1254	Ingestion of Soil	4.76E-3	2.31E-9	<0.01	0.00	3.35E-10	<0.01	0.00	1.98E-10			2.87E-11		
Arsenic	Inhalation of Indoor Air	1.97E-6	1.53E-7			9.27E-8			1.31E-8	1.98E-7	1.21	7.94E-9	1.19E-7	1.37
Arsenic	Inhalation of Outdoor Air	1.97E-6	5.12E-8			2.31E-8			4.39E-9	6.61E-8	0.40	1.98E-9	2.99E-8	0.34
Benzene	Inhalation of Indoor Air	3.81E-3	2.96E-4	0.02	0.19	1.79E-4	0.01	0.20	2.54E-5	7.39E-7	4.52	1.53E-5	4.45E-7	5.10
Benzene	Inhalation of Outdoor Air	3.81E-3	9.89E-5	<0.01	0.06	4.47E-5	<0.01	0.05	8.48E-6	2.46E-7	1.51	3.83E-6	1.11E-7	1.28
Beryllium	Inhalation of Indoor Air	2.08E-7	1.61E-8	<0.01	0.00	9.77E-9	<0.01	0.00	1.38E-9	1.16E-8	0.07	8.37E-10	7.03E-9	0.08
Beryllium	Inhalation of Outdoor Air	2.08E-7	5.39E-9	<0.01	0.00	2.44E-9	<0.01	0.00	4.62E-10	3.88E-9	0.02	2.09E-10	1.75E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	2.85E-5	2.22E-6	<0.01	0.01	1.34E-6	<0.01	0.01	1.90E-7	1.60E-9	0.01	1.14E-7	9.65E-10	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	2.85E-5	7.41E-7	<0.01	0.00	3.35E-7	<0.01	0.00	6.35E-8	5.33E-10	0.00	2.87E-8	2.41E-10	0.00
Bromomethane	Inhalation of Indoor Air	1.72E-4	1.34E-5	<0.01	0.10	8.11E-6	<0.01	0.11	1.15E-6			6.95E-7		
Bromomethane	Inhalation of Outdoor Air	1.72E-4	4.48E-6	<0.01	0.03	2.02E-6	<0.01	0.03	3.84E-7			1.73E-7		
Cadmium	Inhalation of Indoor Air	1.72E-6	1.34E-7	<0.01	0.06	8.08E-8	<0.01	0.06	1.14E-8	7.23E-8	0.44	6.92E-9	4.36E-8	0.50
Cadmium	Inhalation of Outdoor Air	1.72E-6	4.46E-8	<0.01	0.02	2.02E-8	<0.01	0.02	3.82E-9	2.41E-8	0.15	1.73E-9	1.09E-8	0.12
Carbon Tetrachloride	Inhalation of Indoor Air	6.05E-4	4.71E-5	0.08	0.89	2.84E-5	0.05	0.95	4.03E-6	2.12E-7	1.30	2.43E-6	1.27E-7	1.46
Carbon Tetrachloride	Inhalation of Outdoor Air	6.05E-4	1.57E-5	0.03	0.30	7.10E-6	0.01	0.24	1.34E-6	7.06E-8	0.43	6.09E-7	3.19E-8	0.37
Chloroethane	Inhalation of Indoor Air	1.70E-4	1.32E-5	<0.01	0.00	8.01E-6	<0.01	0.00	1.13E-6			6.86E-7		

Table C-18
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 2 Tours of Duty (6 Years)			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m ³	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Outdoor Air	1.70E-4	4.42E-6	<0.01	0.00	2.00E-6	<0.01	0.00	3.79E-7			1.71E-7		
Chloroform	Inhalation of Indoor Air	2.16E-4	1.68E-5	<0.01	0.00	1.01E-5	<0.01	0.00	1.44E-6	1.16E-7	0.71	8.73E-7	7.03E-8	0.80
Chloroform	Inhalation of Outdoor Air	2.16E-4	5.63E-6	<0.01	0.00	2.54E-6	<0.01	0.00	4.82E-7	3.88E-8	0.24	2.18E-7	1.75E-8	0.20
Chloromethane	Inhalation of Indoor Air	1.70E-3	1.32E-4	<0.01	0.02	8.01E-5	<0.01	0.02	1.13E-5	7.17E-8	0.44	6.86E-6	4.32E-8	0.49
Chloromethane	Inhalation of Outdoor Air	1.70E-3	4.42E-5	<0.01	0.01	2.00E-5	<0.01	0.00	3.79E-6	2.39E-8	0.15	1.71E-6	1.08E-8	0.12
Chromium	Ingestion of Indoor Dust	1.59E+1	2.32E-5	<0.01	0.00	4.49E-6	<0.01	0.00	1.99E-6			3.85E-7		
Chromium	Ingestion of Soil	1.59E+1	7.76E-6	<0.01	0.00	1.12E-6	<0.01	0.00	6.65E-7			9.63E-8		
Dichlorodifluoromethane	Inhalation of Indoor Air	3.66E-3	2.85E-4	<0.01	0.05	1.72E-4	<0.01	0.06	2.44E-5			1.47E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.66E-3	9.51E-5	<0.01	0.02	4.30E-5	<0.01	0.01	8.15E-6			3.68E-6		
Dieldrin	Inhalation of Indoor Air	2.28E-7	1.78E-8			1.07E-8			1.52E-9	2.45E-8	0.15	9.21E-10	1.48E-8	0.17
Dieldrin	Inhalation of Outdoor Air	2.28E-7	5.93E-9			2.68E-9			5.09E-10	8.19E-9	0.05	2.30E-10	3.70E-9	0.04
Formaldehyde	Inhalation of Indoor Air	3.06E-3	2.38E-4	0.28	3.02	1.44E-4	0.17	3.22	2.04E-5	9.31E-7	5.70	1.23E-5	5.62E-7	6.43
Formaldehyde	Inhalation of Outdoor Air	3.06E-3	7.96E-5	0.09	1.01	3.60E-5	0.04	0.81	6.82E-6	3.10E-7	1.90	3.08E-6	1.40E-7	1.61
gamma-BHC	Inhalation of Indoor Air	3.23E-7	2.51E-8			1.51E-8			2.15E-9	2.37E-9	0.01	1.30E-9	1.43E-9	0.02
gamma-BHC	Inhalation of Outdoor Air	3.23E-7	8.38E-9			3.79E-9			7.19E-10	7.90E-10	0.00	3.25E-10	3.57E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	1.98E-7	1.54E-8			9.32E-9			1.32E-9	1.20E-8	0.07	7.99E-10	7.27E-9	0.08
Heptachlor epoxide	Inhalation of Outdoor Air	1.98E-7	5.15E-9			2.33E-9			4.41E-10	4.02E-9	0.02	1.99E-10	1.81E-9	0.02
Heptachlor	Inhalation of Indoor Air	2.29E-7	1.78E-8			1.07E-8			1.53E-9	6.98E-9	0.04	9.25E-10	4.21E-9	0.05
Heptachlor	Inhalation of Outdoor Air	2.29E-7	5.96E-9			2.69E-9			5.11E-10	2.32E-9	0.01	2.31E-10	1.05E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.97E-4	6.99E-5			4.21E-5			5.99E-6	4.61E-7	2.82	3.61E-6	2.78E-7	3.18
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.97E-4	2.33E-5			1.05E-5			1.99E-6	1.53E-7	0.94	9.03E-7	6.95E-8	0.80
Hydrochloric Acid	Inhalation of Indoor Air	2.67E-3	2.08E-4	0.04	0.40	1.25E-4	0.02	0.42	1.78E-5			1.07E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	2.67E-3	6.94E-5	0.01	0.13	3.14E-5	<0.01	0.11	5.95E-6			2.69E-6		
Mercury	Inhalation of Indoor Air	6.12E-6	4.77E-7	<0.01	0.06	2.87E-7	<0.01	0.06	4.09E-8			2.46E-8		
Mercury	Inhalation of Outdoor Air	6.12E-6	1.59E-7	<0.01	0.02	7.19E-8	<0.01	0.02	1.36E-8			6.16E-9		
Methylene Chloride	Inhalation of Indoor Air	7.87E-3	6.13E-4	<0.01	0.01	3.69E-4	<0.01	0.01	5.25E-5	8.64E-8	0.53	3.17E-5	5.21E-8	0.60
Methylene Chloride	Inhalation of Outdoor Air	7.87E-3	2.04E-4	<0.01	0.00	9.24E-5	<0.01	0.00	1.75E-5	2.88E-8	0.18	7.92E-6	1.30E-8	0.15

Table C-18
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
n-Hexane	Inhalation of Indoor Air	2.72E-3	2.12E-4	<0.01	0.04	1.28E-4	<0.01	0.04	1.82E-5			1.09E-5		
n-Hexane	Inhalation of Outdoor Air	2.72E-3	7.08E-5	<0.01	0.01	3.20E-5	<0.01	0.01	6.07E-6			2.74E-6		
Naphthalene	Inhalation of Indoor Air	2.96E-4	2.30E-5	0.03	0.29	1.39E-5	0.02	0.31	1.97E-6			1.19E-6		
Naphthalene	Inhalation of Outdoor Air	2.96E-4	7.69E-6	<0.01	0.10	3.48E-6	<0.01	0.08	6.59E-7			2.98E-7		
PM-10	Inhalation of Indoor Air	5.34E-2	4.16E-3	0.29	3.16	2.51E-3	0.18	3.37	3.56E-4			2.15E-4		
PM-10	Inhalation of Outdoor Air	5.34E-2	1.38E-3	0.10	1.05	6.27E-4	0.04	0.84	1.18E-4			5.38E-5		
Propylene	Inhalation of Indoor Air	7.21E-3	5.62E-4	<0.01	0.01	3.39E-4	<0.01	0.01	4.81E-5			2.90E-5		
Propylene	Inhalation of Outdoor Air	7.21E-3	1.87E-4	<0.01	0.00	8.47E-5	<0.01	0.00	1.60E-5			7.26E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.10E-3	8.59E-5			5.18E-5			7.36E-6	1.49E-8	0.09	4.44E-6	9.01E-9	0.10
Tetrachloroethylene	Inhalation of Outdoor Air	1.10E-3	2.86E-5			1.29E-5			2.45E-6	4.98E-9	0.03	1.11E-6	2.25E-9	0.03
Toluene	Inhalation of Indoor Air	2.08E-2	1.61E-3	0.01	0.15	9.77E-4	<0.01	0.16	1.38E-4			8.37E-5		
Toluene	Inhalation of Outdoor Air	2.08E-2	5.39E-4	<0.01	0.05	2.44E-4	<0.01	0.04	4.62E-5			2.09E-5		
Total Carcinogenic PAHS (BaP T	Ingestion of Indoor Dust	4.98E-2	7.27E-8			1.40E-8			6.23E-9	4.55E-8	0.28	1.20E-9	8.78E-9	0.10
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	4.98E-2	2.42E-8			3.50E-9			2.07E-9	1.51E-8	0.09	3.00E-10	2.19E-9	0.03
Total Dioxin/Furans (2,3,7,8-T	Dermal Contact with Soil	1.62E-5	2.10E-11			9.95E-12			1.80E-12	2.70E-7	1.65	8.53E-13	1.27E-7	1.46
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Indoor Dust	5.83E-5	8.51E-11			1.64E-11			7.29E-12	1.09E-6	6.70	1.40E-12	2.11E-7	2.42
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	1.62E-5	7.90E-12			1.14E-12			6.77E-13	1.01E-7	0.62	9.80E-14	1.47E-8	0.17
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	9.92E-10	7.72E-11			4.66E-11			6.62E-12	9.93E-7	6.08	3.99E-12	5.99E-7	6.85
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	9.92E-10	2.57E-11			1.16E-11			2.20E-12	3.31E-7	2.03	9.98E-13	1.49E-7	1.71
Trichloroethylene	Inhalation of Indoor Air	1.42E-3	1.10E-4			6.68E-5			9.50E-6	5.65E-8	0.35	5.73E-6	3.41E-8	0.39
Trichloroethylene	Inhalation of Outdoor Air	1.42E-3	3.69E-5			1.67E-5			3.16E-6	1.88E-8	0.12	1.43E-6	8.52E-9	0.10
Vinyl Acetate	Inhalation of Indoor Air	4.72E-3	3.68E-4	<0.01	0.07	2.22E-4	<0.01	0.07	3.15E-5			1.90E-5		
Vinyl Acetate	Inhalation of Outdoor Air	4.72E-3	1.22E-4	<0.01	0.02	5.55E-5	<0.01	0.02	1.05E-5			4.75E-6		
Vinyl Chloride	Inhalation of Indoor Air	1.10E-4	8.63E-6			5.20E-6			7.40E-7	2.22E-7	1.36	4.46E-7	1.33E-7	1.53
Vinyl Chloride	Inhalation of Outdoor Air	1.10E-4	2.87E-6			1.30E-6			2.46E-7	7.40E-8	0.45	1.11E-7	3.34E-8	0.38
Total Risk:			9.22			5.21			1.63E-5			8.74E-6		
				100.0			100.0			99.9			100.0	

Table C-19
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.13E-4	3.99E-5		2.41E-5		1.71E-6	3.47E-7	3.13	1.03E-6	2.09E-7	3.57		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.13E-4	1.33E-5		6.03E-6		5.71E-7	1.15E-7	1.04	2.58E-7	5.24E-8	0.89		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.50E-4	1.94E-5		1.17E-5		8.35E-7	4.67E-8	0.42	5.03E-7	2.82E-8	0.48		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.50E-4	6.49E-6		2.93E-6		2.78E-7	1.55E-8	0.14	1.25E-7	7.05E-9	0.12		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.38E-4	1.08E-5		6.52E-6		4.63E-7	8.11E-8	0.73	2.79E-7	4.89E-8	0.83		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.38E-4	3.60E-6		1.63E-6		1.54E-7	2.70E-8	0.24	6.98E-8	1.22E-8	0.21		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.30E-3	1.79E-4	0.10	0.82	1.08E-4	0.06	0.87		7.68E-6		4.63E-6		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.30E-3	5.98E-5	0.03	0.27	2.70E-5	0.02	0.22		2.56E-6		1.15E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	1.97E-4	1.54E-5	0.27	2.11	9.29E-6	0.16	2.25		6.60E-7	5.08E-7	4.57		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.97E-4	5.13E-6	0.09	0.70	2.32E-6	0.04	0.56		2.20E-7	1.69E-7	1.52		
1,2-Dichloroethane	Inhalation of Indoor Air	2.02E-4	1.57E-5			9.51E-6				6.75E-7	6.15E-8	0.55		
1,2-Dichloroethane	Inhalation of Outdoor Air	2.02E-4	5.25E-6			2.37E-6				2.25E-7	2.05E-8	0.18		
1,2-Dichloropropane	Inhalation of Indoor Air	1.17E-4	9.18E-6	<0.01	0.06	5.53E-6	<0.01	0.07		3.93E-7		2.37E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.17E-4	3.06E-6	<0.01	0.02	1.38E-6	<0.01	0.02		1.31E-7		5.93E-8		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.53E-4	5.09E-5	0.03	0.23	3.07E-5	0.02	0.25		2.18E-6		1.31E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.53E-4	1.69E-5	<0.01	0.08	7.67E-6	<0.01	0.06		7.27E-7		3.28E-7		
1,3-Butadiene	Inhalation of Indoor Air	4.93E-4	3.83E-5			2.31E-5				1.64E-6	1.61E-6	14.49		
1,3-Butadiene	Inhalation of Outdoor Air	4.93E-4	1.27E-5			5.78E-6				5.48E-7	5.37E-7	4.83		
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.70E-3	1.33E-4	<0.01	0.00	8.02E-5	<0.01	0.00		5.70E-6	2.28E-7	2.05		
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.70E-3	4.43E-5	<0.01	0.00	2.00E-5	<0.01	0.00		1.90E-6	7.60E-8	0.68		
1,4-Dioxane	Inhalation of Indoor Air	1.30E-3	1.01E-4	<0.01	0.00	6.14E-5	<0.01	0.00		4.36E-6	1.17E-7	1.06		
1,4-Dioxane	Inhalation of Outdoor Air	1.30E-3	3.39E-5	<0.01	0.00	1.53E-5	<0.01	0.00		1.45E-6	3.93E-8	0.35		
2-Propanol	Inhalation of Indoor Air	1.06E-2	8.29E-4	<0.01	0.00	5.00E-4	<0.01	0.00		3.55E-5		2.14E-5		
2-Propanol	Inhalation of Outdoor Air	1.06E-2	2.76E-4	<0.01	0.00	1.25E-4	<0.01	0.00		1.18E-5		5.36E-6		
Acetaldehyde	Inhalation of Indoor Air	4.42E-2	3.44E-3	1.3	10.46	2.07E-3	0.81	11.16		1.47E-4	1.13E-6	10.22		
Acetaldehyde	Inhalation of Outdoor Air	4.42E-2	1.14E-3	0.45	3.49	5.19E-4	0.20	2.79		4.92E-5	3.79E-7	3.41		
Acetonitrile	Inhalation of Indoor Air	3.16E-2	2.46E-3	0.14	1.12	1.48E-3	0.09	1.20		1.05E-4		6.37E-5		

Table C-19
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	3.16E-2	8.22E-4	0.05	0.37	3.71E-4	0.02	0.30	3.52E-5			1.59E-5		
Acrolein	Inhalation of Indoor Air	4.91E-4	3.82E-5	6.7	52.31	2.30E-5	4.0	55.81	1.64E-6			9.89E-7		
Acrolein	Inhalation of Outdoor Air	4.91E-4	1.27E-5	2.2	17.44	5.77E-6	1.0	13.95	5.46E-7			2.47E-7		
Acrylonitrile	Inhalation of Indoor Air	2.63E-4	2.04E-5	0.04	0.28	1.23E-5	0.02	0.30	8.78E-7	2.09E-7	1.88	5.29E-7	1.26E-7	2.15
Acrylonitrile	Inhalation of Outdoor Air	2.63E-4	6.83E-6	0.01	0.09	3.09E-6	<0.01	0.07	2.92E-7	6.96E-8	0.63	1.32E-7	3.15E-8	0.54
Aldrin	Inhalation of Indoor Air	2.89E-7	2.25E-8			1.35E-8			9.64E-10	1.65E-8	0.15	5.81E-10	9.97E-9	0.17
Aldrin	Inhalation of Outdoor Air	2.89E-7	7.50E-9			3.39E-9			3.21E-10	5.51E-9	0.05	1.45E-10	2.49E-9	0.04
alpha-BHC	Inhalation of Indoor Air	2.96E-7	2.30E-8			1.39E-8			9.87E-10	6.22E-9	0.06	5.95E-10	3.75E-9	0.06
alpha-BHC	Inhalation of Outdoor Air	2.96E-7	7.68E-9			3.47E-9			3.29E-10	2.07E-9	0.02	1.48E-10	9.38E-10	0.02
Aroclor-1254	Dermal Contact with Soil	4.20E-2	5.43E-8	<0.01	0.02	2.57E-8	<0.01	0.02	2.33E-9			1.10E-9		
Aroclor-1254	Ingestion of Indoor Dust	4.20E-2	6.13E-8	<0.01	0.02	1.18E-8	<0.01	0.01	2.62E-9			5.07E-10		
Aroclor-1254	Ingestion of Soil	4.20E-2	2.04E-8	<0.01	0.01	2.95E-9	<0.01	0.00	8.75E-10			1.26E-10		
Arsenic	Inhalation of Indoor Air	2.32E-6	1.81E-7			1.09E-7			7.77E-9	1.17E-7	1.05	4.68E-9	7.05E-8	1.20
Arsenic	Inhalation of Outdoor Air	2.32E-6	6.04E-8			2.73E-8			2.59E-9	3.90E-8	0.35	1.17E-9	1.76E-8	0.30
Benzene	Inhalation of Indoor Air	4.22E-3	3.28E-4	0.02	0.15	1.98E-4	0.01	0.16	1.40E-5	4.09E-7	3.68	8.49E-6	2.46E-7	4.20
Benzene	Inhalation of Outdoor Air	4.22E-3	1.09E-4	<0.01	0.05	4.95E-5	<0.01	0.04	4.69E-6	1.36E-7	1.23	2.12E-6	6.16E-8	1.05
Beryllium	Inhalation of Indoor Air	2.79E-7	2.17E-8	<0.01	0.00	1.31E-8	<0.01	0.00	9.34E-10	7.84E-9	0.07	5.63E-10	4.73E-9	0.08
Beryllium	Inhalation of Outdoor Air	2.79E-7	7.26E-9	<0.01	0.00	3.28E-9	<0.01	0.00	3.11E-10	2.61E-9	0.02	1.40E-10	1.18E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.28E-5	2.55E-6	<0.01	0.01	1.54E-6	<0.01	0.01	1.09E-7	9.20E-10	0.01	6.61E-8	5.55E-10	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.28E-5	8.52E-7	<0.01	0.00	3.85E-7	<0.01	0.00	3.65E-8	3.06E-10	0.00	1.65E-8	1.38E-10	0.00
Bromomethane	Inhalation of Indoor Air	1.97E-4	1.53E-5	0.01	0.08	9.27E-6	<0.01	0.09	6.58E-7			3.97E-7		
Bromomethane	Inhalation of Outdoor Air	1.97E-4	5.12E-6	<0.01	0.03	2.31E-6	<0.01	0.02	2.19E-7			9.93E-8		
Cadmium	Inhalation of Indoor Air	2.20E-6	1.71E-7	<0.01	0.05	1.03E-7	<0.01	0.06	7.36E-9	4.64E-8	0.42	4.44E-9	2.80E-8	0.48
Cadmium	Inhalation of Outdoor Air	2.20E-6	5.73E-8	<0.01	0.02	2.59E-8	<0.01	0.01	2.45E-9	1.54E-8	0.14	1.11E-9	7.00E-9	0.12
Carbon Tetrachloride	Inhalation of Indoor Air	6.40E-4	4.98E-5	0.09	0.68	3.00E-5	0.05	0.73	2.13E-6	1.12E-7	1.01	1.28E-6	6.76E-8	1.15
Carbon Tetrachloride	Inhalation of Outdoor Air	6.40E-4	1.66E-5	0.03	0.23	7.51E-6	0.01	0.18	7.12E-7	3.73E-8	0.34	3.22E-7	1.69E-8	0.29
Chloroethane	Inhalation of Indoor Air	2.00E-4	1.56E-5	<0.01	0.00	9.43E-6	<0.01	0.00	6.70E-7			4.04E-7		

Table C-19
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - RME Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 1 Tour of Duty (3 Years)			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Outdoor Air	2.00E-4	5.21E-6	<0.01	0.00	2.35E-6	<0.01	0.00	2.23E-7			1.01E-7		
Chloroform	Inhalation of Indoor Air	2.44E-4	1.90E-5	<0.01	0.00	1.14E-5	<0.01	0.00	8.15E-7	6.56E-8	0.59	4.91E-7	3.95E-8	0.67
Chloroform	Inhalation of Outdoor Air	2.44E-4	6.34E-6	<0.01	0.00	2.86E-6	<0.01	0.00	2.71E-7	2.18E-8	0.20	1.22E-7	9.89E-9	0.17
Chloromethane	Inhalation of Indoor Air	1.80E-3	1.40E-4	<0.01	0.01	8.48E-5	<0.01	0.01	6.02E-6	3.79E-8	0.34	3.63E-6	2.29E-8	0.39
Chloromethane	Inhalation of Outdoor Air	1.80E-3	4.68E-5	<0.01	0.00	2.12E-5	<0.01	0.00	2.00E-6	1.26E-8	0.11	9.09E-7	5.72E-9	0.10
Chromium	Ingestion of Indoor Dust	3.41E+1	4.98E-5	<0.01	0.00	9.62E-6	<0.01	0.00	2.13E-6			4.12E-7		
Chromium	Ingestion of Soil	3.41E+1	1.66E-5	<0.01	0.00	2.40E-6	<0.01	0.00	7.12E-7			1.03E-7		
Dichlorodifluoromethane	Inhalation of Indoor Air	4.47E-3	3.48E-4	<0.01	0.05	2.10E-4	<0.01	0.05	1.49E-5			9.01E-6		
Dichlorodifluoromethane	Inhalation of Outdoor Air	4.47E-3	1.16E-4	<0.01	0.02	5.25E-5	<0.01	0.01	4.98E-6			2.25E-6		
Dieldrin	Inhalation of Indoor Air	2.76E-7	2.15E-8			1.29E-8			9.22E-10	1.48E-8	0.13	5.56E-10	8.95E-9	0.15
Dieldrin	Inhalation of Outdoor Air	2.76E-7	7.17E-9			3.24E-9			3.07E-10	4.95E-9	0.04	1.39E-10	2.23E-9	0.04
Formaldehyde	Inhalation of Indoor Air	3.88E-3	3.02E-4	0.35	2.76	1.82E-4	0.21	2.94	1.29E-5	5.90E-7	5.31	7.82E-6	3.56E-7	6.07
Formaldehyde	Inhalation of Outdoor Air	3.88E-3	1.00E-4	0.12	0.92	4.56E-5	0.05	0.74	4.32E-6	1.96E-7	1.77	1.95E-6	8.90E-8	1.52
gamma-BHC	Inhalation of Indoor Air	4.41E-7	3.43E-8			2.07E-8			1.47E-9	1.61E-9	0.01	8.87E-10	9.76E-10	0.02
gamma-BHC	Inhalation of Outdoor Air	4.41E-7	1.14E-8			5.17E-9			4.90E-10	5.39E-10	0.00	2.21E-10	2.44E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.22E-7	1.73E-8			1.04E-8			7.43E-10	6.76E-9	0.06	4.48E-10	4.07E-9	0.07
Heptachlor epoxide	Inhalation of Outdoor Air	2.22E-7	5.78E-9			2.61E-9			2.47E-10	2.25E-9	0.02	1.12E-10	1.01E-9	0.02
Heptachlor	Inhalation of Indoor Air	2.98E-7	2.32E-8			1.40E-8			9.97E-10	4.53E-9	0.04	6.01E-10	2.73E-9	0.05
Heptachlor	Inhalation of Outdoor Air	2.98E-7	7.75E-9			3.50E-9			3.32E-10	1.51E-9	0.01	1.50E-10	6.84E-10	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.78E-3	1.39E-4			8.39E-5			5.96E-6	4.59E-7	4.13	3.59E-6	2.77E-7	4.72
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.78E-3	4.64E-5			2.09E-5			1.98E-6	1.53E-7	1.38	8.99E-7	6.92E-8	1.18
Hydrochloric Acid	Inhalation of Indoor Air	2.97E-3	2.31E-4	0.04	0.32	1.39E-4	0.02	0.34	9.93E-6			5.99E-6		
Hydrochloric Acid	Inhalation of Outdoor Air	2.97E-3	7.72E-5	0.01	0.11	3.49E-5	<0.01	0.08	3.31E-6			1.49E-6		
Mercury	Inhalation of Indoor Air	7.75E-6	6.03E-7	<0.01	0.05	3.64E-7	<0.01	0.06	2.58E-8			1.56E-8		
Mercury	Inhalation of Outdoor Air	7.75E-6	2.01E-7	<0.01	0.02	9.10E-8	<0.01	0.01	8.62E-9			3.90E-9		
Methylene Chloride	Inhalation of Indoor Air	1.11E-2	8.66E-4	<0.01	0.01	5.22E-4	<0.01	0.01	3.71E-5	6.10E-8	0.55	2.23E-5	3.68E-8	0.63
Methylene Chloride	Inhalation of Outdoor Air	1.11E-2	2.88E-4	<0.01	0.00	1.30E-4	<0.01	0.00	1.23E-5	2.03E-8	0.18	5.59E-6	9.20E-9	0.16

Table C-19
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
n-Hexane	Inhalation of Indoor Air	3.42E-3	2.66E-4	<0.01	0.04	1.60E-4	<0.01	0.04	1.14E-5			6.88E-6		
n-Hexane	Inhalation of Outdoor Air	3.42E-3	8.88E-5	<0.01	0.01	4.01E-5	<0.01	0.01	3.80E-6			1.72E-6		
Naphthalene	Inhalation of Indoor Air	3.42E-4	2.66E-5	0.03	0.24	1.60E-5	0.02	0.26	1.14E-6			6.89E-7		
Naphthalene	Inhalation of Outdoor Air	3.42E-4	8.89E-6	0.01	0.08	4.02E-6	<0.01	0.06	3.81E-7			1.72E-7		
PM-10	Inhalation of Indoor Air	6.06E-2	4.72E-3	0.33	2.58	2.85E-3	0.20	2.76	2.02E-4			1.22E-4		
PM-10	Inhalation of Outdoor Air	6.06E-2	1.57E-3	0.11	0.86	7.12E-4	0.05	0.69	6.75E-5			3.05E-5		
Propylene	Inhalation of Indoor Air	1.31E-2	1.02E-3	<0.01	0.01	6.19E-4	<0.01	0.01	4.40E-5			2.65E-5		
Propylene	Inhalation of Outdoor Air	1.31E-2	3.42E-4	<0.01	0.00	1.54E-4	<0.01	0.00	1.46E-5			6.64E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.44E-3	1.12E-4			6.80E-5			4.83E-6	9.81E-9	0.09	2.91E-6	5.91E-9	0.10
Tetrachloroethylene	Inhalation of Outdoor Air	1.44E-3	3.75E-5			1.70E-5			1.61E-6	3.27E-9	0.03	7.28E-7	1.47E-9	0.03
Toluene	Inhalation of Indoor Air	2.36E-2	1.84E-3	0.02	0.13	1.11E-3	<0.01	0.13	7.89E-5			4.76E-5		
Toluene	Inhalation of Outdoor Air	2.36E-2	6.13E-4	<0.01	0.04	2.77E-4	<0.01	0.03	2.63E-5			1.19E-5		
Total Carcinogenic PAHS (BaP T	Ingestion of Indoor Dust	7.74E-2	1.13E-7			2.18E-8			4.84E-9	3.53E-8	0.32	9.35E-10	6.82E-9	0.12
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	7.74E-2	3.76E-8			5.45E-9			1.61E-9	1.17E-8	0.11	2.33E-10	1.70E-9	0.03
Total Dioxin/Furans (2,3,7,8-T	Dermal Contact with Soil	9.44E-5	1.22E-10			5.78E-11			5.23E-12	7.85E-7	7.06	2.48E-12	3.72E-7	6.33
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Indoor Dust	5.83E-5	8.51E-11			1.64E-11			3.64E-12	5.47E-7	4.92	7.04E-13	1.05E-7	1.80
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	9.44E-5	4.59E-11			6.65E-12			1.96E-12	2.95E-7	2.66	2.85E-13	4.27E-8	0.73
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	1.21E-9	9.43E-11			5.69E-11			4.04E-12	6.06E-7	5.45	2.44E-12	3.66E-7	6.23
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.21E-9	3.14E-11			1.42E-11			1.34E-12	2.02E-7	1.82	6.10E-13	9.15E-8	1.56
Trichloroethylene	Inhalation of Indoor Air	1.73E-3	1.34E-4			8.13E-5			5.78E-6	3.44E-8	0.31	3.48E-6	2.07E-8	0.35
Trichloroethylene	Inhalation of Outdoor Air	1.73E-3	4.49E-5			2.03E-5			1.92E-6	1.14E-8	0.10	8.71E-7	5.18E-9	0.09
Vinyl Acetate	Inhalation of Indoor Air	3.58E-2	2.79E-3	0.05	0.38	1.68E-3	0.03	0.41	1.19E-4			7.21E-5		
Vinyl Acetate	Inhalation of Outdoor Air	3.58E-2	9.30E-4	0.02	0.13	4.20E-4	<0.01	0.10	3.98E-5			1.80E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.26E-4	9.86E-6			5.95E-6			4.22E-7	1.26E-7	1.14	2.55E-7	7.65E-8	1.30
Vinyl Chloride	Inhalation of Outdoor Air	1.26E-4	3.28E-6			1.48E-6			1.40E-7	4.22E-8	0.38	6.37E-8	1.91E-8	0.33
Total Risk:				12.81	100.0		7.24	100.0		1.11E-5	100.0		5.87E-6	100.0

Table C-20
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.13E-4	3.99E-5		2.41E-5		3.42E-6	6.95E-7	3.13	2.06E-6	4.19E-7	3.57		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.13E-4	1.33E-5		6.03E-6		1.14E-6	2.31E-7	1.04	5.16E-7	1.04E-7	0.89		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.50E-4	1.94E-5		1.17E-5		1.67E-6	9.35E-8	0.42	1.00E-6	5.64E-8	0.48		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.50E-4	6.49E-6		2.93E-6		5.56E-7	3.11E-8	0.14	2.51E-7	1.41E-8	0.12		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.38E-4	1.08E-5		6.52E-6		9.26E-7	1.62E-7	0.73	5.59E-7	9.78E-8	0.83		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.38E-4	3.60E-6		1.63E-6		3.08E-7	5.40E-8	0.24	1.39E-7	2.44E-8	0.21		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.30E-3	1.79E-4	0.10	0.82	1.08E-4	0.06	0.87		1.53E-5		9.27E-6		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.30E-3	5.98E-5	0.03	0.27	2.70E-5	0.02	0.22		5.12E-6		2.31E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	1.97E-4	1.54E-5	0.27	2.11	9.29E-6	0.16	2.25		1.32E-6	1.01E-6	4.57		
1,2-Dibromoethane	Inhalation of Outdoor Air	1.97E-4	5.13E-6	0.09	0.70	2.32E-6	0.04	0.56		4.40E-7	3.39E-7	1.52		
1,2-Dichloroethane	Inhalation of Indoor Air	2.02E-4	1.57E-5			9.51E-6				1.35E-6	1.23E-7	0.55		
1,2-Dichloroethane	Inhalation of Outdoor Air	2.02E-4	5.25E-6			2.37E-6				4.50E-7	4.10E-8	0.18		
1,2-Dichloropropane	Inhalation of Indoor Air	1.17E-4	9.18E-6	<0.01	0.06	5.53E-6	<0.01	0.07		7.87E-7		4.74E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.17E-4	3.06E-6	<0.01	0.02	1.38E-6	<0.01	0.02		2.62E-7		1.18E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.53E-4	5.09E-5	0.03	0.23	3.07E-5	0.02	0.25		4.36E-6		2.63E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.53E-4	1.69E-5	<0.01	0.08	7.67E-6	<0.01	0.06		1.45E-6		6.57E-7		
1,3-Butadiene	Inhalation of Indoor Air	4.93E-4	3.83E-5			2.31E-5				3.29E-6	3.22E-6	14.49		
1,3-Butadiene	Inhalation of Outdoor Air	4.93E-4	1.27E-5			5.78E-6				1.09E-6	1.07E-6	4.83		
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.70E-3	1.33E-4	<0.01	0.00	8.02E-5	<0.01	0.00		1.14E-5	4.56E-7	2.05		
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.70E-3	4.43E-5	<0.01	0.00	2.00E-5	<0.01	0.00		3.80E-6	1.52E-7	0.68		
1,4-Dioxane	Inhalation of Indoor Air	1.30E-3	1.01E-4	<0.01	0.00	6.14E-5	<0.01	0.00		8.73E-6	2.35E-7	1.06		
1,4-Dioxane	Inhalation of Outdoor Air	1.30E-3	3.39E-5	<0.01	0.00	1.53E-5	<0.01	0.00		2.91E-6	7.86E-8	0.35		
2-Propanol	Inhalation of Indoor Air	1.06E-2	8.29E-4	<0.01	0.00	5.00E-4	<0.01	0.00		7.11E-5		4.28E-5		
2-Propanol	Inhalation of Outdoor Air	1.06E-2	2.76E-4	<0.01	0.00	1.25E-4	<0.01	0.00		2.37E-5		1.07E-5		
Acetaldehyde	Inhalation of Indoor Air	4.42E-2	3.44E-3	1.3	10.46	2.07E-3	0.81	11.16		2.95E-4	2.27E-6	10.22		
Acetaldehyde	Inhalation of Outdoor Air	4.42E-2	1.14E-3	0.45	3.49	5.19E-4	0.20	2.79		9.84E-5	7.58E-7	3.41		
Acetonitrile	Inhalation of Indoor Air	3.16E-2	2.46E-3	0.14	1.12	1.48E-3	0.09	1.20		2.11E-4		1.27E-4		

Table C-20
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetonitrile	Inhalation of Outdoor Air	3.16E-2	8.22E-4	0.05	0.37	3.71E-4	0.02	0.30	7.04E-5			3.18E-5		
Acrolein	Inhalation of Indoor Air	4.91E-4	3.82E-5	6.7	52.31	2.30E-5	4.0	55.81	3.28E-6			1.97E-6		
Acrolein	Inhalation of Outdoor Air	4.91E-4	1.27E-5	2.2	17.44	5.77E-6	1.0	13.95	1.09E-6			4.94E-7		
Acrylonitrile	Inhalation of Indoor Air	2.63E-4	2.04E-5	0.04	0.28	1.23E-5	0.02	0.30	1.75E-6	4.18E-7	1.88	1.05E-6	2.52E-7	2.15
Acrylonitrile	Inhalation of Outdoor Air	2.63E-4	6.83E-6	0.01	0.09	3.09E-6	<0.01	0.07	5.85E-7	1.39E-7	0.63	2.64E-7	6.30E-8	0.54
Aldrin	Inhalation of Indoor Air	2.89E-7	2.25E-8			1.35E-8			1.92E-9	3.30E-8	0.15	1.16E-9	1.99E-8	0.17
Aldrin	Inhalation of Outdoor Air	2.89E-7	7.50E-9			3.39E-9			6.43E-10	1.10E-8	0.05	2.90E-10	4.98E-9	0.04
alpha-BHC	Inhalation of Indoor Air	2.96E-7	2.30E-8			1.39E-8			1.97E-9	1.24E-8	0.06	1.19E-9	7.50E-9	0.06
alpha-BHC	Inhalation of Outdoor Air	2.96E-7	7.68E-9			3.47E-9			6.58E-10	4.14E-9	0.02	2.97E-10	1.87E-9	0.02
Aroclor-1254	Dermal Contact with Soil	4.20E-2	5.43E-8	<0.01	0.02	2.57E-8	<0.01	0.02	4.66E-9			2.20E-9		
Aroclor-1254	Ingestion of Indoor Dust	4.20E-2	6.13E-8	<0.01	0.02	1.18E-8	<0.01	0.01	5.25E-9			1.01E-9		
Aroclor-1254	Ingestion of Soil	4.20E-2	2.04E-8	<0.01	0.01	2.95E-9	<0.01	0.00	1.75E-9			2.53E-10		
Arsenic	Inhalation of Indoor Air	2.32E-6	1.81E-7			1.09E-7			1.55E-8	2.34E-7	1.05	9.37E-9	1.41E-7	1.20
Arsenic	Inhalation of Outdoor Air	2.32E-6	6.04E-8			2.73E-8			5.18E-9	7.80E-8	0.35	2.34E-9	3.52E-8	0.30
Benzene	Inhalation of Indoor Air	4.22E-3	3.28E-4	0.02	0.15	1.98E-4	0.01	0.16	2.81E-5	8.18E-7	3.68	1.69E-5	4.93E-7	4.20
Benzene	Inhalation of Outdoor Air	4.22E-3	1.09E-4	<0.01	0.05	4.95E-5	<0.01	0.04	9.38E-6	2.72E-7	1.23	4.24E-6	1.23E-7	1.05
Beryllium	Inhalation of Indoor Air	2.79E-7	2.17E-8	<0.01	0.00	1.31E-8	<0.01	0.00	1.86E-9	1.56E-8	0.07	1.12E-9	9.46E-9	0.08
Beryllium	Inhalation of Outdoor Air	2.79E-7	7.26E-9	<0.01	0.00	3.28E-9	<0.01	0.00	6.22E-10	5.23E-9	0.02	2.81E-10	2.36E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.28E-5	2.55E-6	<0.01	0.01	1.54E-6	<0.01	0.01	2.19E-7	1.84E-9	0.01	1.32E-7	1.11E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.28E-5	8.52E-7	<0.01	0.00	3.85E-7	<0.01	0.00	7.30E-8	6.13E-10	0.00	3.30E-8	2.77E-10	0.00
Bromomethane	Inhalation of Indoor Air	1.97E-4	1.53E-5	0.01	0.08	9.27E-6	<0.01	0.09	1.31E-6			7.94E-7		
Bromomethane	Inhalation of Outdoor Air	1.97E-4	5.12E-6	<0.01	0.03	2.31E-6	<0.01	0.02	4.39E-7			1.98E-7		
Cadmium	Inhalation of Indoor Air	2.20E-6	1.71E-7	<0.01	0.05	1.03E-7	<0.01	0.06	1.47E-8	9.28E-8	0.42	8.89E-9	5.60E-8	0.48
Cadmium	Inhalation of Outdoor Air	2.20E-6	5.73E-8	<0.01	0.02	2.59E-8	<0.01	0.01	4.91E-9	3.09E-8	0.14	2.22E-9	1.40E-8	0.12
Carbon Tetrachloride	Inhalation of Indoor Air	6.40E-4	4.98E-5	0.09	0.68	3.00E-5	0.05	0.73	4.27E-6	2.24E-7	1.01	2.57E-6	1.35E-7	1.15
Carbon Tetrachloride	Inhalation of Outdoor Air	6.40E-4	1.66E-5	0.03	0.23	7.51E-6	0.01	0.18	1.42E-6	7.47E-8	0.34	6.44E-7	3.38E-8	0.29
Chloroethane	Inhalation of Indoor Air	2.00E-4	1.56E-5	<0.01	0.00	9.43E-6	<0.01	0.00	1.34E-6			8.08E-7		

Table C-20
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chloroethane	Inhalation of Outdoor Air	2.00E-4	5.21E-6	<0.01	0.00	2.35E-6	<0.01	0.00	4.46E-7			2.02E-7		
Chloroform	Inhalation of Indoor Air	2.44E-4	1.90E-5	<0.01	0.00	1.14E-5	<0.01	0.00	1.63E-6	1.31E-7	0.59	9.83E-7	7.91E-8	0.67
Chloroform	Inhalation of Outdoor Air	2.44E-4	6.34E-6	<0.01	0.00	2.86E-6	<0.01	0.00	5.43E-7	4.37E-8	0.20	2.45E-7	1.97E-8	0.17
Chloromethane	Inhalation of Indoor Air	1.80E-3	1.40E-4	<0.01	0.01	8.48E-5	<0.01	0.01	1.20E-5	7.59E-8	0.34	7.27E-6	4.58E-8	0.39
Chloromethane	Inhalation of Outdoor Air	1.80E-3	4.68E-5	<0.01	0.00	2.12E-5	<0.01	0.00	4.01E-6	2.53E-8	0.11	1.81E-6	1.14E-8	0.10
Chromium	Ingestion of Indoor Dust	3.41E+1	4.98E-5	<0.01	0.00	9.62E-6	<0.01	0.00	4.27E-6			8.25E-7		
Chromium	Ingestion of Soil	3.41E+1	1.66E-5	<0.01	0.00	2.40E-6	<0.01	0.00	1.42E-6			2.06E-7		
Dichlorodifluoromethane	Inhalation of Indoor Air	4.47E-3	3.48E-4	<0.01	0.05	2.10E-4	<0.01	0.05	2.98E-5			1.80E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	4.47E-3	1.16E-4	<0.01	0.02	5.25E-5	<0.01	0.01	9.96E-6			4.50E-6		
Dieldrin	Inhalation of Indoor Air	2.76E-7	2.15E-8			1.29E-8			1.84E-9	2.97E-8	0.13	1.11E-9	1.79E-8	0.15
Dieldrin	Inhalation of Outdoor Air	2.76E-7	7.17E-9			3.24E-9			6.14E-10	9.90E-9	0.04	2.78E-10	4.47E-9	0.04
Formaldehyde	Inhalation of Indoor Air	3.88E-3	3.02E-4	0.35	2.76	1.82E-4	0.21	2.94	2.59E-5	1.18E-6	5.31	1.56E-5	7.12E-7	6.07
Formaldehyde	Inhalation of Outdoor Air	3.88E-3	1.00E-4	0.12	0.92	4.56E-5	0.05	0.74	8.65E-6	3.93E-7	1.77	3.91E-6	1.78E-7	1.52
gamma-BHC	Inhalation of Indoor Air	4.41E-7	3.43E-8			2.07E-8			2.94E-9	3.23E-9	0.01	1.77E-9	1.95E-9	0.02
gamma-BHC	Inhalation of Outdoor Air	4.41E-7	1.14E-8			5.17E-9			9.81E-10	1.07E-9	0.00	4.43E-10	4.88E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.22E-7	1.73E-8			1.04E-8			1.48E-9	1.35E-8	0.06	8.96E-10	8.15E-9	0.07
Heptachlor epoxide	Inhalation of Outdoor Air	2.22E-7	5.78E-9			2.61E-9			4.95E-10	4.50E-9	0.02	2.24E-10	2.03E-9	0.02
Heptachlor	Inhalation of Indoor Air	2.98E-7	2.32E-8			1.40E-8			1.99E-9	9.07E-9	0.04	1.20E-9	5.47E-9	0.05
Heptachlor	Inhalation of Outdoor Air	2.98E-7	7.75E-9			3.50E-9			6.64E-10	3.02E-9	0.01	3.00E-10	1.36E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.78E-3	1.39E-4			8.39E-5			1.19E-5	9.18E-7	4.13	7.19E-6	5.54E-7	4.72
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.78E-3	4.64E-5			2.09E-5			3.97E-6	3.06E-7	1.38	1.79E-6	1.38E-7	1.18
Hydrochloric Acid	Inhalation of Indoor Air	2.97E-3	2.31E-4	0.04	0.32	1.39E-4	0.02	0.34	1.98E-5			1.19E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	2.97E-3	7.72E-5	0.01	0.11	3.49E-5	<0.01	0.08	6.62E-6			2.99E-6		
Mercury	Inhalation of Indoor Air	7.75E-6	6.03E-7	<0.01	0.05	3.64E-7	<0.01	0.06	5.17E-8			3.12E-8		
Mercury	Inhalation of Outdoor Air	7.75E-6	2.01E-7	<0.01	0.02	9.10E-8	<0.01	0.01	1.72E-8			7.80E-9		
Methylene Chloride	Inhalation of Indoor Air	1.11E-2	8.66E-4	<0.01	0.01	5.22E-4	<0.01	0.01	7.42E-5	1.22E-7	0.55	4.47E-5	7.36E-8	0.63
Methylene Chloride	Inhalation of Outdoor Air	1.11E-2	2.88E-4	<0.01	0.00	1.30E-4	<0.01	0.00	2.47E-5	4.07E-8	0.18	1.11E-5	1.84E-8	0.16

Table C-20
Elementary School
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Elementary School Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Adolescent (6-12)			Adult			Adolescent (6-12)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
n-Hexane	Inhalation of Indoor Air	3.42E-3	2.66E-4	<0.01	0.04	1.60E-4	<0.01	0.04	2.28E-5			1.37E-5		
n-Hexane	Inhalation of Outdoor Air	3.42E-3	8.88E-5	<0.01	0.01	4.01E-5	<0.01	0.01	7.61E-6			3.44E-6		
Naphthalene	Inhalation of Indoor Air	3.42E-4	2.66E-5	0.03	0.24	1.60E-5	0.02	0.26	2.28E-6			1.37E-6		
Naphthalene	Inhalation of Outdoor Air	3.42E-4	8.89E-6	0.01	0.08	4.02E-6	<0.01	0.06	7.62E-7			3.44E-7		
PM-10	Inhalation of Indoor Air	6.06E-2	4.72E-3	0.33	2.58	2.85E-3	0.20	2.76	4.05E-4			2.44E-4		
PM-10	Inhalation of Outdoor Air	6.06E-2	1.57E-3	0.11	0.86	7.12E-4	0.05	0.69	1.35E-4			6.10E-5		
Propylene	Inhalation of Indoor Air	1.31E-2	1.02E-3	<0.01	0.01	6.19E-4	<0.01	0.01	8.80E-5			5.31E-5		
Propylene	Inhalation of Outdoor Air	1.31E-2	3.42E-4	<0.01	0.00	1.54E-4	<0.01	0.00	2.93E-5			1.32E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.44E-3	1.12E-4			6.80E-5			9.66E-6	1.96E-8	0.09	5.82E-6	1.18E-8	0.10
Tetrachloroethylene	Inhalation of Outdoor Air	1.44E-3	3.75E-5			1.70E-5			3.22E-6	6.54E-9	0.03	1.45E-6	2.95E-9	0.03
Toluene	Inhalation of Indoor Air	2.36E-2	1.84E-3	0.02	0.13	1.11E-3	<0.01	0.13	1.57E-4			9.52E-5		
Toluene	Inhalation of Outdoor Air	2.36E-2	6.13E-4	<0.01	0.04	2.77E-4	<0.01	0.03	5.26E-5			2.38E-5		
Total Carcinogenic PAHS (BaP T	Ingestion of Indoor Dust	7.74E-2	1.13E-7			2.18E-8			9.69E-9	7.07E-8	0.32	1.87E-9	1.36E-8	0.12
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	7.74E-2	3.76E-8			5.45E-9			3.23E-9	2.35E-8	0.11	4.67E-10	3.41E-9	0.03
Total Dioxin/Furans (2,3,7,8-T	Dermal Contact with Soil	9.44E-5	1.22E-10			5.78E-11			1.04E-11	1.57E-6	7.06	4.96E-12	7.44E-7	6.33
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Indoor Dust	5.83E-5	8.51E-11			1.64E-11			7.29E-12	1.09E-6	4.92	1.40E-12	2.11E-7	1.80
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	9.44E-5	4.59E-11			6.65E-12			3.93E-12	5.90E-7	2.66	5.70E-13	8.55E-8	0.73
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	1.21E-9	9.43E-11			5.69E-11			8.09E-12	1.21E-6	5.45	4.88E-12	7.32E-7	6.23
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.21E-9	3.14E-11			1.42E-11			2.69E-12	4.04E-7	1.82	1.22E-12	1.83E-7	1.56
Trichloroethylene	Inhalation of Indoor Air	1.73E-3	1.34E-4			8.13E-5			1.15E-5	6.88E-8	0.31	6.97E-6	4.15E-8	0.35
Trichloroethylene	Inhalation of Outdoor Air	1.73E-3	4.49E-5			2.03E-5			3.85E-6	2.29E-8	0.10	1.74E-6	1.03E-8	0.09
Vinyl Acetate	Inhalation of Indoor Air	3.58E-2	2.79E-3	0.05	0.38	1.68E-3	0.03	0.41	2.39E-4			1.44E-4		
Vinyl Acetate	Inhalation of Outdoor Air	3.58E-2	9.30E-4	0.02	0.13	4.20E-4	<0.01	0.10	7.97E-5			3.60E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.26E-4	9.86E-6			5.95E-6			8.45E-7	2.53E-7	1.14	5.10E-7	1.53E-7	1.30
Vinyl Chloride	Inhalation of Outdoor Air	1.26E-4	3.28E-6			1.48E-6			2.81E-7	8.45E-8	0.38	1.27E-7	3.82E-8	0.33
Total Risk:			12.81			100.0			7.24			100.0		
			2.22E-5			100.0			1.17E-5			100.0		

Table C-21
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.38E-4	2.66E-4		9.51E-5		1.14E-5	2.31E-6	3.75	4.07E-6	8.28E-7	4.20		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.38E-4	7.01E-5		2.50E-5		3.00E-6	6.10E-7	0.99	1.07E-6	2.17E-7	1.10		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.12E-4	1.29E-4		4.61E-5		5.54E-6	3.10E-7	0.50	1.97E-6	1.10E-7	0.56		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.12E-4	3.40E-5		1.21E-5		1.45E-6	8.16E-8	0.13	5.20E-7	2.91E-8	0.15		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.15E-4	7.02E-5		2.51E-5		3.01E-6	5.27E-7	0.85	1.07E-6	1.88E-7	0.95		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.15E-4	1.84E-5		6.60E-6		7.92E-7	1.38E-7	0.22	2.83E-7	4.95E-8	0.25		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.14E-3	1.30E-3	0.76	1.44	4.66E-4	0.27	1.44		5.59E-5		1.99E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.14E-3	3.43E-4	0.20	0.38	1.22E-4	0.07	0.38		1.47E-5		5.25E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	4.65E-5	0.82	1.55	1.66E-5	0.29	1.55	1.99E-6	1.53E-6	2.48	7.12E-7	5.48E-7	2.78
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	1.22E-5	0.21	0.41	4.37E-6	0.08	0.41	5.25E-7	4.04E-7	0.65	1.87E-7	1.44E-7	0.73
1,2-Dichloroethane	Inhalation of Indoor Air	1.83E-4	1.11E-4			3.98E-5			4.78E-6	4.35E-7	0.70	1.70E-6	1.55E-7	0.79
1,2-Dichloroethane	Inhalation of Outdoor Air	1.83E-4	2.93E-5			1.04E-5			1.25E-6	1.14E-7	0.19	4.49E-7	4.09E-8	0.21
1,2-Dichloropropane	Inhalation of Indoor Air	9.85E-5	5.98E-5	0.05	0.10	2.13E-5	0.02	0.10	2.56E-6			9.15E-7		
1,2-Dichloropropane	Inhalation of Outdoor Air	9.85E-5	1.57E-5	0.01	0.03	5.62E-6	<0.01	0.03	6.74E-7			2.40E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.31E-4	3.83E-4	0.22	0.42	1.37E-4	0.08	0.42	1.64E-5			5.87E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.31E-4	1.00E-4	0.06	0.11	3.60E-5	0.02	0.11	4.32E-6			1.54E-6		
1,3-Butadiene	Inhalation of Indoor Air	3.78E-4	2.30E-4			8.21E-5			9.85E-6	9.66E-6	15.62	3.52E-6	3.45E-6	17.49
1,3-Butadiene	Inhalation of Outdoor Air	3.78E-4	6.05E-5			2.16E-5			2.59E-6	2.54E-6	4.11	9.26E-7	9.08E-7	4.60
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.53E-3	9.34E-4	<0.01	0.01	3.33E-4	<0.01	0.01	4.00E-5	1.60E-6	2.59	1.42E-5	5.71E-7	2.90
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.53E-3	2.45E-4	<0.01	0.00	8.78E-5	<0.01	0.00	1.05E-5	4.21E-7	0.68	3.76E-6	1.50E-7	0.76
1,4-Dioxane	Inhalation of Indoor Air	1.02E-3	6.21E-4	<0.01	0.00	2.21E-4	<0.01	0.00	2.66E-5	7.18E-7	1.16	9.50E-6	2.56E-7	1.30
1,4-Dioxane	Inhalation of Outdoor Air	1.02E-3	1.63E-4	<0.01	0.00	5.83E-5	<0.01	0.00	7.00E-6	1.89E-7	0.31	2.50E-6	6.75E-8	0.34
2-Propanol	Inhalation of Indoor Air	3.88E-2	2.35E-2	0.01	0.02	8.42E-3	<0.01	0.02	1.01E-3			3.61E-4		
2-Propanol	Inhalation of Outdoor Air	3.88E-2	6.20E-3	<0.01	0.01	2.21E-3	<0.01	0.01	2.66E-4			9.50E-5		
4,4'-DDT	Dermal Contact with Soil	4.64E-2	6.95E-7	<0.01	0.00	1.10E-7	<0.01	0.00	2.98E-8	1.01E-8	0.02	4.74E-9	1.61E-9	0.01
4,4'-DDT	Ingestion of Indoor Dust	4.64E-2	4.16E-7	<0.01	0.00	4.45E-8	<0.01	0.00	1.78E-8	6.06E-9	0.01	1.91E-9	6.49E-10	0.00
4,4'-DDT	Ingestion of Soil	4.64E-2	1.78E-7	<0.01	0.00	1.91E-8	<0.01	0.00	7.64E-9	2.59E-9	0.00	8.18E-10	2.78E-10	0.00

Table C-21
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetaldehyde	Inhalation of Indoor Air	2.23E-2	1.35E-2	5.3	10.00	4.84E-3	1.9	10.00	5.81E-4	4.47E-6	7.24	2.07E-4	1.59E-6	8.10
Acetaldehyde	Inhalation of Outdoor Air	2.23E-2	3.57E-3	1.4	2.63	1.27E-3	0.50	2.63	1.53E-4	1.17E-6	1.90	5.46E-5	4.20E-7	2.13
Acetonitrile	Inhalation of Indoor Air	3.12E-3	1.89E-3	0.11	0.21	6.77E-4	0.04	0.21	8.12E-5			2.90E-5		
Acetonitrile	Inhalation of Outdoor Air	3.12E-3	4.98E-4	0.03	0.06	1.78E-4	0.01	0.06	2.13E-5			7.63E-6		
Acrolein	Inhalation of Indoor Air	2.65E-4	1.61E-4	28.2	53.51	5.76E-5	10.1	53.53	6.91E-6			2.46E-6		
Acrolein	Inhalation of Outdoor Air	2.65E-4	4.24E-5	7.4	14.08	1.51E-5	2.7	14.09	1.81E-6			6.49E-7		
Acrylonitrile	Inhalation of Indoor Air	2.69E-4	1.63E-4	0.29	0.54	5.83E-5	0.10	0.54	7.00E-6	1.66E-6	2.69	2.50E-6	5.95E-7	3.02
Acrylonitrile	Inhalation of Outdoor Air	2.69E-4	4.30E-5	0.08	0.14	1.53E-5	0.03	0.14	1.84E-6	4.38E-7	0.71	6.58E-7	1.56E-7	0.79
Aldrin	Inhalation of Indoor Air	1.42E-7	8.64E-8			3.08E-8			3.70E-9	6.35E-8	0.10	1.32E-9	2.26E-8	0.11
Aldrin	Inhalation of Outdoor Air	1.42E-7	2.27E-8			8.12E-9			9.74E-10	1.67E-8	0.03	3.48E-10	5.96E-9	0.03
alpha-BHC	Inhalation of Indoor Air	1.99E-7	1.21E-7			4.33E-8			5.20E-9	3.27E-8	0.05	1.85E-9	1.17E-8	0.06
alpha-BHC	Inhalation of Outdoor Air	1.99E-7	3.19E-8			1.14E-8			1.36E-9	8.62E-9	0.01	4.89E-10	3.08E-9	0.02
Arsenic	Inhalation of Indoor Air	1.93E-6	1.17E-6			4.20E-7			5.04E-8	7.58E-7	1.23	1.80E-8	2.70E-7	1.37
Arsenic	Inhalation of Outdoor Air	1.93E-6	3.09E-7			1.10E-7			1.32E-8	1.99E-7	0.32	4.73E-9	7.12E-8	0.36
Barium	Ingestion of Indoor Dust	1.08E+2	9.73E-4	0.01	0.03	1.04E-4	<0.01	0.01	4.17E-5			4.46E-6		
Barium	Ingestion of Soil	1.08E+2	4.17E-4	<0.01	0.01	4.46E-5	<0.01	0.00	1.78E-5			1.91E-6		
Benzene	Inhalation of Indoor Air	3.35E-3	2.03E-3	0.12	0.23	7.27E-4	0.04	0.23	8.72E-5	2.53E-6	4.10	3.11E-5	9.05E-7	4.59
Benzene	Inhalation of Outdoor Air	3.35E-3	5.35E-4	0.03	0.06	1.91E-4	0.01	0.06	2.29E-5	6.66E-7	1.08	8.19E-6	2.38E-7	1.21
Benzyl Chloride	Inhalation of Indoor Air	3.24E-4	1.97E-4			7.04E-5			8.45E-6	1.43E-6	2.32	3.01E-6	5.13E-7	2.60
Benzyl Chloride	Inhalation of Outdoor Air	3.24E-4	5.19E-5			1.85E-5			2.22E-6	3.78E-7	0.61	7.94E-7	1.35E-7	0.68
Beryllium	Inhalation of Indoor Air	1.86E-7	1.13E-7	<0.01	0.00	4.05E-8	<0.01	0.00	4.86E-9	4.08E-8	0.07	1.73E-9	1.46E-8	0.07
Beryllium	Inhalation of Outdoor Air	1.86E-7	2.98E-8	<0.01	0.00	1.06E-8	<0.01	0.00	1.28E-9	1.07E-8	0.02	4.57E-10	3.84E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.14E-5	1.90E-5	<0.01	0.01	6.82E-6	<0.01	0.01	8.18E-7	6.87E-9	0.01	2.92E-7	2.45E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.14E-5	5.02E-6	<0.01	0.00	1.79E-6	<0.01	0.00	2.15E-7	1.80E-9	0.00	7.69E-8	6.46E-10	0.00
Bromomethane	Inhalation of Indoor Air	1.78E-4	1.08E-4	0.08	0.14	3.86E-5	0.03	0.14	4.64E-6			1.65E-6		
Bromomethane	Inhalation of Outdoor Air	1.78E-4	2.84E-5	0.02	0.04	1.01E-5	<0.01	0.04	1.22E-6			4.36E-7		
Cadmium	Inhalation of Indoor Air	3.40E-6	2.06E-6	0.08	0.15	7.37E-7	0.03	0.15	8.85E-8	5.57E-7	0.90	3.16E-8	1.99E-7	1.01

Table C-21
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Cadmium	Inhalation of Outdoor Air	3.40E-6	5.43E-7	0.02	0.04	1.94E-7	<0.01	0.04	2.33E-8	1.46E-7	0.24	8.32E-9	5.24E-8	0.27
Carbon Tetrachloride	Inhalation of Indoor Air	6.27E-4	3.81E-4	0.67	1.26	1.36E-4	0.24	1.27	1.63E-5	8.57E-7	1.39	5.83E-6	3.06E-7	1.55
Carbon Tetrachloride	Inhalation of Outdoor Air	6.27E-4	1.00E-4	0.18	0.33	3.58E-5	0.06	0.33	4.29E-6	2.25E-7	0.36	1.53E-6	8.06E-8	0.41
Chloroethane	Inhalation of Indoor Air	1.69E-4	1.03E-4	<0.01	0.00	3.68E-5	<0.01	0.00	4.41E-6			1.57E-6		
Chloroethane	Inhalation of Outdoor Air	1.69E-4	2.71E-5	<0.01	0.00	9.69E-6	<0.01	0.00	1.16E-6			4.15E-7		
Chloroform	Inhalation of Indoor Air	2.23E-4	1.35E-4	<0.01	0.00	4.85E-5	<0.01	0.00	5.82E-6	4.68E-7	0.76	2.07E-6	1.67E-7	0.85
Chloroform	Inhalation of Outdoor Air	2.23E-4	3.57E-5	<0.01	0.00	1.27E-5	<0.01	0.00	1.53E-6	1.23E-7	0.20	5.47E-7	4.40E-8	0.22
Chloromethane	Inhalation of Indoor Air	1.65E-3	1.00E-3	0.01	0.02	3.59E-4	<0.01	0.02	4.31E-5	2.71E-7	0.44	1.53E-5	9.69E-8	0.49
Chloromethane	Inhalation of Outdoor Air	1.65E-3	2.64E-4	<0.01	0.01	9.45E-5	<0.01	0.01	1.13E-5	7.14E-8	0.12	4.05E-6	2.55E-8	0.13
Chromium	Ingestion of Indoor Dust	3.01E+1	2.69E-4	<0.01	0.00	2.88E-5	<0.01	0.00	1.15E-5			1.23E-6		
Chromium	Ingestion of Soil	3.01E+1	1.15E-4	<0.01	0.00	1.23E-5	<0.01	0.00	4.95E-6			5.30E-7		
Dieldrin	Inhalation of Indoor Air	1.96E-7	1.19E-7			4.25E-8			5.10E-9	8.22E-8	0.13	1.82E-9	2.93E-8	0.15
Dieldrin	Inhalation of Outdoor Air	1.96E-7	3.13E-8			1.12E-8			1.34E-9	2.16E-8	0.03	4.80E-10	7.73E-9	0.04
Formaldehyde	Inhalation of Indoor Air	2.34E-3	1.42E-3	1.7	3.15	5.08E-4	0.59	3.15	6.10E-5	2.77E-6	4.49	2.17E-5	9.91E-7	5.02
Formaldehyde	Inhalation of Outdoor Air	2.34E-3	3.74E-4	0.44	0.83	1.33E-4	0.16	0.83	1.60E-5	7.30E-7	1.18	5.73E-6	2.60E-7	1.32
gamma-BHC	Inhalation of Indoor Air	3.54E-7	2.15E-7			7.68E-8			9.22E-9	1.01E-8	0.02	3.29E-9	3.62E-9	0.02
gamma-BHC	Inhalation of Outdoor Air	3.54E-7	5.66E-8			2.02E-8			2.42E-9	2.67E-9	0.00	8.67E-10	9.53E-10	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.18E-7	1.32E-7			4.73E-8			5.67E-9	5.16E-8	0.08	2.02E-9	1.84E-8	0.09
Heptachlor epoxide	Inhalation of Outdoor Air	2.18E-7	3.48E-8			1.24E-8			1.49E-9	1.36E-8	0.02	5.33E-10	4.85E-9	0.02
Heptachlor	Inhalation of Indoor Air	1.98E-7	1.20E-7			4.30E-8			5.16E-9	2.35E-8	0.04	1.84E-9	8.39E-9	0.04
Heptachlor	Inhalation of Outdoor Air	1.98E-7	3.17E-8			1.13E-8			1.36E-9	6.18E-9	0.01	4.85E-10	2.21E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.63E-4	5.24E-4			1.87E-4			2.24E-5	1.73E-6	2.80	8.02E-6	6.18E-7	3.13
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.63E-4	1.38E-4			4.93E-5			5.91E-6	4.55E-7	0.74	2.11E-6	1.62E-7	0.82
Hydrochloric Acid	Inhalation of Indoor Air	3.87E-3	2.35E-3	0.41	0.78	8.40E-4	0.15	0.78	1.00E-4			3.60E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	3.87E-3	6.19E-4	0.11	0.21	2.21E-4	0.04	0.21	2.65E-5			9.47E-6		
Mercury	Inhalation of Indoor Air	6.26E-6	3.80E-6	0.04	0.08	1.35E-6	0.02	0.08	1.63E-7			5.82E-8		
Mercury	Inhalation of Outdoor Air	6.26E-6	1.00E-6	0.01	0.02	3.57E-7	<0.01	0.02	4.29E-8			1.53E-8		

Table C-21
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 1 Tour of Duty (3 Years)			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Methylene Chloride	Inhalation of Indoor Air	9.38E-3	5.69E-3	<0.01	0.01	2.03E-3	<0.01	0.01	2.44E-4	4.01E-7	0.65	8.72E-5	1.43E-7	0.73
Methylene Chloride	Inhalation of Outdoor Air	9.38E-3	1.49E-3	<0.01	0.00	5.35E-4	<0.01	0.00	6.42E-5	1.05E-7	0.17	2.29E-5	3.77E-8	0.19
Methylisobutylketone	Inhalation of Indoor Air	2.10E-3	1.27E-3	0.06	0.11	4.57E-4	0.02	0.11	5.48E-5			1.95E-5		
Methylisobutylketone	Inhalation of Outdoor Air	2.10E-3	3.36E-4	0.01	0.03	1.20E-4	<0.01	0.03	1.44E-5			5.15E-6		
n-Hexane	Inhalation of Indoor Air	2.79E-3	1.69E-3	0.03	0.06	6.06E-4	0.01	0.06	7.27E-5			2.59E-5		
n-Hexane	Inhalation of Outdoor Air	2.79E-3	4.46E-4	<0.01	0.01	1.59E-4	<0.01	0.01	1.91E-5			6.83E-6		
Naphthalene	Inhalation of Indoor Air	3.05E-4	1.85E-4	0.22	0.41	6.63E-5	0.08	0.41	7.96E-6			2.84E-6		
Naphthalene	Inhalation of Outdoor Air	3.05E-4	4.88E-5	0.06	0.11	1.74E-5	0.02	0.11	2.09E-6			7.48E-7		
PM-10	Inhalation of Indoor Air	5.56E-2	3.37E-2	2.4	4.49	1.20E-2	0.85	4.49	1.44E-3			5.17E-4		
PM-10	Inhalation of Outdoor Air	5.56E-2	8.89E-3	0.62	1.18	3.17E-3	0.22	1.18	3.81E-4			1.36E-4		
Propylene	Inhalation of Indoor Air	5.32E-3	3.23E-3	<0.01	0.01	1.15E-3	<0.01	0.01	1.38E-4			4.94E-5		
Propylene	Inhalation of Outdoor Air	5.32E-3	8.50E-4	<0.01	0.00	3.03E-4	<0.01	0.00	3.64E-5			1.30E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.21E-3	7.37E-4			2.63E-4			3.15E-5	6.41E-8	0.10	1.12E-5	2.29E-8	0.12
Tetrachloroethylene	Inhalation of Outdoor Air	1.21E-3	1.94E-4			6.92E-5			8.31E-6	1.68E-8	0.03	2.96E-6	6.02E-9	0.03
Toluene	Inhalation of Indoor Air	3.13E-2	1.90E-2	0.17	0.32	6.80E-3	0.06	0.32	8.16E-4			2.91E-4		
Toluene	Inhalation of Outdoor Air	3.13E-2	5.01E-3	0.04	0.08	1.79E-3	0.02	0.08	2.14E-4			7.67E-5		
Total Carcinogenic PAHS (BaP T)	Ingestion of Indoor Dust	7.72E-2	6.91E-7			7.41E-8			2.96E-8	2.16E-7	0.35	3.17E-9	2.31E-8	0.12
Total Carcinogenic PAHS (BaP T)	Ingestion of Soil	7.72E-2	2.96E-7			3.17E-8			1.27E-8	9.27E-8	0.15	1.36E-9	9.93E-9	0.05
Total Dioxin/Furans (2,3,7,8-T)	Dermal Contact with Soil	2.12E-5	1.59E-10			2.53E-11			6.81E-12	1.02E-6	1.65	1.08E-12	1.62E-7	0.83
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Indoor Dust	1.35E-4	1.21E-9			1.29E-10			5.19E-11	7.79E-6	12.60	5.56E-12	8.35E-7	4.23
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Soil	2.12E-5	8.15E-11			8.74E-12			3.49E-12	5.24E-7	0.85	3.74E-13	5.61E-8	0.28
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	1.23E-9	7.49E-10			2.67E-10			3.21E-11	4.82E-6	7.79	1.14E-11	1.72E-6	8.72
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	1.23E-9	1.97E-10			7.04E-11			8.45E-12	1.26E-6	2.05	3.02E-12	4.53E-7	2.30
Trichloroethylene	Inhalation of Indoor Air	1.52E-3	9.27E-4			3.31E-4			3.97E-5	2.36E-7	0.38	1.41E-5	8.44E-8	0.43
Trichloroethylene	Inhalation of Outdoor Air	1.52E-3	2.44E-4			8.71E-5			1.04E-5	6.22E-8	0.10	3.73E-6	2.22E-8	0.11
Vinyl Acetate	Inhalation of Indoor Air	4.45E-3	2.70E-3	0.05	0.09	9.66E-4	0.02	0.09	1.16E-4			4.14E-5		
Vinyl Acetate	Inhalation of Outdoor Air	4.45E-3	7.12E-4	0.01	0.02	2.54E-4	<0.01	0.02	3.05E-5			1.09E-5		

Table C-21
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vinyl Chloride	Inhalation of Indoor Air	1.08E-4	6.56E-5			2.34E-5			2.81E-6	8.43E-7	1.36	1.00E-6	3.01E-7	1.53
Vinyl Chloride	Inhalation of Outdoor Air	1.08E-4	1.72E-5			6.16E-6			7.40E-7	2.22E-7	0.36	2.64E-7	7.92E-8	0.40
Total Risk:				52.75	100.0		18.83	100.0		6.18E-5	100.0		1.97E-5	100.0

Table C-22
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.38E-4	2.66E-4		9.51E-5		2.28E-5	4.63E-6	3.75	8.15E-6	1.65E-6	4.20		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.38E-4	7.01E-5		2.50E-5		6.01E-6	1.22E-6	0.99	2.14E-6	4.35E-7	1.10		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.12E-4	1.29E-4		4.61E-5		1.10E-5	6.20E-7	0.50	3.95E-6	2.21E-7	0.56		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.12E-4	3.40E-5		1.21E-5		2.91E-6	1.63E-7	0.13	1.04E-6	5.83E-8	0.15		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.15E-4	7.02E-5		2.51E-5		6.02E-6	1.05E-6	0.85	2.15E-6	3.76E-7	0.95		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.15E-4	1.84E-5		6.60E-6		1.58E-6	2.77E-7	0.22	5.66E-7	9.91E-8	0.25		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.14E-3	1.30E-3	0.76 1.44	4.66E-4	0.27 1.44	1.11E-4			3.99E-5				
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.14E-3	3.43E-4	0.20 0.38	1.22E-4	0.07 0.38	2.94E-5			1.05E-5				
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	4.65E-5	0.82 1.55	1.66E-5	0.29 1.55	3.99E-6	3.07E-6	2.48	1.42E-6	1.09E-6	2.78		
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	1.22E-5	0.21 0.41	4.37E-6	0.08 0.41	1.05E-6	8.08E-7	0.65	3.75E-7	2.88E-7	0.73		
1,2-Dichloroethane	Inhalation of Indoor Air	1.83E-4	1.11E-4		3.98E-5		9.56E-6	8.70E-7	0.70	3.41E-6	3.10E-7	0.79		
1,2-Dichloroethane	Inhalation of Outdoor Air	1.83E-4	2.93E-5		1.04E-5		2.51E-6	2.29E-7	0.19	8.98E-7	8.18E-8	0.21		
1,2-Dichloropropane	Inhalation of Indoor Air	9.85E-5	5.98E-5	0.05 0.10	2.13E-5	0.02 0.10	5.12E-6			1.83E-6				
1,2-Dichloropropane	Inhalation of Outdoor Air	9.85E-5	1.57E-5	0.01 0.03	5.62E-6	<0.01 0.03	1.34E-6			4.81E-7				
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.31E-4	3.83E-4	0.22 0.42	1.37E-4	0.08 0.42	3.28E-5			1.17E-5				
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.31E-4	1.00E-4	0.06 0.11	3.60E-5	0.02 0.11	8.65E-6			3.09E-6				
1,3-Butadiene	Inhalation of Indoor Air	3.78E-4	2.30E-4		8.21E-5		1.97E-5	1.93E-5	15.62	7.04E-6	6.90E-6	17.49		
1,3-Butadiene	Inhalation of Outdoor Air	3.78E-4	6.05E-5		2.16E-5		5.18E-6	5.08E-6	4.11	1.85E-6	1.81E-6	4.60		
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.53E-3	9.34E-4	<0.01 0.01	3.33E-4	<0.01 0.01	8.00E-5	3.20E-6	2.59	2.85E-5	1.14E-6	2.90		
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.53E-3	2.45E-4	<0.01 0.00	8.78E-5	<0.01 0.00	2.10E-5	8.42E-7	0.68	7.52E-6	3.01E-7	0.76		
1,4-Dioxane	Inhalation of Indoor Air	1.02E-3	6.21E-4	<0.01 0.00	2.21E-4	<0.01 0.00	5.32E-5	1.43E-6	1.16	1.90E-5	5.13E-7	1.30		
1,4-Dioxane	Inhalation of Outdoor Air	1.02E-3	1.63E-4	<0.01 0.00	5.83E-5	<0.01 0.00	1.40E-5	3.78E-7	0.31	5.00E-6	1.35E-7	0.34		
2-Propanol	Inhalation of Indoor Air	3.88E-2	2.35E-2	0.01 0.02	8.42E-3	<0.01 0.02	2.02E-3			7.22E-4				
2-Propanol	Inhalation of Outdoor Air	3.88E-2	6.20E-3	<0.01 0.01	2.21E-3	<0.01 0.01	5.32E-4			1.90E-4				
4,4'-DDT	Dermal Contact with Soil	4.64E-2	6.95E-7	<0.01 0.00	1.10E-7	<0.01 0.00	5.96E-8	2.02E-8	0.02	9.49E-9	3.22E-9	0.01		
4,4'-DDT	Ingestion of Indoor Dust	4.64E-2	4.16E-7	<0.01 0.00	4.45E-8	<0.01 0.00	3.56E-8	1.21E-8	0.01	3.82E-9	1.29E-9	0.00		
4,4'-DDT	Ingestion of Soil	4.64E-2	1.78E-7	<0.01 0.00	1.91E-8	<0.01 0.00	1.52E-8	5.19E-9	0.00	1.63E-9	5.56E-10	0.00		

Table C-22
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetaldehyde	Inhalation of Indoor Air	2.23E-2	1.35E-2	5.3	10.00	4.84E-3	1.9	10.00	1.16E-3	8.95E-6	7.24	4.15E-4	3.19E-6	8.10
Acetaldehyde	Inhalation of Outdoor Air	2.23E-2	3.57E-3	1.4	2.63	1.27E-3	0.50	2.63	3.06E-4	2.35E-6	1.90	1.09E-4	8.41E-7	2.13
Acetonitrile	Inhalation of Indoor Air	3.12E-3	1.89E-3	0.11	0.21	6.77E-4	0.04	0.21	1.62E-4			5.80E-5		
Acetonitrile	Inhalation of Outdoor Air	3.12E-3	4.98E-4	0.03	0.06	1.78E-4	0.01	0.06	4.27E-5			1.52E-5		
Acrolein	Inhalation of Indoor Air	2.65E-4	1.61E-4	28.2	53.51	5.76E-5	10.1	53.53	1.38E-5			4.93E-6		
Acrolein	Inhalation of Outdoor Air	2.65E-4	4.24E-5	7.4	14.08	1.51E-5	2.7	14.09	3.63E-6			1.29E-6		
Acrylonitrile	Inhalation of Indoor Air	2.69E-4	1.63E-4	0.29	0.54	5.83E-5	0.10	0.54	1.40E-5	3.33E-6	2.69	5.00E-6	1.19E-6	3.02
Acrylonitrile	Inhalation of Outdoor Air	2.69E-4	4.30E-5	0.08	0.14	1.53E-5	0.03	0.14	3.68E-6	8.77E-7	0.71	1.31E-6	3.13E-7	0.79
Aldrin	Inhalation of Indoor Air	1.42E-7	8.64E-8			3.08E-8			7.40E-9	1.27E-7	0.10	2.64E-9	4.53E-8	0.11
Aldrin	Inhalation of Outdoor Air	1.42E-7	2.27E-8			8.12E-9			1.94E-9	3.34E-8	0.03	6.96E-10	1.19E-8	0.03
alpha-BHC	Inhalation of Indoor Air	1.99E-7	1.21E-7			4.33E-8			1.04E-8	6.55E-8	0.05	3.71E-9	2.34E-8	0.06
alpha-BHC	Inhalation of Outdoor Air	1.99E-7	3.19E-8			1.14E-8			2.73E-9	1.72E-8	0.01	9.78E-10	6.16E-9	0.02
Arsenic	Inhalation of Indoor Air	1.93E-6	1.17E-6			4.20E-7			1.00E-7	1.51E-6	1.23	3.60E-8	5.41E-7	1.37
Arsenic	Inhalation of Outdoor Air	1.93E-6	3.09E-7			1.10E-7			2.65E-8	3.99E-7	0.32	9.47E-9	1.42E-7	0.36
Barium	Ingestion of Indoor Dust	1.08E+2	9.73E-4	0.01	0.03	1.04E-4	<0.01	0.01	8.34E-5			8.93E-6		
Barium	Ingestion of Soil	1.08E+2	4.17E-4	<0.01	0.01	4.46E-5	<0.01	0.00	3.57E-5			3.82E-6		
Benzene	Inhalation of Indoor Air	3.35E-3	2.03E-3	0.12	0.23	7.27E-4	0.04	0.23	1.74E-4	5.06E-6	4.10	6.23E-5	1.81E-6	4.59
Benzene	Inhalation of Outdoor Air	3.35E-3	5.35E-4	0.03	0.06	1.91E-4	0.01	0.06	4.59E-5	1.33E-6	1.08	1.63E-5	4.76E-7	1.21
Benzyl Chloride	Inhalation of Indoor Air	3.24E-4	1.97E-4			7.04E-5			1.69E-5	2.87E-6	2.32	6.03E-6	1.02E-6	2.60
Benzyl Chloride	Inhalation of Outdoor Air	3.24E-4	5.19E-5			1.85E-5			4.44E-6	7.56E-7	0.61	1.58E-6	2.70E-7	0.68
Beryllium	Inhalation of Indoor Air	1.86E-7	1.13E-7	<0.01	0.00	4.05E-8	<0.01	0.00	9.73E-9	8.17E-8	0.07	3.47E-9	2.92E-8	0.07
Beryllium	Inhalation of Outdoor Air	1.86E-7	2.98E-8	<0.01	0.00	1.06E-8	<0.01	0.00	2.56E-9	2.15E-8	0.02	9.14E-10	7.68E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.14E-5	1.90E-5	<0.01	0.01	6.82E-6	<0.01	0.01	1.63E-6	1.37E-8	0.01	5.84E-7	4.91E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.14E-5	5.02E-6	<0.01	0.00	1.79E-6	<0.01	0.00	4.30E-7	3.61E-9	0.00	1.53E-7	1.29E-9	0.00
Bromomethane	Inhalation of Indoor Air	1.78E-4	1.08E-4	0.08	0.14	3.86E-5	0.03	0.14	9.28E-6			3.31E-6		
Bromomethane	Inhalation of Outdoor Air	1.78E-4	2.84E-5	0.02	0.04	1.01E-5	<0.01	0.04	2.44E-6			8.72E-7		
Cadmium	Inhalation of Indoor Air	3.40E-6	2.06E-6	0.08	0.15	7.37E-7	0.03	0.15	1.77E-7	1.11E-6	0.90	6.32E-8	3.98E-7	1.01

Table C-22
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Cadmium	Inhalation of Outdoor Air	3.40E-6	5.43E-7	0.02	0.04	1.94E-7	<0.01	0.04	4.66E-8	2.93E-7	0.24	1.66E-8	1.04E-7	0.27
Carbon Tetrachloride	Inhalation of Indoor Air	6.27E-4	3.81E-4	0.67	1.26	1.36E-4	0.24	1.27	3.26E-5	1.71E-6	1.39	1.16E-5	6.12E-7	1.55
Carbon Tetrachloride	Inhalation of Outdoor Air	6.27E-4	1.00E-4	0.18	0.33	3.58E-5	0.06	0.33	8.59E-6	4.51E-7	0.36	3.07E-6	1.61E-7	0.41
Chloroethane	Inhalation of Indoor Air	1.69E-4	1.03E-4	<0.01	0.00	3.68E-5	<0.01	0.00	8.83E-6			3.15E-6		
Chloroethane	Inhalation of Outdoor Air	1.69E-4	2.71E-5	<0.01	0.00	9.69E-6	<0.01	0.00	2.32E-6			8.30E-7		
Chloroform	Inhalation of Indoor Air	2.23E-4	1.35E-4	<0.01	0.00	4.85E-5	<0.01	0.00	1.16E-5	9.37E-7	0.76	4.15E-6	3.34E-7	0.85
Chloroform	Inhalation of Outdoor Air	2.23E-4	3.57E-5	<0.01	0.00	1.27E-5	<0.01	0.00	3.06E-6	2.46E-7	0.20	1.09E-6	8.81E-8	0.22
Chloromethane	Inhalation of Indoor Air	1.65E-3	1.00E-3	0.01	0.02	3.59E-4	<0.01	0.02	8.62E-5	5.43E-7	0.44	3.07E-5	1.93E-7	0.49
Chloromethane	Inhalation of Outdoor Air	1.65E-3	2.64E-4	<0.01	0.01	9.45E-5	<0.01	0.01	2.26E-5	1.42E-7	0.12	8.10E-6	5.10E-8	0.13
Chromium	Ingestion of Indoor Dust	3.01E+1	2.69E-4	<0.01	0.00	2.88E-5	<0.01	0.00	2.31E-5			2.47E-6		
Chromium	Ingestion of Soil	3.01E+1	1.15E-4	<0.01	0.00	1.23E-5	<0.01	0.00	9.90E-6			1.06E-6		
Dieldrin	Inhalation of Indoor Air	1.96E-7	1.19E-7			4.25E-8			1.02E-8	1.64E-7	0.13	3.64E-9	5.87E-8	0.15
Dieldrin	Inhalation of Outdoor Air	1.96E-7	3.13E-8			1.12E-8			2.68E-9	4.32E-8	0.03	9.60E-10	1.54E-8	0.04
Formaldehyde	Inhalation of Indoor Air	2.34E-3	1.42E-3	1.7	3.15	5.08E-4	0.59	3.15	1.22E-4	5.55E-6	4.49	4.35E-5	1.98E-6	5.02
Formaldehyde	Inhalation of Outdoor Air	2.34E-3	3.74E-4	0.44	0.83	1.33E-4	0.16	0.83	3.21E-5	1.46E-6	1.18	1.14E-5	5.21E-7	1.32
gamma-BHC	Inhalation of Indoor Air	3.54E-7	2.15E-7			7.68E-8			1.84E-8	2.03E-8	0.02	6.59E-9	7.25E-9	0.02
gamma-BHC	Inhalation of Outdoor Air	3.54E-7	5.66E-8			2.02E-8			4.85E-9	5.34E-9	0.00	1.73E-9	1.90E-9	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.18E-7	1.32E-7			4.73E-8			1.13E-8	1.03E-7	0.08	4.05E-9	3.69E-8	0.09
Heptachlor epoxide	Inhalation of Outdoor Air	2.18E-7	3.48E-8			1.24E-8			2.98E-9	2.72E-8	0.02	1.06E-9	9.71E-9	0.02
Heptachlor	Inhalation of Indoor Air	1.98E-7	1.20E-7			4.30E-8			1.03E-8	4.70E-8	0.04	3.69E-9	1.67E-8	0.04
Heptachlor	Inhalation of Outdoor Air	1.98E-7	3.17E-8			1.13E-8			2.72E-9	1.23E-8	0.01	9.71E-10	4.42E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.63E-4	5.24E-4			1.87E-4			4.49E-5	3.46E-6	2.80	1.60E-5	1.23E-6	3.13
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.63E-4	1.38E-4			4.93E-5			1.18E-5	9.11E-7	0.74	4.22E-6	3.25E-7	0.82
Hydrochloric Acid	Inhalation of Indoor Air	3.87E-3	2.35E-3	0.41	0.78	8.40E-4	0.15	0.78	2.01E-4			7.20E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	3.87E-3	6.19E-4	0.11	0.21	2.21E-4	0.04	0.21	5.30E-5			1.89E-5		
Mercury	Inhalation of Indoor Air	6.26E-6	3.80E-6	0.04	0.08	1.35E-6	0.02	0.08	3.26E-7			1.16E-7		
Mercury	Inhalation of Outdoor Air	6.26E-6	1.00E-6	0.01	0.02	3.57E-7	<0.01	0.02	8.58E-8			3.06E-8		

Table C-22
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methylene Chloride	Inhalation of Indoor Air	9.38E-3	5.69E-3	<0.01	0.01	2.03E-3	<0.01	0.01	4.88E-4	8.03E-7	0.65	1.74E-4	2.86E-7	0.73
Methylene Chloride	Inhalation of Outdoor Air	9.38E-3	1.49E-3	<0.01	0.00	5.35E-4	<0.01	0.00	1.28E-4	2.11E-7	0.17	4.58E-5	7.55E-8	0.19
Methylisobutylketone	Inhalation of Indoor Air	2.10E-3	1.27E-3	0.06	0.11	4.57E-4	0.02	0.11	1.09E-4			3.91E-5		
Methylisobutylketone	Inhalation of Outdoor Air	2.10E-3	3.36E-4	0.01	0.03	1.20E-4	<0.01	0.03	2.88E-5			1.03E-5		
n-Hexane	Inhalation of Indoor Air	2.79E-3	1.69E-3	0.03	0.06	6.06E-4	0.01	0.06	1.45E-4			5.19E-5		
n-Hexane	Inhalation of Outdoor Air	2.79E-3	4.46E-4	<0.01	0.01	1.59E-4	<0.01	0.01	3.82E-5			1.36E-5		
Naphthalene	Inhalation of Indoor Air	3.05E-4	1.85E-4	0.22	0.41	6.63E-5	0.08	0.41	1.59E-5			5.68E-6		
Naphthalene	Inhalation of Outdoor Air	3.05E-4	4.88E-5	0.06	0.11	1.74E-5	0.02	0.11	4.18E-6			1.49E-6		
PM-10	Inhalation of Indoor Air	5.56E-2	3.37E-2	2.4	4.49	1.20E-2	0.85	4.49	2.89E-3			1.03E-3		
PM-10	Inhalation of Outdoor Air	5.56E-2	8.89E-3	0.62	1.18	3.17E-3	0.22	1.18	7.62E-4			2.72E-4		
Propylene	Inhalation of Indoor Air	5.32E-3	3.23E-3	<0.01	0.01	1.15E-3	<0.01	0.01	2.76E-4			9.89E-5		
Propylene	Inhalation of Outdoor Air	5.32E-3	8.50E-4	<0.01	0.00	3.03E-4	<0.01	0.00	7.28E-5			2.60E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.21E-3	7.37E-4			2.63E-4			6.31E-5	1.28E-7	0.10	2.25E-5	4.58E-8	0.12
Tetrachloroethylene	Inhalation of Outdoor Air	1.21E-3	1.94E-4			6.92E-5			1.66E-5	3.37E-8	0.03	5.93E-6	1.20E-8	0.03
Toluene	Inhalation of Indoor Air	3.13E-2	1.90E-2	0.17	0.32	6.80E-3	0.06	0.32	1.63E-3			5.83E-4		
Toluene	Inhalation of Outdoor Air	3.13E-2	5.01E-3	0.04	0.08	1.79E-3	0.02	0.08	4.29E-4			1.53E-4		
Total Carcinogenic PAHS (BaP T)	Ingestion of Indoor Dust	7.72E-2	6.91E-7			7.41E-8			5.92E-8	4.32E-7	0.35	6.35E-9	4.63E-8	0.12
Total Carcinogenic PAHS (BaP T)	Ingestion of Soil	7.72E-2	2.96E-7			3.17E-8			2.54E-8	1.85E-7	0.15	2.72E-9	1.98E-8	0.05
Total Dioxin/Furans (2,3,7,8-T)	Dermal Contact with Soil	2.12E-5	1.59E-10			2.53E-11			1.36E-11	2.04E-6	1.65	2.17E-12	3.25E-7	0.83
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Indoor Dust	1.35E-4	1.21E-9			1.29E-10			1.03E-10	1.55E-5	12.60	1.11E-11	1.67E-6	4.23
Total Dioxin/Furans (2,3,7,8-T)	Ingestion of Soil	2.12E-5	8.15E-11			8.74E-12			6.99E-12	1.04E-6	0.85	7.49E-13	1.12E-7	0.28
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	1.23E-9	7.49E-10			2.67E-10			6.42E-11	9.64E-6	7.79	2.29E-11	3.44E-6	8.72
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	1.23E-9	1.97E-10			7.04E-11			1.69E-11	2.53E-6	2.05	6.04E-12	9.06E-7	2.30
Trichloroethylene	Inhalation of Indoor Air	1.52E-3	9.27E-4			3.31E-4			7.95E-5	4.73E-7	0.38	2.83E-5	1.68E-7	0.43
Trichloroethylene	Inhalation of Outdoor Air	1.52E-3	2.44E-4			8.71E-5			2.09E-5	1.24E-7	0.10	7.47E-6	4.44E-8	0.11
Vinyl Acetate	Inhalation of Indoor Air	4.45E-3	2.70E-3	0.05	0.09	9.66E-4	0.02	0.09	2.32E-4			8.28E-5		
Vinyl Acetate	Inhalation of Outdoor Air	4.45E-3	7.12E-4	0.01	0.02	2.54E-4	<0.01	0.02	6.10E-5			2.18E-5		

Table C-22
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vinyl Chloride	Inhalation of Indoor Air	1.08E-4	6.56E-5			2.34E-5			5.62E-6	1.68E-6	1.36	2.00E-6	6.02E-7	1.53
Vinyl Chloride	Inhalation of Outdoor Air	1.08E-4	1.72E-5			6.16E-6			1.48E-6	4.44E-7	0.36	5.28E-7	1.58E-7	0.40
Total Risk:				52.75	100.0		18.83	100.0		1.23E-4	100.0		3.94E-5	100.0

Table C-23
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)					Carcinogenic Risk (CR)						
			Child			Integrated Adult/Child		Child			Integrated Adult/Child			
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	4.38E-4	--			1.29E-4			--	--	--	5.54E-5	1.12E-5	4.00
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	4.38E-4	--			3.40E-5			--	--	--	1.45E-5	2.96E-6	1.05
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.12E-4	--			6.28E-5			--	--	--	2.69E-5	1.50E-6	0.54
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.12E-4	--			1.65E-5			--	--	--	7.08E-6	3.96E-7	0.14
1,1-Dichloroethylene	Inhalation of Indoor Air	1.15E-4	--			3.41E-5			--	--	--	1.46E-5	2.56E-6	0.91
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.15E-4	--			8.98E-6			--	--	--	3.85E-6	6.73E-7	0.24
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.14E-3	--	--	--	6.34E-4	0.37	1.44	--	--	--	2.71E-4		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.14E-3	--	--	--	1.66E-4	0.10	0.38	--	--	--	7.15E-5		
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	--	--	--	2.26E-5	0.40	1.55	--	--	--	9.69E-6	7.46E-6	2.65
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	--	--	--	5.95E-6	0.10	0.41	--	--	--	2.55E-6	1.96E-6	0.70
1,2-Dichloroethane	Inhalation of Indoor Air	1.83E-4	--			5.41E-5			--	--	--	2.32E-5	2.11E-6	0.75
1,2-Dichloroethane	Inhalation of Outdoor Air	1.83E-4	--			1.42E-5			--	--	--	6.11E-6	5.56E-7	0.20
1,2-Dichloropropane	Inhalation of Indoor Air	9.85E-5	--	--	--	2.90E-5	0.03	0.10	--	--	--	1.24E-5		
1,2-Dichloropropane	Inhalation of Outdoor Air	9.85E-5	--	--	--	7.64E-6	<0.01	0.03	--	--	--	3.27E-6		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	6.31E-4	--	--	--	1.86E-4	0.11	0.42	--	--	--	7.98E-5		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	6.31E-4	--	--	--	4.90E-5	0.03	0.11	--	--	--	2.10E-5		
1,3-Butadiene	Inhalation of Indoor Air	3.78E-4	--			1.11E-4			--	--	--	4.78E-5	4.69E-5	16.66
1,3-Butadiene	Inhalation of Outdoor Air	3.78E-4	--			2.94E-5			--	--	--	1.26E-5	1.23E-5	4.39
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.53E-3	--	--	--	4.53E-4	<0.01	0.01	--	--	--	1.94E-4	7.77E-6	2.76
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.53E-3	--	--	--	1.19E-4	<0.01	0.00	--	--	--	5.11E-5	2.04E-6	0.73
1,4-Dioxane	Inhalation of Indoor Air	1.02E-3	--	--	--	3.01E-4	<0.01	0.00	--	--	--	1.29E-4	3.49E-6	1.24
1,4-Dioxane	Inhalation of Outdoor Air	1.02E-3	--	--	--	7.94E-5	<0.01	0.00	--	--	--	3.40E-5	9.18E-7	0.33
2-Propanol	Inhalation of Indoor Air	3.88E-2	--	--	--	1.14E-2	<0.01	0.02	--	--	--	4.91E-3		
2-Propanol	Inhalation of Outdoor Air	3.88E-2	--	--	--	3.01E-3	<0.01	0.01	--	--	--	1.29E-3		
4,4'-DDT	Dermal Contact with Soil	4.64E-2	--	--	--	2.27E-7	<0.01	0.00	--	--	--	9.75E-8	3.31E-8	0.01
4,4'-DDT	Ingestion of Indoor Dust	4.64E-2	--	--	--	1.18E-7	<0.01	0.00	--	--	--	5.09E-8	1.73E-8	0.01
4,4'-DDT	Ingestion of Soil	4.64E-2	--	--	--	5.09E-8	<0.01	0.00	--	--	--	2.18E-8	7.42E-9	0.00

Table C-23
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetaldehyde	Inhalation of Indoor Air	2.23E-2	--	--	--	6.58E-3	2.6	10.00	--	--	--	2.82E-3	2.17E-5	7.72
Acetaldehyde	Inhalation of Outdoor Air	2.23E-2	--	--	--	1.73E-3	0.67	2.63	--	--	--	7.43E-4	5.72E-6	2.03
Acetonitrile	Inhalation of Indoor Air	3.12E-3	--	--	--	9.20E-4	0.05	0.21	--	--	--	3.94E-4		
Acetonitrile	Inhalation of Outdoor Air	3.12E-3	--	--	--	2.42E-4	0.01	0.06	--	--	--	1.03E-4		
Acrolein	Inhalation of Indoor Air	2.65E-4	--	--	--	7.83E-5	13.7	53.52	--	--	--	3.35E-5		
Acrolein	Inhalation of Outdoor Air	2.65E-4	--	--	--	2.06E-5	3.6	14.08	--	--	--	8.83E-6		
Acrylonitrile	Inhalation of Indoor Air	2.69E-4	--	--	--	7.93E-5	0.14	0.54	--	--	--	3.40E-5	8.09E-6	2.87
Acrylonitrile	Inhalation of Outdoor Air	2.69E-4	--	--	--	2.08E-5	0.04	0.14	--	--	--	8.95E-6	2.13E-6	0.76
Aldrin	Inhalation of Indoor Air	1.42E-7	--	--	--	4.19E-8			--	--	--	1.79E-8	3.08E-7	0.11
Aldrin	Inhalation of Outdoor Air	1.42E-7	--	--	--	1.10E-8			--	--	--	4.73E-9	8.11E-8	0.03
alpha-BHC	Inhalation of Indoor Air	1.99E-7	--	--	--	5.89E-8			--	--	--	2.52E-8	1.59E-7	0.06
alpha-BHC	Inhalation of Outdoor Air	1.99E-7	--	--	--	1.55E-8			--	--	--	6.65E-9	4.19E-8	0.01
Arsenic	Inhalation of Indoor Air	1.93E-6	--	--	--	5.71E-7			--	--	--	2.44E-7	3.68E-6	1.31
Arsenic	Inhalation of Outdoor Air	1.93E-6	--	--	--	1.50E-7			--	--	--	6.44E-8	9.69E-7	0.34
Barium	Ingestion of Indoor Dust	1.08E+2	--	--	--	2.78E-4	<0.01	0.02	--	--	--	1.19E-4		
Barium	Ingestion of Soil	1.08E+2	--	--	--	1.19E-4	<0.01	0.01	--	--	--	5.10E-5		
Benzene	Inhalation of Indoor Air	3.35E-3	--	--	--	9.88E-4	0.06	0.23	--	--	--	4.23E-4	1.23E-5	4.37
Benzene	Inhalation of Outdoor Air	3.35E-3	--	--	--	2.60E-4	0.02	0.06	--	--	--	1.11E-4	3.23E-6	1.15
Benzyl Chloride	Inhalation of Indoor Air	3.24E-4	--	--	--	9.58E-5			--	--	--	4.10E-5	6.97E-6	2.48
Benzyl Chloride	Inhalation of Outdoor Air	3.24E-4	--	--	--	2.52E-5			--	--	--	1.08E-5	1.83E-6	0.65
Beryllium	Inhalation of Indoor Air	1.86E-7	--	--	--	5.51E-8	<0.01	0.00	--	--	--	2.36E-8	1.98E-7	0.07
Beryllium	Inhalation of Outdoor Air	1.86E-7	--	--	--	1.45E-8	<0.01	0.00	--	--	--	6.22E-9	5.22E-8	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.14E-5	--	--	--	9.27E-6	<0.01	0.01	--	--	--	3.97E-6	3.33E-8	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.14E-5	--	--	--	2.44E-6	<0.01	0.00	--	--	--	1.04E-6	8.78E-9	0.00
Bromomethane	Inhalation of Indoor Air	1.78E-4	--	--	--	5.25E-5	0.04	0.14	--	--	--	2.25E-5		
Bromomethane	Inhalation of Outdoor Air	1.78E-4	--	--	--	1.38E-5	<0.01	0.04	--	--	--	5.93E-6		
Cadmium	Inhalation of Indoor Air	3.40E-6	--	--	--	1.00E-6	0.04	0.15	--	--	--	4.30E-7	2.70E-6	0.96

Table C-23
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Cadmium	Inhalation of Outdoor Air	3.40E-6	--	--	--	2.64E-7	0.01	0.04	--	--	--	1.13E-7	7.13E-7	0.25
Carbon Tetrachloride	Inhalation of Indoor Air	6.27E-4	--	--	--	1.85E-4	0.32	1.26	--	--	--	7.93E-5	4.16E-6	1.48
Carbon Tetrachloride	Inhalation of Outdoor Air	6.27E-4	--	--	--	4.87E-5	0.09	0.33	--	--	--	2.08E-5	1.09E-6	0.39
Chloroethane	Inhalation of Indoor Air	1.69E-4	--	--	--	5.00E-5	<0.01	0.00	--	--	--	2.14E-5		
Chloroethane	Inhalation of Outdoor Air	1.69E-4	--	--	--	1.31E-5	<0.01	0.00	--	--	--	5.64E-6		
Chloroform	Inhalation of Indoor Air	2.23E-4	--	--	--	6.59E-5	<0.01	0.00	--	--	--	2.82E-5	2.27E-6	0.81
Chloroform	Inhalation of Outdoor Air	2.23E-4	--	--	--	1.73E-5	<0.01	0.00	--	--	--	7.44E-6	5.99E-7	0.21
Chloromethane	Inhalation of Indoor Air	1.65E-3	--	--	--	4.88E-4	<0.01	0.02	--	--	--	2.09E-4	1.31E-6	0.47
Chloromethane	Inhalation of Outdoor Air	1.65E-3	--	--	--	1.28E-4	<0.01	0.01	--	--	--	5.50E-5	3.47E-7	0.12
Chromium	Ingestion of Indoor Dust	3.01E+1	--	--	--	7.70E-5	<0.01	0.00	--	--	--	3.30E-5		
Chromium	Ingestion of Soil	3.01E+1	--	--	--	3.30E-5	<0.01	0.00	--	--	--	1.41E-5		
Dieldrin	Inhalation of Indoor Air	1.96E-7	--	--	--	5.78E-8			--	--	--	2.48E-8	3.99E-7	0.14
Dieldrin	Inhalation of Outdoor Air	1.96E-7	--	--	--	1.52E-8			--	--	--	6.52E-9	1.05E-7	0.04
Formaldehyde	Inhalation of Indoor Air	2.34E-3	--	--	--	6.91E-4	0.81	3.15	--	--	--	2.96E-4	1.34E-5	4.79
Formaldehyde	Inhalation of Outdoor Air	2.34E-3	--	--	--	1.81E-4	0.21	0.83	--	--	--	7.79E-5	3.54E-6	1.26
gamma-BHC	Inhalation of Indoor Air	3.54E-7	--	--	--	1.04E-7			--	--	--	4.48E-8	4.93E-8	0.02
gamma-BHC	Inhalation of Outdoor Air	3.54E-7	--	--	--	2.75E-8			--	--	--	1.17E-8	1.29E-8	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.18E-7	--	--	--	6.43E-8			--	--	--	2.75E-8	2.51E-7	0.09
Heptachlor epoxide	Inhalation of Outdoor Air	2.18E-7	--	--	--	1.69E-8			--	--	--	7.26E-9	6.60E-8	0.02
Heptachlor	Inhalation of Indoor Air	1.98E-7	--	--	--	5.85E-8			--	--	--	2.51E-8	1.14E-7	0.04
Heptachlor	Inhalation of Outdoor Air	1.98E-7	--	--	--	1.54E-8			--	--	--	6.60E-9	3.00E-8	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.63E-4	--	--	--	2.54E-4			--	--	--	1.09E-4	8.40E-6	2.99
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.63E-4	--	--	--	6.70E-5			--	--	--	2.87E-5	2.21E-6	0.79
Hydrochloric Acid	Inhalation of Indoor Air	3.87E-3	--	--	--	1.14E-3	0.20	0.78	--	--	--	4.89E-4		
Hydrochloric Acid	Inhalation of Outdoor Air	3.87E-3	--	--	--	3.00E-4	0.05	0.21	--	--	--	1.28E-4		
Mercury	Inhalation of Indoor Air	6.26E-6	--	--	--	1.84E-6	0.02	0.08	--	--	--	7.92E-7		
Mercury	Inhalation of Outdoor Air	6.26E-6	--	--	--	4.86E-7	<0.01	0.02	--	--	--	2.08E-7		

Table C-23
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 30 years			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Methylene Chloride	Inhalation of Indoor Air	9.38E-3	--	--	--	2.76E-3	<0.01	0.01	--	--	--	1.18E-3	1.95E-6	0.69
Methylene Chloride	Inhalation of Outdoor Air	9.38E-3	--	--	--	7.28E-4	<0.01	0.00	--	--	--	3.12E-4	5.13E-7	0.18
Methylisobutylketone	Inhalation of Indoor Air	2.10E-3	--	--	--	6.21E-4	0.03	0.11	--	--	--	2.66E-4		
Methylisobutylketone	Inhalation of Outdoor Air	2.10E-3	--	--	--	1.63E-4	<0.01	0.03	--	--	--	7.01E-5		
n-Hexane	Inhalation of Indoor Air	2.79E-3	--	--	--	8.24E-4	0.01	0.06	--	--	--	3.53E-4		
n-Hexane	Inhalation of Outdoor Air	2.79E-3	--	--	--	2.17E-4	<0.01	0.01	--	--	--	9.30E-5		
Naphthalene	Inhalation of Indoor Air	3.05E-4	--	--	--	9.02E-5	0.11	0.41	--	--	--	3.86E-5		
Naphthalene	Inhalation of Outdoor Air	3.05E-4	--	--	--	2.37E-5	0.03	0.11	--	--	--	1.01E-5		
PM-10	Inhalation of Indoor Air	5.56E-2	--	--	--	1.64E-2	1.1	4.49	--	--	--	7.03E-3		
PM-10	Inhalation of Outdoor Air	5.56E-2	--	--	--	4.31E-3	0.30	1.18	--	--	--	1.85E-3		
Propylene	Inhalation of Indoor Air	5.32E-3	--	--	--	1.56E-3	<0.01	0.01	--	--	--	6.72E-4		
Propylene	Inhalation of Outdoor Air	5.32E-3	--	--	--	4.13E-4	<0.01	0.00	--	--	--	1.77E-4		
Tetrachloroethylene	Inhalation of Indoor Air	1.21E-3	--	--	--	3.58E-4			--	--	--	1.53E-4	3.11E-7	0.11
Tetrachloroethylene	Inhalation of Outdoor Air	1.21E-3	--	--	--	9.42E-5			--	--	--	4.03E-5	8.19E-8	0.03
Toluene	Inhalation of Indoor Air	3.13E-2	--	--	--	9.25E-3	0.08	0.32	--	--	--	3.96E-3		
Toluene	Inhalation of Outdoor Air	3.13E-2	--	--	--	2.43E-3	0.02	0.08	--	--	--	1.04E-3		
Total Carcinogenic PAHS (BaP T	Ingestion of Indoor Dust	7.72E-2	--	--	--	1.97E-7			--	--	--	8.46E-8	6.18E-7	0.22
Total Carcinogenic PAHS (BaP T	Ingestion of Soil	7.72E-2	--	--	--	8.46E-8			--	--	--	3.62E-8	2.64E-7	0.09
Total Dioxin/Furans (2,3,7,8-T	Dermal Contact with Soil	2.12E-5	--	--	--	5.20E-11			--	--	--	2.23E-11	3.34E-6	1.19
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Indoor Dust	1.35E-4	--	--	--	3.46E-10			--	--	--	1.48E-10	2.22E-5	7.91
Total Dioxin/Furans (2,3,7,8-T	Ingestion of Soil	2.12E-5	--	--	--	2.33E-11			--	--	--	9.98E-12	1.49E-6	0.53
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	1.23E-9	--	--	--	3.64E-10			--	--	--	1.56E-10	2.34E-5	8.31
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.23E-9	--	--	--	9.58E-11			--	--	--	4.10E-11	6.16E-6	2.19
Trichloroethylene	Inhalation of Indoor Air	1.52E-3	--	--	--	4.50E-4			--	--	--	1.93E-4	1.14E-6	0.41
Trichloroethylene	Inhalation of Outdoor Air	1.52E-3	--	--	--	1.18E-4			--	--	--	5.08E-5	3.02E-7	0.11
Vinyl Acetate	Inhalation of Indoor Air	4.45E-3	--	--	--	1.31E-3	0.02	0.09	--	--	--	5.63E-4		
Vinyl Acetate	Inhalation of Outdoor Air	4.45E-3	--	--	--	3.45E-4	<0.01	0.02	--	--	--	1.48E-4		

Table C-23
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)				Carcinogenic Risk (CR)					
			Child		Integrated Adult/Child		Child		Integrated Adult/Child			
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vinyl Chloride	Inhalation of Indoor Air	1.08E-4	--		3.18E-5		--	--	--	1.36E-5	4.09E-6	1.46
Vinyl Chloride	Inhalation of Outdoor Air	1.08E-4	--		8.38E-6		--	--	--	3.59E-6	1.07E-6	0.38
Total Risk:				--		25.62	100.0		--		2.81E-4	100.0

Table C-24
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.51E-4	3.34E-4		1.19E-4		1.43E-5	2.91E-6	2.58	5.12E-6	1.04E-6	2.83		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.51E-4	8.81E-5		3.14E-5		3.77E-6	7.66E-7	0.68	1.34E-6	2.73E-7	0.74		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.35E-4	1.43E-4		5.11E-5		6.14E-6	3.43E-7	0.30	2.19E-6	1.22E-7	0.33		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.35E-4	3.77E-5		1.34E-5		1.61E-6	9.05E-8	0.08	5.77E-7	3.23E-8	0.09		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.29E-4	7.88E-5		2.81E-5		3.38E-6	5.91E-7	0.52	1.20E-6	2.11E-7	0.57		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.29E-4	2.07E-5		7.41E-6		8.89E-7	1.55E-7	0.14	3.17E-7	5.56E-8	0.15		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.45E-3	1.49E-3	0.87	1.29	5.32E-4	0.31	1.29		6.39E-5		2.28E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.45E-3	3.92E-4	0.23	0.34	1.40E-4	0.08	0.34		1.68E-5		6.00E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	4.65E-5	0.82	1.21	1.66E-5	0.29	1.21	1.99E-6	1.53E-6	1.36	7.12E-7	5.48E-7	1.49
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	1.22E-5	0.21	0.32	4.37E-6	0.08	0.32	5.25E-7	4.04E-7	0.36	1.87E-7	1.44E-7	0.39
1,2-Dichloroethane	Inhalation of Indoor Air	2.06E-4	1.25E-4			4.48E-5			5.38E-6	4.89E-7	0.43	1.92E-6	1.74E-7	0.48
1,2-Dichloroethane	Inhalation of Outdoor Air	2.06E-4	3.30E-5			1.18E-5			1.41E-6	1.28E-7	0.11	5.05E-7	4.60E-8	0.13
1,2-Dichloropropane	Inhalation of Indoor Air	1.11E-4	6.75E-5	0.06	0.09	2.41E-5	0.02	0.09	2.89E-6			1.03E-6		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.11E-4	1.77E-5	0.02	0.02	6.34E-6	<0.01	0.02	7.61E-7			2.71E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	7.17E-4	4.35E-4	0.25	0.38	1.55E-4	0.09	0.38	1.86E-5			6.66E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	7.17E-4	1.14E-4	0.07	0.10	4.09E-5	0.02	0.10	4.91E-6			1.75E-6		
1,3-Butadiene	Inhalation of Indoor Air	4.51E-4	2.74E-4			9.80E-5			1.17E-5	1.15E-5	10.21	4.20E-6	4.11E-6	11.18
1,3-Butadiene	Inhalation of Outdoor Air	4.51E-4	7.22E-5			2.57E-5			3.09E-6	3.03E-6	2.69	1.10E-6	1.08E-6	2.94
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.89E-3	1.14E-3	<0.01	0.01	4.10E-4	<0.01	0.01	4.92E-5	1.97E-6	1.75	1.75E-5	7.03E-7	1.91
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.89E-3	3.02E-4	<0.01	0.00	1.08E-4	<0.01	0.00	1.29E-5	5.18E-7	0.46	4.62E-6	1.85E-7	0.50
1,4-Dioxane	Inhalation of Indoor Air	1.27E-3	7.76E-4	<0.01	0.00	2.77E-4	<0.01	0.00	3.32E-5	8.98E-7	0.80	1.18E-5	3.20E-7	0.87
1,4-Dioxane	Inhalation of Outdoor Air	1.27E-3	2.04E-4	<0.01	0.00	7.29E-5	<0.01	0.00	8.75E-6	2.36E-7	0.21	3.12E-6	8.44E-8	0.23
2-Propanol	Inhalation of Indoor Air	8.33E-2	5.06E-2	0.03	0.04	1.80E-2	<0.01	0.04	2.16E-3			7.74E-4		
2-Propanol	Inhalation of Outdoor Air	8.33E-2	1.33E-2	<0.01	0.01	4.75E-3	<0.01	0.01	5.71E-4			2.03E-4		
4,4'-DDT	Dermal Contact with Soil	7.76E-2	1.16E-6	<0.01	0.00	1.84E-7	<0.01	0.00	4.97E-8	1.69E-8	0.01	7.92E-9	2.69E-9	0.01
4,4'-DDT	Ingestion of Indoor Dust	7.76E-2	6.94E-7	<0.01	0.00	7.44E-8	<0.01	0.00	2.97E-8	1.01E-8	0.01	3.18E-9	1.08E-9	0.00
4,4'-DDT	Ingestion of Soil	7.76E-2	2.97E-7	<0.01	0.00	3.18E-8	<0.01	0.00	1.27E-8	4.33E-9	0.00	1.36E-9	4.64E-10	0.00

Table C-24
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetaldehyde	Inhalation of Indoor Air	3.86E-2	2.34E-2	9.1	13.54	8.37E-3	3.3	13.55	1.00E-3	7.73E-6	6.86	3.58E-4	2.76E-6	7.51
Acetaldehyde	Inhalation of Outdoor Air	3.86E-2	6.17E-3	2.4	3.56	2.20E-3	0.86	3.57	2.64E-4	2.03E-6	1.80	9.44E-5	7.27E-7	1.98
Acetonitrile	Inhalation of Indoor Air	3.75E-3	2.28E-3	0.13	0.20	8.15E-4	0.05	0.20	9.78E-5			3.49E-5		
Acetonitrile	Inhalation of Outdoor Air	3.75E-3	6.00E-4	0.04	0.05	2.14E-4	0.01	0.05	2.57E-5			9.19E-6		
Acrolein	Inhalation of Indoor Air	3.22E-4	1.95E-4	34.2	50.84	6.98E-5	12.2	50.86	8.38E-6			2.99E-6		
Acrolein	Inhalation of Outdoor Air	3.22E-4	5.14E-5	9.0	13.38	1.83E-5	3.2	13.38	2.20E-6			7.88E-7		
Acrylonitrile	Inhalation of Indoor Air	3.15E-4	1.91E-4	0.33	0.50	6.83E-5	0.12	0.50	8.20E-6	1.95E-6	1.73	2.92E-6	6.97E-7	1.89
Acrylonitrile	Inhalation of Outdoor Air	3.15E-4	5.03E-5	0.09	0.13	1.79E-5	0.03	0.13	2.15E-6	5.13E-7	0.46	7.70E-7	1.83E-7	0.50
Aldrin	Inhalation of Indoor Air	1.30E-6	7.91E-7			2.82E-7			3.39E-8	5.81E-7	0.52	1.21E-8	2.07E-7	0.56
Aldrin	Inhalation of Outdoor Air	1.30E-6	2.08E-7			7.43E-8			8.92E-9	1.53E-7	0.14	3.18E-9	5.46E-8	0.15
alpha-BHC	Inhalation of Indoor Air	2.79E-7	1.69E-7			6.06E-8			7.28E-9	4.58E-8	0.04	2.60E-9	1.63E-8	0.04
alpha-BHC	Inhalation of Outdoor Air	2.79E-7	4.47E-8			1.59E-8			1.91E-9	1.20E-8	0.01	6.84E-10	4.31E-9	0.01
Arsenic	Inhalation of Indoor Air	2.28E-6	1.38E-6			4.96E-7			5.95E-8	8.96E-7	0.79	2.12E-8	3.20E-7	0.87
Arsenic	Inhalation of Outdoor Air	2.28E-6	3.65E-7			1.30E-7			1.56E-8	2.35E-7	0.21	5.59E-9	8.42E-8	0.23
Barium	Ingestion of Indoor Dust	1.84E+2	1.65E-3	0.02	0.04	1.77E-4	<0.01	0.01	7.09E-5			7.59E-6		
Barium	Ingestion of Soil	1.84E+2	7.09E-4	0.01	0.02	7.59E-5	<0.01	0.00	3.03E-5			3.25E-6		
Benzene	Inhalation of Indoor Air	3.69E-3	2.24E-3	0.13	0.19	8.00E-4	0.05	0.19	9.60E-5	2.79E-6	2.47	3.43E-5	9.96E-7	2.71
Benzene	Inhalation of Outdoor Air	3.69E-3	5.90E-4	0.03	0.05	2.10E-4	0.01	0.05	2.52E-5	7.34E-7	0.65	9.03E-6	2.62E-7	0.71
Benzyl Chloride	Inhalation of Indoor Air	1.59E-3	9.66E-4			3.45E-4			4.14E-5	7.04E-6	6.24	1.47E-5	2.51E-6	6.83
Benzyl Chloride	Inhalation of Outdoor Air	1.59E-3	2.54E-4			9.08E-5			1.09E-5	1.85E-6	1.64	3.89E-6	6.62E-7	1.80
Beryllium	Inhalation of Indoor Air	2.47E-7	1.50E-7	<0.01	0.00	5.35E-8	<0.01	0.00	6.43E-9	5.40E-8	0.05	2.29E-9	1.92E-8	0.05
Beryllium	Inhalation of Outdoor Air	2.47E-7	3.94E-8	<0.01	0.00	1.41E-8	<0.01	0.00	1.69E-9	1.42E-8	0.01	6.04E-10	5.07E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.71E-5	2.25E-5	<0.01	0.01	8.05E-6	<0.01	0.01	9.66E-7	8.12E-9	0.01	3.45E-7	2.90E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.71E-5	5.93E-6	<0.01	0.00	2.12E-6	<0.01	0.00	2.54E-7	2.13E-9	0.00	9.08E-8	7.63E-10	0.00
Bromomethane	Inhalation of Indoor Air	2.23E-4	1.35E-4	0.09	0.14	4.83E-5	0.03	0.14	5.80E-6			2.07E-6		
Bromomethane	Inhalation of Outdoor Air	2.23E-4	3.56E-5	0.02	0.04	1.27E-5	<0.01	0.04	1.52E-6			5.45E-7		
Cadmium	Inhalation of Indoor Air	4.75E-6	2.88E-6	0.11	0.17	1.03E-6	0.04	0.17	1.23E-7	7.79E-7	0.69	4.41E-8	2.78E-7	0.76

Table C-24
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Cadmium	Inhalation of Outdoor Air	4.75E-6	7.59E-7	0.03	0.04	2.71E-7	0.01	0.04	3.25E-8	2.05E-7	0.18	1.16E-8	7.32E-8	0.20
Carbon Tetrachloride	Inhalation of Indoor Air	6.64E-4	4.03E-4	0.71	1.05	1.44E-4	0.25	1.05	1.73E-5	9.08E-7	0.80	6.17E-6	3.24E-7	0.88
Carbon Tetrachloride	Inhalation of Outdoor Air	6.64E-4	1.06E-4	0.19	0.28	3.79E-5	0.07	0.28	4.55E-6	2.39E-7	0.21	1.62E-6	8.53E-8	0.23
Chloroethane	Inhalation of Indoor Air	1.96E-4	1.19E-4	<0.01	0.00	4.26E-5	<0.01	0.00	5.12E-6			1.82E-6		
Chloroethane	Inhalation of Outdoor Air	1.96E-4	3.14E-5	<0.01	0.00	1.12E-5	<0.01	0.00	1.34E-6			4.81E-7		
Chloroform	Inhalation of Indoor Air	2.49E-4	1.51E-4	<0.01	0.00	5.40E-5	<0.01	0.00	6.48E-6	5.22E-7	0.46	2.31E-6	1.86E-7	0.51
Chloroform	Inhalation of Outdoor Air	2.49E-4	3.98E-5	<0.01	0.00	1.42E-5	<0.01	0.00	1.70E-6	1.37E-7	0.12	6.09E-7	4.90E-8	0.13
Chloromethane	Inhalation of Indoor Air	1.73E-3	1.05E-3	0.01	0.02	3.76E-4	<0.01	0.02	4.51E-5	2.84E-7	0.25	1.61E-5	1.01E-7	0.28
Chloromethane	Inhalation of Outdoor Air	1.73E-3	2.77E-4	<0.01	0.00	9.90E-5	<0.01	0.00	1.18E-5	7.48E-8	0.07	4.24E-6	2.67E-8	0.07
Chromium	Ingestion of Indoor Dust	3.74E+1	3.35E-4	<0.01	0.00	3.59E-5	<0.01	0.00	1.43E-5			1.54E-6		
Chromium	Ingestion of Soil	3.74E+1	1.43E-4	<0.01	0.00	1.54E-5	<0.01	0.00	6.16E-6			6.60E-7		
Dieldrin	Inhalation of Indoor Air	2.34E-7	1.42E-7			5.09E-8			6.10E-9	9.83E-8	0.09	2.18E-9	3.51E-8	0.10
Dieldrin	Inhalation of Outdoor Air	2.34E-7	3.75E-8			1.33E-8			1.60E-9	2.58E-8	0.02	5.74E-10	9.24E-9	0.03
Formaldehyde	Inhalation of Indoor Air	3.06E-3	1.85E-3	2.2	3.22	6.63E-4	0.77	3.22	7.96E-5	3.62E-6	3.21	2.84E-5	1.29E-6	3.52
Formaldehyde	Inhalation of Outdoor Air	3.06E-3	4.89E-4	0.57	0.85	1.74E-4	0.20	0.85	2.09E-5	9.53E-7	0.85	7.48E-6	3.40E-7	0.93
gamma-BHC	Inhalation of Indoor Air	5.28E-7	3.21E-7			1.14E-7			1.37E-8	1.51E-8	0.01	4.91E-9	5.40E-9	0.01
gamma-BHC	Inhalation of Outdoor Air	5.28E-7	8.45E-8			3.01E-8			3.62E-9	3.98E-9	0.00	1.29E-9	1.42E-9	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.55E-7	1.55E-7			5.54E-8			6.65E-9	6.05E-8	0.05	2.37E-9	2.16E-8	0.06
Heptachlor epoxide	Inhalation of Outdoor Air	2.55E-7	4.08E-8			1.45E-8			1.75E-9	1.59E-8	0.01	6.25E-10	5.68E-9	0.02
Heptachlor	Inhalation of Indoor Air	2.54E-7	1.54E-7			5.51E-8			6.61E-9	3.01E-8	0.03	2.36E-9	1.07E-8	0.03
Heptachlor	Inhalation of Outdoor Air	2.54E-7	4.06E-8			1.45E-8			1.74E-9	7.92E-9	0.01	6.21E-10	2.82E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.10E-2	6.72E-3			2.40E-3			2.88E-4	2.21E-5	19.66	1.02E-4	7.92E-6	21.52
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.10E-2	1.76E-3			6.31E-4			7.58E-5	5.83E-6	5.17	2.70E-5	2.08E-6	5.66
Hydrochloric Acid	Inhalation of Indoor Air	4.86E-3	2.95E-3	0.52	0.77	1.05E-3	0.18	0.77	1.26E-4			4.52E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	4.86E-3	7.77E-4	0.14	0.20	2.77E-4	0.05	0.20	3.33E-5			1.18E-5		
Mercury	Inhalation of Indoor Air	8.56E-6	5.20E-6	0.06	0.09	1.85E-6	0.02	0.09	2.22E-7			7.96E-8		
Mercury	Inhalation of Outdoor Air	8.56E-6	1.36E-6	0.02	0.02	4.88E-7	<0.01	0.02	5.86E-8			2.09E-8		

Table C-24
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methylene Chloride	Inhalation of Indoor Air	1.29E-2	7.88E-3	<0.01	0.01	2.81E-3	<0.01	0.01	3.37E-4	5.55E-7	0.49	1.20E-4	1.98E-7	0.54
Methylene Chloride	Inhalation of Outdoor Air	1.29E-2	2.07E-3	<0.01	0.00	7.40E-4	<0.01	0.00	8.88E-5	1.46E-7	0.13	3.17E-5	5.22E-8	0.14
Methylisobutylketone	Inhalation of Indoor Air	2.47E-3	1.50E-3	0.07	0.10	5.37E-4	0.02	0.10	6.44E-5			2.30E-5		
Methylisobutylketone	Inhalation of Outdoor Air	2.47E-3	3.95E-4	0.02	0.03	1.41E-4	<0.01	0.03	1.69E-5			6.05E-6		
n-Hexane	Inhalation of Indoor Air	3.41E-3	2.07E-3	0.04	0.05	7.41E-4	0.01	0.05	8.89E-5			3.17E-5		
n-Hexane	Inhalation of Outdoor Air	3.41E-3	5.46E-4	<0.01	0.01	1.95E-4	<0.01	0.01	2.34E-5			8.36E-6		
Naphthalene	Inhalation of Indoor Air	3.39E-4	2.06E-4	0.24	0.36	7.35E-5	0.09	0.36	8.83E-6			3.15E-6		
Naphthalene	Inhalation of Outdoor Air	3.39E-4	5.42E-5	0.06	0.09	1.93E-5	0.02	0.09	2.32E-6			8.29E-7		
PM-10	Inhalation of Indoor Air	6.49E-2	3.94E-2	2.8	4.10	1.40E-2	0.99	4.10	1.69E-3			6.03E-4		
PM-10	Inhalation of Outdoor Air	6.49E-2	1.03E-2	0.73	1.08	3.70E-3	0.26	1.08	4.45E-4			1.58E-4		
Propylene	Inhalation of Indoor Air	9.30E-3	5.65E-3	<0.01	0.01	2.01E-3	<0.01	0.01	2.42E-4			8.65E-5		
Propylene	Inhalation of Outdoor Air	9.30E-3	1.48E-3	<0.01	0.00	5.31E-4	<0.01	0.00	6.37E-5			2.27E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.46E-3	8.91E-4			3.18E-4			3.82E-5	7.75E-8	0.07	1.36E-5	2.77E-8	0.08
Tetrachloroethylene	Inhalation of Outdoor Air	1.46E-3	2.34E-4			8.37E-5			1.00E-5	2.04E-8	0.02	3.59E-6	7.28E-9	0.02
Toluene	Inhalation of Indoor Air	4.30E-2	2.61E-2	0.23	0.34	9.32E-3	0.08	0.34	1.11E-3			3.99E-4		
Toluene	Inhalation of Outdoor Air	4.30E-2	6.87E-3	0.06	0.09	2.45E-3	0.02	0.09	2.94E-4			1.05E-4		
Total Carcinogenic PAHS (B	Ingestion of Indoor Dust	1.09E-1	9.79E-7			1.04E-7			4.19E-8	3.06E-7	0.27	4.49E-9	3.28E-8	0.09
Total Carcinogenic PAHS (B	Ingestion of Soil	1.09E-1	4.19E-7			4.49E-8			1.79E-8	1.31E-7	0.12	1.92E-9	1.40E-8	0.04
Total Dioxin/Furans (2,3,7	Dermal Contact with Soil	9.11E-5	6.81E-10			1.08E-10			2.92E-11	4.38E-6	3.88	4.65E-12	6.98E-7	1.90
Total Dioxin/Furans (2,3,7	Ingestion of Indoor Dust	1.35E-4	1.21E-9			1.29E-10			5.19E-11	7.79E-6	6.91	5.56E-12	8.35E-7	2.27
Total Dioxin/Furans (2,3,7	Ingestion of Soil	9.11E-5	3.49E-10			3.74E-11			1.49E-11	2.24E-6	1.99	1.60E-12	2.40E-7	0.65
Total Dioxin/Furans (2,3,7	Inhalation of Indoor Air	1.48E-9	9.03E-10			3.22E-10			3.87E-11	5.81E-6	5.15	1.38E-11	2.07E-6	5.64
Total Dioxin/Furans (2,3,7	Inhalation of Outdoor Air	1.48E-9	2.37E-10			8.49E-11			1.01E-11	1.52E-6	1.35	3.64E-12	5.46E-7	1.48
Trichloroethylene	Inhalation of Indoor Air	1.76E-3	1.06E-3			3.82E-4			4.58E-5	2.72E-7	0.24	1.63E-5	9.74E-8	0.26
Trichloroethylene	Inhalation of Outdoor Air	1.76E-3	2.81E-4			1.00E-4			1.20E-5	7.17E-8	0.06	4.30E-6	2.56E-8	0.07
Vinyl Acetate	Inhalation of Indoor Air	2.50E-2	1.52E-2	0.27	0.40	5.44E-3	0.10	0.40	6.53E-4			2.33E-4		
Vinyl Acetate	Inhalation of Outdoor Air	2.50E-2	4.00E-3	0.07	0.10	1.43E-3	0.03	0.10	1.71E-4			6.13E-5		

Table C-24
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Vinyl Chloride	Inhalation of Indoor Air	1.22E-4	7.41E-5		2.64E-5		3.17E-6	9.53E-7	0.85	1.13E-6	3.40E-7	0.93		
Vinyl Chloride	Inhalation of Outdoor Air	1.22E-4	1.95E-5		6.97E-6		8.36E-7	2.51E-7	0.22	2.98E-7	8.96E-8	0.24		
Total Risk:				67.35	100.0		24.04	100.0		1.12E-4	100.0		3.68E-5	100.0

Table C-25
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.51E-4	3.34E-4		1.19E-4		2.87E-5	5.82E-6	2.58	1.02E-5	2.08E-6	2.83		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.51E-4	8.81E-5		3.14E-5		7.55E-6	1.53E-6	0.68	2.69E-6	5.47E-7	0.74		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.35E-4	1.43E-4		5.11E-5		1.22E-5	6.87E-7	0.30	4.38E-6	2.45E-7	0.33		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.35E-4	3.77E-5		1.34E-5		3.23E-6	1.81E-7	0.08	1.15E-6	6.46E-8	0.09		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.29E-4	7.88E-5		2.81E-5		6.76E-6	1.18E-6	0.52	2.41E-6	4.22E-7	0.57		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.29E-4	2.07E-5		7.41E-6		1.77E-6	3.11E-7	0.14	6.35E-7	1.11E-7	0.15		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.45E-3	1.49E-3	0.87	1.29	5.32E-4	0.31	1.29		4.56E-5				
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.45E-3	3.92E-4	0.23	0.34	1.40E-4	0.08	0.34		1.20E-5				
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	4.65E-5	0.82	1.21	1.66E-5	0.29	1.21	3.99E-6	3.07E-6	1.36	1.42E-6	1.09E-6	1.49
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	1.22E-5	0.21	0.32	4.37E-6	0.08	0.32	1.05E-6	8.08E-7	0.36	3.75E-7	2.88E-7	0.39
1,2-Dichloroethane	Inhalation of Indoor Air	2.06E-4	1.25E-4			4.48E-5			1.07E-5	9.79E-7	0.43	3.84E-6	3.49E-7	0.48
1,2-Dichloroethane	Inhalation of Outdoor Air	2.06E-4	3.30E-5			1.18E-5			2.83E-6	2.57E-7	0.11	1.01E-6	9.20E-8	0.13
1,2-Dichloropropane	Inhalation of Indoor Air	1.11E-4	6.75E-5	0.06	0.09	2.41E-5	0.02	0.09	5.78E-6			2.06E-6		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.11E-4	1.77E-5	0.02	0.02	6.34E-6	<0.01	0.02	1.52E-6			5.43E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	7.17E-4	4.35E-4	0.25	0.38	1.55E-4	0.09	0.38	3.73E-5			1.33E-5		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	7.17E-4	1.14E-4	0.07	0.10	4.09E-5	0.02	0.10	9.82E-6			3.50E-6		
1,3-Butadiene	Inhalation of Indoor Air	4.51E-4	2.74E-4			9.80E-5			2.35E-5	2.30E-5	10.21	8.40E-6	8.23E-6	11.18
1,3-Butadiene	Inhalation of Outdoor Air	4.51E-4	7.22E-5			2.57E-5			6.19E-6	6.06E-6	2.69	2.21E-6	2.16E-6	2.94
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.89E-3	1.14E-3	<0.01	0.01	4.10E-4	<0.01	0.01	9.85E-5	3.94E-6	1.75	3.51E-5	1.40E-6	1.91
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.89E-3	3.02E-4	<0.01	0.00	1.08E-4	<0.01	0.00	2.59E-5	1.03E-6	0.46	9.25E-6	3.70E-7	0.50
1,4-Dioxane	Inhalation of Indoor Air	1.27E-3	7.76E-4	<0.01	0.00	2.77E-4	<0.01	0.00	6.65E-5	1.79E-6	0.80	2.37E-5	6.41E-7	0.87
1,4-Dioxane	Inhalation of Outdoor Air	1.27E-3	2.04E-4	<0.01	0.00	7.29E-5	<0.01	0.00	1.75E-5	4.72E-7	0.21	6.25E-6	1.68E-7	0.23
2-Propanol	Inhalation of Indoor Air	8.33E-2	5.06E-2	0.03	0.04	1.80E-2	<0.01	0.04	4.33E-3			1.54E-3		
2-Propanol	Inhalation of Outdoor Air	8.33E-2	1.33E-2	<0.01	0.01	4.75E-3	<0.01	0.01	1.14E-3			4.07E-4		
4,4'-DDT	Dermal Contact with Soil	7.76E-2	1.16E-6	<0.01	0.00	1.84E-7	<0.01	0.00	9.95E-8	3.38E-8	0.01	1.58E-8	5.39E-9	0.01
4,4'-DDT	Ingestion of Indoor Dust	7.76E-2	6.94E-7	<0.01	0.00	7.44E-8	<0.01	0.00	5.95E-8	2.02E-8	0.01	6.37E-9	2.16E-9	0.00
4,4'-DDT	Ingestion of Soil	7.76E-2	2.97E-7	<0.01	0.00	3.18E-8	<0.01	0.00	2.55E-8	8.67E-9	0.00	2.73E-9	9.29E-10	0.00

Table C-25
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetaldehyde	Inhalation of Indoor Air	3.86E-2	2.34E-2	9.1	13.54	8.37E-3	3.3	13.55	2.01E-3	1.54E-5	6.86	7.17E-4	5.52E-6	7.51
Acetaldehyde	Inhalation of Outdoor Air	3.86E-2	6.17E-3	2.4	3.56	2.20E-3	0.86	3.57	5.28E-4	4.07E-6	1.80	1.88E-4	1.45E-6	1.98
Acetonitrile	Inhalation of Indoor Air	3.75E-3	2.28E-3	0.13	0.20	8.15E-4	0.05	0.20	1.95E-4			6.98E-5		
Acetonitrile	Inhalation of Outdoor Air	3.75E-3	6.00E-4	0.04	0.05	2.14E-4	0.01	0.05	5.14E-5			1.83E-5		
Acrolein	Inhalation of Indoor Air	3.22E-4	1.95E-4	34.2	50.84	6.98E-5	12.2	50.86	1.67E-5			5.98E-6		
Acrolein	Inhalation of Outdoor Air	3.22E-4	5.14E-5	9.0	13.38	1.83E-5	3.2	13.38	4.41E-6			1.57E-6		
Acrylonitrile	Inhalation of Indoor Air	3.15E-4	1.91E-4	0.33	0.50	6.83E-5	0.12	0.50	1.64E-5	3.90E-6	1.73	5.85E-6	1.39E-6	1.89
Acrylonitrile	Inhalation of Outdoor Air	3.15E-4	5.03E-5	0.09	0.13	1.79E-5	0.03	0.13	4.31E-6	1.02E-6	0.46	1.54E-6	3.66E-7	0.50
Aldrin	Inhalation of Indoor Air	1.30E-6	7.91E-7			2.82E-7			6.78E-8	1.16E-6	0.52	2.42E-8	4.15E-7	0.56
Aldrin	Inhalation of Outdoor Air	1.30E-6	2.08E-7			7.43E-8			1.78E-8	3.06E-7	0.14	6.37E-9	1.09E-7	0.15
alpha-BHC	Inhalation of Indoor Air	2.79E-7	1.69E-7			6.06E-8			1.45E-8	9.17E-8	0.04	5.20E-9	3.27E-8	0.04
alpha-BHC	Inhalation of Outdoor Air	2.79E-7	4.47E-8			1.59E-8			3.83E-9	2.41E-8	0.01	1.36E-9	8.62E-9	0.01
Arsenic	Inhalation of Indoor Air	2.28E-6	1.38E-6			4.96E-7			1.19E-7	1.79E-6	0.79	4.25E-8	6.40E-7	0.87
Arsenic	Inhalation of Outdoor Air	2.28E-6	3.65E-7			1.30E-7			3.13E-8	4.71E-7	0.21	1.11E-8	1.68E-7	0.23
Barium	Ingestion of Indoor Dust	1.84E+2	1.65E-3	0.02	0.04	1.77E-4	<0.01	0.01	1.41E-4			1.51E-5		
Barium	Ingestion of Soil	1.84E+2	7.09E-4	0.01	0.02	7.59E-5	<0.01	0.00	6.07E-5			6.51E-6		
Benzene	Inhalation of Indoor Air	3.69E-3	2.24E-3	0.13	0.19	8.00E-4	0.05	0.19	1.92E-4	5.58E-6	2.47	6.86E-5	1.99E-6	2.71
Benzene	Inhalation of Outdoor Air	3.69E-3	5.90E-4	0.03	0.05	2.10E-4	0.01	0.05	5.05E-5	1.46E-6	0.65	1.80E-5	5.24E-7	0.71
Benzyl Chloride	Inhalation of Indoor Air	1.59E-3	9.66E-4			3.45E-4			8.28E-5	1.40E-5	6.24	2.95E-5	5.03E-6	6.83
Benzyl Chloride	Inhalation of Outdoor Air	1.59E-3	2.54E-4			9.08E-5			2.18E-5	3.70E-6	1.64	7.78E-6	1.32E-6	1.80
Beryllium	Inhalation of Indoor Air	2.47E-7	1.50E-7	<0.01	0.00	5.35E-8	<0.01	0.00	1.28E-8	1.08E-7	0.05	4.59E-9	3.85E-8	0.05
Beryllium	Inhalation of Outdoor Air	2.47E-7	3.94E-8	<0.01	0.00	1.41E-8	<0.01	0.00	3.38E-9	2.84E-8	0.01	1.20E-9	1.01E-8	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.71E-5	2.25E-5	<0.01	0.01	8.05E-6	<0.01	0.01	1.93E-6	1.62E-8	0.01	6.90E-7	5.80E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.71E-5	5.93E-6	<0.01	0.00	2.12E-6	<0.01	0.00	5.08E-7	4.27E-9	0.00	1.81E-7	1.52E-9	0.00
Bromomethane	Inhalation of Indoor Air	2.23E-4	1.35E-4	0.09	0.14	4.83E-5	0.03	0.14	1.16E-5			4.14E-6		
Bromomethane	Inhalation of Outdoor Air	2.23E-4	3.56E-5	0.02	0.04	1.27E-5	<0.01	0.04	3.05E-6			1.09E-6		
Cadmium	Inhalation of Indoor Air	4.75E-6	2.88E-6	0.11	0.17	1.03E-6	0.04	0.17	2.47E-7	1.55E-6	0.69	8.83E-8	5.56E-7	0.76

Table C-25
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Cadmium	Inhalation of Outdoor Air	4.75E-6	7.59E-7	0.03	0.04	2.71E-7	0.01	0.04	6.51E-8	4.10E-7	0.18	2.32E-8	1.46E-7	0.20
Carbon Tetrachloride	Inhalation of Indoor Air	6.64E-4	4.03E-4	0.71	1.05	1.44E-4	0.25	1.05	3.46E-5	1.81E-6	0.80	1.23E-5	6.48E-7	0.88
Carbon Tetrachloride	Inhalation of Outdoor Air	6.64E-4	1.06E-4	0.19	0.28	3.79E-5	0.07	0.28	9.10E-6	4.78E-7	0.21	3.25E-6	1.70E-7	0.23
Chloroethane	Inhalation of Indoor Air	1.96E-4	1.19E-4	<0.01	0.00	4.26E-5	<0.01	0.00	1.02E-5			3.65E-6		
Chloroethane	Inhalation of Outdoor Air	1.96E-4	3.14E-5	<0.01	0.00	1.12E-5	<0.01	0.00	2.69E-6			9.62E-7		
Chloroform	Inhalation of Indoor Air	2.49E-4	1.51E-4	<0.01	0.00	5.40E-5	<0.01	0.00	1.29E-5	1.04E-6	0.46	4.63E-6	3.72E-7	0.51
Chloroform	Inhalation of Outdoor Air	2.49E-4	3.98E-5	<0.01	0.00	1.42E-5	<0.01	0.00	3.41E-6	2.74E-7	0.12	1.21E-6	9.81E-8	0.13
Chloromethane	Inhalation of Indoor Air	1.73E-3	1.05E-3	0.01	0.02	3.76E-4	<0.01	0.02	9.03E-5	5.69E-7	0.25	3.22E-5	2.03E-7	0.28
Chloromethane	Inhalation of Outdoor Air	1.73E-3	2.77E-4	<0.01	0.00	9.90E-5	<0.01	0.00	2.37E-5	1.49E-7	0.07	8.49E-6	5.34E-8	0.07
Chromium	Ingestion of Indoor Dust	3.74E+1	3.35E-4	<0.01	0.00	3.59E-5	<0.01	0.00	2.87E-5			3.08E-6		
Chromium	Ingestion of Soil	3.74E+1	1.43E-4	<0.01	0.00	1.54E-5	<0.01	0.00	1.23E-5			1.32E-6		
Dieldrin	Inhalation of Indoor Air	2.34E-7	1.42E-7			5.09E-8			1.22E-8	1.96E-7	0.09	4.36E-9	7.02E-8	0.10
Dieldrin	Inhalation of Outdoor Air	2.34E-7	3.75E-8			1.33E-8			3.21E-9	5.17E-8	0.02	1.14E-9	1.84E-8	0.03
Formaldehyde	Inhalation of Indoor Air	3.06E-3	1.85E-3	2.2	3.22	6.63E-4	0.77	3.22	1.59E-4	7.24E-6	3.21	5.69E-5	2.58E-6	3.52
Formaldehyde	Inhalation of Outdoor Air	3.06E-3	4.89E-4	0.57	0.85	1.74E-4	0.20	0.85	4.19E-5	1.90E-6	0.85	1.49E-5	6.81E-7	0.93
gamma-BHC	Inhalation of Indoor Air	5.28E-7	3.21E-7			1.14E-7			2.75E-8	3.02E-8	0.01	9.83E-9	1.08E-8	0.01
gamma-BHC	Inhalation of Outdoor Air	5.28E-7	8.45E-8			3.01E-8			7.24E-9	7.96E-9	0.00	2.58E-9	2.84E-9	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.55E-7	1.55E-7			5.54E-8			1.33E-8	1.21E-7	0.05	4.75E-9	4.32E-8	0.06
Heptachlor epoxide	Inhalation of Outdoor Air	2.55E-7	4.08E-8			1.45E-8			3.50E-9	3.18E-8	0.01	1.25E-9	1.13E-8	0.02
Heptachlor	Inhalation of Indoor Air	2.54E-7	1.54E-7			5.51E-8			1.32E-8	6.02E-8	0.03	4.72E-9	2.15E-8	0.03
Heptachlor	Inhalation of Outdoor Air	2.54E-7	4.06E-8			1.45E-8			3.48E-9	1.58E-8	0.01	1.24E-9	5.65E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.10E-2	6.72E-3			2.40E-3			5.76E-4	4.43E-5	19.66	2.05E-4	1.58E-5	21.52
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.10E-2	1.76E-3			6.31E-4			1.51E-4	1.16E-5	5.17	5.41E-5	4.17E-6	5.66
Hydrochloric Acid	Inhalation of Indoor Air	4.86E-3	2.95E-3	0.52	0.77	1.05E-3	0.18	0.77	2.53E-4			9.04E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	4.86E-3	7.77E-4	0.14	0.20	2.77E-4	0.05	0.20	6.66E-5			2.37E-5		
Mercury	Inhalation of Indoor Air	8.56E-6	5.20E-6	0.06	0.09	1.85E-6	0.02	0.09	4.45E-7			1.59E-7		
Mercury	Inhalation of Outdoor Air	8.56E-6	1.36E-6	0.02	0.02	4.88E-7	<0.01	0.02	1.17E-7			4.19E-8		

Table C-25
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methylene Chloride	Inhalation of Indoor Air	1.29E-2	7.88E-3	<0.01	0.01	2.81E-3	<0.01	0.01	6.75E-4	1.11E-6	0.49	2.41E-4	3.96E-7	0.54
Methylene Chloride	Inhalation of Outdoor Air	1.29E-2	2.07E-3	<0.01	0.00	7.40E-4	<0.01	0.00	1.77E-4	2.92E-7	0.13	6.34E-5	1.04E-7	0.14
Methylisobutylketone	Inhalation of Indoor Air	2.47E-3	1.50E-3	0.07	0.10	5.37E-4	0.02	0.10	1.28E-4			4.60E-5		
Methylisobutylketone	Inhalation of Outdoor Air	2.47E-3	3.95E-4	0.02	0.03	1.41E-4	<0.01	0.03	3.39E-5			1.21E-5		
n-Hexane	Inhalation of Indoor Air	3.41E-3	2.07E-3	0.04	0.05	7.41E-4	0.01	0.05	1.77E-4			6.35E-5		
n-Hexane	Inhalation of Outdoor Air	3.41E-3	5.46E-4	<0.01	0.01	1.95E-4	<0.01	0.01	4.68E-5			1.67E-5		
Naphthalene	Inhalation of Indoor Air	3.39E-4	2.06E-4	0.24	0.36	7.35E-5	0.09	0.36	1.76E-5			6.30E-6		
Naphthalene	Inhalation of Outdoor Air	3.39E-4	5.42E-5	0.06	0.09	1.93E-5	0.02	0.09	4.64E-6			1.65E-6		
PM-10	Inhalation of Indoor Air	6.49E-2	3.94E-2	2.8	4.10	1.40E-2	0.99	4.10	3.38E-3			1.20E-3		
PM-10	Inhalation of Outdoor Air	6.49E-2	1.03E-2	0.73	1.08	3.70E-3	0.26	1.08	8.90E-4			3.17E-4		
Propylene	Inhalation of Indoor Air	9.30E-3	5.65E-3	<0.01	0.01	2.01E-3	<0.01	0.01	4.84E-4			1.73E-4		
Propylene	Inhalation of Outdoor Air	9.30E-3	1.48E-3	<0.01	0.00	5.31E-4	<0.01	0.00	1.27E-4			4.55E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.46E-3	8.91E-4			3.18E-4			7.64E-5	1.55E-7	0.07	2.72E-5	5.54E-8	0.08
Tetrachloroethylene	Inhalation of Outdoor Air	1.46E-3	2.34E-4			8.37E-5			2.01E-5	4.08E-8	0.02	7.18E-6	1.45E-8	0.02
Toluene	Inhalation of Indoor Air	4.30E-2	2.61E-2	0.23	0.34	9.32E-3	0.08	0.34	2.23E-3			7.99E-4		
Toluene	Inhalation of Outdoor Air	4.30E-2	6.87E-3	0.06	0.09	2.45E-3	0.02	0.09	5.89E-4			2.10E-4		
Total Carcinogenic PAHS (B	Ingestion of Indoor Dust	1.09E-1	9.79E-7			1.04E-7			8.39E-8	6.12E-7	0.27	8.99E-9	6.56E-8	0.09
Total Carcinogenic PAHS (B	Ingestion of Soil	1.09E-1	4.19E-7			4.49E-8			3.59E-8	2.62E-7	0.12	3.85E-9	2.81E-8	0.04
Total Dioxin/Furans (2,3,7	Dermal Contact with Soil	9.11E-5	6.81E-10			1.08E-10			5.84E-11	8.76E-6	3.88	9.30E-12	1.39E-6	1.90
Total Dioxin/Furans (2,3,7	Ingestion of Indoor Dust	1.35E-4	1.21E-9			1.29E-10			1.03E-10	1.55E-5	6.91	1.11E-11	1.67E-6	2.27
Total Dioxin/Furans (2,3,7	Ingestion of Soil	9.11E-5	3.49E-10			3.74E-11			2.99E-11	4.49E-6	1.99	3.20E-12	4.81E-7	0.65
Total Dioxin/Furans (2,3,7	Inhalation of Indoor Air	1.48E-9	9.03E-10			3.22E-10			7.74E-11	1.16E-5	5.15	2.76E-11	4.15E-6	5.64
Total Dioxin/Furans (2,3,7	Inhalation of Outdoor Air	1.48E-9	2.37E-10			8.49E-11			2.03E-11	3.05E-6	1.35	7.28E-12	1.09E-6	1.48
Trichloroethylene	Inhalation of Indoor Air	1.76E-3	1.06E-3			3.82E-4			9.16E-5	5.45E-7	0.24	3.27E-5	1.94E-7	0.26
Trichloroethylene	Inhalation of Outdoor Air	1.76E-3	2.81E-4			1.00E-4			2.41E-5	1.43E-7	0.06	8.61E-6	5.12E-8	0.07
Vinyl Acetate	Inhalation of Indoor Air	2.50E-2	1.52E-2	0.27	0.40	5.44E-3	0.10	0.40	1.30E-3			4.66E-4		
Vinyl Acetate	Inhalation of Outdoor Air	2.50E-2	4.00E-3	0.07	0.10	1.43E-3	0.03	0.10	3.43E-4			1.22E-4		

Table C-25
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vinyl Chloride	Inhalation of Indoor Air	1.22E-4	7.41E-5			2.64E-5			6.35E-6	1.90E-6	0.85	2.27E-6	6.81E-7	0.93
Vinyl Chloride	Inhalation of Outdoor Air	1.22E-4	1.95E-5			6.97E-6			1.67E-6	5.02E-7	0.22	5.97E-7	1.79E-7	0.24
Total Risk:				67.35	100.0		24.04	100.0		2.25E-4	100.0		7.36E-5	100.0

Table C-26
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.51E-4	--		1.62E-4		--	--	--	6.97E-5	1.41E-5	2.72		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.51E-4	--		4.28E-5		--	--	--	1.83E-5	3.72E-6	0.72		
1,1,2-Trichloroethane	Inhalation of Indoor Air	2.35E-4	--		6.96E-5		--	--	--	2.98E-5	1.67E-6	0.32		
1,1,2-Trichloroethane	Inhalation of Outdoor Air	2.35E-4	--		1.83E-5		--	--	--	7.85E-6	4.39E-7	0.08		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.29E-4	--		3.83E-5		--	--	--	1.64E-5	2.87E-6	0.55		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.29E-4	--		1.00E-5		--	--	--	4.32E-6	7.56E-7	0.15		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.45E-3	--	--	7.24E-4	0.42	1.29		--			3.10E-4		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.45E-3	--	--	1.90E-4	0.11	0.34		--			8.16E-5		
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	--	--	2.26E-5	0.40	1.21		--	--	--	9.69E-6	7.46E-6	1.43
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	--	--	5.95E-6	0.10	0.32		--	--	--	2.55E-6	1.96E-6	0.38
1,2-Dichloroethane	Inhalation of Indoor Air	2.06E-4	--		6.10E-5				--	--	--	2.61E-5	2.37E-6	0.46
1,2-Dichloroethane	Inhalation of Outdoor Air	2.06E-4	--		1.60E-5				--	--	--	6.88E-6	6.26E-7	0.12
1,2-Dichloropropane	Inhalation of Indoor Air	1.11E-4	--	--	3.27E-5	0.03	0.09		--			1.40E-5		
1,2-Dichloropropane	Inhalation of Outdoor Air	1.11E-4	--	--	8.63E-6	<0.01	0.02		--			3.69E-6		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	7.17E-4	--	--	2.11E-4	0.12	0.38		--			9.06E-5		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	7.17E-4	--	--	5.56E-5	0.03	0.10		--			2.38E-5		
1,3-Butadiene	Inhalation of Indoor Air	4.51E-4	--		1.33E-4				--	--	--	5.71E-5	5.59E-5	10.76
1,3-Butadiene	Inhalation of Outdoor Air	4.51E-4	--		3.50E-5				--	--	--	1.50E-5	1.47E-5	2.83
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.89E-3	--	--	5.58E-4	<0.01	0.01		--	--	--	2.39E-4	9.57E-6	1.84
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.89E-3	--	--	1.46E-4	<0.01	0.00		--	--	--	6.29E-5	2.51E-6	0.48
1,4-Dioxane	Inhalation of Indoor Air	1.27E-3	--	--	3.77E-4	<0.01	0.00		--	--	--	1.61E-4	4.36E-6	0.84
1,4-Dioxane	Inhalation of Outdoor Air	1.27E-3	--	--	9.92E-5	<0.01	0.00		--	--	--	4.25E-5	1.14E-6	0.22
2-Propanol	Inhalation of Indoor Air	8.33E-2	--	--	2.45E-2	0.01	0.04		--			1.05E-2		
2-Propanol	Inhalation of Outdoor Air	8.33E-2	--	--	6.47E-3	<0.01	0.01		--			2.77E-3		
4,4'-DDT	Dermal Contact with Soil	7.76E-2	--	--	3.80E-7	<0.01	0.00		--	--	--	1.62E-7	5.53E-8	0.01
4,4'-DDT	Ingestion of Indoor Dust	7.76E-2	--	--	1.98E-7	<0.01	0.00		--	--	--	8.50E-8	2.89E-8	0.01
4,4'-DDT	Ingestion of Soil	7.76E-2	--	--	8.50E-8	<0.01	0.00		--	--	--	3.64E-8	1.23E-8	0.00

Table C-26
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Acetaldehyde	Inhalation of Indoor Air	3.86E-2	--	--	--	1.13E-2	4.4	13.54	--	--	--	4.88E-3	3.75E-5	7.23
Acetaldehyde	Inhalation of Outdoor Air	3.86E-2	--	--	--	2.99E-3	1.2	3.56	--	--	--	1.28E-3	9.89E-6	1.90
Acetonitrile	Inhalation of Indoor Air	3.75E-3	--	--	--	1.10E-3	0.06	0.20	--	--	--	4.75E-4		
Acetonitrile	Inhalation of Outdoor Air	3.75E-3	--	--	--	2.91E-4	0.02	0.05	--	--	--	1.25E-4		
Acrolein	Inhalation of Indoor Air	3.22E-4	--	--	--	9.50E-5	16.6	50.85	--	--	--	4.07E-5		
Acrolein	Inhalation of Outdoor Air	3.22E-4	--	--	--	2.50E-5	4.4	13.38	--	--	--	1.07E-5		
Acrylonitrile	Inhalation of Indoor Air	3.15E-4	--	--	--	9.29E-5	0.16	0.50	--	--	--	3.98E-5	9.47E-6	1.82
Acrylonitrile	Inhalation of Outdoor Air	3.15E-4	--	--	--	2.44E-5	0.04	0.13	--	--	--	1.04E-5	2.49E-6	0.48
Aldrin	Inhalation of Indoor Air	1.30E-6	--	--	--	3.84E-7			--	--	--	1.64E-7	2.82E-6	0.54
Aldrin	Inhalation of Outdoor Air	1.30E-6	--	--	--	1.01E-7			--	--	--	4.33E-8	7.43E-7	0.14
alpha-BHC	Inhalation of Indoor Air	2.79E-7	--	--	--	8.25E-8			--	--	--	3.53E-8	2.22E-7	0.04
alpha-BHC	Inhalation of Outdoor Air	2.79E-7	--	--	--	2.17E-8			--	--	--	9.30E-9	5.86E-8	0.01
Arsenic	Inhalation of Indoor Air	2.28E-6	--	--	--	6.74E-7			--	--	--	2.89E-7	4.35E-6	0.84
Arsenic	Inhalation of Outdoor Air	2.28E-6	--	--	--	1.77E-7			--	--	--	7.61E-8	1.14E-6	0.22
Barium	Ingestion of Indoor Dust	1.84E+2	--	--	--	4.72E-4	<0.01	0.02	--	--	--	2.02E-4		
Barium	Ingestion of Soil	1.84E+2	--	--	--	2.02E-4	<0.01	0.01	--	--	--	8.68E-5		
Benzene	Inhalation of Indoor Air	3.69E-3	--	--	--	1.08E-3	0.06	0.19	--	--	--	4.66E-4	1.35E-5	2.61
Benzene	Inhalation of Outdoor Air	3.69E-3	--	--	--	2.86E-4	0.02	0.05	--	--	--	1.22E-4	3.56E-6	0.69
Benzyl Chloride	Inhalation of Indoor Air	1.59E-3	--	--	--	4.69E-4			--	--	--	2.01E-4	3.42E-5	6.58
Benzyl Chloride	Inhalation of Outdoor Air	1.59E-3	--	--	--	1.23E-4			--	--	--	5.29E-5	9.00E-6	1.73
Beryllium	Inhalation of Indoor Air	2.47E-7	--	--	--	7.28E-8	<0.01	0.00	--	--	--	3.12E-8	2.62E-7	0.05
Beryllium	Inhalation of Outdoor Air	2.47E-7	--	--	--	1.91E-8	<0.01	0.00	--	--	--	8.21E-9	6.90E-8	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.71E-5	--	--	--	1.09E-5	<0.01	0.01	--	--	--	4.69E-6	3.94E-8	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.71E-5	--	--	--	2.88E-6	<0.01	0.00	--	--	--	1.23E-6	1.03E-8	0.00
Bromomethane	Inhalation of Indoor Air	2.23E-4	--	--	--	6.58E-5	0.05	0.14	--	--	--	2.82E-5		
Bromomethane	Inhalation of Outdoor Air	2.23E-4	--	--	--	1.73E-5	0.01	0.04	--	--	--	7.42E-6		
Cadmium	Inhalation of Indoor Air	4.75E-6	--	--	--	1.40E-6	0.05	0.17	--	--	--	6.00E-7	3.78E-6	0.73

Table C-26
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Cadmium	Inhalation of Outdoor Air	4.75E-6	--	--	--	3.69E-7	0.01	0.04	--	--	--	1.58E-7	9.96E-7	0.19
Carbon Tetrachloride	Inhalation of Indoor Air	6.64E-4	--	--	--	1.96E-4	0.34	1.05	--	--	--	8.40E-5	4.41E-6	0.85
Carbon Tetrachloride	Inhalation of Outdoor Air	6.64E-4	--	--	--	5.16E-5	0.09	0.28	--	--	--	2.21E-5	1.16E-6	0.22
Chloroethane	Inhalation of Indoor Air	1.96E-4	--	--	--	5.80E-5	<0.01	0.00	--	--	--	2.48E-5		
Chloroethane	Inhalation of Outdoor Air	1.96E-4	--	--	--	1.52E-5	<0.01	0.00	--	--	--	6.54E-6		
Chloroform	Inhalation of Indoor Air	2.49E-4	--	--	--	7.35E-5	<0.01	0.00	--	--	--	3.15E-5	2.53E-6	0.49
Chloroform	Inhalation of Outdoor Air	2.49E-4	--	--	--	1.93E-5	<0.01	0.00	--	--	--	8.29E-6	6.67E-7	0.13
Chloromethane	Inhalation of Indoor Air	1.73E-3	--	--	--	5.11E-4	<0.01	0.02	--	--	--	2.19E-4	1.38E-6	0.27
Chloromethane	Inhalation of Outdoor Air	1.73E-3	--	--	--	1.34E-4	<0.01	0.00	--	--	--	5.77E-5	3.63E-7	0.07
Chromium	Ingestion of Indoor Dust	3.74E+1	--	--	--	9.58E-5	<0.01	0.00	--	--	--	4.10E-5		
Chromium	Ingestion of Soil	3.74E+1	--	--	--	4.10E-5	<0.01	0.00	--	--	--	1.76E-5		
Dieldrin	Inhalation of Indoor Air	2.34E-7	--	--	--	6.92E-8			--	--	--	2.96E-8	4.77E-7	0.09
Dieldrin	Inhalation of Outdoor Air	2.34E-7	--	--	--	1.82E-8			--	--	--	7.80E-9	1.25E-7	0.02
Formaldehyde	Inhalation of Indoor Air	3.06E-3	--	--	--	9.02E-4	1.1	3.22	--	--	--	3.86E-4	1.76E-5	3.38
Formaldehyde	Inhalation of Outdoor Air	3.06E-3	--	--	--	2.37E-4	0.28	0.85	--	--	--	1.01E-4	4.63E-6	0.89
gamma-BHC	Inhalation of Indoor Air	5.28E-7	--	--	--	1.55E-7			--	--	--	6.68E-8	7.35E-8	0.01
gamma-BHC	Inhalation of Outdoor Air	5.28E-7	--	--	--	4.10E-8			--	--	--	1.75E-8	1.93E-8	0.00
Heptachlor epoxide	Inhalation of Indoor Air	2.55E-7	--	--	--	7.53E-8			--	--	--	3.23E-8	2.94E-7	0.06
Heptachlor epoxide	Inhalation of Outdoor Air	2.55E-7	--	--	--	1.98E-8			--	--	--	8.50E-9	7.73E-8	0.01
Heptachlor	Inhalation of Indoor Air	2.54E-7	--	--	--	7.49E-8			--	--	--	3.21E-8	1.46E-7	0.03
Heptachlor	Inhalation of Outdoor Air	2.54E-7	--	--	--	1.97E-8			--	--	--	8.45E-9	3.84E-8	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	1.10E-2	--	--	--	3.26E-3			--	--	--	1.39E-3	1.07E-4	20.71
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	1.10E-2	--	--	--	8.59E-4			--	--	--	3.68E-4	2.83E-5	5.45
Hydrochloric Acid	Inhalation of Indoor Air	4.86E-3	--	--	--	1.43E-3	0.25	0.77	--	--	--	6.14E-4		
Hydrochloric Acid	Inhalation of Outdoor Air	4.86E-3	--	--	--	3.77E-4	0.07	0.20	--	--	--	1.61E-4		
Mercury	Inhalation of Indoor Air	8.56E-6	--	--	--	2.52E-6	0.03	0.09	--	--	--	1.08E-6		
Mercury	Inhalation of Outdoor Air	8.56E-6	--	--	--	6.64E-7	<0.01	0.02	--	--	--	2.84E-7		

Table C-26
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 30 years			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Methylene Chloride	Inhalation of Indoor Air	1.29E-2	--	--	--	3.82E-3	<0.01	0.01	--	--	--	1.64E-3	2.69E-6	0.52
Methylene Chloride	Inhalation of Outdoor Air	1.29E-2	--	--	--	1.00E-3	<0.01	0.00	--	--	--	4.31E-4	7.10E-7	0.14
Methylisobutylketone	Inhalation of Indoor Air	2.47E-3	--	--	--	7.30E-4	0.03	0.10	--	--	--	3.13E-4		
Methylisobutylketone	Inhalation of Outdoor Air	2.47E-3	--	--	--	1.92E-4	<0.01	0.03	--	--	--	8.23E-5		
n-Hexane	Inhalation of Indoor Air	3.41E-3	--	--	--	1.00E-3	0.02	0.05	--	--	--	4.32E-4		
n-Hexane	Inhalation of Outdoor Air	3.41E-3	--	--	--	2.65E-4	<0.01	0.01	--	--	--	1.13E-4		
Naphthalene	Inhalation of Indoor Air	3.39E-4	--	--	--	1.00E-4	0.12	0.36	--	--	--	4.28E-5		
Naphthalene	Inhalation of Outdoor Air	3.39E-4	--	--	--	2.63E-5	0.03	0.09	--	--	--	1.12E-5		
PM-10	Inhalation of Indoor Air	6.49E-2	--	--	--	1.91E-2	1.3	4.10	--	--	--	8.21E-3		
PM-10	Inhalation of Outdoor Air	6.49E-2	--	--	--	5.04E-3	0.35	1.08	--	--	--	2.16E-3		
Propylene	Inhalation of Indoor Air	9.30E-3	--	--	--	2.74E-3	<0.01	0.01	--	--	--	1.17E-3		
Propylene	Inhalation of Outdoor Air	9.30E-3	--	--	--	7.22E-4	<0.01	0.00	--	--	--	3.09E-4		
Tetrachloroethylene	Inhalation of Indoor Air	1.46E-3	--	--	--	4.33E-4			--	--	--	1.85E-4	3.76E-7	0.07
Tetrachloroethylene	Inhalation of Outdoor Air	1.46E-3	--	--	--	1.13E-4			--	--	--	4.88E-5	9.91E-8	0.02
Toluene	Inhalation of Indoor Air	4.30E-2	--	--	--	1.26E-2	0.11	0.34	--	--	--	5.43E-3		
Toluene	Inhalation of Outdoor Air	4.30E-2	--	--	--	3.33E-3	0.03	0.09	--	--	--	1.43E-3		
Total Carcinogenic PAHS (B	Ingestion of Indoor Dust	1.09E-1	--	--	--	2.79E-7			--	--	--	1.19E-7	8.75E-7	0.17
Total Carcinogenic PAHS (B	Ingestion of Soil	1.09E-1	--	--	--	1.19E-7			--	--	--	5.14E-8	3.75E-7	0.07
Total Dioxin/Furans (2,3,7	Dermal Contact with Soil	9.11E-5	--	--	--	2.23E-10			--	--	--	9.56E-11	1.43E-5	2.76
Total Dioxin/Furans (2,3,7	Ingestion of Indoor Dust	1.35E-4	--	--	--	3.46E-10			--	--	--	1.48E-10	2.22E-5	4.28
Total Dioxin/Furans (2,3,7	Ingestion of Soil	9.11E-5	--	--	--	9.98E-11			--	--	--	4.27E-11	6.41E-6	1.23
Total Dioxin/Furans (2,3,7	Inhalation of Indoor Air	1.48E-9	--	--	--	4.39E-10			--	--	--	1.88E-10	2.82E-5	5.43
Total Dioxin/Furans (2,3,7	Inhalation of Outdoor Air	1.48E-9	--	--	--	1.15E-10			--	--	--	4.95E-11	7.42E-6	1.43
Trichloroethylene	Inhalation of Indoor Air	1.76E-3	--	--	--	5.19E-4			--	--	--	2.22E-4	1.32E-6	0.25
Trichloroethylene	Inhalation of Outdoor Air	1.76E-3	--	--	--	1.36E-4			--	--	--	5.86E-5	3.48E-7	0.07
Vinyl Acetate	Inhalation of Indoor Air	2.50E-2	--	--	--	7.40E-3	0.13	0.40	--	--	--	3.17E-3		
Vinyl Acetate	Inhalation of Outdoor Air	2.50E-2	--	--	--	1.94E-3	0.03	0.10	--	--	--	8.34E-4		

Table C-26
Residential Towers (3101/3102)
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)				Carcinogenic Risk (CR)					
			Child		Integrated Adult/Child		Child		Integrated Adult/Child			
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Vinyl Chloride	Inhalation of Indoor Air	1.22E-4	--		3.60E-5		--	--	--	1.54E-5	4.63E-6	0.89
Vinyl Chloride	Inhalation of Outdoor Air	1.22E-4	--		9.48E-6		--	--	--	4.06E-6	1.21E-6	0.23
Total Risk:				--		32.70	100.0		--		5.20E-4	100.0

Table C-27
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,1-Trichloroethane	Inhalation of Indoor Air	8.84E-4	5.36E-4	<0.01	0.00	1.91E-4	<0.01	0.00	2.30E-5			8.21E-6		
1,1,1-Trichloroethane	Inhalation of Outdoor Air	8.84E-4	1.41E-4	<0.01	0.00	5.04E-5	<0.01	0.00	6.05E-6			2.16E-6		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.35E-4	3.25E-4			1.16E-4			1.39E-5	2.83E-6	1.55	4.98E-6	1.01E-6	1.55
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.35E-4	8.56E-5			3.05E-5			3.67E-6	7.45E-7	0.41	1.31E-6	2.66E-7	0.41
1,1-Dichloroethylene	Inhalation of Indoor Air	1.78E-4	1.08E-4			3.86E-5			4.64E-6	8.12E-7	0.45	1.65E-6	2.90E-7	0.45
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.78E-4	2.85E-5			1.01E-5			1.22E-6	2.13E-7	0.12	4.36E-7	7.63E-8	0.12
1,2,4-Trichlorobenzene	Inhalation of Indoor Air	2.11E-4	1.28E-4	<0.01	0.00	4.59E-5	<0.01	0.00	5.51E-6			1.96E-6		
1,2,4-Trichlorobenzene	Inhalation of Outdoor Air	2.11E-4	3.38E-5	<0.01	0.00	1.20E-5	<0.01	0.00	1.45E-6			5.18E-7		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	1.81E-3	1.10E-3	0.64	0.48	3.93E-4	0.23	0.48	4.72E-5			1.68E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	1.81E-3	2.90E-4	0.17	0.13	1.03E-4	0.06	0.13	1.24E-5			4.44E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	4.65E-5	0.82	0.61	1.66E-5	0.29	0.61	1.99E-6	1.53E-6	0.84	7.12E-7	5.48E-7	0.84
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	1.22E-5	0.21	0.16	4.37E-6	0.08	0.16	5.25E-7	4.04E-7	0.22	1.87E-7	1.44E-7	0.22
1,2-Dichlorobenzene	Inhalation of Indoor Air	1.20E-4	7.28E-5	<0.01	0.00	2.60E-5	<0.01	0.00	3.12E-6			1.11E-6		
1,2-Dichlorobenzene	Inhalation of Outdoor Air	1.20E-4	1.91E-5	<0.01	0.00	6.84E-6	<0.01	0.00	8.21E-7			2.93E-7		
1,2-Dichloropropane	Inhalation of Indoor Air	3.91E-4	2.37E-4	0.21	0.16	8.48E-5	0.07	0.16	1.01E-5			3.63E-6		
1,2-Dichloropropane	Inhalation of Outdoor Air	3.91E-4	6.24E-5	0.05	0.04	2.23E-5	0.02	0.04	2.67E-6			9.56E-7		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	5.60E-4	3.40E-4	0.20	0.15	1.21E-4	0.07	0.15	1.45E-5			5.21E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	5.60E-4	8.95E-5	0.05	0.04	3.19E-5	0.02	0.04	3.83E-6			1.37E-6		
1,3-Butadiene	Inhalation of Indoor Air	5.19E-4	3.15E-4			1.12E-4			1.35E-5	1.32E-5	7.26	4.82E-6	4.73E-6	7.26
1,3-Butadiene	Inhalation of Outdoor Air	5.19E-4	8.30E-5			2.96E-5			3.55E-6	3.48E-6	1.91	1.27E-6	1.24E-6	1.91
1,4-Dichlorobenzene	Inhalation of Indoor Air	8.05E-4	4.89E-4	<0.01	0.00	1.74E-4	<0.01	0.00	2.09E-5	8.38E-7	0.46	7.48E-6	2.99E-7	0.46
1,4-Dichlorobenzene	Inhalation of Outdoor Air	8.05E-4	1.28E-4	<0.01	0.00	4.59E-5	<0.01	0.00	5.51E-6	2.20E-7	0.12	1.97E-6	7.88E-8	0.12
1,4-Dioxane	Inhalation of Indoor Air	2.32E-3	1.41E-3	<0.01	0.00	5.05E-4	<0.01	0.00	6.06E-5	1.63E-6	0.90	2.16E-5	5.84E-7	0.90
1,4-Dioxane	Inhalation of Outdoor Air	2.32E-3	3.72E-4	<0.01	0.00	1.32E-4	<0.01	0.00	1.59E-5	4.30E-7	0.24	5.69E-6	1.53E-7	0.24
2-Butanone	Inhalation of Indoor Air	8.26E-3	5.01E-3	0.02	0.01	1.79E-3	<0.01	0.01	2.15E-4			7.68E-5		
2-Butanone	Inhalation of Outdoor Air	8.26E-3	1.32E-3	<0.01	0.00	4.71E-4	<0.01	0.00	5.66E-5			2.02E-5		
2-Propanol	Inhalation of Indoor Air	1.33E-2	8.08E-3	<0.01	0.00	2.88E-3	<0.01	0.00	3.46E-4			1.23E-4		

Table C-27
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
2-Propanol	Inhalation of Outdoor Air	1.33E-2	2.12E-3	<0.01	0.00	7.59E-4	<0.01	0.00	9.11E-5			3.25E-5		
Acetaldehyde	Inhalation of Indoor Air	3.76E-2	2.28E-2	8.9	6.71	8.17E-3	3.2	6.71	9.81E-4	7.55E-6	4.14	3.50E-4	2.69E-6	4.14
Acetaldehyde	Inhalation of Outdoor Air	3.76E-2	6.02E-3	2.3	1.77	2.15E-3	0.84	1.77	2.58E-4	1.98E-6	1.09	9.22E-5	7.10E-7	1.09
Acetonitrile	Inhalation of Indoor Air	4.33E-3	2.63E-3	0.15	0.12	9.39E-4	0.05	0.12	1.12E-4			4.02E-5		
Acetonitrile	Inhalation of Outdoor Air	4.33E-3	6.92E-4	0.04	0.03	2.47E-4	0.01	0.03	2.96E-5			1.05E-5		
Acrolein	Inhalation of Indoor Air	5.99E-4	3.64E-4	63.7	48.04	1.30E-4	22.8	48.04	1.56E-5			5.57E-6		
Acrolein	Inhalation of Outdoor Air	5.99E-4	9.58E-5	16.8	12.64	3.42E-5	6.0	12.64	4.10E-6			1.46E-6		
Acrylonitrile	Inhalation of Indoor Air	6.71E-4	4.07E-4	0.71	0.54	1.45E-4	0.25	0.54	1.74E-5	4.16E-6	2.28	6.24E-6	1.48E-6	2.28
Acrylonitrile	Inhalation of Outdoor Air	6.71E-4	1.07E-4	0.19	0.14	3.83E-5	0.07	0.14	4.60E-6	1.09E-6	0.60	1.64E-6	3.91E-7	0.60
alpha-BHC	Inhalation of Indoor Air	3.77E-7	2.29E-7			8.17E-8			9.81E-9	6.18E-8	0.03	3.50E-9	2.20E-8	0.03
alpha-BHC	Inhalation of Outdoor Air	3.77E-7	6.02E-8			2.15E-8			2.58E-9	1.62E-8	0.01	9.22E-10	5.81E-9	0.01
Antimony	Inhalation of Indoor Air	2.36E-4	1.43E-4	12.6	9.49	5.13E-5	4.5	9.49	6.16E-6			2.20E-6		
Antimony	Inhalation of Outdoor Air	2.36E-4	3.78E-5	3.3	2.50	1.35E-5	1.2	2.50	1.62E-6			5.79E-7		
Arsenic	Inhalation of Indoor Air	1.44E-5	8.77E-6			3.13E-6			3.76E-7	5.66E-6	3.10	1.34E-7	2.02E-6	3.10
Arsenic	Inhalation of Outdoor Air	1.44E-5	2.31E-6			8.25E-7			9.90E-8	1.49E-6	0.82	3.53E-8	5.32E-7	0.82
Benzene	Inhalation of Indoor Air	3.59E-3	2.18E-3	0.13	0.10	7.80E-4	0.05	0.10	9.36E-5	2.71E-6	1.49	3.34E-5	9.71E-7	1.49
Benzene	Inhalation of Outdoor Air	3.59E-3	5.74E-4	0.03	0.03	2.05E-4	0.01	0.03	2.46E-5	7.15E-7	0.39	8.79E-6	2.55E-7	0.39
Beryllium	Inhalation of Indoor Air	2.86E-7	1.74E-7	<0.01	0.00	6.22E-8	<0.01	0.00	7.46E-9	6.27E-8	0.03	2.66E-9	2.23E-8	0.03
Beryllium	Inhalation of Outdoor Air	2.86E-7	4.58E-8	<0.01	0.00	1.63E-8	<0.01	0.00	1.96E-9	1.65E-8	0.01	7.01E-10	5.89E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	5.18E-5	3.15E-5	0.01	0.01	1.12E-5	<0.01	0.01	1.35E-6	1.13E-8	0.01	4.82E-7	4.05E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	5.18E-5	8.29E-6	<0.01	0.00	2.96E-6	<0.01	0.00	3.55E-7	2.98E-9	0.00	1.26E-7	1.06E-9	0.00
Bromomethane	Inhalation of Indoor Air	1.81E-4	1.10E-4	0.08	0.06	3.94E-5	0.03	0.06	4.72E-6			1.68E-6		
Bromomethane	Inhalation of Outdoor Air	1.81E-4	2.90E-5	0.02	0.02	1.03E-5	<0.01	0.02	1.24E-6			4.44E-7		
Cadmium	Inhalation of Indoor Air	1.31E-4	7.98E-5	3.1	2.34	2.85E-5	1.1	2.34	3.42E-6	2.15E-5	11.83	1.22E-6	7.70E-6	11.83
Cadmium	Inhalation of Outdoor Air	1.31E-4	2.10E-5	0.82	0.62	7.50E-6	0.29	0.62	9.01E-7	5.67E-6	3.11	3.21E-7	2.02E-6	3.11
Carbon Tetrachloride	Inhalation of Indoor Air	6.30E-4	3.83E-4	0.67	0.51	1.36E-4	0.24	0.51	1.64E-5	8.61E-7	0.47	5.86E-6	3.07E-7	0.47
Carbon Tetrachloride	Inhalation of Outdoor Air	6.30E-4	1.00E-4	0.18	0.13	3.60E-5	0.06	0.13	4.32E-6	2.26E-7	0.12	1.54E-6	8.10E-8	0.12

Table C-27
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chlorobenzene	Inhalation of Indoor Air	2.77E-4	1.68E-4	0.03	0.02	6.01E-5	0.01	0.02	7.22E-6			2.57E-6		
Chlorobenzene	Inhalation of Outdoor Air	2.77E-4	4.43E-5	<0.01	0.01	1.58E-5	<0.01	0.01	1.90E-6			6.78E-7		
Chloroethane	Inhalation of Indoor Air	3.14E-4	1.90E-4	<0.01	0.00	6.81E-5	<0.01	0.00	8.18E-6			2.92E-6		
Chloroethane	Inhalation of Outdoor Air	3.14E-4	5.02E-5	<0.01	0.00	1.79E-5	<0.01	0.00	2.15E-6			7.69E-7		
Chloroform	Inhalation of Indoor Air	4.06E-4	2.47E-4	<0.01	0.00	8.82E-5	<0.01	0.00	1.05E-5	8.52E-7	0.47	3.78E-6	3.04E-7	0.47
Chloroform	Inhalation of Outdoor Air	4.06E-4	6.50E-5	<0.01	0.00	2.32E-5	<0.01	0.00	2.78E-6	2.24E-7	0.12	9.95E-7	8.01E-8	0.12
Chloromethane	Inhalation of Indoor Air	2.11E-3	1.28E-3	0.02	0.01	4.59E-4	<0.01	0.01	5.51E-5	3.47E-7	0.19	1.96E-5	1.24E-7	0.19
Chloromethane	Inhalation of Outdoor Air	2.11E-3	3.38E-4	<0.01	0.00	1.20E-4	<0.01	0.00	1.45E-5	9.14E-8	0.05	5.18E-6	3.26E-8	0.05
Cumene	Inhalation of Indoor Air	2.53E-4	1.53E-4	<0.01	0.00	5.49E-5	<0.01	0.00	6.59E-6			2.35E-6		
Cumene	Inhalation of Outdoor Air	2.53E-4	4.04E-5	<0.01	0.00	1.44E-5	<0.01	0.00	1.73E-6			6.19E-7		
Dichlorodifluoromethane	Inhalation of Indoor Air	2.92E-3	1.77E-3	0.03	0.02	6.33E-4	0.01	0.02	7.60E-5			2.71E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	2.92E-3	4.67E-4	<0.01	0.01	1.66E-4	<0.01	0.01	2.00E-5			7.14E-6		
Dieldrin	Inhalation of Indoor Air	3.65E-7	2.22E-7			7.93E-8			9.52E-9	1.53E-7	0.08	3.40E-9	5.47E-8	0.08
Dieldrin	Inhalation of Outdoor Air	3.65E-7	5.84E-8			2.08E-8			2.50E-9	4.03E-8	0.02	8.94E-10	1.44E-8	0.02
Ethylbenzene	Inhalation of Indoor Air	5.68E-3	3.45E-3	0.01	0.01	1.23E-3	<0.01	0.01	1.48E-4	5.69E-7	0.31	5.28E-5	2.03E-7	0.31
Ethylbenzene	Inhalation of Outdoor Air	5.68E-3	9.08E-4	<0.01	0.00	3.24E-4	<0.01	0.00	3.89E-5	1.49E-7	0.08	1.39E-5	5.35E-8	0.08
Formaldehyde	Inhalation of Indoor Air	1.70E-3	1.03E-3	1.2	0.91	3.69E-4	0.43	0.91	4.43E-5	2.01E-6	1.11	1.58E-5	7.20E-7	1.11
Formaldehyde	Inhalation of Outdoor Air	1.70E-3	2.72E-4	0.32	0.24	9.71E-5	0.11	0.24	1.16E-5	5.30E-7	0.29	4.16E-6	1.89E-7	0.29
Freon 113	Inhalation of Indoor Air	1.08E-3	6.58E-4	<0.01	0.00	2.35E-4	<0.01	0.00	2.82E-5			1.00E-5		
Freon 113	Inhalation of Outdoor Air	1.08E-3	1.73E-4	<0.01	0.00	6.19E-5	<0.01	0.00	7.43E-6			2.65E-6		
gamma-BHC	Inhalation of Indoor Air	1.18E-7	7.20E-8			2.57E-8			3.08E-9	3.39E-9	0.00	1.10E-9	1.21E-9	0.00
gamma-BHC	Inhalation of Outdoor Air	1.18E-7	1.89E-8			6.77E-9			8.12E-10	8.93E-10	0.00	2.90E-10	3.19E-10	0.00
Halocarbon 134A	Inhalation of Indoor Air	1.98E-4	1.20E-4	<0.01	0.00	4.31E-5	<0.01	0.00	5.17E-6			1.84E-6		
Halocarbon 134A	Inhalation of Outdoor Air	1.98E-4	3.17E-5	<0.01	0.00	1.13E-5	<0.01	0.00	1.36E-6			4.86E-7		
Heptachlor	Inhalation of Indoor Air	5.37E-7	3.26E-7			1.16E-7			1.39E-8	6.36E-8	0.03	4.99E-9	2.27E-8	0.03
Heptachlor	Inhalation of Outdoor Air	5.37E-7	8.59E-8			3.06E-8			3.68E-9	1.67E-8	0.01	1.31E-9	5.98E-9	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	9.58E-4	5.81E-4			2.07E-4			2.49E-5	1.91E-6	1.05	8.90E-6	6.85E-7	1.05

Table C-27
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	9.58E-4	1.53E-4		5.46E-5		6.56E-6	5.05E-7	0.28	2.34E-6	1.80E-7	0.28		
Hexachlorobenzene	Inhalation of Indoor Air	4.62E-6	2.80E-6		1.00E-6		1.20E-7	1.93E-7	0.11	4.29E-8	6.91E-8	0.11		
Hexachlorobenzene	Inhalation of Outdoor Air	4.62E-6	7.38E-7		2.63E-7		3.16E-8	5.09E-8	0.03	1.13E-8	1.81E-8	0.03		
Hydrochloric Acid	Inhalation of Indoor Air	1.84E-2	1.12E-2	2.0 1.48	4.00E-3	0.70 1.48	4.80E-4			1.71E-4				
Hydrochloric Acid	Inhalation of Outdoor Air	1.84E-2	2.95E-3	0.52 0.39	1.05E-3	0.18 0.39	1.26E-4			4.52E-5				
Mercury	Inhalation of Indoor Air	1.08E-5	6.58E-6	0.08 0.06	2.35E-6	0.03 0.06	2.82E-7			1.00E-7				
Mercury	Inhalation of Outdoor Air	1.08E-5	1.73E-6	0.02 0.02	6.18E-7	<0.01 0.02	7.42E-8			2.65E-8				
Methyl t-Butylether	Inhalation of Indoor Air	9.85E-5	5.98E-5	<0.01 0.00	2.13E-5	<0.01 0.00	2.56E-6			9.15E-7				
Methyl t-Butylether	Inhalation of Outdoor Air	9.85E-5	1.57E-5	<0.01 0.00	5.62E-6	<0.01 0.00	6.74E-7			2.40E-7				
Methylcyclohexane	Inhalation of Indoor Air	2.79E-4	1.69E-4	<0.01 0.00	6.06E-5	<0.01 0.00	7.27E-6			2.59E-6				
Methylcyclohexane	Inhalation of Outdoor Air	2.79E-4	4.46E-5	<0.01 0.00	1.59E-5	<0.01 0.00	1.91E-6			6.83E-7				
Methylene Chloride	Inhalation of Indoor Air	7.87E-3	4.78E-3	<0.01 0.00	1.70E-3	<0.01 0.00	2.05E-4	3.37E-7	0.18	7.32E-5	1.20E-7	0.18		
Methylene Chloride	Inhalation of Outdoor Air	7.87E-3	1.25E-3	<0.01 0.00	4.49E-4	<0.01 0.00	5.39E-5	8.87E-8	0.05	1.92E-5	3.16E-8	0.05		
Methylisobutylketone	Inhalation of Indoor Air	3.80E-3	2.31E-3	0.10 0.08	8.25E-4	0.04 0.08	9.90E-5			3.53E-5				
Methylisobutylketone	Inhalation of Outdoor Air	3.80E-3	6.08E-4	0.03 0.02	2.17E-4	<0.01 0.02	2.60E-5			9.31E-6				
n-Hexane	Inhalation of Indoor Air	4.19E-3	2.54E-3	0.04 0.03	9.10E-4	0.02 0.03	1.09E-4			3.90E-5				
n-Hexane	Inhalation of Outdoor Air	4.19E-3	6.70E-4	0.01 0.01	2.39E-4	<0.01 0.01	2.87E-5			1.02E-5				
Naphthalene	Inhalation of Indoor Air	3.53E-4	2.14E-4	0.25 0.19	7.67E-5	0.09 0.19	9.20E-6			3.28E-6				
Naphthalene	Inhalation of Outdoor Air	3.53E-4	5.65E-5	0.07 0.05	2.01E-5	0.02 0.05	2.42E-6			8.65E-7				
Nickel	Inhalation of Indoor Air	3.96E-5	2.40E-5	1.7 1.27	8.60E-6	0.60 1.27	1.03E-6	9.39E-7	0.52	3.68E-7	3.35E-7	0.52		
Nickel	Inhalation of Outdoor Air	3.96E-5	6.33E-6	0.44 0.33	2.26E-6	0.16 0.33	2.71E-7	2.47E-7	0.14	9.70E-8	8.82E-8	0.14		
Phenol	Inhalation of Indoor Air	1.59E-4	9.70E-5	<0.01 0.00	3.46E-5	<0.01 0.00	4.15E-6			1.48E-6				
Phenol	Inhalation of Outdoor Air	1.59E-4	2.55E-5	<0.01 0.00	9.11E-6	<0.01 0.00	1.09E-6			3.90E-7				
PM-10	Inhalation of Indoor Air	1.71E-1	1.04E-1	7.3 5.50	3.72E-2	2.6 5.50	4.46E-3			1.59E-3				
PM-10	Inhalation of Outdoor Air	1.71E-1	2.74E-2	1.9 1.45	9.79E-3	0.69 1.45	1.17E-3			4.19E-4				
Propylene	Inhalation of Indoor Air	2.55E-2	1.55E-2	0.02 0.01	5.55E-3	<0.01 0.01	6.66E-4			2.37E-4				
Propylene	Inhalation of Outdoor Air	2.55E-2	4.09E-3	<0.01 0.00	1.46E-3	<0.01 0.00	1.75E-4			6.26E-5				

Table C-27
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Styrene	Inhalation of Indoor Air	1.71E-3	1.03E-3	<0.01	0.00	3.71E-4	<0.01	0.00	4.45E-5			1.59E-5		
Styrene	Inhalation of Outdoor Air	1.71E-3	2.73E-4	<0.01	0.00	9.77E-5	<0.01	0.00	1.17E-5			4.18E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.42E-3	8.67E-4			3.09E-4			3.71E-5	7.54E-8	0.04	1.32E-5	2.69E-8	0.04
Tetrachloroethylene	Inhalation of Outdoor Air	1.42E-3	2.28E-4			8.15E-5			9.78E-6	1.98E-8	0.01	3.49E-6	7.09E-9	0.01
Toluene	Inhalation of Indoor Air	2.47E-2	1.50E-2	0.13	0.10	5.36E-3	0.05	0.10	6.44E-4			2.30E-4		
Toluene	Inhalation of Outdoor Air	2.47E-2	3.95E-3	0.03	0.03	1.41E-3	0.01	0.03	1.69E-4			6.05E-5		
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	1.84E-8	1.12E-8			4.00E-9			4.80E-10	7.20E-5	39.48	1.71E-10	2.57E-5	39.48
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	1.84E-8	2.94E-9			1.05E-9			1.26E-10	1.89E-5	10.39	4.51E-11	6.76E-6	10.39
Trichloroethylene	Inhalation of Indoor Air	2.63E-3	1.59E-3			5.71E-4			6.85E-5	4.07E-7	0.22	2.44E-5	1.45E-7	0.22
Trichloroethylene	Inhalation of Outdoor Air	2.63E-3	4.20E-4			1.50E-4			1.80E-5	1.07E-7	0.06	6.44E-6	3.83E-8	0.06
Trichlorofluoromethane	Inhalation of Indoor Air	3.87E-3	2.35E-3	0.01	0.01	8.39E-4	<0.01	0.01	1.00E-4			3.59E-5		
Trichlorofluoromethane	Inhalation of Outdoor Air	3.87E-3	6.18E-4	<0.01	0.00	2.21E-4	<0.01	0.00	2.65E-5			9.47E-6		
Vinyl Acetate	Inhalation of Indoor Air	1.38E-2	8.40E-3	0.15	0.11	3.00E-3	0.05	0.11	3.60E-4			1.28E-4		
Vinyl Acetate	Inhalation of Outdoor Air	1.38E-2	2.21E-3	0.04	0.03	7.89E-4	0.01	0.03	9.47E-5			3.38E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.19E-4	7.26E-5			2.59E-5			3.11E-6	9.34E-7	0.51	1.11E-6	3.33E-7	0.51
Vinyl Chloride	Inhalation of Outdoor Air	1.19E-4	1.91E-5			6.83E-6			8.19E-7	2.45E-7	0.13	2.92E-7	8.78E-8	0.13
Total Risk:			132.63			47.37			1.82E-4			6.51E-5		

Table C-28
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,1-Trichloroethane	Inhalation of Indoor Air	8.84E-4	5.36E-4	<0.01	0.00	1.91E-4	<0.01	0.00	4.60E-5			1.64E-5		
1,1,1-Trichloroethane	Inhalation of Outdoor Air	8.84E-4	1.41E-4	<0.01	0.00	5.04E-5	<0.01	0.00	1.21E-5			4.32E-6		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.35E-4	3.25E-4			1.16E-4			2.78E-5	5.66E-6	1.55	9.96E-6	2.02E-6	1.55
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.35E-4	8.56E-5			3.05E-5			7.34E-6	1.49E-6	0.41	2.62E-6	5.32E-7	0.41
1,1-Dichloroethylene	Inhalation of Indoor Air	1.78E-4	1.08E-4			3.86E-5			9.28E-6	1.62E-6	0.45	3.31E-6	5.80E-7	0.45
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.78E-4	2.85E-5			1.01E-5			2.44E-6	4.27E-7	0.12	8.72E-7	1.52E-7	0.12
1,2,4-Trichlorobenzene	Inhalation of Indoor Air	2.11E-4	1.28E-4	<0.01	0.00	4.59E-5	<0.01	0.00	1.10E-5			3.93E-6		
1,2,4-Trichlorobenzene	Inhalation of Outdoor Air	2.11E-4	3.38E-5	<0.01	0.00	1.20E-5	<0.01	0.00	2.90E-6			1.03E-6		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	1.81E-3	1.10E-3	0.64	0.48	3.93E-4	0.23	0.48	9.44E-5			3.37E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	1.81E-3	2.90E-4	0.17	0.13	1.03E-4	0.06	0.13	2.48E-5			8.88E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	4.65E-5	0.82	0.61	1.66E-5	0.29	0.61	3.99E-6	3.07E-6	0.84	1.42E-6	1.09E-6	0.84
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	1.22E-5	0.21	0.16	4.37E-6	0.08	0.16	1.05E-6	8.08E-7	0.22	3.75E-7	2.88E-7	0.22
1,2-Dichlorobenzene	Inhalation of Indoor Air	1.20E-4	7.28E-5	<0.01	0.00	2.60E-5	<0.01	0.00	6.24E-6			2.23E-6		
1,2-Dichlorobenzene	Inhalation of Outdoor Air	1.20E-4	1.91E-5	<0.01	0.00	6.84E-6	<0.01	0.00	1.64E-6			5.87E-7		
1,2-Dichloropropane	Inhalation of Indoor Air	3.91E-4	2.37E-4	0.21	0.16	8.48E-5	0.07	0.16	2.03E-5			7.26E-6		
1,2-Dichloropropane	Inhalation of Outdoor Air	3.91E-4	6.24E-5	0.05	0.04	2.23E-5	0.02	0.04	5.35E-6			1.91E-6		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	5.60E-4	3.40E-4	0.20	0.15	1.21E-4	0.07	0.15	2.91E-5			1.04E-5		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	5.60E-4	8.95E-5	0.05	0.04	3.19E-5	0.02	0.04	7.67E-6			2.74E-6		
1,3-Butadiene	Inhalation of Indoor Air	5.19E-4	3.15E-4			1.12E-4			2.70E-5	2.64E-5	7.26	9.65E-6	9.46E-6	7.26
1,3-Butadiene	Inhalation of Outdoor Air	5.19E-4	8.30E-5			2.96E-5			7.11E-6	6.97E-6	1.91	2.54E-6	2.49E-6	1.91
1,4-Dichlorobenzene	Inhalation of Indoor Air	8.05E-4	4.89E-4	<0.01	0.00	1.74E-4	<0.01	0.00	4.19E-5	1.67E-6	0.46	1.49E-5	5.99E-7	0.46
1,4-Dichlorobenzene	Inhalation of Outdoor Air	8.05E-4	1.28E-4	<0.01	0.00	4.59E-5	<0.01	0.00	1.10E-5	4.41E-7	0.12	3.94E-6	1.57E-7	0.12
1,4-Dioxane	Inhalation of Indoor Air	2.32E-3	1.41E-3	<0.01	0.00	5.05E-4	<0.01	0.00	1.21E-4	3.27E-6	0.90	4.32E-5	1.16E-6	0.90
1,4-Dioxane	Inhalation of Outdoor Air	2.32E-3	3.72E-4	<0.01	0.00	1.32E-4	<0.01	0.00	3.19E-5	8.61E-7	0.24	1.13E-5	3.07E-7	0.24
2-Butanone	Inhalation of Indoor Air	8.26E-3	5.01E-3	0.02	0.01	1.79E-3	<0.01	0.01	4.30E-4			1.53E-4		
2-Butanone	Inhalation of Outdoor Air	8.26E-3	1.32E-3	<0.01	0.00	4.71E-4	<0.01	0.00	1.13E-4			4.04E-5		
2-Propanol	Inhalation of Indoor Air	1.33E-2	8.08E-3	<0.01	0.00	2.88E-3	<0.01	0.00	6.92E-4			2.47E-4		

Table C-28
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
2-Propanol	Inhalation of Outdoor Air	1.33E-2	2.12E-3	<0.01	0.00	7.59E-4	<0.01	0.00	1.82E-4			6.51E-5		
Acetaldehyde	Inhalation of Indoor Air	3.76E-2	2.28E-2	8.9	6.71	8.17E-3	3.2	6.71	1.96E-3	1.51E-5	4.14	7.00E-4	5.39E-6	4.14
Acetaldehyde	Inhalation of Outdoor Air	3.76E-2	6.02E-3	2.3	1.77	2.15E-3	0.84	1.77	5.16E-4	3.97E-6	1.09	1.84E-4	1.42E-6	1.09
Acetonitrile	Inhalation of Indoor Air	4.33E-3	2.63E-3	0.15	0.12	9.39E-4	0.05	0.12	2.25E-4			8.05E-5		
Acetonitrile	Inhalation of Outdoor Air	4.33E-3	6.92E-4	0.04	0.03	2.47E-4	0.01	0.03	5.93E-5			2.11E-5		
Acrolein	Inhalation of Indoor Air	5.99E-4	3.64E-4	63.7	48.04	1.30E-4	22.8	48.04	3.12E-5			1.11E-5		
Acrolein	Inhalation of Outdoor Air	5.99E-4	9.58E-5	16.8	12.64	3.42E-5	6.0	12.64	8.21E-6			2.93E-6		
Acrylonitrile	Inhalation of Indoor Air	6.71E-4	4.07E-4	0.71	0.54	1.45E-4	0.25	0.54	3.49E-5	8.32E-6	2.28	1.24E-5	2.97E-6	2.28
Acrylonitrile	Inhalation of Outdoor Air	6.71E-4	1.07E-4	0.19	0.14	3.83E-5	0.07	0.14	9.20E-6	2.18E-6	0.60	3.28E-6	7.82E-7	0.60
alpha-BHC	Inhalation of Indoor Air	3.77E-7	2.29E-7			8.17E-8			1.96E-8	1.23E-7	0.03	7.01E-9	4.41E-8	0.03
alpha-BHC	Inhalation of Outdoor Air	3.77E-7	6.02E-8			2.15E-8			5.16E-9	3.25E-8	0.01	1.84E-9	1.16E-8	0.01
Antimony	Inhalation of Indoor Air	2.36E-4	1.43E-4	12.6	9.49	5.13E-5	4.5	9.49	1.23E-5			4.40E-6		
Antimony	Inhalation of Outdoor Air	2.36E-4	3.78E-5	3.3	2.50	1.35E-5	1.2	2.50	3.24E-6			1.15E-6		
Arsenic	Inhalation of Indoor Air	1.44E-5	8.77E-6			3.13E-6			7.52E-7	1.13E-5	3.10	2.68E-7	4.04E-6	3.10
Arsenic	Inhalation of Outdoor Air	1.44E-5	2.31E-6			8.25E-7			1.98E-7	2.98E-6	0.82	7.07E-8	1.06E-6	0.82
Benzene	Inhalation of Indoor Air	3.59E-3	2.18E-3	0.13	0.10	7.80E-4	0.05	0.10	1.87E-4	5.43E-6	1.49	6.68E-5	1.94E-6	1.49
Benzene	Inhalation of Outdoor Air	3.59E-3	5.74E-4	0.03	0.03	2.05E-4	0.01	0.03	4.92E-5	1.43E-6	0.39	1.75E-5	5.11E-7	0.39
Beryllium	Inhalation of Indoor Air	2.86E-7	1.74E-7	<0.01	0.00	6.22E-8	<0.01	0.00	1.49E-8	1.25E-7	0.03	5.33E-9	4.47E-8	0.03
Beryllium	Inhalation of Outdoor Air	2.86E-7	4.58E-8	<0.01	0.00	1.63E-8	<0.01	0.00	3.92E-9	3.30E-8	0.01	1.40E-9	1.17E-8	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	5.18E-5	3.15E-5	0.01	0.01	1.12E-5	<0.01	0.01	2.70E-6	2.26E-8	0.01	9.64E-7	8.10E-9	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	5.18E-5	8.29E-6	<0.01	0.00	2.96E-6	<0.01	0.00	7.10E-7	5.97E-9	0.00	2.53E-7	2.13E-9	0.00
Bromomethane	Inhalation of Indoor Air	1.81E-4	1.10E-4	0.08	0.06	3.94E-5	0.03	0.06	9.45E-6			3.37E-6		
Bromomethane	Inhalation of Outdoor Air	1.81E-4	2.90E-5	0.02	0.02	1.03E-5	<0.01	0.02	2.48E-6			8.88E-7		
Cadmium	Inhalation of Indoor Air	1.31E-4	7.98E-5	3.1	2.34	2.85E-5	1.1	2.34	6.84E-6	4.31E-5	11.83	2.44E-6	1.54E-5	11.83
Cadmium	Inhalation of Outdoor Air	1.31E-4	2.10E-5	0.82	0.62	7.50E-6	0.29	0.62	1.80E-6	1.13E-5	3.11	6.43E-7	4.05E-6	3.11
Carbon Tetrachloride	Inhalation of Indoor Air	6.30E-4	3.83E-4	0.67	0.51	1.36E-4	0.24	0.51	3.28E-5	1.72E-6	0.47	1.17E-5	6.15E-7	0.47
Carbon Tetrachloride	Inhalation of Outdoor Air	6.30E-4	1.00E-4	0.18	0.13	3.60E-5	0.06	0.13	8.64E-6	4.53E-7	0.12	3.08E-6	1.62E-7	0.12

Table C-28
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 2 Tours of Duty (6 Years)			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chlorobenzene	Inhalation of Indoor Air	2.77E-4	1.68E-4	0.03	0.02	6.01E-5	0.01	0.02	1.44E-5			5.15E-6		
Chlorobenzene	Inhalation of Outdoor Air	2.77E-4	4.43E-5	<0.01	0.01	1.58E-5	<0.01	0.01	3.80E-6			1.35E-6		
Chloroethane	Inhalation of Indoor Air	3.14E-4	1.90E-4	<0.01	0.00	6.81E-5	<0.01	0.00	1.63E-5			5.84E-6		
Chloroethane	Inhalation of Outdoor Air	3.14E-4	5.02E-5	<0.01	0.00	1.79E-5	<0.01	0.00	4.30E-6			1.53E-6		
Chloroform	Inhalation of Indoor Air	4.06E-4	2.47E-4	<0.01	0.00	8.82E-5	<0.01	0.00	2.11E-5	1.70E-6	0.47	7.56E-6	6.08E-7	0.47
Chloroform	Inhalation of Outdoor Air	4.06E-4	6.50E-5	<0.01	0.00	2.32E-5	<0.01	0.00	5.57E-6	4.48E-7	0.12	1.99E-6	1.60E-7	0.12
Chloromethane	Inhalation of Indoor Air	2.11E-3	1.28E-3	0.02	0.01	4.59E-4	<0.01	0.01	1.10E-4	6.94E-7	0.19	3.93E-5	2.48E-7	0.19
Chloromethane	Inhalation of Outdoor Air	2.11E-3	3.38E-4	<0.01	0.00	1.20E-4	<0.01	0.00	2.90E-5	1.82E-7	0.05	1.03E-5	6.52E-8	0.05
Cumene	Inhalation of Indoor Air	2.53E-4	1.53E-4	<0.01	0.00	5.49E-5	<0.01	0.00	1.31E-5			4.70E-6		
Cumene	Inhalation of Outdoor Air	2.53E-4	4.04E-5	<0.01	0.00	1.44E-5	<0.01	0.00	3.46E-6			1.23E-6		
Dichlorodifluoromethane	Inhalation of Indoor Air	2.92E-3	1.77E-3	0.03	0.02	6.33E-4	0.01	0.02	1.52E-4			5.43E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	2.92E-3	4.67E-4	<0.01	0.01	1.66E-4	<0.01	0.01	4.00E-5			1.42E-5		
Dieldrin	Inhalation of Indoor Air	3.65E-7	2.22E-7			7.93E-8			1.90E-8	3.06E-7	0.08	6.80E-9	1.09E-7	0.08
Dieldrin	Inhalation of Outdoor Air	3.65E-7	5.84E-8			2.08E-8			5.01E-9	8.06E-8	0.02	1.78E-9	2.88E-8	0.02
Ethylbenzene	Inhalation of Indoor Air	5.68E-3	3.45E-3	0.01	0.01	1.23E-3	<0.01	0.01	2.96E-4	1.13E-6	0.31	1.05E-4	4.07E-7	0.31
Ethylbenzene	Inhalation of Outdoor Air	5.68E-3	9.08E-4	<0.01	0.00	3.24E-4	<0.01	0.00	7.79E-5	2.99E-7	0.08	2.78E-5	1.07E-7	0.08
Formaldehyde	Inhalation of Indoor Air	1.70E-3	1.03E-3	1.2	0.91	3.69E-4	0.43	0.91	8.86E-5	4.03E-6	1.11	3.16E-5	1.44E-6	1.11
Formaldehyde	Inhalation of Outdoor Air	1.70E-3	2.72E-4	0.32	0.24	9.71E-5	0.11	0.24	2.33E-5	1.06E-6	0.29	8.32E-6	3.78E-7	0.29
Freon 113	Inhalation of Indoor Air	1.08E-3	6.58E-4	<0.01	0.00	2.35E-4	<0.01	0.00	5.64E-5			2.01E-5		
Freon 113	Inhalation of Outdoor Air	1.08E-3	1.73E-4	<0.01	0.00	6.19E-5	<0.01	0.00	1.48E-5			5.30E-6		
gamma-BHC	Inhalation of Indoor Air	1.18E-7	7.20E-8			2.57E-8			6.17E-9	6.79E-9	0.00	2.20E-9	2.42E-9	0.00
gamma-BHC	Inhalation of Outdoor Air	1.18E-7	1.89E-8			6.77E-9			1.62E-9	1.78E-9	0.00	5.80E-10	6.38E-10	0.00
Halocarbon 134A	Inhalation of Indoor Air	1.98E-4	1.20E-4	<0.01	0.00	4.31E-5	<0.01	0.00	1.03E-5			3.69E-6		
Halocarbon 134A	Inhalation of Outdoor Air	1.98E-4	3.17E-5	<0.01	0.00	1.13E-5	<0.01	0.00	2.72E-6			9.72E-7		
Heptachlor	Inhalation of Indoor Air	5.37E-7	3.26E-7			1.16E-7			2.79E-8	1.27E-7	0.03	9.99E-9	4.54E-8	0.03
Heptachlor	Inhalation of Outdoor Air	5.37E-7	8.59E-8			3.06E-8			7.36E-9	3.35E-8	0.01	2.63E-9	1.19E-8	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	9.58E-4	5.81E-4			2.07E-4			4.98E-5	3.83E-6	1.05	1.78E-5	1.37E-6	1.05

Table C-28
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 2 Tours of Duty (6 Years)			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	9.58E-4	1.53E-4		5.46E-5		1.31E-5	1.01E-6	0.28	4.68E-6	3.60E-7	0.28		
Hexachlorobenzene	Inhalation of Indoor Air	4.62E-6	2.80E-6		1.00E-6		2.40E-7	3.87E-7	0.11	8.59E-8	1.38E-7	0.11		
Hexachlorobenzene	Inhalation of Outdoor Air	4.62E-6	7.38E-7		2.63E-7		6.32E-8	1.01E-7	0.03	2.26E-8	3.63E-8	0.03		
Hydrochloric Acid	Inhalation of Indoor Air	1.84E-2	1.12E-2	2.0 1.48	4.00E-3	0.70 1.48	9.61E-4			3.43E-4				
Hydrochloric Acid	Inhalation of Outdoor Air	1.84E-2	2.95E-3	0.52 0.39	1.05E-3	0.18 0.39	2.53E-4			9.04E-5				
Mercury	Inhalation of Indoor Air	1.08E-5	6.58E-6	0.08 0.06	2.35E-6	0.03 0.06	5.64E-7			2.01E-7				
Mercury	Inhalation of Outdoor Air	1.08E-5	1.73E-6	0.02 0.02	6.18E-7	<0.01 0.02	1.48E-7			5.30E-8				
Methyl t-Butylether	Inhalation of Indoor Air	9.85E-5	5.98E-5	<0.01 0.00	2.13E-5	<0.01 0.00	5.12E-6			1.83E-6				
Methyl t-Butylether	Inhalation of Outdoor Air	9.85E-5	1.57E-5	<0.01 0.00	5.62E-6	<0.01 0.00	1.34E-6			4.81E-7				
Methylcyclohexane	Inhalation of Indoor Air	2.79E-4	1.69E-4	<0.01 0.00	6.06E-5	<0.01 0.00	1.45E-5			5.19E-6				
Methylcyclohexane	Inhalation of Outdoor Air	2.79E-4	4.46E-5	<0.01 0.00	1.59E-5	<0.01 0.00	3.82E-6			1.36E-6				
Methylene Chloride	Inhalation of Indoor Air	7.87E-3	4.78E-3	<0.01 0.00	1.70E-3	<0.01 0.00	4.10E-4	6.74E-7	0.18	1.46E-4	2.40E-7	0.18		
Methylene Chloride	Inhalation of Outdoor Air	7.87E-3	1.25E-3	<0.01 0.00	4.49E-4	<0.01 0.00	1.07E-4	1.77E-7	0.05	3.85E-5	6.33E-8	0.05		
Methylisobutylketone	Inhalation of Indoor Air	3.80E-3	2.31E-3	0.10 0.08	8.25E-4	0.04 0.08	1.98E-4			7.07E-5				
Methylisobutylketone	Inhalation of Outdoor Air	3.80E-3	6.08E-4	0.03 0.02	2.17E-4	<0.01 0.02	5.21E-5			1.86E-5				
n-Hexane	Inhalation of Indoor Air	4.19E-3	2.54E-3	0.04 0.03	9.10E-4	0.02 0.03	2.18E-4			7.80E-5				
n-Hexane	Inhalation of Outdoor Air	4.19E-3	6.70E-4	0.01 0.01	2.39E-4	<0.01 0.01	5.74E-5			2.05E-5				
Naphthalene	Inhalation of Indoor Air	3.53E-4	2.14E-4	0.25 0.19	7.67E-5	0.09 0.19	1.84E-5			6.57E-6				
Naphthalene	Inhalation of Outdoor Air	3.53E-4	5.65E-5	0.07 0.05	2.01E-5	0.02 0.05	4.84E-6			1.73E-6				
Nickel	Inhalation of Indoor Air	3.96E-5	2.40E-5	1.7 1.27	8.60E-6	0.60 1.27	2.06E-6	1.87E-6	0.52	7.37E-7	6.70E-7	0.52		
Nickel	Inhalation of Outdoor Air	3.96E-5	6.33E-6	0.44 0.33	2.26E-6	0.16 0.33	5.43E-7	4.94E-7	0.14	1.94E-7	1.76E-7	0.14		
Phenol	Inhalation of Indoor Air	1.59E-4	9.70E-5	<0.01 0.00	3.46E-5	<0.01 0.00	8.31E-6			2.97E-6				
Phenol	Inhalation of Outdoor Air	1.59E-4	2.55E-5	<0.01 0.00	9.11E-6	<0.01 0.00	2.18E-6			7.81E-7				
PM-10	Inhalation of Indoor Air	1.71E-1	1.04E-1	7.3 5.50	3.72E-2	2.6 5.50	8.92E-3			3.18E-3				
PM-10	Inhalation of Outdoor Air	1.71E-1	2.74E-2	1.9 1.45	9.79E-3	0.69 1.45	2.34E-3			8.39E-4				
Propylene	Inhalation of Indoor Air	2.55E-2	1.55E-2	0.02 0.01	5.55E-3	<0.01 0.01	1.33E-3			4.75E-4				
Propylene	Inhalation of Outdoor Air	2.55E-2	4.09E-3	<0.01 0.00	1.46E-3	<0.01 0.00	3.50E-4			1.25E-4				

Table C-28
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Styrene	Inhalation of Indoor Air	1.71E-3	1.03E-3	<0.01	0.00	3.71E-4	<0.01	0.00	8.91E-5			3.18E-5		
Styrene	Inhalation of Outdoor Air	1.71E-3	2.73E-4	<0.01	0.00	9.77E-5	<0.01	0.00	2.34E-5			8.37E-6		
Tetrachloroethylene	Inhalation of Indoor Air	1.42E-3	8.67E-4			3.09E-4			7.43E-5	1.50E-7	0.04	2.65E-5	5.39E-8	0.04
Tetrachloroethylene	Inhalation of Outdoor Air	1.42E-3	2.28E-4			8.15E-5			1.95E-5	3.97E-8	0.01	6.98E-6	1.41E-8	0.01
Toluene	Inhalation of Indoor Air	2.47E-2	1.50E-2	0.13	0.10	5.36E-3	0.05	0.10	1.28E-3			4.60E-4		
Toluene	Inhalation of Outdoor Air	2.47E-2	3.95E-3	0.03	0.03	1.41E-3	0.01	0.03	3.39E-4			1.21E-4		
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	1.84E-8	1.12E-8			4.00E-9			9.60E-10	1.44E-4	39.48	3.42E-10	5.14E-5	39.48
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	1.84E-8	2.94E-9			1.05E-9			2.52E-10	3.78E-5	10.39	9.02E-11	1.35E-5	10.39
Trichloroethylene	Inhalation of Indoor Air	2.63E-3	1.59E-3			5.71E-4			1.37E-4	8.15E-7	0.22	4.89E-5	2.91E-7	0.22
Trichloroethylene	Inhalation of Outdoor Air	2.63E-3	4.20E-4			1.50E-4			3.60E-5	2.14E-7	0.06	1.28E-5	7.66E-8	0.06
Trichlorofluoromethane	Inhalation of Indoor Air	3.87E-3	2.35E-3	0.01	0.01	8.39E-4	<0.01	0.01	2.01E-4			7.19E-5		
Trichlorofluoromethane	Inhalation of Outdoor Air	3.87E-3	6.18E-4	<0.01	0.00	2.21E-4	<0.01	0.00	5.30E-5			1.89E-5		
Vinyl Acetate	Inhalation of Indoor Air	1.38E-2	8.40E-3	0.15	0.11	3.00E-3	0.05	0.11	7.20E-4			2.57E-4		
Vinyl Acetate	Inhalation of Outdoor Air	1.38E-2	2.21E-3	0.04	0.03	7.89E-4	0.01	0.03	1.89E-4			6.76E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.19E-4	7.26E-5			2.59E-5			6.22E-6	1.86E-6	0.51	2.22E-6	6.67E-7	0.51
Vinyl Chloride	Inhalation of Outdoor Air	1.19E-4	1.91E-5			6.83E-6			1.63E-6	4.91E-7	0.13	5.85E-7	1.75E-7	0.13
Total Risk:				132.63	100.0		47.37	100.0		3.64E-4	100.0		1.30E-4	100.0

Table C-29
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,1-Trichloroethane	Inhalation of Indoor Air	8.84E-4	--	--	--	2.60E-4	<0.01	0.00	--	--	--	1.11E-4	--	--
1,1,1-Trichloroethane	Inhalation of Outdoor Air	8.84E-4	--	--	--	6.86E-5	<0.01	0.00	--	--	--	2.94E-5	--	--
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.35E-4	--	--	--	1.58E-4	--	--	--	--	--	6.77E-5	1.37E-5	1.55
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.35E-4	--	--	--	4.16E-5	--	--	--	--	--	1.78E-5	3.61E-6	0.41
1,1-Dichloroethylene	Inhalation of Indoor Air	1.78E-4	--	--	--	5.26E-5	--	--	--	--	--	2.25E-5	3.94E-6	0.45
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.78E-4	--	--	--	1.38E-5	--	--	--	--	--	5.93E-6	1.03E-6	0.12
1,2,4-Trichlorobenzene	Inhalation of Indoor Air	2.11E-4	--	--	--	6.25E-5	<0.01	0.00	--	--	--	2.67E-5	--	--
1,2,4-Trichlorobenzene	Inhalation of Outdoor Air	2.11E-4	--	--	--	1.64E-5	<0.01	0.00	--	--	--	7.05E-6	--	--
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	1.81E-3	--	--	--	5.35E-4	0.31	0.48	--	--	--	2.29E-4	--	--
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	1.81E-3	--	--	--	1.40E-4	0.08	0.13	--	--	--	6.03E-5	--	--
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	--	--	--	2.26E-5	0.40	0.61	--	--	--	9.69E-6	7.46E-6	0.84
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	--	--	--	5.95E-6	0.10	0.16	--	--	--	2.55E-6	1.96E-6	0.22
1,2-Dichlorobenzene	Inhalation of Indoor Air	1.20E-4	--	--	--	3.53E-5	<0.01	0.00	--	--	--	1.51E-5	--	--
1,2-Dichlorobenzene	Inhalation of Outdoor Air	1.20E-4	--	--	--	9.31E-6	<0.01	0.00	--	--	--	3.99E-6	--	--
1,2-Dichloropropane	Inhalation of Indoor Air	3.91E-4	--	--	--	1.15E-4	0.10	0.16	--	--	--	4.94E-5	--	--
1,2-Dichloropropane	Inhalation of Outdoor Air	3.91E-4	--	--	--	3.03E-5	0.03	0.04	--	--	--	1.30E-5	--	--
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	5.60E-4	--	--	--	1.65E-4	0.10	0.15	--	--	--	7.08E-5	--	--
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	5.60E-4	--	--	--	4.35E-5	0.03	0.04	--	--	--	1.86E-5	--	--
1,3-Butadiene	Inhalation of Indoor Air	5.19E-4	--	--	--	1.53E-4	--	--	--	--	--	6.56E-5	6.43E-5	7.26
1,3-Butadiene	Inhalation of Outdoor Air	5.19E-4	--	--	--	4.03E-5	--	--	--	--	--	1.72E-5	1.69E-5	1.91
1,4-Dichlorobenzene	Inhalation of Indoor Air	8.05E-4	--	--	--	2.37E-4	<0.01	0.00	--	--	--	1.01E-4	4.07E-6	0.46
1,4-Dichlorobenzene	Inhalation of Outdoor Air	8.05E-4	--	--	--	6.25E-5	<0.01	0.00	--	--	--	2.68E-5	1.07E-6	0.12
1,4-Dioxane	Inhalation of Indoor Air	2.32E-3	--	--	--	6.87E-4	<0.01	0.00	--	--	--	2.94E-4	7.94E-6	0.90
1,4-Dioxane	Inhalation of Outdoor Air	2.32E-3	--	--	--	1.80E-4	<0.01	0.00	--	--	--	7.74E-5	2.09E-6	0.24
2-Butanone	Inhalation of Indoor Air	8.26E-3	--	--	--	2.43E-3	<0.01	0.01	--	--	--	1.04E-3	--	--
2-Butanone	Inhalation of Outdoor Air	8.26E-3	--	--	--	6.41E-4	<0.01	0.00	--	--	--	2.74E-4	--	--
2-Propanol	Inhalation of Indoor Air	1.33E-2	--	--	--	3.92E-3	<0.01	0.00	--	--	--	1.68E-3	--	--

Table C-29
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 30 years			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
2-Propanol	Inhalation of Outdoor Air	1.33E-2	--	--	--	1.03E-3	<0.01	0.00	--	--	--	4.42E-4	--	--
Acetaldehyde	Inhalation of Indoor Air	3.76E-2	--	--	--	1.11E-2	4.3	6.71	--	--	--	4.76E-3	3.66E-5	4.14
Acetaldehyde	Inhalation of Outdoor Air	3.76E-2	--	--	--	2.92E-3	1.1	1.77	--	--	--	1.25E-3	9.65E-6	1.09
Acetonitrile	Inhalation of Indoor Air	4.33E-3	--	--	--	1.27E-3	0.07	0.12	--	--	--	5.47E-4	--	--
Acetonitrile	Inhalation of Outdoor Air	4.33E-3	--	--	--	3.36E-4	0.02	0.03	--	--	--	1.44E-4	--	--
Acrolein	Inhalation of Indoor Air	5.99E-4	--	--	--	1.76E-4	30.9	48.04	--	--	--	7.57E-5	--	--
Acrolein	Inhalation of Outdoor Air	5.99E-4	--	--	--	4.65E-5	8.1	12.64	--	--	--	1.99E-5	--	--
Acrylonitrile	Inhalation of Indoor Air	6.71E-4	--	--	--	1.98E-4	0.35	0.54	--	--	--	8.49E-5	2.02E-5	2.28
Acrylonitrile	Inhalation of Outdoor Air	6.71E-4	--	--	--	5.21E-5	0.09	0.14	--	--	--	2.23E-5	5.31E-6	0.60
alpha-BHC	Inhalation of Indoor Air	3.77E-7	--	--	--	1.11E-7	--	--	--	--	--	4.76E-8	3.00E-7	0.03
alpha-BHC	Inhalation of Outdoor Air	3.77E-7	--	--	--	2.92E-8	--	--	--	--	--	1.25E-8	7.90E-8	0.01
Antimony	Inhalation of Indoor Air	2.36E-4	--	--	--	6.98E-5	6.1	9.49	--	--	--	2.99E-5	--	--
Antimony	Inhalation of Outdoor Air	2.36E-4	--	--	--	1.83E-5	1.6	2.50	--	--	--	7.88E-6	--	--
Arsenic	Inhalation of Indoor Air	1.44E-5	--	--	--	4.26E-6	--	--	--	--	--	1.82E-6	2.75E-5	3.10
Arsenic	Inhalation of Outdoor Air	1.44E-5	--	--	--	1.12E-6	--	--	--	--	--	4.80E-7	7.23E-6	0.82
Benzene	Inhalation of Indoor Air	3.59E-3	--	--	--	1.06E-3	0.06	0.10	--	--	--	4.54E-4	1.32E-5	1.49
Benzene	Inhalation of Outdoor Air	3.59E-3	--	--	--	2.79E-4	0.02	0.03	--	--	--	1.19E-4	3.47E-6	0.39
Beryllium	Inhalation of Indoor Air	2.86E-7	--	--	--	8.45E-8	<0.01	0.00	--	--	--	3.62E-8	3.04E-7	0.03
Beryllium	Inhalation of Outdoor Air	2.86E-7	--	--	--	2.22E-8	<0.01	0.00	--	--	--	9.54E-9	8.01E-8	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	5.18E-5	--	--	--	1.53E-5	<0.01	0.01	--	--	--	6.55E-6	5.50E-8	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	5.18E-5	--	--	--	4.02E-6	<0.01	0.00	--	--	--	1.72E-6	1.44E-8	0.00
Bromomethane	Inhalation of Indoor Air	1.81E-4	--	--	--	5.35E-5	0.04	0.06	--	--	--	2.29E-5	--	--
Bromomethane	Inhalation of Outdoor Air	1.81E-4	--	--	--	1.41E-5	<0.01	0.02	--	--	--	6.04E-6	--	--
Cadmium	Inhalation of Indoor Air	1.31E-4	--	--	--	3.88E-5	1.5	2.34	--	--	--	1.66E-5	1.04E-4	11.83
Cadmium	Inhalation of Outdoor Air	1.31E-4	--	--	--	1.02E-5	0.40	0.62	--	--	--	4.37E-6	2.75E-5	3.11
Carbon Tetrachloride	Inhalation of Indoor Air	6.30E-4	--	--	--	1.86E-4	0.33	0.51	--	--	--	7.97E-5	4.18E-6	0.47
Carbon Tetrachloride	Inhalation of Outdoor Air	6.30E-4	--	--	--	4.89E-5	0.09	0.13	--	--	--	2.09E-5	1.10E-6	0.12

Table C-29
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 30 years			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Chlorobenzene	Inhalation of Indoor Air	2.77E-4	--	--	--	8.18E-5	0.01	0.02	--	3.50E-5				
Chlorobenzene	Inhalation of Outdoor Air	2.77E-4	--	--	--	2.15E-5	<0.01	0.01	--	9.23E-6				
Chloroethane	Inhalation of Indoor Air	3.14E-4	--	--	--	9.27E-5	<0.01	0.00	--	3.97E-5				
Chloroethane	Inhalation of Outdoor Air	3.14E-4	--	--	--	2.44E-5	<0.01	0.00	--	1.04E-5				
Chloroform	Inhalation of Indoor Air	4.06E-4	--	--	--	1.20E-4	<0.01	0.00	--	5.14E-5	4.14E-6	0.47		
Chloroform	Inhalation of Outdoor Air	4.06E-4	--	--	--	3.15E-5	<0.01	0.00	--	1.35E-5	1.08E-6	0.12		
Chloromethane	Inhalation of Indoor Air	2.11E-3	--	--	--	6.24E-4	<0.01	0.01	--	2.67E-4	1.68E-6	0.19		
Chloromethane	Inhalation of Outdoor Air	2.11E-3	--	--	--	1.64E-4	<0.01	0.00	--	7.04E-5	4.43E-7	0.05		
Cumene	Inhalation of Indoor Air	2.53E-4	--	--	--	7.47E-5	<0.01	0.00	--	3.20E-5				
Cumene	Inhalation of Outdoor Air	2.53E-4	--	--	--	1.96E-5	<0.01	0.00	--	8.42E-6				
Dichlorodifluoromethane	Inhalation of Indoor Air	2.92E-3	--	--	--	8.62E-4	0.02	0.02	--	3.69E-4				
Dichlorodifluoromethane	Inhalation of Outdoor Air	2.92E-3	--	--	--	2.26E-4	<0.01	0.01	--	9.72E-5				
Dieldrin	Inhalation of Indoor Air	3.65E-7	--	--	--	1.07E-7			--	4.62E-8	7.44E-7	0.08		
Dieldrin	Inhalation of Outdoor Air	3.65E-7	--	--	--	2.83E-8			--	1.21E-8	1.95E-7	0.02		
Ethylbenzene	Inhalation of Indoor Air	5.68E-3	--	--	--	1.67E-3	<0.01	0.01	--	7.18E-4	2.76E-6	0.31		
Ethylbenzene	Inhalation of Outdoor Air	5.68E-3	--	--	--	4.41E-4	<0.01	0.00	--	1.89E-4	7.28E-7	0.08		
Formaldehyde	Inhalation of Indoor Air	1.70E-3	--	--	--	5.02E-4	0.59	0.91	--	2.15E-4	9.79E-6	1.11		
Formaldehyde	Inhalation of Outdoor Air	1.70E-3	--	--	--	1.32E-4	0.15	0.24	--	5.66E-5	2.57E-6	0.29		
Freon 113	Inhalation of Indoor Air	1.08E-3	--	--	--	3.19E-4	<0.01	0.00	--	1.37E-4				
Freon 113	Inhalation of Outdoor Air	1.08E-3	--	--	--	8.42E-5	<0.01	0.00	--	3.60E-5				
gamma-BHC	Inhalation of Indoor Air	1.18E-7	--	--	--	3.49E-8			--	1.49E-8	1.64E-8	0.00		
gamma-BHC	Inhalation of Outdoor Air	1.18E-7	--	--	--	9.21E-9			--	3.94E-9	4.34E-9	0.00		
Halocarbon 134A	Inhalation of Indoor Air	1.98E-4	--	--	--	5.86E-5	<0.01	0.00	--	2.51E-5				
Halocarbon 134A	Inhalation of Outdoor Air	1.98E-4	--	--	--	1.54E-5	<0.01	0.00	--	6.61E-6				
Heptachlor	Inhalation of Indoor Air	5.37E-7	--	--	--	1.58E-7			--	6.79E-8	3.09E-7	0.03		
Heptachlor	Inhalation of Outdoor Air	5.37E-7	--	--	--	4.17E-8			--	1.78E-8	8.13E-8	0.01		
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	9.58E-4	--	--	--	2.82E-4			--	1.21E-4	9.32E-6	1.05		

Table C-29
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 30 years			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	9.58E-4	--	--	7.43E-5	--	--	--	--	--	--	3.18E-5	2.45E-6	0.28
Hexachlorobenzene	Inhalation of Indoor Air	4.62E-6	--	--	1.36E-6	--	--	--	--	--	--	5.84E-7	9.40E-7	0.11
Hexachlorobenzene	Inhalation of Outdoor Air	4.62E-6	--	--	3.58E-7	--	--	--	--	--	--	1.53E-7	2.47E-7	0.03
Hydrochloric Acid	Inhalation of Indoor Air	1.84E-2	--	--	5.45E-3	0.95	1.48	--	--	--	--	2.33E-3	--	--
Hydrochloric Acid	Inhalation of Outdoor Air	1.84E-2	--	--	1.43E-3	0.25	0.39	--	--	--	--	6.14E-4	--	--
Mercury	Inhalation of Indoor Air	1.08E-5	--	--	3.19E-6	0.04	0.06	--	--	--	--	1.37E-6	--	--
Mercury	Inhalation of Outdoor Air	1.08E-5	--	--	8.41E-7	<0.01	0.02	--	--	--	--	3.60E-7	--	--
Methyl t-Butylether	Inhalation of Indoor Air	9.85E-5	--	--	2.90E-5	<0.01	0.00	--	--	--	--	1.24E-5	--	--
Methyl t-Butylether	Inhalation of Outdoor Air	9.85E-5	--	--	7.64E-6	<0.01	0.00	--	--	--	--	3.27E-6	--	--
Methylcyclohexane	Inhalation of Indoor Air	2.79E-4	--	--	8.24E-5	<0.01	0.00	--	--	--	--	3.53E-5	--	--
Methylcyclohexane	Inhalation of Outdoor Air	2.79E-4	--	--	2.16E-5	<0.01	0.00	--	--	--	--	9.29E-6	--	--
Methylene Chloride	Inhalation of Indoor Air	7.87E-3	--	--	2.32E-3	<0.01	0.00	--	--	--	--	9.95E-4	1.63E-6	0.18
Methylene Chloride	Inhalation of Outdoor Air	7.87E-3	--	--	6.11E-4	<0.01	0.00	--	--	--	--	2.62E-4	4.31E-7	0.05
Methylisobutylketone	Inhalation of Indoor Air	3.80E-3	--	--	1.12E-3	0.05	0.08	--	--	--	--	4.81E-4	--	--
Methylisobutylketone	Inhalation of Outdoor Air	3.80E-3	--	--	2.95E-4	0.01	0.02	--	--	--	--	1.26E-4	--	--
n-Hexane	Inhalation of Indoor Air	4.19E-3	--	--	1.23E-3	0.02	0.03	--	--	--	--	5.30E-4	--	--
n-Hexane	Inhalation of Outdoor Air	4.19E-3	--	--	3.25E-4	<0.01	0.01	--	--	--	--	1.39E-4	--	--
Naphthalene	Inhalation of Indoor Air	3.53E-4	--	--	1.04E-4	0.12	0.19	--	--	--	--	4.47E-5	--	--
Naphthalene	Inhalation of Outdoor Air	3.53E-4	--	--	2.74E-5	0.03	0.05	--	--	--	--	1.17E-5	--	--
Nickel	Inhalation of Indoor Air	3.96E-5	--	--	1.16E-5	0.82	1.27	--	--	--	--	5.01E-6	4.56E-6	0.52
Nickel	Inhalation of Outdoor Air	3.96E-5	--	--	3.07E-6	0.22	0.33	--	--	--	--	1.31E-6	1.20E-6	0.14
Phenol	Inhalation of Indoor Air	1.59E-4	--	--	4.71E-5	<0.01	0.00	--	--	--	--	2.01E-5	--	--
Phenol	Inhalation of Outdoor Air	1.59E-4	--	--	1.24E-5	<0.01	0.00	--	--	--	--	5.31E-6	--	--
PM-10	Inhalation of Indoor Air	1.71E-1	--	--	5.06E-2	3.5	5.50	--	--	--	--	2.16E-2	--	--
PM-10	Inhalation of Outdoor Air	1.71E-1	--	--	1.33E-2	0.93	1.45	--	--	--	--	5.70E-3	--	--
Propylene	Inhalation of Indoor Air	2.55E-2	--	--	7.55E-3	<0.01	0.01	--	--	--	--	3.23E-3	--	--
Propylene	Inhalation of Outdoor Air	2.55E-2	--	--	1.98E-3	<0.01	0.00	--	--	--	--	8.51E-4	--	--

Table C-29
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Styrene	Inhalation of Indoor Air	1.71E-3	--	--	--	5.05E-4	<0.01	0.00	--	--	--	2.16E-4		
Styrene	Inhalation of Outdoor Air	1.71E-3	--	--	--	1.32E-4	<0.01	0.00	--	--	--	5.69E-5		
Tetrachloroethylene	Inhalation of Indoor Air	1.42E-3	--	--	--	4.21E-4			--	--	--	1.80E-4	3.66E-7	0.04
Tetrachloroethylene	Inhalation of Outdoor Air	1.42E-3	--	--	--	1.10E-4			--	--	--	4.75E-5	9.64E-8	0.01
Toluene	Inhalation of Indoor Air	2.47E-2	--	--	--	7.30E-3	0.06	0.10	--	--	--	3.12E-3		
Toluene	Inhalation of Outdoor Air	2.47E-2	--	--	--	1.92E-3	0.02	0.03	--	--	--	8.23E-4		
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	1.84E-8	--	--	--	5.44E-9			--	--	--	2.33E-9	3.49E-4	39.48
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	1.84E-8	--	--	--	1.43E-9			--	--	--	6.13E-10	9.20E-5	10.39
Trichloroethylene	Inhalation of Indoor Air	2.63E-3	--	--	--	7.76E-4			--	--	--	3.32E-4	1.98E-6	0.22
Trichloroethylene	Inhalation of Outdoor Air	2.63E-3	--	--	--	2.04E-4			--	--	--	8.76E-5	5.21E-7	0.06
Trichlorofluoromethane	Inhalation of Indoor Air	3.87E-3	--	--	--	1.14E-3	<0.01	0.01	--	--	--	4.89E-4		
Trichlorofluoromethane	Inhalation of Outdoor Air	3.87E-3	--	--	--	3.00E-4	<0.01	0.00	--	--	--	1.28E-4		
Vinyl Acetate	Inhalation of Indoor Air	1.38E-2	--	--	--	4.08E-3	0.07	0.11	--	--	--	1.74E-3		
Vinyl Acetate	Inhalation of Outdoor Air	1.38E-2	--	--	--	1.07E-3	0.02	0.03	--	--	--	4.60E-4		
Vinyl Chloride	Inhalation of Indoor Air	1.19E-4	--	--	--	3.53E-5			--	--	--	1.51E-5	4.53E-6	0.51
Vinyl Chloride	Inhalation of Outdoor Air	1.19E-4	--	--	--	9.28E-6			--	--	--	3.98E-6	1.19E-6	0.13
Total Risk:				--	--		64.42	100.0		--	--		8.85E-4	100.0

Table C-30
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,1-Trichloroethane	Inhalation of Indoor Air	1.57E-3	9.55E-4	<0.01	0.00	3.41E-4	<0.01	0.00	4.09E-5			1.46E-5		
1,1,1-Trichloroethane	Inhalation of Outdoor Air	1.57E-3	2.51E-4	<0.01	0.00	8.98E-5	<0.01	0.00	1.07E-5			3.85E-6		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	7.87E-4	4.77E-4			1.70E-4			2.04E-5	4.15E-6	1.31	7.31E-6	1.48E-6	1.31
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	7.87E-4	1.25E-4			4.49E-5			5.39E-6	1.09E-6	0.34	1.92E-6	3.90E-7	0.34
1,1-Dichloroethylene	Inhalation of Indoor Air	1.78E-4	1.08E-4			3.86E-5			4.64E-6	8.12E-7	0.26	1.65E-6	2.90E-7	0.26
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.78E-4	2.85E-5			1.01E-5			1.22E-6	2.13E-7	0.07	4.36E-7	7.63E-8	0.07
1,2,4-Trichlorobenzene	Inhalation of Indoor Air	3.22E-4	1.95E-4	<0.01	0.00	6.99E-5	<0.01	0.00	8.39E-6			2.99E-6		
1,2,4-Trichlorobenzene	Inhalation of Outdoor Air	3.22E-4	5.15E-5	<0.01	0.00	1.84E-5	<0.01	0.00	2.20E-6			7.88E-7		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.45E-3	1.49E-3	0.87	0.33	5.32E-4	0.31	0.33	6.39E-5			2.28E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.45E-3	3.92E-4	0.23	0.09	1.40E-4	0.08	0.09	1.68E-5			6.00E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	4.65E-5	0.82	0.31	1.66E-5	0.29	0.31	1.99E-6	1.53E-6	0.48	7.12E-7	5.48E-7	0.48
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	1.22E-5	0.21	0.08	4.37E-6	0.08	0.08	5.25E-7	4.04E-7	0.13	1.87E-7	1.44E-7	0.13
1,2-Dichlorobenzene	Inhalation of Indoor Air	1.20E-4	7.28E-5	<0.01	0.00	2.60E-5	<0.01	0.00	3.12E-6			1.11E-6		
1,2-Dichlorobenzene	Inhalation of Outdoor Air	1.20E-4	1.91E-5	<0.01	0.00	6.84E-6	<0.01	0.00	8.21E-7			2.93E-7		
1,2-Dichloropropane	Inhalation of Indoor Air	6.53E-4	3.96E-4	0.35	0.13	1.41E-4	0.12	0.13	1.69E-5			6.07E-6		
1,2-Dichloropropane	Inhalation of Outdoor Air	6.53E-4	1.04E-4	0.09	0.03	3.72E-5	0.03	0.03	4.47E-6			1.59E-6		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	7.60E-4	4.61E-4	0.27	0.10	1.64E-4	0.10	0.10	1.97E-5			7.06E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	7.60E-4	1.21E-4	0.07	0.03	4.33E-5	0.03	0.03	5.20E-6			1.85E-6		
1,3-Butadiene	Inhalation of Indoor Air	7.51E-4	4.56E-4			1.62E-4			1.95E-5	1.91E-5	6.03	6.98E-6	6.84E-6	6.03
1,3-Butadiene	Inhalation of Outdoor Air	7.51E-4	1.20E-4			4.28E-5			5.14E-6	5.04E-6	1.59	1.83E-6	1.80E-6	1.59
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.18E-3	7.19E-4	<0.01	0.00	2.57E-4	<0.01	0.00	3.08E-5	1.23E-6	0.39	1.10E-5	4.40E-7	0.39
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.18E-3	1.89E-4	<0.01	0.00	6.76E-5	<0.01	0.00	8.11E-6	3.24E-7	0.10	2.89E-6	1.15E-7	0.10
1,4-Dioxane	Inhalation of Indoor Air	8.88E-3	5.39E-3	<0.01	0.00	1.92E-3	<0.01	0.00	2.31E-4	6.24E-6	1.97	8.25E-5	2.23E-6	1.97
1,4-Dioxane	Inhalation of Outdoor Air	8.88E-3	1.42E-3	<0.01	0.00	5.07E-4	<0.01	0.00	6.08E-5	1.64E-6	0.52	2.17E-5	5.86E-7	0.52
2-Butanone	Inhalation of Indoor Air	1.29E-2	7.86E-3	0.03	0.01	2.80E-3	<0.01	0.01	3.36E-4			1.20E-4		
2-Butanone	Inhalation of Outdoor Air	1.29E-2	2.06E-3	<0.01	0.00	7.38E-4	<0.01	0.00	8.86E-5			3.16E-5		
2-Propanol	Inhalation of Indoor Air	1.79E-2	1.08E-2	<0.01	0.00	3.88E-3	<0.01	0.00	4.66E-4			1.66E-4		

Table C-30
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
2-Propanol	Inhalation of Outdoor Air	1.79E-2	2.86E-3	<0.01	0.00	1.02E-3	<0.01	0.00	1.22E-4			4.38E-5		
Acetaldehyde	Inhalation of Indoor Air	8.22E-2	4.99E-2	19.4	7.32	1.78E-2	6.9	7.32	2.13E-3	1.64E-5	5.19	7.64E-4	5.88E-6	5.19
Acetaldehyde	Inhalation of Outdoor Air	8.22E-2	1.31E-2	5.1	1.93	4.69E-3	1.8	1.93	5.63E-4	4.33E-6	1.37	2.01E-4	1.54E-6	1.37
Acetonitrile	Inhalation of Indoor Air	7.51E-3	4.56E-3	0.27	0.10	1.63E-3	0.10	0.10	1.95E-4			6.98E-5		
Acetonitrile	Inhalation of Outdoor Air	7.51E-3	1.20E-3	0.07	0.03	4.29E-4	0.03	0.03	5.14E-5			1.83E-5		
Acrolein	Inhalation of Indoor Air	1.31E-3	7.98E-4	139.8	52.70	2.85E-4	49.9	52.70	3.42E-5			1.22E-5		
Acrolein	Inhalation of Outdoor Air	1.31E-3	2.10E-4	36.8	13.87	7.50E-5	13.1	13.87	9.00E-6			3.21E-6		
Acrylonitrile	Inhalation of Indoor Air	2.21E-3	1.34E-3	2.3	0.89	4.79E-4	0.84	0.89	5.75E-5	1.36E-5	4.31	2.05E-5	4.89E-6	4.31
Acrylonitrile	Inhalation of Outdoor Air	2.21E-3	3.53E-4	0.62	0.23	1.26E-4	0.22	0.23	1.51E-5	3.60E-6	1.14	5.40E-6	1.28E-6	1.14
alpha-BHC	Inhalation of Indoor Air	8.22E-7	4.99E-7			1.78E-7			2.14E-8	1.34E-7	0.04	7.64E-9	4.81E-8	0.04
alpha-BHC	Inhalation of Outdoor Air	8.22E-7	1.31E-7			4.69E-8			5.63E-9	3.55E-8	0.01	2.01E-9	1.26E-8	0.01
Antimony	Inhalation of Indoor Air	3.63E-4	2.20E-4	19.3	7.29	7.89E-5	6.9	7.29	9.47E-6			3.38E-6		
Antimony	Inhalation of Outdoor Air	3.63E-4	5.81E-5	5.1	1.92	2.07E-5	1.8	1.92	2.49E-6			8.90E-7		
Arsenic	Inhalation of Indoor Air	3.62E-5	2.19E-5			7.85E-6			9.42E-7	1.41E-5	4.47	3.36E-7	5.06E-6	4.47
Arsenic	Inhalation of Outdoor Air	3.62E-5	5.78E-6			2.06E-6			2.47E-7	3.73E-6	1.18	8.85E-8	1.33E-6	1.18
Benzene	Inhalation of Indoor Air	4.63E-3	2.81E-3	0.16	0.06	1.00E-3	0.06	0.06	1.20E-4	3.50E-6	1.10	4.30E-5	1.25E-6	1.10
Benzene	Inhalation of Outdoor Air	4.63E-3	7.40E-4	0.04	0.02	2.64E-4	0.02	0.02	3.17E-5	9.21E-7	0.29	1.13E-5	3.29E-7	0.29
Beryllium	Inhalation of Indoor Air	4.94E-7	3.00E-7	<0.01	0.00	1.07E-7	<0.01	0.00	1.28E-8	1.08E-7	0.03	4.59E-9	3.86E-8	0.03
Beryllium	Inhalation of Outdoor Air	4.94E-7	7.90E-8	<0.01	0.00	2.82E-8	<0.01	0.00	3.38E-9	2.84E-8	0.01	1.20E-9	1.01E-8	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	6.20E-5	3.76E-5	0.01	0.00	1.34E-5	<0.01	0.00	1.61E-6	1.35E-8	0.00	5.76E-7	4.84E-9	0.00
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	6.20E-5	9.90E-6	<0.01	0.00	3.53E-6	<0.01	0.00	4.24E-7	3.56E-9	0.00	1.51E-7	1.27E-9	0.00
Bromomethane	Inhalation of Indoor Air	2.64E-4	1.60E-4	0.11	0.04	5.74E-5	0.04	0.04	6.89E-6			2.46E-6		
Bromomethane	Inhalation of Outdoor Air	2.64E-4	4.23E-5	0.03	0.01	1.51E-5	0.01	0.01	1.81E-6			6.47E-7		
Cadmium	Inhalation of Indoor Air	2.54E-4	1.54E-4	6.0	2.27	5.52E-5	2.1	2.27	6.62E-6	4.17E-5	13.15	2.36E-6	1.49E-5	13.15
Cadmium	Inhalation of Outdoor Air	2.54E-4	4.07E-5	1.6	0.60	1.45E-5	0.57	0.60	1.74E-6	1.09E-5	3.46	6.23E-7	3.92E-6	3.46
Carbon Tetrachloride	Inhalation of Indoor Air	6.95E-4	4.22E-4	0.74	0.28	1.50E-4	0.26	0.28	1.81E-5	9.50E-7	0.30	6.46E-6	3.39E-7	0.30
Carbon Tetrachloride	Inhalation of Outdoor Air	6.95E-4	1.11E-4	0.19	0.07	3.97E-5	0.07	0.07	4.76E-6	2.50E-7	0.08	1.70E-6	8.93E-8	0.08

Table C-30
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chlorobenzene	Inhalation of Indoor Air	4.37E-4	2.65E-4	0.05	0.02	9.48E-5	0.02	0.02	1.13E-5			4.06E-6		
Chlorobenzene	Inhalation of Outdoor Air	4.37E-4	6.99E-5	0.01	0.00	2.49E-5	<0.01	0.00	2.99E-6			1.07E-6		
Chloroethane	Inhalation of Indoor Air	8.95E-4	5.43E-4	<0.01	0.00	1.94E-4	<0.01	0.00	2.32E-5			8.32E-6		
Chloroethane	Inhalation of Outdoor Air	8.95E-4	1.43E-4	<0.01	0.00	5.10E-5	<0.01	0.00	6.13E-6			2.18E-6		
Chloroform	Inhalation of Indoor Air	9.41E-4	5.71E-4	<0.01	0.00	2.04E-4	<0.01	0.00	2.44E-5	1.97E-6	0.62	8.74E-6	7.04E-7	0.62
Chloroform	Inhalation of Outdoor Air	9.41E-4	1.50E-4	<0.01	0.00	5.37E-5	<0.01	0.00	6.44E-6	5.18E-7	0.16	2.30E-6	1.85E-7	0.16
Chloromethane	Inhalation of Indoor Air	2.60E-3	1.57E-3	0.02	0.01	5.64E-4	<0.01	0.01	6.77E-5	4.26E-7	0.13	2.41E-5	1.52E-7	0.13
Chloromethane	Inhalation of Outdoor Air	2.60E-3	4.15E-4	<0.01	0.00	1.48E-4	<0.01	0.00	1.78E-5	1.12E-7	0.04	6.36E-6	4.00E-8	0.04
Cumene	Inhalation of Indoor Air	3.57E-4	2.17E-4	<0.01	0.00	7.76E-5	<0.01	0.00	9.31E-6			3.32E-6		
Cumene	Inhalation of Outdoor Air	3.57E-4	5.71E-5	<0.01	0.00	2.04E-5	<0.01	0.00	2.45E-6			8.75E-7		
Dichlorodifluoromethane	Inhalation of Indoor Air	3.20E-3	1.94E-3	0.03	0.01	6.96E-4	0.01	0.01	8.35E-5			2.98E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.20E-3	5.12E-4	<0.01	0.00	1.83E-4	<0.01	0.00	2.19E-5			7.85E-6		
Dieldrin	Inhalation of Indoor Air	5.58E-7	3.39E-7			1.21E-7			1.45E-8	2.34E-7	0.07	5.19E-9	8.36E-8	0.07
Dieldrin	Inhalation of Outdoor Air	5.58E-7	8.92E-8			3.18E-8			3.82E-9	6.16E-8	0.02	1.36E-9	2.20E-8	0.02
Ethylbenzene	Inhalation of Indoor Air	7.25E-3	4.40E-3	0.02	0.01	1.57E-3	<0.01	0.01	1.88E-4	7.26E-7	0.23	6.74E-5	2.59E-7	0.23
Ethylbenzene	Inhalation of Outdoor Air	7.25E-3	1.15E-3	<0.01	0.00	4.13E-4	<0.01	0.00	4.96E-5	1.91E-7	0.06	1.77E-5	6.82E-8	0.06
Formaldehyde	Inhalation of Indoor Air	2.24E-3	1.36E-3	1.6	0.60	4.85E-4	0.57	0.60	5.83E-5	2.65E-6	0.84	2.08E-5	9.47E-7	0.84
Formaldehyde	Inhalation of Outdoor Air	2.24E-3	3.58E-4	0.42	0.16	1.27E-4	0.15	0.16	1.53E-5	6.98E-7	0.22	5.48E-6	2.49E-7	0.22
Freon 113	Inhalation of Indoor Air	2.00E-3	1.21E-3	<0.01	0.00	4.34E-4	<0.01	0.00	5.21E-5			1.86E-5		
Freon 113	Inhalation of Outdoor Air	2.00E-3	3.20E-4	<0.01	0.00	1.14E-4	<0.01	0.00	1.37E-5			4.90E-6		
gamma-BHC	Inhalation of Indoor Air	2.20E-7	1.34E-7			4.78E-8			5.74E-9	6.31E-9	0.00	2.05E-9	2.25E-9	0.00
gamma-BHC	Inhalation of Outdoor Air	2.20E-7	3.52E-8			1.25E-8			1.51E-9	1.66E-9	0.00	5.39E-10	5.93E-10	0.00
Halocarbon 134A	Inhalation of Indoor Air	2.52E-4	1.53E-4	<0.01	0.00	5.47E-5	<0.01	0.00	6.57E-6			2.34E-6		
Halocarbon 134A	Inhalation of Outdoor Air	2.52E-4	4.03E-5	<0.01	0.00	1.44E-5	<0.01	0.00	1.72E-6			6.17E-7		
Heptachlor	Inhalation of Indoor Air	1.14E-6	6.93E-7			2.47E-7			2.97E-8	1.35E-7	0.04	1.06E-8	4.83E-8	0.04
Heptachlor	Inhalation of Outdoor Air	1.14E-6	1.82E-7			6.51E-8			7.82E-9	3.55E-8	0.01	2.79E-9	1.27E-8	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	9.58E-4	5.81E-4			2.07E-4			2.49E-5	1.91E-6	0.60	8.90E-6	6.85E-7	0.60

Table C-30
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	9.58E-4	1.53E-4		5.46E-5		6.56E-6	5.05E-7	0.16	2.34E-6	1.80E-7	0.16		
Hexachlorobenzene	Inhalation of Indoor Air	5.00E-6	3.03E-6		1.08E-6		1.30E-7	2.09E-7	0.07	4.64E-8	7.48E-8	0.07		
Hexachlorobenzene	Inhalation of Outdoor Air	5.00E-6	7.99E-7		2.85E-7		3.42E-8	5.51E-8	0.02	1.22E-8	1.96E-8	0.02		
Hydrochloric Acid	Inhalation of Indoor Air	2.43E-2	1.48E-2	2.6 0.98	5.28E-3	0.93 0.98	6.34E-4			2.26E-4				
Hydrochloric Acid	Inhalation of Outdoor Air	2.43E-2	3.89E-3	0.68 0.26	1.39E-3	0.24 0.26	1.66E-4			5.96E-5				
Mercury	Inhalation of Indoor Air	1.79E-5	1.08E-5	0.13 0.05	3.88E-6	0.05 0.05	4.66E-7			1.66E-7				
Mercury	Inhalation of Outdoor Air	1.79E-5	2.86E-6	0.03 0.01	1.02E-6	0.01 0.01	1.22E-7			4.38E-8				
Methyl t-Butylether	Inhalation of Indoor Air	9.85E-5	5.98E-5	<0.01 0.00	2.13E-5	<0.01 0.00	2.56E-6			9.15E-7				
Methyl t-Butylether	Inhalation of Outdoor Air	9.85E-5	1.57E-5	<0.01 0.00	5.62E-6	<0.01 0.00	6.74E-7			2.40E-7				
Methylcyclohexane	Inhalation of Indoor Air	6.74E-4	4.09E-4	<0.01 0.00	1.46E-4	<0.01 0.00	1.75E-5			6.26E-6				
Methylcyclohexane	Inhalation of Outdoor Air	6.74E-4	1.07E-4	<0.01 0.00	3.84E-5	<0.01 0.00	4.61E-6			1.64E-6				
Methylene Chloride	Inhalation of Indoor Air	2.44E-2	1.48E-2	0.02 0.01	5.30E-3	<0.01 0.01	6.36E-4	1.04E-6	0.33	2.27E-4	3.73E-7	0.33		
Methylene Chloride	Inhalation of Outdoor Air	2.44E-2	3.90E-3	<0.01 0.00	1.39E-3	<0.01 0.00	1.67E-4	2.75E-7	0.09	5.97E-5	9.83E-8	0.09		
Methylisobutylketone	Inhalation of Indoor Air	5.63E-3	3.42E-3	0.15 0.06	1.22E-3	0.05 0.06	1.46E-4			5.24E-5				
Methylisobutylketone	Inhalation of Outdoor Air	5.63E-3	9.01E-4	0.04 0.01	3.21E-4	0.01 0.01	3.86E-5			1.37E-5				
n-Hexane	Inhalation of Indoor Air	1.26E-2	7.67E-3	0.13 0.05	2.73E-3	0.05 0.05	3.28E-4			1.17E-4				
n-Hexane	Inhalation of Outdoor Air	1.26E-2	2.01E-3	0.04 0.01	7.20E-4	0.01 0.01	8.65E-5			3.08E-5				
Naphthalene	Inhalation of Indoor Air	4.51E-4	2.74E-4	0.32 0.12	9.79E-5	0.11 0.12	1.17E-5			4.19E-6				
Naphthalene	Inhalation of Outdoor Air	4.51E-4	7.22E-5	0.08 0.03	2.57E-5	0.03 0.03	3.09E-6			1.10E-6				
Nickel	Inhalation of Indoor Air	9.34E-5	5.67E-5	4.0 1.50	2.02E-5	1.4 1.50	2.43E-6	2.21E-6	0.70	8.68E-7	7.90E-7	0.70		
Nickel	Inhalation of Outdoor Air	9.34E-5	1.49E-5	1.0 0.39	5.33E-6	0.37 0.39	6.40E-7	5.82E-7	0.18	2.28E-7	2.08E-7	0.18		
Phenol	Inhalation of Indoor Air	2.40E-4	1.45E-4	<0.01 0.00	5.20E-5	<0.01 0.00	6.24E-6			2.23E-6				
Phenol	Inhalation of Outdoor Air	2.40E-4	3.83E-5	<0.01 0.00	1.36E-5	<0.01 0.00	1.64E-6			5.87E-7				
PM-10	Inhalation of Indoor Air	2.34E-1	1.42E-1	10.0 3.76	5.08E-2	3.6 3.76	6.10E-3			2.17E-3				
PM-10	Inhalation of Outdoor Air	2.34E-1	3.74E-2	2.6 0.99	1.33E-2	0.94 0.99	1.60E-3			5.73E-4				
Propylene	Inhalation of Indoor Air	6.94E-2	4.21E-2	0.05 0.02	1.50E-2	0.02 0.02	1.80E-3			6.45E-4				
Propylene	Inhalation of Outdoor Air	6.94E-2	1.10E-2	0.01 0.00	3.96E-3	<0.01 0.00	4.75E-4			1.69E-4				

Table C-30
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m ³	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Styrene	Inhalation of Indoor Air	2.93E-3	1.78E-3	<0.01	0.00	6.35E-4	<0.01	0.00	7.63E-5			2.72E-5		
Styrene	Inhalation of Outdoor Air	2.93E-3	4.68E-4	<0.01	0.00	1.67E-4	<0.01	0.00	2.00E-5			7.17E-6		
Tetrachloroethylene	Inhalation of Indoor Air	2.13E-3	1.29E-3			4.63E-4			5.56E-5	1.13E-7	0.04	1.98E-5	4.03E-8	0.04
Tetrachloroethylene	Inhalation of Outdoor Air	2.13E-3	3.41E-4			1.22E-4			1.46E-5	2.97E-8	0.01	5.23E-6	1.06E-8	0.01
Toluene	Inhalation of Indoor Air	2.84E-2	1.73E-2	0.15	0.06	6.18E-3	0.05	0.06	7.41E-4			2.64E-4		
Toluene	Inhalation of Outdoor Air	2.84E-2	4.55E-3	0.04	0.02	1.62E-3	0.01	0.02	1.95E-4			6.97E-5		
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	2.92E-8	1.77E-8			6.33E-9			7.60E-10	1.14E-4	35.90	2.71E-10	4.07E-5	35.90
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	2.92E-8	4.66E-9			1.66E-9			2.00E-10	3.00E-5	9.45	7.14E-11	1.07E-5	9.45
Trichloroethylene	Inhalation of Indoor Air	4.67E-3	2.83E-3			1.01E-3			1.21E-4	7.24E-7	0.23	4.34E-5	2.58E-7	0.23
Trichloroethylene	Inhalation of Outdoor Air	4.67E-3	7.47E-4			2.66E-4			3.20E-5	1.90E-7	0.06	1.14E-5	6.80E-8	0.06
Trichlorofluoromethane	Inhalation of Indoor Air	4.98E-3	3.02E-3	0.02	0.01	1.08E-3	<0.01	0.01	1.29E-4			4.63E-5		
Trichlorofluoromethane	Inhalation of Outdoor Air	4.98E-3	7.96E-4	<0.01	0.00	2.84E-4	<0.01	0.00	3.41E-5			1.21E-5		
Vinyl Acetate	Inhalation of Indoor Air	2.33E-2	1.41E-2	0.25	0.09	5.06E-3	0.09	0.09	6.07E-4			2.17E-4		
Vinyl Acetate	Inhalation of Outdoor Air	2.33E-2	3.73E-3	0.07	0.02	1.33E-3	0.02	0.02	1.59E-4			5.71E-5		
Vinyl Chloride	Inhalation of Indoor Air	1.31E-4	7.96E-5			2.84E-5			3.41E-6	1.02E-6	0.32	1.21E-6	3.65E-7	0.32
Vinyl Chloride	Inhalation of Outdoor Air	1.31E-4	2.09E-5			7.48E-6			8.97E-7	2.69E-7	0.08	3.20E-7	9.62E-8	0.08
Total Risk:				265.30	100.0		94.75	100.0	3.17E-4	100.0		1.13E-4	100.0	

Table C-31
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,1-Trichloroethane	Inhalation of Indoor Air	1.57E-3	9.55E-4	<0.01	0.00	3.41E-4	<0.01	0.00	8.19E-5			2.92E-5		
1,1,1-Trichloroethane	Inhalation of Outdoor Air	1.57E-3	2.51E-4	<0.01	0.00	8.98E-5	<0.01	0.00	2.15E-5			7.70E-6		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	7.87E-4	4.77E-4			1.70E-4			4.09E-5	8.31E-6	1.31	1.46E-5	2.97E-6	1.31
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	7.87E-4	1.25E-4			4.49E-5			1.07E-5	2.18E-6	0.34	3.85E-6	7.81E-7	0.34
1,1-Dichloroethylene	Inhalation of Indoor Air	1.78E-4	1.08E-4			3.86E-5			9.28E-6	1.62E-6	0.26	3.31E-6	5.80E-7	0.26
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.78E-4	2.85E-5			1.01E-5			2.44E-6	4.27E-7	0.07	8.72E-7	1.52E-7	0.07
1,2,4-Trichlorobenzene	Inhalation of Indoor Air	3.22E-4	1.95E-4	<0.01	0.00	6.99E-5	<0.01	0.00	1.67E-5			5.99E-6		
1,2,4-Trichlorobenzene	Inhalation of Outdoor Air	3.22E-4	5.15E-5	<0.01	0.00	1.84E-5	<0.01	0.00	4.41E-6			1.57E-6		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.45E-3	1.49E-3	0.87	0.33	5.32E-4	0.31	0.33	1.27E-4			4.56E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.45E-3	3.92E-4	0.23	0.09	1.40E-4	0.08	0.09	3.36E-5			1.20E-5		
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	4.65E-5	0.82	0.31	1.66E-5	0.29	0.31	3.99E-6	3.07E-6	0.48	1.42E-6	1.09E-6	0.48
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	1.22E-5	0.21	0.08	4.37E-6	0.08	0.08	1.05E-6	8.08E-7	0.13	3.75E-7	2.88E-7	0.13
1,2-Dichlorobenzene	Inhalation of Indoor Air	1.20E-4	7.28E-5	<0.01	0.00	2.60E-5	<0.01	0.00	6.24E-6			2.23E-6		
1,2-Dichlorobenzene	Inhalation of Outdoor Air	1.20E-4	1.91E-5	<0.01	0.00	6.84E-6	<0.01	0.00	1.64E-6			5.87E-7		
1,2-Dichloropropane	Inhalation of Indoor Air	6.53E-4	3.96E-4	0.35	0.13	1.41E-4	0.12	0.13	3.39E-5			1.21E-5		
1,2-Dichloropropane	Inhalation of Outdoor Air	6.53E-4	1.04E-4	0.09	0.03	3.72E-5	0.03	0.03	8.94E-6			3.19E-6		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	7.60E-4	4.61E-4	0.27	0.10	1.64E-4	0.10	0.10	3.95E-5			1.41E-5		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	7.60E-4	1.21E-4	0.07	0.03	4.33E-5	0.03	0.03	1.04E-5			3.71E-6		
1,3-Butadiene	Inhalation of Indoor Air	7.51E-4	4.56E-4			1.62E-4			3.91E-5	3.83E-5	6.03	1.39E-5	1.36E-5	6.03
1,3-Butadiene	Inhalation of Outdoor Air	7.51E-4	1.20E-4			4.28E-5			1.02E-5	1.00E-5	1.59	3.67E-6	3.60E-6	1.59
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.18E-3	7.19E-4	<0.01	0.00	2.57E-4	<0.01	0.00	6.16E-5	2.46E-6	0.39	2.20E-5	8.81E-7	0.39
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.18E-3	1.89E-4	<0.01	0.00	6.76E-5	<0.01	0.00	1.62E-5	6.49E-7	0.10	5.79E-6	2.31E-7	0.10
1,4-Dioxane	Inhalation of Indoor Air	8.88E-3	5.39E-3	<0.01	0.00	1.92E-3	<0.01	0.00	4.62E-4	1.24E-5	1.97	1.65E-4	4.46E-6	1.97
1,4-Dioxane	Inhalation of Outdoor Air	8.88E-3	1.42E-3	<0.01	0.00	5.07E-4	<0.01	0.00	1.21E-4	3.28E-6	0.52	4.34E-5	1.17E-6	0.52
2-Butanone	Inhalation of Indoor Air	1.29E-2	7.86E-3	0.03	0.01	2.80E-3	<0.01	0.01	6.73E-4			2.40E-4		
2-Butanone	Inhalation of Outdoor Air	1.29E-2	2.06E-3	<0.01	0.00	7.38E-4	<0.01	0.00	1.77E-4			6.33E-5		
2-Propanol	Inhalation of Indoor Air	1.79E-2	1.08E-2	<0.01	0.00	3.88E-3	<0.01	0.00	9.32E-4			3.33E-4		

Table C-31
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
2-Propanol	Inhalation of Outdoor Air	1.79E-2	2.86E-3	<0.01	0.00	1.02E-3	<0.01	0.00	2.45E-4			8.76E-5		
Acetaldehyde	Inhalation of Indoor Air	8.22E-2	4.99E-2	19.4	7.32	1.78E-2	6.9	7.32	4.27E-3	3.29E-5	5.19	1.52E-3	1.17E-5	5.19
Acetaldehyde	Inhalation of Outdoor Air	8.22E-2	1.31E-2	5.1	1.93	4.69E-3	1.8	1.93	1.12E-3	8.67E-6	1.37	4.02E-4	3.09E-6	1.37
Acetonitrile	Inhalation of Indoor Air	7.51E-3	4.56E-3	0.27	0.10	1.63E-3	0.10	0.10	3.91E-4			1.39E-4		
Acetonitrile	Inhalation of Outdoor Air	7.51E-3	1.20E-3	0.07	0.03	4.29E-4	0.03	0.03	1.02E-4			3.67E-5		
Acrolein	Inhalation of Indoor Air	1.31E-3	7.98E-4	139.8	52.70	2.85E-4	49.9	52.70	6.84E-5			2.44E-5		
Acrolein	Inhalation of Outdoor Air	1.31E-3	2.10E-4	36.8	13.87	7.50E-5	13.1	13.87	1.80E-5			6.43E-6		
Acrylonitrile	Inhalation of Indoor Air	2.21E-3	1.34E-3	2.3	0.89	4.79E-4	0.84	0.89	1.15E-4	2.73E-5	4.31	4.11E-5	9.78E-6	4.31
Acrylonitrile	Inhalation of Outdoor Air	2.21E-3	3.53E-4	0.62	0.23	1.26E-4	0.22	0.23	3.02E-5	7.20E-6	1.14	1.08E-5	2.57E-6	1.14
alpha-BHC	Inhalation of Indoor Air	8.22E-7	4.99E-7			1.78E-7			4.28E-8	2.69E-7	0.04	1.52E-8	9.63E-8	0.04
alpha-BHC	Inhalation of Outdoor Air	8.22E-7	1.31E-7			4.69E-8			1.12E-8	7.10E-8	0.01	4.02E-9	2.53E-8	0.01
Antimony	Inhalation of Indoor Air	3.63E-4	2.20E-4	19.3	7.29	7.89E-5	6.9	7.29	1.89E-5			6.76E-6		
Antimony	Inhalation of Outdoor Air	3.63E-4	5.81E-5	5.1	1.92	2.07E-5	1.8	1.92	4.98E-6			1.78E-6		
Arsenic	Inhalation of Indoor Air	3.62E-5	2.19E-5			7.85E-6			1.88E-6	2.83E-5	4.47	6.73E-7	1.01E-5	4.47
Arsenic	Inhalation of Outdoor Air	3.62E-5	5.78E-6			2.06E-6			4.95E-7	7.46E-6	1.18	1.77E-7	2.66E-6	1.18
Benzene	Inhalation of Indoor Air	4.63E-3	2.81E-3	0.16	0.06	1.00E-3	0.06	0.06	2.41E-4	7.00E-6	1.10	8.61E-5	2.50E-6	1.10
Benzene	Inhalation of Outdoor Air	4.63E-3	7.40E-4	0.04	0.02	2.64E-4	0.02	0.02	6.34E-5	1.84E-6	0.29	2.26E-5	6.58E-7	0.29
Beryllium	Inhalation of Indoor Air	4.94E-7	3.00E-7	<0.01	0.00	1.07E-7	<0.01	0.00	2.57E-8	2.16E-7	0.03	9.19E-9	7.72E-8	0.03
Beryllium	Inhalation of Outdoor Air	4.94E-7	7.90E-8	<0.01	0.00	2.82E-8	<0.01	0.00	6.77E-9	5.69E-8	0.01	2.41E-9	2.03E-8	0.01
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	6.20E-5	3.76E-5	0.01	0.00	1.34E-5	<0.01	0.00	3.22E-6	2.71E-8	0.00	1.15E-6	9.68E-9	0.00
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	6.20E-5	9.90E-6	<0.01	0.00	3.53E-6	<0.01	0.00	8.49E-7	7.13E-9	0.00	3.03E-7	2.54E-9	0.00
Bromomethane	Inhalation of Indoor Air	2.64E-4	1.60E-4	0.11	0.04	5.74E-5	0.04	0.04	1.37E-5			4.92E-6		
Bromomethane	Inhalation of Outdoor Air	2.64E-4	4.23E-5	0.03	0.01	1.51E-5	0.01	0.01	3.62E-6			1.29E-6		
Cadmium	Inhalation of Indoor Air	2.54E-4	1.54E-4	6.0	2.27	5.52E-5	2.1	2.27	1.32E-5	8.35E-5	13.15	4.73E-6	2.98E-5	13.15
Cadmium	Inhalation of Outdoor Air	2.54E-4	4.07E-5	1.6	0.60	1.45E-5	0.57	0.60	3.48E-6	2.19E-5	3.46	1.24E-6	7.85E-6	3.46
Carbon Tetrachloride	Inhalation of Indoor Air	6.95E-4	4.22E-4	0.74	0.28	1.50E-4	0.26	0.28	3.62E-5	1.90E-6	0.30	1.29E-5	6.79E-7	0.30
Carbon Tetrachloride	Inhalation of Outdoor Air	6.95E-4	1.11E-4	0.19	0.07	3.97E-5	0.07	0.07	9.53E-6	5.00E-7	0.08	3.40E-6	1.78E-7	0.08

Table C-31
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chlorobenzene	Inhalation of Indoor Air	4.37E-4	2.65E-4	0.05	0.02	9.48E-5	0.02	0.02	2.27E-5			8.13E-6		
Chlorobenzene	Inhalation of Outdoor Air	4.37E-4	6.99E-5	0.01	0.00	2.49E-5	<0.01	0.00	5.99E-6			2.14E-6		
Chloroethane	Inhalation of Indoor Air	8.95E-4	5.43E-4	<0.01	0.00	1.94E-4	<0.01	0.00	4.65E-5			1.66E-5		
Chloroethane	Inhalation of Outdoor Air	8.95E-4	1.43E-4	<0.01	0.00	5.10E-5	<0.01	0.00	1.22E-5			4.37E-6		
Chloroform	Inhalation of Indoor Air	9.41E-4	5.71E-4	<0.01	0.00	2.04E-4	<0.01	0.00	4.89E-5	3.94E-6	0.62	1.74E-5	1.40E-6	0.62
Chloroform	Inhalation of Outdoor Air	9.41E-4	1.50E-4	<0.01	0.00	5.37E-5	<0.01	0.00	1.28E-5	1.03E-6	0.16	4.60E-6	3.70E-7	0.16
Chloromethane	Inhalation of Indoor Air	2.60E-3	1.57E-3	0.02	0.01	5.64E-4	<0.01	0.01	1.35E-4	8.53E-7	0.13	4.83E-5	3.04E-7	0.13
Chloromethane	Inhalation of Outdoor Air	2.60E-3	4.15E-4	<0.01	0.00	1.48E-4	<0.01	0.00	3.56E-5	2.24E-7	0.04	1.27E-5	8.01E-8	0.04
Cumene	Inhalation of Indoor Air	3.57E-4	2.17E-4	<0.01	0.00	7.76E-5	<0.01	0.00	1.86E-5			6.65E-6		
Cumene	Inhalation of Outdoor Air	3.57E-4	5.71E-5	<0.01	0.00	2.04E-5	<0.01	0.00	4.90E-6			1.75E-6		
Dichlorodifluoromethane	Inhalation of Indoor Air	3.20E-3	1.94E-3	0.03	0.01	6.96E-4	0.01	0.01	1.67E-4			5.96E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.20E-3	5.12E-4	<0.01	0.00	1.83E-4	<0.01	0.00	4.39E-5			1.57E-5		
Dieldrin	Inhalation of Indoor Air	5.58E-7	3.39E-7			1.21E-7			2.90E-8	4.68E-7	0.07	1.03E-8	1.67E-7	0.07
Dieldrin	Inhalation of Outdoor Air	5.58E-7	8.92E-8			3.18E-8			7.65E-9	1.23E-7	0.02	2.73E-9	4.40E-8	0.02
Ethylbenzene	Inhalation of Indoor Air	7.25E-3	4.40E-3	0.02	0.01	1.57E-3	<0.01	0.01	3.77E-4	1.45E-6	0.23	1.34E-4	5.19E-7	0.23
Ethylbenzene	Inhalation of Outdoor Air	7.25E-3	1.15E-3	<0.01	0.00	4.13E-4	<0.01	0.00	9.93E-5	3.82E-7	0.06	3.54E-5	1.36E-7	0.06
Formaldehyde	Inhalation of Indoor Air	2.24E-3	1.36E-3	1.6	0.60	4.85E-4	0.57	0.60	1.16E-4	5.30E-6	0.84	4.16E-5	1.89E-6	0.84
Formaldehyde	Inhalation of Outdoor Air	2.24E-3	3.58E-4	0.42	0.16	1.27E-4	0.15	0.16	3.06E-5	1.39E-6	0.22	1.09E-5	4.98E-7	0.22
Freon 113	Inhalation of Indoor Air	2.00E-3	1.21E-3	<0.01	0.00	4.34E-4	<0.01	0.00	1.04E-4			3.72E-5		
Freon 113	Inhalation of Outdoor Air	2.00E-3	3.20E-4	<0.01	0.00	1.14E-4	<0.01	0.00	2.74E-5			9.80E-6		
gamma-BHC	Inhalation of Indoor Air	2.20E-7	1.34E-7			4.78E-8			1.14E-8	1.26E-8	0.00	4.10E-9	4.51E-9	0.00
gamma-BHC	Inhalation of Outdoor Air	2.20E-7	3.52E-8			1.25E-8			3.02E-9	3.32E-9	0.00	1.07E-9	1.18E-9	0.00
Halocarbon 134A	Inhalation of Indoor Air	2.52E-4	1.53E-4	<0.01	0.00	5.47E-5	<0.01	0.00	1.31E-5			4.69E-6		
Halocarbon 134A	Inhalation of Outdoor Air	2.52E-4	4.03E-5	<0.01	0.00	1.44E-5	<0.01	0.00	3.45E-6			1.23E-6		
Heptachlor	Inhalation of Indoor Air	1.14E-6	6.93E-7			2.47E-7			5.94E-8	2.70E-7	0.04	2.12E-8	9.66E-8	0.04
Heptachlor	Inhalation of Outdoor Air	1.14E-6	1.82E-7			6.51E-8			1.56E-8	7.11E-8	0.01	5.58E-9	2.54E-8	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	9.58E-4	5.81E-4			2.07E-4			4.98E-5	3.83E-6	0.60	1.78E-5	1.37E-6	0.60

Table C-31
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	9.58E-4	1.53E-4		5.46E-5		1.31E-5	1.01E-6	0.16	4.68E-6	3.60E-7	0.16		
Hexachlorobenzene	Inhalation of Indoor Air	5.00E-6	3.03E-6		1.08E-6		2.60E-7	4.19E-7	0.07	9.29E-8	1.49E-7	0.07		
Hexachlorobenzene	Inhalation of Outdoor Air	5.00E-6	7.99E-7		2.85E-7		6.84E-8	1.10E-7	0.02	2.44E-8	3.93E-8	0.02		
Hydrochloric Acid	Inhalation of Indoor Air	2.43E-2	1.48E-2	2.6 0.98	5.28E-3	0.93 0.98	1.26E-3			4.53E-4				
Hydrochloric Acid	Inhalation of Outdoor Air	2.43E-2	3.89E-3	0.68 0.26	1.39E-3	0.24 0.26	3.33E-4			1.19E-4				
Mercury	Inhalation of Indoor Air	1.79E-5	1.08E-5	0.13 0.05	3.88E-6	0.05 0.05	9.32E-7			3.33E-7				
Mercury	Inhalation of Outdoor Air	1.79E-5	2.86E-6	0.03 0.01	1.02E-6	0.01 0.01	2.45E-7			8.76E-8				
Methyl t-Butylether	Inhalation of Indoor Air	9.85E-5	5.98E-5	<0.01 0.00	2.13E-5	<0.01 0.00	5.12E-6			1.83E-6				
Methyl t-Butylether	Inhalation of Outdoor Air	9.85E-5	1.57E-5	<0.01 0.00	5.62E-6	<0.01 0.00	1.34E-6			4.81E-7				
Methylcyclohexane	Inhalation of Indoor Air	6.74E-4	4.09E-4	<0.01 0.00	1.46E-4	<0.01 0.00	3.50E-5			1.25E-5				
Methylcyclohexane	Inhalation of Outdoor Air	6.74E-4	1.07E-4	<0.01 0.00	3.84E-5	<0.01 0.00	9.23E-6			3.29E-6				
Methylene Chloride	Inhalation of Indoor Air	2.44E-2	1.48E-2	0.02 0.01	5.30E-3	<0.01 0.01	1.27E-3	2.09E-6	0.33	4.54E-4	7.47E-7	0.33		
Methylene Chloride	Inhalation of Outdoor Air	2.44E-2	3.90E-3	<0.01 0.00	1.39E-3	<0.01 0.00	3.34E-4	5.50E-7	0.09	1.19E-4	1.96E-7	0.09		
Methylisobutylketone	Inhalation of Indoor Air	5.63E-3	3.42E-3	0.15 0.06	1.22E-3	0.05 0.06	2.93E-4			1.04E-4				
Methylisobutylketone	Inhalation of Outdoor Air	5.63E-3	9.01E-4	0.04 0.01	3.21E-4	0.01 0.01	7.72E-5			2.75E-5				
n-Hexane	Inhalation of Indoor Air	1.26E-2	7.67E-3	0.13 0.05	2.73E-3	0.05 0.05	6.57E-4			2.34E-4				
n-Hexane	Inhalation of Outdoor Air	1.26E-2	2.01E-3	0.04 0.01	7.20E-4	0.01 0.01	1.73E-4			6.17E-5				
Naphthalene	Inhalation of Indoor Air	4.51E-4	2.74E-4	0.32 0.12	9.79E-5	0.11 0.12	2.35E-5			8.39E-6				
Naphthalene	Inhalation of Outdoor Air	4.51E-4	7.22E-5	0.08 0.03	2.57E-5	0.03 0.03	6.18E-6			2.21E-6				
Nickel	Inhalation of Indoor Air	9.34E-5	5.67E-5	4.0 1.50	2.02E-5	1.4 1.50	4.86E-6	4.42E-6	0.70	1.73E-6	1.58E-6	0.70		
Nickel	Inhalation of Outdoor Air	9.34E-5	1.49E-5	1.0 0.39	5.33E-6	0.37 0.39	1.28E-6	1.16E-6	0.18	4.57E-7	4.16E-7	0.18		
Phenol	Inhalation of Indoor Air	2.40E-4	1.45E-4	<0.01 0.00	5.20E-5	<0.01 0.00	1.24E-5			4.46E-6				
Phenol	Inhalation of Outdoor Air	2.40E-4	3.83E-5	<0.01 0.00	1.36E-5	<0.01 0.00	3.28E-6			1.17E-6				
PM-10	Inhalation of Indoor Air	2.34E-1	1.42E-1	10.0 3.76	5.08E-2	3.6 3.76	1.22E-2			4.35E-3				
PM-10	Inhalation of Outdoor Air	2.34E-1	3.74E-2	2.6 0.99	1.33E-2	0.94 0.99	3.21E-3			1.14E-3				
Propylene	Inhalation of Indoor Air	6.94E-2	4.21E-2	0.05 0.02	1.50E-2	0.02 0.02	3.61E-3			1.29E-3				
Propylene	Inhalation of Outdoor Air	6.94E-2	1.10E-2	0.01 0.00	3.96E-3	<0.01 0.00	9.50E-4			3.39E-4				

Table C-31
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m ³	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Styrene	Inhalation of Indoor Air	2.93E-3	1.78E-3	<0.01	0.00	6.35E-4	<0.01	0.00	1.52E-4			5.45E-5		
Styrene	Inhalation of Outdoor Air	2.93E-3	4.68E-4	<0.01	0.00	1.67E-4	<0.01	0.00	4.01E-5			1.43E-5		
Tetrachloroethylene	Inhalation of Indoor Air	2.13E-3	1.29E-3			4.63E-4			1.11E-4	2.26E-7	0.04	3.97E-5	8.07E-8	0.04
Tetrachloroethylene	Inhalation of Outdoor Air	2.13E-3	3.41E-4			1.22E-4			2.93E-5	5.94E-8	0.01	1.04E-5	2.12E-8	0.01
Toluene	Inhalation of Indoor Air	2.84E-2	1.73E-2	0.15	0.06	6.18E-3	0.05	0.06	1.48E-3			5.29E-4		
Toluene	Inhalation of Outdoor Air	2.84E-2	4.55E-3	0.04	0.02	1.62E-3	0.01	0.02	3.90E-4			1.39E-4		
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	2.92E-8	1.77E-8			6.33E-9			1.52E-9	2.28E-4	35.90	5.42E-10	8.14E-5	35.90
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	2.92E-8	4.66E-9			1.66E-9			4.00E-10	6.00E-5	9.45	1.42E-10	2.14E-5	9.45
Trichloroethylene	Inhalation of Indoor Air	4.67E-3	2.83E-3			1.01E-3			2.43E-4	1.44E-6	0.23	8.69E-5	5.17E-7	0.23
Trichloroethylene	Inhalation of Outdoor Air	4.67E-3	7.47E-4			2.66E-4			6.40E-5	3.81E-7	0.06	2.28E-5	1.36E-7	0.06
Trichlorofluoromethane	Inhalation of Indoor Air	4.98E-3	3.02E-3	0.02	0.01	1.08E-3	<0.01	0.01	2.59E-4			9.26E-5		
Trichlorofluoromethane	Inhalation of Outdoor Air	4.98E-3	7.96E-4	<0.01	0.00	2.84E-4	<0.01	0.00	6.82E-5			2.43E-5		
Vinyl Acetate	Inhalation of Indoor Air	2.33E-2	1.41E-2	0.25	0.09	5.06E-3	0.09	0.09	1.21E-3			4.34E-4		
Vinyl Acetate	Inhalation of Outdoor Air	2.33E-2	3.73E-3	0.07	0.02	1.33E-3	0.02	0.02	3.19E-4			1.14E-4		
Vinyl Chloride	Inhalation of Indoor Air	1.31E-4	7.96E-5			2.84E-5			6.82E-6	2.04E-6	0.32	2.43E-6	7.31E-7	0.32
Vinyl Chloride	Inhalation of Outdoor Air	1.31E-4	2.09E-5			7.48E-6			1.79E-6	5.38E-7	0.08	6.41E-7	1.92E-7	0.08
Total Risk:				265.30	100.0		94.75	100.0	6.35E-4	100.0		2.26E-4	100.0	

Table C-32
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
1,1,1-Trichloroethane	Inhalation of Indoor Air	1.57E-3	--	--	--	4.64E-4	<0.01	0.00	--	--	--	1.98E-4		
1,1,1-Trichloroethane	Inhalation of Outdoor Air	1.57E-3	--	--	--	1.22E-4	<0.01	0.00	--	--	--	5.23E-5		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	7.87E-4	--	--	--	2.32E-4	--	--	--	9.94E-5	2.01E-5	1.31		
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	7.87E-4	--	--	--	6.10E-5	--	--	--	2.61E-5	5.31E-6	0.34		
1,1-Dichloroethylene	Inhalation of Indoor Air	1.78E-4	--	--	--	5.26E-5	--	--	--	2.25E-5	3.94E-6	0.26		
1,1-Dichloroethylene	Inhalation of Outdoor Air	1.78E-4	--	--	--	1.38E-5	--	--	--	5.93E-6	1.03E-6	0.07		
1,2,4-Trichlorobenzene	Inhalation of Indoor Air	3.22E-4	--	--	--	9.51E-5	<0.01	0.00	--	--	--	4.07E-5		
1,2,4-Trichlorobenzene	Inhalation of Outdoor Air	3.22E-4	--	--	--	2.50E-5	<0.01	0.00	--	--	--	1.07E-5		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	2.45E-3	--	--	--	7.24E-4	0.42	0.33	--	--	--	3.10E-4		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	2.45E-3	--	--	--	1.90E-4	0.11	0.09	--	--	--	8.16E-5		
1,2-Dibromoethane	Inhalation of Indoor Air	7.66E-5	--	--	--	2.26E-5	0.40	0.31	--	--	--	9.69E-6		
1,2-Dibromoethane	Inhalation of Outdoor Air	7.66E-5	--	--	--	5.95E-6	0.10	0.08	--	--	--	2.55E-6		
1,2-Dichlorobenzene	Inhalation of Indoor Air	1.20E-4	--	--	--	3.53E-5	<0.01	0.00	--	--	--	1.51E-5		
1,2-Dichlorobenzene	Inhalation of Outdoor Air	1.20E-4	--	--	--	9.31E-6	<0.01	0.00	--	--	--	3.99E-6		
1,2-Dichloropropane	Inhalation of Indoor Air	6.53E-4	--	--	--	1.92E-4	0.17	0.13	--	--	--	8.25E-5		
1,2-Dichloropropane	Inhalation of Outdoor Air	6.53E-4	--	--	--	5.06E-5	0.04	0.03	--	--	--	2.17E-5		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	7.60E-4	--	--	--	2.24E-4	0.13	0.10	--	--	--	9.61E-5		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	7.60E-4	--	--	--	5.90E-5	0.03	0.03	--	--	--	2.52E-5		
1,3-Butadiene	Inhalation of Indoor Air	7.51E-4	--	--	--	2.21E-4	--	--	--	9.49E-5	9.30E-5	6.03		
1,3-Butadiene	Inhalation of Outdoor Air	7.51E-4	--	--	--	5.83E-5	--	--	--	2.49E-5	2.44E-5	1.59		
1,4-Dichlorobenzene	Inhalation of Indoor Air	1.18E-3	--	--	--	3.49E-4	<0.01	0.00	--	--	--	1.49E-4		
1,4-Dichlorobenzene	Inhalation of Outdoor Air	1.18E-3	--	--	--	9.19E-5	<0.01	0.00	--	--	--	3.94E-5		
1,4-Dioxane	Inhalation of Indoor Air	8.88E-3	--	--	--	2.62E-3	<0.01	0.00	--	--	--	1.12E-3		
1,4-Dioxane	Inhalation of Outdoor Air	8.88E-3	--	--	--	6.89E-4	<0.01	0.00	--	--	--	2.95E-4		
2-Butanone	Inhalation of Indoor Air	1.29E-2	--	--	--	3.81E-3	0.01	0.01	--	--	--	1.63E-3		
2-Butanone	Inhalation of Outdoor Air	1.29E-2	--	--	--	1.00E-3	<0.01	0.00	--	--	--	4.30E-4		
2-Propanol	Inhalation of Indoor Air	1.79E-2	--	--	--	5.28E-3	<0.01	0.00	--	--	--	2.26E-3		

Table C-32
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
2-Propanol	Inhalation of Outdoor Air	1.79E-2	--	--	--	1.39E-3	<0.01	0.00	--	--	--	5.95E-4		
Acetaldehyde	Inhalation of Indoor Air	8.22E-2	--	--	--	2.42E-2	9.4	7.32	--	--	--	1.03E-2 8.00E-5 5.19		
Acetaldehyde	Inhalation of Outdoor Air	8.22E-2	--	--	--	6.38E-3	2.5	1.93	--	--	--	2.73E-3 2.10E-5 1.37		
Acetonitrile	Inhalation of Indoor Air	7.51E-3	--	--	--	2.21E-3	0.13	0.10	--	--	--	9.50E-4		
Acetonitrile	Inhalation of Outdoor Air	7.51E-3	--	--	--	5.83E-4	0.03	0.03	--	--	--	2.50E-4		
Acrolein	Inhalation of Indoor Air	1.31E-3	--	--	--	3.88E-4	67.9	52.70	--	--	--	1.66E-4		
Acrolein	Inhalation of Outdoor Air	1.31E-3	--	--	--	1.02E-4	17.9	13.87	--	--	--	4.37E-5		
Acrylonitrile	Inhalation of Indoor Air	2.21E-3	--	--	--	6.52E-4	1.1	0.89	--	--	--	2.79E-4 6.65E-5 4.31		
Acrylonitrile	Inhalation of Outdoor Air	2.21E-3	--	--	--	1.71E-4	0.30	0.23	--	--	--	7.35E-5 1.75E-5 1.14		
alpha-BHC	Inhalation of Indoor Air	8.22E-7	--	--	--	2.42E-7	--	--	--	--	--	1.04E-7 6.55E-7 0.04		
alpha-BHC	Inhalation of Outdoor Air	8.22E-7	--	--	--	6.38E-8	--	--	--	--	--	2.73E-8 1.72E-7 0.01		
Antimony	Inhalation of Indoor Air	3.63E-4	--	--	--	1.07E-4	9.4	7.29	--	--	--	4.60E-5		
Antimony	Inhalation of Outdoor Air	3.63E-4	--	--	--	2.82E-5	2.5	1.92	--	--	--	1.21E-5		
Arsenic	Inhalation of Indoor Air	3.62E-5	--	--	--	1.06E-5	--	--	--	--	--	4.57E-6 6.88E-5 4.47		
Arsenic	Inhalation of Outdoor Air	3.62E-5	--	--	--	2.81E-6	--	--	--	--	--	1.20E-6 1.81E-5 1.18		
Benzene	Inhalation of Indoor Air	4.63E-3	--	--	--	1.36E-3	0.08	0.06	--	--	--	5.85E-4 1.70E-5 1.10		
Benzene	Inhalation of Outdoor Air	4.63E-3	--	--	--	3.59E-4	0.02	0.02	--	--	--	1.54E-4 4.47E-6 0.29		
Beryllium	Inhalation of Indoor Air	4.94E-7	--	--	--	1.45E-7	<0.01	0.00	--	--	--	6.25E-8 5.25E-7 0.03		
Beryllium	Inhalation of Outdoor Air	4.94E-7	--	--	--	3.83E-8	<0.01	0.00	--	--	--	1.64E-8 1.38E-7 0.01		
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	6.20E-5	--	--	--	1.82E-5	<0.01	0.00	--	--	--	7.83E-6 6.58E-8 0.00		
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	6.20E-5	--	--	--	4.81E-6	<0.01	0.00	--	--	--	2.06E-6 1.73E-8 0.00		
Bromomethane	Inhalation of Indoor Air	2.64E-4	--	--	--	7.81E-5	0.05	0.04	--	--	--	3.34E-5		
Bromomethane	Inhalation of Outdoor Air	2.64E-4	--	--	--	2.05E-5	0.01	0.01	--	--	--	8.81E-6		
Cadmium	Inhalation of Indoor Air	2.54E-4	--	--	--	7.51E-5	2.9	2.27	--	--	--	3.22E-5 2.02E-4 13.15		
Cadmium	Inhalation of Outdoor Air	2.54E-4	--	--	--	1.97E-5	0.77	0.60	--	--	--	8.47E-6 5.33E-5 3.46		
Carbon Tetrachloride	Inhalation of Indoor Air	6.95E-4	--	--	--	2.05E-4	0.36	0.28	--	--	--	8.79E-5 4.61E-6 0.30		
Carbon Tetrachloride	Inhalation of Outdoor Air	6.95E-4	--	--	--	5.40E-5	0.09	0.07	--	--	--	2.31E-5 1.21E-6 0.08		

Table C-32
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 30 years			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chlorobenzene	Inhalation of Indoor Air	4.37E-4	--	--	--	1.29E-4	0.02	0.02	--	--	--	5.53E-5	--	--
Chlorobenzene	Inhalation of Outdoor Air	4.37E-4	--	--	--	3.39E-5	<0.01	0.00	--	--	--	1.45E-5	--	--
Chloroethane	Inhalation of Indoor Air	8.95E-4	--	--	--	2.64E-4	<0.01	0.00	--	--	--	1.13E-4	--	--
Chloroethane	Inhalation of Outdoor Air	8.95E-4	--	--	--	6.94E-5	<0.01	0.00	--	--	--	2.97E-5	--	--
Chloroform	Inhalation of Indoor Air	9.41E-4	--	--	--	2.77E-4	<0.01	0.00	--	--	--	1.18E-4	9.57E-6	0.62
Chloroform	Inhalation of Outdoor Air	9.41E-4	--	--	--	7.30E-5	<0.01	0.00	--	--	--	3.13E-5	2.52E-6	0.16
Chloromethane	Inhalation of Indoor Air	2.60E-3	--	--	--	7.67E-4	<0.01	0.01	--	--	--	3.28E-4	2.07E-6	0.13
Chloromethane	Inhalation of Outdoor Air	2.60E-3	--	--	--	2.01E-4	<0.01	0.00	--	--	--	8.65E-5	5.45E-7	0.04
Cumene	Inhalation of Indoor Air	3.57E-4	--	--	--	1.05E-4	<0.01	0.00	--	--	--	4.52E-5	--	--
Cumene	Inhalation of Outdoor Air	3.57E-4	--	--	--	2.77E-5	<0.01	0.00	--	--	--	1.19E-5	--	--
Dichlorodifluoromethane	Inhalation of Indoor Air	3.20E-3	--	--	--	9.46E-4	0.02	0.01	--	--	--	4.05E-4	--	--
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.20E-3	--	--	--	2.49E-4	<0.01	0.00	--	--	--	1.06E-4	--	--
Dieldrin	Inhalation of Indoor Air	5.58E-7	--	--	--	1.64E-7	--	--	--	--	--	7.06E-8	1.13E-6	0.07
Dieldrin	Inhalation of Outdoor Air	5.58E-7	--	--	--	4.33E-8	--	--	--	--	--	1.85E-8	2.99E-7	0.02
Ethylbenzene	Inhalation of Indoor Air	7.25E-3	--	--	--	2.13E-3	<0.01	0.01	--	--	--	9.16E-4	3.52E-6	0.23
Ethylbenzene	Inhalation of Outdoor Air	7.25E-3	--	--	--	5.62E-4	<0.01	0.00	--	--	--	2.41E-4	9.28E-7	0.06
Formaldehyde	Inhalation of Indoor Air	2.24E-3	--	--	--	6.60E-4	0.77	0.60	--	--	--	2.83E-4	1.28E-5	0.84
Formaldehyde	Inhalation of Outdoor Air	2.24E-3	--	--	--	1.73E-4	0.20	0.16	--	--	--	7.45E-5	3.39E-6	0.22
Freon 113	Inhalation of Indoor Air	2.00E-3	--	--	--	5.91E-4	<0.01	0.00	--	--	--	2.53E-4	--	--
Freon 113	Inhalation of Outdoor Air	2.00E-3	--	--	--	1.55E-4	<0.01	0.00	--	--	--	6.66E-5	--	--
gamma-BHC	Inhalation of Indoor Air	2.20E-7	--	--	--	6.51E-8	--	--	--	--	--	2.79E-8	3.06E-8	0.00
gamma-BHC	Inhalation of Outdoor Air	2.20E-7	--	--	--	1.71E-8	--	--	--	--	--	7.34E-9	8.07E-9	0.00
Halocarbon 134A	Inhalation of Indoor Air	2.52E-4	--	--	--	7.44E-5	<0.01	0.00	--	--	--	3.19E-5	--	--
Halocarbon 134A	Inhalation of Outdoor Air	2.52E-4	--	--	--	1.95E-5	<0.01	0.00	--	--	--	8.39E-6	--	--
Heptachlor	Inhalation of Indoor Air	1.14E-6	--	--	--	3.36E-7	--	--	--	--	--	1.44E-7	6.56E-7	0.04
Heptachlor	Inhalation of Outdoor Air	1.14E-6	--	--	--	8.86E-8	--	--	--	--	--	3.79E-8	1.72E-7	0.01
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	9.58E-4	--	--	--	2.82E-4	--	--	--	--	--	1.21E-4	9.32E-6	0.60

Table C-32
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	9.58E-4	--	--	7.43E-5	--	--	--	3.18E-5	2.45E-6	0.16			
Hexachlorobenzene	Inhalation of Indoor Air	5.00E-6	--	--	1.47E-6	--	--	--	6.32E-7	1.01E-6	0.07			
Hexachlorobenzene	Inhalation of Outdoor Air	5.00E-6	--	--	3.88E-7	--	--	--	1.66E-7	2.67E-7	0.02			
Hydrochloric Acid	Inhalation of Indoor Air	2.43E-2	--	--	7.19E-3	1.3	0.98	--	3.08E-3					
Hydrochloric Acid	Inhalation of Outdoor Air	2.43E-2	--	--	1.89E-3	0.33	0.26	--	8.10E-4					
Mercury	Inhalation of Indoor Air	1.79E-5	--	--	5.28E-6	0.06	0.05	--	2.26E-6					
Mercury	Inhalation of Outdoor Air	1.79E-5	--	--	1.39E-6	0.02	0.01	--	5.96E-7					
Methyl t-Butylether	Inhalation of Indoor Air	9.85E-5	--	--	2.90E-5	<0.01	0.00	--	1.24E-5					
Methyl t-Butylether	Inhalation of Outdoor Air	9.85E-5	--	--	7.64E-6	<0.01	0.00	--	3.27E-6					
Methylcyclohexane	Inhalation of Indoor Air	6.74E-4	--	--	1.98E-4	<0.01	0.00	--	8.52E-5					
Methylcyclohexane	Inhalation of Outdoor Air	6.74E-4	--	--	5.23E-5	<0.01	0.00	--	2.24E-5					
Methylene Chloride	Inhalation of Indoor Air	2.44E-2	--	--	7.21E-3	<0.01	0.01	--	3.09E-3	5.08E-6	0.33			
Methylene Chloride	Inhalation of Outdoor Air	2.44E-2	--	--	1.89E-3	<0.01	0.00	--	8.13E-4	1.33E-6	0.09			
Methylisobutylketone	Inhalation of Indoor Air	5.63E-3	--	--	1.66E-3	0.07	0.06	--	7.12E-4					
Methylisobutylketone	Inhalation of Outdoor Air	5.63E-3	--	--	4.37E-4	0.02	0.01	--	1.87E-4					
n-Hexane	Inhalation of Indoor Air	1.26E-2	--	--	3.72E-3	0.07	0.05	--	1.59E-3					
n-Hexane	Inhalation of Outdoor Air	1.26E-2	--	--	9.80E-4	0.02	0.01	--	4.20E-4					
Naphthalene	Inhalation of Indoor Air	4.51E-4	--	--	1.33E-4	0.16	0.12	--	5.71E-5					
Naphthalene	Inhalation of Outdoor Air	4.51E-4	--	--	3.50E-5	0.04	0.03	--	1.50E-5					
Nickel	Inhalation of Indoor Air	9.34E-5	--	--	2.75E-5	1.9	1.50	--	1.18E-5	1.07E-5	0.70			
Nickel	Inhalation of Outdoor Air	9.34E-5	--	--	7.25E-6	0.51	0.39	--	3.10E-6	2.82E-6	0.18			
Phenol	Inhalation of Indoor Air	2.40E-4	--	--	7.07E-5	<0.01	0.00	--	3.03E-5					
Phenol	Inhalation of Outdoor Air	2.40E-4	--	--	1.86E-5	<0.01	0.00	--	7.98E-6					
PM-10	Inhalation of Indoor Air	2.34E-1	--	--	6.91E-2	4.8	3.76	--	2.96E-2					
PM-10	Inhalation of Outdoor Air	2.34E-1	--	--	1.81E-2	1.3	0.99	--	7.79E-3					
Propylene	Inhalation of Indoor Air	6.94E-2	--	--	2.04E-2	0.02	0.02	--	8.77E-3					
Propylene	Inhalation of Outdoor Air	6.94E-2	--	--	5.38E-3	<0.01	0.00	--	2.30E-3					

Table C-32
GEMB - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Styrene	Inhalation of Indoor Air	2.93E-3	--	--	--	8.64E-4	<0.01	0.00	--	--	--	3.70E-4		
Styrene	Inhalation of Outdoor Air	2.93E-3	--	--	--	2.27E-4	<0.01	0.00	--	--	--	9.75E-5		
Tetrachloroethylene	Inhalation of Indoor Air	2.13E-3	--	--	--	6.30E-4			--	--	--	2.70E-4	5.48E-7	0.04
Tetrachloroethylene	Inhalation of Outdoor Air	2.13E-3	--	--	--	1.66E-4			--	--	--	7.11E-5	1.44E-7	0.01
Toluene	Inhalation of Indoor Air	2.84E-2	--	--	--	8.40E-3	0.07	0.06	--	--	--	3.60E-3		
Toluene	Inhalation of Outdoor Air	2.84E-2	--	--	--	2.21E-3	0.02	0.02	--	--	--	9.47E-4		
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	2.92E-8	--	--	--	8.61E-9			--	--	--	3.69E-9	5.53E-4	35.90
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	2.92E-8	--	--	--	2.26E-9			--	--	--	9.71E-10	1.45E-4	9.45
Trichloroethylene	Inhalation of Indoor Air	4.67E-3	--	--	--	1.37E-3			--	--	--	5.91E-4	3.51E-6	0.23
Trichloroethylene	Inhalation of Outdoor Air	4.67E-3	--	--	--	3.62E-4			--	--	--	1.55E-4	9.25E-7	0.06
Trichlorofluoromethane	Inhalation of Indoor Air	4.98E-3	--	--	--	1.47E-3	<0.01	0.01	--	--	--	6.30E-4		
Trichlorofluoromethane	Inhalation of Outdoor Air	4.98E-3	--	--	--	3.87E-4	<0.01	0.00	--	--	--	1.65E-4		
Vinyl Acetate	Inhalation of Indoor Air	2.33E-2	--	--	--	6.88E-3	0.12	0.09	--	--	--	2.95E-3		
Vinyl Acetate	Inhalation of Outdoor Air	2.33E-2	--	--	--	1.81E-3	0.03	0.02	--	--	--	7.76E-4		
Vinyl Chloride	Inhalation of Indoor Air	1.31E-4	--	--	--	3.86E-5			--	--	--	1.65E-5	4.97E-6	0.32
Vinyl Chloride	Inhalation of Outdoor Air	1.31E-4	--	--	--	1.01E-5			--	--	--	4.36E-6	1.30E-6	0.08
Total Risk:				--	--	128.86	100.0			--	--	1.54E-3	100.0	

Table C-33
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,1-Trichloroethane	Inhalation of Indoor Air	7.02E-4	4.26E-4	<0.01	0.00	1.52E-4	<0.01	0.00	1.82E-5			6.52E-6		
1,1,1-Trichloroethane	Inhalation of Outdoor Air	7.02E-4	1.12E-4	<0.01	0.00	4.00E-5	<0.01	0.00	4.80E-6			1.71E-6		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.79E-4	3.51E-4			1.25E-4			1.50E-5	3.05E-6	6.38	5.38E-6	1.09E-6	6.38
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.79E-4	9.25E-5			3.30E-5			3.96E-6	8.05E-7	1.68	1.41E-6	2.87E-7	1.68
1,1,2-Trichloroethane	Inhalation of Indoor Air	1.08E-4	6.61E-5			2.36E-5			2.83E-6	1.58E-7	0.33	1.01E-6	5.66E-8	0.33
1,1,2-Trichloroethane	Inhalation of Outdoor Air	1.08E-4	1.74E-5			6.21E-6			7.45E-7	4.17E-8	0.09	2.66E-7	1.49E-8	0.09
1,2,4-Trichlorobenzene	Inhalation of Indoor Air	8.75E-4	5.31E-4	<0.01	0.01	1.89E-4	<0.01	0.01	2.27E-5			8.13E-6		
1,2,4-Trichlorobenzene	Inhalation of Outdoor Air	8.75E-4	1.39E-4	<0.01	0.00	4.99E-5	<0.01	0.00	5.99E-6			2.14E-6		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	1.08E-3	6.59E-4	0.38	0.59	2.35E-4	0.14	0.59	2.82E-5			1.00E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	1.08E-3	1.73E-4	0.10	0.16	6.19E-5	0.04	0.16	7.43E-6			2.65E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	2.11E-4	1.28E-4	2.2	3.46	4.58E-5	0.80	3.46	5.49E-6	4.23E-6	8.83	1.96E-6	1.51E-6	8.83
1,2-Dibromoethane	Inhalation of Outdoor Air	2.11E-4	3.37E-5	0.59	0.91	1.20E-5	0.21	0.91	1.44E-6	1.11E-6	2.32	5.16E-7	3.97E-7	2.32
1,2-Dichlorobenzene	Inhalation of Indoor Air	2.96E-4	1.80E-4	<0.01	0.00	6.43E-5	<0.01	0.00	7.71E-6			2.75E-6		
1,2-Dichlorobenzene	Inhalation of Outdoor Air	2.96E-4	4.73E-5	<0.01	0.00	1.69E-5	<0.01	0.00	2.03E-6			7.25E-7		
1,2-Dichloroethane	Inhalation of Indoor Air	1.45E-4	8.83E-5			3.15E-5			3.78E-6	3.44E-7	0.72	1.35E-6	1.23E-7	0.72
1,2-Dichloroethane	Inhalation of Outdoor Air	1.45E-4	2.32E-5			8.30E-6			9.96E-7	9.06E-8	0.19	3.55E-7	3.23E-8	0.19
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	3.26E-4	1.98E-4	0.12	0.18	7.07E-5	0.04	0.18	8.49E-6			3.03E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	3.26E-4	5.21E-5	0.03	0.05	1.86E-5	0.01	0.05	2.23E-6			7.98E-7		
1,3-Butadiene	Inhalation of Indoor Air	2.45E-4	1.49E-4			5.32E-5			6.39E-6	6.26E-6	13.07	2.28E-6	2.23E-6	13.07
1,3-Butadiene	Inhalation of Outdoor Air	2.45E-4	3.92E-5			1.40E-5			1.68E-6	1.64E-6	3.44	6.00E-7	5.88E-7	3.44
1,4-Dichlorobenzene	Inhalation of Indoor Air	8.59E-4	5.22E-4	<0.01	0.00	1.86E-4	<0.01	0.00	2.23E-5	8.94E-7	1.87	7.98E-6	3.19E-7	1.87
1,4-Dichlorobenzene	Inhalation of Outdoor Air	8.59E-4	1.37E-4	<0.01	0.00	4.90E-5	<0.01	0.00	5.88E-6	2.35E-7	0.49	2.10E-6	8.41E-8	0.49
1,4-Dioxane	Inhalation of Indoor Air	1.16E-3	7.07E-4	<0.01	0.00	2.52E-4	<0.01	0.00	3.03E-5	8.18E-7	1.71	1.08E-5	2.92E-7	1.71
1,4-Dioxane	Inhalation of Outdoor Air	1.16E-3	1.86E-4	<0.01	0.00	6.64E-5	<0.01	0.00	7.97E-6	2.15E-7	0.45	2.84E-6	7.69E-8	0.45
2-Butanone	Inhalation of Indoor Air	6.20E-3	3.77E-3	0.01	0.02	1.34E-3	<0.01	0.02	1.61E-4			5.77E-5		
2-Butanone	Inhalation of Outdoor Air	6.20E-3	9.92E-4	<0.01	0.01	3.54E-4	<0.01	0.01	4.25E-5			1.51E-5		
2-Propanol	Inhalation of Indoor Air	2.03E-2	1.23E-2	<0.01	0.01	4.40E-3	<0.01	0.01	5.29E-4			1.88E-4		

Table C-33
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 1 Tour of Duty (3 Years)			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
2-Propanol	Inhalation of Outdoor Air	2.03E-2	3.24E-3	<0.01	0.00	1.16E-3	<0.01	0.00	1.39E-4			4.97E-5		
4,4'-DDT	Inhalation of Indoor Air	2.59E-7	1.57E-7			5.63E-8			6.75E-9	2.29E-9	0.00	2.41E-9 8.19E-10 0.00		
4,4'-DDT	Inhalation of Outdoor Air	2.59E-7	4.14E-8			1.48E-8			1.77E-9	6.03E-10	0.00	6.35E-10 2.15E-10 0.00		
Acetaldehyde	Inhalation of Indoor Air	3.99E-2	2.42E-2	9.4	14.54	8.65E-3	3.4	14.54	1.03E-3	7.99E-6	16.68	3.70E-4 2.85E-6 16.68		
Acetaldehyde	Inhalation of Outdoor Air	3.99E-2	6.37E-3	2.5	3.83	2.27E-3	0.89	3.83	2.73E-4	2.10E-6	4.39	9.76E-5 7.51E-7 4.39		
Acetonitrile	Inhalation of Indoor Air	8.37E-2	5.08E-2	3.0	4.58	1.81E-2	1.1	4.58	2.17E-3			7.78E-4		
Acetonitrile	Inhalation of Outdoor Air	8.37E-2	1.33E-2	0.78	1.20	4.77E-3	0.28	1.20	5.73E-4			2.04E-4		
Acrolein	Inhalation of Indoor Air	2.58E-4	1.56E-4	27.5	42.37	5.60E-5	9.8	42.37	6.72E-6			2.40E-6		
Acrolein	Inhalation of Outdoor Air	2.58E-4	4.12E-5	7.2	11.15	1.47E-5	2.6	11.15	1.76E-6			6.31E-7		
Acrylonitrile	Inhalation of Indoor Air	2.72E-4	1.65E-4	0.29	0.45	5.90E-5	0.10	0.45	7.08E-6	1.68E-6	3.52	2.53E-6 6.02E-7 3.52		
Acrylonitrile	Inhalation of Outdoor Air	2.72E-4	4.35E-5	0.08	0.12	1.55E-5	0.03	0.12	1.86E-6	4.44E-7	0.93	6.66E-7 1.58E-7 0.93		
Antimony	Inhalation of Indoor Air	6.77E-6	4.11E-6	0.36	0.56	1.47E-6	0.13	0.56	1.76E-7			6.30E-8		
Antimony	Inhalation of Outdoor Air	6.77E-6	1.08E-6	0.09	0.15	3.86E-7	0.03	0.15	4.64E-8			1.65E-8		
Arsenic	Inhalation of Indoor Air	2.56E-6	1.55E-6			5.56E-7			6.67E-8	1.00E-6	2.10	2.38E-8 3.59E-7 2.10		
Arsenic	Inhalation of Outdoor Air	2.56E-6	4.10E-7			1.46E-7			1.75E-8	2.64E-7	0.55	6.27E-9 9.44E-8 0.55		
Benzene	Inhalation of Indoor Air	1.99E-3	1.21E-3	0.07	0.11	4.33E-4	0.03	0.11	5.20E-5	1.51E-6	3.15	1.85E-5 5.39E-7 3.15		
Benzene	Inhalation of Outdoor Air	1.99E-3	3.19E-4	0.02	0.03	1.14E-4	<0.01	0.03	1.36E-5	3.97E-7	0.83	4.89E-6 1.42E-7 0.83		
Beryllium	Inhalation of Indoor Air	1.68E-7	1.02E-7	<0.01	0.00	3.64E-8	<0.01	0.00	4.37E-9	3.67E-8	0.08	1.56E-9 1.31E-8 0.08		
Beryllium	Inhalation of Outdoor Air	1.68E-7	2.68E-8	<0.01	0.00	9.59E-9	<0.01	0.00	1.15E-9	9.67E-9	0.02	4.11E-10 3.45E-9 0.02		
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.82E-5	2.32E-5	<0.01	0.01	8.29E-6	<0.01	0.01	9.95E-7	8.35E-9	0.02	3.55E-7 2.98E-9 0.02		
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.82E-5	6.10E-6	<0.01	0.00	2.18E-6	<0.01	0.00	2.61E-7	2.19E-9	0.00	9.35E-8 7.85E-10 0.00		
Bromomethane	Inhalation of Indoor Air	1.19E-4	7.24E-5	0.05	0.08	2.58E-5	0.02	0.08	3.10E-6			1.10E-6		
Bromomethane	Inhalation of Outdoor Air	1.19E-4	1.90E-5	0.01	0.02	6.80E-6	<0.01	0.02	8.16E-7			2.91E-7		
Cadmium	Inhalation of Indoor Air	9.48E-7	5.76E-7	0.02	0.03	2.05E-7	<0.01	0.03	2.46E-8	1.55E-7	0.32	8.81E-9 5.55E-8 0.32		
Cadmium	Inhalation of Outdoor Air	9.48E-7	1.51E-7	<0.01	0.01	5.41E-8	<0.01	0.01	6.49E-9	4.09E-8	0.09	2.32E-9 1.46E-8 0.09		
Carbon Tetrachloride	Inhalation of Indoor Air	6.91E-4	4.19E-4	0.73	1.13	1.49E-4	0.26	1.13	1.79E-5	9.44E-7	1.97	6.42E-6 3.37E-7 1.97		
Carbon Tetrachloride	Inhalation of Outdoor Air	6.91E-4	1.10E-4	0.19	0.30	3.94E-5	0.07	0.30	4.73E-6	2.48E-7	0.52	1.69E-6 8.87E-8 0.52		

Table C-33
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chlorobenzene	Inhalation of Indoor Air	2.79E-4	1.69E-4	0.03	0.05	6.06E-5	0.01	0.05	7.27E-6			2.59E-6		
Chlorobenzene	Inhalation of Outdoor Air	2.79E-4	4.46E-5	<0.01	0.01	1.59E-5	<0.01	0.01	1.91E-6			6.83E-7		
Chloroethane	Inhalation of Indoor Air	1.34E-4	8.18E-5	<0.01	0.00	2.92E-5	<0.01	0.00	3.50E-6			1.25E-6		
Chloroethane	Inhalation of Outdoor Air	1.34E-4	2.15E-5	<0.01	0.00	7.69E-6	<0.01	0.00	9.23E-7			3.29E-7		
Chloroform	Inhalation of Indoor Air	1.63E-4	9.90E-5	<0.01	0.00	3.53E-5	<0.01	0.00	4.24E-6	3.41E-7	0.71	1.51E-6	1.22E-7	0.71
Chloroform	Inhalation of Outdoor Air	1.63E-4	2.60E-5	<0.01	0.00	9.30E-6	<0.01	0.00	1.11E-6	8.99E-8	0.19	3.98E-7	3.21E-8	0.19
Chloromethane	Inhalation of Indoor Air	1.67E-3	1.01E-3	0.01	0.02	3.62E-4	<0.01	0.02	4.35E-5	2.74E-7	0.57	1.55E-5	9.78E-8	0.57
Chloromethane	Inhalation of Outdoor Air	1.67E-3	2.67E-4	<0.01	0.00	9.54E-5	<0.01	0.00	1.14E-5	7.21E-8	0.15	4.08E-6	2.57E-8	0.15
Cumene	Inhalation of Indoor Air	1.96E-4	1.19E-4	<0.01	0.00	4.25E-5	<0.01	0.00	5.10E-6			1.82E-6		
Cumene	Inhalation of Outdoor Air	1.96E-4	3.13E-5	<0.01	0.00	1.11E-5	<0.01	0.00	1.34E-6			4.79E-7		
Dichlorodifluoromethane	Inhalation of Indoor Air	2.85E-3	1.73E-3	0.03	0.05	6.19E-4	0.01	0.05	7.43E-5			2.65E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	2.85E-3	4.56E-4	<0.01	0.01	1.63E-4	<0.01	0.01	1.95E-5			6.98E-6		
Dieldrin	Inhalation of Indoor Air	1.92E-7	1.16E-7			4.17E-8			5.00E-9	8.06E-8	0.17	1.78E-9	2.87E-8	0.17
Dieldrin	Inhalation of Outdoor Air	1.92E-7	3.07E-8			1.09E-8			1.31E-9	2.12E-8	0.04	4.70E-10	7.57E-9	0.04
Ethylbenzene	Inhalation of Indoor Air	3.16E-3	1.92E-3	<0.01	0.01	6.86E-4	<0.01	0.01	8.23E-5	3.17E-7	0.66	2.94E-5	1.13E-7	0.66
Ethylbenzene	Inhalation of Outdoor Air	3.16E-3	5.05E-4	<0.01	0.00	1.80E-4	<0.01	0.00	2.16E-5	8.34E-8	0.17	7.74E-6	2.98E-8	0.17
Formaldehyde	Inhalation of Indoor Air	8.58E-4	5.21E-4	0.61	0.94	1.86E-4	0.22	0.94	2.23E-5	1.01E-6	2.12	7.98E-6	3.63E-7	2.12
Formaldehyde	Inhalation of Outdoor Air	8.58E-4	1.37E-4	0.16	0.25	4.90E-5	0.06	0.25	5.88E-6	2.67E-7	0.56	2.10E-6	9.55E-8	0.56
Freon 113	Inhalation of Indoor Air	7.70E-4	4.68E-4	<0.01	0.00	1.67E-4	<0.01	0.00	2.00E-5			7.16E-6		
Freon 113	Inhalation of Outdoor Air	7.70E-4	1.23E-4	<0.01	0.00	4.39E-5	<0.01	0.00	5.27E-6			1.88E-6		
gamma-BHC	Inhalation of Indoor Air	2.96E-7	1.80E-7			6.43E-8			7.72E-9	8.49E-9	0.02	2.75E-9	3.03E-9	0.02
gamma-BHC	Inhalation of Outdoor Air	2.96E-7	4.74E-8			1.69E-8			2.03E-9	2.23E-9	0.00	7.25E-10	7.98E-10	0.00
Halocarbon 134A	Inhalation of Indoor Air	1.31E-4	7.96E-5	<0.01	0.00	2.84E-5	<0.01	0.00	3.41E-6			1.21E-6		
Halocarbon 134A	Inhalation of Outdoor Air	1.31E-4	2.09E-5	<0.01	0.00	7.48E-6	<0.01	0.00	8.97E-7			3.20E-7		
Heptachlor epoxide	Inhalation of Indoor Air	2.68E-7	1.62E-7			5.81E-8			6.97E-9	6.35E-8	0.13	2.49E-9	2.26E-8	0.13
Heptachlor epoxide	Inhalation of Outdoor Air	2.68E-7	4.28E-8			1.53E-8			1.83E-9	1.67E-8	0.03	6.55E-10	5.96E-9	0.03
Heptachlor	Inhalation of Indoor Air	3.75E-7	2.27E-7			8.13E-8			9.76E-9	4.44E-8	0.09	3.48E-9	1.58E-8	0.09

Table C-33
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 1 Tour of Duty (3 Years)			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Heptachlor	Inhalation of Outdoor Air	3.75E-7	5.99E-8		2.14E-8		2.56E-9	1.16E-8	0.02	9.17E-10	4.17E-9	0.02		
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.34E-4	5.06E-4		1.80E-4		2.17E-5	1.67E-6	3.49	7.75E-6	5.97E-7	3.49		
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.34E-4	1.33E-4		4.76E-5		5.71E-6	4.39E-7	0.92	2.04E-6	1.57E-7	0.92		
Hydrochloric Acid	Inhalation of Indoor Air	1.75E-3	1.06E-3	0.19	0.29	3.81E-4	0.07	0.29		4.57E-5		1.63E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	1.75E-3	2.80E-4	0.05	0.08	1.00E-4	0.02	0.08		1.20E-5		4.30E-6		
Mercury	Inhalation of Indoor Air	5.74E-6	3.48E-6	0.04	0.06	1.24E-6	0.01	0.06		1.49E-7		5.34E-8		
Mercury	Inhalation of Outdoor Air	5.74E-6	9.18E-7	0.01	0.02	3.27E-7	<0.01	0.02		3.93E-8		1.40E-8		
Methylcyclohexane	Inhalation of Indoor Air	6.45E-5	3.91E-5	<0.01	0.00	1.39E-5	<0.01	0.00		1.67E-6		5.99E-7		
Methylcyclohexane	Inhalation of Outdoor Air	6.45E-5	1.03E-5	<0.01	0.00	3.68E-6	<0.01	0.00		4.41E-7		1.57E-7		
Methylene Chloride	Inhalation of Indoor Air	4.00E-3	2.42E-3	<0.01	0.00	8.67E-4	<0.01	0.00	1.04E-4	1.71E-7	0.36	3.71E-5		
Methylene Chloride	Inhalation of Outdoor Air	4.00E-3	6.39E-4	<0.01	0.00	2.28E-4	<0.01	0.00	2.74E-5	4.50E-8	0.09	9.78E-6		
Methylisobutylketone	Inhalation of Indoor Air	2.25E-3	1.37E-3	0.06	0.09	4.89E-4	0.02	0.09		5.87E-5		2.09E-5		
Methylisobutylketone	Inhalation of Outdoor Air	2.25E-3	3.60E-4	0.02	0.02	1.28E-4	<0.01	0.02		1.54E-5		5.52E-6		
n-Hexane	Inhalation of Indoor Air	1.13E-3	6.87E-4	0.01	0.02	2.45E-4	<0.01	0.02		2.94E-5		1.05E-5		
n-Hexane	Inhalation of Outdoor Air	1.13E-3	1.80E-4	<0.01	0.00	6.46E-5	<0.01	0.00		7.75E-6		2.76E-6		
Naphthalene	Inhalation of Indoor Air	2.70E-4	1.64E-4	0.19	0.30	5.85E-5	0.07	0.30		7.02E-6		2.51E-6		
Naphthalene	Inhalation of Outdoor Air	2.70E-4	4.31E-5	0.05	0.08	1.54E-5	0.02	0.08		1.84E-6		6.60E-7		
Nickel	Inhalation of Indoor Air	1.12E-5	6.84E-6	0.48	0.74	2.44E-6	0.17	0.74	2.93E-7	2.67E-7	0.56	1.04E-7		
Nickel	Inhalation of Outdoor Air	1.12E-5	1.80E-6	0.13	0.19	6.43E-7	0.05	0.19	7.72E-8	7.02E-8	0.15	2.75E-8		
Phenol	Inhalation of Indoor Air	9.68E-5	5.87E-5	<0.01	0.00	2.09E-5	<0.01	0.00		2.51E-6		8.99E-7		
Phenol	Inhalation of Outdoor Air	9.68E-5	1.54E-5	<0.01	0.00	5.52E-6	<0.01	0.00		6.63E-7		2.36E-7		
PM-10	Inhalation of Indoor Air	1.25E-1	7.60E-2	5.3	8.22	2.71E-2	1.9	8.22		3.25E-3		1.16E-3		
PM-10	Inhalation of Outdoor Air	1.25E-1	2.00E-2	1.4	2.16	7.14E-3	0.50	2.16		8.57E-4		3.06E-4		
Propylene	Inhalation of Indoor Air	1.46E-3	8.91E-4	<0.01	0.00	3.18E-4	<0.01	0.00		3.82E-5		1.36E-5		
Propylene	Inhalation of Outdoor Air	1.46E-3	2.34E-4	<0.01	0.00	8.37E-5	<0.01	0.00		1.00E-5		3.59E-6		
Styrene	Inhalation of Indoor Air	6.86E-4	4.16E-4	<0.01	0.00	1.48E-4	<0.01	0.00		1.78E-5		6.37E-6		
Styrene	Inhalation of Outdoor Air	6.86E-4	1.09E-4	<0.01	0.00	3.91E-5	<0.01	0.00		4.69E-6		1.67E-6		

Table C-33
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m ³	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Tetrachloroethylene	Inhalation of Indoor Air	8.49E-4	5.16E-4			1.84E-4			2.21E-5	4.48E-8	0.09	7.89E-6	1.60E-8	0.09
Tetrachloroethylene	Inhalation of Outdoor Air	8.49E-4	1.35E-4			4.84E-5			5.81E-6	1.18E-8	0.02	2.07E-6	4.21E-9	0.02
Toluene	Inhalation of Indoor Air	9.84E-3	5.98E-3	0.05	0.08	2.13E-3	0.02	0.08	2.56E-4			9.15E-5		
Toluene	Inhalation of Outdoor Air	9.84E-3	1.57E-3	0.01	0.02	5.62E-4	<0.01	0.02	6.74E-5			2.40E-5		
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	1.11E-9	6.80E-10			2.42E-10			2.91E-11	4.37E-6	9.12	1.04E-11	1.56E-6	9.12
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.11E-9	1.78E-10			6.39E-11			7.67E-12	1.15E-6	2.40	2.73E-12	4.10E-7	2.40
Trichloroethylene	Inhalation of Indoor Air	1.00E-3	6.13E-4			2.18E-4			2.62E-5	1.56E-7	0.33	9.38E-6	5.58E-8	0.33
Trichloroethylene	Inhalation of Outdoor Air	1.00E-3	1.61E-4			5.76E-5			6.91E-6	4.11E-8	0.09	2.46E-6	1.46E-8	0.09
Trichlorofluoromethane	Inhalation of Indoor Air	2.40E-3	1.46E-3	<0.01	0.01	5.22E-4	<0.01	0.01	6.26E-5			2.23E-5		
Trichlorofluoromethane	Inhalation of Outdoor Air	2.40E-3	3.84E-4	<0.01	0.00	1.37E-4	<0.01	0.00	1.64E-5			5.89E-6		
Vinyl Acetate	Inhalation of Indoor Air	8.14E-3	4.94E-3	0.09	0.13	1.76E-3	0.03	0.13	2.11E-4			7.56E-5		
Vinyl Acetate	Inhalation of Outdoor Air	8.14E-3	1.30E-3	0.02	0.04	4.64E-4	<0.01	0.04	5.57E-5			1.99E-5		
Total Risk:				64.80	100.0		23.14	100.0		4.79E-5	100.0		1.71E-5	100.0

Table C-34
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 2 Tours of Duty (6 Years)			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,1-Trichloroethane	Inhalation of Indoor Air	7.02E-4	4.26E-4	<0.01	0.00	1.52E-4	<0.01	0.00	3.65E-5			1.30E-5		
1,1,1-Trichloroethane	Inhalation of Outdoor Air	7.02E-4	1.12E-4	<0.01	0.00	4.00E-5	<0.01	0.00	9.61E-6			3.43E-6		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.79E-4	3.51E-4			1.25E-4			3.01E-5	6.11E-6	6.38	1.07E-5	2.18E-6	6.38
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.79E-4	9.25E-5			3.30E-5			7.93E-6	1.61E-6	1.68	2.83E-6	5.75E-7	1.68
1,1,2-Trichloroethane	Inhalation of Indoor Air	1.08E-4	6.61E-5			2.36E-5			5.66E-6	3.17E-7	0.33	2.02E-6	1.13E-7	0.33
1,1,2-Trichloroethane	Inhalation of Outdoor Air	1.08E-4	1.74E-5			6.21E-6			1.49E-6	8.35E-8	0.09	5.32E-7	2.98E-8	0.09
1,2,4-Trichlorobenzene	Inhalation of Indoor Air	8.75E-4	5.31E-4	<0.01	0.01	1.89E-4	<0.01	0.01	4.55E-5			1.62E-5		
1,2,4-Trichlorobenzene	Inhalation of Outdoor Air	8.75E-4	1.39E-4	<0.01	0.00	4.99E-5	<0.01	0.00	1.19E-5			4.28E-6		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	1.08E-3	6.59E-4	0.38	0.59	2.35E-4	0.14	0.59	5.65E-5			2.01E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	1.08E-3	1.73E-4	0.10	0.16	6.19E-5	0.04	0.16	1.48E-5			5.31E-6		
1,2-Dibromoethane	Inhalation of Indoor Air	2.11E-4	1.28E-4	2.2	3.46	4.58E-5	0.80	3.46	1.09E-5	8.46E-6	8.83	3.92E-6	3.02E-6	8.83
1,2-Dibromoethane	Inhalation of Outdoor Air	2.11E-4	3.37E-5	0.59	0.91	1.20E-5	0.21	0.91	2.89E-6	2.22E-6	2.32	1.03E-6	7.95E-7	2.32
1,2-Dichlorobenzene	Inhalation of Indoor Air	2.96E-4	1.80E-4	<0.01	0.00	6.43E-5	<0.01	0.00	1.54E-5			5.51E-6		
1,2-Dichlorobenzene	Inhalation of Outdoor Air	2.96E-4	4.73E-5	<0.01	0.00	1.69E-5	<0.01	0.00	4.06E-6			1.45E-6		
1,2-Dichloroethane	Inhalation of Indoor Air	1.45E-4	8.83E-5			3.15E-5			7.57E-6	6.89E-7	0.72	2.70E-6	2.46E-7	0.72
1,2-Dichloroethane	Inhalation of Outdoor Air	1.45E-4	2.32E-5			8.30E-6			1.99E-6	1.81E-7	0.19	7.11E-7	6.47E-8	0.19
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	3.26E-4	1.98E-4	0.12	0.18	7.07E-5	0.04	0.18	1.69E-5			6.06E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	3.26E-4	5.21E-5	0.03	0.05	1.86E-5	0.01	0.05	4.46E-6			1.59E-6		
1,3-Butadiene	Inhalation of Indoor Air	2.45E-4	1.49E-4			5.32E-5			1.27E-5	1.25E-5	13.07	4.56E-6	4.47E-6	13.07
1,3-Butadiene	Inhalation of Outdoor Air	2.45E-4	3.92E-5			1.40E-5			3.36E-6	3.29E-6	3.44	1.20E-6	1.17E-6	3.44
1,4-Dichlorobenzene	Inhalation of Indoor Air	8.59E-4	5.22E-4	<0.01	0.00	1.86E-4	<0.01	0.00	4.47E-5	1.78E-6	1.87	1.59E-5	6.39E-7	1.87
1,4-Dichlorobenzene	Inhalation of Outdoor Air	8.59E-4	1.37E-4	<0.01	0.00	4.90E-5	<0.01	0.00	1.17E-5	4.70E-7	0.49	4.20E-6	1.68E-7	0.49
1,4-Dioxane	Inhalation of Indoor Air	1.16E-3	7.07E-4	<0.01	0.00	2.52E-4	<0.01	0.00	6.06E-5	1.63E-6	1.71	2.16E-5	5.84E-7	1.71
1,4-Dioxane	Inhalation of Outdoor Air	1.16E-3	1.86E-4	<0.01	0.00	6.64E-5	<0.01	0.00	1.59E-5	4.30E-7	0.45	5.69E-6	1.53E-7	0.45
2-Butanone	Inhalation of Indoor Air	6.20E-3	3.77E-3	0.01	0.02	1.34E-3	<0.01	0.02	3.23E-4			1.15E-4		
2-Butanone	Inhalation of Outdoor Air	6.20E-3	9.92E-4	<0.01	0.01	3.54E-4	<0.01	0.01	8.50E-5			3.03E-5		
2-Propanol	Inhalation of Indoor Air	2.03E-2	1.23E-2	<0.01	0.01	4.40E-3	<0.01	0.01	1.05E-3			3.77E-4		

Table C-34
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 2 Tours of Duty (6 Years)			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	% of Total	ADD mg/kg-day	% HI of Total	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
2-Propanol	Inhalation of Outdoor Air	2.03E-2	3.24E-3	<0.01	0.00	1.16E-3	<0.01	0.00	2.78E-4			9.94E-5		
4,4'-DDT	Inhalation of Indoor Air	2.59E-7	1.57E-7			5.63E-8			1.35E-8	4.58E-9	0.00	4.82E-9	1.63E-9	0.00
4,4'-DDT	Inhalation of Outdoor Air	2.59E-7	4.14E-8			1.48E-8			3.55E-9	1.20E-9	0.00	1.27E-9	4.31E-10	0.00
Acetaldehyde	Inhalation of Indoor Air	3.99E-2	2.42E-2	9.4	14.54	8.65E-3	3.4	14.54	2.07E-3	1.59E-5	16.68	7.41E-4	5.71E-6	16.68
Acetaldehyde	Inhalation of Outdoor Air	3.99E-2	6.37E-3	2.5	3.83	2.27E-3	0.89	3.83	5.46E-4	4.20E-6	4.39	1.95E-4	1.50E-6	4.39
Acetonitrile	Inhalation of Indoor Air	8.37E-2	5.08E-2	3.0	4.58	1.81E-2	1.1	4.58	4.35E-3			1.55E-3		
Acetonitrile	Inhalation of Outdoor Air	8.37E-2	1.33E-2	0.78	1.20	4.77E-3	0.28	1.20	1.14E-3			4.09E-4		
Acrolein	Inhalation of Indoor Air	2.58E-4	1.56E-4	27.5	42.37	5.60E-5	9.8	42.37	1.34E-5			4.80E-6		
Acrolein	Inhalation of Outdoor Air	2.58E-4	4.12E-5	7.2	11.15	1.47E-5	2.6	11.15	3.53E-6			1.26E-6		
Acrylonitrile	Inhalation of Indoor Air	2.72E-4	1.65E-4	0.29	0.45	5.90E-5	0.10	0.45	1.41E-5	3.37E-6	3.52	5.06E-6	1.20E-6	3.52
Acrylonitrile	Inhalation of Outdoor Air	2.72E-4	4.35E-5	0.08	0.12	1.55E-5	0.03	0.12	3.73E-6	8.88E-7	0.93	1.33E-6	3.17E-7	0.93
Antimony	Inhalation of Indoor Air	6.77E-6	4.11E-6	0.36	0.56	1.47E-6	0.13	0.56	3.52E-7			1.26E-7		
Antimony	Inhalation of Outdoor Air	6.77E-6	1.08E-6	0.09	0.15	3.86E-7	0.03	0.15	9.28E-8			3.31E-8		
Arsenic	Inhalation of Indoor Air	2.56E-6	1.55E-6			5.56E-7			1.33E-7	2.01E-6	2.10	4.77E-8	7.18E-7	2.10
Arsenic	Inhalation of Outdoor Air	2.56E-6	4.10E-7			1.46E-7			3.51E-8	5.29E-7	0.55	1.25E-8	1.88E-7	0.55
Benzene	Inhalation of Indoor Air	1.99E-3	1.21E-3	0.07	0.11	4.33E-4	0.03	0.11	1.04E-4	3.02E-6	3.15	3.71E-5	1.07E-6	3.15
Benzene	Inhalation of Outdoor Air	1.99E-3	3.19E-4	0.02	0.03	1.14E-4	<0.01	0.03	2.73E-5	7.95E-7	0.83	9.78E-6	2.84E-7	0.83
Beryllium	Inhalation of Indoor Air	1.68E-7	1.02E-7	<0.01	0.00	3.64E-8	<0.01	0.00	8.75E-9	7.35E-8	0.08	3.12E-9	2.62E-8	0.08
Beryllium	Inhalation of Outdoor Air	1.68E-7	2.68E-8	<0.01	0.00	9.59E-9	<0.01	0.00	2.30E-9	1.93E-8	0.02	8.22E-10	6.90E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.82E-5	2.32E-5	<0.01	0.01	8.29E-6	<0.01	0.01	1.99E-6	1.67E-8	0.02	7.10E-7	5.97E-9	0.02
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.82E-5	6.10E-6	<0.01	0.00	2.18E-6	<0.01	0.00	5.23E-7	4.39E-9	0.00	1.87E-7	1.57E-9	0.00
Bromomethane	Inhalation of Indoor Air	1.19E-4	7.24E-5	0.05	0.08	2.58E-5	0.02	0.08	6.20E-6			2.21E-6		
Bromomethane	Inhalation of Outdoor Air	1.19E-4	1.90E-5	0.01	0.02	6.80E-6	<0.01	0.02	1.63E-6			5.83E-7		
Cadmium	Inhalation of Indoor Air	9.48E-7	5.76E-7	0.02	0.03	2.05E-7	<0.01	0.03	4.93E-8	3.11E-7	0.32	1.76E-8	1.11E-7	0.32
Cadmium	Inhalation of Outdoor Air	9.48E-7	1.51E-7	<0.01	0.01	5.41E-8	<0.01	0.01	1.29E-8	8.18E-8	0.09	4.64E-9	2.92E-8	0.09
Carbon Tetrachloride	Inhalation of Indoor Air	6.91E-4	4.19E-4	0.73	1.13	1.49E-4	0.26	1.13	3.59E-5	1.88E-6	1.97	1.28E-5	6.74E-7	1.97
Carbon Tetrachloride	Inhalation of Outdoor Air	6.91E-4	1.10E-4	0.19	0.30	3.94E-5	0.07	0.30	9.47E-6	4.97E-7	0.52	3.38E-6	1.77E-7	0.52

Table C-34
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chlorobenzene	Inhalation of Indoor Air	2.79E-4	1.69E-4	0.03	0.05	6.06E-5	0.01	0.05	1.45E-5			5.19E-6		
Chlorobenzene	Inhalation of Outdoor Air	2.79E-4	4.46E-5	<0.01	0.01	1.59E-5	<0.01	0.01	3.82E-6			1.36E-6		
Chloroethane	Inhalation of Indoor Air	1.34E-4	8.18E-5	<0.01	0.00	2.92E-5	<0.01	0.00	7.01E-6			2.50E-6		
Chloroethane	Inhalation of Outdoor Air	1.34E-4	2.15E-5	<0.01	0.00	7.69E-6	<0.01	0.00	1.84E-6			6.59E-7		
Chloroform	Inhalation of Indoor Air	1.63E-4	9.90E-5	<0.01	0.00	3.53E-5	<0.01	0.00	8.48E-6	6.83E-7	0.71	3.03E-6	2.44E-7	0.71
Chloroform	Inhalation of Outdoor Air	1.63E-4	2.60E-5	<0.01	0.00	9.30E-6	<0.01	0.00	2.23E-6	1.79E-7	0.19	7.97E-7	6.42E-8	0.19
Chloromethane	Inhalation of Indoor Air	1.67E-3	1.01E-3	0.01	0.02	3.62E-4	<0.01	0.02	8.70E-5	5.48E-7	0.57	3.10E-5	1.95E-7	0.57
Chloromethane	Inhalation of Outdoor Air	1.67E-3	2.67E-4	<0.01	0.00	9.54E-5	<0.01	0.00	2.28E-5	1.44E-7	0.15	8.17E-6	5.15E-8	0.15
Cumene	Inhalation of Indoor Air	1.96E-4	1.19E-4	<0.01	0.00	4.25E-5	<0.01	0.00	1.02E-5			3.64E-6		
Cumene	Inhalation of Outdoor Air	1.96E-4	3.13E-5	<0.01	0.00	1.11E-5	<0.01	0.00	2.68E-6			9.59E-7		
Dichlorodifluoromethane	Inhalation of Indoor Air	2.85E-3	1.73E-3	0.03	0.05	6.19E-4	0.01	0.05	1.48E-4			5.30E-5		
Dichlorodifluoromethane	Inhalation of Outdoor Air	2.85E-3	4.56E-4	<0.01	0.01	1.63E-4	<0.01	0.01	3.91E-5			1.39E-5		
Dieldrin	Inhalation of Indoor Air	1.92E-7	1.16E-7			4.17E-8			1.00E-8	1.61E-7	0.17	3.57E-9	5.75E-8	0.17
Dieldrin	Inhalation of Outdoor Air	1.92E-7	3.07E-8			1.09E-8			2.63E-9	4.24E-8	0.04	9.41E-10	1.51E-8	0.04
Ethylbenzene	Inhalation of Indoor Air	3.16E-3	1.92E-3	<0.01	0.01	6.86E-4	<0.01	0.01	1.64E-4	6.34E-7	0.66	5.88E-5	2.26E-7	0.66
Ethylbenzene	Inhalation of Outdoor Air	3.16E-3	5.05E-4	<0.01	0.00	1.80E-4	<0.01	0.00	4.33E-5	1.66E-7	0.17	1.54E-5	5.96E-8	0.17
Formaldehyde	Inhalation of Indoor Air	8.58E-4	5.21E-4	0.61	0.94	1.86E-4	0.22	0.94	4.46E-5	2.03E-6	2.12	1.59E-5	7.26E-7	2.12
Formaldehyde	Inhalation of Outdoor Air	8.58E-4	1.37E-4	0.16	0.25	4.90E-5	0.06	0.25	1.17E-5	5.35E-7	0.56	4.20E-6	1.91E-7	0.56
Freon 113	Inhalation of Indoor Air	7.70E-4	4.68E-4	<0.01	0.00	1.67E-4	<0.01	0.00	4.01E-5			1.43E-5		
Freon 113	Inhalation of Outdoor Air	7.70E-4	1.23E-4	<0.01	0.00	4.39E-5	<0.01	0.00	1.05E-5			3.77E-6		
gamma-BHC	Inhalation of Indoor Air	2.96E-7	1.80E-7			6.43E-8			1.54E-8	1.69E-8	0.02	5.51E-9	6.06E-9	0.02
gamma-BHC	Inhalation of Outdoor Air	2.96E-7	4.74E-8			1.69E-8			4.06E-9	4.47E-9	0.00	1.45E-9	1.59E-9	0.00
Halocarbon 134A	Inhalation of Indoor Air	1.31E-4	7.96E-5	<0.01	0.00	2.84E-5	<0.01	0.00	6.82E-6			2.43E-6		
Halocarbon 134A	Inhalation of Outdoor Air	1.31E-4	2.09E-5	<0.01	0.00	7.48E-6	<0.01	0.00	1.79E-6			6.41E-7		
Heptachlor epoxide	Inhalation of Indoor Air	2.68E-7	1.62E-7			5.81E-8			1.39E-8	1.27E-7	0.13	4.98E-9	4.53E-8	0.13
Heptachlor epoxide	Inhalation of Outdoor Air	2.68E-7	4.28E-8			1.53E-8			3.67E-9	3.34E-8	0.03	1.31E-9	1.19E-8	0.03
Heptachlor	Inhalation of Indoor Air	3.75E-7	2.27E-7			8.13E-8			1.95E-8	8.88E-8	0.09	6.97E-9	3.17E-8	0.09

Table C-34
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Heptachlor	Inhalation of Outdoor Air	3.75E-7	5.99E-8		2.14E-8		5.13E-9	2.33E-8	0.02	1.83E-9	8.35E-9	0.02		
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.34E-4	5.06E-4		1.80E-4		4.34E-5	3.34E-6	3.49	1.55E-5	1.19E-6	3.49		
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.34E-4	1.33E-4		4.76E-5		1.14E-5	8.79E-7	0.92	4.08E-6	3.14E-7	0.92		
Hydrochloric Acid	Inhalation of Indoor Air	1.75E-3	1.06E-3	0.19	0.29	3.81E-4	0.07	0.29		9.15E-5		3.26E-5		
Hydrochloric Acid	Inhalation of Outdoor Air	1.75E-3	2.80E-4	0.05	0.08	1.00E-4	0.02	0.08		2.40E-5		8.60E-6		
Mercury	Inhalation of Indoor Air	5.74E-6	3.48E-6	0.04	0.06	1.24E-6	0.01	0.06		2.99E-7		1.06E-7		
Mercury	Inhalation of Outdoor Air	5.74E-6	9.18E-7	0.01	0.02	3.27E-7	<0.01	0.02		7.87E-8		2.81E-8		
Methylcyclohexane	Inhalation of Indoor Air	6.45E-5	3.91E-5	<0.01	0.00	1.39E-5	<0.01	0.00		3.35E-6		1.19E-6		
Methylcyclohexane	Inhalation of Outdoor Air	6.45E-5	1.03E-5	<0.01	0.00	3.68E-6	<0.01	0.00		8.83E-7		3.15E-7		
Methylene Chloride	Inhalation of Indoor Air	4.00E-3	2.42E-3	<0.01	0.00	8.67E-4	<0.01	0.00		2.08E-4	3.42E-7	0.36		
Methylene Chloride	Inhalation of Outdoor Air	4.00E-3	6.39E-4	<0.01	0.00	2.28E-4	<0.01	0.00		5.48E-5	9.01E-8	0.09		
Methylisobutylketone	Inhalation of Indoor Air	2.25E-3	1.37E-3	0.06	0.09	4.89E-4	0.02	0.09		1.17E-4		4.19E-5		
Methylisobutylketone	Inhalation of Outdoor Air	2.25E-3	3.60E-4	0.02	0.02	1.28E-4	<0.01	0.02		3.09E-5		1.10E-5		
n-Hexane	Inhalation of Indoor Air	1.13E-3	6.87E-4	0.01	0.02	2.45E-4	<0.01	0.02		5.89E-5		2.10E-5		
n-Hexane	Inhalation of Outdoor Air	1.13E-3	1.80E-4	<0.01	0.00	6.46E-5	<0.01	0.00		1.55E-5		5.53E-6		
Naphthalene	Inhalation of Indoor Air	2.70E-4	1.64E-4	0.19	0.30	5.85E-5	0.07	0.30		1.40E-5		5.02E-6		
Naphthalene	Inhalation of Outdoor Air	2.70E-4	4.31E-5	0.05	0.08	1.54E-5	0.02	0.08		3.69E-6		1.32E-6		
Nickel	Inhalation of Indoor Air	1.12E-5	6.84E-6	0.48	0.74	2.44E-6	0.17	0.74		5.86E-7	5.34E-7	0.56		
Nickel	Inhalation of Outdoor Air	1.12E-5	1.80E-6	0.13	0.19	6.43E-7	0.05	0.19		1.54E-7	1.40E-7	0.15		
Phenol	Inhalation of Indoor Air	9.68E-5	5.87E-5	<0.01	0.00	2.09E-5	<0.01	0.00		5.03E-6		1.79E-6		
Phenol	Inhalation of Outdoor Air	9.68E-5	1.54E-5	<0.01	0.00	5.52E-6	<0.01	0.00		1.32E-6		4.73E-7		
PM-10	Inhalation of Indoor Air	1.25E-1	7.60E-2	5.3	8.22	2.71E-2	1.9	8.22		6.51E-3		2.32E-3		
PM-10	Inhalation of Outdoor Air	1.25E-1	2.00E-2	1.4	2.16	7.14E-3	0.50	2.16		1.71E-3		6.12E-4		
Propylene	Inhalation of Indoor Air	1.46E-3	8.91E-4	<0.01	0.00	3.18E-4	<0.01	0.00		7.64E-5		2.72E-5		
Propylene	Inhalation of Outdoor Air	1.46E-3	2.34E-4	<0.01	0.00	8.37E-5	<0.01	0.00		2.01E-5		7.18E-6		
Styrene	Inhalation of Indoor Air	6.86E-4	4.16E-4	<0.01	0.00	1.48E-4	<0.01	0.00		3.57E-5		1.27E-5		
Styrene	Inhalation of Outdoor Air	6.86E-4	1.09E-4	<0.01	0.00	3.91E-5	<0.01	0.00		9.39E-6		3.35E-6		

Table C-34
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m ³	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Tetrachloroethylene	Inhalation of Indoor Air	8.49E-4	5.16E-4			1.84E-4			4.42E-5	8.97E-8	0.09	1.57E-5	3.20E-8	0.09
Tetrachloroethylene	Inhalation of Outdoor Air	8.49E-4	1.35E-4			4.84E-5			1.16E-5	2.36E-8	0.02	4.15E-6	8.43E-9	0.02
Toluene	Inhalation of Indoor Air	9.84E-3	5.98E-3	0.05	0.08	2.13E-3	0.02	0.08	5.12E-4			1.83E-4		
Toluene	Inhalation of Outdoor Air	9.84E-3	1.57E-3	0.01	0.02	5.62E-4	<0.01	0.02	1.34E-4			4.81E-5		
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Indoor Air	1.11E-9	6.80E-10			2.42E-10			5.82E-11	8.74E-6	9.12	2.08E-11	3.12E-6	9.12
Total Dioxin/Furans (2,3,7,8-T	Inhalation of Outdoor Air	1.11E-9	1.78E-10			6.39E-11			1.53E-11	2.30E-6	2.40	5.47E-12	8.21E-7	2.40
Trichloroethylene	Inhalation of Indoor Air	1.00E-3	6.13E-4			2.18E-4			5.25E-5	3.12E-7	0.33	1.87E-5	1.11E-7	0.33
Trichloroethylene	Inhalation of Outdoor Air	1.00E-3	1.61E-4			5.76E-5			1.38E-5	8.22E-8	0.09	4.93E-6	2.93E-8	0.09
Trichlorofluoromethane	Inhalation of Indoor Air	2.40E-3	1.46E-3	<0.01	0.01	5.22E-4	<0.01	0.01	1.25E-4			4.47E-5		
Trichlorofluoromethane	Inhalation of Outdoor Air	2.40E-3	3.84E-4	<0.01	0.00	1.37E-4	<0.01	0.00	3.29E-5			1.17E-5		
Vinyl Acetate	Inhalation of Indoor Air	8.14E-3	4.94E-3	0.09	0.13	1.76E-3	0.03	0.13	4.23E-4			1.51E-4		
Vinyl Acetate	Inhalation of Outdoor Air	8.14E-3	1.30E-3	0.02	0.04	4.64E-4	<0.01	0.04	1.11E-4			3.98E-5		
Total Risk:				64.80	100.0		23.14	100.0		9.58E-5	100.0		3.42E-5	100.0

Table C-35
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 30 years			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,1,1-Trichloroethane	Inhalation of Indoor Air	7.02E-4	--	--	--	2.07E-4	<0.01	0.00	--	--	--	8.87E-5		
1,1,1-Trichloroethane	Inhalation of Outdoor Air	7.02E-4	--	--	--	5.45E-5	<0.01	0.00	--	--	--	2.33E-5		
1,1,2,2-Tetrachloroethane	Inhalation of Indoor Air	5.79E-4	--	--	--	1.70E-4			--	--	--	7.32E-5	1.48E-5	6.38
1,1,2,2-Tetrachloroethane	Inhalation of Outdoor Air	5.79E-4	--	--	--	4.49E-5			--	--	--	1.92E-5	3.91E-6	1.68
1,1,2-Trichloroethane	Inhalation of Indoor Air	1.08E-4	--	--	--	3.21E-5			--	--	--	1.37E-5	7.70E-7	0.33
1,1,2-Trichloroethane	Inhalation of Outdoor Air	1.08E-4	--	--	--	8.45E-6			--	--	--	3.62E-6	2.02E-7	0.09
1,2,4-Trichlorobenzene	Inhalation of Indoor Air	8.75E-4	--	--	--	2.58E-4	<0.01	0.01	--	--	--	1.10E-4		
1,2,4-Trichlorobenzene	Inhalation of Outdoor Air	8.75E-4	--	--	--	6.79E-5	<0.01	0.00	--	--	--	2.91E-5		
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	1.08E-3	--	--	--	3.20E-4	0.19	0.59	--	--	--	1.37E-4		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	1.08E-3	--	--	--	8.42E-5	0.05	0.16	--	--	--	3.61E-5		
1,2-Dibromoethane	Inhalation of Indoor Air	2.11E-4	--	--	--	6.23E-5	1.1	3.46	--	--	--	2.67E-5	2.05E-5	8.83
1,2-Dibromoethane	Inhalation of Outdoor Air	2.11E-4	--	--	--	1.63E-5	0.29	0.91	--	--	--	7.02E-6	5.41E-6	2.32
1,2-Dichlorobenzene	Inhalation of Indoor Air	2.96E-4	--	--	--	8.74E-5	<0.01	0.00	--	--	--	3.74E-5		
1,2-Dichlorobenzene	Inhalation of Outdoor Air	2.96E-4	--	--	--	2.30E-5	<0.01	0.00	--	--	--	9.86E-6		
1,2-Dichloroethane	Inhalation of Indoor Air	1.45E-4	--	--	--	4.29E-5			--	--	--	1.83E-5	1.67E-6	0.72
1,2-Dichloroethane	Inhalation of Outdoor Air	1.45E-4	--	--	--	1.12E-5			--	--	--	4.83E-6	4.40E-7	0.19
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	3.26E-4	--	--	--	9.62E-5	0.06	0.18	--	--	--	4.12E-5		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	3.26E-4	--	--	--	2.53E-5	0.01	0.05	--	--	--	1.08E-5		
1,3-Butadiene	Inhalation of Indoor Air	2.45E-4	--	--	--	7.24E-5			--	--	--	3.10E-5	3.04E-5	13.07
1,3-Butadiene	Inhalation of Outdoor Air	2.45E-4	--	--	--	1.90E-5			--	--	--	8.17E-6	8.00E-6	3.44
1,4-Dichlorobenzene	Inhalation of Indoor Air	8.59E-4	--	--	--	2.53E-4	<0.01	0.00	--	--	--	1.08E-4	4.34E-6	1.87
1,4-Dichlorobenzene	Inhalation of Outdoor Air	8.59E-4	--	--	--	6.67E-5	<0.01	0.00	--	--	--	2.85E-5	1.14E-6	0.49
1,4-Dioxane	Inhalation of Indoor Air	1.16E-3	--	--	--	3.43E-4	<0.01	0.00	--	--	--	1.47E-4	3.97E-6	1.71
1,4-Dioxane	Inhalation of Outdoor Air	1.16E-3	--	--	--	9.04E-5	<0.01	0.00	--	--	--	3.87E-5	1.04E-6	0.45
2-Butanone	Inhalation of Indoor Air	6.20E-3	--	--	--	1.83E-3	<0.01	0.02	--	--	--	7.84E-4		
2-Butanone	Inhalation of Outdoor Air	6.20E-3	--	--	--	4.81E-4	<0.01	0.01	--	--	--	2.06E-4		
2-Propanol	Inhalation of Indoor Air	2.03E-2	--	--	--	5.99E-3	<0.01	0.01	--	--	--	2.56E-3		

Table C-35
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
2-Propanol	Inhalation of Outdoor Air	2.03E-2	--	--	--	1.57E-3	<0.01	0.00	--	--	--	6.76E-4		
4,4'-DDT	Inhalation of Indoor Air	2.59E-7	--	--	--	7.65E-8	--	--	--	3.28E-8	1.11E-8	0.00		
4,4'-DDT	Inhalation of Outdoor Air	2.59E-7	--	--	--	2.01E-8	--	--	--	8.63E-9	2.93E-9	0.00		
Acetaldehyde	Inhalation of Indoor Air	3.99E-2	--	--	--	1.17E-2	4.6	14.54	--	--	--	5.04E-3 3.88E-5 16.68		
Acetaldehyde	Inhalation of Outdoor Air	3.99E-2	--	--	--	3.09E-3	1.2	3.83	--	--	--	1.32E-3 1.02E-5 4.39		
Acetonitrile	Inhalation of Indoor Air	8.37E-2	--	--	--	2.46E-2	1.4	4.58	--	--	--	1.05E-2		
Acetonitrile	Inhalation of Outdoor Air	8.37E-2	--	--	--	6.49E-3	0.38	1.20	--	--	--	2.78E-3		
Acrolein	Inhalation of Indoor Air	2.58E-4	--	--	--	7.62E-5	13.3	42.37	--	--	--	3.26E-5		
Acrolein	Inhalation of Outdoor Air	2.58E-4	--	--	--	2.00E-5	3.5	11.15	--	--	--	8.59E-6		
Acrylonitrile	Inhalation of Indoor Air	2.72E-4	--	--	--	8.03E-5	0.14	0.45	--	--	--	3.44E-5 8.19E-6 3.52		
Acrylonitrile	Inhalation of Outdoor Air	2.72E-4	--	--	--	2.11E-5	0.04	0.12	--	--	--	9.06E-6 2.15E-6 0.93		
Antimony	Inhalation of Indoor Air	6.77E-6	--	--	--	1.99E-6	0.17	0.56	--	--	--	8.57E-7		
Antimony	Inhalation of Outdoor Air	6.77E-6	--	--	--	5.26E-7	0.05	0.15	--	--	--	2.25E-7		
Arsenic	Inhalation of Indoor Air	2.56E-6	--	--	--	7.57E-7	--	--	--	3.24E-7	4.88E-6	2.10		
Arsenic	Inhalation of Outdoor Air	2.56E-6	--	--	--	1.99E-7	--	--	--	8.53E-8	1.28E-6	0.55		
Benzene	Inhalation of Indoor Air	1.99E-3	--	--	--	5.89E-4	0.03	0.11	--	--	--	2.52E-4 7.34E-6 3.15		
Benzene	Inhalation of Outdoor Air	1.99E-3	--	--	--	1.55E-4	<0.01	0.03	--	--	--	6.65E-5 1.93E-6 0.83		
Beryllium	Inhalation of Indoor Air	1.68E-7	--	--	--	4.95E-8	<0.01	0.00	--	--	--	2.12E-8 1.78E-7 0.08		
Beryllium	Inhalation of Outdoor Air	1.68E-7	--	--	--	1.30E-8	<0.01	0.00	--	--	--	5.59E-9 4.69E-8 0.02		
bis(2-Ethylhexyl)phthalate	Inhalation of Indoor Air	3.82E-5	--	--	--	1.12E-5	<0.01	0.01	--	--	--	4.83E-6 4.05E-8 0.02		
bis(2-Ethylhexyl)phthalate	Inhalation of Outdoor Air	3.82E-5	--	--	--	2.96E-6	<0.01	0.00	--	--	--	1.27E-6 1.06E-8 0.00		
Bromomethane	Inhalation of Indoor Air	1.19E-4	--	--	--	3.51E-5	0.02	0.08	--	--	--	1.50E-5		
Bromomethane	Inhalation of Outdoor Air	1.19E-4	--	--	--	9.25E-6	<0.01	0.02	--	--	--	3.96E-6		
Cadmium	Inhalation of Indoor Air	9.48E-7	--	--	--	2.79E-7	0.01	0.03	--	--	--	1.19E-7 7.55E-7 0.32		
Cadmium	Inhalation of Outdoor Air	9.48E-7	--	--	--	7.36E-8	<0.01	0.01	--	--	--	3.15E-8 1.98E-7 0.09		
Carbon Tetrachloride	Inhalation of Indoor Air	6.91E-4	--	--	--	2.03E-4	0.36	1.13	--	--	--	8.73E-5 4.58E-6 1.97		
Carbon Tetrachloride	Inhalation of Outdoor Air	6.91E-4	--	--	--	5.36E-5	0.09	0.30	--	--	--	2.29E-5 1.20E-6 0.52		

Table C-35
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Chlorobenzene	Inhalation of Indoor Air	2.79E-4	--	--	--	8.24E-5	0.01	0.05	--	--	--	3.53E-5	--	--
Chlorobenzene	Inhalation of Outdoor Air	2.79E-4	--	--	--	2.17E-5	<0.01	0.01	--	--	--	9.30E-6	--	--
Chloroethane	Inhalation of Indoor Air	1.34E-4	--	--	--	3.97E-5	<0.01	0.00	--	--	--	1.70E-5	--	--
Chloroethane	Inhalation of Outdoor Air	1.34E-4	--	--	--	1.04E-5	<0.01	0.00	--	--	--	4.48E-6	--	--
Chloroform	Inhalation of Indoor Air	1.63E-4	--	--	--	4.81E-5	<0.01	0.00	--	--	--	2.06E-5	1.65E-6	0.71
Chloroform	Inhalation of Outdoor Air	1.63E-4	--	--	--	1.26E-5	<0.01	0.00	--	--	--	5.42E-6	4.36E-7	0.19
Chloromethane	Inhalation of Indoor Air	1.67E-3	--	--	--	4.93E-4	<0.01	0.02	--	--	--	2.11E-4	1.33E-6	0.57
Chloromethane	Inhalation of Outdoor Air	1.67E-3	--	--	--	1.29E-4	<0.01	0.00	--	--	--	5.56E-5	3.50E-7	0.15
Cumene	Inhalation of Indoor Air	1.96E-4	--	--	--	5.78E-5	<0.01	0.00	--	--	--	2.48E-5	--	--
Cumene	Inhalation of Outdoor Air	1.96E-4	--	--	--	1.52E-5	<0.01	0.00	--	--	--	6.52E-6	--	--
Dichlorodifluoromethane	Inhalation of Indoor Air	2.85E-3	--	--	--	8.42E-4	0.01	0.05	--	--	--	3.61E-4	--	--
Dichlorodifluoromethane	Inhalation of Outdoor Air	2.85E-3	--	--	--	2.21E-4	<0.01	0.01	--	--	--	9.50E-5	--	--
Dieldrin	Inhalation of Indoor Air	1.92E-7	--	--	--	5.67E-8	--	--	--	--	--	2.43E-8	3.91E-7	0.17
Dieldrin	Inhalation of Outdoor Air	1.92E-7	--	--	--	1.49E-8	--	--	--	--	--	6.40E-9	1.03E-7	0.04
Ethylbenzene	Inhalation of Indoor Air	3.16E-3	--	--	--	9.33E-4	<0.01	0.01	--	--	--	4.00E-4	1.54E-6	0.66
Ethylbenzene	Inhalation of Outdoor Air	3.16E-3	--	--	--	2.45E-4	<0.01	0.00	--	--	--	1.05E-4	4.05E-7	0.17
Formaldehyde	Inhalation of Indoor Air	8.58E-4	--	--	--	2.53E-4	0.30	0.94	--	--	--	1.08E-4	4.93E-6	2.12
Formaldehyde	Inhalation of Outdoor Air	8.58E-4	--	--	--	6.66E-5	0.08	0.25	--	--	--	2.85E-5	1.29E-6	0.56
Freon 113	Inhalation of Indoor Air	7.70E-4	--	--	--	2.27E-4	<0.01	0.00	--	--	--	9.74E-5	--	--
Freon 113	Inhalation of Outdoor Air	7.70E-4	--	--	--	5.98E-5	<0.01	0.00	--	--	--	2.56E-5	--	--
gamma-BHC	Inhalation of Indoor Air	2.96E-7	--	--	--	8.75E-8	--	--	--	--	--	3.75E-8	4.12E-8	0.02
gamma-BHC	Inhalation of Outdoor Air	2.96E-7	--	--	--	2.30E-8	--	--	--	--	--	9.87E-9	1.08E-8	0.00
Halocarbon 134A	Inhalation of Indoor Air	1.31E-4	--	--	--	3.86E-5	<0.01	0.00	--	--	--	1.65E-5	--	--
Halocarbon 134A	Inhalation of Outdoor Air	1.31E-4	--	--	--	1.01E-5	<0.01	0.00	--	--	--	4.36E-6	--	--
Heptachlor epoxide	Inhalation of Indoor Air	2.68E-7	--	--	--	7.90E-8	--	--	--	--	--	3.38E-8	3.08E-7	0.13
Heptachlor epoxide	Inhalation of Outdoor Air	2.68E-7	--	--	--	2.08E-8	--	--	--	--	--	8.91E-9	8.11E-8	0.03
Heptachlor	Inhalation of Indoor Air	3.75E-7	--	--	--	1.10E-7	--	--	--	--	--	4.74E-8	2.15E-7	0.09

Table C-35
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Heptachlor	Inhalation of Outdoor Air	3.75E-7	--		2.91E-8		--	--	--	1.24E-8	5.67E-8	0.02		
Hexachloro-1,3-Butadiene	Inhalation of Indoor Air	8.34E-4	--		2.46E-4		--	--	--	1.05E-4	8.12E-6	3.49		
Hexachloro-1,3-Butadiene	Inhalation of Outdoor Air	8.34E-4	--		6.47E-5		--	--	--	2.77E-5	2.13E-6	0.92		
Hydrochloric Acid	Inhalation of Indoor Air	1.75E-3	--	--	5.18E-4	0.09	0.29	--		2.22E-4				
Hydrochloric Acid	Inhalation of Outdoor Air	1.75E-3	--	--	1.36E-4	0.02	0.08	--		5.84E-5				
Mercury	Inhalation of Indoor Air	5.74E-6	--	--	1.69E-6	0.02	0.06	--		7.26E-7				
Mercury	Inhalation of Outdoor Air	5.74E-6	--	--	4.46E-7	<0.01	0.02	--		1.91E-7				
Methylcyclohexane	Inhalation of Indoor Air	6.45E-5	--	--	1.90E-5	<0.01	0.00	--		8.15E-6				
Methylcyclohexane	Inhalation of Outdoor Air	6.45E-5	--	--	5.00E-6	<0.01	0.00	--		2.14E-6				
Methylene Chloride	Inhalation of Indoor Air	4.00E-3	--	--	1.18E-3	<0.01	0.00	--	--	5.05E-4	8.32E-7	0.36		
Methylene Chloride	Inhalation of Outdoor Air	4.00E-3	--	--	3.10E-4	<0.01	0.00	--	--	1.33E-4	2.18E-7	0.09		
Methylisobutylketone	Inhalation of Indoor Air	2.25E-3	--	--	6.65E-4	0.03	0.09	--		2.85E-4				
Methylisobutylketone	Inhalation of Outdoor Air	2.25E-3	--	--	1.75E-4	<0.01	0.02	--		7.51E-5				
n-Hexane	Inhalation of Indoor Air	1.13E-3	--	--	3.33E-4	<0.01	0.02	--		1.43E-4				
n-Hexane	Inhalation of Outdoor Air	1.13E-3	--	--	8.78E-5	<0.01	0.00	--		3.76E-5				
Naphthalene	Inhalation of Indoor Air	2.70E-4	--	--	7.96E-5	0.09	0.30	--		3.41E-5				
Naphthalene	Inhalation of Outdoor Air	2.70E-4	--	--	2.09E-5	0.02	0.08	--		8.98E-6				
Nickel	Inhalation of Indoor Air	1.12E-5	--	--	3.32E-6	0.23	0.74	--	--	1.42E-6	1.29E-6	0.56		
Nickel	Inhalation of Outdoor Air	1.12E-5	--	--	8.75E-7	0.06	0.19	--	--	3.75E-7	3.41E-7	0.15		
Phenol	Inhalation of Indoor Air	9.68E-5	--	--	2.85E-5	<0.01	0.00	--		1.22E-5				
Phenol	Inhalation of Outdoor Air	9.68E-5	--	--	7.51E-6	<0.01	0.00	--		3.22E-6				
PM-10	Inhalation of Indoor Air	1.25E-1	--	--	3.69E-2	2.6	8.22	--		1.58E-2				
PM-10	Inhalation of Outdoor Air	1.25E-1	--	--	9.71E-3	0.68	2.16	--		4.16E-3				
Propylene	Inhalation of Indoor Air	1.46E-3	--	--	4.32E-4	<0.01	0.00	--		1.85E-4				
Propylene	Inhalation of Outdoor Air	1.46E-3	--	--	1.13E-4	<0.01	0.00	--		4.88E-5				
Styrene	Inhalation of Indoor Air	6.86E-4	--	--	2.02E-4	<0.01	0.00	--		8.67E-5				
Styrene	Inhalation of Outdoor Air	6.86E-4	--	--	5.32E-5	<0.01	0.00	--		2.28E-5				

Table C-35
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - Average Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m ³	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Tetrachloroethylene	Inhalation of Indoor Air	8.49E-4	--		2.50E-4		--	--	--	1.07E-4	2.18E-7	0.09		
Tetrachloroethylene	Inhalation of Outdoor Air	8.49E-4	--		6.59E-5		--	--	--	2.82E-5	5.73E-8	0.02		
Toluene	Inhalation of Indoor Air	9.84E-3	--	--	2.90E-3	0.03	0.08	--		1.24E-3				
Toluene	Inhalation of Outdoor Air	9.84E-3	--	--	7.64E-4	<0.01	0.02	--		3.27E-4				
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	1.11E-9	--		3.30E-10		--	--	--	1.41E-10	2.12E-5	9.12		
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	1.11E-9	--		8.69E-11		--	--	--	3.72E-11	5.58E-6	2.40		
Trichloroethylene	Inhalation of Indoor Air	1.00E-3	--		2.97E-4		--	--	--	1.27E-4	7.59E-7	0.33		
Trichloroethylene	Inhalation of Outdoor Air	1.00E-3	--		7.83E-5		--	--	--	3.35E-5	1.99E-7	0.09		
Trichlorofluoromethane	Inhalation of Indoor Air	2.40E-3	--	--	7.10E-4	<0.01	0.01	--		3.04E-4				
Trichlorofluoromethane	Inhalation of Outdoor Air	2.40E-3	--	--	1.86E-4	<0.01	0.00	--		8.01E-5				
Vinyl Acetate	Inhalation of Indoor Air	8.14E-3	--	--	2.40E-3	0.04	0.13	--		1.02E-3				
Vinyl Acetate	Inhalation of Outdoor Air	8.14E-3	--	--	6.32E-4	0.01	0.04	--		2.70E-4				
Total Risk:			--	--	31.48	100.0	--	--	--	2.32E-4	100.0			

Table C-36
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 1 Tour of Duty (3 Years)			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	1.42E-3	8.64E-4	0.50	0.50	3.08E-4	0.18	0.50	3.70E-5			1.32E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	1.42E-3	2.27E-4	0.13	0.13	8.12E-5	0.05	0.13	9.74E-6			3.48E-6		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	4.41E-4	2.68E-4	0.16	0.16	9.57E-5	0.06	0.16	1.14E-5			4.10E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	4.41E-4	7.05E-5	0.04	0.04	2.52E-5	0.01	0.04	3.02E-6			1.08E-6		
2-Propanol	Inhalation of Indoor Air	4.00E-2	2.43E-2	0.01	0.01	8.69E-3	<0.01	0.01	1.04E-3			3.72E-4		
2-Propanol	Inhalation of Outdoor Air	4.00E-2	6.40E-3	<0.01	0.00	2.28E-3	<0.01	0.00	2.74E-4			9.80E-5		
Acetaldehyde	Inhalation of Indoor Air	7.93E-2	4.82E-2	18.7	18.70	1.72E-2	6.7	18.70	2.06E-3	1.59E-5	18.64	7.37E-4	5.68E-6	18.64
Acetaldehyde	Inhalation of Outdoor Air	7.93E-2	1.26E-2	4.9	4.92	4.53E-3	1.8	4.92	5.43E-4	4.18E-6	4.90	1.94E-4	1.49E-6	4.90
Acetonitrile	Inhalation of Indoor Air	2.19E-1	1.33E-1	7.8	7.77	4.76E-2	2.8	7.77	5.72E-3			2.04E-3		
Acetonitrile	Inhalation of Outdoor Air	2.19E-1	3.51E-2	2.0	2.04	1.25E-2	0.73	2.04	1.50E-3			5.37E-4		
Acrolein	Inhalation of Indoor Air	3.31E-4	2.01E-4	35.2	35.15	7.19E-5	12.6	35.15	8.62E-6			3.08E-6		
Acrolein	Inhalation of Outdoor Air	3.31E-4	5.29E-5	9.3	9.25	1.89E-5	3.3	9.25	2.27E-6			8.10E-7		
Acrylonitrile	Inhalation of Indoor Air	5.61E-4	3.40E-4	0.60	0.59	1.21E-4	0.21	0.59	1.46E-5	3.47E-6	4.07	5.21E-6	1.24E-6	4.07
Acrylonitrile	Inhalation of Outdoor Air	5.61E-4	8.96E-5	0.16	0.16	3.20E-5	0.06	0.16	3.84E-6	9.14E-7	1.07	1.37E-6	3.26E-7	1.07
Antimony (metallic)	Inhalation of Indoor Air	7.84E-6	4.76E-6	0.42	0.42	1.70E-6	0.15	0.42	2.04E-7			7.28E-8		
Antimony (metallic)	Inhalation of Outdoor Air	7.84E-6	1.25E-6	0.11	0.11	4.47E-7	0.04	0.11	5.36E-8			1.91E-8		
Arsenic (inorganic)	Inhalation of Indoor Air	5.77E-6	3.50E-6			1.25E-6			1.50E-7	2.26E-6	2.65	5.36E-8	8.07E-7	2.65
Arsenic (inorganic)	Inhalation of Outdoor Air	5.77E-6	9.22E-7			3.29E-7			3.95E-8	5.95E-7	0.70	1.41E-8	2.12E-7	0.70
Benzene	Inhalation of Indoor Air	3.00E-3	1.82E-3	0.11	0.11	6.51E-4	0.04	0.11	7.81E-5	2.26E-6	2.66	2.79E-5	8.10E-7	2.66
Benzene	Inhalation of Outdoor Air	3.00E-3	4.79E-4	0.03	0.03	1.71E-4	<0.01	0.03	2.05E-5	5.97E-7	0.70	7.34E-6	2.13E-7	0.70
Beryllium	Inhalation of Indoor Air	3.05E-7	1.85E-7	<0.01	0.00	6.63E-8	<0.01	0.00	7.95E-9	6.68E-8	0.08	2.84E-9	2.38E-8	0.08
Beryllium	Inhalation of Outdoor Air	3.05E-7	4.88E-8	<0.01	0.00	1.74E-8	<0.01	0.00	2.09E-9	1.75E-8	0.02	7.47E-10	6.28E-9	0.02
Bis(2-ethylhexyl)Phthalate (DE	Inhalation of Indoor Air	7.20E-5	4.37E-5	0.02	0.02	1.56E-5	<0.01	0.02	1.87E-6	1.57E-8	0.02	6.69E-7	5.62E-9	0.02
Bis(2-ethylhexyl)Phthalate (DE	Inhalation of Outdoor Air	7.20E-5	1.15E-5	<0.01	0.00	4.10E-6	<0.01	0.00	4.93E-7	4.14E-9	0.00	1.76E-7	1.47E-9	0.00
Bromomethane	Inhalation of Indoor Air	1.54E-4	9.40E-5	0.07	0.07	3.35E-5	0.02	0.07	4.03E-6			1.43E-6		
Bromomethane	Inhalation of Outdoor Air	1.54E-4	2.47E-5	0.02	0.02	8.84E-6	<0.01	0.02	1.06E-6			3.78E-7		
Butadiene, 1,3-	Inhalation of Indoor Air	4.45E-4	2.70E-4			9.66E-5			1.15E-5	1.13E-5	13.31	4.14E-6	4.05E-6	13.31

Table C-36
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Butadiene, 1,3-	Inhalation of Outdoor Air	4.45E-4	7.12E-5		2.54E-5		3.05E-6	2.99E-6	3.50	1.08E-6	1.06E-6	3.50		
Cadmium (food)	Inhalation of Indoor Air	1.22E-6	7.40E-7	0.03 0.03	2.64E-7	0.01 0.03	3.17E-8	2.00E-7	0.23	1.13E-8	7.14E-8	0.23		
Cadmium (food)	Inhalation of Outdoor Air	1.22E-6	1.94E-7	<0.01 0.01	6.96E-8	<0.01 0.01	8.35E-9	5.26E-8	0.06	2.98E-9	1.88E-8	0.06		
Carbon Tetrachloride	Inhalation of Indoor Air	8.16E-4	4.95E-4	0.87 0.87	1.77E-4	0.31 0.87	2.12E-5	1.11E-6	1.31	7.58E-6	3.98E-7	1.31		
Carbon Tetrachloride	Inhalation of Outdoor Air	8.16E-4	1.30E-4	0.23 0.23	4.65E-5	0.08 0.23	5.58E-6	2.93E-7	0.34	1.99E-6	1.04E-7	0.34		
Chlorobenzene	Inhalation of Indoor Air	4.59E-4	2.79E-4	0.05 0.05	9.96E-5	0.02 0.05	1.19E-5			4.27E-6				
Chlorobenzene	Inhalation of Outdoor Air	4.59E-4	7.34E-5	0.01 0.01	2.62E-5	<0.01 0.01	3.14E-6			1.12E-6				
Chloroform	Inhalation of Indoor Air	2.29E-4	1.39E-4	<0.01 0.00	4.98E-5	<0.01 0.00	5.98E-6	4.81E-7	0.56	2.13E-6	1.71E-7	0.56		
Chloroform	Inhalation of Outdoor Air	2.29E-4	3.67E-5	<0.01 0.00	1.31E-5	<0.01 0.00	1.57E-6	1.26E-7	0.15	5.62E-7	4.52E-8	0.15		
Chloromethane	Inhalation of Indoor Air	1.99E-3	1.20E-3	0.01 0.01	4.31E-4	<0.01 0.01	5.18E-5	3.26E-7	0.38	1.85E-5	1.16E-7	0.38		
Chloromethane	Inhalation of Outdoor Air	1.99E-3	3.18E-4	<0.01 0.00	1.13E-4	<0.01 0.00	1.36E-5	8.59E-8	0.10	4.87E-6	3.06E-8	0.10		
Cumene	Inhalation of Indoor Air	1.96E-4	1.19E-4	<0.01 0.00	4.25E-5	<0.01 0.00	5.10E-6			1.82E-6				
Cumene	Inhalation of Outdoor Air	1.96E-4	3.13E-5	<0.01 0.00	1.11E-5	<0.01 0.00	1.34E-6			4.79E-7				
DDT (p,p'-Dichlorodiphenyltrich	Inhalation of Indoor Air	4.92E-7	2.98E-7		1.06E-7		1.28E-8	4.34E-9	0.01	4.57E-9	1.55E-9	0.01		
DDT (p,p'-Dichlorodiphenyltrich	Inhalation of Outdoor Air	4.92E-7	7.86E-8		2.80E-8		3.37E-9	1.14E-9	0.00	1.20E-9	4.08E-10	0.00		
Dibromoethane, 1,2-	Inhalation of Indoor Air	2.30E-4	1.39E-4	2.4 2.44	4.99E-5	0.87 2.44	5.98E-6	4.61E-6	5.40	2.13E-6	1.64E-6	5.40		
Dibromoethane, 1,2-	Inhalation of Outdoor Air	2.30E-4	3.67E-5	0.64 0.64	1.31E-5	0.23 0.64	1.57E-6	1.21E-6	1.42	5.62E-7	4.33E-7	1.42		
Dichlorobenzene, 1,2-	Inhalation of Indoor Air	6.60E-4	4.00E-4	<0.01 0.01	1.43E-4	<0.01 0.01	1.71E-5			6.13E-6				
Dichlorobenzene, 1,2-	Inhalation of Outdoor Air	6.60E-4	1.05E-4	<0.01 0.00	3.76E-5	<0.01 0.00	4.52E-6			1.61E-6				
Dichlorobenzene, 1,4-	Inhalation of Indoor Air	1.58E-3	9.59E-4	<0.01 0.00	3.42E-4	<0.01 0.00	4.11E-5	1.64E-6	1.93	1.46E-5	5.87E-7	1.93		
Dichlorobenzene, 1,4-	Inhalation of Outdoor Air	1.58E-3	2.52E-4	<0.01 0.00	9.01E-5	<0.01 0.00	1.08E-5	4.32E-7	0.51	3.86E-6	1.54E-7	0.51		
Dichlorodifluoromethane	Inhalation of Indoor Air	3.00E-3	1.82E-3	0.03 0.03	6.50E-4	0.01 0.03	7.80E-5			2.78E-5				
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.00E-3	4.79E-4	<0.01 0.01	1.71E-4	<0.01 0.01	2.05E-5			7.33E-6				
Dichloroethane, 1,2-	Inhalation of Indoor Air	1.61E-4	9.81E-5		3.50E-5		4.20E-6	3.82E-7	0.45	1.50E-6	1.36E-7	0.45		
Dichloroethane, 1,2-	Inhalation of Outdoor Air	1.61E-4	2.58E-5		9.22E-6		1.10E-6	1.00E-7	0.12	3.95E-7	3.59E-8	0.12		
Dichloromethane	Inhalation of Indoor Air	5.02E-3	3.05E-3	<0.01 0.00	1.08E-3	<0.01 0.00	1.30E-4	2.15E-7	0.25	4.67E-5	7.68E-8	0.25		
Dichloromethane	Inhalation of Outdoor Air	5.02E-3	8.03E-4	<0.01 0.00	2.86E-4	<0.01 0.00	3.44E-5	5.66E-8	0.07	1.22E-5	2.02E-8	0.07		

Table C-36
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 1 Tour of Duty (3 Years)			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Dieldrin	Inhalation of Indoor Air	2.27E-7	1.38E-7		4.93E-8		5.92E-9	9.53E-8	0.11	2.11E-9	3.40E-8	0.11		
Dieldrin	Inhalation of Outdoor Air	2.27E-7	3.63E-8		1.29E-8		1.55E-9	2.50E-8	0.03	5.56E-10	8.96E-9	0.03		
Dioxane, 1,4-	Inhalation of Indoor Air	1.85E-3	1.12E-3	<0.01 0.00	4.02E-4	<0.01 0.00	4.83E-5	1.30E-6	1.53	1.72E-5	4.66E-7	1.53		
Dioxane, 1,4-	Inhalation of Outdoor Air	1.85E-3	2.96E-4	<0.01 0.00	1.06E-4	<0.01 0.00	1.27E-5	3.43E-7	0.40	4.54E-6	1.22E-7	0.40		
Ethyl Benzene	Inhalation of Indoor Air	4.47E-3	2.71E-3	<0.01 0.01	9.70E-4	<0.01 0.01	1.16E-4	4.48E-7	0.53	4.15E-5	1.60E-7	0.53		
Ethyl Benzene	Inhalation of Outdoor Air	4.47E-3	7.14E-4	<0.01 0.00	2.55E-4	<0.01 0.00	3.06E-5	1.17E-7	0.14	1.09E-5	4.21E-8	0.14		
Ethyl Chloride	Inhalation of Indoor Air	2.36E-4	1.43E-4	<0.01 0.00	5.13E-5	<0.01 0.00	6.16E-6			2.20E-6				
Ethyl Chloride	Inhalation of Outdoor Air	2.36E-4	3.78E-5	<0.01 0.00	1.35E-5	<0.01 0.00	1.62E-6			5.79E-7				
Formaldehyde	Inhalation of Indoor Air	8.84E-4	5.36E-4	0.63 0.62	1.91E-4	0.22 0.62	2.30E-5	1.04E-6	1.23	8.21E-6	3.73E-7	1.23		
Formaldehyde	Inhalation of Outdoor Air	8.84E-4	1.41E-4	0.16 0.16	5.04E-5	0.06 0.16	6.05E-6	2.75E-7	0.32	2.16E-6	9.83E-8	0.32		
Heptachlor Epoxide	Inhalation of Indoor Air	3.39E-7	2.06E-7		7.36E-8		8.83E-9	8.04E-8	0.09	3.15E-9	2.87E-8	0.09		
Heptachlor Epoxide	Inhalation of Outdoor Air	3.39E-7	5.42E-8		1.93E-8		2.32E-9	2.11E-8	0.02	8.30E-10	7.55E-9	0.02		
Heptachlor	Inhalation of Indoor Air	8.07E-7	4.90E-7		1.75E-7		2.10E-8	9.55E-8	0.11	7.50E-9	3.41E-8	0.11		
Heptachlor	Inhalation of Outdoor Air	8.07E-7	1.28E-7		4.60E-8		5.52E-9	2.51E-8	0.03	1.97E-9	8.98E-9	0.03		
Hexachlorobutadiene	Inhalation of Indoor Air	3.51E-3	2.13E-3		7.61E-4		9.14E-5	7.03E-6	8.25	3.26E-5	2.51E-6	8.25		
Hexachlorobutadiene	Inhalation of Outdoor Air	3.51E-3	5.61E-4		2.00E-4		2.40E-5	1.85E-6	2.17	8.59E-6	6.61E-7	2.17		
Hexachlorocyclohexane, gamma	Inhalation of Indoor Air	6.30E-7	3.82E-7		1.36E-7		1.64E-8	1.80E-8	0.02	5.85E-9	6.44E-9	0.02		
Hexachlorocyclohexane, gamma	Inhalation of Outdoor Air	6.30E-7	1.00E-7		3.59E-8		4.31E-9	4.74E-9	0.01	1.54E-9	1.69E-9	0.01		
Hexane, n-	Inhalation of Indoor Air	1.83E-3	1.11E-3	0.02 0.02	3.98E-4	<0.01 0.02	4.78E-5			1.70E-5				
Hexane, n-	Inhalation of Outdoor Air	1.83E-3	2.93E-4	<0.01 0.01	1.04E-4	<0.01 0.01	1.25E-5			4.49E-6				
Hydrogen Chloride	Inhalation of Indoor Air	2.10E-3	1.27E-3	0.22 0.22	4.55E-4	0.08 0.22	5.46E-5			1.95E-5				
Hydrogen Chloride	Inhalation of Outdoor Air	2.10E-3	3.35E-4	0.06 0.06	1.19E-4	0.02 0.06	1.43E-5			5.13E-6				
Mercury (inorganic)	Inhalation of Indoor Air	1.22E-5	7.46E-6	0.09 0.09	2.66E-6	0.03 0.09	3.19E-7			1.14E-7				
Mercury (inorganic)	Inhalation of Outdoor Air	1.22E-5	1.96E-6	0.02 0.02	7.01E-7	<0.01 0.02	8.41E-8			3.00E-8				
Methyl Ethyl Ketone	Inhalation of Indoor Air	1.26E-2	7.68E-3	0.03 0.03	2.74E-3	<0.01 0.03	3.29E-4			1.17E-4				
Methyl Ethyl Ketone	Inhalation of Outdoor Air	1.26E-2	2.02E-3	<0.01 0.01	7.22E-4	<0.01 0.01	8.66E-5			3.09E-5				
Methyl Isobutyl Ketone	Inhalation of Indoor Air	3.72E-3	2.26E-3	0.10 0.10	8.08E-4	0.04 0.10	9.70E-5			3.46E-5				

Table C-36
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methyl Isobutyl Ketone	Inhalation of Outdoor Air	3.72E-3	5.96E-4	0.03	0.03	2.12E-4	<0.01	0.03	2.55E-5			9.12E-6		
Methylcyclohexane	Inhalation of Indoor Air	6.45E-5	3.91E-5	<0.01	0.00	1.39E-5	<0.01	0.00	1.67E-6			5.99E-7		
Methylcyclohexane	Inhalation of Outdoor Air	6.45E-5	1.03E-5	<0.01	0.00	3.68E-6	<0.01	0.00	4.41E-7			1.57E-7		
Naphthalene	Inhalation of Indoor Air	4.13E-4	2.50E-4	0.29	0.29	8.96E-5	0.10	0.29	1.07E-5			3.84E-6		
Naphthalene	Inhalation of Outdoor Air	4.13E-4	6.60E-5	0.08	0.08	2.35E-5	0.03	0.08	2.83E-6			1.01E-6		
Nickel (soluble salts)	Inhalation of Indoor Air	1.82E-5	1.10E-5	0.78	0.77	3.96E-6	0.28	0.77	4.75E-7	4.32E-7	0.51	1.69E-7	1.54E-7	0.51
Nickel (soluble salts)	Inhalation of Outdoor Air	1.82E-5	2.91E-6	0.20	0.20	1.04E-6	0.07	0.20	1.25E-7	1.13E-7	0.13	4.46E-8	4.06E-8	0.13
Phenol	Inhalation of Indoor Air	1.58E-4	9.59E-5	<0.01	0.00	3.42E-5	<0.01	0.00	4.11E-6			1.46E-6		
Phenol	Inhalation of Outdoor Air	1.58E-4	2.52E-5	<0.01	0.00	9.01E-6	<0.01	0.00	1.08E-6			3.86E-7		
PM-10	Inhalation of Indoor Air	2.31E-1	1.40E-1	9.8	9.80	5.01E-2	3.5	9.80	6.01E-3			2.14E-3		
PM-10	Inhalation of Outdoor Air	2.31E-1	3.69E-2	2.6	2.58	1.31E-2	0.92	2.58	1.58E-3			5.65E-4		
Propylene	Inhalation of Indoor Air	1.87E-3	1.13E-3	<0.01	0.00	4.06E-4	<0.01	0.00	4.87E-5			1.74E-5		
Propylene	Inhalation of Outdoor Air	1.87E-3	2.99E-4	<0.01	0.00	1.06E-4	<0.01	0.00	1.28E-5			4.58E-6		
Styrene	Inhalation of Indoor Air	8.07E-4	4.90E-4	<0.01	0.00	1.75E-4	<0.01	0.00	2.10E-5			7.50E-6		
Styrene	Inhalation of Outdoor Air	8.07E-4	1.29E-4	<0.01	0.00	4.60E-5	<0.01	0.00	5.52E-6			1.97E-6		
Tetrachloroethane, 1,1,2,2-	Inhalation of Indoor Air	9.40E-4	5.70E-4			2.03E-4			2.44E-5	4.96E-6	5.82	8.73E-6	1.77E-6	5.82
Tetrachloroethane, 1,1,2,2-	Inhalation of Outdoor Air	9.40E-4	1.50E-4			5.36E-5			6.43E-6	1.30E-6	1.53	2.29E-6	4.66E-7	1.53
Tetrachloroethylene	Inhalation of Indoor Air	1.68E-3	1.02E-3			3.64E-4			4.37E-5	8.88E-8	0.10	1.56E-5	3.17E-8	0.10
Tetrachloroethylene	Inhalation of Outdoor Air	1.68E-3	2.68E-4			9.60E-5			1.15E-5	2.33E-8	0.03	4.11E-6	8.35E-9	0.03
Tetrafluoroethane, 1,1,1,2-	Inhalation of Indoor Air	1.43E-4	8.70E-5	<0.01	0.00	3.10E-5	<0.01	0.00	3.73E-6			1.33E-6		
Tetrafluoroethane, 1,1,1,2-	Inhalation of Outdoor Air	1.43E-4	2.29E-5	<0.01	0.00	8.18E-6	<0.01	0.00	9.81E-7			3.50E-7		
Toluene	Inhalation of Indoor Air	1.27E-2	7.72E-3	0.07	0.07	2.75E-3	0.02	0.07	3.31E-4			1.18E-4		
Toluene	Inhalation of Outdoor Air	1.27E-2	2.03E-3	0.02	0.02	7.25E-4	<0.01	0.02	8.71E-5			3.11E-5		
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	1.85E-9	1.12E-9			4.02E-10			4.82E-11	7.23E-6	8.48	1.72E-11	2.58E-6	8.48
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	1.85E-9	2.96E-10			1.05E-10			1.26E-11	1.90E-6	2.23	4.53E-12	6.80E-7	2.23
Trichloro-1,2,2-trifluoroethan	Inhalation of Indoor Air	8.74E-4	5.31E-4	<0.01	0.00	1.89E-4	<0.01	0.00	2.27E-5			8.12E-6		
Trichloro-1,2,2-trifluoroethan	Inhalation of Outdoor Air	8.74E-4	1.39E-4	<0.01	0.00	4.99E-5	<0.01	0.00	5.99E-6			2.13E-6		

Table C-36
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 1 Tour of Duty (3 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Trichlorobenzene, 1,2,4-	Inhalation of Indoor Air	3.70E-3	2.24E-3	0.04	0.04	8.02E-4	0.01	0.04	9.63E-5			3.44E-5		
Trichlorobenzene, 1,2,4-	Inhalation of Outdoor Air	3.70E-3	5.91E-4	0.01	0.01	2.11E-4	<0.01	0.01	2.53E-5			9.05E-6		
Trichloroethane, 1,1,1-	Inhalation of Indoor Air	8.16E-4	4.95E-4	<0.01	0.00	1.77E-4	<0.01	0.00	2.12E-5			7.59E-6		
Trichloroethane, 1,1,1-	Inhalation of Outdoor Air	8.16E-4	1.30E-4	<0.01	0.00	4.66E-5	<0.01	0.00	5.59E-6			1.99E-6		
Trichloroethane, 1,1,2-	Inhalation of Indoor Air	1.08E-4	6.61E-5			2.36E-5			2.83E-6	1.58E-7	0.19	1.01E-6	5.66E-8	0.19
Trichloroethane, 1,1,2-	Inhalation of Outdoor Air	1.08E-4	1.74E-5			6.21E-6			7.45E-7	4.17E-8	0.05	2.66E-7	1.49E-8	0.05
Trichloroethylene	Inhalation of Indoor Air	1.41E-3	8.58E-4			3.06E-4			3.67E-5	2.18E-7	0.26	1.31E-5	7.81E-8	0.26
Trichloroethylene	Inhalation of Outdoor Air	1.41E-3	2.25E-4			8.06E-5			9.67E-6	5.75E-8	0.07	3.45E-6	2.05E-8	0.07
Trichlorofluoromethane	Inhalation of Indoor Air	3.09E-3	1.87E-3	<0.01	0.01	6.70E-4	<0.01	0.01	8.04E-5			2.87E-5		
Trichlorofluoromethane	Inhalation of Outdoor Air	3.09E-3	4.94E-4	<0.01	0.00	1.76E-4	<0.01	0.00	2.11E-5			7.56E-6		
Vinyl Acetate	Inhalation of Indoor Air	1.46E-2	8.89E-3	0.16	0.16	3.17E-3	0.06	0.16	3.81E-4			1.36E-4		
Vinyl Acetate	Inhalation of Outdoor Air	1.46E-2	2.34E-3	0.04	0.04	8.36E-4	0.01	0.04	1.00E-4			3.58E-5		
Total Risk:				100.24	100.0		35.80	100.0		8.53E-5	100.0		3.04E-5	100.0

Table C-37
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	1.42E-3	8.64E-4	0.50	0.50	3.08E-4	0.18	0.50	7.40E-5			2.64E-5		
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	1.42E-3	2.27E-4	0.13	0.13	8.12E-5	0.05	0.13	1.94E-5			6.96E-6		
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	4.41E-4	2.68E-4	0.16	0.16	9.57E-5	0.06	0.16	2.29E-5			8.20E-6		
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	4.41E-4	7.05E-5	0.04	0.04	2.52E-5	0.01	0.04	6.04E-6			2.16E-6		
2-Propanol	Inhalation of Indoor Air	4.00E-2	2.43E-2	0.01	0.01	8.69E-3	<0.01	0.01	2.08E-3			7.45E-4		
2-Propanol	Inhalation of Outdoor Air	4.00E-2	6.40E-3	<0.01	0.00	2.28E-3	<0.01	0.00	5.49E-4			1.96E-4		
Acetaldehyde	Inhalation of Indoor Air	7.93E-2	4.82E-2	18.7	18.70	1.72E-2	6.7	18.70	4.13E-3	3.18E-5	18.64	1.47E-3	1.13E-5	18.64
Acetaldehyde	Inhalation of Outdoor Air	7.93E-2	1.26E-2	4.9	4.92	4.53E-3	1.8	4.92	1.08E-3	8.37E-6	4.90	3.88E-4	2.99E-6	4.90
Acetonitrile	Inhalation of Indoor Air	2.19E-1	1.33E-1	7.8	7.77	4.76E-2	2.8	7.77	1.14E-2			4.08E-3		
Acetonitrile	Inhalation of Outdoor Air	2.19E-1	3.51E-2	2.0	2.04	1.25E-2	0.73	2.04	3.01E-3			1.07E-3		
Acrolein	Inhalation of Indoor Air	3.31E-4	2.01E-4	35.2	35.15	7.19E-5	12.6	35.15	1.72E-5			6.16E-6		
Acrolein	Inhalation of Outdoor Air	3.31E-4	5.29E-5	9.3	9.25	1.89E-5	3.3	9.25	4.54E-6			1.62E-6		
Acrylonitrile	Inhalation of Indoor Air	5.61E-4	3.40E-4	0.60	0.59	1.21E-4	0.21	0.59	2.92E-5	6.95E-6	4.07	1.04E-5	2.48E-6	4.07
Acrylonitrile	Inhalation of Outdoor Air	5.61E-4	8.96E-5	0.16	0.16	3.20E-5	0.06	0.16	7.68E-6	1.82E-6	1.07	2.74E-6	6.53E-7	1.07
Antimony (metallic)	Inhalation of Indoor Air	7.84E-6	4.76E-6	0.42	0.42	1.70E-6	0.15	0.42	4.08E-7			1.45E-7		
Antimony (metallic)	Inhalation of Outdoor Air	7.84E-6	1.25E-6	0.11	0.11	4.47E-7	0.04	0.11	1.07E-7			3.83E-8		
Arsenic (inorganic)	Inhalation of Indoor Air	5.77E-6	3.50E-6			1.25E-6			3.00E-7	4.52E-6	2.65	1.07E-7	1.61E-6	2.65
Arsenic (inorganic)	Inhalation of Outdoor Air	5.77E-6	9.22E-7			3.29E-7			7.90E-8	1.19E-6	0.70	2.82E-8	4.25E-7	0.70
Benzene	Inhalation of Indoor Air	3.00E-3	1.82E-3	0.11	0.11	6.51E-4	0.04	0.11	1.56E-4	4.53E-6	2.66	5.58E-5	1.62E-6	2.66
Benzene	Inhalation of Outdoor Air	3.00E-3	4.79E-4	0.03	0.03	1.71E-4	<0.01	0.03	4.11E-5	1.19E-6	0.70	1.46E-5	4.26E-7	0.70
Beryllium	Inhalation of Indoor Air	3.05E-7	1.85E-7	<0.01	0.00	6.63E-8	<0.01	0.00	1.59E-8	1.33E-7	0.08	5.68E-9	4.77E-8	0.08
Beryllium	Inhalation of Outdoor Air	3.05E-7	4.88E-8	<0.01	0.00	1.74E-8	<0.01	0.00	4.18E-9	3.51E-8	0.02	1.49E-9	1.25E-8	0.02
Bis(2-ethylhexyl)Phthalate (DE	Inhalation of Indoor Air	7.20E-5	4.37E-5	0.02	0.02	1.56E-5	<0.01	0.02	3.74E-6	3.14E-8	0.02	1.33E-6	1.12E-8	0.02
Bis(2-ethylhexyl)Phthalate (DE	Inhalation of Outdoor Air	7.20E-5	1.15E-5	<0.01	0.00	4.10E-6	<0.01	0.00	9.86E-7	8.28E-9	0.00	3.52E-7	2.95E-9	0.00
Bromomethane	Inhalation of Indoor Air	1.54E-4	9.40E-5	0.07	0.07	3.35E-5	0.02	0.07	8.06E-6			2.87E-6		
Bromomethane	Inhalation of Outdoor Air	1.54E-4	2.47E-5	0.02	0.02	8.84E-6	<0.01	0.02	2.12E-6			7.57E-7		
Butadiene, 1,3-	Inhalation of Indoor Air	4.45E-4	2.70E-4			9.66E-5			2.31E-5	2.27E-5	13.31	8.28E-6	8.11E-6	13.31

Table C-37
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Butadiene, 1,3-	Inhalation of Outdoor Air	4.45E-4	7.12E-5		2.54E-5		6.10E-6	5.98E-6	3.50	2.17E-6	2.13E-6	3.50		
Cadmium (food)	Inhalation of Indoor Air	1.22E-6	7.40E-7	0.03 0.03	2.64E-7	0.01 0.03	6.35E-8	4.00E-7	0.23	2.26E-8	1.42E-7	0.23		
Cadmium (food)	Inhalation of Outdoor Air	1.22E-6	1.94E-7	<0.01 0.01	6.96E-8	<0.01 0.01	1.67E-8	1.05E-7	0.06	5.96E-9	3.76E-8	0.06		
Carbon Tetrachloride	Inhalation of Indoor Air	8.16E-4	4.95E-4	0.87 0.87	1.77E-4	0.31 0.87	4.24E-5	2.23E-6	1.31	1.51E-5	7.96E-7	1.31		
Carbon Tetrachloride	Inhalation of Outdoor Air	8.16E-4	1.30E-4	0.23 0.23	4.65E-5	0.08 0.23	1.11E-5	5.86E-7	0.34	3.99E-6	2.09E-7	0.34		
Chlorobenzene	Inhalation of Indoor Air	4.59E-4	2.79E-4	0.05 0.05	9.96E-5	0.02 0.05	2.39E-5			8.54E-6				
Chlorobenzene	Inhalation of Outdoor Air	4.59E-4	7.34E-5	0.01 0.01	2.62E-5	<0.01 0.01	6.29E-6			2.24E-6				
Chloroform	Inhalation of Indoor Air	2.29E-4	1.39E-4	<0.01 0.00	4.98E-5	<0.01 0.00	1.19E-5	9.62E-7	0.56	4.27E-6	3.43E-7	0.56		
Chloroform	Inhalation of Outdoor Air	2.29E-4	3.67E-5	<0.01 0.00	1.31E-5	<0.01 0.00	3.14E-6	2.53E-7	0.15	1.12E-6	9.05E-8	0.15		
Chloromethane	Inhalation of Indoor Air	1.99E-3	1.20E-3	0.01 0.01	4.31E-4	<0.01 0.01	1.03E-4	6.52E-7	0.38	3.70E-5	2.33E-7	0.38		
Chloromethane	Inhalation of Outdoor Air	1.99E-3	3.18E-4	<0.01 0.00	1.13E-4	<0.01 0.00	2.72E-5	1.71E-7	0.10	9.74E-6	6.13E-8	0.10		
Cumene	Inhalation of Indoor Air	1.96E-4	1.19E-4	<0.01 0.00	4.25E-5	<0.01 0.00	1.02E-5			3.64E-6				
Cumene	Inhalation of Outdoor Air	1.96E-4	3.13E-5	<0.01 0.00	1.11E-5	<0.01 0.00	2.68E-6			9.59E-7				
DDT (p,p'-Dichlorodiphenyltrich	Inhalation of Indoor Air	4.92E-7	2.98E-7		1.06E-7		2.56E-8	8.69E-9	0.01	9.14E-9	3.10E-9	0.01		
DDT (p,p'-Dichlorodiphenyltrich	Inhalation of Outdoor Air	4.92E-7	7.86E-8		2.80E-8		6.74E-9	2.28E-9	0.00	2.40E-9	8.17E-10	0.00		
Dibromoethane, 1,2-	Inhalation of Indoor Air	2.30E-4	1.39E-4	2.4 2.44	4.99E-5	0.87 2.44	1.19E-5	9.22E-6	5.40	4.27E-6	3.29E-6	5.40		
Dibromoethane, 1,2-	Inhalation of Outdoor Air	2.30E-4	3.67E-5	0.64 0.64	1.31E-5	0.23 0.64	3.15E-6	2.42E-6	1.42	1.12E-6	8.66E-7	1.42		
Dichlorobenzene, 1,2-	Inhalation of Indoor Air	6.60E-4	4.00E-4	<0.01 0.01	1.43E-4	<0.01 0.01	3.43E-5			1.22E-5				
Dichlorobenzene, 1,2-	Inhalation of Outdoor Air	6.60E-4	1.05E-4	<0.01 0.00	3.76E-5	<0.01 0.00	9.04E-6			3.22E-6				
Dichlorobenzene, 1,4-	Inhalation of Indoor Air	1.58E-3	9.59E-4	<0.01 0.00	3.42E-4	<0.01 0.00	8.22E-5	3.29E-6	1.93	2.93E-5	1.17E-6	1.93		
Dichlorobenzene, 1,4-	Inhalation of Outdoor Air	1.58E-3	2.52E-4	<0.01 0.00	9.01E-5	<0.01 0.00	2.16E-5	8.65E-7	0.51	7.73E-6	3.09E-7	0.51		
Dichlorodifluoromethane	Inhalation of Indoor Air	3.00E-3	1.82E-3	0.03 0.03	6.50E-4	0.01 0.03	1.56E-4			5.57E-5				
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.00E-3	4.79E-4	<0.01 0.01	1.71E-4	<0.01 0.01	4.10E-5			1.46E-5				
Dichloroethane, 1,2-	Inhalation of Indoor Air	1.61E-4	9.81E-5		3.50E-5		8.41E-6	7.65E-7	0.45	3.00E-6	2.73E-7	0.45		
Dichloroethane, 1,2-	Inhalation of Outdoor Air	1.61E-4	2.58E-5		9.22E-6		2.21E-6	2.01E-7	0.12	7.90E-7	7.19E-8	0.12		
Dichloromethane	Inhalation of Indoor Air	5.02E-3	3.05E-3	<0.01 0.00	1.08E-3	<0.01 0.00	2.61E-4	4.30E-7	0.25	9.34E-5	1.53E-7	0.25		
Dichloromethane	Inhalation of Outdoor Air	5.02E-3	8.03E-4	<0.01 0.00	2.86E-4	<0.01 0.00	6.88E-5	1.13E-7	0.07	2.45E-5	4.04E-8	0.07		

Table C-37
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Dieldrin	Inhalation of Indoor Air	2.27E-7	1.38E-7		4.93E-8		1.18E-8	1.90E-7	0.11	4.23E-9	6.81E-8	0.11		
Dieldrin	Inhalation of Outdoor Air	2.27E-7	3.63E-8		1.29E-8		3.11E-9	5.01E-8	0.03	1.11E-9	1.79E-8	0.03		
Dioxane, 1,4-	Inhalation of Indoor Air	1.85E-3	1.12E-3	<0.01 0.00	4.02E-4	<0.01 0.00	9.66E-5	2.61E-6	1.53	3.45E-5	9.32E-7	1.53		
Dioxane, 1,4-	Inhalation of Outdoor Air	1.85E-3	2.96E-4	<0.01 0.00	1.06E-4	<0.01 0.00	2.54E-5	6.87E-7	0.40	9.08E-6	2.45E-7	0.40		
Ethyl Benzene	Inhalation of Indoor Air	4.47E-3	2.71E-3	<0.01 0.01	9.70E-4	<0.01 0.01	2.32E-4	8.96E-7	0.53	8.31E-5	3.20E-7	0.53		
Ethyl Benzene	Inhalation of Outdoor Air	4.47E-3	7.14E-4	<0.01 0.00	2.55E-4	<0.01 0.00	6.12E-5	2.35E-7	0.14	2.18E-5	8.42E-8	0.14		
Ethyl Chloride	Inhalation of Indoor Air	2.36E-4	1.43E-4	<0.01 0.00	5.13E-5	<0.01 0.00	1.23E-5			4.40E-6				
Ethyl Chloride	Inhalation of Outdoor Air	2.36E-4	3.78E-5	<0.01 0.00	1.35E-5	<0.01 0.00	3.24E-6			1.15E-6				
Formaldehyde	Inhalation of Indoor Air	8.84E-4	5.36E-4	0.63 0.62	1.91E-4	0.22 0.62	4.60E-5	2.09E-6	1.23	1.64E-5	7.47E-7	1.23		
Formaldehyde	Inhalation of Outdoor Air	8.84E-4	1.41E-4	0.16 0.16	5.04E-5	0.06 0.16	1.21E-5	5.50E-7	0.32	4.32E-6	1.96E-7	0.32		
Heptachlor Epoxide	Inhalation of Indoor Air	3.39E-7	2.06E-7		7.36E-8		1.76E-8	1.60E-7	0.09	6.31E-9	5.74E-8	0.09		
Heptachlor Epoxide	Inhalation of Outdoor Air	3.39E-7	5.42E-8		1.93E-8		4.65E-9	4.23E-8	0.02	1.66E-9	1.51E-8	0.02		
Heptachlor	Inhalation of Indoor Air	8.07E-7	4.90E-7		1.75E-7		4.20E-8	1.91E-7	0.11	1.50E-8	6.82E-8	0.11		
Heptachlor	Inhalation of Outdoor Air	8.07E-7	1.28E-7		4.60E-8		1.10E-8	5.02E-8	0.03	3.94E-9	1.79E-8	0.03		
Hexachlorobutadiene	Inhalation of Indoor Air	3.51E-3	2.13E-3		7.61E-4		1.82E-4	1.40E-5	8.25	6.52E-5	5.02E-6	8.25		
Hexachlorobutadiene	Inhalation of Outdoor Air	3.51E-3	5.61E-4		2.00E-4		4.81E-5	3.70E-6	2.17	1.71E-5	1.32E-6	2.17		
Hexachlorocyclohexane, gamma	Inhalation of Indoor Air	6.30E-7	3.82E-7		1.36E-7		3.28E-8	3.60E-8	0.02	1.17E-8	1.28E-8	0.02		
Hexachlorocyclohexane, gamma	Inhalation of Outdoor Air	6.30E-7	1.00E-7		3.59E-8		8.63E-9	9.49E-9	0.01	3.08E-9	3.39E-9	0.01		
Hexane, n-	Inhalation of Indoor Air	1.83E-3	1.11E-3	0.02 0.02	3.98E-4	<0.01 0.02	9.57E-5			3.41E-5				
Hexane, n-	Inhalation of Outdoor Air	1.83E-3	2.93E-4	<0.01 0.01	1.04E-4	<0.01 0.01	2.51E-5			8.99E-6				
Hydrogen Chloride	Inhalation of Indoor Air	2.10E-3	1.27E-3	0.22 0.22	4.55E-4	0.08 0.22	1.09E-4			3.90E-5				
Hydrogen Chloride	Inhalation of Outdoor Air	2.10E-3	3.35E-4	0.06 0.06	1.19E-4	0.02 0.06	2.87E-5			1.02E-5				
Mercury (inorganic)	Inhalation of Indoor Air	1.22E-5	7.46E-6	0.09 0.09	2.66E-6	0.03 0.09	6.39E-7			2.28E-7				
Mercury (inorganic)	Inhalation of Outdoor Air	1.22E-5	1.96E-6	0.02 0.02	7.01E-7	<0.01 0.02	1.68E-7			6.01E-8				
Methyl Ethyl Ketone	Inhalation of Indoor Air	1.26E-2	7.68E-3	0.03 0.03	2.74E-3	<0.01 0.03	6.58E-4			2.35E-4				
Methyl Ethyl Ketone	Inhalation of Outdoor Air	1.26E-2	2.02E-3	<0.01 0.01	7.22E-4	<0.01 0.01	1.73E-4			6.18E-5				
Methyl Isobutyl Ketone	Inhalation of Indoor Air	3.72E-3	2.26E-3	0.10 0.10	8.08E-4	0.04 0.10	1.94E-4			6.93E-5				

Table C-37
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methyl Isobutyl Ketone	Inhalation of Outdoor Air	3.72E-3	5.96E-4	0.03	0.03	2.12E-4	<0.01	0.03	5.10E-5			1.82E-5		
Methylcyclohexane	Inhalation of Indoor Air	6.45E-5	3.91E-5	<0.01	0.00	1.39E-5	<0.01	0.00	3.35E-6			1.19E-6		
Methylcyclohexane	Inhalation of Outdoor Air	6.45E-5	1.03E-5	<0.01	0.00	3.68E-6	<0.01	0.00	8.83E-7			3.15E-7		
Naphthalene	Inhalation of Indoor Air	4.13E-4	2.50E-4	0.29	0.29	8.96E-5	0.10	0.29	2.15E-5			7.68E-6		
Naphthalene	Inhalation of Outdoor Air	4.13E-4	6.60E-5	0.08	0.08	2.35E-5	0.03	0.08	5.66E-6			2.02E-6		
Nickel (soluble salts)	Inhalation of Indoor Air	1.82E-5	1.10E-5	0.78	0.77	3.96E-6	0.28	0.77	9.51E-7	8.65E-7	0.51	3.39E-7	3.09E-7	0.51
Nickel (soluble salts)	Inhalation of Outdoor Air	1.82E-5	2.91E-6	0.20	0.20	1.04E-6	0.07	0.20	2.50E-7	2.27E-7	0.13	8.93E-8	8.13E-8	0.13
Phenol	Inhalation of Indoor Air	1.58E-4	9.59E-5	<0.01	0.00	3.42E-5	<0.01	0.00	8.22E-6			2.93E-6		
Phenol	Inhalation of Outdoor Air	1.58E-4	2.52E-5	<0.01	0.00	9.01E-6	<0.01	0.00	2.16E-6			7.72E-7		
PM-10	Inhalation of Indoor Air	2.31E-1	1.40E-1	9.8	9.80	5.01E-2	3.5	9.80	1.20E-2			4.29E-3		
PM-10	Inhalation of Outdoor Air	2.31E-1	3.69E-2	2.6	2.58	1.31E-2	0.92	2.58	3.16E-3			1.13E-3		
Propylene	Inhalation of Indoor Air	1.87E-3	1.13E-3	<0.01	0.00	4.06E-4	<0.01	0.00	9.74E-5			3.48E-5		
Propylene	Inhalation of Outdoor Air	1.87E-3	2.99E-4	<0.01	0.00	1.06E-4	<0.01	0.00	2.56E-5			9.16E-6		
Styrene	Inhalation of Indoor Air	8.07E-4	4.90E-4	<0.01	0.00	1.75E-4	<0.01	0.00	4.20E-5			1.50E-5		
Styrene	Inhalation of Outdoor Air	8.07E-4	1.29E-4	<0.01	0.00	4.60E-5	<0.01	0.00	1.10E-5			3.94E-6		
Tetrachloroethane, 1,1,2,2-	Inhalation of Indoor Air	9.40E-4	5.70E-4			2.03E-4			4.89E-5	9.93E-6	5.82	1.74E-5	3.54E-6	5.82
Tetrachloroethane, 1,1,2,2-	Inhalation of Outdoor Air	9.40E-4	1.50E-4			5.36E-5			1.28E-5	2.61E-6	1.53	4.59E-6	9.33E-7	1.53
Tetrachloroethylene	Inhalation of Indoor Air	1.68E-3	1.02E-3			3.64E-4			8.75E-5	1.77E-7	0.10	3.12E-5	6.34E-8	0.10
Tetrachloroethylene	Inhalation of Outdoor Air	1.68E-3	2.68E-4			9.60E-5			2.30E-5	4.67E-8	0.03	8.23E-6	1.67E-8	0.03
Tetrafluoroethane, 1,1,1,2-	Inhalation of Indoor Air	1.43E-4	8.70E-5	<0.01	0.00	3.10E-5	<0.01	0.00	7.46E-6			2.66E-6		
Tetrafluoroethane, 1,1,1,2-	Inhalation of Outdoor Air	1.43E-4	2.29E-5	<0.01	0.00	8.18E-6	<0.01	0.00	1.96E-6			7.01E-7		
Toluene	Inhalation of Indoor Air	1.27E-2	7.72E-3	0.07	0.07	2.75E-3	0.02	0.07	6.62E-4			2.36E-4		
Toluene	Inhalation of Outdoor Air	1.27E-2	2.03E-3	0.02	0.02	7.25E-4	<0.01	0.02	1.74E-4			6.22E-5		
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	1.85E-9	1.12E-9			4.02E-10			9.64E-11	1.44E-5	8.48	3.44E-11	5.16E-6	8.48
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	1.85E-9	2.96E-10			1.05E-10			2.53E-11	3.80E-6	2.23	9.06E-12	1.36E-6	2.23
Trichloro-1,2,2-trifluoroethan	Inhalation of Indoor Air	8.74E-4	5.31E-4	<0.01	0.00	1.89E-4	<0.01	0.00	4.55E-5			1.62E-5		
Trichloro-1,2,2-trifluoroethan	Inhalation of Outdoor Air	8.74E-4	1.39E-4	<0.01	0.00	4.99E-5	<0.01	0.00	1.19E-5			4.27E-6		

Table C-37
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 2 Tours of Duty (6 Years)			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child (0-6)			Adult			Child (0-6)			Adult		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Trichlorobenzene, 1,2,4-	Inhalation of Indoor Air	3.70E-3	2.24E-3	0.04	0.04	8.02E-4	0.01	0.04	1.92E-4			6.88E-5		
Trichlorobenzene, 1,2,4-	Inhalation of Outdoor Air	3.70E-3	5.91E-4	0.01	0.01	2.11E-4	<0.01	0.01	5.07E-5			1.81E-5		
Trichloroethane, 1,1,1-	Inhalation of Indoor Air	8.16E-4	4.95E-4	<0.01	0.00	1.77E-4	<0.01	0.00	4.25E-5			1.51E-5		
Trichloroethane, 1,1,1-	Inhalation of Outdoor Air	8.16E-4	1.30E-4	<0.01	0.00	4.66E-5	<0.01	0.00	1.11E-5			3.99E-6		
Trichloroethane, 1,1,2-	Inhalation of Indoor Air	1.08E-4	6.61E-5			2.36E-5			5.66E-6	3.17E-7	0.19	2.02E-6	1.13E-7	0.19
Trichloroethane, 1,1,2-	Inhalation of Outdoor Air	1.08E-4	1.74E-5			6.21E-6			1.49E-6	8.35E-8	0.05	5.32E-7	2.98E-8	0.05
Trichloroethylene	Inhalation of Indoor Air	1.41E-3	8.58E-4			3.06E-4			7.35E-5	4.37E-7	0.26	2.62E-5	1.56E-7	0.26
Trichloroethylene	Inhalation of Outdoor Air	1.41E-3	2.25E-4			8.06E-5			1.93E-5	1.15E-7	0.07	6.91E-6	4.11E-8	0.07
Trichlorofluoromethane	Inhalation of Indoor Air	3.09E-3	1.87E-3	<0.01	0.01	6.70E-4	<0.01	0.01	1.60E-4			5.74E-5		
Trichlorofluoromethane	Inhalation of Outdoor Air	3.09E-3	4.94E-4	<0.01	0.00	1.76E-4	<0.01	0.00	4.23E-5			1.51E-5		
Vinyl Acetate	Inhalation of Indoor Air	1.46E-2	8.89E-3	0.16	0.16	3.17E-3	0.06	0.16	7.62E-4			2.72E-4		
Vinyl Acetate	Inhalation of Outdoor Air	1.46E-2	2.34E-3	0.04	0.04	8.36E-4	0.01	0.04	2.00E-4			7.16E-5		
Total Risk:				100.24	100.0		35.80	100.0		1.70E-4	100.0		6.09E-5	100.0

Table C-38
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
1,2,4-Trimethylbenzene	Inhalation of Indoor Air	1.42E-3	--	--	--	4.19E-4	0.24	0.50	--	--	--	1.79E-4	--	--
1,2,4-Trimethylbenzene	Inhalation of Outdoor Air	1.42E-3	--	--	--	1.10E-4	0.06	0.13	--	--	--	4.73E-5	--	--
1,3,5-Trimethylbenzene	Inhalation of Indoor Air	4.41E-4	--	--	--	1.30E-4	0.08	0.16	--	--	--	5.58E-5	--	--
1,3,5-Trimethylbenzene	Inhalation of Outdoor Air	4.41E-4	--	--	--	3.42E-5	0.02	0.04	--	--	--	1.46E-5	--	--
2-Propanol	Inhalation of Indoor Air	4.00E-2	--	--	--	1.18E-2	<0.01	0.01	--	--	--	5.06E-3	--	--
2-Propanol	Inhalation of Outdoor Air	4.00E-2	--	--	--	3.11E-3	<0.01	0.00	--	--	--	1.33E-3	--	--
Acetaldehyde	Inhalation of Indoor Air	7.93E-2	--	--	--	2.34E-2	9.1	18.70	--	--	--	1.00E-2	7.72E-5	18.64
Acetaldehyde	Inhalation of Outdoor Air	7.93E-2	--	--	--	6.16E-3	2.4	4.92	--	--	--	2.64E-3	2.03E-5	4.90
Acetonitrile	Inhalation of Indoor Air	2.19E-1	--	--	--	6.48E-2	3.8	7.77	--	--	--	2.77E-2	--	--
Acetonitrile	Inhalation of Outdoor Air	2.19E-1	--	--	--	1.70E-2	1.00	2.04	--	--	--	7.31E-3	--	--
Acrolein	Inhalation of Indoor Air	3.31E-4	--	--	--	9.77E-5	17.1	35.15	--	--	--	4.19E-5	--	--
Acrolein	Inhalation of Outdoor Air	3.31E-4	--	--	--	2.57E-5	4.5	9.25	--	--	--	1.10E-5	--	--
Acrylonitrile	Inhalation of Indoor Air	5.61E-4	--	--	--	1.65E-4	0.29	0.59	--	--	--	7.09E-5	1.68E-5	4.07
Acrylonitrile	Inhalation of Outdoor Air	5.61E-4	--	--	--	4.35E-5	0.08	0.16	--	--	--	1.86E-5	4.44E-6	1.07
Antimony (metallic)	Inhalation of Indoor Air	7.84E-6	--	--	--	2.31E-6	0.20	0.42	--	--	--	9.91E-7	--	--
Antimony (metallic)	Inhalation of Outdoor Air	7.84E-6	--	--	--	6.08E-7	0.05	0.11	--	--	--	2.60E-7	--	--
Arsenic (inorganic)	Inhalation of Indoor Air	5.77E-6	--	--	--	1.70E-6	--	--	--	--	--	7.29E-7	1.09E-5	2.65
Arsenic (inorganic)	Inhalation of Outdoor Air	5.77E-6	--	--	--	4.48E-7	--	--	--	--	--	1.92E-7	2.89E-6	0.70
Benzene	Inhalation of Indoor Air	3.00E-3	--	--	--	8.85E-4	0.05	0.11	--	--	--	3.79E-4	1.10E-5	2.66
Benzene	Inhalation of Outdoor Air	3.00E-3	--	--	--	2.33E-4	0.01	0.03	--	--	--	9.98E-5	2.90E-6	0.70
Beryllium	Inhalation of Indoor Air	3.05E-7	--	--	--	9.01E-8	<0.01	0.00	--	--	--	3.86E-8	3.24E-7	0.08
Beryllium	Inhalation of Outdoor Air	3.05E-7	--	--	--	2.37E-8	<0.01	0.00	--	--	--	1.01E-8	8.54E-8	0.02
Bis(2-ethylhexyl)Phthalate (DE	Inhalation of Indoor Air	7.20E-5	--	--	--	2.12E-5	<0.01	0.02	--	--	--	9.10E-6	7.64E-8	0.02
Bis(2-ethylhexyl)Phthalate (DE	Inhalation of Outdoor Air	7.20E-5	--	--	--	5.58E-6	<0.01	0.00	--	--	--	2.39E-6	2.01E-8	0.00
Bromomethane	Inhalation of Indoor Air	1.54E-4	--	--	--	4.56E-5	0.03	0.07	--	--	--	1.95E-5	--	--
Bromomethane	Inhalation of Outdoor Air	1.54E-4	--	--	--	1.20E-5	<0.01	0.02	--	--	--	5.15E-6	--	--
Butadiene, 1,3-	Inhalation of Indoor Air	4.45E-4	--	--	--	1.31E-4	--	--	--	--	--	5.63E-5	5.52E-5	13.31

Table C-38
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Butadiene, 1,3-	Inhalation of Outdoor Air	4.45E-4	--	--	3.45E-5	--	--	--	1.48E-5	1.45E-5	3.50			
Cadmium (food)	Inhalation of Indoor Air	1.22E-6	--	--	3.59E-7	0.01	0.03	--	--	1.54E-7	9.71E-7	0.23		
Cadmium (food)	Inhalation of Outdoor Air	1.22E-6	--	--	9.47E-8	<0.01	0.01	--	--	4.05E-8	2.55E-7	0.06		
Carbon Tetrachloride	Inhalation of Indoor Air	8.16E-4	--	--	2.40E-4	0.42	0.87	--	--	1.03E-4	5.41E-6	1.31		
Carbon Tetrachloride	Inhalation of Outdoor Air	8.16E-4	--	--	6.33E-5	0.11	0.23	--	--	2.71E-5	1.42E-6	0.34		
Chlorobenzene	Inhalation of Indoor Air	4.59E-4	--	--	1.35E-4	0.02	0.05	--	--	5.81E-5	--	--		
Chlorobenzene	Inhalation of Outdoor Air	4.59E-4	--	--	3.56E-5	<0.01	0.01	--	--	1.52E-5	--	--		
Chloroform	Inhalation of Indoor Air	2.29E-4	--	--	6.77E-5	<0.01	0.00	--	--	2.90E-5	2.33E-6	0.56		
Chloroform	Inhalation of Outdoor Air	2.29E-4	--	--	1.78E-5	<0.01	0.00	--	--	7.64E-6	6.15E-7	0.15		
Chloromethane	Inhalation of Indoor Air	1.99E-3	--	--	5.87E-4	<0.01	0.01	--	--	2.51E-4	1.58E-6	0.38		
Chloromethane	Inhalation of Outdoor Air	1.99E-3	--	--	1.54E-4	<0.01	0.00	--	--	6.62E-5	4.17E-7	0.10		
Cumene	Inhalation of Indoor Air	1.96E-4	--	--	5.78E-5	<0.01	0.00	--	--	2.48E-5	--	--		
Cumene	Inhalation of Outdoor Air	1.96E-4	--	--	1.52E-5	<0.01	0.00	--	--	6.52E-6	--	--		
DDT (p,p'-Dichlorodiphenyltrich	Inhalation of Indoor Air	4.92E-7	--	--	1.45E-7	--	--	--	--	6.22E-8	2.11E-8	0.01		
DDT (p,p'-Dichlorodiphenyltrich	Inhalation of Outdoor Air	4.92E-7	--	--	3.81E-8	--	--	--	--	1.63E-8	5.55E-9	0.00		
Dibromoethane, 1,2-	Inhalation of Indoor Air	2.30E-4	--	--	6.78E-5	1.2	2.44	--	--	2.90E-5	2.23E-5	5.40		
Dibromoethane, 1,2-	Inhalation of Outdoor Air	2.30E-4	--	--	1.78E-5	0.31	0.64	--	--	7.65E-6	5.89E-6	1.42		
Dichlorobenzene, 1,2-	Inhalation of Indoor Air	6.60E-4	--	--	1.94E-4	<0.01	0.01	--	--	8.34E-5	--	--		
Dichlorobenzene, 1,2-	Inhalation of Outdoor Air	6.60E-4	--	--	5.12E-5	<0.01	0.00	--	--	2.19E-5	--	--		
Dichlorobenzene, 1,4-	Inhalation of Indoor Air	1.58E-3	--	--	4.66E-4	<0.01	0.00	--	--	1.99E-4	7.99E-6	1.93		
Dichlorobenzene, 1,4-	Inhalation of Outdoor Air	1.58E-3	--	--	1.22E-4	<0.01	0.00	--	--	5.25E-5	2.10E-6	0.51		
Dichlorodifluoromethane	Inhalation of Indoor Air	3.00E-3	--	--	8.84E-4	0.02	0.03	--	--	3.79E-4	--	--		
Dichlorodifluoromethane	Inhalation of Outdoor Air	3.00E-3	--	--	2.32E-4	<0.01	0.01	--	--	9.98E-5	--	--		
Dichloroethane, 1,2-	Inhalation of Indoor Air	1.61E-4	--	--	4.76E-5	--	--	--	--	2.04E-5	1.85E-6	0.45		
Dichloroethane, 1,2-	Inhalation of Outdoor Air	1.61E-4	--	--	1.25E-5	--	--	--	--	5.37E-6	4.89E-7	0.12		
Dichloromethane	Inhalation of Indoor Air	5.02E-3	--	--	1.48E-3	<0.01	0.00	--	--	6.35E-4	1.04E-6	0.25		
Dichloromethane	Inhalation of Outdoor Air	5.02E-3	--	--	3.90E-4	<0.01	0.00	--	--	1.67E-4	2.74E-7	0.07		

Table C-38
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case			Hazard Index (HI)						Carcinogenic Risk (CR)					
Duration: 30 years			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total	ADD mg/kg-day	% HI of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total		
Dieldrin	Inhalation of Indoor Air	2.27E-7	--	--	6.71E-8	--	--	--	2.87E-8	4.63E-7	0.11			
Dieldrin	Inhalation of Outdoor Air	2.27E-7	--	--	1.76E-8	--	--	--	7.57E-9	1.21E-7	0.03			
Dioxane, 1,4-	Inhalation of Indoor Air	1.85E-3	--	--	5.47E-4	<0.01	0.00	--	--	2.34E-4	6.34E-6	1.53		
Dioxane, 1,4-	Inhalation of Outdoor Air	1.85E-3	--	--	1.44E-4	<0.01	0.00	--	--	6.17E-5	1.66E-6	0.40		
Ethyl Benzene	Inhalation of Indoor Air	4.47E-3	--	--	1.31E-3	<0.01	0.01	--	--	5.65E-4	2.17E-6	0.53		
Ethyl Benzene	Inhalation of Outdoor Air	4.47E-3	--	--	3.47E-4	<0.01	0.00	--	--	1.48E-4	5.72E-7	0.14		
Ethyl Chloride	Inhalation of Indoor Air	2.36E-4	--	--	6.98E-5	<0.01	0.00	--	--	2.99E-5	--	--		
Ethyl Chloride	Inhalation of Outdoor Air	2.36E-4	--	--	1.83E-5	<0.01	0.00	--	--	7.88E-6	--	--		
Formaldehyde	Inhalation of Indoor Air	8.84E-4	--	--	2.60E-4	0.30	0.62	--	--	1.11E-4	5.08E-6	1.23		
Formaldehyde	Inhalation of Outdoor Air	8.84E-4	--	--	6.86E-5	0.08	0.16	--	--	2.94E-5	1.33E-6	0.32		
Heptachlor Epoxide	Inhalation of Indoor Air	3.39E-7	--	--	1.00E-7	--	--	--	--	4.29E-8	3.90E-7	0.09		
Heptachlor Epoxide	Inhalation of Outdoor Air	3.39E-7	--	--	2.63E-8	--	--	--	--	1.12E-8	1.02E-7	0.02		
Heptachlor	Inhalation of Indoor Air	8.07E-7	--	--	2.38E-7	--	--	--	--	1.02E-7	4.64E-7	0.11		
Heptachlor	Inhalation of Outdoor Air	8.07E-7	--	--	6.26E-8	--	--	--	--	2.68E-8	1.22E-7	0.03		
Hexachlorobutadiene	Inhalation of Indoor Air	3.51E-3	--	--	1.03E-3	--	--	--	--	4.43E-4	3.41E-5	8.25		
Hexachlorobutadiene	Inhalation of Outdoor Air	3.51E-3	--	--	2.72E-4	--	--	--	--	1.16E-4	8.99E-6	2.17		
Hexachlorocyclohexane, gamma	Inhalation of Indoor Air	6.30E-7	--	--	1.85E-7	--	--	--	--	7.96E-8	8.76E-8	0.02		
Hexachlorocyclohexane, gamma	Inhalation of Outdoor Air	6.30E-7	--	--	4.89E-8	--	--	--	--	2.09E-8	2.30E-8	0.01		
Hexane, n-	Inhalation of Indoor Air	1.83E-3	--	--	5.42E-4	<0.01	0.02	--	--	2.32E-4	--	--		
Hexane, n-	Inhalation of Outdoor Air	1.83E-3	--	--	1.42E-4	<0.01	0.01	--	--	6.11E-5	--	--		
Hydrogen Chloride	Inhalation of Indoor Air	2.10E-3	--	--	6.19E-4	0.11	0.22	--	--	2.65E-4	--	--		
Hydrogen Chloride	Inhalation of Outdoor Air	2.10E-3	--	--	1.63E-4	0.03	0.06	--	--	6.99E-5	--	--		
Mercury (inorganic)	Inhalation of Indoor Air	1.22E-5	--	--	3.62E-6	0.04	0.09	--	--	1.55E-6	--	--		
Mercury (inorganic)	Inhalation of Outdoor Air	1.22E-5	--	--	9.53E-7	0.01	0.02	--	--	4.08E-7	--	--		
Methyl Ethyl Ketone	Inhalation of Indoor Air	1.26E-2	--	--	3.73E-3	0.01	0.03	--	--	1.59E-3	--	--		
Methyl Ethyl Ketone	Inhalation of Outdoor Air	1.26E-2	--	--	9.81E-4	<0.01	0.01	--	--	4.20E-4	--	--		
Methyl Isobutyl Ketone	Inhalation of Indoor Air	3.72E-3	--	--	1.10E-3	0.05	0.10	--	--	4.71E-4	--	--		

Table C-38
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	% HI of Total		ADD mg/kg-day	% HI of Total		LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Methyl Isobutyl Ketone	Inhalation of Outdoor Air	3.72E-3	--	--	--	2.89E-4	0.01	0.03	--	--	--	1.24E-4	--	--
Methylcyclohexane	Inhalation of Indoor Air	6.45E-5	--	--	--	1.90E-5	<0.01	0.00	--	--	--	8.15E-6	--	--
Methylcyclohexane	Inhalation of Outdoor Air	6.45E-5	--	--	--	5.00E-6	<0.01	0.00	--	--	--	2.14E-6	--	--
Naphthalene	Inhalation of Indoor Air	4.13E-4	--	--	--	1.21E-4	0.14	0.29	--	--	--	5.22E-5	--	--
Naphthalene	Inhalation of Outdoor Air	4.13E-4	--	--	--	3.20E-5	0.04	0.08	--	--	--	1.37E-5	--	--
Nickel (soluble salts)	Inhalation of Indoor Air	1.82E-5	--	--	--	5.38E-6	0.38	0.77	--	--	--	2.30E-6	2.10E-6	0.51
Nickel (soluble salts)	Inhalation of Outdoor Air	1.82E-5	--	--	--	1.41E-6	0.10	0.20	--	--	--	6.07E-7	5.53E-7	0.13
Phenol	Inhalation of Indoor Air	1.58E-4	--	--	--	4.66E-5	<0.01	0.00	--	--	--	1.99E-5	--	--
Phenol	Inhalation of Outdoor Air	1.58E-4	--	--	--	1.22E-5	<0.01	0.00	--	--	--	5.25E-6	--	--
PM-10	Inhalation of Indoor Air	2.31E-1	--	--	--	6.81E-2	4.8	9.80	--	--	--	2.92E-2	--	--
PM-10	Inhalation of Outdoor Air	2.31E-1	--	--	--	1.79E-2	1.3	2.58	--	--	--	7.68E-3	--	--
Propylene	Inhalation of Indoor Air	1.87E-3	--	--	--	5.52E-4	<0.01	0.00	--	--	--	2.36E-4	--	--
Propylene	Inhalation of Outdoor Air	1.87E-3	--	--	--	1.45E-4	<0.01	0.00	--	--	--	6.23E-5	--	--
Styrene	Inhalation of Indoor Air	8.07E-4	--	--	--	2.38E-4	<0.01	0.00	--	--	--	1.02E-4	--	--
Styrene	Inhalation of Outdoor Air	8.07E-4	--	--	--	6.26E-5	<0.01	0.00	--	--	--	2.68E-5	--	--
Tetrachloroethane, 1,1,2,2-	Inhalation of Indoor Air	9.40E-4	--	--	--	2.77E-4	--	--	--	--	--	1.18E-4	2.41E-5	5.82
Tetrachloroethane, 1,1,2,2-	Inhalation of Outdoor Air	9.40E-4	--	--	--	7.29E-5	--	--	--	--	--	3.12E-5	6.34E-6	1.53
Tetrachloroethylene	Inhalation of Indoor Air	1.68E-3	--	--	--	4.96E-4	--	--	--	--	--	2.12E-4	4.31E-7	0.10
Tetrachloroethylene	Inhalation of Outdoor Air	1.68E-3	--	--	--	1.30E-4	--	--	--	--	--	5.59E-5	1.13E-7	0.03
Tetrafluoroethane, 1,1,1,2-	Inhalation of Indoor Air	1.43E-4	--	--	--	4.22E-5	<0.01	0.00	--	--	--	1.81E-5	--	--
Tetrafluoroethane, 1,1,1,2-	Inhalation of Outdoor Air	1.43E-4	--	--	--	1.11E-5	<0.01	0.00	--	--	--	4.76E-6	--	--
Toluene	Inhalation of Indoor Air	1.27E-2	--	--	--	3.75E-3	0.03	0.07	--	--	--	1.60E-3	--	--
Toluene	Inhalation of Outdoor Air	1.27E-2	--	--	--	9.87E-4	<0.01	0.02	--	--	--	4.23E-4	--	--
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Indoor Air	1.85E-9	--	--	--	5.46E-10	--	--	--	--	--	2.34E-10	3.51E-5	8.48
Total Dioxin/Furans (2,3,7,8-T)	Inhalation of Outdoor Air	1.85E-9	--	--	--	1.43E-10	--	--	--	--	--	6.16E-11	9.25E-6	2.23
Trichloro-1,2,2-trifluoroethan	Inhalation of Indoor Air	8.74E-4	--	--	--	2.57E-4	<0.01	0.00	--	--	--	1.10E-4	--	--
Trichloro-1,2,2-trifluoroethan	Inhalation of Outdoor Air	8.74E-4	--	--	--	6.78E-5	<0.01	0.00	--	--	--	2.90E-5	--	--

Table C-38
Golf Course - Upwind/Downwind of SIC Evaluation
Total NonCarcinogenic and Carcinogenic Risk
via
Exposure Pathway

Scenario: Residential Scenario - RME Case Duration: 30 years			Hazard Index (HI)						Carcinogenic Risk (CR)					
			Child			Integrated Adult/Child			Child			Integrated Adult/Child		
Analyte	Pathway	EPC mg/kg or mg/m3	ADD mg/kg-day	HI	% of Total	ADD mg/kg-day	HI	% of Total	LADD mg/kg-day	CR	% of Total	LADD mg/kg-day	CR	% of Total
Trichlorobenzene, 1,2,4-	Inhalation of Indoor Air	3.70E-3	--	--	--	1.09E-3	0.02	0.04	--	--	--	4.68E-4	--	--
Trichlorobenzene, 1,2,4-	Inhalation of Outdoor Air	3.70E-3	--	--	--	2.87E-4	<0.01	0.01	--	--	--	1.23E-4	--	--
Trichloroethane, 1,1,1-	Inhalation of Indoor Air	8.16E-4	--	--	--	2.40E-4	<0.01	0.00	--	--	--	1.03E-4	--	--
Trichloroethane, 1,1,1-	Inhalation of Outdoor Air	8.16E-4	--	--	--	6.33E-5	<0.01	0.00	--	--	--	2.71E-5	--	--
Trichloroethane, 1,1,2-	Inhalation of Indoor Air	1.08E-4	--	--	--	3.21E-5	--	--	--	--	--	1.37E-5	7.70E-7	0.19
Trichloroethane, 1,1,2-	Inhalation of Outdoor Air	1.08E-4	--	--	--	8.45E-6	--	--	--	--	--	3.62E-6	2.02E-7	0.05
Trichloroethylene	Inhalation of Indoor Air	1.41E-3	--	--	--	4.16E-4	--	--	--	--	--	1.78E-4	1.06E-6	0.26
Trichloroethylene	Inhalation of Outdoor Air	1.41E-3	--	--	--	1.09E-4	--	--	--	--	--	4.70E-5	2.79E-7	0.07
Trichlorofluoromethane	Inhalation of Indoor Air	3.09E-3	--	--	--	9.11E-4	<0.01	0.01	--	--	--	3.90E-4	--	--
Trichlorofluoromethane	Inhalation of Outdoor Air	3.09E-3	--	--	--	2.39E-4	<0.01	0.00	--	--	--	1.02E-4	--	--
Vinyl Acetate	Inhalation of Indoor Air	1.46E-2	--	--	--	4.32E-3	0.08	0.16	--	--	--	1.85E-3	--	--
Vinyl Acetate	Inhalation of Outdoor Air	1.46E-2	--	--	--	1.13E-3	0.02	0.04	--	--	--	4.87E-4	--	--
Total Risk:			--	--	--	48.69	100.0		--	--	--	4.14E-4	100.0	

Appendix D

Upwind vs. Downwind Analysis Ambient Air Data

Table Number	Media	Description
D-1	Ambient Air Samples	Ambient Air Data Used in the Upwind vs. Downwind Analysis

Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	100-01-6	4-Nitroaniline	SVOC	2.00E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	100-02-7	4-Nitrophenol	SVOC	2.90E-05	J	6.05E-05	ND	mg/m3
4/21/1998	100-41-4	Ethylbenzene	GC/MS			9.80E-03	B	mg/m3
4/21/1998	100-42-5	Styrene	GC/MS			4.25E-03	B	mg/m3
4/21/1998	100-44-7	Benzyl Chloride	GC/MS			2.58E-03	ND	mg/m3
4/21/1998	100-51-6	Benzyl alcohol	SVOC	4.20E-05		7.90E-05		mg/m3
4/21/1998	100-52-7	Benzaldehyde	ALD/KET			2.61E-03		mg/m3
4/21/1998	10061-01-5	c-1,3-Dichloropropene	GC/MS			3.62E-04		mg/m3
4/21/1998	10061-02-6	t-1,3-Dichloropropene	GC/MS			1.59E-04	ND	mg/m3
4/21/1998	100-75-4	N-Nitrosopiperidine	SVOC	1.50E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	101-55-3	4-Bromophenyl phenyl ether	SVOC	1.50E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	1024-57-3	Heptachlor epoxide	PEST/PCB	3.40E-07	BJ	2.49E-07	ND	mg/m3
4/21/1998	1031-07-8	Endosulfan Sulfate	PEST/PCB	2.03E-07	ND	2.00E-07	ND	mg/m3
4/21/1998	103-65-1	n-Propylbenzene	GC/MS			6.38E-04	B	mg/m3
4/21/1998	104-51-8	n-Butylbenzene	GC/MS			2.19E-04	ND	mg/m3
4/21/1998	105-05-5	p-Diethylbenzene	GC/MS			2.47E-04	ND	mg/m3
4/21/1998	105-67-9	2,4-Dimethylphenol	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	10595-95-6	N-Nitrosomethylethylamine	SVOC	2.00E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	106-42-3/108-38-	p-Xylene + m-Xylene	GC/MS			1.36E-02	B	mg/m3
4/21/1998	106-43-4	p-Chlorotoluene	GC/MS			2.58E-03	ND	mg/m3
4/21/1998	106-44-5/108-39-	4-Methylphenol/3-Methylphenol	SVOC			7.10E-05	F	mg/m3
4/21/1998	106-44-5/108-39-4	4-Methylphenol/3-Methylphenol	SVOC	6.10E-05	F			mg/m3
4/21/1998	106-46-7	1,4-Dichlorobenzene	SVOC	7.02E-04		5.46E-04		mg/m3
4/21/1998	106-47-8	p-Chloroaniline	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	106-93-4	1,2-Dibromoethane	GC/MS			7.67E-05	BJ	mg/m3
4/21/1998	106-97-8	n-Butane	GC/MS			1.03E-02		mg/m3
4/21/1998	106-99-0	1,3-Butadiene	GC/MS			1.02E-03		mg/m3
4/21/1998	107-02-8	Acrolein	ALD/KET			1.80E-04		mg/m3
4/21/1998	107-06-2	1,2-Dichloroethane	GC/MS			1.01E-04	ND	mg/m3
4/21/1998	107-13-1	Acrylonitrile	GC/MS			2.21E-03		mg/m3
4/21/1998	107-39-1	2,4,4-Trimethyl-1-Pentene	GC/MS			2.15E-03		mg/m3
4/21/1998	107-40-4	2,4,4-Trimethyl-2-Pentene	GC/MS			2.06E-04	ND	mg/m3
4/21/1998	108-05-4	Vinyl Acetate	GC/MS			3.40E-02		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	108-08-7	2,4-Dimethylpentane	GC/MS			2.05E-04	ND	mg/m3
4/21/1998	108-10-1	Methylisobutylketone	GC/MS			8.92E-03		mg/m3
4/21/1998	108-60-1	bis(2-Chloroisopropyl)ether	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	108-67-8	1,3,5-Trimethylbenzene	GC/MS			1.03E-03	B	mg/m3
4/21/1998	108-87-2	Methylcyclohexane	GC/MS			2.00E-04	ND	mg/m3
4/21/1998	108-88-3	Toluene	GC/MS			3.42E-02	B	mg/m3
4/21/1998	108-90-7	Chlorobenzene	GC/MS			6.43E-04	B	mg/m3
4/21/1998	108-95-2	Phenol	SVOC	1.58E-04		2.40E-04		mg/m3
4/21/1998	109-06-8	2-Picoline	SVOC	2.50E-06	ND	2.00E-06	ND	mg/m3
4/21/1998	109-66-0	n-Pentane	GC/MS			7.49E-03		mg/m3
4/21/1998	109-67-1	1-Pentene	GC/MS			1.26E-03		mg/m3
4/21/1998	110-54-3	n-Hexane	GC/MS			5.28E-03		mg/m3
4/21/1998	110-62-3	Valeraldehyde	ALD/KET			1.17E-03		mg/m3
4/21/1998	110-82-7	Cyclohexane	GC/MS			2.13E-03		mg/m3
4/21/1998	110-83-8	Cyclohexene	GC/MS			3.02E-04	B	mg/m3
4/21/1998	110-86-1	Pyridine	SVOC	2.50E-06	ND	2.00E-06	ND	mg/m3
4/21/1998	11096-82-5	PCB-1260	PEST/PCB	1.01E-06	ND	9.90E-07	ND	mg/m3
4/21/1998	11097-69-1	PCB-1254	PEST/PCB	1.22E-06	ND	1.20E-06	ND	mg/m3
4/21/1998	11104-28-2	PCB-1221	PEST/PCB	2.67E-06	ND	2.62E-06	ND	mg/m3
4/21/1998	11141-16-5	PCB-1232	PEST/PCB	1.60E-06	ND	1.57E-06	ND	mg/m3
4/21/1998	111-44-4	bis(2-Chloroethyl)ether	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	111-65-9	n-Octane	GC/MS			1.96E-03	B	mg/m3
4/21/1998	111-66-0	1-Octene	GC/MS			1.65E-03		mg/m3
4/21/1998	111-71-7	Heptanal	GC/MS			5.83E-02		mg/m3
4/21/1998	111-84-2	n-Nonane	GC/MS			2.57E-03		mg/m3
4/21/1998	111-91-1	bis(2-Chloroethoxy)methane	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	1120-21-4	n-Undecane	GC/MS			6.70E-03		mg/m3
4/21/1998	115-07-1	Propylene	GC/MS			1.61E-01	B	mg/m3
4/21/1998	115-11-7/106-98-	Isobutene + 1-Butene	GC/MS			6.60E-03	B	mg/m3
4/21/1998	117-81-7	bis(2-Ethylhexyl)phthalate	SVOC	7.20E-05		6.20E-05		mg/m3
4/21/1998	117-84-0	Di-n-octylphthalate	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	118-74-1	Hexachlorobenzene	SVOC	1.00E-06	ND	5.00E-06		mg/m3
4/21/1998	119-93-7	3,3'-Dimethylbenzidine	SVOC	4.50E-06	ND	4.00E-06	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	120-12-7	Anthracene	SVOC	2.00E-06		3.00E-06		mg/m3
4/21/1998	120-58-1	Isosafrole	SVOC	2.50E-06	ND	2.00E-06	ND	mg/m3
4/21/1998	120-82-1	1,2,4-Trichlorobenzene	SVOC	1.10E-05		1.70E-05		mg/m3
4/21/1998	120-83-2	2,4-Dichlorophenol	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	121-14-2	2,4-Dinitrotoluene	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	122-09-8	Dimethylphenethylamine	SVOC	4.80E-05	ND	4.05E-05	ND	mg/m3
4/21/1998	122-39-4	Diphenylamine/N-NitrosoDPA	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	123-38-6	Propionaldehyde	ALD/KET			9.90E-04		mg/m3
4/21/1998	123-72-8	n-Butyraldehyde	ALD/KET			6.30E-04		mg/m3
4/21/1998	123-91-1	1,4-Dioxane	GC/MS			9.17E-03		mg/m3
4/21/1998	124-11-8	1-Nonene	GC/MS			1.08E-03		mg/m3
4/21/1998	124-18-5	n-Decane	GC/MS			4.65E-03		mg/m3
4/21/1998	124-48-1	Dibromochloromethane	GC/MS			4.25E-03	ND	mg/m3
4/21/1998	12672-29-6	PCB-1248	PEST/PCB	2.45E-06	ND	2.41E-06	ND	mg/m3
4/21/1998	12674-11-2	PCB-1016	PEST/PCB	1.11E-06	ND	1.09E-06	ND	mg/m3
4/21/1998	126-99-8	Chloroprene	GC/MS			1.81E-03	ND	mg/m3
4/21/1998	127-18-4	Tetrachloroethylene	GC/MS			1.69E-03	B	mg/m3
4/21/1998	12789-03-6	gamma-Chlordane	PEST/PCB	1.02E-07	ND	5.35E-07		mg/m3
4/21/1998	127-91-3	b-Pinene	GC/MS			5.56E-04		mg/m3
4/21/1998	129-00-0	Pyrene	SVOC	8.00E-06		1.20E-05		mg/m3
4/21/1998	130-15-4	1,4-Naphthoquinone	SVOC	2.50E-06	ND	2.00E-06	ND	mg/m3
4/21/1998	131-11-3	Dimethylphthalate	SVOC	3.40E-05		4.40E-05		mg/m3
4/21/1998	132-64-9	Dibenzofuran	SVOC	2.20E-05		3.80E-05		mg/m3
4/21/1998	134-32-7	1-Naphthylamine	SVOC	4.00E-06	ND	3.50E-06	ND	mg/m3
4/21/1998	141-32-2	Butyl Acrylate	GC/MS			2.62E-03	ND	mg/m3
4/21/1998	141-93-5	m-Diethylbenzene	GC/MS			1.64E-04	ND	mg/m3
4/21/1998	142-29-0	Cyclopentene	GC/MS			1.11E-04	J	mg/m3
4/21/1998	142-82-5	n-Heptane	GC/MS			2.86E-03		mg/m3
4/21/1998	143-50-0	Kepone	SVOC	4.45E-05	ND	3.70E-05	ND	mg/m3
4/21/1998	156-59-2	c-1,2-Dichloroethylene	GC/MS			1.98E-03	ND	mg/m3
4/21/1998	156-60-5	t-1,2-Dichloroethylene	GC/MS			1.98E-04	ND	mg/m3
4/21/1998	1634-04-4	Methyl t-Butylether	GC/MS			3.60E-04	ND	mg/m3
4/21/1998	1746-01-6	2,3,7,8-TCDD	DIOXINS	2.00E-11	r	5.90E-10		mg/m3

Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	1888-71-7	Hexachloropropene	SVOC	1.50E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	191-24-2	Benzo(g,h,i)perylene	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	193-39-5	Indeno(1,2,3-cd)pyrene	SVOC	5.00E-07	ND	1.00E-06		mg/m3
4/21/1998	19408-74-3	1,2,3,7,8,9-HxCDD	DIOXINS	2.60E-10		4.69E-09		mg/m3
4/21/1998	205-99-2	Benzo(b)fluoranthene	SVOC	5.00E-07	ND	4.00E-06	F	mg/m3
4/21/1998	206-44-0	Fluoranthene	SVOC	1.30E-05		1.70E-05		mg/m3
4/21/1998	207-08-9	Benzo(k)fluoranthene	SVOC	1.50E-06	ND	4.00E-06	F	mg/m3
4/21/1998	208-96-8	Acenaphthylene	SVOC	1.00E-05		1.60E-05		mg/m3
4/21/1998	218-01-9	Chrysene	SVOC	3.00E-06		4.00E-06		mg/m3
4/21/1998	2198-23-4	4-Nonene	GC/MS			8.76E-04	ND	mg/m3
4/21/1998	2303-16-4	Diallate	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	2385-85-5	Mirex	PEST/PCB	2.37E-07	ND	2.33E-07	ND	mg/m3
4/21/1998	23950-58-5	Pronamide	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	27476-50-2	Methylcyclopentene	GC/MS			2.01E-04	ND	mg/m3
4/21/1998	287-92-3	Cyclopentane	GC/MS			5.72E-04		mg/m3
4/21/1998	30402-14-3	Total TCDF	DIOXINS	9.19E-09		3.23E-07	u	mg/m3
4/21/1998	30402-15-4	Total PeCDF	DIOXINS	1.07E-08		2.73E-07	u	mg/m3
4/21/1998	309-00-2	Aldrin	PEST/PCB	8.81E-08	ND	8.65E-08	ND	mg/m3
4/21/1998	319-84-6	alpha-BHC	PEST/PCB	3.43E-08	ND	3.37E-08	ND	mg/m3
4/21/1998	319-85-7	beta-BHC	PEST/PCB	1.10E-07	ND	1.08E-07	ND	mg/m3
4/21/1998	319-86-8	delta-BHC	PEST/PCB	1.23E-07	ND	1.21E-07	ND	mg/m3
4/21/1998	3268-87-9	1,2,3,4,6,7,8,9-OCDD	DIOXINS	8.00E-09	s	6.46E-08	s	mg/m3
4/21/1998	33213-65-9	Endosulfan II	PEST/PCB	1.90E-07	ND	1.86E-07	ND	mg/m3
4/21/1998	34465-46-8	Total HxCDD	DIOXINS	5.04E-09		1.50E-07		mg/m3
4/21/1998	3522-94-9	2,2,5-Trimethylhexane	GC/MS			1.57E-04	ND	mg/m3
4/21/1998	35822-46-9	1,2,3,4,6,7,8-HpCDD	DIOXINS	3.26E-09		4.40E-08		mg/m3
4/21/1998	36088-22-9	Total PeCDD	DIOXINS	2.25E-09		1.09E-07		mg/m3
4/21/1998	37871-00-4	Total HpCDD	DIOXINS	6.52E-09		9.10E-08		mg/m3
4/21/1998	38998-75-3	Total HpCDF	DIOXINS	1.81E-08		1.23E-07	u	mg/m3
4/21/1998	39001-02-0	1,2,3,4,6,7,8,9-OCDF	DIOXINS	1.36E-08		5.28E-08		mg/m3
4/21/1998	39227-28-6	1,2,3,4,7,8-HxCDD	DIOXINS	1.90E-10		4.99E-09		mg/m3
4/21/1998	40321-76-4	1,2,3,7,8-PeCDD	DIOXINS	9.00E-11	r	3.52E-09		mg/m3
4/21/1998	4050-45-7	t-2-Hexene	GC/MS			2.23E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	41903-57-5	Total TCDD	DIOXINS	1.63E-09		8.22E-08		mg/m3
4/21/1998	463-82-1	Neopentane	GC/MS			2.94E-04	ND	mg/m3
4/21/1998	465-73-6	Isodrin	PEST/PCB	5.85E-07	P	4.12E-08	ND	mg/m3
4/21/1998	496-11-7	Indan	GC/MS			1.93E-04	J	mg/m3
4/21/1998	50-00-0	Formaldehyde	ALD/KET			2.70E-03		mg/m3
4/21/1998	50-29-3	4,4'-DDT	PEST/PCB	1.47E-07	ND	1.45E-07	ND	mg/m3
4/21/1998	50-32-8	Benz(a)pyrene	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	510-15-6	Chlorobenzilate	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	5103-71-9	alpha-Chlordane	PEST/PCB	9.48E-08	ND	4.03E-07	P	mg/m3
4/21/1998	51207-31-9	2,3,7,8-TCDF	DIOXINS	1.00E-10		5.58E-09	u	mg/m3
4/21/1998	51-28-5	2,4-Dinitrophenol	SVOC	7.45E-05	ND	6.25E-05	ND	mg/m3
4/21/1998	526-73-8	1,2,3-Trimethylbenzene	GC/MS			7.36E-04	B	mg/m3
4/21/1998	529-20-4	Tolualdehyde	ALD/KET			3.51E-03		mg/m3
4/21/1998	534-52-1	4,6-Dinitro-2-methylphenol	SVOC	6.40E-05	ND	5.40E-05	ND	mg/m3
4/21/1998	53469-21-9	PCB-1242	PEST/PCB	1.82E-06	ND	1.78E-06	ND	mg/m3
4/21/1998	53494-70-5	Endrin Ketone	PEST/PCB	2.25E-07	ND	2.21E-07	ND	mg/m3
4/21/1998	53-70-3	Dibenz(a,h)anthracene	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	538-93-2	Isobutylbenzene	GC/MS			2.74E-04	ND	mg/m3
4/21/1998	53-96-3	2-Acetylaminofluorene	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	540-84-1	2,2,4-Trimethylpentane	GC/MS			1.73E-03		mg/m3
4/21/1998	541-73-1	1,3-Dichlorobenzene	SVOC	5.00E-07	ND	5.00E-06		mg/m3
4/21/1998	55-18-5	N-Nitrosodiethylamine	SVOC	2.00E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	55673-89-7	1,2,3,4,7,8,9-HpCDF	DIOXINS	1.84E-09		9.39E-09		mg/m3
4/21/1998	55684-94-1	Total HxCDF	DIOXINS	1.60E-08		2.14E-07	u	mg/m3
4/21/1998	56-23-5	Carbon Tetrachloride	GC/MS			7.53E-04		mg/m3
4/21/1998	563-45-1	3-Methyl-1-Butene	GC/MS			1.72E-04	ND	mg/m3
4/21/1998	564-02-3	2,2,3-Trimethylpentane	GC/MS			2.33E-04	ND	mg/m3
4/21/1998	56-49-5	3-Methylcholanthrene	SVOC	3.00E-06	ND	2.50E-06	ND	mg/m3
4/21/1998	56-55-3	Benz(a)anthracene	SVOC	1.00E-06	J	2.00E-06	J	mg/m3
4/21/1998	565-59-3	2,3-Dimethylpentane	GC/MS			2.05E-03	ND	mg/m3
4/21/1998	56-57-5	4-Nitroquinoline-1-oxide	SVOC	5.30E-05	ND	4.45E-05	ND	mg/m3
4/21/1998	565-75-3	2,3,4-Trimethylpentane	GC/MS			2.33E-04	ND	mg/m3
4/21/1998	57117-31-4	2,3,4,7,8-PeCDF	DIOXINS	8.90E-10		2.17E-08		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	57117-41-6	1,2,3,7,8-PeCDF	DIOXINS	2.50E-10		9.98E-09		mg/m3
4/21/1998	57117-44-9	1,2,3,6,7,8-HxCDF	DIOXINS	1.10E-09		2.03E-08	u	mg/m3
4/21/1998	57653-85-7	1,2,3,6,7,8-HxCDD	DIOXINS	3.90E-10		9.68E-09		mg/m3
4/21/1998	57-97-6	7,12-Dimethylbenz(a)anthracene	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	58-89-9	gamma-BHC	PEST/PCB	2.09E-07	BP	2.21E-07	BP	mg/m3
4/21/1998	58-90-2	2,3,4,6-Tetrachlorophenol	SVOC	1.50E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	589-34-4	3-Methylhexane	GC/MS			2.45E-04	ND	mg/m3
4/21/1998	589-81-1	3-Methylheptane	GC/MS			2.10E-04	ND	mg/m3
4/21/1998	590-18-1	c-2-Butene	GC/MS			6.18E-04		mg/m3
4/21/1998	590-86-3	Isovaleraldehyde	ALD/KET			4.50E-05	ND	mg/m3
4/21/1998	591-49-1	1-Methylcyclohexene	GC/MS			2.75E-04	ND	mg/m3
4/21/1998	591-76-4	Isoheptane	GC/MS			1.02E-03		mg/m3
4/21/1998	592-13-2	2,5-Dimethylhexane	GC/MS			4.66E-04		mg/m3
4/21/1998	592-27-8	2-Methylheptane	GC/MS			3.59E-03		mg/m3
4/21/1998	592-41-6	1-Hexene	GC/MS			1.58E-03		mg/m3
4/21/1998	592-76-7	1-Heptene	GC/MS			1.56E-03		mg/m3
4/21/1998	593-60-2	Vinyl Bromide	GC/MS			2.18E-03	ND	mg/m3
4/21/1998	59-50-7	4-Chloro-3-methylphenol	SVOC	1.50E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	59-89-2	N-Nitrosomorpholine	SVOC	2.00E-06	ND	2.00E-06	ND	mg/m3
4/21/1998	60-11-7	p-Dimethylaminoazobenzene	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	60-29-7	Diethyl Ether	GC/MS			5.45E-04	ND	mg/m3
4/21/1998	60-57-1	Dieldrin	PEST/PCB	2.28E-07	P	5.74E-07	P	mg/m3
4/21/1998	606-20-2	2,6-Dinitrotoluene	SVOC	1.50E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	60851-34-5	2,3,4,6,7,8-HxCDF	DIOXINS	3.26E-09		2.82E-08		mg/m3
4/21/1998	608-93-5	Pentachlorobenzene	SVOC	1.50E-06	ND	1.10E-05		mg/m3
4/21/1998	611-14-3	o-Ethyltoluene	GC/MS			7.85E-04	B	mg/m3
4/21/1998	620-14-4	m-Ethyltoluene	GC/MS			1.86E-03	B	mg/m3
4/21/1998	621-64-7	N-Nitroso-di-n-propylamine	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	622-96-8	p-Ethyltoluene	GC/MS			1.03E-03		mg/m3
4/21/1998	62-44-2	Phenacetin	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	624-64-6	t-2-Butene	GC/MS			5.95E-04		mg/m3
4/21/1998	62-50-0	Ethyl methanesulfonate	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	625-27-4	2-Methyl-2-Pentene	GC/MS			2.92E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	62-53-3	Aniline	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	627-20-3	c-2-Pentene	GC/MS			2.29E-04	ND	mg/m3
4/21/1998	62-75-9	N-Nitrosodimethylamine	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	64-17-5	Ethanol	GC/MS			7.73E-02		mg/m3
4/21/1998	646-04-8	t-2-Pentene	GC/MS			3.15E-04		mg/m3
4/21/1998	65-85-0	Benzoic acid	SVOC	5.09E-04		7.43E-04		mg/m3
4/21/1998	66-25-1	Hexanal	ALD/KET			8.26E-02		mg/m3
4/21/1998	66-27-3	Methyl methanesulfonate	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	67562-39-4	1,2,3,4,6,7,8-HpCDF	DIOXINS	8.00E-09		7.63E-08	u	mg/m3
4/21/1998	67-63-0	2-Propanol	GC/MS			1.99E-02	B	mg/m3
4/21/1998	67-64-1	Acetone	ALD/KET			1.53E-02		mg/m3
4/21/1998	67-66-3	Chloroform	GC/MS			7.80E-04		mg/m3
4/21/1998	67-72-1	Hexachloroethane	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	691-37-2	4-Methyl-1-Pentene	GC/MS			4.99E-04	ND	mg/m3
4/21/1998	691-38-3	c-4-Methyl-2-Pentene	GC/MS			3.61E-04	ND	mg/m3
4/21/1998	7005-72-3	4-Chlorophenylphenyl ether	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	70648-26-9	1,2,3,4,7,8-HxCDF	DIOXINS	7.70E-10		2.03E-08	u	mg/m3
4/21/1998	71-23-8	1-Propanol	GC/MS			3.43E-04	ND	mg/m3
4/21/1998	71-36-3	1-Butanol	GC/MS			7.50E-03		mg/m3
4/21/1998	71-43-2	Benzene	GC/MS			6.73E-03	B	mg/m3
4/21/1998	71-55-6	1,1,1-Trichloroethane	GC/MS			2.23E-03		mg/m3
4/21/1998	72-20-8	Endrin	PEST/PCB	4.51E-07	ND	4.42E-07	ND	mg/m3
4/21/1998	72-43-5	Methoxychlor	PEST/PCB	6.83E-07	ND	6.70E-07	ND	mg/m3
4/21/1998	72-54-8	4,4'-DDD	PEST/PCB	8.34E-08	ND	8.18E-08	ND	mg/m3
4/21/1998	72-55-9	4,4'-DDE	PEST/PCB	2.27E-07	ND	2.23E-07	NDJ	mg/m3
4/21/1998	72918-21-9	1,2,3,7,8,9-HxCDF	DIOXINS	9.50E-10		8.22E-09		mg/m3
4/21/1998	73513-42-5	Isohexane	GC/MS			3.52E-04	ND	mg/m3
4/21/1998	7421-93-4	Endrin Aldehyde	PEST/PCB	2.67E-07	ND	2.62E-07	ND	mg/m3
4/21/1998	7439-92-1	Lead	PM10	9.99E-05	B	1.63E-02	B	mg/m3
4/21/1998	7439-97-6	Mercury	MERCURY	3.85E-06		4.21E-06		mg/m3
4/21/1998	7440-02-0	Nickel	PM10	1.83E-05		1.41E-04		mg/m3
4/21/1998	7440-22-4	Silver	PM10	1.27E-06	B	4.86E-05	B	mg/m3
4/21/1998	7440-28-0	Thallium	PM10	1.74E-06	ND	1.12E-05	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	7440-36-0	Antimony	PM10	7.84E-06	B	3.87E-04	B	mg/m3
4/21/1998	7440-38-2	Arsenic	PM10	5.77E-06	B	5.52E-05	B	mg/m3
4/21/1998	7440-41-7	Beryllium	PM10	2.28E-08	BJ	3.70E-07	ND	mg/m3
4/21/1998	7440-43-9F	Cadmium	PM10	1.22E-06	B	3.43E-04	B	mg/m3
4/21/1998	7440-47-3	Chromium	PM10	1.89E-05	B	1.16E-04	B	mg/m3
4/21/1998	7440-50-8	Copper	PM10	1.02E-04		6.21E-03		mg/m3
4/21/1998	7440-66-6	Zinc	PM10	2.85E-04		1.18E-02		mg/m3
4/21/1998	74-83-9	Bromomethane	GC/MS			3.10E-04		mg/m3
4/21/1998	74-87-3	Chloromethane	GC/MS			3.48E-03		mg/m3
4/21/1998	74-97-5	Bromochloromethane	GC/MS			2.64E-03	ND	mg/m3
4/21/1998	74-98-6	Propane	GC/MS			7.60E-02	B	mg/m3
4/21/1998	75-00-3	Chloroethane	GC/MS			8.95E-04		mg/m3
4/21/1998	75-01-4	Vinyl Chloride	GC/MS			1.15E-04	ND	mg/m3
4/21/1998	75-05-8	Acetonitrile	GC/MS			6.28E-04	ND	mg/m3
4/21/1998	75-07-0	Acetaldehyde	ALD/KET			3.87E-03		mg/m3
4/21/1998	75-09-2	Methylene Chloride	GC/MS			1.03E-02	B	mg/m3
4/21/1998	75-25-2	Bromoform	GC/MS			5.16E-03	ND	mg/m3
4/21/1998	75-27-4	Bromodichloromethane	GC/MS			3.34E-03	ND	mg/m3
4/21/1998	75-28-5	Isobutane	GC/MS			5.67E-03		mg/m3
4/21/1998	75-34-3	1,1-Dichloroethane	GC/MS			2.02E-04	ND	mg/m3
4/21/1998	75-35-4	1,1-Dichloroethylene	GC/MS			2.97E-04	ND	mg/m3
4/21/1998	75-43-4	Dichlorofluoromethane	GC/MS			2.10E-03	ND	mg/m3
4/21/1998	75-45-6	Chlorodifluoromethane	GC/MS			1.70E-03		mg/m3
4/21/1998	75-69-4	Trichlorofluoromethane	GC/MS			2.75E-03		mg/m3
4/21/1998	75-71-8	Dichlorodifluoromethane	GC/MS			3.75E-03		mg/m3
4/21/1998	75-83-2	Neohexane	GC/MS			2.11E-04	ND	mg/m3
4/21/1998	76-01-7	Pentachloroethane	SVOC	1.50E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	760-21-4	2-Ethyl-1-Butene	GC/MS			4.81E-04	ND	mg/m3
4/21/1998	76-13-1	Freon 113	GC/MS			2.83E-03		mg/m3
4/21/1998	76-14-2	Freon 114	GC/MS			6.98E-05	J	mg/m3
4/21/1998	763-29-1	2-Methyl-1-Pentene	GC/MS			3.09E-04	ND	mg/m3
4/21/1998	7642-04-8	c-2-Octene	GC/MS			7.79E-04	J	mg/m3
4/21/1998	7642-09-3	c-3-Hexene	GC/MS			3.78E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	76-44-8	Heptachlor	PEST/PCB	8.07E-07		1.14E-06		mg/m3
4/21/1998	7647-01-0	Hydrochloric Acid	ACIDGAS	2.29E-03		1.42E-02		mg/m3
4/21/1998	7664-39-3	Hydrofluoric Acid	ACIDGAS	9.90E-04		1.08E-03	J	mg/m3
4/21/1998	7664-93-9	Sulfuric Acid	ACIDGAS	1.44E-02		2.64E-02		mg/m3
4/21/1998	7688-21-3	c-2-Hexene	GC/MS			1.72E-04	ND	mg/m3
4/21/1998	77-47-4	Hexachlorocyclopentadiene	SVOC	2.60E-05	ND	2.20E-05	ND	mg/m3
4/21/1998	7782-49-2	Selenium	PM10	7.37E-07	ND	3.90E-05		mg/m3
4/21/1998	78-59-1	Isophorone	SVOC	7.40E-05		6.70E-05		mg/m3
4/21/1998	78-78-4	Isopentane	GC/MS			6.57E-03		mg/m3
4/21/1998	78-79-5	Isoprene	GC/MS			2.22E-04	ND	mg/m3
4/21/1998	78-87-5	1,2-Dichloropropane	GC/MS			2.31E-04	ND	mg/m3
4/21/1998	78-93-3	2-Butanone	ALD/KET			1.17E-02		mg/m3
4/21/1998	79-00-5	1,1,2-Trichloroethane	GC/MS			2.72E-04	ND	mg/m3
4/21/1998	79-01-6	Trichloroethylene	GC/MS			2.09E-03	B	mg/m3
4/21/1998	79-29-8	2,3-Dimethylbutane	GC/MS			2.29E-04	ND	mg/m3
4/21/1998	79-34-5	1,1,2,2-Tetrachloroethane	GC/MS			8.22E-04	B	mg/m3
4/21/1998	8001-35-2	Toxaphene	PEST/PCB	9.01E-06	ND	8.84E-06	ND	mg/m3
4/21/1998	80-56-8	α -Pinene	GC/MS			3.28E-03		mg/m3
4/21/1998	811-97-2	Halocarbon 134A	GC/MS			2.91E-04		mg/m3
4/21/1998	821-95-4	1-Undecene	GC/MS			1.57E-04	ND	mg/m3
4/21/1998	82-68-8	Pentachloronitrobenzene	SVOC	3.00E-06	ND	2.50E-06	ND	mg/m3
4/21/1998	83-32-9	Acenaphthene	SVOC	1.00E-06	ND	3.00E-06		mg/m3
4/21/1998	84-66-2	Diethylphthalate	SVOC	5.00E-06		1.00E-05		mg/m3
4/21/1998	84-74-2	Di-n-butylphthalate	SVOC	4.00E-05		4.30E-05		mg/m3
4/21/1998	85-01-8	Phenanthrene	SVOC	3.90E-05		6.80E-05		mg/m3
4/21/1998	85-68-7	Butylbenzylphthalate	SVOC	3.00E-06		4.00E-06		mg/m3
4/21/1998	86-73-7	Fluorene	SVOC	2.00E-05		2.90E-05		mg/m3
4/21/1998	86-74-8	Carbazole	SVOC	5.00E-07	ND	2.00E-06		mg/m3
4/21/1998	872-05-9	1-Decene	GC/MS			8.53E-03		mg/m3
4/21/1998	87-65-0	2,6-Dichlorophenol	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	87-68-3	Hexachloro-1,3-Butadiene	SVOC	1.00E-06	ND	9.58E-04	B	mg/m3
4/21/1998	87-86-5	Pentachlorophenol	SVOC	6.80E-05	ND	5.70E-05	ND	mg/m3
4/21/1998	88-06-2	2,4,6-Trichlorophenol	SVOC	1.50E-06	ND	1.00E-06	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	88-74-4	2-Nitroaniline	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	88-75-5	2-Nitrophenol	SVOC	1.03E-04		1.00E-04		mg/m3
4/21/1998	91-20-3	Naphthalene	SVOC	2.90E-04		5.26E-04		mg/m3
4/21/1998	91-57-6	2-Methylnaphthalene	SVOC	8.50E-05		1.17E-04		mg/m3
4/21/1998	91-58-7	2-Chloronaphthalene	SVOC	1.50E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	91-59-8	2-Naphthylamine	SVOC	3.50E-06	ND	3.00E-06	ND	mg/m3
4/21/1998	91-80-5	Methapyrilene	SVOC	4.90E-05	ND	4.10E-05	ND	mg/m3
4/21/1998	91-94-1	3,3'-Dichlorobenzidine	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	922-61-2	c-3-Methyl-2-Pentene	GC/MS			3.61E-04	ND	mg/m3
4/21/1998	924-16-3	N-Nitroso-di-n-butylamine	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	92-67-1	4-Aminobiphenyl	SVOC	5.00E-06	ND	4.00E-06	ND	mg/m3
4/21/1998	92-87-5	Benzidine	SVOC	3.15E-05	ND	2.65E-05	ND	mg/m3
4/21/1998	930-55-2	N-Nitrosopyrrolidine	SVOC	3.00E-06	ND	2.50E-06	ND	mg/m3
4/21/1998	94-59-7	Safrole	SVOC	1.50E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	95-13-6	Indene	GC/MS			2.61E-04	ND	mg/m3
4/21/1998	95-47-6	o-Xylene	GC/MS			5.59E-03	B	mg/m3
4/21/1998	95-48-7	2-Methylphenol	SVOC	4.20E-05		4.20E-05		mg/m3
4/21/1998	95-49-8	o-Chlorotoluene	GC/MS			2.58E-03	ND	mg/m3
4/21/1998	95-50-1	1,2-Dichlorobenzene	SVOC	1.00E-06	ND	3.70E-05		mg/m3
4/21/1998	95-53-4	o-Toluidine	SVOC	1.00E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	95-57-8	2-Chlorophenol	SVOC	5.00E-07	ND	5.00E-07	ND	mg/m3
4/21/1998	95-63-6	1,2,4-Trimethylbenzene	GC/MS			3.48E-03	B	mg/m3
4/21/1998	95-94-3	1,2,4,5-Tetrachlorobenzene	SVOC	1.50E-06	ND	9.00E-06		mg/m3
4/21/1998	95-95-4	2,4,5-Trichlorophenol	SVOC	1.50E-06	ND	1.00E-06	ND	mg/m3
4/21/1998	959-98-8	Endosulfan I	PEST/PCB	6.32E-08	ND	5.08E-08	ND	mg/m3
4/21/1998	96-14-0	3-Methylpentane	GC/MS			3.17E-04	ND	mg/m3
4/21/1998	96-37-7	Methylcyclopentane	GC/MS			2.58E-04	ND	mg/m3
4/21/1998	98-06-6	t-Butylbenzene	GC/MS			2.74E-04	ND	mg/m3
4/21/1998	98-82-8	Cumene	GC/MS			3.93E-04	J	mg/m3
4/21/1998	98-86-2	Acetophenone	SVOC	5.00E-07	ND	8.15E-04	E	mg/m3
4/21/1998	98-95-3	Nitrobenzene	SVOC	2.00E-06	ND	2.00E-06	ND	mg/m3
4/21/1998	99-09-2	3-Nitroaniline	SVOC	2.00E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	99-35-4	sym-Trinitrobenzene	SVOC	3.00E-06	ND	2.50E-06	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/21/1998	99-55-8	5-Nitro-o-toluidine	SVOC	1.00E-06	ND	5.00E-07	ND	mg/m3
4/21/1998	99-65-0	1,3-Dinitrobenzene	SVOC	2.00E-06	ND	1.50E-06	ND	mg/m3
4/21/1998	99-87-6	p-Isopropyltoluene	GC/MS			2.74E-04		mg/m3
4/21/1998	CPAH-TEQ	Total Carcinogenic PAHS (BaP TEQs)	SVOC	2.18E-07		7.44E-07		mg/m3
4/21/1998	DIOXIN-TEQ	Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	DIOXINS	1.40E-09		2.70E-08		mg/m3
4/21/1998	PM10	PM-10	PM10	2.31E-01		2.45E-01		mg/m3
5/6/1998	100-41-4	Ethylbenzene	GC/MS	3.21E-03	B	4.21E-03	B	mg/m3
5/6/1998	100-42-5	Styrene	GC/MS	5.52E-04	B	1.06E-03	B	mg/m3
5/6/1998	100-44-7	Benzyl Chloride	GC/MS	5.17E-05	ND	5.17E-05	ND	mg/m3
5/6/1998	100-52-7	Benzaldehyde	ALD/KET	4.89E-03		3.90E-03		mg/m3
5/6/1998	10061-01-5	c-1,3-Dichloropropene	GC/MS	2.27E-04		1.13E-04	ND	mg/m3
5/6/1998	10061-02-6	t-1,3-Dichloropropene	GC/MS	1.81E-04		4.53E-05	ND	mg/m3
5/6/1998	103-65-1	n-Propylbenzene	GC/MS	2.94E-04		3.43E-04		mg/m3
5/6/1998	104-51-8	n-Butylbenzene	GC/MS	8.22E-05	ND	2.74E-04	ND	mg/m3
5/6/1998	105-05-5	p-Diethylbenzene	GC/MS	8.22E-05	ND	8.22E-05	ND	mg/m3
5/6/1998	106-42-3/108-38-	p-Xylene + m-Xylene	GC/MS			5.81E-03	B	mg/m3
5/6/1998	106-42-3/108-38-3	p-Xylene + m-Xylene	GC/MS	6.72E-03	B			mg/m3
5/6/1998	106-43-4	p-Chlorotoluene	GC/MS	1.03E-04	ND	2.58E-04	ND	mg/m3
5/6/1998	106-46-7	1,4-Dichlorobenzene	SVOC	2.10E-03	B	1.50E-03	B	mg/m3
5/6/1998	106-93-4	1,2-Dibromoethane	GC/MS	2.30E-04	B	7.67E-05	ND	mg/m3
5/6/1998	106-97-8	n-Butane	GC/MS	4.67E-03	B	4.84E-03	B	mg/m3
5/6/1998	106-99-0	1,3-Butadiene	GC/MS	4.64E-04		5.52E-04		mg/m3
5/6/1998	107-06-2	1,2-Dichloroethane	GC/MS	1.62E-04	J	8.08E-05	ND	mg/m3
5/6/1998	107-13-1	Acrylonitrile	GC/MS	1.08E-04	ND	2.17E-04	ND	mg/m3
5/6/1998	107-39-1	2,4,4-Trimethyl-1-Pentene	GC/MS	9.16E-05	ND	3.43E-04	ND	mg/m3
5/6/1998	107-40-4	2,4,4-Trimethyl-2-Pentene	GC/MS	6.87E-05	ND	4.12E-04	ND	mg/m3
5/6/1998	108-05-4	Vinyl Acetate	GC/MS	1.26E-02		1.70E-02		mg/m3
5/6/1998	108-08-7	2,4-Dimethylpentane	GC/MS	8.18E-05	ND	8.18E-05	ND	mg/m3
5/6/1998	108-10-1	Methylisobutylketone	GC/MS	4.05E-03		4.62E-03		mg/m3
5/6/1998	108-67-8	1,3,5-Trimethylbenzene	GC/MS	4.42E-04	B	4.42E-04	B	mg/m3
5/6/1998	108-87-2	Methylcyclohexane	GC/MS	1.00E-04	ND	1.00E-04	ND	mg/m3
5/6/1998	108-88-3	Toluene	GC/MS	1.02E-02	B	1.94E-02	B	mg/m3
5/6/1998	108-90-7	Chlorobenzene	GC/MS	4.60E-04	B	3.22E-04	B	mg/m3

Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
5/6/1998	109-66-0	n-Pentane	GC/MS	2.39E-03		3.80E-03		mg/m3
5/6/1998	109-67-1	1-Pentene	GC/MS	7.15E-04		6.87E-04		mg/m3
5/6/1998	110-54-3	n-Hexane	GC/MS	1.87E-03	B	2.36E-03	B	mg/m3
5/6/1998	110-82-7	Cyclohexane	GC/MS	8.94E-04		3.27E-03	J	mg/m3
5/6/1998	110-83-8	Cyclohexene	GC/MS	8.38E-05	ND	2.68E-04	ND	mg/m3
5/6/1998	111-65-9	n-Octane	GC/MS	7.46E-04	B	7.46E-04	B	mg/m3
5/6/1998	111-66-0	1-Octene	GC/MS	6.41E-04		2.98E-04	ND	mg/m3
5/6/1998	111-71-7	Heptanal	GC/MS	1.33E-02	J	6.67E-03	J	mg/m3
5/6/1998	111-84-2	n-Nonane	GC/MS	1.31E-03		1.36E-03		mg/m3
5/6/1998	1120-21-4	n-Undecane	GC/MS	2.23E-03		7.02E-04		mg/m3
5/6/1998	115-07-1	Propylene	GC/MS	1.87E-03	B	2.47E-03	B	mg/m3
5/6/1998	115-11-7/106-98-	Isobutene + 1-Butene	GC/MS			2.91E-03	B	mg/m3
5/6/1998	115-11-7/106-98-9	Isobutene + 1-Butene	GC/MS	2.36E-03	B			mg/m3
5/6/1998	120-82-1	1,2,4-Trichlorobenzene	SVOC	3.70E-03	B	2.96E-04	BJ	mg/m3
5/6/1998	123-72-8	n-Butyraldehyde	ALD/KET	1.60E-02		3.80E-02		mg/m3
5/6/1998	123-91-1	1,4-Dioxane	GC/MS	2.01E-03		1.47E-03		mg/m3
5/6/1998	124-11-8	1-Nonene	GC/MS	1.03E-04	ND	4.12E-04	ND	mg/m3
5/6/1998	124-18-5	n-Decane	GC/MS	1.86E-03	B	2.67E-03	B	mg/m3
5/6/1998	124-48-1	Dibromochloromethane	GC/MS	8.50E-05	ND	8.50E-05	ND	mg/m3
5/6/1998	126-99-8	Chloroprene	GC/MS	1.08E-04	ND	1.08E-04	ND	mg/m3
5/6/1998	127-18-4	Tetrachloroethylene	GC/MS	1.69E-03	B	3.38E-03	B	mg/m3
5/6/1998	127-91-3	b-Pinene	GC/MS	5.56E-05	ND	5.56E-05	ND	mg/m3
5/6/1998	141-32-2	Butyl Acrylate	GC/MS	2.35E-04	ND	2.35E-04	ND	mg/m3
5/6/1998	141-93-5	m-Diethylbenzene	GC/MS	5.48E-05	ND	5.48E-05	ND	mg/m3
5/6/1998	142-29-0	Cyclopentene	GC/MS	5.56E-05	ND	5.56E-05	ND	mg/m3
5/6/1998	142-82-5	n-Heptane	GC/MS	1.06E-03		8.18E-05	ND	mg/m3
5/6/1998	156-59-2	c-1,2-Dichloroethylene	GC/MS	5.94E-05	ND	5.94E-05	ND	mg/m3
5/6/1998	156-60-5	t-1,2-Dichloroethylene	GC/MS	5.94E-05	ND	5.94E-05	ND	mg/m3
5/6/1998	1634-04-4	Methyl t-Butylether	GC/MS	1.44E-04	ND	2.70E-04	ND	mg/m3
5/6/1998	1746-01-6	2,3,7,8-TCDD	DIOXINS	1.00E-11				mg/m3
5/6/1998	19408-74-3	1,2,3,7,8,9-HxCDD	DIOXINS	1.70E-10				mg/m3
5/6/1998	2198-23-4	4-Nonene	GC/MS	7.73E-05	ND	3.35E-04	ND	mg/m3
5/6/1998	27476-50-2	Methylcyclopentene	GC/MS	5.04E-05	ND	2.01E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
5/6/1998	287-92-3	Cyclopentane	GC/MS	4.29E-05	ND	4.29E-05	ND	mg/m3
5/6/1998	30402-14-3	Total TCDF	DIOXINS	5.38E-09				mg/m3
5/6/1998	30402-15-4	Total PeCDF	DIOXINS	5.38E-09				mg/m3
5/6/1998	3268-87-9	1,2,3,4,6,7,8,9-OCDD	DIOXINS	7.05E-09				mg/m3
5/6/1998	34465-46-8	Total HxCDD	DIOXINS	3.23E-09				mg/m3
5/6/1998	3522-94-9	2,2,5-Trimethylhexane	GC/MS	2.62E-04	ND	3.67E-04	ND	mg/m3
5/6/1998	35822-46-9	1,2,3,4,6,7,8-HpCDD	DIOXINS	2.03E-09				mg/m3
5/6/1998	36088-22-9	Total PeCDD	DIOXINS	1.67E-09				mg/m3
5/6/1998	37871-00-4	Total HpCDD	DIOXINS	4.18E-09				mg/m3
5/6/1998	38998-75-3	Total HpCDF	DIOXINS	5.85E-09				mg/m3
5/6/1998	39001-02-0	1,2,3,4,6,7,8,9-OCDF	DIOXINS	3.58E-09				mg/m3
5/6/1998	39227-28-6	1,2,3,4,7,8-HxCDD	DIOXINS	1.20E-10				mg/m3
5/6/1998	40321-76-4	1,2,3,7,8-PeCDD	DIOXINS	6.00E-11				mg/m3
5/6/1998	4050-45-7	t-2-Hexene	GC/MS	6.88E-05	ND	6.88E-05	ND	mg/m3
5/6/1998	41903-57-5	Total TCDD	DIOXINS	1.43E-09				mg/m3
5/6/1998	463-82-1	Neopentane	GC/MS	4.41E-05	ND	1.03E-04	ND	mg/m3
5/6/1998	496-11-7	Indan	GC/MS	9.65E-05	J	2.41E-04	J	mg/m3
5/6/1998	51207-31-9	2,3,7,8-TCDF	DIOXINS	9.00E-11				mg/m3
5/6/1998	526-73-8	1,2,3-Trimethylbenzene	GC/MS	3.43E-04	B	3.43E-04	B	mg/m3
5/6/1998	538-93-2	Isobutylbenzene	GC/MS	8.22E-05	ND	3.01E-04	ND	mg/m3
5/6/1998	540-84-1	2,2,4-Trimethylpentane	GC/MS	5.13E-04		3.26E-04		mg/m3
5/6/1998	541-73-1	1,3-Dichlorobenzene	SVOC	4.20E-04	B	1.20E-04	ND	mg/m3
5/6/1998	55673-89-7	1,2,3,4,7,8,9-HpCDF	DIOXINS	5.70E-10				mg/m3
5/6/1998	55684-94-1	Total HxCDF	DIOXINS	5.73E-09				mg/m3
5/6/1998	56-23-5	Carbon Tetrachloride	GC/MS	8.16E-04		6.91E-04		mg/m3
5/6/1998	563-45-1	3-Methyl-1-Butene	GC/MS	5.72E-05	ND	5.72E-05	ND	mg/m3
5/6/1998	564-02-3	2,2,3-Trimethylpentane	GC/MS	1.17E-04	ND	3.26E-04	ND	mg/m3
5/6/1998	565-59-3	2,3-Dimethylpentane	GC/MS	8.18E-05	ND	8.18E-05	ND	mg/m3
5/6/1998	565-75-3	2,3,4-Trimethylpentane	GC/MS	6.99E-05	ND	6.99E-05	ND	mg/m3
5/6/1998	57117-31-4	2,3,4,7,8-PeCDF	DIOXINS	4.20E-10				mg/m3
5/6/1998	57117-41-6	1,2,3,7,8-PeCDF	DIOXINS	1.70E-10				mg/m3
5/6/1998	57117-44-9	1,2,3,6,7,8-HxCDF	DIOXINS	4.70E-10				mg/m3
5/6/1998	57653-85-7	1,2,3,6,7,8-HxCDD	DIOXINS	2.40E-10				mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
5/6/1998	589-34-4	3-Methylhexane	GC/MS	6.14E-05	ND	6.14E-05	ND	mg/m3
5/6/1998	589-81-1	3-Methylheptane	GC/MS	1.17E-04	ND	1.17E-04	ND	mg/m3
5/6/1998	590-18-1	c-2-Butene	GC/MS	3.21E-04		2.98E-04		mg/m3
5/6/1998	591-49-1	1-Methylcyclohexene	GC/MS	5.89E-05	ND	3.14E-04	ND	mg/m3
5/6/1998	591-76-4	Isoheptane	GC/MS	4.09E-04		3.68E-04		mg/m3
5/6/1998	592-13-2	2,5-Dimethylhexane	GC/MS	1.17E-04	ND	3.96E-04	ND	mg/m3
5/6/1998	592-27-8	2-Methylheptane	GC/MS	6.99E-05	ND	1.07E-03		mg/m3
5/6/1998	592-41-6	1-Hexene	GC/MS	4.81E-04		1.03E-03		mg/m3
5/6/1998	592-76-7	1-Heptene	GC/MS	8.02E-05	ND	3.81E-04	ND	mg/m3
5/6/1998	593-60-2	Vinyl Bromide	GC/MS	1.31E-04	ND	2.40E-04	ND	mg/m3
5/6/1998	60-29-7	Diethyl Ether	GC/MS	1.81E-04	ND	3.18E-04	ND	mg/m3
5/6/1998	60851-34-5	2,3,4,6,7,8-HxCDF	DIOXINS	1.09E-09				mg/m3
5/6/1998	611-14-3	o-Ethyltoluene	GC/MS	3.43E-04	B	3.43E-04	B	mg/m3
5/6/1998	620-14-4	m-Ethyltoluene	GC/MS	6.87E-04	B	8.34E-04	B	mg/m3
5/6/1998	622-96-8	p-Ethyltoluene	GC/MS	4.42E-04	B	4.42E-04	B	mg/m3
5/6/1998	624-64-6	t-2-Butene	GC/MS	3.44E-04		3.89E-04		mg/m3
5/6/1998	625-27-4	2-Methyl-2-Pentene	GC/MS	1.37E-04	ND	2.41E-04	ND	mg/m3
5/6/1998	627-20-3	c-2-Pentene	GC/MS	5.72E-05	ND	5.72E-05	ND	mg/m3
5/6/1998	64-17-5	Ethanol	GC/MS	3.58E-02		5.44E-02		mg/m3
5/6/1998	646-04-8	t-2-Pentene	GC/MS	5.72E-05	ND	2.86E-04		mg/m3
5/6/1998	66-25-1	Hexanal	ALD/KET	1.93E-02		1.78E-02		mg/m3
5/6/1998	67562-39-4	1,2,3,4,6,7,8-HpCDF	DIOXINS	2.99E-09				mg/m3
5/6/1998	67-63-0	2-Propanol	GC/MS	4.37E-02	J	7.90E-03	J	mg/m3
5/6/1998	67-64-1	Acetone	ALD/KET	8.82E-02	B	1.80E-01	BJ	mg/m3
5/6/1998	67-66-3	Chloroform	GC/MS	2.44E-04	B	1.95E-04	B	mg/m3
5/6/1998	691-37-2	4-Methyl-1-Pentene	GC/MS	5.16E-05	ND	5.16E-05	ND	mg/m3
5/6/1998	691-38-3	c-4-Methyl-2-Pentene	GC/MS	2.58E-04	ND	3.78E-04	ND	mg/m3
5/6/1998	70648-26-9	1,2,3,4,7,8-HxCDF	DIOXINS	3.80E-10				mg/m3
5/6/1998	71-23-8	1-Propanol	GC/MS	2.40E-02	J	3.14E-03	J	mg/m3
5/6/1998	71-36-3	1-Butanol	GC/MS	3.02E-04	ND	2.27E-03	J	mg/m3
5/6/1998	71-43-2	Benzene	GC/MS	3.25E-03	B	3.57E-03	B	mg/m3
5/6/1998	71-55-6	1,1,1-Trichloroethane	GC/MS	8.17E-04	B	7.62E-04	B	mg/m3
5/6/1998	72918-21-9	1,2,3,7,8,9-HxCDF	DIOXINS	3.00E-10				mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
5/6/1998	73513-42-5	Isohexane	GC/MS	5.28E-05	ND	5.28E-05	ND	mg/m3
5/6/1998	7439-97-6	Mercury	MERCURY	1.50E-07	ND	1.50E-07	ND	mg/m3
5/6/1998	74-83-9	Bromomethane	GC/MS	1.55E-04	J	7.75E-05	J	mg/m3
5/6/1998	74-87-3	Chloromethane	GC/MS	1.65E-03		1.94E-03		mg/m3
5/6/1998	74-97-5	Bromochloromethane	GC/MS	1.06E-04	ND	1.06E-04	ND	mg/m3
5/6/1998	74-98-6	Propane	GC/MS	9.25E-03		1.02E-02		mg/m3
5/6/1998	75-00-3	Chloroethane	GC/MS	2.37E-04		3.42E-04		mg/m3
5/6/1998	75-01-4	Vinyl Chloride	GC/MS	5.10E-05	ND	5.10E-05	ND	mg/m3
5/6/1998	75-05-8	Acetonitrile	GC/MS	1.09E-04	ND	3.41E-03	ND	mg/m3
5/6/1998	75-07-0	Acetaldehyde	ALD/KET	7.94E-02	J	1.31E-01	BJ	mg/m3
5/6/1998	75-09-2	Methylene Chloride	GC/MS	5.03E-03	B	4.33E-03	B	mg/m3
5/6/1998	75-25-2	Bromoform	GC/MS	2.58E-04	ND	2.58E-04	ND	mg/m3
5/6/1998	75-27-4	Bromodichloromethane	GC/MS	1.00E-04	ND	1.00E-04	ND	mg/m3
5/6/1998	75-28-5	Isobutane	GC/MS	2.82E-03		1.19E-02	J	mg/m3
5/6/1998	75-34-3	1,1-Dichloroethane	GC/MS	6.06E-05	ND	6.06E-05	ND	mg/m3
5/6/1998	75-35-4	1,1-Dichloroethylene	GC/MS	3.96E-05	ND	5.94E-05	ND	mg/m3
5/6/1998	75-43-4	Dichlorofluoromethane	GC/MS	4.41E-04	ND	2.52E-04	ND	mg/m3
5/6/1998	75-45-6	Chlorodifluoromethane	GC/MS	1.38E-03		1.73E-03		mg/m3
5/6/1998	75-69-4	Trichlorofluoromethane	GC/MS	1.80E-03	B	1.91E-03	B	mg/m3
5/6/1998	75-71-8	Dichlorodifluoromethane	GC/MS	2.96E-03		3.01E-03		mg/m3
5/6/1998	75-83-2	Neohexane	GC/MS	8.80E-05	ND	8.80E-05	ND	mg/m3
5/6/1998	760-21-4	2-Ethyl-1-Butene	GC/MS	1.20E-04	ND	2.06E-04	ND	mg/m3
5/6/1998	76-13-1	Freon 113	GC/MS	7.65E-04		1.30E-03		mg/m3
5/6/1998	76-14-2	Freon 114	GC/MS	6.98E-05	J	6.98E-05	J	mg/m3
5/6/1998	763-29-1	2-Methyl-1-Pentene	GC/MS	6.88E-05	ND	3.44E-04		mg/m3
5/6/1998	7642-04-8	c-2-Octene	GC/MS	4.58E-04	ND	2.75E-04	ND	mg/m3
5/6/1998	7642-09-3	c-3-Hexene	GC/MS	8.59E-05	ND	1.89E-04	ND	mg/m3
5/6/1998	7647-01-0	Hydrochloric Acid	ACIDGAS	1.76E-03		9.18E-03		mg/m3
5/6/1998	7664-39-3	Hydrofluoric Acid	ACIDGAS	3.70E-04	J	2.90E-04	J	mg/m3
5/6/1998	7664-93-9	Sulfuric Acid	ACIDGAS	5.68E-03		8.44E-03		mg/m3
5/6/1998	7688-21-3	c-2-Hexene	GC/MS	5.16E-05	ND	5.16E-05	ND	mg/m3
5/6/1998	78-78-4	Isopentane	GC/MS	4.69E-03		3.95E-03		mg/m3
5/6/1998	78-79-5	Isoprene	GC/MS	1.67E-04		1.95E-04		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
5/6/1998	78-87-5	1,2-Dichloropropane	GC/MS	4.61E-05	ND	7.38E-04		mg/m3
5/6/1998	78-93-3	2-Butanone	ALD/KET	1.08E-02		1.68E-02		mg/m3
5/6/1998	79-00-5	1,1,2-Trichloroethane	GC/MS	1.09E-04	J	1.36E-04	ND	mg/m3
5/6/1998	79-01-6	Trichloroethylene	GC/MS	1.50E-03	B	1.29E-03	B	mg/m3
5/6/1998	79-29-8	2,3-Dimethylbutane	GC/MS	3.87E-04		5.28E-05	ND	mg/m3
5/6/1998	79-34-5	1,1,2,2-Tetrachloroethane	GC/MS	6.17E-04	B	4.80E-04	B	mg/m3
5/6/1998	80-56-8	α -Pinene	GC/MS	5.00E-04		3.89E-04		mg/m3
5/6/1998	811-97-2	Halocarbon 134A	GC/MS	1.25E-04	J	2.08E-04		mg/m3
5/6/1998	821-95-4	1-Undecene	GC/MS	3.15E-05	ND	6.30E-04	ND	mg/m3
5/6/1998	872-05-9	1-Decene	GC/MS	1.72E-03		9.74E-04		mg/m3
5/6/1998	87-68-3	Hexachloro-1,3-Butadiene	SVOC	3.51E-03	B	5.32E-04	BJ	mg/m3
5/6/1998	91-20-3	Naphthalene	SVOC	5.23E-04	J	2.62E-04	J	mg/m3
5/6/1998	922-61-2	c-3-Methyl-2-Pentene	GC/MS	1.20E-04	ND	2.75E-04	ND	mg/m3
5/6/1998	95-13-6	Indene	GC/MS	7.12E-05	ND	2.37E-04	ND	mg/m3
5/6/1998	95-47-6	o-Xylene	GC/MS	3.12E-03	B	2.73E-03	B	mg/m3
5/6/1998	95-49-8	o-Chlorotoluene	GC/MS	1.29E-04	ND	5.94E-04	ND	mg/m3
5/6/1998	95-50-1	1,2-Dichlorobenzene	SVOC	6.60E-04	B	1.20E-04	BJ	mg/m3
5/6/1998	95-63-6	1,2,4-Trimethylbenzene	GC/MS	1.42E-03	B	1.52E-03	B	mg/m3
5/6/1998	96-14-0	3-Methylpentane	GC/MS	8.80E-05	ND	1.55E-03		mg/m3
5/6/1998	96-37-7	Methylcyclopentane	GC/MS	5.16E-04		7.22E-04		mg/m3
5/6/1998	98-06-6	t-Butylbenzene	GC/MS	5.48E-05	ND	3.01E-04	ND	mg/m3
5/6/1998	98-82-8	Cumene	GC/MS	1.96E-04	J	1.96E-04	J	mg/m3
5/6/1998	99-87-6	p-Isopropyltoluene	GC/MS	1.10E-04	J	2.19E-04		mg/m3
5/6/1998	DIOXIN-TEQ	Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	DIOXINS	6.31E-10				mg/m3
7/1/1998	100-41-4	Ethylbenzene	GC/MS	2.84E-03	B	4.04E-03	B	mg/m3
7/1/1998	100-42-5	Styrene	GC/MS	7.56E-04	B	9.73E-04	B	mg/m3
7/1/1998	100-44-7	Benzyl Chloride	GC/MS	4.29E-04	ND	5.20E-04	ND	mg/m3
7/1/1998	100-52-7	Benzaldehyde	ALD/KET	5.28E-03		5.54E-03		mg/m3
7/1/1998	10061-01-5	c-1,3-Dichloropropene	GC/MS	1.16E-04	ND	1.40E-04	ND	mg/m3
7/1/1998	10061-02-6	t-1,3-Dichloropropene	GC/MS	1.36E-04	ND	1.63E-04	ND	mg/m3
7/1/1998	103-65-1	n-Propylbenzene	GC/MS	2.48E-04	ND	2.99E-04	ND	mg/m3
7/1/1998	104-51-8	n-Butylbenzene	GC/MS	1.12E-04	ND	1.37E-04	ND	mg/m3
7/1/1998	105-05-5	p-Diethylbenzene	GC/MS	5.48E-04	ND	6.60E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
7/1/1998	106-42-3/108-38-	p-Xylene + m-Xylene	GC/MS			4.11E-03	B	mg/m3
7/1/1998	106-42-3/108-38-3	p-Xylene + m-Xylene	GC/MS	2.89E-03	B			mg/m3
7/1/1998	106-43-4	p-Chlorotoluene	GC/MS	1.06E-04	ND	1.29E-04	ND	mg/m3
7/1/1998	106-46-7	1,4-Dichlorobenzene	SVOC	9.30E-04	BJ	9.06E-04	BJ	mg/m3
7/1/1998	106-93-4	1,2-Dibromoethane	GC/MS	2.19E-04	ND	2.65E-04	ND	mg/m3
7/1/1998	106-97-8	n-Butane	GC/MS	2.89E-03	B	3.75E-03	B	mg/m3
7/1/1998	106-99-0	1,3-Butadiene	GC/MS	4.86E-05	ND	5.63E-04	B	mg/m3
7/1/1998	107-06-2	1,2-Dichloroethane	GC/MS	1.07E-04	ND	1.29E-04	ND	mg/m3
7/1/1998	107-13-1	Acrylonitrile	GC/MS	2.49E-04	B	6.91E-04	B	mg/m3
7/1/1998	107-39-1	2,4,4-Trimethyl-1-Pentene	GC/MS	1.37E-04	J	2.79E-04	J	mg/m3
7/1/1998	107-40-4	2,4-4-Trimethyl-2-Pentene	GC/MS	1.72E-04	ND	2.08E-04	ND	mg/m3
7/1/1998	108-05-4	Vinyl Acetate	GC/MS	1.47E-02	BF	2.70E-02	BF	mg/m3
7/1/1998	108-08-7	2,4-Dimethylpentane	GC/MS	8.59E-05	ND	1.02E-04	ND	mg/m3
7/1/1998	108-10-1	Methylisobutylketone	GC/MS	1.20E-03	B	1.79E-03	B	mg/m3
7/1/1998	108-67-8	1,3,5-Trimethylbenzene	GC/MS	1.91E-04	BJ	2.75E-04	BJ	mg/m3
7/1/1998	108-87-2	Methylcyclohexane	GC/MS	9.02E-05	ND	1.10E-04	ND	mg/m3
7/1/1998	108-88-3	Toluene	GC/MS	9.29E-03	B	2.05E-02	B	mg/m3
7/1/1998	108-90-7	Chlorobenzene	GC/MS	4.23E-04	B	4.87E-04	B	mg/m3
7/1/1998	109-66-0	n-Pentane	GC/MS	1.79E-03	B	1.99E-03	B	mg/m3
7/1/1998	109-67-1	1-Pentene	GC/MS	3.89E-04	B	3.46E-04	B	mg/m3
7/1/1998	110-54-3	n-Hexane	GC/MS	5.77E-04	B	1.14E-03	B	mg/m3
7/1/1998	110-82-7	Cyclohexane	GC/MS	2.82E-04	B	8.94E-05	ND	mg/m3
7/1/1998	110-83-8	Cyclohexene	GC/MS	4.99E-04	B	8.08E-04	B	mg/m3
7/1/1998	111-65-9	n-Octane	GC/MS	6.62E-04	B	5.03E-04	B	mg/m3
7/1/1998	111-66-0	1-Octene	GC/MS	3.80E-04		1.47E-04	ND	mg/m3
7/1/1998	111-71-7	Heptanal	GC/MS	1.75E-04	ND	2.12E-04	ND	mg/m3
7/1/1998	111-84-2	n-Nonane	GC/MS	7.54E-04	B	6.34E-04	BJ	mg/m3
7/1/1998	1120-21-4	n-Undecane	GC/MS	1.18E-04	ND	1.44E-04	ND	mg/m3
7/1/1998	115-07-1	Propylene	GC/MS	7.97E-04	B	1.26E-03	B	mg/m3
7/1/1998	115-11-7/106-98-	Isobutene + 1-Butene	GC/MS			2.63E-03	B	mg/m3
7/1/1998	115-11-7/106-98-9	Isobutene + 1-Butene	GC/MS	1.61E-03	B			mg/m3
7/1/1998	120-82-1	1,2,4-Trichlorobenzene	SVOC	2.89E-04	BJ	3.55E-04	BJ	mg/m3
7/1/1998	123-72-8	n-Butyraldehyde	ALD/KET	2.52E-02		4.53E-02		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
7/1/1998	123-91-1	1,4-Dioxane	GC/MS	7.07E-04	ND	8.54E-04	ND	mg/m3
7/1/1998	124-11-8	1-Nonene	GC/MS	1.78E-04	ND	2.14E-04	ND	mg/m3
7/1/1998	124-18-5	n-Decane	GC/MS	1.11E-03	B	1.39E-03	B	mg/m3
7/1/1998	124-48-1	Dibromochloromethane	GC/MS	2.13E-04	ND	2.59E-04	ND	mg/m3
7/1/1998	126-99-8	Chloroprene	GC/MS	6.50E-05	ND	7.77E-05	ND	mg/m3
7/1/1998	127-18-4	Tetrachloroethylene	GC/MS	1.18E-03	B	1.55E-03	B	mg/m3
7/1/1998	127-91-3	b-Pinene	GC/MS	1.86E-04	ND	2.25E-04	ND	mg/m3
7/1/1998	141-32-2	Butyl Acrylate	GC/MS	9.94E-05	ND	1.20E-04	ND	mg/m3
7/1/1998	141-93-5	m-Diethylbenzene	GC/MS	4.49E-04	ND	5.43E-04	ND	mg/m3
7/1/1998	142-29-0	Cyclopentene	GC/MS	5.84E-05	ND	7.09E-05	ND	mg/m3
7/1/1998	142-82-5	n-Heptane	GC/MS	4.70E-04	B	8.38E-04	B	mg/m3
7/1/1998	156-59-2	c-1,2-Dichloroethylene	GC/MS	9.69E-05	ND	1.17E-04	ND	mg/m3
7/1/1998	156-60-5	t-1,2-Dichloroethylene	GC/MS	9.69E-05	ND	1.17E-04	ND	mg/m3
7/1/1998	1634-04-4	Methyl t-Butylether	GC/MS	1.13E-04	ND	1.37E-04	ND	mg/m3
7/1/1998	1746-01-6	2,3,7,8-TCDD	DIOXINS			3.05E-10		mg/m3
7/1/1998	19408-74-3	1,2,3,7,8,9-HxCDD	DIOXINS	1.82E-10		2.61E-09		mg/m3
7/1/1998	2198-23-4	4-Nonene	GC/MS	1.37E-04	ND	1.65E-04	ND	mg/m3
7/1/1998	27476-50-2	Methylcyclopentene	GC/MS	8.56E-05	ND	1.02E-04	ND	mg/m3
7/1/1998	287-92-3	Cyclopentane	GC/MS	7.58E-05	ND	9.16E-05	ND	mg/m3
7/1/1998	30402-14-3	Total TCDF	DIOXINS	5.53E-09		1.68E-07	u	mg/m3
7/1/1998	30402-15-4	Total PeCDF	DIOXINS	6.50E-09		1.21E-07	u	mg/m3
7/1/1998	3268-87-9	1,2,3,4,6,7,8,9-OCDD	DIOXINS	4.23E-09		3.42E-08		mg/m3
7/1/1998	34465-46-8	Total HxCDD	DIOXINS	3.02E-09		6.53E-08		mg/m3
7/1/1998	3522-94-9	2,2,5-Trimethylhexane	GC/MS	1.52E-04	ND	1.83E-04	ND	mg/m3
7/1/1998	35822-46-9	1,2,3,4,6,7,8-HpCDD	DIOXINS	1.17E-09		1.37E-08		mg/m3
7/1/1998	36088-22-9	Total PeCDD	DIOXINS	1.89E-09		4.98E-08		mg/m3
7/1/1998	37871-00-4	Total HpCDD	DIOXINS	2.31E-09		3.11E-08		mg/m3
7/1/1998	38998-75-3	Total HpCDF	DIOXINS	8.45E-09		8.40E-08	u	mg/m3
7/1/1998	39001-02-0	1,2,3,4,6,7,8,9-OCDF	DIOXINS	3.06E-09		2.12E-08		mg/m3
7/1/1998	39227-28-6	1,2,3,4,7,8-HxCDD	DIOXINS	1.53E-10	r	2.61E-09		mg/m3
7/1/1998	40321-76-4	1,2,3,7,8-PeCDD	DIOXINS	7.48E-11	r	1.46E-09		mg/m3
7/1/1998	4050-45-7	t-2-Hexene	GC/MS	7.22E-05	ND	8.77E-05	ND	mg/m3
7/1/1998	41903-57-5	Total TCDD	DIOXINS	1.79E-09		4.98E-08		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
7/1/1998	463-82-1	Neopentane	GC/MS	4.56E-05	ND	5.45E-05	ND	mg/m3
7/1/1998	496-11-7	Indan	GC/MS	6.52E-05	ND	7.72E-05	ND	mg/m3
7/1/1998	51207-31-9	2,3,7,8-TCDF	DIOXINS	9.42E-11		3.05E-09		mg/m3
7/1/1998	526-73-8	1,2,3-Trimethylbenzene	GC/MS	1.62E-04	BJ	1.82E-04	BJ	mg/m3
7/1/1998	538-93-2	Isobutylbenzene	GC/MS	1.23E-04	ND	1.48E-04	ND	mg/m3
7/1/1998	540-84-1	2,2,4-Trimethylpentane	GC/MS	6.99E-05	ND	8.39E-05	ND	mg/m3
7/1/1998	541-73-1	1,3-Dichlorobenzene	SVOC	7.41E-04	ND	8.94E-04	ND	mg/m3
7/1/1998	55673-89-7	1,2,3,4,7,8,9-HpCDF	DIOXINS	6.18E-10		4.98E-09		mg/m3
7/1/1998	55684-94-1	Total HxCDF	DIOXINS	9.43E-09		1.21E-07	u	mg/m3
7/1/1998	56-23-5	Carbon Tetrachloride	GC/MS	7.85E-04	B	6.78E-04	B	mg/m3
7/1/1998	563-45-1	3-Methyl-1-Butene	GC/MS	4.87E-05	ND	5.87E-05	ND	mg/m3
7/1/1998	564-02-3	2,2,3-Trimethylpentane	GC/MS	1.35E-04	ND	1.65E-04	ND	mg/m3
7/1/1998	565-59-3	2,3-Dimethylpentane	GC/MS	5.32E-05	ND	6.34E-05	ND	mg/m3
7/1/1998	565-75-3	2,3,4-Trimethylpentane	GC/MS	1.18E-03	B	1.51E-03	B	mg/m3
7/1/1998	57117-31-4	2,3,4,7,8-PeCDF	DIOXINS	4.55E-10		8.09E-09		mg/m3
7/1/1998	57117-41-6	1,2,3,7,8-PeCDF	DIOXINS	1.79E-10		4.67E-09		mg/m3
7/1/1998	57117-44-9	1,2,3,6,7,8-HxCDF	DIOXINS	6.18E-10		1.06E-08	u	mg/m3
7/1/1998	57653-85-7	1,2,3,6,7,8-HxCDD	DIOXINS	2.31E-10		4.05E-09		mg/m3
7/1/1998	589-34-4	3-Methylhexane	GC/MS	6.34E-05	ND	2.00E-04	B	mg/m3
7/1/1998	589-81-1	3-Methylheptane	GC/MS	1.21E-04	ND	1.47E-04	ND	mg/m3
7/1/1998	590-18-1	c-2-Butene	GC/MS	1.42E-04	B	1.90E-04	B	mg/m3
7/1/1998	591-49-1	1-Methylcyclohexene	GC/MS	1.30E-04	ND	1.55E-04	ND	mg/m3
7/1/1998	591-76-4	Isoheptane	GC/MS	5.07E-03	B	9.82E-05	ND	mg/m3
7/1/1998	592-13-2	2,5-Dimethylhexane	GC/MS	1.63E-04	ND	1.98E-04	ND	mg/m3
7/1/1998	592-27-8	2-Methylheptane	GC/MS	6.11E-04	B	8.11E-04	B	mg/m3
7/1/1998	592-41-6	1-Hexene	GC/MS	1.46E-04	ND	1.75E-04	ND	mg/m3
7/1/1998	592-76-7	1-Heptene	GC/MS	5.89E-04		9.34E-04		mg/m3
7/1/1998	593-60-2	Vinyl Bromide	GC/MS	9.83E-05	ND	1.20E-04	ND	mg/m3
7/1/1998	60-29-7	Diethyl Ether	GC/MS	1.36E-04	ND	1.63E-04	ND	mg/m3
7/1/1998	60851-34-5	2,3,4,6,7,8-HxCDF	DIOXINS	2.05E-09		1.59E-08		mg/m3
7/1/1998	611-14-3	o-Ethyltoluene	GC/MS	1.96E-04	BJ	3.12E-04	ND	mg/m3
7/1/1998	620-14-4	m-Ethyltoluene	GC/MS	4.02E-04	BJ	5.20E-04	BJ	mg/m3
7/1/1998	622-96-8	p-Ethyltoluene	GC/MS	2.50E-04	BJ	2.99E-04	BJ	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
7/1/1998	624-64-6	t-2-Butene	GC/MS	4.35E-05	ND	2.34E-04	B	mg/m3
7/1/1998	625-27-4	2-Methyl-2-Pentene	GC/MS	1.03E-04	ND	1.24E-04	ND	mg/m3
7/1/1998	627-20-3	c-2-Pentene	GC/MS	7.58E-05	ND	9.16E-05	ND	mg/m3
7/1/1998	64-17-5	Ethanol	GC/MS	2.95E-02		4.69E-02		mg/m3
7/1/1998	646-04-8	t-2-Pentene	GC/MS	6.01E-05	BJ	7.01E-05	ND	mg/m3
7/1/1998	66-25-1	Hexanal	ALD/KET	1.69E-02		2.29E-02		mg/m3
7/1/1998	67562-39-4	1,2,3,4,7,8-HpCDF	DIOXINS	4.88E-09		5.60E-08	u	mg/m3
7/1/1998	67-63-0	2-Propanol	GC/MS	1.23E-02	B	1.65E-02	B	mg/m3
7/1/1998	67-64-1	Acetone	ALD/KET	7.68E-02	B	9.56E-02	B	mg/m3
7/1/1998	67-66-3	Chloroform	GC/MS	1.27E-04	BJ	1.71E-04	BJ	mg/m3
7/1/1998	691-37-2	4-Methyl-1-Pentene	GC/MS	9.97E-05	ND	1.20E-04	ND	mg/m3
7/1/1998	691-38-3	c-4-Methyl-2-Pentene	GC/MS	1.62E-04	ND	1.96E-04	ND	mg/m3
7/1/1998	70648-26-9	1,2,3,4,7,8-HxCDF	DIOXINS	6.18E-10		1.31E-08	u	mg/m3
7/1/1998	71-23-8	1-Propanol	GC/MS	5.26E-04	ND	6.36E-04	ND	mg/m3
7/1/1998	71-36-3	1-Butanol	GC/MS	1.49E-02	B	6.08E-02	B	mg/m3
7/1/1998	71-43-2	Benzene	GC/MS	1.82E-03	B	3.09E-03	B	mg/m3
7/1/1998	71-55-6	1,1,1-Trichloroethane	GC/MS	7.30E-04	B	6.92E-04	B	mg/m3
7/1/1998	72918-21-9	1,2,3,7,8,9-HxCDF	DIOXINS	5.53E-10		4.98E-09		mg/m3
7/1/1998	73513-42-5	Isohexane	GC/MS	2.33E-03	B	7.04E-05	ND	mg/m3
7/1/1998	7439-97-6	Mercury	MERCURY	1.66E-05		1.69E-05		mg/m3
7/1/1998	74-83-9	Bromomethane	GC/MS	7.75E-05	ND	9.30E-05	ND	mg/m3
7/1/1998	74-87-3	Chloromethane	GC/MS	1.46E-03	B	1.71E-03	B	mg/m3
7/1/1998	74-97-5	Bromochloromethane	GC/MS	1.03E-04	ND	1.24E-04	ND	mg/m3
7/1/1998	74-98-6	Propane	GC/MS	4.75E-03	B	5.36E-03	B	mg/m3
7/1/1998	75-00-3	Chloroethane	GC/MS	6.32E-05	ND	7.64E-05	ND	mg/m3
7/1/1998	75-01-4	Vinyl Chloride	GC/MS	6.89E-05	ND	8.29E-05	ND	mg/m3
7/1/1998	75-05-8	Acetonitrile	GC/MS	1.09E-03	BJ	9.87E-03	B	mg/m3
7/1/1998	75-07-0	Acetaldehyde	ALD/KET	7.78E-02		1.22E-01		mg/m3
7/1/1998	75-09-2	Methylene Chloride	GC/MS	2.42E-03	B	3.28E-03	B	mg/m3
7/1/1998	75-25-2	Bromoform	GC/MS	4.49E-04	ND	5.37E-04	ND	mg/m3
7/1/1998	75-27-4	Bromodichloromethane	GC/MS	1.44E-04	ND	1.74E-04	ND	mg/m3
7/1/1998	75-28-5	Isobutane	GC/MS	1.15E-03	B	1.20E-03	B	mg/m3
7/1/1998	75-34-3	1,1-Dichloroethane	GC/MS	6.06E-05	ND	7.48E-05	ND	mg/m3

Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
7/1/1998	75-35-4	1,1-Dichloroethylene	GC/MS	8.70E-05	ND	1.05E-04	ND	mg/m3
7/1/1998	75-43-4	Dichlorofluoromethane	GC/MS	1.05E-04	ND	1.26E-04	ND	mg/m3
7/1/1998	75-45-6	Chlorodifluoromethane	GC/MS	3.43E-03		4.66E-03		mg/m3
7/1/1998	75-69-4	Trichlorofluoromethane	GC/MS	2.20E-03	B	2.79E-03	B	mg/m3
7/1/1998	75-71-8	Dichlorodifluoromethane	GC/MS	2.65E-03	B	2.67E-03	B	mg/m3
7/1/1998	75-83-2	Neohexane	GC/MS	9.33E-05	ND	1.13E-04	ND	mg/m3
7/1/1998	760-21-4	2-Ethyl-1-Butene	GC/MS	8.25E-05	ND	9.97E-05	ND	mg/m3
7/1/1998	76-13-1	Freon 113	GC/MS	6.73E-04	B	6.35E-04	B	mg/m3
7/1/1998	76-14-2	Freon 114	GC/MS	1.05E-04	ND	1.26E-04	ND	mg/m3
7/1/1998	763-29-1	2-Methyl-1-Pentene	GC/MS	9.28E-05	ND	1.13E-04	ND	mg/m3
7/1/1998	7642-04-8	c-2-Octene	GC/MS	1.12E-04	ND	1.35E-04	ND	mg/m3
7/1/1998	7642-09-3	c-3-Hexene	GC/MS	7.74E-05	ND	9.28E-05	ND	mg/m3
7/1/1998	7647-01-0	Hydrochloric Acid	ACIDGAS	1.80E-03		2.28E-02		mg/m3
7/1/1998	7664-39-3	Hydrofluoric Acid	ACIDGAS	2.79E-06	ND	6.99E-05	J	mg/m3
7/1/1998	7664-93-9	Sulfuric Acid	ACIDGAS	1.68E-02		2.56E-02		mg/m3
7/1/1998	7688-21-3	c-2-Hexene	GC/MS	6.70E-05	ND	8.08E-05	ND	mg/m3
7/1/1998	78-78-4	Isopentane	GC/MS	2.31E-03	B	3.39E-03	B	mg/m3
7/1/1998	78-79-5	Isoprene	GC/MS	2.17E-04	B	2.36E-04	B	mg/m3
7/1/1998	78-87-5	1,2-Dichloropropane	GC/MS	7.38E-05	ND	8.77E-05	ND	mg/m3
7/1/1998	78-93-3	2-Butanone	ALD/KET	1.27E-02		1.60E-02		mg/m3
7/1/1998	79-00-5	1,1,2-Trichloroethane	GC/MS	1.58E-04	ND	1.93E-04	ND	mg/m3
7/1/1998	79-01-6	Trichloroethylene	GC/MS	9.60E-04	B	1.51E-03	B	mg/m3
7/1/1998	79-29-8	2,3-Dimethylbutane	GC/MS	1.23E-04	BJ	2.64E-04	B	mg/m3
7/1/1998	79-34-5	1,1,2,2-Tetrachloroethane	GC/MS	9.53E-04	B	1.13E-03	B	mg/m3
7/1/1998	80-56-8	α -Pinene	GC/MS	1.95E-04	BJ	1.75E-04	ND	mg/m3
7/1/1998	811-97-2	Halocarbon 134A	GC/MS	1.21E-04	J	1.37E-04	ND	mg/m3
7/1/1998	821-95-4	1-Undecene	GC/MS	2.61E-04	ND	3.15E-04	ND	mg/m3
7/1/1998	872-05-9	1-Decene	GC/MS	2.20E-04	ND	2.66E-04	ND	mg/m3
7/1/1998	87-68-3	Hexachloro-1,3-Butadiene	SVOC	6.49E-04	BJ	5.48E-03	ND	mg/m3
7/1/1998	91-20-3	Naphthalene	SVOC	2.01E-04	ND	2.43E-04	ND	mg/m3
7/1/1998	922-61-2	c-3-Methyl-2-Pentene	GC/MS	1.15E-04	ND	1.39E-04	ND	mg/m3
7/1/1998	95-13-6	Indene	GC/MS	9.73E-05	ND	1.16E-04	ND	mg/m3
7/1/1998	95-47-6	o-Xylene	GC/MS	1.18E-03	B	1.60E-03	B	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
7/1/1998	95-49-8	o-Chlorotoluene	GC/MS	2.48E-04	ND	3.00E-04	ND	mg/m3
7/1/1998	95-50-1	1,2-Dichlorobenzene	SVOC	8.13E-04	ND	9.81E-04	ND	mg/m3
7/1/1998	95-63-6	1,2,4-Trimethylbenzene	GC/MS	6.82E-04	B	8.93E-04	B	mg/m3
7/1/1998	96-14-0	3-Methylpentane	GC/MS	6.65E-04	B	1.24E-03	B	mg/m3
7/1/1998	96-37-7	Methylcyclopentane	GC/MS	7.22E-05	ND	8.59E-05	ND	mg/m3
7/1/1998	98-06-6	t-Butylbenzene	GC/MS	1.29E-04	ND	1.81E-04	J	mg/m3
7/1/1998	98-82-8	Cumene	GC/MS	1.55E-04	ND	1.86E-04	ND	mg/m3
7/1/1998	99-87-6	p-Isopropyltoluene	GC/MS	2.19E-04	ND	2.63E-04	ND	mg/m3
7/1/1998	DIOXIN-TEQ	Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	DIOXINS	8.28E-10		1.25E-08		mg/m3
8/26/1998	100-01-6	4-Nitroaniline	SVOC	1.78E-05	ND	1.76E-05	ND	mg/m3
8/26/1998	100-02-7	4-Nitrophenol	SVOC	1.59E-04	ND	1.57E-04	ND	mg/m3
8/26/1998	100-41-4	Ethylbenzene	GC/MS	1.97E-03	B	4.73E-03	B	mg/m3
8/26/1998	100-42-5	Styrene	GC/MS	6.29E-04	B	9.48E-04	B	mg/m3
8/26/1998	100-44-7	Benzyl Chloride	GC/MS	5.12E-04	ND	5.22E-04	ND	mg/m3
8/26/1998	100-51-6	Benzyl alcohol	SVOC	4.56E-06	ND	8.24E-05		mg/m3
8/26/1998	100-52-7	Benzaldehyde	ALD/KET	1.11E-04		5.26E-04		mg/m3
8/26/1998	10061-01-5	c-1,3-Dichloropropene	GC/MS	1.38E-04	ND	1.41E-04	ND	mg/m3
8/26/1998	10061-02-6	t-1,3-Dichloropropene	GC/MS	1.60E-04	ND	1.64E-04	ND	mg/m3
8/26/1998	100-75-4	N-Nitrosopiperidine	SVOC	5.16E-06	ND	5.10E-06	ND	mg/m3
8/26/1998	101-55-3	4-Bromophenyl phenyl ether	SVOC	2.80E-06	ND	2.77E-06	ND	mg/m3
8/26/1998	1024-57-3	Heptachlor epoxide	PEST/PCB	2.54E-07	ND	2.63E-07	ND	mg/m3
8/26/1998	1031-07-8	Endosulfan Sulfate	PEST/PCB	2.04E-07	ND	2.11E-07	ND	mg/m3
8/26/1998	103-65-1	n-Propylbenzene	GC/MS	2.94E-04	ND	3.02E-04	ND	mg/m3
8/26/1998	104-51-8	n-Butylbenzene	GC/MS	1.34E-04	ND	1.37E-04	ND	mg/m3
8/26/1998	105-05-5	p-Diethylbenzene	GC/MS	6.52E-04	ND	6.66E-04	ND	mg/m3
8/26/1998	105-67-9	2,4-Dimethylphenol	SVOC	1.27E-05	ND	1.25E-05	ND	mg/m3
8/26/1998	10595-95-6	N-Nitrosomethylethylamine	SVOC	1.69E-05	ND	1.67E-05	ND	mg/m3
8/26/1998	106-42-3/108-38-	p-Xylene + m-Xylene	GC/MS			4.31E-03	B	mg/m3
8/26/1998	106-42-3/108-38-3	p-Xylene + m-Xylene	GC/MS	1.94E-03	B			mg/m3
8/26/1998	106-43-4	p-Chlorotoluene	GC/MS	1.27E-04	ND	1.29E-04	ND	mg/m3
8/26/1998	106-44-5/108-39-	4-Methylphenol/3-Methylphenol	SVOC			3.96E-05	F	mg/m3
8/26/1998	106-44-5/108-39-4	4-Methylphenol/3-Methylphenol	SVOC	6.36E-05	F			mg/m3
8/26/1998	106-46-7	1,4-Dichlorobenzene	SVOC	4.44E-04		4.42E-04		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	106-47-8	p-Chloroaniline	SVOC	7.08E-06	ND	7.00E-06	ND	mg/m3
8/26/1998	106-93-4	1,2-Dibromoethane	GC/MS	2.61E-04	ND	2.67E-04	ND	mg/m3
8/26/1998	106-97-8	n-Butane	GC/MS	4.46E-03	B	3.32E-03	B	mg/m3
8/26/1998	106-99-0	1,3-Butadiene	GC/MS	2.34E-04	B	3.91E-04	B	mg/m3
8/26/1998	107-02-8	Acrolein	ALD/KET	3.32E-04		7.37E-04		mg/m3
8/26/1998	107-06-2	1,2-Dichloroethane	GC/MS	1.27E-04	ND	1.30E-04	ND	mg/m3
8/26/1998	107-13-1	Acrylonitrile	GC/MS	1.06E-04	ND	1.08E-04	ND	mg/m3
8/26/1998	107-39-1	2,4,4-Trimethyl-1-Pentene	GC/MS	2.08E-04	J	3.69E-04		mg/m3
8/26/1998	107-40-4	2,4-4-Trimethyl-2-Pentene	GC/MS	2.05E-04	ND	2.10E-04	ND	mg/m3
8/26/1998	108-05-4	Vinyl Acetate	GC/MS	6.66E-05	ND	6.82E-05	ND	mg/m3
8/26/1998	108-08-7	2,4-Dimethylpentane	GC/MS	1.02E-04	ND	1.04E-04	ND	mg/m3
8/26/1998	108-10-1	Methylisobutylketone	GC/MS	2.11E-03	B	2.49E-03	B	mg/m3
8/26/1998	108-60-1	bis(2-Chloroisopropyl)ether	SVOC	4.44E-06	ND	4.39E-06	ND	mg/m3
8/26/1998	108-67-8	1,3,5-Trimethylbenzene	GC/MS	2.42E-04	BJ	4.15E-04	BJ	mg/m3
8/26/1998	108-87-2	Methylcyclohexane	GC/MS	1.08E-04	ND	9.30E-04	B	mg/m3
8/26/1998	108-88-3	Toluene	GC/MS	7.03E-03	B	2.20E-02	B	mg/m3
8/26/1998	108-90-7	Chlorobenzene	GC/MS	1.17E-04	BJ	1.99E-04	ND	mg/m3
8/26/1998	108-95-2	Phenol	SVOC	8.12E-05		1.12E-04		mg/m3
8/26/1998	109-06-8	2-Picoline	SVOC	1.31E-05	ND	1.30E-05	ND	mg/m3
8/26/1998	109-66-0	n-Pentane	GC/MS	1.27E-03	B	1.38E-03	B	mg/m3
8/26/1998	109-67-1	1-Pentene	GC/MS	4.24E-04	B	3.63E-04	B	mg/m3
8/26/1998	110-54-3	n-Hexane	GC/MS	7.11E-04	B	1.63E-03	B	mg/m3
8/26/1998	110-62-3	Valeraldehyde	ALD/KET	5.53E-05	ND	5.27E-05	ND	mg/m3
8/26/1998	110-82-7	Cyclohexane	GC/MS	8.87E-05	ND	2.03E-03	B	mg/m3
8/26/1998	110-83-8	Cyclohexene	GC/MS	1.35E-04	ND	1.38E-04	ND	mg/m3
8/26/1998	110-86-1	Pyridine	SVOC	1.27E-05	ND	1.26E-05	ND	mg/m3
8/26/1998	11096-82-5	PCB-1260	PEST/PCB	1.01E-06	ND	1.05E-06	ND	mg/m3
8/26/1998	11097-69-1	PCB-1254	PEST/PCB	1.23E-06	ND	1.27E-06	ND	mg/m3
8/26/1998	11104-28-2	PCB-1221	PEST/PCB	2.68E-06	ND	2.77E-06	ND	mg/m3
8/26/1998	11141-16-5	PCB-1232	PEST/PCB	1.61E-06	ND	1.66E-06	ND	mg/m3
8/26/1998	111-44-4	bis(2-Chloroethyl)ether	SVOC	3.46E-06	ND	3.42E-06	ND	mg/m3
8/26/1998	111-65-9	n-Octane	GC/MS	5.73E-04	B	7.27E-04	B	mg/m3
8/26/1998	111-66-0	1-Octene	GC/MS	3.55E-04		1.48E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	111-71-7	Heptanal	GC/MS	2.09E-04	ND	2.13E-04	ND	mg/m3
8/26/1998	111-84-2	n-Nonane	GC/MS	8.54E-04	B	1.24E-03	B	mg/m3
8/26/1998	111-91-1	bis(2-Chloroethoxy)methane	SVOC	4.67E-06	ND	4.61E-06	ND	mg/m3
8/26/1998	1120-21-4	n-Undecane	GC/MS	1.05E-03		1.09E-03		mg/m3
8/26/1998	115-07-1	Propylene	GC/MS	1.71E-03	B	1.82E-03	B	mg/m3
8/26/1998	115-11-7/106-98-	Isobutene + 1-Butene	GC/MS			1.97E-03	B	mg/m3
8/26/1998	115-11-7/106-98-9	Isobutene + 1-Butene	GC/MS	1.67E-03	B			mg/m3
8/26/1998	117-81-7	bis(2-Ethylhexyl)phthalate	SVOC	3.81E-05		4.42E-05		mg/m3
8/26/1998	117-84-0	Di-n-octylphthalate	SVOC	4.14E-06	ND	4.09E-06	ND	mg/m3
8/26/1998	118-74-1	Hexachlorobenzene	SVOC	5.43E-06	ND	5.37E-06	ND	mg/m3
8/26/1998	119-93-7	3,3'-Dimethylbenzidine	SVOC	6.48E-05	ND	6.40E-05	ND	mg/m3
8/26/1998	120-12-7	Anthracene	SVOC	4.25E-06	ND	9.27E-06		mg/m3
8/26/1998	120-58-1	Isosafrole	SVOC	2.14E-05	ND	2.12E-05	ND	mg/m3
8/26/1998	120-82-1	1,2,4-Trichlorobenzene	SVOC	2.47E-04	BJ	3.13E-04	BJ	mg/m3
8/26/1998	120-83-2	2,4-Dichlorophenol	SVOC	5.54E-06	ND	5.48E-06	ND	mg/m3
8/26/1998	121-14-2	2,4-Dinitrotoluene	SVOC	1.81E-05	ND	1.79E-05	ND	mg/m3
8/26/1998	122-09-8	Dimethylphenethylamine	SVOC	2.54E-04	ND	2.51E-04	ND	mg/m3
8/26/1998	122-39-4	Diphenylamine/N-NitrosoDPA	SVOC	1.22E-05	ND	1.21E-05	ND	mg/m3
8/26/1998	123-38-6	Propionaldehyde	ALD/KET	3.32E-04		3.16E-04		mg/m3
8/26/1998	123-72-8	n-Butyraldehyde	ALD/KET	1.96E-02		2.11E-04		mg/m3
8/26/1998	123-91-1	1,4-Dioxane	GC/MS	8.42E-04	ND	8.60E-04	ND	mg/m3
8/26/1998	124-11-8	1-Nonene	GC/MS	2.12E-04	ND	2.16E-04	ND	mg/m3
8/26/1998	124-18-5	n-Decane	GC/MS	1.27E-03	B	2.22E-03	B	mg/m3
8/26/1998	124-48-1	Dibromochloromethane	GC/MS	2.55E-04	ND	2.61E-04	ND	mg/m3
8/26/1998	12672-29-6	PCB-1248	PEST/PCB	2.46E-06	ND	2.54E-06	ND	mg/m3
8/26/1998	12674-11-2	PCB-1016	PEST/PCB	1.12E-06	ND	1.15E-06	ND	mg/m3
8/26/1998	126-99-8	Chloroprene	GC/MS	7.73E-05	ND	7.90E-05	ND	mg/m3
8/26/1998	127-18-4	Tetrachloroethylene	GC/MS	2.71E-04	ND	4.90E-04	BJ	mg/m3
8/26/1998	12789-03-6	gamma-Chlordane	PEST/PCB	3.74E-07	B	6.07E-07	B	mg/m3
8/26/1998	127-91-3	b-Pinene	GC/MS	2.21E-04	ND	2.26E-04	ND	mg/m3
8/26/1998	129-00-0	Pyrene	SVOC	4.58E-06	ND	1.48E-05		mg/m3
8/26/1998	130-15-4	1,4-Naphthoquinone	SVOC	1.36E-05	ND	1.35E-05	ND	mg/m3
8/26/1998	131-11-3	Dimethylphthalate	SVOC	4.28E-06	ND	4.23E-06	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	132-64-9	Dibenzofuran	SVOC	1.15E-05		4.83E-05		mg/m3
8/26/1998	134-32-7	1-Naphthylamine	SVOC	1.48E-05	ND	1.46E-05	ND	mg/m3
8/26/1998	141-32-2	Butyl Acrylate	GC/MS	1.18E-04	ND	1.21E-04	ND	mg/m3
8/26/1998	141-93-5	m-Diethylbenzene	GC/MS	5.34E-04	ND	5.45E-04	ND	mg/m3
8/26/1998	142-29-0	Cyclopentene	GC/MS	7.01E-05	ND	7.16E-05	ND	mg/m3
8/26/1998	142-82-5	n-Heptane	GC/MS	9.29E-05	ND	1.53E-03	B	mg/m3
8/26/1998	143-50-0	Kepone	SVOC	1.92E-04	ND	1.90E-04	ND	mg/m3
8/26/1998	156-59-2	c-1,2-Dichloroethylene	GC/MS	1.16E-04	ND	1.18E-04	ND	mg/m3
8/26/1998	156-60-5	t-1,2-Dichloroethylene	GC/MS	1.16E-04	ND	1.18E-04	ND	mg/m3
8/26/1998	1634-04-4	Methyl t-Butylether	GC/MS	1.35E-04	ND	1.37E-04	ND	mg/m3
8/26/1998	1746-01-6	2,3,7,8-TCDD	DIOXINS	1.11E-10		4.44E-10		mg/m3
8/26/1998	1888-71-7	Hexachloropropene	SVOC	1.45E-05	ND	1.44E-05	ND	mg/m3
8/26/1998	191-24-2	Benzo(g,h,i)perylene	SVOC	1.82E-06	ND	1.80E-06	ND	mg/m3
8/26/1998	193-39-5	Indeno(1,2,3-cd)pyrene	SVOC	3.13E-06	ND	3.09E-06	ND	mg/m3
8/26/1998	19408-74-3	1,2,3,7,8,9-HxCDD	DIOXINS	3.07E-10		4.78E-09		mg/m3
8/26/1998	205-99-2	Benzo(b)fluoranthene	SVOC	5.13E-06	ND	5.07E-06	ND	mg/m3
8/26/1998	206-44-0	Fluoranthene	SVOC	1.92E-06	ND	2.26E-05		mg/m3
8/26/1998	207-08-9	Benzo(k)fluoranthene	SVOC	2.62E-06	ND	2.59E-06	ND	mg/m3
8/26/1998	208-96-8	Acenaphthylene	SVOC	6.06E-06	ND	3.80E-05		mg/m3
8/26/1998	218-01-9	Chrysene	SVOC	3.89E-06	ND	3.85E-06	ND	mg/m3
8/26/1998	2198-23-4	4-Nonene	GC/MS	1.61E-04	ND	1.65E-04	ND	mg/m3
8/26/1998	2303-16-4	Diallate	SVOC	3.13E-06	ND	3.09E-06	ND	mg/m3
8/26/1998	2385-85-5	Mirex	PEST/PCB	2.21E-07	ND	2.28E-07	ND	mg/m3
8/26/1998	23950-58-5	Pronamide	SVOC	6.31E-06	ND	6.24E-06	ND	mg/m3
8/26/1998	27476-50-2	Methylcyclopentene	GC/MS	1.01E-04	ND	1.03E-04	ND	mg/m3
8/26/1998	287-92-3	Cyclopentane	GC/MS	9.03E-05	ND	9.22E-05	ND	mg/m3
8/26/1998	30402-14-3	Total TCDF	DIOXINS	1.94E-08		4.10E-07		mg/m3
8/26/1998	30402-15-4	Total PeCDF	DIOXINS	2.15E-08		4.10E-07	u	mg/m3
8/26/1998	309-00-2	Aldrin	PEST/PCB	8.83E-08	ND	9.13E-08	ND	mg/m3
8/26/1998	319-84-6	alpha-BHC	PEST/PCB	5.46E-08	ND	3.56E-08	ND	mg/m3
8/26/1998	319-85-7	beta-BHC	PEST/PCB	1.10E-07	ND	1.14E-07	ND	mg/m3
8/26/1998	319-86-8	delta-BHC	PEST/PCB	9.41E-08	ND	9.73E-08	ND	mg/m3
8/26/1998	3268-87-9	1,2,3,4,6,7,8,9-OCDD	DIOXINS	4.92E-09	s	1.33E-07	s	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	33213-65-9	Endosulfan II	PEST/PCB	1.90E-07	ND	1.97E-07	ND	mg/m3
8/26/1998	34465-46-8	Total HxCDD	DIOXINS	4.61E-09		1.37E-07		mg/m3
8/26/1998	3522-94-9	2,2,5-Trimethylhexane	GC/MS	1.80E-04	ND	1.84E-04	ND	mg/m3
8/26/1998	35822-46-9	1,2,3,4,6,7,8-HpCDD	DIOXINS	2.06E-09		6.14E-08		mg/m3
8/26/1998	36088-22-9	Total PeCDD	DIOXINS	3.38E-09		8.53E-08		mg/m3
8/26/1998	37871-00-4	Total HpCDD	DIOXINS	4.00E-09		1.30E-07		mg/m3
8/26/1998	38998-75-3	Total HpCDF	DIOXINS	1.05E-08		3.07E-07	u	mg/m3
8/26/1998	39001-02-0	1,2,3,4,6,7,8,9-OCDF	DIOXINS	3.69E-09	s	1.67E-07	s	mg/m3
8/26/1998	39227-28-6	1,2,3,4,7,8-HxCDD	DIOXINS	3.01E-10		5.12E-09		mg/m3
8/26/1998	40321-76-4	1,2,3,7,8-PeCDD	DIOXINS	3.38E-10		2.77E-09		mg/m3
8/26/1998	4050-45-7	t-2-Hexene	GC/MS	8.59E-05	ND	8.78E-05	ND	mg/m3
8/26/1998	41903-57-5	Total TCDD	DIOXINS	3.38E-09		8.53E-08		mg/m3
8/26/1998	463-82-1	Neopentane	GC/MS	5.39E-05	ND	5.51E-05	ND	mg/m3
8/26/1998	465-73-6	Isodrin	PEST/PCB	6.47E-07		4.36E-08	ND	mg/m3
8/26/1998	496-11-7	Indan	GC/MS	7.67E-05	ND	7.84E-05	ND	mg/m3
8/26/1998	50-00-0	Formaldehyde	ALD/KET	8.84E-04		1.37E-03		mg/m3
8/26/1998	50-29-3	4,4-DDT	PEST/PCB	4.92E-07		1.53E-07	ND	mg/m3
8/26/1998	50-32-8	Benz(a)pyrene	SVOC	5.71E-06	ND	5.64E-06	ND	mg/m3
8/26/1998	510-15-6	Chlorobenzilate	SVOC	6.53E-06	ND	6.46E-06	ND	mg/m3
8/26/1998	5103-71-9	alpha-Chlordane	PEST/PCB	3.47E-07	B	1.40E-07	BPJ	mg/m3
8/26/1998	51207-31-9	2,3,7,8-TCDF	DIOXINS	5.84E-10		4.44E-09		mg/m3
8/26/1998	51-28-5	2,4-Dinitrophenol	SVOC	1.70E-04	ND	1.68E-04	ND	mg/m3
8/26/1998	526-73-8	1,2,3-Trimethylbenzene	GC/MS	2.10E-04	BJ	3.48E-04	BJ	mg/m3
8/26/1998	529-20-4	Tolualdehyde	ALD/KET	4.42E-04		2.00E-03		mg/m3
8/26/1998	534-52-1	4,6-Dinitro-2-methylphenol	SVOC	2.21E-05	ND	2.18E-05	ND	mg/m3
8/26/1998	53469-21-9	PCB-1242	PEST/PCB	1.82E-06	ND	1.88E-06	ND	mg/m3
8/26/1998	53494-70-5	Endrin Ketone	PEST/PCB	2.26E-07	ND	2.34E-07	ND	mg/m3
8/26/1998	53-70-3	Dibenz(a,h)anthracene	SVOC	5.10E-06	ND	5.05E-06	ND	mg/m3
8/26/1998	538-93-2	Isobutylbenzene	GC/MS	1.46E-04	ND	1.49E-04	ND	mg/m3
8/26/1998	53-96-3	2-Acetylaminofluorene	SVOC	6.01E-06	ND	5.94E-06	ND	mg/m3
8/26/1998	540-84-1	2,2,4-Trimethylpentane	GC/MS	8.35E-05	ND	8.53E-05	ND	mg/m3
8/26/1998	541-73-1	1,3-Dichlorobenzene	SVOC	4.39E-06	ND	4.34E-06	ND	mg/m3
8/26/1998	55-18-5	N-Nitrosodiethylamine	SVOC	2.07E-05	ND	2.05E-05	ND	mg/m3

Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	55673-89-7	1,2,3,4,7,8,9-HpCDF	DIOXINS	1.01E-09		2.77E-08		mg/m3
8/26/1998	55684-94-1	Total HxCDF	DIOXINS	1.91E-08		4.10E-07	u	mg/m3
8/26/1998	56-23-5	Carbon Tetrachloride	GC/MS	6.65E-04	B	6.34E-04	B	mg/m3
8/26/1998	563-45-1	3-Methyl-1-Butene	GC/MS	5.77E-05	ND	5.90E-05	ND	mg/m3
8/26/1998	564-02-3	2,2,3-Trimethylpentane	GC/MS	1.62E-04	ND	1.65E-04	ND	mg/m3
8/26/1998	56-49-5	3-Methylcholanthrene	SVOC	4.22E-06	ND	4.18E-06	ND	mg/m3
8/26/1998	56-55-3	Benz(a)anthracene	SVOC	3.89E-06	ND	3.85E-06	ND	mg/m3
8/26/1998	565-59-3	2,3-Dimethylpentane	GC/MS	6.28E-05	ND	6.42E-05	ND	mg/m3
8/26/1998	56-57-5	4-Nitroquinoline-1-oxide	SVOC	9.16E-05	ND	9.06E-05	ND	mg/m3
8/26/1998	565-75-3	2,3,4-Trimethylpentane	GC/MS	5.29E-05	ND	5.41E-05	ND	mg/m3
8/26/1998	57117-31-4	2,3,4,7,8-PeCDF	DIOXINS	1.72E-09		3.14E-08		mg/m3
8/26/1998	57117-41-6	1,2,3,7,8-PeCDF	DIOXINS	1.20E-09		1.16E-08		mg/m3
8/26/1998	57117-44-9	1,2,3,6,7,8-HxCDF	DIOXINS	2.03E-09		3.41E-08	u	mg/m3
8/26/1998	57653-85-7	1,2,3,6,7,8-HxCDD	DIOXINS	3.38E-10		8.87E-09		mg/m3
8/26/1998	57-97-6	7,12-Dimethylbenz(a)anthracene	SVOC	9.49E-06	ND	9.38E-06	ND	mg/m3
8/26/1998	58-89-9	gamma-BHC	PEST/PCB	6.30E-07		6.45E-08	ND	mg/m3
8/26/1998	58-90-2	2,3,4,6-Tetrachlorophenol	SVOC	2.45E-05	ND	2.43E-05	ND	mg/m3
8/26/1998	589-34-4	3-Methylhexane	GC/MS	7.59E-05	ND	7.77E-05	ND	mg/m3
8/26/1998	589-81-1	3-Methylheptane	GC/MS	1.45E-04	ND	1.48E-04	ND	mg/m3
8/26/1998	590-18-1	c-2-Butene	GC/MS	2.27E-04	B	2.47E-04	B	mg/m3
8/26/1998	590-86-3	Isovaleraldehyde	ALD/KET	5.53E-05	ND	5.27E-05	ND	mg/m3
8/26/1998	591-49-1	1-Methylcyclohexene	GC/MS	1.54E-04	ND	1.57E-04	ND	mg/m3
8/26/1998	591-76-4	Isoheptane	GC/MS	4.58E-04	B	5.93E-04	B	mg/m3
8/26/1998	592-13-2	2,5-Dimethylhexane	GC/MS	1.95E-04	ND	1.99E-04	ND	mg/m3
8/26/1998	592-27-8	2-Methylheptane	GC/MS	1.22E-04	ND	1.25E-04	ND	mg/m3
8/26/1998	592-41-6	1-Hexene	GC/MS	1.74E-04	ND	1.77E-04	ND	mg/m3
8/26/1998	592-76-7	1-Heptene	GC/MS	5.45E-04		1.98E-04	ND	mg/m3
8/26/1998	593-60-2	Vinyl Bromide	GC/MS	1.17E-04	ND	1.20E-04	ND	mg/m3
8/26/1998	59-50-7	4-Chloro-3-methylphenol	SVOC	5.71E-06	ND	5.64E-06	ND	mg/m3
8/26/1998	59-89-2	N-Nitrosomorpholine	SVOC	5.54E-06	ND	5.48E-06	ND	mg/m3
8/26/1998	60-11-7	p-Dimethylaminoazobenzene	SVOC	7.41E-06	ND	7.32E-06	ND	mg/m3
8/26/1998	60-29-7	Diethyl Ether	GC/MS	1.62E-04	ND	1.65E-04	ND	mg/m3
8/26/1998	60-57-1	Dieldrin	PEST/PCB	1.06E-07	ND	4.15E-07	P	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	606-20-2	2,6-Dinitrotoluene	SVOC	1.63E-05	ND	1.61E-05	ND	mg/m3
8/26/1998	60851-34-5	2,3,4,6,7,8-HxCDF	DIOXINS	2.34E-09		6.83E-08		mg/m3
8/26/1998	608-93-5	Pentachlorobenzene	SVOC	4.77E-06	ND	4.72E-06	ND	mg/m3
8/26/1998	611-14-3	o-Ethyltoluene	GC/MS	2.36E-04	BJ	3.15E-04	BJ	mg/m3
8/26/1998	620-14-4	m-Ethyltoluene	GC/MS	4.72E-04	BJ	8.39E-04	B	mg/m3
8/26/1998	621-64-7	N-Nitroso-di-n-propylamine	SVOC	9.00E-06	ND	8.90E-06	ND	mg/m3
8/26/1998	622-96-8	p-Ethyltoluene	GC/MS	2.56E-04	BJ	4.62E-04	BJ	mg/m3
8/26/1998	62-44-2	Phenacetin	SVOC	4.56E-06	ND	4.50E-06	ND	mg/m3
8/26/1998	624-64-6	t-2-Butene	GC/MS	2.98E-04	B	2.98E-04	B	mg/m3
8/26/1998	62-50-0	Ethyl methanesulfonate	SVOC	6.01E-06	ND	5.94E-06	ND	mg/m3
8/26/1998	625-27-4	2-Methyl-2-Pentene	GC/MS	1.22E-04	ND	1.24E-04	ND	mg/m3
8/26/1998	62-53-3	Aniline	SVOC	1.37E-05	ND	1.36E-05	ND	mg/m3
8/26/1998	627-20-3	c-2-Pentene	GC/MS	9.03E-05	ND	9.22E-05	ND	mg/m3
8/26/1998	62-75-9	N-Nitrosodimethylamine	SVOC	1.73E-05	ND	1.71E-05	ND	mg/m3
8/26/1998	64-17-5	Ethanol	GC/MS	3.90E-02		4.86E-02		mg/m3
8/26/1998	646-04-8	t-2-Pentene	GC/MS	6.88E-05	ND	7.03E-05	ND	mg/m3
8/26/1998	65-85-0	Benzoic acid	SVOC	2.16E-04	B	3.53E-04	B	mg/m3
8/26/1998	66-25-1	Hexanal	ALD/KET	1.01E-02		2.11E-04		mg/m3
8/26/1998	66-27-3	Methyl methanesulfonate	SVOC	6.97E-06	ND	6.89E-06	ND	mg/m3
8/26/1998	67562-39-4	1,2,3,4,6,7,8-HpCDF	DIOXINS	6.15E-09		1.88E-07	u	mg/m3
8/26/1998	67-63-0	2-Propanol	GC/MS	2.04E-02	B	2.06E-02	B	mg/m3
8/26/1998	67-64-1	Acetone	ALD/KET	2.21E-03		6.53E-03		mg/m3
8/26/1998	67-66-3	Chloroform	GC/MS	1.20E-04	ND	2.66E-04	B	mg/m3
8/26/1998	67-72-1	Hexachloroethane	SVOC	4.03E-06	ND	3.99E-06	ND	mg/m3
8/26/1998	691-37-2	4-Methyl-1-Pentene	GC/MS	1.18E-04	ND	1.21E-04	ND	mg/m3
8/26/1998	691-38-3	c-4-Methyl-2-Pentene	GC/MS	1.92E-04	ND	1.98E-04	ND	mg/m3
8/26/1998	7005-72-3	4-Chlorophenylphenyl ether	SVOC	2.88E-06	ND	2.85E-06	ND	mg/m3
8/26/1998	70648-26-9	1,2,3,4,7,8-HxCDF	DIOXINS	2.21E-09		3.75E-08	u	mg/m3
8/26/1998	71-23-8	1-Propanol	GC/MS	6.26E-04	ND	3.73E-03		mg/m3
8/26/1998	71-36-3	1-Butanol	GC/MS	4.14E-02		3.78E-02		mg/m3
8/26/1998	71-43-2	Benzene	GC/MS	1.44E-03	B	2.93E-03	B	mg/m3
8/26/1998	71-55-6	1,1,1-Trichloroethane	GC/MS	7.73E-04	B	1.01E-03	B	mg/m3
8/26/1998	72-20-8	Endrin	PEST/PCB	4.52E-07	ND	4.67E-07	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	72-43-5	Methoxychlor	PEST/PCB	6.84E-07	ND	7.08E-07	ND	mg/m3
8/26/1998	72-54-8	4,4'-DDD	PEST/PCB	9.84E-08	ND	2.14E-07	P	mg/m3
8/26/1998	72-55-9	4,4'-DDE	PEST/PCB	2.28E-07	ND	2.35E-07	ND	mg/m3
8/26/1998	72918-21-9	1,2,3,7,8,9-HxCDF	DIOXINS	5.53E-10		1.95E-08		mg/m3
8/26/1998	73513-42-5	Isohexane	GC/MS	6.86E-05	ND	7.02E-05	ND	mg/m3
8/26/1998	7421-93-4	Endrin Aldehyde	PEST/PCB	2.68E-07	ND	2.77E-07	ND	mg/m3
8/26/1998	7439-92-1	Lead	PM10	3.61E-05	B	2.73E-03	B	mg/m3
8/26/1998	7439-97-6	Mercury	MERCURY	1.50E-07	ND	1.50E-07	ND	mg/m3
8/26/1998	7440-02-0	Nickel	PM10	7.49E-06		1.20E-05		mg/m3
8/26/1998	7440-22-4	Silver	PM10	3.50E-07		1.84E-05		mg/m3
8/26/1998	7440-28-0	Thallium	PM10	1.70E-06	ND	1.89E-07	J	mg/m3
8/26/1998	7440-36-0	Antimony	PM10	5.45E-06	B	2.84E-04	B	mg/m3
8/26/1998	7440-38-2	Arsenic	PM10	9.96E-07	J	3.07E-06		mg/m3
8/26/1998	7440-41-7	Beryllium	PM10	3.06E-07	B	5.96E-07	B	mg/m3
8/26/1998	7440-43-9F	Cadmium	PM10	6.68E-07	B	6.33E-05	B	mg/m3
8/26/1998	7440-47-3	Chromium	PM10	1.18E-05	B	1.78E-05	B	mg/m3
8/26/1998	7440-50-8	Copper	PM10	8.79E-05		3.04E-03		mg/m3
8/26/1998	7440-66-6	Zinc	PM10	1.43E-04		5.21E-03		mg/m3
8/26/1998	74-83-9	Bromomethane	GC/MS	9.16E-05	ND	9.36E-05	ND	mg/m3
8/26/1998	74-87-3	Chloromethane	GC/MS	1.52E-03	B	1.76E-03	B	mg/m3
8/26/1998	74-97-5	Bromochloromethane	GC/MS	1.23E-04	ND	1.25E-04	ND	mg/m3
8/26/1998	74-98-6	Propane	GC/MS	6.35E-03	B	7.45E-03	B	mg/m3
8/26/1998	75-00-3	Chloroethane	GC/MS	7.58E-05	ND	7.74E-05	ND	mg/m3
8/26/1998	75-01-4	Vinyl Chloride	GC/MS	8.11E-05	ND	8.29E-05	ND	mg/m3
8/26/1998	75-05-8	Acetonitrile	GC/MS	8.77E-02		3.77E-03		mg/m3
8/26/1998	75-07-0	Acetaldehyde	ALD/KET	1.11E-03		1.37E-03		mg/m3
8/26/1998	75-09-2	Methylene Chloride	GC/MS	3.54E-03	B	4.09E-03	B	mg/m3
8/26/1998	75-25-2	Bromoform	GC/MS	5.32E-04	ND	5.42E-04	ND	mg/m3
8/26/1998	75-27-4	Bromodichloromethane	GC/MS	1.71E-04	ND	1.75E-04	ND	mg/m3
8/26/1998	75-28-5	Isobutane	GC/MS	2.23E-03	B	1.98E-03	B	mg/m3
8/26/1998	75-34-3	1,1-Dichloroethane	GC/MS	7.30E-05	ND	7.46E-05	ND	mg/m3
8/26/1998	75-35-4	1,1-Dichloroethylene	GC/MS	1.03E-04	ND	1.78E-04	BJ	mg/m3
8/26/1998	75-43-4	Dichlorofluoromethane	GC/MS	1.24E-04	ND	1.27E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	75-45-6	Chlorodifluoromethane	GC/MS	1.91E-03		1.81E-03		mg/m3
8/26/1998	75-69-4	Trichlorofluoromethane	GC/MS	3.17E-03	B	4.54E-03	B	mg/m3
8/26/1998	75-71-8	Dichlorodifluoromethane	GC/MS	3.00E-03	B	2.89E-03	B	mg/m3
8/26/1998	75-83-2	Neohexane	GC/MS	1.11E-04	ND	1.14E-04	ND	mg/m3
8/26/1998	76-01-7	Pentachloroethane	SVOC	1.05E-05	ND	1.04E-05	ND	mg/m3
8/26/1998	760-21-4	2-Ethyl-1-Butene	GC/MS	9.87E-05	ND	1.01E-04	ND	mg/m3
8/26/1998	76-13-1	Freon 113	GC/MS	8.87E-04	B	8.49E-04	B	mg/m3
8/26/1998	76-14-2	Freon 114	GC/MS	1.25E-04	ND	1.28E-04	ND	mg/m3
8/26/1998	763-29-1	2-Methyl-1-Pentene	GC/MS	1.11E-04	ND	1.88E-04	BJ	mg/m3
8/26/1998	7642-04-8	c-2-Octene	GC/MS	1.33E-04	ND	1.36E-04	ND	mg/m3
8/26/1998	7642-09-3	c-3-Hexene	GC/MS	9.14E-05	ND	9.33E-05	ND	mg/m3
8/26/1998	76-44-8	Heptachlor	PEST/PCB	2.34E-07		4.88E-08	ND	mg/m3
8/26/1998	7647-01-0	Hydrochloric Acid	ACIDGAS	1.29E-03		2.94E-02		mg/m3
8/26/1998	7664-39-3	Hydrofluoric Acid	ACIDGAS	1.06E-03		9.89E-04		mg/m3
8/26/1998	7664-93-9	Sulfuric Acid	ACIDGAS	4.51E-03		2.24E-02		mg/m3
8/26/1998	7688-21-3	c-2-Hexene	GC/MS	7.98E-05	ND	8.15E-05	ND	mg/m3
8/26/1998	77-47-4	Hexachlorocyclopentadiene	SVOC	7.52E-05	ND	7.43E-05	ND	mg/m3
8/26/1998	7782-49-2	Selenium	PM10	7.21E-07	ND	7.72E-06	B	mg/m3
8/26/1998	78-59-1	Isophorone	SVOC	3.68E-06	ND	3.63E-06	ND	mg/m3
8/26/1998	78-78-4	Isopentane	GC/MS	9.45E-05	ND	1.81E-03	B	mg/m3
8/26/1998	78-79-5	Isoprene	GC/MS	8.73E-04		9.87E-04		mg/m3
8/26/1998	78-87-5	1,2-Dichloropropane	GC/MS	8.63E-05	ND	8.81E-05	ND	mg/m3
8/26/1998	78-93-3	2-Butanone	ALD/KET	5.53E-04		2.84E-03		mg/m3
8/26/1998	79-00-5	1,1,2-Trichloroethane	GC/MS	1.89E-04	ND	1.93E-04	ND	mg/m3
8/26/1998	79-01-6	Trichloroethylene	GC/MS	8.58E-04	B	1.21E-03	B	mg/m3
8/26/1998	79-29-8	2,3-Dimethylbutane	GC/MS	1.17E-04	ND	1.19E-04	ND	mg/m3
8/26/1998	79-34-5	1,1,1,2-Tetrachloroethane	GC/MS	5.42E-04	ND	5.52E-04	ND	mg/m3
8/26/1998	8001-35-2	Toxaphene	PEST/PCB	9.04E-06	ND	9.34E-06	ND	mg/m3
8/26/1998	80-56-8	a-Pinene	GC/MS	4.01E-04	B	2.51E-04	BJ	mg/m3
8/26/1998	811-97-2	Halocarbon 134A	GC/MS	1.35E-04	ND	1.38E-04	ND	mg/m3
8/26/1998	821-95-4	1-Undecene	GC/MS	3.11E-04	ND	3.67E-03	B	mg/m3
8/26/1998	82-68-8	Pentachloronitrobenzene	SVOC	2.74E-05	ND	2.71E-05	ND	mg/m3
8/26/1998	83-32-9	Acenaphthene	SVOC	3.29E-06	ND	4.94E-05		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	84-66-2	Diethylphthalate	SVOC	2.70E-06	ND	2.67E-06	ND	mg/m3
8/26/1998	84-74-2	Di-n-butylphthalate	SVOC	3.40E-05		4.56E-05		mg/m3
8/26/1998	85-01-8	Phenanthrene	SVOC	1.70E-05		1.02E-04		mg/m3
8/26/1998	85-68-7	Butylbenzylphthalate	SVOC	3.57E-06	ND	3.53E-06	ND	mg/m3
8/26/1998	86-73-7	Fluorene	SVOC	3.57E-06	ND	4.39E-05		mg/m3
8/26/1998	86-74-8	Carbazole	SVOC	4.22E-06	ND	4.18E-06	ND	mg/m3
8/26/1998	872-05-9	1-Decene	GC/MS	2.62E-04	ND	2.68E-04	ND	mg/m3
8/26/1998	87-65-0	2,6-Dichlorophenol	SVOC	8.01E-06	ND	7.92E-06	ND	mg/m3
8/26/1998	87-68-3	Hexachloro-1,3-Butadiene	SVOC	4.61E-06	ND	4.56E-06	ND	mg/m3
8/26/1998	87-86-5	Pentachlorophenol	SVOC	1.35E-04	ND	1.33E-04	ND	mg/m3
8/26/1998	88-06-2	2,4,6-Trichlorophenol	SVOC	1.11E-05	ND	1.10E-05	ND	mg/m3
8/26/1998	88-74-4	2-Nitroaniline	SVOC	2.54E-05	ND	2.51E-05	ND	mg/m3
8/26/1998	88-75-5	2-Nitrophenol	SVOC	1.71E-05	ND	1.69E-05	ND	mg/m3
8/26/1998	91-20-3	Naphthalene	SVOC	1.61E-04		5.14E-04		mg/m3
8/26/1998	91-57-6	2-Methylnaphthalene	SVOC	5.71E-05		1.31E-04		mg/m3
8/26/1998	91-58-7	2-Chloronaphthalene	SVOC	4.33E-06	ND	4.28E-06	ND	mg/m3
8/26/1998	91-59-8	2-Naphthylamine	SVOC	2.93E-04	ND	2.90E-04	ND	mg/m3
8/26/1998	91-80-5	Methapyrilene	SVOC	2.96E-04	ND	2.93E-04	ND	mg/m3
8/26/1998	91-94-1	3,3'-Dichlorobenzidine	SVOC	7.08E-06	ND	7.00E-06	ND	mg/m3
8/26/1998	922-61-2	c-3-Methyl-2-Pentene	GC/MS	1.38E-04	ND	1.41E-04	ND	mg/m3
8/26/1998	924-16-3	N-Nitroso-di-n-butylamine	SVOC	1.50E-05	ND	1.48E-05	ND	mg/m3
8/26/1998	92-67-1	4-Aminobiphenyl	SVOC	3.68E-05	ND	3.63E-05	ND	mg/m3
8/26/1998	92-87-5	Benzidine	SVOC	1.17E-04	ND	1.16E-04	ND	mg/m3
8/26/1998	930-55-2	N-Nitrosopyrrolidine	SVOC	1.82E-05	ND	1.80E-05	ND	mg/m3
8/26/1998	94-59-7	Safrole	SVOC	2.14E-05	ND	2.12E-05	ND	mg/m3
8/26/1998	95-13-6	Indene	GC/MS	1.15E-04	ND	1.17E-04	ND	mg/m3
8/26/1998	95-47-6	o-Xylene	GC/MS	8.84E-04	B	1.63E-03	B	mg/m3
8/26/1998	95-48-7	2-Methylphenol	SVOC	5.27E-06	ND	5.21E-06	ND	mg/m3
8/26/1998	95-49-8	o-Chlorotoluene	GC/MS	2.95E-04	ND	3.02E-04	ND	mg/m3
8/26/1998	95-50-1	1,2-Dichlorobenzene	SVOC	4.56E-06	ND	2.35E-05		mg/m3
8/26/1998	95-53-4	o-Toluidine	SVOC	9.77E-06	ND	9.66E-06	ND	mg/m3
8/26/1998	95-57-8	2-Chlorophenol	SVOC	3.57E-06	ND	3.53E-06	ND	mg/m3
8/26/1998	95-63-6	1,2,4-Trimethylbenzene	GC/MS	8.83E-04	B	1.54E-03	B	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
8/26/1998	95-94-3	1,2,4,5-Tetrachlorobenzene	SVOC	3.95E-06	ND	3.90E-06	ND	mg/m3
8/26/1998	95-95-4	2,4,5-Trichlorophenol	SVOC	1.45E-05	ND	1.44E-05	ND	mg/m3
8/26/1998	959-98-8	Endosulfan I	PEST/PCB	5.19E-08	ND	5.37E-08	ND	mg/m3
8/26/1998	96-14-0	3-Methylpentane	GC/MS	8.30E-04	B	7.14E-04	B	mg/m3
8/26/1998	96-37-7	Methylcyclopentane	GC/MS	8.49E-05	ND	8.68E-05	ND	mg/m3
8/26/1998	98-06-6	t-Butylbenzene	GC/MS	1.51E-04	ND	1.55E-04	ND	mg/m3
8/26/1998	98-82-8	Cumene	GC/MS	1.84E-04	ND	1.87E-04	ND	mg/m3
8/26/1998	98-86-2	Acetophenone	SVOC	4.64E-06	ND	4.58E-06	ND	mg/m3
8/26/1998	98-95-3	Nitrobenzene	SVOC	5.27E-06	ND	5.21E-06	ND	mg/m3
8/26/1998	99-09-2	3-Nitroaniline	SVOC	9.11E-06	ND	9.00E-06	ND	mg/m3
8/26/1998	99-35-4	sym-Trinitrobenzene	SVOC	1.87E-05	ND	1.84E-05	ND	mg/m3
8/26/1998	99-55-8	5-Nitro-o-toluidine	SVOC	1.15E-05	ND	1.14E-05	ND	mg/m3
8/26/1998	99-65-0	1,3-Dinitrobenzene	SVOC	2.63E-05	ND	2.60E-05	ND	mg/m3
8/26/1998	99-87-6	p-Isopropyltoluene	GC/MS	2.60E-04	ND	2.65E-04	ND	mg/m3
8/26/1998	CPAH-TEQ	Total Carcinogenic PAHS (BaP TEQs)	SVOC	1.25E-06	ND	1.23E-06	ND	mg/m3
8/26/1998	DIOXIN-TEQ	Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	DIOXINS	2.33E-09		4.05E-08		mg/m3
8/26/1998	PM10	PM-10	PM10	7.12E-02		1.49E-01		mg/m3
10/15/1998	100-01-6	4-Nitroaniline	SVOC	1.71E-05	ND	1.80E-05	ND	mg/m3
10/15/1998	100-02-7	4-Nitrophenol	SVOC	1.52E-04	ND	1.61E-04	ND	mg/m3
10/15/1998	100-41-4	Ethylbenzene	GC/MS	4.64E-03	B	6.98E-03	B	mg/m3
10/15/1998	100-42-5	Styrene	GC/MS	8.07E-04	B	1.66E-03	B	mg/m3
10/15/1998	100-44-7	Benzyl Chloride	GC/MS	9.69E-05	ND	1.14E-04	ND	mg/m3
10/15/1998	100-51-6	Benzyl alcohol	SVOC	4.36E-06	ND	2.26E-04		mg/m3
10/15/1998	100-52-7	Benzaldehyde	ALD/KET	2.78E-04		9.47E-04		mg/m3
10/15/1998	10061-01-5	c-1,3-Dichloropropene	GC/MS	2.21E-04	ND	2.58E-04	ND	mg/m3
10/15/1998	10061-02-6	t-1,3-Dichloropropene	GC/MS	1.16E-04	ND	1.36E-04	ND	mg/m3
10/15/1998	100-75-4	N-Nitrosopiperidine	SVOC	4.94E-06	ND	5.21E-06	ND	mg/m3
10/15/1998	101-55-3	4-Bromophenyl phenyl ether	SVOC	2.68E-06	ND	2.83E-06	ND	mg/m3
10/15/1998	1024-57-3	Heptachlor epoxide	PEST/PCB	2.10E-07	NDJ	2.30E-07	ND	mg/m3
10/15/1998	1031-07-8	Endosulfan Sulfate	PEST/PCB	2.32E-07	ND	2.53E-07	ND	mg/m3
10/15/1998	103-65-1	n-Propylbenzene	GC/MS	2.71E-04	BJ	4.32E-04	B	mg/m3
10/15/1998	104-51-8	n-Butylbenzene	GC/MS	1.74E-04	ND	2.04E-04	ND	mg/m3
10/15/1998	105-05-5	p-Diethylbenzene	GC/MS	1.55E-04	ND	1.82E-04	ND	mg/m3

Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	105-67-9	2,4-Dimethylphenol	SVOC	1.21E-05	ND	1.28E-05	ND	mg/m3
10/15/1998	10595-95-6	N-Nitrosomethylethylamine	SVOC	1.62E-05	ND	1.70E-05	ND	mg/m3
10/15/1998	106-42-3/108-38-	p-Xylene + m-Xylene	GC/MS			6.81E-03	B	mg/m3
10/15/1998	106-42-3/108-38-3	p-Xylene + m-Xylene	GC/MS	4.51E-03	B			mg/m3
10/15/1998	106-43-4	p-Chlorotoluene	GC/MS	2.11E-04	ND	2.48E-04	ND	mg/m3
10/15/1998	106-44-5/108-39-	4-Methylphenol/3-Methylphenol	SVOC			5.98E-05	F	mg/m3
10/15/1998	106-44-5/108-39-4	4-Methylphenol/3-Methylphenol	SVOC	4.34E-05	F			mg/m3
10/15/1998	106-46-7	1,4-Dichlorobenzene	SVOC	1.21E-04		2.90E-04		mg/m3
10/15/1998	106-47-8	p-Chloroaniline	SVOC	6.78E-06	ND	7.15E-06	ND	mg/m3
10/15/1998	106-93-4	1,2-Dibromoethane	GC/MS	1.35E-04	ND	1.58E-04	ND	mg/m3
10/15/1998	106-97-8	n-Butane	GC/MS	4.51E-03	B	4.51E-03	B	mg/m3
10/15/1998	106-99-0	1,3-Butadiene	GC/MS	2.36E-04		4.28E-04		mg/m3
10/15/1998	107-02-8	Acrolein	ALD/KET	1.85E-04		1.05E-04		mg/m3
10/15/1998	107-06-2	1,2-Dichloroethane	GC/MS	1.86E-04	ND	2.18E-04	ND	mg/m3
10/15/1998	107-13-1	Acrylonitrile	GC/MS	6.26E-04		1.03E-03		mg/m3
10/15/1998	107-39-1	2,4,4-Trimethyl-1-Pentene	GC/MS	1.91E-04	ND	2.48E-04	BJ	mg/m3
10/15/1998	107-40-4	2,4,4-Trimethyl-2-Pentene	GC/MS	1.32E-04	ND	1.55E-04	ND	mg/m3
10/15/1998	108-05-4	Vinyl Acetate	GC/MS	5.31E-03	F	9.45E-03	F	mg/m3
10/15/1998	108-08-7	2,4-Dimethylpentane	GC/MS	1.63E-04	ND	1.91E-04	ND	mg/m3
10/15/1998	108-10-1	Methylisobutylketone	GC/MS	1.67E-03	B	4.01E-03	B	mg/m3
10/15/1998	108-60-1	bis(2-Chloroisopropyl)ether	SVOC	4.26E-06	ND	4.49E-06	ND	mg/m3
10/15/1998	108-67-8	1,3,5-Trimethylbenzene	GC/MS	4.30E-04	B	7.65E-04	B	mg/m3
10/15/1998	108-87-2	Methylcyclohexane	GC/MS	6.45E-05	BJ	1.68E-04	BJ	mg/m3
10/15/1998	108-88-3	Toluene	GC/MS	1.29E-02	B	2.73E-02	B	mg/m3
10/15/1998	108-90-7	Chlorobenzene	GC/MS	1.19E-04	ND	8.69E-05	BJ	mg/m3
10/15/1998	108-95-2	Phenol	SVOC	5.12E-05		1.98E-04		mg/m3
10/15/1998	109-06-8	2-Picoline	SVOC	1.26E-05	ND	1.32E-05	ND	mg/m3
10/15/1998	109-66-0	n-Pentane	GC/MS	1.59E-03	B	1.11E-03	B	mg/m3
10/15/1998	109-67-1	1-Pentene	GC/MS	5.69E-04	B	5.47E-04	B	mg/m3
10/15/1998	110-54-3	n-Hexane	GC/MS	1.38E-03	B	4.36E-03	B	mg/m3
10/15/1998	110-62-3	Valeraldehyde	ALD/KET	9.26E-05		5.26E-05	ND	mg/m3
10/15/1998	110-82-7	Cyclohexane	GC/MS	7.60E-04	B	3.68E-03	B	mg/m3
10/15/1998	110-83-8	Cyclohexene	GC/MS	2.40E-04	J	2.36E-04	J	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	110-86-1	Pyridine	SVOC	1.22E-05	ND	1.29E-05	ND	mg/m3
10/15/1998	11096-82-5	PCB-1260	PEST/PCB	1.46E-06	ND	1.60E-06	ND	mg/m3
10/15/1998	11097-69-1	PCB-1254	PEST/PCB	9.43E-07	ND	1.03E-06	ND	mg/m3
10/15/1998	11104-28-2	PCB-1221	PEST/PCB	2.63E-06	ND	2.87E-06	ND	mg/m3
10/15/1998	11141-16-5	PCB-1232	PEST/PCB	1.19E-06	ND	1.29E-06	ND	mg/m3
10/15/1998	111-44-4	bis(2-Chloroethyl)ether	SVOC	3.31E-06	ND	3.49E-06	ND	mg/m3
10/15/1998	111-65-9	n-Octane	GC/MS	7.27E-04	B	8.34E-04	B	mg/m3
10/15/1998	111-66-0	1-Octene	GC/MS	3.01E-04	J	5.59E-04	J	mg/m3
10/15/1998	111-71-7	Heptanal	GC/MS	1.79E-02	J	1.17E-02	J	mg/m3
10/15/1998	111-84-2	n-Nonane	GC/MS	1.21E-03	BJ	1.51E-03	BJ	mg/m3
10/15/1998	111-91-1	bis(2-Chloroethoxy)methane	SVOC	4.47E-06	ND	4.71E-06	ND	mg/m3
10/15/1998	1120-21-4	n-Undecane	GC/MS	1.32E-03		1.78E-03		mg/m3
10/15/1998	115-07-1	Propylene	GC/MS	1.49E-03	B	1.87E-03	B	mg/m3
10/15/1998	115-11-7/106-98-	Isobutene + 1-Butene	GC/MS			1.87E-03	B	mg/m3
10/15/1998	115-11-7/106-98-9	Isobutene + 1-Butene	GC/MS	1.63E-03	B			mg/m3
10/15/1998	117-81-7	bis(2-Ethylhexyl)phthalate	SVOC	4.57E-06	ND	5.65E-05		mg/m3
10/15/1998	117-84-0	Di-n-octylphthalate	SVOC	6.52E-06	J	4.18E-06	ND	mg/m3
10/15/1998	118-74-1	Hexachlorobenzene	SVOC	5.20E-06	ND	5.49E-06	ND	mg/m3
10/15/1998	119-93-7	3,3'-Dimethylbenzidine	SVOC	6.20E-05	ND	6.54E-05	ND	mg/m3
10/15/1998	120-12-7	Anthracene	SVOC	4.07E-06	ND	4.29E-06	ND	mg/m3
10/15/1998	120-58-1	Isosafrole	SVOC	2.05E-05	ND	2.16E-05	ND	mg/m3
10/15/1998	120-82-1	1,2,4-Trichlorobenzene	SVOC	1.28E-04	BJ	1.70E-04	BJ	mg/m3
10/15/1998	120-83-2	2,4-Dichlorophenol	SVOC	5.31E-06	ND	5.60E-06	ND	mg/m3
10/15/1998	121-14-2	2,4-Dinitrotoluene	SVOC	1.73E-05	ND	1.83E-05	ND	mg/m3
10/15/1998	122-09-8	Dimethylphenethylamine	SVOC	2.43E-04	ND	2.56E-04	ND	mg/m3
10/15/1998	122-39-4	Diphenylamine/N-NitrosoDPA	SVOC	1.17E-05	ND	1.24E-05	ND	mg/m3
10/15/1998	123-38-6	Propionaldehyde	ALD/KET	1.85E-04		2.10E-04		mg/m3
10/15/1998	123-72-8	n-Butyraldehyde	ALD/KET	1.85E-04		2.10E-04		mg/m3
10/15/1998	123-73-9	Crotonaldehyde	ALD/KET	4.63E-05	ND	5.26E-05	ND	mg/m3
10/15/1998	123-91-1	1,4-Dioxane	GC/MS	1.10E-03		1.83E-03		mg/m3
10/15/1998	124-11-8	1-Nonene	GC/MS	4.63E-04		3.83E-04	J	mg/m3
10/15/1998	124-18-5	n-Decane	GC/MS	2.05E-03	B	3.69E-03	B	mg/m3
10/15/1998	124-48-1	Dibromochloromethane	GC/MS	2.16E-04	ND	2.53E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	12672-29-6	PCB-1248	PEST/PCB	1.70E-06	ND	1.86E-06	ND	mg/m3
10/15/1998	12674-11-2	PCB-1016	PEST/PCB	1.73E-06	ND	1.89E-06	ND	mg/m3
10/15/1998	126-99-8	Chloroprene	GC/MS	2.37E-04	ND	2.78E-04	ND	mg/m3
10/15/1998	127-18-4	Tetrachloroethylene	GC/MS	2.58E-04	ND	7.17E-04	B	mg/m3
10/15/1998	12789-03-6	gamma-Chlordane	PEST/PCB	1.67E-07	J	6.10E-08	J	mg/m3
10/15/1998	127-91-3	b-Pinene	GC/MS	1.03E-04	ND	1.20E-04	ND	mg/m3
10/15/1998	129-00-0	Pyrene	SVOC	4.39E-06	ND	1.50E-05		mg/m3
10/15/1998	130-15-4	1,4-Naphthoquinone	SVOC	1.31E-05	ND	1.38E-05	ND	mg/m3
10/15/1998	131-11-3	Dimethylphthalate	SVOC	3.00E-05		4.49E-05		mg/m3
10/15/1998	132-64-9	Dibenzofuran	SVOC	3.89E-06	ND	2.99E-05		mg/m3
10/15/1998	134-32-7	1-Naphthylamine	SVOC	1.42E-05	ND	1.50E-05	ND	mg/m3
10/15/1998	141-32-2	Butyl Acrylate	GC/MS	5.31E-04	ND	6.23E-04	ND	mg/m3
10/15/1998	141-93-5	m-Diethylbenzene	GC/MS	1.31E-04	ND	1.30E-03	B	mg/m3
10/15/1998	142-29-0	Cyclopentene	GC/MS	1.16E-04	ND	1.36E-04	ND	mg/m3
10/15/1998	142-82-5	n-Heptane	GC/MS	7.73E-04	B	1.51E-03	B	mg/m3
10/15/1998	143-50-0	Kepone	SVOC	1.84E-04	ND	1.94E-04	ND	mg/m3
10/15/1998	156-59-2	c-1,2-Dichloroethylene	GC/MS	1.49E-04	ND	1.75E-04	ND	mg/m3
10/15/1998	156-60-5	t-1,2-Dichloroethylene	GC/MS	1.46E-04	ND	1.71E-04	ND	mg/m3
10/15/1998	1634-04-4	Methyl t-Butylether	GC/MS	2.98E-04	ND	3.51E-04	ND	mg/m3
10/15/1998	1746-01-6	2,3,7,8-TCDD	DIOXINS	8.29E-12	ND	3.62E-10		mg/m3
10/15/1998	1888-71-7	Hexachloropropene	SVOC	1.39E-05	ND	1.47E-05	ND	mg/m3
10/15/1998	191-24-2	Benzo(g,h,i)perylene	SVOC	1.75E-06	ND	1.84E-06	ND	mg/m3
10/15/1998	193-39-5	Indeno(1,2,3-cd)pyrene	SVOC	3.00E-06	ND	3.16E-06	ND	mg/m3
10/15/1998	19408-74-3	1,2,3,7,8,9-HxCDD	DIOXINS	1.45E-10	r	2.76E-09		mg/m3
10/15/1998	205-99-2	Benzo(b)fluoranthene	SVOC	4.92E-06	ND	5.18E-06	ND	mg/m3
10/15/1998	206-44-0	Fluoranthene	SVOC	1.84E-06	ND	2.34E-05		mg/m3
10/15/1998	207-08-9	Benzo(k)fluoranthene	SVOC	2.51E-06	ND	2.65E-06	ND	mg/m3
10/15/1998	208-96-8	Acenaphthylene	SVOC	5.81E-06	ND	2.43E-05		mg/m3
10/15/1998	218-01-9	Chrysene	SVOC	3.73E-06	ND	3.93E-06	ND	mg/m3
10/15/1998	2198-23-4	4-Nonene	GC/MS	1.66E-04	ND	1.95E-04	ND	mg/m3
10/15/1998	2303-16-4	Diallate	SVOC	3.00E-06	ND	3.16E-06	ND	mg/m3
10/15/1998	2385-85-5	Mirex	PEST/PCB	2.24E-07	ND	2.45E-07	ND	mg/m3
10/15/1998	23950-58-5	Pronamide	SVOC	6.05E-06	ND	6.37E-06	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	27476-50-2	Methylcyclopentene	GC/MS	1.22E-04	ND	1.43E-04	ND	mg/m3
10/15/1998	287-92-3	Cyclopentane	GC/MS	1.15E-04	BJ	1.23E-04	ND	mg/m3
10/15/1998	30402-14-3	Total TCDF	DIOXINS	3.85E-09		1.74E-07		mg/m3
10/15/1998	30402-15-4	Total PeCDF	DIOXINS	2.96E-09		1.35E-07	u	mg/m3
10/15/1998	309-00-2	Aldrin	PEST/PCB	8.63E-08	ND	9.42E-08	ND	mg/m3
10/15/1998	319-84-6	alpha-BHC	PEST/PCB	6.02E-08	ND	6.17E-07		mg/m3
10/15/1998	319-85-7	beta-BHC	PEST/PCB	1.15E-07	ND	1.25E-07	ND	mg/m3
10/15/1998	319-86-8	delta-BHC	PEST/PCB	7.59E-08	ND	8.28E-08	ND	mg/m3
10/15/1998	3268-87-9	1,2,3,4,6,7,8,9-OCDD	DIOXINS	4.44E-09	s	3.29E-08	s	mg/m3
10/15/1998	33213-65-9	Endosulfan II	PEST/PCB	1.81E-07	ND	1.98E-07	ND	mg/m3
10/15/1998	34465-46-8	Total HxCDD	DIOXINS	2.13E-09		7.56E-08		mg/m3
10/15/1998	3522-94-9	2,2,5-Trimethylhexane	GC/MS	5.79E-04	ND	6.81E-04	ND	mg/m3
10/15/1998	35822-46-9	1,2,3,4,6,7,8-HpCDD	DIOXINS	1.45E-09	s	1.97E-08	s	mg/m3
10/15/1998	36088-22-9	Total PeCDD	DIOXINS	9.47E-10		4.93E-08		mg/m3
10/15/1998	37871-00-4	Total HpCDD	DIOXINS	2.69E-09	s	3.95E-08	s	mg/m3
10/15/1998	38998-75-3	Total HpCDF	DIOXINS	4.44E-09		6.58E-08		mg/m3
10/15/1998	39001-02-0	1,2,3,4,6,7,8,9-OCDF	DIOXINS	3.55E-09	s	2.01E-08	s	mg/m3
10/15/1998	39227-28-6	1,2,3,4,7,8-HxCDD	DIOXINS	1.01E-10	r	2.96E-09		mg/m3
10/15/1998	40321-76-4	1,2,3,7,8-PeCDD	DIOXINS	5.03E-11	r	1.68E-09		mg/m3
10/15/1998	4050-45-7	t-2-Hexene	GC/MS	1.63E-04	ND	1.92E-04	ND	mg/m3
10/15/1998	41903-57-5	Total TCDD	DIOXINS	1.18E-09		5.59E-08		mg/m3
10/15/1998	463-82-1	Neopentane	GC/MS	9.42E-05	ND	1.11E-04	ND	mg/m3
10/15/1998	465-73-6	Isodrin	PEST/PCB	4.02E-08	ND	3.42E-07	BP	mg/m3
10/15/1998	496-11-7	Indan	GC/MS	2.77E-04	ND	1.24E-04	J	mg/m3
10/15/1998	50-00-0	Formaldehyde	ALD/KET	8.33E-04		1.37E-03		mg/m3
10/15/1998	50-29-3	4,4'-DDT	PEST/PCB	1.39E-07	ND	1.52E-07	ND	mg/m3
10/15/1998	50-32-8	Benz(a)pyrene	SVOC	5.47E-06	ND	5.76E-06	ND	mg/m3
10/15/1998	510-15-6	Chlorobenzilate	SVOC	6.26E-06	ND	6.60E-06	ND	mg/m3
10/15/1998	5103-71-9	alpha-Chlordane	PEST/PCB	5.99E-08	PJ	2.23E-07	ND	mg/m3
10/15/1998	51207-31-9	2,3,7,8-TCDF	DIOXINS	7.11E-11		3.09E-09		mg/m3
10/15/1998	51-28-5	2,4-Dinitrophenol	SVOC	1.63E-04	ND	1.72E-04	ND	mg/m3
10/15/1998	526-73-8	1,2,3-Trimethylbenzene	GC/MS	3.11E-04	B	5.40E-04	B	mg/m3
10/15/1998	529-20-4	Tolualdehyde	ALD/KET	4.63E-05	ND	5.26E-05	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	534-52-1	4,6-Dinitro-2-methylphenol	SVOC	2.12E-05	ND	2.23E-05	ND	mg/m3
10/15/1998	53469-21-9	PCB-1242	PEST/PCB	3.29E-06	ND	3.59E-06	ND	mg/m3
10/15/1998	53494-70-5	Endrin Ketone	PEST/PCB	2.72E-07	ND	1.79E-07	NDJ	mg/m3
10/15/1998	53-70-3	Dibenz(a,h)anthracene	SVOC	4.89E-06	ND	5.15E-06	ND	mg/m3
10/15/1998	538-93-2	Isobutylbenzene	GC/MS	1.82E-04	ND	2.13E-04	ND	mg/m3
10/15/1998	53-96-3	2-Acetylaminofluorene	SVOC	5.76E-06	ND	6.07E-06	ND	mg/m3
10/15/1998	540-84-1	2,2,4-Trimethylpentane	GC/MS	1.45E-04	BJ	1.52E-04	BJ	mg/m3
10/15/1998	541-73-1	1,3-Dichlorobenzene	SVOC	4.20E-06	ND	4.43E-06	ND	mg/m3
10/15/1998	55-18-5	N-Nitrosodiethylamine	SVOC	1.98E-05	ND	2.09E-05	ND	mg/m3
10/15/1998	55673-89-7	1,2,3,4,7,8,9-HpCDF	DIOXINS	5.63E-10		6.58E-09		mg/m3
10/15/1998	55684-94-1	Total HxCDF	DIOXINS	4.14E-09		1.28E-07		mg/m3
10/15/1998	56-23-5	Carbon Tetrachloride	GC/MS	4.99E-04	B	6.03E-04	B	mg/m3
10/15/1998	563-45-1	3-Methyl-1-Butene	GC/MS	1.14E-04	ND	1.34E-04	ND	mg/m3
10/15/1998	564-02-3	2,2,3-Trimethylpentane	GC/MS	2.56E-04	ND	3.01E-04	ND	mg/m3
10/15/1998	56-49-5	3-Methylcholanthrene	SVOC	4.05E-06	ND	4.27E-06	ND	mg/m3
10/15/1998	56-55-3	Benz(a)anthracene	SVOC	3.73E-06	ND	3.93E-06	ND	mg/m3
10/15/1998	565-59-3	2,3-Dimethylpentane	GC/MS	1.92E-04	ND	3.10E-04	BJ	mg/m3
10/15/1998	56-57-5	4-Nitroquinoline-1-oxide	SVOC	8.78E-05	ND	9.25E-05	ND	mg/m3
10/15/1998	565-75-3	2,3,4-Trimethylpentane	GC/MS	1.46E-04	ND	1.72E-04	ND	mg/m3
10/15/1998	57117-31-4	2,3,4,7,8-PeCDF	DIOXINS	2.04E-10		1.05E-08		mg/m3
10/15/1998	57117-41-6	1,2,3,7,8-PeCDF	DIOXINS	9.77E-11	r	4.60E-09		mg/m3
10/15/1998	57117-44-9	1,2,3,6,7,8-HxCDF	DIOXINS	2.96E-10		1.12E-08		mg/m3
10/15/1998	57653-85-7	1,2,3,6,7,8-HxCDD	DIOXINS	1.69E-10		4.27E-09		mg/m3
10/15/1998	57-97-6	7,12-Dimethylbenz(a)anthracene	SVOC	9.09E-06	ND	9.59E-06	ND	mg/m3
10/15/1998	58-89-9	gamma-BHC	PEST/PCB	5.10E-08	ND	8.55E-08	ND	mg/m3
10/15/1998	58-90-2	2,3,4,6-Tetrachlorophenol	SVOC	2.35E-05	ND	2.48E-05	ND	mg/m3
10/15/1998	589-34-4	3-Methylhexane	GC/MS	4.99E-04	B	1.06E-03	B	mg/m3
10/15/1998	589-81-1	3-Methylheptane	GC/MS	2.33E-04	ND	2.75E-04	ND	mg/m3
10/15/1998	590-18-1	c-2-Butene	GC/MS	1.27E-04	ND	1.98E-04	BJ	mg/m3
10/15/1998	590-86-3	Isovaleraldehyde	ALD/KET	4.63E-05	ND	5.26E-05	ND	mg/m3
10/15/1998	591-49-1	1-Methylcyclohexene	GC/MS	1.28E-04	ND	1.50E-04	ND	mg/m3
10/15/1998	591-76-4	Isoheptane	GC/MS	4.83E-04	B	8.14E-04	B	mg/m3
10/15/1998	592-13-2	2,5-Dimethylhexane	GC/MS	2.38E-04	ND	2.80E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	592-27-8	2-Methylheptane	GC/MS	5.87E-04	B	8.06E-04	B	mg/m3
10/15/1998	592-41-6	1-Hexene	GC/MS	9.55E-04	B	5.02E-04	BJ	mg/m3
10/15/1998	592-76-7	1-Heptene	GC/MS	6.25E-04		5.09E-04		mg/m3
10/15/1998	593-60-2	Vinyl Bromide	GC/MS	2.86E-04	ND	3.36E-04	ND	mg/m3
10/15/1998	59-50-7	4-Chloro-3-methylphenol	SVOC	5.47E-06	ND	5.76E-06	ND	mg/m3
10/15/1998	59-89-2	N-Nitrosomorpholine	SVOC	5.31E-06	ND	5.60E-06	ND	mg/m3
10/15/1998	60-11-7	p-Dimethylaminoazobenzene	SVOC	7.10E-06	ND	7.48E-06	ND	mg/m3
10/15/1998	60-29-7	Diethyl Ether	GC/MS	4.07E-04	ND	4.77E-04	ND	mg/m3
10/15/1998	60-57-1	Dieldrin	PEST/PCB	2.44E-07	NDJ	2.66E-07	ND	mg/m3
10/15/1998	606-20-2	2,6-Dinitrotoluene	SVOC	1.56E-05	ND	1.65E-05	ND	mg/m3
10/15/1998	60851-34-5	2,3,4,6,7,8-HxCDF	DIOXINS	7.40E-10		1.68E-08		mg/m3
10/15/1998	608-93-5	Pentachlorobenzene	SVOC	4.57E-06	ND	4.82E-06	ND	mg/m3
10/15/1998	611-14-3	o-Ethyltoluene	GC/MS	3.17E-04	B	5.84E-04	B	mg/m3
10/15/1998	620-14-4	m-Ethyltoluene	GC/MS	7.80E-04	B	1.24E-03	B	mg/m3
10/15/1998	621-64-7	N-Nitroso-di-n-propylamine	SVOC	8.62E-06	ND	9.09E-06	ND	mg/m3
10/15/1998	622-96-8	p-Ethyltoluene	GC/MS	4.30E-04	B	6.97E-04	B	mg/m3
10/15/1998	62-44-2	Phenacetin	SVOC	4.36E-06	ND	4.60E-06	ND	mg/m3
10/15/1998	624-64-6	t-2-Butene	GC/MS	2.19E-04	B	2.70E-04	B	mg/m3
10/15/1998	62-50-0	Ethyl methanesulfonate	SVOC	5.76E-06	ND	6.07E-06	ND	mg/m3
10/15/1998	625-27-4	2-Methyl-2-Pentene	GC/MS	3.06E-04	ND	3.57E-04	ND	mg/m3
10/15/1998	62-53-3	Aniline	SVOC	1.31E-05	ND	1.39E-05	ND	mg/m3
10/15/1998	627-20-3	c-2-Pentene	GC/MS	1.17E-04	ND	1.38E-04	ND	mg/m3
10/15/1998	62-75-9	N-Nitrosodimethylamine	SVOC	1.66E-05	ND	1.75E-05	ND	mg/m3
10/15/1998	64-17-5	Ethanol	GC/MS	3.46E-02	F	4.16E-02	F	mg/m3
10/15/1998	646-04-8	t-2-Pentene	GC/MS	1.28E-04	ND	1.50E-04	ND	mg/m3
10/15/1998	65-85-0	Benzoic acid	SVOC	2.96E-04		4.54E-04		mg/m3
10/15/1998	66-25-1	Hexanal	ALD/KET	2.30E-02	B	2.10E-04		mg/m3
10/15/1998	66-27-3	Methyl methanesulfonate	SVOC	6.68E-06	ND	7.04E-06	ND	mg/m3
10/15/1998	67562-39-4	1,2,3,4,6,7,8-HpCDF	DIOXINS	2.13E-09		3.95E-08		mg/m3
10/15/1998	67-63-0	2-Propanol	GC/MS	4.93E-03		7.34E-03		mg/m3
10/15/1998	67-64-1	Acetone	ALD/KET	2.59E-03		6.31E-03		mg/m3
10/15/1998	67-66-3	Chloroform	GC/MS	1.62E-04	ND	1.52E-04	BJ	mg/m3
10/15/1998	67-72-1	Hexachloroethane	SVOC	3.86E-06	ND	4.07E-06	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	691-37-2	4-Methyl-1-Pentene	GC/MS	1.27E-04	ND	1.49E-04	ND	mg/m3
10/15/1998	691-38-3	c-4-Methyl-2-Pentene	GC/MS	5.62E-04	ND	6.60E-04	ND	mg/m3
10/15/1998	7005-72-3	4-Chlorophenylphenyl ether	SVOC	2.76E-06	ND	2.91E-06	ND	mg/m3
10/15/1998	70648-26-9	1,2,3,4,7,8-HxCDF	DIOXINS	2.69E-10		1.28E-08		mg/m3
10/15/1998	71-23-8	1-Propanol	GC/MS	3.46E-03	J	5.79E-03	J	mg/m3
10/15/1998	71-36-3	1-Butanol	GC/MS	2.89E-02	B	1.58E-01	B	mg/m3
10/15/1998	71-43-2	Benzene	GC/MS	1.48E-03	B	3.02E-03	B	mg/m3
10/15/1998	71-55-6	1,1,1-Trichloroethane	GC/MS	4.90E-04	B	5.38E-04	B	mg/m3
10/15/1998	72-20-8	Endrin	PEST/PCB	4.70E-07	ND	5.13E-07	ND	mg/m3
10/15/1998	72-43-5	Methoxychlor	PEST/PCB	4.61E-07	ND	4.53E-07	ND	mg/m3
10/15/1998	72-54-8	4,4'-DDD	PEST/PCB	7.25E-08	ND	7.91E-08	ND	mg/m3
10/15/1998	72-55-9	4,4'-DDE	PEST/PCB	2.73E-07	ND	2.98E-07	ND	mg/m3
10/15/1998	72918-21-9	1,2,3,7,8,9-HxCDF	DIOXINS	2.19E-10		4.93E-09		mg/m3
10/15/1998	73513-42-5	Isohexane	GC/MS	1.27E-03	B	2.50E-03	B	mg/m3
10/15/1998	7421-93-4	Endrin Aldehyde	PEST/PCB	2.10E-07	ND	3.11E-07	PJ	mg/m3
10/15/1998	7439-92-1	Lead	PM10	3.84E-05	B	3.70E-03	B	mg/m3
10/15/1998	7439-97-6	Mercury	MERCURY	8.03E-06		1.32E-05		mg/m3
10/15/1998	7440-02-0	Nickel	PM10	8.06E-06	B	1.26E-05	B	mg/m3
10/15/1998	7440-22-4	Silver	PM10	5.74E-07		2.89E-05		mg/m3
10/15/1998	7440-28-0	Thallium	PM10	2.39E-06	BJ	1.54E-06	BJ	mg/m3
10/15/1998	7440-36-0	Antimony	PM10	7.05E-06	B	3.18E-04	B	mg/m3
10/15/1998	7440-38-2	Arsenic	PM10	9.30E-07	ND	7.06E-06		mg/m3
10/15/1998	7440-41-7	Beryllium	PM10	1.76E-07	B	2.99E-07	B	mg/m3
10/15/1998	7440-43-9F	Cadmium	PM10	9.58E-07	B	1.67E-04	B	mg/m3
10/15/1998	7440-47-3	Chromium	PM10	1.06E-05	B	1.69E-05	B	mg/m3
10/15/1998	7440-50-8	Copper	PM10	1.08E-04	B	8.98E-04	B	mg/m3
10/15/1998	7440-66-6	Zinc	PM10	1.86E-04	B	6.51E-03	B	mg/m3
10/15/1998	74-83-9	Bromomethane	GC/MS	1.53E-04	ND	1.80E-04	ND	mg/m3
10/15/1998	74-87-3	Chloromethane	GC/MS	2.06E-03		2.14E-03		mg/m3
10/15/1998	74-97-5	Bromochloromethane	GC/MS	2.33E-04	ND	2.75E-04	ND	mg/m3
10/15/1998	74-98-6	Propane	GC/MS	1.10E-02	B	1.59E-02	B	mg/m3
10/15/1998	75-00-3	Chloroethane	GC/MS	1.63E-04	ND	1.92E-04	ND	mg/m3
10/15/1998	75-01-4	Vinyl Chloride	GC/MS	1.13E-04	ND	1.33E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	75-05-8	Acetonitrile	GC/MS	2.46E-01		1.09E-02		mg/m3
10/15/1998	75-07-0	Acetaldehyde	ALD/KET	1.39E-03		1.47E-03		mg/m3
10/15/1998	75-09-2	Methylene Chloride	GC/MS	5.03E-03	B	2.77E-02	B	mg/m3
10/15/1998	75-25-2	Bromoform	GC/MS	6.14E-04	ND	7.17E-04	ND	mg/m3
10/15/1998	75-27-4	Bromodichloromethane	GC/MS	2.31E-04	ND	2.71E-04	ND	mg/m3
10/15/1998	75-28-5	Isobutane	GC/MS	1.91E-03	B	2.12E-03	B	mg/m3
10/15/1998	75-34-3	1,1-Dichloroethane	GC/MS	1.34E-04	ND	1.57E-04	ND	mg/m3
10/15/1998	75-35-4	1,1-Dichloroethylene	GC/MS	1.07E-04	ND	1.26E-04	ND	mg/m3
10/15/1998	75-43-4	Dichlorofluoromethane	GC/MS	9.49E-04	ND	1.11E-03	ND	mg/m3
10/15/1998	75-45-6	Chlorodifluoromethane	GC/MS	3.92E-03		6.78E-03		mg/m3
10/15/1998	75-69-4	Trichlorofluoromethane	GC/MS	2.47E-03	BJ	6.39E-03	B	mg/m3
10/15/1998	75-71-8	Dichlorodifluoromethane	GC/MS	2.82E-03	B	2.84E-03	B	mg/m3
10/15/1998	75-83-2	Neohexane	GC/MS	1.85E-04	ND	2.18E-04	ND	mg/m3
10/15/1998	76-01-7	Pentachloroethane	SVOC	1.01E-05	ND	1.06E-05	ND	mg/m3
10/15/1998	760-21-4	2-Ethyl-1-Butene	GC/MS	2.77E-04	ND	3.25E-04	ND	mg/m3
10/15/1998	76-13-1	Freon 113	GC/MS	7.58E-04	B	7.65E-04	B	mg/m3
10/15/1998	76-14-2	Freon 114	GC/MS	2.23E-04	ND	2.62E-04	ND	mg/m3
10/15/1998	763-29-1	2-Methyl-1-Pentene	GC/MS	1.66E-04	ND	1.96E-04	ND	mg/m3
10/15/1998	7642-04-8	c-2-Octene	GC/MS	1.00E-03	ND	1.17E-03	ND	mg/m3
10/15/1998	7642-09-3	c-3-Hexene	GC/MS	2.06E-04	ND	2.42E-04	ND	mg/m3
10/15/1998	76-44-8	Heptachlor	PEST/PCB	8.48E-08	ND	9.25E-08	ND	mg/m3
10/15/1998	7647-01-0	Hydrochloric Acid	ACIDGAS	1.65E-03		2.68E-02		mg/m3
10/15/1998	7664-39-3	Hydrofluoric Acid	ACIDGAS	3.68E-04		3.32E-04		mg/m3
10/15/1998	7664-93-9	Sulfuric Acid	ACIDGAS	5.80E-03		2.02E-02		mg/m3
10/15/1998	7688-21-3	c-2-Hexene	GC/MS	1.25E-04	ND	1.46E-04	ND	mg/m3
10/15/1998	77-47-4	Hexachlorocyclopentadiene	SVOC	7.20E-05	ND	7.59E-05	ND	mg/m3
10/15/1998	7782-49-2	Selenium	PM10	1.30E-07	BJ	1.89E-06	B	mg/m3
10/15/1998	78-59-1	Isophorone	SVOC	1.08E-05		2.19E-05		mg/m3
10/15/1998	78-78-4	Isopentane	GC/MS	1.93E-04	ND	2.27E-04	ND	mg/m3
10/15/1998	78-79-5	Isoprene	GC/MS	2.81E-04	BJ	3.59E-04	BJ	mg/m3
10/15/1998	78-87-5	1,2-Dichloropropane	GC/MS	1.18E-04	ND	7.01E-04	B	mg/m3
10/15/1998	78-93-3	2-Butanone	ALD/KET	8.33E-04		3.26E-03		mg/m3
10/15/1998	79-00-5	1,1,2-Trichloroethane	GC/MS	2.99E-04	ND	3.51E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	79-01-6	Trichloroethylene	GC/MS	7.19E-04	B	1.81E-03	B	mg/m3
10/15/1998	79-29-8	2,3-Dimethylbutane	GC/MS	4.96E-03	B	6.19E-03	B	mg/m3
10/15/1998	79-34-5	1,1,2,2-Tetrachloroethane	GC/MS	2.05E-04	ND	2.41E-04	ND	mg/m3
10/15/1998	8001-35-2	Toxaphene	PEST/PCB	2.72E-06	ND	2.97E-06	ND	mg/m3
10/15/1998	80-56-8	α -Pinene	GC/MS	1.86E-04	ND	2.18E-04	ND	mg/m3
10/15/1998	811-97-2	Halocarbon 134A	GC/MS	1.44E-04	J	2.07E-04	ND	mg/m3
10/15/1998	821-95-4	1-Undecene	GC/MS	2.77E-03		1.23E-03		mg/m3
10/15/1998	82-68-8	Pentachloronitrobenzene	SVOC	2.63E-05	ND	2.77E-05	ND	mg/m3
10/15/1998	83-32-9	Acenaphthene	SVOC	3.15E-06	ND	2.50E-05		mg/m3
10/15/1998	84-66-2	Diethylphthalate	SVOC	2.59E-06	ND	2.73E-06	ND	mg/m3
10/15/1998	84-74-2	Di-n-butylphthalate	SVOC	2.79E-05		3.88E-05		mg/m3
10/15/1998	85-01-8	Phenanthrene	SVOC	1.36E-05		7.48E-05		mg/m3
10/15/1998	85-68-7	Butylbenzylphthalate	SVOC	3.42E-06	ND	3.60E-06	ND	mg/m3
10/15/1998	86-73-7	Fluorene	SVOC	3.42E-06	ND	2.85E-05		mg/m3
10/15/1998	86-74-8	Carbazole	SVOC	4.05E-06	ND	4.27E-06	ND	mg/m3
10/15/1998	872-05-9	1-Decene	GC/MS	5.02E-04		2.21E-04	ND	mg/m3
10/15/1998	87-65-0	2,6-Dichlorophenol	SVOC	7.67E-06	ND	8.09E-06	ND	mg/m3
10/15/1998	87-68-3	Hexachloro-1,3-Butadiene	SVOC	4.41E-06	ND	4.66E-06	ND	mg/m3
10/15/1998	87-86-5	Pentachlorophenol	SVOC	1.29E-04	ND	1.36E-04	ND	mg/m3
10/15/1998	88-06-2	2,4,6-Trichlorophenol	SVOC	1.06E-05	ND	1.12E-05	ND	mg/m3
10/15/1998	88-74-4	2-Nitroaniline	SVOC	2.43E-05	ND	2.56E-05	ND	mg/m3
10/15/1998	88-75-5	2-Nitrophenol	SVOC	1.64E-05	ND	1.73E-05	ND	mg/m3
10/15/1998	91-20-3	Naphthalene	SVOC	1.75E-04		4.40E-04		mg/m3
10/15/1998	91-57-6	2-Methylnaphthalene	SVOC	3.60E-05		8.98E-05		mg/m3
10/15/1998	91-58-7	2-Chloronaphthalene	SVOC	4.15E-06	ND	4.38E-06	ND	mg/m3
10/15/1998	91-59-8	2-Naphthylamine	SVOC	2.81E-04	ND	2.96E-04	ND	mg/m3
10/15/1998	91-80-5	Methapyrilene	SVOC	2.84E-04	ND	2.99E-04	ND	mg/m3
10/15/1998	91-94-1	3,3'-Dichlorobenzidine	SVOC	6.78E-06	ND	7.15E-06	ND	mg/m3
10/15/1998	922-61-2	c-3-Methyl-2-Pentene	GC/MS	2.63E-04	ND	3.09E-04	ND	mg/m3
10/15/1998	924-16-3	N-Nitroso-di-n-butylamine	SVOC	1.43E-05	ND	1.51E-05	ND	mg/m3
10/15/1998	92-67-1	4-Aminobiphenyl	SVOC	3.52E-05	ND	3.71E-05	ND	mg/m3
10/15/1998	92-87-5	Benzidine	SVOC	1.12E-04	ND	1.18E-04	ND	mg/m3
10/15/1998	930-55-2	N-Nitrosopyrrolidine	SVOC	1.75E-05	ND	1.84E-05	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
10/15/1998	94-59-7	Safrole	SVOC	2.05E-05	ND	2.16E-05	ND	mg/m3
10/15/1998	95-13-6	Indene	GC/MS	1.61E-04	ND	1.89E-04	ND	mg/m3
10/15/1998	95-47-6	o-Xylene	GC/MS	1.60E-03	B	2.41E-03	B	mg/m3
10/15/1998	95-48-7	2-Methylphenol	SVOC	5.05E-06	ND	2.52E-05		mg/m3
10/15/1998	95-49-8	o-Chlorotoluene	GC/MS	2.71E-04	ND	3.20E-04	ND	mg/m3
10/15/1998	95-50-1	1,2-Dichlorobenzene	SVOC	4.36E-06	ND	1.44E-05		mg/m3
10/15/1998	95-53-4	o-Toluidine	SVOC	9.36E-06	ND	9.86E-06	ND	mg/m3
10/15/1998	95-57-8	2-Chlorophenol	SVOC	3.42E-06	ND	3.60E-06	ND	mg/m3
10/15/1998	95-63-6	1,2,4-Trimethylbenzene	GC/MS	1.35E-03	B	2.26E-03	B	mg/m3
10/15/1998	95-94-3	1,2,4,5-Tetrachlorobenzene	SVOC	3.78E-06	ND	3.99E-06	ND	mg/m3
10/15/1998	95-95-4	2,4,5-Trichlorophenol	SVOC	1.39E-05	ND	1.47E-05	ND	mg/m3
10/15/1998	959-98-8	Endosulfan I	PEST/PCB	4.18E-08	ND	3.75E-07	NDJ	mg/m3
10/15/1998	96-14-0	3-Methylpentane	GC/MS	5.74E-04	B	1.23E-03	B	mg/m3
10/15/1998	96-37-7	Methylcyclopentane	GC/MS	4.64E-04	B	1.26E-03	B	mg/m3
10/15/1998	98-06-6	t-Butylbenzene	GC/MS	1.30E-04	ND	1.52E-04	ND	mg/m3
10/15/1998	98-82-8	Cumene	GC/MS	4.07E-04	ND	4.79E-04	ND	mg/m3
10/15/1998	98-86-2	Acetophenone	SVOC	4.44E-06	ND	4.68E-06	ND	mg/m3
10/15/1998	98-95-3	Nitrobenzene	SVOC	5.05E-06	ND	5.32E-06	ND	mg/m3
10/15/1998	99-09-2	3-Nitroaniline	SVOC	8.73E-06	ND	9.20E-06	ND	mg/m3
10/15/1998	99-35-4	sym-Trinitrobenzene	SVOC	1.79E-05	ND	1.88E-05	ND	mg/m3
10/15/1998	99-55-8	5-Nitro-o-toluidine	SVOC	1.11E-05	ND	1.17E-05	ND	mg/m3
10/15/1998	99-65-0	1,3-Dinitrobenzene	SVOC	2.52E-05	ND	2.66E-05	ND	mg/m3
10/15/1998	99-87-6	p-Isopropyltoluene	GC/MS	1.83E-04	ND	2.15E-04	ND	mg/m3
10/15/1998	CPAH-TEQ	Total Carcinogenic PAHS (BaP TEQs)	SVOC	1.19E-06	ND	1.26E-06	ND	mg/m3
10/15/1998	DIOXIN-TEQ	Total Dioxin/Furans (2,3,7,8-TCDD TEQs)	DIOXINS	4.09E-10		1.41E-08		mg/m3
10/15/1998	PM10	PM-10	PM10	7.34E-02		2.39E-01		mg/m3
4/22/1999	100-01-6	4-Nitroaniline	SVOC			1.31E-05	ND	mg/m3
4/22/1999	100-02-7	4-Nitrophenol	SVOC			1.79E-05	ND	mg/m3
4/22/1999	100-41-4	Ethylbenzene	GC/MS			4.04E-03	B	mg/m3
4/22/1999	100-42-5	Styrene	GC/MS			1.31E-03	B	mg/m3
4/22/1999	100-44-7	Benzyl Chloride	GC/MS			2.52E-04	ND	mg/m3
4/22/1999	100-51-6	Benzyl alcohol	SVOC			1.87E-04		mg/m3
4/22/1999	100-52-7	Benzaldehyde	ALD/KET			2.35E-04		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	10061-01-5	c-1,3-Dichloropropene	GC/MS			1.89E-04	ND	mg/m3
4/22/1999	10061-02-6	t-1,3-Dichloropropene	GC/MS			1.63E-04	ND	mg/m3
4/22/1999	100-75-4	N-Nitrosopiperidine	SVOC			1.28E-06	ND	mg/m3
4/22/1999	101-55-3	4-Bromophenyl phenyl ether	SVOC			3.45E-06	ND	mg/m3
4/22/1999	1024-57-3	Heptachlor epoxide	PEST/PCB			4.21E-07	ND	mg/m3
4/22/1999	1031-07-8	Endosulfan Sulfate	PEST/PCB			1.82E-07	ND	mg/m3
4/22/1999	103-65-1	n-Propylbenzene	GC/MS			4.44E-04	ND	mg/m3
4/22/1999	104-51-8	n-Butylbenzene	GC/MS			1.89E-04	ND	mg/m3
4/22/1999	105-05-5	p-Diethylbenzene	GC/MS			2.60E-04	ND	mg/m3
4/22/1999	105-67-9	2,4-Dimethylphenol	SVOC			1.66E-05	ND	mg/m3
4/22/1999	10595-95-6	N-Nitrosomethylethylamine	SVOC			1.65E-05	ND	mg/m3
4/22/1999	106-42-3/108-38-	p-Xylene + m-Xylene	GC/MS			4.38E-03	B	mg/m3
4/22/1999	106-43-4	p-Chlorotoluene	GC/MS			2.32E-04	ND	mg/m3
4/22/1999	106-44-5/108-39-	4-Methylphenol/3-Methylphenol	SVOC			3.66E-06	ND	mg/m3
4/22/1999	106-46-7	1,4-Dichlorobenzene	SVOC			4.37E-04		mg/m3
4/22/1999	106-47-8	p-Chloroaniline	SVOC			7.99E-06	ND	mg/m3
4/22/1999	106-93-4	1,2-Dibromoethane	GC/MS			4.18E-04	ND	mg/m3
4/22/1999	106-97-8	n-Butane	GC/MS			3.20E-03		mg/m3
4/22/1999	106-99-0	1,3-Butadiene	GC/MS			3.01E-04	ND	mg/m3
4/22/1999	107-02-8	Acrolein	ALD/KET			1.18E-04		mg/m3
4/22/1999	107-06-2	1,2-Dichloroethane	GC/MS			4.51E-04	ND	mg/m3
4/22/1999	107-13-1	Acrylonitrile	GC/MS			3.19E-04	ND	mg/m3
4/22/1999	107-39-1	2,4,4-Trimethyl-1-Pentene	GC/MS			2.40E-04	ND	mg/m3
4/22/1999	107-40-4	2,4-4-Trimethyl-2-Pentene	GC/MS			1.54E-04	ND	mg/m3
4/22/1999	108-05-4	Vinyl Acetate	GC/MS			6.38E-05	ND	mg/m3
4/22/1999	108-08-7	2,4-Dimethylpentane	GC/MS			4.56E-04	ND	mg/m3
4/22/1999	108-10-1	Methylisobutylketone	GC/MS			1.76E-03	B	mg/m3
4/22/1999	108-60-1	bis(2-Chloroisopropyl)ether	SVOC			1.46E-06	ND	mg/m3
4/22/1999	108-67-8	1,3,5-Trimethylbenzene	GC/MS			3.30E-04	BJ	mg/m3
4/22/1999	108-87-2	Methylcyclohexane	GC/MS			1.97E-04	ND	mg/m3
4/22/1999	108-88-3	Toluene	GC/MS			2.34E-02	B	mg/m3
4/22/1999	108-90-7	Chlorobenzene	GC/MS			8.14E-05	ND	mg/m3
4/22/1999	108-95-2	Phenol	SVOC			8.91E-05		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	109-06-8	2-Picoline	SVOC			2.14E-05	ND	mg/m3
4/22/1999	109-66-0	n-Pentane	GC/MS			1.66E-03	B	mg/m3
4/22/1999	109-67-1	1-Pentene	GC/MS			3.32E-04	J	mg/m3
4/22/1999	110-54-3	n-Hexane	GC/MS			1.98E-03	B	mg/m3
4/22/1999	110-62-3	Valeraldehyde	ALD/KET			3.53E-04		mg/m3
4/22/1999	110-82-7	Cyclohexane	GC/MS			7.84E-04	B	mg/m3
4/22/1999	110-83-8	Cyclohexene	GC/MS			2.31E-04	ND	mg/m3
4/22/1999	110-86-1	Pyridine	SVOC			1.37E-05	ND	mg/m3
4/22/1999	11096-82-5	PCB-1260	PEST/PCB			1.24E-06	ND	mg/m3
4/22/1999	11097-69-1	PCB-1254	PEST/PCB			8.67E-07	ND	mg/m3
4/22/1999	11104-28-2	PCB-1221	PEST/PCB			1.45E-06	ND	mg/m3
4/22/1999	11141-16-5	PCB-1232	PEST/PCB			8.28E-06	ND	mg/m3
4/22/1999	111-44-4	bis(2-Chloroethyl)ether	SVOC			2.07E-06	ND	mg/m3
4/22/1999	111-65-9	n-Octane	GC/MS			4.34E-04	B	mg/m3
4/22/1999	111-66-0	1-Octene	GC/MS			3.96E-04	ND	mg/m3
4/22/1999	111-71-7	Heptanal	GC/MS			1.01E-03	ND	mg/m3
4/22/1999	111-84-2	n-Nonane	GC/MS			7.23E-04	BJ	mg/m3
4/22/1999	111-91-1	bis(2-Chloroethoxy)methane	SVOC			3.76E-06	ND	mg/m3
4/22/1999	1120-21-4	n-Undecane	GC/MS			7.02E-04		mg/m3
4/22/1999	115-07-1	Propylene	GC/MS			8.52E-03	B	mg/m3
4/22/1999	115-11-7/106-98-	Isobutene + 1-Butene	GC/MS			1.37E-03	B	mg/m3
4/22/1999	117-81-7	bis(2-Ethylhexyl)phthalate	SVOC			4.48E-05		mg/m3
4/22/1999	117-84-0	Di-n-octylphthalate	SVOC			3.76E-06	ND	mg/m3
4/22/1999	118-74-1	Hexachlorobenzene	SVOC			2.63E-06	ND	mg/m3
4/22/1999	119-93-7	3,3'-Dimethylbenzidine	SVOC			2.54E-05	ND	mg/m3
4/22/1999	120-12-7	Anthracene	SVOC			2.65E-06	ND	mg/m3
4/22/1999	120-58-1	Isosafrole	SVOC			2.00E-05	ND	mg/m3
4/22/1999	120-82-1	1,2,4-Trichlorobenzene	SVOC			1.52E-06	ND	mg/m3
4/22/1999	120-83-2	2,4-Dichlorophenol	SVOC			3.94E-06	ND	mg/m3
4/22/1999	121-14-2	2,4-Dinitrotoluene	SVOC			1.52E-05	ND	mg/m3
4/22/1999	122-09-8	Dimethylphenethylamine	SVOC			4.43E-04	ND	mg/m3
4/22/1999	122-39-4	Diphenylamine/N-NitrosoDPA	SVOC			4.77E-06	ND	mg/m3
4/22/1999	123-38-6	Propionaldehyde	ALD/KET			3.53E-04		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	123-72-8	n-Butyraldehyde	ALD/KET			9.86E-03		mg/m3
4/22/1999	123-73-9	Crotonaldehyde	ALD/KET			5.88E-05	ND	mg/m3
4/22/1999	123-91-1	1,4-Dioxane	GC/MS			4.61E-04	ND	mg/m3
4/22/1999	124-11-8	1-Nonene	GC/MS			4.66E-04	ND	mg/m3
4/22/1999	124-18-5	n-Decane	GC/MS			2.41E-03	B	mg/m3
4/22/1999	124-48-1	Dibromochloromethane	GC/MS			3.63E-04	ND	mg/m3
4/22/1999	12672-29-6	PCB-1248	PEST/PCB			1.56E-06	ND	mg/m3
4/22/1999	12674-11-2	PCB-1016	PEST/PCB			3.15E-06	ND	mg/m3
4/22/1999	126-99-8	Chloroprene	GC/MS			3.99E-04	ND	mg/m3
4/22/1999	127-18-4	Tetrachloroethylene	GC/MS			1.29E-03	B	mg/m3
4/22/1999	12789-03-6	gamma-Chlordane	PEST/PCB			9.07E-08	ND	mg/m3
4/22/1999	127-91-3	b-Pinene	GC/MS			5.95E-04	ND	mg/m3
4/22/1999	129-00-0	Pyrene	SVOC			1.22E-06	ND	mg/m3
4/22/1999	130-15-4	1,4-Naphthoquinone	SVOC			1.61E-05	ND	mg/m3
4/22/1999	131-11-3	Dimethylphthalate	SVOC			1.61E-06	ND	mg/m3
4/22/1999	132-64-9	Dibenzofuran	SVOC			1.15E-05		mg/m3
4/22/1999	134-32-7	1-Naphthylamine	SVOC			1.01E-05	ND	mg/m3
4/22/1999	141-32-2	Butyl Acrylate	GC/MS			1.06E-03	ND	mg/m3
4/22/1999	141-93-5	m-Diethylbenzene	GC/MS			8.90E-05	ND	mg/m3
4/22/1999	142-29-0	Cyclopentene	GC/MS			2.74E-04	ND	mg/m3
4/22/1999	142-82-5	n-Heptane	GC/MS			6.42E-04	B	mg/m3
4/22/1999	143-50-0	Kepone	SVOC			3.19E-05	ND	mg/m3
4/22/1999	156-59-2	c-1,2-Dichloroethylene	GC/MS			4.69E-04	ND	mg/m3
4/22/1999	156-60-5	t-1,2-Dichloroethylene	GC/MS			4.33E-04	ND	mg/m3
4/22/1999	1634-04-4	Methyl t-Butylether	GC/MS			1.92E-04	ND	mg/m3
4/22/1999	1746-01-6	2,3,7,8-TCDD	DIOXINS			1.01E-10		mg/m3
4/22/1999	1888-71-7	Hexachloropropene	SVOC			1.04E-05	ND	mg/m3
4/22/1999	191-24-2	Benzo(g,h,i)perylene	SVOC			2.16E-06	ND	mg/m3
4/22/1999	193-39-5	Indeno(1,2,3-cd)pyrene	SVOC			2.13E-06	ND	mg/m3
4/22/1999	19408-74-3	1,2,3,7,8,9-HxCDD	DIOXINS			5.49E-10		mg/m3
4/22/1999	205-99-2	Benzo(b)fluoranthene	SVOC			2.78E-06	ND	mg/m3
4/22/1999	206-44-0	Fluoranthene	SVOC			5.36E-06		mg/m3
4/22/1999	207-08-9	Benzo(k)fluoranthene	SVOC			2.06E-06	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	208-96-8	Acenaphthylene	SVOC			2.18E-06	ND	mg/m3
4/22/1999	218-01-9	Chrysene	SVOC			2.27E-06	ND	mg/m3
4/22/1999	2198-23-4	4-Nonene	GC/MS			3.86E-04	ND	mg/m3
4/22/1999	2303-16-4	Diallate	SVOC			9.89E-06	ND	mg/m3
4/22/1999	2385-85-5	Mirex	PEST/PCB			1.64E-07	ND	mg/m3
4/22/1999	23950-58-5	Pronamide	SVOC			3.35E-06	ND	mg/m3
4/22/1999	27476-50-2	Methylcyclopentene	GC/MS			2.68E-04	ND	mg/m3
4/22/1999	287-92-3	Cyclopentane	GC/MS			3.33E-04	ND	mg/m3
4/22/1999	30402-14-3	Total TCDF	DIOXINS			6.64E-08		mg/m3
4/22/1999	30402-15-4	Total PeCDF	DIOXINS			4.62E-08		mg/m3
4/22/1999	309-00-2	Aldrin	PEST/PCB			1.08E-07	ND	mg/m3
4/22/1999	319-84-6	alpha-BHC	PEST/PCB			8.23E-07	B	mg/m3
4/22/1999	319-85-7	beta-BHC	PEST/PCB			9.41E-08	ND	mg/m3
4/22/1999	319-86-8	delta-BHC	PEST/PCB			1.62E-07	ND	mg/m3
4/22/1999	3268-87-9	1,2,3,4,6,7,8,9-OCDD	DIOXINS			1.42E-08		mg/m3
4/22/1999	33213-65-9	Endosulfan II	PEST/PCB			2.51E-07	ND	mg/m3
4/22/1999	34465-46-8	Total HxCDD	DIOXINS			2.08E-08		mg/m3
4/22/1999	3522-94-9	2,2,5-Trimethylhexane	GC/MS			2.35E-04	ND	mg/m3
4/22/1999	35822-46-9	1,2,3,4,6,7,8-HpCDD	DIOXINS			6.93E-09		mg/m3
4/22/1999	36088-22-9	Total PeCDD	DIOXINS			1.42E-08		mg/m3
4/22/1999	37871-00-4	Total HpCDD	DIOXINS			1.30E-08		mg/m3
4/22/1999	38998-75-3	Total HpCDF	DIOXINS			3.18E-08		mg/m3
4/22/1999	39001-02-0	1,2,3,4,6,7,8,9-OCDF	DIOXINS			8.66E-09		mg/m3
4/22/1999	39227-28-6	1,2,3,4,7,8-HxCDD	DIOXINS			5.77E-10		mg/m3
4/22/1999	40321-76-4	1,2,3,7,8-PeCDD	DIOXINS			3.46E-10		mg/m3
4/22/1999	4050-45-7	t-2-Hexene	GC/MS			3.97E-04	ND	mg/m3
4/22/1999	41903-57-5	Total TCDD	DIOXINS			1.47E-08		mg/m3
4/22/1999	463-82-1	Neopentane	GC/MS			1.62E-04	ND	mg/m3
4/22/1999	465-73-6	Isodrin	PEST/PCB			1.09E-07	ND	mg/m3
4/22/1999	496-11-7	Indan	GC/MS			2.40E-04	ND	mg/m3
4/22/1999	50-00-0	Formaldehyde	ALD/KET			1.53E-03		mg/m3
4/22/1999	50-29-3	4,4'-DDT	PEST/PCB			1.95E-07	ND	mg/m3
4/22/1999	50-32-8	Benz(a)pyrene	SVOC			3.37E-06	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	510-15-6	Chlorobenzilate	SVOC			3.45E-06	ND	mg/m3
4/22/1999	5103-71-9	alpha-Chlordane	PEST/PCB			8.77E-08	ND	mg/m3
4/22/1999	51207-31-9	2,3,7,8-TCDF	DIOXINS			8.66E-10		mg/m3
4/22/1999	51-28-5	2,4-Dinitrophenol	SVOC			7.01E-05	ND	mg/m3
4/22/1999	526-73-8	1,2,3-Trimethylbenzene	GC/MS			7.04E-05	ND	mg/m3
4/22/1999	529-20-4	Tolualdehyde	ALD/KET			9.40E-04		mg/m3
4/22/1999	534-52-1	4,6-Dinitro-2-methylphenol	SVOC			1.07E-05	ND	mg/m3
4/22/1999	53469-21-9	PCB-1242	PEST/PCB			1.37E-06	ND	mg/m3
4/22/1999	53494-70-5	Endrin Ketone	PEST/PCB			9.95E-08	ND	mg/m3
4/22/1999	53-70-3	Dibenz(a,h)anthracene	SVOC			1.51E-06	ND	mg/m3
4/22/1999	538-93-2	Isobutylbenzene	GC/MS			1.77E-04	ND	mg/m3
4/22/1999	53-96-3	2-Acetylaminofluorene	SVOC			5.93E-06	ND	mg/m3
4/22/1999	540-84-1	2,2,4-Trimethylpentane	GC/MS			6.09E-05	ND	mg/m3
4/22/1999	541-73-1	1,3-Dichlorobenzene	SVOC			2.28E-06	ND	mg/m3
4/22/1999	55-18-5	N-Nitrosodiethylamine	SVOC			9.07E-06	ND	mg/m3
4/22/1999	55673-89-7	1,2,3,4,7,8,9-HpCDF	DIOXINS			2.89E-09		mg/m3
4/22/1999	55684-94-1	Total HxCDF	DIOXINS			4.33E-08		mg/m3
4/22/1999	56-23-5	Carbon Tetrachloride	GC/MS			5.74E-04	B	mg/m3
4/22/1999	563-45-1	3-Methyl-1-Butene	GC/MS			3.43E-04	ND	mg/m3
4/22/1999	564-02-3	2,2,3-Trimethylpentane	GC/MS			1.36E-04	ND	mg/m3
4/22/1999	56-49-5	3-Methylcholanthrene	SVOC			2.27E-05	ND	mg/m3
4/22/1999	56-55-3	Benz(a)anthracene	SVOC			2.83E-06	ND	mg/m3
4/22/1999	565-59-3	2,3-Dimethylpentane	GC/MS			7.08E-05	BJ	mg/m3
4/22/1999	56-57-5	4-Nitroquinoline-1-oxide	SVOC			8.14E-05	ND	mg/m3
4/22/1999	565-75-3	2,3,4-Trimethylpentane	GC/MS			2.87E-04	ND	mg/m3
4/22/1999	57117-31-4	2,3,4,7,8-PeCDF	DIOXINS			3.18E-09		mg/m3
4/22/1999	57117-41-6	1,2,3,7,8-PeCDF	DIOXINS			1.47E-09		mg/m3
4/22/1999	57117-44-9	1,2,3,6,7,8-HxCDF	DIOXINS			3.18E-09		mg/m3
4/22/1999	57653-85-7	1,2,3,6,7,8-HxCDD	DIOXINS			8.66E-10		mg/m3
4/22/1999	57-97-6	7,12-Dimethylbenz(a)anthracene	SVOC			7.09E-06	ND	mg/m3
4/22/1999	58-89-9	gamma-BHC	PEST/PCB			1.04E-07	ND	mg/m3
4/22/1999	58-90-2	2,3,4,6-Tetrachlorophenol	SVOC			3.61E-06	ND	mg/m3
4/22/1999	589-34-4	3-Methylhexane	GC/MS			6.63E-04	B	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	589-81-1	3-Methylheptane	GC/MS			3.87E-04	ND	mg/m3
4/22/1999	590-18-1	c-2-Butene	GC/MS			2.45E-04	ND	mg/m3
4/22/1999	590-86-3	Isovaleraldehyde	ALD/KET			5.88E-05	ND	mg/m3
4/22/1999	591-49-1	1-Methylcyclohexene	GC/MS			2.30E-04	ND	mg/m3
4/22/1999	591-76-4	Isoheptane	GC/MS			7.20E-04	B	mg/m3
4/22/1999	592-13-2	2,5-Dimethylhexane	GC/MS			2.56E-04	ND	mg/m3
4/22/1999	592-27-8	2-Methylheptane	GC/MS			1.35E-04	ND	mg/m3
4/22/1999	592-41-6	1-Hexene	GC/MS			2.55E-04	J	mg/m3
4/22/1999	592-76-7	1-Heptene	GC/MS			1.95E-04	ND	mg/m3
4/22/1999	593-60-2	Vinyl Bromide	GC/MS			2.71E-04	ND	mg/m3
4/22/1999	59-50-7	4-Chloro-3-methylphenol	SVOC			3.45E-06	ND	mg/m3
4/22/1999	59-89-2	N-Nitrosomorpholine	SVOC			1.71E-06	ND	mg/m3
4/22/1999	60-11-7	p-Dimethylaminoazobenzene	SVOC			4.07E-06	ND	mg/m3
4/22/1999	60-29-7	Diethyl Ether	GC/MS			3.77E-04	ND	mg/m3
4/22/1999	60-57-1	Dieldrin	PEST/PCB			2.08E-07	ND	mg/m3
4/22/1999	606-20-2	2,6-Dinitrotoluene	SVOC			1.67E-05	ND	mg/m3
4/22/1999	60851-34-5	2,3,4,6,7,8-HxCDF	DIOXINS			5.49E-09		mg/m3
4/22/1999	608-93-5	Pentachlorobenzene	SVOC			2.46E-06	ND	mg/m3
4/22/1999	611-14-3	o-Ethyltoluene	GC/MS			4.57E-04	ND	mg/m3
4/22/1999	620-14-4	m-Ethyltoluene	GC/MS			6.28E-04	BJ	mg/m3
4/22/1999	621-64-7	N-Nitroso-di-n-propylamine	SVOC			3.63E-06	ND	mg/m3
4/22/1999	622-96-8	p-Ethyltoluene	GC/MS			3.47E-04	BJ	mg/m3
4/22/1999	62-44-2	Phenacetin	SVOC			5.98E-06	ND	mg/m3
4/22/1999	624-64-6	t-2-Butene	GC/MS			1.77E-04	ND	mg/m3
4/22/1999	62-50-0	Ethyl methanesulfonate	SVOC			2.58E-06	ND	mg/m3
4/22/1999	625-27-4	2-Methyl-2-Pentene	GC/MS			2.34E-04	ND	mg/m3
4/22/1999	62-53-3	Aniline	SVOC			1.12E-05	ND	mg/m3
4/22/1999	627-20-3	c-2-Pentene	GC/MS			3.26E-04	ND	mg/m3
4/22/1999	62-75-9	N-Nitrosodimethylamine	SVOC			1.58E-05	ND	mg/m3
4/22/1999	64-17-5	Ethanol	GC/MS			6.87E-02	F	mg/m3
4/22/1999	646-04-8	t-2-Pentene	GC/MS			3.36E-04	ND	mg/m3
4/22/1999	65-85-0	Benzoic acid	SVOC			4.79E-04	B	mg/m3
4/22/1999	66-25-1	Hexanal	ALD/KET			4.70E-04		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	66-27-3	Methyl methanesulfonate	SVOC			3.27E-06	ND	mg/m3
4/22/1999	67562-39-4	1,2,3,4,6,7,8-HpCDF	DIOXINS			1.85E-08		mg/m3
4/22/1999	67-63-0	2-Propanol	GC/MS			5.59E-03		mg/m3
4/22/1999	67-64-1	Acetone	ALD/KET			9.87E-03		mg/m3
4/22/1999	67-66-3	Chloroform	GC/MS			9.41E-04	BJ	mg/m3
4/22/1999	67-72-1	Hexachloroethane	SVOC			1.17E-06	ND	mg/m3
4/22/1999	691-37-2	4-Methyl-1-Pentene	GC/MS			4.07E-04	ND	mg/m3
4/22/1999	691-38-3	c-4-Methyl-2-Pentene	GC/MS			4.81E-04	ND	mg/m3
4/22/1999	7005-72-3	4-Chlorophenylphenyl ether	SVOC			2.40E-06	ND	mg/m3
4/22/1999	70648-26-9	1,2,3,4,7,8-HxCDF	DIOXINS			4.62E-09		mg/m3
4/22/1999	71-23-8	1-Propanol	GC/MS			1.44E-03	ND	mg/m3
4/22/1999	71-36-3	1-Butanol	GC/MS			1.11E-02		mg/m3
4/22/1999	71-43-2	Benzene	GC/MS			3.25E-03	B	mg/m3
4/22/1999	71-55-6	1,1,1-Trichloroethane	GC/MS			5.08E-04	BJ	mg/m3
4/22/1999	72-20-8	Endrin	PEST/PCB			4.04E-07	ND	mg/m3
4/22/1999	72-43-5	Methoxychlor	PEST/PCB			1.14E-06	ND	mg/m3
4/22/1999	72-54-8	4,4'-DDD	PEST/PCB			1.98E-07	ND	mg/m3
4/22/1999	72-55-9	4,4'-DDE	PEST/PCB			1.77E-07	ND	mg/m3
4/22/1999	72918-21-9	1,2,3,7,8,9-HxCDF	DIOXINS			1.67E-09		mg/m3
4/22/1999	73513-42-5	Isohexane	GC/MS			8.80E-04	B	mg/m3
4/22/1999	7421-93-4	Endrin Aldehyde	PEST/PCB			7.64E-07	B	mg/m3
4/22/1999	7439-92-1	Lead	PM10			1.11E-03		mg/m3
4/22/1999	7439-97-6	Mercury	MERCURY			2.57E-05		mg/m3
4/22/1999	7440-02-0	Nickel	PM10			1.85E-05		mg/m3
4/22/1999	7440-22-4	Silver	PM10			5.58E-06		mg/m3
4/22/1999	7440-28-0	Thallium	PM10			1.41E-06	ND	mg/m3
4/22/1999	7440-36-0	Antimony	PM10			7.66E-05		mg/m3
4/22/1999	7440-38-2	Arsenic	PM10			3.25E-06	B	mg/m3
4/22/1999	7440-41-7	Beryllium	PM10			1.41E-07	B	mg/m3
4/22/1999	7440-43-9F	Cadmium	PM10			3.77E-05		mg/m3
4/22/1999	7440-47-3	Chromium	PM10			1.22E-05		mg/m3
4/22/1999	7440-50-8	Copper	PM10			5.43E-04		mg/m3
4/22/1999	7440-66-6	Zinc	PM10			1.70E-03		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	74-83-9	Bromomethane	GC/MS			3.64E-04	ND	mg/m3
4/22/1999	74-87-3	Chloromethane	GC/MS			1.51E-03	B	mg/m3
4/22/1999	74-97-5	Bromochloromethane	GC/MS			1.32E-04	ND	mg/m3
4/22/1999	74-98-6	Propane	GC/MS			8.89E-03		mg/m3
4/22/1999	75-00-3	Chloroethane	GC/MS			3.28E-04	ND	mg/m3
4/22/1999	75-01-4	Vinyl Chloride	GC/MS			2.42E-04	ND	mg/m3
4/22/1999	75-05-8	Acetonitrile	GC/MS			2.77E-04	ND	mg/m3
4/22/1999	75-07-0	Acetaldehyde	ALD/KET			1.88E-03		mg/m3
4/22/1999	75-09-2	Methylene Chloride	GC/MS			2.49E-03	B	mg/m3
4/22/1999	75-25-2	Bromoform	GC/MS			4.81E-04	ND	mg/m3
4/22/1999	75-27-4	Bromodichloromethane	GC/MS			1.37E-04	ND	mg/m3
4/22/1999	75-28-5	Isobutane	GC/MS			1.87E-03		mg/m3
4/22/1999	75-34-3	1,1-Dichloroethane	GC/MS			3.64E-04	ND	mg/m3
4/22/1999	75-35-4	1,1-Dichloroethylene	GC/MS			4.31E-04	ND	mg/m3
4/22/1999	75-43-4	Dichlorofluoromethane	GC/MS			9.62E-04	ND	mg/m3
4/22/1999	75-45-6	Chlorodifluoromethane	GC/MS			1.42E-04	ND	mg/m3
4/22/1999	75-69-4	Trichlorofluoromethane	GC/MS			4.69E-03	B	mg/m3
4/22/1999	75-71-8	Dichlorodifluoromethane	GC/MS			2.65E-03		mg/m3
4/22/1999	75-83-2	Neohexane	GC/MS			3.25E-04	ND	mg/m3
4/22/1999	76-01-7	Pentachloroethane	SVOC			2.94E-06	ND	mg/m3
4/22/1999	760-21-4	2-Ethyl-1-Butene	GC/MS			1.71E-04	ND	mg/m3
4/22/1999	76-13-1	Freon 113	GC/MS			5.02E-04	BJ	mg/m3
4/22/1999	76-14-2	Freon 114	GC/MS			6.63E-04	ND	mg/m3
4/22/1999	763-29-1	2-Methyl-1-Pentene	GC/MS			6.12E-04	ND	mg/m3
4/22/1999	7642-04-8	c-2-Octene	GC/MS			3.43E-04	ND	mg/m3
4/22/1999	7642-09-3	c-3-Hexene	GC/MS			1.30E-04	ND	mg/m3
4/22/1999	76-44-8	Heptachlor	PEST/PCB			8.67E-07	BP	mg/m3
4/22/1999	7647-01-0	Hydrochloric Acid	ACIDGAS			9.92E-03		mg/m3
4/22/1999	7664-39-3	Hydrofluoric Acid	ACIDGAS			2.70E-04		mg/m3
4/22/1999	7664-93-9	Sulfuric Acid	ACIDGAS			1.93E-02		mg/m3
4/22/1999	7688-21-3	c-2-Hexene	GC/MS			4.09E-04	ND	mg/m3
4/22/1999	77-47-4	Hexachlorocyclopentadiene	SVOC			6.73E-05	ND	mg/m3
4/22/1999	7782-49-2	Selenium	PM10			3.78E-06	B	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	78-59-1	Isophorone	SVOC			3.19E-05		mg/m3
4/22/1999	78-78-4	Isopentane	GC/MS			3.27E-03	F	mg/m3
4/22/1999	78-79-5	Isoprene	GC/MS			2.93E-04	ND	mg/m3
4/22/1999	78-87-5	1,2-Dichloropropane	GC/MS			8.53E-04	B	mg/m3
4/22/1999	78-93-3	2-Butanone	ALD/KET			4.82E-03		mg/m3
4/22/1999	79-00-5	1,1,2-Trichloroethane	GC/MS			1.33E-04	ND	mg/m3
4/22/1999	79-01-6	Trichloroethylene	GC/MS			8.90E-03	B	mg/m3
4/22/1999	79-29-8	2,3-Dimethylbutane	GC/MS			3.84E-04	ND	mg/m3
4/22/1999	79-34-5	1,1,2,2-Tetrachloroethane	GC/MS			3.77E-04	ND	mg/m3
4/22/1999	8001-35-2	Toxaphene	PEST/PCB			3.52E-06	ND	mg/m3
4/22/1999	80-56-8	a-Pinene	GC/MS			4.28E-04	ND	mg/m3
4/22/1999	811-97-2	Halocarbon 134A	GC/MS			2.94E-04	ND	mg/m3
4/22/1999	821-95-4	1-Undecene	GC/MS			1.80E-04	ND	mg/m3
4/22/1999	82-68-8	Pentachloronitrobenzene	SVOC			1.88E-05	ND	mg/m3
4/22/1999	83-32-9	Acenaphthene	SVOC			1.83E-06	ND	mg/m3
4/22/1999	84-66-2	Diethylphthalate	SVOC			5.98E-06		mg/m3
4/22/1999	84-74-2	Di-n-butylphthalate	SVOC			4.07E-05		mg/m3
4/22/1999	85-01-8	Phenanthrene	SVOC			1.69E-05		mg/m3
4/22/1999	85-68-7	Butylbenzylphthalate	SVOC			2.73E-06	ND	mg/m3
4/22/1999	86-73-7	Fluorene	SVOC			7.83E-06		mg/m3
4/22/1999	86-74-8	Carbazole	SVOC			5.39E-06	ND	mg/m3
4/22/1999	872-05-9	1-Decene	GC/MS			4.24E-03	ND	mg/m3
4/22/1999	87-65-0	2,6-Dichlorophenol	SVOC			4.59E-06	ND	mg/m3
4/22/1999	87-68-3	Hexachloro-1,3-Butadiene	SVOC			1.04E-06	ND	mg/m3
4/22/1999	87-86-5	Pentachlorophenol	SVOC			1.64E-05	ND	mg/m3
4/22/1999	88-06-2	2,4,6-Trichlorophenol	SVOC			2.23E-06	ND	mg/m3
4/22/1999	88-74-4	2-Nitroaniline	SVOC			2.46E-06	ND	mg/m3
4/22/1999	88-75-5	2-Nitrophenol	SVOC			2.78E-06	ND	mg/m3
4/22/1999	91-20-3	Naphthalene	SVOC			2.40E-04		mg/m3
4/22/1999	91-57-6	2-Methylnaphthalene	SVOC			5.41E-05		mg/m3
4/22/1999	91-58-7	2-Chloronaphthalene	SVOC			3.61E-06	ND	mg/m3
4/22/1999	91-59-8	2-Naphthylamine	SVOC			2.56E-05	ND	mg/m3
4/22/1999	91-80-5	Methapyrilene	SVOC			2.36E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
4/22/1999	91-94-1	3,3'-Dichlorobenzidine	SVOC			5.62E-06	ND	mg/m3
4/22/1999	922-61-2	c-3-Methyl-2-Pentene	GC/MS			3.71E-04	ND	mg/m3
4/22/1999	924-16-3	N-Nitroso-di-n-butylamine	SVOC			3.04E-06	ND	mg/m3
4/22/1999	92-67-1	4-Aminobiphenyl	SVOC			1.09E-05	ND	mg/m3
4/22/1999	92-87-5	Benzidine	SVOC			1.73E-04	ND	mg/m3
4/22/1999	930-55-2	N-Nitrosopyrrolidine	SVOC			8.50E-06	ND	mg/m3
4/22/1999	94-59-7	Safrole	SVOC			1.20E-05	ND	mg/m3
4/22/1999	95-13-6	Indene	GC/MS			2.19E-04	ND	mg/m3
4/22/1999	95-47-6	o-Xylene	GC/MS			1.60E-03	B	mg/m3
4/22/1999	95-48-7	2-Methylphenol	SVOC			3.68E-06	ND	mg/m3
4/22/1999	95-49-8	o-Chlorotoluene	GC/MS			4.47E-04	ND	mg/m3
4/22/1999	95-50-1	1,2-Dichlorobenzene	SVOC			1.37E-06	ND	mg/m3
4/22/1999	95-53-4	o-Toluidine	SVOC			6.91E-06	ND	mg/m3
4/22/1999	95-57-8	2-Chlorophenol	SVOC			2.55E-06	ND	mg/m3
4/22/1999	95-63-6	1,2,4-Trimethylbenzene	GC/MS			1.07E-03	B	mg/m3
4/22/1999	95-94-3	1,2,4,5-Tetrachlorobenzene	SVOC			3.56E-06	ND	mg/m3
4/22/1999	95-95-4	2,4,5-Trichlorophenol	SVOC			3.09E-06	ND	mg/m3
4/22/1999	959-98-8	Endosulfan I	PEST/PCB			3.26E-07	B	mg/m3
4/22/1999	96-14-0	3-Methylpentane	GC/MS			5.21E-04	BJ	mg/m3
4/22/1999	96-37-7	Methylcyclopentane	GC/MS			4.57E-04	J	mg/m3
4/22/1999	98-06-6	t-Butylbenzene	GC/MS			2.82E-03	ND	mg/m3
4/22/1999	98-82-8	Cumene	GC/MS			5.64E-05	ND	mg/m3
4/22/1999	98-86-2	Acetophenone	SVOC			2.31E-06	ND	mg/m3
4/22/1999	98-95-3	Nitrobenzene	SVOC			2.76E-06	ND	mg/m3
4/22/1999	99-09-2	3-Nitroaniline	SVOC			1.64E-05	ND	mg/m3
4/22/1999	99-35-4	sym-Trinitrobenzene	SVOC			1.25E-05	ND	mg/m3
4/22/1999	99-55-8	5-Nitro-o-toluidine	SVOC			1.80E-05	ND	mg/m3
4/22/1999	99-65-0	1,3-Dinitrobenzene	SVOC			1.78E-05	ND	mg/m3
4/22/1999	99-87-6	p-Isopropyltoluene	GC/MS			1.69E-04	ND	mg/m3
4/22/1999	CPAH-TEQ	Total Carcinogenic PAHS (BaP TEQs)	SVOC			7.97E-07	ND	mg/m3
4/22/1999	DIOXIN-TEQ	Total Dioxin/Furans (2,3,7,8-TCDD TE	DIOXINS			4.18E-09		mg/m3
4/22/1999	PM10	PM10	PM10			1.11E-01		mg/m3
6/15/1999	100-41-4	Ethylbenzene	GC/MS			6.03E-03	B	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
6/15/1999	100-42-5	Styrene	GC/MS			1.78E-03	B	mg/m3
6/15/1999	100-44-7	Benzyl Chloride	GC/MS			1.00E-04	ND	mg/m3
6/15/1999	100-52-7	Benzaldehyde	ALD/KET			3.10E-04		mg/m3
6/15/1999	10061-01-5	c-1,3-Dichloropropene	GC/MS			7.52E-05	ND	mg/m3
6/15/1999	10061-02-6	t-1,3-Dichloropropene	GC/MS			6.46E-05	ND	mg/m3
6/15/1999	103-65-1	n-Propylbenzene	GC/MS			4.27E-04	B	mg/m3
6/15/1999	104-51-8	n-Butylbenzene	GC/MS			7.51E-05	ND	mg/m3
6/15/1999	105-05-5	p-Diethylbenzene	GC/MS			1.03E-04	ND	mg/m3
6/15/1999	106-42-3/108-38-	p-Xylene + m-Xylene	GC/MS			5.77E-03	B	mg/m3
6/15/1999	106-43-4	p-Chlorotoluene	GC/MS			9.23E-05	ND	mg/m3
6/15/1999	106-46-7	1,4-Dichlorobenzene	SVOC			1.52E-03	B	mg/m3
6/15/1999	106-93-4	1,2-Dibromoethane	GC/MS			1.66E-04	ND	mg/m3
6/15/1999	106-97-8	n-Butane	GC/MS			5.93E-03	B	mg/m3
6/15/1999	106-99-0	1,3-Butadiene	GC/MS			3.84E-04	B	mg/m3
6/15/1999	107-02-8	Acrolein	ALD/KET			1.86E-03		mg/m3
6/15/1999	107-06-2	1,2-Dichloroethane	GC/MS			1.79E-04	ND	mg/m3
6/15/1999	107-13-1	Acrylonitrile	GC/MS			1.27E-04	ND	mg/m3
6/15/1999	107-39-1	2,4,4-Trimethyl-1-Pentene	GC/MS			4.21E-04		mg/m3
6/15/1999	107-40-4	2,4-4-Trimethyl-2-Pentene	GC/MS			6.12E-05	ND	mg/m3
6/15/1999	108-05-4	Vinyl Acetate	GC/MS			9.28E-03		mg/m3
6/15/1999	108-08-7	2,4-Dimethylpentane	GC/MS			1.81E-04	ND	mg/m3
6/15/1999	108-10-1	Methylisobutylketone	GC/MS			3.06E-03	B	mg/m3
6/15/1999	108-67-8	1,3,5-Trimethylbenzene	GC/MS			6.67E-04	B	mg/m3
6/15/1999	108-87-2	Methylcyclohexane	GC/MS			2.50E-04	B	mg/m3
6/15/1999	108-88-3	Toluene	GC/MS			2.66E-02	B	mg/m3
6/15/1999	108-90-7	Chlorobenzene	GC/MS			1.23E-04	B	mg/m3
6/15/1999	109-66-0	n-Pentane	GC/MS			1.81E-03	B	mg/m3
6/15/1999	109-67-1	1-Pentene	GC/MS			6.38E-04	B	mg/m3
6/15/1999	110-54-3	n-Hexane	GC/MS			1.26E-02	B	mg/m3
6/15/1999	110-62-3	Valeraldehyde	ALD/KET			2.06E-04		mg/m3
6/15/1999	110-82-7	Cyclohexane	GC/MS			1.11E-03	B	mg/m3
6/15/1999	110-83-8	Cyclohexene	GC/MS			1.84E-04		mg/m3
6/15/1999	111-65-9	n-Octane	GC/MS			6.99E-04	B	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
6/15/1999	111-66-0	1-Octene	GC/MS			3.39E-04		mg/m3
6/15/1999	111-71-7	Heptanal	GC/MS			9.74E-03		mg/m3
6/15/1999	111-84-2	n-Nonane	GC/MS			1.38E-03	B	mg/m3
6/15/1999	1120-21-4	n-Undecane	GC/MS			1.21E-03		mg/m3
6/15/1999	115-07-1	Propylene	GC/MS			2.42E-03	B	mg/m3
6/15/1999	115-11-7/106-98-	Isobutene + 1-Butene	GC/MS			2.34E-03	B	mg/m3
6/15/1999	120-82-1	1,2,4-Trichlorobenzene	SVOC			3.30E-04	ND	mg/m3
6/15/1999	123-38-6	Propionaldehyde	ALD/KET			5.16E-04		mg/m3
6/15/1999	123-72-8	n-Butyraldehyde	ALD/KET			1.45E-03		mg/m3
6/15/1999	123-73-9	Crotonaldehyde	ALD/KET			5.16E-05	ND	mg/m3
6/15/1999	123-91-1	1,4-Dioxane	GC/MS			1.65E-03	B	mg/m3
6/15/1999	124-11-8	1-Nonene	GC/MS			4.10E-04		mg/m3
6/15/1999	124-18-5	n-Decane	GC/MS			3.39E-03	B	mg/m3
6/15/1999	124-48-1	Dibromochloromethane	GC/MS			1.44E-04	ND	mg/m3
6/15/1999	126-99-8	Chloroprene	GC/MS			1.59E-04	ND	mg/m3
6/15/1999	127-18-4	Tetrachloroethylene	GC/MS			8.80E-04	B	mg/m3
6/15/1999	127-91-3	b-Pinene	GC/MS			2.36E-04	ND	mg/m3
6/15/1999	141-32-2	Butyl Acrylate	GC/MS			4.19E-04	ND	mg/m3
6/15/1999	141-93-5	m-Diethylbenzene	GC/MS			3.53E-05	ND	mg/m3
6/15/1999	142-29-0	Cyclopentene	GC/MS			1.09E-04	ND	mg/m3
6/15/1999	142-82-5	n-Heptane	GC/MS			4.42E-03	B	mg/m3
6/15/1999	156-59-2	c-1,2-Dichloroethylene	GC/MS			1.86E-04	ND	mg/m3
6/15/1999	156-60-5	t-1,2-Dichloroethylene	GC/MS			1.72E-04	ND	mg/m3
6/15/1999	1634-04-4	Methyl t-Butylether	GC/MS			9.85E-05	J	mg/m3
6/15/1999	1746-01-6	2,3,7,8-TCDD	DIOXINS			2.75E-10		mg/m3
6/15/1999	19408-74-3	1,2,3,7,8,9-HxCDD	DIOXINS			1.40E-09		mg/m3
6/15/1999	2198-23-4	4-Nonene	GC/MS			1.54E-04	ND	mg/m3
6/15/1999	27476-50-2	Methylcyclopentene	GC/MS			1.06E-04	ND	mg/m3
6/15/1999	287-92-3	Cyclopentane	GC/MS			1.98E-04	BJ	mg/m3
6/15/1999	30402-14-3	Total TCDF	DIOXINS			1.82E-07	u	mg/m3
6/15/1999	30402-15-4	Total PeCDF	DIOXINS			1.61E-07	u	mg/m3
6/15/1999	3268-87-9	1,2,3,4,6,7,8,9-OCDD	DIOXINS			4.18E-08		mg/m3
6/15/1999	34465-46-8	Total HxCDD	DIOXINS			5.38E-08		mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
6/15/1999	3522-94-9	2,2,5-Trimethylhexane	GC/MS			9.35E-05	ND	mg/m3
6/15/1999	35822-46-9	1,2,3,4,6,7,8-HpCDD	DIOXINS			2.09E-08		mg/m3
6/15/1999	36088-22-9	Total PeCDD	DIOXINS			5.08E-08		mg/m3
6/15/1999	37871-00-4	Total HpCDD	DIOXINS			4.18E-08		mg/m3
6/15/1999	38998-75-3	Total HpCDF	DIOXINS			9.56E-08	u	mg/m3
6/15/1999	39001-02-0	1,2,3,4,6,7,8,9-OCDF	DIOXINS			3.88E-08		mg/m3
6/15/1999	39227-28-6	1,2,3,4,7,8-HxCDD	DIOXINS			1.58E-09		mg/m3
6/15/1999	40321-76-4	1,2,3,7,8-PeCDD	DIOXINS			1.23E-09		mg/m3
6/15/1999	4050-45-7	t-2-Hexene	GC/MS			7.77E-05	BJ	mg/m3
6/15/1999	41903-57-5	Total TCDD	DIOXINS			4.18E-08		mg/m3
6/15/1999	463-82-1	Neopentane	GC/MS			6.46E-05	ND	mg/m3
6/15/1999	496-11-7	Indan	GC/MS			1.29E-04	J	mg/m3
6/15/1999	50-00-0	Formaldehyde	ALD/KET			1.55E-03		mg/m3
6/15/1999	51207-31-9	2,3,7,8-TCDF	DIOXINS			2.72E-09		mg/m3
6/15/1999	526-73-8	1,2,3-Trimethylbenzene	GC/MS			4.57E-04	B	mg/m3
6/15/1999	529-20-4	Tolualdehyde	ALD/KET			7.22E-04		mg/m3
6/15/1999	538-93-2	Isobutylbenzene	GC/MS			7.01E-05	ND	mg/m3
6/15/1999	540-84-1	2,2,4-Trimethylpentane	GC/MS			2.97E-04	BF	mg/m3
6/15/1999	541-73-1	1,3-Dichlorobenzene	SVOC			1.44E-04	ND	mg/m3
6/15/1999	55673-89-7	1,2,3,4,7,8,9-HpCDF	DIOXINS			8.66E-09		mg/m3
6/15/1999	55684-94-1	Total HxCDF	DIOXINS			1.05E-07	u	mg/m3
6/15/1999	56-23-5	Carbon Tetrachloride	GC/MS			4.82E-04	B	mg/m3
6/15/1999	563-45-1	3-Methyl-1-Butene	GC/MS			1.18E-04	J	mg/m3
6/15/1999	564-02-3	2,2,3-Trimethylpentane	GC/MS			1.28E-04		mg/m3
6/15/1999	565-59-3	2,3-Dimethylpentane	GC/MS			1.88E-04	B	mg/m3
6/15/1999	565-75-3	2,3,4-Trimethylpentane	GC/MS			8.48E-04		mg/m3
6/15/1999	57117-31-4	2,3,4,7,8-PeCDF	DIOXINS			1.02E-08		mg/m3
6/15/1999	57117-41-6	1,2,3,7,8-PeCDF	DIOXINS			4.78E-09		mg/m3
6/15/1999	57117-44-9	1,2,3,6,7,8-HxCDF	DIOXINS			9.86E-09		mg/m3
6/15/1999	57653-85-7	1,2,3,6,7,8-HxCDD	DIOXINS			2.84E-09		mg/m3
6/15/1999	589-34-4	3-Methylhexane	GC/MS			7.20E-04	B	mg/m3
6/15/1999	589-81-1	3-Methylheptane	GC/MS			1.09E-04	BJ	mg/m3
6/15/1999	590-18-1	c-2-Butene	GC/MS			3.32E-04	B	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
6/15/1999	590-86-3	Isovaleraldehyde	ALD/KET			5.16E-05	ND	mg/m3
6/15/1999	591-49-1	1-Methylcyclohexene	GC/MS			9.15E-05	ND	mg/m3
6/15/1999	591-76-4	Isoheptane	GC/MS			3.27E-05	ND	mg/m3
6/15/1999	592-13-2	2,5-Dimethylhexane	GC/MS			2.40E-04		mg/m3
6/15/1999	592-27-8	2-Methylheptane	GC/MS			5.36E-05	ND	mg/m3
6/15/1999	592-41-6	1-Hexene	GC/MS			7.60E-04	B	mg/m3
6/15/1999	592-76-7	1-Heptene	GC/MS			5.69E-04		mg/m3
6/15/1999	593-60-2	Vinyl Bromide	GC/MS			1.08E-04	ND	mg/m3
6/15/1999	60-29-7	Diethyl Ether	GC/MS			1.49E-04	ND	mg/m3
6/15/1999	60851-34-5	2,3,4,6,7,8-HxCDF	DIOXINS			1.40E-08		mg/m3
6/15/1999	611-14-3	o-Ethyltoluene	GC/MS			5.69E-04	B	mg/m3
6/15/1999	620-14-4	m-Ethyltoluene	GC/MS			1.19E-03	B	mg/m3
6/15/1999	622-96-8	p-Ethyltoluene	GC/MS			6.28E-04	B	mg/m3
6/15/1999	624-64-6	t-2-Butene	GC/MS			3.66E-04	B	mg/m3
6/15/1999	625-27-4	2-Methyl-2-Pentene	GC/MS			1.16E-04	J	mg/m3
6/15/1999	627-20-3	c-2-Pentene	GC/MS			1.35E-04	BJ	mg/m3
6/15/1999	64-17-5	Ethanol	GC/MS			5.98E-02		mg/m3
6/15/1999	646-04-8	t-2-Pentene	GC/MS			2.30E-04	J	mg/m3
6/15/1999	66-25-1	Hexanal	ALD/KET			3.10E-04		mg/m3
6/15/1999	67562-39-4	1,2,3,4,6,7,8-HpCDF	DIOXINS			5.98E-08	u	mg/m3
6/15/1999	67-63-0	2-Propanol	GC/MS			1.53E-02	B	mg/m3
6/15/1999	67-64-1	Acetone	ALD/KET			4.85E-03		mg/m3
6/15/1999	67-66-3	Chloroform	GC/MS			3.44E-04	BJ	mg/m3
6/15/1999	691-37-2	4-Methyl-1-Pentene	GC/MS			1.61E-04	ND	mg/m3
6/15/1999	691-38-3	c-4-Methyl-2-Pentene	GC/MS			1.91E-04	ND	mg/m3
6/15/1999	70648-26-9	1,2,3,4,7,8-HxCDF	DIOXINS			9.86E-09		mg/m3
6/15/1999	71-23-8	1-Propanol	GC/MS			5.91E-03		mg/m3
6/15/1999	71-36-3	1-Butanol	GC/MS			4.27E-02	B	mg/m3
6/15/1999	71-43-2	Benzene	GC/MS			2.60E-03	B	mg/m3
6/15/1999	71-55-6	1,1,1-Trichloroethane	GC/MS			4.44E-04	B	mg/m3
6/15/1999	72918-21-9	1,2,3,7,8,9-HxCDF	DIOXINS			4.78E-09		mg/m3
6/15/1999	73513-42-5	Isohexane	GC/MS			3.62E-03	BF	mg/m3
6/15/1999	7439-92-1	Lead	PM10			4.27E-03	B	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
6/15/1999	7439-97-6	Mercury	MERCURY			1.56E-05		mg/m3
6/15/1999	7440-02-0	Nickel	PM10			1.46E-05		mg/m3
6/15/1999	7440-22-4	Silver	PM10			2.21E-05	B	mg/m3
6/15/1999	7440-28-0	Thallium	PM10			1.39E-06	ND	mg/m3
6/15/1999	7440-36-0	Antimony	PM10			1.19E-04	B	mg/m3
6/15/1999	7440-38-2	Arsenic	PM10			3.74E-06		mg/m3
6/15/1999	7440-41-7	Beryllium	PM10			2.93E-08	BJ	mg/m3
6/15/1999	7440-43-9F	Cadmium	PM10			4.63E-05	B	mg/m3
6/15/1999	7440-47-3	Chromium	PM10			1.76E-05		mg/m3
6/15/1999	7440-50-8	Copper	PM10			1.23E-03	B	mg/m3
6/15/1999	7440-66-6	Zinc	PM10			2.94E-03	B	mg/m3
6/15/1999	74-83-9	Bromomethane	GC/MS			1.54E-04	BJ	mg/m3
6/15/1999	74-87-3	Chloromethane	GC/MS			2.29E-03		mg/m3
6/15/1999	74-97-5	Bromochloromethane	GC/MS			5.26E-05	ND	mg/m3
6/15/1999	74-98-6	Propane	GC/MS			9.72E-03		mg/m3
6/15/1999	75-00-3	Chloroethane	GC/MS			2.90E-04		mg/m3
6/15/1999	75-01-4	Vinyl Chloride	GC/MS			1.31E-04	BJ	mg/m3
6/15/1999	75-05-8	Acetonitrile	GC/MS			1.48E-03		mg/m3
6/15/1999	75-07-0	Acetaldehyde	ALD/KET			2.58E-03		mg/m3
6/15/1999	75-09-2	Methylene Chloride	GC/MS			3.01E-03	B	mg/m3
6/15/1999	75-25-2	Bromoform	GC/MS			1.91E-04	ND	mg/m3
6/15/1999	75-27-4	Bromodichloromethane	GC/MS			5.45E-05	ND	mg/m3
6/15/1999	75-28-5	Isobutane	GC/MS			3.04E-03	B	mg/m3
6/15/1999	75-34-3	1,1-Dichloroethane	GC/MS			1.44E-04	ND	mg/m3
6/15/1999	75-35-4	1,1-Dichloroethylene	GC/MS			1.71E-04	ND	mg/m3
6/15/1999	75-43-4	Dichlorofluoromethane	GC/MS			3.82E-04	ND	mg/m3
6/15/1999	75-45-6	Chlorodifluoromethane	GC/MS			1.71E-03		mg/m3
6/15/1999	75-69-4	Trichlorofluoromethane	GC/MS			4.03E-03	B	mg/m3
6/15/1999	75-71-8	Dichlorodifluoromethane	GC/MS			2.66E-03	B	mg/m3
6/15/1999	75-83-2	Neohexane	GC/MS			1.29E-04	ND	mg/m3
6/15/1999	760-21-4	2-Ethyl-1-Butene	GC/MS			6.77E-05	ND	mg/m3
6/15/1999	76-13-1	Freon 113	GC/MS			7.13E-04	B	mg/m3
6/15/1999	76-14-2	Freon 114	GC/MS			2.63E-04	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
(Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
6/15/1999	763-29-1	2-Methyl-1-Pentene	GC/MS			2.42E-04	ND	mg/m3
6/15/1999	7642-04-8	c-2-Octene	GC/MS			1.36E-04	ND	mg/m3
6/15/1999	7642-09-3	c-3-Hexene	GC/MS			5.16E-05	ND	mg/m3
6/15/1999	7647-01-0	Hydrochloric Acid	ACIDGAS			1.71E-02		mg/m3
6/15/1999	7664-39-3	Hydrofluoric Acid	ACIDGAS			8.24E-04		mg/m3
6/15/1999	7664-93-9	Sulfuric Acid	ACIDGAS			1.85E-02		mg/m3
6/15/1999	7688-21-3	c-2-Hexene	GC/MS			1.63E-04	ND	mg/m3
6/15/1999	7782-49-2	Selenium	PM10			6.65E-07	J	mg/m3
6/15/1999	78-78-4	Isopentane	GC/MS			5.39E-03	BF	mg/m3
6/15/1999	78-79-5	Isoprene	GC/MS			5.62E-04	B	mg/m3
6/15/1999	78-87-5	1,2-Dichloropropane	GC/MS			3.85E-05	ND	mg/m3
6/15/1999	78-93-3	2-Butanone	ALD/KET			2.48E-03		mg/m3
6/15/1999	79-00-5	1,1,2-Trichloroethane	GC/MS			5.26E-05	ND	mg/m3
6/15/1999	79-01-6	Trichloroethylene	GC/MS			1.62E-03	B	mg/m3
6/15/1999	79-29-8	2,3-Dimethylbutane	GC/MS			1.52E-04	ND	mg/m3
6/15/1999	79-34-5	1,1,2,2-Tetrachloroethane	GC/MS			1.49E-04	ND	mg/m3
6/15/1999	80-56-8	a-Pinene	GC/MS			4.69E-04	B	mg/m3
6/15/1999	811-97-2	Halocarbon 134A	GC/MS			1.16E-04	ND	mg/m3
6/15/1999	821-95-4	1-Undecene	GC/MS			4.75E-04		mg/m3
6/15/1999	872-05-9	1-Decene	GC/MS			5.10E-04	J	mg/m3
6/15/1999	87-68-3	Hexachloro-1,3-Butadiene	SVOC			2.76E-04	ND	mg/m3
6/15/1999	91-20-3	Naphthalene	SVOC			2.51E-04		mg/m3
6/15/1999	922-61-2	c-3-Methyl-2-Pentene	GC/MS			1.47E-04	ND	mg/m3
6/15/1999	95-13-6	Indene	GC/MS			8.71E-05	ND	mg/m3
6/15/1999	95-47-6	o-Xylene	GC/MS			2.12E-03	B	mg/m3
6/15/1999	95-49-8	o-Chlorotoluene	GC/MS			1.77E-04	ND	mg/m3
6/15/1999	95-50-1	1,2-Dichlorobenzene	SVOC			7.38E-05	BJ	mg/m3
6/15/1999	95-63-6	1,2,4-Trimethylbenzene	GC/MS			1.94E-03	B	mg/m3
6/15/1999	96-14-0	3-Methylpentane	GC/MS			1.14E-03	B	mg/m3
6/15/1999	96-37-7	Methylcyclopentane	GC/MS			8.25E-04	B	mg/m3
6/15/1999	98-06-6	t-Butylbenzene	GC/MS			1.12E-03	ND	mg/m3
6/15/1999	98-82-8	Cumene	GC/MS			2.76E-04	B	mg/m3
6/15/1999	99-87-6	p-Isopropyltoluene	GC/MS			6.71E-05	ND	mg/m3

**Table D-1 - Ambient Air Data Used in the Upwind/Downwind Analysis
 (Non-Detected Results Set at 1/2 the SQL)**

Sample Date	Cas No	Analyte	Datagroup	Golf Course		GEMB		Units
				Result	Qualifier	Result	Qualifier	
6/15/1999	DIOXIN-TEQ	Total Dioxin/Furans (2,3,7,8-TCDD TEQ)	DIOXINS			1.24E-08		mg/m3
6/15/1999	PM10	PM-10	PM10			1.14E-01		mg/m3

Appendix E
Results of the Soil Trend Analysis
and
Technical Discussion of Kriging

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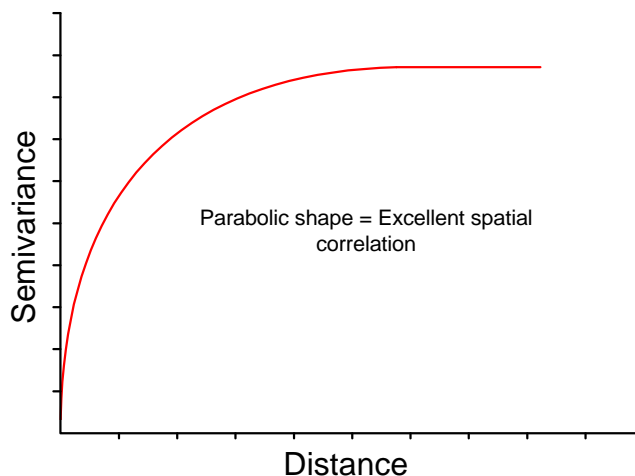
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E.0 RESULTS OF THE SOIL TREND ANALYSIS

The purpose of the trend analysis of soil samples collected from Naval Air Facility (NAF) Atsugi was to determine if a spatial correlation between concentration and distance exists for constituents of concern (COCs) in soil. Specifically, do the concentrations of COCs in soil on NAF Atsugi decrease as the distance from the Shinkampo Incineration Complex (SIC) increases? Two approaches were used to determine if such a spatial correlation exists:

1. **Thiessen Polygons** - Thiessen Polygons (TPs) are a graphical data visualization technique that facilitate the identification of spatial trends in data sets. TPs are created using the spatial distribution of the sample stations to create a polygon around each sample station. The size and shape of the polygon depends on the location of all surrounding sample stations. The higher the sample density (i.e., the closer the sample stations are to one another) the smaller the size of the TPs that are created. After the TPs have been created, the analytical results associated with the sample station that is contained in the TP are assigned to the TP. It is important to note that, unlike kriging, the size and shape of the TPs that are created are based solely on the spatial distribution of the sample stations and not on the concentration.
2. **Kriging Analysis** - Kriging is a geostatistical technique that is used to predict concentrations of COCs at an unsampled location based on the analytical results of nearby sample stations. Kriging fits a mathematical function to a specified number of points, or all points within a specified radius, to determine the output value for each location. The fundamental assumption in all kriging analysis is that distance or direction between sample points shows spatial correlation with concentration. Before analytical data can be kriged, the data must be evaluated to determine if it is suitable for kriging (i.e., do the data exhibit a spatial correlation between concentration and distance or direction?). The process for determining whether or not analytical data are suitable for kriging is the development of a semi-variogram. A semi-variogram is the plot of the variance of paired sample measurements (the average squared difference between pairs) as a function of the distance or direction between samples. Semi-variograms provide a means of quantifying a commonly-observed relationship: samples close together will tend to have more similar values than samples far apart. Analytical data sets that exhibit this relationship are suitable for kriging because there is a correlation between concentration and distance or direction. Semi-variograms are also used to identify the mathematical function used to control the way the kriging algorithm generates the interpolated concentrations. A theoretical example of a semi-variogram model for analytical data that exhibits a perfect correlation between concentration and distance is presented in Figure E-1. A technical discussion of the kriging process is presented in section E-1.

Figure E-1
Theoretical Semi-Variogram Showing Perfect Correlation Between Concentration and Distance



Trend Analysis Results

Approximately 30 surface soil samples (0 - 3") and 8 subsurface soil samples (3 - 12") were collected in March 1998 by Radian International, LLC specifically for the trend analysis. These samples were collected in areas defined by seven radii starting at the SIC and extending to the north, with transects at distances of less than 300m, 300 to 800m, 800 to 1500m, and greater than 1500m from the SIC. The samples were analyzed for multiple constituents including metals, semi-volatile organic compounds, pesticides, polychlorinated biphenyls, volatile organic compounds, and dioxins/furans.

Three COCs were selected for the trend analysis based on their relative toxicity and because they represent different chemical classes (i.e., inorganics, semi-volatile organics, and dioxins/furans):

- Arsenic
- The Total Benzo(a)pyrene equivalent concentration (Total BaP TEQ)
- The Total 2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) equivalent concentration (Total 2,3,7,8-TCDD TEQ)

Thiessen Polygons

The analytical data for arsenic, Total BaP TEQs, and Total 2,3,7,8-TCDD TEQs were used to develop thiessen polygons. Figures E-2 through E-4 present the results of the thiessen polygon evaluation of trends in soil at NAF Atsugi.

Arsenic

Arsenic did not exhibit any spatial trends in concentration and distance from the SIC (Figure E-2). Elevated concentrations of arsenic are present throughout the base. Elevated concentrations of arsenic in subsurface soil were typically collocated with elevated concentrations in surface soil.

Total BaP TEQs

Total BaP TEQs did not exhibit any spatial trends in concentration and distance from the SIC (Figure E-3). Elevated concentrations of Total BaP TEQs are present sporadically in the surface soil across the base. Elevated concentrations of Total BaP TEQs in subsurface soil were typically collocated with elevated concentrations in surface soil.

Total 2,3,7,8-TCDD TEQs

The concentrations of Total 2,3,7,8-TCDD TEQs tended to decrease as the distance from the SIC increased. Figure E-4 shows elevated concentrations near the SIC with a clear pattern of decreasing concentration moving away from the SIC. An interesting feature of the figures is the elevated concentrations of Total 2,3,7,8-TCDD TEQs directly north of the SIC. Elevated concentrations of Total 2,3,7,8-TCDD TEQs in subsurface soil were typically collocated with elevated concentrations in surface soil.

Kriging Analysis

Semi-variograms were developed for arsenic, Total BaP TEQs, and Total 2,3,7,8-TCDD TEQs in order to determine if the analytical data were suitable for kriging and also to determine the optimal mathematical function for use in the kriging algorithm. Figures E-5 to E-10 present the results of the kriging analysis of soil at NAF Atsugi.

Arsenic

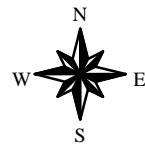
A mathematical model describing the correlation of concentration and distance from the SIC could not be fitted to the semi-variogram of the arsenic data (see Figure E-5). This means, that the arsenic data do not exhibit a spatial correlation between concentration and distance. Consequently, the arsenic data were not used to generate a kriged concentration map. An alternative interpolation method, called Inverse Distance Weighting (IDW), was applied to the arsenic soil data to create a surface soil concentration map (see Figure E-6). IDW assumes that each point has a local influence that diminishes with distance, and weights points closer to the processing cell greater than those further away. There is no clear pattern of contamination.

Total BaP TEQs

The semi-variogram for Total BaP TEQs is presented in Figure E-7 and indicates that the analytical data for Total BaP TEQs were suitable for kriging. The kriged results are presented in Figure E-8 and no clear pattern of contamination is evident. The highest concentrations in surface soil are located east of the SIC.

Total 2,3,7,8-TCDD TEQs

The semi-variogram for Total 2,3,7,8-TCDD TEQs is presented in Figure E-9 and indicates that the analytical data for Total 2,3,7,8-TCDD TEQs were suitable for kriging. The kriged results are presented in Figure E-10. Total 2,3,7,8-TCDD TEQs exhibited the clearest pattern of contamination; high concentrations were found near the SIC and decrease as the distance from the SIC increases.



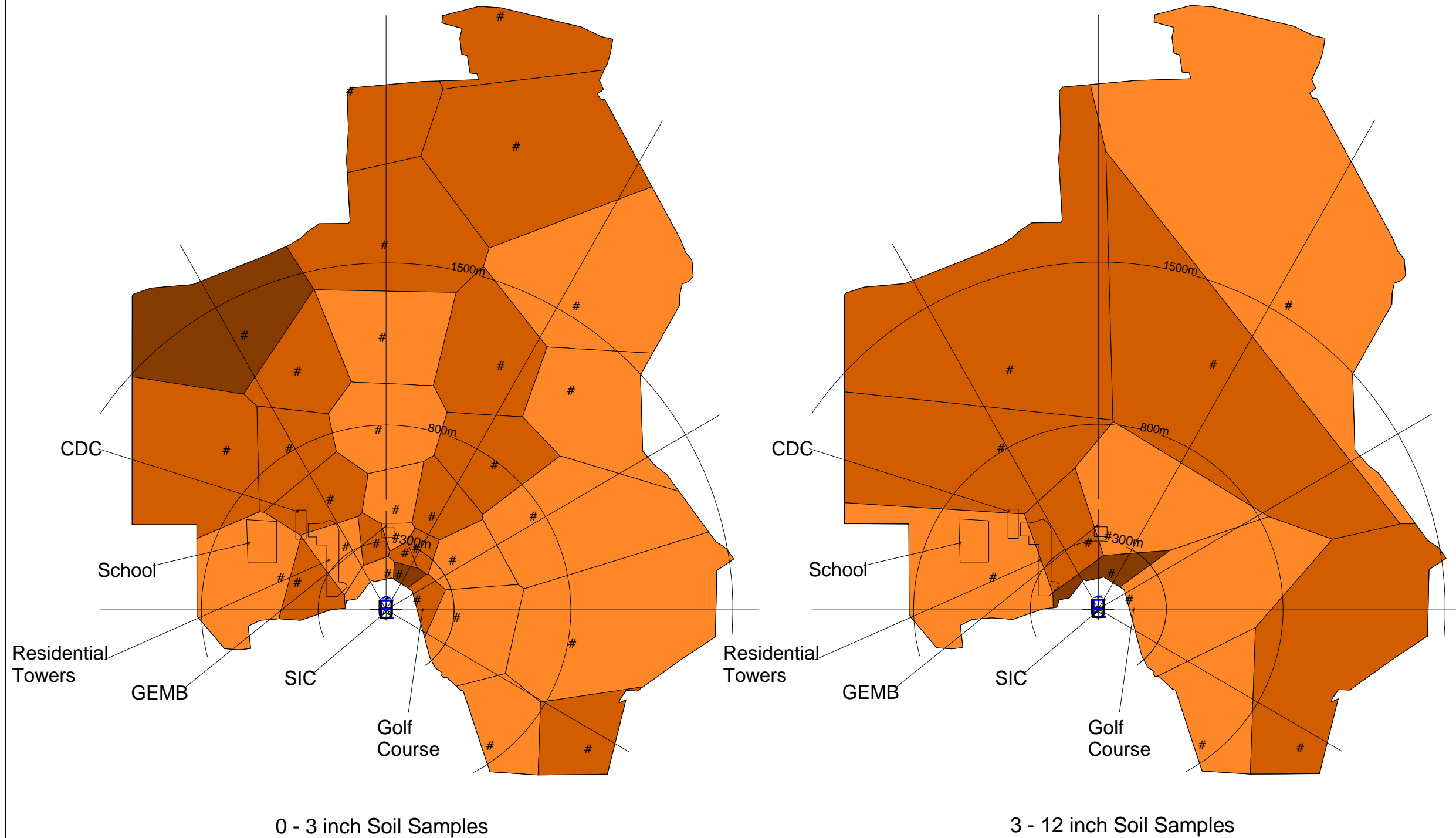
Legend

- Shinkampo Incineration Complex
- # Trend Analysis Soil Samples
- Areas of Concern
- Arsenic (mg/kg)
- 0 - 0.43
- 0.43 - 4
- 4 - 6.7
- 6.7 - 14.7

Notes

The EPA Region III Residential Soil Cleanup Level for Arsenic is 0.43 mg/kg

Thiessen Polygons for Arsenic



0 - 3 inch Soil Samples

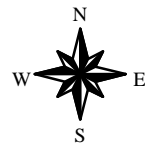
3 - 12 inch Soil Samples











0 400 800 1200 Meters

NAF Atsugi, Japan
May 2001

Figure
E-2



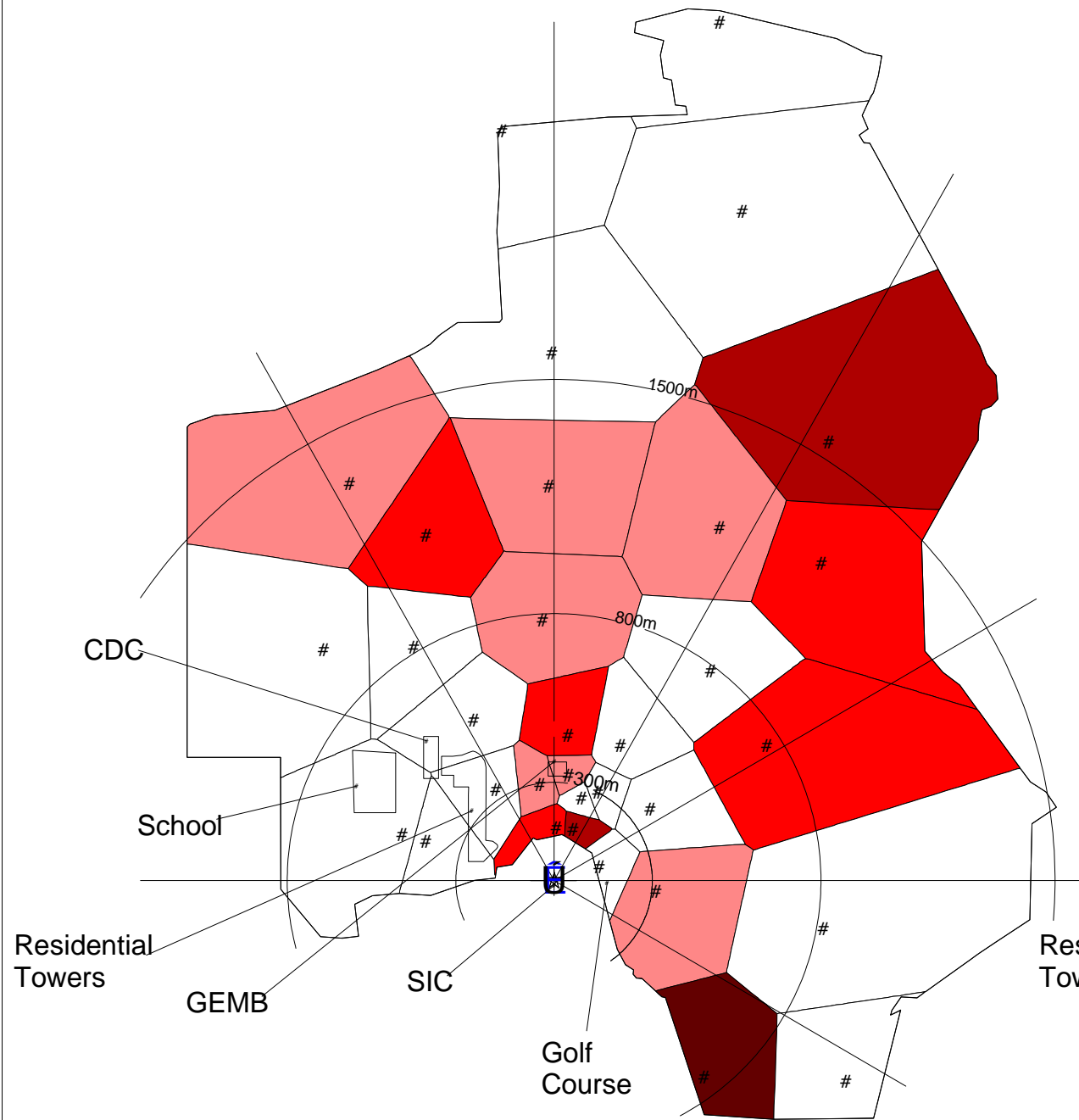
Legend

-  Shinkampo Incineration Complex
-  Trend Analysis Soil Samples
-  Areas of Concern
- Total Benzo(a)pyrene TEQs (mg/kg)
-  Not Detected
-  0 - 0.087
-  0.087 - 0.165
-  0.165 - 0.616
-  0.616 - 0.682

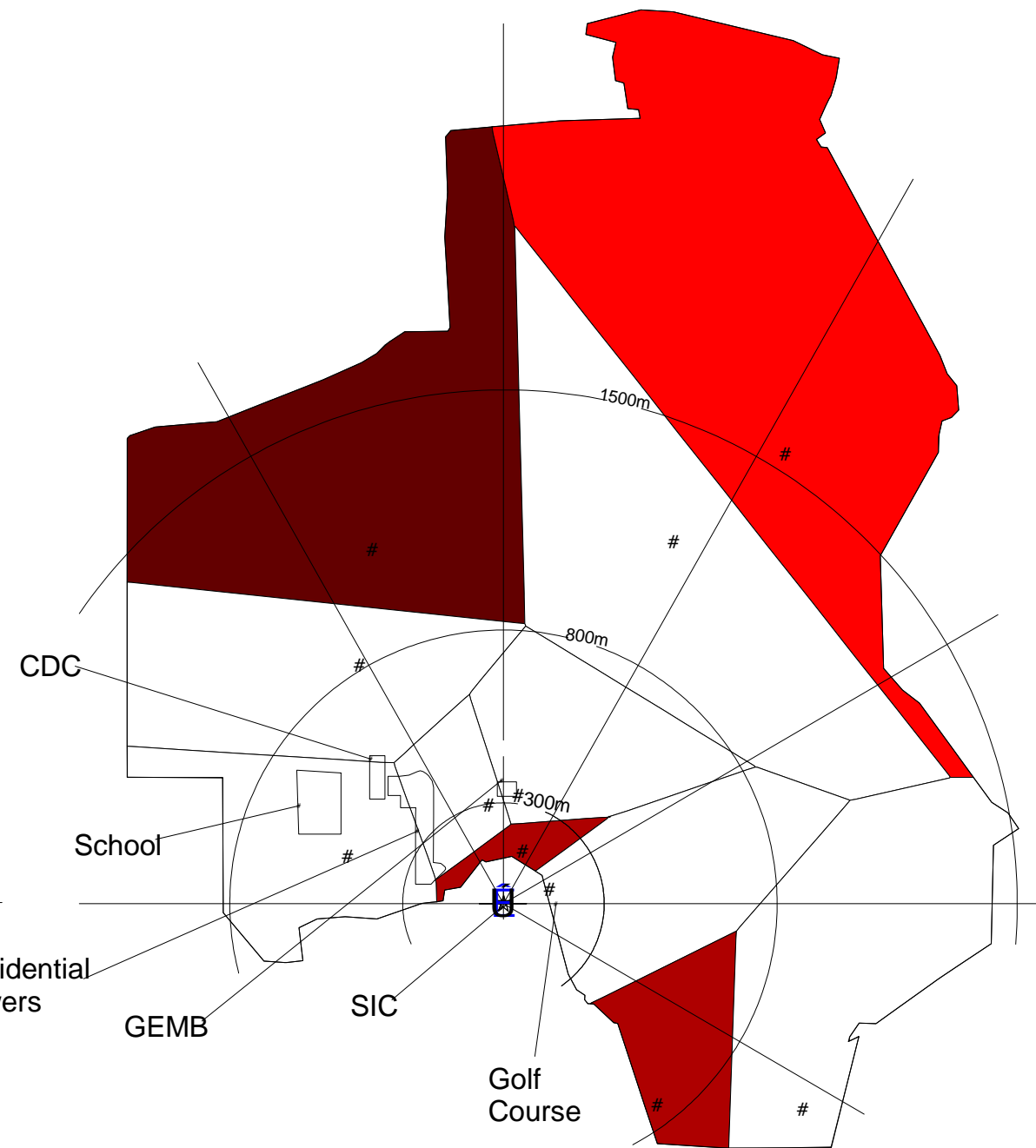
Notes

The EPA Region III Residential Soil Cleanup Level for Benzo(a)pyrene is 0.087 mg/kg

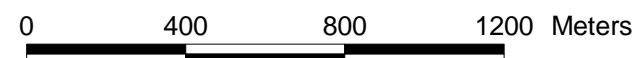
Thiessen Polygons for Total Benzo(a)pyrene TEQs



0 - 3 inch Soil Samples

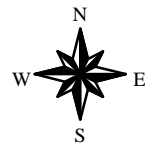


3 - 12 inch Soil Samples



NAF Atsugi, Japan
May 2001

Figure
E-3



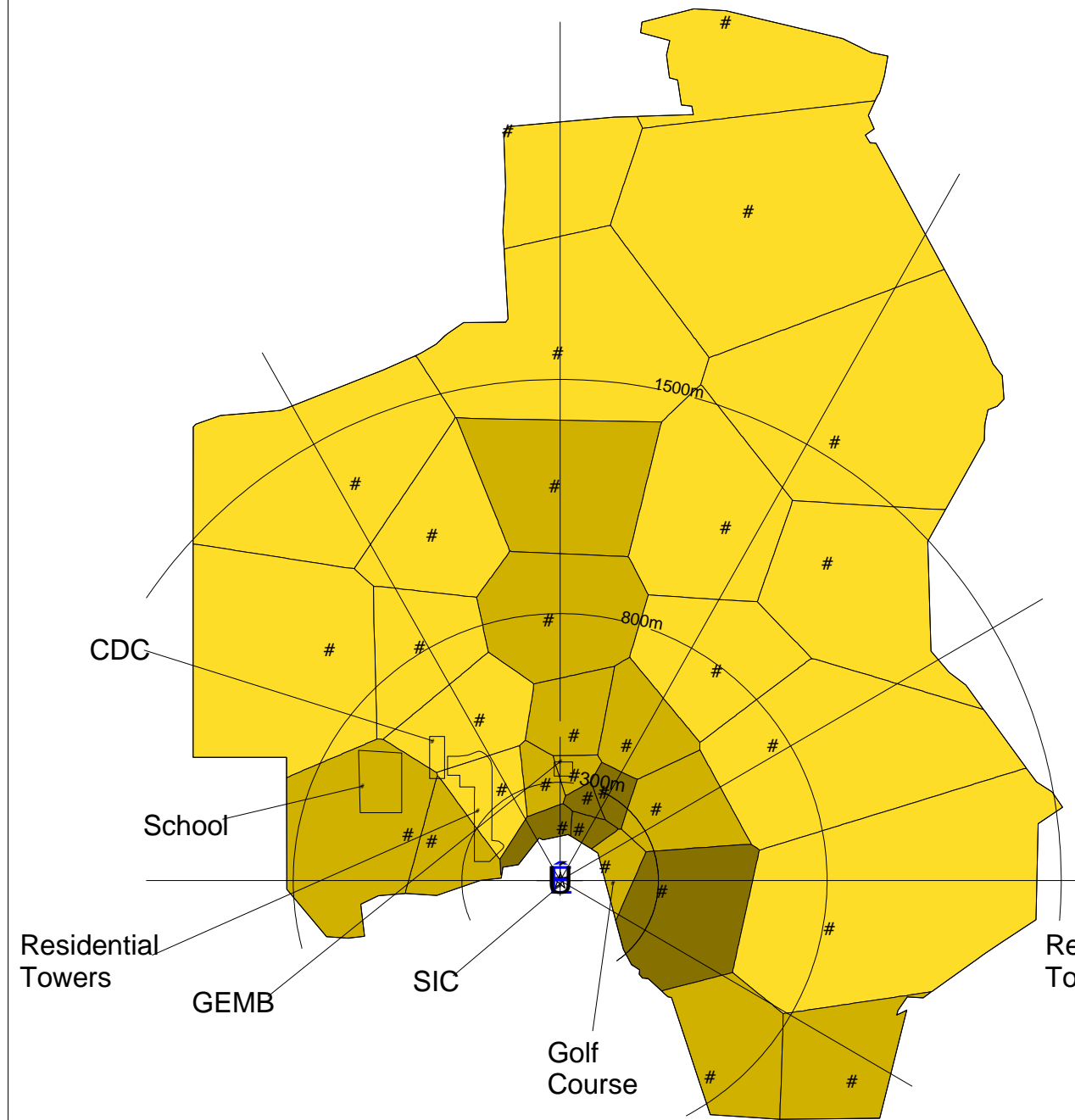
Legend

- Shinkampo Incineration Complex
- Trend Analysis Soil Samples
- Areas of Concern
- Total 2,3,7,8-TCDD TEQs (mg/kg)
- Not Detected
- 0 - 0.000004
- 0.000004 - 0.00004
- 0.00004 - 0.000326
- 0.000326 - 0.000664

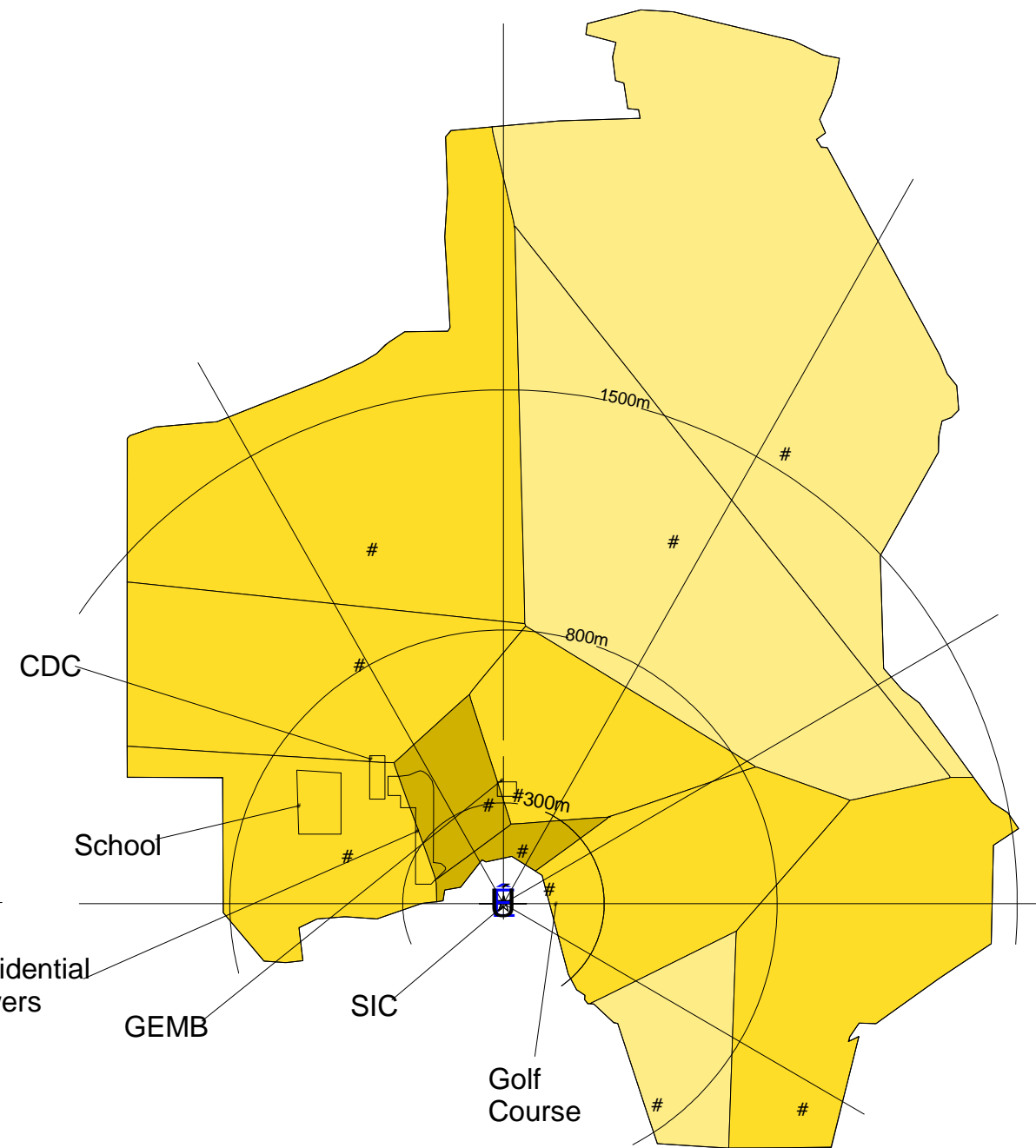
Notes

The EPA Region III Residential Soil Cleanup Level for 2,3,7,8-TCDD is 0.000004 mg/kg

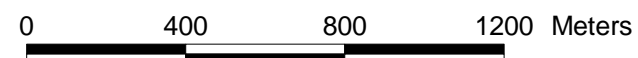
Thiessen Polygons for Total 2,3,7,8-TCDD TEQs



0 - 3 inch Soil Samples



3 - 12 inch Soil Samples

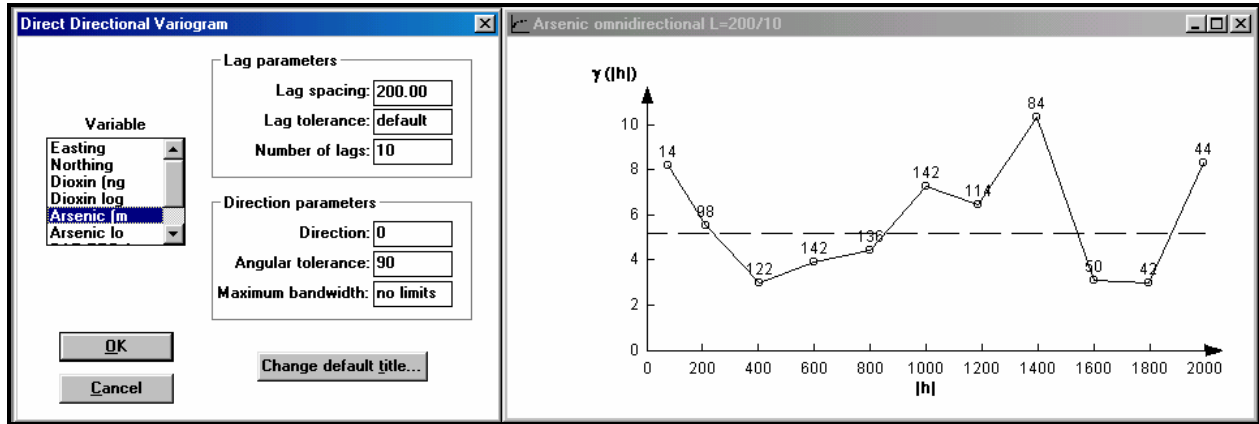


NAF Atsugi, Japan
May 2001

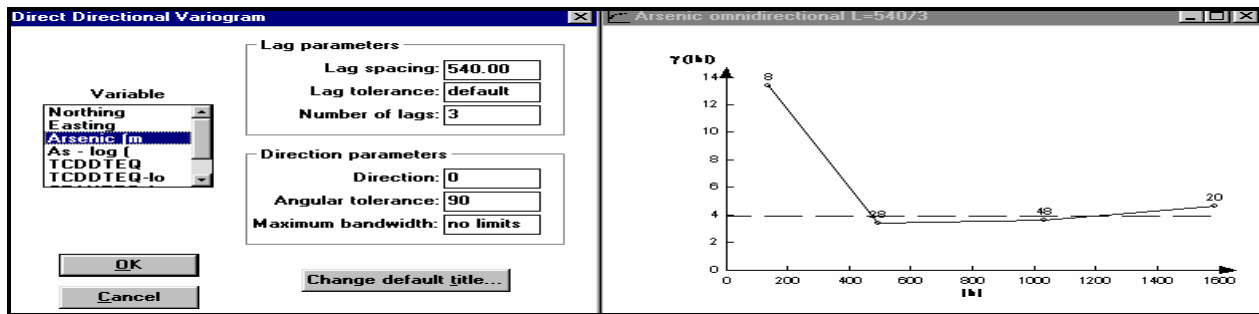
Figure
E-4

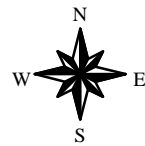
Figure E-5
 Semi-Variogram for Arsenic

Arsenic Surface Soil Semi-Variogram Plot



Arsenic Subsurface Soil Semi-Variogram Plot





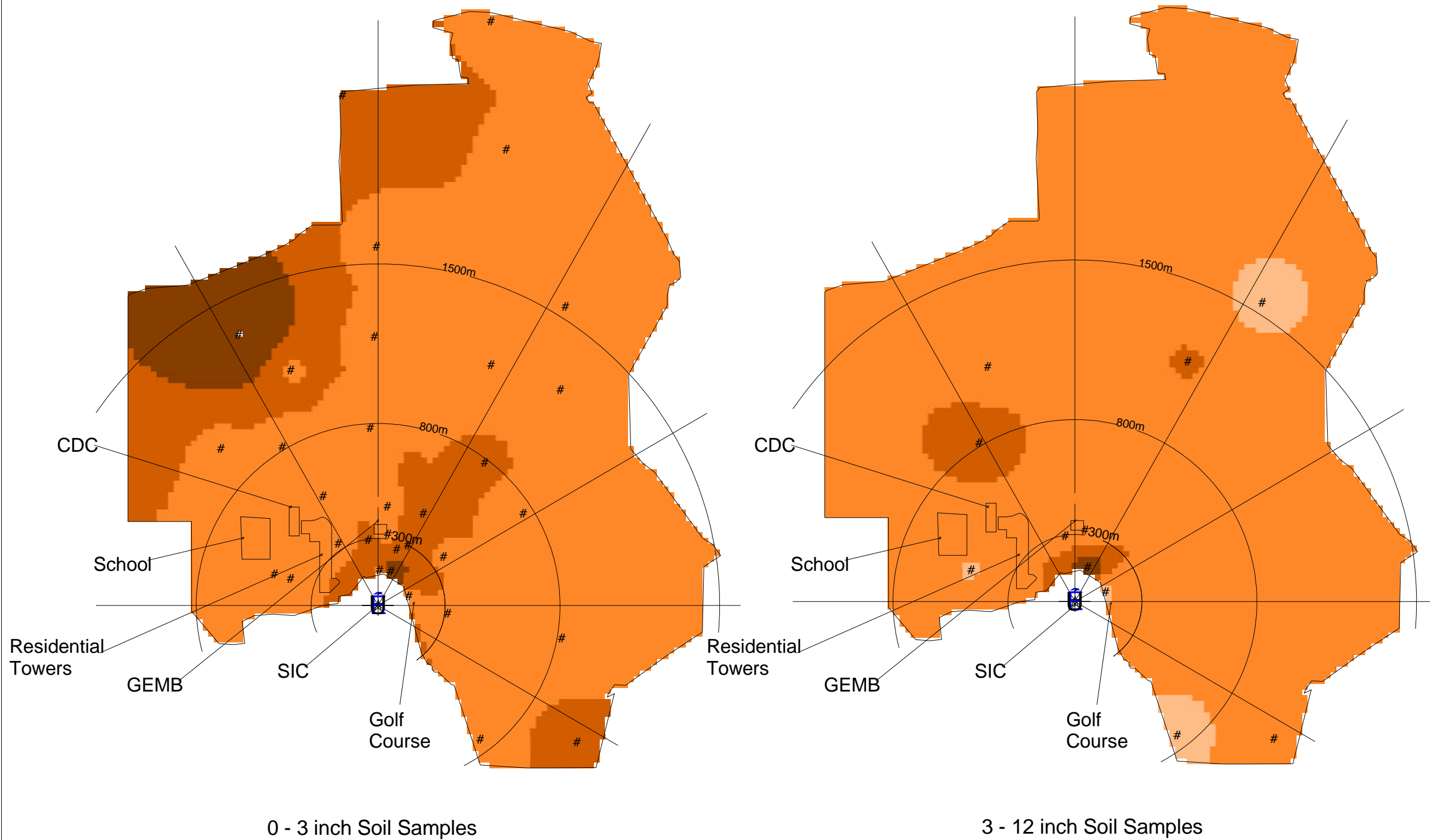
Legend

- Shinkampo Incineration Complex
- Trend Analysis Soil Samples
- Areas of Concern
- IDW Arsenic (mg/kg)
 - 0 - 0.43
 - 0.43 - 2.572
 - 2.572 - 4.714
 - 4.714 - 6.856
 - 6.856 - 14.691
 - No Data

Notes

The EPA Region III Residential Soil Cleanup Level for Arsenic is 0.43 mg/kg

Inverse Distance Weighted Soil Concentrations for Arsenic



0 - 3 inch Soil Samples

3 - 12 inch Soil Samples



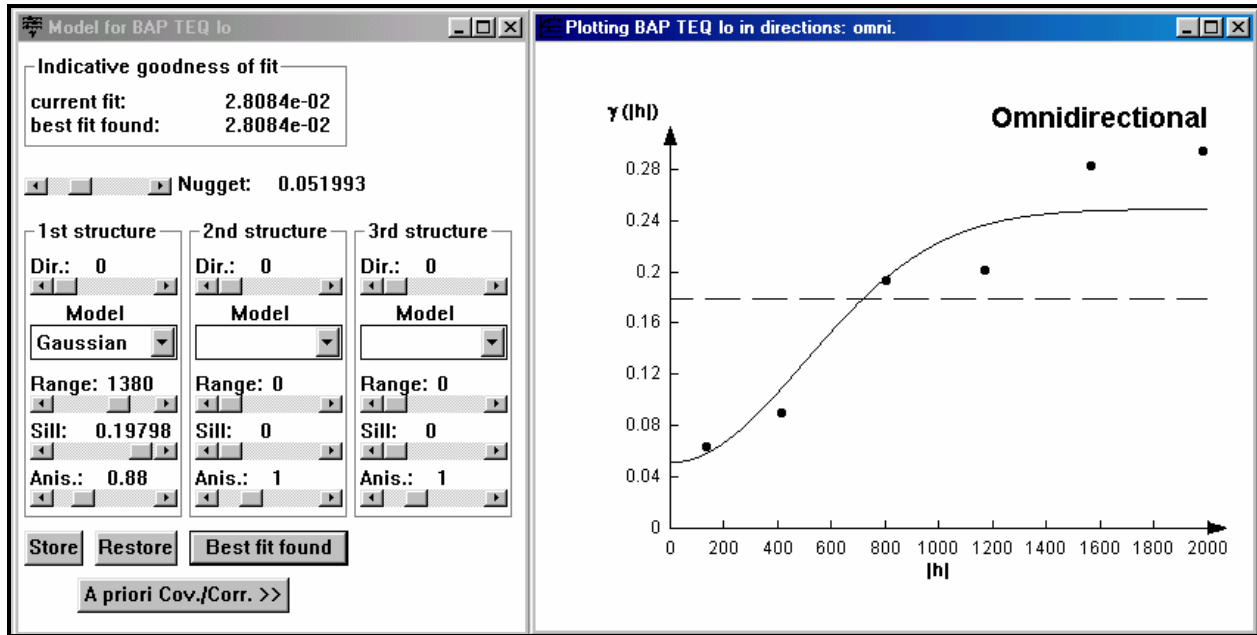
0 400 800 1200 Meters

NAF Atsugi, Japan
May 2001

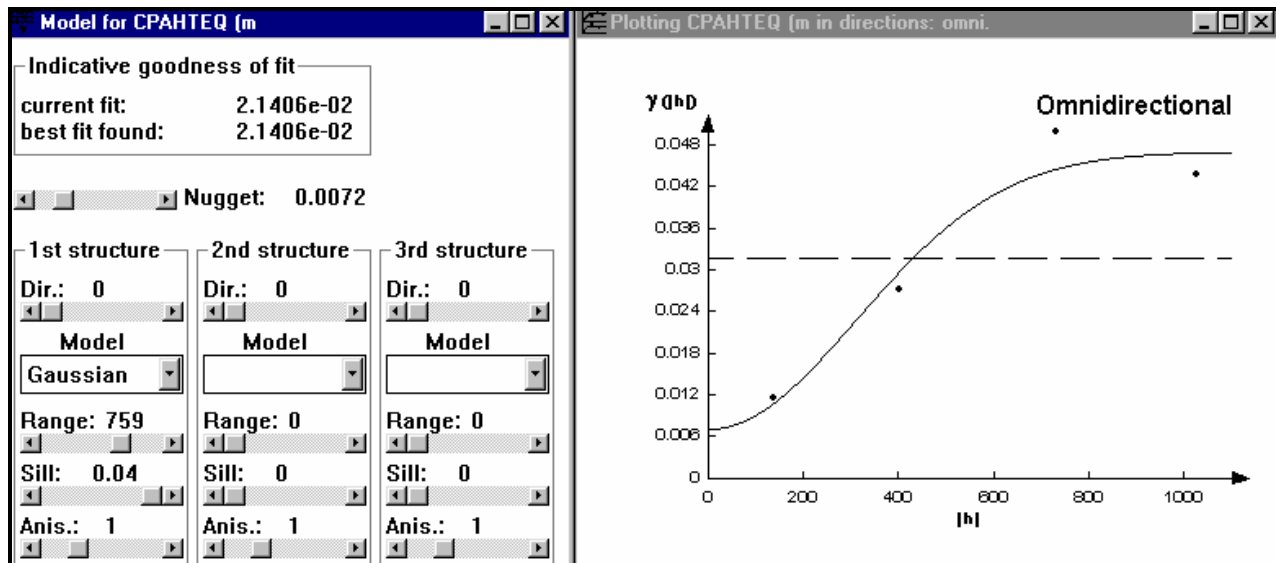
Figure
E-6

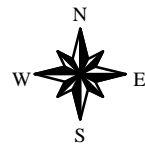
Figure E-7
 Semi-Variogram for Total BaP TEQs

Surface Soil BAP TEQ - log Semi-Variogram Plot and Model












Subsurface Soil BAP TEQ Semi-Variogram Plot and Model





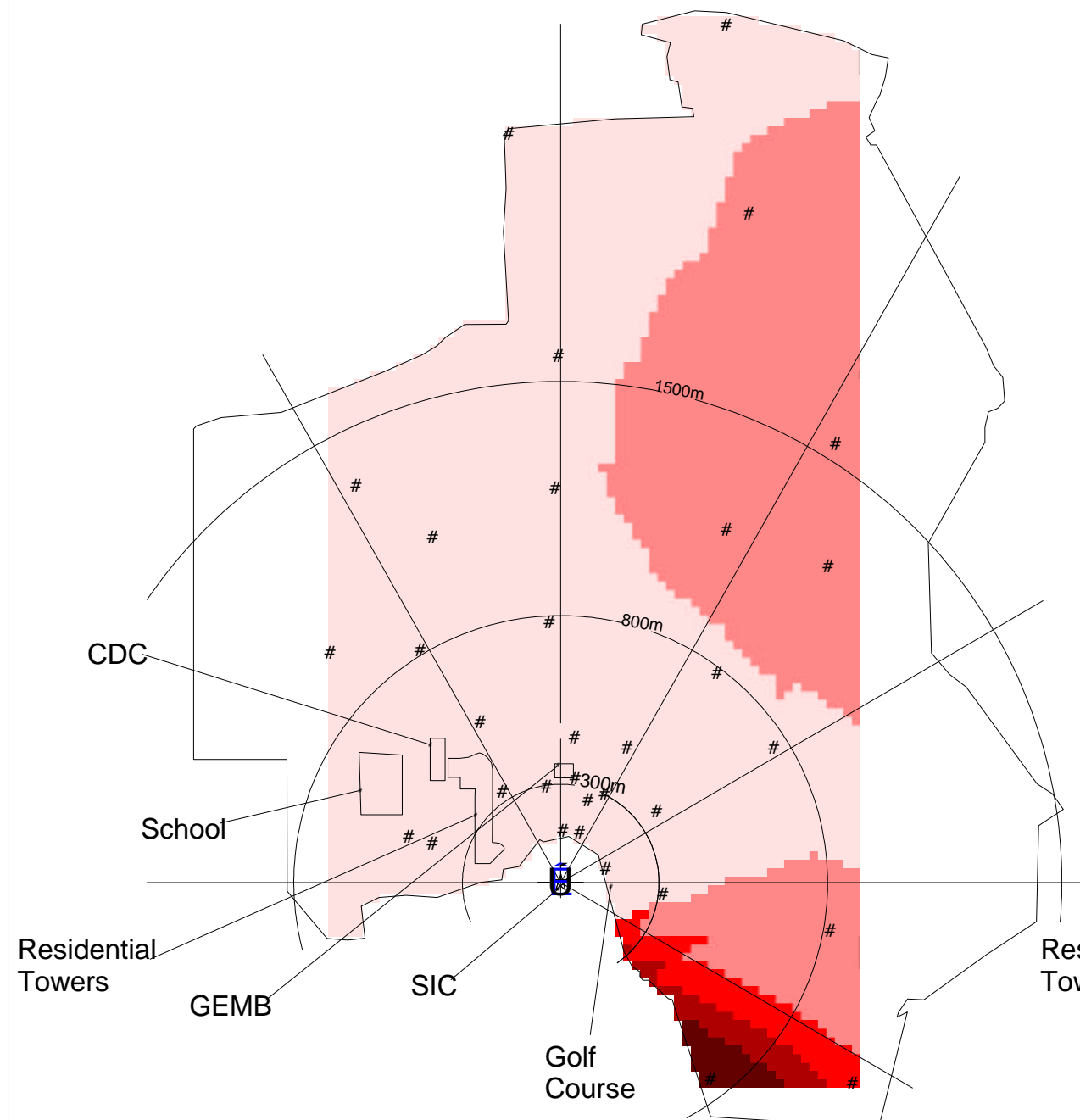
Legend

-  Shinkampo Incineration Complex
-  Trend Analysis Soil Samples
-  Areas of Concern
- Kriged Total Benzo(a)pyrene TEQs (mg/kg)**
-  0 - 0.087
-  0.087 - 0.246
-  0.246 - 0.334
-  0.334 - 0.421
-  0.421 - 0.644
-  No Data

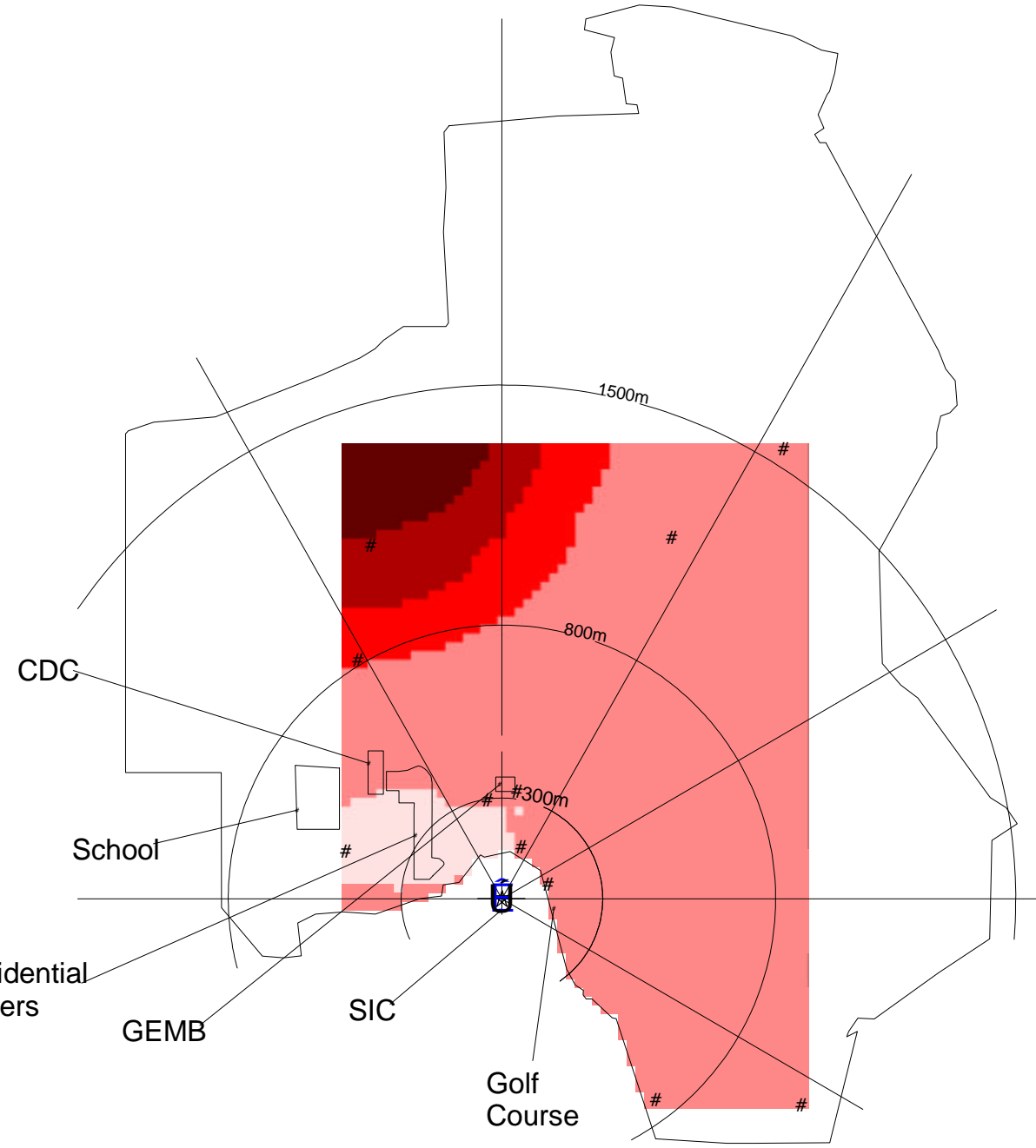
Notes

The EPA Region III Residential Soil Cleanup Level for Benzo(a)pyrene is 0.087 mg/kg

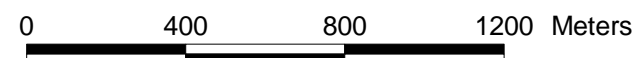
Kriged Soil Concentrations for Total Benzo(a)pyrene TEQs



0 - 3 inch Soil Samples



3 - 12 inch Soil Samples

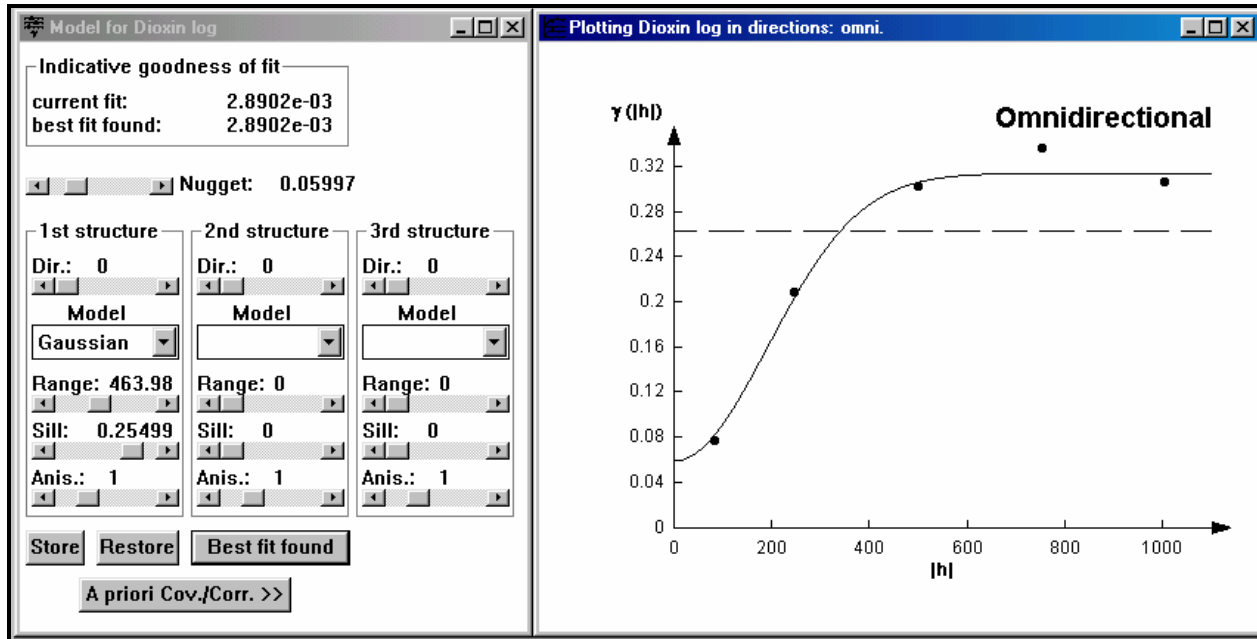


NAF Atsugi, Japan
May 2001

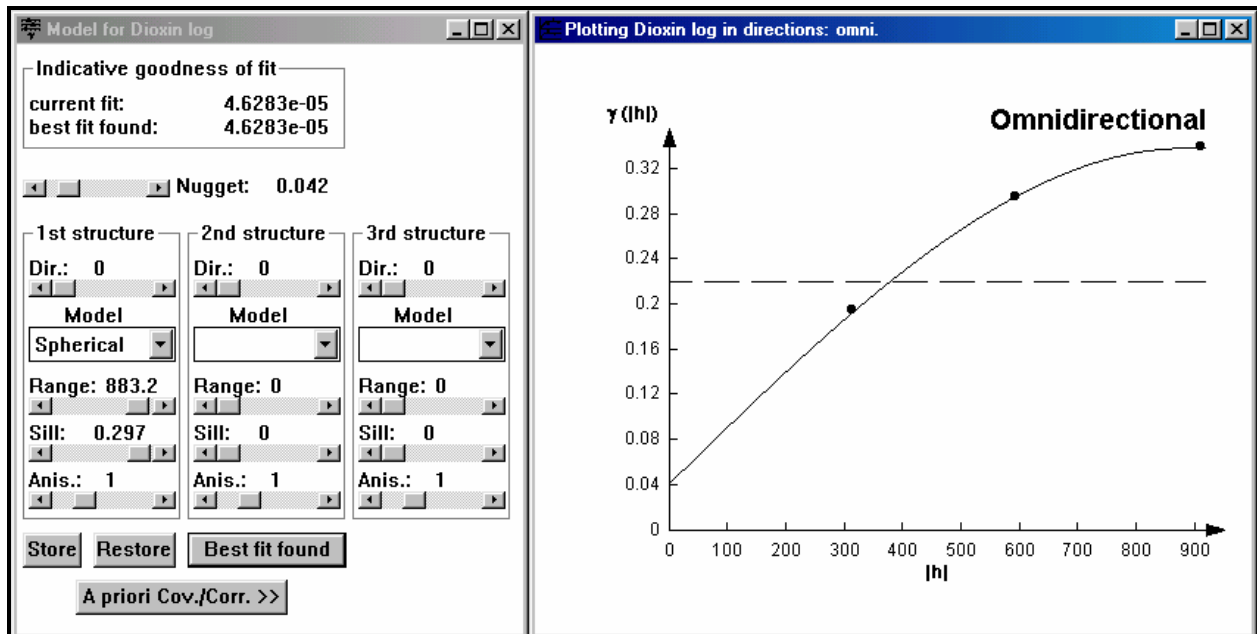
**Figure
E-8**

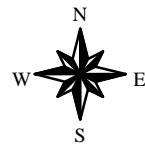
Figure E-9
 Semi-Variogram for Total 2,3,7,8-TCDD TEQs

Surface Soil TCDD TEQ - Log Semi-Variogram Plot and Model












Subsurface Soil TCDD TEQ - Log Semi-Variogram Plot and Model





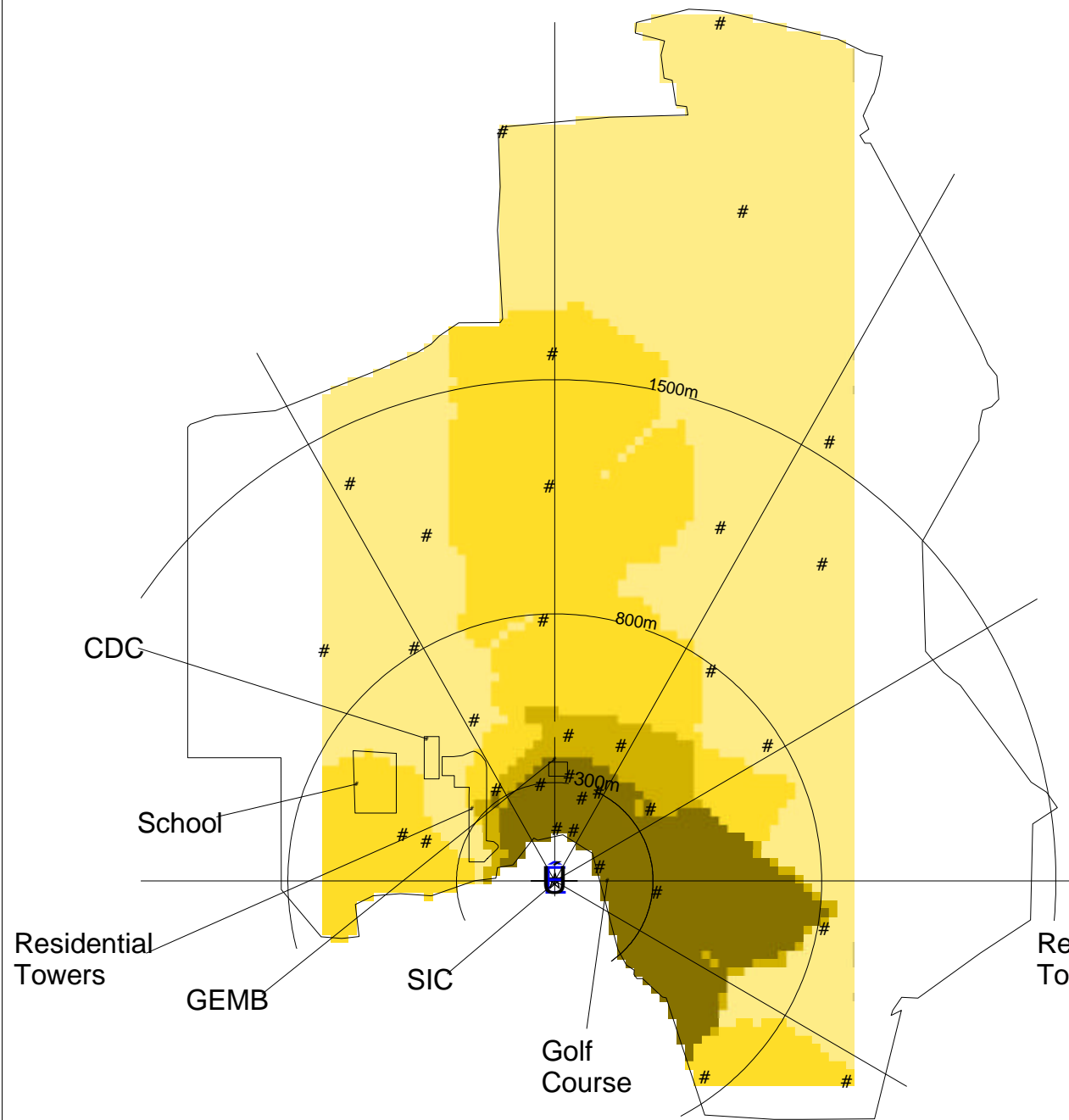
Legend

-  Shinkampo Incineration Complex
-  Trend Analysis Soil Samples
-  Areas of Concern
- Kriged Total 2,3,7,8-TCDD TEQs (mg/kg)**
-  0 - 0.000004
-  0.000004 - 0.000004
-  0.000004 - 0.000009
-  0.000009 - 0.000025
-  0.000025 - 0.00007
-  No Data

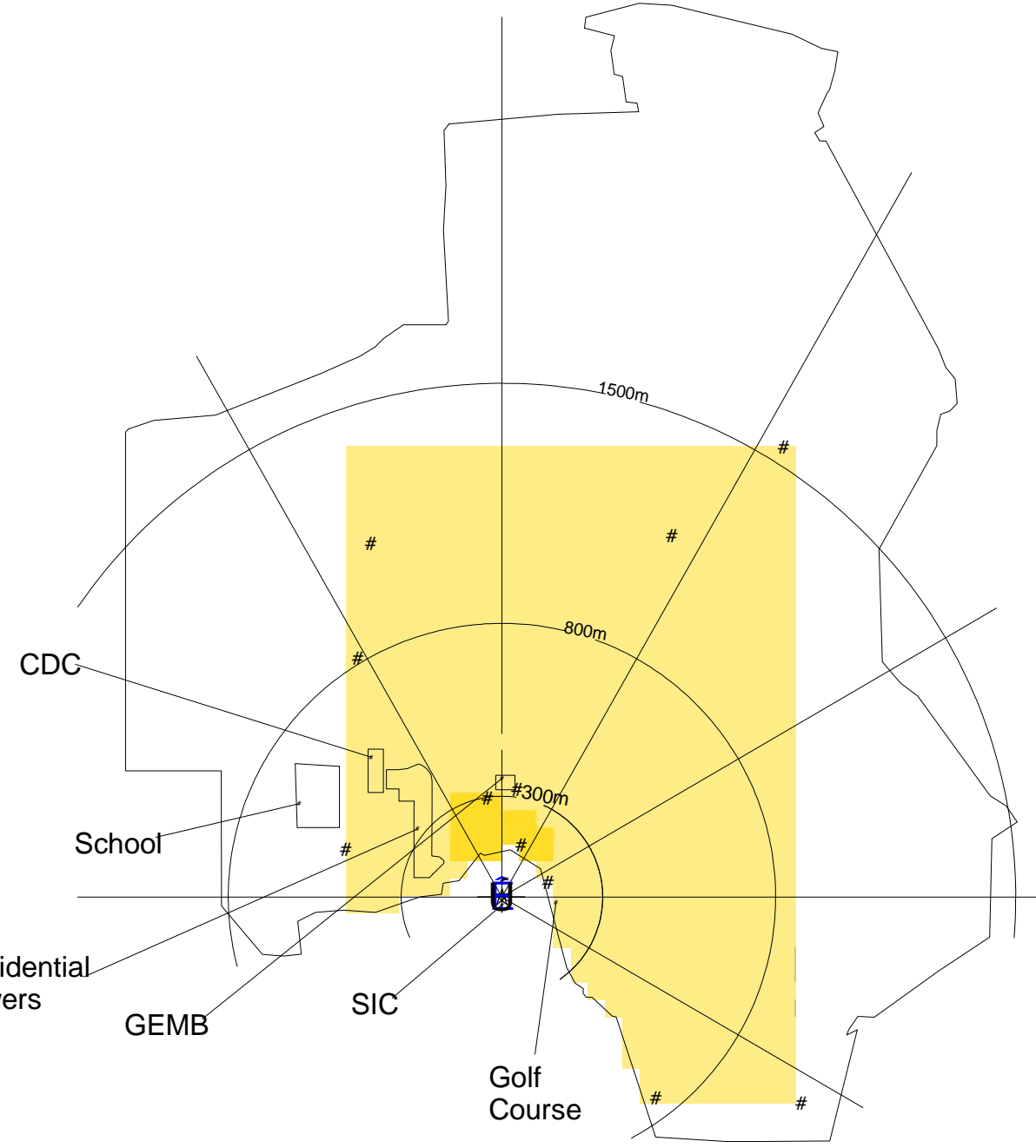
Notes

The EPA Region III Residential Soil Cleanup Level for 2,3,7,8-TCDD is 0.000004 mg/kg

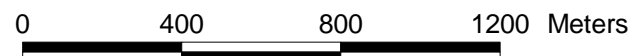
Kriged Soil Concentrations for Total 2,3,7,8-TCDD TEQs



0 - 3 inch Soil Samples



3 - 12 inch Soil Samples



NAF Atsugi, Japan
May 2001

Figure E-10

E.1 TECHNICAL DISCUSSION OF KRIGING

This section describes the objectives and approaches used to determine if COC concentrations in soil exhibit a significant spatial correlation with distance using a geostatistical technique called kriging. The approach used to perform the trend analysis included the following steps:

- Select indicator COCs to be evaluated.
- Compute the variances for groups of pairs of measurements in class intervals of similar distance and direction. This step includes developing a pair comparison file and then developing a semi-variogram plot which presents the variances versus distances.
- Fit a model curve to the semi-variogram plot; the model is assumed to be an approximation of the "true semi-variogram".
- Use the semi-variogram results to predict COC concentrations throughout the base.

The following sections present the methodologies that were employed, the results that were obtained, and the findings of the evaluation. The pair comparison files, semi-variogram plots, and semi-variogram models were developed using Variowin 2.2 software while other statistics, such as the distribution tests, were calculated using SiteSTAT™ 1.0.

The explanations, techniques, and considerations used in this evaluation are based on several different sources which include:

- An Introduction to Applied Geostatistics. 1989. Edward H. Isaaks and R. Mohan Srivastava. Oxford University Press. New York, New York. USA.
- GEO - EAS 1.2.1 User's Guide. 1991. U.S. Environmental Protection Agency – United States Environmental Monitoring Systems Laboratory, Office of Research and Development. EPA/600/8-91/008.

E.1.1 Kriging and Contouring

All interpolation and contouring methods assume that some type of spatial correlation between concentration and distance is present. Weighted moving-average methods are based on the assumption that data values closest to the point where the mean is being estimated contain more information than data further away and, therefore, get more weight. The problem is knowing what weight to assign each data point. Kriging determines the weights by using the spatial correlation structure of the COC which is empirically determined by developing a semi-variogram model. Ordinary kriging assumes that local means are not necessarily closely related to the population mean, and, therefore, uses only the samples in the local neighborhood for the estimate. Ordinary kriging is the most commonly used method for environmental data.

In kriging, to estimate a concentration at an unsampled location "X" an interpolation method is used to determine a set of weights that are assigned to each sample in the vicinity of the estimation location. The weights depend explicitly on the location (distance and direction) and arrangement (clustering) of sample points near the unsampled location "X". In other words, kriging is a way to predict the COC concentration at location "X" by calculating a weighted-moving average concentration based on the known sample data results in the vicinity.

By definition, kriging is the weighted linear estimate, with a particular set of weights, which minimizes the computed estimation variance (standard error squared). The relationship of the kriging standard deviation to the actual error of estimation is dependent on the semi-variogram model used and the validity of the underlying assumptions — therefore kriging standard deviations should be interpreted with caution.

E.1.2 Semi-Variogram Models

The semi-variogram model is an interpretation of the spatial correlation structure of the sample data set. It controls the way that kriging weights are assigned to samples during interpolation, and consequently controls the

quality of the results. Therefore, the kriging output is directly dependent on the semi-variogram model. In some cases a semi-variogram model cannot be developed because the data do not exhibit a consistent spatial correlation structure.

A semi-variogram is a plot of the average difference (actually, the variance, which is equal to one-half the mean squared difference) of paired sample measurements as a function of the distance (and optionally of the direction) between samples. Typically, all possible sample pairs are examined, and grouped into classes (lags) of approximately equal distance and direction. Semi-variograms provide a means of quantifying the commonly-observed relationship that samples close together will tend to have more similar values than samples far apart.

The estimation variance is computed as a function of a semi-variogram model and locations of samples relative to each other, and to the point being estimated. The kriging weights are obtained from a semi-variogram which measures the degree of correlation among sample values in the area as a function of the distance and direction between samples. Kriging has a number of valuable characteristics: its estimates are calculated by weighting measurements with coefficients that minimize the error of the estimates, and the sampled data are “honored”—that is, their estimation error is zero.

Kriging has a number of advantages over most other interpolation methods:

- Smoothing — Kriging smoothes, or regresses, estimates based on the proportion of total sample variance accounted for by random “noise”. The noisier the data set, the less individual samples represent their immediate vicinity, and the more they are smoothed.
- Declustering — The kriging weight assigned to a sample is lowered to the degree that its information is duplicated by nearby, highly correlated samples. This helps mitigate the impact of oversampling “hot spots”.
- Anisotropy — When samples are more highly correlated in a particular direction, kriging weights will be greater for samples in that direction.
- Precision — Given a semi-variogram representative of the area to be estimated, kriging will compute the most precise estimates possible from the available data. In practice, this is only approximated, as the semi-variogram must itself be estimated from the available data.

Estimation of the semi-variogram from sample data involves interpretation and judgment, and often requires a large number of “trial and error” computer runs. The steps for developing semi-variogram models for the indicator COCs at NAF Atsugi are presented in the following sections.

E.1.3 Identification of Indicator COCs for Kriging

Kriging was performed for arsenic, Total BaP TEQs, and Total 2,3,7,8-TCDD TEQs as described in Section E.0. Note: Only the detailed results of the kriging analysis for the surface soil samples are presented in the sections that follow.

E.1.4 Data Evaluation and Reduction

The trend analysis data for each COC, including the result, units, northing, and easting, were collated. Non-detected data were assigned a value of ½ the sample quantitation limit. In instances where there were duplicate sample results at one station, the results were averaged and the average value was assigned to that sample station. Tests were performed on the data to determine if the data were normally or lognormally distributed. The arsenic and Total BaP TEQs data sets were not normal or lognormal at a 5% significance level. The Total 2,3,7,8-TCDD TEQ data set was lognormally distributed at a 5% significance level. In instances where the data were lognormally distributed the log transformed values were used in the evaluation. The data used in the kriging evaluation are presented in Tables E-1, E-2, and E-3.

E.1.5 Pair Comparisons

The first step in performing kriging is to create a pair comparison file (PCF) for each COC. This consists of computing the variances for groups of pairs of measurements in class intervals of similar distance and direction. This step was performed using the Variowin - Prevar module.

E.1.6 Semi-Variogram Plots

The next step is to use the PCF data generated in the first step to create a semi-variogram plot. There are several different parameters that must be determined by the user to develop a suitable plot. Finding the "right" combination is a trial and error exercise, but a systematic approach was used to modify different parameters. These parameters included:

E.1.6.1 Lag Parameters

Lag Spacing

A lag is a distance class interval. All possible sample pairs are examined, and grouped into classes (lags) of approximately equal distance and direction. Lag intervals are computed from a rule-of-thumb which states that semi-variograms are generally not valid beyond one-half the maximum distance between samples. The maximum pair distance is therefore divided by two, and then subdivided into ten equal distance classes.

Lag Tolerance

Lag tolerance allows data to be included if it is close to the specified angular tolerance. For example, a semi-variogram computed with a angular tolerance of 90 degrees and a lag tolerance of 10 degrees will include all pairs with an orientation between 80 and 100 degrees.

Number of Lags

Specifies how many lags should be included in the plot.

E.1.6.2 Direction Parameters

Direction

The direction option allows you to specify the pair orientation (selection) criteria. Acceptable values range from 0 to 180 degrees (excluding 180). The default is zero degrees, which is parallel to the X axis.

Angular Tolerance

The angular tolerance of 90 degrees on either side of any specified direction line allows all pairs to be included regardless of direction. This maximizes the number of pairs in each distance class, which usually gives the "best" or smoothest semi-variogram.

Maximum Bandwidth

The maximum bandwidth is the maximum perpendicular distance from the direction centerline to the second point in a pair. The default value is "No limits" meaning that no such constraint is imposed.

Semi-variogram plots were created for each COC. Default parameter values were used for the lag tolerance, direction, angular tolerance, and maximum bandwidth. An iterative process, in which the lag spacing and the number of lags were modified, was used to derive the best plot.

E.1.6.3 Interpreting Semi-Variogram Plots

Ideally, a semi-variogram for a COC would begin with an initial linear increase from the Y-intercept curving relatively sharply into a horizontal constant value as depicted in Figure E-11. This idealized semi-variogram form means that for the overall data set there is excellent continuity. In other words, the samples surrounding point "X" are consistently good predictors of point "X" and that as you get further away from point "X" the estimation variance consistently increases until it flattens out.

E.1.6.4 Atsugi Semi-Variogram Plots

Figures E-12 through E-16 present semi-variogram plots for arsenic, Total BaP TEQs, and 2,3,7,8-TCDD TEQs.

Arsenic

A semi-variogram plot could not be developed for arsenic based on the untransformed or the log transformed data. In both cases the plots were “U” shaped. A plot in which the line goes from higher to lower on the X axis means that there is very little, if any, spatial continuity and that data values closest to a point where the mean is being estimated contain less information than data further away.

Total BaP TEQs

Semi-variogram plots were obtained for Total BaP TEQs for both the untransformed and log transformed results.

Total 2,3,7,8-TCDD TEQs

A semi-variogram plot was obtained for Total 2,3,7,8-TCDD TEQs for the log transformed results.

E.1.7 Semi-Variogram Modeling

Once a semi-variogram plot is developed, the next step in the process is to develop a mathematical function to represent the plot. Figure E-17 presents three common mathematical functions that are used to model semi-variogram plots. The type of model, the nugget, the range, and the sill are required inputs for semi-variogram models. Developing a model is an iterative process that consists of superimposing plots of various model curves on the experimental semi-variogram plot until one is found that looks right. Some obvious questions that come up at this point are: Which one of these models is best? How do you decide which one to use? What happens if you pick the wrong one? Unfortunately there aren't any simple answers. The best model is the one which most closely matches the true semi-variogram for the data, but of course, you will never know what that is unless you exhaustively sample the site. Variowin software provides a quantitative measure of which model provides the best relative fit to the semi-variogram plot. Figure E-18 presents an example of a semi-variogram plot and a model to fit the data.

E.1.8 NAF Atsugi Semi-Variogram Modeling

Figures E-19 through E-21 present semi-variogram models that were developed for Total BaP TEQs (both untransformed and log transformed) and Total 2,3,7,8-TCDD TEQs (log transformed). In all three cases, the gaussian model best fits the data. The fit of the models to the data are relatively good. For example, the gaussian model intersects all but the last data point of the log transformed Total 2,3,7,8-TCDD TEQs data.

Figure E-11
Idealized Form of a Semi-Variogram Plot

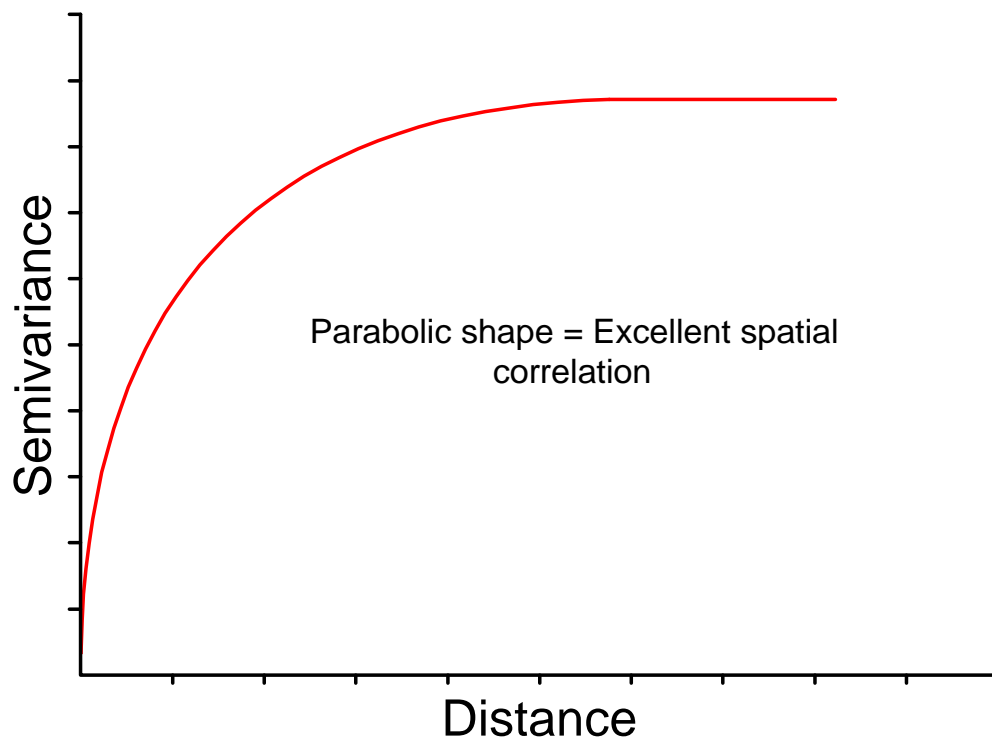


Figure E-12
Arsenic Semi-Variogram

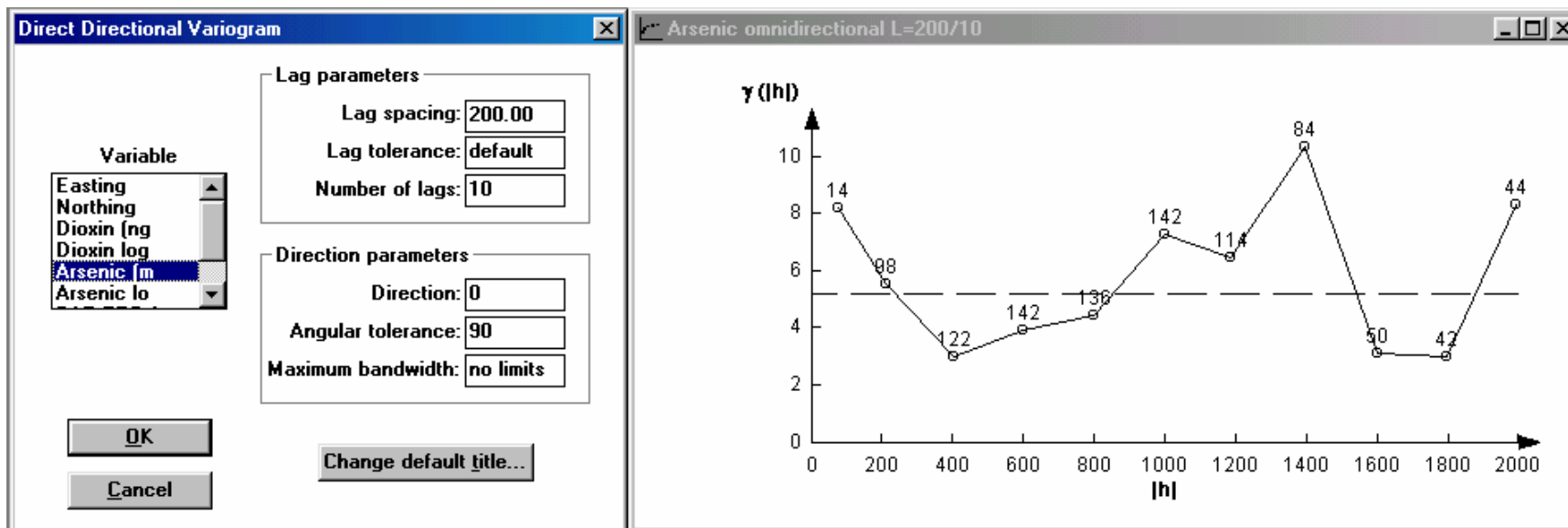


Figure E-13
Arsenic log Transformed Semi-Variogram

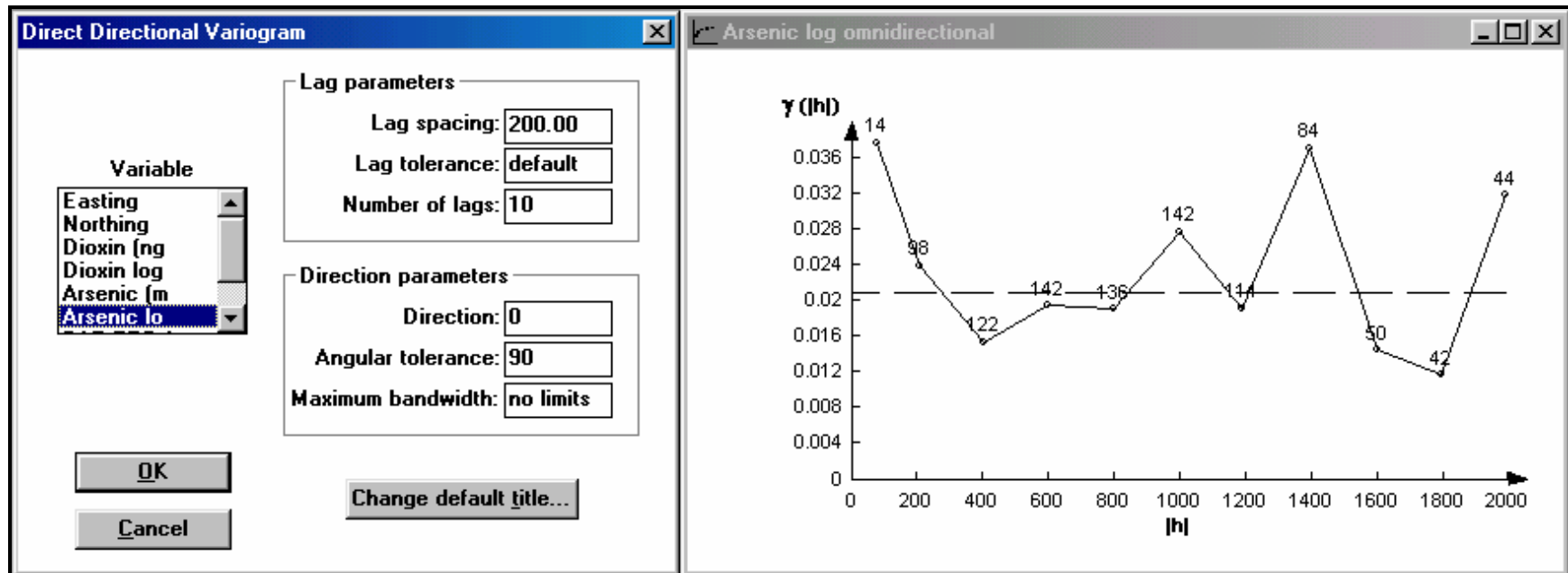


Figure E-14
Total BaP TEQs Semi-Variogram

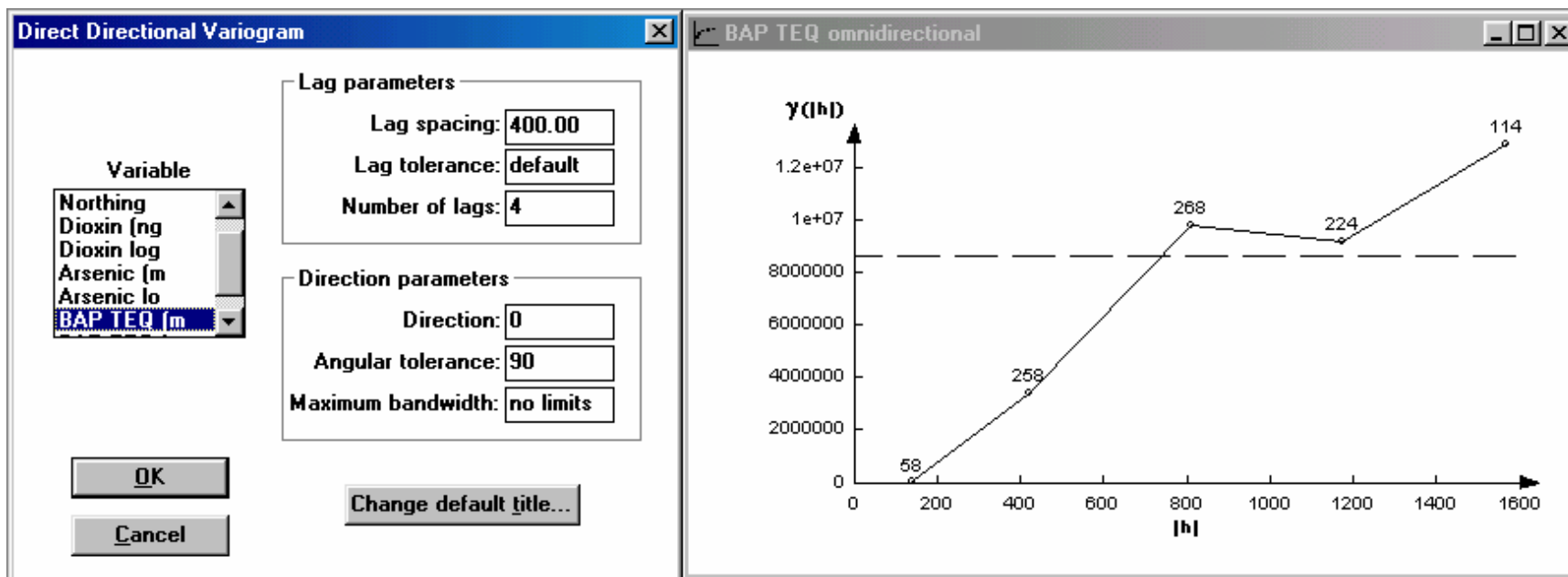


Figure E-15
Total BaP TEQs Log Transformed Semi-Variogram

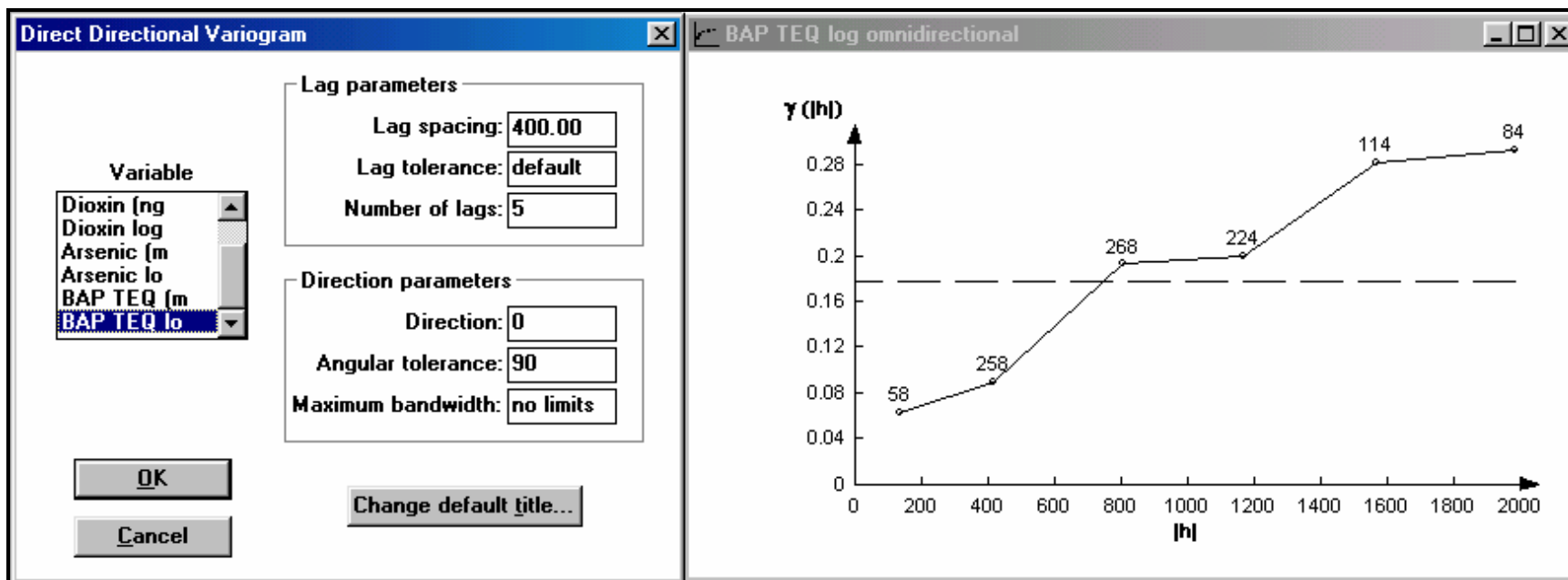


Figure E-16
Total 2,3,7,8-TCDD TEQs Log Transformed Semi-Variogram

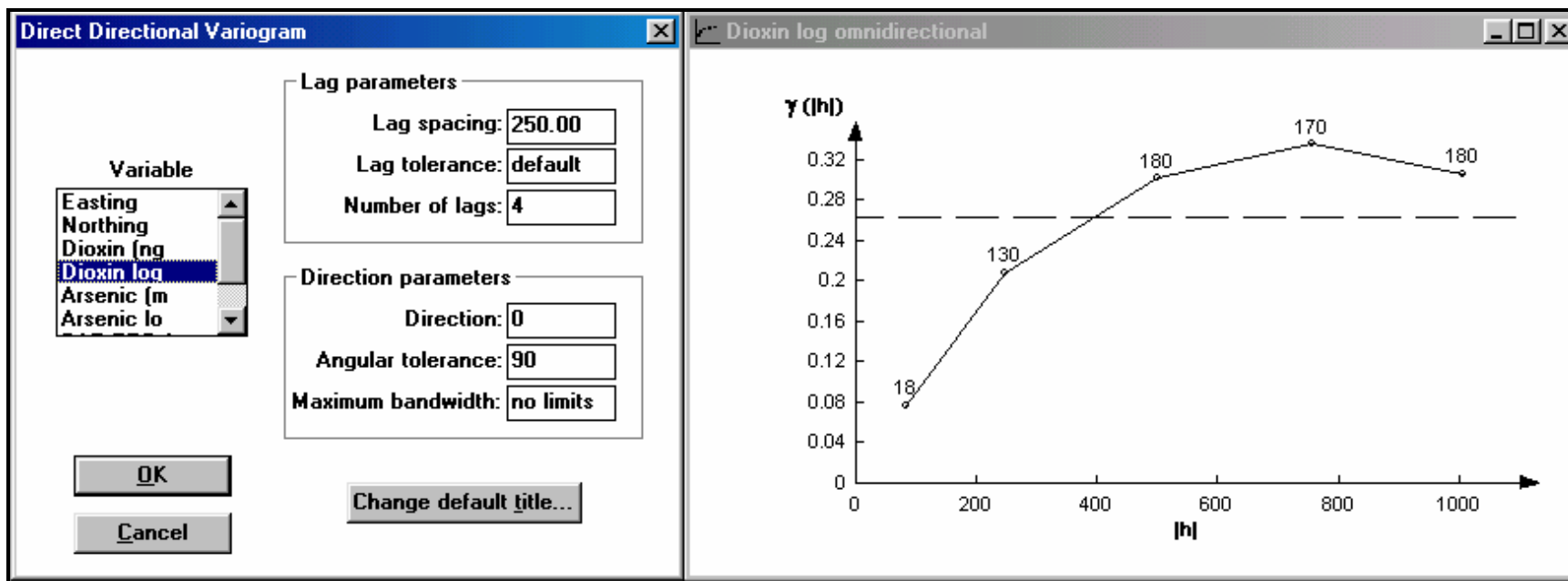


Figure E-17
Mathematical Models for Semi-Variograms

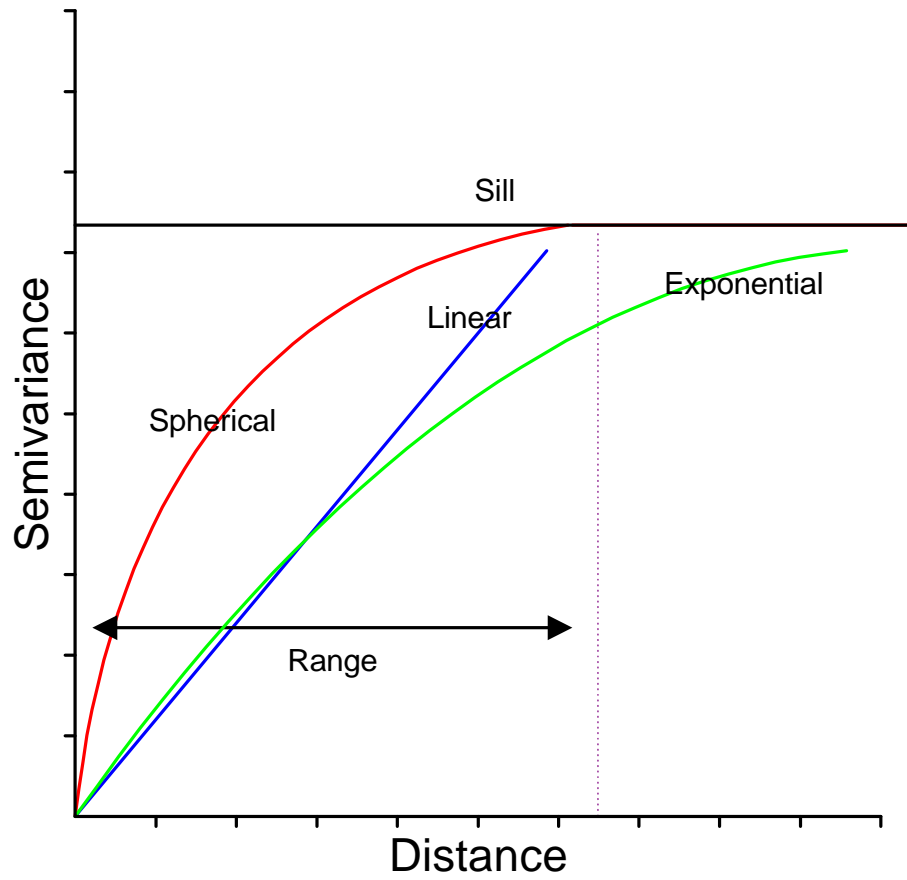


Figure E-18
Example of a Semi-Variogram Plot and a Function fit to the Model

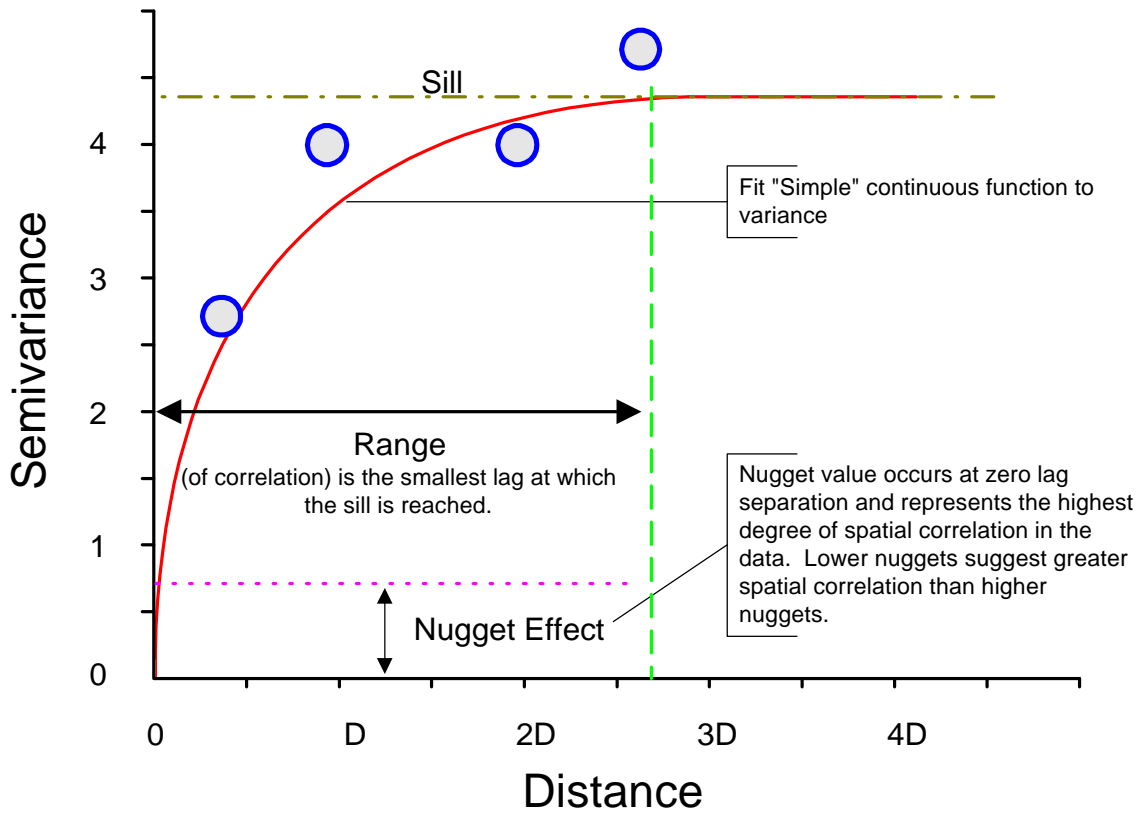


Figure E-19
 Semi-Variogram Model for Total BaP TEQs

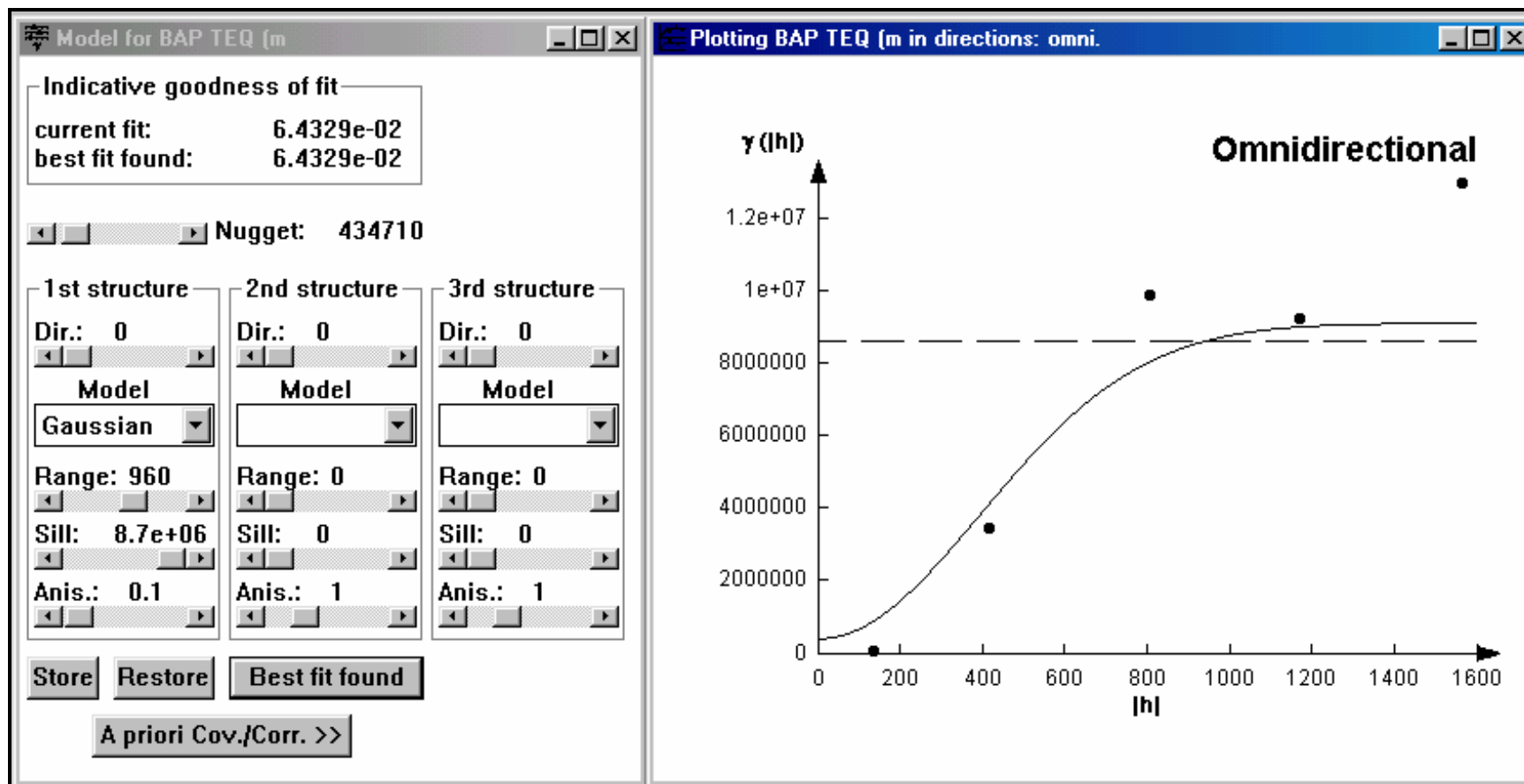


Figure E-20
 Semi-Variogram Model for Total BaP TEQs log Transformed Data

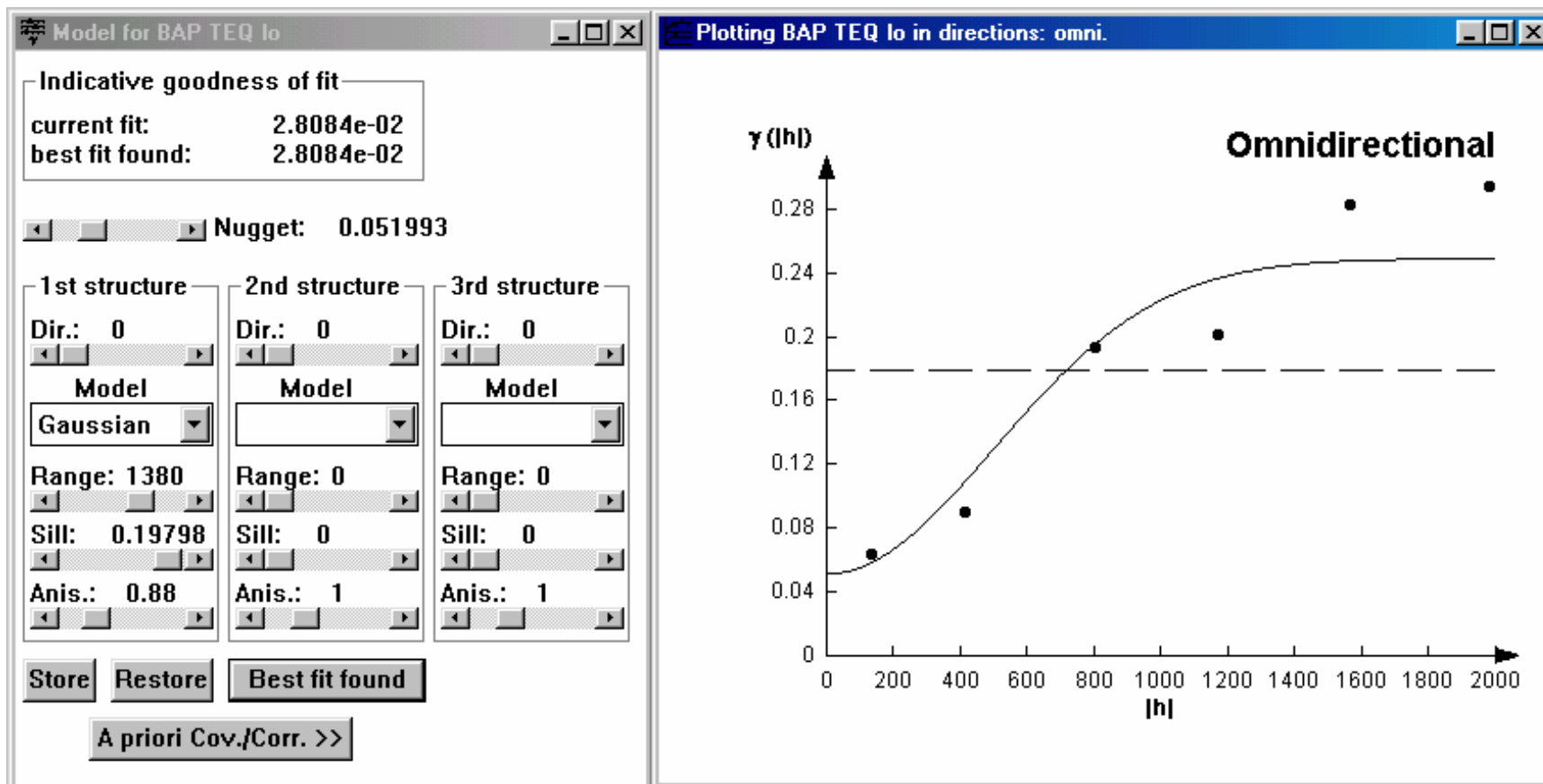


Figure E-21
 Semi-Variogram Model for Total 2,3,7,8-TCDD TEQs log Transformed Data

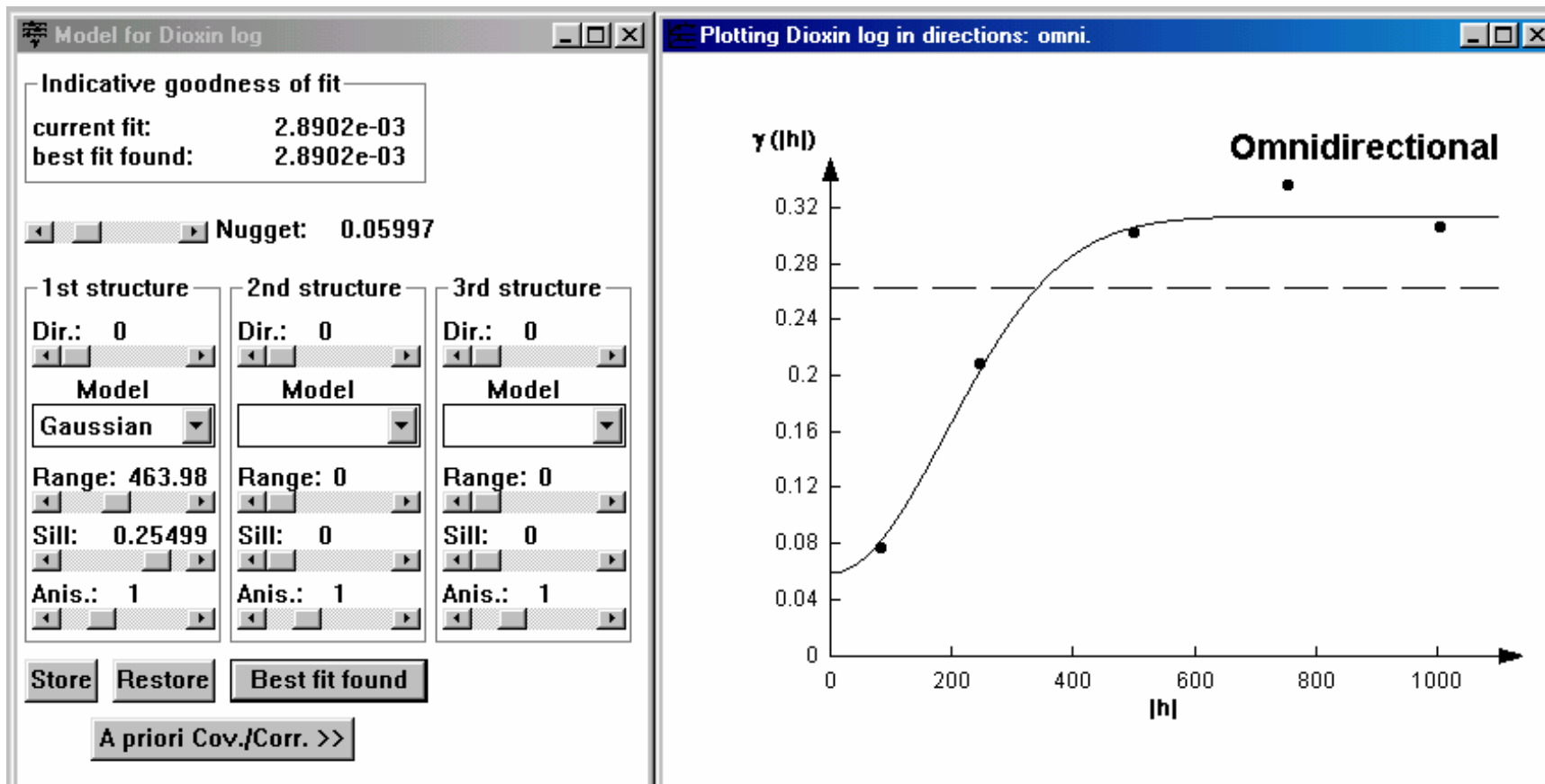


Table E-1
Arsenic
NAF Atsugi Soil Data (0-3") Used in the Trend Analysis

Easting (meters)	Northing (meters)	Arsenic (mg/kg)	Arsenic log (mg/kg)
958.678	4664.959	4.5	0.65
1035.337	5158.597	14.7	1.17
1191.941	4118.4	4	0.6
1226.414	4672.556	4.1	0.61
1262.783	4098.715	4.1	0.61
1263.185	5005.222	4.5	0.65
1404.122	4457.351	4.1	0.61
1470.181	4251.891	3.4	0.53
1488.223	6203.974	5.2	0.72
1600.607	4266.425	5.3	0.72
1608.88	4754.05	3.8	0.58
1626.983	5151.552	3.8	0.58
1635.761	5544.574	4.2	0.62
1649.252	4136.401	3.9	0.59
1683.94	4412.076	3.8	0.58
1686.011	4292.968	3.3	0.52
1698.288	4132.317	11.2	1.05
1724.085	4226.382	4.9	0.69
1772.713	4243.941	6.7	0.83
1776.648	4022.861	4.1	0.61
1839.273	4381.661	5.85	0.77
1928.041	4193.64	4	0.6
1945.816	3948.274	3.7	0.57
2087.728	3400.241	3.7	0.57
2107.175	4602.865	5.2	0.72
2133.927	6525.751	4.6	0.66
2134.162	5027.428	4.4	0.64
2200.264	5966.435	4.7	0.67
2274.158	4382.573	2.6	0.41
2435.694	4921.641	3.9	0.59
2441.42	3838.776	3	0.48
2457.602	5282.404	3.4	0.53
2508.23	3386.038	5.7	0.76

Depth = 0 to 3 inches.

½ the Sample Quantitation Limit was used for non-detects.

Table E-2
Total BaP TEQs
NAF Atsugi Soil Data (0-3”) Used in the Trend Analysis

Easting (meters)	Northing (meters)	BAP TEQ (ug/kg)	BAP TEQ Log (ug/kg)
958.678	4664.959	113.239	2.053996
1035.337	5158.597	57.9805	1.763282
1191.941	4118.4	91.038	1.959223
1226.414	4672.556	120.172	2.079803
1262.783	4098.715	140.971	2.14913
1263.185	5005.222	164.81	2.216984
1404.122	4457.351	97.282	1.988032
1470.181	4251.891	110.928	2.045041
1488.223	6203.974	131.727	2.119675
1600.607	4266.425	72.852	1.862441
1608.88	4754.05	81.66	1.912009
1626.983	5151.552	62.586	1.796477
1635.761	5544.574	129.416	2.111988
1649.252	4136.401	157.42	2.19706
1683.94	4412.076	129.693	2.112917
1686.011	4292.968	64.464	1.809317
1698.288	4132.317	451.5325	2.654689
1724.085	4226.382	147.904	2.16998
1772.713	4243.941	159.459	2.202649
1776.648	4022.861	97.282	1.988032
1839.273	4381.661	105.837	2.024638
1928.041	4193.64	138.66	2.141951
1945.816	3948.274	68.456	1.835412
2087.728	3400.241	17248.4	4.236749
2107.175	4602.865	129.416	2.111988
2133.927	6525.751	150.215	2.176713
2134.162	5027.428	62.848	1.798291
2200.264	5966.435	140.971	2.14913
2274.158	4382.573	117.04	2.068334
2435.694	4921.641	141.618	2.151118
2441.42	3838.776	110.928	2.045041
2457.602	5282.404	558.95	2.747373
2508.23	3386.038	147.904	2.16998

Depth = 0 to 3 inches.

½ the Sample Quantitation Limit was used for non-detects.

Table E-3
Total 2,3,7,8-TCDD TEQs
NAF Atsugi Soil Data (0-3”) Used in the Trend Analysis

Easting (meters)	Northing (meters)	TCDD TEQ¹ (ng/kg)	TCDD TEQ¹ Log (ng/kg)
958.67798	4664.95923	29.8849	1.4755
1035.33740	5158.59747	31.6420	1.5003
1191.94135	4118.39996	43.7766	1.6412
1226.41420	4672.55553	16.4385	1.2159
1262.78284	4098.71489	61.2907	1.7874
1263.18504	5005.22201	35.0485	1.5447
1404.12247	4457.35149	18.0917	1.2575
1470.18094	4251.89091	16.7627	1.2243
1488.22319	6203.97398	25.6174	1.4085
1600.60693	4266.42490	234.7410	2.3706
1608.88030	4754.04976	72.0498	1.8576
1626.98307	5151.55182	88.7440	1.9481
1635.76143	5544.57361	8.7443	0.9417
1649.25223	4136.40052	642.5200	2.8079
1683.93980	4412.07568	73.9341	1.8688
1686.01097	4292.96772	69.6706	1.8430
1698.28804	4132.31701	570.0700	2.7559
1724.08537	4226.38235	356.6535	2.5522
1772.71255	4243.94142	331.6498	2.5207
1776.64818	4022.86115	84.2582	1.9256
1839.27318	4381.66140	97.1836	1.9876
1928.04131	4193.64025	103.8705	2.0165
1945.81582	3948.27390	663.2480	2.8217
2087.72842	3400.24090	49.4723	1.6944
2107.17514	4602.86485	23.8791	1.3780
2133.92687	6525.75108	37.2344	1.5709
2134.16234	5027.42818	8.9927	0.9539
2200.26444	5966.43541	20.4649	1.3110
2274.15780	4382.57313	21.6680	1.3358
2435.69412	4921.64058	20.0806	1.3028
2441.41987	3838.77568	15.1432	1.1802
2457.60173	5282.40414	28.4317	1.4538
2508.23030	3386.03764	54.9044	1.7396

Depth = 0 to 3 inches.

½ the Sample Quantitation Limit was used for non-detects.

¹van Leeuwen, FXR. 1997. Derivation of toxic equivalency factors (TEFs) for dioxin-like compounds in humans and wildlife. Organohalogen Compounds 34:237. 32.

**Appendix F
Toxicity Profiles
for
Constituents of Concern
NAF Atsugi, Japan**

Submitted To:

**U.S. Navy Environmental Health Center
2510 Walmer Avenue, Suite A
Norfolk, VA 23513**

Prepared By:

**Dr. Richard L. DeGrandchamp
University of Colorado
Department of Molecular Toxicology and Environmental Health**

May 2001

E.1 Toxicity Profiles

This appendix presents a short description, or profile, of the toxic effects for the constituents of concern identified in the human health risk assessment. Toxicity profiles are presented for the following constituents:

- Acetaldehyde
- Acetonitrile
- Acetophenone
- Acrolein
- Acrylonitrile
- Benzyl Chloride
- 1,3-Butadiene
- Cadmium
- Crotonaldehyde
- 1,2-Dibromoethane
- Formaldehyde
- Hexachloro-1,3-Butadiene
- Naphthalene
- Dioxins/Furans
- 1,1,2,2-Tetrachloroethane

Acetaldehyde

Acetaldehyde (also known as acetic aldehyde, ethanal, and ethyl aldehyde) is a liquid or vapor (above 69°F) that is heavier than air at ambient temperatures. It has a pungent, fruity odor. The major principle route of exposure is inhalation. At high concentrations, acetaldehyde may irritate the eyes, skin, and respiratory tract. Symptoms of exposure include eyes, nose, and throat irritation, skin burns, cough, central nervous system depressant/depression; and delayed fluid accumulation in the lung. Repeated or long-term exposure can affect the central nervous system producing chronic alcohol-like intoxication.

According to the Occupational Safety and Health Administration (OSHA), the Permissible Exposure Level (PEL) for an adult 8-hour per day exposure to acetaldehyde vapor is 360 mg/cu.m.

EPA has derived the Reference Concentration (RfC) toxicity value for systemic (or non-carcinogenic) effects based on laboratory animal experiments. The Reference Concentration (RfC) toxicity value for systemic (or non-carcinogenic) effects is 6E-2 mg/cu.m. The no-observable-adverse-effect level (NOAEL) is 273 mg/cu.m and was based on degeneration of nasal epithelium (cells lining the nose). The uncertainty factor associated with the RfC is 1000. A factor of 10 was applied to account for interspecies extrapolation, a factor of 10 for taking into account the most sensitive human subpopulation, and a factor of 10 to account for extrapolating subchronic to chronic exposures. At higher concentrations, kidney, reproductive, and teratogenic effects were observed in laboratory animals.

According to EPA, acetaldehyde is a class B2 (probable human carcinogen). This classification is based on laboratory studies showing an increased incidence of nasal tumors in rats and laryngeal tumors in hamsters. The inhalation Unit Risk Factor is 2.2E-6 per µg/cu.m.

Acetonitrile

Acetonitrile (also known ethanenitrile, cyanomethane, ethylnitrile, and methyl cyanide) is a colorless aromatic vapor that is heavier than air under ambient conditions. It is absorbed into the body via inhalation, through the skin, and ingestion. At high concentrations, symptoms of exposure include nose and throat irritation; shortness of breath; nausea and vomiting; chest pain; muscle weakness; stupor and convulsions. However, symptoms may not become obvious for several hours after exposure. The target organs are the respiratory system, heart, central nervous system, liver, and kidneys.

According to National Institute Of Occupational Safety and Health (NIOSH), the Time Weighted Average (TWA) for an adult 8-hour per day exposure to acetonitrile vapor is 34 mg/cu.m. The OSHA PEL is 40 mg/cu.m.

EPA has derived the RfC toxicity value for systemic (or non-carcinogenic) effects based on laboratory animal experiments. The RfC is $9E-3$ mg/cu.m and is based on an increased mortality. The NOAEL is 336 mg/cu.m. The uncertainty factor associated with the RfC is 100. A factor of 3 was incorporated to account for interspecies extrapolation, a factor of 10 was used to protect sensitive human subpopulations, and a factor of 3 was used to account for deficiencies in the design of the experimental studies.

According to EPA, acetaldehyde is a class D carcinogen (not classifiable). There is an absence of human evidence of cancer and the results from laboratory animals are equivocal. That is, some experiments indicate it may have slight carcinogenic potential while others indicate no carcinogenic effects.

Acetophenone

Acetophenone (also 1-phenylethanone, phenyl methyl ketone, acetylbenzene) is colorless liquid or white crystals, with characteristic odor. The substance can be absorbed into the body by inhalation, through the skin and by ingestion. At low concentrations the substance primarily irritates the eyes. Symptoms of exposure to high concentrations may include headache, dizziness, drowsiness, and can lead to unconsciousness. The substance may cause significant effects on the central nervous system.

The American Conference of Governmental Industrial Hygienists (ACGIH) has derived a Threshold Limit Value (TLV) of 49 mg/cu.m. Exposure at high level may result in unconsciousness. Neither NIOSH nor OSHA has developed acceptable exposure levels for acetophenone.

EPA has derived the oral RfD toxicity value for systemic (or non-carcinogenic) effects based on laboratory animal experiments. The RfD is 1E-1 (mg/kg)/day and is based on general toxicity. The NOAEL is 423 mg/kg/day. The uncertainty factor associated with the RfC is 3000. A factor of 10 was incorporated to account for interspecies extrapolation, a factor of 10 to account for the most sensitive subpopulation, a factor of 10 was used to extrapolate from subchronic to chronic exposure, and a factor of 3 was used to account for deficiencies in the design of the experimental studies.

According to EPA, acetophenone is a class D carcinogen (not classifiable). There is an absence of human and animal evidence of cancer.

Acrolein

Acrolein (also known as acraldehyde, acrylaldehyde, acrylic aldehyde, allyl aldehyde, propenal, and 2-propenal) is a vapor with a piercing disagreeable odor. Acrolein does not stay in the air or water for very long. Acrolein is transformed into other chemicals within days of entering air as a vapor. Acrolein dissolves easily in water and within days it changes into a vapor and enters the air. The remaining acrolein left in the water is transformed into other chemicals, which are rapidly degraded. Acrolein that enters the soil is washed out in water and changes into a vapor, and is oxidized. Acrolein is used to make other chemicals and pesticides and is found in some livestock feeds and pesticides. Small amounts of acrolein can be formed when organic matter such as trees and other plants, including tobacco, are burned and also when fuels such as gasoline and oil are burned. It is a normal part of automobile exhaust. Small amounts of acrolein may also be found in foods such as fried foods, cooking oils, and roasted coffee.

Exposure to low concentrations of acrolein may produce mild irritation of the eyes and throat. Symptoms of exposure at high concentrations can include eye, skin, mucous membrane irritation, decreased lung function, delayed accumulation of lung fluid which can lead to chronic respiratory disease. High concentrations can produce labored breathing, burning sensation in the throat. Acrolein primarily enters the body via inhalation. The target organs are the eyes, skin respiratory system, and heart.

According to NIOSH, the TWA for an adult 8 hour per day exposure to acrolein vapor is 0.25 mg/cu.m. The OSHA PEL is also 0.25 mg/cu.m.

EPA has derived the Reference Concentration (RfC) toxicity value for systemic (or non-carcinogenic) effects based on laboratory animal experiments. The RfC is $2E-5$ mg/cu.m and is based on a statistically significant increase in degeneration of nasal epithelium (cells lining the nose). The lowest-observable-adverse-effect level (LOAEL) is 0.92 mg/cu.m. The uncertainty factor associated with the RfC is 1000. A factor of 10 was incorporated to account for interspecies extrapolation, a factor of 10 was used to protect sensitive human subpopulations, and a factor of 10 was used to account for extrapolation from a subchronic to a chronic exposure.

According to EPA, acrolein is a class C carcinogen (possible human carcinogen). There is evidence of tumor formation in laboratory experiments. There are no carcinogenic studies relating to human exposures. EPA has not yet developed a carcinogenic slope factor or unit risk factor for acrolein.

Acrylonitrile

Acrylonitrile (also known as acrylonitrile monomer, cyanoethylene, propenenitrile, 2-propenenitrile, VCN, and vinyl cyanide) is a yellow liquid with an unpleasant sharp, onion- or garlic-like odor at ambient temperatures. Acrylonitrile is used primarily to make plastics, acrylic fibers, and synthetic rubber. Acrylonitrile breaks down quickly in air. It has been found in small amounts in the water and soil near manufacturing plants and hazardous waste sites. In water, acrylonitrile usually breaks down in about 1 to 2 weeks, although this can vary depending on environmental conditions.

Symptoms of exposure at high concentrations can include eye and skin irritation, headache, sneezing, nausea, vomiting, and dermatitis. Acrylonitrile primarily enters the body via inhalation and absorption through the skin. The target organs are the eyes, cardiovascular and heart. At high concentrations the predominant toxic effect is a pneumonia-like change in the lung. acrylonitrile is quickly eliminated from the body. Most acrylonitrile is removed from the body within 24 hours, but approximately 25% of what is taken in binds to tissue in the body.

According to NIOSH, the TWA for an adult 8 hour per day exposure to acrylonitrile vapor is 2.17 mg/cu.m. The OSHA PEL is 4.3 mg/cu.m.

EPA has derived the Reference Concentration (RfC) toxicity value for systemic (or non-carcinogenic) effects based on laboratory animal experiments. The RfC for acrylonitrile is $2E-3$ mg/cu.m and is based on a statistically significant increase in degeneration and inflammation of nasal and respiratory epithelium (cells lining the nose and throat), as well as an increase in mucus secreting cells. The LOAEL is 43 mg/cu.m. The uncertainty factor associated with the RfC is 1000. A factor of 3 was incorporated to adjust from a minimally adverse LOAEL to a NOAEL, a factor of 10 was used to protect sensitive human subpopulations, a factor of 3 was incorporated to account for interspecies extrapolation, and a factor of 10 was used to account for the lack of toxicity information.

According to EPA, acrylonitrile is a class B1 carcinogen (probable human carcinogen). There is evidence of an increase in the incidence of lung tumors in occupationally exposed workers. There is also evidence of brain tumors (astrocytomas) in laboratory animals exposed via drinking water, ingestion, and inhalation. The EPA oral Carcinogenic Slope Factor is $5.4E-1$ per (mg/kg)/day. There are no carcinogenic studies relating to human exposures. EPA has not yet developed a carcinogenic Slope Factor or Unit Risk Factor for acrylonitrile.

Benzyl Chloride

Benzyl chloride (also known as chloromethylbenzene, alpha-chlorotoluene) is a yellow liquid with a pungent aromatic odor.

Symptoms of exposure to high concentrations may include eye, skin, and nose irritation, muscle weakness, irritability, headache, skin eruptions, and fluid accumulation in the lung. Individuals exposed to vapors may experience a burning sensation in the lungs triggering coughing and shortness of breath. Vapors may cause the eyes to redden and become painful, vision may become blurred. Abdominal pain, diarrhea, and vomiting may occur after ingesting liquid benzyl chloride. The target organs are the eyes, skin respiratory system, and central nervous system.

According to NIOSH, the TWA for an adult 8-hour per day exposure to benzyl chloride vapor is 5 mg/cu.m. The OSHA PEL is also 5 mg/cu.m.

EPA has determined that there is inadequate data to derive a Reference Concentration (RfC) toxicity value for toxic systemic (or non-carcinogenic) effects.

According to EPA, benzyl chloride is a class B2 carcinogen (probable human carcinogen). Human data are inadequate and equivocal. Animal carcinogenic data suggest that benzyl chloride produces tumors in several tissues after ingestion or injection. No studies have investigated tumor formation associated with inhalation. The oral carcinogenic Slope Factor is 1.7E-1 per (mg/kg)/day. For drinking water, the Unit Risk Factor is 4.9E-6 per µg/L.

1,3-Butadiene

Butadiene (also known as pyrrolylene biethylene, bivinyl, butadiene, divinyl, erythrene, and vinylethylene) is a colorless gas that is mildly aromatic with a slight gasoline odor. About 75% of the manufactured butadiene is used to make synthetic rubber. Synthetic rubber is widely used for tires on cars and trucks. It breaks down quickly in air by sunlight and in sunny weather half of it breaks down in about 2 hours. When not sunny, it takes a few days for about half of it to break down in the air. It evaporates very quickly from water and soil. Since it evaporates so easily, it is not generally detected in water or soil. Microorganisms in the soil may destroy it. Exposure to butadiene commonly occurs from breathing contaminated air from car and truck exhaust, waste incineration, wood fires and breathing cigarette smoke.

At low concentrations, butadiene may cause slight irritation of the eyes, nose, and throat. Inhalation may induce coughing, drowsiness, blurred vision, nausea, and sore throat. At much higher concentrations, symptoms of exposure may include severe eye, nose, and throat irritation, drowsiness, and lightheadedness. Butadiene liquid may cause frostbite on contact with skin. It has also been reported to produce birth defects and reproductive effects in animals. The target organs are the respiratory system, eyes, central nervous system, and reproductive system.

According to OSHA, the PEL is 2.2 mg/cu.m for an adult 8-hour per day exposure to butadiene vapors.

Currently, EPA has determined that there is inadequate data to derive a Reference Concentration (RfC) or Reference Dose (RfD) toxicity value for toxic systemic (or non-carcinogenic) effects associated with inhaling or ingesting butadiene.

According to EPA, butadiene is a class B2 carcinogen (probable human carcinogen). There is inadequate human evidence of cancer. The results from experiments on laboratory animals indicate that butadiene produces multiple tumors and tumor types. The inhalation Unit Risk Factor is 2.8E-4 per µg/cu.m.

Cadmium

Cadmium (also referred to as cadmium monoxide, cadmium oxide fume, and cadmium fumes) resulting from incineration is an odorless yellow-brown finely divided particulate dispersed in air.

Cadmium is a naturally occurring chemical and is part of all soils and rocks, including coal and mineral fertilizers. The cadmium is extracted during the production of other metals like zinc, lead, and copper. Most cadmium enters the environment from mining, industry and manufacturing, and burning coal and household wastes. Cadmium particles in air can travel long distances before falling to the ground or water where it binds strongly to soil and sediment particles. Some forms of cadmium dissolve in water. Cadmium doesn't break down in the environment, but can change chemical forms depending on environmental conditions. Cadmium stays in the body a very long time and can build up from many years of exposure to low levels.

At high airborne concentrations cadmium can produce fluid accumulation in the lung, breathing difficulty, cough, chest tightness, chest pain, headache, chills, muscle aches, nausea, vomiting, diarrhea, and emphysema. It can lead to loss of protein via urination (following kidney damage), loss of the sense of smell, and produce a mild anemia (reducing red blood cells). The target organs are the respiratory system, kidneys, and blood cells.

According to OSHA, the PEL is 0.005 mg/cu.m for an adult 8-hour per day exposure to cadmium fumes.

EPA has derived the oral Reference Dose (RfD) toxicity value for toxic systemic (or non-carcinogenic) effects based on human studies and laboratory animal experiments. This RfD is based on proteinuria, which is protein excretion in urine symptomatic of kidney damage. The RfD for ingesting cadmium in food is 1E-3 mg/kg/day with an uncertainty factor of 10 accounting for sensitive human subpopulations. The NOAEL is 1E-2 mg/kg/day.

The RfD for ingesting cadmium in drinking water is 5E-4 (mg/kg)/day with an uncertainty factor of 10 accounting for sensitive human subpopulations. The NOAEL is 5E-3 (mg/kg)/day.

According to EPA, cadmium is a class B1 carcinogen (probable human carcinogen). There is limited evidence of an increase in the incidence of lung, trachea, and bronchus tumors in occupationally exposed workers to cadmium fumes and particles. There is also evidence of lung cancer in laboratory animals exposed via inhalation.

Cadmium does not appear to be carcinogenic when ingested. The EPA inhalation Unit Risk Factor is 1.8E-3 per µg/cu.m.

Crotonaldehyde

Crotonaldehyde (also known as 2-butenal, beta-methyl acrolein, and propylene aldehyde) is a white liquid with a suffocating odor. Symptoms associated with high concentrations may include eye, skin and respiratory system irritation, dyspnea (breathing difficulty), and fluid accumulation in the lungs. Target organs are the eyes, skin, respiratory system.

According to NIOSH, the TWA for an adult 8-hour per day exposure to benzyl chloride vapor is 6 mg/cu.m. The OSHA PEL is also 6 mg/cu.m.

At this time, EPA has determined that there is inadequate data to derive a Reference Concentration (RfC) or Reference Dose (RfD) toxicity value for toxic systemic (or non-carcinogenic) effects associated with inhaling or ingesting crotonaldehyde.

According to EPA, crotonaldehyde is a class C carcinogen (possible human carcinogen). There is limited evidence of an increase in the incidence of liver tumors (hepatocellular carcinomas) in laboratory animals exposed to crotonaldehyde in drinking water. However, there is only one animal study that supports this conclusion. Furthermore, the high-dose group of animals had *fewer* tumors than the low-dose group. EPA has not yet developed an oral Slope Factor for crotonaldehyde.

1,2-Dibromoethane

Dibromoethane (also known as ethylene dibromide, ethylene bromide, and glycol dibromide) is a colorless liquid or solid with a sweet odor. It has been used as a pesticide in soil, and on citrus, vegetable, and grain crops.

Dibromoethane is a manufactured chemical. It also occurs naturally in small amounts in the ocean where it is formed, probably by algae and kelp. When released into the environment, it quickly moves to air and will evaporate from surface water and soil to the air. It dissolves in water and will move through soil into the groundwater. Small amounts bind to soil particles. It breaks down slowly in air (over 4-5 months), more quickly in surface water (2 months), and is resistant to break down in groundwater. It is not expected to accumulate in plants or animals.

Exposure may occur via inhalation, ingestion, or absorption through the skin. Symptoms of exposure at high concentrations may include eye, skin (dermatitis with vesiculation), and respiratory irritation, liver and kidney damage. Exposed individuals may experience burning sensation in the lungs, cough, labored breathing, shortness of breath, and finally unconsciousness. The target organs are skin, respiratory system, liver, kidneys, and reproductive system.

According to NIOSH, the TWA for an adult 8-hour per day exposure to dibromoethane vapor is 0.35 mg/cu.m. The OSHA PEL is 154 mg/cu.m.

At this time, EPA has determined that there is inadequate data to derive a Reference Concentration (RfC) or Reference Dose (RfD) toxicity value for toxic systemic (or non-carcinogenic) effects associated with inhaling or ingesting dibromoethane.

According to EPA, dibromoethane is a class B2 carcinogen (probable human carcinogen). There is no evidence of an increase in tumor incidence in humans. However, tumors in the skin, stomach, liver, and respiratory system have been observed. The EPA inhalation Unit Risk Factor is 2.2E-4 per $\mu\text{g}/\text{cu.m}$. It is based on nasal cell cancer.

Formaldehyde

Formaldehyde (also known as methanal, methyl aldehyde, methylene oxide) is a nearly colorless gas with a pungent, suffocating slightly sweet odor. Symptoms of exposure at high concentrations can include eyes, nose, throat, and respiratory system irritation, lacrimation (discharge of tears), cough, and bronchitis spasm. Routes of exposure are inhalation and absorption through the skin. The target organs are the eyes and skin, and respiratory tract where it is corrosive to surface tissue. Repeated or prolonged formaldehyde exposure may also produce skin and respiratory sensitizations. These can result in asthmatic or hypersensitivity reactions.

According to NIOSH, the TWA for an adult 8-hour per day exposure to formaldehyde vapor is 2.0E-2 mg/cu.m. The OSHA PEL is 9.2E-1 mg/cu.m.

EPA has derived the Reference Dose (RfD) toxicity value for toxic systemic (or non-carcinogenic) effects based on laboratory animal experiments. The RfD for formaldehyde is 2E-1 (mg/kg)/day and is based on a statistically significant decrease in body weight as well as histopathological changes (tissue damage) in numerous organs. The NOAEL is 15 (mg/kg)/day. The uncertainty factor associated with the RfC is 100 and accounts for inter- and intraspecies differences.

According to EPA, formaldehyde is a class B1 carcinogen (probable human carcinogen). There is evidence of an increase in the incidence of lung and nasopharyngeal (nose and mouth) tumors in occupationally exposed workers. Similar tumors have been detected in laboratory animals exposed via drinking water, ingestion, and inhalation. The EPA Inhalation Unit Risk is 1.3E-5 per µg/cu.m.

Hexachloro-1,3-Butadiene

Hexachloro-1,3-butadiene (also known as HCBd, hexachloro-1,3-butadiene; 1,3-hexachlorobutadiene, and perchlorobutadiene) is a clear colorless liquid with a mild turpentine-like odor under ambient conditions. It is mainly used to make rubber products. It is also used as an organic solvent, lubricants, and as a heat transfer liquid, and as a hydraulic fluid. In air, half of it may be broken down to other chemicals within 60 days. In water, half of it may be broken down to other chemicals within about 30 days and is rapidly destroyed in soil. Hexachloro-1,3-butadiene can accumulate in fish and shellfish.

Although no studies have been conducted on humans, studies in mice have shown irritation of the nose when large amounts were breathed over a short time. It can be absorbed into the body via vapor inhalation, through the skin and by ingestion. Symptoms of exposure at high concentrations can include irritation eyes, skin, and respiratory system. Target organs are the eyes, skin, respiratory system, and kidneys. Exposed individuals may cough, experience burning in the respiratory system and develop a sore throat. Repeated or prolonged exposure may cause skin sensitization. Those exposed individuals may subsequently experience allergic hypersensitivity.

According to NIOSH, the TWA for an adult 8-hour per day exposure to hexachloro-1,3-butadiene vapor is 2.4E-1 mg/cu.m. There is no OSHA PEL.

At this time, EPA has determined that there is inadequate data to derive a Reference Concentration (RfC) or Reference Dose (RfD) toxicity value for toxic systemic (or non-carcinogenic) effects associated with inhaling or ingesting hexachloro-1,3-butadiene.

According to EPA, hexachloro-1,3-butadiene is a class C carcinogen (possible human carcinogen). There is no evidence of an increase in the incidence tumors in occupationally exposed workers. However, an increased incidence of kidney tumors has been observed in laboratory animals exposed to hexachloro-1,3-butadiene added to food. The EPA oral Slope Factor is 7.8E-2 per (mg/kg)/day. The drinking water Unit Risk Factor is 2.2 per µg/L. A inhalation Unit Risk Factor has been calculated from oral exposure data and is 2.2E-5 µg/cu.m .

Naphthalene

Naphthalene (also known as naphthalin, tar camphor, or white tar) is a colorless to brown solid, with an odor of mothballs. Naphthalene evaporates quickly. In bodies of water such as lakes or rivers, naphthalene does not absorb strongly to soils or sediments, but instead, it tends to evaporate into the air. When naphthalene is released into the air, humidity and sunlight destroy naphthalene within a few hours. In water and soil, naphthalene is either destroyed by bacteria or evaporates into the air within a few hours or days.

Routes of naphthalene exposure are inhalation and absorption through the skin or eye contact. Symptoms of exposure at high concentrations may include eye irritation, headache, confusion, excitement, malaise (vague feeling of discomfort), nausea, vomiting, abdominal pain, bladder irritation, and profuse sweating. Jaundice, hematuria (blood in the urine), kidney failure, dermatitis (inflammation of the skin), optical neuritis (inflammation of optical nerves), and corneal damage (damage to the covering of the eye) may develop with prolonged exposure to high concentrations. The target organs are the eyes and skin, blood, liver, kidneys, and central nervous system.

According to NIOSH, the TWA for an adult-8 hour per day exposure to naphthalene vapor is 50 mg/cu.m. The OSHA PEL is also 50 mg/cu.m.

EPA has derived the oral Reference Dose (RfD) toxicity value for toxic systemic (or non-carcinogenic) effects based on laboratory animal experiments. The RfD for naphthalene is 50 (mg/kg)/day and is based on a statistically significant decrease in body weight as well as histopathological changes in numerous organs. The NOAEL is 100 (mg/kg)/day. The uncertainty factor associated with the RfD is 3000. A factor of 10 was used to account for inter- and intra-species differences, a factor of 10 to protect sensitive human subpopulations, a factor of 10 to extrapolate from subchronic to chronic exposure, and a factor of 3 to account for deficiencies in the database.

According to EPA, naphthalene is a class C carcinogen (possible human carcinogen). There is inadequate evidence of tumor formation in occupationally exposed workers. However, benign tumors have been detected in laboratory animals exposed via inhalation. An inhalation Unit Risk Factor has not been developed for naphthalene due to the weak evidence that naphthalene is a human carcinogen.

Dioxins/Furans

Dioxins/Furans (dioxins) are a group of 75 chemically-related compounds. Dioxins (also known as dioxin, dioxine, TCDBD, TCDD, and 2,3,7,8-TCDD) form a colorless to white, crystalline solid. The most studied and toxic chemical form of the dioxin family is 2,3,7,8-tetrachloro-di-benzo-p-dioxin (2,3,7,8-TCCDD). Dioxins enter the environment as mixtures containing a number of individual components. They (mainly 2,3,7,8-TCDD) may be formed during the chlorine bleaching process at pulp and paper mills. They are also formed during chlorination of waste and drinking water in municipal treatment plants and can occur as contaminants in the manufacture of certain organic chemicals. Dioxins are released into the air in emissions from municipal solid waste and industrial incinerators. When released into the air, dioxins may be transported long distances. Dioxins are broken down by sunlight, evaporate to air, but most attach to soil and sediment in water. Dioxins may accumulate in the food chain, resulting in measurable levels in animals and humans. Exposure to dioxins in the general population occurs primarily from eating food. Sources of dioxin are meat, dairy products, and fish (which may make up more than 90% of the intake for the general population).

The most noted health effect in people exposed to large amounts of dioxin is chloracne. Chloracne is a severe skin disease with acne-like lesions that occur mainly on the face and upper body. Other skin effects noted in people exposed to high doses of 2,3,7,8-TCDD include skin rashes, discoloration, and excessive body hair. Symptoms of exposure to high concentrations of dioxins may also include eye irritation, allergic dermatitis, porphyria (damage to blood forming cells), gastrointestinal disturbance, reproductive impairment, teratogenic effects (birth defects). Target organs are the eyes, skin, liver, kidneys, and reproductive system

Neither NIOSH nor OSHA have developed acceptable exposure levels for occupational exposures to dioxins.

At this date, EPA has determined that there is inadequate data to derive a Reference Concentration (RfC) or Reference Dose (RfD) toxicity value for toxic systemic (or non-carcinogenic) effects.

According to EPA, hexachlorodibenzo-p-dioxin mixtures are class C carcinogens (possible human carcinogen). There are no published epidemiological studies in occupationally exposed workers. However, liver tumors have been detected in animal studies. The oral Slope Factor is 6.2E3 (mg/kg)/day. The drinking water Unit Risk Factor is 1.8E-1 per µg/L. The inhalation Unit Risk Factor is 1.3 µg/cu.m.

1,1,2,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane (also known as acetylene tetrachloride and symmetrical tetrachloroethane) is a colorless to pale-yellow liquid with a pungent, penetrating, sweet, chloroform-like odor. It is used to clean and degrease metals, and in paints and pesticides. Most 1,1,2,2-tetrachloroethane released into the environment eventually moves in the outside air or groundwater. Breakdown of this chemical in both the air and groundwater is slow. Half of the chemical is expected to disappear from groundwater in 1-3 months and from air in about 2 months. Low levels of 1,1,2,2-tetrachloroethane can be present in both indoor and outdoor air.

Symptoms associated with exposure to high concentrations may include abdominal pain, cough, dizziness, headache, nausea, and sore throat. Low levels of 1,1,2,2-tetrachloroethane can be present in both indoor and outdoor air. Prolonged exposure can produce jaundice, hepatitis, liver tenderness, dermatitis, monocytosis (increased blood monocytes), kidney damage. Target organs are skin, liver, kidneys, central nervous system, and gastrointestinal tract

According to NIOSH, the TWA for an adult 8-hour per day exposure to 1,1,2,2-tetrachloroethane vapor is 7 mg/cu.m. The OSHA PEL is 35 mg/cu.m.

At this date, EPA has determined that there is inadequate data to derive a Reference Concentration (RfC) or Reference Dose (RfD) toxicity value for toxic systemic (or non-carcinogenic) effects.

According to EPA, 1,1,2,2-tetrachloroethane is a class C carcinogen (possible human carcinogen). There are no published epidemiological studies in occupationally exposed workers. However, liver tumors have been detected in animal studies. The oral Slope Factor is 2.0E-3 (mg/kg)/day. The drinking water Unit Risk Factor is 5.8E-6 per µg/L. The inhalation Unit Risk Factor is 5.8E-5 µg/cu.m.