Midfield Satellite Concourse Draft EIR

Appendix C

Human Health Risk Assessment

1.0 INTRODUCTION

The human health risk assessment (HHRA) presented in this appendix estimates cancer, chronic non-cancer, and acute health risks associated with exposure to toxic air contaminants that would be emitted as a result of the Los Angeles International Airport (LAX) Midfield Satellite Concourse (MSC) North Project and future phase(s) of the MSC Program.

1.1 Purpose

The objective of the HHRA is to assess incremental changes to health impacts for people exposed to toxic air contaminants (TAC) resulting from construction and operations associated with the proposed MSC North Project and future phase(s) of the MSC Program. The results of the HHRA identify whether the proposed MSC North Project or future phase(s) of the MSC Program would increase health risks for people living, working, recreating, or attending school near LAX.

Due to the size and scale of the MSC Program, LAWA proposes to develop the MSC Program in phases. Phase I ("MSC North Project") of the MSC Program is the construction of the northern portion of the multi-story MSC facility and associated improvements. The MSC North Project is intended to improve the terminal operations, concessions facilities, and overall passenger experience at LAX. The facility would be designed to serve both domestic and international traffic. The MSC North Project would provide LAWA with the flexibility to accommodate demand for aircraft gates while modernizing other terminals at LAX and reduce reliance on the West Remote gates. Later phase(s) would involve the development of the remaining components of the MSC Program described above and are referred to herein as the future phase(s) of the MSC Program. The proposed Project would not alter the airspace traffic, runway operational characteristics, or the practical capacity of the airport. The Project would not increase passenger or gate capacity at LAX and would not increase flights and/or operations at LAX.

The HHRA includes a quantitative evaluation of TAC emissions from both construction and operational sources for the MSC North Project, as well as a qualitative discussion of TAC emissions from operational sources of the future phase(s) of the MSC Program. These emissions form the basis of estimating impacts from TAC. The 2019 Future With MSC North Project scenario is compared against the 2019 Future Without MSC North Project scenario; baseline concentrations for the construction of the proposed Project are assumed to be zero.

Possible human health risks associated with the proposed Project were estimated using modeled TAC concentrations in air and standard methods developed by the California Environmental Protection Agency (CalEPA) and U.S. Environmental Protection Agency (USEPA). Health impacts were evaluated for cancer risks and chronic and acute non-cancer health hazards. An impact was considered significant if cancer or non-cancer health hazards exceeded regulatory thresholds.

1.2 General Approach

This HHRA focuses on analysis of incremental human health risks and hazards associated with airborne releases of TAC during construction and operation of the proposed MSC North Project. Cancer risks as well as chronic and acute non-cancer health hazard assessments all depend on estimating TAC concentrations in air in two steps: (1) estimation of emissions of TAC associated with construction and subsequent modeling of dispersion of those TAC to downwind receptor locations; and (2) estimation of health risks associated with inhalation of TAC. Estimated emission rates were used, along with meteorological and geographic information, as inputs to an air dispersion model. The dispersion model predicted possible concentrations of TAC released during airport construction within the study area around the airport. Modeled concentrations were used to estimate human health risks and hazards, which serve as the basis of the significance determinations for the proposed MSC North Project.

Potential impacts to human health were estimated using modeled TAC concentrations in air and methods developed by the CalEPA and the USEPA, as described below. Results of the analysis were then interpreted by comparing incremental cancer risks and chronic non-cancer health hazards to regulatory thresholds. For purposes of assessing the significance of any health impacts, these comparisons were made for maximally exposed individuals (MEI) at locations where maximum concentrations of TAC were predicted by air dispersion modeling. An impact was considered significant if cancer risks and/or chronic non-cancer health hazards for MEI exceeded regulatory thresholds. In addition, the range of possible risks and hazards was addressed by evaluating risks for all modeled locations within the defined study area.

Methods for conducting this HHRA are presented in Section 2; TAC emission calculation approach and results and a discussion of the dispersion analysis are presented in Section 3; associated health risks are presented in Section 4; and uncertainties are discussed in Section 5.

2.0 METHODOLOGY

The HHRA was conducted in four steps as defined in South Coast Air Quality Management District[1] (SCAQMD), California Environmental Protection Agency[2] (CalEPA) and U.S. Environmental Protection Agency[3] (EPA) guidance, consisting of:

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[1] South Coast Air Quality Management District, Supplemental Guidelines for preparing Risk Assessment for the Air Toxics Hot Spots Information and Assessment Act (AB2588). July 2005.

[2] California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines, Part I: Technical Support Document for the Determination of Acute Reference Exposure Levels for Airborne Toxicants, March 1999; Air Toxic Hot Spots Program Risk Assessment Guidelines, Part IV: Technical Support Document for Exposure Assessment and Stochastic Analysis, September 2000; Air Toxics Hot Spots Program Risk Assessment Guidelines, Part III: The Determination of Chronic Reference Exposure Levels for Airborne Toxicants, February 23, 2000; Air Toxics Hot Spots Program Risk Assessment Guidelines, Part II: Technical Support Document for Describing Available Cancer Potency Factors, updated August 2003; Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, August 2003.

- Identification of TACs that may be released in sufficient quantities to present a public health risk (Hazard Identification);
- Analysis of ways in which people might be exposed to TACs (Exposure Assessment);
- Evaluation of the toxicity of TACs that may present public health risks (Toxicity Assessment); and
- Characterization of the magnitude and location of potential health risks for the exposed community (Risk Characterization)

Specifically, this HHRA addresses the following issues:

- Quantitative assessment of potential cancer risks and chronic non-cancer health hazards due to the release of TACs associated with the proposed MSC North Project construction and operational activities.
- Quantitative evaluation of possible acute non-cancer health hazards due to the release of TACs associated with the proposed MSC North Project construction and operational activities.
- Qualitative assessment of potential cancer risks and chronic non-cancer health hazards due to the release of TACs associated with the future phase(s) of the MSC Program operational activities.
- Qualitative evaluation of possible acute non-cancer health hazards due to the release of TACs associated with the future phase(s) of the MSC Program operational activities.

Protective[4] methods that are likely to overestimate rather than underestimate possible health risks were used to estimate cancer risks and chronic non-cancer health hazards. For example, incremental risks and hazards associated with the proposed MSC North Project were calculated for individuals assumed to live, work, recreate, or attend school at locations where TAC concentrations are predicted to be highest. Further, these individuals were assumed to be exposed to TAC for almost all days of the year and for many years to maximize estimates of possible exposure. These "maximally exposed individuals" or MEI are hypothetical individuals used to help ensure that the HHRA is protective.

Risk estimates for MEI are, therefore, upper-bound predictions that could be experienced by people working or living near LAX who breathe TAC released during construction activities associated with the proposed Project. If hypothetical individuals that receive the highest exposures are protected, actual members of the population near LAX will also be protected.

The HHRA for the proposed MSC North Project also evaluates the potential for short-term (1-hour) exposures to cause immediate, or acute, non-cancer health impacts. These estimates are

[3] U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Risk Assessment Guidance for Superfund, Vol I, Human Health Evaluation Manual (Part A), Interim Final, EPA/540/1-89/002, December, 1989.

[4] The terms "protective" and "conservative" are often used interchangeably to indicate that risk assessment methods were designed to err on the side of over-estimating risk. "Protective is used in this HHRA to avoid confusion over what "conservative" means in different situations. For example, a "conservative" estimate of the time that someone might live in a given residence could imply to some readers that a minimum time was identified.

also intentionally conservative; they use, for example, the highest 1-hour concentrations for assessing acute impacts regardless of whether individuals might have access to locations where maximum concentrations occur. This approach helps ensure that actual exposure concentrations in off-airport areas are not underestimated.

2.1 Selection of TACs of Concern

In general, TAC of concern used in the HHRA are based on TAC identified under California Assembly Bill AB2588 and for which the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) has developed cancer slope factors, chronic reference levels, and/or acute reference levels.

The list of TAC of concern used in this HHRA was developed using regulatory lists, emissions estimates, human toxicity information, results of the LAX Master Plan HHRA, and a review of health risk assessments for construction activities included in the LAX South Airfield Improvement Project (SAIP) Final EIR,[5] LAX Crossfield Taxiway Project (CFTP) Final EIR,[6] LAX Bradley West Project Final EIR,[7] LAX Central Utility Plant Replacement Project (CUP-RP) Final EIR,[8] and LAX Master Plan Final EIR.[9] This list of TAC was further refined to include only TAC with chronic Reference Exposure Levels (RELs), acute RELs, and cancer potency values identified by the California OEHHA. The resulting list of TAC of concern evaluated in this HHRA is provided in **Table 2-1**.

5 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) South Airfield Improvement Project, August 2005.

6 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Crossfield Taxiway Project, January 2009.

7 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Bradley West Project, September 2009.

8 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Central Utility Plant Replacement Project, January 2009.

9 City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004.

Table 2-1

Toxic Air Contaminants (TAC) of Concern for the proposed Project

Toxic Air Contaminant	Type
Acetaldehyde	VOC
Acrolein	VOC
Benzene	VOC
1,3-Butadiene	VOC
Ethylbenzene	VOC
Formaldehyde	VOC
n-Hexane	VOC
Methyl alcohol	VOC
Methyl ethyl ketone	VOC
Propylene	VOC
Styrene	VOC
Toluene	VOC
Xylene (total)	VOC
Naphthalene	PAH
Arsenic	PM-Metal
Cadmium	PM-Metal
Chromium VI	PM-Metal
Copper	PM-Metal
Lead	PM-Metal
Manganese	PM-Metal
Mercury	PM-Metal
Nickel	PM-Metal
Selenium	PM-Metal
Vanadium	PM-Metal
Diesel PM	Diesel Exhaust
Chlorine	PM-Inorganics
Silicon	PM-Inorganics
Sulfates	PM-Inorganics

Notes:
PAH = Polycyclic aromatic hydrocarbons
PM = Particulate matter
VOC = Volatile organic compounds

Sources: Ricondo & Associates, Inc., December 2013.

2.2 Exposure Assessment

2.2.1 Exposure Populations

For analysis of the proposed Project, the HHRA selected the following receptors for quantitative evaluation: on-airport/off-site workers, on-airport/on-site workers, off-airport workers, off-airport adult residents, off-airport child residents, and off-airport school children. Each receptor represents a unique population and set of exposure conditions. As a whole, they cover a range of exposure scenarios for people who may be affected by LAX emissions to the greatest extent. Receptors for which exposure scenarios are prepared were selected to provide protective risks and hazards estimates for MEI and to demonstrate the range of risks and hazards in the vicinity of the airport. As previously noted, by providing estimates for the most exposed individuals for determination of significance, the general population is protected.

2.2.2 Exposure Pathways

Different receptors (e.g., off-site workers, school children) could be exposed to TAC in several ways, deemed exposure pathways. An exposure scenario is developed for each receptor that considers various pathways by which they might be exposed to TAC.

An exposure pathway consists of four parts:

- A TAC source (e.g., diesel/gasoline engines)
- A release mechanism (e.g., diesel/gasoline engine exhaust)
- A means of transport from point of release to point of exposure (e.g., local winds)
- A route of exposure (e.g., inhalation)

If any of these elements of an exposure pathway is absent, no exposure can take place, and, the pathway is considered incomplete. Incomplete pathways were not evaluated in this HHRA. In addition, some exposure pathways may be complete, but may result in little or negligible exposure. Thus, numerous possibly complete exposure pathways exist for receptors at or near LAX, but most are anticipated to make minimal to negligible contribution to total risks and hazards. For this HHRA, the inhalation pathway is the most important complete exposure pathway, contributing the majority of risk associated with the proposed MSC North Project, and was therefore quantitatively evaluated for all receptors.

Other exposure pathways -- including deposition of TAC onto soils and subsequent exposure via incidental ingestion of this soil, uptake from soil into homegrown vegetables, and other indirect pathways -- were addressed quantitatively in the programmatic HHRA developed for the LAX Master Plan EIR[10] (see LAX Master Plan Final EIR Technical Report 14a and Technical

[10] City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004.

Report S-9a). No pathway other than inhalation was found to be an important contributor to exposure and thus to risk/hazard. Based on this previous analysis, pathways other than inhalation were not assessed in this HHRA.

2.2.3 Exposure Concentrations

Analyses of cancer risk and non-cancer health hazards, both chronic and acute, were included in the exposure assessment for the receptors identified in Section 2.2.1. Chronic and acute exposure to TAC from Project-specific construction activities and operational sources were estimated by:

- Estimation of construction source emissions for annual (for chronic exposure) and for peak daily (for acute exposure).
- Dispersion modeling of construction and operational emissions over an area that consists of the airport property and urban areas to the north, east, and south.

Modeled concentrations of TAC at locations where highest concentrations are anticipated were used to estimate incremental human health risks and hazards. These estimates serve as the basis for significance determinations for the proposed MSC North Project. To estimate cancer risks and the potential for adverse non-cancer health hazards, TAC intakes via inhalation for each receptor were estimated.

In 2009, the EPA released the *Risk Assessment Guidance for Superfund (RAGS), Part F*[11] (hereafter referred to as RAGS Part F). This guidance recommends that inhalation dosimetry methodology be used to calculate inhalation exposures. In this approach, the concentration of the chemical in air is the exposure metric (e.g., milligrams per cubic meter, mg/m^3), and risks are estimated using a unit risk that predicts cancer risk for each mg/m^3. Inhalation rate and body weight are no longer used in the calculations. RAGS Part F methodology is currently used exclusively by USEPA for calculating risks and hazards for the inhalation pathway and has become universally applied within the United States.

RAGS Part F recommends that the concentration of the chemical in air be used as the exposure metric resulting in **Equation 2-1** for an exposure concentration:

11 U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Risk Assessment Guidance for Superfund, Vol. I, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment), Final, EPA-540-R-070-002, OSWER 9285.7-82, January 2009.

Equation 2-1

RAGS Part F Chronic Exposures

$$EC = (CA \times ET \times EF \times ED) / AT$$

Where:

EC	=	exposure concentration (μg/m^3)
CA	=	chemical concentration in air (μg/m^3)
ET	=	exposure time (hours/day)
EF	=	exposure frequency (days/year)
ED	=	exposure duration (years)
AT	=	average time; e.g., the period over which exposure is averaged, ED in years x 365 days/year x 24 hours/day (hours)

Source: U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Risk Assessment Guidance for Superfund, Vol. I, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment), Final, EPA-540-R-070-002, OSWER 9285.7-82, January 2009.

Averaging time for estimation of cancer risk is 70 years or 25,550 days. Cancer risk is evaluated as the lifetime average daily dose (LADD) according to CalEPA and USEPA guidance. Averaging time for estimation of non-cancer health hazards is the duration of exposure, expressed in days. Non-cancer health hazards are evaluated as average daily dose (ADD) over the period of exposure, again, following CalEPA and USEPA guidance.

Cancer risks and the non-cancer health hazards are then calculated using the **Equation 2-2**:

Equation 2-2

RAGS Part F Cancer Risks Characterized by an Inhalation Unit Risk and Hazard Quotients

$$Risk = IUR \times EC$$

$$HQ = EC / (RfC \times 1000\ \mu g/mg)$$

Where:

IUR	=	inhalation unit risk (μg/m^3)$^{-1}$
EC	=	exposure concentration (μg/m^3)
HQ	=	hazard quotient
RfC	=	reference concentration (mg/m^3)

Source: U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Risk Assessment Guidance for Superfund, Vol. I, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment), Final, EPA-540-R-070-002, OSWER 9285.7-82, January 2009.

Assessment of potential chronic human health impacts due to release of TAC associated with the proposed Project assumes that exposure concentrations of TAC are constant over a 70-year period for residential receptors. For this analysis, chemical concentrations, C, from construction were assumed to continue for five years. For the remaining 65 years of a 70 year lifetime, construction emissions were assumed to be zero. Risk estimates using these predicted TAC concentrations were based locations where construction impacts were likely to be maximal. Such risk estimates overestimate risks for most people living, working or attending school near LAX. This conservatism (protection) is built into the risk assessment developed for the proposed Project to help counter any future changes in the proposed Project construction that cannot now be anticipated quantitatively.

Exposure parameters used to calculate LADD and ADD for all receptors for the inhalation pathway are summarized in **Table 2-2**. Exposure parameters are based on CalEPA Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities,[12] USEPA Exposure Factors Handbook,[13] and CalEPA Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.[14] Although USEPA has recently released another version of the Exposure Factors Handbook[15] that updates some of the recommended exposure parameters, the exposure parameters in Table 2-2 were selected to maintain consistency with the health risk analyses conducted for the LAX Master Plan Final EIR,[16] the SAIP EIR,[17] the CFTP EIR,[18] the Bradley West Project EIR,[19] and the SPAS EIR.[20]

The equation for the RAGS Part F methodology requires exposure time, an exposure parameter that was not previously defined for the LAX Master Plan EIS/EIR and other tiered LAX EIRs (SAIP EIR, CFTP EIR, Bradley West Project EIR, and CUP-RP EIR) because it was not required for the Risk Assessment Guidance for Superfund (RAGS), Part A methodology (hereafter referred to as RAGS Part A). For exposure time, assumptions adopted for the SPAS EIR were used. Residents were assumed to be exposed 24 hours a day. A school child was

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12 California Environmental Protection Agency, Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities, 1993.

13 U.S. Environmental Protection Agency, Exposure Factors Handbook, USEPA/600/P-95/002Fa, 1997.

14 California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, August 2003.

15 U.S. Environmental Protection Agency, *Exposure Factors Handbook*, EPA/600/R-090/052F, September 2011.

16 City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004.

17 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) South Airfield Improvement Project, August 2005.

18 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Crossfield Taxiway Project, January 2009.

19 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Bradley West Project, September 2009.

20 City of Los Angeles, Los Angeles World Airports, Final Environmental Impact Report for Los Angeles International Airport (LAX) Specific Plan Amendment Study, January 2013.

assumed to be exposed eight hours per day to account for six hours of school instruction and two hours of after-school activities. An adult worker was assumed to be exposed 10 hours per day.

Table 2-2

Parameters Used to Estimate Exposures to TACs of Concern

	Off-Airport Receptors				
	Off-Site Resident				
Exposure Pathway Inhalation of Particulates and Gases	**Adult (70 years)**	**Adult (30 years)**	**Child**	**Off-Site School Child**	**Off-Site Worker**
Daily Breathing Rate (m^3/day)	20[2]	20[2]	15[2]	6[2]	10[2]
Exposure Frequency (days/yr)	350[1,3]	350[1,3]	350[1,3]	200[4]	245[1]
Exposure Duration (years)	70[1,5]	30[1,5]	6[2]	6[4]	40[1]
Body Weight (kg)	70[1,6]	70[1,6]	15[2]	40	70[1,6]
Averaging Time - Non-cancer (days)	25,550[1,6]	10,929	2,190[6]	2,190[6]	14,600[6]
Averaging Time - Cancer (days)	25,550[1,6]	25,550	25,550[1,6]	25,550[1,6]	25,550[1,6]

Notes:
1 Cal/EPA, Air Toxic Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, August 2003.
2 USEPA, Exposure Factors Handbook, USEPA/600/P-95/002Fa, 1997.
3 USEPA, Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors, Office of Solid Waste and Emergency Response, Washington D.C., August, 1991.
4 Site-specific.
5 70 year exposure duration will be used as basis for determining significance.
6 USEPA, Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual, Part A, USEPA/540/1-89/002, Office of Emergency and Remedial Response, Washington D.C., 1989.

Source: Ricondo & Associates, Inc., December 2013.

The CalEPA Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments recommends a range of exposure parameters be evaluated. Additional analyses are presented in the uncertainties analysis to verify how sensitivity of risk estimates to changes in exposure duration and exposure time might affect conclusions concerning impacts of the proposed MSC North Project.

2.3 Toxicity Assessment

Risks from exposure to TAC are calculated by combining estimates of potential exposure with chemical-specific toxicity criteria developed by CalEPA, USEPA, or both. The toxicity assessment initially examined quantitative toxicity criteria for TAC selected from regulatory lists.

A toxicity assessment for TAC of concern was conducted for the LAX Master Plan Final EIR, as described in Technical Report 14a of that EIR. Conclusions of that assessment have not changed materially. Both the CalEPA OEHHA, and USEPA continually update toxicity values as new studies are completed, and all toxicity information provided in Technical Report 14a was reviewed and updated as appropriate by researching recent information available from USEPA, CalEPA OEHHA, World Health Organization (WHO), and Agency for Toxic Substance and Disease Registry (ATSDR).

Acute RELs developed by the State of California were used in the characterization of potential acute non-cancer health hazards associated with the proposed Project. Other sources of acute toxicity criteria (e.g., Agency for Toxic Substances and Disease Registry (ATSDR)) were also evaluated as a source of acute criteria as part of this re-assessment of toxicity information.

Cancer unit risk factors, cancer slope factors, and chronic RELs developed by the State of California were used to characterize cancer risks and chronic non-cancer health hazards associated with longer term inhalation of emissions from construction activities. Both types of toxicity criteria are based on studies of chronic exposure in animals or, in some cases, to people. Inhalation unit risk (for RAGS Part F calculations) and cancer slope factors are presented in **Table 2-3**. Chronic RELs and reference concentrations (RfCs) are presented in **Table 2-4**.

Acute RELs developed by the State of California were used in characterization of potential hazards associated with short-term exposure (usually from exposures on the order of 1-hour). RELs are based on the most sensitive, relevant, adverse health effect reported in the medical and toxicological literature. Since margins of safety[21] are incorporated to address data gaps and uncertainties, exceeding an REL does not automatically indicate an adverse health impact. Acute RELs are applicable to all receptors, children and adults, and hazards are the ratio of estimated or measured concentrations and the REL. Acute RELs for the TAC of concern included in this analysis are provided in **Table 2-5**.

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[21] Margin of safety is a ratio of the no-observed-effect level to the estimated exposure dose. Margins of safety are incorporated in the development of toxicity values to account for differences in dose-response among individuals. For example, the same dose of alcohol may have a greater effect on a woman than a man, not only because a woman is smaller in body size but also because men and women metabolize alcohol at different rates.

Table 2-3

Toxicity Criteria for Systemic Toxicants

TAC of Concern	USEPA Cancer Inhalation RfC[1,2] (µg/m^3)[3]	Cal/EPA Chronic Inhalation REL[4] (µg/m^3)	Target Organ	Cancer Classification[4]
VOC				
Acetaldehyde	0.01	0.0000027	Nasal, Larynx	B2
Acrolein	N/A[5]	N/A	N/A	C
Benzene	0.1	0.000029	Blood	A
1,3-Butadiene	0.6	0.00017	Reproductive System, Blood, Lung, GI	A
Ethylbenzene	0.0087	0.0000025	Kidney	D
Formaldehyde	0.021	0.000006	Respiratory System	B1
PAH				
Naphthalene	0.12	0.000034	Respiratory System	C
Diesel Exhaust				
Diesel Particulates	1.1	0.0003	Lung	D
PM-Metal				
Arsenic	12	0.0033	Skin	A
Cadmium	15	0.0042	Lung, trachea, bronchus cancer deaths	B1
Chromium VI	510	0.15	Lung	A
Lead	0.042	0.000012	N/A	B2
Nickel	0.91	0.00026	N/A	A
Vanadium pentoxide[6]	29[7]	0.0083[7]	N/A	N/A

Notes:

1 California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Toxicity Criteria Online Database, Available: http://www.oehha.ca.gov/tcdb/index.asp, 2013.

2 mg/kg/day - milligram per kilogram per day

3 µg/m^3 = microgram per cubic meter

4 USEPA, EPA Weight of Evidence (EPA 1986, EPA 1996):
- A Human carcinogen
- B1 Probable human carcinogen – indicates limited evidence in humans
- B2 Probable human carcinogen – indicates sufficient evidence in animals and inadequate or no evidence in humans.
- C Possible human carcinogen
- D Not classifiable as human carcinogen

5 N/A = Not available

6 Inhalation unit risk value for vanadium pentoxide was used for vanadium in the risk calculations.

7 USEPA Regional Screening Level (RSL) table, May 2013.

Source: Ricondo & Associates, Inc., December 2013.

Table 2-4

Cancer Slope and Unit Risk Factors

TAC of Concern	Cal/EPA[1] Inhalation Cancer Slope Factor $[(mg/kg/day)^{-1}]$[2]	Cal/EPA[1] Inhalation Unit Risk Factor $[(\mu g/m^3)^{-1}]$[3]	Tumor Site/Inhalation	USEPA	Cal/EPA
VOC					
Acetaldehyde	9	140	Respiratory System	1,000	300
Acrolein	0.02	0.35	Respiratory System, Eye	1,000	200
Benzene	30	60	Hematopoietic System, Development, Nervous System, Immune System	300	10
1,3]Butadiene	2	20	Reproductive System	1,000	30
Ethylbenzene	1,000	2,000	Developmental, Liver, Kidney, Endocrine System	300	30
Formaldehyde	9.8[6]	9	Respiratory System, Eye	N/A[8]	10
n]Hexane	700	7,000	Nervous System	300	30
Methyl alcohol	40,006	4,000	Developmental	N/A	30
Methyl ethyl ketone	5,000	N/A	Developmental(skeletal variations)	300	N/A
Propylene	3,000[6]	3,000	Respiratory System	N/A	100
Styrene	1,000	900	CNS[9]	30	3
Toluene	5,000	300	CNS, Respiratory System, Development	10	100
Xylenes	100	700	CNS, Respiratory System	300	30
PAH					
Naphthalene	3	9	Respiratory System	3,000	1,000
Diesel Exhaust					
Diesel Particulates	5	5	Respiratory System	30	30
PM Metal					
Arsenic	0.0156	0.015	Development, Cardiovascular System, Nervous System	N/A	30
Cadmium	0.01	0.02	Kidney; respiratory system	N/A	30
Chromium (VI)	0.16	0.2	Respiratory System	300	100
Copper	N/A	N/A	N/A	N/A	N/A
Lead	N/A	N/A	N/A	N/A	N/A
Manganese	0.05	0.09	Nervous System	1,000	300
Mercury	0.3	0.03	Nervous System	30	300
Nickel	0.09[6,7]	0.014	Respiratory System, Immune System	N/A	30
Selenium	20[6]	20	Alimentary system; nervous system cardiovascular system;	N/A	3
Vanadium	0.1[6]	N/A	N/A	N/A	N/A
PM Inorganics					
Chlorine	0.15[6]	0.2	Respiratory System	N/A	30
Silicon	3	3	Respiratory system	N/A	10

Table 2-4

Cancer Slope and Unit Risk Factors

TAC of Concern	Cal/EPA[1] Inhalation Cancer Slope Factor $[(mg/kg/day)^{-1}]^2$	Cal/EPA[1] Inhalation Unit Risk Factor $[(\mu g/m^3)^{-1}]^3$	Tumor Site/Inhalation	USEPA	Cal/EPA
Sulfates	N/A	N/A	N/A	N/A	N/A

Notes:

1 Values obtained from the USEPA Integrated Risk Information System (IRIS), 2013.

2 RfC = Reference Concentration

3 $\mu g/m^3$ = microgram per cubic meter

4 REL = Reference Exposure Level (obtained from OEHHA Online Toxicity Criteria database, 2013. RELs are concentrations in air that would not result in toxic effects even if exposure continued for a lifetime.)

5 VOC = volatile organic compounds

6 Values obtained from the USEPA Regional Screening Level (RSL) table, May 2013.

7 RfC for nickel soluble salts was used for nickel.

8 N/A = Not available or not applicable.

9 CNS = Central Nervous System

Source: Ricondo & Associates, Inc., December 2013.

Table 2-5

Acute RELs for TAC of Concern

TAC	Acute REL[1] (μg/m^3)
Acrolein	2.5
Benzene	1,300
Formaldehyde	55
Methyl alcohol	28,000
Methyl ethyl ketone	13,000
Styrene	21,000
Toluene	37,000
Xylenes Total	22,000
Arsenic	0.2
Chlorine	210
Copper	100
Manganese	0.17 [2]
Mercury	0.6
Nickel	0.2
Vanadium pentoxide [3]	30
Sulfates	120

Notes:
1 Values obtained from OEHHA Online Toxicity Criteria database, accessed June 2013.
2 8-hour value.
3 Acute value for vanadium pentoxide was used for vanadium in the risk calculations.

Source: Ricondo & Associates, Inc., December 2013.

2.4 Risk Characterization

2.4.1 Methodology for Evaluating Cancer Risks and Non-Cancer Health Hazards

Concentrations of TAC of concern in air, locations of potentially exposed populations, including locations for MEI exposure scenarios (worker, resident, student), and toxicity criteria were used to calculate incremental human health risks associated with the proposed MSC North Project. Risks for people recreating near the airport would be lower than those for workers, residents, and students, and no risks were calculated for this population. Where risks are not significant for other receptor groups, risks for recreators near LAX can also be considered insignificant.

Cancer risks were estimated by multiplying exposure estimates for carcinogenic chemicals by corresponding cancer slope factors. Results were risk estimates expressed as the odds of developing cancer. Commonly, risks (or odds) of developing cancer of one to ten in one million (1 x 10^{-6} to 10 x 10^{-6}) or less are considered *de minimis*.[22] Higher risks may be deemed significant in some instances. Cancer risks were based on an exposure duration of 70 years.

Chronic non-cancer health hazard estimates were calculated by dividing exposure estimates by reference doses. Reference doses are estimates of highest exposure levels that would not cause adverse health effects even if exposures continue over a lifetime. The ratio of exposure concentration to reference concentration is termed the hazard quotient (HQ). A HQ greater than one indicates an exposure concentration greater than that considered safe. A ratio that is less than one indicates that Project-related (incremental) exposure was less than the highest exposure level that would not cause an adverse health effect and, hence, no impact to human health would be expected. Risks or odds of adverse effects cannot be estimated using reference doses. However, because reference concentrations are developed in a conservative fashion, HQs only slightly higher than one are generally accepted as being associated with low risks (or even no risk) of adverse effects, and that potential for adverse effects increases as the HQ gets larger.

Impacts of exposure to multiple chemicals were accounted for by adding cancer risk estimates for exposure to all carcinogenic chemicals, and by adding estimated HQs for non-carcinogenic chemicals that affect the same target organ or tissue in the body. Addition of HQs for TAC that produce effects in similar organs and tissues results in a Hazard Index (HI) that reflects possible total hazards. Several TAC have effects on the respiratory system including acetaldehyde, acrolein, formaldehyde, xylenes, and diesel particulates. Non-cancer health hazards for the proposed MSC North Project were calculated for the respiratory system which accounted for essentially all potential non-cancer health hazards.

To determine whether releases of TAC for the proposed MSC North Project would be significant, incremental human health risks for the proposed Project were compared to appropriate thresholds of significance identified in SCAQMD or CalEPA guidance or policy. These comparisons will focus on specific risk thresholds such as ten in one million cancer risk or a hazard index of 1. Differences in incremental human health impacts among alternatives provide a quantitative assessment of the relative impacts among alternatives.

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[22] Clay, Don R., U.S. Environmental Protection Agency, “Memorandum to OSWER, Subject: Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions”, April 22, 1991.

2.4.2 Maximally Exposed Individuals (MEI)

For the proposed MSC North Project, grid points were analyzed along the airport fence-line and within the study area, as shown in **Figure 2-1**. These locations are anticipated to represent MEI, based on previous dispersion modeling for LAX. Concentrations of each TAC at these nodes were used in calculating cancer risk, and chronic and acute non-cancer health hazard estimates. These calculations were used to identify locations with maximum cancer risks and maximum non-cancer health hazards and serve as the basis for significance determinations.

MEI estimates were partially land use specific. On-airport locations were used to identify on-worker locations. For off-airport locations, all land uses and associated receptors (commercial, residential, etc.) were evaluated for all fence-line grid points under the assumption that such land use could be present now or in the future. Risk and hazard calculations were based on receptors appropriate for land use designations. For example, at each grid node, exposure parameters appropriate for adult commercial workers, for both adult and child residential receptors and for school children were used to estimate exposures, cancer risks, and non-cancer health hazards at that grid point location.

Fence-line concentrations of TAC represent the highest or near-highest concentrations that could be considered "off-airport." Concentrations in areas where people actually work, live, or attend school are predicted to be lower. Thus, impacts for residents, workers, and school children are likely to provide protective estimates for risks and hazards that may occur as a result of implementing the proposed MSC North Project.

2.4.3 Methodology for Evaluating Acute Impacts

Acute non-cancer risk estimates were calculated by dividing estimated maximum 1-hour TAC concentrations in air by acute RELs. An acute REL is a concentration in air below which adverse effects are unlikely for people, including sensitive subgroups, exposed for a short time on an intermittent basis. In most cases, RELs are estimated on the basis of an 1-hour exposure duration. RELs do not distinguish between adults and children, but are established at levels that are considered protective of sensitive populations. Since margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL does not automatically indicate an adverse health impact.

Toxicity criteria (i.e., RELs) for acute non-cancer health hazards do not distinguish between adults and children, but are established at levels that are considered protective of sensitive populations. An acute REL is a concentration in air below which adverse effects are unlikely, including in sensitive subgroups. In most cases, RELs were estimated on the basis of an 1-hour exposure duration. CalEPA's OEHHA has developed acute RELs for several of the TAC of concern identified in emissions from the airport.

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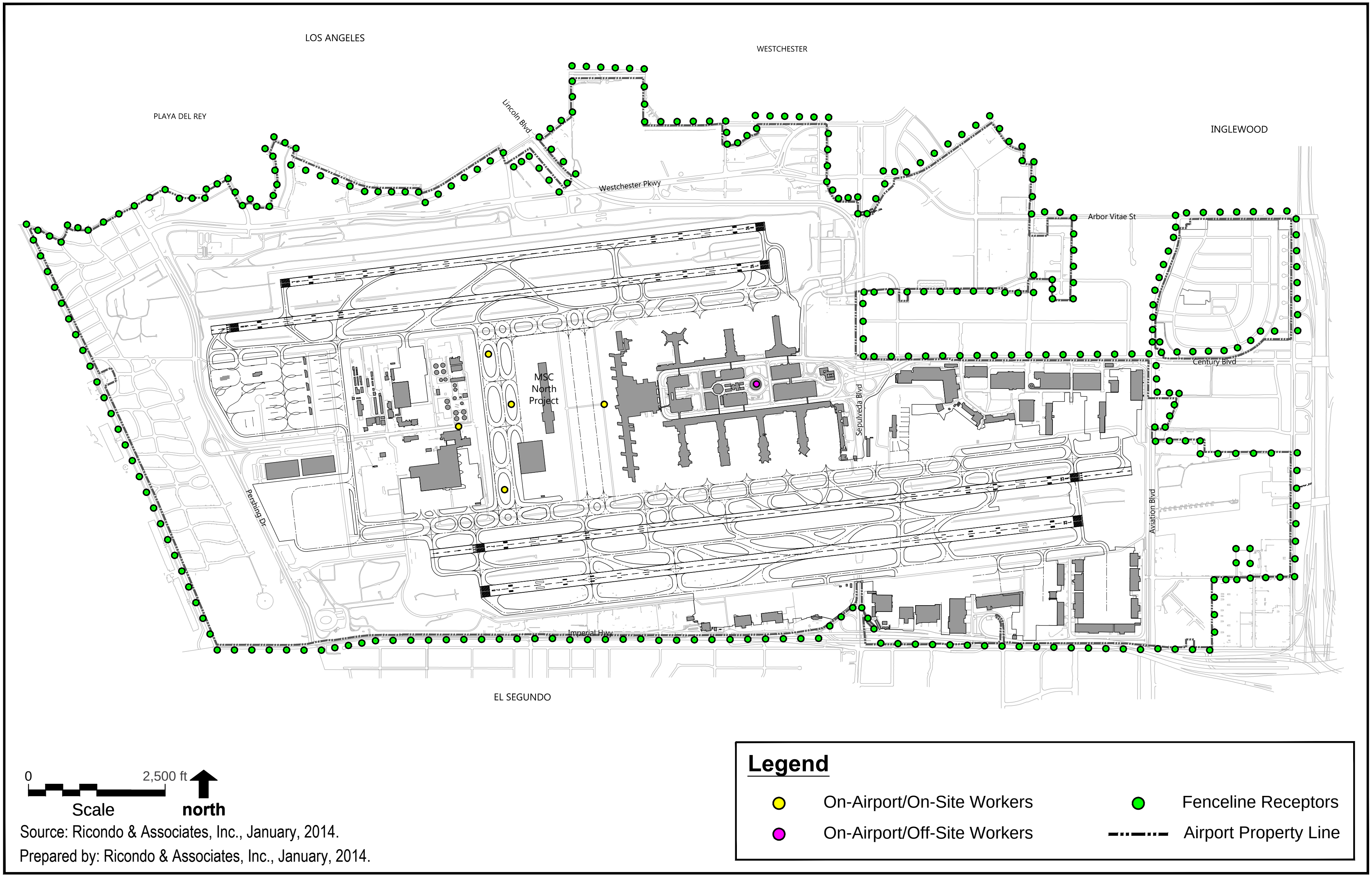

Source: Ricondo & Associates, Inc., January, 2014.

Prepared by: Ricondo & Associates, Inc., January, 2014.

LAX Midfield Satellite Concourse Draft EIR

Receptor Locations

Figure **2-1**

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Short-term concentrations for TAC associated with Project construction and operations were estimated using the same air dispersion model (AERMOD) used to estimate annual average concentrations, but with the model option for 1-hour maximum concentrations selected. These concentrations represent the highest predicted concentrations of TAC. Acute non-cancer health hazards were then estimated at each grid point by dividing estimated maximum 1-hour TAC concentrations in air by acute RELs. A hazard index equal to or greater than 1, the threshold of significance for acute non-cancer health impacts, indicates some potential for adverse acute non-cancer health impacts. A hazard index less than 1 suggests that adverse acute non-cancer health impacts are not expected.

3.0 TAC EMISSIONS AND DISPERSION

3.1 TAC Emission

Both organic and particulate-bound TACs were analyzed in this HHRA. TACs exist in air as either reactive organic gases or particulate matter. For purposes of this EIR, organic emissions are represented by volatile organic compounds (VOC). Emission rates of organic TACs were developed from VOC emission inventories for the same construction and operational sources analyzed in Section 4.1 of this EIR. TACs associated with small particles, or those particles less than 10 microns in diameter (PM_{10}), are the focus for particulate emissions, because this size fraction can deposit in the lung and is therefore primarily responsible for inhalation exposure. Emission rates of particulate-bound TACs were developed from the PM_{10} emission inventories also included in Section 4.1. Speciation profiles[23] for VOC and PM_{10} emissions from individual source types, primarily developed by the California Air Resources Board (CARB), were used to calculate TAC emissions.[24] These emissions form the basis for modeling concentrations of TACs in air on and around LAX.

3.1.1 <u>MSC North Project</u>

Construction Emissions

Construction of the MSC North Project would result in temporary emissions of various air pollutants from construction equipment, vehicles used by workers commuting to the job site, trucks used for haul/delivery trips, and demolition (material crushing and grading). Methods for estimating source emissions are detailed in Section 4.1., *Air Quality*, in this Draft EIR. For

23 Speciation profiles provide estimates of the chemical composition of emissions, and are used in the emission inventory and air quality models. CARB maintains and updates estimates of the chemical composition and size fractions of PM10 and the chemical composition and reactive fractions of ROG for a variety of emission source categories. Speciation profiles are used to provide estimates of TAC emissions.

24 California Air Resources Board, Available at: http://www.arb.ca.gov/ei/speciate/dnldoptvv10001.php, Accessed: December 2, 2013.

emissions estimating, the period of construction for the proposed Project was anticipated to be approximately 5 years.

Emissions of DPM (assumed to be equal to the engine exhaust component of particulates less than 10 microns in diameter) are expected to contribute the majority to total incremental cancer risks for construction sources. Based on previous evaluations of construction impacts at LAX, other TACs have minimal contributions. DPM is classified as a carcinogenic TAC by the California Office of Environmental Health Hazard Assessment (OEHHA). However, the evaluation of cancer risks and chronic health hazards evaluated the release of DPM as well as other associated TACs from construction equipment.

TAC inventories for construction equipment VOC emissions were developed from Organic Profile No. 818 for diesel-fueled equipment, and Organic Profile No. 2110 for gasoline vehicles. TAC emission inventories for construction equipment PM emissions were developed from Profile No. 425 for diesel-fueled equipment, and Profile No. 420 for construction dust.

Operational Emissions

The MSC North Project would not alter the airspace traffic, runway operational characteristics, or the practical capacity of the airport.[25] Therefore, changes in emissions from aircraft operations over the 2012 baseline are due to increased travel demand and changes in aircraft fleet mixes that are projected to occur by 2019 irrespective of the proposed MSC North Project. However, the implementation of the MSC North Project would require passenger bus trips between the MSC North building and the CTA, and additional heating and cooling load from the Central Utility Plant. TAC emissions were analyzed for 2019 Without and With Project scenarios in order to determine the incremental impact. Evaluation of potential impacts to human health associated with these proposed MSC North Project-specific operational sources (e.g., passenger busing, utility increases to meet demands, and the difference in taxi times for aircraft operations) were assessed in this HHRA.

TAC inventories for operational source VOC emissions were developed from Organic Profile No. 3 for external combustion boilers fueled with natural gas, Organic Profile No. 818 for diesel-fueled equipment, Organic Profile No. 816 for gasoline off-road equipment, and EPA Profile No. 5565 for aircraft engine exhaust. TAC inventories for operation source PM emissions were

[25] The approved LAX Master Plan includes a gate cap limit at LAX, which effectively limits the number of aircraft passengers that can be processed/accommodated at LAX. This was established in the Final EIS/EIR for the LAX Master Plan, which showed forecasted activity levels for the No Action/No Project alternative essentially the same as for the approved Alternative D. The MSC, while providing modern aircraft gates, does not increase the passenger processing capabilities of the airport and would have no effect on the number or type of aircraft operations at LAX. Therefore, the MSC North Project and the future phase(s) of the MSC Program will comply with the gate cap as discussed in the LAX Master Plan. The MSC North Project will allow LAWA to modernize the existing terminal area without having to reduce the number of available gates and will reduce the number of operations at the West Remote Gates/Pads. Once the future phase(s) of the MSC Program is completed, the West Remote Gates/Pads would be eliminated.

developed from Profile No. 110 for natural gas combustion, and Profile No. 425 for diesel-fueled equipment.

3.1.2 Future Phase(s) of the MSC Program

The MSC Program components that are not part of the MSC North Project, as discussed in Chapter 2, *Description of the Proposed Project*, have only been conceptually planned; thus, only a program-level HRA of these components is possible. For those MSC Program components receiving only programmatic environmental review in the MSC EIR, further project-level environmental review under CEQA will be required in the future before they can be implemented. Project-level environmental documents for future phase(s) of the MSC Program will be initiated at such time as LAWA determines the timing of these phase(s).

Construction Emissions

Construction TAC emissions for the MSC Program were covered under the LAX Master Plan Final EIR, are anticipated to be substantially the same, and are therefore not quantified in this EIR.

Operational Emissions

Any future phase(s) of the MSC Program would contribute to operational TAC emissions. TAC emissions in this analysis are presented in terms of a projected future Program operational date of 2025. Evaluation of potential impacts to human health associated with operational sources of the future phase(s) of the MSC Program were discussed qualitatively in this HHRA.

3.2 Exposure Concentrations (Dispersion)

Air dispersion modeling was used to estimate TAC concentrations for the proposed Project. TAC concentrations were estimated in two steps: first, dispersion modeling was used to estimate total ROG and PM_{10} concentrations, and then individual organic or particulate TAC concentrations were calculated using emissions profiles to speciate total ROG and PM_{10} estimates. For example, if total ROG at a given location was 0.1 microgram per cubic meter ($\mu g/m^3$) and a given volatile TAC was expected to make up 1 percent of this total, the concentration of that TAC at that location would be 0.001 $\mu g/m^3$.

Project-related concentrations for TAC from construction sources were estimated using the air dispersion model (AERMOD, Version 12345) with model options for 1-hour maximum, annual, and period average concentrations selected.

3.2.1 Source Areas

Construction DPM sources were modeled as engine exhaust emissions elevated 5 meters. Construction dust emissions were modeled at ground level. Operational sources were located at their respective on-airport locations; aircraft emissions were located on the appropriate taxiways and runways, as well as the approach and departure paths. Release heights for aircraft are respective to each phase of the landing-takeoff (LTO) cycle. APU and GSE emissions were located at the gates. Busing emissions were modeled along the service road routes between terminals.

3.2.2 Receptors

Receptors were modeled along the airport fence-line at approximately 100 m intervals. In addition, several on-airport grid points at or around the proposed Project site were also modeled. A receptor was also located at the LAX Theme Building. The modeled receptors are shown on Figure 2-1.

3.2.3 Meteorology

Five years (2005 through 2009) of AERMOD-ready hourly meteorological data from SCAQMD's LAX Hastings monitoring station was provided by SCAQMD. All five years were run, and the highest hourly average results at each grid point were used to quantify acute hazards; the highest annual concentration was used to develop the 70-year exposure concentration that was used for calculations of chronic non-cancer hazards and cancer risk.

4.0 HUMAN HEALTH RISK ASSESSMENT

This HHRA assess incremental changes to health impacts for people exposed to TAC resulting from construction and operations associated with the proposed MSC North Project. Cancer risk and chronic non-cancer health hazard estimates for impacts of the proposed MSC North Project are based on estimated project construction and operational emissions and air dispersion modeling as discussed above and in the following sections. Acute health hazard estimates were also addressed using emission estimates and dispersion modeling. Risk calculations, presented in **Attachment C.1**, indicate that estimates of cancer risks and chronic health hazards would be below the regulatory thresholds of significance. However, acute hazard indices associated with incremental operational emissions of the proposed Project would be above the acute hazard index regulatory thresholds of significance. Since assessment of health risks included locations where concentrations of TAC were predicted to be highest, this finding applies to all areas on and around LAX.

The following subsections discuss the incremental cancer risk and chronic non-cancer health hazard estimates for impacts of the proposed MSC North Project by receptor.

4.1 Cancer Risks and Non-Cancer Hazards Associated with the Proposed Project

Cancer risk estimates from exposure to construction sources are presented below for adult workers, residents, and school children. Acute and chronic non-cancer health hazards are discussed.

Although construction emissions are only projected to last during the 5-year construction period, for convenience in cancer risk calculations, construction emissions during the construction period were amortized over the entire 70-year exposure period. This approach allowed use of a single exposure concentration in the calculations.

4.1.1 Comparison of On-Site Air Concentrations with OSHA Limits for On-Site Workers

Impacts to on-site workers were evaluated by comparing estimated maximum 1-hour air concentrations of TAC to the California Occupational Safety and Health Administration (CalOSHA) 8-hour Time-Weighted Average Permissible Exposure Levels (PEL-TWAs).[26] Estimated on-site air concentrations and PEL-TWAs for TAC of concern for construction and operations of the proposed MSC North Project are presented in **Table 4-1**. Operational concentrations compare the incremental difference between the 2019 Future With MSC North Project and the 2019 Future Without MSC North Project scenario. Estimated maximum 1-hour air concentrations at the on-site locations under the proposed MSC North Project for construction were converted to 8-hour averages by multiplying by a factor of 0.7.[27] The resulting 8-hour averages are a few to several orders of magnitude below PELs for all TAC. This result suggests that air concentrations from airport emissions with implementation the proposed MSC North Project would not exceed those considered "acceptable" by CalOSHA standards.

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26 California Occupational Safety and Health Administration, Permissible Exposure Limits for Chemical Contaminants, Table AC 1, Available at: http://www.dire.ca.gov/title8/5155.html.

27 California Air Resources Board. 2003. HARP User Guide: Appendix H Recommendations for Estimating Concentrations of Longer Averaging Periods from the Maximum One-Hour Concentration for Screening Purposes. December. Available at: http://www.arb.ca.gov/toxics/harp/harpug.htm.

Table 4-1

Comparison of CalOSHA Permissible Exposure Limits to Maximum Estimated 8-Hour On-Site Air Concentrations

Toxic Air Contaminant [1]	Project Construction Concentrations (mg/m^3) [2]	Project Operations Concentrations (mg/m^3) [2]	CalOSHA PEL TWA (mg/m^3) [3]
Acetaldehyde	0.002101	0.002568	45
Acrolein	0.000036	0.001453	0.25
Benzene	0.000572	0.001593	0.32 [4]
1,3-Butadiene	0.000054	0.001132	2.2
Ethylbenzene	0.000087	0.000303	435
Formaldehyde	0.004205	0.007433	0.37 [4]
Hexane, n-	0.000045	0.000000	180
Methanol	0.000009	0.001087	260
Methyl ethyl ketone	0.000422	0.000009	590
Naphthalene	0.000024	0.000330	50
Propylene	0.000742	0.003080	N/A [5]
Styrene	0.000017	0.000207	215
Toluene	0.000421	0.001297	37
Xylene (total)	0.000297	0.001190	435
Diesel PM	0.001943	0.013096	N/A [5]
Arsenic	0.000002	0.000001	0.01
Cadmium	0.000003	0.000001	0.005
Chlorine	0.000271	0.000005	1.5
Chromium (VI)	0.000001	0.0000001	0.005
Copper	0.000009	0.000001	1
Lead	0.000045	0.000001	0.05
Manganese	0.000073	0.000001	0.2
Mercury	0.000001	0.0000004	0.025
Nickel	0.000005	0.000000	0.5
Selenium	0.000000	0.000000	0.2
Silicon	0.015520	0.000033	6
Sulfates	0.000409	0.000232	N/A [5]
Vanadium	0.000021	0.0000004	0.05

Notes:
1 All TACs for which PEL-TWAs are available are listed. PEL-TWAs are not available for diesel exhaust, propylene, and sulfates.
2 Maximum 1-hour concentrations at on-airport location converted to 8-hour averages by multiplying by a factor of 0.7.
3 California Occupational Safety and Health Administration. Permissible Exposure Limits for Chemical Contaminants, Table AC-1, 2008, http://www.dir.ca.gov/title8/5155table_ac1.html.
4 CalOSHA does not have a value; value is from American Conference of Governmental Industrial Hygienists (ACGIH), Documentation of the Threshold Limit Values and Biological Exposure Indices, 8th ed., Cincinnati, Ohio, 1998.
5 N/A = Not Available

Source: Ricondo & Associates, Inc., January 2014.

4.1.2 Cancer Risks and Chronic Non-Cancer Health Hazards for Maximally Exposed Individuals (MEI) – Residents and School Children

For cancer risks and chronic non-cancer hazards for the proposed Project, 326 grid points were analyzed along the airport fence-line. The concentrations at the 326 fence-line locations represent maximum concentrations of TAC predicted by the air dispersion modeling, can be used to evaluate exposure to a MEI, and thus provide a ceiling for risks and hazards for off-airport residential, commercial, and student receptors. In essence, these calculations assumed that people live, work, and go to school at the LAX fence-line. Although this assumption is incorrect, it is conservative.

Air concentrations for TAC from construction sources were developed using emissions estimates and dispersion modeling as described above. Using these emission estimates, exposure parameters for potential receptors and current toxicity values, cancer risks and chronic non-cancer health hazards were calculated for adult residents, resident children ages 0 to 6 years, and for elementary-aged school children at fence-line locations. Offsite worker risks and hazards were estimated at the fence-line receptors. Peak cancer risks and chronic non-cancer health hazards for MEI for construction and operations of the proposed MSC North Project are summarized in **Table 4-2**.

Table 4-2

Incremental Cancer Risks and Chronic Non-Cancer Human Health Hazards for Maximally Exposed Individuals from the MSC North Project

Receptor Type	Project Construction	Project Operations
Incremental Cancer Risks [1] (per million people)		
Child Resident	0.09	0.1
School Child	0.02	0.03
Adult Resident	1.0	1.6
Adult Worker	0.4	0.9
Incremental Non-Cancer Chronic Hazards [2]		
Child Resident	0.08	0.01
School Child	0.02	0.003
Adult Resident	0.08	0.01
Adult Worker	0.06	-0.002

Table 4-2

Incremental Cancer Risks and Chronic Non-Cancer Human Health Hazards for Maximally Exposed Individuals from the MSC North Project

Receptor Type	Project Construction	Project Operations

Notes:

1 Values provided are changes in the number of cancer cases per million people exposed as compared to baseline conditions. All estimates are rounded to one significant figure.

2 Hazard indices are totals for all TACs that may affect the respiratory system. This incremental hazard index is essentially equal to the total for all TACs.

Source: Ricondo & Associates, Inc., January 2014.

4.1.2.1 Residents (Adults and Young Children)

The estimated peak incremental cancer risks for adult residents and child residents for construction of the proposed MSC North Project range from 0.09 in one million to 1.0 in one million. Cancer risks for operational sources were also evaluated. When compared against the 2019 Future Without MSC North Project scenario, the estimated peak incremental cancer risks for adult residents and child residents for the proposed MSC North Project range from 0.1 in one million to 1.6 in one million. Estimated incremental cancer risks are higher for adults than for children, because exposure duration is longer. Exposure to DPM released during construction contributed 83 percent of the peak cancer risks for adults and children. Cancer risks from operational sources are due primarily to exposure of DPM, which contributes to about 99 percent of the risk estimate.

Project-related chronic non-cancer hazard indices for construction impacts associated with the MSC North Project for adult residents and child residents living at the peak TAC concentration location were estimated to be 0.08. At the construction peak hazard index location, hazard indices are primarily attributable to silicon (56 percent) and chlorine (15 percent). Chronic non-cancer hazard indices for operational impacts associated with the MSC North Project for adult residents and child residents living at the peak TAC concentration location were estimated to be 0.01. At the peak hazard index location, hazard indices are primarily attributable to acrolein (80 percent) and formaldehyde (15 percent).

4.1.2.2 School Children

School children were evaluated at all 326 fence-line grid nodes. Incremental cancer risk from construction of the proposed Project for children attending schools at the peak location within the study area is estimated to be 0.02 in one million. Exposure to DPM released during construction contributed 83 percent of the peak cancer risks. When compared against the 2019 Future Without MSC North Project scenario, the estimated peak incremental cancer risk for school children is 0.03 in one million. Cancer risks from operational sources are due primarily to exposure of DPM, which contributes to about 99 percent of the risk estimate.

Risks below 1 in one million are typically considered negligible by regulatory agencies in California.

4.1.2.3 Adult Workers

Adult workers were evaluated at all 326 off-airport grid nodes. Cancer risks for adult workers during construction at the peak location are estimated to be 0.4 in one million. Exposure to DPM released during construction contributed 83 percent of the peak cancer risks. When compared against the 2019 Future Without MSC North Project scenario, the estimated peak incremental cancer risk for adult workers is 0.9 in one million. Cancer risks from operational sources are due primarily to exposure of DPM, which contributes to about 99 percent of the risk estimate.

Overall, project-related cancer risks for the proposed Project for adult workers are predicted to be below the threshold of significance.

4.1.3 Acute Non-Cancer Hazards Risk

As with cancer risks and chronic non-cancer health hazards, acute health hazards were analyzed at 332 grid points within the study area. Short-term concentrations of TAC for the proposed MSC North Project sources were estimated using AERMOD with the model option for 1-hour maximum concentrations selected. Acute health hazards were estimated at each grid point by comparison of the modeled TAC concentration at each grid point with the acute REL. All TAC identified in MSC North Project construction and operational emissions, and for which CalEPA has developed acute RELs, were evaluated for potential acute health hazards. All acute health hazard estimates are specific for airport emissions and are independent of county-wide estimates developed by USEPA.

Land use distinctions and different exposure scenarios are irrelevant for assessment of acute health hazards. For example, someone visiting a commercial establishment would potentially be subject to the same acute health hazards as someone working at the establishment. Fence-line concentrations of TAC are likely to represent the highest concentrations and therefore the greatest impacts for residents, school children, or off-airport workers. Six on-airport grid points were assumed to be commercial receptors (workers).

Formaldehyde and manganese are the only TAC of concern in construction emissions from the proposed MSC North Project that might be present at concentrations approaching the thresholds for acute health hazards. Acute health hazards for other TAC are orders of magnitude below their respective acute RELs and thus would not contribute substantially to health hazards. The primary source of formaldehyde is from diesel-powered construction equipment; the primary source of manganese is fugitive dust. Maximum acute health hazards associated with exposure to these two chemicals from the proposed MSC North Project construction are summarized in **Table 4-3**. As shown in Table 4-3, construction-related maximum acute hazard quotients for formaldehyde and manganese during construction are all below the significance threshold of 1. Calculations are provided in **Attachment C.2**.

Incremental maximum acute health hazards associated with exposure to chemicals as a result of operations of the proposed MSC North Project are shown in **Table 4-4**. As shown, operations-related incremental maximum acute hazard quotients for acrolein for operations of the proposed MSC North Project as compared to the 2019 Future Without MSC North Project scenario are estimated to be 1.9 for residents living at the peak hazard location, 0.5 for school children, 0.3 for recreational users, and 1.4 for off-site adult workers. A hazard index equal to or greater than 1 would indicate the potential for acute adverse health effects. Acute exposure to acrolein typically results in mild irritation of eyes and mucous membranes. Acute exposures to formaldehyde may result in irritation to the eye and respiratory system and potentially adverse effects to the immune system.

Table 4-3

Maximum Incremental Acute Non-Cancer Hazard Indices from Construction

Pollutant	Formaldehyde	Manganese
Residential		
Maximum HI [1]	0.14	0.13
Minimum HI	0.003	0.02
Average HI	0.007	0.07
School		
Maximum HI	0.01	0.08
Minimum HI	0.003	0.03
Average HI	0.006	0.06
Offsite Worker		
Maximum HI	0.01	0.01
Minimum HI	0.002	0.02
Average HI	0.004	0.04
Recreational		
Maximum HI	0.01	0.1
Minimum HI	0.003	0.02
Average HI	0.006	0.05
Overall Off-Airport		
Maximum HI	0.14	0.13
On-Site Occupational		
Maximum HI	0.11	0.62

Notes:
1 HI = Hazard Index

Source: Ricondo & Associates, Inc., 2013.

Table 4-4

Maximum Incremental Acute Non-Cancer Hazard Indices from Operations

Pollutant	Acrolein	Formaldehyde
Residential		
Maximum HI [1]	**1.93** [2]	0.44
Minimum HI	-1.41	-0.32
Average HI	-0.07	-0.02
School		
Maximum HI	0.50	0.12
Minimum HI	-0.79	-0.18
Average HI	0.03	0.01
Offsite Worker		
Maximum HI	**1.36**	0.32
Minimum HI	-1.33	-0.31
Average HI	-0.06	-0.01
Recreational		
Maximum HI	0.33	0.07
Minimum HI	-1.25	-0.29
Average HI	-0.37	-0.09
Overall Off-Airport		
Maximum HI	**1.93**	0.44
On-Site Occupational		
Maximum HI	0.75	0.18

Notes:
1 HI = Hazard Index
2 **Bold** HIs are greater than the significance threshold of 1.

Source: Ricondo & Associates, Inc., January 2014.

4.2 Cumulative Risks and Non-Cancer Health Hazards Associated with the Proposed Project

Unlike air quality, for which standards have been established that determine acceptable levels of pollutant concentrations, no standards exist that establish acceptable levels of human health risks or that identify a threshold of significance for cumulative health risk impacts. Therefore, the discussion below addresses cumulative health risk impacts, and Project-related contributions to those impacts; however, no determination is made regarding the significance of cumulative impacts. Since these results are not used for significance determination, a general discussion of the cumulative impacts for the proposed project is provided. Based on information available from the South Coast Air Quality Management District (SCAQMD) and U.S. Environmental Protection Agency (USEPA), relative to regional cancer risk estimates and toxic air contaminant (TAC) predictions, the geographic areas considered in the cumulative health risk impacts analysis include the South Coast Air Basin for cancer risk and the LAX area for non-cancer health hazards, as further described below.

4.2.1 Cumulative Cancer Risks

The SCAQMD conducted an urban air toxics monitoring and evaluation study for the South Coast Air Basin from April 2004 through March 2006 *called Multiple Air Toxics Exposure Study in the South Coast Air Basin* (MATES-III).[28] MATES-III is a follow up to MATES-II[29]; SCAQMD is currently working on another update, MATES-IV, to update the monitoring and evaluation study. However, the results of MATES-IV are not yet available to the public.[30] According to MATES-III, cancer risks in the South Coast Air Basin range from 870 in one million to 1,400 in one million, with an average of 1,200 in one million. These cancer risk estimates are high and indicate that current impacts associated with ongoing releases of TAC (e.g., from vehicle exhaust) and from sources of TAC from past and present projects in the region are substantial. The MATES-III study is an appropriate estimate of present cumulative impacts of TAC emissions in the South Coast Air Basin. It does not, however, have sufficient resolution to determine the fractional contribution of current LAX operations to TAC in the airshed. Only possible incremental contributions to cumulative impacts can be assessed.

Meaningful quantification of future cumulative health risk exposure in the entire South Coast Air Basin is not possible. Moreover, the threshold of significance used to determine cancer risk impacts associated with the proposed Project is based on the cancer risks associated with individual projects; this threshold is not appropriately applied to conclusions regarding cumulative cancer risk in the South Coast Air Basin.

However, based on the relatively high cancer risk level associated with TAC in air in the South Coast Air Basin (i.e., an additional 1,200 cancer cases per million according to MATES-III), the proposed Project (with a maximum estimated incremental cancer risk of 1.6 cancer cases per million) would not add substantially (less than 0.13 percent) to the already high cumulative cancer risk in the South Coast Air Basin. This small increase estimated for the proposed Project would not be measurable against urban background conditions in the South Coast Air Basin.

The above comparisons do not account for possible positive changes in air quality in the South Coast Air Basin in the future. SCAQMD and other agencies are consistently working to reduce

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[28] South Coast Air Quality Management District, Final Report, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-III), September 2008, Available: http://www.aqmd.gov/prdas/matesIII/matesIII.html, accessed December 2, 2013.

[29] South Coast Air Quality Management District, Final Report, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-II), March 2000, Available: http://www.aqmd.gov/matesiidf/es.pdf, accessed December 2, 2013.

[30] Information on the new MATES-IV study is available at http://www.aqmd.gov/prdas/MatesIV/MatesIV.html, accessed December 2, 2013.

air pollution. In particular, reductions in emissions of diesel particulates are being considered and implemented. Since diesel particulate matter is the major contributor to estimated cancer risks, substantial reductions in diesel emissions would result in substantial reductions in cumulative cancer risks. These, and other such regulations intended to reduce TAC emissions within the South Coast Air Basin, would reduce cumulative impacts overall. While continued, if not increased, regulation by the SCAQMD of point sources as well as more stringent emission controls on mobile sources would reduce TAC emissions, whether such measures would alter incremental contributions of TAC releases to cumulative impacts under the proposed MSC North Project cannot be ascertained.

4.2.2 Cumulative Chronic Non-Cancer Health Hazards

Acrolein is the TAC of concern that is responsible for the majority of all predicted chronic non-cancer health hazards associated with LAX operations. In 2011, USEPA published an independent study of possible annual average air concentrations within the South Coast Air Basin associated with a variety of TAC, including acrolein.[31] These estimates provide a means for assessing cumulative chronic non-cancer health hazard impacts of airport operations in much the same manner as cumulative cancer risks were assessed using the MATES-III results.

Within Los Angeles County, USEPA prediction for annual average concentrations yield acrolein hazard indices ranging from 0.3 to 15, with an average of 4; DPM hazard indices ranging from 0.0007 to 1.2, with an average of 0.3. Incremental hazard indices for the proposed MSC North project (Table 4-2) were estimated to range from 0.02 to 0.08 for construction, and between 0.002 and 0.01 for operations, orders of magnitude below the threshold of significance of one. Given the relatively small hazard indices associated with proposed MSC North Project emissions, the Project is not expected to add significantly to cumulative chronic non-cancer health hazards.

Because of the substantial uncertainties associated with the USEPA estimates,[32] the cumulative analysis for chronic non-cancer health hazard impacts is semi-quantitative and based on a range of possible contributions. This cumulative analysis does not address the issue of potential interactions among acrolein and criteria pollutants. Such interactions cannot, at this time, be addressed in a quantitative fashion. A qualitative discussion of the issue is presented in the LAX Master Plan Final EIR[33] Technical Report S-9a, Section 7.

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31 U.S. Environmental Protection Agency, 2005 National-Scale Air Toxics Assessment, 2011, Available: www.epa.gov/ttn/atw/nata2005/tables.html.

32 U.S. Environmental Protection Agency, 2005 National-Scale Air Toxics Assessment, 2011, Available: www.epa.gov/ttn/atw/nata2005/tables.html.

33 City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004.

As discussed in the LAX Master Plan Final EIR[34] (Section 4.24.1.2), limited data are available for describing acrolein emissions. Therefore, estimates of chronic non-cancer health hazards are very uncertain. Chronic non-cancer health hazards associated with the proposed Project should only be used to provide a relative comparison to basin-wide conditions. These hazards should not be viewed as absolute estimates of potential health impacts. Moreover, USEPA's estimates are based on data from 2005 and are therefore several years old. Emissions from some important sources may have been reduced as a result of continuing efforts by SCAQMD and other agencies to improve air quality in the South Coast Air Basin. Finally, the estimates do not consider degradation of TAC in the atmosphere. Degradation may be very important for relatively reactive chemicals such as acrolein.

4.2.3 Cumulative Acute Non-Cancer Health Hazards

Acrolein, formaldehyde, and manganese are the primary TAC of concern in the proposed MSC North Project emissions that might be present at concentrations approaching the threshold for acute health hazards. Predicted concentrations of TAC released from operational activities for the proposed MSC North Project estimate that acute non-cancer health hazards would be above the significance threshold of one. The assessment of cumulative acute non-cancer health hazards follows the methods used to evaluate cumulative acute non-cancer health hazards presented in the LAX Master Plan Final EIR[35] (Section 4.24.1.7 and Technical Report S-9a, Section 6.3), incorporating updated National Scale Air Toxics Assessment (NATA) tables from 2005. USEPA-modeled emission estimates by census tract were used to estimate annual average ambient air concentrations. These census tract emission estimates are subject to high uncertainty, and USEPA warns against using them to predict local concentrations. Thus, for the analysis of cumulative acute non-cancer health hazards, estimates for each census tract within Los Angeles County were identified, and the range of concentrations was used as an estimate of the possible range of annual average concentrations in the general vicinity of the airport. This range of concentrations was used to estimate a range of acute non-cancer hazard indices using the same methods as described in the LAX Master Plan Final EIR[36] (Section 4.24.1.7 and Technical Report S-9a, Section 6.1). The methodology entails converting the USEPA annual average estimates to maximum 1-hour average concentrations by dividing annual average estimates by 0.08. Then the maximum 1-hour average concentrations were divided by the acute REL to calculate acute hazard indices. The range of hazard indices was then used as a basis for comparison with estimated maximum acute non-cancer health hazards for the proposed Project. The relative magnitude of acute non-cancer health hazards calculated on the basis of the USEPA estimates and maximum hazards estimated for the proposed Project were

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[34] City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004.

[35] City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004.

[36] City of Los Angeles, Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, April 2004.

taken as a general measure of relative cumulative impacts. Emphasis must be placed on the relative nature of these estimates. Uncertainties in the analysis preclude estimation of absolute impacts.

When USEPA annual average estimates are converted to possible maximum 1-hour average concentrations, acrolein acute hazard indices are estimated to range from 0.03 to 1.5, with an average of 0.4; formaldehyde acute hazard indices are estimated to range from 0.1 to 2.2, with an average of 1; and manganese acute hazard indices are estimated to range from 0.03 to 0.5, with an average of 0.13 for locations within the HHRA study area. Predicted overall maximum incremental acute non-cancer health hazards for the proposed MSC North Project associated with acrolein ranged from 1.4 to 1.9; those associated with formaldehyde ranged from 0.3 to 0.4; and those associated with manganese ranged from 0.1 to 0.6. Results suggest that the proposed MSC North Project would add to total 1-hour maximum acrolein concentrations at some locations in the HHRA study area and, therefore, to cumulative acute non-cancer health hazards associated with exposure to acrolein.

4.2.4 Conclusions

Although no defined thresholds for cumulative health risk impacts are available, it is the policy of the SCAQMD to use the same significance thresholds for cumulative impacts as for the Project-specific impacts analyzed in the EIR. If cumulative health risks are evaluated following this SCAQMD policy, the Project's contribution to the cumulative cancer risk would not be cumulatively considerable since the incremental cancer risk impacts of the proposed MSC North Project are all below the individual cancer risk significance thresholds of 10 in one million. It is expected that the contribution to the cumulative cancer risk from the future phase(s) of the MSC Program would also not be cumulatively considerable.

In contrast to cancer risk, the SCAQMD policy does have different significance thresholds for project-specific and cumulative impacts for hazard indices for TAC emissions. A project-specific significance threshold is one (1.0) while the cumulative threshold is 3.0. Based on this SCAQMD policy, chronic non-cancer hazard indices associated with airport emissions under the proposed MSC North Project, and the future phase(s) of the MSC Program, would be cumulatively considerable.

5.0 UNCERTAINTIES

Uncertainties are present in all facets of human health risk assessment. Potential important uncertainties associated with the HHRA for the LAX Master Plan are discussed in detail in Technical Report 14a and Technical Report S-9a of the LAX Master Plan Final EIR. These same uncertainty considerations apply to the analyses presented in the proposed MSC North Project EIR. These uncertainties are briefly summarized below.

5.1 Uncertainties Associated with Emission Estimates and Dispersion Modeling

Risk estimates were based on chemical concentration estimates obtained through emissions and dispersion modeling. Emissions estimates are sensitive to the values used to represent the numerous emission source variables (e.g., future aircraft operation assumptions) and to the air toxic emission factor values used for each source. Consequently, estimated emissions values are subject to uncertainties. Different assumptions and values of variables would result in different emissions estimates. The HHRA used well-accepted methods and best available emission factor data to develop estimates of emissions, and estimates and assumptions are reasonable and appropriate. Actual emissions are unlikely to be meaningfully greater than those used in the analyses.

In accordance with the Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,[37] a simplification was made in the emissions modeling to model DPM and not the speciated emissions from diesel-fueled engines for the emission concentrations used in the evaluation of cancer risk or chronic non-cancer health impacts. According to the guidance, the inhalation cancer potency factor and chronic REL for DPM already account for inhalation impacts from speciated emissions from diesel-fueled engines. Therefore, this omission in the modeling is not expected to impact the results of the analysis.

Another simplification was made in the estimate of construction emissions. Construction emission sources were limited to diesel engine exhaust, gasoline engine exhaust, and construction dust. Previous studies indicated that these sources account for a substantial majority of all TAC emissions and thus for risks and hazards associated with construction activities come from these sources. Further, methods used assumed that all PM from engine exhaust came from diesel engines and all of the engine exhaust TOG came from gasoline engines. Given the high toxicity of diesel PM and the greater emissions of toxic organic chemicals in in gasoline engine exhaust, these assumptions compensate for ignoring expected minor contributions from paving and striping emissions.

In addition, recent studies suggest that predicted concentrations of acrolein in air associated with LAX construction and operations may be over-estimated. Acrolein is unlikely to be transported over long distances because of its high reactivity and estimated short half-life in air. A study at Chicago O'Hare International Airport used empirical measurements of acrolein in ambient air to determine that acrolein was not a significant TAC associated with airport operations. The Illinois EPA measured airborne levels of various air contaminants in the vicinity of the O'Hare International Airport as well as at other locations in the Chicago area over a seven-month period in 2000. An objective of the air toxics monitoring program was to determine if emissions associated with O'Hare International Airport had a measurable impact on air quality

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37 California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, Appendix D, August 2003.

in areas adjacent to the airport. Acrolein was not reported at measurable levels in air at locations near the airport during the air toxic monitoring program.

5.2 Evaluation of Sensitive Receptor Populations

Certain subpopulations may be more sensitive or susceptible to negative health impacts caused by environmental contaminants than the population at large. Risk estimates presented in the HHRA represent a wide range of potential exposures including the highest that can be reasonably expected. Thus, even though risk estimates are not provided for all potentially sensitive receptors in the area, populations not specifically evaluated are still expected to be represented. For example, quantitatively evaluated populations include those with the highest expected exposure durations and exposure frequencies (e.g., residents). Exposures are therefore expected to be less for other populations, even those with higher chemical sensitivities.

5.3 Uncertainties Associated with Exposure Parameter Assumptions

Evaluating human exposure requires many assumptions about how people actually contact chemicals in the environment. Key issues associated with exposure assessment are discussed below.

5.3.1 Uncertainties in Exposure Duration for Cancer Risks

An exposure duration of 70 years was used to estimate possible cancer risks associated with the proposed Project. A 70-year exposure duration is generally used by the SCAQMD in risk assessments performed for permitting purposes. This exposure duration combined with other exposure parameters used in this HHRA assumes that an individual exists who resides where maximum impacts occur in a location near construction similar to construction anticipated for LAX, and that the individual is sedentary, spending essentially all of his/her time at home. Further, this exposure duration assumes that construction emissions continue for a lifetime (6 years for a child and 70 years for an adult). In essence, SCAQMD assumes that person would constantly be exposed to emissions at the point of greatest impact for their entire lives. This combination of factors never occurs, and any estimates of cancer risk based on such a combination will greatly overestimate possible cancer risks for everyone in the study area.

In the Air Toxics Hot Spots Guidance,[38] OEHHA recommends using a stochastic approach to evaluating cancer risks for residential receptors (it does not recommend this approach for workers or for chronic non-cancer health hazards). It suggests consideration of a range of exposure durations, e.g., 9-year, 30-year, and 70-year exposure durations. Varying exposure duration for residents evaluated for the proposed Project would not materially affect conclusions about the cancer risk impact of the proposed MSC North Project because all of the incremental cancer risks estimated for residential receptors are below the threshold of significance. The conclusions regarding potential cancer risk impacts of the proposed MSC North Project would remain the same.

5.3.2 Uncertainties Associated with the Evaluation of the Construction Emissions

For the evaluation of construction impacts, construction emissions from the proposed Project were estimated to produce a 5-year average for the 5-year construction period and then amortized over the 70-year exposure period to estimate the annualized 70-year average emissions. While this approach may be appropriate for the estimate of cancer risks for the adult resident who has an exposure duration of 70 years, it may underestimate risks for receptors whose exposure durations are less than 70 years, such as the child resident and school child with 6-year exposure durations. To check the sensitivity of the conclusions to this amortization, annual average emissions were recalculated for the peak locations by amortizing the construction emissions only over the 5-year construction period (instead of the 70-year period). Then, cancer risks and non-cancer health hazards were recalculated for exposure to these revised exposure concentrations assuming an exposure duration of 5 years for all receptors. The averaging time for the cancer risks remained at 70 years, but non-cancer averaging times were modified to be 5 years. These results are presented in **Table 5-1**. Calculations for this analysis are provided in **Attachment C.3**.

Although the incremental cancer risks and hazards are higher for the 5-year modified construction emissions analysis, the risks and hazards are still below the significance thresholds and conclusions regarding potential impacts of the proposed Project would remain the same.

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[38] California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, August 2003.

Table 5-1

Incremental Cancer Risks for Maximally Exposed Individuals for proposed Project Construction with Adjustment of Construction Emissions for 5-Year Construction Period

Receptor Type	Incremental Cancer Risk [1] (per million people)	Significance Threshold (per million people)	Significant?
Child Resident	4.8	10	No
School Child	0.9	10	No
Adult Resident	4.8	10	No
Adult Worker	3.4	10	No
	Incremental Chronic Non-Cancer Hazards Risk	**Significance Threshold**	**Significant?**
Child Resident	0.39	1	No
School Child	0.07	1	No
Adult Resident	0.39	1	No
Adult Worker	0.27	1	No

Notes:
1 Values provided are the maximum number of cancer cases per million people exposed.

Source: Ricondo and Associates, Inc., December 2013.

5.4 Uncertainties Associated with Toxicity Assessment

Quantitative evaluation of chemical toxicity requires assumptions to extrapolate toxicity information in the literature to possible impacts on people exposure to chemicals in the environment. Key assumptions are discussed briefly below.

5.4.1 Uncertainties Associated with Toxicity Criteria

A potentially large source of uncertainty is inherent in the derivation of the CalEPA toxicity criteria (cancer slope factors and RELs). In many cases, data used to develop toxicity criteria must be extrapolated from animals to sensitive humans. For example, the application of uncertainty factors to estimated no-observable-adverse-effects-levels (NOAELs) or lowest-observed-adverse-effects-levels (LOAELs) are typically used to develop RELs. While designed to be protective, in many cases toxicity criteria are likely to overestimate the magnitude of differences that may exist between humans and animals, and among humans.

In some cases, however, toxicity criteria may be based on studies that did not detect the most sensitive adverse effects. For example, many past studies have not measured possible toxic effects on the immune system. Moreover, some chemicals may cause subtle effects not easily recognized in animal studies. Overall, toxicity criteria are likely to protective for most or all exposed populations. These criteria are constantly being reconsidered in light of new research and are subject to occasional change during this process. The nature and direction of these changes cannot be predicted and currently available criteria are the best source of toxicity information for use in health risk assessments.

5.4.2 Uncertainties Associated with Unavailable Toxicity Values

1,3-Butadiene, ethylbenzene, naphthalene, n-hexane, propylene, silicon, antimony, cadmium, hexavalent chromium, lead, selenium, and DPM do not have acute RELs that have been developed by OEHHA. However, 1,3-butadiene and ethylbenzene have acute toxicity screening levels from the Agency for Toxic Substances and Disease Registry (ATSDR) in the form of published acute minimal risk levels (MRLs) for hazardous substances. MRLs were established to provide a screening tool for public health professionals to use to identify if potential human health hazards exist from contamination at hazardous waste sites. MRLs are often based on animal studies because relevant human studies are lacking. ATSDR assumes that humans are more sensitive than animals to the effects of hazardous substances and that certain persons may be particularly sensitive. Thus, ATSDR recommendations for MRLs may be as much as a hundred-fold below levels shown to be non-toxic in laboratory animals. This approach is conservative (i.e., protective) for public health. Acute inhalation MRLs for 1,3-butadiene and ethylbenzene are 0.1 parts per million (ppm) and 5 ppm, respectively. These MRLs are relatively high (compared to acrolein which has an acute MRL of 0.003 ppm), reflecting the low acute toxicity of these chemicals. It's unlikely that acute non-cancer health hazards associated with these organic chemicals would rival acrolein, the risk driver for potential acute non-cancer health hazards from aircraft emissions. Lack of inclusion of these chemicals in the quantitative risk assessment is not expected to change the conclusions of the acute non-cancer health hazard evaluation.

Although DPM does not have an acute REL, several components of DPM (such as arsenic, chlorine, mercury, nickel, vanadium, and sulfates) were evaluated in the acute non-cancer health hazard analysis. As noted in Section 5.1, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*[39] indicates that toxicity values for DPM were developed for whole diesel exhaust (gas and particulate matter). As such, DPM should be the only TAC considered in the calculation of cancer risks and chronic non-cancer health hazards for diesel engine emissions; speciated diesel exhaust components (e.g., PAHs, metals) should not be evaluated along with DPM. Studies used to support the DPM toxicity value also indicate that "potential cancer risk from inhalation exposure to whole diesel exhaust will outweigh the multipathway cancer risk from the speciated components." DPM does not,

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[39] California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, Appendix D, August 2003.

however, have an acute REL. Therefore, in order to account for potential acute impacts from DPM, the speciated components of DPM (arsenic, chlorine, mercury, nickel, vanadium, and sulfates) were evaluated in the acute non-cancer health hazard analysis.

Naphthalene, n-hexane, propylene, silicon, antimony, cadmium, hexavalent chromium, lead, and selenium do not have acute toxicity values. Therefore, their potential impact on the conclusions of the acute risk evaluation is unknown.

5.5 Uncertainties in Risk Characterization

Combining estimates of exposure and toxicity to estimate risks and hazards to human health require the use of methods that simplify actual exposure. For the inhalation pathway, important issues for risk characterization are discussed below.

5.5.1 Uncertainties Associated with Elimination of Potentially Complete Exposure Pathways

The proposed MSC North Project HHRA evaluates the potential complete exposure pathway of direct inhalation of TAC released during construction and operations of the proposed Project. However, other exposure pathways, such as exposure to TAC deposited onto soils, could also be important. For example, children might ingest TAC that deposited onto soil through hand-to-mouth activity during outdoor play, or residents who have gardens could ingest TAC taken up from soil into plants. For the proposed Project HHRA, based on the multi-pathway screening analysis in the LAX Master Plan Final EIR and other airport HHRAs, inhalation of TAC was identified as the primary exposure pathway, and exposures and risks from inhalation of TAC were quantified.

Other potential exposure pathways were analyzed in a two-step screening process described in Technical Report 14a Attachment B, Section 2.5.3 of the LAX Master Plan Final EIR. In the first step, air dispersion modeling was used to determine potential TAC concentrations in air on or near LAX, and these concentrations were used to estimate deposition of TAC onto soils over time. In the second screening step, concentrations of TAC estimated in soil were compared to the range of background concentrations of these chemicals to determine the relative impacts of deposition from air. This analysis indicated that impacts to soils from deposition of TAC from airports would be negligible and that the estimated contribution from LAX emissions would result in no measurable difference in expected background concentrations of metals. Therefore, secondary pathways involving TAC in soil were not further evaluated.

5.6 Interactions among Acrolein and Criteria Pollutants

TAC that act in similar ways to produce toxicity may cause additive, or even greater than additive, impacts to human health. Acrolein and criteria pollutants, such as oxides of nitrogen and ozone, all act as irritants to the upper respiratory system. Thus, interactions among these chemicals are possible.

Whether such interactions actually occur, and are important for emissions from LAX construction, cannot be ascertained with available information. Many uncertainties exist, including:

- Reliability of acrolein concentration estimates (see Section 5.1).
- Lack of information on specific mechanisms of toxicity for the chemicals in question, which will affect the potential for and degree of any interactions.
- Lack of information on thresholds at which interactions may occur.

Without extensive additional research, the potential for impacts related to interactions among acrolein and criteria pollutants cannot be further assessed.

6.0 SUMMARY

The HHRA addressed possible incremental health impacts associated with construction and operations of the proposed MSC North Project. The evaluation assessed cancer risks, chronic non-cancer health hazards, and acute health hazards. The text below summarizes the conclusions regarding significant human health impacts based on modeling estimates.

- Incremental cancer risks associated with construction and operations of the proposed MSC North Project are anticipated to be below the threshold of significance of 10 in one million for all receptor types (i.e., child resident, school child, adult resident, and adult worker) within the study area. Incremental cancer risk estimates indicate that impacts would be less than significant.
- Incremental chronic non-cancer hazard indices associated with construction and operations of the proposed MSC North Project are anticipated to be below the threshold of significance for all receptor types (i.e., child resident, school child, adult resident, and adult worker). Incremental chronic non-cancer hazard indices indicate that impacts would be less than significant.
- Incremental acute hazard indices for operations of the proposed MSC North Project would be at or above the threshold of significance of 1 at 5 of 326 modeled receptor locations. Incremental acute hazard indices indicate that impacts would be significant.
- Exposure concentrations used for the risk calculations assumed that the 5-year average construction emissions were amortized over a 70-year exposure period to estimate the annualized 70-year average emissions. Because this approach could underestimate

risks for receptors whose exposure durations are less than 70 years, cancer risks and hazards were recalculated using construction emissions amortized over the 5-year construction period (instead of the 70-year period) and assuming an exposure duration of 5 years for all receptors. Although this recalculation showed that the incremental cancer risks and hazards are higher for the 5-year modified construction emissions analysis, the risks and hazards are still below significance thresholds and conclusions regarding potential impacts of the proposed Project would remain the same.

- Estimated maximum air concentrations for all TAC evaluated on the proposed Project site would not exceed PEL-TWA for construction workers. Therefore, health impacts to on-airport workers would be less than significant.
- From a cumulative standpoint, cancer risks and chronic non-cancer hazards from the proposed Project construction would likely contribute negligibly to the risks and hazards from emissions for anticipated concurrent construction projects at LAX.
- Also from a cumulative standpoint, acute hazards from operations of the proposed MSC North Project would likely contribute to the hazards from emissions for anticipated concurrent construction projects at LAX.
- Estimated cumulative risks and hazards from emissions for concurrent construction projects at LAX would not be measurable against urban background conditions in the South Coast Air Basin.

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Midfield Satellite Concourse North Project

Draft EIR

Appendix C (Human Health Risk Assessment)

Human Health Risk Assessment Files

Provided by Ricondo & Associates

December 2013

C.1 Construction Cancer Risk and Chronic Non-Cancer Health Hazard Calculations (RAGS Part F)

C.2 Construction Acute Health Hazard Calculations

C.3 Cancer Risk and Chronic Non-Cancer Health Hazard Calculations for Adjusted Construction Emissions (RAGS Part F)

C.4 Operations Cancer Risk and Chronic Non-Cancer Health Hazard Calculations (RAGS Part F)

C.5 Operations Acute Health Hazard Calculations

Attachment C.1

Construction Cancer Risk and Chronic Non-Cancer Health Hazard Calculations (RAGS Part F)

Table 1-1

RAGS F Risk Calculation for MSC North Project, Construction - Lifetime Exposure
(Based on Peak Location of Residential Cancer Risks)

Exposure Parameters	Residential Child	School Child	Residential Adult
Exposure Time	24 (hrs/day)	8 (hrs/day)	24 (hrs/day)
Exposure Frequency	350 (days/year)	200 (days/year)	350 (days/year)
Exposure Duration	6 (years)	6 (years)	70 (years)
Averaging Time (non-carcinogenic)	52560 (hrs)	52560 (hrs)	613200 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)	613200 (hrs)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:
EC = Exposure Concentratic ED = Exposure Duration
CA = Concentration in Air AT = Averaging Time
ET = Exposure Time IUR = Inhalation Unit Risk
EF = Exposure Frequency RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks			Hazard Quotients		
TAC	Concentration at Location with Maximum Risk (ug/m3)	EPA Inhalation Unit Risk $(ug/m^3)^{-1}$	CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$	EPA Chronic Inhalation RfC (ug/m^3)	CalEPA Chronic Inhalation RfC (ug/m^3)	Cancer Risk to Child Resident	Cancer Risk to School Child	Cancer Risk to Adult Resident	Hazard Quotient Child Resident	Hazard Quotient School Child	Hazard Quotient Adult Resident
Acetaldehyde	3.62E-03	2.20E-06	2.70E-06	9.00E+00	1.40E+02	8.03E-10	1.53E-10	9.36E-09	2.48E-05	4.72E-06	2.48E-05
Acrolein	6.18E-05	N/A	N/A	2.00E-02	3.50E-01	NC	NC	NC	1.69E-04	3.23E-05	1.69E-04
Benzene	9.84E-04	7.80E-06	2.90E-05	3.00E+01	6.00E+01	2.35E-09	4.47E-10	2.74E-08	1.57E-05	3.00E-06	1.57E-05
1,3-Butadiene	9.35E-05	3.00E-05	1.70E-04	2.00E+00	2.00E+01	1.31E-09	2.49E-10	1.52E-08	4.48E-06	8.54E-07	4.48E-06
Ethylbenzene	1.50E-04	2.50E-06	2.50E-06	1.00E+03	2.00E+03	3.08E-11	5.87E-12	3.60E-10	7.19E-08	1.37E-08	7.19E-08
Formaldehyde	7.24E-03	1.30E-05	6.00E-06	9.80E+00	9.00E+00	3.57E-09	6.80E-10	4.16E-08	7.71E-04	1.47E-04	7.71E-04
Hexane, n-	7.72E-05	N/A	N/A	7.00E+02	7.00E+03	NC	NC	NC	1.06E-08	2.02E-09	1.06E-08
Methanol	1.48E-05	N/A	N/A	4.00E+03	4.00E+03	NC	NC	NC	3.54E-09	6.74E-10	3.54E-09
Methyl ethyl ketone	7.27E-04	N/A	N/A	5.00E+03	N/A	NC	NC	NC	NC	NC	NC
Naphthalene	4.18E-05	N/A	3.40E-05	3.00E+00	9.00E+00	1.17E-10	2.23E-11	1.36E-09	4.45E-06	8.49E-07	4.45E-06
Propylene	1.28E-03	N/A	N/A	3.00E+03	3.00E+03	NC	NC	NC	4.08E-07	7.78E-08	4.08E-07
Styrene	2.85E-05	N/A	N/A	1.00E+03	9.00E+02	NC	NC	NC	3.04E-08	5.79E-09	3.04E-08
Toluene	7.25E-04	N/A	N/A	5.00E+03	3.00E+02	NC	NC	NC	2.32E-06	4.41E-07	2.32E-06
Xylene (total)	5.12E-04	N/A	N/A	1.00E+02	7.00E+02	NC	NC	NC	7.01E-07	1.34E-07	7.01E-07
Diesel PM	2.92E-03	N/A	3.00E-04	5.00E+00	5.00E+00	7.20E-08	1.37E-08	8.40E-07	5.60E-04	1.07E-04	5.60E-04
Arsenic	9.08E-07	4.30E-03	3.30E-03	1.50E-02	1.50E-02	2.46E-10	4.69E-11	2.87E-09	5.81E-05	1.11E-05	5.81E-05
Cadmium	1.57E-06	1.80E-03	4.20E-03	1.00E-02	2.00E-02	5.42E-10	1.03E-10	6.32E-09	7.52E-05	1.43E-05	7.52E-05
Chlorine	1.59E-04	N/A	N/A	1.50E-01	2.00E-01	NC	NC	NC	7.63E-04	1.45E-04	7.63E-04
Chromium (VI)	4.89E-07	1.20E-02	1.50E-01	1.00E-01	2.00E-01	6.03E-09	1.15E-09	7.04E-08	2.35E-06	4.47E-07	2.35E-06
Copper	5.21E-06	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Lead	2.62E-05	N/A	1.20E-05	N/A	N/A	2.59E-11	4.93E-12	3.02E-10	NC	NC	NC
Manganese	4.29E-05	N/A	N/A	5.00E-02	9.00E-02	NC	NC	NC	4.57E-04	8.71E-05	4.57E-04
Mercury	8.32E-07	N/A	N/A	3.00E-01	3.00E-02	NC	NC	NC	2.66E-05	5.07E-06	2.66E-05
Nickel	2.88E-06	N/A	2.60E-04	9.00E-02	1.40E-02	6.17E-11	1.17E-11	7.19E-10	1.98E-04	3.76E-05	1.98E-04
Selenium	1.41E-07	N/A	N/A	2.00E+01	2.00E+01	NC	NC	NC	6.76E-09	1.29E-09	6.76E-09
Silicon	9.09E-03	N/A	N/A	3.00E+00	3.00E+00	NC	NC	NC	2.91E-03	5.54E-04	2.91E-03
Sulfates	2.70E-04	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Vanadium	1.24E-05	8.30E-03	N/A	1.00E-01	N/A	NC	NC	NC	NC	NC	NC
					TOTAL	8.71E-08	1.66E-08	1.02E-06	0.0060	0.0012	0.0060
					1 in a million cancer risks	0.087	0.017	1.016			

Notes:
[1] Residential Maximum Grid No. Receptor_81
N/A - Not Available
NC = Not Calculated
ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Table 1-2

RAGS F Risk Calculation for MSC North Project, Construction - Lifetime Exposure
(Based on Peak Location of Residential Hazards)

Exposure Parameters	Residential Child	School Child	Residential Adult
Exposure Time	24 (hrs/day)	8 (hrs/day)	24 (hrs/day)
Exposure Frequency	350 (days/year)	200 (days/year)	350 (days/year)
Exposure Duration	6 (years)	6 (years)	70 (years)
Averaging Time (non-carcinogenic)	52560 (hrs)	52560 (hrs)	613200 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)	613200 (hrs)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:

EC = Exposure Concentratic	ED = Exposure Duration
CA = Concentration in Air	AT = Averaging Time
ET = Exposure Time	IUR = Inhalation Unit Risk
EF = Exposure Frequency	RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks			Hazard Quotients		
TAC	Concentration at Location with Maximum Risk (ug/m3)	EPA Inhalation Unit Risk $(ug/m^3)^{-1}$	CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$	EPA Chronic Inhalation RfC (ug/m^3)	CalEPA Chronic Inhalation RfC (ug/m^3)	Cancer Risk to Child Resident	Cancer Risk to School Child	Cancer Risk to Adult Resident	Hazard Quotient Child Resident	Hazard Quotient School Child	Hazard Quotient Adult Resident
Acetaldehyde	2.63E-02	2.20E-06	2.70E-06	9.00E+00	1.40E+02	5.83E-09	1.11E-09	6.81E-08	1.80E-04	3.43E-05	1.80E-04
Acrolein	4.49E-04	N/A	N/A	2.00E-02	3.50E-01	NC	NC	NC	1.23E-03	2.35E-04	1.23E-03
Benzene	7.15E-03	7.80E-06	2.90E-05	3.00E+01	6.00E+01	1.71E-08	3.25E-09	1.99E-07	1.14E-04	2.18E-05	1.14E-04
1,3-Butadiene	6.79E-04	3.00E-05	1.70E-04	2.00E+00	2.00E+01	9.49E-09	1.81E-09	1.11E-07	3.26E-05	6.20E-06	3.26E-05
Ethylbenzene	1.09E-03	2.50E-06	2.50E-06	1.00E+03	2.00E+03	2.24E-10	4.27E-11	2.61E-09	5.23E-07	9.96E-08	5.23E-07
Formaldehyde	5.26E-02	1.30E-05	6.00E-06	9.80E+00	9.00E+00	2.59E-08	4.94E-09	3.03E-07	5.61E-03	1.07E-03	5.61E-03
Hexane, n-	5.61E-04	N/A	N/A	7.00E+02	7.00E+03	NC	NC	NC	7.69E-08	1.46E-08	7.69E-08
Methanol	1.07E-04	N/A	N/A	4.00E+03	4.00E+03	NC	NC	NC	2.57E-08	4.90E-09	2.57E-08
Methyl ethyl ketone	5.28E-03	N/A	N/A	5.00E+03	N/A	NC	NC	NC	NC	NC	NC
Naphthalene	3.04E-04	N/A	3.40E-05	3.00E+00	9.00E+00	8.49E-10	1.62E-10	9.91E-09	3.24E-05	6.17E-06	3.24E-05
Propylene	9.29E-03	N/A	N/A	3.00E+03	3.00E+03	NC	NC	NC	2.97E-06	5.65E-07	2.97E-06
Styrene	2.07E-04	N/A	N/A	1.00E+03	9.00E+02	NC	NC	NC	2.21E-07	4.21E-08	2.21E-07
Toluene	5.27E-03	N/A	N/A	5.00E+03	3.00E+02	NC	NC	NC	1.68E-05	3.21E-06	1.68E-05
Xylene (total)	3.72E-03	N/A	N/A	1.00E+02	7.00E+02	NC	NC	NC	5.10E-06	9.71E-07	5.10E-06
Diesel PM	2.20E-02	N/A	3.00E-04	5.00E+00	5.00E+00	5.43E-07	1.03E-07	6.34E-06	4.22E-03	8.05E-04	4.22E-03
Arsenic	1.47E-05	4.30E-03	3.30E-03	1.50E-02	1.50E-02	3.99E-09	7.60E-10	4.66E-08	9.41E-04	1.79E-04	9.41E-04
Cadmium	2.46E-05	1.80E-03	4.20E-03	1.00E-02	2.00E-02	8.50E-09	1.62E-09	9.91E-08	1.18E-03	2.25E-04	1.18E-03
Chlorine	2.59E-03	N/A	N/A	1.50E-01	2.00E-01	NC	NC	NC	1.24E-02	2.37E-03	1.24E-02
Chromium (VI)	7.99E-06	1.20E-02	1.50E-01	1.00E-01	2.00E-01	9.85E-08	1.88E-08	1.15E-06	3.83E-05	7.29E-06	3.83E-05
Copper	8.45E-05	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Lead	4.28E-04	N/A	1.20E-05	N/A	N/A	4.22E-10	8.03E-11	4.92E-09	NC	NC	NC
Manganese	7.01E-04	N/A	N/A	5.00E-02	9.00E-02	NC	NC	NC	7.47E-03	1.42E-03	7.47E-03
Mercury	1.28E-05	N/A	N/A	3.00E-01	3.00E-02	NC	NC	NC	4.10E-04	7.81E-05	4.10E-04
Nickel	4.67E-05	N/A	2.60E-04	9.00E-02	1.40E-02	9.97E-10	1.90E-10	1.16E-08	3.20E-03	6.09E-04	3.20E-03
Selenium	2.05E-06	N/A	N/A	2.00E+01	2.00E+01	NC	NC	NC	9.81E-08	1.87E-08	9.81E-08
Silicon	1.49E-01	N/A	N/A	3.00E+00	3.00E+00	NC	NC	NC	4.75E-02	9.04E-03	4.75E-02
Sulfates	3.97E-03	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Vanadium	2.02E-04	8.30E-03	N/A	1.00E-01	N/A	NC	NC	NC	NC	NC	NC
					TOTAL	7.15E-07	1.36E-07	8.34E-06	0.0846	0.0161	0.0846

Notes:
[1] Residential Maximum Grid No. Receptor_81
N/A - Not Available
NC = Not Calculated
ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Table 1-3

RAGS F Risk Calculation for MSC North Project, Construction - Lifetime Exposure
(Based on Peak Location of Commercial Cancer Risks)

Exposure Parameters	**Adult Worker**
Exposure Time	24 (hrs/day)
Exposure Frequency	350 (days/year)
Exposure Duration	40 (years)
Averaging Time (non-carcinogenic)	350400 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:
EC = Exposure Concentration; ED = Exposure Duration
CA = Concentration in Air; AT = Averaging Time
ET = Exposure Time; IUR = Inhalation Unit Risk
EF = Exposure Frequency; RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks	Hazard Quotients
TAC	**Concentration at Location with Maximum Risk (ug/m3)**	**EPA Inhalation Unit Risk $(ug/m^3)^{-1}$**	**CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$**	**EPA Chronic Inhalation RfC (ug/m^3)**	**CalEPA Chronic Inhalation RfC (ug/m^3)**	**Cancer Risk to Adult Worker**	**Hazard Quotient Adult Worker**
Acetaldehyde	2.56E-03	2.20E-06	2.70E-06	9.00E+00	1.40E+02	3.79E-09	1.76E-05
Acrolein	4.38E-05	N/A	N/A	2.00E-02	3.50E-01	NC	1.20E-04
Benzene	6.98E-04	7.80E-06	2.90E-05	3.00E+01	6.00E+01	1.11E-08	1.11E-05
1,3-Butadiene	6.62E-05	3.00E-05	1.70E-04	2.00E+00	2.00E+01	6.17E-09	3.18E-06
Ethylbenzene	1.06E-04	2.50E-06	2.50E-06	1.00E+03	2.00E+03	1.46E-10	5.10E-08
Formaldehyde	5.13E-03	1.30E-05	6.00E-06	9.80E+00	9.00E+00	1.69E-08	5.47E-04
Hexane, n-	5.47E-05	N/A	N/A	7.00E+02	7.00E+03	NC	7.50E-09
Methanol	1.05E-05	N/A	N/A	4.00E+03	4.00E+03	NC	2.51E-09
Methyl ethyl ketone	5.15E-04	N/A	N/A	5.00E+03	N/A	NC	NC
Naphthalene	2.96E-05	N/A	3.40E-05	3.00E+00	9.00E+00	5.52E-10	3.16E-06
Propylene	9.05E-04	N/A	N/A	3.00E+03	3.00E+03	NC	2.89E-07
Styrene	2.02E-05	N/A	N/A	1.00E+03	9.00E+02	NC	2.15E-08
Toluene	5.13E-04	N/A	N/A	5.00E+03	3.00E+02	NC	1.64E-06
Xylene (total)	3.63E-04	N/A	N/A	1.00E+02	7.00E+02	NC	4.97E-07
Diesel PM	2.03E-03	N/A	3.00E-04	5.00E+00	5.00E+00	3.34E-07	3.89E-04
Arsenic	6.31E-07	4.30E-03	3.30E-03	1.50E-02	1.50E-02	1.14E-09	4.03E-05
Cadmium	1.09E-06	1.80E-03	4.20E-03	1.00E-02	2.00E-02	2.51E-09	5.22E-05
Chlorine	1.11E-04	N/A	N/A	1.50E-01	2.00E-01	NC	5.30E-04
Chromium (VI)	3.40E-07	1.20E-02	1.50E-01	1.00E-01	2.00E-01	2.79E-08	1.63E-06
Copper	3.62E-06	N/A	N/A	N/A	N/A	NC	NC
Lead	1.82E-05	N/A	1.20E-05	N/A	N/A	1.20E-10	NC
Manganese	2.98E-05	N/A	N/A	5.00E-02	9.00E-02	NC	3.18E-04
Mercury	5.78E-07	N/A	N/A	3.00E-01	3.00E-02	NC	1.85E-05
Nickel	2.00E-06	N/A	2.60E-04	9.00E-02	1.40E-02	2.85E-10	1.37E-04
Selenium	9.79E-08	N/A	N/A	2.00E+01	2.00E+01	NC	4.69E-09
Silicon	6.31E-03	N/A	N/A	3.00E+00	3.00E+00	NC	2.02E-03
Sulfates	1.88E-04	N/A	N/A	N/A	N/A	NC	NC
Vanadium	8.62E-06	8.30E-03	N/A	1.00E-01	N/A	NC	NC
					TOTAL	4.04E-07	0.0042
					1 in a million cancer risks	0.40	

Notes:
[1] Commercial Maximum Grid No. Receptor_309
N/A - Not Available
NC = Not Calculated
ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Table 1-4

RAGS F Risk Calculation for MSC North Project, Construction - Lifetime Exposure
(Based on Peak Location of Commercial Cancer Risks)

Exposure Parameters	Adult Worker
Exposure Time	24 (hrs/day)
Exposure Frequency	350 (days/year)
Exposure Duration	40 (years)
Averaging Time (non-carcinogenic)	350400 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC

Where:

EC = Exposure Concentration	ED = Exposure Duration
CA = Concentration in Air	AT = Averaging Time
ET = Exposure Time	IUR = Inhalation Unit Risk
EF = Exposure Frequency	RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks	Hazard Quotients
TAC	**Concentration at Location with Maximum Risk (ug/m3)**	**EPA Inhalation Unit Risk $(ug/m^3)^{-1}$**	**CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$**	**EPA Chronic Inhalation RfC (ug/m^3)**	**CalEPA Chronic Inhalation RfC (ug/m^3)**	**Cancer Risk to Adult Worker**	**Hazard Quotient Adult Worker**
Acetaldehyde	1.78E-02	2.20E-06	2.70E-06	9.00E+00	1.40E+02	2.63E-08	1.22E-04
Acrolein	3.04E-04	N/A	N/A	2.00E-02	3.50E-01	NC	8.32E-04
Benzene	4.84E-03	7.80E-06	2.90E-05	3.00E+01	6.00E+01	7.69E-08	7.73E-05
1,3-Butadiene	4.59E-04	3.00E-05	1.70E-04	2.00E+00	2.00E+01	4.28E-08	2.20E-05
Ethylbenzene	7.37E-04	2.50E-06	2.50E-06	1.00E+03	2.00E+03	1.01E-09	3.53E-07
Formaldehyde	3.56E-02	1.30E-05	6.00E-06	9.80E+00	9.00E+00	1.17E-07	3.79E-03
Hexane, n-	3.79E-04	N/A	N/A	7.00E+02	7.00E+03	NC	5.20E-08
Methanol	7.25E-05	N/A	N/A	4.00E+03	4.00E+03	NC	1.74E-08
Methyl ethyl ketone	3.57E-03	N/A	N/A	5.00E+03	N/A	NC	NC
Naphthalene	2.05E-04	N/A	3.40E-05	3.00E+00	9.00E+00	3.83E-09	2.19E-05
Propylene	6.28E-03	N/A	N/A	3.00E+03	3.00E+03	NC	2.01E-06
Styrene	1.40E-04	N/A	N/A	1.00E+03	9.00E+02	NC	1.49E-07
Toluene	3.56E-03	N/A	N/A	5.00E+03	3.00E+02	NC	1.14E-05
Xylene (total)	2.52E-03	N/A	N/A	1.00E+02	7.00E+02	NC	3.45E-06
Diesel PM	1.49E-02	N/A	3.00E-04	5.00E+00	5.00E+00	2.46E-06	2.87E-03
Arsenic	9.94E-06	4.30E-03	3.30E-03	1.50E-02	1.50E-02	1.80E-08	6.36E-04
Cadmium	1.66E-05	1.80E-03	4.20E-03	1.00E-02	2.00E-02	3.83E-08	7.98E-04
Chlorine	1.75E-03	N/A	N/A	1.50E-01	2.00E-01	NC	8.40E-03
Chromium (VI)	5.40E-06	1.20E-02	1.50E-01	1.00E-01	2.00E-01	4.43E-07	2.59E-05
Copper	5.71E-05	N/A	N/A	N/A	N/A	NC	NC
Lead	2.89E-04	N/A	1.20E-05	N/A	N/A	1.90E-09	NC
Manganese	4.73E-04	N/A	N/A	5.00E-02	9.00E-02	NC	5.04E-03
Mercury	8.67E-06	N/A	N/A	3.00E-01	3.00E-02	NC	2.77E-04
Nickel	3.15E-05	N/A	2.60E-04	9.00E-02	1.40E-02	4.49E-09	2.16E-03
Selenium	1.38E-06	N/A	N/A	2.00E+01	2.00E+01	NC	6.63E-08
Silicon	1.00E-01	N/A	N/A	3.00E+00	3.00E+00	NC	3.21E-02
Sulfates	2.68E-03	N/A	N/A	N/A	N/A	NC	NC
Vanadium	1.37E-04	8.30E-03	N/A	1.00E-01	N/A	NC	NC
					TOTAL	3.23E-06	0.0572

Notes:

[1] Residential Maximum Grid No. Receptor_307

N/A - Not Available

NC = Not Calculated

ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Attachment C.2

Construction Acute Health Hazard Calculations

Table 2-1
Summary of Incremental Acute Hazard Indices for LAX MSC North Project for On-Site Workers and Off-Site Receptors
Construction TAC Concentrations

Receptor Location	acetaldehyde (µg/m³)	acrolein (µg/m³)	benzene (µg/m³)	formaldehyde (µg/m³)	methyl alcohol (µg/m³)	methyl ethyl ketone (µg/m³)	styrene (µg/m³)	toluene (µg/m³)	xylene, total (µg/m³)	arsenic (µg/m³)	chlorine (µg/m³)	copper (µg/m³)	manganese (µg/m³)	mercury (µg/m³)	nickel (µg/m³)	vanadium (µg/m³)	sulfates (µg/m³)
Commerical - Onsite																	
Maximum Onsite Concentration -->	3.00E+00	5.13E-02	8.17E-01	6.01E+00	1.22E-02	6.03E-01	2.37E-02	6.01E-01	4.25E-01	2.19E-03	3.87E-01	1.26E-02	1.05E-01	1.90E-03	6.96E-03	3.01E-02	5.84E-01
Commerical - Offsite																	
Maximum Offsite Concentration -->	2.80E-01	4.78E-03	7.61E-02	5.59E-01	1.14E-03	5.62E-02	2.21E-03	5.60E-02	3.96E-02	3.45E-04	6.09E-02	1.98E-03	1.65E-02	2.95E-04	1.09E-03	4.74E-03	8.95E-02
Minimum Offsite Concentration -->	5.91E-02	1.01E-03	1.61E-02	1.18E-01	2.41E-04	1.19E-02	4.66E-04	1.18E-02	8.36E-03	5.46E-05	9.64E-03	3.14E-04	2.60E-03	4.68E-05	1.73E-04	7.51E-04	1.42E-02
Average Offsite Concentration -->	1.13E-01	1.93E-03	3.07E-02	2.26E-01	4.60E-04	2.27E-02	8.90E-04	2.26E-02	1.60E-02	1.34E-04	2.36E-02	7.69E-04	6.39E-03	1.15E-04	4.24E-04	1.84E-03	3.48E-02
Recreational																	
Maximum Offsite Concentration -->	3.23E-01	5.53E-03	8.80E-02	6.47E-01	1.32E-03	6.50E-02	2.55E-03	6.48E-02	4.58E-02	3.73E-04	6.58E-02	2.14E-03	1.78E-02	3.19E-04	1.18E-03	5.13E-03	9.69E-02
Minimum Offsite Concentration -->	7.99E-02	1.37E-03	2.17E-02	1.60E-01	3.26E-04	1.60E-02	6.30E-04	1.60E-02	1.13E-02	5.67E-05	1.00E-02	3.26E-04	2.70E-03	4.92E-05	1.80E-04	7.79E-04	1.51E-02
Average Offsite Concentration -->	1.55E-01	2.65E-03	4.21E-02	3.10E-01	6.31E-04	3.11E-02	1.22E-03	3.10E-02	2.19E-02	1.67E-04	2.95E-02	9.61E-04	7.98E-03	1.43E-04	5.30E-04	2.30E-03	4.36E-02
Residential																	
Maximum Offsite Concentration -->	3.92E-01	6.70E-03	1.07E-01	7.84E-01	1.60E-03	7.87E-02	3.09E-03	7.85E-02	5.55E-02	4.45E-04	7.86E-02	2.56E-03	2.13E-02	3.82E-04	1.41E-03	6.13E-03	1.16E-01
Minimum Offsite Concentration -->	7.90E-02	1.35E-03	2.15E-02	1.58E-01	3.22E-04	1.59E-02	6.23E-04	1.58E-02	1.12E-02	7.06E-05	1.25E-02	4.06E-04	3.37E-03	6.09E-05	2.24E-04	9.71E-04	1.86E-02
Average Offsite Concentration -->	1.94E-01	3.31E-03	5.28E-02	3.88E-01	7.91E-04	3.89E-02	1.53E-03	3.88E-02	2.74E-02	2.34E-04	4.12E-02	1.34E-03	1.11E-02	2.00E-04	7.40E-04	3.21E-03	6.08E-02
School																	
Maximum Offsite Concentration -->	2.69E-01	4.60E-03	7.32E-02	5.39E-01	1.10E-03	5.41E-02	2.12E-03	5.39E-02	3.81E-02	2.88E-04	5.09E-02	1.66E-03	1.38E-02	2.47E-04	9.13E-04	3.96E-03	7.50E-02
Minimum Offsite Concentration -->	7.39E-02	1.26E-03	2.01E-02	1.48E-01	3.02E-04	1.49E-02	5.83E-04	1.48E-02	1.05E-02	9.06E-05	1.60E-02	5.20E-04	4.32E-03	7.75E-05	2.87E-04	1.25E-03	2.35E-02
Average Offsite Concentration -->	1.77E-01	3.02E-03	4.81E-02	3.54E-01	7.21E-04	3.55E-02	1.39E-03	3.54E-02	2.50E-02	2.01E-04	3.55E-02	1.16E-03	9.60E-03	1.72E-04	6.38E-04	2.77E-03	5.24E-02
CalEPA Acute REL	470	2.5	1300	55	28000	13000	21000	37000	22000	0.2	210	100	0.17	0.6	6	30	120
Commerical - Onsite																	
Maximum Onsite Acute Hazard -->	6.39E-03	2.05E-02	6.28E-04	1.09E-01	4.37E-07	4.64E-05	1.13E-06	1.63E-05	1.93E-05	1.10E-02	1.84E-03	1.26E-04	6.15E-01	3.17E-03	1.16E-03	1.00E-03	4.87E-03
Commerical - Offsite																	
Maximum Offsite Acute Hazard -->	5.95E-04	1.91E-03	5.85E-05	1.02E-02	4.07E-08	4.32E-06	1.05E-07	1.51E-06	1.80E-06	1.72E-03	2.90E-04	1.98E-05	9.68E-02	4.92E-04	1.82E-04	1.58E-04	7.46E-04
Minimum Offsite Acute Hazard -->	1.26E-04	4.04E-04	1.24E-05	2.15E-03	8.61E-09	9.13E-07	2.22E-08	3.20E-07	3.80E-07	2.73E-04	4.59E-05	3.14E-06	1.53E-02	7.80E-05	2.88E-05	2.50E-05	1.19E-04
Average Offsite Acute Hazard -->	2.40E-04	7.72E-04	2.36E-05	4.11E-03	1.64E-08	1.74E-06	4.24E-08	6.11E-07	7.26E-07	6.69E-04	1.13E-04	7.69E-06	3.76E-02	1.91E-04	7.07E-05	6.13E-05	2.90E-04
Recreational																	
Maximum Offsite Acute Hazard -->	6.88E-04	2.21E-03	6.77E-05	1.18E-02	4.71E-08	5.00E-06	1.22E-07	1.75E-06	2.08E-06	1.86E-03	3.13E-04	2.14E-05	1.05E-01	5.32E-04	1.97E-04	1.71E-04	8.08E-04
Minimum Offsite Acute Hazard -->	1.70E-04	5.46E-04	1.67E-05	2.91E-03	1.16E-08	1.23E-06	3.00E-08	4.32E-07	5.14E-07	2.84E-04	4.76E-05	3.26E-06	1.59E-02	8.20E-05	3.00E-05	2.60E-05	1.26E-04
Average Offsite Acute Hazard -->	3.29E-04	1.06E-03	3.24E-05	5.63E-03	2.26E-08	2.39E-06	5.81E-08	8.38E-07	9.96E-07	8.36E-04	1.41E-04	9.61E-06	4.70E-02	2.39E-04	8.84E-05	7.67E-05	3.64E-04
Residential																	
Maximum Offsite Acute Hazard -->	8.34E-04	2.68E-03	8.21E-05	1.43E-02	5.71E-08	6.06E-06	1.47E-07	2.12E-06	2.52E-06	2.23E-03	3.74E-04	2.56E-05	1.25E-01	6.36E-04	2.35E-04	2.04E-04	9.66E-04
Minimum Offsite Acute Hazard -->	1.68E-04	5.40E-04	1.65E-05	2.88E-03	1.15E-08	1.22E-06	2.97E-08	4.28E-07	5.09E-07	3.53E-04	5.93E-05	4.06E-06	1.98E-02	1.02E-04	3.73E-05	3.24E-05	1.55E-04
Average Offsite Acute Hazard -->	4.12E-04	1.33E-03	4.06E-05	7.05E-03	2.82E-08	3.00E-06	7.28E-08	1.05E-06	1.25E-06	1.17E-03	1.96E-04	1.34E-05	6.56E-02	3.34E-04	1.23E-04	1.07E-04	5.07E-04
School																	
Maximum Offsite Acute Hazard -->	5.73E-04	1.84E-03	5.63E-05	9.79E-03	3.92E-08	4.16E-06	1.01E-07	1.46E-06	1.73E-06	1.44E-03	2.42E-04	1.66E-05	8.09E-02	4.11E-04	1.52E-04	1.32E-04	6.25E-04
Minimum Offsite Acute Hazard -->	1.57E-04	5.06E-04	1.55E-05	2.69E-03	1.08E-08	1.14E-06	2.78E-08	4.00E-07	4.76E-07	4.53E-04	7.62E-05	5.20E-06	2.54E-02	1.29E-04	4.78E-05	4.15E-05	1.96E-04
Average Offsite Acute Hazard -->	3.76E-04	1.21E-03	3.70E-05	6.43E-03	2.58E-08	2.73E-06	6.64E-08	9.57E-07	1.14E-06	1.01E-03	1.69E-04	1.16E-05	5.65E-02	2.87E-04	1.06E-04	9.22E-05	4.37E-04

Table 2-2
Summary of Incremental Acute Hazard Concentrations

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acrolein ($\mu g/m^3$)	benzene ($\mu g/m^3$)	formaldehyde ($\mu g/m^3$)	methyl alcohol ($\mu g/m^3$)	methyl ethyl ketone ($\mu g/m^3$)	phenol (carbolic acid) ($\mu g/m^3$)	styrene ($\mu g/m^3$)	toluene ($\mu g/m^3$)	xylene, total ($\mu g/m^3$)	arsenic ($\mu g/m^3$)	chlorine ($\mu g/m^3$)	copper ($\mu g/m^3$)	manganese ($\mu g/m^3$)	mercury ($\mu g/m^3$)	nickel ($\mu g/m^3$)	vanadium ($\mu g/m^3$)	sulfates ($\mu g/m^3$)
117	370814	758243	Offsite Worker	1.73E-01	2.96E-03	4.72E-02	3.47E-01	7.07E-04	3.48E-02	0.00E+00	1.37E-03	3.47E-02	2.45E-02	2.14E-04	3.79E-02	1.23E-03	1.02E-02	1.84E-04	6.80E-04	2.95E-03	5.58E-02
118	370810	758153	Offsite Worker	1.76E-01	3.00E-03	4.78E-02	3.51E-01	7.16E-04	3.53E-02	0.00E+00	1.38E-03	3.52E-02	2.49E-02	2.20E-04	3.88E-02	1.26E-03	1.05E-02	1.88E-04	6.96E-04	3.02E-03	5.72E-02
119	370807	758063	Offsite Worker	1.77E-01	3.02E-03	4.81E-02	3.54E-01	7.21E-04	3.55E-02	0.00E+00	1.39E-03	3.54E-02	2.50E-02	2.22E-04	3.93E-02	1.28E-03	1.06E-02	1.91E-04	7.05E-04	3.06E-03	5.80E-02
120	370803	757974	Offsite Worker	1.95E-01	3.34E-03	5.31E-02	3.91E-01	7.97E-04	3.92E-02	0.00E+00	1.54E-03	3.91E-02	2.76E-02	2.31E-04	4.08E-02	1.33E-03	1.10E-02	1.98E-04	7.33E-04	3.18E-03	6.03E-02
121	370835	757927	Offsite Worker	1.98E-01	3.38E-03	5.38E-02	3.96E-01	8.07E-04	3.97E-02	0.00E+00	1.56E-03	3.96E-02	2.80E-02	2.42E-04	4.27E-02	1.39E-03	1.15E-02	2.07E-04	7.66E-04	3.32E-03	6.29E-02
122	370868	757880	Offsite Worker	1.95E-01	3.33E-03	5.30E-02	3.90E-01	7.95E-04	3.91E-02	0.00E+00	1.54E-03	3.90E-02	2.76E-02	2.40E-04	4.23E-02	1.38E-03	1.14E-02	2.05E-04	7.59E-04	3.30E-03	6.24E-02
123	370921	757884	Offsite Worker	1.85E-01	3.15E-03	5.02E-02	3.69E-01	7.53E-04	3.71E-02	0.00E+00	1.46E-03	3.70E-02	2.61E-02	2.32E-04	4.10E-02	1.33E-03	1.11E-02	1.99E-04	7.35E-04	3.19E-03	6.04E-02
124	370975	757887	Offsite Worker	1.73E-01	2.96E-03	4.71E-02	3.47E-01	7.07E-04	3.48E-02	0.00E+00	1.37E-03	3.47E-02	2.45E-02	2.25E-04	3.98E-02	1.29E-03	1.07E-02	1.93E-04	7.14E-04	3.10E-03	5.86E-02
125	370975	757794	Offsite Worker	1.80E-01	3.08E-03	4.91E-02	3.61E-01	7.36E-04	3.62E-02	0.00E+00	1.42E-03	3.61E-02	2.55E-02	2.37E-04	4.19E-02	1.36E-03	1.13E-02	2.03E-04	7.52E-04	3.26E-03	6.18E-02
126	371026	757794	Offsite Worker	1.78E-01	3.05E-03	4.85E-02	3.57E-01	7.27E-04	3.58E-02	0.00E+00	1.41E-03	3.57E-02	2.52E-02	2.31E-04	4.08E-02	1.33E-03	1.10E-02	1.98E-04	7.32E-04	3.18E-03	6.02E-02
127	371076	757877	Offsite Worker	1.62E-01	2.76E-03	4.40E-02	3.24E-01	6.60E-04	3.25E-02	0.00E+00	1.28E-03	3.24E-02	2.29E-02	2.16E-04	3.82E-02	1.24E-03	1.03E-02	1.85E-04	6.85E-04	2.97E-03	5.63E-02
128	371126	757959	Offsite Worker	1.53E-01	2.61E-03	4.15E-02	3.05E-01	6.23E-04	3.07E-02	0.00E+00	1.20E-03	3.06E-02	2.16E-02	2.01E-04	3.56E-02	1.16E-03	9.61E-03	1.73E-04	6.38E-04	2.77E-03	5.24E-02
129	371119	758031	Offsite Worker	1.58E-01	2.70E-03	4.29E-02	3.16E-01	6.44E-04	3.17E-02	0.00E+00	1.24E-03	3.16E-02	2.23E-02	2.00E-04	3.54E-02	1.15E-03	9.56E-03	1.71E-04	6.34E-04	2.75E-03	5.21E-02
143	371953	757977	Offsite Worker	1.13E-01	1.92E-03	3.06E-02	2.25E-01	4.59E-04	2.26E-02	0.00E+00	8.88E-04	2.25E-02	1.59E-02	1.36E-04	2.40E-02	7.80E-04	6.48E-03	1.16E-04	4.30E-04	1.87E-03	3.53E-02
144	371948	757880	Offsite Worker	1.16E-01	1.99E-03	3.17E-02	2.33E-01	4.75E-04	2.34E-02	0.00E+00	9.18E-04	2.33E-02	1.65E-02	1.45E-04	2.57E-02	8.36E-04	6.95E-03	1.25E-04	4.61E-04	2.00E-03	3.78E-02
145	371943	757783	Offsite Worker	1.18E-01	2.02E-03	3.22E-02	2.37E-01	4.83E-04	2.38E-02	0.00E+00	9.33E-04	2.37E-02	1.67E-02	1.37E-04	2.41E-02	7.86E-04	6.53E-03	1.17E-04	4.33E-04	1.88E-03	3.56E-02
146	372016	757794	Offsite Worker	1.13E-01	1.94E-03	3.08E-02	2.27E-01	4.62E-04	2.28E-02	0.00E+00	8.94E-04	2.27E-02	1.60E-02	1.28E-04	2.27E-02	7.38E-04	6.13E-03	1.10E-04	4.07E-04	1.77E-03	3.35E-02
147	372102	757791	Offsite Worker	1.07E-01	1.83E-03	2.91E-02	2.14E-01	4.36E-04	2.14E-02	0.00E+00	8.42E-04	2.14E-02	1.51E-02	1.15E-04	2.03E-02	6.62E-04	5.49E-03	9.88E-05	3.65E-04	1.58E-03	3.01E-02
148	372178	757760	Offsite Worker	9.83E-02	1.68E-03	2.67E-02	1.97E-01	4.01E-04	1.97E-02	0.00E+00	7.75E-04	1.97E-02	1.39E-02	1.13E-04	2.00E-02	6.50E-04	5.40E-03	9.68E-05	3.58E-04	1.56E-03	2.94E-02
149	372177	757670	Offsite Worker	1.01E-01	1.72E-03	2.74E-02	2.02E-01	4.11E-04	2.02E-02	0.00E+00	7.95E-04	2.02E-02	1.43E-02	1.16E-04	2.05E-02	6.67E-04	5.55E-03	9.94E-05	3.68E-04	1.60E-03	3.02E-02
150	372176	757579	Offsite Worker	1.01E-01	1.72E-03	2.75E-02	2.02E-01	4.12E-04	2.03E-02	0.00E+00	7.96E-04	2.02E-02	1.43E-02	1.23E-04	2.17E-02	7.07E-04	5.87E-03	1.05E-04	3.90E-04	1.69E-03	3.19E-02
151	372174	757489	Offsite Worker	1.00E-01	1.71E-03	2.72E-02	2.00E-01	4.08E-04	2.01E-02	0.00E+00	7.89E-04	2.00E-02	1.42E-02	1.24E-04	2.19E-02	7.13E-04	5.92E-03	1.06E-04	3.93E-04	1.71E-03	3.23E-02
152	372173	757398	Offsite Worker	1.02E-01	1.74E-03	2.77E-02	2.04E-01	4.15E-04	2.04E-02	0.00E+00	8.02E-04	2.04E-02	1.44E-02	1.33E-04	2.36E-02	7.67E-04	6.37E-03	1.14E-04	4.23E-04	1.83E-03	3.47E-02
153	372171	757308	Offsite Worker	1.03E-01	1.76E-03	2.81E-02	2.06E-01	4.21E-04	2.07E-02	0.00E+00	8.14E-04	2.07E-02	1.46E-02	1.41E-04	2.48E-02	8.08E-04	6.71E-03	1.20E-04	4.46E-04	1.93E-03	3.65E-02
154	372055	757309	Offsite Worker	1.09E-01	1.87E-03	2.97E-02	2.19E-01	4.46E-04	2.19E-02	0.00E+00	8.61E-04	2.19E-02	1.55E-02	1.48E-04	2.62E-02	8.53E-04	7.08E-03	1.27E-04	4.70E-04	2.04E-03	3.86E-02
156	372055	757416	Offsite Worker	1.07E-01	1.83E-03	2.91E-02	2.14E-01	4.37E-04	2.15E-02	0.00E+00	8.45E-04	2.15E-02	1.52E-02	1.31E-04	2.32E-02	7.55E-04	6.27E-03	1.13E-04	4.16E-04	1.81E-03	3.43E-02
157	371952	757442	Offsite Worker	1.12E-01	1.91E-03	3.04E-02	2.24E-01	4.56E-04	2.24E-02	0.00E+00	8.81E-04	2.24E-02	1.58E-02	1.38E-04	2.44E-02	7.95E-04	6.60E-03	1.18E-04	4.38E-04	1.90E-03	3.60E-02
158	371950	757345	Offsite Worker	1.14E-01	1.95E-03	3.10E-02	2.28E-01	4.65E-04	2.29E-02	0.00E+00	9.00E-04	2.29E-02	1.62E-02	1.50E-04	2.65E-02	8.63E-04	7.17E-03	1.29E-04	4.76E-04	2.07E-03	3.91E-02
159	371864	757344	Offsite Worker	1.19E-01	2.03E-03	3.23E-02	2.38E-01	4.84E-04	2.38E-02	0.00E+00	9.36E-04	2.38E-02	1.68E-02	1.53E-04	2.71E-02	8.82E-04	7.33E-03	1.32E-04	4.86E-04	2.11E-03	4.00E-02
160	371790	757347	Offsite Worker	1.23E-01	2.11E-03	3.35E-02	2.47E-01	5.03E-04	2.48E-02	0.00E+00	9.72E-04	2.47E-02	1.75E-02	1.55E-04	2.73E-02	8.89E-04	7.38E-03	1.33E-04	4.90E-04	2.13E-03	4.04E-02
161	371708	757356	Offsite Worker	1.29E-01	2.20E-03	3.50E-02	2.58E-01	5.25E-04	2.59E-02	0.00E+00	1.02E-03	2.58E-02	1.82E-02	1.55E-04	2.74E-02	8.91E-04	7.40E-03	1.33E-04	4.91E-04	2.13E-03	4.05E-02
162	371615	757356	Offsite Worker	1.35E-01	2.31E-03	3.68E-02	2.71E-01	5.52E-04	2.72E-02	0.00E+00	1.07E-03	2.71E-02	1.91E-02	1.65E-04	2.92E-02	9.49E-04	7.88E-03	1.42E-04	5.23E-04	2.27E-03	4.31E-02
163	371523	757356	Offsite Worker	1.42E-01	2.42E-03	3.86E-02	2.84E-01	5.79E-04	2.85E-02	0.00E+00	1.12E-03	2.84E-02	2.01E-02	1.75E-04	3.09E-02	1.01E-03	8.36E-03	1.50E-04	5.55E-04	2.41E-03	4.56E-02
164	371430	757356	Offsite Worker	1.52E-01	2.60E-03	4.13E-02	3.04E-01	6.20E-04	3.05E-02	0.00E+00	1.20E-03	3.04E-02	2.15E-02	1.85E-04	3.26E-02	1.06E-03	8.82E-03	1.58E-04	5.85E-04	2.54E-03	4.80E-02
165	371338	757356	Offsite Worker	1.63E-01	2.78E-03	4.42E-02	3.25E-01	6.63E-04	3.26E-02	0.00E+00	1.28E-03	3.26E-02	2.30E-02	1.94E-04	3.42E-02	1.11E-03	9.24E-03	1.66E-04	6.14E-04	2.66E-03	5.04E-02
166	371245	757356	Offsite Worker	1.74E-01	2.97E-03	4.73E-02	3.48E-01	7.09E-04	3.49E-02	0.00E+00	1.37E-03	3.48E-02	2.46E-02	2.02E-04	3.56E-02	1.16E-03	9.62E-03	1.73E-04	6.39E-04	2.77E-03	5.25E-02
167	371153	757356	Offsite Worker	1.85E-01	3.17E-03	5.04E-02	3.71E-01	7.56E-04	3.72E-02	0.00E+00	1.46E-03	3.71E-02	2.62E-02	2.08E-04	3.67E-02	1.20E-03	9.93E-03	1.78E-04	6.59E-04	2.86E-03	5.42E-02
168	371061	757356	Offsite Worker	1.97E-01	3.37E-03	5.36E-02	3.94E-01	8.03E-04	3.96E-02	0.00E+00	1.55E-03	3.94E-02	2.79E-02	2.22E-04	3.91E-02	1.27E-03	1.06E-02	1.90E-04	7.02E-04	3.05E-03	5.77E-02
169	371005	757357	Offsite Worker	2.05E-01	3.51E-03	5.59E-02	4.11E-01	8.38E-04	4.13E-02	0.00E+00	1.62E-03	4.12E-02	2.91E-02	2.29E-04	4.05E-02	1.32E-03	1.09E-02	1.97E-04	7.27E-04	3.15E-03	5.98E-02
170	370998	757293	Offsite Worker	2.09E-01	3.58E-03	5.70E-02	4.19E-01	8.54E-04	4.21E-02	0.00E+00	1.65E-03	4.19E-02	2.96E-02	2.39E-04	4.23E-02	1.38E-03	1.14E-02	2.05E-04	7.59E-04	3.29E-03	6.23E-02
171	370998	757194	Offsite Worker	2.09E-01	3.57E-03	5.69E-02	4.18E-01	8.53E-04	4.20E-02	0.00E+00	1.65E-03	4.19E-02	2.96E-02	2.50E-04	4.42E-02	1.44E-03	1.19E-02	2.15E-04	7.93E-04	3.44E-03	6.55E-02
172	370998	757096	Offsite Worker	2.14E-01	3.65E-03	5.81E-02	4.27E-01	8.72E-04	4.29E-02	0.00E+00	1.69E-03	4.28E-02	3.02E-02	2.74E-04	4.85E-02	1.58E-03	1.31E-02	2.35E-04	8.70E-04	3.77E-03	7.16E-02
173	370998	756998	Offsite Worker	2.17E-01	3.71E-03	5.91E-02	4.35E-01	8.87E-04	4.36E-02	0.00E+00	1.71E-03	4.35E-02	3.08E-02	2.61E-04	4.61E-02	1.50E-03	1.25E-02	2.24E-04	8.28E-04	3.59E-03	6.79E-02
174	371057	756997	Offsite Worker	2.07E-01	3.54E-03	5.64E-02	4.15E-01	8.46E-04	4.16E-02	0.00E+00	1.63E-03	4.15E-02	2.93E-02	2.51E-04	4.43E-02	1.44E-03	1.20E-02	2.15E-04	7.96E-04	3.45E-03	6.53E-02
175	371153	756997	Offsite Worker	1.92E-01	3.29E-03	5.24E-02	3.85E-01	7.85E-04	3.86E-02	0.00E+00	1.52E-03	3.85E-02	2.72E-02	2.35E-04	4.16E-02	1.35E-03	1.12E-02	2.01E-04	7.46E-04	3.24E-03	6.12E-02
176	371249	756997	Offsite Worker	1.79E-01	3.06E-03	4.88E-02	3.58E-01	7.31E-04	3.60E-02	0.00E+00	1.41E-03	3.59E-02	2.54E-02	2.21E-04	3.90E-02	1.27E-03	1.05E-02	1.89E-04	7.00E-04	3.04E-03	5.74E-02
177	371345	756997	Offsite Worker	1.67E-01	2.86E-03	4.55E-02	3.35E-01	6.83E-04	3.36E-02	0.00E+00	1.32E-03	3.35E-02	2.37E-02	2.08E-04	3.67E-02	1.19E-03	9.92E-03	1.78E-04	6.59E-04	2.86E-03	5.40E-02
178	371440	756997	Offsite Worker	1.57E-01	2.68E-03	4.26E-02	3.14E-01	6.39E-04	3.15E-02	0.00E+00	1.24E-03	3.14E-02	2.22E-02	1.96E-04	3.46E-02	1.13E-03	9.35E-03	1.68E-04	6.21E-04	2.70E-03	5.09E-02
179	371536	756997	Offsite Worker	1.47E-01	2.51E-03	4.00E-02	2.94E-01	6.00E-04	2.95E-02	0.00E+00	1.16E-03	2.95E-02	2.08E-02	1.85E-04	3.26E-02	1.06E-03	8.82E-03	1.58E-04	5.86E-04	2.54E-03	4.80E-02
180	371632	756997	Offsite Worker	1.38E-01	2.36E-03	3.76E-02	2.77E-01	5.64E-04	2.78E-02	0.00E+00	1.09E-03	2.77E-02	1.96E-02	1.75E-04	3.08E-02	1.00E-03	8.34E-03	1.49E-04	5.53E-04	2.40E-03	4.53E-02
181	371728	756997	Offsite Worker	1.31E-01	2.23E-03	3.56E-02	2.61E-01	5.33E-04	2.62E-02	0.00E+00	1.03E-03	2.62E-02	1.85E-02	1.65E-04	2.92E-02	9.49E-04	7.89E-03	1.41E-04	5.24E-04	2.27E-03	4.29E-02
182	371824	756997	Offsite Worker	1.24E-01	2.12E-03	3.38E-02	2.48E-01	5.07E-04	2.49E-02	0.00E+00	9.79E-04	2.49E-02	1.76E-02	1.57E-04	2.76E-02	8.99E-04	7.47E-03	1.34E-04	4.96E-04	2.15E-03	4.06E-02
183	371920	756997	Offsite Worker	1.18E-01	2.02E-03	3.22E-02	2.37E-01	4.82E-04	2.37E-02	0.00E+00	9.32E-04	2.37E-02	1.67E-02	1.48E-04	2.62E-02	8.53E-04	7.09E-03	1.27E-04	4.71E-04	2.04E-03	3.85E-02

Table 2-2
Summary of Incremental Acute Hazard Concentrations

Receptor Number	X	Y	Receptor Type	acetaldehyde (μg/m³)	acrolein (μg/m³)	benzene (μg/m³)	formaldehyde (μg/m³)	methyl alcohol (μg/m³)	methyl ethyl ketone (μg/m³)	phenol (carbolic acid) (μg/m³)	styrene (μg/m³)	toluene (μg/m³)	xylene, total (μg/m³)	arsenic (μg/m³)	chlorine (μg/m³)	copper (μg/m³)	manganese (μg/m³)	mercury (μg/m³)	nickel (μg/m³)	vanadium (μg/m³)	sulfates (μg/m³)
184	372016	756997	Offsite Worker	1.13E-01	1.93E-03	3.07E-02	2.25E-01	4.60E-04	2.26E-02	0.00E+00	8.89E-04	2.26E-02	1.60E-02	1.41E-04	2.49E-02	8.10E-04	6.73E-03	1.21E-04	4.47E-04	1.94E-03	3.66E-02
185	372111	756997	Offsite Worker	1.08E-01	1.84E-03	2.93E-02	2.15E-01	4.39E-04	2.16E-02	0.00E+00	8.49E-04	2.16E-02	1.52E-02	1.34E-04	2.37E-02	7.71E-04	6.40E-03	1.15E-04	4.25E-04	1.85E-03	3.48E-02
186	372207	756997	Offsite Worker	1.03E-01	1.76E-03	2.80E-02	2.06E-01	4.20E-04	2.07E-02	0.00E+00	8.12E-04	2.06E-02	1.46E-02	1.28E-04	2.25E-02	7.34E-04	6.09E-03	1.09E-04	4.05E-04	1.76E-03	3.31E-02
187	372303	756997	Offsite Worker	9.85E-02	1.68E-03	2.68E-02	1.97E-01	4.02E-04	1.98E-02	0.00E+00	7.77E-04	1.97E-02	1.39E-02	1.22E-04	2.15E-02	6.99E-04	5.81E-03	1.04E-04	3.85E-04	1.67E-03	3.16E-02
188	372399	756997	Offsite Worker	9.44E-02	1.61E-03	2.57E-02	1.89E-01	3.85E-04	1.90E-02	0.00E+00	7.45E-04	1.89E-02	1.34E-02	1.16E-04	2.05E-02	6.67E-04	5.54E-03	9.92E-05	3.68E-04	1.60E-03	3.01E-02
189	372495	756997	Offsite Worker	9.06E-02	1.55E-03	2.47E-02	1.81E-01	3.70E-04	1.82E-02	0.00E+00	7.15E-04	1.82E-02	1.28E-02	1.11E-04	1.96E-02	6.36E-04	5.29E-03	9.47E-05	3.51E-04	1.52E-03	2.87E-02
190	372591	756997	Offsite Worker	8.71E-02	1.49E-03	2.37E-02	1.74E-01	3.55E-04	1.75E-02	0.00E+00	6.87E-04	1.74E-02	1.23E-02	1.06E-04	1.87E-02	6.08E-04	5.05E-03	9.05E-05	3.35E-04	1.46E-03	2.75E-02
191	372610	757063	Offsite Worker	8.48E-02	1.45E-03	2.31E-02	1.70E-01	3.46E-04	1.70E-02	0.00E+00	6.69E-04	1.70E-02	1.20E-02	1.10E-04	1.94E-02	6.30E-04	5.24E-03	9.38E-05	3.48E-04	1.51E-03	2.84E-02
192	372612	757132	Offsite Worker	8.63E-02	1.48E-03	2.35E-02	1.73E-01	3.52E-04	1.73E-02	0.00E+00	6.81E-04	1.73E-02	1.22E-02	1.10E-04	1.95E-02	6.33E-04	5.26E-03	9.42E-05	3.49E-04	1.52E-03	2.86E-02
193	372614	757201	Offsite Worker	8.64E-02	1.48E-03	2.35E-02	1.73E-01	3.52E-04	1.74E-02	0.00E+00	6.81E-04	1.73E-02	1.22E-02	1.06E-04	1.87E-02	6.09E-04	5.06E-03	9.07E-05	3.36E-04	1.46E-03	2.75E-02
194	372616	757270	Offsite Worker	8.55E-02	1.46E-03	2.33E-02	1.71E-01	3.49E-04	1.72E-02	0.00E+00	6.75E-04	1.71E-02	1.21E-02	1.03E-04	1.82E-02	5.93E-04	4.93E-03	8.85E-05	3.27E-04	1.42E-03	2.69E-02
195	372627	757351	Offsite Worker	8.45E-02	1.45E-03	2.30E-02	1.69E-01	3.45E-04	1.70E-02	0.00E+00	6.67E-04	1.69E-02	1.20E-02	1.14E-04	2.01E-02	6.55E-04	5.44E-03	9.75E-05	3.61E-04	1.57E-03	2.96E-02
196	372651	757422	Offsite Worker	8.33E-02	1.42E-03	2.27E-02	1.67E-01	3.40E-04	1.67E-02	0.00E+00	6.57E-04	1.67E-02	1.18E-02	1.15E-04	2.02E-02	6.58E-04	5.47E-03	9.81E-05	3.63E-04	1.58E-03	2.98E-02
197	372676	757494	Offsite Worker	8.14E-02	1.39E-03	2.22E-02	1.63E-01	3.32E-04	1.64E-02	0.00E+00	6.42E-04	1.63E-02	1.15E-02	1.08E-04	1.91E-02	6.20E-04	5.15E-03	9.25E-05	3.42E-04	1.49E-03	2.81E-02
198	372704	757569	Offsite Worker	7.98E-02	1.36E-03	2.17E-02	1.60E-01	3.25E-04	1.60E-02	0.00E+00	6.29E-04	1.60E-02	1.13E-02	9.66E-05	1.71E-02	5.55E-04	4.61E-03	8.28E-05	3.06E-04	1.33E-03	2.52E-02
199	372733	757645	Offsite Worker	7.75E-02	1.32E-03	2.11E-02	1.55E-01	3.16E-04	1.56E-02	0.00E+00	6.11E-04	1.55E-02	1.10E-02	9.84E-05	1.74E-02	5.66E-04	4.70E-03	8.42E-05	3.12E-04	1.35E-03	2.55E-02
200	372746	757702	Offsite Worker	7.80E-02	1.33E-03	2.12E-02	1.56E-01	3.18E-04	1.57E-02	0.00E+00	6.15E-04	1.56E-02	1.10E-02	9.76E-05	1.72E-02	5.61E-04	4.66E-03	8.35E-05	3.09E-04	1.34E-03	2.53E-02
201	372746	757768	Offsite Worker	7.88E-02	1.35E-03	2.15E-02	1.58E-01	3.22E-04	1.58E-02	0.00E+00	6.22E-04	1.58E-02	1.12E-02	9.43E-05	1.67E-02	5.42E-04	4.50E-03	8.07E-05	2.99E-04	1.30E-03	2.45E-02
204	372994	757783	Offsite Worker	7.11E-02	1.21E-03	1.93E-02	1.42E-01	2.90E-04	1.43E-02	0.00E+00	5.60E-04	1.42E-02	1.01E-02	8.85E-05	1.56E-02	5.09E-04	4.22E-03	7.57E-05	2.80E-04	1.22E-03	2.30E-02
205	373087	757783	Offsite Worker	6.82E-02	1.17E-03	1.86E-02	1.36E-01	2.78E-04	1.37E-02	0.00E+00	5.38E-04	1.37E-02	9.66E-03	8.62E-05	1.52E-02	4.95E-04	4.12E-03	7.37E-05	2.73E-04	1.19E-03	2.24E-02
206	373180	757784	Offsite Worker	6.55E-02	1.12E-03	1.78E-02	1.31E-01	2.67E-04	1.31E-02	0.00E+00	5.16E-04	1.31E-02	9.27E-03	8.37E-05	1.48E-02	4.81E-04	3.99E-03	7.16E-05	2.65E-04	1.15E-03	2.17E-02
207	373274	757785	Offsite Worker	6.29E-02	1.08E-03	1.71E-02	1.26E-01	2.57E-04	1.26E-02	0.00E+00	4.96E-04	1.26E-02	8.91E-03	8.10E-05	1.43E-02	4.65E-04	3.87E-03	6.92E-05	2.57E-04	1.11E-03	2.10E-02
208	373367	757786	Offsite Worker	6.13E-02	1.05E-03	1.67E-02	1.23E-01	2.50E-04	1.23E-02	0.00E+00	4.84E-04	1.23E-02	8.68E-03	7.82E-05	1.38E-02	4.49E-04	3.73E-03	6.69E-05	2.48E-04	1.08E-03	2.03E-02
209	373418	757742	Offsite Worker	6.11E-02	1.04E-03	1.66E-02	1.22E-01	2.49E-04	1.23E-02	0.00E+00	4.82E-04	1.22E-02	8.64E-03	7.51E-05	1.33E-02	4.31E-04	3.58E-03	6.43E-05	2.38E-04	1.03E-03	1.96E-02
210	373418	757653	Offsite Worker	6.15E-02	1.05E-03	1.67E-02	1.23E-01	2.51E-04	1.24E-02	0.00E+00	4.85E-04	1.23E-02	8.71E-03	8.13E-05	1.43E-02	4.67E-04	3.88E-03	6.96E-05	2.58E-04	1.12E-03	2.11E-02
211	373419	757564	Offsite Worker	6.25E-02	1.07E-03	1.70E-02	1.25E-01	2.55E-04	1.26E-02	0.00E+00	4.93E-04	1.25E-02	8.85E-03	8.69E-05	1.53E-02	4.99E-04	4.15E-03	7.44E-05	2.75E-04	1.20E-03	2.26E-02
212	373419	757475	Offsite Worker	6.28E-02	1.07E-03	1.71E-02	1.26E-01	2.56E-04	1.26E-02	0.00E+00	4.96E-04	1.26E-02	8.89E-03	8.51E-05	1.50E-02	4.89E-04	4.06E-03	7.29E-05	2.70E-04	1.17E-03	2.21E-02
213	373420	757386	Offsite Worker	6.33E-02	1.08E-03	1.72E-02	1.27E-01	2.58E-04	1.27E-02	0.00E+00	4.99E-04	1.27E-02	8.96E-03	7.62E-05	1.35E-02	4.38E-04	3.64E-03	6.53E-05	2.42E-04	1.05E-03	1.99E-02
214	373420	757297	Offsite Worker	6.38E-02	1.09E-03	1.74E-02	1.28E-01	2.60E-04	1.28E-02	0.00E+00	5.03E-04	1.28E-02	9.03E-03	7.86E-05	1.39E-02	4.52E-04	3.75E-03	6.73E-05	2.49E-04	1.08E-03	2.04E-02
215	373421	757207	Offsite Worker	6.37E-02	1.09E-03	1.73E-02	1.27E-01	2.60E-04	1.28E-02	0.00E+00	5.02E-04	1.28E-02	9.02E-03	8.22E-05	1.45E-02	4.73E-04	3.93E-03	7.03E-05	2.61E-04	1.13E-03	2.13E-02
216	373421	757118	Offsite Worker	6.23E-02	1.06E-03	1.69E-02	1.25E-01	2.54E-04	1.25E-02	0.00E+00	4.91E-04	1.25E-02	8.81E-03	8.15E-05	1.44E-02	4.68E-04	3.89E-03	6.97E-05	2.58E-04	1.12E-03	2.11E-02
217	373292	757117	Offsite Worker	6.53E-02	1.12E-03	1.78E-02	1.31E-01	2.66E-04	1.31E-02	0.00E+00	5.15E-04	1.31E-02	9.24E-03	8.54E-05	1.51E-02	4.91E-04	4.08E-03	7.30E-05	2.71E-04	1.17E-03	2.21E-02
218	373213	757118	Offsite Worker	6.73E-02	1.15E-03	1.83E-02	1.35E-01	2.75E-04	1.35E-02	0.00E+00	5.31E-04	1.35E-02	9.53E-03	8.79E-05	1.55E-02	5.05E-04	4.20E-03	7.51E-05	2.79E-04	1.21E-03	2.28E-02
219	373158	757066	Offsite Worker	6.91E-02	1.18E-03	1.88E-02	1.38E-01	2.82E-04	1.39E-02	0.00E+00	5.45E-04	1.38E-02	9.79E-03	8.76E-05	1.55E-02	5.03E-04	4.18E-03	7.49E-05	2.78E-04	1.21E-03	2.27E-02
220	373084	757026	Offsite Worker	7.16E-02	1.22E-03	1.95E-02	1.43E-01	2.92E-04	1.44E-02	0.00E+00	5.65E-04	1.44E-02	1.01E-02	8.75E-05	1.55E-02	5.03E-04	4.18E-03	7.48E-05	2.77E-04	1.20E-03	2.27E-02
221	373009	757011	Offsite Worker	7.38E-02	1.26E-03	2.01E-02	1.48E-01	3.01E-04	1.48E-02	0.00E+00	5.82E-04	1.48E-02	1.05E-02	8.90E-05	1.57E-02	5.12E-04	4.25E-03	7.62E-05	2.82E-04	1.22E-03	2.31E-02
222	372922	757009	Offsite Worker	7.63E-02	1.30E-03	2.08E-02	1.53E-01	3.11E-04	1.53E-02	0.00E+00	6.02E-04	1.53E-02	1.08E-02	9.22E-05	1.63E-02	5.30E-04	4.40E-03	7.89E-05	2.92E-04	1.27E-03	2.39E-02
223	372835	757007	Offsite Worker	7.89E-02	1.35E-03	2.15E-02	1.58E-01	3.22E-04	1.58E-02	0.00E+00	6.22E-04	1.58E-02	1.12E-02	9.56E-05	1.69E-02	5.49E-04	4.57E-03	8.18E-05	3.03E-04	1.32E-03	2.48E-02
224	372747	757006	Offsite Worker	8.16E-02	1.40E-03	2.22E-02	1.63E-01	3.33E-04	1.64E-02	0.00E+00	6.44E-04	1.64E-02	1.16E-02	9.94E-05	1.75E-02	5.71E-04	4.74E-03	8.50E-05	3.15E-04	1.37E-03	2.58E-02
225	372660	757004	Offsite Worker	8.45E-02	1.45E-03	2.30E-02	1.69E-01	3.45E-04	1.70E-02	0.00E+00	6.67E-04	1.69E-02	1.20E-02	1.03E-04	1.82E-02	5.93E-04	4.93E-03	8.83E-05	3.27E-04	1.42E-03	2.68E-02
226	372651	757063	Offsite Worker	8.33E-02	1.42E-03	2.27E-02	1.67E-01	3.40E-04	1.67E-02	0.00E+00	6.57E-04	1.67E-02	1.18E-02	1.08E-04	1.90E-02	6.19E-04	5.15E-03	9.21E-05	3.42E-04	1.48E-03	2.79E-02
227	372629	756931	Offsite Worker	8.71E-02	1.49E-03	2.37E-02	1.74E-01	3.55E-04	1.75E-02	0.00E+00	6.87E-04	1.74E-02	1.23E-02	1.01E-04	1.79E-02	5.83E-04	4.84E-03	8.67E-05	3.21E-04	1.39E-03	2.63E-02
228	372631	756857	Offsite Worker	8.73E-02	1.49E-03	2.38E-02	1.75E-01	3.56E-04	1.75E-02	0.00E+00	6.89E-04	1.75E-02	1.24E-02	1.01E-04	1.78E-02	5.78E-04	4.80E-03	8.60E-05	3.19E-04	1.38E-03	2.61E-02
229	372634	756783	Offsite Worker	8.68E-02	1.48E-03	2.36E-02	1.74E-01	3.54E-04	1.74E-02	0.00E+00	6.85E-04	1.74E-02	1.23E-02	1.01E-04	1.78E-02	5.78E-04	4.80E-03	8.60E-05	3.19E-04	1.38E-03	2.61E-02
230	372702	756778	Offsite Worker	8.43E-02	1.44E-03	2.29E-02	1.69E-01	3.44E-04	1.69E-02	0.00E+00	6.65E-04	1.69E-02	1.19E-02	9.77E-05	1.73E-02	5.61E-04	4.66E-03	8.36E-05	3.10E-04	1.34E-03	2.54E-02
231	372756	756775	Offsite Worker	8.25E-02	1.41E-03	2.24E-02	1.65E-01	3.36E-04	1.66E-02	0.00E+00	6.50E-04	1.65E-02	1.17E-02	9.56E-05	1.69E-02	5.49E-04	4.56E-03	8.18E-05	3.03E-04	1.31E-03	2.48E-02
232	372729	756712	Offsite Worker	8.34E-02	1.42E-03	2.27E-02	1.67E-01	3.40E-04	1.67E-02	0.00E+00	6.58E-04	1.67E-02	1.18E-02	9.42E-05	1.66E-02	5.41E-04	4.50E-03	8.08E-05	2.99E-04	1.30E-03	2.46E-02
233	372703	756650	Offsite Worker	8.34E-02	1.43E-03	2.27E-02	1.67E-01	3.40E-04	1.68E-02	0.00E+00	6.58E-04	1.67E-02	1.18E-02	1.03E-04	1.83E-02	5.94E-04	4.93E-03	8.85E-05	3.28E-04	1.42E-03	2.69E-02
234	372677	756588	Offsite Worker	8.71E-02	1.49E-03	2.37E-02	1.74E-01	3.55E-04	1.75E-02	0.00E+00	6.87E-04	1.74E-02	1.23E-02	1.10E-04	1.94E-02	6.32E-04	5.25E-03	9.40E-05	3.48E-04	1.51E-03	2.85E-02
235	372619	756588	Offsite Worker	8.97E-02	1.53E-03	2.44E-02	1.79E-01	3.66E-04	1.80E-02	0.00E+00	7.08E-04	1.80E-02	1.27E-02	1.13E-04	1.99E-02	6.48E-04	5.38E-03	9.64E-05	3.57E-04	1.55E-03	2.92E-02
236	372622	756509	Offsite Worker	9.49E-02	1.62E-03	2.58E-02	1.90E-01	3.87E-04	1.91E-02	0.00E+00	7.49E-04	1.90E-02	1.34E-02	1.14E-04	2.01E-02	6.55E-04	5.44E-03	9.74E-05	3.61E-04	1.57E-03	2.95E-02
237	372700	756511	Offsite Worker	9.14E-02	1.56E-03	2.49E-02	1.83E-01	3.73E-04	1.84E-02	0.00E+00	7.21E-04	1.83E-02	1.29E-02	1.11E-04	1.95E-02	6.36E-04	5.28E-03	9.46E-05	3.51E-04	1.52E-03	2.87E-02
238	372789	756510	Offsite Worker	8.78E-02	1.50E-03	2.39E-02	1.76E-01	3.58E-04	1.76E-02	0.00E+00	6.92E-04	1.76E-02	1.24E-02	1.07E-04	1.89E-02	6.15E-04	5.11E-03	9.15E-05	3.39E-04	1.47E-03	2.77E-02

Table 2-2
Summary of Incremental Acute Hazard Concentrations

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acrolein ($\mu g/m^3$)	benzene ($\mu g/m^3$)	formaldehyde ($\mu g/m^3$)	methyl alcohol ($\mu g/m^3$)	methyl ethyl ketone ($\mu g/m^3$)	phenol (carbolic acid) ($\mu g/m^3$)	styrene ($\mu g/m^3$)	toluene ($\mu g/m^3$)	xylene, total ($\mu g/m^3$)	arsenic ($\mu g/m^3$)	chlorine ($\mu g/m^3$)	copper ($\mu g/m^3$)	manganese ($\mu g/m^3$)	mercury ($\mu g/m^3$)	nickel ($\mu g/m^3$)	vanadium ($\mu g/m^3$)	sulfates ($\mu g/m^3$)
239	372871	756509	Offsite Worker	8.46E-02	1.45E-03	2.30E-02	1.69E-01	3.45E-04	1.70E-02	0.00E+00	6.67E-04	1.69E-02	1.20E-02	1.04E-04	1.83E-02	5.96E-04	4.95E-03	8.87E-05	3.29E-04	1.43E-03	2.69E-02
240	372871	756437	Offsite Worker	8.69E-02	1.49E-03	2.36E-02	1.74E-01	3.55E-04	1.75E-02	0.00E+00	6.85E-04	1.74E-02	1.23E-02	1.02E-04	1.79E-02	5.84E-04	4.85E-03	8.69E-05	3.22E-04	1.40E-03	2.63E-02
241	372970	756437	Offsite Worker	8.35E-02	1.43E-03	2.27E-02	1.67E-01	3.40E-04	1.68E-02	0.00E+00	6.58E-04	1.67E-02	1.18E-02	9.85E-05	1.74E-02	5.66E-04	4.70E-03	8.42E-05	3.12E-04	1.35E-03	2.55E-02
242	373069	756437	Offsite Worker	8.02E-02	1.37E-03	2.18E-02	1.60E-01	3.27E-04	1.61E-02	0.00E+00	6.32E-04	1.61E-02	1.13E-02	9.54E-05	1.69E-02	5.48E-04	4.56E-03	8.16E-05	3.02E-04	1.31E-03	2.47E-02
243	373168	756437	Offsite Worker	7.70E-02	1.32E-03	2.10E-02	1.54E-01	3.14E-04	1.55E-02	0.00E+00	6.08E-04	1.54E-02	1.09E-02	9.25E-05	1.63E-02	5.32E-04	4.42E-03	7.91E-05	2.93E-04	1.27E-03	2.40E-02
244	373267	756437	Offsite Worker	7.40E-02	1.27E-03	2.01E-02	1.48E-01	3.02E-04	1.49E-02	0.00E+00	5.84E-04	1.48E-02	1.05E-02	8.97E-05	1.58E-02	5.15E-04	4.28E-03	7.67E-05	2.84E-04	1.23E-03	2.32E-02
245	373412	756437	Offsite Worker	6.99E-02	1.19E-03	1.90E-02	1.40E-01	2.85E-04	1.40E-02	0.00E+00	5.51E-04	1.40E-02	9.90E-03	8.57E-05	1.51E-02	4.93E-04	4.09E-03	7.33E-05	2.72E-04	1.18E-03	2.22E-02
246	373409	756339	Offsite Worker	7.14E-02	1.22E-03	1.94E-02	1.43E-01	2.91E-04	1.43E-02	0.00E+00	5.63E-04	1.43E-02	1.01E-02	8.17E-05	1.44E-02	4.70E-04	3.90E-03	6.99E-05	2.59E-04	1.12E-03	2.12E-02
247	373406	756240	Offsite Worker	6.93E-02	1.19E-03	1.89E-02	1.39E-01	2.83E-04	1.39E-02	0.00E+00	5.47E-04	1.39E-02	9.82E-03	7.30E-05	1.29E-02	4.19E-04	3.48E-03	6.25E-05	2.31E-04	1.00E-03	1.90E-02
248	373403	756142	Offsite Worker	6.42E-02	1.10E-03	1.75E-02	1.29E-01	2.62E-04	1.29E-02	0.00E+00	5.07E-04	1.29E-02	9.10E-03	7.25E-05	1.28E-02	4.17E-04	3.46E-03	6.20E-05	2.30E-04	9.97E-04	1.88E-02
249	373400	756042	Offsite Worker	5.91E-02	1.01E-03	1.61E-02	1.18E-01	2.41E-04	1.19E-02	0.00E+00	4.66E-04	1.18E-02	8.36E-03	7.21E-05	1.27E-02	4.14E-04	3.44E-03	6.17E-05	2.29E-04	9.92E-04	1.87E-02
250	373397	755944	Offsite Worker	6.01E-02	1.03E-03	1.63E-02	1.20E-01	2.45E-04	1.21E-02	0.00E+00	4.74E-04	1.20E-02	8.51E-03	6.88E-05	1.22E-02	3.95E-04	3.28E-03	5.89E-05	2.18E-04	9.47E-04	1.79E-02
251	373393	755846	Offsite Worker	6.10E-02	1.04E-03	1.66E-02	1.22E-01	2.49E-04	1.22E-02	0.00E+00	4.81E-04	1.22E-02	8.63E-03	6.18E-05	1.09E-02	3.55E-04	2.95E-03	5.29E-05	1.96E-04	8.50E-04	1.61E-02
252	373390	755747	Offsite Worker	5.99E-02	1.02E-03	1.63E-02	1.20E-01	2.44E-04	1.20E-02	0.00E+00	4.73E-04	1.20E-02	8.48E-03	5.46E-05	9.64E-03	3.14E-04	2.60E-03	4.68E-05	1.73E-04	7.51E-04	1.42E-02
253	373309	755744	Offsite Worker	6.10E-02	1.04E-03	1.66E-02	1.22E-01	2.49E-04	1.23E-02	0.00E+00	4.81E-04	1.22E-02	8.64E-03	5.50E-05	9.72E-03	3.16E-04	2.63E-03	4.72E-05	1.74E-04	7.57E-04	1.44E-02
254	373229	755743	Offsite Worker	6.21E-02	1.06E-03	1.69E-02	1.24E-01	2.53E-04	1.25E-02	0.00E+00	4.90E-04	1.24E-02	8.80E-03	5.55E-05	9.79E-03	3.19E-04	2.65E-03	4.76E-05	1.76E-04	7.63E-04	1.45E-02
255	373143	755741	Offsite Worker	6.32E-02	1.08E-03	1.72E-02	1.26E-01	2.58E-04	1.27E-02	0.00E+00	4.98E-04	1.27E-02	8.95E-03	5.57E-05	9.83E-03	3.20E-04	2.66E-03	4.78E-05	1.77E-04	7.66E-04	1.46E-02
256	373143	755823	Offsite Worker	6.56E-02	1.12E-03	1.79E-02	1.31E-01	2.68E-04	1.32E-02	0.00E+00	5.18E-04	1.31E-02	9.29E-03	6.00E-05	1.06E-02	3.45E-04	2.86E-03	5.15E-05	1.90E-04	8.25E-04	1.57E-02
257	373143	755906	Offsite Worker	6.66E-02	1.14E-03	1.81E-02	1.33E-01	2.72E-04	1.34E-02	0.00E+00	5.25E-04	1.33E-02	9.43E-03	6.78E-05	1.20E-02	3.89E-04	3.23E-03	5.81E-05	2.15E-04	9.32E-04	1.76E-02
258	373065	755906	Offsite Worker	6.85E-02	1.17E-03	1.86E-02	1.37E-01	2.79E-04	1.38E-02	0.00E+00	5.40E-04	1.37E-02	9.69E-03	6.78E-05	1.20E-02	3.89E-04	3.23E-03	5.81E-05	2.15E-04	9.32E-04	1.77E-02
259	373065	755827	Offsite Worker	6.71E-02	1.15E-03	1.83E-02	1.34E-01	2.74E-04	1.35E-02	0.00E+00	5.30E-04	1.34E-02	9.50E-03	6.10E-05	1.08E-02	3.50E-04	2.91E-03	5.23E-05	1.93E-04	8.38E-04	1.59E-02
260	373068	755733	Offsite Worker	6.38E-02	1.09E-03	1.74E-02	1.28E-01	2.60E-04	1.28E-02	0.00E+00	5.03E-04	1.28E-02	9.03E-03	5.53E-05	9.76E-03	3.18E-04	2.64E-03	4.76E-05	1.75E-04	7.61E-04	1.45E-02
261	373007	755733	Offsite Worker	6.53E-02	1.12E-03	1.78E-02	1.31E-01	2.66E-04	1.31E-02	0.00E+00	5.15E-04	1.31E-02	9.24E-03	5.53E-05	9.77E-03	3.18E-04	2.64E-03	4.77E-05	1.75E-04	7.61E-04	1.46E-02
262	372941	755733	Offsite Worker	6.68E-02	1.14E-03	1.82E-02	1.34E-01	2.73E-04	1.34E-02	0.00E+00	5.27E-04	1.34E-02	9.46E-03	5.53E-05	9.75E-03	3.17E-04	2.63E-03	4.77E-05	1.75E-04	7.59E-04	1.46E-02
263	372941	755636	Offsite Worker	6.50E-02	1.11E-03	1.77E-02	1.30E-01	2.65E-04	1.31E-02	0.00E+00	5.13E-04	1.30E-02	9.20E-03	6.55E-05	1.16E-02	3.76E-04	3.12E-03	5.65E-05	2.08E-04	9.01E-04	1.73E-02
264	372941	755539	Offsite Worker	6.32E-02	1.08E-03	1.72E-02	1.26E-01	2.58E-04	1.27E-02	0.00E+00	4.98E-04	1.27E-02	8.94E-03	7.66E-05	1.35E-02	4.40E-04	3.65E-03	6.58E-05	2.43E-04	1.05E-03	2.00E-02
265	372941	755442	Offsite Worker	6.07E-02	1.04E-03	1.65E-02	1.21E-01	2.48E-04	1.22E-02	0.00E+00	4.79E-04	1.22E-02	8.60E-03	8.36E-05	1.48E-02	4.80E-04	3.99E-03	7.17E-05	2.65E-04	1.15E-03	2.18E-02
266	372913	755342	Offsite Worker	6.34E-02	1.08E-03	1.73E-02	1.27E-01	2.59E-04	1.27E-02	0.00E+00	5.00E-04	1.27E-02	8.98E-03	9.61E-05	1.70E-02	5.52E-04	4.59E-03	8.23E-05	3.05E-04	1.32E-03	2.50E-02
267	372817	755346	Offsite Worker	6.61E-02	1.13E-03	1.80E-02	1.32E-01	2.70E-04	1.33E-02	0.00E+00	5.21E-04	1.32E-02	9.36E-03	1.01E-04	1.78E-02	5.80E-04	4.82E-03	8.64E-05	3.20E-04	1.39E-03	2.62E-02
268	372720	755349	Offsite Worker	6.87E-02	1.18E-03	1.87E-02	1.38E-01	2.80E-04	1.38E-02	0.00E+00	5.42E-04	1.38E-02	9.73E-03	1.05E-04	1.85E-02	6.02E-04	5.00E-03	8.96E-05	3.32E-04	1.44E-03	2.72E-02
269	372624	755352	Offsite Worker	7.12E-02	1.22E-03	1.94E-02	1.42E-01	2.91E-04	1.43E-02	0.00E+00	5.62E-04	1.43E-02	1.01E-02	1.07E-04	1.89E-02	6.15E-04	5.11E-03	9.16E-05	3.39E-04	1.47E-03	2.78E-02
270	372527	755349	Offsite Worker	7.37E-02	1.26E-03	2.01E-02	1.47E-01	3.01E-04	1.48E-02	0.00E+00	5.81E-04	1.48E-02	1.04E-02	1.07E-04	1.89E-02	6.14E-04	5.10E-03	9.15E-05	3.39E-04	1.47E-03	2.78E-02
271	372431	755353	Offsite Worker	7.69E-02	1.31E-03	2.09E-02	1.54E-01	3.14E-04	1.55E-02	0.00E+00	6.07E-04	1.54E-02	1.09E-02	1.05E-04	1.86E-02	6.06E-04	5.04E-03	9.03E-05	3.34E-04	1.45E-03	2.74E-02
272	372334	755356	Offsite Worker	8.09E-02	1.38E-03	2.20E-02	1.62E-01	3.30E-04	1.62E-02	0.00E+00	6.38E-04	1.62E-02	1.14E-02	1.02E-04	1.80E-02	5.86E-04	4.87E-03	8.75E-05	3.23E-04	1.40E-03	2.66E-02
273	372237	755359	Offsite Worker	8.50E-02	1.45E-03	2.31E-02	1.70E-01	3.47E-04	1.71E-02	0.00E+00	6.71E-04	1.70E-02	1.20E-02	9.70E-05	1.71E-02	5.57E-04	4.63E-03	8.32E-05	3.07E-04	1.33E-03	2.53E-02
274	372141	755362	Offsite Worker	8.89E-02	1.52E-03	2.42E-02	1.78E-01	3.63E-04	1.78E-02	0.00E+00	7.01E-04	1.78E-02	1.26E-02	1.02E-04	1.79E-02	5.84E-04	4.85E-03	8.70E-05	3.22E-04	1.40E-03	2.64E-02
275	372044	755366	Offsite Worker	9.23E-02	1.58E-03	2.51E-02	1.85E-01	3.77E-04	1.85E-02	0.00E+00	7.28E-04	1.85E-02	1.31E-02	1.05E-04	1.85E-02	6.02E-04	5.00E-03	8.96E-05	3.32E-04	1.44E-03	2.72E-02
276	371948	755369	Offsite Worker	9.52E-02	1.63E-03	2.59E-02	1.90E-01	3.88E-04	1.91E-02	0.00E+00	7.51E-04	1.91E-02	1.35E-02	1.06E-04	1.88E-02	6.10E-04	5.07E-03	9.09E-05	3.37E-04	1.46E-03	2.76E-02
277	371851	755372	Offsite Worker	9.74E-02	1.66E-03	2.65E-02	1.95E-01	3.97E-04	1.96E-02	0.00E+00	7.68E-04	1.95E-02	1.38E-02	1.06E-04	1.87E-02	6.07E-04	5.05E-03	9.05E-05	3.35E-04	1.45E-03	2.75E-02
278	371755	755375	Offsite Worker	9.88E-02	1.69E-03	2.69E-02	1.98E-01	4.03E-04	1.98E-02	0.00E+00	7.79E-04	1.98E-02	1.40E-02	1.03E-04	1.82E-02	5.93E-04	4.92E-03	8.83E-05	3.27E-04	1.42E-03	2.68E-02
279	371658	755378	Offsite Worker	1.02E-01	1.74E-03	2.76E-02	2.03E-01	4.14E-04	2.04E-02	0.00E+00	8.01E-04	2.03E-02	1.44E-02	1.00E-04	1.77E-02	5.75E-04	4.78E-03	8.58E-05	3.17E-04	1.38E-03	2.61E-02
280	371562	755382	Offsite Worker	1.05E-01	1.80E-03	2.87E-02	2.11E-01	4.30E-04	2.11E-02	0.00E+00	8.31E-04	2.11E-02	1.49E-02	1.00E-04	1.77E-02	5.76E-04	4.78E-03	8.59E-05	3.17E-04	1.38E-03	2.61E-02
281	371465	755385	Offsite Worker	1.08E-01	1.85E-03	2.95E-02	2.17E-01	4.42E-04	2.17E-02	0.00E+00	8.54E-04	2.17E-02	1.53E-02	9.78E-05	1.73E-02	5.62E-04	4.67E-03	8.39E-05	3.10E-04	1.34E-03	2.55E-02
282	371368	755388	Offsite Worker	1.14E-01	1.94E-03	3.10E-02	2.28E-01	4.64E-04	2.29E-02	0.00E+00	8.97E-04	2.28E-02	1.61E-02	9.30E-05	1.64E-02	5.34E-04	4.44E-03	7.99E-05	2.95E-04	1.28E-03	2.44E-02
283	371272	755391	Offsite Worker	1.17E-01	2.00E-03	3.19E-02	2.34E-01	4.78E-04	2.35E-02	0.00E+00	9.24E-04	2.35E-02	1.66E-02	9.34E-05	1.65E-02	5.36E-04	4.45E-03	8.02E-05	2.96E-04	1.28E-03	2.44E-02
284	371175	755395	Offsite Worker	1.27E-01	2.17E-03	3.46E-02	2.54E-01	5.19E-04	2.55E-02	0.00E+00	1.00E-03	2.55E-02	1.80E-02	1.01E-04	1.79E-02	5.83E-04	4.84E-03	8.73E-05	3.22E-04	1.40E-03	2.67E-02
285	371079	755398	Offsite Worker	1.36E-01	2.33E-03	3.71E-02	2.73E-01	5.56E-04	2.74E-02	0.00E+00	1.08E-03	2.73E-02	1.93E-02	1.13E-04	2.00E-02	6.52E-04	5.41E-03	9.77E-05	3.60E-04	1.56E-03	2.99E-02
286	371042	755478	Offsite Worker	1.41E-01	2.41E-03	3.84E-02	2.82E-01	5.75E-04	2.83E-02	0.00E+00	1.11E-03	2.82E-02	2.00E-02	1.13E-04	2.00E-02	6.51E-04	5.41E-03	9.76E-05	3.59E-04	1.56E-03	2.98E-02
287	371009	755538	Offsite Worker	1.44E-01	2.47E-03	3.93E-02	2.89E-01	5.89E-04	2.90E-02	0.00E+00	1.14E-03	2.89E-02	2.04E-02	1.13E-04	1.99E-02	6.48E-04	5.38E-03	9.71E-05	3.58E-04	1.55E-03	2.97E-02
288	370975	755597	Offsite Worker	1.47E-01	2.52E-03	4.01E-02	2.95E-01	6.01E-04	2.96E-02	0.00E+00	1.16E-03	2.95E-02	2.09E-02	1.14E-04	2.01E-02	6.55E-04	5.44E-03	9.82E-05	3.62E-04	1.57E-03	3.00E-02
289	370925	755597	Offsite Worker	1.55E-01	2.65E-03	4.21E-02	3.10E-01	6.32E-04	3.11E-02	0.00E+00	1.22E-03	3.10E-02	2.19E-02	1.21E-04	2.13E-02	6.95E-04	5.77E-03	1.04E-04	3.83E-04	1.66E-03	3.19E-02
290	370860	755547	Offsite Worker	1.62E-01	2.76E-03	4.40E-02	3.24E-01	6.60E-04	3.25E-02	0.00E+00	1.28E-03	3.24E-02	2.29E-02	1.35E-04	2.38E-02	7.74E-04	6.43E-03	1.16E-04	4.27E-04	1.85E-03	3.56E-02
291	370796	755497	Offsite Worker	1.62E-01	2.76E-03	4.40E-02	3.23E-01	6.60E-04	3.25E-02	0.00E+00	1.28E-03	3.24E-02	2.29E-02	1.62E-04	2.86E-02	9.31E-04	7.73E-03	1.39E-04	5.14E-04	2.23E-03	4.25E-02

Table 2-2
Summary of Incremental Acute Hazard Concentrations

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m³)	acrolein (µg/m³)	benzene (µg/m³)	formaldehyde (µg/m³)	methyl alcohol (µg/m³)	methyl ethyl ketone (µg/m³)	phenol (carbolic acid) (µg/m³)	styrene (µg/m³)	toluene (µg/m³)	xylene, total (µg/m³)	arsenic (µg/m³)	chlorine (µg/m³)	copper (µg/m³)	manganese (µg/m³)	mercury (µg/m³)	nickel (µg/m³)	vanadium (µg/m³)	sulfates (µg/m³)
292	370733	755428	Offsite Worker	1.56E-01	2.67E-03	4.24E-02	3.12E-01	6.36E-04	3.13E-02	0.00E+00	1.23E-03	3.12E-02	2.21E-02	1.90E-04	3.36E-02	1.09E-03	9.08E-03	1.63E-04	6.03E-04	2.62E-03	4.95E-02
293	370634	755428	Offsite Worker	1.70E-01	2.90E-03	4.62E-02	3.40E-01	6.93E-04	3.41E-02	0.00E+00	1.34E-03	3.40E-02	2.40E-02	2.06E-04	3.64E-02	1.19E-03	9.85E-03	1.77E-04	6.54E-04	2.84E-03	5.36E-02
294	370536	755428	Offsite Worker	1.78E-01	3.04E-03	4.84E-02	3.56E-01	7.25E-04	3.57E-02	0.00E+00	1.40E-03	3.56E-02	2.52E-02	2.08E-04	3.67E-02	1.19E-03	9.91E-03	1.78E-04	6.58E-04	2.86E-03	5.40E-02
295	370437	755428	Offsite Worker	1.79E-01	3.06E-03	4.86E-02	3.58E-01	7.29E-04	3.59E-02	0.00E+00	1.41E-03	3.58E-02	2.53E-02	2.04E-04	3.61E-02	1.18E-03	9.76E-03	1.75E-04	6.48E-04	2.81E-03	5.33E-02
296	370338	755427	Offsite Worker	1.84E-01	3.14E-03	5.00E-02	3.68E-01	7.49E-04	3.69E-02	0.00E+00	1.45E-03	3.68E-02	2.60E-02	2.04E-04	3.61E-02	1.17E-03	9.75E-03	1.75E-04	6.48E-04	2.81E-03	5.34E-02
307	369249	755442	Offsite Worker	2.63E-01	4.50E-03	7.17E-02	5.27E-01	1.07E-03	5.29E-02	0.00E+00	2.08E-03	5.28E-02	3.73E-02	3.20E-04	5.65E-02	1.84E-03	1.53E-02	2.74E-04	1.01E-03	4.40E-03	8.30E-02
308	369151	755442	Offsite Worker	2.70E-01	4.61E-03	7.33E-02	5.39E-01	1.10E-03	5.41E-02	0.00E+00	2.13E-03	5.40E-02	3.82E-02	3.00E-04	5.30E-02	1.73E-03	1.43E-02	2.58E-04	9.52E-04	4.13E-03	7.85E-02
309	369052	755442	Offsite Worker	2.80E-01	4.78E-03	7.61E-02	5.59E-01	1.14E-03	5.62E-02	0.00E+00	2.21E-03	5.60E-02	3.96E-02	3.45E-04	6.09E-02	1.98E-03	1.65E-02	2.95E-04	1.09E-03	4.74E-03	8.95E-02
320	368035	755402	Offsite Worker	1.99E-01	3.40E-03	5.42E-02	3.98E-01	8.12E-04	4.00E-02	0.00E+00	1.57E-03	3.99E-02	2.82E-02	2.12E-04	3.74E-02	1.22E-03	1.01E-02	1.82E-04	6.72E-04	2.91E-03	5.55E-02
321	367960	755389	Offsite Worker	1.78E-01	3.05E-03	4.86E-02	3.57E-01	7.28E-04	3.58E-02	0.00E+00	1.41E-03	3.57E-02	2.53E-02	2.27E-04	4.00E-02	1.30E-03	1.08E-02	1.94E-04	7.19E-04	3.12E-03	5.91E-02
322	367863	755390	Offsite Worker	1.48E-01	2.54E-03	4.04E-02	2.97E-01	6.05E-04	2.98E-02	0.00E+00	1.17E-03	2.97E-02	2.10E-02	2.32E-04	4.09E-02	1.33E-03	1.11E-02	1.98E-04	7.34E-04	3.18E-03	6.03E-02
323	367766	755392	Offsite Worker	1.44E-01	2.45E-03	3.91E-02	2.87E-01	5.86E-04	2.88E-02	0.00E+00	1.13E-03	2.88E-02	2.03E-02	2.08E-04	3.68E-02	1.20E-03	9.95E-03	1.79E-04	6.61E-04	2.87E-03	5.43E-02
324	367669	755393	Offsite Worker	1.35E-01	2.31E-03	3.68E-02	2.71E-01	5.52E-04	2.72E-02	0.00E+00	1.07E-03	2.71E-02	1.92E-02	1.74E-04	3.07E-02	9.99E-04	8.30E-03	1.49E-04	5.51E-04	2.39E-03	4.55E-02
325	367572	755394	Offsite Worker	1.30E-01	2.23E-03	3.55E-02	2.61E-01	5.32E-04	2.62E-02	0.00E+00	1.03E-03	2.61E-02	1.85E-02	1.66E-04	2.94E-02	9.55E-04	7.93E-03	1.42E-04	5.27E-04	2.29E-03	4.32E-02
326	367475	755395	Offsite Worker	1.24E-01	2.13E-03	3.38E-02	2.49E-01	5.07E-04	2.50E-02	0.00E+00	9.81E-04	2.49E-02	1.76E-02	1.64E-04	2.89E-02	9.42E-04	7.82E-03	1.40E-04	5.19E-04	2.25E-03	4.25E-02
327	370400	756850	On-Site Occupational	3.95E-01	6.76E-03	1.08E-01	7.91E-01	1.61E-03	7.94E-02	0.00E+00	3.12E-03	7.92E-02	5.60E-02	4.45E-04	7.85E-02	2.56E-03	2.12E-02	3.82E-04	1.41E-03	6.12E-03	1.16E-01
328	369032	756750	On-Site Occupational	3.00E+00	5.13E-02	8.17E-01	6.01E+00	1.22E-02	6.03E-01	0.00E+00	2.37E-02	6.01E-01	4.25E-01	2.19E-03	3.87E-01	1.26E-02	1.05E-01	1.90E-03	6.96E-03	3.01E-02	5.84E-01
329	368737	756629	On-Site Occupational	9.71E-01	1.66E-02	2.64E-01	1.94E+00	3.96E-03	1.95E-01	0.00E+00	7.66E-03	1.95E-01	1.38E-01	8.02E-04	1.41E-01	4.61E-03	3.82E-02	6.94E-04	2.54E-03	1.10E-02	2.13E-01
330	368907	757031	On-Site Occupational	1.32E+00	2.26E-02	3.60E-01	2.65E+00	5.40E-03	2.66E-01	0.00E+00	1.04E-02	2.65E-01	1.88E-01	1.20E-03	2.12E-01	6.90E-03	5.73E-02	1.04E-03	3.81E-03	1.65E-02	3.17E-01
331	368990	756274	On-Site Occupational	9.37E-01	1.60E-02	2.55E-01	1.88E+00	3.82E-03	1.88E-01	0.00E+00	7.39E-03	1.88E-01	1.33E-01	9.57E-04	1.69E-01	5.50E-03	4.56E-02	8.23E-04	3.03E-03	1.32E-02	2.51E-01
332	369550	756745	On-Site Occupational	2.26E+00	3.87E-02	6.16E-01	4.53E+00	9.23E-03	4.54E-01	0.00E+00	1.78E-02	4.53E-01	3.20E-01	1.89E-03	3.33E-01	1.08E-02	8.99E-02	1.63E-03	5.98E-03	2.59E-02	5.01E-01
1	367379	755396	Recreational	1.17E-01	1.99E-03	3.17E-02	2.33E-01	4.75E-04	2.34E-02	0.00E+00	9.19E-04	2.33E-02	1.65E-02	1.53E-04	2.70E-02	8.79E-04	7.30E-03	1.31E-04	4.85E-04	2.10E-03	3.97E-02
2	367340	755485	Recreational	1.18E-01	2.03E-03	3.22E-02	2.37E-01	4.83E-04	2.38E-02	0.00E+00	9.35E-04	2.37E-02	1.68E-02	1.45E-04	2.56E-02	8.33E-04	6.92E-03	1.24E-04	4.59E-04	1.99E-03	3.77E-02
3	367301	755573	Recreational	1.36E-01	2.32E-03	3.69E-02	2.71E-01	5.53E-04	2.72E-02	0.00E+00	1.07E-03	2.72E-02	1.92E-02	1.27E-04	2.25E-02	7.31E-04	6.07E-03	1.09E-04	4.03E-04	1.75E-03	3.33E-02
4	367263	755661	Recreational	1.46E-01	2.50E-03	3.98E-02	2.93E-01	5.97E-04	2.94E-02	0.00E+00	1.15E-03	2.93E-02	2.07E-02	9.58E-05	1.69E-02	5.50E-04	4.57E-03	8.27E-05	3.04E-04	1.32E-03	2.53E-02
5	367224	755749	Recreational	1.44E-01	2.46E-03	3.92E-02	2.88E-01	5.88E-04	2.89E-02	0.00E+00	1.14E-03	2.89E-02	2.04E-02	1.02E-04	1.80E-02	5.86E-04	4.86E-03	8.82E-05	3.23E-04	1.40E-03	2.70E-02
6	367186	755838	Recreational	1.33E-01	2.27E-03	3.61E-02	2.66E-01	5.42E-04	2.67E-02	0.00E+00	1.05E-03	2.66E-02	1.88E-02	1.36E-04	2.40E-02	7.80E-04	6.47E-03	1.17E-04	4.30E-04	1.87E-03	3.57E-02
7	367147	755926	Recreational	1.34E-01	2.28E-03	3.64E-02	2.67E-01	5.45E-04	2.69E-02	0.00E+00	1.05E-03	2.68E-02	1.89E-02	1.57E-04	2.77E-02	9.02E-04	7.49E-03	1.35E-04	4.98E-04	2.16E-03	4.11E-02
8	367109	756014	Recreational	1.46E-01	2.50E-03	3.98E-02	2.93E-01	5.97E-04	2.94E-02	0.00E+00	1.16E-03	2.93E-02	2.07E-02	1.49E-04	2.63E-02	8.55E-04	7.10E-03	1.28E-04	4.72E-04	2.05E-03	3.90E-02
9	367070	756103	Recreational	1.47E-01	2.51E-03	3.99E-02	2.93E-01	5.98E-04	2.95E-02	0.00E+00	1.16E-03	2.94E-02	2.08E-02	1.27E-04	2.24E-02	7.28E-04	6.04E-03	1.09E-04	4.02E-04	1.74E-03	3.33E-02
10	367032	756191	Recreational	1.35E-01	2.30E-03	3.67E-02	2.70E-01	5.50E-04	2.71E-02	0.00E+00	1.06E-03	2.70E-02	1.91E-02	1.46E-04	2.58E-02	8.38E-04	6.96E-03	1.25E-04	4.62E-04	2.01E-03	3.80E-02
11	366993	756279	Recreational	1.30E-01	2.23E-03	3.55E-02	2.61E-01	5.32E-04	2.62E-02	0.00E+00	1.03E-03	2.61E-02	1.85E-02	1.47E-04	2.59E-02	8.44E-04	7.01E-03	1.26E-04	4.65E-04	2.02E-03	3.83E-02
12	366954	756367	Recreational	1.19E-01	2.04E-03	3.24E-02	2.38E-01	4.86E-04	2.39E-02	0.00E+00	9.39E-04	2.38E-02	1.69E-02	1.69E-04	2.98E-02	9.69E-04	8.05E-03	1.45E-04	5.34E-04	2.32E-03	4.39E-02
13	366916	756456	Recreational	1.26E-01	2.15E-03	3.43E-02	2.52E-01	5.14E-04	2.53E-02	0.00E+00	9.93E-04	2.52E-02	1.78E-02	1.76E-04	3.11E-02	1.01E-03	8.41E-03	1.51E-04	5.58E-04	2.42E-03	4.59E-02
14	366877	756544	Recreational	1.30E-01	2.21E-03	3.53E-02	2.59E-01	5.29E-04	2.60E-02	0.00E+00	1.02E-03	2.60E-02	1.83E-02	1.53E-04	2.70E-02	8.78E-04	7.29E-03	1.31E-04	4.84E-04	2.10E-03	4.00E-02
15	366839	756632	Recreational	1.27E-01	2.17E-03	3.46E-02	2.55E-01	5.19E-04	2.56E-02	0.00E+00	1.00E-03	2.55E-02	1.80E-02	1.58E-04	2.78E-02	9.06E-04	7.53E-03	1.35E-04	5.00E-04	2.17E-03	4.09E-02
16	366800	756720	Recreational	1.19E-01	2.04E-03	3.25E-02	2.39E-01	4.87E-04	2.40E-02	0.00E+00	9.42E-04	2.39E-02	1.69E-02	1.50E-04	2.65E-02	8.61E-04	7.15E-03	1.28E-04	4.75E-04	2.06E-03	3.90E-02
17	366762	756809	Recreational	1.12E-01	1.92E-03	3.05E-02	2.24E-01	4.57E-04	2.25E-02	0.00E+00	8.84E-04	2.24E-02	1.59E-02	1.30E-04	2.29E-02	7.45E-04	6.19E-03	1.11E-04	4.11E-04	1.78E-03	3.39E-02
18	366723	756897	Recreational	1.01E-01	1.73E-03	2.76E-02	2.03E-01	4.14E-04	2.04E-02	0.00E+00	8.00E-04	2.03E-02	1.44E-02	1.28E-04	2.27E-02	7.38E-04	6.13E-03	1.10E-04	4.07E-04	1.77E-03	3.34E-02
19	366685	756985	Recreational	1.10E-01	1.88E-03	3.00E-02	2.21E-01	4.50E-04	2.21E-02	0.00E+00	8.70E-04	2.21E-02	1.56E-02	1.18E-04	2.08E-02	6.76E-04	5.62E-03	1.01E-04	3.73E-04	1.62E-03	3.06E-02
20	366646	757074	Recreational	1.22E-01	2.08E-03	3.32E-02	2.44E-01	4.97E-04	2.45E-02	0.00E+00	9.61E-04	2.44E-02	1.72E-02	1.08E-04	1.90E-02	6.19E-04	5.15E-03	9.25E-05	3.42E-04	1.48E-03	2.81E-02
21	366607	757162	Recreational	1.28E-01	2.18E-03	3.48E-02	2.56E-01	5.21E-04	2.57E-02	0.00E+00	1.01E-03	2.56E-02	1.81E-02	1.05E-04	1.85E-02	6.02E-04	5.00E-03	8.98E-05	3.32E-04	1.44E-03	2.74E-02
22	366569	757250	Recreational	1.27E-01	2.17E-03	3.45E-02	2.54E-01	5.17E-04	2.55E-02	0.00E+00	1.00E-03	2.54E-02	1.79E-02	1.03E-04	1.82E-02	5.92E-04	4.92E-03	8.84E-05	3.27E-04	1.42E-03	2.69E-02
23	366530	757338	Recreational	1.19E-01	2.03E-03	3.24E-02	2.38E-01	4.86E-04	2.39E-02	0.00E+00	9.39E-04	2.38E-02	1.69E-02	9.82E-05	1.73E-02	5.64E-04	4.68E-03	8.43E-05	3.11E-04	1.35E-03	2.57E-02
24	366492	757427	Recreational	1.06E-01	1.81E-03	2.88E-02	2.12E-01	4.32E-04	2.13E-02	0.00E+00	8.36E-04	2.12E-02	1.50E-02	8.73E-05	1.54E-02	5.02E-04	4.17E-03	7.51E-05	2.77E-04	1.20E-03	2.29E-02
25	366453	757515	Recreational	9.02E-02	1.54E-03	2.45E-02	1.81E-01	3.68E-04	1.81E-02	0.00E+00	7.12E-04	1.81E-02	1.28E-02	7.29E-05	1.29E-02	4.19E-04	3.48E-03	6.29E-05	2.31E-04	1.00E-03	1.92E-02
26	366415	757603	Recreational	8.27E-02	1.41E-03	2.25E-02	1.65E-01	3.37E-04	1.66E-02	0.00E+00	6.52E-04	1.66E-02	1.17E-02	5.76E-05	1.02E-02	3.31E-04	2.74E-03	4.99E-05	1.83E-04	7.91E-04	1.53E-02
27	366376	757692	Recreational	7.99E-02	1.37E-03	2.17E-02	1.60E-01	3.26E-04	1.60E-02	0.00E+00	6.30E-04	1.60E-02	1.13E-02	5.67E-05	1.00E-02	3.26E-04	2.70E-03	4.92E-05	1.80E-04	7.79E-04	1.51E-02
84	369336	758100	Recreational	3.23E-01	5.53E-03	8.80E-02	6.47E-01	1.32E-03	6.50E-02	0.00E+00	2.55E-03	6.48E-02	4.58E-02	3.73E-04	6.58E-02	2.14E-03	1.78E-02	3.19E-04	1.18E-03	5.13E-03	9.69E-02
85	369269	758170	Recreational	3.05E-01	5.22E-03	8.31E-02	6.11E-01	1.25E-03	6.13E-02	0.00E+00	2.41E-03	6.12E-02	4.32E-02	3.47E-04	6.12E-02	1.99E-03	1.65E-02	2.97E-04	1.10E-03	4.77E-03	9.04E-02
86	369202	758239	Recreational	2.72E-01	4.64E-03	7.39E-02	5.43E-01	1.11E-03	5.46E-02	0.00E+00	2.14E-03	5.44E-02	3.84E-02	3.51E-04	6.19E-02	2.01E-03	1.67E-02	3.00E-04	1.11E-03	4.82E-03	9.10E-02
87	369264	758285	Recreational	2.73E-01	4.67E-03	7.44E-02	5.47E-01	1.12E-03	5.49E-02	0.00E+00	2.16E-03	5.48E-02	3.87E-02	3.18E-04	5.61E-02	1.83E-03	1.52E-02	2.72E-04	1.01E-03	4.37E-03	8.28E-02
88	369326	758330	Recreational	2.64E-01	4.51E-03	7.18E-02	5.28E-01	1.08E-03	5.30E-02	0.00E+00	2.08E-03	5.29E-02	3.74E-02	3.00E-04	5.29E-02	1.72E-03	1.43E-02	2.57E-04	9.50E-04	4.12E-03	7.81E-02

Table 2-2
Summary of Incremental Acute Hazard Concentrations

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m³)	acrolein (µg/m³)	benzene (µg/m³)	formaldehyde (µg/m³)	methyl alcohol (µg/m³)	methyl ethyl ketone (µg/m³)	phenol (carbolic acid) (µg/m³)	styrene (µg/m³)	toluene (µg/m³)	xylene, total (µg/m³)	arsenic (µg/m³)	chlorine (µg/m³)	copper (µg/m³)	manganese (µg/m³)	mercury (µg/m³)	nickel (µg/m³)	vanadium (µg/m³)	sulfates (µg/m³)
89	369389	758376	Recreational	2.47E-01	4.22E-03	6.71E-02	4.94E-01	1.01E-03	4.96E-02	0.00E+00	1.95E-03	4.94E-02	3.49E-02	2.88E-04	5.10E-02	1.66E-03	1.38E-02	2.47E-04	9.14E-04	3.97E-03	7.50E-02
90	369389	758462	Recreational	2.31E-01	3.95E-03	6.29E-02	4.63E-01	9.43E-04	4.64E-02	0.00E+00	1.82E-03	4.63E-02	3.27E-02	2.71E-04	4.78E-02	1.56E-03	1.29E-02	2.32E-04	8.58E-04	3.73E-03	7.03E-02
91	369389	758548	Recreational	2.17E-01	3.71E-03	5.91E-02	4.34E-01	8.86E-04	4.36E-02	0.00E+00	1.71E-03	4.35E-02	3.07E-02	2.55E-04	4.50E-02	1.46E-03	1.22E-02	2.18E-04	8.07E-04	3.50E-03	6.60E-02
28	366338	757780	Residential	7.90E-02	1.35E-03	2.15E-02	1.58E-01	3.22E-04	1.59E-02	0.00E+00	6.23E-04	1.58E-02	1.12E-02	7.06E-05	1.25E-02	4.06E-04	3.37E-03	6.09E-05	2.24E-04	9.71E-04	1.86E-02
29	366402	757746	Residential	8.16E-02	1.39E-03	2.22E-02	1.63E-01	3.33E-04	1.64E-02	0.00E+00	6.43E-04	1.63E-02	1.15E-02	7.06E-05	1.25E-02	4.06E-04	3.37E-03	6.10E-05	2.24E-04	9.71E-04	1.87E-02
30	366467	757713	Residential	8.42E-02	1.44E-03	2.29E-02	1.69E-01	3.44E-04	1.69E-02	0.00E+00	6.65E-04	1.69E-02	1.19E-02	7.09E-05	1.25E-02	4.07E-04	3.38E-03	6.12E-05	2.25E-04	9.74E-04	1.88E-02
31	366531	757679	Residential	8.70E-02	1.49E-03	2.37E-02	1.74E-01	3.55E-04	1.75E-02	0.00E+00	6.86E-04	1.74E-02	1.23E-02	7.07E-05	1.25E-02	4.06E-04	3.37E-03	6.11E-05	2.24E-04	9.72E-04	1.87E-02
32	366567	757773	Residential	9.78E-02	1.67E-03	2.66E-02	1.96E-01	3.99E-04	1.96E-02	0.00E+00	7.71E-04	1.96E-02	1.38E-02	9.74E-05	1.72E-02	5.60E-04	4.65E-03	8.37E-05	3.09E-04	1.34E-03	2.55E-02
33	366625	757758	Residential	1.02E-01	1.74E-03	2.77E-02	2.03E-01	4.15E-04	2.04E-02	0.00E+00	8.02E-04	2.04E-02	1.44E-02	1.02E-04	1.80E-02	5.87E-04	4.87E-03	8.77E-05	3.24E-04	1.40E-03	2.67E-02
34	366682	757744	Residential	1.06E-01	1.81E-03	2.88E-02	2.12E-01	4.31E-04	2.12E-02	0.00E+00	8.34E-04	2.12E-02	1.50E-02	1.07E-04	1.89E-02	6.15E-04	5.11E-03	9.20E-05	3.39E-04	1.47E-03	2.80E-02
35	366768	757788	Residential	1.19E-01	2.04E-03	3.24E-02	2.38E-01	4.86E-04	2.39E-02	0.00E+00	9.39E-04	2.39E-02	1.69E-02	1.29E-04	2.29E-02	7.44E-04	6.18E-03	1.11E-04	4.10E-04	1.78E-03	3.37E-02
36	366854	757833	Residential	1.30E-01	2.21E-03	3.53E-02	2.59E-01	5.28E-04	2.60E-02	0.00E+00	1.02E-03	2.59E-02	1.83E-02	1.47E-04	2.60E-02	8.44E-04	7.02E-03	1.26E-04	4.66E-04	2.02E-03	3.81E-02
37	366941	757877	Residential	1.35E-01	2.30E-03	3.67E-02	2.70E-01	5.50E-04	2.71E-02	0.00E+00	1.06E-03	2.70E-02	1.91E-02	1.55E-04	2.74E-02	8.91E-04	7.40E-03	1.33E-04	4.91E-04	2.13E-03	4.02E-02
38	367027	757922	Residential	1.33E-01	2.27E-03	3.62E-02	2.66E-01	5.43E-04	2.67E-02	0.00E+00	1.05E-03	2.66E-02	1.88E-02	1.50E-04	2.65E-02	8.64E-04	7.17E-03	1.29E-04	4.76E-04	2.07E-03	3.91E-02
39	367113	757966	Residential	1.24E-01	2.12E-03	3.38E-02	2.49E-01	5.07E-04	2.50E-02	0.00E+00	9.81E-04	2.49E-02	1.76E-02	1.33E-04	2.35E-02	7.66E-04	6.36E-03	1.15E-04	4.23E-04	1.83E-03	3.49E-02
40	367192	757916	Residential	1.34E-01	2.29E-03	3.64E-02	2.68E-01	5.46E-04	2.69E-02	0.00E+00	1.06E-03	2.68E-02	1.89E-02	1.44E-04	2.54E-02	8.28E-04	6.88E-03	1.24E-04	4.57E-04	1.98E-03	3.77E-02
41	367264	757916	Residential	1.37E-01	2.35E-03	3.74E-02	2.75E-01	5.60E-04	2.76E-02	0.00E+00	1.08E-03	2.75E-02	1.94E-02	1.45E-04	2.56E-02	8.34E-04	6.92E-03	1.25E-04	4.60E-04	2.00E-03	3.80E-02
42	367335	757916	Residential	1.49E-01	2.54E-03	4.05E-02	2.98E-01	6.07E-04	2.99E-02	0.00E+00	1.17E-03	2.98E-02	2.11E-02	1.59E-04	2.81E-02	9.14E-04	7.59E-03	1.36E-04	5.04E-04	2.19E-03	4.14E-02
43	367343	757966	Residential	1.53E-01	2.62E-03	4.17E-02	3.07E-01	6.25E-04	3.08E-02	0.00E+00	1.21E-03	3.07E-02	2.17E-02	1.64E-04	2.90E-02	9.42E-04	7.83E-03	1.40E-04	5.20E-04	2.26E-03	4.26E-02
44	367404	757995	Residential	1.62E-01	2.76E-03	4.40E-02	3.23E-01	6.59E-04	3.25E-02	0.00E+00	1.27E-03	3.24E-02	2.29E-02	1.69E-04	2.98E-02	9.68E-04	8.05E-03	1.44E-04	5.34E-04	2.32E-03	4.38E-02
45	367465	758024	Residential	1.66E-01	2.84E-03	4.53E-02	3.33E-01	6.79E-04	3.34E-02	0.00E+00	1.31E-03	3.33E-02	2.36E-02	1.66E-04	2.93E-02	9.53E-04	7.92E-03	1.42E-04	5.26E-04	2.28E-03	4.32E-02
55	367673	758189	Residential	1.35E-01	2.31E-03	3.68E-02	2.70E-01	5.51E-04	2.71E-02	0.00E+00	1.07E-03	2.71E-02	1.91E-02	1.77E-04	3.12E-02	1.01E-03	8.43E-03	1.51E-04	5.60E-04	2.43E-03	4.59E-02
59	367816	758096	Residential	1.47E-01	2.52E-03	4.01E-02	2.95E-01	6.01E-04	2.96E-02	0.00E+00	1.16E-03	2.95E-02	2.09E-02	1.97E-04	3.48E-02	1.13E-03	9.41E-03	1.69E-04	6.25E-04	2.71E-03	5.12E-02
60	367898	758066	Residential	1.58E-01	2.70E-03	4.29E-02	3.16E-01	6.44E-04	3.17E-02	0.00E+00	1.24E-03	3.16E-02	2.23E-02	2.05E-04	3.62E-02	1.18E-03	9.80E-03	1.76E-04	6.50E-04	2.82E-03	5.34E-02
61	367980	758035	Residential	1.71E-01	2.93E-03	4.66E-02	3.42E-01	6.98E-04	3.44E-02	0.00E+00	1.35E-03	3.43E-02	2.42E-02	2.10E-04	3.71E-02	1.21E-03	1.00E-02	1.80E-04	6.66E-04	2.89E-03	5.47E-02
62	368062	758005	Residential	1.85E-01	3.16E-03	5.02E-02	3.69E-01	7.53E-04	3.71E-02	0.00E+00	1.46E-03	3.70E-02	2.61E-02	2.31E-04	4.09E-02	1.33E-03	1.10E-02	1.98E-04	7.34E-04	3.18E-03	6.02E-02
63	368144	757975	Residential	1.98E-01	3.38E-03	5.38E-02	3.96E-01	8.07E-04	3.97E-02	0.00E+00	1.56E-03	3.96E-02	2.80E-02	2.53E-04	4.47E-02	1.46E-03	1.21E-02	2.17E-04	8.03E-04	3.48E-03	6.59E-02
64	368226	757945	Residential	2.11E-01	3.60E-03	5.73E-02	4.21E-01	8.59E-04	4.23E-02	0.00E+00	1.66E-03	4.22E-02	2.98E-02	2.71E-04	4.79E-02	1.56E-03	1.30E-02	2.32E-04	8.60E-04	3.73E-03	7.06E-02
65	368301	757943	Residential	2.16E-01	3.69E-03	5.87E-02	4.31E-01	8.80E-04	4.33E-02	0.00E+00	1.70E-03	4.32E-02	3.05E-02	2.80E-04	4.95E-02	1.61E-03	1.34E-02	2.40E-04	8.89E-04	3.86E-03	7.30E-02
66	368376	757941	Residential	2.17E-01	3.70E-03	5.90E-02	4.34E-01	8.84E-04	4.35E-02	0.00E+00	1.71E-03	4.34E-02	3.07E-02	2.73E-04	4.82E-02	1.57E-03	1.30E-02	2.34E-04	8.66E-04	3.76E-03	7.13E-02
67	368452	757940	Residential	2.29E-01	3.91E-03	6.22E-02	4.57E-01	9.33E-04	4.59E-02	0.00E+00	1.80E-03	4.58E-02	3.24E-02	2.81E-04	4.96E-02	1.61E-03	1.34E-02	2.41E-04	8.90E-04	3.86E-03	7.32E-02
68	368527	757938	Residential	2.43E-01	4.15E-03	6.60E-02	4.85E-01	9.90E-04	4.87E-02	0.00E+00	1.91E-03	4.86E-02	3.43E-02	2.92E-04	5.16E-02	1.68E-03	1.39E-02	2.50E-04	9.26E-04	4.02E-03	7.61E-02
69	368563	757880	Residential	2.60E-01	4.44E-03	7.07E-02	5.20E-01	1.06E-03	5.22E-02	0.00E+00	2.05E-03	5.20E-02	3.68E-02	3.12E-04	5.51E-02	1.79E-03	1.49E-02	2.68E-04	9.90E-04	4.30E-03	8.14E-02
70	368636	757926	Residential	2.57E-01	4.39E-03	6.99E-02	5.14E-01	1.05E-03	5.16E-02	0.00E+00	2.02E-03	5.14E-02	3.63E-02	2.68E-04	4.73E-02	1.54E-03	1.28E-02	2.30E-04	8.49E-04	3.68E-03	7.03E-02
71	368709	757971	Residential	2.63E-01	4.50E-03	7.17E-02	5.27E-01	1.07E-03	5.29E-02	0.00E+00	2.08E-03	5.28E-02	3.73E-02	2.44E-04	4.31E-02	1.40E-03	1.16E-02	2.10E-04	7.73E-04	3.35E-03	6.41E-02
72	368782	758017	Residential	2.56E-01	4.37E-03	6.96E-02	5.12E-01	1.04E-03	5.14E-02	0.00E+00	2.02E-03	5.12E-02	3.62E-02	3.23E-04	5.70E-02	1.85E-03	1.54E-02	2.76E-04	1.02E-03	4.44E-03	8.39E-02
73	368855	758062	Residential	2.65E-01	4.53E-03	7.22E-02	5.31E-01	1.08E-03	5.33E-02	0.00E+00	2.09E-03	5.31E-02	3.76E-02	3.61E-04	6.37E-02	2.07E-03	1.72E-02	3.09E-04	1.14E-03	4.97E-03	9.36E-02
74	368928	758108	Residential	2.58E-01	4.42E-03	7.03E-02	5.17E-01	1.05E-03	5.19E-02	0.00E+00	2.04E-03	5.18E-02	3.66E-02	3.44E-04	6.07E-02	1.97E-03	1.64E-02	2.94E-04	1.09E-03	4.73E-03	8.94E-02
75	369001	758153	Residential	2.52E-01	4.31E-03	6.86E-02	5.04E-01	1.03E-03	5.06E-02	0.00E+00	1.99E-03	5.05E-02	3.57E-02	3.12E-04	5.51E-02	1.79E-03	1.49E-02	2.68E-04	9.89E-04	4.29E-03	8.14E-02
76	369058	758074	Residential	2.79E-01	4.78E-03	7.60E-02	5.59E-01	1.14E-03	5.61E-02	0.00E+00	2.20E-03	5.60E-02	3.96E-02	3.62E-04	6.39E-02	2.08E-03	1.73E-02	3.10E-04	1.15E-03	4.98E-03	9.40E-02
77	369102	758103	Residential	2.74E-01	4.68E-03	7.44E-02	5.47E-01	1.12E-03	5.50E-02	0.00E+00	2.16E-03	5.48E-02	3.87E-02	3.70E-04	6.54E-02	2.13E-03	1.77E-02	3.17E-04	1.17E-03	5.10E-03	9.62E-02
78	369145	758132	Residential	2.76E-01	4.71E-03	7.50E-02	5.51E-01	1.12E-03	5.53E-02	0.00E+00	2.17E-03	5.52E-02	3.90E-02	3.78E-04	6.67E-02	2.17E-03	1.80E-02	3.23E-04	1.20E-03	5.19E-03	9.80E-02
79	369200	758065	Residential	3.23E-01	5.52E-03	8.78E-02	6.46E-01	1.32E-03	6.48E-02	0.00E+00	2.55E-03	6.47E-02	4.57E-02	4.15E-04	7.33E-02	2.38E-03	1.98E-02	3.55E-04	1.31E-03	5.71E-03	1.08E-01
80	369255	757998	Residential	3.64E-01	6.23E-03	9.91E-02	7.29E-01	1.49E-03	7.32E-02	0.00E+00	2.87E-03	7.30E-02	5.16E-02	4.24E-04	7.48E-02	2.43E-03	2.02E-02	3.63E-04	1.34E-03	5.83E-03	1.10E-01
81	369310	757931	Residential	3.92E-01	6.70E-03	1.07E-01	7.84E-01	1.60E-03	7.87E-02	0.00E+00	3.09E-03	7.85E-02	5.55E-02	4.45E-04	7.86E-02	2.56E-03	2.13E-02	3.82E-04	1.41E-03	6.13E-03	1.16E-01
82	369356	757981	Residential	3.58E-01	6.12E-03	9.74E-02	7.16E-01	1.46E-03	7.19E-02	0.00E+00	2.82E-03	7.17E-02	5.07E-02	4.30E-04	7.59E-02	2.47E-03	2.05E-02	3.68E-04	1.36E-03	5.91E-03	1.12E-01
83	369403	758031	Residential	3.26E-01	5.58E-03	8.88E-02	6.53E-01	1.33E-03	6.55E-02	0.00E+00	2.57E-03	6.53E-02	4.62E-02	4.06E-04	7.17E-02	2.33E-03	1.94E-02	3.48E-04	1.29E-03	5.59E-03	1.06E-01
92	369389	758634	Residential	2.04E-01	3.49E-03	5.56E-02	4.09E-01	8.34E-04	4.10E-02	0.00E+00	1.61E-03	4.09E-02	2.89E-02	2.40E-04	4.23E-02	1.38E-03	1.14E-02	2.05E-04	7.60E-04	3.30E-03	6.22E-02
93	369469	758630	Residential	1.95E-01	3.33E-03	5.29E-02	3.89E-01	7.94E-04	3.91E-02	0.00E+00	1.53E-03	3.90E-02	2.75E-02	2.46E-04	4.34E-02	1.41E-03	1.17E-02	2.10E-04	7.79E-04	3.38E-03	6.38E-02
94	369549	758625	Residential	1.87E-01	3.20E-03	5.10E-02	3.75E-01	7.65E-04	3.76E-02	0.00E+00	1.48E-03	3.75E-02	2.65E-02	2.39E-04	4.22E-02	1.37E-03	1.14E-02	2.05E-04	7.58E-04	3.29E-03	6.22E-02
95	369630	758621	Residential	1.83E-01	3.13E-03	4.99E-02	3.67E-01	7.47E-04	3.68E-02	0.00E+00	1.44E-03	3.67E-02	2.59E-02	2.31E-04	4.09E-02	1.33E-03	1.10E-02	1.98E-04	7.33E-04	3.18E-03	6.02E-02
96	369710	758617	Residential	1.75E-01	2.99E-03	4.76E-02	3.50E-01	7.14E-04	3.51E-02	0.00E+00	1.38E-03	3.50E-02	2.48E-02	2.46E-04	4.34E-02	1.41E-03	1.17E-02	2.11E-04	7.79E-04	3.38E-03	6.39E-02
97	369791	758613	Residential	1.68E-01	2.88E-03	4.58E-02	3.37E-01	6.87E-04	3.38E-02	0.00E+00	1.33E-03	3.37E-02	2.38E-02	2.40E-04	4.24E-02	1.38E-03	1.15E-02	2.05E-04	7.60E-04	3.30E-03	6.24E-02

Table 2-2
Summary of Incremental Acute Hazard Concentrations

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m³)	acrolein (µg/m³)	benzene (µg/m³)	formaldehyde (µg/m³)	methyl alcohol (µg/m³)	methyl ethyl ketone (µg/m³)	phenol (carbolic acid) (µg/m³)	styrene (µg/m³)	toluene (µg/m³)	xylene, total (µg/m³)	arsenic (µg/m³)	chlorine (µg/m³)	copper (µg/m³)	manganese (µg/m³)	mercury (µg/m³)	nickel (µg/m³)	vanadium (µg/m³)	sulfates (µg/m³)
98	369791	758514	Residential	1.81E-01	3.09E-03	4.91E-02	3.61E-01	7.36E-04	3.63E-02	0.00E+00	1.42E-03	3.62E-02	2.56E-02	2.63E-04	4.64E-02	1.51E-03	1.25E-02	2.25E-04	8.33E-04	3.62E-03	6.83E-02
99	369791	758416	Residential	1.96E-01	3.36E-03	5.35E-02	3.93E-01	8.02E-04	3.95E-02	0.00E+00	1.55E-03	3.94E-02	2.78E-02	2.80E-04	4.94E-02	1.61E-03	1.34E-02	2.40E-04	8.87E-04	3.85E-03	7.28E-02
100	369791	758318	Residential	2.18E-01	3.72E-03	5.92E-02	4.36E-01	8.88E-04	4.37E-02	0.00E+00	1.72E-03	4.36E-02	3.08E-02	2.90E-04	5.11E-02	1.66E-03	1.38E-02	2.48E-04	9.18E-04	3.98E-03	7.55E-02
101	369881	758318	Residential	2.19E-01	3.74E-03	5.95E-02	4.37E-01	8.92E-04	4.39E-02	0.00E+00	1.72E-03	4.38E-02	3.09E-02	2.68E-04	4.74E-02	1.54E-03	1.28E-02	2.30E-04	8.50E-04	3.69E-03	7.00E-02
102	369972	758318	Residential	2.17E-01	3.71E-03	5.90E-02	4.34E-01	8.85E-04	4.36E-02	0.00E+00	1.71E-03	4.35E-02	3.07E-02	2.65E-04	4.67E-02	1.52E-03	1.26E-02	2.27E-04	8.39E-04	3.64E-03	6.88E-02
103	370062	758318	Residential	2.04E-01	3.48E-03	5.54E-02	4.07E-01	8.31E-04	4.09E-02	0.00E+00	1.61E-03	4.08E-02	2.88E-02	2.57E-04	4.54E-02	1.48E-03	1.23E-02	2.20E-04	8.14E-04	3.53E-03	6.67E-02
104	370153	758318	Residential	1.86E-01	3.17E-03	5.05E-02	3.71E-01	7.57E-04	3.73E-02	0.00E+00	1.46E-03	3.72E-02	2.63E-02	2.49E-04	4.39E-02	1.43E-03	1.19E-02	2.13E-04	7.88E-04	3.42E-03	6.46E-02
105	370243	758318	Residential	1.92E-01	3.28E-03	5.22E-02	3.84E-01	7.82E-04	3.85E-02	0.00E+00	1.51E-03	3.84E-02	2.71E-02	2.47E-04	4.37E-02	1.42E-03	1.18E-02	2.12E-04	7.84E-04	3.40E-03	6.44E-02
111	370408	758347	Residential	1.80E-01	3.07E-03	4.89E-02	3.59E-01	7.33E-04	3.61E-02	0.00E+00	1.42E-03	3.60E-02	2.54E-02	2.35E-04	4.15E-02	1.35E-03	1.12E-02	2.01E-04	7.45E-04	3.23E-03	6.12E-02
112	370490	758344	Residential	1.77E-01	3.03E-03	4.82E-02	3.55E-01	7.23E-04	3.56E-02	0.00E+00	1.40E-03	3.55E-02	2.51E-02	2.28E-04	4.02E-02	1.31E-03	1.09E-02	1.95E-04	7.22E-04	3.13E-03	5.93E-02
113	370572	758341	Residential	1.84E-01	3.14E-03	5.00E-02	3.67E-01	7.49E-04	3.69E-02	0.00E+00	1.45E-03	3.68E-02	2.60E-02	2.13E-04	3.76E-02	1.22E-03	1.02E-02	1.83E-04	6.75E-04	2.93E-03	5.55E-02
114	370654	758338	Residential	1.81E-01	3.10E-03	4.94E-02	3.63E-01	7.40E-04	3.65E-02	0.00E+00	1.43E-03	3.64E-02	2.57E-02	2.12E-04	3.74E-02	1.22E-03	1.01E-02	1.81E-04	6.71E-04	2.91E-03	5.51E-02
115	370735	758335	Residential	1.71E-01	2.93E-03	4.66E-02	3.43E-01	6.98E-04	3.44E-02	0.00E+00	1.35E-03	3.43E-02	2.42E-02	2.08E-04	3.68E-02	1.20E-03	9.94E-03	1.78E-04	6.60E-04	2.86E-03	5.42E-02
116	370817	758333	Residential	1.65E-01	2.81E-03	4.48E-02	3.29E-01	6.71E-04	3.30E-02	0.00E+00	1.30E-03	3.30E-02	2.33E-02	2.06E-04	3.63E-02	1.18E-03	9.82E-03	1.76E-04	6.52E-04	2.83E-03	5.36E-02
130	371183	758027	Residential	1.47E-01	2.51E-03	4.00E-02	2.94E-01	5.99E-04	2.95E-02	0.00E+00	1.16E-03	2.94E-02	2.08E-02	1.94E-04	3.43E-02	1.12E-03	9.27E-03	1.66E-04	6.15E-04	2.67E-03	5.05E-02
131	371248	758024	Residential	1.39E-01	2.38E-03	3.79E-02	2.79E-01	5.69E-04	2.80E-02	0.00E+00	1.10E-03	2.79E-02	1.97E-02	1.84E-04	3.25E-02	1.06E-03	8.79E-03	1.58E-04	5.84E-04	2.53E-03	4.80E-02
132	371326	758075	Residential	1.32E-01	2.26E-03	3.59E-02	2.64E-01	5.39E-04	2.65E-02	0.00E+00	1.04E-03	2.65E-02	1.87E-02	1.75E-04	3.09E-02	1.01E-03	8.37E-03	1.50E-04	5.55E-04	2.41E-03	4.56E-02
133	371404	758127	Residential	1.25E-01	2.14E-03	3.41E-02	2.51E-01	5.11E-04	2.52E-02	0.00E+00	9.89E-04	2.51E-02	1.77E-02	1.67E-04	2.95E-02	9.60E-04	7.98E-03	1.43E-04	5.30E-04	2.30E-03	4.35E-02
134	371481	758178	Residential	1.19E-01	2.04E-03	3.25E-02	2.39E-01	4.87E-04	2.40E-02	0.00E+00	9.41E-04	2.39E-02	1.69E-02	1.60E-04	2.82E-02	9.17E-04	7.62E-03	1.37E-04	5.06E-04	2.20E-03	4.15E-02
135	371559	758230	Residential	1.14E-01	1.94E-03	3.09E-02	2.27E-01	4.64E-04	2.28E-02	0.00E+00	8.96E-04	2.28E-02	1.61E-02	1.53E-04	2.70E-02	8.77E-04	7.29E-03	1.31E-04	4.84E-04	2.10E-03	3.97E-02
136	371637	758281	Residential	1.08E-01	1.85E-03	2.95E-02	2.17E-01	4.42E-04	2.18E-02	0.00E+00	8.55E-04	2.17E-02	1.53E-02	1.46E-04	2.58E-02	8.39E-04	6.97E-03	1.25E-04	4.63E-04	2.01E-03	3.80E-02
137	371715	758333	Residential	1.04E-01	1.77E-03	2.82E-02	2.07E-01	4.23E-04	2.08E-02	0.00E+00	8.17E-04	2.08E-02	1.47E-02	1.40E-04	2.47E-02	8.05E-04	6.68E-03	1.20E-04	4.44E-04	1.93E-03	3.64E-02
138	371769	758261	Residential	1.05E-01	1.79E-03	2.84E-02	2.09E-01	4.26E-04	2.10E-02	0.00E+00	8.24E-04	2.09E-02	1.48E-02	1.44E-04	2.55E-02	8.30E-04	6.90E-03	1.24E-04	4.58E-04	1.99E-03	3.76E-02
139	371822	758189	Residential	1.08E-01	1.85E-03	2.95E-02	2.17E-01	4.43E-04	2.18E-02	0.00E+00	8.56E-04	2.17E-02	1.54E-02	1.38E-04	2.43E-02	7.92E-04	6.58E-03	1.18E-04	4.37E-04	1.89E-03	3.59E-02
140	371894	758160	Residential	1.06E-01	1.81E-03	2.88E-02	2.12E-01	4.32E-04	2.13E-02	0.00E+00	8.35E-04	2.12E-02	1.50E-02	1.30E-04	2.29E-02	7.46E-04	6.20E-03	1.11E-04	4.12E-04	1.79E-03	3.38E-02
141	371894	758081	Residential	1.05E-01	1.79E-03	2.85E-02	2.10E-01	4.27E-04	2.10E-02	0.00E+00	8.26E-04	2.10E-02	1.48E-02	1.39E-04	2.45E-02	7.97E-04	6.62E-03	1.19E-04	4.40E-04	1.91E-03	3.61E-02
142	371959	758074	Residential	1.05E-01	1.80E-03	2.86E-02	2.11E-01	4.29E-04	2.11E-02	0.00E+00	8.30E-04	2.11E-02	1.49E-02	1.38E-04	2.44E-02	7.94E-04	6.60E-03	1.18E-04	4.38E-04	1.90E-03	3.59E-02
155	372055	757363	Residential	1.08E-01	1.85E-03	2.94E-02	2.17E-01	4.41E-04	2.17E-02	0.00E+00	8.53E-04	2.17E-02	1.53E-02	1.43E-04	2.53E-02	8.22E-04	6.83E-03	1.23E-04	4.54E-04	1.97E-03	3.73E-02
297	370239	755427	Residential	1.85E-01	3.17E-03	5.04E-02	3.71E-01	7.56E-04	3.72E-02	0.00E+00	1.46E-03	3.71E-02	2.62E-02	2.02E-04	3.57E-02	1.16E-03	9.65E-03	1.74E-04	6.41E-04	2.78E-03	5.29E-02
298	370138	755427	Residential	2.12E-01	3.63E-03	5.77E-02	4.24E-01	8.65E-04	4.26E-02	0.00E+00	1.67E-03	4.25E-02	3.00E-02	2.17E-04	3.82E-02	1.24E-03	1.03E-02	1.86E-04	6.87E-04	2.98E-03	5.69E-02
299	370040	755427	Residential	2.32E-01	3.96E-03	6.30E-02	4.64E-01	9.45E-04	4.65E-02	0.00E+00	1.83E-03	4.64E-02	3.28E-02	2.33E-04	4.12E-02	1.34E-03	1.11E-02	2.01E-04	7.39E-04	3.21E-03	6.13E-02
300	369941	755426	Residential	2.39E-01	4.09E-03	6.51E-02	4.78E-01	9.75E-04	4.80E-02	0.00E+00	1.89E-03	4.79E-02	3.38E-02	2.89E-04	5.11E-02	1.66E-03	1.38E-02	2.48E-04	9.17E-04	3.98E-03	7.54E-02
301	369842	755426	Residential	2.36E-01	4.04E-03	6.43E-02	4.73E-01	9.64E-04	4.75E-02	0.00E+00	1.86E-03	4.74E-02	3.35E-02	3.13E-04	5.53E-02	1.80E-03	1.50E-02	2.68E-04	9.93E-04	4.31E-03	8.14E-02
302	369741	755435	Residential	2.53E-01	4.33E-03	6.89E-02	5.07E-01	1.03E-03	5.08E-02	0.00E+00	2.00E-03	5.07E-02	3.58E-02	2.59E-04	4.58E-02	1.49E-03	1.24E-02	2.23E-04	8.22E-04	3.57E-03	6.79E-02
303	369643	755434	Residential	2.69E-01	4.60E-03	7.32E-02	5.39E-01	1.10E-03	5.41E-02	0.00E+00	2.12E-03	5.39E-02	3.81E-02	2.88E-04	5.09E-02	1.66E-03	1.38E-02	2.47E-04	9.13E-04	3.96E-03	7.50E-02
304	369544	755434	Residential	2.66E-01	4.55E-03	7.24E-02	5.33E-01	1.09E-03	5.35E-02	0.00E+00	2.10E-03	5.33E-02	3.77E-02	3.04E-04	5.37E-02	1.75E-03	1.45E-02	2.60E-04	9.64E-04	4.19E-03	7.91E-02
305	369445	755434	Residential	2.74E-01	4.68E-03	7.45E-02	5.48E-01	1.12E-03	5.50E-02	0.00E+00	2.16E-03	5.48E-02	3.87E-02	3.23E-04	5.70E-02	1.85E-03	1.54E-02	2.76E-04	1.02E-03	4.44E-03	8.38E-02
306	369346	755434	Residential	2.74E-01	4.69E-03	7.46E-02	5.49E-01	1.12E-03	5.51E-02	0.00E+00	2.16E-03	5.49E-02	3.88E-02	2.91E-04	5.14E-02	1.67E-03	1.39E-02	2.50E-04	9.23E-04	4.00E-03	7.59E-02
310	368953	755441	Residential	2.95E-01	5.04E-03	8.03E-02	5.90E-01	1.20E-03	5.92E-02	0.00E+00	2.33E-03	5.91E-02	4.18E-02	3.49E-04	6.16E-02	2.01E-03	1.67E-02	2.99E-04	1.11E-03	4.80E-03	9.08E-02
311	368854	755441	Residential	2.96E-01	5.06E-03	8.06E-02	5.93E-01	1.21E-03	5.95E-02	0.00E+00	2.34E-03	5.93E-02	4.19E-02	3.11E-04	5.49E-02	1.79E-03	1.48E-02	2.67E-04	9.86E-04	4.28E-03	8.10E-02
312	368755	755441	Residential	2.81E-01	4.81E-03	7.65E-02	5.63E-01	1.15E-03	5.65E-02	0.00E+00	2.22E-03	5.63E-02	3.98E-02	3.01E-04	5.32E-02	1.73E-03	1.44E-02	2.59E-04	9.55E-04	4.14E-03	7.87E-02
313	368657	755441	Residential	2.73E-01	4.67E-03	7.43E-02	5.46E-01	1.11E-03	5.48E-02	0.00E+00	2.15E-03	5.47E-02	3.86E-02	3.17E-04	5.59E-02	1.82E-03	1.51E-02	2.71E-04	1.00E-03	4.35E-03	8.23E-02
314	368558	755440	Residential	2.67E-01	4.57E-03	7.28E-02	5.35E-01	1.09E-03	5.37E-02	0.00E+00	2.11E-03	5.36E-02	3.79E-02	3.04E-04	5.37E-02	1.75E-03	1.45E-02	2.61E-04	9.63E-04	4.18E-03	7.92E-02
315	368459	755440	Residential	2.50E-01	4.27E-03	6.80E-02	5.00E-01	1.02E-03	5.02E-02	0.00E+00	1.97E-03	5.01E-02	3.54E-02	3.02E-04	5.33E-02	1.73E-03	1.44E-02	2.59E-04	9.56E-04	4.15E-03	7.85E-02
316	368360	755440	Residential	2.51E-01	4.30E-03	6.84E-02	5.03E-01	1.03E-03	5.05E-02	0.00E+00	1.98E-03	5.03E-02	3.56E-02	2.74E-04	4.84E-02	1.58E-03	1.31E-02	2.35E-04	8.69E-04	3.77E-03	7.16E-02
317	368262	755439	Residential	2.35E-01	4.02E-03	6.39E-02	4.70E-01	9.58E-04	4.72E-02	0.00E+00	1.85E-03	4.71E-02	3.33E-02	2.79E-04	4.94E-02	1.61E-03	1.33E-02	2.39E-04	8.86E-04	3.84E-03	7.28E-02
318	368186	755427	Residential	2.29E-01	3.91E-03	6.23E-02	4.58E-01	9.34E-04	4.60E-02	0.00E+00	1.81E-03	4.58E-02	3.24E-02	2.51E-04	4.43E-02	1.44E-03	1.20E-02	2.15E-04	7.95E-04	3.45E-03	6.54E-02
319	368111	755414	Residential	2.17E-01	3.71E-03	5.90E-02	4.34E-01	8.84E-04	4.35E-02	0.00E+00	1.71E-03	4.34E-02	3.07E-02	2.32E-04	4.10E-02	1.33E-03	1.11E-02	1.99E-04	7.36E-04	3.19E-03	6.04E-02
46	367504	757948	School	1.74E-01	2.98E-03	4.75E-02	3.49E-01	7.12E-04	3.50E-02	0.00E+00	1.38E-03	3.49E-02	2.47E-02	1.79E-04	3.17E-02	1.03E-03	8.56E-03	1.54E-04	5.69E-04	2.47E-03	4.67E-02
47	367544	757873	School	1.81E-01	3.09E-03	4.92E-02	3.61E-01	7.37E-04	3.63E-02	0.00E+00	1.42E-03	3.62E-02	2.56E-02	1.90E-04	3.36E-02	1.09E-03	9.09E-03	1.63E-04	6.04E-04	2.62E-03	4.95E-02
48	367587	757909	School	1.86E-01	3.18E-03	5.07E-02	3.73E-01	7.60E-04	3.74E-02	0.00E+00	1.47E-03	3.73E-02	2.64E-02	1.89E-04	3.34E-02	1.09E-03	9.02E-03	1.62E-04	5.99E-04	2.60E-03	4.92E-02
49	367623	757866	School	1.93E-01	3.30E-03	5.25E-02	3.86E-01	7.87E-04	3.88E-02	0.00E+00	1.52E-03	3.87E-02	2.73E-02	1.98E-04	3.50E-02	1.14E-03	9.47E-03	1.70E-04	6.29E-04	2.73E-03	5.16E-02
50	367694	757866	School	2.02E-01	3.46E-03	5.51E-02	4.05E-01	8.26E-04	4.07E-02	0.00E+00	1.60E-03	4.05E-02	2.87E-02	2.00E-04	3.53E-02	1.15E-03	9.54E-03	1.71E-04	6.33E-04	2.75E-03	5.21E-02

Table 2-2
Summary of Incremental Acute Hazard Concentrations

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acrolein ($\mu g/m^3$)	benzene ($\mu g/m^3$)	formaldehyde ($\mu g/m^3$)	methyl alcohol ($\mu g/m^3$)	methyl ethyl ketone ($\mu g/m^3$)	phenol (carbolic acid) ($\mu g/m^3$)	styrene ($\mu g/m^3$)	toluene ($\mu g/m^3$)	xylene, total ($\mu g/m^3$)	arsenic ($\mu g/m^3$)	chlorine ($\mu g/m^3$)	copper ($\mu g/m^3$)	manganese ($\mu g/m^3$)	mercury ($\mu g/m^3$)	nickel ($\mu g/m^3$)	vanadium ($\mu g/m^3$)	sulfates ($\mu g/m^3$)
51	367716	757927	School	1.95E-01	3.34E-03	5.32E-02	3.91E-01	7.98E-04	3.93E-02	0.00E+00	1.54E-03	3.92E-02	2.77E-02	1.77E-04	3.13E-02	1.02E-03	8.47E-03	1.53E-04	5.63E-04	2.44E-03	4.65E-02
52	367737	757988	School	1.83E-01	3.12E-03	4.97E-02	3.66E-01	7.46E-04	3.67E-02	0.00E+00	1.44E-03	3.66E-02	2.59E-02	1.75E-04	3.09E-02	1.01E-03	8.35E-03	1.50E-04	5.55E-04	2.41E-03	4.56E-02
53	367727	758067	School	1.63E-01	2.78E-03	4.43E-02	3.26E-01	6.65E-04	3.27E-02	0.00E+00	1.29E-03	3.26E-02	2.31E-02	1.83E-04	3.24E-02	1.05E-03	8.76E-03	1.57E-04	5.81E-04	2.52E-03	4.77E-02
54	367716	758146	School	1.43E-01	2.44E-03	3.88E-02	2.85E-01	5.82E-04	2.86E-02	0.00E+00	1.13E-03	2.86E-02	2.02E-02	1.83E-04	3.24E-02	1.05E-03	8.75E-03	1.57E-04	5.81E-04	2.52E-03	4.76E-02
56	367723	758254	School	1.32E-01	2.25E-03	3.58E-02	2.64E-01	5.37E-04	2.65E-02	0.00E+00	1.04E-03	2.64E-02	1.86E-02	1.71E-04	3.03E-02	9.84E-04	8.18E-03	1.47E-04	5.43E-04	2.36E-03	4.46E-02
57	367784	758221	School	1.39E-01	2.38E-03	3.79E-02	2.79E-01	5.68E-04	2.80E-02	0.00E+00	1.10E-03	2.79E-02	1.97E-02	1.75E-04	3.10E-02	1.01E-03	8.37E-03	1.50E-04	5.56E-04	2.41E-03	4.57E-02
58	367845	758189	School	1.47E-01	2.51E-03	4.00E-02	2.94E-01	6.00E-04	2.95E-02	0.00E+00	1.16E-03	2.95E-02	2.08E-02	1.82E-04	3.22E-02	1.05E-03	8.71E-03	1.56E-04	5.78E-04	2.51E-03	4.75E-02
106	370247	758254	School	2.03E-01	3.47E-03	5.52E-02	4.06E-01	8.28E-04	4.08E-02	0.00E+00	1.60E-03	4.07E-02	2.87E-02	2.61E-04	4.61E-02	1.50E-03	1.25E-02	2.24E-04	8.27E-04	3.59E-03	6.79E-02
107	370250	758189	School	2.13E-01	3.64E-03	5.79E-02	4.26E-01	8.68E-04	4.28E-02	0.00E+00	1.68E-03	4.26E-02	3.01E-02	2.65E-04	4.69E-02	1.52E-03	1.27E-02	2.28E-04	8.41E-04	3.65E-03	6.92E-02
108	370308	758196	School	2.05E-01	3.50E-03	5.58E-02	4.10E-01	8.36E-04	4.12E-02	0.00E+00	1.62E-03	4.11E-02	2.90E-02	2.66E-04	4.69E-02	1.53E-03	1.27E-02	2.28E-04	8.42E-04	3.65E-03	6.92E-02
109	370361	758236	School	1.94E-01	3.31E-03	5.27E-02	3.87E-01	7.90E-04	3.89E-02	0.00E+00	1.53E-03	3.88E-02	2.74E-02	2.55E-04	4.50E-02	1.46E-03	1.22E-02	2.18E-04	8.07E-04	3.50E-03	6.63E-02
110	370415	758275	School	1.86E-01	3.18E-03	5.06E-02	3.72E-01	7.59E-04	3.74E-02	0.00E+00	1.47E-03	3.73E-02	2.63E-02	2.43E-04	4.29E-02	1.40E-03	1.16E-02	2.08E-04	7.70E-04	3.34E-03	6.33E-02
202	372807	757781	School	7.69E-02	1.31E-03	2.09E-02	1.54E-01	3.14E-04	1.55E-02	0.00E+00	6.07E-04	1.54E-02	1.09E-02	9.24E-05	1.63E-02	5.31E-04	4.41E-03	7.90E-05	2.93E-04	1.27E-03	2.40E-02
203	372901	757782	School	7.39E-02	1.26E-03	2.01E-02	1.48E-01	3.02E-04	1.49E-02	0.00E+00	5.83E-04	1.48E-02	1.05E-02	9.06E-05	1.60E-02	5.20E-04	4.32E-03	7.75E-05	2.87E-04	1.25E-03	2.35E-02

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acetaldehyde Acute Hazard	acrolein ($\mu g/m^3$)	acrolein Acute Hazard	benzene ($\mu g/m^3$)	benzene Acute Hazard	formaldehyde ($\mu g/m^3$)	formaldehyde Acute Hazard	methyl alcohol ($\mu g/m^3$)	methyl alcohol Acute Hazard	methyl ethyl ketone ($\mu g/m^3$)	methyl ethyl ketone Acute Hazard	styrene ($\mu g/m^3$)	styrene Acute Hazard	toluene ($\mu g/m^3$)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
117	370814	758243	Offsite Worker	1.73E-01	3.69E-04	2.96E-03	1.19E-03	4.72E-02	3.63E-05	3.47E-01	6.31E-03	7.07E-04	2.53E-08	3.48E-02	2.68E-06	1.37E-03	6.51E-08	3.47E-02	9.39E-07
118	370810	758153	Offsite Worker	1.76E-01	3.74E-04	3.00E-03	1.20E-03	4.78E-02	3.68E-05	3.51E-01	6.39E-03	7.16E-04	2.56E-08	3.53E-02	2.71E-06	1.38E-03	6.59E-08	3.52E-02	9.51E-07
119	370807	758063	Offsite Worker	1.77E-01	3.76E-04	3.02E-03	1.21E-03	4.81E-02	3.70E-05	3.54E-01	6.43E-03	7.21E-04	2.58E-08	3.55E-02	2.73E-06	1.39E-03	6.64E-08	3.54E-02	9.57E-07
120	370803	757974	Offsite Worker	1.95E-01	4.16E-04	3.34E-03	1.34E-03	5.31E-02	4.09E-05	3.91E-01	7.11E-03	7.97E-04	2.85E-08	3.92E-02	3.02E-06	1.54E-03	7.34E-08	3.91E-02	1.06E-06
121	370835	757927	Offsite Worker	1.98E-01	4.21E-04	3.38E-03	1.35E-03	5.38E-02	4.14E-05	3.96E-01	7.19E-03	8.07E-04	2.88E-08	3.97E-02	3.06E-06	1.56E-03	7.43E-08	3.96E-02	1.07E-06
122	370868	757880	Offsite Worker	1.95E-01	4.15E-04	3.33E-03	1.33E-03	5.30E-02	4.08E-05	3.90E-01	7.09E-03	7.95E-04	2.84E-08	3.91E-02	3.01E-06	1.54E-03	7.32E-08	3.90E-02	1.05E-06
123	370921	757884	Offsite Worker	1.85E-01	3.93E-04	3.15E-03	1.26E-03	5.02E-02	3.86E-05	3.69E-01	6.72E-03	7.53E-04	2.69E-08	3.71E-02	2.85E-06	1.46E-03	6.93E-08	3.70E-02	9.99E-07
124	370975	757887	Offsite Worker	1.73E-01	3.69E-04	2.96E-03	1.18E-03	4.71E-02	3.63E-05	3.47E-01	6.30E-03	7.07E-04	2.52E-08	3.48E-02	2.68E-06	1.37E-03	6.51E-08	3.47E-02	9.38E-07
125	370975	757794	Offsite Worker	1.80E-01	3.84E-04	3.08E-03	1.23E-03	4.91E-02	3.77E-05	3.61E-01	6.56E-03	7.36E-04	2.63E-08	3.62E-02	2.79E-06	1.42E-03	6.77E-08	3.61E-02	9.76E-07
126	371026	757794	Offsite Worker	1.78E-01	3.79E-04	3.05E-03	1.22E-03	4.85E-02	3.73E-05	3.57E-01	6.48E-03	7.27E-04	2.60E-08	3.58E-02	2.75E-06	1.41E-03	6.69E-08	3.57E-02	9.65E-07
127	371076	757877	Offsite Worker	1.62E-01	3.44E-04	2.76E-03	1.11E-03	4.40E-02	3.38E-05	3.24E-01	5.88E-03	6.60E-04	2.36E-08	3.25E-02	2.50E-06	1.28E-03	6.07E-08	3.24E-02	8.75E-07
128	371126	757959	Offsite Worker	1.53E-01	3.25E-04	2.61E-03	1.04E-03	4.15E-02	3.20E-05	3.05E-01	5.55E-03	6.23E-04	2.22E-08	3.07E-02	2.36E-06	1.20E-03	5.73E-08	3.06E-02	8.26E-07
129	371119	758031	Offsite Worker	1.58E-01	3.36E-04	2.70E-03	1.08E-03	4.29E-02	3.30E-05	3.16E-01	5.74E-03	6.44E-04	2.30E-08	3.17E-02	2.44E-06	1.24E-03	5.93E-08	3.16E-02	8.54E-07
143	371953	757977	Offsite Worker	1.13E-01	2.39E-04	1.92E-03	7.70E-04	3.06E-02	2.36E-05	2.25E-01	4.09E-03	4.59E-04	1.64E-08	2.26E-02	1.74E-06	8.88E-04	4.23E-08	2.25E-02	6.09E-07
144	371948	757880	Offsite Worker	1.16E-01	2.48E-04	1.99E-03	7.96E-04	3.17E-02	2.44E-05	2.33E-01	4.24E-03	4.75E-04	1.70E-08	2.34E-02	1.80E-06	9.18E-04	4.37E-08	2.33E-02	6.30E-07
145	371943	757783	Offsite Worker	1.18E-01	2.52E-04	2.02E-03	8.09E-04	3.22E-02	2.48E-05	2.37E-01	4.30E-03	4.83E-04	1.72E-08	2.38E-02	1.83E-06	9.33E-04	4.44E-08	2.37E-02	6.41E-07
146	372016	757794	Offsite Worker	1.13E-01	2.41E-04	1.94E-03	7.75E-04	3.08E-02	2.37E-05	2.27E-01	4.12E-03	4.62E-04	1.65E-08	2.28E-02	1.75E-06	8.94E-04	4.26E-08	2.27E-02	6.14E-07
147	372102	757791	Offsite Worker	1.07E-01	2.27E-04	1.83E-03	7.30E-04	2.91E-02	2.23E-05	2.14E-01	3.88E-03	4.36E-04	1.56E-08	2.14E-02	1.65E-06	8.42E-04	4.01E-08	2.14E-02	5.78E-07
148	372178	757760	Offsite Worker	9.83E-02	2.09E-04	1.68E-03	6.72E-04	2.67E-02	2.06E-05	1.97E-01	3.58E-03	4.01E-04	1.43E-08	1.97E-02	1.52E-06	7.75E-04	3.69E-08	1.97E-02	5.32E-07
149	372177	757670	Offsite Worker	1.01E-01	2.14E-04	1.72E-03	6.89E-04	2.74E-02	2.11E-05	2.02E-01	3.67E-03	4.11E-04	1.47E-08	2.02E-02	1.56E-06	7.95E-04	3.79E-08	2.02E-02	5.46E-07
150	372176	757579	Offsite Worker	1.01E-01	2.15E-04	1.72E-03	6.90E-04	2.75E-02	2.11E-05	2.02E-01	3.67E-03	4.12E-04	1.47E-08	2.03E-02	1.56E-06	7.96E-04	3.79E-08	2.02E-02	5.46E-07
151	372174	757489	Offsite Worker	1.00E-01	2.13E-04	1.71E-03	6.84E-04	2.72E-02	2.09E-05	2.00E-01	3.64E-03	4.08E-04	1.46E-08	2.01E-02	1.55E-06	7.89E-04	3.76E-08	2.00E-02	5.42E-07
152	372173	757398	Offsite Worker	1.02E-01	2.16E-04	1.74E-03	6.96E-04	2.77E-02	2.13E-05	2.04E-01	3.70E-03	4.15E-04	1.48E-08	2.04E-02	1.57E-06	8.02E-04	3.82E-08	2.04E-02	5.51E-07
153	372171	757308	Offsite Worker	1.03E-01	2.19E-04	1.76E-03	7.05E-04	2.81E-02	2.16E-05	2.06E-01	3.75E-03	4.21E-04	1.50E-08	2.07E-02	1.59E-06	8.14E-04	3.87E-08	2.07E-02	5.58E-07
154	372055	757309	Offsite Worker	1.09E-01	2.32E-04	1.87E-03	7.47E-04	2.97E-02	2.29E-05	2.19E-01	3.97E-03	4.46E-04	1.59E-08	2.19E-02	1.69E-06	8.61E-04	4.10E-08	2.19E-02	5.91E-07
156	372055	757416	Offsite Worker	1.07E-01	2.28E-04	1.83E-03	7.32E-04	2.91E-02	2.24E-05	2.14E-01	3.90E-03	4.37E-04	1.56E-08	2.15E-02	1.65E-06	8.45E-04	4.02E-08	2.15E-02	5.80E-07
157	371952	757442	Offsite Worker	1.12E-01	2.38E-04	1.91E-03	7.64E-04	3.04E-02	2.34E-05	2.24E-01	4.06E-03	4.56E-04	1.63E-08	2.24E-02	1.73E-06	8.81E-04	4.20E-08	2.24E-02	6.05E-07
158	371950	757345	Offsite Worker	1.14E-01	2.43E-04	1.95E-03	7.80E-04	3.10E-02	2.39E-05	2.28E-01	4.15E-03	4.65E-04	1.66E-08	2.29E-02	1.76E-06	9.00E-04	4.29E-08	2.29E-02	6.18E-07
159	371864	757344	Offsite Worker	1.19E-01	2.53E-04	2.03E-03	8.12E-04	3.23E-02	2.49E-05	2.38E-01	4.32E-03	4.84E-04	1.73E-08	2.38E-02	1.83E-06	9.36E-04	4.46E-08	2.38E-02	6.43E-07
160	371790	757347	Offsite Worker	1.23E-01	2.62E-04	2.11E-03	8.43E-04	3.35E-02	2.58E-05	2.47E-01	4.48E-03	5.03E-04	1.80E-08	2.48E-02	1.90E-06	9.72E-04	4.63E-08	2.47E-02	6.67E-07
161	371708	757356	Offsite Worker	1.29E-01	2.74E-04	2.20E-03	8.80E-04	3.50E-02	2.69E-05	2.58E-01	4.68E-03	5.25E-04	1.88E-08	2.59E-02	1.99E-06	1.02E-03	4.84E-08	2.58E-02	6.97E-07
162	371615	757356	Offsite Worker	1.35E-01	2.88E-04	2.31E-03	9.24E-04	3.68E-02	2.83E-05	2.71E-01	4.92E-03	5.52E-04	1.97E-08	2.72E-02	2.09E-06	1.07E-03	5.08E-08	2.71E-02	7.32E-07
163	371523	757356	Offsite Worker	1.42E-01	3.02E-04	2.42E-03	9.70E-04	3.86E-02	2.97E-05	2.84E-01	5.16E-03	5.79E-04	2.07E-08	2.85E-02	2.19E-06	1.12E-03	5.33E-08	2.84E-02	7.68E-07
164	371430	757356	Offsite Worker	1.52E-01	3.23E-04	2.60E-03	1.04E-03	4.13E-02	3.18E-05	3.04E-01	5.53E-03	6.20E-04	2.21E-08	3.05E-02	2.35E-06	1.20E-03	5.71E-08	3.04E-02	8.23E-07
165	371338	757356	Offsite Worker	1.63E-01	3.46E-04	2.78E-03	1.11E-03	4.42E-02	3.40E-05	3.25E-01	5.91E-03	6.63E-04	2.37E-08	3.26E-02	2.51E-06	1.28E-03	6.10E-08	3.26E-02	8.80E-07
166	371245	757356	Offsite Worker	1.74E-01	3.70E-04	2.97E-03	1.19E-03	4.73E-02	3.64E-05	3.48E-01	6.32E-03	7.09E-04	2.53E-08	3.49E-02	2.68E-06	1.37E-03	6.53E-08	3.48E-02	9.41E-07
167	371153	757356	Offsite Worker	1.85E-01	3.94E-04	3.17E-03	1.27E-03	5.04E-02	3.88E-05	3.71E-01	6.74E-03	7.56E-04	2.70E-08	3.72E-02	2.86E-06	1.46E-03	6.96E-08	3.71E-02	1.00E-06
168	371061	757356	Offsite Worker	1.97E-01	4.19E-04	3.37E-03	1.35E-03	5.36E-02	4.12E-05	3.94E-01	7.16E-03	8.03E-04	2.87E-08	3.96E-02	3.04E-06	1.55E-03	7.40E-08	3.94E-02	1.07E-06
169	371005	757357	Offsite Worker	2.05E-01	4.37E-04	3.51E-03	1.40E-03	5.59E-02	4.30E-05	4.11E-01	7.48E-03	8.38E-04	2.99E-08	4.13E-02	3.17E-06	1.62E-03	7.72E-08	4.12E-02	1.11E-06
170	370998	757293	Offsite Worker	2.09E-01	4.45E-04	3.58E-03	1.43E-03	5.70E-02	4.38E-05	4.19E-01	7.62E-03	8.54E-04	3.05E-08	4.21E-02	3.24E-06	1.65E-03	7.86E-08	4.19E-02	1.13E-06
171	370998	757194	Offsite Worker	2.09E-01	4.45E-04	3.57E-03	1.43E-03	5.69E-02	4.38E-05	4.18E-01	7.61E-03	8.53E-04	3.05E-08	4.20E-02	3.23E-06	1.65E-03	7.85E-08	4.19E-02	1.13E-06
172	370998	757096	Offsite Worker	2.14E-01	4.55E-04	3.65E-03	1.46E-03	5.81E-02	4.47E-05	4.27E-01	7.77E-03	8.72E-04	3.11E-08	4.29E-02	3.30E-06	1.69E-03	8.02E-08	4.28E-02	1.16E-06
173	370998	756998	Offsite Worker	2.17E-01	4.62E-04	3.71E-03	1.49E-03	5.91E-02	4.55E-05	4.35E-01	7.91E-03	8.87E-04	3.17E-08	4.36E-02	3.36E-06	1.71E-03	8.16E-08	4.35E-02	1.18E-06
174	371057	756997	Offsite Worker	2.07E-01	4.41E-04	3.54E-03	1.42E-03	5.64E-02	4.34E-05	4.15E-01	7.54E-03	8.46E-04	3.02E-08	4.16E-02	3.20E-06	1.63E-03	7.78E-08	4.15E-02	1.12E-06
175	371153	756997	Offsite Worker	1.92E-01	4.09E-04	3.29E-03	1.32E-03	5.24E-02	4.03E-05	3.85E-01	7.00E-03	7.85E-04	2.80E-08	3.86E-02	2.97E-06	1.52E-03	7.23E-08	3.85E-02	1.04E-06
176	371249	756997	Offsite Worker	1.79E-01	3.81E-04	3.06E-03	1.22E-03	4.88E-02	3.75E-05	3.58E-01	6.52E-03	7.31E-04	2.61E-08	3.60E-02	2.77E-06	1.41E-03	6.73E-08	3.59E-02	9.70E-07
177	371345	756997	Offsite Worker	1.67E-01	3.56E-04	2.86E-03	1.14E-03	4.55E-02	3.50E-05	3.35E-01	6.09E-03	6.83E-04	2.44E-08	3.36E-02	2.58E-06	1.32E-03	6.28E-08	3.35E-02	9.06E-07
178	371440	756997	Offsite Worker	1.57E-01	3.33E-04	2.68E-03	1.07E-03	4.26E-02	3.28E-05	3.14E-01	5.70E-03	6.39E-04	2.28E-08	3.15E-02	2.42E-06	1.24E-03	5.89E-08	3.14E-02	8.49E-07
179	371536	756997	Offsite Worker	1.47E-01	3.13E-04	2.51E-03	1.01E-03	4.00E-02	3.08E-05	2.94E-01	5.35E-03	6.00E-04	2.14E-08	2.95E-02	2.27E-06	1.16E-03	5.52E-08	2.95E-02	7.96E-07
180	371632	756997	Offsite Worker	1.38E-01	2.94E-04	2.36E-03	9.46E-04	3.76E-02	2.90E-05	2.77E-01	5.03E-03	5.64E-04	2.02E-08	2.78E-02	2.14E-06	1.09E-03	5.20E-08	2.77E-02	7.49E-07
181	371728	756997	Offsite Worker	1.31E-01	2.78E-04	2.23E-03	8.93E-04	3.56E-02	2.73E-05	2.61E-01	4.75E-03	5.33E-04	1.90E-08	2.62E-02	2.02E-06	1.03E-03	4.91E-08	2.62E-02	7.07E-07
182	371824	756997	Offsite Worker	1.24E-01	2.64E-04	2.12E-03	8.49E-04	3.38E-02	2.60E-05	2.48E-01	4.52E-03	5.07E-04	1.81E-08	2.49E-02	1.92E-06	9.79E-04	4.66E-08	2.49E-02	6.72E-07

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acetaldehyde Acute Hazard	acrolein ($\mu g/m^3$)	acrolein Acute Hazard	benzene ($\mu g/m^3$)	benzene Acute Hazard	formaldehyde ($\mu g/m^3$)	formaldehyde Acute Hazard	methyl alcohol ($\mu g/m^3$)	methyl alcohol Acute Hazard	methyl ethyl ketone ($\mu g/m^3$)	methyl ethyl ketone Acute Hazard	styrene ($\mu g/m^3$)	styrene Acute Hazard	toluene ($\mu g/m^3$)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
183	371920	756997	Offsite Worker	1.18E-01	2.51E-04	2.02E-03	8.08E-04	3.22E-02	2.47E-05	2.37E-01	4.30E-03	4.82E-04	1.72E-08	2.37E-02	1.83E-06	9.32E-04	4.44E-08	2.37E-02	6.40E-07
184	372016	756997	Offsite Worker	1.13E-01	2.40E-04	1.93E-03	7.70E-04	3.07E-02	2.36E-05	2.25E-01	4.10E-03	4.60E-04	1.64E-08	2.26E-02	1.74E-06	8.89E-04	4.23E-08	2.26E-02	6.10E-07
185	372111	756997	Offsite Worker	1.08E-01	2.29E-04	1.84E-03	7.36E-04	2.93E-02	2.25E-05	2.15E-01	3.92E-03	4.39E-04	1.57E-08	2.16E-02	1.66E-06	8.49E-04	4.04E-08	2.16E-02	5.83E-07
186	372207	756997	Offsite Worker	1.03E-01	2.19E-04	1.76E-03	7.04E-04	2.80E-02	2.15E-05	2.06E-01	3.74E-03	4.20E-04	1.50E-08	2.07E-02	1.59E-06	8.12E-04	3.87E-08	2.06E-02	5.57E-07
187	372303	756997	Offsite Worker	9.85E-02	2.10E-04	1.68E-03	6.74E-04	2.68E-02	2.06E-05	1.97E-01	3.58E-03	4.02E-04	1.44E-08	1.98E-02	1.52E-06	7.77E-04	3.70E-08	1.97E-02	5.33E-07
188	372399	756997	Offsite Worker	9.44E-02	2.01E-04	1.61E-03	6.46E-04	2.57E-02	1.98E-05	1.89E-01	3.44E-03	3.85E-04	1.38E-08	1.90E-02	1.46E-06	7.45E-04	3.55E-08	1.89E-02	5.11E-07
189	372495	756997	Offsite Worker	9.06E-02	1.93E-04	1.55E-03	6.20E-04	2.47E-02	1.90E-05	1.81E-01	3.30E-03	3.70E-04	1.32E-08	1.82E-02	1.40E-06	7.15E-04	3.40E-08	1.82E-02	4.91E-07
190	372591	756997	Offsite Worker	8.71E-02	1.85E-04	1.49E-03	5.95E-04	2.37E-02	1.82E-05	1.74E-01	3.17E-03	3.55E-04	1.27E-08	1.75E-02	1.35E-06	6.87E-04	3.27E-08	1.74E-02	4.71E-07
191	372610	757063	Offsite Worker	8.48E-02	1.80E-04	1.45E-03	5.80E-04	2.31E-02	1.77E-05	1.70E-01	3.08E-03	3.46E-04	1.24E-08	1.70E-02	1.31E-06	6.69E-04	3.18E-08	1.70E-02	4.59E-07
192	372612	757132	Offsite Worker	8.63E-02	1.84E-04	1.48E-03	5.90E-04	2.35E-02	1.81E-05	1.73E-01	3.14E-03	3.52E-04	1.26E-08	1.73E-02	1.33E-06	6.81E-04	3.24E-08	1.73E-02	4.67E-07
193	372614	757201	Offsite Worker	8.64E-02	1.84E-04	1.48E-03	5.91E-04	2.35E-02	1.81E-05	1.73E-01	3.14E-03	3.52E-04	1.26E-08	1.74E-02	1.33E-06	6.81E-04	3.24E-08	1.73E-02	4.68E-07
194	372616	757270	Offsite Worker	8.55E-02	1.82E-04	1.46E-03	5.85E-04	2.33E-02	1.79E-05	1.71E-01	3.11E-03	3.49E-04	1.25E-08	1.72E-02	1.32E-06	6.75E-04	3.21E-08	1.71E-02	4.63E-07
195	372627	757351	Offsite Worker	8.45E-02	1.80E-04	1.45E-03	5.78E-04	2.30E-02	1.77E-05	1.69E-01	3.08E-03	3.45E-04	1.23E-08	1.70E-02	1.31E-06	6.67E-04	3.18E-08	1.69E-02	4.58E-07
196	372651	757422	Offsite Worker	8.33E-02	1.77E-04	1.42E-03	5.69E-04	2.27E-02	1.74E-05	1.67E-01	3.03E-03	3.40E-04	1.21E-08	1.67E-02	1.29E-06	6.57E-04	3.13E-08	1.67E-02	4.51E-07
197	372676	757494	Offsite Worker	8.14E-02	1.73E-04	1.39E-03	5.57E-04	2.22E-02	1.70E-05	1.63E-01	2.96E-03	3.32E-04	1.19E-08	1.64E-02	1.26E-06	6.42E-04	3.06E-08	1.63E-02	4.41E-07
198	372704	757569	Offsite Worker	7.98E-02	1.70E-04	1.36E-03	5.45E-04	2.17E-02	1.67E-05	1.60E-01	2.90E-03	3.25E-04	1.16E-08	1.60E-02	1.23E-06	6.29E-04	3.00E-08	1.60E-02	4.32E-07
199	372733	757645	Offsite Worker	7.75E-02	1.65E-04	1.32E-03	5.30E-04	2.11E-02	1.62E-05	1.55E-01	2.82E-03	3.16E-04	1.13E-08	1.56E-02	1.20E-06	6.11E-04	2.91E-08	1.55E-02	4.20E-07
200	372746	757702	Offsite Worker	7.80E-02	1.66E-04	1.33E-03	5.33E-04	2.12E-02	1.63E-05	1.56E-01	2.84E-03	3.18E-04	1.14E-08	1.57E-02	1.20E-06	6.15E-04	2.93E-08	1.56E-02	4.22E-07
201	372746	757768	Offsite Worker	7.88E-02	1.68E-04	1.35E-03	5.39E-04	2.15E-02	1.65E-05	1.58E-01	2.87E-03	3.22E-04	1.15E-08	1.58E-02	1.22E-06	6.22E-04	2.96E-08	1.58E-02	4.27E-07
204	372994	757783	Offsite Worker	7.11E-02	1.51E-04	1.21E-03	4.86E-04	1.93E-02	1.49E-05	1.42E-01	2.59E-03	2.90E-04	1.04E-08	1.43E-02	1.10E-06	5.60E-04	2.67E-08	1.42E-02	3.85E-07
205	373087	757783	Offsite Worker	6.82E-02	1.45E-04	1.17E-03	4.66E-04	1.86E-02	1.43E-05	1.36E-01	2.48E-03	2.78E-04	9.94E-09	1.37E-02	1.05E-06	5.38E-04	2.56E-08	1.37E-02	3.69E-07
206	373180	757784	Offsite Worker	6.55E-02	1.39E-04	1.12E-03	4.48E-04	1.78E-02	1.37E-05	1.31E-01	2.38E-03	2.67E-04	9.54E-09	1.31E-02	1.01E-06	5.16E-04	2.46E-08	1.31E-02	3.54E-07
207	373274	757785	Offsite Worker	6.29E-02	1.34E-04	1.08E-03	4.30E-04	1.71E-02	1.32E-05	1.26E-01	2.29E-03	2.57E-04	9.17E-09	1.26E-02	9.72E-07	4.96E-04	2.36E-08	1.26E-02	3.41E-07
208	373367	757786	Offsite Worker	6.13E-02	1.31E-04	1.05E-03	4.19E-04	1.67E-02	1.28E-05	1.23E-01	2.23E-03	2.50E-04	8.94E-09	1.23E-02	9.48E-07	4.84E-04	2.30E-08	1.23E-02	3.32E-07
209	373418	757742	Offsite Worker	6.11E-02	1.30E-04	1.04E-03	4.17E-04	1.66E-02	1.28E-05	1.22E-01	2.22E-03	2.49E-04	8.90E-09	1.23E-02	9.43E-07	4.82E-04	2.29E-08	1.22E-02	3.31E-07
210	373418	757653	Offsite Worker	6.15E-02	1.31E-04	1.05E-03	4.21E-04	1.67E-02	1.29E-05	1.23E-01	2.24E-03	2.51E-04	8.96E-09	1.24E-02	9.51E-07	4.85E-04	2.31E-08	1.23E-02	3.33E-07
211	373419	757564	Offsite Worker	6.25E-02	1.33E-04	1.07E-03	4.27E-04	1.70E-02	1.31E-05	1.25E-01	2.27E-03	2.55E-04	9.11E-09	1.26E-02	9.66E-07	4.93E-04	2.35E-08	1.25E-02	3.38E-07
212	373419	757475	Offsite Worker	6.28E-02	1.34E-04	1.07E-03	4.30E-04	1.71E-02	1.32E-05	1.26E-01	2.29E-03	2.56E-04	9.15E-09	1.26E-02	9.71E-07	4.96E-04	2.36E-08	1.26E-02	3.40E-07
213	373420	757386	Offsite Worker	6.33E-02	1.35E-04	1.08E-03	4.33E-04	1.72E-02	1.32E-05	1.27E-01	2.30E-03	2.58E-04	9.22E-09	1.27E-02	9.78E-07	4.99E-04	2.38E-08	1.27E-02	3.43E-07
214	373420	757297	Offsite Worker	6.38E-02	1.36E-04	1.09E-03	4.36E-04	1.74E-02	1.34E-05	1.28E-01	2.32E-03	2.60E-04	9.30E-09	1.28E-02	9.86E-07	5.03E-04	2.40E-08	1.28E-02	3.45E-07
215	373421	757207	Offsite Worker	6.37E-02	1.36E-04	1.09E-03	4.36E-04	1.73E-02	1.33E-05	1.27E-01	2.32E-03	2.60E-04	9.28E-09	1.28E-02	9.84E-07	5.02E-04	2.39E-08	1.28E-02	3.45E-07
216	373421	757118	Offsite Worker	6.23E-02	1.32E-04	1.06E-03	4.26E-04	1.69E-02	1.30E-05	1.25E-01	2.26E-03	2.54E-04	9.07E-09	1.25E-02	9.62E-07	4.91E-04	2.34E-08	1.25E-02	3.37E-07
217	373292	757117	Offsite Worker	6.53E-02	1.39E-04	1.12E-03	4.46E-04	1.78E-02	1.37E-05	1.31E-01	2.38E-03	2.66E-04	9.51E-09	1.31E-02	1.01E-06	5.15E-04	2.45E-08	1.31E-02	3.53E-07
218	373213	757118	Offsite Worker	6.73E-02	1.43E-04	1.15E-03	4.60E-04	1.83E-02	1.41E-05	1.35E-01	2.45E-03	2.75E-04	9.81E-09	1.35E-02	1.04E-06	5.31E-04	2.53E-08	1.35E-02	3.64E-07
219	373158	757066	Offsite Worker	6.91E-02	1.47E-04	1.18E-03	4.73E-04	1.88E-02	1.45E-05	1.38E-01	2.52E-03	2.82E-04	1.01E-08	1.39E-02	1.07E-06	5.45E-04	2.60E-08	1.38E-02	3.74E-07
220	373084	757026	Offsite Worker	7.16E-02	1.52E-04	1.22E-03	4.90E-04	1.95E-02	1.50E-05	1.43E-01	2.61E-03	2.92E-04	1.04E-08	1.44E-02	1.11E-06	5.65E-04	2.69E-08	1.44E-02	3.88E-07
221	373009	757011	Offsite Worker	7.38E-02	1.57E-04	1.26E-03	5.05E-04	2.01E-02	1.55E-05	1.48E-01	2.69E-03	3.01E-04	1.08E-08	1.48E-02	1.14E-06	5.82E-04	2.77E-08	1.48E-02	4.00E-07
222	372922	757009	Offsite Worker	7.63E-02	1.62E-04	1.30E-03	5.21E-04	2.08E-02	1.60E-05	1.53E-01	2.77E-03	3.11E-04	1.11E-08	1.53E-02	1.18E-06	6.02E-04	2.86E-08	1.53E-02	4.13E-07
223	372835	757007	Offsite Worker	7.89E-02	1.68E-04	1.35E-03	5.39E-04	2.15E-02	1.65E-05	1.58E-01	2.87E-03	3.22E-04	1.15E-08	1.58E-02	1.22E-06	6.22E-04	2.96E-08	1.58E-02	4.27E-07
224	372747	757006	Offsite Worker	8.16E-02	1.74E-04	1.40E-03	5.58E-04	2.22E-02	1.71E-05	1.63E-01	2.97E-03	3.33E-04	1.19E-08	1.64E-02	1.26E-06	6.44E-04	3.07E-08	1.64E-02	4.42E-07
225	372660	757004	Offsite Worker	8.45E-02	1.80E-04	1.45E-03	5.78E-04	2.30E-02	1.77E-05	1.69E-01	3.08E-03	3.45E-04	1.23E-08	1.70E-02	1.31E-06	6.67E-04	3.18E-08	1.69E-02	4.58E-07
226	372651	757063	Offsite Worker	8.33E-02	1.77E-04	1.42E-03	5.70E-04	2.27E-02	1.74E-05	1.67E-01	3.03E-03	3.40E-04	1.21E-08	1.67E-02	1.29E-06	6.57E-04	3.13E-08	1.67E-02	4.51E-07
227	372629	756931	Offsite Worker	8.71E-02	1.85E-04	1.49E-03	5.95E-04	2.37E-02	1.82E-05	1.74E-01	3.17E-03	3.55E-04	1.27E-08	1.75E-02	1.35E-06	6.87E-04	3.27E-08	1.74E-02	4.71E-07
228	372631	756857	Offsite Worker	8.73E-02	1.86E-04	1.49E-03	5.97E-04	2.38E-02	1.83E-05	1.75E-01	3.18E-03	3.56E-04	1.27E-08	1.75E-02	1.35E-06	6.89E-04	3.28E-08	1.75E-02	4.73E-07
229	372634	756783	Offsite Worker	8.68E-02	1.85E-04	1.48E-03	5.94E-04	2.36E-02	1.82E-05	1.74E-01	3.16E-03	3.54E-04	1.26E-08	1.74E-02	1.34E-06	6.85E-04	3.26E-08	1.74E-02	4.70E-07
230	372702	756778	Offsite Worker	8.43E-02	1.79E-04	1.44E-03	5.77E-04	2.29E-02	1.77E-05	1.69E-01	3.07E-03	3.44E-04	1.23E-08	1.69E-02	1.30E-06	6.65E-04	3.17E-08	1.69E-02	4.57E-07
231	372756	756775	Offsite Worker	8.25E-02	1.75E-04	1.41E-03	5.64E-04	2.24E-02	1.73E-05	1.65E-01	3.00E-03	3.36E-04	1.20E-08	1.66E-02	1.27E-06	6.50E-04	3.10E-08	1.65E-02	4.46E-07
232	372729	756712	Offsite Worker	8.34E-02	1.77E-04	1.42E-03	5.70E-04	2.27E-02	1.74E-05	1.67E-01	3.03E-03	3.40E-04	1.21E-08	1.67E-02	1.29E-06	6.58E-04	3.13E-08	1.67E-02	4.51E-07
233	372703	756650	Offsite Worker	8.34E-02	1.77E-04	1.43E-03	5.70E-04	2.27E-02	1.75E-05	1.67E-01	3.04E-03	3.40E-04	1.22E-08	1.68E-02	1.29E-06	6.58E-04	3.13E-08	1.67E-02	4.52E-07
234	372677	756588	Offsite Worker	8.71E-02	1.85E-04	1.49E-03	5.95E-04	2.37E-02	1.82E-05	1.74E-01	3.17E-03	3.55E-04	1.27E-08	1.75E-02	1.35E-06	6.87E-04	3.27E-08	1.74E-02	4.71E-07
235	372619	756588	Offsite Worker	8.97E-02	1.91E-04	1.53E-03	6.13E-04	2.44E-02	1.88E-05	1.79E-01	3.26E-03	3.66E-04	1.31E-08	1.80E-02	1.39E-06	7.08E-04	3.37E-08	1.80E-02	4.86E-07
236	372622	756509	Offsite Worker	9.49E-02	2.02E-04	1.62E-03	6.49E-04	2.58E-02	1.99E-05	1.90E-01	3.45E-03	3.87E-04	1.38E-08	1.91E-02	1.47E-06	7.49E-04	3.57E-08	1.90E-02	5.14E-07

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m^3)	acetaldehyde Acute Hazard	acrolein (µg/m^3)	acrolein Acute Hazard	benzene (µg/m^3)	benzene Acute Hazard	formaldehyde (µg/m^3)	formaldehyde Acute Hazard	methyl alcohol (µg/m^3)	methyl alcohol Acute Hazard	methyl ethyl ketone (µg/m^3)	methyl ethyl ketone Acute Hazard	styrene (µg/m^3)	styrene Acute Hazard	toluene (µg/m^3)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
237	372700	756511	Offsite Worker	9.14E-02	1.95E-04	1.56E-03	6.25E-04	2.49E-02	1.91E-05	1.83E-01	3.33E-03	3.73E-04	1.33E-08	1.84E-02	1.41E-06	7.21E-04	3.43E-08	1.83E-02	4.95E-07
238	372789	756510	Offsite Worker	8.78E-02	1.87E-04	1.50E-03	6.00E-04	2.39E-02	1.84E-05	1.76E-01	3.19E-03	3.58E-04	1.28E-08	1.76E-02	1.36E-06	6.92E-04	3.30E-08	1.76E-02	4.75E-07
239	372871	756509	Offsite Worker	8.46E-02	1.80E-04	1.45E-03	5.78E-04	2.30E-02	1.77E-05	1.69E-01	3.08E-03	3.45E-04	1.23E-08	1.70E-02	1.31E-06	6.67E-04	3.18E-08	1.69E-02	4.58E-07
240	372871	756437	Offsite Worker	8.69E-02	1.85E-04	1.49E-03	5.94E-04	2.36E-02	1.82E-05	1.74E-01	3.16E-03	3.55E-04	1.27E-08	1.75E-02	1.34E-06	6.85E-04	3.26E-08	1.74E-02	4.71E-07
241	372970	756437	Offsite Worker	8.35E-02	1.78E-04	1.43E-03	5.71E-04	2.27E-02	1.75E-05	1.67E-01	3.04E-03	3.40E-04	1.22E-08	1.68E-02	1.29E-06	6.58E-04	3.13E-08	1.67E-02	4.52E-07
242	373069	756437	Offsite Worker	8.02E-02	1.71E-04	1.37E-03	5.48E-04	2.18E-02	1.68E-05	1.60E-01	2.92E-03	3.27E-04	1.17E-08	1.61E-02	1.24E-06	6.32E-04	3.01E-08	1.61E-02	4.34E-07
243	373168	756437	Offsite Worker	7.70E-02	1.64E-04	1.32E-03	5.27E-04	2.10E-02	1.61E-05	1.54E-01	2.80E-03	3.14E-04	1.12E-08	1.55E-02	1.19E-06	6.08E-04	2.89E-08	1.54E-02	4.17E-07
244	373267	756437	Offsite Worker	7.40E-02	1.58E-04	1.27E-03	5.06E-04	2.01E-02	1.55E-05	1.48E-01	2.69E-03	3.02E-04	1.08E-08	1.49E-02	1.14E-06	5.84E-04	2.78E-08	1.48E-02	4.01E-07
245	373412	756437	Offsite Worker	6.99E-02	1.49E-04	1.19E-03	4.78E-04	1.90E-02	1.46E-05	1.40E-01	2.54E-03	2.85E-04	1.02E-08	1.40E-02	1.08E-06	5.51E-04	2.63E-08	1.40E-02	3.78E-07
246	373409	756339	Offsite Worker	7.14E-02	1.52E-04	1.22E-03	4.88E-04	1.94E-02	1.50E-05	1.43E-01	2.60E-03	2.91E-04	1.04E-08	1.43E-02	1.10E-06	5.63E-04	2.68E-08	1.43E-02	3.87E-07
247	373406	756240	Offsite Worker	6.93E-02	1.48E-04	1.19E-03	4.74E-04	1.89E-02	1.45E-05	1.39E-01	2.52E-03	2.83E-04	1.01E-08	1.39E-02	1.07E-06	5.47E-04	2.60E-08	1.39E-02	3.75E-07
248	373403	756142	Offsite Worker	6.42E-02	1.37E-04	1.10E-03	4.39E-04	1.75E-02	1.34E-05	1.29E-01	2.34E-03	2.62E-04	9.36E-09	1.29E-02	9.93E-07	5.07E-04	2.41E-08	1.29E-02	3.48E-07
249	373400	756042	Offsite Worker	5.91E-02	1.26E-04	1.01E-03	4.04E-04	1.61E-02	1.24E-05	1.18E-01	2.15E-03	2.41E-04	8.61E-09	1.19E-02	9.13E-07	4.66E-04	2.22E-08	1.18E-02	3.20E-07
250	373397	755944	Offsite Worker	6.01E-02	1.28E-04	1.03E-03	4.11E-04	1.63E-02	1.26E-05	1.20E-01	2.19E-03	2.45E-04	8.75E-09	1.21E-02	9.28E-07	4.74E-04	2.26E-08	1.20E-02	3.25E-07
251	373393	755846	Offsite Worker	6.10E-02	1.30E-04	1.04E-03	4.17E-04	1.66E-02	1.28E-05	1.22E-01	2.22E-03	2.49E-04	8.88E-09	1.22E-02	9.42E-07	4.81E-04	2.29E-08	1.22E-02	3.30E-07
252	373390	755747	Offsite Worker	5.99E-02	1.27E-04	1.02E-03	4.10E-04	1.63E-02	1.25E-05	1.20E-01	2.18E-03	2.44E-04	8.73E-09	1.20E-02	9.26E-07	4.73E-04	2.25E-08	1.20E-02	3.24E-07
253	373309	755744	Offsite Worker	6.10E-02	1.30E-04	1.04E-03	4.17E-04	1.66E-02	1.28E-05	1.22E-01	2.22E-03	2.49E-04	8.89E-09	1.23E-02	9.43E-07	4.81E-04	2.29E-08	1.22E-02	3.30E-07
254	373229	755743	Offsite Worker	6.21E-02	1.32E-04	1.06E-03	4.25E-04	1.69E-02	1.30E-05	1.24E-01	2.26E-03	2.53E-04	9.05E-09	1.25E-02	9.60E-07	4.90E-04	2.33E-08	1.24E-02	3.36E-07
255	373143	755741	Offsite Worker	6.32E-02	1.34E-04	1.08E-03	4.32E-04	1.72E-02	1.32E-05	1.26E-01	2.30E-03	2.58E-04	9.21E-09	1.27E-02	9.76E-07	4.98E-04	2.37E-08	1.27E-02	3.42E-07
256	373143	755823	Offsite Worker	6.56E-02	1.40E-04	1.12E-03	4.49E-04	1.79E-02	1.37E-05	1.31E-01	2.39E-03	2.68E-04	9.56E-09	1.32E-02	1.01E-06	5.18E-04	2.46E-08	1.31E-02	3.55E-07
257	373143	755906	Offsite Worker	6.66E-02	1.42E-04	1.14E-03	4.55E-04	1.81E-02	1.39E-05	1.33E-01	2.42E-03	2.72E-04	9.71E-09	1.34E-02	1.03E-06	5.25E-04	2.50E-08	1.33E-02	3.61E-07
258	373065	755906	Offsite Worker	6.85E-02	1.46E-04	1.17E-03	4.68E-04	1.86E-02	1.43E-05	1.37E-01	2.49E-03	2.79E-04	9.98E-09	1.38E-02	1.06E-06	5.40E-04	2.57E-08	1.37E-02	3.71E-07
259	373065	755827	Offsite Worker	6.71E-02	1.43E-04	1.15E-03	4.59E-04	1.83E-02	1.41E-05	1.34E-01	2.44E-03	2.74E-04	9.78E-09	1.35E-02	1.04E-06	5.30E-04	2.52E-08	1.34E-02	3.63E-07
260	373068	755733	Offsite Worker	6.38E-02	1.36E-04	1.09E-03	4.36E-04	1.74E-02	1.34E-05	1.28E-01	2.32E-03	2.60E-04	9.30E-09	1.28E-02	9.86E-07	5.03E-04	2.40E-08	1.28E-02	3.45E-07
261	373007	755733	Offsite Worker	6.53E-02	1.39E-04	1.12E-03	4.46E-04	1.78E-02	1.37E-05	1.31E-01	2.37E-03	2.66E-04	9.51E-09	1.31E-02	1.01E-06	5.15E-04	2.45E-08	1.31E-02	3.53E-07
262	372941	755733	Offsite Worker	6.68E-02	1.42E-04	1.14E-03	4.57E-04	1.82E-02	1.40E-05	1.34E-01	2.43E-03	2.73E-04	9.74E-09	1.34E-02	1.03E-06	5.27E-04	2.51E-08	1.34E-02	3.62E-07
263	372941	755636	Offsite Worker	6.50E-02	1.38E-04	1.11E-03	4.44E-04	1.77E-02	1.36E-05	1.30E-01	2.36E-03	2.65E-04	9.47E-09	1.31E-02	1.00E-06	5.13E-04	2.44E-08	1.30E-02	3.52E-07
264	372941	755539	Offsite Worker	6.32E-02	1.34E-04	1.08E-03	4.32E-04	1.72E-02	1.32E-05	1.26E-01	2.30E-03	2.58E-04	9.20E-09	1.27E-02	9.76E-07	4.98E-04	2.37E-08	1.27E-02	3.42E-07
265	372941	755442	Offsite Worker	6.07E-02	1.29E-04	1.04E-03	4.15E-04	1.65E-02	1.27E-05	1.21E-01	2.21E-03	2.48E-04	8.85E-09	1.22E-02	9.38E-07	4.79E-04	2.28E-08	1.22E-02	3.29E-07
266	372913	755342	Offsite Worker	6.34E-02	1.35E-04	1.08E-03	4.34E-04	1.73E-02	1.33E-05	1.27E-01	2.31E-03	2.59E-04	9.24E-09	1.27E-02	9.80E-07	5.00E-04	2.38E-08	1.27E-02	3.43E-07
267	372817	755346	Offsite Worker	6.61E-02	1.41E-04	1.13E-03	4.52E-04	1.80E-02	1.38E-05	1.32E-01	2.41E-03	2.70E-04	9.63E-09	1.33E-02	1.02E-06	5.21E-04	2.48E-08	1.32E-02	3.58E-07
268	372720	755349	Offsite Worker	6.87E-02	1.46E-04	1.18E-03	4.70E-04	1.87E-02	1.44E-05	1.38E-01	2.50E-03	2.80E-04	1.00E-08	1.38E-02	1.06E-06	5.42E-04	2.58E-08	1.38E-02	3.72E-07
269	372624	755352	Offsite Worker	7.12E-02	1.51E-04	1.22E-03	4.87E-04	1.94E-02	1.49E-05	1.42E-01	2.59E-03	2.91E-04	1.04E-08	1.43E-02	1.10E-06	5.62E-04	2.67E-08	1.43E-02	3.86E-07
270	372527	755349	Offsite Worker	7.37E-02	1.57E-04	1.26E-03	5.04E-04	2.01E-02	1.54E-05	1.47E-01	2.68E-03	3.01E-04	1.07E-08	1.48E-02	1.14E-06	5.81E-04	2.77E-08	1.48E-02	3.99E-07
271	372431	755353	Offsite Worker	7.69E-02	1.64E-04	1.31E-03	5.26E-04	2.09E-02	1.61E-05	1.54E-01	2.80E-03	3.14E-04	1.12E-08	1.55E-02	1.19E-06	6.07E-04	2.89E-08	1.54E-02	4.16E-07
272	372334	755356	Offsite Worker	8.09E-02	1.72E-04	1.38E-03	5.53E-04	2.20E-02	1.69E-05	1.62E-01	2.94E-03	3.30E-04	1.18E-08	1.62E-02	1.25E-06	6.38E-04	3.04E-08	1.62E-02	4.38E-07
273	372237	755359	Offsite Worker	8.50E-02	1.81E-04	1.45E-03	5.81E-04	2.31E-02	1.78E-05	1.70E-01	3.09E-03	3.47E-04	1.24E-08	1.71E-02	1.31E-06	6.71E-04	3.19E-08	1.70E-02	4.60E-07
274	372141	755362	Offsite Worker	8.89E-02	1.89E-04	1.52E-03	6.08E-04	2.42E-02	1.86E-05	1.78E-01	3.23E-03	3.63E-04	1.29E-08	1.78E-02	1.37E-06	7.01E-04	3.34E-08	1.78E-02	4.81E-07
275	372044	755366	Offsite Worker	9.23E-02	1.96E-04	1.58E-03	6.31E-04	2.51E-02	1.93E-05	1.85E-01	3.36E-03	3.77E-04	1.35E-08	1.85E-02	1.43E-06	7.28E-04	3.47E-08	1.85E-02	5.00E-07
276	371948	755369	Offsite Worker	9.52E-02	2.02E-04	1.63E-03	6.51E-04	2.59E-02	1.99E-05	1.90E-01	3.46E-03	3.88E-04	1.39E-08	1.91E-02	1.47E-06	7.51E-04	3.57E-08	1.91E-02	5.15E-07
277	371851	755372	Offsite Worker	9.74E-02	2.07E-04	1.66E-03	6.66E-04	2.65E-02	2.04E-05	1.95E-01	3.54E-03	3.97E-04	1.42E-08	1.96E-02	1.50E-06	7.68E-04	3.66E-08	1.95E-02	5.27E-07
278	371755	755375	Offsite Worker	9.88E-02	2.10E-04	1.69E-03	6.76E-04	2.69E-02	2.07E-05	1.98E-01	3.60E-03	4.03E-04	1.44E-08	1.98E-02	1.53E-06	7.79E-04	3.71E-08	1.98E-02	5.35E-07
279	371658	755378	Offsite Worker	1.02E-01	2.16E-04	1.74E-03	6.94E-04	2.76E-02	2.13E-05	2.03E-01	3.69E-03	4.14E-04	1.48E-08	2.04E-02	1.57E-06	8.01E-04	3.81E-08	2.03E-02	5.50E-07
280	371562	755382	Offsite Worker	1.05E-01	2.24E-04	1.80E-03	7.20E-04	2.87E-02	2.20E-05	2.11E-01	3.83E-03	4.30E-04	1.53E-08	2.11E-02	1.63E-06	8.31E-04	3.95E-08	2.11E-02	5.70E-07
281	371465	755385	Offsite Worker	1.08E-01	2.30E-04	1.85E-03	7.40E-04	2.95E-02	2.27E-05	2.17E-01	3.94E-03	4.42E-04	1.58E-08	2.17E-02	1.67E-06	8.54E-04	4.07E-08	2.17E-02	5.86E-07
282	371368	755388	Offsite Worker	1.14E-01	2.42E-04	1.94E-03	7.78E-04	3.10E-02	2.38E-05	2.28E-01	4.14E-03	4.64E-04	1.66E-08	2.29E-02	1.76E-06	8.97E-04	4.27E-08	2.28E-02	6.16E-07
283	371272	755391	Offsite Worker	1.17E-01	2.49E-04	2.00E-03	8.01E-04	3.19E-02	2.45E-05	2.34E-01	4.26E-03	4.78E-04	1.71E-08	2.35E-02	1.81E-06	9.24E-04	4.40E-08	2.35E-02	6.34E-07
284	371175	755395	Offsite Worker	1.27E-01	2.70E-04	2.17E-03	8.69E-04	3.46E-02	2.66E-05	2.54E-01	4.62E-03	5.19E-04	1.85E-08	2.55E-02	1.96E-06	1.00E-03	4.77E-08	2.55E-02	6.88E-07
285	371079	755398	Offsite Worker	1.36E-01	2.90E-04	2.33E-03	9.32E-04	3.71E-02	2.85E-05	2.73E-01	4.96E-03	5.56E-04	1.99E-08	2.74E-02	2.11E-06	1.08E-03	5.12E-08	2.73E-02	7.38E-07
286	371042	755478	Offsite Worker	1.41E-01	3.00E-04	2.41E-03	9.64E-04	3.84E-02	2.95E-05	2.82E-01	5.13E-03	5.75E-04	2.05E-08	2.83E-02	2.18E-06	1.11E-03	5.29E-08	2.82E-02	7.63E-07
287	371009	755538	Offsite Worker	1.44E-01	3.07E-04	2.47E-03	9.87E-04	3.93E-02	3.02E-05	2.89E-01	5.25E-03	5.89E-04	2.10E-08	2.90E-02	2.23E-06	1.14E-03	5.42E-08	2.89E-02	7.81E-07
288	370975	755597	Offsite Worker	1.47E-01	3.14E-04	2.52E-03	1.01E-03	4.01E-02	3.08E-05	2.95E-01	5.36E-03	6.01E-04	2.15E-08	2.96E-02	2.28E-06	1.16E-03	5.54E-08	2.95E-02	7.98E-07

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m³)	acetaldehyde Acute Hazard	acrolein (µg/m³)	acrolein Acute Hazard	benzene (µg/m³)	benzene Acute Hazard	formaldehyde (µg/m³)	formaldehyde Acute Hazard	methyl alcohol (µg/m³)	methyl alcohol Acute Hazard	methyl ethyl ketone (µg/m³)	methyl ethyl ketone Acute Hazard	styrene (µg/m³)	styrene Acute Hazard	toluene (µg/m³)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
289	370925	755597	Offsite Worker	1.55E-01	3.29E-04	2.65E-03	1.06E-03	4.21E-02	3.24E-05	3.10E-01	5.63E-03	6.32E-04	2.26E-08	3.11E-02	2.39E-06	1.22E-03	5.82E-08	3.10E-02	8.38E-07
290	370860	755547	Offsite Worker	1.62E-01	3.44E-04	2.76E-03	1.11E-03	4.40E-02	3.39E-05	3.24E-01	5.88E-03	6.60E-04	2.36E-08	3.25E-02	2.50E-06	1.28E-03	6.08E-08	3.24E-02	8.76E-07
291	370796	755497	Offsite Worker	1.62E-01	3.44E-04	2.76E-03	1.11E-03	4.40E-02	3.38E-05	3.23E-01	5.88E-03	6.60E-04	2.36E-08	3.25E-02	2.50E-06	1.28E-03	6.07E-08	3.24E-02	8.75E-07
292	370733	755428	Offsite Worker	1.56E-01	3.32E-04	2.67E-03	1.07E-03	4.24E-02	3.26E-05	3.12E-01	5.67E-03	6.36E-04	2.27E-08	3.13E-02	2.41E-06	1.23E-03	5.86E-08	3.12E-02	8.44E-07
293	370634	755428	Offsite Worker	1.70E-01	3.61E-04	2.90E-03	1.16E-03	4.62E-02	3.56E-05	3.40E-01	6.18E-03	6.93E-04	2.48E-08	3.41E-02	2.62E-06	1.34E-03	6.38E-08	3.40E-02	9.20E-07
294	370536	755428	Offsite Worker	1.78E-01	3.78E-04	3.04E-03	1.22E-03	4.84E-02	3.72E-05	3.56E-01	6.47E-03	7.25E-04	2.59E-08	3.57E-02	2.75E-06	1.40E-03	6.68E-08	3.56E-02	9.62E-07
295	370437	755428	Offsite Worker	1.79E-01	3.80E-04	3.06E-03	1.22E-03	4.86E-02	3.74E-05	3.58E-01	6.50E-03	7.29E-04	2.60E-08	3.59E-02	2.76E-06	1.41E-03	6.71E-08	3.58E-02	9.68E-07
296	370338	755427	Offsite Worker	1.84E-01	3.91E-04	3.14E-03	1.26E-03	5.00E-02	3.84E-05	3.68E-01	6.68E-03	7.49E-04	2.68E-08	3.69E-02	2.84E-06	1.45E-03	6.90E-08	3.68E-02	9.94E-07
307	369249	755442	Offsite Worker	2.63E-01	5.61E-04	4.50E-03	1.80E-03	7.17E-02	5.51E-05	5.27E-01	9.59E-03	1.07E-03	3.84E-08	5.29E-02	4.07E-06	2.08E-03	9.90E-08	5.28E-02	1.43E-06
308	369151	755442	Offsite Worker	2.70E-01	5.73E-04	4.61E-03	1.84E-03	7.33E-02	5.64E-05	5.39E-01	9.81E-03	1.10E-03	3.93E-08	5.41E-02	4.16E-06	2.13E-03	1.01E-07	5.40E-02	1.46E-06
309	369052	755442	Offsite Worker	2.80E-01	5.95E-04	4.78E-03	1.91E-03	7.61E-02	5.85E-05	5.59E-01	1.02E-02	1.14E-03	4.07E-08	5.62E-02	4.32E-06	2.21E-03	1.05E-07	5.60E-02	1.51E-06
320	368035	755402	Offsite Worker	1.99E-01	4.24E-04	3.40E-03	1.36E-03	5.42E-02	4.17E-05	3.98E-01	7.24E-03	8.12E-04	2.90E-08	4.00E-02	3.08E-06	1.57E-03	7.48E-08	3.99E-02	1.08E-06
321	367960	755389	Offsite Worker	1.78E-01	3.80E-04	3.05E-03	1.22E-03	4.86E-02	3.74E-05	3.57E-01	6.49E-03	7.28E-04	2.60E-08	3.58E-02	2.76E-06	1.41E-03	6.70E-08	3.57E-02	9.66E-07
322	367863	755390	Offsite Worker	1.48E-01	3.16E-04	2.54E-03	1.01E-03	4.04E-02	3.10E-05	2.97E-01	5.40E-03	6.05E-04	2.16E-08	2.98E-02	2.29E-06	1.17E-03	5.57E-08	2.97E-02	8.03E-07
323	367766	755392	Offsite Worker	1.44E-01	3.05E-04	2.45E-03	9.82E-04	3.91E-02	3.01E-05	2.87E-01	5.22E-03	5.86E-04	2.09E-08	2.88E-02	2.22E-06	1.13E-03	5.39E-08	2.88E-02	7.77E-07
324	367669	755393	Offsite Worker	1.35E-01	2.88E-04	2.31E-03	9.25E-04	3.68E-02	2.83E-05	2.71E-01	4.92E-03	5.52E-04	1.97E-08	2.72E-02	2.09E-06	1.07E-03	5.08E-08	2.71E-02	7.33E-07
325	367572	755394	Offsite Worker	1.30E-01	2.78E-04	2.23E-03	8.92E-04	3.55E-02	2.73E-05	2.61E-01	4.75E-03	5.32E-04	1.90E-08	2.62E-02	2.02E-06	1.03E-03	4.90E-08	2.61E-02	7.06E-07
326	367475	755395	Offsite Worker	1.24E-01	2.65E-04	2.13E-03	8.50E-04	3.38E-02	2.60E-05	2.49E-01	4.52E-03	5.07E-04	1.81E-08	2.50E-02	1.92E-06	9.81E-04	4.67E-08	2.49E-02	6.73E-07
327	370400	756850	On-Site Occupational	3.95E-01	8.41E-04	6.76E-03	2.70E-03	1.08E-01	8.27E-05	7.91E-01	1.44E-02	1.61E-03	5.76E-08	7.94E-02	6.11E-06	3.12E-03	1.48E-07	7.92E-02	2.14E-06
328	369032	756750	On-Site Occupational	3.00E+00	6.39E-03	5.13E-02	2.05E-02	8.17E-01	6.28E-04	6.01E+00	1.09E-01	1.22E-02	4.37E-07	6.03E-01	4.64E-05	2.37E-02	1.13E-06	6.01E-01	1.63E-05
329	368737	756629	On-Site Occupational	9.71E-01	2.07E-03	1.66E-02	6.64E-03	2.64E-01	2.03E-04	1.94E+00	3.53E-02	3.96E-03	1.42E-07	1.95E-01	1.50E-05	7.66E-03	3.65E-07	1.95E-01	5.26E-06
330	368907	757031	On-Site Occupational	1.32E+00	2.82E-03	2.26E-02	9.06E-03	3.60E-01	2.77E-04	2.65E+00	4.82E-02	5.40E-03	1.93E-07	2.66E-01	2.05E-05	1.04E-02	4.98E-07	2.65E-01	7.17E-06
331	368990	756274	On-Site Occupational	9.37E-01	1.99E-03	1.60E-02	6.41E-03	2.55E-01	1.96E-04	1.88E+00	3.41E-02	3.82E-03	1.37E-07	1.88E-01	1.45E-05	7.39E-03	3.52E-07	1.88E-01	5.07E-06
332	369550	756745	On-Site Occupational	2.26E+00	4.81E-03	3.87E-02	1.55E-02	6.16E-01	4.74E-04	4.53E+00	8.23E-02	9.23E-03	3.30E-07	4.54E-01	3.50E-05	1.78E-02	8.50E-07	4.53E-01	1.22E-05
1	367379	755396	Recreational	1.17E-01	2.48E-04	1.99E-03	7.97E-04	3.17E-02	2.44E-05	2.33E-01	4.24E-03	4.75E-04	1.70E-08	2.34E-02	1.80E-06	9.19E-04	4.38E-08	2.33E-02	6.31E-07
2	367340	755485	Recreational	1.18E-01	2.52E-04	2.03E-03	8.10E-04	3.22E-02	2.48E-05	2.37E-01	4.31E-03	4.83E-04	1.73E-08	2.38E-02	1.83E-06	9.35E-04	4.45E-08	2.37E-02	6.42E-07
3	367301	755573	Recreational	1.36E-01	2.88E-04	2.32E-03	9.27E-04	3.69E-02	2.84E-05	2.71E-01	4.93E-03	5.53E-04	1.98E-08	2.72E-02	2.09E-06	1.07E-03	5.09E-08	2.72E-02	7.34E-07
4	367263	755661	Recreational	1.46E-01	3.11E-04	2.50E-03	1.00E-03	3.98E-02	3.06E-05	2.93E-01	5.32E-03	5.97E-04	2.13E-08	2.94E-02	2.26E-06	1.15E-03	5.50E-08	2.93E-02	7.92E-07
5	367224	755749	Recreational	1.44E-01	3.07E-04	2.46E-03	9.85E-04	3.92E-02	3.02E-05	2.88E-01	5.24E-03	5.88E-04	2.10E-08	2.89E-02	2.23E-06	1.14E-03	5.41E-08	2.89E-02	7.80E-07
6	367186	755838	Recreational	1.33E-01	2.83E-04	2.27E-03	9.08E-04	3.61E-02	2.78E-05	2.66E-01	4.83E-03	5.42E-04	1.94E-08	2.67E-02	2.05E-06	1.05E-03	4.99E-08	2.66E-02	7.19E-07
7	367147	755926	Recreational	1.34E-01	2.84E-04	2.28E-03	9.14E-04	3.64E-02	2.80E-05	2.67E-01	4.86E-03	5.45E-04	1.95E-08	2.69E-02	2.07E-06	1.05E-03	5.02E-08	2.68E-02	7.24E-07
8	367109	756014	Recreational	1.46E-01	3.12E-04	2.50E-03	1.00E-03	3.98E-02	3.07E-05	2.93E-01	5.33E-03	5.97E-04	2.13E-08	2.94E-02	2.26E-06	1.16E-03	5.50E-08	2.93E-02	7.93E-07
9	367070	756103	Recreational	1.47E-01	3.12E-04	2.51E-03	1.00E-03	3.99E-02	3.07E-05	2.93E-01	5.34E-03	5.98E-04	2.14E-08	2.95E-02	2.27E-06	1.16E-03	5.51E-08	2.94E-02	7.94E-07
10	367032	756191	Recreational	1.35E-01	2.87E-04	2.30E-03	9.22E-04	3.67E-02	2.82E-05	2.70E-01	4.91E-03	5.50E-04	1.96E-08	2.71E-02	2.08E-06	1.06E-03	5.06E-08	2.70E-02	7.30E-07
11	366993	756279	Recreational	1.30E-01	2.77E-04	2.23E-03	8.92E-04	3.55E-02	2.73E-05	2.61E-01	4.74E-03	5.32E-04	1.90E-08	2.62E-02	2.01E-06	1.03E-03	4.90E-08	2.61E-02	7.06E-07
12	366954	756367	Recreational	1.19E-01	2.53E-04	2.04E-03	8.14E-04	3.24E-02	2.49E-05	2.38E-01	4.33E-03	4.86E-04	1.73E-08	2.39E-02	1.84E-06	9.39E-04	4.47E-08	2.38E-02	6.45E-07
13	366916	756456	Recreational	1.26E-01	2.68E-04	2.15E-03	8.61E-04	3.43E-02	2.64E-05	2.52E-01	4.58E-03	5.14E-04	1.83E-08	2.53E-02	1.95E-06	9.93E-04	4.73E-08	2.52E-02	6.82E-07
14	366877	756544	Recreational	1.30E-01	2.76E-04	2.21E-03	8.86E-04	3.53E-02	2.71E-05	2.59E-01	4.71E-03	5.29E-04	1.89E-08	2.60E-02	2.00E-06	1.02E-03	4.87E-08	2.60E-02	7.01E-07
15	366839	756632	Recreational	1.27E-01	2.71E-04	2.17E-03	8.70E-04	3.46E-02	2.66E-05	2.55E-01	4.63E-03	5.19E-04	1.85E-08	2.56E-02	1.97E-06	1.00E-03	4.78E-08	2.55E-02	6.89E-07
16	366800	756720	Recreational	1.19E-01	2.54E-04	2.04E-03	8.17E-04	3.25E-02	2.50E-05	2.39E-01	4.35E-03	4.87E-04	1.74E-08	2.40E-02	1.85E-06	9.42E-04	4.49E-08	2.39E-02	6.47E-07
17	366762	756809	Recreational	1.12E-01	2.38E-04	1.92E-03	7.66E-04	3.05E-02	2.35E-05	2.24E-01	4.08E-03	4.57E-04	1.63E-08	2.25E-02	1.73E-06	8.84E-04	4.21E-08	2.24E-02	6.07E-07
18	366723	756897	Recreational	1.01E-01	2.16E-04	1.73E-03	6.93E-04	2.76E-02	2.12E-05	2.03E-01	3.69E-03	4.14E-04	1.48E-08	2.04E-02	1.57E-06	8.00E-04	3.81E-08	2.03E-02	5.49E-07
19	366685	756985	Recreational	1.10E-01	2.35E-04	1.88E-03	7.54E-04	3.00E-02	2.31E-05	2.21E-01	4.01E-03	4.50E-04	1.61E-08	2.21E-02	1.70E-06	8.70E-04	4.14E-08	2.21E-02	5.97E-07
20	366646	757074	Recreational	1.22E-01	2.59E-04	2.08E-03	8.33E-04	3.32E-02	2.55E-05	2.44E-01	4.43E-03	4.97E-04	1.78E-08	2.45E-02	1.88E-06	9.61E-04	4.58E-08	2.44E-02	6.60E-07
21	366607	757162	Recreational	1.28E-01	2.72E-04	2.18E-03	8.73E-04	3.48E-02	2.67E-05	2.56E-01	4.65E-03	5.21E-04	1.86E-08	2.57E-02	1.97E-06	1.01E-03	4.80E-08	2.56E-02	6.91E-07
22	366569	757250	Recreational	1.27E-01	2.70E-04	2.17E-03	8.67E-04	3.45E-02	2.65E-05	2.54E-01	4.61E-03	5.17E-04	1.85E-08	2.55E-02	1.96E-06	1.00E-03	4.76E-08	2.54E-02	6.86E-07
23	366530	757338	Recreational	1.19E-01	2.53E-04	2.03E-03	8.14E-04	3.24E-02	2.49E-05	2.38E-01	4.33E-03	4.86E-04	1.73E-08	2.39E-02	1.84E-06	9.39E-04	4.47E-08	2.38E-02	6.44E-07
24	366492	757427	Recreational	1.06E-01	2.26E-04	1.81E-03	7.25E-04	2.88E-02	2.22E-05	2.12E-01	3.86E-03	4.32E-04	1.54E-08	2.13E-02	1.64E-06	8.36E-04	3.98E-08	2.12E-02	5.74E-07
25	366453	757515	Recreational	9.02E-02	1.92E-04	1.54E-03	6.17E-04	2.45E-02	1.89E-05	1.81E-01	3.28E-03	3.68E-04	1.31E-08	1.81E-02	1.39E-06	7.12E-04	3.39E-08	1.81E-02	4.88E-07
26	366415	757603	Recreational	8.27E-02	1.76E-04	1.41E-03	5.65E-04	2.25E-02	1.73E-05	1.65E-01	3.01E-03	3.37E-04	1.20E-08	1.66E-02	1.28E-06	6.52E-04	3.10E-08	1.66E-02	4.48E-07
27	366376	757692	Recreational	7.99E-02	1.70E-04	1.37E-03	5.46E-04	2.17E-02	1.67E-05	1.60E-01	2.91E-03	3.26E-04	1.16E-08	1.60E-02	1.23E-06	6.30E-04	3.00E-08	1.60E-02	4.32E-07
84	369336	758100	Recreational	3.23E-01	6.88E-04	5.53E-03	2.21E-03	8.80E-02	6.77E-05	6.47E-01	1.18E-02	1.32E-03	4.71E-08	6.50E-02	5.00E-06	2.55E-03	1.22E-07	6.48E-02	1.75E-06

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acetaldehyde Acute Hazard	acrolein ($\mu g/m^3$)	acrolein Acute Hazard	benzene ($\mu g/m^3$)	benzene Acute Hazard	formaldehyde ($\mu g/m^3$)	formaldehyde Acute Hazard	methyl alcohol ($\mu g/m^3$)	methyl alcohol Acute Hazard	methyl ethyl ketone ($\mu g/m^3$)	methyl ethyl ketone Acute Hazard	styrene ($\mu g/m^3$)	styrene Acute Hazard	toluene ($\mu g/m^3$)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
85	369269	758170	Recreational	3.05E-01	6.50E-04	5.22E-03	2.09E-03	8.31E-02	6.39E-05	6.11E-01	1.11E-02	1.25E-03	4.45E-08	6.13E-02	4.72E-06	2.41E-03	1.15E-07	6.12E-02	1.65E-06
86	369202	758239	Recreational	2.72E-01	5.78E-04	4.64E-03	1.86E-03	7.39E-02	5.68E-05	5.43E-01	9.88E-03	1.11E-03	3.96E-08	5.46E-02	4.20E-06	2.14E-03	1.02E-07	5.44E-02	1.47E-06
87	369264	758285	Recreational	2.73E-01	5.82E-04	4.67E-03	1.87E-03	7.44E-02	5.72E-05	5.47E-01	9.95E-03	1.12E-03	3.98E-08	5.49E-02	4.22E-06	2.16E-03	1.03E-07	5.48E-02	1.48E-06
88	369326	758330	Recreational	2.64E-01	5.61E-04	4.51E-03	1.80E-03	7.18E-02	5.52E-05	5.28E-01	9.60E-03	1.08E-03	3.84E-08	5.30E-02	4.08E-06	2.08E-03	9.91E-08	5.29E-02	1.43E-06
89	369389	758376	Recreational	2.47E-01	5.25E-04	4.22E-03	1.69E-03	6.71E-02	5.17E-05	4.94E-01	8.98E-03	1.01E-03	3.60E-08	4.96E-02	3.81E-06	1.95E-03	9.27E-08	4.94E-02	1.34E-06
90	369389	758462	Recreational	2.31E-01	4.92E-04	3.95E-03	1.58E-03	6.29E-02	4.84E-05	4.63E-01	8.41E-03	9.43E-04	3.37E-08	4.64E-02	3.57E-06	1.82E-03	8.68E-08	4.63E-02	1.25E-06
91	369389	758548	Recreational	2.17E-01	4.62E-04	3.71E-03	1.48E-03	5.91E-02	4.54E-05	4.34E-01	7.90E-03	8.86E-04	3.16E-08	4.36E-02	3.35E-06	1.71E-03	8.15E-08	4.35E-02	1.18E-06
28	366338	757780	Residential	7.90E-02	1.68E-04	1.35E-03	5.40E-04	2.15E-02	1.65E-05	1.58E-01	2.88E-03	3.22E-04	1.15E-08	1.59E-02	1.22E-06	6.23E-04	2.97E-08	1.58E-02	4.28E-07
29	366402	757746	Residential	8.16E-02	1.74E-04	1.39E-03	5.58E-04	2.22E-02	1.71E-05	1.63E-01	2.97E-03	3.33E-04	1.19E-08	1.64E-02	1.26E-06	6.43E-04	3.06E-08	1.63E-02	4.42E-07
30	366467	757713	Residential	8.42E-02	1.79E-04	1.44E-03	5.76E-04	2.29E-02	1.76E-05	1.69E-01	3.07E-03	3.44E-04	1.23E-08	1.69E-02	1.30E-06	6.65E-04	3.16E-08	1.69E-02	4.56E-07
31	366531	757679	Residential	8.70E-02	1.85E-04	1.49E-03	5.95E-04	2.37E-02	1.82E-05	1.74E-01	3.16E-03	3.55E-04	1.27E-08	1.75E-02	1.34E-06	6.86E-04	3.27E-08	1.74E-02	4.71E-07
32	366567	757773	Residential	9.78E-02	2.08E-04	1.67E-03	6.69E-04	2.66E-02	2.05E-05	1.96E-01	3.56E-03	3.99E-04	1.42E-08	1.96E-02	1.51E-06	7.71E-04	3.67E-08	1.96E-02	5.29E-07
33	366625	757758	Residential	1.02E-01	2.16E-04	1.74E-03	6.95E-04	2.77E-02	2.13E-05	2.03E-01	3.70E-03	4.15E-04	1.48E-08	2.04E-02	1.57E-06	8.02E-04	3.82E-08	2.04E-02	5.50E-07
34	366682	757744	Residential	1.06E-01	2.25E-04	1.81E-03	7.23E-04	2.88E-02	2.21E-05	2.12E-01	3.85E-03	4.31E-04	1.54E-08	2.12E-02	1.63E-06	8.34E-04	3.97E-08	2.12E-02	5.72E-07
35	366768	757788	Residential	1.19E-01	2.53E-04	2.04E-03	8.14E-04	3.24E-02	2.49E-05	2.38E-01	4.33E-03	4.86E-04	1.74E-08	2.39E-02	1.84E-06	9.39E-04	4.47E-08	2.39E-02	6.45E-07
36	366854	757833	Residential	1.30E-01	2.76E-04	2.21E-03	8.86E-04	3.53E-02	2.71E-05	2.59E-01	4.71E-03	5.28E-04	1.89E-08	2.60E-02	2.00E-06	1.02E-03	4.87E-08	2.59E-02	7.01E-07
37	366941	757877	Residential	1.35E-01	2.87E-04	2.30E-03	9.22E-04	3.67E-02	2.82E-05	2.70E-01	4.90E-03	5.50E-04	1.96E-08	2.71E-02	2.08E-06	1.06E-03	5.06E-08	2.70E-02	7.30E-07
38	367027	757922	Residential	1.33E-01	2.83E-04	2.27E-03	9.09E-04	3.62E-02	2.78E-05	2.66E-01	4.84E-03	5.43E-04	1.94E-08	2.67E-02	2.06E-06	1.05E-03	5.00E-08	2.66E-02	7.20E-07
39	367113	757966	Residential	1.24E-01	2.64E-04	2.12E-03	8.50E-04	3.38E-02	2.60E-05	2.49E-01	4.52E-03	5.07E-04	1.81E-08	2.50E-02	1.92E-06	9.81E-04	4.67E-08	2.49E-02	6.73E-07
40	367192	757916	Residential	1.34E-01	2.85E-04	2.29E-03	9.15E-04	3.64E-02	2.80E-05	2.68E-01	4.87E-03	5.46E-04	1.95E-08	2.69E-02	2.07E-06	1.06E-03	5.02E-08	2.68E-02	7.24E-07
41	367264	757916	Residential	1.37E-01	2.92E-04	2.35E-03	9.39E-04	3.74E-02	2.88E-05	2.75E-01	5.00E-03	5.60E-04	2.00E-08	2.76E-02	2.12E-06	1.08E-03	5.16E-08	2.75E-02	7.44E-07
42	367335	757916	Residential	1.49E-01	3.17E-04	2.54E-03	1.02E-03	4.05E-02	3.11E-05	2.98E-01	5.41E-03	6.07E-04	2.17E-08	2.99E-02	2.30E-06	1.17E-03	5.59E-08	2.98E-02	8.06E-07
43	367343	757966	Residential	1.53E-01	3.26E-04	2.62E-03	1.05E-03	4.17E-02	3.21E-05	3.07E-01	5.57E-03	6.25E-04	2.23E-08	3.08E-02	2.37E-06	1.21E-03	5.75E-08	3.07E-02	8.29E-07
44	367404	757995	Residential	1.62E-01	3.44E-04	2.76E-03	1.10E-03	4.40E-02	3.38E-05	3.23E-01	5.88E-03	6.59E-04	2.35E-08	3.25E-02	2.50E-06	1.27E-03	6.07E-08	3.24E-02	8.75E-07
45	367465	758024	Residential	1.66E-01	3.54E-04	2.84E-03	1.14E-03	4.53E-02	3.48E-05	3.33E-01	6.06E-03	6.79E-04	2.43E-08	3.34E-02	2.57E-06	1.31E-03	6.25E-08	3.33E-02	9.01E-07
55	367673	758189	Residential	1.35E-01	2.87E-04	2.31E-03	9.24E-04	3.68E-02	2.83E-05	2.70E-01	4.92E-03	5.51E-04	1.97E-08	2.71E-02	2.09E-06	1.07E-03	5.07E-08	2.71E-02	7.31E-07
59	367816	758096	Residential	1.47E-01	3.14E-04	2.52E-03	1.01E-03	4.01E-02	3.09E-05	2.95E-01	5.36E-03	6.01E-04	2.15E-08	2.96E-02	2.28E-06	1.16E-03	5.54E-08	2.95E-02	7.98E-07
60	367898	758066	Residential	1.58E-01	3.36E-04	2.70E-03	1.08E-03	4.29E-02	3.30E-05	3.16E-01	5.74E-03	6.44E-04	2.30E-08	3.17E-02	2.44E-06	1.24E-03	5.93E-08	3.16E-02	8.54E-07
61	367980	758035	Residential	1.71E-01	3.64E-04	2.93E-03	1.17E-03	4.66E-02	3.58E-05	3.42E-01	6.23E-03	6.98E-04	2.49E-08	3.44E-02	2.64E-06	1.35E-03	6.43E-08	3.43E-02	9.27E-07
62	368062	758005	Residential	1.85E-01	3.93E-04	3.16E-03	1.26E-03	5.02E-02	3.86E-05	3.69E-01	6.72E-03	7.53E-04	2.69E-08	3.71E-02	2.85E-06	1.46E-03	6.93E-08	3.70E-02	9.99E-07
63	368144	757975	Residential	1.98E-01	4.21E-04	3.38E-03	1.35E-03	5.38E-02	4.14E-05	3.96E-01	7.20E-03	8.07E-04	2.88E-08	3.97E-02	3.06E-06	1.56E-03	7.43E-08	3.96E-02	1.07E-06
64	368226	757945	Residential	2.11E-01	4.48E-04	3.60E-03	1.44E-03	5.73E-02	4.41E-05	4.21E-01	7.66E-03	8.59E-04	3.07E-08	4.23E-02	3.25E-06	1.66E-03	7.91E-08	4.22E-02	1.14E-06
65	368301	757943	Residential	2.16E-01	4.59E-04	3.69E-03	1.47E-03	5.87E-02	4.51E-05	4.31E-01	7.84E-03	8.80E-04	3.14E-08	4.33E-02	3.33E-06	1.70E-03	8.10E-08	4.32E-02	1.17E-06
66	368376	757941	Residential	2.17E-01	4.61E-04	3.70E-03	1.48E-03	5.90E-02	4.54E-05	4.34E-01	7.89E-03	8.84E-04	3.16E-08	4.35E-02	3.35E-06	1.71E-03	8.14E-08	4.34E-02	1.17E-06
67	368452	757940	Residential	2.29E-01	4.86E-04	3.91E-03	1.56E-03	6.22E-02	4.79E-05	4.57E-01	8.32E-03	9.33E-04	3.33E-08	4.59E-02	3.53E-06	1.80E-03	8.59E-08	4.58E-02	1.24E-06
68	368527	757938	Residential	2.43E-01	5.16E-04	4.15E-03	1.66E-03	6.60E-02	5.08E-05	4.85E-01	8.83E-03	9.90E-04	3.53E-08	4.87E-02	3.75E-06	1.91E-03	9.11E-08	4.86E-02	1.31E-06
69	368563	757880	Residential	2.60E-01	5.53E-04	4.44E-03	1.78E-03	7.07E-02	5.44E-05	5.20E-01	9.45E-03	1.06E-03	3.78E-08	5.22E-02	4.01E-06	2.05E-03	9.75E-08	5.20E-02	1.41E-06
70	368636	757926	Residential	2.57E-01	5.46E-04	4.39E-03	1.76E-03	6.99E-02	5.37E-05	5.14E-01	9.34E-03	1.05E-03	3.74E-08	5.16E-02	3.97E-06	2.02E-03	9.64E-08	5.14E-02	1.39E-06
71	368709	757971	Residential	2.63E-01	5.60E-04	4.50E-03	1.80E-03	7.17E-02	5.51E-05	5.27E-01	9.58E-03	1.07E-03	3.84E-08	5.29E-02	4.07E-06	2.08E-03	9.89E-08	5.28E-02	1.43E-06
72	368782	758017	Residential	2.56E-01	5.44E-04	4.37E-03	1.75E-03	6.96E-02	5.35E-05	5.12E-01	9.31E-03	1.04E-03	3.73E-08	5.14E-02	3.95E-06	2.02E-03	9.61E-08	5.12E-02	1.38E-06
73	368855	758062	Residential	2.65E-01	5.64E-04	4.53E-03	1.81E-03	7.22E-02	5.55E-05	5.31E-01	9.65E-03	1.08E-03	3.87E-08	5.33E-02	4.10E-06	2.09E-03	9.96E-08	5.31E-02	1.44E-06
74	368928	758108	Residential	2.58E-01	5.50E-04	4.42E-03	1.77E-03	7.03E-02	5.41E-05	5.17E-01	9.40E-03	1.05E-03	3.77E-08	5.19E-02	3.99E-06	2.04E-03	9.71E-08	5.18E-02	1.40E-06
75	369001	758153	Residential	2.52E-01	5.36E-04	4.31E-03	1.72E-03	6.86E-02	5.28E-05	5.04E-01	9.17E-03	1.03E-03	3.67E-08	5.06E-02	3.89E-06	1.99E-03	9.47E-08	5.05E-02	1.36E-06
76	369058	758074	Residential	2.79E-01	5.94E-04	4.78E-03	1.91E-03	7.60E-02	5.85E-05	5.59E-01	1.02E-02	1.14E-03	4.07E-08	5.61E-02	4.32E-06	2.20E-03	1.05E-07	5.60E-02	1.51E-06
77	369102	758103	Residential	2.74E-01	5.82E-04	4.68E-03	1.87E-03	7.44E-02	5.73E-05	5.47E-01	9.95E-03	1.12E-03	3.99E-08	5.50E-02	4.23E-06	2.16E-03	1.03E-07	5.48E-02	1.48E-06
78	369145	758132	Residential	2.76E-01	5.86E-04	4.71E-03	1.88E-03	7.50E-02	5.77E-05	5.51E-01	1.00E-02	1.12E-03	4.01E-08	5.53E-02	4.26E-06	2.17E-03	1.03E-07	5.52E-02	1.49E-06
79	369200	758065	Residential	3.23E-01	6.87E-04	5.52E-03	2.21E-03	8.78E-02	6.76E-05	6.46E-01	1.17E-02	1.32E-03	4.70E-08	6.48E-02	4.99E-06	2.55E-03	1.21E-07	6.47E-02	1.75E-06
80	369255	757998	Residential	3.64E-01	7.75E-04	6.23E-03	2.49E-03	9.91E-02	7.62E-05	7.29E-01	1.33E-02	1.49E-03	5.31E-08	7.32E-02	5.63E-06	2.87E-03	1.37E-07	7.30E-02	1.97E-06
81	369310	757931	Residential	3.92E-01	8.34E-04	6.70E-03	2.68E-03	1.07E-01	8.21E-05	7.84E-01	1.43E-02	1.60E-03	5.71E-08	7.87E-02	6.06E-06	3.09E-03	1.47E-07	7.85E-02	2.12E-06
82	369356	757981	Residential	3.58E-01	7.61E-04	6.12E-03	2.45E-03	9.74E-02	7.49E-05	7.16E-01	1.30E-02	1.46E-03	5.21E-08	7.19E-02	5.53E-06	2.82E-03	1.34E-07	7.17E-02	1.94E-06
83	369403	758031	Residential	3.26E-01	6.94E-04	5.58E-03	2.23E-03	8.88E-02	6.83E-05	6.53E-01	1.19E-02	1.33E-03	4.75E-08	6.55E-02	5.04E-06	2.57E-03	1.23E-07	6.53E-02	1.77E-06
92	369389	758634	Residential	2.04E-01	4.35E-04	3.49E-03	1.40E-03	5.56E-02	4.28E-05	4.09E-01	7.44E-03	8.34E-04	2.98E-08	4.10E-02	3.16E-06	1.61E-03	7.68E-08	4.09E-02	1.11E-06

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m^3)	acetaldehyde Acute Hazard	acrolein (µg/m^3)	acrolein Acute Hazard	benzene (µg/m^3)	benzene Acute Hazard	formaldehyde (µg/m^3)	formaldehyde Acute Hazard	methyl alcohol (µg/m^3)	methyl alcohol Acute Hazard	methyl ethyl ketone (µg/m^3)	methyl ethyl ketone Acute Hazard	styrene (µg/m^3)	styrene Acute Hazard	toluene (µg/m^3)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
93	369469	758630	Residential	1.95E-01	4.14E-04	3.33E-03	1.33E-03	5.29E-02	4.07E-05	3.89E-01	7.08E-03	7.94E-04	2.83E-08	3.91E-02	3.01E-06	1.53E-03	7.31E-08	3.90E-02	1.05E-06
94	369549	758625	Residential	1.87E-01	3.99E-04	3.20E-03	1.28E-03	5.10E-02	3.92E-05	3.75E-01	6.82E-03	7.65E-04	2.73E-08	3.76E-02	2.90E-06	1.48E-03	7.04E-08	3.75E-02	1.01E-06
95	369630	758621	Residential	1.83E-01	3.90E-04	3.13E-03	1.25E-03	4.99E-02	3.83E-05	3.67E-01	6.67E-03	7.47E-04	2.67E-08	3.68E-02	2.83E-06	1.44E-03	6.88E-08	3.67E-02	9.92E-07
96	369710	758617	Residential	1.75E-01	3.72E-04	2.99E-03	1.20E-03	4.76E-02	3.66E-05	3.50E-01	6.36E-03	7.14E-04	2.55E-08	3.51E-02	2.70E-06	1.38E-03	6.57E-08	3.50E-02	9.47E-07
97	369791	758613	Residential	1.68E-01	3.58E-04	2.88E-03	1.15E-03	4.58E-02	3.52E-05	3.37E-01	6.12E-03	6.87E-04	2.45E-08	3.38E-02	2.60E-06	1.33E-03	6.32E-08	3.37E-02	9.11E-07
98	369791	758514	Residential	1.81E-01	3.84E-04	3.09E-03	1.23E-03	4.91E-02	3.78E-05	3.61E-01	6.57E-03	7.36E-04	2.63E-08	3.63E-02	2.79E-06	1.42E-03	6.78E-08	3.62E-02	9.77E-07
99	369791	758416	Residential	1.96E-01	4.18E-04	3.36E-03	1.34E-03	5.35E-02	4.11E-05	3.93E-01	7.15E-03	8.02E-04	2.86E-08	3.95E-02	3.04E-06	1.55E-03	7.38E-08	3.94E-02	1.06E-06
100	369791	758318	Residential	2.18E-01	4.63E-04	3.72E-03	1.49E-03	5.92E-02	4.56E-05	4.36E-01	7.92E-03	8.88E-04	3.17E-08	4.37E-02	3.36E-06	1.72E-03	8.18E-08	4.36E-02	1.18E-06
101	369881	758318	Residential	2.19E-01	4.65E-04	3.74E-03	1.49E-03	5.95E-02	4.57E-05	4.37E-01	7.95E-03	8.92E-04	3.18E-08	4.39E-02	3.38E-06	1.72E-03	8.21E-08	4.38E-02	1.18E-06
102	369972	758318	Residential	2.17E-01	4.62E-04	3.71E-03	1.48E-03	5.90E-02	4.54E-05	4.34E-01	7.89E-03	8.85E-04	3.16E-08	4.36E-02	3.35E-06	1.71E-03	8.15E-08	4.35E-02	1.17E-06
103	370062	758318	Residential	2.04E-01	4.33E-04	3.48E-03	1.39E-03	5.54E-02	4.26E-05	4.07E-01	7.41E-03	8.31E-04	2.97E-08	4.09E-02	3.15E-06	1.61E-03	7.65E-08	4.08E-02	1.10E-06
104	370153	758318	Residential	1.86E-01	3.95E-04	3.17E-03	1.27E-03	5.05E-02	3.89E-05	3.71E-01	6.75E-03	7.57E-04	2.70E-08	3.73E-02	2.87E-06	1.46E-03	6.97E-08	3.72E-02	1.00E-06
105	370243	758318	Residential	1.92E-01	4.08E-04	3.28E-03	1.31E-03	5.22E-02	4.01E-05	3.84E-01	6.98E-03	7.82E-04	2.79E-08	3.85E-02	2.96E-06	1.51E-03	7.20E-08	3.84E-02	1.04E-06
111	370408	758347	Residential	1.80E-01	3.82E-04	3.07E-03	1.23E-03	4.89E-02	3.76E-05	3.59E-01	6.53E-03	7.33E-04	2.62E-08	3.61E-02	2.77E-06	1.42E-03	6.74E-08	3.60E-02	9.72E-07
112	370490	758344	Residential	1.77E-01	3.77E-04	3.03E-03	1.21E-03	4.82E-02	3.71E-05	3.55E-01	6.45E-03	7.23E-04	2.58E-08	3.56E-02	2.74E-06	1.40E-03	6.66E-08	3.55E-02	9.60E-07
113	370572	758341	Residential	1.84E-01	3.91E-04	3.14E-03	1.26E-03	5.00E-02	3.84E-05	3.67E-01	6.68E-03	7.49E-04	2.68E-08	3.69E-02	2.84E-06	1.45E-03	6.90E-08	3.68E-02	9.94E-07
114	370654	758338	Residential	1.81E-01	3.86E-04	3.10E-03	1.24E-03	4.94E-02	3.80E-05	3.63E-01	6.60E-03	7.40E-04	2.64E-08	3.65E-02	2.80E-06	1.43E-03	6.82E-08	3.64E-02	9.82E-07
115	370735	758335	Residential	1.71E-01	3.64E-04	2.93E-03	1.17E-03	4.66E-02	3.58E-05	3.43E-01	6.23E-03	6.98E-04	2.49E-08	3.44E-02	2.65E-06	1.35E-03	6.43E-08	3.43E-02	9.27E-07
116	370817	758333	Residential	1.65E-01	3.50E-04	2.81E-03	1.12E-03	4.48E-02	3.44E-05	3.29E-01	5.99E-03	6.71E-04	2.40E-08	3.30E-02	2.54E-06	1.30E-03	6.18E-08	3.30E-02	8.91E-07
130	371183	758027	Residential	1.47E-01	3.13E-04	2.51E-03	1.00E-03	4.00E-02	3.08E-05	2.94E-01	5.35E-03	5.99E-04	2.14E-08	2.95E-02	2.27E-06	1.16E-03	5.52E-08	2.94E-02	7.95E-07
131	371248	758024	Residential	1.39E-01	2.97E-04	2.38E-03	9.53E-04	3.79E-02	2.92E-05	2.79E-01	5.07E-03	5.69E-04	2.03E-08	2.80E-02	2.15E-06	1.10E-03	5.24E-08	2.79E-02	7.55E-07
132	371326	758075	Residential	1.32E-01	2.81E-04	2.26E-03	9.03E-04	3.59E-02	2.76E-05	2.64E-01	4.80E-03	5.39E-04	1.92E-08	2.65E-02	2.04E-06	1.04E-03	4.96E-08	2.65E-02	7.15E-07
133	371404	758127	Residential	1.25E-01	2.67E-04	2.14E-03	8.57E-04	3.41E-02	2.62E-05	2.51E-01	4.56E-03	5.11E-04	1.83E-08	2.52E-02	1.94E-06	9.89E-04	4.71E-08	2.51E-02	6.79E-07
134	371481	758178	Residential	1.19E-01	2.54E-04	2.04E-03	8.15E-04	3.25E-02	2.50E-05	2.39E-01	4.34E-03	4.87E-04	1.74E-08	2.40E-02	1.84E-06	9.41E-04	4.48E-08	2.39E-02	6.46E-07
135	371559	758230	Residential	1.14E-01	2.42E-04	1.94E-03	7.77E-04	3.09E-02	2.38E-05	2.27E-01	4.13E-03	4.64E-04	1.66E-08	2.28E-02	1.76E-06	8.96E-04	4.27E-08	2.28E-02	6.15E-07
136	371637	758281	Residential	1.08E-01	2.31E-04	1.85E-03	7.41E-04	2.95E-02	2.27E-05	2.17E-01	3.94E-03	4.42E-04	1.58E-08	2.18E-02	1.67E-06	8.55E-04	4.07E-08	2.17E-02	5.87E-07
137	371715	758333	Residential	1.04E-01	2.20E-04	1.77E-03	7.08E-04	2.82E-02	2.17E-05	2.07E-01	3.77E-03	4.23E-04	1.51E-08	2.08E-02	1.60E-06	8.17E-04	3.89E-08	2.08E-02	5.61E-07
138	371769	758261	Residential	1.05E-01	2.22E-04	1.79E-03	7.15E-04	2.84E-02	2.19E-05	2.09E-01	3.80E-03	4.26E-04	1.52E-08	2.10E-02	1.61E-06	8.24E-04	3.93E-08	2.09E-02	5.66E-07
139	371822	758189	Residential	1.08E-01	2.31E-04	1.85E-03	7.42E-04	2.95E-02	2.27E-05	2.17E-01	3.95E-03	4.43E-04	1.58E-08	2.18E-02	1.68E-06	8.56E-04	4.07E-08	2.17E-02	5.87E-07
140	371894	758160	Residential	1.06E-01	2.25E-04	1.81E-03	7.24E-04	2.88E-02	2.22E-05	2.12E-01	3.85E-03	4.32E-04	1.54E-08	2.13E-02	1.64E-06	8.35E-04	3.98E-08	2.12E-02	5.73E-07
141	371894	758081	Residential	1.05E-01	2.23E-04	1.79E-03	7.16E-04	2.85E-02	2.19E-05	2.10E-01	3.81E-03	4.27E-04	1.53E-08	2.10E-02	1.62E-06	8.26E-04	3.93E-08	2.10E-02	5.67E-07
142	371959	758074	Residential	1.05E-01	2.24E-04	1.80E-03	7.20E-04	2.86E-02	2.20E-05	2.11E-01	3.83E-03	4.29E-04	1.53E-08	2.11E-02	1.63E-06	8.30E-04	3.95E-08	2.11E-02	5.70E-07
155	372055	757363	Residential	1.08E-01	2.30E-04	1.85E-03	7.40E-04	2.94E-02	2.27E-05	2.17E-01	3.94E-03	4.41E-04	1.58E-08	2.17E-02	1.67E-06	8.53E-04	4.06E-08	2.17E-02	5.86E-07
297	370239	755427	Residential	1.85E-01	3.94E-04	3.17E-03	1.27E-03	5.04E-02	3.88E-05	3.71E-01	6.74E-03	7.56E-04	2.70E-08	3.72E-02	2.86E-06	1.46E-03	6.96E-08	3.71E-02	1.00E-06
298	370138	755427	Residential	2.12E-01	4.51E-04	3.63E-03	1.45E-03	5.77E-02	4.44E-05	4.24E-01	7.72E-03	8.65E-04	3.09E-08	4.26E-02	3.28E-06	1.67E-03	7.97E-08	4.25E-02	1.15E-06
299	370040	755427	Residential	2.32E-01	4.93E-04	3.96E-03	1.58E-03	6.30E-02	4.85E-05	4.64E-01	8.43E-03	9.45E-04	3.38E-08	4.65E-02	3.58E-06	1.83E-03	8.70E-08	4.64E-02	1.25E-06
300	369941	755426	Residential	2.39E-01	5.09E-04	4.09E-03	1.63E-03	6.51E-02	5.00E-05	4.78E-01	8.70E-03	9.75E-04	3.48E-08	4.80E-02	3.69E-06	1.89E-03	8.98E-08	4.79E-02	1.29E-06
301	369842	755426	Residential	2.36E-01	5.03E-04	4.04E-03	1.62E-03	6.43E-02	4.95E-05	4.73E-01	8.60E-03	9.64E-04	3.44E-08	4.75E-02	3.65E-06	1.86E-03	8.88E-08	4.74E-02	1.28E-06
302	369741	755435	Residential	2.53E-01	5.39E-04	4.33E-03	1.73E-03	6.89E-02	5.30E-05	5.07E-01	9.21E-03	1.03E-03	3.69E-08	5.08E-02	3.91E-06	2.00E-03	9.51E-08	5.07E-02	1.37E-06
303	369643	755434	Residential	2.69E-01	5.73E-04	4.60E-03	1.84E-03	7.32E-02	5.63E-05	5.39E-01	9.79E-03	1.10E-03	3.92E-08	5.41E-02	4.16E-06	2.12E-03	1.01E-07	5.39E-02	1.46E-06
304	369544	755434	Residential	2.66E-01	5.66E-04	4.55E-03	1.82E-03	7.24E-02	5.57E-05	5.33E-01	9.68E-03	1.09E-03	3.88E-08	5.35E-02	4.11E-06	2.10E-03	1.00E-07	5.33E-02	1.44E-06
305	369445	755434	Residential	2.74E-01	5.82E-04	4.68E-03	1.87E-03	7.45E-02	5.73E-05	5.48E-01	9.96E-03	1.12E-03	3.99E-08	5.50E-02	4.23E-06	2.16E-03	1.03E-07	5.48E-02	1.48E-06
306	369346	755434	Residential	2.74E-01	5.83E-04	4.69E-03	1.87E-03	7.46E-02	5.74E-05	5.49E-01	9.98E-03	1.12E-03	4.00E-08	5.51E-02	4.24E-06	2.16E-03	1.03E-07	5.49E-02	1.48E-06
310	368953	755441	Residential	2.95E-01	6.28E-04	5.04E-03	2.02E-03	8.03E-02	6.17E-05	5.90E-01	1.07E-02	1.20E-03	4.30E-08	5.92E-02	4.56E-06	2.33E-03	1.11E-07	5.91E-02	1.60E-06
311	368854	755441	Residential	2.96E-01	6.30E-04	5.06E-03	2.03E-03	8.06E-02	6.20E-05	5.93E-01	1.08E-02	1.21E-03	4.32E-08	5.95E-02	4.58E-06	2.34E-03	1.11E-07	5.93E-02	1.60E-06
312	368755	755441	Residential	2.81E-01	5.98E-04	4.81E-03	1.92E-03	7.65E-02	5.88E-05	5.63E-01	1.02E-02	1.15E-03	4.10E-08	5.65E-02	4.34E-06	2.22E-03	1.06E-07	5.63E-02	1.52E-06
313	368657	755441	Residential	2.73E-01	5.81E-04	4.67E-03	1.87E-03	7.43E-02	5.71E-05	5.46E-01	9.93E-03	1.11E-03	3.98E-08	5.48E-02	4.22E-06	2.15E-03	1.03E-07	5.47E-02	1.48E-06
314	368558	755440	Residential	2.67E-01	5.69E-04	4.57E-03	1.83E-03	7.28E-02	5.60E-05	5.35E-01	9.73E-03	1.09E-03	3.90E-08	5.37E-02	4.13E-06	2.11E-03	1.00E-07	5.36E-02	1.45E-06
315	368459	755440	Residential	2.50E-01	5.32E-04	4.27E-03	1.71E-03	6.80E-02	5.23E-05	5.00E-01	9.09E-03	1.02E-03	3.64E-08	5.02E-02	3.86E-06	1.97E-03	9.39E-08	5.01E-02	1.35E-06
316	368360	755440	Residential	2.51E-01	5.35E-04	4.30E-03	1.72E-03	6.84E-02	5.26E-05	5.03E-01	9.14E-03	1.03E-03	3.66E-08	5.05E-02	3.88E-06	1.98E-03	9.44E-08	5.03E-02	1.36E-06
317	368262	755439	Residential	2.35E-01	5.00E-04	4.02E-03	1.61E-03	6.39E-02	4.92E-05	4.70E-01	8.55E-03	9.58E-04	3.42E-08	4.72E-02	3.63E-06	1.85E-03	8.82E-08	4.71E-02	1.27E-06
318	368186	755427	Residential	2.29E-01	4.87E-04	3.91E-03	1.56E-03	6.23E-02	4.79E-05	4.58E-01	8.33E-03	9.34E-04	3.34E-08	4.60E-02	3.54E-06	1.81E-03	8.60E-08	4.58E-02	1.24E-06

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	acetaldehyde (μg/m³)	acetaldehyde Acute Hazard	acrolein (μg/m³)	acrolein Acute Hazard	benzene (μg/m³)	benzene Acute Hazard	formaldehyde (μg/m³)	formaldehyde Acute Hazard	methyl alcohol (μg/m³)	methyl alcohol Acute Hazard	methyl ethyl ketone (μg/m³)	methyl ethyl ketone Acute Hazard	styrene (μg/m³)	styrene Acute Hazard	toluene (μg/m³)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
319	368111	755414	Residential	2.17E-01	4.61E-04	3.71E-03	1.48E-03	5.90E-02	4.54E-05	4.34E-01	7.89E-03	8.84E-04	3.16E-08	4.35E-02	3.35E-06	1.71E-03	8.14E-08	4.34E-02	1.17E-06
46	367504	757948	School	1.74E-01	3.71E-04	2.98E-03	1.19E-03	4.75E-02	3.65E-05	3.49E-01	6.35E-03	7.12E-04	2.54E-08	3.50E-02	2.69E-06	1.38E-03	6.55E-08	3.49E-02	9.44E-07
47	367544	757873	School	1.81E-01	3.84E-04	3.09E-03	1.24E-03	4.92E-02	3.78E-05	3.61E-01	6.57E-03	7.37E-04	2.63E-08	3.63E-02	2.79E-06	1.42E-03	6.79E-08	3.62E-02	9.78E-07
48	367587	757909	School	1.86E-01	3.96E-04	3.18E-03	1.27E-03	5.07E-02	3.90E-05	3.73E-01	6.77E-03	7.60E-04	2.71E-08	3.74E-02	2.88E-06	1.47E-03	6.99E-08	3.73E-02	1.01E-06
49	367623	757866	School	1.93E-01	4.11E-04	3.30E-03	1.32E-03	5.25E-02	4.04E-05	3.86E-01	7.02E-03	7.87E-04	2.81E-08	3.88E-02	2.98E-06	1.52E-03	7.25E-08	3.87E-02	1.04E-06
50	367694	757866	School	2.02E-01	4.31E-04	3.46E-03	1.38E-03	5.51E-02	4.24E-05	4.05E-01	7.36E-03	8.26E-04	2.95E-08	4.07E-02	3.13E-06	1.60E-03	7.60E-08	4.05E-02	1.10E-06
51	367716	757927	School	1.95E-01	4.16E-04	3.34E-03	1.34E-03	5.32E-02	4.09E-05	3.91E-01	7.11E-03	7.98E-04	2.85E-08	3.93E-02	3.02E-06	1.54E-03	7.34E-08	3.92E-02	1.06E-06
52	367737	757988	School	1.83E-01	3.89E-04	3.12E-03	1.25E-03	4.97E-02	3.83E-05	3.66E-01	6.65E-03	7.46E-04	2.66E-08	3.67E-02	2.82E-06	1.44E-03	6.86E-08	3.66E-02	9.89E-07
53	367727	758067	School	1.63E-01	3.47E-04	2.78E-03	1.11E-03	4.43E-02	3.41E-05	3.26E-01	5.93E-03	6.65E-04	2.37E-08	3.27E-02	2.52E-06	1.29E-03	6.12E-08	3.26E-02	8.82E-07
54	367716	758146	School	1.43E-01	3.03E-04	2.44E-03	9.75E-04	3.88E-02	2.99E-05	2.85E-01	5.19E-03	5.82E-04	2.08E-08	2.86E-02	2.20E-06	1.13E-03	5.36E-08	2.86E-02	7.72E-07
56	367723	758254	School	1.32E-01	2.80E-04	2.25E-03	9.01E-04	3.58E-02	2.76E-05	2.64E-01	4.79E-03	5.37E-04	1.92E-08	2.65E-02	2.04E-06	1.04E-03	4.95E-08	2.64E-02	7.13E-07
57	367784	758221	School	1.39E-01	2.96E-04	2.38E-03	9.52E-04	3.79E-02	2.91E-05	2.79E-01	5.07E-03	5.68E-04	2.03E-08	2.80E-02	2.15E-06	1.10E-03	5.23E-08	2.79E-02	7.54E-07
58	367845	758189	School	1.47E-01	3.13E-04	2.51E-03	1.01E-03	4.00E-02	3.08E-05	2.94E-01	5.35E-03	6.00E-04	2.14E-08	2.95E-02	2.27E-06	1.16E-03	5.52E-08	2.95E-02	7.96E-07
106	370247	758254	School	2.03E-01	4.32E-04	3.47E-03	1.39E-03	5.52E-02	4.25E-05	4.06E-01	7.39E-03	8.28E-04	2.96E-08	4.08E-02	3.14E-06	1.60E-03	7.62E-08	4.07E-02	1.10E-06
107	370250	758189	School	2.13E-01	4.53E-04	3.64E-03	1.46E-03	5.79E-02	4.46E-05	4.26E-01	7.74E-03	8.68E-04	3.10E-08	4.28E-02	3.29E-06	1.68E-03	8.00E-08	4.26E-02	1.15E-06
108	370308	758196	School	2.05E-01	4.36E-04	3.50E-03	1.40E-03	5.58E-02	4.29E-05	4.10E-01	7.46E-03	8.36E-04	2.99E-08	4.12E-02	3.17E-06	1.62E-03	7.70E-08	4.11E-02	1.11E-06
109	370361	758236	School	1.94E-01	4.12E-04	3.31E-03	1.32E-03	5.27E-02	4.05E-05	3.87E-01	7.04E-03	7.90E-04	2.82E-08	3.89E-02	2.99E-06	1.53E-03	7.27E-08	3.88E-02	1.05E-06
110	370415	758275	School	1.86E-01	3.96E-04	3.18E-03	1.27E-03	5.06E-02	3.90E-05	3.72E-01	6.77E-03	7.59E-04	2.71E-08	3.74E-02	2.88E-06	1.47E-03	6.99E-08	3.73E-02	1.01E-06
202	372807	757781	School	7.69E-02	1.64E-04	1.31E-03	5.26E-04	2.09E-02	1.61E-05	1.54E-01	2.80E-03	3.14E-04	1.12E-08	1.55E-02	1.19E-06	6.07E-04	2.89E-08	1.54E-02	4.16E-07
203	372901	757782	School	7.39E-02	1.57E-04	1.26E-03	5.06E-04	2.01E-02	1.55E-05	1.48E-01	2.69E-03	3.02E-04	1.08E-08	1.49E-02	1.14E-06	5.83E-04	2.78E-08	1.48E-02	4.00E-07

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	xylene, total (µg/m^3)	xylene, total Acute Hazard	arsenic (µg/m^3)	arsenic Acute Hazard	chlorine (µg/m^3)	chlorine Acute Hazard	copper (µg/m^3)	copper Acute Hazard	manganese (µg/m^3)	manganese Acute Hazard	mercury (µg/m^3)	mercury Acute Hazard	nickel (µg/m^3)	nickel Acute Hazard	vanadium (µg/m^3)	vanadium Acute Hazard	sulfates (µg/m^3)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.17		0.6		6		30		120
117	370814	758243	Offsite Worker	2.45E-02	1.12E-06	2.14E-04	1.07E-03	3.79E-02	1.80E-04	1.23E-03	1.23E-05	1.02E-02	1.71E-02	1.84E-04	3.06E-04	6.80E-04	1.13E-04	2.95E-03	9.83E-05	5.58E-02	4.65E-04
118	370810	758153	Offsite Worker	2.49E-02	1.13E-06	2.20E-04	1.10E-03	3.88E-02	1.85E-04	1.26E-03	1.26E-05	1.05E-02	1.75E-02	1.88E-04	3.13E-04	6.96E-04	1.16E-04	3.02E-03	1.01E-04	5.72E-02	4.76E-04
119	370807	758063	Offsite Worker	2.50E-02	1.14E-06	2.22E-04	1.11E-03	3.93E-02	1.87E-04	1.28E-03	1.28E-05	1.06E-02	1.77E-02	1.91E-04	3.18E-04	7.05E-04	1.17E-04	3.06E-03	1.02E-04	5.80E-02	4.83E-04
120	370803	757974	Offsite Worker	2.76E-02	1.26E-06	2.31E-04	1.16E-03	4.08E-02	1.94E-04	1.33E-03	1.33E-05	1.10E-02	1.84E-02	1.98E-04	3.30E-04	7.33E-04	1.22E-04	3.18E-03	1.06E-04	6.03E-02	5.02E-04
121	370835	757927	Offsite Worker	2.80E-02	1.27E-06	2.42E-04	1.21E-03	4.27E-02	2.03E-04	1.39E-03	1.39E-05	1.15E-02	1.92E-02	2.07E-04	3.45E-04	7.66E-04	1.28E-04	3.32E-03	1.11E-04	6.29E-02	5.24E-04
122	370868	757880	Offsite Worker	2.76E-02	1.25E-06	2.40E-04	1.20E-03	4.23E-02	2.01E-04	1.38E-03	1.38E-05	1.14E-02	1.91E-02	2.05E-04	3.42E-04	7.59E-04	1.27E-04	3.30E-03	1.10E-04	6.24E-02	5.20E-04
123	370921	757884	Offsite Worker	2.61E-02	1.19E-06	2.32E-04	1.16E-03	4.10E-02	1.95E-04	1.33E-03	1.33E-05	1.11E-02	1.85E-02	1.99E-04	3.31E-04	7.35E-04	1.23E-04	3.19E-03	1.06E-04	6.04E-02	5.03E-04
124	370975	757887	Offsite Worker	2.45E-02	1.11E-06	2.25E-04	1.13E-03	3.98E-02	1.89E-04	1.29E-03	1.29E-05	1.07E-02	1.79E-02	1.93E-04	3.22E-04	7.14E-04	1.19E-04	3.10E-03	1.03E-04	5.86E-02	4.89E-04
125	370975	757794	Offsite Worker	2.55E-02	1.16E-06	2.37E-04	1.19E-03	4.19E-02	2.00E-04	1.36E-03	1.36E-05	1.13E-02	1.89E-02	2.03E-04	3.39E-04	7.52E-04	1.25E-04	3.26E-03	1.09E-04	6.18E-02	5.15E-04
126	371026	757794	Offsite Worker	2.52E-02	1.15E-06	2.31E-04	1.15E-03	4.08E-02	1.94E-04	1.33E-03	1.33E-05	1.10E-02	1.84E-02	1.98E-04	3.30E-04	7.32E-04	1.22E-04	3.18E-03	1.06E-04	6.02E-02	5.01E-04
127	371076	757877	Offsite Worker	2.29E-02	1.04E-06	2.16E-04	1.08E-03	3.82E-02	1.82E-04	1.24E-03	1.24E-05	1.03E-02	1.72E-02	1.85E-04	3.09E-04	6.85E-04	1.14E-04	2.97E-03	9.91E-05	5.63E-02	4.69E-04
128	371126	757959	Offsite Worker	2.16E-02	9.82E-07	2.01E-04	1.01E-03	3.56E-02	1.69E-04	1.16E-03	1.16E-05	9.61E-03	1.60E-02	1.73E-04	2.88E-04	6.38E-04	1.06E-04	2.77E-03	9.23E-05	5.24E-02	4.37E-04
129	371119	758031	Offsite Worker	2.23E-02	1.02E-06	2.00E-04	1.00E-03	3.54E-02	1.68E-04	1.15E-03	1.15E-05	9.56E-03	1.59E-02	1.71E-04	2.86E-04	6.34E-04	1.06E-04	2.75E-03	9.18E-05	5.21E-02	4.34E-04
143	371953	757977	Offsite Worker	1.59E-02	7.24E-07	1.36E-04	6.79E-04	2.40E-02	1.14E-04	7.80E-04	7.80E-06	6.48E-03	1.08E-02	1.16E-04	1.94E-04	4.30E-04	7.17E-05	1.87E-03	6.22E-05	3.53E-02	2.94E-04
144	371948	757880	Offsite Worker	1.65E-02	7.49E-07	1.45E-04	7.27E-04	2.57E-02	1.22E-04	8.36E-04	8.36E-06	6.95E-03	1.16E-02	1.25E-04	2.08E-04	4.61E-04	7.69E-05	2.00E-03	6.67E-05	3.78E-02	3.15E-04
145	371943	757783	Offsite Worker	1.67E-02	7.61E-07	1.37E-04	6.84E-04	2.41E-02	1.15E-04	7.86E-04	7.86E-06	6.53E-03	1.09E-02	1.17E-04	1.95E-04	4.33E-04	7.22E-05	1.88E-03	6.27E-05	3.56E-02	2.97E-04
146	372016	757794	Offsite Worker	1.60E-02	7.29E-07	1.28E-04	6.42E-04	2.27E-02	1.08E-04	7.38E-04	7.38E-06	6.13E-03	1.02E-02	1.10E-04	1.84E-04	4.07E-04	6.78E-05	1.77E-03	5.89E-05	3.35E-02	2.79E-04
147	372102	757791	Offsite Worker	1.51E-02	6.87E-07	1.15E-04	5.76E-04	2.03E-02	9.68E-05	6.62E-04	6.62E-06	5.49E-03	9.16E-03	9.88E-05	1.65E-04	3.65E-04	6.08E-05	1.58E-03	5.28E-05	3.01E-02	2.51E-04
148	372178	757760	Offsite Worker	1.39E-02	6.32E-07	1.13E-04	5.65E-04	2.00E-02	9.51E-05	6.50E-04	6.50E-06	5.40E-03	8.99E-03	9.68E-05	1.61E-04	3.58E-04	5.97E-05	1.56E-03	5.18E-05	2.94E-02	2.45E-04
149	372177	757670	Offsite Worker	1.43E-02	6.49E-07	1.16E-04	5.81E-04	2.05E-02	9.77E-05	6.67E-04	6.67E-06	5.55E-03	9.24E-03	9.94E-05	1.66E-04	3.68E-04	6.13E-05	1.60E-03	5.33E-05	3.02E-02	2.51E-04
150	372176	757579	Offsite Worker	1.43E-02	6.49E-07	1.23E-04	6.15E-04	2.17E-02	1.03E-04	7.07E-04	7.07E-06	5.87E-03	9.78E-03	1.05E-04	1.75E-04	3.90E-04	6.50E-05	1.69E-03	5.64E-05	3.19E-02	2.66E-04
151	372174	757489	Offsite Worker	1.42E-02	6.44E-07	1.24E-04	6.20E-04	2.19E-02	1.04E-04	7.13E-04	7.13E-06	5.92E-03	9.87E-03	1.06E-04	1.77E-04	3.93E-04	6.55E-05	1.71E-03	5.69E-05	3.23E-02	2.69E-04
152	372173	757398	Offsite Worker	1.44E-02	6.55E-07	1.33E-04	6.67E-04	2.36E-02	1.12E-04	7.67E-04	7.67E-06	6.37E-03	1.06E-02	1.14E-04	1.91E-04	4.23E-04	7.05E-05	1.83E-03	6.12E-05	3.47E-02	2.90E-04
153	372171	757308	Offsite Worker	1.46E-02	6.64E-07	1.41E-04	7.03E-04	2.48E-02	1.18E-04	8.08E-04	8.08E-06	6.71E-03	1.12E-02	1.20E-04	2.01E-04	4.46E-04	7.43E-05	1.93E-03	6.45E-05	3.65E-02	3.05E-04
154	372055	757309	Offsite Worker	1.55E-02	7.03E-07	1.48E-04	7.42E-04	2.62E-02	1.25E-04	8.53E-04	8.53E-06	7.08E-03	1.18E-02	1.27E-04	2.12E-04	4.70E-04	7.84E-05	2.04E-03	6.80E-05	3.86E-02	3.22E-04
156	372055	757416	Offsite Worker	1.52E-02	6.89E-07	1.31E-04	6.57E-04	2.32E-02	1.10E-04	7.55E-04	7.55E-06	6.27E-03	1.04E-02	1.13E-04	1.88E-04	4.16E-04	6.94E-05	1.81E-03	6.02E-05	3.43E-02	2.86E-04
157	371952	757442	Offsite Worker	1.58E-02	7.19E-07	1.38E-04	6.91E-04	2.44E-02	1.16E-04	7.95E-04	7.95E-06	6.60E-03	1.10E-02	1.18E-04	1.97E-04	4.38E-04	7.31E-05	1.90E-03	6.34E-05	3.60E-02	3.00E-04
158	371950	757345	Offsite Worker	1.62E-02	7.34E-07	1.50E-04	7.51E-04	2.65E-02	1.26E-04	8.63E-04	8.63E-06	7.17E-03	1.20E-02	1.29E-04	2.15E-04	4.76E-04	7.94E-05	2.07E-03	6.89E-05	3.91E-02	3.26E-04
159	371864	757344	Offsite Worker	1.68E-02	7.64E-07	1.53E-04	7.67E-04	2.71E-02	1.29E-04	8.82E-04	8.82E-06	7.33E-03	1.22E-02	1.32E-04	2.19E-04	4.86E-04	8.11E-05	2.11E-03	7.04E-05	4.00E-02	3.33E-04
160	371790	757347	Offsite Worker	1.75E-02	7.93E-07	1.55E-04	7.73E-04	2.73E-02	1.30E-04	8.89E-04	8.89E-06	7.38E-03	1.23E-02	1.33E-04	2.21E-04	4.90E-04	8.17E-05	2.13E-03	7.09E-05	4.04E-02	3.36E-04
161	371708	757356	Offsite Worker	1.82E-02	8.28E-07	1.55E-04	7.75E-04	2.74E-02	1.30E-04	8.91E-04	8.91E-06	7.40E-03	1.23E-02	1.33E-04	2.22E-04	4.91E-04	8.19E-05	2.13E-03	7.11E-05	4.05E-02	3.37E-04
162	371615	757356	Offsite Worker	1.91E-02	8.70E-07	1.65E-04	8.26E-04	2.92E-02	1.39E-04	9.49E-04	9.49E-06	7.88E-03	1.31E-02	1.42E-04	2.36E-04	5.23E-04	8.72E-05	2.27E-03	7.57E-05	4.31E-02	3.59E-04
163	371523	757356	Offsite Worker	2.01E-02	9.13E-07	1.75E-04	8.75E-04	3.09E-02	1.47E-04	1.01E-03	1.01E-05	8.36E-03	1.39E-02	1.50E-04	2.50E-04	5.55E-04	9.25E-05	2.41E-03	8.03E-05	4.56E-02	3.80E-04
164	371430	757356	Offsite Worker	2.15E-02	9.78E-07	1.85E-04	9.24E-04	3.26E-02	1.55E-04	1.06E-03	1.06E-05	8.82E-03	1.47E-02	1.58E-04	2.64E-04	5.85E-04	9.76E-05	2.54E-03	8.47E-05	4.80E-02	4.00E-04
165	371338	757356	Offsite Worker	2.30E-02	1.05E-06	1.94E-04	9.68E-04	3.42E-02	1.63E-04	1.11E-03	1.11E-05	9.24E-03	1.54E-02	1.66E-04	2.76E-04	6.14E-04	1.02E-04	2.66E-03	8.88E-05	5.04E-02	4.20E-04
166	371245	757356	Offsite Worker	2.46E-02	1.12E-06	2.02E-04	1.01E-03	3.56E-02	1.70E-04	1.16E-03	1.16E-05	9.62E-03	1.60E-02	1.73E-04	2.88E-04	6.39E-04	1.06E-04	2.77E-03	9.24E-05	5.25E-02	4.37E-04
167	371153	757356	Offsite Worker	2.62E-02	1.19E-06	2.08E-04	1.04E-03	3.67E-02	1.75E-04	1.20E-03	1.20E-05	9.93E-03	1.65E-02	1.78E-04	2.97E-04	6.59E-04	1.10E-04	2.86E-03	9.54E-05	5.42E-02	4.51E-04
168	371061	757356	Offsite Worker	2.79E-02	1.27E-06	2.22E-04	1.11E-03	3.91E-02	1.86E-04	1.27E-03	1.27E-05	1.06E-02	1.76E-02	1.90E-04	3.16E-04	7.02E-04	1.17E-04	3.05E-03	1.02E-04	5.77E-02	4.81E-04
169	371005	757357	Offsite Worker	2.91E-02	1.32E-06	2.29E-04	1.15E-03	4.05E-02	1.93E-04	1.32E-03	1.32E-05	1.09E-02	1.82E-02	1.97E-04	3.28E-04	7.27E-04	1.21E-04	3.15E-03	1.05E-04	5.98E-02	4.98E-04
170	370998	757293	Offsite Worker	2.96E-02	1.35E-06	2.39E-04	1.20E-03	4.23E-02	2.01E-04	1.38E-03	1.38E-05	1.14E-02	1.90E-02	2.05E-04	3.42E-04	7.59E-04	1.26E-04	3.29E-03	1.10E-04	6.23E-02	5.20E-04
171	370998	757194	Offsite Worker	2.96E-02	1.35E-06	2.50E-04	1.25E-03	4.42E-02	2.10E-04	1.44E-03	1.44E-05	1.19E-02	1.99E-02	2.15E-04	3.58E-04	7.93E-04	1.32E-04	3.44E-03	1.15E-04	6.55E-02	5.45E-04
172	370998	757096	Offsite Worker	3.02E-02	1.37E-06	2.74E-04	1.37E-03	4.85E-02	2.31E-04	1.58E-03	1.58E-05	1.31E-02	2.18E-02	2.35E-04	3.92E-04	8.70E-04	1.45E-04	3.77E-03	1.26E-04	7.16E-02	5.96E-04
173	370998	756998	Offsite Worker	3.08E-02	1.40E-06	2.61E-04	1.31E-03	4.61E-02	2.20E-04	1.50E-03	1.50E-05	1.25E-02	2.08E-02	2.24E-04	3.73E-04	8.28E-04	1.38E-04	3.59E-03	1.20E-04	6.79E-02	5.66E-04
174	371057	756997	Offsite Worker	2.93E-02	1.33E-06	2.51E-04	1.26E-03	4.43E-02	2.11E-04	1.44E-03	1.44E-05	1.20E-02	2.00E-02	2.15E-04	3.58E-04	7.96E-04	1.33E-04	3.45E-03	1.15E-04	6.53E-02	5.44E-04
175	371153	756997	Offsite Worker	2.72E-02	1.24E-06	2.35E-04	1.18E-03	4.16E-02	1.98E-04	1.35E-03	1.35E-05	1.12E-02	1.87E-02	2.01E-04	3.36E-04	7.46E-04	1.24E-04	3.24E-03	1.08E-04	6.12E-02	5.10E-04
176	371249	756997	Offsite Worker	2.54E-02	1.15E-06	2.21E-04	1.10E-03	3.90E-02	1.86E-04	1.27E-03	1.27E-05	1.05E-02	1.76E-02	1.89E-04	3.15E-04	7.00E-04	1.17E-04	3.04E-03	1.01E-04	5.74E-02	4.78E-04
177	371345	756997	Offsite Worker	2.37E-02	1.08E-06	2.08E-04	1.04E-03	3.67E-02	1.75E-04	1.19E-03	1.19E-05	9.92E-03	1.65E-02	1.78E-04	2.96E-04	6.59E-04	1.10E-04	2.86E-03	9.53E-05	5.40E-02	4.50E-04
178	371440	756997	Offsite Worker	2.22E-02	1.01E-06	1.96E-04	9.80E-04	3.46E-02	1.65E-04	1.13E-03	1.13E-05	9.35E-03	1.56E-02	1.68E-04	2.79E-04	6.21E-04	1.03E-04	2.70E-03	8.98E-05	5.09E-02	4.24E-04
179	371536	756997	Offsite Worker	2.08E-02	9.46E-07	1.85E-04	9.24E-04	3.26E-02	1.55E-04	1.06E-03	1.06E-05	8.82E-03	1.47E-02	1.58E-04	2.64E-04	5.86E-04	9.76E-05	2.54E-03	8.48E-05	4.80E-02	4.00E-04
180	371632	756997	Offsite Worker	1.96E-02	8.90E-07	1.75E-04	8.73E-04	3.08E-02	1.47E-04	1.00E-03	1.00E-05	8.34E-03	1.39E-02	1.49E-04	2.49E-04	5.53E-04	9.22E-05	2.40E-03	8.01E-05	4.53E-02	3.78E-04
181	371728	756997	Offsite Worker	1.85E-02	8.41E-07	1.65E-04	8.26E-04	2.92E-02	1.39E-04	9.49E-04	9.49E-06	7.89E-03	1.31E-02	1.41E-04	2.36E-04	5.24E-04	8.73E-05	2.27E-03	7.58E-05	4.29E-02	3.57E-04
182	371824	756997	Offsite Worker	1.76E-02	7.99E-07	1.57E-04	7.83E-04	2.76E-02	1.32E-04	8.99E-04	8.99E-06	7.47E-03	1.25E-02	1.34E-04	2.23E-04	4.96E-04	8.27E-05	2.15E-03	7.18E-05	4.06E-02	3.38E-04

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	xylene, total (µg/m^3)	xylene, total Acute Hazard	arsenic (µg/m^3)	arsenic Acute Hazard	chlorine (µg/m^3)	chlorine Acute Hazard	copper (µg/m^3)	copper Acute Hazard	manganese (µg/m^3)	manganese Acute Hazard	mercury (µg/m^3)	mercury Acute Hazard	nickel (µg/m^3)	nickel Acute Hazard	vanadium (µg/m^3)	vanadium Acute Hazard	sulfates (µg/m^3)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.17		0.6		6		30		120
183	371920	756997	Offsite Worker	1.67E-02	7.61E-07	1.48E-04	7.42E-04	2.62E-02	1.25E-04	8.53E-04	8.53E-06	7.09E-03	1.18E-02	1.27E-04	2.12E-04	4.71E-04	7.84E-05	2.04E-03	6.81E-05	3.85E-02	3.21E-04
184	372016	756997	Offsite Worker	1.60E-02	7.25E-07	1.41E-04	7.05E-04	2.49E-02	1.19E-04	8.10E-04	8.10E-06	6.73E-03	1.12E-02	1.21E-04	2.01E-04	4.47E-04	7.45E-05	1.94E-03	6.47E-05	3.66E-02	3.05E-04
185	372111	756997	Offsite Worker	1.52E-02	6.93E-07	1.34E-04	6.71E-04	2.37E-02	1.13E-04	7.71E-04	7.71E-06	6.40E-03	1.07E-02	1.15E-04	1.91E-04	4.25E-04	7.08E-05	1.85E-03	6.15E-05	3.48E-02	2.90E-04
186	372207	756997	Offsite Worker	1.46E-02	6.62E-07	1.28E-04	6.38E-04	2.25E-02	1.07E-04	7.34E-04	7.34E-06	6.09E-03	1.02E-02	1.09E-04	1.82E-04	4.05E-04	6.74E-05	1.76E-03	5.85E-05	3.31E-02	2.76E-04
187	372303	756997	Offsite Worker	1.39E-02	6.34E-07	1.22E-04	6.08E-04	2.15E-02	1.02E-04	6.99E-04	6.99E-06	5.81E-03	9.68E-03	1.04E-04	1.73E-04	3.85E-04	6.42E-05	1.67E-03	5.58E-05	3.16E-02	2.63E-04
188	372399	756997	Offsite Worker	1.34E-02	6.08E-07	1.16E-04	5.80E-04	2.05E-02	9.76E-05	6.67E-04	6.67E-06	5.54E-03	9.23E-03	9.92E-05	1.65E-04	3.68E-04	6.13E-05	1.60E-03	5.32E-05	3.01E-02	2.51E-04
189	372495	756997	Offsite Worker	1.28E-02	5.83E-07	1.11E-04	5.54E-04	1.96E-02	9.31E-05	6.36E-04	6.36E-06	5.29E-03	8.81E-03	9.47E-05	1.58E-04	3.51E-04	5.85E-05	1.52E-03	5.08E-05	2.87E-02	2.40E-04
190	372591	756997	Offsite Worker	1.23E-02	5.60E-07	1.06E-04	5.29E-04	1.87E-02	8.90E-05	6.08E-04	6.08E-06	5.05E-03	8.42E-03	9.05E-05	1.51E-04	3.35E-04	5.59E-05	1.46E-03	4.85E-05	2.75E-02	2.29E-04
191	372610	757063	Offsite Worker	1.20E-02	5.45E-07	1.10E-04	5.48E-04	1.94E-02	9.23E-05	6.30E-04	6.30E-06	5.24E-03	8.73E-03	9.38E-05	1.56E-04	3.48E-04	5.79E-05	1.51E-03	5.03E-05	2.84E-02	2.37E-04
192	372612	757132	Offsite Worker	1.22E-02	5.56E-07	1.10E-04	5.51E-04	1.95E-02	9.26E-05	6.33E-04	6.33E-06	5.26E-03	8.77E-03	9.42E-05	1.57E-04	3.49E-04	5.82E-05	1.52E-03	5.05E-05	2.86E-02	2.38E-04
193	372614	757201	Offsite Worker	1.22E-02	5.56E-07	1.06E-04	5.30E-04	1.87E-02	8.92E-05	6.09E-04	6.09E-06	5.06E-03	8.44E-03	9.07E-05	1.51E-04	3.36E-04	5.60E-05	1.46E-03	4.86E-05	2.75E-02	2.29E-04
194	372616	757270	Offsite Worker	1.21E-02	5.50E-07	1.03E-04	5.16E-04	1.82E-02	8.68E-05	5.93E-04	5.93E-06	4.93E-03	8.21E-03	8.85E-05	1.47E-04	3.27E-04	5.45E-05	1.42E-03	4.73E-05	2.69E-02	2.24E-04
195	372627	757351	Offsite Worker	1.20E-02	5.44E-07	1.14E-04	5.69E-04	2.01E-02	9.58E-05	6.55E-04	6.55E-06	5.44E-03	9.06E-03	9.75E-05	1.63E-04	3.61E-04	6.02E-05	1.57E-03	5.22E-05	2.96E-02	2.47E-04
196	372651	757422	Offsite Worker	1.18E-02	5.36E-07	1.15E-04	5.73E-04	2.02E-02	9.63E-05	6.58E-04	6.58E-06	5.47E-03	9.12E-03	9.81E-05	1.63E-04	3.63E-04	6.05E-05	1.58E-03	5.25E-05	2.98E-02	2.48E-04
197	372676	757494	Offsite Worker	1.15E-02	5.24E-07	1.08E-04	5.40E-04	1.91E-02	9.08E-05	6.20E-04	6.20E-06	5.15E-03	8.59E-03	9.25E-05	1.54E-04	3.42E-04	5.70E-05	1.49E-03	4.95E-05	2.81E-02	2.34E-04
198	372704	757569	Offsite Worker	1.13E-02	5.13E-07	9.66E-05	4.83E-04	1.71E-02	8.12E-05	5.55E-04	5.55E-06	4.61E-03	7.68E-03	8.28E-05	1.38E-04	3.06E-04	5.10E-05	1.33E-03	4.43E-05	2.52E-02	2.10E-04
199	372733	757645	Offsite Worker	1.10E-02	4.99E-07	9.84E-05	4.92E-04	1.74E-02	8.28E-05	5.66E-04	5.66E-06	4.70E-03	7.83E-03	8.42E-05	1.40E-04	3.12E-04	5.20E-05	1.35E-03	4.51E-05	2.55E-02	2.13E-04
200	372746	757702	Offsite Worker	1.10E-02	5.02E-07	9.76E-05	4.88E-04	1.72E-02	8.21E-05	5.61E-04	5.61E-06	4.66E-03	7.77E-03	8.35E-05	1.39E-04	3.09E-04	5.16E-05	1.34E-03	4.48E-05	2.53E-02	2.11E-04
201	372746	757768	Offsite Worker	1.12E-02	5.07E-07	9.43E-05	4.72E-04	1.67E-02	7.93E-05	5.42E-04	5.42E-06	4.50E-03	7.50E-03	8.07E-05	1.35E-04	2.99E-04	4.98E-05	1.30E-03	4.32E-05	2.45E-02	2.04E-04
204	372994	757783	Offsite Worker	1.01E-02	4.57E-07	8.85E-05	4.42E-04	1.56E-02	7.44E-05	5.09E-04	5.09E-06	4.22E-03	7.04E-03	7.57E-05	1.26E-04	2.80E-04	4.67E-05	1.22E-03	4.06E-05	2.30E-02	1.91E-04
205	373087	757783	Offsite Worker	9.66E-03	4.39E-07	8.62E-05	4.31E-04	1.52E-02	7.25E-05	4.95E-04	4.95E-06	4.12E-03	6.86E-03	7.37E-05	1.23E-04	2.73E-04	4.55E-05	1.19E-03	3.95E-05	2.24E-02	1.86E-04
206	373180	757784	Offsite Worker	9.27E-03	4.21E-07	8.37E-05	4.18E-04	1.48E-02	7.04E-05	4.81E-04	4.81E-06	3.99E-03	6.66E-03	7.16E-05	1.19E-04	2.65E-04	4.42E-05	1.15E-03	3.84E-05	2.17E-02	1.81E-04
207	373274	757785	Offsite Worker	8.91E-03	4.05E-07	8.10E-05	4.05E-04	1.43E-02	6.81E-05	4.65E-04	4.65E-06	3.87E-03	6.44E-03	6.92E-05	1.15E-04	2.57E-04	4.28E-05	1.11E-03	3.71E-05	2.10E-02	1.75E-04
208	373367	757786	Offsite Worker	8.68E-03	3.95E-07	7.82E-05	3.91E-04	1.38E-02	6.57E-05	4.49E-04	4.49E-06	3.73E-03	6.22E-03	6.69E-05	1.11E-04	2.48E-04	4.13E-05	1.08E-03	3.58E-05	2.03E-02	1.69E-04
209	373418	757742	Offsite Worker	8.64E-03	3.93E-07	7.51E-05	3.75E-04	1.33E-02	6.31E-05	4.31E-04	4.31E-06	3.58E-03	5.97E-03	6.43E-05	1.07E-04	2.38E-04	3.97E-05	1.03E-03	3.44E-05	1.96E-02	1.63E-04
210	373418	757653	Offsite Worker	8.71E-03	3.96E-07	8.13E-05	4.06E-04	1.43E-02	6.83E-05	4.67E-04	4.67E-06	3.88E-03	6.46E-03	6.96E-05	1.16E-04	2.58E-04	4.29E-05	1.12E-03	3.73E-05	2.11E-02	1.76E-04
211	373419	757564	Offsite Worker	8.85E-03	4.02E-07	8.69E-05	4.35E-04	1.53E-02	7.31E-05	4.99E-04	4.99E-06	4.15E-03	6.92E-03	7.44E-05	1.24E-04	2.75E-04	4.59E-05	1.20E-03	3.99E-05	2.26E-02	1.88E-04
212	373419	757475	Offsite Worker	8.89E-03	4.04E-07	8.51E-05	4.26E-04	1.50E-02	7.16E-05	4.89E-04	4.89E-06	4.06E-03	6.77E-03	7.29E-05	1.21E-04	2.70E-04	4.50E-05	1.17E-03	3.90E-05	2.21E-02	1.84E-04
213	373420	757386	Offsite Worker	8.96E-03	4.07E-07	7.62E-05	3.81E-04	1.35E-02	6.41E-05	4.38E-04	4.38E-06	3.64E-03	6.06E-03	6.53E-05	1.09E-04	2.42E-04	4.03E-05	1.05E-03	3.49E-05	1.99E-02	1.66E-04
214	373420	757297	Offsite Worker	9.03E-03	4.11E-07	7.86E-05	3.93E-04	1.39E-02	6.61E-05	4.52E-04	4.52E-06	3.75E-03	6.26E-03	6.73E-05	1.12E-04	2.49E-04	4.15E-05	1.08E-03	3.61E-05	2.04E-02	1.70E-04
215	373421	757207	Offsite Worker	9.02E-03	4.10E-07	8.22E-05	4.11E-04	1.45E-02	6.92E-05	4.73E-04	4.73E-06	3.93E-03	6.54E-03	7.03E-05	1.17E-04	2.61E-04	4.34E-05	1.13E-03	3.77E-05	2.13E-02	1.78E-04
216	373421	757118	Offsite Worker	8.81E-03	4.01E-07	8.15E-05	4.08E-04	1.44E-02	6.86E-05	4.68E-04	4.68E-06	3.89E-03	6.49E-03	6.97E-05	1.16E-04	2.58E-04	4.31E-05	1.12E-03	3.74E-05	2.11E-02	1.76E-04
217	373292	757117	Offsite Worker	9.24E-03	4.20E-07	8.54E-05	4.27E-04	1.51E-02	7.18E-05	4.91E-04	4.91E-06	4.08E-03	6.79E-03	7.30E-05	1.22E-04	2.71E-04	4.51E-05	1.17E-03	3.92E-05	2.21E-02	1.84E-04
218	373213	757118	Offsite Worker	9.53E-03	4.33E-07	8.79E-05	4.40E-04	1.55E-02	7.39E-05	5.05E-04	5.05E-06	4.20E-03	7.00E-03	7.51E-05	1.25E-04	2.79E-04	4.64E-05	1.21E-03	4.03E-05	2.28E-02	1.90E-04
219	373158	757066	Offsite Worker	9.79E-03	4.45E-07	8.76E-05	4.38E-04	1.55E-02	7.37E-05	5.03E-04	5.03E-06	4.18E-03	6.97E-03	7.49E-05	1.25E-04	2.78E-04	4.63E-05	1.21E-03	4.02E-05	2.27E-02	1.89E-04
220	373084	757026	Offsite Worker	1.01E-02	4.61E-07	8.75E-05	4.37E-04	1.55E-02	7.36E-05	5.03E-04	5.03E-06	4.18E-03	6.96E-03	7.48E-05	1.25E-04	2.77E-04	4.62E-05	1.20E-03	4.01E-05	2.27E-02	1.89E-04
221	373009	757011	Offsite Worker	1.05E-02	4.75E-07	8.90E-05	4.45E-04	1.57E-02	7.49E-05	5.12E-04	5.12E-06	4.25E-03	7.08E-03	7.62E-05	1.27E-04	2.82E-04	4.70E-05	1.22E-03	4.08E-05	2.31E-02	1.93E-04
222	372922	757009	Offsite Worker	1.08E-02	4.91E-07	9.22E-05	4.61E-04	1.63E-02	7.76E-05	5.30E-04	5.30E-06	4.40E-03	7.34E-03	7.89E-05	1.32E-04	2.92E-04	4.87E-05	1.27E-03	4.23E-05	2.39E-02	1.99E-04
223	372835	757007	Offsite Worker	1.12E-02	5.07E-07	9.56E-05	4.78E-04	1.69E-02	8.04E-05	5.49E-04	5.49E-06	4.57E-03	7.61E-03	8.18E-05	1.36E-04	3.03E-04	5.05E-05	1.32E-03	4.38E-05	2.48E-02	2.07E-04
224	372747	757006	Offsite Worker	1.16E-02	5.25E-07	9.94E-05	4.97E-04	1.75E-02	8.36E-05	5.71E-04	5.71E-06	4.74E-03	7.91E-03	8.50E-05	1.42E-04	3.15E-04	5.25E-05	1.37E-03	4.56E-05	2.58E-02	2.15E-04
225	372660	757004	Offsite Worker	1.20E-02	5.44E-07	1.03E-04	5.16E-04	1.82E-02	8.68E-05	5.93E-04	5.93E-06	4.93E-03	8.21E-03	8.83E-05	1.47E-04	3.27E-04	5.45E-05	1.42E-03	4.73E-05	2.68E-02	2.23E-04
226	372651	757063	Offsite Worker	1.18E-02	5.36E-07	1.08E-04	5.39E-04	1.90E-02	9.06E-05	6.19E-04	6.19E-06	5.15E-03	8.58E-03	9.21E-05	1.54E-04	3.42E-04	5.69E-05	1.48E-03	4.94E-05	2.79E-02	2.33E-04
227	372629	756931	Offsite Worker	1.23E-02	5.60E-07	1.01E-04	5.07E-04	1.79E-02	8.53E-05	5.83E-04	5.83E-06	4.84E-03	8.07E-03	8.67E-05	1.45E-04	3.21E-04	5.36E-05	1.39E-03	4.65E-05	2.63E-02	2.19E-04
228	372631	756857	Offsite Worker	1.24E-02	5.62E-07	1.01E-04	5.03E-04	1.78E-02	8.46E-05	5.78E-04	5.78E-06	4.80E-03	8.00E-03	8.60E-05	1.43E-04	3.19E-04	5.31E-05	1.38E-03	4.61E-05	2.61E-02	2.18E-04
229	372634	756783	Offsite Worker	1.23E-02	5.59E-07	1.01E-04	5.03E-04	1.78E-02	8.45E-05	5.78E-04	5.78E-06	4.80E-03	8.00E-03	8.60E-05	1.43E-04	3.19E-04	5.31E-05	1.38E-03	4.61E-05	2.61E-02	2.17E-04
230	372702	756778	Offsite Worker	1.19E-02	5.43E-07	9.77E-05	4.88E-04	1.73E-02	8.22E-05	5.61E-04	5.61E-06	4.66E-03	7.77E-03	8.36E-05	1.39E-04	3.10E-04	5.16E-05	1.34E-03	4.48E-05	2.54E-02	2.11E-04
231	372756	756775	Offsite Worker	1.17E-02	5.31E-07	9.56E-05	4.78E-04	1.69E-02	8.04E-05	5.49E-04	5.49E-06	4.56E-03	7.60E-03	8.18E-05	1.36E-04	3.03E-04	5.05E-05	1.31E-03	4.38E-05	2.48E-02	2.07E-04
232	372729	756712	Offsite Worker	1.18E-02	5.36E-07	9.42E-05	4.71E-04	1.66E-02	7.92E-05	5.41E-04	5.41E-06	4.50E-03	7.50E-03	8.08E-05	1.35E-04	2.99E-04	4.98E-05	1.30E-03	4.32E-05	2.46E-02	2.05E-04
233	372703	756650	Offsite Worker	1.18E-02	5.37E-07	1.03E-04	5.17E-04	1.83E-02	8.69E-05	5.94E-04	5.94E-06	4.93E-03	8.22E-03	8.85E-05	1.47E-04	3.28E-04	5.46E-05	1.42E-03	4.74E-05	2.69E-02	2.24E-04
234	372677	756588	Offsite Worker	1.23E-02	5.60E-07	1.10E-04	5.50E-04	1.94E-02	9.24E-05	6.32E-04	6.32E-06	5.25E-03	8.75E-03	9.40E-05	1.57E-04	3.48E-04	5.81E-05	1.51E-03	5.04E-05	2.85E-02	2.38E-04
235	372619	756588	Offsite Worker	1.27E-02	5.77E-07	1.13E-04	5.64E-04	1.99E-02	9.48E-05	6.48E-04	6.48E-06	5.38E-03	8.97E-03	9.64E-05	1.61E-04	3.57E-04	5.95E-05	1.55E-03	5.17E-05	2.92E-02	2.44E-04
236	372622	756509	Offsite Worker	1.34E-02	6.11E-07	1.14E-04	5.70E-04	2.01E-02	9.58E-05	6.55E-04	6.55E-06	5.44E-03	9.07E-03	9.74E-05	1.62E-04	3.61E-04	6.02E-05	1.57E-03	5.23E-05	2.95E-02	2.46E-04

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	xylene, total (µg/m³)	xylene, total Acute Hazard	arsenic (µg/m³)	arsenic Acute Hazard	chlorine (µg/m³)	chlorine Acute Hazard	copper (µg/m³)	copper Acute Hazard	manganese (µg/m³)	manganese Acute Hazard	mercury (µg/m³)	mercury Acute Hazard	nickel (µg/m³)	nickel Acute Hazard	vanadium (µg/m³)	vanadium Acute Hazard	sulfates (µg/m³)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.17		0.6		6		30		120
237	372700	756511	Offsite Worker	1.29E-02	5.88E-07	1.11E-04	5.53E-04	1.95E-02	9.31E-05	6.36E-04	6.36E-06	5.28E-03	8.81E-03	9.46E-05	1.58E-04	3.51E-04	5.84E-05	1.52E-03	5.07E-05	2.87E-02	2.39E-04
238	372789	756510	Offsite Worker	1.24E-02	5.65E-07	1.07E-04	5.35E-04	1.89E-02	9.00E-05	6.15E-04	6.15E-06	5.11E-03	8.51E-03	9.15E-05	1.52E-04	3.39E-04	5.65E-05	1.47E-03	4.91E-05	2.77E-02	2.31E-04
239	372871	756509	Offsite Worker	1.20E-02	5.44E-07	1.04E-04	5.19E-04	1.83E-02	8.73E-05	5.96E-04	5.96E-06	4.95E-03	8.26E-03	8.87E-05	1.48E-04	3.29E-04	5.48E-05	1.43E-03	4.76E-05	2.69E-02	2.24E-04
240	372871	756437	Offsite Worker	1.23E-02	5.59E-07	1.02E-04	5.08E-04	1.79E-02	8.54E-05	5.84E-04	5.84E-06	4.85E-03	8.08E-03	8.69E-05	1.45E-04	3.22E-04	5.37E-05	1.40E-03	4.66E-05	2.63E-02	2.19E-04
241	372970	756437	Offsite Worker	1.18E-02	5.37E-07	9.85E-05	4.92E-04	1.74E-02	8.28E-05	5.66E-04	5.66E-06	4.70E-03	7.84E-03	8.42E-05	1.40E-04	3.12E-04	5.20E-05	1.35E-03	4.52E-05	2.55E-02	2.13E-04
242	373069	756437	Offsite Worker	1.13E-02	5.16E-07	9.54E-05	4.77E-04	1.69E-02	8.03E-05	5.48E-04	5.48E-06	4.56E-03	7.60E-03	8.16E-05	1.36E-04	3.02E-04	5.04E-05	1.31E-03	4.38E-05	2.47E-02	2.06E-04
243	373168	756437	Offsite Worker	1.09E-02	4.96E-07	9.25E-05	4.63E-04	1.63E-02	7.78E-05	5.32E-04	5.32E-06	4.42E-03	7.36E-03	7.91E-05	1.32E-04	2.93E-04	4.89E-05	1.27E-03	4.24E-05	2.40E-02	2.00E-04
244	373267	756437	Offsite Worker	1.05E-02	4.76E-07	8.97E-05	4.48E-04	1.58E-02	7.54E-05	5.15E-04	5.15E-06	4.28E-03	7.14E-03	7.67E-05	1.28E-04	2.84E-04	4.74E-05	1.23E-03	4.11E-05	2.32E-02	1.94E-04
245	373412	756437	Offsite Worker	9.90E-03	4.50E-07	8.57E-05	4.29E-04	1.51E-02	7.21E-05	4.93E-04	4.93E-06	4.09E-03	6.82E-03	7.33E-05	1.22E-04	2.72E-04	4.53E-05	1.18E-03	3.93E-05	2.22E-02	1.85E-04
246	373409	756339	Offsite Worker	1.01E-02	4.60E-07	8.17E-05	4.09E-04	1.44E-02	6.87E-05	4.70E-04	4.70E-06	3.90E-03	6.50E-03	6.99E-05	1.16E-04	2.59E-04	4.32E-05	1.12E-03	3.75E-05	2.12E-02	1.77E-04
247	373406	756240	Offsite Worker	9.82E-03	4.46E-07	7.30E-05	3.65E-04	1.29E-02	6.14E-05	4.19E-04	4.19E-06	3.48E-03	5.81E-03	6.25E-05	1.04E-04	2.31E-04	3.85E-05	1.00E-03	3.35E-05	1.90E-02	1.58E-04
248	373403	756142	Offsite Worker	9.10E-03	4.13E-07	7.25E-05	3.62E-04	1.28E-02	6.10E-05	4.17E-04	4.17E-06	3.46E-03	5.77E-03	6.20E-05	1.03E-04	2.30E-04	3.83E-05	9.97E-04	3.32E-05	1.88E-02	1.57E-04
249	373400	756042	Offsite Worker	8.36E-03	3.80E-07	7.21E-05	3.61E-04	1.27E-02	6.07E-05	4.14E-04	4.14E-06	3.44E-03	5.74E-03	6.17E-05	1.03E-04	2.29E-04	3.81E-05	9.92E-04	3.31E-05	1.87E-02	1.56E-04
250	373397	755944	Offsite Worker	8.51E-03	3.87E-07	6.88E-05	3.44E-04	1.22E-02	5.79E-05	3.95E-04	3.95E-06	3.28E-03	5.47E-03	5.89E-05	9.81E-05	2.18E-04	3.63E-05	9.47E-04	3.16E-05	1.79E-02	1.49E-04
251	373393	755846	Offsite Worker	8.63E-03	3.92E-07	6.18E-05	3.09E-04	1.09E-02	5.20E-05	3.55E-04	3.55E-06	2.95E-03	4.92E-03	5.29E-05	8.82E-05	1.96E-04	3.26E-05	8.50E-04	2.83E-05	1.61E-02	1.34E-04
252	373390	755747	Offsite Worker	8.48E-03	3.85E-07	5.46E-05	2.73E-04	9.64E-03	4.59E-05	3.14E-04	3.14E-06	2.60E-03	4.34E-03	4.68E-05	7.80E-05	1.73E-04	2.88E-05	7.51E-04	2.50E-05	1.42E-02	1.19E-04
253	373309	755744	Offsite Worker	8.64E-03	3.93E-07	5.50E-05	2.75E-04	9.72E-03	4.63E-05	3.16E-04	3.16E-06	2.63E-03	4.38E-03	4.72E-05	7.87E-05	1.74E-04	2.91E-05	7.57E-04	2.52E-05	1.44E-02	1.20E-04
254	373229	755743	Offsite Worker	8.80E-03	4.00E-07	5.55E-05	2.77E-04	9.79E-03	4.66E-05	3.19E-04	3.19E-06	2.65E-03	4.41E-03	4.76E-05	7.94E-05	1.76E-04	2.93E-05	7.63E-04	2.54E-05	1.45E-02	1.21E-04
255	373143	755741	Offsite Worker	8.95E-03	4.07E-07	5.57E-05	2.78E-04	9.83E-03	4.68E-05	3.20E-04	3.20E-06	2.66E-03	4.43E-03	4.78E-05	7.97E-05	1.77E-04	2.94E-05	7.66E-04	2.55E-05	1.46E-02	1.22E-04
256	373143	755823	Offsite Worker	9.29E-03	4.22E-07	6.00E-05	3.00E-04	1.06E-02	5.04E-05	3.45E-04	3.45E-06	2.86E-03	4.77E-03	5.15E-05	8.58E-05	1.90E-04	3.17E-05	8.25E-04	2.75E-05	1.57E-02	1.31E-04
257	373143	755906	Offsite Worker	9.43E-03	4.29E-07	6.78E-05	3.39E-04	1.20E-02	5.70E-05	3.89E-04	3.89E-06	3.23E-03	5.39E-03	5.81E-05	9.68E-05	2.15E-04	3.58E-05	9.32E-04	3.11E-05	1.76E-02	1.47E-04
258	373065	755906	Offsite Worker	9.69E-03	4.41E-07	6.78E-05	3.39E-04	1.20E-02	5.70E-05	3.89E-04	3.89E-06	3.23E-03	5.39E-03	5.81E-05	9.68E-05	2.15E-04	3.58E-05	9.32E-04	3.11E-05	1.77E-02	1.47E-04
259	373065	755827	Offsite Worker	9.50E-03	4.32E-07	6.10E-05	3.05E-04	1.08E-02	5.13E-05	3.50E-04	3.50E-06	2.91E-03	4.85E-03	5.23E-05	8.72E-05	1.93E-04	3.22E-05	8.38E-04	2.79E-05	1.59E-02	1.33E-04
260	373068	755733	Offsite Worker	9.03E-03	4.11E-07	5.53E-05	2.77E-04	9.76E-03	4.65E-05	3.18E-04	3.18E-06	2.64E-03	4.40E-03	4.76E-05	7.94E-05	1.75E-04	2.92E-05	7.61E-04	2.54E-05	1.45E-02	1.21E-04
261	373007	755733	Offsite Worker	9.24E-03	4.20E-07	5.53E-05	2.77E-04	9.77E-03	4.65E-05	3.18E-04	3.18E-06	2.64E-03	4.40E-03	4.77E-05	7.95E-05	1.75E-04	2.92E-05	7.61E-04	2.54E-05	1.46E-02	1.22E-04
262	372941	755733	Offsite Worker	9.46E-03	4.30E-07	5.53E-05	2.76E-04	9.75E-03	4.64E-05	3.17E-04	3.17E-06	2.63E-03	4.39E-03	4.77E-05	7.96E-05	1.75E-04	2.92E-05	7.59E-04	2.53E-05	1.46E-02	1.22E-04
263	372941	755636	Offsite Worker	9.20E-03	4.18E-07	6.55E-05	3.28E-04	1.16E-02	5.51E-05	3.76E-04	3.76E-06	3.12E-03	5.21E-03	5.65E-05	9.41E-05	2.08E-04	3.46E-05	9.01E-04	3.00E-05	1.73E-02	1.44E-04
264	372941	755539	Offsite Worker	8.94E-03	4.06E-07	7.66E-05	3.83E-04	1.35E-02	6.44E-05	4.40E-04	4.40E-06	3.65E-03	6.09E-03	6.58E-05	1.10E-04	2.43E-04	4.04E-05	1.05E-03	3.51E-05	2.00E-02	1.67E-04
265	372941	755442	Offsite Worker	8.60E-03	3.91E-07	8.36E-05	4.18E-04	1.48E-02	7.03E-05	4.80E-04	4.80E-06	3.99E-03	6.65E-03	7.17E-05	1.20E-04	2.65E-04	4.41E-05	1.15E-03	3.83E-05	2.18E-02	1.82E-04
266	372913	755342	Offsite Worker	8.98E-03	4.08E-07	9.61E-05	4.81E-04	1.70E-02	8.08E-05	5.52E-04	5.52E-06	4.59E-03	7.65E-03	8.23E-05	1.37E-04	3.05E-04	5.08E-05	1.32E-03	4.41E-05	2.50E-02	2.08E-04
267	372817	755346	Offsite Worker	9.36E-03	4.25E-07	1.01E-04	5.05E-04	1.78E-02	8.49E-05	5.80E-04	5.80E-06	4.82E-03	8.04E-03	8.64E-05	1.44E-04	3.20E-04	5.34E-05	1.39E-03	4.63E-05	2.62E-02	2.19E-04
268	372720	755349	Offsite Worker	9.73E-03	4.42E-07	1.05E-04	5.24E-04	1.85E-02	8.81E-05	6.02E-04	6.02E-06	5.00E-03	8.34E-03	8.96E-05	1.49E-04	3.32E-04	5.53E-05	1.44E-03	4.80E-05	2.72E-02	2.27E-04
269	372624	755352	Offsite Worker	1.01E-02	4.58E-07	1.07E-04	5.35E-04	1.89E-02	9.00E-05	6.15E-04	6.15E-06	5.11E-03	8.52E-03	9.16E-05	1.53E-04	3.39E-04	5.65E-05	1.47E-03	4.91E-05	2.78E-02	2.32E-04
270	372527	755349	Offsite Worker	1.04E-02	4.74E-07	1.07E-04	5.34E-04	1.89E-02	8.99E-05	6.14E-04	6.14E-06	5.10E-03	8.50E-03	9.15E-05	1.52E-04	3.39E-04	5.65E-05	1.47E-03	4.90E-05	2.78E-02	2.31E-04
271	372431	755353	Offsite Worker	1.09E-02	4.95E-07	1.05E-04	5.27E-04	1.86E-02	8.87E-05	6.06E-04	6.06E-06	5.04E-03	8.39E-03	9.03E-05	1.51E-04	3.34E-04	5.57E-05	1.45E-03	4.84E-05	2.74E-02	2.29E-04
272	372334	755356	Offsite Worker	1.14E-02	5.20E-07	1.02E-04	5.10E-04	1.80E-02	8.58E-05	5.86E-04	5.86E-06	4.87E-03	8.12E-03	8.75E-05	1.46E-04	3.23E-04	5.39E-05	1.40E-03	4.68E-05	2.66E-02	2.22E-04
273	372237	755359	Offsite Worker	1.20E-02	5.47E-07	9.70E-05	4.85E-04	1.71E-02	8.15E-05	5.57E-04	5.57E-06	4.63E-03	7.71E-03	8.32E-05	1.39E-04	3.07E-04	5.12E-05	1.33E-03	4.45E-05	2.53E-02	2.11E-04
274	372141	755362	Offsite Worker	1.26E-02	5.72E-07	1.02E-04	5.08E-04	1.79E-02	8.54E-05	5.84E-04	5.84E-06	4.85E-03	8.08E-03	8.70E-05	1.45E-04	3.22E-04	5.36E-05	1.40E-03	4.66E-05	2.64E-02	2.20E-04
275	372044	755366	Offsite Worker	1.31E-02	5.94E-07	1.05E-04	5.24E-04	1.85E-02	8.81E-05	6.02E-04	6.02E-06	5.00E-03	8.34E-03	8.96E-05	1.49E-04	3.32E-04	5.53E-05	1.44E-03	4.80E-05	2.72E-02	2.27E-04
276	371948	755369	Offsite Worker	1.35E-02	6.12E-07	1.06E-04	5.31E-04	1.88E-02	8.93E-05	6.10E-04	6.10E-06	5.07E-03	8.45E-03	9.09E-05	1.51E-04	3.37E-04	5.61E-05	1.46E-03	4.87E-05	2.76E-02	2.30E-04
277	371851	755372	Offsite Worker	1.38E-02	6.27E-07	1.06E-04	5.29E-04	1.87E-02	8.89E-05	6.07E-04	6.07E-06	5.05E-03	8.41E-03	9.05E-05	1.51E-04	3.35E-04	5.58E-05	1.45E-03	4.85E-05	2.75E-02	2.29E-04
278	371755	755375	Offsite Worker	1.40E-02	6.36E-07	1.03E-04	5.16E-04	1.82E-02	8.67E-05	5.93E-04	5.93E-06	4.92E-03	8.20E-03	8.83E-05	1.47E-04	3.27E-04	5.45E-05	1.42E-03	4.73E-05	2.68E-02	2.24E-04
279	371658	755378	Offsite Worker	1.44E-02	6.54E-07	1.00E-04	5.00E-04	1.77E-02	8.41E-05	5.75E-04	5.75E-06	4.78E-03	7.96E-03	8.58E-05	1.43E-04	3.17E-04	5.29E-05	1.38E-03	4.59E-05	2.61E-02	2.17E-04
280	371562	755382	Offsite Worker	1.49E-02	6.78E-07	1.00E-04	5.01E-04	1.77E-02	8.42E-05	5.76E-04	5.76E-06	4.78E-03	7.97E-03	8.59E-05	1.43E-04	3.17E-04	5.29E-05	1.38E-03	4.59E-05	2.61E-02	2.18E-04
281	371465	755385	Offsite Worker	1.53E-02	6.97E-07	9.78E-05	4.89E-04	1.73E-02	8.22E-05	5.62E-04	5.62E-06	4.67E-03	7.78E-03	8.39E-05	1.40E-04	3.10E-04	5.17E-05	1.34E-03	4.48E-05	2.55E-02	2.13E-04
282	371368	755388	Offsite Worker	1.61E-02	7.32E-07	9.30E-05	4.65E-04	1.64E-02	7.81E-05	5.34E-04	5.34E-06	4.44E-03	7.39E-03	7.99E-05	1.33E-04	2.95E-04	4.91E-05	1.28E-03	4.26E-05	2.44E-02	2.03E-04
283	371272	755391	Offsite Worker	1.66E-02	7.54E-07	9.34E-05	4.67E-04	1.65E-02	7.85E-05	5.36E-04	5.36E-06	4.45E-03	7.42E-03	8.02E-05	1.34E-04	2.96E-04	4.93E-05	1.28E-03	4.28E-05	2.44E-02	2.04E-04
284	371175	755395	Offsite Worker	1.80E-02	8.18E-07	1.01E-04	5.07E-04	1.79E-02	8.53E-05	5.83E-04	5.83E-06	4.84E-03	8.07E-03	8.73E-05	1.46E-04	3.22E-04	5.36E-05	1.40E-03	4.65E-05	2.67E-02	2.22E-04
285	371079	755398	Offsite Worker	1.93E-02	8.77E-07	1.13E-04	5.67E-04	2.00E-02	9.53E-05	6.52E-04	6.52E-06	5.41E-03	9.02E-03	9.77E-05	1.63E-04	3.60E-04	5.99E-05	1.56E-03	5.20E-05	2.99E-02	2.49E-04
286	371042	755478	Offsite Worker	2.00E-02	9.07E-07	1.13E-04	5.67E-04	2.00E-02	9.53E-05	6.51E-04	6.51E-06	5.41E-03	9.01E-03	9.76E-05	1.63E-04	3.59E-04	5.99E-05	1.56E-03	5.19E-05	2.98E-02	2.49E-04
287	371009	755538	Offsite Worker	2.04E-02	9.29E-07	1.13E-04	5.64E-04	1.99E-02	9.48E-05	6.48E-04	6.48E-06	5.38E-03	8.97E-03	9.71E-05	1.62E-04	3.58E-04	5.96E-05	1.55E-03	5.17E-05	2.97E-02	2.47E-04
288	370975	755597	Offsite Worker	2.09E-02	9.48E-07	1.14E-04	5.70E-04	2.01E-02	9.59E-05	6.55E-04	6.55E-06	5.44E-03	9.07E-03	9.82E-05	1.64E-04	3.62E-04	6.03E-05	1.57E-03	5.23E-05	3.00E-02	2.50E-04

Table 2-3

Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	xylene, total (µg/m³)	xylene, total Acute Hazard	arsenic (µg/m³)	arsenic Acute Hazard	chlorine (µg/m³)	chlorine Acute Hazard	copper (µg/m³)	copper Acute Hazard	manganese (µg/m³)	manganese Acute Hazard	mercury (µg/m³)	mercury Acute Hazard	nickel (µg/m³)	nickel Acute Hazard	vanadium (µg/m³)	vanadium Acute Hazard	sulfates (µg/m³)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.17		0.6		6		30		120
289	370925	755597	Offsite Worker	2.19E-02	9.97E-07	1.21E-04	6.05E-04	2.13E-02	1.02E-04	6.95E-04	6.95E-06	5.77E-03	9.61E-03	1.04E-04	1.74E-04	3.83E-04	6.39E-05	1.66E-03	5.54E-05	3.19E-02	2.65E-04
290	370860	755547	Offsite Worker	2.29E-02	1.04E-06	1.35E-04	6.74E-04	2.38E-02	1.13E-04	7.74E-04	7.74E-06	6.43E-03	1.07E-02	1.16E-04	1.94E-04	4.27E-04	7.12E-05	1.85E-03	6.17E-05	3.56E-02	2.96E-04
291	370796	755497	Offsite Worker	2.29E-02	1.04E-06	1.62E-04	8.11E-04	2.86E-02	1.36E-04	9.31E-04	9.31E-06	7.73E-03	1.29E-02	1.39E-04	2.32E-04	5.14E-04	8.56E-05	2.23E-03	7.43E-05	4.25E-02	3.54E-04
292	370733	755428	Offsite Worker	2.21E-02	1.00E-06	1.90E-04	9.51E-04	3.36E-02	1.60E-04	1.09E-03	1.09E-05	9.08E-03	1.51E-02	1.63E-04	2.72E-04	6.03E-04	1.00E-04	2.62E-03	8.72E-05	4.95E-02	4.13E-04
293	370634	755428	Offsite Worker	2.40E-02	1.09E-06	2.06E-04	1.03E-03	3.64E-02	1.74E-04	1.19E-03	1.19E-05	9.85E-03	1.64E-02	1.77E-04	2.94E-04	6.54E-04	1.09E-04	2.84E-03	9.46E-05	5.36E-02	4.47E-04
294	370536	755428	Offsite Worker	2.52E-02	1.14E-06	2.08E-04	1.04E-03	3.67E-02	1.75E-04	1.19E-03	1.19E-05	9.91E-03	1.65E-02	1.78E-04	2.96E-04	6.58E-04	1.10E-04	2.86E-03	9.52E-05	5.40E-02	4.50E-04
295	370437	755428	Offsite Worker	2.53E-02	1.15E-06	2.04E-04	1.02E-03	3.61E-02	1.72E-04	1.18E-03	1.18E-05	9.76E-03	1.63E-02	1.75E-04	2.92E-04	6.48E-04	1.08E-04	2.81E-03	9.38E-05	5.33E-02	4.44E-04
296	370338	755427	Offsite Worker	2.60E-02	1.18E-06	2.04E-04	1.02E-03	3.61E-02	1.72E-04	1.17E-03	1.17E-05	9.75E-03	1.63E-02	1.75E-04	2.92E-04	6.48E-04	1.08E-04	2.81E-03	9.37E-05	5.34E-02	4.45E-04
307	369249	755442	Offsite Worker	3.73E-02	1.70E-06	3.20E-04	1.60E-03	5.65E-02	2.69E-04	1.84E-03	1.84E-05	1.53E-02	2.54E-02	2.74E-04	4.56E-04	1.01E-03	1.69E-04	4.40E-03	1.47E-04	8.30E-02	6.91E-04
308	369151	755442	Offsite Worker	3.82E-02	1.73E-06	3.00E-04	1.50E-03	5.30E-02	2.52E-04	1.73E-03	1.73E-05	1.43E-02	2.39E-02	2.58E-04	4.30E-04	9.52E-04	1.59E-04	4.13E-03	1.38E-04	7.85E-02	6.54E-04
309	369052	755442	Offsite Worker	3.96E-02	1.80E-06	3.45E-04	1.72E-03	6.09E-02	2.90E-04	1.98E-03	1.98E-05	1.65E-02	2.74E-02	2.95E-04	4.92E-04	1.09E-03	1.82E-04	4.74E-03	1.58E-04	8.95E-02	7.46E-04
320	368035	755402	Offsite Worker	2.82E-02	1.28E-06	2.12E-04	1.06E-03	3.74E-02	1.78E-04	1.22E-03	1.22E-05	1.01E-02	1.69E-02	1.82E-04	3.04E-04	6.72E-04	1.12E-04	2.91E-03	9.72E-05	5.55E-02	4.63E-04
321	367960	755389	Offsite Worker	2.53E-02	1.15E-06	2.27E-04	1.13E-03	4.00E-02	1.91E-04	1.30E-03	1.30E-05	1.08E-02	1.80E-02	1.94E-04	3.24E-04	7.19E-04	1.20E-04	3.12E-03	1.04E-04	5.91E-02	4.93E-04
322	367863	755390	Offsite Worker	2.10E-02	9.55E-07	2.32E-04	1.16E-03	4.09E-02	1.95E-04	1.33E-03	1.33E-05	1.11E-02	1.84E-02	1.98E-04	3.31E-04	7.34E-04	1.22E-04	3.18E-03	1.06E-04	6.03E-02	5.02E-04
323	367766	755392	Offsite Worker	2.03E-02	9.24E-07	2.08E-04	1.04E-03	3.68E-02	1.75E-04	1.20E-03	1.20E-05	9.95E-03	1.66E-02	1.79E-04	2.98E-04	6.61E-04	1.10E-04	2.87E-03	9.56E-05	5.43E-02	4.53E-04
324	367669	755393	Offsite Worker	1.92E-02	8.71E-07	1.74E-04	8.69E-04	3.07E-02	1.46E-04	9.99E-04	9.99E-06	8.30E-03	1.38E-02	1.49E-04	2.49E-04	5.51E-04	9.19E-05	2.39E-03	7.97E-05	4.55E-02	3.79E-04
325	367572	755394	Offsite Worker	1.85E-02	8.39E-07	1.66E-04	8.31E-04	2.94E-02	1.40E-04	9.55E-04	9.55E-06	7.93E-03	1.32E-02	1.42E-04	2.37E-04	5.27E-04	8.78E-05	2.29E-03	7.62E-05	4.32E-02	3.60E-04
326	367475	755395	Offsite Worker	1.76E-02	8.00E-07	1.64E-04	8.19E-04	2.89E-02	1.38E-04	9.42E-04	9.42E-06	7.82E-03	1.30E-02	1.40E-04	2.34E-04	5.19E-04	8.66E-05	2.25E-03	7.51E-05	4.25E-02	3.55E-04
327	370400	756850	On-Site Occupational	5.60E-02	2.54E-06	4.45E-04	2.22E-03	7.85E-02	3.74E-04	2.56E-03	2.56E-05	2.12E-02	3.54E-02	3.82E-04	6.36E-04	1.41E-03	2.35E-04	6.12E-03	2.04E-04	1.16E-01	9.68E-04
328	369032	756750	On-Site Occupational	4.25E-01	1.93E-05	2.19E-03	1.10E-02	3.87E-01	1.84E-03	1.26E-02	1.26E-04	1.05E-01	1.74E-01	1.90E-03	3.17E-03	6.96E-03	1.16E-03	3.01E-02	1.00E-03	5.84E-01	4.87E-03
329	368737	756629	On-Site Occupational	1.38E-01	6.25E-06	8.02E-04	4.01E-03	1.41E-01	6.74E-04	4.61E-03	4.61E-05	3.82E-02	6.37E-02	6.94E-04	1.16E-03	2.54E-03	4.24E-04	1.10E-02	3.67E-04	2.13E-01	1.78E-03
330	368907	757031	On-Site Occupational	1.88E-01	8.52E-06	1.20E-03	6.01E-03	2.12E-01	1.01E-03	6.90E-03	6.90E-05	5.73E-02	9.55E-02	1.04E-03	1.73E-03	3.81E-03	6.35E-04	1.65E-02	5.50E-04	3.17E-01	2.64E-03
331	368990	756274	On-Site Occupational	1.33E-01	6.03E-06	9.57E-04	4.78E-03	1.69E-01	8.04E-04	5.50E-03	5.50E-05	4.56E-02	7.61E-02	8.23E-04	1.37E-03	3.03E-03	5.06E-04	1.32E-02	4.39E-04	2.51E-01	2.09E-03
332	369550	756745	On-Site Occupational	3.20E-01	1.46E-05	1.89E-03	9.43E-03	3.33E-01	1.58E-03	1.08E-02	1.08E-04	8.99E-02	1.50E-01	1.63E-03	2.72E-03	5.98E-03	9.97E-04	2.59E-02	8.64E-04	5.01E-01	4.17E-03
1	367379	755396	Recreational	1.65E-02	7.50E-07	1.53E-04	7.65E-04	2.70E-02	1.29E-04	8.79E-04	8.79E-06	7.30E-03	1.22E-02	1.31E-04	2.18E-04	4.85E-04	8.08E-05	2.10E-03	7.01E-05	3.97E-02	3.31E-04
2	367340	755485	Recreational	1.68E-02	7.63E-07	1.45E-04	7.25E-04	2.56E-02	1.22E-04	8.33E-04	8.33E-06	6.92E-03	1.15E-02	1.24E-04	2.07E-04	4.59E-04	7.66E-05	1.99E-03	6.65E-05	3.77E-02	3.14E-04
3	367301	755573	Recreational	1.92E-02	8.72E-07	1.27E-04	6.36E-04	2.25E-02	1.07E-04	7.31E-04	7.31E-06	6.07E-03	1.01E-02	1.09E-04	1.82E-04	4.03E-04	6.72E-05	1.75E-03	5.83E-05	3.33E-02	2.77E-04
4	367263	755661	Recreational	2.07E-02	9.42E-07	9.58E-05	4.79E-04	1.69E-02	8.05E-05	5.50E-04	5.50E-06	4.57E-03	7.61E-03	8.27E-05	1.38E-04	3.04E-04	5.06E-05	1.32E-03	4.39E-05	2.53E-02	2.11E-04
5	367224	755749	Recreational	2.04E-02	9.27E-07	1.02E-04	5.10E-04	1.80E-02	8.57E-05	5.86E-04	5.86E-06	4.86E-03	8.11E-03	8.82E-05	1.47E-04	3.23E-04	5.39E-05	1.40E-03	4.67E-05	2.70E-02	2.25E-04
6	367186	755838	Recreational	1.88E-02	8.55E-07	1.36E-04	6.79E-04	2.40E-02	1.14E-04	7.80E-04	7.80E-06	6.47E-03	1.08E-02	1.17E-04	1.95E-04	4.30E-04	7.17E-05	1.87E-03	6.22E-05	3.57E-02	2.97E-04
7	367147	755926	Recreational	1.89E-02	8.60E-07	1.57E-04	7.85E-04	2.77E-02	1.32E-04	9.02E-04	9.02E-06	7.49E-03	1.25E-02	1.35E-04	2.25E-04	4.98E-04	8.29E-05	2.16E-03	7.19E-05	4.11E-02	3.42E-04
8	367109	756014	Recreational	2.07E-02	9.42E-07	1.49E-04	7.44E-04	2.63E-02	1.25E-04	8.55E-04	8.55E-06	7.10E-03	1.18E-02	1.28E-04	2.13E-04	4.72E-04	7.86E-05	2.05E-03	6.82E-05	3.90E-02	3.25E-04
9	367070	756103	Recreational	2.08E-02	9.44E-07	1.27E-04	6.33E-04	2.24E-02	1.06E-04	7.28E-04	7.28E-06	6.04E-03	1.01E-02	1.09E-04	1.82E-04	4.02E-04	6.69E-05	1.74E-03	5.80E-05	3.33E-02	2.77E-04
10	367032	756191	Recreational	1.91E-02	8.68E-07	1.46E-04	7.29E-04	2.58E-02	1.23E-04	8.38E-04	8.38E-06	6.96E-03	1.16E-02	1.25E-04	2.08E-04	4.62E-04	7.71E-05	2.01E-03	6.69E-05	3.80E-02	3.17E-04
11	366993	756279	Recreational	1.85E-02	8.39E-07	1.47E-04	7.34E-04	2.59E-02	1.23E-04	8.44E-04	8.44E-06	7.01E-03	1.17E-02	1.26E-04	2.10E-04	4.65E-04	7.75E-05	2.02E-03	6.73E-05	3.83E-02	3.19E-04
12	366954	756367	Recreational	1.69E-02	7.66E-07	1.69E-04	8.43E-04	2.98E-02	1.42E-04	9.69E-04	9.69E-06	8.05E-03	1.34E-02	1.45E-04	2.41E-04	5.34E-04	8.91E-05	2.32E-03	7.73E-05	4.39E-02	3.66E-04
13	366916	756456	Recreational	1.78E-02	8.10E-07	1.76E-04	8.81E-04	3.11E-02	1.48E-04	1.01E-03	1.01E-05	8.41E-03	1.40E-02	1.51E-04	2.52E-04	5.58E-04	9.31E-05	2.42E-03	8.08E-05	4.59E-02	3.82E-04
14	366877	756544	Recreational	1.83E-02	8.34E-07	1.53E-04	7.64E-04	2.70E-02	1.28E-04	8.78E-04	8.78E-06	7.29E-03	1.22E-02	1.31E-04	2.19E-04	4.84E-04	8.07E-05	2.10E-03	7.01E-05	4.00E-02	3.33E-04
15	366839	756632	Recreational	1.80E-02	8.19E-07	1.58E-04	7.88E-04	2.78E-02	1.33E-04	9.06E-04	9.06E-06	7.53E-03	1.25E-02	1.35E-04	2.25E-04	5.00E-04	8.33E-05	2.17E-03	7.23E-05	4.09E-02	3.41E-04
16	366800	756720	Recreational	1.69E-02	7.69E-07	1.50E-04	7.49E-04	2.65E-02	1.26E-04	8.61E-04	8.61E-06	7.15E-03	1.19E-02	1.28E-04	2.14E-04	4.75E-04	7.91E-05	2.06E-03	6.87E-05	3.90E-02	3.25E-04
17	366762	756809	Recreational	1.59E-02	7.21E-07	1.30E-04	6.49E-04	2.29E-02	1.09E-04	7.45E-04	7.45E-06	6.19E-03	1.03E-02	1.11E-04	1.86E-04	4.11E-04	6.85E-05	1.78E-03	5.95E-05	3.39E-02	2.83E-04
18	366723	756897	Recreational	1.44E-02	6.53E-07	1.28E-04	6.42E-04	2.27E-02	1.08E-04	7.38E-04	7.38E-06	6.13E-03	1.02E-02	1.10E-04	1.83E-04	4.07E-04	6.78E-05	1.77E-03	5.88E-05	3.34E-02	2.78E-04
19	366685	756985	Recreational	1.56E-02	7.09E-07	1.18E-04	5.88E-04	2.08E-02	9.89E-05	6.76E-04	6.76E-06	5.62E-03	9.36E-03	1.01E-04	1.68E-04	3.73E-04	6.21E-05	1.62E-03	5.39E-05	3.06E-02	2.55E-04
20	366646	757074	Recreational	1.72E-02	7.84E-07	1.08E-04	5.39E-04	1.90E-02	9.06E-05	6.19E-04	6.19E-06	5.15E-03	8.58E-03	9.25E-05	1.54E-04	3.42E-04	5.70E-05	1.48E-03	4.94E-05	2.81E-02	2.35E-04
21	366607	757162	Recreational	1.81E-02	8.22E-07	1.05E-04	5.23E-04	1.85E-02	8.80E-05	6.02E-04	6.02E-06	5.00E-03	8.33E-03	8.98E-05	1.50E-04	3.32E-04	5.53E-05	1.44E-03	4.80E-05	2.74E-02	2.28E-04
22	366569	757250	Recreational	1.79E-02	8.16E-07	1.03E-04	5.15E-04	1.82E-02	8.66E-05	5.92E-04	5.92E-06	4.92E-03	8.19E-03	8.84E-05	1.47E-04	3.27E-04	5.44E-05	1.42E-03	4.72E-05	2.69E-02	2.24E-04
23	366530	757338	Recreational	1.69E-02	7.66E-07	9.82E-05	4.91E-04	1.73E-02	8.25E-05	5.64E-04	5.64E-06	4.68E-03	7.81E-03	8.43E-05	1.40E-04	3.11E-04	5.19E-05	1.35E-03	4.50E-05	2.57E-02	2.14E-04
24	366492	757427	Recreational	1.50E-02	6.82E-07	8.73E-05	4.37E-04	1.54E-02	7.34E-05	5.02E-04	5.02E-06	4.17E-03	6.94E-03	7.51E-05	1.25E-04	2.77E-04	4.61E-05	1.20E-03	4.00E-05	2.29E-02	1.91E-04
25	366453	757515	Recreational	1.28E-02	5.81E-07	7.29E-05	3.65E-04	1.29E-02	6.13E-05	4.19E-04	4.19E-06	3.48E-03	5.80E-03	6.29E-05	1.05E-04	2.31E-04	3.85E-05	1.00E-03	3.34E-05	1.92E-02	1.60E-04
26	366415	757603	Recreational	1.17E-02	5.32E-07	5.76E-05	2.88E-04	1.02E-02	4.83E-05	3.31E-04	3.31E-06	2.74E-03	4.57E-03	4.99E-05	8.31E-05	1.83E-04	3.04E-05	7.91E-04	2.64E-05	1.53E-02	1.28E-04
27	366376	757692	Recreational	1.13E-02	5.14E-07	5.67E-05	2.84E-04	1.00E-02	4.76E-05	3.26E-04	3.26E-06	2.70E-03	4.50E-03	4.92E-05	8.20E-05	1.80E-04	3.00E-05	7.79E-04	2.60E-05	1.51E-02	1.26E-04
84	369336	758100	Recreational	4.58E-02	2.08E-06	3.73E-04	1.86E-03	6.58E-02	3.13E-04	2.14E-03	2.14E-05	1.78E-02	2.97E-02	3.19E-04	5.32E-04	1.18E-03	1.97E-04	5.13E-03	1.71E-04	9.69E-02	8.08E-04

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	xylene, total ($\mu g/m^3$)	xylene, total Acute Hazard	arsenic ($\mu g/m^3$)	arsenic Acute Hazard	chlorine ($\mu g/m^3$)	chlorine Acute Hazard	copper ($\mu g/m^3$)	copper Acute Hazard	manganese ($\mu g/m^3$)	manganese Acute Hazard	mercury ($\mu g/m^3$)	mercury Acute Hazard	nickel ($\mu g/m^3$)	nickel Acute Hazard	vanadium ($\mu g/m^3$)	vanadium Acute Hazard	sulfates ($\mu g/m^3$)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.17		0.6		6		30		120
85	369269	758170	Recreational	4.32E-02	1.96E-06	3.47E-04	1.73E-03	6.12E-02	2.91E-04	1.99E-03	1.99E-05	1.65E-02	2.76E-02	2.97E-04	4.95E-04	1.10E-03	1.83E-04	4.77E-03	1.59E-04	9.04E-02	7.53E-04
86	369202	758239	Recreational	3.84E-02	1.75E-06	3.51E-04	1.75E-03	6.19E-02	2.95E-04	2.01E-03	2.01E-05	1.67E-02	2.79E-02	3.00E-04	5.00E-04	1.11E-03	1.85E-04	4.82E-03	1.61E-04	9.10E-02	7.58E-04
87	369264	758285	Recreational	3.87E-02	1.76E-06	3.18E-04	1.59E-03	5.61E-02	2.67E-04	1.83E-03	1.83E-05	1.52E-02	2.53E-02	2.72E-04	4.54E-04	1.01E-03	1.68E-04	4.37E-03	1.46E-04	8.28E-02	6.90E-04
88	369326	758330	Recreational	3.74E-02	1.70E-06	3.00E-04	1.50E-03	5.29E-02	2.52E-04	1.72E-03	1.72E-05	1.43E-02	2.38E-02	2.57E-04	4.28E-04	9.50E-04	1.58E-04	4.12E-03	1.37E-04	7.81E-02	6.51E-04
89	369389	758376	Recreational	3.49E-02	1.59E-06	2.88E-04	1.44E-03	5.10E-02	2.43E-04	1.66E-03	1.66E-05	1.38E-02	2.30E-02	2.47E-04	4.12E-04	9.14E-04	1.52E-04	3.97E-03	1.32E-04	7.50E-02	6.25E-04
90	369389	758462	Recreational	3.27E-02	1.49E-06	2.71E-04	1.35E-03	4.78E-02	2.28E-04	1.56E-03	1.56E-05	1.29E-02	2.15E-02	2.32E-04	3.86E-04	8.58E-04	1.43E-04	3.73E-03	1.24E-04	7.03E-02	5.86E-04
91	369389	758548	Recreational	3.07E-02	1.40E-06	2.55E-04	1.27E-03	4.50E-02	2.14E-04	1.46E-03	1.46E-05	1.22E-02	2.03E-02	2.18E-04	3.63E-04	8.07E-04	1.34E-04	3.50E-03	1.17E-04	6.60E-02	5.50E-04
28	366338	757780	Residential	1.12E-02	5.09E-07	7.06E-05	3.53E-04	1.25E-02	5.94E-05	4.06E-04	4.06E-06	3.37E-03	5.61E-03	6.09E-05	1.02E-04	2.24E-04	3.73E-05	9.71E-04	3.24E-05	1.86E-02	1.55E-04
29	366402	757746	Residential	1.15E-02	5.25E-07	7.06E-05	3.53E-04	1.25E-02	5.93E-05	4.06E-04	4.06E-06	3.37E-03	5.61E-03	6.10E-05	1.02E-04	2.24E-04	3.73E-05	9.71E-04	3.24E-05	1.87E-02	1.56E-04
30	366467	757713	Residential	1.19E-02	5.42E-07	7.09E-05	3.54E-04	1.25E-02	5.95E-05	4.07E-04	4.07E-06	3.38E-03	5.63E-03	6.12E-05	1.02E-04	2.25E-04	3.74E-05	9.74E-04	3.25E-05	1.88E-02	1.56E-04
31	366531	757679	Residential	1.23E-02	5.60E-07	7.07E-05	3.54E-04	1.25E-02	5.94E-05	4.06E-04	4.06E-06	3.37E-03	5.62E-03	6.11E-05	1.02E-04	2.24E-04	3.74E-05	9.72E-04	3.24E-05	1.87E-02	1.56E-04
32	366567	757773	Residential	1.38E-02	6.29E-07	9.74E-05	4.87E-04	1.72E-02	8.19E-05	5.60E-04	5.60E-06	4.65E-03	7.75E-03	8.37E-05	1.39E-04	3.09E-04	5.15E-05	1.34E-03	4.47E-05	2.55E-02	2.13E-04
33	366625	757758	Residential	1.44E-02	6.54E-07	1.02E-04	5.10E-04	1.80E-02	8.58E-05	5.87E-04	5.87E-06	4.87E-03	8.12E-03	8.77E-05	1.46E-04	3.24E-04	5.39E-05	1.40E-03	4.68E-05	2.67E-02	2.23E-04
34	366682	757744	Residential	1.50E-02	6.80E-07	1.07E-04	5.35E-04	1.89E-02	9.00E-05	6.15E-04	6.15E-06	5.11E-03	8.52E-03	9.20E-05	1.53E-04	3.39E-04	5.66E-05	1.47E-03	4.91E-05	2.80E-02	2.33E-04
35	366768	757788	Residential	1.69E-02	7.66E-07	1.29E-04	6.47E-04	2.29E-02	1.09E-04	7.44E-04	7.44E-06	6.18E-03	1.03E-02	1.11E-04	1.85E-04	4.10E-04	6.84E-05	1.78E-03	5.93E-05	3.37E-02	2.81E-04
36	366854	757833	Residential	1.83E-02	8.34E-07	1.47E-04	7.35E-04	2.60E-02	1.24E-04	8.44E-04	8.44E-06	7.02E-03	1.17E-02	1.26E-04	2.10E-04	4.66E-04	7.76E-05	2.02E-03	6.74E-05	3.81E-02	3.18E-04
37	366941	757877	Residential	1.91E-02	8.67E-07	1.55E-04	7.75E-04	2.74E-02	1.30E-04	8.91E-04	8.91E-06	7.40E-03	1.23E-02	1.33E-04	2.21E-04	4.91E-04	8.19E-05	2.13E-03	7.11E-05	4.02E-02	3.35E-04
38	367027	757922	Residential	1.88E-02	8.56E-07	1.50E-04	7.52E-04	2.65E-02	1.26E-04	8.64E-04	8.64E-06	7.17E-03	1.20E-02	1.29E-04	2.15E-04	4.76E-04	7.94E-05	2.07E-03	6.89E-05	3.91E-02	3.26E-04
39	367113	757966	Residential	1.76E-02	8.00E-07	1.33E-04	6.67E-04	2.35E-02	1.12E-04	7.66E-04	7.66E-06	6.36E-03	1.06E-02	1.15E-04	1.91E-04	4.23E-04	7.05E-05	1.83E-03	6.11E-05	3.49E-02	2.91E-04
40	367192	757916	Residential	1.89E-02	8.61E-07	1.44E-04	7.21E-04	2.54E-02	1.21E-04	8.28E-04	8.28E-06	6.88E-03	1.15E-02	1.24E-04	2.06E-04	4.57E-04	7.61E-05	1.98E-03	6.61E-05	3.77E-02	3.14E-04
41	367264	757916	Residential	1.94E-02	8.84E-07	1.45E-04	7.25E-04	2.56E-02	1.22E-04	8.34E-04	8.34E-06	6.92E-03	1.15E-02	1.25E-04	2.08E-04	4.60E-04	7.66E-05	2.00E-03	6.65E-05	3.80E-02	3.16E-04
42	367335	757916	Residential	2.11E-02	9.57E-07	1.59E-04	7.95E-04	2.81E-02	1.34E-04	9.14E-04	9.14E-06	7.59E-03	1.27E-02	1.36E-04	2.27E-04	5.04E-04	8.40E-05	2.19E-03	7.29E-05	4.14E-02	3.45E-04
43	367343	757966	Residential	2.17E-02	9.86E-07	1.64E-04	8.20E-04	2.90E-02	1.38E-04	9.42E-04	9.42E-06	7.83E-03	1.30E-02	1.40E-04	2.34E-04	5.20E-04	8.66E-05	2.26E-03	7.52E-05	4.26E-02	3.55E-04
44	367404	757995	Residential	2.29E-02	1.04E-06	1.69E-04	8.43E-04	2.98E-02	1.42E-04	9.68E-04	9.68E-06	8.05E-03	1.34E-02	1.44E-04	2.40E-04	5.34E-04	8.90E-05	2.32E-03	7.73E-05	4.38E-02	3.65E-04
45	367465	758024	Residential	2.36E-02	1.07E-06	1.66E-04	8.30E-04	2.93E-02	1.40E-04	9.53E-04	9.53E-06	7.92E-03	1.32E-02	1.42E-04	2.37E-04	5.26E-04	8.76E-05	2.28E-03	7.61E-05	4.32E-02	3.60E-04
55	367673	758189	Residential	1.91E-02	8.69E-07	1.77E-04	8.83E-04	3.12E-02	1.48E-04	1.01E-03	1.01E-05	8.43E-03	1.40E-02	1.51E-04	2.52E-04	5.60E-04	9.33E-05	2.43E-03	8.10E-05	4.59E-02	3.82E-04
59	367816	758096	Residential	2.09E-02	9.48E-07	1.97E-04	9.86E-04	3.48E-02	1.66E-04	1.13E-03	1.13E-05	9.41E-03	1.57E-02	1.69E-04	2.81E-04	6.25E-04	1.04E-04	2.71E-03	9.04E-05	5.12E-02	4.27E-04
60	367898	758066	Residential	2.23E-02	1.02E-06	2.05E-04	1.03E-03	3.62E-02	1.73E-04	1.18E-03	1.18E-05	9.80E-03	1.63E-02	1.76E-04	2.93E-04	6.50E-04	1.08E-04	2.82E-03	9.41E-05	5.34E-02	4.45E-04
61	367980	758035	Residential	2.42E-02	1.10E-06	2.10E-04	1.05E-03	3.71E-02	1.77E-04	1.21E-03	1.21E-05	1.00E-02	1.67E-02	1.80E-04	3.00E-04	6.66E-04	1.11E-04	2.89E-03	9.63E-05	5.47E-02	4.56E-04
62	368062	758005	Residential	2.61E-02	1.19E-06	2.31E-04	1.16E-03	4.09E-02	1.95E-04	1.33E-03	1.33E-05	1.10E-02	1.84E-02	1.98E-04	3.30E-04	7.34E-04	1.22E-04	3.18E-03	1.06E-04	6.02E-02	5.02E-04
63	368144	757975	Residential	2.80E-02	1.27E-06	2.53E-04	1.27E-03	4.47E-02	2.13E-04	1.46E-03	1.46E-05	1.21E-02	2.02E-02	2.17E-04	3.62E-04	8.03E-04	1.34E-04	3.48E-03	1.16E-04	6.59E-02	5.49E-04
64	368226	757945	Residential	2.98E-02	1.36E-06	2.71E-04	1.36E-03	4.79E-02	2.28E-04	1.56E-03	1.56E-05	1.30E-02	2.16E-02	2.32E-04	3.87E-04	8.60E-04	1.43E-04	3.73E-03	1.24E-04	7.06E-02	5.88E-04
65	368301	757943	Residential	3.05E-02	1.39E-06	2.80E-04	1.40E-03	4.95E-02	2.36E-04	1.61E-03	1.61E-05	1.34E-02	2.23E-02	2.40E-04	4.00E-04	8.89E-04	1.48E-04	3.86E-03	1.29E-04	7.30E-02	6.08E-04
66	368376	757941	Residential	3.07E-02	1.39E-06	2.73E-04	1.37E-03	4.82E-02	2.30E-04	1.57E-03	1.57E-05	1.30E-02	2.17E-02	2.34E-04	3.90E-04	8.66E-04	1.44E-04	3.76E-03	1.25E-04	7.13E-02	5.94E-04
67	368452	757940	Residential	3.24E-02	1.47E-06	2.81E-04	1.40E-03	4.96E-02	2.36E-04	1.61E-03	1.61E-05	1.34E-02	2.23E-02	2.41E-04	4.01E-04	8.90E-04	1.48E-04	3.86E-03	1.29E-04	7.32E-02	6.10E-04
68	368527	757938	Residential	3.43E-02	1.56E-06	2.92E-04	1.46E-03	5.16E-02	2.46E-04	1.68E-03	1.68E-05	1.39E-02	2.32E-02	2.50E-04	4.17E-04	9.26E-04	1.54E-04	4.02E-03	1.34E-04	7.61E-02	6.34E-04
69	368563	757880	Residential	3.68E-02	1.67E-06	3.12E-04	1.56E-03	5.51E-02	2.63E-04	1.79E-03	1.79E-05	1.49E-02	2.48E-02	2.68E-04	4.46E-04	9.90E-04	1.65E-04	4.30E-03	1.43E-04	8.14E-02	6.78E-04
70	368636	757926	Residential	3.63E-02	1.65E-06	2.68E-04	1.34E-03	4.73E-02	2.25E-04	1.54E-03	1.54E-05	1.28E-02	2.13E-02	2.30E-04	3.84E-04	8.49E-04	1.41E-04	3.68E-03	1.23E-04	7.03E-02	5.86E-04
71	368709	757971	Residential	3.73E-02	1.70E-06	2.44E-04	1.22E-03	4.31E-02	2.05E-04	1.40E-03	1.40E-05	1.16E-02	1.94E-02	2.10E-04	3.50E-04	7.73E-04	1.29E-04	3.35E-03	1.12E-04	6.41E-02	5.34E-04
72	368782	758017	Residential	3.62E-02	1.65E-06	3.23E-04	1.61E-03	5.70E-02	2.71E-04	1.85E-03	1.85E-05	1.54E-02	2.57E-02	2.76E-04	4.61E-04	1.02E-03	1.70E-04	4.44E-03	1.48E-04	8.39E-02	7.00E-04
73	368855	758062	Residential	3.76E-02	1.71E-06	3.61E-04	1.80E-03	6.37E-02	3.04E-04	2.07E-03	2.07E-05	1.72E-02	2.87E-02	3.09E-04	5.14E-04	1.14E-03	1.91E-04	4.97E-03	1.66E-04	9.36E-02	7.80E-04
74	368928	758108	Residential	3.66E-02	1.66E-06	3.44E-04	1.72E-03	6.07E-02	2.89E-04	1.97E-03	1.97E-05	1.64E-02	2.73E-02	2.94E-04	4.90E-04	1.09E-03	1.82E-04	4.73E-03	1.58E-04	8.94E-02	7.45E-04
75	369001	758153	Residential	3.57E-02	1.62E-06	3.12E-04	1.56E-03	5.51E-02	2.63E-04	1.79E-03	1.79E-05	1.49E-02	2.48E-02	2.68E-04	4.46E-04	9.89E-04	1.65E-04	4.29E-03	1.43E-04	8.14E-02	6.78E-04
76	369058	758074	Residential	3.96E-02	1.80E-06	3.62E-04	1.81E-03	6.39E-02	3.04E-04	2.08E-03	2.08E-05	1.73E-02	2.88E-02	3.10E-04	5.16E-04	1.15E-03	1.91E-04	4.98E-03	1.66E-04	9.40E-02	7.83E-04
77	369102	758103	Residential	3.87E-02	1.76E-06	3.70E-04	1.85E-03	6.54E-02	3.11E-04	2.13E-03	2.13E-05	1.77E-02	2.95E-02	3.17E-04	5.28E-04	1.17E-03	1.96E-04	5.10E-03	1.70E-04	9.62E-02	8.01E-04
78	369145	758132	Residential	3.90E-02	1.77E-06	3.78E-04	1.89E-03	6.67E-02	3.17E-04	2.17E-03	2.17E-05	1.80E-02	3.00E-02	3.23E-04	5.38E-04	1.20E-03	1.99E-04	5.19E-03	1.73E-04	9.80E-02	8.17E-04
79	369200	758065	Residential	4.57E-02	2.08E-06	4.15E-04	2.07E-03	7.33E-02	3.49E-04	2.38E-03	2.38E-05	1.98E-02	3.30E-02	3.55E-04	5.91E-04	1.31E-03	2.19E-04	5.71E-03	1.90E-04	1.08E-01	8.97E-04
80	369255	757998	Residential	5.16E-02	2.34E-06	4.24E-04	2.12E-03	7.48E-02	3.56E-04	2.43E-03	2.43E-05	2.02E-02	3.37E-02	3.63E-04	6.05E-04	1.34E-03	2.24E-04	5.83E-03	1.94E-04	1.10E-01	9.19E-04
81	369310	757931	Residential	5.55E-02	2.52E-06	4.45E-04	2.23E-03	7.86E-02	3.74E-04	2.56E-03	2.56E-05	2.13E-02	3.54E-02	3.82E-04	6.36E-04	1.41E-03	2.35E-04	6.13E-03	2.04E-04	1.16E-01	9.66E-04
82	369356	757981	Residential	5.07E-02	2.30E-06	4.30E-04	2.15E-03	7.59E-02	3.61E-04	2.47E-03	2.47E-05	2.05E-02	3.42E-02	3.68E-04	6.13E-04	1.36E-03	2.27E-04	5.91E-03	1.97E-04	1.12E-01	9.30E-04
83	369403	758031	Residential	4.62E-02	2.10E-06	4.06E-04	2.03E-03	7.17E-02	3.42E-04	2.33E-03	2.33E-05	1.94E-02	3.23E-02	3.48E-04	5.80E-04	1.29E-03	2.15E-04	5.59E-03	1.86E-04	1.06E-01	8.80E-04
92	369389	758634	Residential	2.89E-02	1.32E-06	2.40E-04	1.20E-03	4.23E-02	2.02E-04	1.38E-03	1.38E-05	1.14E-02	1.91E-02	2.05E-04	3.42E-04	7.60E-04	1.27E-04	3.30E-03	1.10E-04	6.22E-02	5.18E-04

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	xylene, total ($\mu g/m^3$)	xylene, total Acute Hazard	arsenic ($\mu g/m^3$)	arsenic Acute Hazard	chlorine ($\mu g/m^3$)	chlorine Acute Hazard	copper ($\mu g/m^3$)	copper Acute Hazard	manganese ($\mu g/m^3$)	manganese Acute Hazard	mercury ($\mu g/m^3$)	mercury Acute Hazard	nickel ($\mu g/m^3$)	nickel Acute Hazard	vanadium ($\mu g/m^3$)	vanadium Acute Hazard	sulfates ($\mu g/m^3$)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.17		0.6		6		30		120
93	369469	758630	Residential	2.75E-02	1.25E-06	2.46E-04	1.23E-03	4.34E-02	2.07E-04	1.41E-03	1.41E-05	1.17E-02	1.95E-02	2.10E-04	3.50E-04	7.79E-04	1.30E-04	3.38E-03	1.13E-04	6.38E-02	5.32E-04
94	369549	758625	Residential	2.65E-02	1.21E-06	2.39E-04	1.20E-03	4.22E-02	2.01E-04	1.37E-03	1.37E-05	1.14E-02	1.90E-02	2.05E-04	3.41E-04	7.58E-04	1.26E-04	3.29E-03	1.10E-04	6.22E-02	5.18E-04
95	369630	758621	Residential	2.59E-02	1.18E-06	2.31E-04	1.16E-03	4.09E-02	1.95E-04	1.33E-03	1.33E-05	1.10E-02	1.84E-02	1.98E-04	3.30E-04	7.33E-04	1.22E-04	3.18E-03	1.06E-04	6.02E-02	5.02E-04
96	369710	758617	Residential	2.48E-02	1.13E-06	2.46E-04	1.23E-03	4.34E-02	2.07E-04	1.41E-03	1.41E-05	1.17E-02	1.96E-02	2.11E-04	3.51E-04	7.79E-04	1.30E-04	3.38E-03	1.13E-04	6.39E-02	5.33E-04
97	369791	758613	Residential	2.38E-02	1.08E-06	2.40E-04	1.20E-03	4.24E-02	2.02E-04	1.38E-03	1.38E-05	1.15E-02	1.91E-02	2.05E-04	3.42E-04	7.60E-04	1.27E-04	3.30E-03	1.10E-04	6.24E-02	5.20E-04
98	369791	758514	Residential	2.56E-02	1.16E-06	2.63E-04	1.31E-03	4.64E-02	2.21E-04	1.51E-03	1.51E-05	1.25E-02	2.09E-02	2.25E-04	3.75E-04	8.33E-04	1.39E-04	3.62E-03	1.21E-04	6.83E-02	5.69E-04
99	369791	758416	Residential	2.78E-02	1.26E-06	2.80E-04	1.40E-03	4.94E-02	2.35E-04	1.61E-03	1.61E-05	1.34E-02	2.23E-02	2.40E-04	4.00E-04	8.87E-04	1.48E-04	3.85E-03	1.28E-04	7.28E-02	6.07E-04
100	369791	758318	Residential	3.08E-02	1.40E-06	2.90E-04	1.45E-03	5.11E-02	2.44E-04	1.66E-03	1.66E-05	1.38E-02	2.30E-02	2.48E-04	4.14E-04	9.18E-04	1.53E-04	3.98E-03	1.33E-04	7.55E-02	6.29E-04
101	369881	758318	Residential	3.09E-02	1.41E-06	2.68E-04	1.34E-03	4.74E-02	2.26E-04	1.54E-03	1.54E-05	1.28E-02	2.13E-02	2.30E-04	3.83E-04	8.50E-04	1.42E-04	3.69E-03	1.23E-04	7.00E-02	5.83E-04
102	369972	758318	Residential	3.07E-02	1.40E-06	2.65E-04	1.32E-03	4.67E-02	2.23E-04	1.52E-03	1.52E-05	1.26E-02	2.11E-02	2.27E-04	3.78E-04	8.39E-04	1.40E-04	3.64E-03	1.21E-04	6.88E-02	5.73E-04
103	370062	758318	Residential	2.88E-02	1.31E-06	2.57E-04	1.28E-03	4.54E-02	2.16E-04	1.48E-03	1.48E-05	1.23E-02	2.04E-02	2.20E-04	3.66E-04	8.14E-04	1.36E-04	3.53E-03	1.18E-04	6.67E-02	5.56E-04
104	370153	758318	Residential	2.63E-02	1.19E-06	2.49E-04	1.24E-03	4.39E-02	2.09E-04	1.43E-03	1.43E-05	1.19E-02	1.98E-02	2.13E-04	3.55E-04	7.88E-04	1.31E-04	3.42E-03	1.14E-04	6.46E-02	5.38E-04
105	370243	758318	Residential	2.71E-02	1.23E-06	2.47E-04	1.24E-03	4.37E-02	2.08E-04	1.42E-03	1.42E-05	1.18E-02	1.97E-02	2.12E-04	3.53E-04	7.84E-04	1.31E-04	3.40E-03	1.13E-04	6.44E-02	5.37E-04
111	370408	758347	Residential	2.54E-02	1.16E-06	2.35E-04	1.17E-03	4.15E-02	1.98E-04	1.35E-03	1.35E-05	1.12E-02	1.87E-02	2.01E-04	3.36E-04	7.45E-04	1.24E-04	3.23E-03	1.08E-04	6.12E-02	5.10E-04
112	370490	758344	Residential	2.51E-02	1.14E-06	2.28E-04	1.14E-03	4.02E-02	1.92E-04	1.31E-03	1.31E-05	1.09E-02	1.81E-02	1.95E-04	3.25E-04	7.22E-04	1.20E-04	3.13E-03	1.04E-04	5.93E-02	4.94E-04
113	370572	758341	Residential	2.60E-02	1.18E-06	2.13E-04	1.06E-03	3.76E-02	1.79E-04	1.22E-03	1.22E-05	1.02E-02	1.69E-02	1.83E-04	3.04E-04	6.75E-04	1.13E-04	2.93E-03	9.76E-05	5.55E-02	4.63E-04
114	370654	758338	Residential	2.57E-02	1.17E-06	2.12E-04	1.06E-03	3.74E-02	1.78E-04	1.22E-03	1.22E-05	1.01E-02	1.68E-02	1.81E-04	3.02E-04	6.71E-04	1.12E-04	2.91E-03	9.70E-05	5.51E-02	4.59E-04
115	370735	758335	Residential	2.42E-02	1.10E-06	2.08E-04	1.04E-03	3.68E-02	1.75E-04	1.20E-03	1.20E-05	9.94E-03	1.66E-02	1.78E-04	2.97E-04	6.60E-04	1.10E-04	2.86E-03	9.55E-05	5.42E-02	4.52E-04
116	370817	758333	Residential	2.33E-02	1.06E-06	2.06E-04	1.03E-03	3.63E-02	1.73E-04	1.18E-03	1.18E-05	9.82E-03	1.64E-02	1.76E-04	2.94E-04	6.52E-04	1.09E-04	2.83E-03	9.44E-05	5.36E-02	4.46E-04
130	371183	758027	Residential	2.08E-02	9.45E-07	1.94E-04	9.71E-04	3.43E-02	1.63E-04	1.12E-03	1.12E-05	9.27E-03	1.54E-02	1.66E-04	2.77E-04	6.15E-04	1.03E-04	2.67E-03	8.90E-05	5.05E-02	4.21E-04
131	371248	758024	Residential	1.97E-02	8.97E-07	1.84E-04	9.21E-04	3.25E-02	1.55E-04	1.06E-03	1.06E-05	8.79E-03	1.47E-02	1.58E-04	2.63E-04	5.84E-04	9.73E-05	2.53E-03	8.45E-05	4.80E-02	4.00E-04
132	371326	758075	Residential	1.87E-02	8.50E-07	1.75E-04	8.76E-04	3.09E-02	1.47E-04	1.01E-03	1.01E-05	8.37E-03	1.39E-02	1.50E-04	2.50E-04	5.55E-04	9.26E-05	2.41E-03	8.04E-05	4.56E-02	3.80E-04
133	371404	758127	Residential	1.77E-02	8.07E-07	1.67E-04	8.35E-04	2.95E-02	1.41E-04	9.60E-04	9.60E-06	7.98E-03	1.33E-02	1.43E-04	2.39E-04	5.30E-04	8.83E-05	2.30E-03	7.66E-05	4.35E-02	3.62E-04
134	371481	758178	Residential	1.69E-02	7.68E-07	1.60E-04	7.98E-04	2.82E-02	1.34E-04	9.17E-04	9.17E-06	7.62E-03	1.27E-02	1.37E-04	2.28E-04	5.06E-04	8.43E-05	2.20E-03	7.32E-05	4.15E-02	3.46E-04
135	371559	758230	Residential	1.61E-02	7.31E-07	1.53E-04	7.63E-04	2.70E-02	1.28E-04	8.77E-04	8.77E-06	7.29E-03	1.21E-02	1.31E-04	2.18E-04	4.84E-04	8.06E-05	2.10E-03	7.00E-05	3.97E-02	3.31E-04
136	371637	758281	Residential	1.53E-02	6.98E-07	1.46E-04	7.30E-04	2.58E-02	1.23E-04	8.39E-04	8.39E-06	6.97E-03	1.16E-02	1.25E-04	2.08E-04	4.63E-04	7.72E-05	2.01E-03	6.70E-05	3.80E-02	3.17E-04
137	371715	758333	Residential	1.47E-02	6.67E-07	1.40E-04	7.00E-04	2.47E-02	1.18E-04	8.05E-04	8.05E-06	6.68E-03	1.11E-02	1.20E-04	2.00E-04	4.44E-04	7.40E-05	1.93E-03	6.42E-05	3.64E-02	3.03E-04
138	371769	758261	Residential	1.48E-02	6.73E-07	1.44E-04	7.22E-04	2.55E-02	1.22E-04	8.30E-04	8.30E-06	6.90E-03	1.15E-02	1.24E-04	2.06E-04	4.58E-04	7.63E-05	1.99E-03	6.63E-05	3.76E-02	3.13E-04
139	371822	758189	Residential	1.54E-02	6.98E-07	1.38E-04	6.89E-04	2.43E-02	1.16E-04	7.92E-04	7.92E-06	6.58E-03	1.10E-02	1.18E-04	1.97E-04	4.37E-04	7.28E-05	1.89E-03	6.32E-05	3.59E-02	2.99E-04
140	371894	758160	Residential	1.50E-02	6.81E-07	1.30E-04	6.49E-04	2.29E-02	1.09E-04	7.46E-04	7.46E-06	6.20E-03	1.03E-02	1.11E-04	1.85E-04	4.12E-04	6.86E-05	1.79E-03	5.96E-05	3.38E-02	2.82E-04
141	371894	758081	Residential	1.48E-02	6.74E-07	1.39E-04	6.94E-04	2.45E-02	1.17E-04	7.97E-04	7.97E-06	6.62E-03	1.10E-02	1.19E-04	1.98E-04	4.40E-04	7.33E-05	1.91E-03	6.36E-05	3.61E-02	3.01E-04
142	371959	758074	Residential	1.49E-02	6.77E-07	1.38E-04	6.91E-04	2.44E-02	1.16E-04	7.94E-04	7.94E-06	6.60E-03	1.10E-02	1.18E-04	1.97E-04	4.38E-04	7.30E-05	1.90E-03	6.34E-05	3.59E-02	2.99E-04
155	372055	757363	Residential	1.53E-02	6.96E-07	1.43E-04	7.16E-04	2.53E-02	1.20E-04	8.22E-04	8.22E-06	6.83E-03	1.14E-02	1.23E-04	2.04E-04	4.54E-04	7.56E-05	1.97E-03	6.56E-05	3.73E-02	3.11E-04
297	370239	755427	Residential	2.62E-02	1.19E-06	2.02E-04	1.01E-03	3.57E-02	1.70E-04	1.16E-03	1.16E-05	9.65E-03	1.61E-02	1.74E-04	2.90E-04	6.41E-04	1.07E-04	2.78E-03	9.27E-05	5.29E-02	4.41E-04
298	370138	755427	Residential	3.00E-02	1.37E-06	2.17E-04	1.08E-03	3.82E-02	1.82E-04	1.24E-03	1.24E-05	1.03E-02	1.72E-02	1.86E-04	3.11E-04	6.87E-04	1.14E-04	2.98E-03	9.93E-05	5.69E-02	4.74E-04
299	370040	755427	Residential	3.28E-02	1.49E-06	2.33E-04	1.17E-03	4.12E-02	1.96E-04	1.34E-03	1.34E-05	1.11E-02	1.85E-02	2.01E-04	3.35E-04	7.39E-04	1.23E-04	3.21E-03	1.07E-04	6.13E-02	5.11E-04
300	369941	755426	Residential	3.38E-02	1.54E-06	2.89E-04	1.45E-03	5.11E-02	2.43E-04	1.66E-03	1.66E-05	1.38E-02	2.30E-02	2.48E-04	4.13E-04	9.17E-04	1.53E-04	3.98E-03	1.33E-04	7.54E-02	6.29E-04
301	369842	755426	Residential	3.35E-02	1.52E-06	3.13E-04	1.57E-03	5.53E-02	2.64E-04	1.80E-03	1.80E-05	1.50E-02	2.49E-02	2.68E-04	4.47E-04	9.93E-04	1.66E-04	4.31E-03	1.44E-04	8.14E-02	6.78E-04
302	369741	755435	Residential	3.58E-02	1.63E-06	2.59E-04	1.30E-03	4.58E-02	2.18E-04	1.49E-03	1.49E-05	1.24E-02	2.06E-02	2.23E-04	3.71E-04	8.22E-04	1.37E-04	3.57E-03	1.19E-04	6.79E-02	5.66E-04
303	369643	755434	Residential	3.81E-02	1.73E-06	2.88E-04	1.44E-03	5.09E-02	2.42E-04	1.66E-03	1.66E-05	1.38E-02	2.29E-02	2.47E-04	4.11E-04	9.13E-04	1.52E-04	3.96E-03	1.32E-04	7.50E-02	6.25E-04
304	369544	755434	Residential	3.77E-02	1.71E-06	3.04E-04	1.52E-03	5.37E-02	2.56E-04	1.75E-03	1.75E-05	1.45E-02	2.42E-02	2.60E-04	4.34E-04	9.64E-04	1.61E-04	4.19E-03	1.40E-04	7.91E-02	6.59E-04
305	369445	755434	Residential	3.87E-02	1.76E-06	3.23E-04	1.61E-03	5.70E-02	2.71E-04	1.85E-03	1.85E-05	1.54E-02	2.57E-02	2.76E-04	4.60E-04	1.02E-03	1.70E-04	4.44E-03	1.48E-04	8.38E-02	6.99E-04
306	369346	755434	Residential	3.88E-02	1.76E-06	2.91E-04	1.46E-03	5.14E-02	2.45E-04	1.67E-03	1.67E-05	1.39E-02	2.32E-02	2.50E-04	4.16E-04	9.23E-04	1.54E-04	4.00E-03	1.33E-04	7.59E-02	6.33E-04
310	368953	755441	Residential	4.18E-02	1.90E-06	3.49E-04	1.75E-03	6.16E-02	2.94E-04	2.01E-03	2.01E-05	1.67E-02	2.78E-02	2.99E-04	4.98E-04	1.11E-03	1.84E-04	4.80E-03	1.60E-04	9.08E-02	7.56E-04
311	368854	755441	Residential	4.19E-02	1.91E-06	3.11E-04	1.55E-03	5.49E-02	2.61E-04	1.79E-03	1.79E-05	1.48E-02	2.47E-02	2.67E-04	4.44E-04	9.86E-04	1.64E-04	4.28E-03	1.43E-04	8.10E-02	6.75E-04
312	368755	755441	Residential	3.98E-02	1.81E-06	3.01E-04	1.51E-03	5.32E-02	2.53E-04	1.73E-03	1.73E-05	1.44E-02	2.40E-02	2.59E-04	4.31E-04	9.55E-04	1.59E-04	4.14E-03	1.38E-04	7.87E-02	6.56E-04
313	368657	755441	Residential	3.86E-02	1.76E-06	3.17E-04	1.58E-03	5.59E-02	2.66E-04	1.82E-03	1.82E-05	1.51E-02	2.52E-02	2.71E-04	4.52E-04	1.00E-03	1.67E-04	4.35E-03	1.45E-04	8.23E-02	6.86E-04
314	368558	755440	Residential	3.79E-02	1.72E-06	3.04E-04	1.52E-03	5.37E-02	2.56E-04	1.75E-03	1.75E-05	1.45E-02	2.42E-02	2.61E-04	4.34E-04	9.63E-04	1.61E-04	4.18E-03	1.39E-04	7.92E-02	6.60E-04
315	368459	755440	Residential	3.54E-02	1.61E-06	3.02E-04	1.51E-03	5.33E-02	2.54E-04	1.73E-03	1.73E-05	1.44E-02	2.40E-02	2.59E-04	4.31E-04	9.56E-04	1.59E-04	4.15E-03	1.38E-04	7.85E-02	6.54E-04
316	368360	755440	Residential	3.56E-02	1.62E-06	2.74E-04	1.37E-03	4.84E-02	2.31E-04	1.58E-03	1.58E-05	1.31E-02	2.18E-02	2.35E-04	3.92E-04	8.69E-04	1.45E-04	3.77E-03	1.26E-04	7.16E-02	5.97E-04
317	368262	755439	Residential	3.33E-02	1.51E-06	2.79E-04	1.40E-03	4.94E-02	2.35E-04	1.61E-03	1.61E-05	1.33E-02	2.22E-02	2.39E-04	3.99E-04	8.86E-04	1.48E-04	3.84E-03	1.28E-04	7.28E-02	6.06E-04
318	368186	755427	Residential	3.24E-02	1.47E-06	2.51E-04	1.25E-03	4.43E-02	2.11E-04	1.44E-03	1.44E-05	1.20E-02	1.99E-02	2.15E-04	3.58E-04	7.95E-04	1.32E-04	3.45E-03	1.15E-04	6.54E-02	5.45E-04

Table 2-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices

Receptor Number	X	Y	Receptor Type	xylene, total ($\mu g/m^3$)	xylene, total Acute Hazard	arsenic ($\mu g/m^3$)	arsenic Acute Hazard	chlorine ($\mu g/m^3$)	chlorine Acute Hazard	copper ($\mu g/m^3$)	copper Acute Hazard	manganese ($\mu g/m^3$)	manganese Acute Hazard	mercury ($\mu g/m^3$)	mercury Acute Hazard	nickel ($\mu g/m^3$)	nickel Acute Hazard	vanadium ($\mu g/m^3$)	vanadium Acute Hazard	sulfates ($\mu g/m^3$)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.17		0.6		6		30		120
319	368111	755414	Residential	3.07E-02	1.39E-06	2.32E-04	1.16E-03	4.10E-02	1.95E-04	1.33E-03	1.33E-05	1.11E-02	1.85E-02	1.99E-04	3.31E-04	7.36E-04	1.23E-04	3.19E-03	1.06E-04	6.04E-02	5.04E-04
46	367504	757948	School	2.47E-02	1.12E-06	1.79E-04	8.97E-04	3.17E-02	1.51E-04	1.03E-03	1.03E-05	8.56E-03	1.43E-02	1.54E-04	2.56E-04	5.69E-04	9.48E-05	2.47E-03	8.23E-05	4.67E-02	3.89E-04
47	367544	757873	School	2.56E-02	1.16E-06	1.90E-04	9.52E-04	3.36E-02	1.60E-04	1.09E-03	1.09E-05	9.09E-03	1.52E-02	1.63E-04	2.72E-04	6.04E-04	1.01E-04	2.62E-03	8.73E-05	4.95E-02	4.12E-04
48	367587	757909	School	2.64E-02	1.20E-06	1.89E-04	9.44E-04	3.34E-02	1.59E-04	1.09E-03	1.09E-05	9.02E-03	1.50E-02	1.62E-04	2.70E-04	5.99E-04	9.98E-05	2.60E-03	8.66E-05	4.92E-02	4.10E-04
49	367623	757866	School	2.73E-02	1.24E-06	1.98E-04	9.91E-04	3.50E-02	1.67E-04	1.14E-03	1.14E-05	9.47E-03	1.58E-02	1.70E-04	2.83E-04	6.29E-04	1.05E-04	2.73E-03	9.09E-05	5.16E-02	4.30E-04
50	367694	757866	School	2.87E-02	1.30E-06	2.00E-04	9.99E-04	3.53E-02	1.68E-04	1.15E-03	1.15E-05	9.54E-03	1.59E-02	1.71E-04	2.86E-04	6.33E-04	1.06E-04	2.75E-03	9.16E-05	5.21E-02	4.34E-04
51	367716	757927	School	2.77E-02	1.26E-06	1.77E-04	8.87E-04	3.13E-02	1.49E-04	1.02E-03	1.02E-05	8.47E-03	1.41E-02	1.53E-04	2.54E-04	5.63E-04	9.38E-05	2.44E-03	8.13E-05	4.65E-02	3.87E-04
52	367737	757988	School	2.59E-02	1.18E-06	1.75E-04	8.75E-04	3.09E-02	1.47E-04	1.01E-03	1.01E-05	8.35E-03	1.39E-02	1.50E-04	2.50E-04	5.55E-04	9.24E-05	2.41E-03	8.02E-05	4.56E-02	3.80E-04
53	367727	758067	School	2.31E-02	1.05E-06	1.83E-04	9.17E-04	3.24E-02	1.54E-04	1.05E-03	1.05E-05	8.76E-03	1.46E-02	1.57E-04	2.62E-04	5.81E-04	9.69E-05	2.52E-03	8.41E-05	4.77E-02	3.97E-04
54	367716	758146	School	2.02E-02	9.18E-07	1.83E-04	9.16E-04	3.24E-02	1.54E-04	1.05E-03	1.05E-05	8.75E-03	1.46E-02	1.57E-04	2.61E-04	5.81E-04	9.68E-05	2.52E-03	8.40E-05	4.76E-02	3.97E-04
56	367723	758254	School	1.86E-02	8.48E-07	1.71E-04	8.57E-04	3.03E-02	1.44E-04	9.84E-04	9.84E-06	8.18E-03	1.36E-02	1.47E-04	2.45E-04	5.43E-04	9.05E-05	2.36E-03	7.86E-05	4.46E-02	3.71E-04
57	367784	758221	School	1.97E-02	8.96E-07	1.75E-04	8.77E-04	3.10E-02	1.47E-04	1.01E-03	1.01E-05	8.37E-03	1.39E-02	1.50E-04	2.50E-04	5.56E-04	9.26E-05	2.41E-03	8.04E-05	4.57E-02	3.80E-04
58	367845	758189	School	2.08E-02	9.47E-07	1.82E-04	9.12E-04	3.22E-02	1.53E-04	1.05E-03	1.05E-05	8.71E-03	1.45E-02	1.56E-04	2.60E-04	5.78E-04	9.63E-05	2.51E-03	8.36E-05	4.75E-02	3.96E-04
106	370247	758254	School	2.87E-02	1.31E-06	2.61E-04	1.30E-03	4.61E-02	2.19E-04	1.50E-03	1.50E-05	1.25E-02	2.08E-02	2.24E-04	3.73E-04	8.27E-04	1.38E-04	3.59E-03	1.20E-04	6.79E-02	5.66E-04
107	370250	758189	School	3.01E-02	1.37E-06	2.65E-04	1.33E-03	4.69E-02	2.23E-04	1.52E-03	1.52E-05	1.27E-02	2.11E-02	2.28E-04	3.79E-04	8.41E-04	1.40E-04	3.65E-03	1.22E-04	6.92E-02	5.77E-04
108	370308	758196	School	2.90E-02	1.32E-06	2.66E-04	1.33E-03	4.69E-02	2.23E-04	1.53E-03	1.53E-05	1.27E-02	2.11E-02	2.28E-04	3.80E-04	8.42E-04	1.40E-04	3.65E-03	1.22E-04	6.92E-02	5.77E-04
109	370361	758236	School	2.74E-02	1.25E-06	2.55E-04	1.27E-03	4.50E-02	2.14E-04	1.46E-03	1.46E-05	1.22E-02	2.03E-02	2.18E-04	3.64E-04	8.07E-04	1.35E-04	3.50E-03	1.17E-04	6.63E-02	5.53E-04
110	370415	758275	School	2.63E-02	1.20E-06	2.43E-04	1.21E-03	4.29E-02	2.04E-04	1.40E-03	1.40E-05	1.16E-02	1.93E-02	2.08E-04	3.47E-04	7.70E-04	1.28E-04	3.34E-03	1.11E-04	6.33E-02	5.27E-04
202	372807	757781	School	1.09E-02	4.95E-07	9.24E-05	4.62E-04	1.63E-02	7.77E-05	5.31E-04	5.31E-06	4.41E-03	7.35E-03	7.90E-05	1.32E-04	2.93E-04	4.88E-05	1.27E-03	4.24E-05	2.40E-02	2.00E-04
203	372901	757782	School	1.05E-02	4.76E-07	9.06E-05	4.53E-04	1.60E-02	7.62E-05	5.20E-04	5.20E-06	4.32E-03	7.21E-03	7.75E-05	1.29E-04	2.87E-04	4.78E-05	1.25E-03	4.15E-05	2.35E-02	1.96E-04

Attachment C.3

Cancer Risk and Chronic Non-Cancer Health Hazard Calculations for Adjusted Construction Emissions (RAGS Part F)

Table 3-1

RAGS F Risk Calculation for MSC North Project, 2015 Construction - 5-year Exposure
(Based on Peak Location of Residential Cancer Risks and Residential Hazards)

Exposure Parameters	Residential Child	School Child	Residential Adult
Exposure Time	24 (hrs/day)	8 (hrs/day)	24 (hrs/day)
Exposure Frequency	350 (days/year)	200 (days/year)	350 (days/year)
Exposure Duration	5 (years)	5 (years)	5 (years)
Averaging Time (non-carcinogenic)	43800 (hrs)	43800 (hrs)	43800 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)	613200 (hrs)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:

EC = Exposure Concentratic	ED = Exposure Duration
CA = Concentration in Air	AT = Averaging Time
ET = Exposure Time	IUR = Inhalation Unit Risk
EF = Exposure Frequency	RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks			Hazard Quotients		
TAC	Concentration at Location with Maximum Risk (ug/m3)	EPA Inhalation Unit Risk $(ug/m^3)^{-1}$	CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$	EPA Chronic Inhalation RfC (ug/m^3)	CalEPA Chronic Inhalation RfC (ug/m^3)	Cancer Risk to Child Resident	Cancer Risk to School Child	Cancer Risk to Adult Resident	Hazard Quotient Child Resident	Hazard Quotient School Child	Hazard Quotient Adult Resident
Acetaldehyde	1.19E-01	2.20E-06	2.70E-06	9.00E+00	1.40E+02	2.20E-08	4.18E-09	2.20E-08	8.13E-04	1.55E-04	8.13E-04
Acrolein	2.03E-03	N/A	N/A	2.00E-02	3.50E-01	NC	NC	NC	5.56E-03	1.06E-03	5.56E-03
Benzene	3.23E-02	7.80E-06	2.90E-05	3.00E+01	6.00E+01	6.42E-08	1.22E-08	6.42E-08	5.17E-04	9.84E-05	5.17E-04
1,3-Butadiene	3.07E-03	3.00E-05	1.70E-04	2.00E+00	2.00E+01	3.57E-08	6.81E-09	3.57E-08	1.47E-04	2.80E-05	1.47E-04
Ethylbenzene	4.93E-03	2.50E-06	2.50E-06	1.00E+03	2.00E+03	8.44E-10	1.61E-10	8.44E-10	2.36E-06	4.50E-07	2.36E-06
Formaldehyde	2.38E-01	1.30E-05	6.00E-06	9.80E+00	9.00E+00	9.77E-08	1.86E-08	9.77E-08	2.53E-02	4.82E-03	2.53E-02
Hexane, n-	2.54E-03	N/A	N/A	7.00E+02	7.00E+03	NC	NC	NC	3.47E-07	6.62E-08	3.47E-07
Methanol	4.85E-04	N/A	N/A	4.00E+03	4.00E+03	NC	NC	NC	1.16E-07	2.21E-08	1.16E-07
Methyl ethyl ketone	2.39E-02	N/A	N/A	5.00E+03	N/A	NC	NC	NC	NC	NC	NC
Naphthalene	1.37E-03	N/A	3.40E-05	3.00E+00	9.00E+00	3.20E-09	6.09E-10	3.20E-09	1.46E-04	2.79E-05	1.46E-04
Propylene	4.19E-02	N/A	N/A	3.00E+03	3.00E+03	NC	NC	NC	1.34E-05	2.55E-06	1.34E-05
Styrene	9.37E-04	N/A	N/A	1.00E+03	9.00E+02	NC	NC	NC	9.98E-07	1.90E-07	9.98E-07
Toluene	2.38E-02	N/A	N/A	5.00E+03	3.00E+02	NC	NC	NC	7.60E-05	1.45E-05	7.60E-05
Xylene (total)	1.68E-02	N/A	N/A	1.00E+02	7.00E+02	NC	NC	NC	2.30E-05	4.39E-06	2.30E-05
Diesel PM	2.04E-01	N/A	3.00E-04	5.00E+00	5.00E+00	4.20E-06	8.00E-07	4.20E-06	3.92E-02	7.47E-03	3.92E-02
Arsenic	6.36E-05	4.30E-03	3.30E-03	1.50E-02	1.50E-02	1.44E-08	2.74E-09	1.44E-08	4.06E-03	7.74E-04	4.06E-03
Cadmium	1.10E-04	1.80E-03	4.20E-03	1.00E-02	2.00E-02	3.16E-08	6.02E-09	3.16E-08	5.27E-03	1.00E-03	5.27E-03
Chlorine	1.11E-02	N/A	N/A	1.50E-01	2.00E-01	NC	NC	NC	5.34E-02	1.02E-02	5.34E-02
Chromium (VI)	3.43E-05	1.20E-02	1.50E-01	1.00E-01	2.00E-01	3.52E-07	6.71E-08	3.52E-07	1.64E-04	3.13E-05	1.64E-04
Copper	3.65E-04	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Lead	1.84E-03	N/A	1.20E-05	N/A	N/A	1.51E-09	2.87E-10	1.51E-09	NC	NC	NC
Manganese	3.01E-03	N/A	N/A	5.00E-02	9.00E-02	NC	NC	NC	3.20E-02	6.10E-03	3.20E-02
Mercury	5.83E-05	N/A	N/A	3.00E-01	3.00E-02	NC	NC	NC	1.86E-03	3.55E-04	1.86E-03
Nickel	2.02E-04	N/A	2.60E-04	9.00E-02	1.40E-02	3.60E-09	6.85E-10	3.60E-09	1.38E-02	2.63E-03	1.38E-02
Selenium	9.86E-06	N/A	N/A	2.00E+01	2.00E+01	NC	NC	NC	4.73E-07	9.01E-08	4.73E-07
Silicon	6.36E-01	N/A	N/A	3.00E+00	3.00E+00	NC	NC	NC	2.03E-01	3.88E-02	2.03E-01
Sulfates	1.89E-02	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Vanadium	8.69E-04	8.30E-03	N/A	1.00E-01	N/A	NC	NC	NC	NC	NC	NC
					TOTAL	4.83E-06	9.20E-07	4.83E-06	0.3859	0.0735	0.3859
					1 in a million cancer risks	4.828	0.920	4.828			

Notes:
[1] Residential Maximum Grid No. Receptor_81
N/A - Not Available
NC = Not Calculated
ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Table 3-2

RAGS F Risk Calculation for MSC North Project, 2015 Construction - 5-year Exposure
(Based on Peak Location of Commercial Cancer Risks)

Exposure Parameters	**Adult Worker**
Exposure Time	24 (hrs/day)
Exposure Frequency	350 (days/year)
Exposure Duration	5 (years)
Averaging Time (non-carcinogenic)	43800 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:

EC = Exposure Concentration	ED = Exposure Duration
CA = Concentration in Air	AT = Averaging Time
ET = Exposure Time	IUR = Inhalation Unit Risk
EF = Exposure Frequency	RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks	Hazard Quotients
TAC	**Concentration at Location with Maximum Risk (ug/m3)**	**EPA Inhalation Unit Risk $(ug/m^3)^{-1}$**	**CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$**	**EPA Chronic Inhalation RfC (ug/m^3)**	**CalEPA Chronic Inhalation RfC (ug/m^3)**	**Cancer Risk to Adult Worker**	**Hazard Quotient Adult Worker**
Acetaldehyde	8.19E-02	2.20E-06	2.70E-06	9.00E+00	1.40E+02	1.51E-08	5.61E-04
Acrolein	1.40E-03	N/A	N/A	2.00E-02	3.50E-01	NC	3.83E-03
Benzene	2.23E-02	7.80E-06	2.90E-05	3.00E+01	6.00E+01	4.43E-08	3.56E-04
1,3-Butadiene	2.12E-03	3.00E-05	1.70E-04	2.00E+00	2.00E+01	2.46E-08	1.01E-04
Ethylbenzene	3.40E-03	2.50E-06	2.50E-06	1.00E+03	2.00E+03	5.82E-10	1.63E-06
Formaldehyde	1.64E-01	1.30E-05	6.00E-06	9.80E+00	9.00E+00	6.73E-08	1.75E-02
Hexane, n-	1.75E-03	N/A	N/A	7.00E+02	7.00E+03	NC	2.40E-07
Methanol	3.34E-04	N/A	N/A	4.00E+03	4.00E+03	NC	8.01E-08
Methyl ethyl ketone	1.64E-02	N/A	N/A	5.00E+03	N/A	NC	NC
Naphthalene	9.47E-04	N/A	3.40E-05	3.00E+00	9.00E+00	2.20E-09	1.01E-04
Propylene	2.89E-02	N/A	N/A	3.00E+03	3.00E+03	NC	9.24E-06
Styrene	6.46E-04	N/A	N/A	1.00E+03	9.00E+02	NC	6.88E-07
Toluene	1.64E-02	N/A	N/A	5.00E+03	3.00E+02	NC	5.24E-05
Xylene (total)	1.16E-02	N/A	N/A	1.00E+02	7.00E+02	NC	1.59E-05
Diesel PM	1.42E-01	N/A	3.00E-04	5.00E+00	5.00E+00	2.91E-06	2.72E-02
Arsenic	4.42E-05	4.30E-03	3.30E-03	1.50E-02	1.50E-02	9.98E-09	2.82E-03
Cadmium	7.63E-05	1.80E-03	4.20E-03	1.00E-02	2.00E-02	2.19E-08	3.66E-03
Chlorine	7.74E-03	N/A	N/A	1.50E-01	2.00E-01	NC	3.71E-02
Chromium (VI)	2.38E-05	1.20E-02	1.50E-01	1.00E-01	2.00E-01	2.44E-07	1.14E-04
Copper	2.53E-04	N/A	N/A	N/A	N/A	NC	NC
Lead	1.27E-03	N/A	1.20E-05	N/A	N/A	1.05E-09	NC
Manganese	2.09E-03	N/A	N/A	5.00E-02	9.00E-02	NC	2.22E-02
Mercury	4.05E-05	N/A	N/A	3.00E-01	3.00E-02	NC	1.29E-03
Nickel	1.40E-04	N/A	2.60E-04	9.00E-02	1.40E-02	2.50E-09	9.61E-03
Selenium	6.85E-06	N/A	N/A	2.00E+01	2.00E+01	NC	3.28E-07
Silicon	4.42E-01	N/A	N/A	3.00E+00	3.00E+00	NC	1.41E-01
Sulfates	1.31E-02	N/A	N/A	N/A	N/A	NC	NC
Vanadium	6.03E-04	8.30E-03	N/A	1.00E-01	N/A	NC	NC
					TOTAL	3.35E-06	0.2678
					1 in a million cancer risks	3.35	

Notes:

[1] Commercial Maximum Grid No. Receptor_309

N/A - Not Available

NC = Not Calculated

ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Table 3-3

RAGS F Risk Calculation for MSC North Project, 2015 Construction - 5-year Exposure
(Based on Peak Location of Commercial Hazards)

Exposure Parameters	Adult Worker
Exposure Time	24 (hrs/day)
Exposure Frequency	350 (days/year)
Exposure Duration	5 (years)
Averaging Time (non-carcinogenic)	43800 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:
EC = Exposure Concentration
CA = Concentration in Air
ET = Exposure Time
EF = Exposure Frequency
ED = Exposure Duration
AT = Averaging Time
IUR = Inhalation Unit Risk
RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks	Hazard Quotients
TAC	Concentration at Location with Maximum Risk (ug/m3)	EPA Inhalation Unit Risk $(ug/m^3)^{-1}$	CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$	EPA Chronic Inhalation RfC (ug/m^3)	CalEPA Chronic Inhalation RfC (ug/m^3)	Cancer Risk to Adult Worker	Hazard Quotient Adult Worker
Acetaldehyde	1.78E-02	2.20E-06	2.70E-06	9.00E+00	1.40E+02	3.29E-09	1.22E-04
Acrolein	3.04E-04	N/A	N/A	2.00E-02	3.50E-01	NC	8.32E-04
Benzene	4.84E-03	7.80E-06	2.90E-05	3.00E+01	6.00E+01	9.61E-09	7.73E-05
1,3-Butadiene	4.59E-04	3.00E-05	1.70E-04	2.00E+00	2.00E+01	5.35E-09	2.20E-05
Ethylbenzene	7.37E-04	2.50E-06	2.50E-06	1.00E+03	2.00E+03	1.26E-10	3.53E-07
Formaldehyde	3.56E-02	1.30E-05	6.00E-06	9.80E+00	9.00E+00	1.46E-08	3.79E-03
Hexane, n-	3.79E-04	N/A	N/A	7.00E+02	7.00E+03	NC	5.20E-08
Methanol	7.25E-05	N/A	N/A	4.00E+03	4.00E+03	NC	1.74E-08
Methyl ethyl ketone	3.57E-03	N/A	N/A	5.00E+03	N/A	NC	NC
Naphthalene	2.05E-04	N/A	3.40E-05	3.00E+00	9.00E+00	4.78E-10	2.19E-05
Propylene	6.28E-03	N/A	N/A	3.00E+03	3.00E+03	NC	2.01E-06
Styrene	1.40E-04	N/A	N/A	1.00E+03	9.00E+02	NC	1.49E-07
Toluene	3.56E-03	N/A	N/A	5.00E+03	3.00E+02	NC	1.14E-05
Xylene (total)	2.52E-03	N/A	N/A	1.00E+02	7.00E+02	NC	3.45E-06
Diesel PM	1.49E-02	N/A	3.00E-04	5.00E+00	5.00E+00	3.07E-07	2.86E-03
Arsenic	9.93E-06	4.30E-03	3.30E-03	1.50E-02	1.50E-02	2.24E-09	6.34E-04
Cadmium	1.66E-05	1.80E-03	4.20E-03	1.00E-02	2.00E-02	4.78E-09	7.96E-04
Chlorine	1.75E-03	N/A	N/A	1.50E-01	2.00E-01	NC	8.39E-03
Chromium (VI)	5.39E-06	1.20E-02	1.50E-01	1.00E-01	2.00E-01	5.53E-08	2.58E-05
Copper	5.70E-05	N/A	N/A	N/A	N/A	NC	NC
Lead	2.88E-04	N/A	1.20E-05	N/A	N/A	2.37E-10	NC
Manganese	4.73E-04	N/A	N/A	5.00E-02	9.00E-02	NC	5.04E-03
Mercury	8.66E-06	N/A	N/A	3.00E-01	3.00E-02	NC	2.77E-04
Nickel	3.15E-05	N/A	2.60E-04	9.00E-02	1.40E-02	5.61E-10	2.16E-03
Selenium	1.38E-06	N/A	N/A	2.00E+01	2.00E+01	NC	6.62E-08
Silicon	1.00E-01	N/A	N/A	3.00E+00	3.00E+00	NC	3.20E-02
Sulfates	2.68E-03	N/A	N/A	N/A	N/A	NC	NC
Vanadium	1.36E-04	8.30E-03	N/A	1.00E-01	N/A	NC	NC
					TOTAL	4.03E-07	0.0571

Notes:
[1] Residential Maximum Grid No. Receptor_308
N/A - Not Available
NC = Not Calculated
ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Attachment C.4

Operations Cancer Risk and Chronic Non-Cancer Health Hazard Calculations (RAGS Part F)

Table 4-1

RAGS F Risk Calculation for MSC North Project, Incremental 2019 With Project over 2019 Without Project- Lifetime Exposure
(Based on Peak Location of Residential Cancer Risks)

Exposure Parameters	Residential Child	School Child	Residential Adult
Exposure Time	24 (hrs/day)	8 (hrs/day)	24 (hrs/day)
Exposure Frequency	350 (days/year)	200 (days/year)	350 (days/year)
Exposure Duration	6 (years)	6 (years)	70 (years)
Averaging Time (non-carcinogenic)	52560 (hrs)	52560 (hrs)	613200 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)	613200 (hrs)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:
EC = Exposure Concentratic ED = Exposure Duration
CA = Concentration in Air AT = Averaging Time
ET = Exposure Time IUR = Inhalation Unit Risk
EF = Exposure Frequency RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks			Hazard Quotients		
TAC	Concentration at Location with Maximum Risk (ug/m3)	EPA Inhalation Unit Risk $(ug/m^3)^{-1}$	CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$	EPA Chronic Inhalation RfC (ug/m^3)	CalEPA Chronic Inhalation RfC (ug/m^3)	Cancer Risk to Child Resident	Cancer Risk to School Child	Cancer Risk to Adult Resident	Hazard Quotient Child Resident	Hazard Quotient School Child	Hazard Quotient Adult Resident
Acetaldehyde	-1.75E-02	2.20E-06	2.70E-06	9.00E+00	1.40E+02	-3.88E-09	-7.39E-10	-4.53E-08	-1.20E-04	-2.28E-05	-1.20E-04
Acrolein	-1.01E-02	N/A	N/A	2.00E-02	3.50E-01	NC	NC	NC	-2.78E-02	-5.29E-03	-2.78E-02
Benzene	-3.31E-03	7.80E-06	2.90E-05	3.00E+01	6.00E+01	-7.90E-09	-1.50E-09	-9.22E-08	-5.30E-05	-1.01E-05	-5.30E-05
1,3-Butadiene	-6.19E-03	3.00E-05	1.70E-04	2.00E+00	2.00E+01	-8.65E-08	-1.65E-08	-1.01E-06	-2.97E-04	-5.66E-05	-2.97E-04
Ethylbenzene	4.83E-04	2.50E-06	2.50E-06	1.00E+03	2.00E+03	9.93E-11	1.89E-11	1.16E-09	2.32E-07	4.41E-08	2.32E-07
Formaldehyde	-5.01E-02	1.30E-05	6.00E-06	9.80E+00	9.00E+00	-2.47E-08	-4.70E-09	-2.88E-07	-5.34E-03	-1.02E-03	-5.34E-03
Hexane, n-	7.86E-04	N/A	N/A	7.00E+02	7.00E+03	NC	NC	NC	1.08E-07	2.05E-08	1.08E-07
Methanol	-7.38E-03	N/A	N/A	4.00E+03	4.00E+03	NC	NC	NC	-1.77E-06	-3.37E-07	-1.77E-06
Methyl ethyl ketone	4.25E-05	N/A	N/A	5.00E+03	N/A	NC	NC	NC	NC	NC	NC
Naphthalene	-2.18E-03	N/A	3.40E-05	3.00E+00	9.00E+00	-6.10E-09	-1.16E-09	-7.12E-08	-2.33E-04	-4.43E-05	-2.33E-04
Propylene	-1.64E-02	N/A	N/A	3.00E+03	3.00E+03	NC	NC	NC	-5.25E-06	-1.00E-06	-5.25E-06
Styrene	-1.14E-03	N/A	N/A	1.00E+03	9.00E+02	NC	NC	NC	-1.21E-06	-2.31E-07	-1.21E-06
Toluene	2.89E-03	N/A	N/A	5.00E+03	3.00E+02	NC	NC	NC	9.25E-06	1.76E-06	9.25E-06
Xylene (total)	-2.08E-01	N/A	N/A	1.00E+02	7.00E+02	NC	NC	NC	-2.85E-04	-5.42E-05	-2.85E-04
Diesel PM	1.06E-02	N/A	3.00E-04	5.00E+00	5.00E+00	2.61E-07	4.97E-08	3.04E-06	2.03E-03	3.86E-04	2.03E-03
Arsenic	5.35E-06	4.30E-03	3.30E-03	1.50E-02	1.50E-02	1.45E-09	2.77E-10	1.69E-08	3.42E-04	6.52E-05	3.42E-04
Cadmium	9.25E-07	1.80E-03	4.20E-03	1.00E-02	2.00E-02	3.19E-10	6.08E-11	3.72E-09	4.43E-05	8.44E-06	4.43E-05
Chlorine	3.62E-06	N/A	N/A	1.50E-01	2.00E-01	NC	NC	NC	1.74E-05	3.31E-06	1.74E-05
Chromium (VI)	4.58E-07	1.20E-02	1.50E-01	1.00E-01	2.00E-01	5.65E-09	1.08E-09	6.59E-08	2.20E-06	4.19E-07	2.20E-06
Copper	1.96E-06	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Lead	9.79E-06	N/A	1.20E-05	N/A	N/A	9.65E-12	1.84E-12	1.13E-10	NC	NC	NC
Manganese	2.52E-06	N/A	N/A	5.00E-02	9.00E-02	NC	NC	NC	2.68E-05	5.11E-06	2.68E-05
Mercury	2.96E-07	N/A	N/A	3.00E-01	3.00E-02	NC	NC	NC	9.46E-06	1.80E-06	9.46E-06
Nickel	6.77E-07	N/A	2.60E-04	9.00E-02	1.40E-02	1.45E-11	2.76E-12	1.69E-10	4.64E-05	8.84E-06	4.64E-05
Selenium	6.06E-07	N/A	N/A	2.00E+01	2.00E+01	NC	NC	NC	2.91E-08	5.54E-09	2.91E-08
Silicon	2.68E-05	N/A	N/A	3.00E+00	3.00E+00	NC	NC	NC	8.56E-06	1.63E-06	8.56E-06
Sulfates	4.38E-04	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Vanadium	3.12E-07	8.30E-03	N/A	1.00E-01	N/A	NC	NC	NC	NC	NC	NC
					TOTAL	1.39E-07	2.65E-08	1.62E-06	-0.0316	-0.0060	-0.0316
					1 in a million cancer risks	0.139	0.027	1.624			

Notes:
[1] Residential Maximum Grid No. Receptor_316
N/A - Not Available
NC = Not Calculated
ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Table 4-2

RAGS F Risk Calculation for MSC North Project, Incremental 2019 With Project over 2019 Without Project- Lifetime Exposure
(Based on Peak Location of Residential Hazards)

Exposure Parameters	Residential Child	School Child	Residential Adult
Exposure Time	24 (hrs/day)	8 (hrs/day)	24 (hrs/day)
Exposure Frequency	350 (days/year)	200 (days/year)	350 (days/year)
Exposure Duration	6 (years)	6 (years)	70 (years)
Averaging Time (non-carcinogenic)	52560 (hrs)	52560 (hrs)	613200 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)	613200 (hrs)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:
EC = Exposure Concentratic ED = Exposure Duration
CA = Concentration in Air AT = Averaging Time
ET = Exposure Time IUR = Inhalation Unit Risk
EF = Exposure Frequency RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks			Hazard Quotients		
TAC	Concentration at Location with Maximum Risk (ug/m3)	EPA Inhalation Unit Risk $(ug/m^3)^{-1}$	CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$	EPA Chronic Inhalation RfC (ug/m^3)	CalEPA Chronic Inhalation RfC (ug/m^3)	Cancer Risk to Child Resident	Cancer Risk to School Child	Cancer Risk to Adult Resident	Hazard Quotient Child Resident	Hazard Quotient School Child	Hazard Quotient Adult Resident
Acetaldehyde	7.25E-03	2.20E-06	2.70E-06	9.00E+00	1.40E+02	1.61E-09	3.07E-10	1.88E-08	4.97E-05	9.46E-06	4.97E-05
Acrolein	4.19E-03	N/A	N/A	2.00E-02	3.50E-01	NC	NC	NC	1.15E-02	2.19E-03	1.15E-02
Benzene	1.92E-03	7.80E-06	2.90E-05	3.00E+01	6.00E+01	4.58E-09	8.73E-10	5.35E-08	3.07E-05	5.85E-06	3.07E-05
1,3-Butadiene	2.67E-03	3.00E-05	1.70E-04	2.00E+00	2.00E+01	3.73E-08	7.11E-09	4.36E-07	1.28E-04	2.44E-05	1.28E-04
Ethylbenzene	-2.71E-05	2.50E-06	2.50E-06	1.00E+03	2.00E+03	-5.56E-12	-1.06E-12	-6.49E-11	-1.30E-08	-2.47E-09	-1.30E-08
Formaldehyde	2.09E-02	1.30E-05	6.00E-06	9.80E+00	9.00E+00	1.03E-08	1.96E-09	1.20E-07	2.22E-03	4.24E-04	2.22E-03
Hexane, n-	-2.12E-04	N/A	N/A	7.00E+02	7.00E+03	NC	NC	NC	-2.90E-08	-5.53E-09	-2.90E-08
Methanol	3.06E-03	N/A	N/A	4.00E+03	4.00E+03	NC	NC	NC	7.34E-07	1.40E-07	7.34E-07
Methyl ethyl ketone	-1.15E-05	N/A	N/A	5.00E+03	N/A	NC	NC	NC	NC	NC	NC
Naphthalene	9.10E-04	N/A	3.40E-05	3.00E+00	9.00E+00	2.54E-09	4.85E-10	2.97E-08	9.70E-05	1.85E-05	9.70E-05
Propylene	7.12E-03	N/A	N/A	3.00E+03	3.00E+03	NC	NC	NC	2.28E-06	4.34E-07	2.28E-06
Styrene	4.90E-04	N/A	N/A	1.00E+03	9.00E+02	NC	NC	NC	5.23E-07	9.95E-08	5.23E-07
Toluene	-3.84E-04	N/A	N/A	5.00E+03	3.00E+02	NC	NC	NC	-1.23E-06	-2.34E-07	-1.23E-06
Xylene (total)	-8.45E-02	N/A	N/A	1.00E+02	7.00E+02	NC	NC	NC	-1.16E-04	-2.20E-05	-1.16E-04
Diesel PM	1.89E-03	N/A	3.00E-04	5.00E+00	5.00E+00	4.66E-08	8.88E-09	5.44E-07	3.63E-04	6.91E-05	3.63E-04
Arsenic	1.33E-06	4.30E-03	3.30E-03	1.50E-02	1.50E-02	3.62E-10	6.89E-11	4.22E-09	8.53E-05	1.62E-05	8.53E-05
Cadmium	2.01E-07	1.80E-03	4.20E-03	1.00E-02	2.00E-02	6.94E-11	1.32E-11	8.10E-10	9.64E-06	1.84E-06	9.64E-06
Chlorine	6.36E-07	N/A	N/A	1.50E-01	2.00E-01	NC	NC	NC	3.05E-06	5.80E-07	3.05E-06
Chromium (VI)	3.57E-07	1.20E-02	1.50E-01	1.00E-01	2.00E-01	4.41E-09	8.39E-10	5.14E-08	1.71E-06	3.26E-07	1.71E-06
Copper	1.39E-06	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Lead	4.48E-06	N/A	1.20E-05	N/A	N/A	4.42E-12	8.41E-13	5.15E-11	NC	NC	NC
Manganese	1.72E-06	N/A	N/A	5.00E-02	9.00E-02	NC	NC	NC	1.84E-05	3.50E-06	1.84E-05
Mercury	4.34E-08	N/A	N/A	3.00E-01	3.00E-02	NC	NC	NC	1.39E-06	2.64E-07	1.39E-06
Nickel	1.47E-07	N/A	2.60E-04	9.00E-02	1.40E-02	3.13E-12	5.96E-13	3.65E-11	1.00E-05	1.91E-06	1.00E-05
Selenium	1.44E-07	N/A	N/A	2.00E+01	2.00E+01	NC	NC	NC	6.90E-09	1.32E-09	6.90E-09
Silicon	4.95E-06	N/A	N/A	3.00E+00	3.00E+00	NC	NC	NC	1.58E-06	3.02E-07	1.58E-06
Sulfates	9.72E-05	N/A	N/A	N/A	N/A	NC	NC	NC	NC	NC	NC
Vanadium	5.77E-08	8.30E-03	N/A	1.00E-01	N/A	NC	NC	NC	NC	NC	NC
					TOTAL	1.08E-07	2.05E-08	1.26E-06	0.0144	0.0027	0.0144

Notes:
[1] Residential Maximum Grid No. Receptor_76
N/A - Not Available
NC = Not Calculated
ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Table 4-3

RAGS F Risk Calculation for MSC North Project, Incremental 2019 With Project over 2019 Without Project- Lifetime Exposure
(Based on Peak Location of Commercial Cancer Risks)

Exposure Parameters	Adult Worker
Exposure Time	24 (hrs/day)
Exposure Frequency	350 (days/year)
Exposure Duration	40 (years)
Averaging Time (non-carcinogenic)	350400 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:
EC = Exposure Concentration
CA = Concentration in Air
ET = Exposure Time
EF = Exposure Frequency
ED = Exposure Duration
AT = Averaging Time
IUR = Inhalation Unit Risk
RfC = Reference Concentration

		Toxicity Criteria				Cancer Risks	Hazard Quotients
TAC	Concentration at Location with Maximum Risk (ug/m3)	EPA Inhalation Unit Risk $(ug/m^3)^{-1}$	CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$	EPA Chronic Inhalation RfC (ug/m^3)	CalEPA Chronic Inhalation RfC (ug/m^3)	Cancer Risk to Adult Worker	Hazard Quotient Adult Worker
Acetaldehyde	-1.04E-02	2.20E-06	2.70E-06	9.00E+00	1.40E+02	-1.54E-08	-7.12E-05
Acrolein	-6.09E-03	N/A	N/A	2.00E-02	3.50E-01	NC	-1.67E-02
Benzene	-3.40E-04	7.80E-06	2.90E-05	3.00E+01	6.00E+01	-5.41E-09	-5.44E-06
1,3-Butadiene	-3.36E-03	3.00E-05	1.70E-04	2.00E+00	2.00E+01	-3.13E-07	-1.61E-04
Ethylbenzene	8.37E-04	2.50E-06	2.50E-06	1.00E+03	2.00E+03	1.15E-09	4.01E-07
Formaldehyde	-2.97E-02	1.30E-05	6.00E-06	9.80E+00	9.00E+00	-9.75E-08	-3.16E-03
Hexane, n-	8.29E-04	N/A	N/A	7.00E+02	7.00E+03	NC	1.14E-07
Methanol	-4.38E-03	N/A	N/A	4.00E+03	4.00E+03	NC	-1.05E-06
Methyl ethyl ketone	4.48E-05	N/A	N/A	5.00E+03	N/A	NC	NC
Naphthalene	-1.28E-03	N/A	3.40E-05	3.00E+00	9.00E+00	-2.39E-08	-1.37E-04
Propylene	-8.78E-03	N/A	N/A	3.00E+03	3.00E+03	NC	-2.81E-06
Styrene	-6.18E-04	N/A	N/A	1.00E+03	9.00E+02	NC	-6.59E-07
Toluene	4.25E-03	N/A	N/A	5.00E+03	3.00E+02	NC	1.36E-05
Xylene (total)	-1.78E-01	N/A	N/A	1.00E+02	7.00E+02	NC	-2.44E-04
Diesel PM	8.04E-03	N/A	3.00E-04	5.00E+00	5.00E+00	1.32E-06	1.54E-03
Arsenic	4.60E-06	4.30E-03	3.30E-03	1.50E-02	1.50E-02	8.31E-09	2.94E-04
Cadmium	7.52E-07	1.80E-03	4.20E-03	1.00E-02	2.00E-02	1.73E-09	3.61E-05
Chlorine	2.74E-06	N/A	N/A	1.50E-01	2.00E-01	NC	1.31E-05
Chromium (VI)	3.88E-07	1.20E-02	1.50E-01	1.00E-01	2.00E-01	3.19E-08	1.86E-06
Copper	1.63E-06	N/A	N/A	N/A	N/A	NC	NC
Lead	8.32E-06	N/A	1.20E-05	N/A	N/A	5.47E-11	NC
Manganese	2.10E-06	N/A	N/A	5.00E-02	9.00E-02	NC	2.23E-05
Mercury	2.19E-07	N/A	N/A	3.00E-01	3.00E-02	NC	6.99E-06
Nickel	5.59E-07	N/A	2.60E-04	9.00E-02	1.40E-02	7.96E-11	3.83E-05
Selenium	5.10E-07	N/A	N/A	2.00E+01	2.00E+01	NC	2.45E-08
Silicon	2.04E-05	N/A	N/A	3.00E+00	3.00E+00	NC	6.52E-06
Sulfates	3.58E-04	N/A	N/A	N/A	N/A	NC	NC
Vanadium	2.38E-07	8.30E-03	N/A	1.00E-01	N/A	NC	NC
					TOTAL	9.10E-07	-0.0185
					1 in a million cancer risks	0.91	

Notes:
[1] Commercial Maximum Grid No. Receptor_320
N/A - Not Available
NC = Not Calculated
ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Table 4-4

RAGS F Risk Calculation for MSC North Project, Incremental 2019 With Project over 2019 Without Project- Lifetime Exposure
(Based on Peak Location of Commercial Cancer Risks)

Exposure Parameters	Adult Worker
Exposure Time	24 (hrs/day)
Exposure Frequency	350 (days/year)
Exposure Duration	40 (years)
Averaging Time (non-carcinogenic)	350400 (hrs)
Averaging Time (carcinogenic)	613200 (hrs)

RAGS F Inhalation Equations

EC = (CA x ET x EF x ED) / (AT)
Risk = IUR x EC
Hazard Quotient = EC / RfC
Where:
EC = Exposure Concentration; ED = Exposure Duration
CA = Concentration in Air; AT = Averaging Time
ET = Exposure Time; IUR = Inhalation Unit Risk
EF = Exposure Frequency; RfC = Reference Concentration

TAC	Concentration at Location with Maximum Risk (ug/m3)	Toxicity Criteria: EPA Inhalation Unit Risk $(ug/m^3)^{-1}$	Toxicity Criteria: CalEPA Inhalation Unit Risk $(ug/m^3)^{-1}$	Toxicity Criteria: EPA Chronic Inhalation RfC (ug/m^3)	Toxicity Criteria: CalEPA Chronic Inhalation RfC (ug/m^3)	Cancer Risks: Cancer Risk to Adult Worker	Hazard Quotients: Hazard Quotient Adult Worker
Acetaldehyde	-1.17E-03	2.20E-06	2.70E-06	9.00E+00	1.40E+02	-1.72E-09	-7.99E-06
Acrolein	-5.82E-04	N/A	N/A	2.00E-02	3.50E-01	NC	-1.59E-03
Benzene	-3.02E-03	7.80E-06	2.90E-05	3.00E+01	6.00E+01	-4.81E-08	-4.83E-05
1,3-Butadiene	-9.82E-04	3.00E-05	1.70E-04	2.00E+00	2.00E+01	-9.15E-08	-4.71E-05
Ethylbenzene	-9.23E-04	2.50E-06	2.50E-06	1.00E+03	2.00E+03	-1.26E-09	-4.43E-07
Formaldehyde	-3.49E-03	1.30E-05	6.00E-06	9.80E+00	9.00E+00	-1.15E-08	-3.72E-04
Hexane, n-	-5.76E-04	N/A	N/A	7.00E+02	7.00E+03	NC	-7.89E-08
Methanol	-5.02E-04	N/A	N/A	4.00E+03	4.00E+03	NC	-1.20E-07
Methyl ethyl ketone	-3.11E-05	N/A	N/A	5.00E+03	N/A	NC	NC
Naphthalene	-1.70E-04	N/A	3.40E-05	3.00E+00	9.00E+00	-3.17E-09	-1.81E-05
Propylene	-2.81E-03	N/A	N/A	3.00E+03	3.00E+03	NC	-8.97E-07
Styrene	-1.77E-04	N/A	N/A	1.00E+03	9.00E+02	NC	-1.89E-07
Toluene	-4.20E-03	N/A	N/A	5.00E+03	3.00E+02	NC	-1.34E-05
Xylene (total)	-4.15E-02	N/A	N/A	1.00E+02	7.00E+02	NC	-5.68E-05
Diesel PM	6.61E-05	N/A	3.00E-04	5.00E+00	5.00E+00	1.09E-08	1.27E-05
Arsenic	4.77E-07	4.30E-03	3.30E-03	1.50E-02	1.50E-02	8.63E-10	3.05E-05
Cadmium	4.76E-08	1.80E-03	4.20E-03	1.00E-02	2.00E-02	1.10E-10	2.28E-06
Chlorine	1.87E-08	N/A	N/A	1.50E-01	2.00E-01	NC	8.95E-08
Chromium (VI)	1.29E-08	1.20E-02	1.50E-01	1.00E-01	2.00E-01	1.06E-09	6.20E-08
Copper	4.58E-08	N/A	N/A	N/A	N/A	NC	NC
Lead	6.09E-07	N/A	1.20E-05	N/A	N/A	4.00E-12	NC
Manganese	6.32E-08	N/A	N/A	5.00E-02	9.00E-02	NC	6.74E-07
Mercury	-1.04E-09	N/A	N/A	3.00E-01	3.00E-02	NC	-3.31E-08
Nickel	4.30E-08	N/A	2.60E-04	9.00E-02	1.40E-02	6.13E-12	2.95E-06
Selenium	4.57E-08	N/A	N/A	2.00E+01	2.00E+01	NC	2.19E-09
Silicon	2.14E-07	N/A	N/A	3.00E+00	3.00E+00	NC	6.84E-08
Sulfates	2.40E-05	N/A	N/A	N/A	N/A	NC	NC
Vanadium	2.49E-09	8.30E-03	N/A	1.00E-01	N/A	NC	NC
					TOTAL	-1.44E-07	-0.0021

Notes:
[1] Residential Maximum Grid No. Receptor_252
N/A - Not Available
NC = Not Calculated
ug/m^3 = micrograms per cubic meter

Source: Ricondo & Associates, Inc., 2013.

Attachment C.5

Operations Acute Health Hazard Calculations

Table 5-1
Summary of Incremental Acute Hazard Indices for LAX MSC North Project over 2019 Without Project for On-Site Workers and Off-Site Receptors
Construction TAC Concentrations

Receptor Location	acetaldehyde (µg/m³)	acrolein (µg/m³)	benzene (µg/m³)	formaldehyde (µg/m³)	methyl alcohol (µg/m³)	methyl ethyl ketone (µg/m³)	styrene (µg/m³)	toluene (µg/m³)	xylene, total (µg/m³)	arsenic (µg/m³)	chlorine (µg/m³)	copper (µg/m³)	mercury (µg/m³)	nickel (µg/m³)	vanadium (µg/m³)	sulfates (µg/m³)
Commerical - Onsite																
Maximum Onsite Concentration -->	3.33E+00	1.88E+00	2.15E+00	9.66E+00	1.41E+00	2.80E-02	2.72E-01	2.96E+00	1.25E+00	1.45E-03	3.25E-03	8.07E-04	2.83E-04	1.98E-04	0.00E+00	1.74E-01
Commerical - Offsite																
Maximum Offsite Concentration -->	6.00E+00	3.40E+00	3.59E+00	1.74E+01	2.54E+00	2.60E-02	4.78E-01	3.53E+00	1.30E+00	3.36E-04	1.54E-03	3.73E-04	1.34E-04	9.22E-05	0.00E+00	8.16E-02
Minimum Offsite Concentration -->	-5.92E+00	-3.32E+00	-4.61E+00	-1.72E+01	-2.51E+00	-2.76E-02	-5.11E-01	-4.45E+00	-1.57E+00	4.22E-05	-1.46E-03	-3.98E-04	-1.28E-04	-4.71E-05	0.00E+00	-5.72E-02
Average Offsite Concentration -->	-2.49E-01	-1.46E-01	-1.66E-03	-7.10E-01	-1.05E-01	1.15E-03	-1.46E-02	1.12E-01	4.93E-02	9.56E-05	-2.03E-04	-4.76E-05	-1.77E-05	-1.92E-06	0.00E+00	-5.64E-03
Recreational																
Maximum Offsite Concentration -->	1.29E+00	8.14E-01	-3.73E-01	3.59E+00	5.36E-01	6.35E-03	2.86E-02	4.78E-01	2.41E-01	1.31E-04	6.91E-04	2.05E-04	6.03E-05	4.33E-05	0.00E+00	3.76E-02
Minimum Offsite Concentration -->	-5.48E+00	-3.13E+00	-2.44E+00	-1.58E+01	-2.32E+00	-2.73E-02	-4.05E-01	-3.33E+00	-1.32E+00	3.65E-05	-9.44E-04	-2.33E-04	-8.23E-05	-4.08E-05	0.00E+00	-4.22E-02
Average Offsite Concentration -->	-1.66E+00	-9.37E-01	-1.06E+00	-4.80E+00	-7.03E-01	-4.99E-03	-1.35E-01	-8.94E-01	-3.04E-01	6.28E-05	-1.12E-04	-2.27E-05	-9.81E-06	-1.33E-07	0.00E+00	-2.66E-03
Residential																
Maximum Offsite Concentration -->	8.37E+00	4.82E+00	2.57E+00	2.41E+01	3.53E+00	2.11E-02	5.79E-01	2.26E+00	8.87E-01	1.72E-04	1.17E-03	3.54E-04	1.02E-04	7.84E-05	0.00E+00	6.61E-02
Minimum Offsite Concentration -->	-6.06E+00	-3.52E+00	-2.46E+00	-1.74E+01	-2.56E+00	-3.07E-02	-3.89E-01	-3.94E+00	-1.52E+00	3.74E-05	-1.61E-03	-3.97E-04	-1.40E-04	-7.57E-05	0.00E+00	-7.49E-02
Average Offsite Concentration -->	-3.29E-01	-1.79E-01	-4.29E-01	-9.63E-01	-1.40E-01	-3.64E-03	-3.46E-02	-5.19E-01	-1.92E-01	9.64E-05	-3.33E-04	-7.39E-05	-2.90E-05	-8.85E-06	0.00E+00	-1.21E-02
School																
Maximum Offsite Concentration -->	2.22E+00	1.25E+00	1.71E+00	6.42E+00	9.38E-01	1.13E-02	1.79E-01	1.76E+00	6.29E-01	1.85E-04	1.12E-03	3.18E-04	9.75E-05	7.71E-05	0.00E+00	6.43E-02
Minimum Offsite Concentration -->	-3.43E+00	-1.97E+00	-1.27E+00	-9.88E+00	-1.45E+00	-9.12E-03	-2.45E-01	-1.28E+00	-4.73E-01	5.43E-05	-7.48E-04	-1.60E-04	-6.52E-05	-3.05E-05	0.00E+00	-3.06E-02
Average Offsite Concentration -->	2.67E-01	1.52E-01	1.28E-01	7.72E-01	1.13E-01	2.65E-04	2.01E-02	7.48E-02	2.20E-02	9.98E-05	-1.23E-04	-1.03E-05	-1.07E-05	2.80E-06	0.00E+00	-1.43E-03
CalEPA Acute REL	470	2.5	1300	55	28000	13000	21000	37000	22000	0.2	210	100	0.6	6	30	120
Commerical - Onsite																
Maximum Onsite Acute Hazard -->	7.09E-03	7.53E-01	1.66E-03	1.76E-01	5.04E-05	2.16E-06	1.29E-05	7.99E-05	5.68E-05	7.23E-03	1.55E-05	8.07E-06	4.72E-04	3.31E-05	0.00E+00	1.45E-03
Commerical - Offsite																
Maximum Offsite Acute Hazard -->	1.28E-02	1.36E+00	2.76E-03	3.16E-01	9.08E-05	2.00E-06	2.28E-05	9.55E-05	5.90E-05	1.68E-03	7.33E-06	3.73E-06	2.24E-04	1.54E-05	0.00E+00	6.80E-04
Minimum Offsite Acute Hazard -->	-1.26E-02	-1.33E+00	-3.54E-03	-3.13E-01	-8.97E-05	-2.12E-06	-2.43E-05	-1.20E-04	-7.13E-05	2.11E-04	-6.96E-06	-3.98E-06	-2.13E-04	-7.84E-06	0.00E+00	-4.77E-04
Average Offsite Acute Hazard -->	-5.30E-04	-5.84E-02	-1.28E-06	-1.29E-02	-3.75E-06	8.87E-08	-6.94E-07	3.03E-06	2.24E-06	4.78E-04	-9.67E-07	-4.76E-07	-2.95E-05	-3.19E-07	0.00E+00	-4.70E-05
Recreational																
Maximum Offsite Acute Hazard -->	2.74E-03	3.26E-01	-2.87E-04	6.52E-02	1.91E-05	4.89E-07	1.36E-06	1.29E-05	1.10E-05	6.53E-04	3.29E-06	2.05E-06	1.00E-04	7.21E-06	0.00E+00	3.13E-04
Minimum Offsite Acute Hazard -->	-1.17E-02	-1.25E+00	-1.87E-03	-2.87E-01	-8.27E-05	-2.10E-06	-1.93E-05	-9.01E-05	-5.99E-05	1.82E-04	-4.50E-06	-2.33E-06	-1.37E-04	-6.80E-06	0.00E+00	-3.51E-04
Average Offsite Acute Hazard -->	-3.53E-03	-3.75E-01	-8.19E-04	-8.73E-02	-2.51E-05	-3.84E-07	-6.42E-06	-2.42E-05	-1.38E-05	3.14E-04	-5.36E-07	-2.27E-07	-1.63E-05	-2.21E-08	0.00E+00	-2.22E-05
Residential																
Maximum Offsite Acute Hazard -->	1.78E-02	1.93E+00	1.98E-03	4.38E-01	1.26E-04	1.62E-06	2.76E-05	6.11E-05	4.03E-05	8.59E-04	5.55E-06	3.54E-06	1.69E-04	1.31E-05	0.00E+00	5.51E-04
Minimum Offsite Acute Hazard -->	-1.29E-02	-1.41E+00	-1.89E-03	-3.16E-01	-9.13E-05	-2.36E-06	-1.85E-05	-1.07E-04	-6.93E-05	1.87E-04	-7.65E-06	-3.97E-06	-2.34E-04	-1.26E-05	0.00E+00	-6.24E-04
Average Offsite Acute Hazard -->	-7.00E-04	-7.14E-02	-3.30E-04	-1.75E-02	-5.00E-06	-2.80E-07	-1.65E-06	-1.40E-05	-8.73E-06	4.82E-04	-1.59E-06	-7.39E-07	-4.84E-05	-1.47E-06	0.00E+00	-1.01E-04
School																
Maximum Offsite Acute Hazard -->	4.72E-03	5.01E-01	1.31E-03	1.17E-01	3.35E-05	8.72E-07	8.52E-06	4.76E-05	2.86E-05	9.25E-04	5.32E-06	3.18E-06	1.63E-04	1.29E-05	0.00E+00	5.36E-04
Minimum Offsite Acute Hazard -->	-7.30E-03	-7.88E-01	-9.74E-04	-1.80E-01	-5.18E-05	-7.02E-07	-1.17E-05	-3.45E-05	-2.15E-05	2.72E-04	-3.56E-06	-1.60E-06	-1.09E-04	-5.08E-06	0.00E+00	-2.55E-04
Average Offsite Acute Hazard -->	5.67E-04	6.09E-02	9.84E-05	1.40E-02	4.03E-06	2.04E-08	9.56E-07	2.02E-06	9.99E-07	4.99E-04	-5.84E-07	-1.03E-07	-1.78E-05	4.67E-07	0.00E+00	-1.19E-05

Table 5-2
Summary of Incremental Acute Hazard Concentrations
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acrolein ($\mu g/m^3$)	benzene ($\mu g/m^3$)	formaldehyde ($\mu g/m^3$)	methyl alcohol ($\mu g/m^3$)	methyl ethyl ketone ($\mu g/m^3$)	phonel (carbolic acid) ($\mu g/m^3$)	styrene ($\mu g/m^3$)	toulene ($\mu g/m^3$)	xylene, total ($\mu g/m^3$)	arsenic ($\mu g/m^3$)	chlorine ($\mu g/m^3$)	copper ($\mu g/m^3$)	mercury ($\mu g/m^3$)	nickel ($\mu g/m^3$)	vanadium ($\mu g/m^3$)	sulfates ($\mu g/m^3$)
117	370814	758243	Offsite Worker	7.96E-01	4.02E-01	1.93E+00	2.39E+00	3.42E-01	1.96E-02	1.19E-01	1.16E-01	2.65E+00	1.00E+00	8.11E-01	6.79E-01	1.26E-04	-5.86E-04	-1.51E-04	-5.11E-05	-1.96E-05
118	370810	758153	Offsite Worker	1.53E-01	3.53E-02	1.63E+00	5.31E-01	7.02E-02	1.89E-02	1.05E-02	6.76E-02	2.47E+00	9.49E-01	7.60E-01	6.37E-01	1.33E-04	-8.73E-04	-2.66E-04	-7.61E-05	-3.44E-05
119	370807	758063	Offsite Worker	-5.95E-02	-6.52E-02	9.04E-01	-1.16E-01	-2.19E-02	1.12E-02	-1.93E-02	2.91E-02	1.44E+00	5.57E-01	4.44E-01	3.72E-01	1.52E-04	-1.06E-03	-3.57E-04	-9.22E-05	-4.26E-05
120	370803	757974	Offsite Worker	2.74E-01	1.49E-01	3.50E-01	8.06E-01	1.17E-01	2.91E-03	4.42E-02	2.85E-02	4.19E-01	1.54E-01	1.27E-01	1.06E-01	1.52E-04	-1.08E-03	-3.98E-04	-9.44E-05	-4.40E-05
121	370835	757927	Offsite Worker	5.63E-01	3.13E-01	5.16E-01	1.64E+00	2.39E-01	3.54E-03	9.28E-02	5.13E-02	5.43E-01	1.95E-01	1.63E-01	1.37E-01	1.53E-04	-6.15E-04	-2.69E-04	-5.37E-05	-1.87E-05
122	370868	757880	Offsite Worker	-2.27E-01	-1.22E-01	-3.22E-01	-6.62E-01	-9.65E-02	-2.84E-03	-3.62E-02	-2.49E-02	-4.00E-01	-1.49E-01	-1.22E-01	-1.02E-01	1.86E-04	-1.03E-04	-4.16E-05	-8.98E-06	1.20E-05
123	370921	757884	Offsite Worker	-6.09E-01	-3.26E-01	-9.23E-01	-1.79E+00	-2.60E-01	-8.30E-03	-9.66E-02	-6.88E-02	-1.16E+00	-4.34E-01	-3.54E-01	-2.97E-01	1.95E-04	4.28E-05	3.72E-05	3.73E-06	2.07E-05
124	370975	757887	Offsite Worker	-9.24E-01	-5.08E-01	-1.01E+00	-2.70E+00	-3.93E-01	-7.82E-03	-1.51E-01	-9.02E-02	-1.15E+00	-4.21E-01	-3.47E-01	-2.91E-01	1.83E-04	2.44E-04	1.16E-04	2.13E-05	3.04E-05
125	370975	757794	Offsite Worker	-1.67E+00	-9.65E-01	-4.35E-01	-4.80E+00	-7.05E-01	2.68E-03	-2.86E-01	-1.13E-01	9.59E-02	7.83E-02	4.16E-02	3.41E-02	1.70E-04	2.67E-04	6.30E-05	2.33E-05	3.04E-05
126	371026	757794	Offsite Worker	-2.00E+00	-1.17E+00	-2.78E-01	-5.74E+00	-8.45E-01	6.16E-03	-3.46E-01	-1.27E-01	4.96E-01	2.41E-01	1.67E-01	1.39E-01	1.60E-04	2.15E-04	1.68E-05	1.88E-05	2.67E-05
127	371076	757877	Offsite Worker	-1.73E+00	-1.01E+00	-3.07E-01	-4.97E+00	-7.30E-01	4.51E-03	-2.98E-01	-1.12E-01	3.23E-01	1.67E-01	1.12E-01	9.31E-02	1.59E-04	4.24E-04	1.39E-04	3.70E-05	3.78E-05
128	371126	757959	Offsite Worker	-1.32E+00	-7.61E-01	-4.68E-01	-3.81E+00	-5.59E-01	6.27E-04	-2.26E-01	-9.39E-02	-1.17E-01	-1.25E-02	-2.65E-02	-2.28E-02	1.57E-04	4.59E-04	1.57E-04	4.00E-05	3.96E-05
129	371119	758031	Offsite Worker	-1.05E+00	-5.85E-01	-9.03E-01	-3.05E+00	-4.45E-01	-5.94E-03	-1.74E-01	-9.37E-02	-9.25E-01	-3.31E-01	-2.77E-01	-2.33E-01	1.63E-04	2.32E-04	7.87E-05	2.02E-05	2.79E-05
143	371953	757977	Offsite Worker	-6.24E-01	-3.42E-01	-7.18E-01	-1.82E+00	-2.65E-01	-5.74E-03	-1.01E-01	-6.22E-02	-8.35E-01	-3.07E-01	-2.53E-01	-2.12E-01	8.04E-05	-2.24E-04	-3.18E-06	-1.96E-05	-4.50E-06
144	371948	757880	Offsite Worker	-3.24E-01	-1.79E-01	-3.38E-01	-9.43E-01	-1.38E-01	-2.56E-03	-5.29E-02	-3.11E-02	-3.79E-01	-1.38E-01	-1.14E-01	-9.60E-02	8.35E-05	-2.07E-04	-1.26E-06	-1.80E-05	-3.25E-06
145	371943	757783	Offsite Worker	-1.03E-01	-6.16E-02	4.10E-02	-2.90E-01	-4.31E-02	9.73E-04	-1.83E-02	-4.53E-03	1.11E-01	4.51E-02	3.48E-02	2.91E-02	8.93E-05	-6.16E-06	3.80E-05	-5.37E-07	8.09E-06
146	372016	757794	Offsite Worker	-2.19E-01	-1.29E-01	1.27E-02	-6.24E-01	-9.22E-02	1.19E-03	-3.82E-02	-1.23E-02	1.21E-01	5.19E-02	3.87E-02	3.23E-02	8.51E-05	4.88E-05	5.14E-05	4.26E-06	1.07E-05
147	372102	757791	Offsite Worker	-3.00E-01	-1.70E-01	-1.92E-01	-8.68E-01	-1.27E-01	-9.02E-04	-5.03E-02	-2.44E-02	-1.61E-01	-5.49E-02	-4.76E-02	-4.00E-02	8.17E-05	7.33E-05	5.60E-05	6.39E-06	1.17E-05
148	372178	757760	Offsite Worker	-5.27E-01	-2.84E-01	-7.38E-01	-1.55E+00	-2.24E-01	-6.43E-03	-8.42E-02	-5.73E-02	-9.10E-01	-3.38E-01	-2.77E-01	-2.32E-01	8.01E-05	-8.41E-06	2.20E-05	-7.33E-07	7.10E-06
149	372177	757670	Offsite Worker	-4.80E-01	-2.67E-01	-4.42E-01	-1.40E+00	-2.04E-01	-3.07E-03	-7.91E-02	-4.39E-02	-4.69E-01	-1.69E-01	-1.41E-01	-1.18E-01	8.39E-05	-2.29E-04	-3.47E-05	-2.00E-05	-4.44E-06
150	372176	757579	Offsite Worker	-9.69E-01	-5.38E-01	-9.04E-01	-2.82E+00	-4.11E-01	-6.34E-03	-1.59E-01	-8.90E-02	-9.65E-01	-3.48E-01	-2.90E-01	-2.43E-01	7.40E-05	-5.26E-04	-9.42E-05	-4.59E-05	-2.14E-05
151	372174	757489	Offsite Worker	-9.95E-01	-5.56E-01	-8.25E-01	-2.89E+00	-4.22E-01	-5.26E-03	-1.65E-01	-8.77E-02	-8.29E-01	-2.95E-01	-2.48E-01	-2.08E-01	7.00E-05	-5.38E-04	-1.06E-04	-4.70E-05	-2.24E-05
152	372173	757398	Offsite Worker	-6.12E-01	-3.26E-01	-9.66E-01	-1.80E+00	-2.61E-01	-8.79E-03	-9.67E-02	-7.05E-02	-1.23E+00	-4.59E-01	-3.74E-01	-3.13E-01	8.33E-05	-6.37E-04	-1.22E-04	-5.55E-05	-2.64E-05
153	372171	757308	Offsite Worker	-2.83E-01	-1.36E-01	-8.77E-01	-8.55E-01	-1.22E-01	-9.28E-03	-4.04E-02	-4.81E-02	-1.24E+00	-4.72E-01	-3.80E-01	-3.19E-01	9.18E-05	-2.12E-04	-4.42E-05	-1.85E-05	-2.78E-06
154	372055	757309	Offsite Worker	-8.00E-01	-4.40E-01	-8.80E-01	-2.33E+00	-3.40E-01	-6.86E-03	-1.30E-01	-7.83E-02	-1.01E+00	-3.68E-01	-3.04E-01	-2.55E-01	1.16E-04	-2.77E-04	-5.78E-05	-2.42E-05	-4.00E-06
156	372055	757416	Offsite Worker	-1.14E+00	-6.41E-01	-8.43E-01	-3.31E+00	-4.83E-01	-4.78E-03	-1.90E-01	-9.68E-02	-7.89E-01	-2.76E-01	-2.35E-01	-1.97E-01	7.66E-05	-7.36E-04	-1.66E-04	-6.42E-05	-3.24E-05
157	371952	757442	Offsite Worker	-1.42E+00	-7.99E-01	-1.08E+00	-4.13E+00	-6.04E-01	-6.27E-03	-2.37E-01	-1.22E-01	-1.02E+00	-3.60E-01	-3.05E-01	-2.56E-01	8.19E-05	-6.22E-04	-1.35E-04	-5.42E-05	-2.58E-05
158	371950	757345	Offsite Worker	-5.96E-01	-3.36E-01	-4.08E-01	-1.72E+00	-2.52E-01	-2.11E-03	-9.96E-02	-4.94E-02	-3.62E-01	-1.25E-01	-1.07E-01	-9.01E-02	1.09E-04	-5.25E-04	-1.01E-04	-4.57E-05	-1.79E-05
159	371864	757344	Offsite Worker	-6.07E-01	-3.39E-01	-5.15E-01	-1.76E+00	-2.57E-01	-3.36E-03	-1.00E-01	-5.39E-02	-5.25E-01	-1.87E-01	-1.57E-01	-1.32E-01	1.11E-04	-5.68E-04	-1.21E-04	-4.95E-05	-2.01E-05
160	371790	757347	Offsite Worker	-6.96E-01	-3.88E-01	-6.08E-01	-2.02E+00	-2.95E-01	-4.06E-03	-1.15E-01	-6.25E-02	-6.29E-01	-2.25E-01	-1.89E-01	-1.58E-01	1.14E-04	-6.13E-04	-1.44E-04	-5.34E-05	-2.22E-05
161	371708	757356	Offsite Worker	-9.99E-01	-5.65E-01	-6.38E-01	-2.89E+00	-4.23E-01	-2.98E-03	-1.67E-01	-8.12E-02	-5.35E-01	-1.81E-01	-1.57E-01	-1.32E-01	1.12E-04	-6.75E-04	-1.76E-04	-5.89E-05	-2.58E-05
162	371615	757356	Offsite Worker	-1.16E+00	-6.57E-01	-6.49E-01	-3.34E+00	-4.89E-01	-2.37E-03	-1.95E-01	-9.07E-02	-4.80E-01	-1.56E-01	-1.39E-01	-1.17E-01	1.17E-04	-7.00E-04	-1.97E-04	-6.11E-05	-2.67E-05
163	371523	757356	Offsite Worker	-1.16E+00	-6.52E-01	-7.89E-01	-3.35E+00	-4.90E-01	-4.06E-03	-1.93E-01	-9.58E-02	-6.98E-01	-2.41E-01	-2.07E-01	-1.74E-01	1.28E-04	-6.56E-04	-1.91E-04	-5.72E-05	-2.32E-05
164	371430	757356	Offsite Worker	-9.35E-01	-5.15E-01	-9.83E-01	-2.73E+00	-3.97E-01	-7.47E-03	-1.53E-01	-8.99E-02	-1.11E+00	-4.03E-01	-3.34E-01	-2.80E-01	1.41E-04	-5.88E-04	-1.58E-04	-5.13E-05	-1.84E-05
165	371338	757356	Offsite Worker	-8.49E-01	-4.54E-01	-1.32E+00	-2.50E+00	-3.62E-01	-1.20E-02	-1.34E-01	-9.73E-02	-1.68E+00	-6.27E-01	-5.11E-01	-4.29E-01	1.54E-04	-5.80E-04	-1.41E-04	-5.06E-05	-1.67E-05
166	371245	757356	Offsite Worker	-8.97E-01	-4.79E-01	-1.41E+00	-2.64E+00	-3.83E-01	-1.28E-02	-1.42E-01	-1.03E-01	-1.79E+00	-6.68E-01	-5.45E-01	-4.57E-01	1.71E-04	-6.71E-04	-1.62E-04	-5.85E-05	-2.00E-05
167	371153	757356	Offsite Worker	-9.54E-01	-5.10E-01	-1.49E+00	-2.81E+00	-4.07E-01	-1.35E-02	-1.51E-01	-1.09E-01	-1.89E+00	-7.04E-01	-5.75E-01	-4.82E-01	1.87E-04	-7.54E-04	-1.79E-04	-6.58E-05	-2.29E-05
168	371061	757356	Offsite Worker	-1.02E+00	-5.44E-01	-1.57E+00	-2.99E+00	-4.34E-01	-1.41E-02	-1.61E-01	-1.16E-01	-1.98E+00	-7.38E-01	-6.02E-01	-5.05E-01	2.08E-04	-7.80E-04	-1.80E-04	-6.81E-05	-2.24E-05
169	371005	757357	Offsite Worker	-1.02E+00	-5.41E-01	-1.63E+00	-2.99E+00	-4.34E-01	-1.50E-02	-1.60E-01	-1.18E-01	-2.09E+00	-7.80E-01	-6.36E-01	-5.33E-01	2.27E-04	-6.92E-04	-1.47E-04	-6.03E-05	-1.59E-05
170	370998	757293	Offsite Worker	-1.30E+00	-7.74E-01	3.83E-01	-3.68E+00	-5.45E-01	1.08E-02	-2.29E-01	-6.17E-02	1.20E+00	4.95E-01	3.79E-01	3.17E-01	2.45E-04	-5.25E-04	-1.69E-04	-4.57E-05	-5.18E-06
171	370998	757194	Offsite Worker	-8.50E-01	-5.14E-01	4.61E-01	-2.40E+00	-3.56E-01	9.60E-03	-1.52E-01	-3.29E-02	1.11E+00	4.50E-01	3.49E-01	2.92E-01	2.82E-04	-5.64E-04	-1.22E-04	-4.92E-05	-3.71E-06
172	370998	757096	Offsite Worker	-2.34E+00	-1.30E+00	-2.25E+00	-6.80E+00	-9.92E-01	-1.61E-02	-3.84E-01	-2.17E-01	-2.43E+00	-8.79E-01	-7.31E-01	-6.13E-01	3.30E-04	-7.55E-04	-1.62E-04	-6.59E-05	-9.53E-06
173	370998	756998	Offsite Worker	-3.69E-01	-2.25E-01	2.49E-01	-1.04E+00	-1.55E-01	4.73E-03	-6.66E-02	-1.26E-02	5.58E-01	2.24E-01	1.74E-01	1.46E-01	3.36E-04	-1.46E-03	-3.84E-04	-1.28E-04	-4.71E-05
174	371057	756997	Offsite Worker	5.30E-02	-4.17E-02	2.17E+00	2.78E-01	3.00E-02	2.60E-02	-1.24E-02	8.14E-02	3.37E+00	1.30E+00	1.04E+00	8.69E-01	3.00E-04	-1.35E-03	-3.61E-04	-1.18E-04	-4.45E-05
175	371153	756997	Offsite Worker	9.75E-01	5.12E-01	1.80E+00	2.89E+00	4.17E-01	1.71E-02	1.52E-01	1.22E-01	2.36E+00	8.84E-01	7.19E-01	6.02E-01	2.55E-04	-1.19E-03	-3.23E-04	-1.04E-04	-3.99E-05
176	371249	756997	Offsite Worker	-1.64E+00	-9.54E-01	-1.62E-01	-4.68E+00	-6.90E-01	5.81E-03	-2.83E-01	-1.01E-01	5.06E-01	2.36E-01	1.68E-01	1.40E-01	2.11E-04	-1.01E-03	-2.84E-04	-8.79E-05	-3.44E-05
177	371345	756997	Offsite Worker	-2.06E+00	-1.19E+00	-4.78E-01	-5.92E+00	-8.70E-01	4.01E-03	-3.54E-01	-1.37E-01	2.10E-01	1.32E-01	7.96E-02	6.57E-02	2.06E-04	-1.04E-03	-2.67E-04	-9.08E-05	-3.67E-05
178	371440	756997	Offsite Worker	-1.44E+00	-8.39E-01	-1.99E-01	-4.13E+00	-6.08E-01	4.44E-03	-2.49E-01	-9.10E-02	3.58E-01	1.74E-01	1.21E-01	1.00E-01	1.87E-04	-1.00E-03	-2.43E-04	-8.73E-05	-3.63E-05
179	371536	756997	Offsite Worker	-4.70E-01	-2.73E-01	-7.61E-02	-1.34E+00	-1.98E-01	1.29E-03	-8.09E-02	-3.01E-02	9.76E-02	4.89E-02	3.32E-02	2.76E-02	1.70E-04	-8.43E-04	-1.85E-04	-7.35E-05	-2.94E-05
180	371632	756997	Offsite Worker	-8.09E-02	-5.57E-02	2.49E-01	-2.14E-01	-3.32E-02	3.37E-03	-1.65E-02	4.21E-03	4.25E-01	1.65E-01	1.31E-01	1.10E-01	1.51E-04	-4.84E-04	-1.06E-04	-4.23E-05	-1.19E-05
181	371728	756997	Offsite Worker	2.03E-01	1.10E-01	2.86E-01	6.00E-01	8.66E-02	2.48E-03	3.25E-02	2.21E-02	3.52E-01	1.30E-01	1.07E-01	8.93E-02	1.43E-04	-3.98E-04	-6.20E-05	-3.47E-05	-7.95E-06
182	371824	756997	Offsite Worker	3.51E-01	1.87E-01	5.72E-01	1.04E+00	1.50E-01	5.23E-03	5.54E-02	4.10E-02	7.30E-01	2.72E-01	2.22E-01	1.86E-01	1.25E-04	-2.75E-04	-4.05E-05	-2.40E-05	-2.99E-06
183	371920	756997	Offsite Worker	-1.31E+00	-7.42E-01	-8.15E-01	-3.79E+00	-5.55E-01	-3.63E-03	-2.20E-01	-1.06E-01	-6.66E-01	-2.24E-01	-1.96E-01	-1.64E-01	1.08E-04	-1.60E-04	-2.87E-05	-1.39E-05	1.63E-06

Table 5-2
Summary of Incremental Acute Hazard Concentrations
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m^3)	acrolein (µg/m^3)	benzene (µg/m^3)	formaldehyde (µg/m^3)	methyl alcohol (µg/m^3)	methyl ethyl ketone (µg/m^3)	phonel (carbolic acid) (µg/m^3)	styrene (µg/m^3)	toulene (µg/m^3)	xylene, total (µg/m^3)	arsenic (µg/m^3)	chlorine (µg/m^3)	copper (µg/m^3)	mercury (µg/m^3)	nickel (µg/m^3)	vanadium (µg/m^3)	sulfates (µg/m^3)
184	372016	756997	Offsite Worker	4.12E-02	1.74E-02	2.01E-01	1.31E-01	1.80E-02	2.22E-03	5.17E-03	9.62E-03	2.94E-01	1.12E-01	9.02E-02	7.55E-02	9.81E-05	-3.65E-04	-2.55E-05	-3.18E-05	-1.04E-05
185	372111	756997	Offsite Worker	3.65E-01	2.39E-01	-7.56E-01	1.00E+00	1.51E-01	-1.09E-02	7.10E-02	-6.14E-03	-1.35E+00	-5.32E-01	-4.20E-01	-3.52E-01	7.78E-05	-7.52E-04	-2.06E-04	-6.56E-05	-3.32E-05
186	372207	756997	Offsite Worker	1.03E+00	5.26E-01	2.30E+00	3.07E+00	4.41E-01	2.30E-02	1.56E-01	1.43E-01	3.13E+00	1.18E+00	9.55E-01	8.00E-01	9.38E-05	4.32E-05	5.82E-05	3.76E-06	1.12E-05
187	372303	756997	Offsite Worker	2.50E+00	1.41E+00	1.52E+00	7.23E+00	1.06E+00	6.47E-03	4.19E-01	2.00E-01	1.21E+00	4.05E-01	3.55E-01	2.98E-01	7.61E-05	2.18E-04	2.34E-05	1.90E-05	1.89E-05
188	372399	756997	Offsite Worker	2.64E+00	1.50E+00	1.54E+00	7.64E+00	1.12E+00	6.02E-03	4.44E-01	2.09E-01	1.18E+00	3.87E-01	3.42E-01	2.88E-01	9.86E-05	1.54E-03	3.73E-04	1.34E-04	9.22E-05
189	372495	756997	Offsite Worker	2.19E-01	1.16E-01	3.81E-01	6.50E-01	9.38E-02	3.56E-03	3.44E-02	2.65E-02	4.94E-01	1.85E-01	1.50E-01	1.26E-01	8.11E-05	3.41E-04	3.87E-05	2.97E-05	2.60E-05
190	372591	756997	Offsite Worker	-7.08E-02	-3.67E-02	-1.44E-01	-2.09E-01	-3.03E-02	-1.42E-03	-1.09E-02	-9.35E-03	-1.93E-01	-7.29E-02	-5.91E-02	-4.95E-02	6.71E-05	-2.74E-04	-1.73E-05	-2.39E-05	-8.42E-06
191	372610	757063	Offsite Worker	-1.35E-01	-9.09E-02	3.56E-01	-3.64E-01	-5.54E-02	4.94E-03	-2.69E-02	5.01E-03	6.19E-01	2.42E-01	1.92E-01	1.60E-01	7.09E-05	6.96E-05	2.53E-05	6.07E-06	1.04E-05
192	372612	757132	Offsite Worker	4.51E-01	2.37E-01	8.20E-01	1.34E+00	1.93E-01	7.77E-03	7.03E-02	5.58E-02	1.07E+00	4.02E-01	3.27E-01	2.74E-01	7.24E-05	1.75E-04	3.54E-05	1.53E-05	1.63E-05
193	372614	757201	Offsite Worker	8.77E-01	4.90E-01	7.42E-01	2.55E+00	3.72E-01	4.80E-03	1.45E-01	7.78E-02	7.53E-01	2.68E-01	2.25E-01	1.89E-01	7.06E-05	5.19E-04	1.29E-04	4.53E-05	3.46E-05
194	372616	757270	Offsite Worker	4.39E-01	2.36E-01	6.25E-01	1.29E+00	1.87E-01	5.47E-03	7.00E-02	4.81E-02	7.74E-01	2.87E-01	2.35E-01	1.97E-01	7.15E-05	4.29E-04	8.79E-05	3.74E-05	2.98E-05
195	372627	757351	Offsite Worker	8.56E-02	4.93E-02	2.72E-02	2.48E-01	3.61E-02	-8.94E-05	1.46E-02	5.92E-03	1.75E-03	-1.63E-03	-2.31E-04	-1.54E-04	7.50E-05	1.19E-04	2.53E-05	1.04E-05	1.35E-05
196	372651	757422	Offsite Worker	-2.91E-01	-1.61E-01	-2.84E-01	-8.46E-01	-1.24E-01	-2.06E-03	-4.78E-02	-2.72E-02	-3.10E-01	-1.12E-01	-9.34E-02	-7.84E-02	7.09E-05	-3.34E-04	-5.61E-05	-2.91E-05	-1.13E-05
197	372676	757494	Offsite Worker	-5.95E-01	-3.38E-01	-3.24E-01	-1.72E+00	-2.52E-01	-1.10E-03	-1.00E-01	-4.63E-02	-2.31E-01	-7.42E-02	-6.67E-02	-5.62E-02	5.49E-05	-6.22E-04	-1.30E-04	-5.42E-05	-2.83E-05
198	372704	757569	Offsite Worker	-1.08E+00	-6.19E-01	-3.90E-01	-3.10E+00	-4.55E-01	4.05E-04	-1.83E-01	-7.67E-02	-1.09E-01	-1.54E-02	-2.57E-02	-2.20E-02	4.93E-05	-4.55E-04	-9.44E-05	-3.96E-05	-1.98E-05
199	372733	757645	Offsite Worker	-1.06E+00	-6.06E-01	-5.57E-01	-3.07E+00	-4.50E-01	-1.68E-03	-1.79E-01	-8.20E-02	-3.77E-01	-1.19E-01	-1.08E-01	-9.12E-02	5.40E-05	-3.29E-04	-5.20E-05	-2.87E-05	-1.26E-05
200	372746	757702	Offsite Worker	-9.68E-01	-5.48E-01	-5.84E-01	-2.80E+00	-4.10E-01	-2.46E-03	-1.62E-01	-7.73E-02	-4.63E-01	-1.55E-01	-1.36E-01	-1.14E-01	5.69E-05	-3.47E-04	-6.42E-05	-3.02E-05	-1.33E-05
201	372746	757768	Offsite Worker	-1.02E+00	-5.82E-01	-5.01E-01	-2.94E+00	-4.31E-01	-1.22E-03	-1.72E-01	-7.74E-02	-3.10E-01	-9.43E-02	-8.81E-02	-7.42E-02	6.23E-05	-2.51E-04	-5.17E-05	-2.19E-05	-7.66E-06
204	372994	757783	Offsite Worker	-9.51E-01	-5.37E-01	-6.05E-01	-2.75E+00	-4.02E-01	-2.81E-03	-1.59E-01	-7.71E-02	-5.06E-01	-1.71E-01	-1.49E-01	-1.25E-01	5.42E-05	-2.88E-04	-5.71E-05	-2.51E-05	-1.04E-05
205	373087	757783	Offsite Worker	-9.88E-01	-5.59E-01	-6.04E-01	-2.86E+00	-4.18E-01	-2.61E-03	-1.66E-01	-7.93E-02	-4.85E-01	-1.63E-01	-1.42E-01	-1.20E-01	5.12E-05	-2.71E-04	-5.23E-05	-2.36E-05	-9.77E-06
206	373180	757784	Offsite Worker	-8.80E-01	-5.00E-01	-4.79E-01	-2.54E+00	-3.72E-01	-1.61E-03	-1.48E-01	-6.85E-02	-3.40E-01	-1.09E-01	-9.83E-02	-8.27E-02	4.81E-05	-2.49E-04	-4.68E-05	-2.17E-05	-8.85E-06
207	373274	757785	Offsite Worker	-7.54E-01	-4.30E-01	-3.41E-01	-2.17E+00	-3.19E-01	-5.47E-04	-1.28E-01	-5.61E-02	-1.84E-01	-5.21E-02	-5.11E-02	-4.31E-02	4.52E-05	-2.13E-04	-4.09E-05	-1.86E-05	-7.21E-06
208	373367	757786	Offsite Worker	-6.63E-01	-3.81E-01	-2.39E-01	-1.91E+00	-2.80E-01	2.57E-04	-1.13E-01	-4.72E-02	-6.62E-02	-9.09E-03	-1.55E-02	-1.33E-02	4.22E-05	-2.04E-04	-3.45E-05	-1.78E-05	-7.02E-06
209	373418	757742	Offsite Worker	-4.91E-01	-2.86E-01	-5.62E-02	-1.41E+00	-2.07E-01	1.65E-03	-8.48E-02	-3.06E-02	1.40E-01	6.62E-02	4.67E-02	3.89E-02	4.26E-05	-1.47E-04	-1.88E-05	-1.28E-05	-3.88E-06
210	373418	757653	Offsite Worker	8.23E-02	3.55E-02	3.81E-01	2.58E-01	3.60E-02	4.21E-03	1.05E-02	1.85E-02	5.57E-01	2.13E-01	1.71E-01	1.43E-01	4.75E-05	-1.94E-04	-3.05E-05	-1.69E-05	-5.97E-06
211	373419	757564	Offsite Worker	8.10E-01	4.59E-01	4.80E-01	2.35E+00	3.43E-01	1.94E-03	1.36E-01	6.44E-02	3.73E-01	1.23E-01	1.09E-01	9.14E-02	5.24E-05	-1.77E-04	-1.81E-05	-1.55E-05	-4.61E-06
212	373419	757475	Offsite Worker	1.04E+00	5.95E-01	3.83E-01	2.99E+00	4.38E-01	-3.04E-04	1.76E-01	7.40E-02	1.17E-01	1.90E-02	2.81E-02	2.41E-02	5.40E-05	-1.27E-04	-1.82E-05	-1.11E-05	-1.74E-06
213	373420	757386	Offsite Worker	7.59E-01	4.31E-01	4.28E-01	2.19E+00	3.21E-01	1.56E-03	1.28E-01	5.95E-02	3.16E-01	1.03E-01	9.15E-02	7.70E-02	4.76E-05	2.22E-05	8.19E-06	1.94E-06	5.69E-06
214	373420	757297	Offsite Worker	4.48E-01	2.47E-01	4.66E-01	1.31E+00	1.90E-01	3.50E-03	7.33E-02	4.29E-02	5.21E-01	1.89E-01	1.57E-01	1.32E-01	5.15E-05	2.31E-04	7.67E-05	2.01E-05	1.73E-05
215	373421	757207	Offsite Worker	7.52E-01	4.24E-01	5.15E-01	2.18E+00	3.18E-01	2.65E-03	1.26E-01	6.23E-02	4.56E-01	1.57E-01	1.35E-01	1.13E-01	5.38E-05	2.36E-04	7.99E-05	2.06E-05	1.78E-05
216	373421	757118	Offsite Worker	8.26E-01	4.67E-01	5.13E-01	2.39E+00	3.50E-01	2.26E-03	1.39E-01	6.65E-02	4.17E-01	1.40E-01	1.22E-01	1.03E-01	5.54E-05	2.23E-04	7.31E-05	1.94E-05	1.72E-05
217	373292	757117	Offsite Worker	8.23E-01	4.64E-01	5.62E-01	2.38E+00	3.48E-01	2.88E-03	1.37E-01	6.81E-02	4.97E-01	1.71E-01	1.47E-01	1.23E-01	5.80E-05	2.29E-04	7.73E-05	2.00E-05	1.78E-05
218	373213	757118	Offsite Worker	8.08E-01	4.55E-01	5.57E-01	2.34E+00	3.42E-01	2.88E-03	1.35E-01	6.71E-02	4.94E-01	1.70E-01	1.46E-01	1.23E-01	5.88E-05	2.35E-04	7.99E-05	2.05E-05	1.82E-05
219	373158	757066	Offsite Worker	9.41E-01	5.31E-01	6.33E-01	2.73E+00	3.99E-01	3.17E-03	1.57E-01	7.75E-02	5.51E-01	1.89E-01	1.63E-01	1.37E-01	6.07E-05	2.24E-04	7.79E-05	1.95E-05	1.78E-05
220	373084	757026	Offsite Worker	1.03E+00	5.85E-01	6.34E-01	2.99E+00	4.37E-01	2.75E-03	1.73E-01	8.29E-02	5.11E-01	1.71E-01	1.50E-01	1.26E-01	6.19E-05	2.21E-04	7.77E-05	1.93E-05	1.78E-05
221	373009	757011	Offsite Worker	1.08E+00	6.13E-01	6.79E-01	3.14E+00	4.59E-01	3.05E-03	1.82E-01	8.75E-02	5.58E-01	1.88E-01	1.64E-01	1.38E-01	6.49E-05	2.69E-04	7.90E-05	2.34E-05	2.06E-05
222	372922	757009	Offsite Worker	1.11E+00	6.28E-01	7.62E-01	3.23E+00	4.72E-01	3.91E-03	1.86E-01	9.23E-02	6.73E-01	2.32E-01	1.99E-01	1.67E-01	6.96E-05	3.59E-04	8.11E-05	3.13E-05	2.59E-05
223	372835	757007	Offsite Worker	1.10E+00	6.18E-01	7.37E-01	3.18E+00	4.64E-01	3.69E-03	1.83E-01	9.03E-02	6.43E-01	2.20E-01	1.90E-01	1.59E-01	7.16E-05	3.80E-04	8.05E-05	3.31E-05	2.72E-05
224	372747	757006	Offsite Worker	1.18E+00	6.70E-01	6.90E-01	3.42E+00	5.00E-01	2.71E-03	1.99E-01	9.36E-02	5.29E-01	1.74E-01	1.54E-01	1.30E-01	7.15E-05	2.77E-04	7.49E-05	2.42E-05	2.17E-05
225	372660	757004	Offsite Worker	6.90E-01	3.98E-01	1.85E-01	1.98E+00	2.91E-01	-1.05E-03	1.18E-01	4.68E-02	-3.16E-02	-2.95E-02	-1.50E-02	-1.22E-02	6.62E-05	-1.53E-04	4.73E-06	-1.33E-05	-2.00E-06
226	372651	757063	Offsite Worker	2.21E-01	1.15E-01	4.44E-01	6.58E-01	9.47E-02	4.32E-03	3.40E-02	2.89E-02	5.92E-01	2.22E-01	1.80E-01	1.51E-01	6.77E-05	-1.44E-05	2.85E-05	-1.26E-06	5.61E-06
227	372629	756931	Offsite Worker	7.54E-01	4.29E-01	3.91E-01	2.18E+00	3.19E-01	1.13E-03	1.27E-01	5.79E-02	2.60E-01	8.11E-02	7.42E-02	6.25E-02	7.16E-05	5.86E-05	8.52E-05	5.11E-06	9.91E-06
228	372631	756857	Offsite Worker	1.70E+00	9.64E-01	1.04E+00	4.93E+00	7.21E-01	4.47E-03	2.86E-01	1.37E-01	8.35E-01	2.79E-01	2.44E-01	2.05E-01	6.55E-05	1.88E-04	3.29E-05	1.64E-05	1.63E-05
229	372634	756783	Offsite Worker	2.03E+00	1.15E+00	1.17E+00	5.87E+00	8.59E-01	4.48E-03	3.41E-01	1.60E-01	8.85E-01	2.90E-01	2.57E-01	2.16E-01	6.48E-05	2.36E-04	3.65E-05	2.06E-05	1.88E-05
230	372702	756778	Offsite Worker	8.84E-01	5.00E-01	5.65E-01	2.56E+00	3.74E-01	2.62E-03	1.48E-01	7.18E-02	4.72E-01	1.60E-01	1.39E-01	1.16E-01	6.49E-05	2.67E-04	3.27E-05	2.33E-05	2.05E-05
231	372756	756775	Offsite Worker	7.19E-01	4.02E-01	5.89E-01	2.09E+00	3.05E-01	3.69E-03	1.19E-01	6.31E-02	5.86E-01	2.08E-01	1.75E-01	1.47E-01	6.27E-05	2.25E-04	3.03E-05	1.97E-05	1.81E-05
232	372729	756712	Offsite Worker	5.17E-01	2.89E-01	4.20E-01	1.50E+00	2.19E-01	2.61E-03	8.57E-02	4.52E-02	4.16E-01	1.47E-01	1.24E-01	1.04E-01	5.87E-05	8.58E-05	1.37E-06	7.48E-06	1.02E-05
233	372703	756650	Offsite Worker	-3.03E-01	-1.92E-01	4.33E-01	-8.41E-01	-1.26E-01	6.68E-03	-5.69E-02	-1.98E-03	8.18E-01	3.23E-01	2.54E-01	2.13E-01	5.43E-05	-6.79E-06	-3.20E-05	-5.92E-07	4.76E-06
234	372677	756588	Offsite Worker	-4.41E-01	-2.68E-01	2.86E-01	-1.25E+00	-1.85E-01	5.56E-03	-7.96E-02	-1.53E-02	6.53E-01	2.62E-01	2.04E-01	1.71E-01	5.04E-05	2.60E-04	-5.27E-05	2.27E-05	1.88E-05
235	372619	756588	Offsite Worker	-6.97E-01	-4.20E-01	3.37E-01	-1.97E+00	-2.92E-01	7.39E-03	-1.25E-01	-2.84E-02	8.51E-01	3.45E-01	2.67E-01	2.23E-01	5.07E-05	3.58E-04	-1.34E-04	3.12E-05	2.41E-05
236	372622	756509	Offsite Worker	-4.05E+00	-2.33E+00	-1.12E+00	-1.16E+01	-1.71E+00	5.66E-03	-6.92E-01	-2.76E-01	1.25E-01	1.49E-01	6.83E-02	5.53E-02	5.26E-05	1.78E-04	6.28E-06	1.55E-05	1.46E-05
237	372700	756511	Offsite Worker	-4.43E+00	-2.55E+00	-1.31E+00	-1.27E+01	-1.87E+00	5.17E-03	-7.57E-01	-3.05E-01	3.45E-03	1.12E-01	3.38E-02	2.63E-02	5.27E-05	2.91E-04	3.83E-06	2.54E-05	2.07E-05
238	372789	756510	Offsite Worker	-4.54E+00	-2.62E+00	-1.42E+00	-1.31E+01	-1.92E+00	4.38E-03	-7.76E-01	-3.16E-01	-1.16E-01	6.84E-02	-2.11E-03	-3.88E-03	5.45E-05	2.91E-04	-2.04E-05	2.54E-05	2.08E-05

Table 5-2
Summary of Incremental Acute Hazard Concentrations
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m³)	acrolein (µg/m³)	benzene (µg/m³)	formaldehyde (µg/m³)	methyl alcohol (µg/m³)	methyl ethyl ketone (µg/m³)	phonel (carbolic acid) (µg/m³)	styrene (µg/m³)	toulene (µg/m³)	xylene, total (µg/m³)	arsenic (µg/m³)	chlorine (µg/m³)	copper (µg/m³)	mercury (µg/m³)	nickel (µg/m³)	vanadium (µg/m³)	sulfates (µg/m³)
239	372871	756509	Offsite Worker	-4.20E+00	-2.42E+00	-1.29E+00	-1.21E+01	-1.77E+00	4.32E-03	-7.17E-01	-2.91E-01	-7.16E-02	7.69E-02	9.01E-03	5.60E-03	5.42E-05	2.39E-04	-1.74E-05	2.08E-05	1.80E-05
240	372871	756437	Offsite Worker	-1.76E+00	-1.04E+00	1.38E-01	-5.02E+00	-7.41E-01	1.00E-02	-3.07E-01	-9.73E-02	1.03E+00	4.43E-01	3.32E-01	2.77E-01	5.79E-05	1.86E-04	1.48E-04	1.62E-05	1.55E-05
241	372970	756437	Offsite Worker	-1.12E+00	-6.72E-01	4.64E-01	-3.18E+00	-4.70E-01	1.09E-02	-1.99E-01	-4.84E-02	1.25E+00	5.08E-01	3.92E-01	3.28E-01	5.59E-05	1.89E-04	1.39E-04	1.64E-05	1.54E-05
242	373069	756437	Offsite Worker	-6.41E-01	-4.00E-01	7.17E-01	-1.79E+00	-2.68E-01	1.17E-02	-1.19E-01	-1.14E-02	1.42E+00	5.64E-01	4.42E-01	3.70E-01	5.40E-05	1.86E-04	1.31E-04	1.62E-05	1.51E-05
243	373168	756437	Offsite Worker	-4.40E-01	-2.84E-01	7.84E-01	-1.21E+00	-1.82E-01	1.16E-02	-8.43E-02	2.73E-03	1.43E+00	5.63E-01	4.44E-01	3.72E-01	5.28E-05	1.80E-04	1.24E-04	1.57E-05	1.47E-05
244	373267	756437	Offsite Worker	-4.97E-01	-3.14E-01	6.77E-01	-1.38E+00	-2.07E-01	1.06E-02	-9.31E-02	-4.44E-03	1.29E+00	5.10E-01	4.01E-01	3.36E-01	5.16E-05	1.73E-04	1.17E-04	1.51E-05	1.42E-05
245	373412	756437	Offsite Worker	-5.60E-01	-3.47E-01	5.40E-01	-1.57E+00	-2.34E-01	9.20E-03	-1.03E-01	-1.30E-02	1.11E+00	4.40E-01	3.45E-01	2.88E-01	5.09E-05	1.62E-04	1.07E-04	1.41E-05	1.35E-05
246	373409	756339	Offsite Worker	1.25E+00	7.12E-01	6.49E-01	3.62E+00	5.29E-01	1.89E-03	2.11E-01	9.62E-02	4.33E-01	1.36E-01	1.24E-01	1.04E-01	5.96E-05	2.21E-04	1.05E-04	1.93E-05	1.75E-05
247	373406	756240	Offsite Worker	1.27E+00	7.24E-01	6.59E-01	3.67E+00	5.38E-01	1.92E-03	2.15E-01	9.77E-02	4.39E-01	1.37E-01	1.26E-01	1.06E-01	6.23E-05	2.87E-04	1.32E-04	2.51E-05	2.14E-05
248	373403	756142	Offsite Worker	3.50E-01	1.89E-01	4.95E-01	1.03E+00	1.49E-01	4.32E-03	5.60E-02	3.82E-02	6.12E-01	2.27E-01	1.86E-01	1.56E-01	5.80E-05	3.48E-04	1.16E-04	3.03E-05	2.42E-05
249	373400	756042	Offsite Worker	2.75E-01	1.39E-01	6.60E-01	8.24E-01	1.18E-01	6.68E-03	4.13E-02	3.98E-02	9.05E-01	3.42E-01	2.76E-01	2.32E-01	5.73E-05	2.14E-04	1.24E-04	1.86E-05	1.69E-05
250	373397	755944	Offsite Worker	5.14E-01	2.84E-01	5.20E-01	1.50E+00	2.18E-01	3.84E-03	8.43E-02	4.87E-02	5.74E-01	2.08E-01	1.73E-01	1.45E-01	5.08E-05	1.13E-04	6.55E-05	9.82E-06	1.09E-05
251	373393	755846	Offsite Worker	4.63E-01	2.62E-01	2.80E-01	1.34E+00	1.96E-01	1.17E-03	7.77E-02	3.70E-02	2.21E-01	7.37E-02	6.47E-02	5.44E-02	5.02E-05	-2.41E-05	2.49E-05	-2.10E-06	3.43E-06
252	373390	755747	Offsite Worker	3.38E-01	2.02E-01	-1.12E-01	9.62E-01	1.42E-01	-2.97E-03	5.99E-02	1.56E-02	-3.33E-01	-1.37E-01	-1.05E-01	-8.78E-02	5.04E-05	-2.04E-04	-4.77E-06	-1.78E-05	-6.26E-06
253	373309	755744	Offsite Worker	2.50E-01	1.51E-01	-1.49E-01	7.07E-01	1.05E-01	-3.00E-03	4.49E-02	9.09E-03	-3.51E-01	-1.41E-01	-1.10E-01	-9.19E-02	5.09E-05	-2.25E-04	-1.12E-05	-1.96E-05	-7.33E-06
254	373229	755743	Offsite Worker	1.26E-01	7.93E-02	-1.58E-01	3.53E-01	5.25E-02	-2.52E-03	2.35E-02	1.59E-03	-3.07E-01	-1.22E-01	-9.56E-02	-8.00E-02	5.14E-05	-2.40E-04	-1.58E-05	-2.09E-05	-8.08E-06
255	373143	755741	Offsite Worker	-5.77E-02	-2.91E-02	-1.42E-01	-1.72E-01	-2.48E-02	-1.45E-03	-8.62E-03	-8.50E-03	-1.96E-01	-7.42E-02	-6.00E-02	-5.03E-02	5.21E-05	-2.49E-04	-2.03E-05	-2.17E-05	-8.51E-06
256	373143	755823	Offsite Worker	1.90E-01	1.06E-01	1.65E-01	5.54E-01	8.07E-02	1.09E-03	3.14E-02	1.70E-02	1.69E-01	6.04E-02	5.06E-02	4.25E-02	5.68E-05	-2.34E-04	1.29E-06	-2.04E-05	-7.22E-06
257	373143	755906	Offsite Worker	2.89E-01	1.55E-01	4.23E-01	8.50E-01	1.23E-01	3.74E-03	4.60E-02	3.20E-02	5.27E-01	1.96E-01	1.60E-01	1.34E-01	5.67E-05	-7.82E-05	1.32E-05	-6.82E-06	1.14E-06
258	373065	755906	Offsite Worker	-8.95E-02	-5.99E-02	2.22E-01	-2.42E-01	-3.69E-02	3.10E-03	-1.78E-02	2.78E-03	3.88E-01	1.52E-01	1.20E-01	1.00E-01	5.95E-05	-1.39E-04	1.07E-05	-1.21E-05	-1.87E-06
259	373065	755827	Offsite Worker	-1.38E-01	-8.16E-02	3.02E-02	-3.90E-01	-5.78E-02	1.01E-03	-2.42E-02	-6.92E-03	1.11E-01	4.59E-02	3.50E-02	2.92E-02	5.81E-05	-2.46E-04	6.20E-07	-2.15E-05	-7.79E-06
260	373068	755733	Offsite Worker	-2.47E-01	-1.40E-01	-1.42E-01	-7.14E-01	-1.05E-01	-5.49E-04	-4.16E-02	-1.95E-02	-1.08E-01	-3.55E-02	-3.15E-02	-2.65E-02	5.19E-05	-2.29E-04	-2.59E-05	-2.00E-05	-7.47E-06
261	373007	755733	Offsite Worker	-3.33E-01	-1.89E-01	-1.72E-01	-9.59E-01	-1.41E-01	-5.08E-04	-5.61E-02	-2.56E-02	-1.15E-01	-3.63E-02	-3.31E-02	-2.79E-02	5.07E-05	-2.28E-04	-4.74E-05	-1.99E-05	-7.51E-06
262	372941	755733	Offsite Worker	-5.69E-01	-3.24E-01	-2.99E-01	-1.64E+00	-2.41E-01	-9.23E-04	-9.59E-02	-4.39E-02	-2.05E-01	-6.48E-02	-5.89E-02	-4.96E-02	4.88E-05	-3.12E-04	-8.38E-05	-2.72E-05	-1.22E-05
263	372941	755636	Offsite Worker	-2.47E-02	1.55E-03	-4.77E-01	-9.57E-02	-1.21E-02	-5.66E-03	4.60E-04	-1.87E-02	-7.36E-01	-2.83E-01	-2.26E-01	-1.90E-01	4.56E-05	-8.37E-04	-2.24E-04	-7.30E-05	-4.08E-05
264	372941	755539	Offsite Worker	-2.76E-01	-1.27E-01	-1.03E+00	-8.44E-01	-1.20E-01	-1.12E-02	-3.77E-02	-5.32E-02	-1.48E+00	-5.65E-01	-4.55E-01	-3.81E-01	4.78E-05	-8.26E-04	-2.14E-04	-7.21E-05	-4.00E-05
265	372941	755442	Offsite Worker	3.62E-01	2.27E-01	-4.24E-01	1.01E+00	1.51E-01	-6.87E-03	6.72E-02	5.71E-03	-8.33E-01	-3.30E-01	-2.59E-01	-2.17E-01	4.89E-05	-6.46E-04	-1.71E-04	-5.64E-05	-3.02E-05
266	372913	755342	Offsite Worker	8.80E-01	5.36E-01	-6.00E-01	2.48E+00	3.69E-01	-1.15E-02	1.59E-01	2.95E-02	-1.35E+00	-5.42E-01	-4.22E-01	-3.53E-01	5.59E-05	-4.65E-04	-1.26E-04	-4.06E-05	-1.98E-05
267	372817	755346	Offsite Worker	6.07E-01	3.91E-01	-1.04E+00	1.68E+00	2.52E-01	-1.54E-02	1.16E-01	-2.14E-03	-1.90E+00	-7.49E-01	-5.91E-01	-4.95E-01	5.70E-05	-5.21E-04	-1.37E-04	-4.55E-05	-2.27E-05
268	372720	755349	Offsite Worker	4.99E-01	3.36E-01	-1.28E+00	1.36E+00	2.06E-01	-1.79E-02	9.95E-02	-1.72E-02	-2.23E+00	-8.73E-01	-6.91E-01	-5.79E-01	5.48E-05	-6.01E-04	-1.75E-04	-5.24E-05	-2.72E-05
269	372624	755352	Offsite Worker	-3.71E-01	-1.80E-01	-1.12E+00	-1.12E+00	-1.60E-01	-1.18E-02	-5.33E-02	-6.22E-02	-1.59E+00	-6.03E-01	-4.86E-01	-4.07E-01	6.76E-05	2.35E-04	4.11E-05	2.05E-05	1.90E-05
270	372527	755349	Offsite Worker	-5.83E+00	-3.30E+00	-3.65E+00	-1.69E+01	-2.47E+00	-1.65E-02	-9.77E-01	-4.71E-01	-3.00E+00	-1.01E+00	-8.82E-01	-7.41E-01	5.38E-05	-1.34E-04	-4.15E-05	-1.17E-05	-2.13E-06
271	372431	755353	Offsite Worker	-5.92E+00	-3.32E+00	-4.61E+00	-1.72E+01	-2.51E+00	-2.76E-02	-9.84E-01	-5.11E-01	-4.45E+00	-1.57E+00	-1.33E+00	-1.11E+00	5.42E-05	-5.15E-04	-1.31E-04	-4.49E-05	-2.26E-05
272	372334	755356	Offsite Worker	-1.01E-01	-6.30E-02	1.11E-01	-2.82E-01	-4.22E-02	1.81E-03	-1.87E-02	-1.90E-03	2.20E-01	8.71E-02	6.83E-02	5.71E-02	7.28E-05	5.27E-04	1.43E-04	4.60E-05	3.52E-05
273	372237	755359	Offsite Worker	7.46E-01	4.20E-01	5.34E-01	2.16E+00	3.16E-01	2.91E-03	1.24E-01	6.26E-02	4.88E-01	1.69E-01	1.45E-01	1.22E-01	6.97E-05	2.21E-04	6.33E-05	1.93E-05	1.85E-05
274	372141	755362	Offsite Worker	1.38E+00	8.12E-01	-1.58E-01	3.93E+00	5.79E-01	-8.48E-03	2.41E-01	7.42E-02	-8.88E-01	-3.77E-01	-2.84E-01	-2.37E-01	6.88E-05	1.31E-04	3.57E-05	1.14E-05	1.35E-05
275	372044	755366	Offsite Worker	1.53E-01	8.75E-02	7.47E-02	4.44E-01	6.49E-02	1.65E-04	2.59E-02	1.16E-02	4.47E-02	1.33E-02	1.25E-02	1.06E-02	6.77E-05	4.28E-05	7.00E-06	3.73E-06	8.69E-06
276	371948	755369	Offsite Worker	-2.84E-01	-1.59E-01	-2.20E-01	-8.23E-01	-1.20E-01	-1.31E-03	-4.72E-02	-2.45E-02	-2.12E-01	-7.49E-02	-6.34E-02	-5.32E-02	7.75E-05	3.51E-05	-4.33E-05	3.06E-06	9.21E-06
277	371851	755372	Offsite Worker	-3.68E-02	-2.99E-03	-5.53E-01	-1.34E-01	-1.74E-02	-6.52E-03	-8.88E-04	-2.21E-02	-8.49E-01	-3.26E-01	-2.61E-01	-2.19E-01	8.94E-05	3.01E-05	-1.48E-05	2.63E-06	1.01E-05
278	371755	755375	Offsite Worker	-2.11E-01	-1.06E-01	-5.09E-01	-6.29E-01	-9.05E-02	-5.17E-03	-3.16E-02	-3.07E-02	-6.99E-01	-2.64E-01	-2.14E-01	-1.79E-01	1.04E-04	1.54E-04	2.15E-05	1.34E-05	1.81E-05
279	371658	755378	Offsite Worker	-9.01E-01	-5.13E-01	-4.62E-01	-2.60E+00	-3.81E-01	-1.31E-03	-1.52E-01	-6.91E-02	-3.04E-01	-9.49E-02	-8.70E-02	-7.33E-02	1.10E-04	1.93E-04	4.03E-05	1.68E-05	2.07E-05
280	371562	755382	Offsite Worker	1.01E+00	5.82E-01	3.49E-01	2.92E+00	4.28E-01	-6.07E-04	1.73E-01	7.15E-02	7.43E-02	3.19E-03	1.52E-02	1.32E-02	1.07E-04	3.98E-05	9.76E-06	3.47E-06	1.22E-05
281	371465	755385	Offsite Worker	2.78E+00	1.58E+00	1.53E+00	8.04E+00	1.18E+00	5.22E-03	4.68E-01	2.17E-01	1.09E+00	3.52E-01	3.16E-01	2.66E-01	1.06E-04	-2.49E-04	-6.61E-05	-2.17E-05	-3.39E-06
282	371368	755388	Offsite Worker	1.77E+00	9.93E-01	1.35E+00	5.14E+00	7.50E-01	7.85E-03	2.94E-01	1.51E-01	1.28E+00	4.50E-01	3.81E-01	3.20E-01	1.09E-04	-5.65E-04	-1.48E-04	-4.93E-05	-2.01E-05
283	371272	755391	Offsite Worker	5.15E-01	2.80E-01	6.66E-01	1.51E+00	2.19E-01	5.59E-03	8.30E-02	5.40E-02	8.01E-01	2.96E-01	2.43E-01	2.03E-01	1.09E-04	-8.15E-04	-2.08E-04	-7.10E-05	-3.36E-05
284	371175	755395	Offsite Worker	5.00E-01	2.81E-01	3.76E-01	1.45E+00	2.12E-01	2.16E-03	8.32E-02	4.26E-02	3.55E-01	1.24E-01	1.05E-01	8.86E-02	1.10E-04	-9.32E-04	-2.32E-04	-8.13E-05	-3.98E-05
285	371079	755398	Offsite Worker	1.77E+00	9.80E-01	1.75E+00	5.16E+00	7.52E-01	1.27E-02	2.90E-01	1.66E-01	1.91E+00	6.92E-01	5.75E-01	4.82E-01	1.19E-04	-7.61E-04	-1.79E-04	-6.63E-05	-2.97E-05
286	371042	755478	Offsite Worker	1.48E+00	8.43E-01	7.83E-01	4.29E+00	6.27E-01	2.40E-03	2.50E-01	1.14E-01	5.34E-01	1.69E-01	1.53E-01	1.29E-01	1.26E-04	-8.84E-04	-2.21E-04	-7.71E-05	-3.57E-05
287	371009	755538	Offsite Worker	1.66E+00	9.53E-01	6.77E-01	4.80E+00	7.03E-01	2.61E-04	2.82E-01	1.21E-01	2.84E-01	6.79E-02	7.50E-02	6.36E-02	1.35E-04	-9.40E-04	-2.46E-04	-8.20E-05	-3.78E-05
288	370975	755597	Offsite Worker	6.02E-01	3.43E-01	3.01E-01	1.74E+00	2.55E-01	7.51E-04	1.02E-01	4.58E-02	1.88E-01	5.73E-02	5.33E-02	4.49E-02	1.32E-04	-1.94E-04	-1.31E-04	-1.69E-05	2.02E-06
289	370925	755597	Offsite Worker	-2.75E-01	-1.53E-01	-2.60E-01	-7.99E-01	-1.17E-01	-1.85E-03	-4.53E-02	-2.54E-02	-2.80E-01	-1.01E-01	-8.43E-02	-7.07E-02	1.44E-04	3.06E-04	9.43E-06	2.67E-05	3.00E-05
290	370860	755547	Offsite Worker	1.94E+00	1.09E+00	1.48E+00	5.62E+00	8.20E-01	8.65E-03	3.22E-01	1.66E-01	1.41E+00	4.95E-01	4.20E-01	3.52E-01	1.43E-04	-4.45E-05	-1.27E-05	-3.88E-06	1.11E-05
291	370796	755497	Offsite Worker	2.26E+00	1.27E+00	1.70E+00	6.56E+00	9.57E-01	9.80E-03	3.76E-01	1.93E-01	1.61E+00	5.63E-01	4.78E-01	4.01E-01	1.28E-04	-1.09E-03	-2.71E-04	-9.50E-05	-4.66E-05

Table 5-2
Summary of Incremental Acute Hazard Concentrations
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m^3)	acrolein (µg/m^3)	benzene (µg/m^3)	formaldehyde (µg/m^3)	methyl alcohol (µg/m^3)	methyl ethyl ketone (µg/m^3)	phonel (carbolic acid) (µg/m^3)	styrene (µg/m^3)	toulene (µg/m^3)	xylene, total (µg/m^3)	arsenic (µg/m^3)	chlorine (µg/m^3)	copper (µg/m^3)	mercury (µg/m^3)	nickel (µg/m^3)	vanadium (µg/m^3)	sulfates (µg/m^3)
292	370733	755428	Offsite Worker	1.69E+00	9.45E-01	1.31E+00	4.90E+00	7.14E-01	7.85E-03	2.80E-01	1.45E-01	1.27E+00	4.47E-01	3.78E-01	3.17E-01	1.05E-04	-6.59E-04	-2.15E-04	-5.75E-05	-2.56E-05
293	370634	755428	Offsite Worker	-4.79E-01	-3.08E-01	7.94E-01	-1.32E+00	-1.99E-01	1.19E-02	-9.12E-02	7.80E-04	1.46E+00	5.77E-01	4.55E-01	3.80E-01	1.22E-04	-7.93E-04	-2.21E-04	-6.92E-05	-3.12E-05
294	370536	755428	Offsite Worker	-1.86E+00	-1.08E+00	-3.75E-01	-5.35E+00	-7.87E-01	4.32E-03	-3.20E-01	-1.22E-01	2.79E-01	1.54E-01	9.96E-02	8.26E-02	1.37E-04	-9.28E-04	-2.59E-04	-8.09E-05	-3.70E-05
295	370437	755428	Offsite Worker	-1.47E+00	-8.80E-01	5.48E-01	-4.17E+00	-6.17E-01	1.36E-02	-2.61E-01	-6.56E-02	1.54E+00	6.30E-01	4.85E-01	4.06E-01	1.48E-04	-2.45E-04	-8.24E-05	-2.14E-05	7.31E-07
296	370338	755427	Offsite Worker	-1.80E+00	-1.05E+00	-9.85E-02	-5.14E+00	-7.57E-01	7.35E-03	-3.12E-01	-1.08E-01	6.81E-01	3.07E-01	2.23E-01	1.86E-01	1.68E-04	1.73E-04	6.41E-05	1.51E-05	2.52E-05
307	369249	755442	Offsite Worker	2.95E+00	1.69E+00	1.23E+00	8.50E+00	1.25E+00	7.71E-04	5.01E-01	2.16E-01	5.43E-01	1.36E-01	1.45E-01	1.23E-01	1.22E-04	5.85E-04	1.58E-04	5.10E-05	4.30E-05
308	369151	755442	Offsite Worker	6.00E+00	3.40E+00	3.57E+00	1.74E+01	2.54E+00	1.46E-02	1.01E+00	4.78E-01	2.79E+00	9.27E-01	8.15E-01	6.85E-01	9.08E-05	-1.32E-04	-6.57E-05	-1.15E-05	1.46E-06
309	369052	755442	Offsite Worker	4.47E+00	2.50E+00	3.59E+00	1.30E+01	1.90E+00	2.21E-02	7.42E-01	3.89E-01	3.53E+00	1.25E+00	1.05E+00	8.85E-01	8.08E-05	-8.45E-04	-2.11E-04	-7.37E-05	-3.79E-05
320	368035	755402	Offsite Worker	-3.88E+00	-2.23E+00	-1.53E+00	-1.12E+01	-1.64E+00	2.67E-06	-6.60E-01	-2.81E-01	-5.83E-01	-1.28E-01	-1.51E-01	-1.28E-01	6.58E-05	-7.10E-04	-2.53E-04	-6.19E-05	-3.21E-05
321	367960	755389	Offsite Worker	-3.65E+00	-2.09E+00	-1.37E+00	-1.05E+01	-1.54E+00	8.39E-04	-6.21E-01	-2.61E-01	-4.40E-01	-7.86E-02	-1.08E-01	-9.25E-02	6.31E-05	-6.07E-04	-2.21E-04	-5.30E-05	-2.68E-05
322	367863	755390	Offsite Worker	-3.06E+00	-1.76E+00	-1.06E+00	-8.81E+00	-1.29E+00	1.72E-03	-5.21E-01	-2.16E-01	-2.37E-01	-1.53E-02	-5.05E-02	-4.37E-02	5.99E-05	-3.25E-04	-1.49E-04	-2.83E-05	-1.19E-05
323	367766	755392	Offsite Worker	-2.61E+00	-1.51E+00	-6.50E-01	-7.51E+00	-1.10E+00	4.58E-03	-4.48E-01	-1.75E-01	1.99E-01	1.42E-01	8.07E-02	6.64E-02	6.14E-05	7.93E-05	3.08E-07	6.91E-06	1.01E-05
324	367669	755393	Offsite Worker	-2.24E+00	-1.31E+00	-3.16E-01	-6.43E+00	-9.46E-01	6.85E-03	-3.87E-01	-1.42E-01	5.49E-01	2.68E-01	1.86E-01	1.54E-01	5.79E-05	1.78E-04	3.59E-05	1.55E-05	1.50E-05
325	367572	755394	Offsite Worker	-2.03E+00	-1.19E+00	-1.24E-01	-5.82E+00	-8.57E-01	8.18E-03	-3.52E-01	-1.23E-01	7.52E-01	3.40E-01	2.46E-01	2.05E-01	5.44E-05	2.22E-04	3.61E-05	1.94E-05	1.71E-05
326	367475	755395	Offsite Worker	-2.03E+00	-1.18E+00	-1.46E-01	-5.80E+00	-8.54E-01	7.88E-03	-3.51E-01	-1.23E-01	7.15E-01	3.26E-01	2.35E-01	1.96E-01	5.60E-05	1.90E-04	3.70E-05	1.66E-05	1.55E-05
327	370400	756850	On-Site Occupational	2.73E-01	1.06E-01	1.62E+00	8.93E-01	1.21E-01	1.82E-02	3.14E-02	7.39E-02	2.40E+00	9.15E-01	7.34E-01	6.15E-01	1.45E-03	-1.77E-04	-1.16E-04	-1.54E-05	1.27E-04
328	369032	756750	On-Site Occupational	-4.46E+00	-2.63E+00	5.65E-01	-1.27E+01	-1.88E+00	2.80E-02	-7.81E-01	-2.39E-01	2.96E+00	1.25E+00	9.43E-01	7.88E-01	2.50E-04	3.25E-03	8.07E-04	2.83E-04	1.98E-04
329	368737	756629	On-Site Occupational	3.33E+00	1.88E+00	2.15E+00	9.66E+00	1.41E+00	1.02E-02	5.58E-01	2.72E-01	1.82E+00	6.17E-01	5.35E-01	4.49E-01	1.47E-04	8.54E-04	3.78E-04	7.45E-05	5.99E-05
330	368907	757031	On-Site Occupational	-5.13E+00	-2.99E+00	-6.58E-01	-1.47E+01	-2.16E+00	1.64E-02	-8.85E-01	-3.22E-01	1.36E+00	6.50E-01	4.55E-01	3.79E-01	1.57E-04	-2.83E-04	1.91E-05	-2.47E-05	-3.89E-07
331	368990	756274	On-Site Occupational	-4.32E+00	-2.47E+00	-1.99E+00	-1.25E+01	-1.83E+00	-3.52E-03	-7.32E-01	-3.23E-01	-1.10E+00	-3.18E-01	-3.08E-01	-2.60E-01	1.70E-04	-1.41E-03	-5.02E-04	-1.23E-04	-6.01E-05
332	369550	756745	On-Site Occupational	-3.77E+00	-1.87E+00	-1.00E+01	-1.13E+01	-1.62E+00	-1.04E-01	-5.55E-01	-5.82E-01	-1.40E+01	-5.29E+00	-4.27E+00	-3.58E+00	2.80E-04	-1.47E-02	-3.75E-03	-1.28E-03	-7.66E-04
1	367379	755396	Recreational	-2.28E+00	-1.33E+00	-3.73E-01	-6.55E+00	-9.63E-01	6.35E-03	-3.93E-01	-1.46E-01	4.78E-01	2.41E-01	1.64E-01	1.36E-01	5.54E-05	2.48E-04	4.69E-05	2.16E-05	1.86E-05
2	367340	755485	Recreational	-3.52E+00	-2.02E+00	-1.17E+00	-1.01E+01	-1.49E+00	2.55E-03	-6.00E-01	-2.47E-01	-1.99E-01	1.09E-02	-3.52E-02	-3.11E-02	5.57E-05	2.78E-04	6.15E-05	2.42E-05	2.02E-05
3	367301	755573	Recreational	-4.62E+00	-2.65E+00	-1.80E+00	-1.33E+01	-1.95E+00	2.86E-04	-7.86E-01	-3.34E-01	-6.58E-01	-1.38E-01	-1.68E-01	-1.43E-01	5.73E-05	2.50E-04	5.85E-05	2.18E-05	1.89E-05
4	367263	755661	Recreational	-5.48E+00	-3.13E+00	-2.40E+00	-1.58E+01	-2.32E+00	-2.93E-03	-9.29E-01	-4.05E-01	-1.20E+00	-3.27E-01	-3.30E-01	-2.79E-01	5.92E-05	3.61E-04	7.49E-05	3.15E-05	2.50E-05
5	367224	755749	Recreational	-5.16E+00	-2.95E+00	-2.44E+00	-1.49E+01	-2.18E+00	-4.90E-03	-8.74E-01	-3.88E-01	-1.41E+00	-4.15E-01	-3.96E-01	-3.34E-01	6.46E-05	6.39E-04	1.91E-04	5.57E-05	4.05E-05
6	367186	755838	Recreational	-2.93E+00	-1.67E+00	-1.44E+00	-8.46E+00	-1.24E+00	-3.43E-03	-4.95E-01	-2.22E-01	-8.83E-01	-2.67E-01	-2.50E-01	-2.11E-01	6.40E-05	6.91E-04	2.05E-04	6.03E-05	4.33E-05
7	367147	755926	Recreational	-1.55E+00	-8.75E-01	-1.07E+00	-4.50E+00	-6.58E-01	-5.61E-03	-2.59E-01	-1.29E-01	-9.59E-01	-3.31E-01	-2.84E-01	-2.38E-01	6.00E-05	4.37E-04	1.46E-04	3.81E-05	2.92E-05
8	367109	756014	Recreational	-1.75E+00	-9.80E-01	-1.36E+00	-5.08E+00	-7.41E-01	-8.11E-03	-2.91E-01	-1.51E-01	-1.31E+00	-4.62E-01	-3.91E-01	-3.28E-01	5.02E-05	1.09E-04	5.27E-05	9.51E-06	1.06E-05
9	367070	756103	Recreational	-1.08E+00	-6.18E-01	-3.77E-01	-3.10E+00	-4.54E-01	5.54E-04	-1.83E-01	-7.62E-02	-8.98E-02	-7.89E-03	-1.97E-02	-1.70E-02	4.36E-05	-1.40E-04	-2.49E-05	-1.22E-05	-3.40E-06
10	367032	756191	Recreational	-2.67E+00	-1.54E+00	-9.90E-01	-7.70E+00	-1.13E+00	7.53E-04	-4.55E-01	-1.91E-01	-3.04E-01	-5.08E-02	-7.40E-02	-6.32E-02	4.71E-05	4.15E-05	2.19E-05	3.62E-06	6.68E-06
11	366993	756279	Recreational	-3.34E+00	-1.90E+00	-1.88E+00	-9.67E+00	-1.41E+00	-6.79E-03	-5.63E-01	-2.62E-01	-1.38E+00	-4.49E-01	-4.00E-01	-3.37E-01	4.87E-05	1.08E-04	6.60E-05	9.46E-06	1.04E-05
12	366954	756367	Recreational	-3.45E+00	-1.95E+00	-2.32E+00	-1.00E+01	-1.46E+00	-1.17E-02	-5.77E-01	-2.84E-01	-2.03E+00	-6.95E-01	-5.98E-01	-5.03E-01	4.59E-05	3.25E-05	4.96E-05	2.83E-06	6.08E-06
13	366916	756456	Recreational	-3.66E+00	-2.09E+00	-1.61E+00	-1.05E+01	-1.55E+00	-2.13E-03	-6.20E-01	-2.71E-01	-8.24E-01	-2.27E-01	-2.27E-01	-1.92E-01	4.44E-05	-3.84E-06	1.88E-05	-3.35E-07	3.98E-06
14	366877	756544	Recreational	-2.93E+00	-1.68E+00	-1.11E+00	-8.45E+00	-1.24E+00	5.08E-04	-4.99E-01	-2.11E-01	-3.75E-01	-7.16E-02	-9.38E-02	-7.99E-02	4.66E-05	1.59E-04	3.13E-05	1.39E-05	1.30E-05
15	366839	756632	Recreational	-2.67E+00	-1.53E+00	-1.08E+00	-7.70E+00	-1.13E+00	-3.99E-04	-4.54E-01	-1.95E-01	-4.53E-01	-1.08E-01	-1.20E-01	-1.02E-01	5.13E-05	3.08E-04	8.18E-05	2.69E-05	2.14E-05
16	366800	756720	Recreational	-2.26E+00	-1.29E+00	-1.05E+00	-6.52E+00	-9.55E-01	-1.99E-03	-3.82E-01	-1.69E-01	-5.96E-01	-1.74E-01	-1.67E-01	-1.41E-01	4.99E-05	3.29E-04	7.65E-05	2.87E-05	2.24E-05
17	366762	756809	Recreational	-1.78E+00	-1.02E+00	-8.41E-01	-5.14E+00	-7.54E-01	-1.69E-03	-3.02E-01	-1.34E-01	-4.86E-01	-1.43E-01	-1.37E-01	-1.15E-01	5.03E-05	2.62E-04	7.00E-05	2.28E-05	1.88E-05
18	366723	756897	Recreational	-1.39E+00	-7.93E-01	-6.39E-01	-4.01E+00	-5.87E-01	-1.13E-03	-2.35E-01	-1.04E-01	-3.54E-01	-1.02E-01	-9.89E-02	-8.35E-02	5.12E-05	1.84E-04	5.22E-05	1.60E-05	1.47E-05
19	366685	756985	Recreational	-1.10E+00	-6.22E-01	-6.88E-01	-3.18E+00	-4.65E-01	-3.09E-03	-1.84E-01	-8.88E-02	-5.65E-01	-1.91E-01	-1.66E-01	-1.39E-01	4.64E-05	-1.08E-05	-2.63E-05	-9.39E-07	3.80E-06
20	366646	757074	Recreational	-9.01E-01	-5.07E-01	-6.35E-01	-2.61E+00	-3.82E-01	-3.40E-03	-1.50E-01	-7.53E-02	-5.74E-01	-1.99E-01	-1.70E-01	-1.43E-01	4.29E-05	-2.46E-04	-9.38E-05	-2.15E-05	-9.22E-06
21	366607	757162	Recreational	-1.09E+00	-6.23E-01	-4.30E-01	-3.13E+00	-4.59E-01	-3.72E-05	-1.85E-01	-7.87E-02	-1.68E-01	-3.77E-02	-4.37E-02	-3.71E-02	4.11E-05	-4.61E-04	-1.27E-04	-4.02E-05	-2.10E-05
22	366569	757250	Recreational	-1.42E+00	-8.21E-01	-3.87E-01	-4.09E+00	-6.00E-01	2.09E-03	-2.43E-01	-9.67E-02	5.61E-02	5.70E-02	2.78E-02	2.26E-02	4.31E-05	-1.86E-04	-6.22E-05	-1.62E-05	-5.94E-06
23	366530	757338	Recreational	-1.40E+00	-8.07E-01	-4.35E-01	-4.03E+00	-5.91E-01	1.40E-03	-2.39E-01	-9.71E-02	-2.96E-02	2.34E-02	1.21E-03	3.62E-04	4.64E-05	6.59E-05	1.50E-05	5.74E-06	7.92E-06
24	366492	757427	Recreational	-1.24E+00	-7.14E-01	-4.64E-01	-3.58E+00	-5.25E-01	3.05E-04	-2.12E-01	-8.91E-02	-1.47E-01	-2.59E-02	-3.62E-02	-3.09E-02	4.21E-05	-1.56E-04	-3.57E-05	-1.36E-05	-4.40E-06
25	366453	757515	Recreational	-1.05E+00	-6.00E-01	-5.40E-01	-3.05E+00	-4.46E-01	-1.52E-03	-1.78E-01	-8.08E-02	-3.54E-01	-1.10E-01	-1.01E-01	-8.54E-02	4.12E-05	-3.55E-04	-8.34E-05	-3.09E-05	-1.52E-05
26	366415	757603	Recreational	-8.43E-01	-4.76E-01	-5.31E-01	-2.44E+00	-3.57E-01	-2.42E-03	-1.41E-01	-6.82E-02	-4.40E-01	-1.49E-01	-1.29E-01	-1.09E-01	3.91E-05	-4.00E-04	-1.06E-04	-3.49E-05	-1.79E-05
27	366376	757692	Recreational	-7.73E-01	-4.34E-01	-5.70E-01	-2.24E+00	-3.28E-01	-3.22E-03	-1.29E-01	-6.55E-02	-5.33E-01	-1.86E-01	-1.58E-01	-1.33E-01	3.65E-05	-2.84E-04	-9.13E-05	-2.47E-05	-1.18E-05
84	369336	758100	Recreational	-3.43E-01	-1.45E-01	-1.68E+00	-1.07E+00	-1.50E-01	-1.87E-02	-4.29E-02	-8.06E-02	-2.47E+00	-9.43E-01	-7.58E-01	-6.35E-01	1.31E-04	-9.35E-04	-2.12E-04	-8.15E-05	-3.80E-05
85	369269	758170	Recreational	9.23E-01	5.94E-01	-1.55E+00	2.56E+00	3.83E-01	-2.32E-02	1.76E-01	-2.50E-03	-2.86E+00	-1.13E+00	-8.88E-01	-7.44E-01	1.19E-04	-5.56E-04	-1.27E-04	-4.85E-05	-1.87E-05
86	369202	758239	Recreational	1.29E+00	8.14E-01	-1.75E+00	3.59E+00	5.36E-01	-2.73E-02	2.41E-01	1.18E-02	-3.33E+00	-1.32E+00	-1.04E+00	-8.67E-01	1.10E-04	-4.43E-04	-9.68E-05	-3.86E-05	-1.35E-05
87	369264	758285	Recreational	5.31E-01	3.53E-01	-1.25E+00	1.45E+00	2.19E-01	-1.76E-02	1.05E-01	-1.42E-02	-2.20E+00	-8.61E-01	-6.81E-01	-5.70E-01	1.11E-04	-5.58E-04	-1.27E-04	-4.87E-05	-1.96E-05
88	369326	758330	Recreational	5.75E-02	6.81E-02	-1.02E+00	1.10E-01	2.06E-02	-1.27E-02	2.02E-02	-3.37E-02	-1.63E+00	-6.31E-01	-5.03E-01	-4.21E-01	1.06E-04	-9.44E-04	-2.33E-04	-8.23E-05	-4.08E-05

Table 5-2
Summary of Incremental Acute Hazard Concentrations
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m^3)	acrolein (µg/m^3)	benzene (µg/m^3)	formaldehyde (µg/m^3)	methyl alcohol (µg/m^3)	methyl ethyl ketone (µg/m^3)	phonel (carbolic acid) (µg/m^3)	styrene (µg/m^3)	toulene (µg/m^3)	xylene, total (µg/m^3)	arsenic (µg/m^3)	chlorine (µg/m^3)	copper (µg/m^3)	mercury (µg/m^3)	nickel (µg/m^3)	vanadium (µg/m^3)	sulfates (µg/m^3)
89	369389	758376	Recreational	5.08E-01	3.15E-01	-5.14E-01	1.43E+00	2.12E-01	-8.65E-03	9.35E-02	1.10E-02	-1.04E+00	-4.14E-01	-3.25E-01	-2.72E-01	1.06E-04	-9.39E-04	-2.25E-04	-8.19E-05	-4.06E-05
90	369389	758462	Recreational	5.95E-01	3.65E-01	-4.84E-01	1.68E+00	2.49E-01	-8.71E-03	1.08E-01	1.71E-02	-1.04E+00	-4.15E-01	-3.24E-01	-2.71E-01	9.89E-05	-9.28E-04	-2.23E-04	-8.09E-05	-4.07E-05
91	369389	758548	Recreational	7.30E-01	4.41E-01	-3.83E-01	2.07E+00	3.06E-01	-8.13E-03	1.31E-01	2.86E-02	-9.40E-01	-3.81E-01	-2.95E-01	-2.47E-01	9.18E-05	-8.96E-04	-2.17E-04	-7.81E-05	-3.96E-05
28	366338	757780	Residential	-4.77E-01	-2.63E-01	-5.03E-01	-1.39E+00	-2.03E-01	-3.82E-03	-7.79E-02	-4.59E-02	-5.65E-01	-2.06E-01	-1.71E-01	-1.43E-01	3.76E-05	4.16E-05	-1.22E-05	3.63E-06	5.79E-06
29	366402	757746	Residential	-5.42E-01	-3.01E-01	-5.17E-01	-1.58E+00	-2.30E-01	-3.68E-03	-8.91E-02	-5.02E-02	-5.57E-01	-2.01E-01	-1.68E-01	-1.41E-01	3.74E-05	-4.88E-05	-3.72E-05	-4.25E-06	9.04E-07
30	366467	757713	Residential	-6.01E-01	-3.35E-01	-5.31E-01	-1.75E+00	-2.55E-01	-3.58E-03	-9.92E-02	-5.41E-02	-5.52E-01	-1.98E-01	-1.66E-01	-1.39E-01	3.75E-05	-1.32E-04	-6.04E-05	-1.16E-05	-3.59E-06
31	366531	757679	Residential	-6.65E-01	-3.71E-01	-5.50E-01	-1.93E+00	-2.82E-01	-3.50E-03	-1.10E-01	-5.85E-02	-5.53E-01	-1.97E-01	-1.65E-01	-1.39E-01	3.76E-05	-2.20E-04	-8.42E-05	-1.92E-05	-8.28E-06
32	366567	757773	Residential	-4.00E-02	-1.27E-02	-3.20E-01	-1.31E-01	-1.80E-02	-3.69E-03	-3.76E-03	-1.39E-02	-4.83E-01	-1.85E-01	-1.49E-01	-1.24E-01	4.10E-05	7.52E-05	-1.42E-06	6.56E-06	7.92E-06
33	366625	757758	Residential	-2.26E-02	-3.88E-03	-2.79E-01	-7.93E-02	-1.05E-02	-3.28E-03	-1.15E-03	-1.14E-02	-4.27E-01	-1.64E-01	-1.31E-01	-1.10E-01	4.18E-05	7.21E-05	-2.02E-06	6.29E-06	7.83E-06
34	366682	757744	Residential	-4.15E-03	5.37E-03	-2.32E-01	-2.39E-02	-2.57E-03	-2.80E-03	1.59E-03	-8.65E-03	-3.62E-01	-1.40E-01	-1.12E-01	-9.35E-02	4.25E-05	6.65E-05	-3.46E-06	5.80E-06	7.59E-06
35	366768	757788	Residential	5.22E-01	3.09E-01	-8.46E-02	1.49E+00	2.20E-01	-3.52E-03	9.16E-02	2.73E-02	-3.76E-01	-1.58E-01	-1.20E-01	-1.00E-01	4.56E-05	5.82E-06	-5.91E-06	5.07E-07	4.61E-06
36	366854	757833	Residential	6.41E-01	3.70E-01	1.72E-01	1.84E+00	2.71E-01	-9.81E-04	1.10E-01	4.34E-02	-3.02E-02	-2.77E-02	-1.41E-02	-1.15E-02	4.72E-05	-1.80E-04	-3.10E-05	-1.57E-05	-5.23E-06
37	366941	757877	Residential	-5.80E-02	-2.94E-02	-1.37E-01	-1.72E-01	-2.49E-02	-1.39E-03	-8.72E-03	-8.34E-03	-1.88E-01	-7.10E-02	-5.75E-02	-4.82E-02	4.34E-05	-5.55E-04	-1.35E-04	-4.84E-05	-2.58E-05
38	367027	757922	Residential	-6.00E-02	-3.40E-02	-3.57E-02	-1.72E-01	-2.54E-02	-1.53E-04	-1.01E-02	-4.80E-03	-2.85E-02	-9.62E-03	-8.44E-03	-7.09E-03	4.25E-05	-6.76E-04	-1.72E-04	-5.89E-05	-3.24E-05
39	367113	757966	Residential	1.94E-01	1.13E-01	2.67E-02	5.59E-01	8.20E-02	-6.11E-04	3.36E-02	1.22E-02	-4.94E-02	-2.40E-02	-1.68E-02	-1.39E-02	4.66E-05	-6.27E-04	-1.54E-04	-5.47E-05	-2.94E-05
40	367192	757916	Residential	7.45E-02	4.42E-02	-1.45E-02	2.14E-01	3.13E-02	-5.38E-04	1.31E-02	3.78E-03	-5.81E-02	-2.44E-02	-1.85E-02	-1.55E-02	4.77E-05	-6.83E-04	-1.69E-04	-5.96E-05	-3.23E-05
41	367264	757916	Residential	1.66E-01	9.70E-02	1.44E-02	4.77E-01	7.01E-02	-6.26E-04	2.88E-02	1.02E-02	-5.56E-02	-2.57E-02	-1.84E-02	-1.54E-02	5.01E-05	-6.62E-04	-1.61E-04	-5.77E-05	-3.09E-05
42	367335	757916	Residential	1.62E-01	9.02E-02	1.51E-01	4.74E-01	6.89E-02	1.05E-03	2.67E-02	1.49E-02	1.60E-01	5.75E-02	4.79E-02	4.02E-02	5.28E-05	-6.15E-04	-1.48E-04	-5.37E-05	-2.82E-05
43	367343	757966	Residential	4.44E-01	2.51E-01	2.86E-01	1.29E+00	1.88E-01	1.34E-03	7.44E-02	3.61E-02	2.40E-01	8.12E-02	7.04E-02	5.92E-02	5.71E-05	-3.93E-04	-8.78E-05	-3.43E-05	-1.58E-05
44	367404	757995	Residential	6.37E-01	3.57E-01	5.14E-01	1.85E+00	2.70E-01	3.17E-03	1.06E-01	5.56E-02	5.07E-01	1.79E-01	1.51E-01	1.27E-01	6.39E-05	-1.01E-04	-1.12E-05	-8.83E-06	5.72E-07
45	367465	758024	Residential	7.26E-01	4.11E-01	4.51E-01	2.10E+00	3.07E-01	2.00E-03	1.22E-01	5.85E-02	3.68E-01	1.24E-01	1.08E-01	9.06E-02	6.96E-05	2.15E-04	7.79E-05	1.88E-05	1.82E-05
55	367673	758189	Residential	-1.24E-01	-4.82E-02	-7.26E-01	-3.93E-01	-5.47E-02	-8.21E-03	-1.43E-02	-3.35E-02	-1.08E+00	-4.13E-01	-3.32E-01	-2.78E-01	5.49E-05	-7.02E-04	-1.49E-04	-6.12E-05	-3.26E-05
59	367816	758096	Residential	-2.83E-01	-1.31E-01	-1.05E+00	-8.66E-01	-1.23E-01	-1.14E-02	-3.87E-02	-5.45E-02	-1.52E+00	-5.78E-01	-4.65E-01	-3.90E-01	5.97E-05	-6.83E-04	-1.44E-04	-5.96E-05	-3.12E-05
60	367898	758066	Residential	2.18E-01	1.63E-01	-1.05E+00	5.68E-01	8.83E-02	-1.38E-02	4.85E-02	-2.54E-02	-1.75E+00	-6.81E-01	-5.41E-01	-4.53E-01	6.20E-05	-7.25E-04	-1.57E-04	-6.32E-05	-3.32E-05
61	367980	758035	Residential	2.62E+00	1.54E+00	-4.17E-02	7.48E+00	1.10E+00	-1.30E-02	4.55E-01	1.50E-01	-1.28E+00	-5.60E-01	-4.15E-01	-3.46E-01	6.27E-05	-7.94E-04	-1.70E-04	-6.92E-05	-3.68E-05
62	368062	758005	Residential	5.00E+00	2.89E+00	1.07E+00	1.43E+01	2.11E+00	-1.08E-02	8.58E-01	3.29E-01	-6.50E-01	-3.75E-01	-2.37E-01	-1.96E-01	6.46E-05	-8.25E-04	-1.72E-04	-7.19E-05	-3.83E-05
63	368144	757975	Residential	8.37E+00	4.82E+00	2.57E+00	2.41E+01	3.53E+00	-8.79E-03	1.43E+00	5.79E-01	1.22E-01	-1.62E-01	-2.47E-02	-1.68E-02	7.40E-05	-6.66E-04	-1.05E-04	-5.81E-05	-2.89E-05
64	368226	757945	Residential	6.46E+00	3.73E+00	1.82E+00	1.86E+01	2.73E+00	-8.68E-03	1.10E+00	4.41E-01	-1.51E-01	-2.19E-01	-9.45E-02	-7.62E-02	8.18E-05	-5.26E-04	-5.86E-05	-4.59E-05	-2.06E-05
65	368301	757943	Residential	1.45E+00	8.53E-01	-4.80E-02	4.15E+00	6.11E-01	-7.51E-03	2.53E-01	8.26E-02	-7.52E-01	-3.26E-01	-2.43E-01	-2.02E-01	8.33E-05	-3.16E-04	-1.77E-05	-2.75E-05	-9.14E-06
66	368376	757941	Residential	-7.53E-01	-4.19E-01	-6.74E-01	-2.19E+00	-3.19E-01	-4.59E-03	-1.24E-01	-6.81E-02	-7.06E-01	-2.54E-01	-2.12E-01	-1.78E-01	7.99E-05	-2.55E-04	-3.33E-05	-2.22E-05	-6.20E-06
67	368452	757940	Residential	-1.04E+00	-5.94E-01	-3.80E-01	-2.98E+00	-4.37E-01	3.17E-04	-1.76E-01	-7.39E-02	-1.14E-01	-1.83E-02	-2.76E-02	-2.36E-02	8.05E-05	-2.38E-04	-4.24E-05	-2.07E-05	-5.21E-06
68	368527	757938	Residential	1.35E+00	7.65E-01	8.00E-01	3.91E+00	5.72E-01	3.24E-03	2.27E-01	1.07E-01	6.22E-01	2.06E-01	1.81E-01	1.53E-01	8.48E-05	-3.69E-04	-1.60E-05	-3.22E-05	-1.19E-05
69	368563	757880	Residential	1.94E+00	1.11E+00	8.75E-01	5.61E+00	8.22E-01	1.32E-03	3.29E-01	1.45E-01	4.63E-01	1.30E-01	1.28E-01	1.08E-01	8.36E-05	-3.17E-04	-1.04E-05	-2.76E-05	-9.18E-06
70	368636	757926	Residential	2.73E+00	1.56E+00	1.31E+00	7.90E+00	1.16E+00	2.80E-03	4.62E-01	2.06E-01	7.74E-01	2.30E-01	2.18E-01	1.84E-01	8.35E-05	-5.14E-04	-9.37E-05	-4.48E-05	-1.98E-05
71	368709	757971	Residential	2.73E+00	1.56E+00	1.22E+00	7.87E+00	1.15E+00	1.82E-03	4.62E-01	2.03E-01	6.45E-01	1.81E-01	1.78E-01	1.51E-01	8.32E-05	-8.37E-04	-1.96E-04	-7.30E-05	-3.72E-05
72	368782	758017	Residential	1.95E+00	1.11E+00	9.27E-01	5.64E+00	8.25E-01	1.91E-03	3.30E-01	1.47E-01	5.41E-01	1.60E-01	1.52E-01	1.28E-01	8.19E-05	-6.67E-04	-1.24E-04	-5.82E-05	-2.82E-05
73	368855	758062	Residential	-4.39E-01	-2.46E-01	-3.28E-01	-1.27E+00	-1.86E-01	-1.90E-03	-7.30E-02	-3.74E-02	-3.11E-01	-1.09E-01	-9.25E-02	-7.77E-02	9.45E-05	-6.75E-04	-1.27E-04	-5.89E-05	-2.75E-05
74	368928	758108	Residential	-8.08E-01	-4.20E-01	-1.60E+00	-2.40E+00	-3.46E-01	-1.55E-02	-1.24E-01	-1.05E-01	-2.13E+00	-8.00E-01	-6.49E-01	-5.44E-01	8.85E-05	-9.05E-04	-2.02E-04	-7.89E-05	-4.04E-05
75	369001	758153	Residential	-6.59E-01	-3.29E-01	-1.71E+00	-1.98E+00	-2.84E-01	-1.76E-02	-9.75E-02	-1.00E-01	-2.37E+00	-8.99E-01	-7.26E-01	-6.08E-01	1.11E-04	-4.38E-04	-8.88E-05	-3.82E-05	-1.32E-05
76	369058	758074	Residential	-4.79E-01	-2.18E-01	-1.86E+00	-1.47E+00	-2.08E-01	-2.02E-02	-6.48E-02	-9.49E-02	-2.68E+00	-1.02E+00	-8.23E-01	-6.89E-01	1.16E-04	-4.78E-04	-1.05E-04	-4.17E-05	-1.48E-05
77	369102	758103	Residential	9.02E-01	5.71E-01	-1.25E+00	2.51E+00	3.75E-01	-1.95E-02	1.69E-01	7.15E-03	-2.38E+00	-9.40E-01	-7.40E-01	-6.19E-01	1.06E-04	-1.05E-03	-2.66E-04	-9.12E-05	-4.63E-05
78	369145	758132	Residential	7.52E-01	4.96E-01	-1.63E+00	2.06E+00	3.11E-01	-2.33E-02	1.47E-01	-1.51E-02	-2.90E+00	-1.14E+00	-8.99E-01	-7.52E-01	9.93E-05	-1.22E-03	-3.32E-04	-1.06E-04	-5.63E-05
79	369200	758065	Residential	8.19E-01	5.51E-01	-2.09E+00	2.23E+00	3.38E-01	-2.92E-02	1.63E-01	-2.79E-02	-3.65E+00	-1.43E+00	-1.13E+00	-9.47E-01	1.10E-04	-1.15E-03	-3.06E-04	-1.01E-04	-5.17E-05
80	369255	757998	Residential	6.09E-01	4.33E-01	-2.27E+00	1.62E+00	2.48E-01	-3.04E-02	1.28E-01	-4.66E-02	-3.83E+00	-1.49E+00	-1.18E+00	-9.92E-01	1.30E-04	-9.42E-04	-2.17E-04	-8.22E-05	-3.85E-05
81	369310	757931	Residential	2.06E-01	2.03E-01	-2.46E+00	4.56E-01	7.81E-02	-3.07E-02	6.03E-02	-7.68E-02	-3.94E+00	-1.52E+00	-1.22E+00	-1.02E+00	1.53E-04	-5.85E-04	-1.20E-04	-5.10E-05	-1.70E-05
82	369356	757981	Residential	-5.87E-01	-2.65E-01	-2.37E+00	-1.81E+00	-2.55E-01	-2.59E-02	-7.85E-02	-1.20E-01	-3.44E+00	-1.31E+00	-1.05E+00	-8.83E-01	1.47E-04	-9.55E-04	-2.21E-04	-8.33E-05	-3.76E-05
83	369403	758031	Residential	1.85E-01	1.38E-01	-8.79E-01	4.82E-01	7.47E-02	-1.15E-02	4.09E-02	-2.11E-02	-1.46E+00	-5.69E-01	-4.52E-01	-3.79E-01	1.42E-04	-1.25E-03	-3.13E-04	-1.09E-04	-5.40E-05
92	369389	758634	Residential	9.00E-01	5.35E-01	-2.21E-01	2.56E+00	3.78E-01	-6.98E-03	1.59E-01	4.43E-02	-7.66E-01	-3.18E-01	-2.43E-01	-2.03E-01	8.67E-05	-8.50E-04	-2.08E-04	-7.41E-05	-3.76E-05
93	369469	758630	Residential	8.66E-01	5.22E-01	-4.11E-01	2.45E+00	3.63E-01	-9.11E-03	1.55E-01	3.54E-02	-1.05E+00	-4.25E-01	-3.29E-01	-2.75E-01	9.96E-05	-3.19E-04	-4.88E-05	-2.78E-05	-7.80E-06
94	369549	758625	Residential	9.33E-02	8.68E-02	-9.57E-01	2.16E-01	3.59E-02	-1.20E-02	2.57E-02	-2.92E-02	-1.54E+00	-5.97E-01	-4.76E-01	-3.98E-01	1.09E-04	-3.06E-04	-8.43E-05	-2.67E-05	-6.19E-06
95	369630	758621	Residential	-1.21E-02	3.63E-02	-1.29E+00	-1.04E-01	-9.67E-03	-1.56E-02	1.08E-02	-4.75E-02	-2.02E+00	-7.79E-01	-6.23E-01	-5.21E-01	1.10E-04	-5.58E-04	-1.35E-04	-4.87E-05	-1.96E-05
96	369710	758617	Residential	-1.52E-01	-2.66E-02	-1.86E+00	-5.36E-01	-7.06E-02	-2.18E-02	-7.87E-03	-7.62E-02	-2.85E+00	-1.09E+00	-8.76E-01	-7.33E-01	9.18E-05	-5.64E-04	-1.86E-04	-4.92E-05	-2.17E-05
97	369791	758613	Residential	-1.30E-01	-3.54E-02	-1.21E+00	-4.35E-01	-5.88E-02	-1.40E-02	-1.05E-02	-5.12E-02	-1.83E+00	-7.04E-01	-5.64E-01	-4.72E-01	8.66E-05	-7.29E-04	-2.13E-04	-6.36E-05	-3.11E-05

Table 5-2
Summary of Incremental Acute Hazard Concentrations
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m³)	acrolein (µg/m³)	benzene (µg/m³)	formaldehyde (µg/m³)	methyl alcohol (µg/m³)	methyl ethyl ketone (µg/m³)	phonel (carbolic acid) (µg/m³)	styrene (µg/m³)	toulene (µg/m³)	xylene, total (µg/m³)	arsenic (µg/m³)	chlorine (µg/m³)	copper (µg/m³)	mercury (µg/m³)	nickel (µg/m³)	vanadium (µg/m³)	sulfates (µg/m³)
98	369791	758514	Residential	-1.34E-01	-3.21E-02	-1.38E+00	-4.57E-01	-6.12E-02	-1.61E-02	-9.51E-03	-5.77E-02	-2.10E+00	-8.06E-01	-6.46E-01	-5.41E-01	9.32E-05	-9.90E-04	-2.82E-04	-8.63E-05	-4.45E-05
99	369791	758416	Residential	-2.19E-01	-7.23E-02	-1.67E+00	-7.17E-01	-9.82E-02	-1.92E-02	-2.14E-02	-7.33E-02	-2.52E+00	-9.66E-01	-7.75E-01	-6.49E-01	9.92E-05	-1.28E-03	-3.59E-04	-1.12E-04	-5.98E-05
100	369791	758318	Residential	-5.75E-01	-2.60E-01	-2.30E+00	-1.77E+00	-2.50E-01	-2.52E-02	-7.70E-02	-1.17E-01	-3.34E+00	-1.27E+00	-1.02E+00	-8.58E-01	1.15E-04	-1.49E-03	-3.94E-04	-1.30E-04	-6.96E-05
101	369881	758318	Residential	-9.04E-01	-4.57E-01	-2.18E+00	-2.70E+00	-3.88E-01	-2.21E-02	-1.35E-01	-1.31E-01	-3.00E+00	-1.13E+00	-9.16E-01	-7.68E-01	1.15E-04	-1.61E-03	-3.97E-04	-1.40E-04	-7.57E-05
102	369972	758318	Residential	-8.90E-01	-5.00E-01	-6.71E-01	-2.58E+00	-3.77E-01	-3.90E-03	-1.48E-01	-7.60E-02	-6.37E-01	-2.24E-01	-1.90E-01	-1.59E-01	1.21E-04	-1.32E-03	-3.45E-04	-1.15E-04	-5.98E-05
103	370062	758318	Residential	1.08E-01	5.63E-02	2.06E-01	3.22E-01	4.61E-02	1.97E-03	1.67E-02	1.37E-02	2.71E-01	1.02E-01	8.25E-02	6.92E-02	1.41E-04	-6.39E-04	-1.49E-04	-5.57E-05	-2.11E-05
104	370153	758318	Residential	5.46E-01	3.17E-01	1.08E-01	1.57E+00	2.30E-01	-1.31E-03	9.38E-02	3.56E-02	-8.69E-02	-4.74E-02	-3.11E-02	-2.58E-02	1.53E-04	-6.32E-04	-1.07E-04	-5.51E-05	-1.96E-05
105	370243	758318	Residential	2.03E+00	1.15E+00	1.09E+00	5.86E+00	8.57E-01	3.57E-03	3.41E-01	1.57E-01	7.67E-01	2.45E-01	2.21E-01	1.86E-01	1.58E-04	-8.64E-04	-1.61E-04	-7.53E-05	-3.16E-05
111	370408	758347	Residential	1.15E+00	6.48E-01	8.02E-01	3.34E+00	4.88E-01	4.21E-03	1.92E-01	9.58E-02	7.18E-01	2.48E-01	2.12E-01	1.78E-01	1.62E-04	5.97E-04	1.75E-04	5.21E-05	4.75E-05
112	370490	758344	Residential	2.28E-01	1.31E-01	6.83E-02	6.57E-01	9.61E-02	-2.75E-04	3.89E-02	1.56E-02	-6.55E-04	-6.22E-03	-2.12E-03	-1.67E-03	1.65E-04	1.17E-03	3.54E-04	1.02E-04	7.84E-05
113	370572	758341	Residential	-3.12E-01	-2.01E-01	5.52E-01	-8.58E-01	-1.29E-01	8.15E-03	-5.97E-02	1.76E-03	1.01E+00	3.96E-01	3.12E-01	2.61E-01	1.54E-04	8.10E-04	3.07E-04	7.07E-05	5.82E-05
114	370654	758338	Residential	-1.78E-02	-2.66E-02	4.81E-01	-2.18E-02	-5.82E-03	5.89E-03	-7.87E-03	1.63E-02	7.60E-01	2.93E-01	2.34E-01	1.96E-01	1.38E-04	2.19E-04	1.65E-04	1.91E-05	2.48E-05
115	370735	758335	Residential	3.27E-01	1.79E-01	3.83E-01	9.60E-01	1.39E-01	3.06E-03	5.31E-02	3.28E-02	4.45E-01	1.63E-01	1.34E-01	1.13E-01	1.29E-04	-2.68E-04	-1.37E-05	-2.34E-05	-2.30E-06
116	370817	758333	Residential	7.45E-01	3.88E-01	1.45E+00	2.21E+00	3.19E-01	1.40E-02	1.15E-01	9.57E-02	1.92E+00	7.22E-01	5.86E-01	4.91E-01	1.22E-04	-2.64E-04	-2.09E-05	-2.31E-05	-2.71E-06
130	371183	758027	Residential	-1.16E+00	-6.63E-01	-4.80E-01	-3.34E+00	-4.90E-01	-3.13E-04	-1.97E-01	-8.47E-02	-2.14E-01	-5.38E-02	-5.75E-02	-4.87E-02	1.53E-04	5.17E-04	1.62E-04	4.51E-05	4.23E-05
131	371248	758024	Residential	-1.74E+00	-1.01E+00	-2.52E-01	-4.98E+00	-7.33E-01	5.22E-03	-3.00E-01	-1.10E-01	4.14E-01	2.03E-01	1.40E-01	1.17E-01	1.40E-04	5.41E-04	1.75E-04	4.72E-05	4.23E-05
132	371326	758075	Residential	-1.86E+00	-1.08E+00	-2.65E-01	-5.33E+00	-7.84E-01	5.64E-03	-3.21E-01	-1.18E-01	4.50E-01	2.20E-01	1.52E-01	1.27E-01	1.33E-04	5.81E-04	1.83E-04	5.06E-05	4.38E-05
133	371404	758127	Residential	-1.85E+00	-1.07E+00	-4.01E-01	-5.32E+00	-7.82E-01	3.96E-03	-3.18E-01	-1.22E-01	2.33E-01	1.36E-01	8.55E-02	7.07E-02	1.26E-04	5.90E-04	1.81E-04	5.15E-05	4.37E-05
134	371481	758178	Residential	-1.86E+00	-1.07E+00	-5.42E-01	-5.34E+00	-7.85E-01	2.29E-03	-3.18E-01	-1.28E-01	1.67E-02	5.26E-02	1.88E-02	1.49E-02	1.19E-04	5.88E-04	1.77E-04	5.13E-05	4.29E-05
135	371559	758230	Residential	-1.87E+00	-1.07E+00	-6.76E-01	-5.38E+00	-7.89E-01	7.00E-04	-3.18E-01	-1.33E-01	-1.90E-01	-2.67E-02	-4.47E-02	-3.83E-02	1.11E-04	5.79E-04	1.71E-04	5.05E-05	4.17E-05
136	371637	758281	Residential	-1.83E+00	-1.05E+00	-7.53E-01	-5.29E+00	-7.75E-01	-3.88E-04	-3.11E-01	-1.34E-01	-3.25E-01	-7.99E-02	-8.67E-02	-7.35E-02	1.06E-04	5.65E-04	1.64E-04	4.93E-05	4.05E-05
137	371715	758333	Residential	-1.75E+00	-1.00E+00	-7.68E-01	-5.06E+00	-7.41E-01	-9.51E-04	-2.97E-01	-1.30E-01	-3.86E-01	-1.05E-01	-1.06E-01	-8.96E-02	1.02E-04	5.48E-04	1.56E-04	4.78E-05	3.91E-05
138	371769	758261	Residential	-1.73E+00	-9.89E-01	-8.08E-01	-5.00E+00	-7.32E-01	-1.54E-03	-2.93E-01	-1.30E-01	-4.59E-01	-1.34E-01	-1.29E-01	-1.09E-01	9.05E-05	3.42E-04	9.98E-05	2.98E-05	2.69E-05
139	371822	758189	Residential	-1.87E+00	-1.08E+00	-5.01E-01	-5.36E+00	-7.88E-01	2.82E-03	-3.20E-01	-1.27E-01	8.40E-02	7.87E-02	3.96E-02	3.23E-02	8.51E-05	-8.27E-06	-3.40E-05	-7.21E-07	7.58E-06
140	371894	758160	Residential	-1.83E+00	-1.06E+00	-5.65E-01	-5.27E+00	-7.73E-01	1.87E-03	-3.13E-01	-1.27E-01	-3.24E-02	3.30E-02	3.47E-03	2.06E-03	9.41E-05	-1.30E-04	-4.29E-05	-1.13E-05	1.87E-06
141	371894	758081	Residential	-1.45E+00	-8.30E-01	-5.06E-01	-4.16E+00	-6.10E-01	7.43E-04	-2.46E-01	-1.02E-01	-1.21E-01	-1.07E-02	-2.66E-02	-2.29E-02	9.41E-05	-2.07E-04	-4.55E-05	-1.80E-05	-2.25E-06
142	371959	758074	Residential	-1.02E+00	-5.76E-01	-5.90E-01	-2.94E+00	-4.30E-01	-2.32E-03	-1.71E-01	-8.04E-02	-4.52E-01	-1.49E-01	-1.32E-01	-1.11E-01	8.63E-05	-2.20E-04	-3.67E-05	-1.92E-05	-3.71E-06
155	372055	757363	Residential	-7.75E-01	-4.32E-01	-6.75E-01	-2.25E+00	-3.29E-01	-4.49E-03	-1.28E-01	-6.95E-02	-6.96E-01	-2.49E-01	-2.09E-01	-1.75E-01	1.00E-04	-5.56E-04	-1.02E-04	-4.85E-05	-2.05E-05
297	370239	755427	Residential	-2.06E+00	-1.16E+00	-1.53E+00	-5.97E+00	-8.72E-01	-8.73E-03	-3.43E-01	-1.75E-01	-1.44E+00	-5.03E-01	-4.28E-01	-3.59E-01	1.72E-04	3.55E-04	1.14E-04	3.09E-05	3.53E-05
298	370138	755427	Residential	-6.39E-01	-3.46E-01	-8.52E-01	-1.87E+00	-2.72E-01	-7.29E-03	-1.03E-01	-6.80E-02	-1.04E+00	-3.85E-01	-3.15E-01	-2.64E-01	1.50E-04	-2.33E-04	-8.55E-05	-2.03E-05	1.61E-06
299	370040	755427	Residential	-3.05E+00	-1.72E+00	-2.06E+00	-8.84E+00	-1.29E+00	-1.04E-02	-5.10E-01	-2.52E-01	-1.80E+00	-6.19E-01	-5.33E-01	-4.47E-01	1.38E-04	-4.80E-04	-1.92E-04	-4.19E-05	-1.28E-05
300	369941	755426	Residential	-4.56E+00	-2.62E+00	-1.60E+00	-1.31E+01	-1.92E+00	2.33E-03	-7.76E-01	-3.23E-01	-3.83E-01	-3.44E-02	-8.44E-02	-7.28E-02	1.67E-04	5.60E-04	1.49E-04	4.88E-05	4.59E-05
301	369842	755426	Residential	-5.57E+00	-3.24E+00	-9.71E-01	-1.60E+01	-2.35E+00	1.48E-02	-9.59E-01	-3.59E-01	1.07E+00	5.53E-01	3.72E-01	3.09E-01	1.56E-04	5.24E-04	1.77E-04	4.57E-05	4.29E-05
302	369741	755435	Residential	-3.43E+00	-1.97E+00	-1.27E+00	-9.88E+00	-1.45E+00	9.92E-04	-5.84E-01	-2.45E-01	-3.87E-01	-6.38E-02	-9.38E-02	-8.02E-02	1.31E-04	7.39E-05	1.90E-05	6.44E-06	1.64E-05
303	369643	755434	Residential	-2.37E+00	-1.36E+00	-8.06E-01	-6.82E+00	-1.00E+00	1.52E-03	-4.04E-01	-1.67E-01	-1.59E-01	-2.43E-03	-3.16E-02	-2.75E-02	1.21E-04	1.78E-04	4.65E-05	1.55E-05	2.10E-05
304	369544	755434	Residential	-3.48E-01	-1.97E-01	-2.16E-01	-1.00E+00	-1.47E-01	-9.70E-04	-5.83E-02	-2.81E-02	-1.77E-01	-5.98E-02	-5.21E-02	-4.38E-02	1.24E-04	-1.82E-04	-5.02E-05	-1.59E-05	1.86E-06
305	369445	755434	Residential	-5.63E-02	-5.36E-02	6.14E-01	-1.25E-01	-2.16E-02	7.69E-03	-1.59E-02	1.89E-02	9.86E-01	3.81E-01	3.04E-01	2.54E-01	1.27E-04	-5.43E-04	-1.01E-04	-4.73E-05	-1.73E-05
306	369346	755434	Residential	1.84E+00	1.08E+00	-1.22E-01	5.25E+00	7.74E-01	-1.02E-02	3.21E-01	1.02E-01	-1.05E+00	-4.50E-01	-3.36E-01	-2.81E-01	1.23E-04	-2.39E-04	-3.52E-05	-2.08E-05	-1.27E-06
310	368953	755441	Residential	2.42E+00	1.36E+00	1.92E+00	7.04E+00	1.03E+00	1.17E-02	4.02E-01	2.10E-01	1.87E+00	6.62E-01	5.59E-01	4.69E-01	8.92E-05	-7.01E-04	-1.40E-04	-6.11E-05	-2.93E-05
311	368854	755441	Residential	-6.42E-01	-4.19E-01	1.25E+00	-1.77E+00	-2.66E-01	1.82E-02	-1.24E-01	7.91E-03	2.26E+00	8.87E-01	7.00E-01	5.86E-01	9.11E-05	-1.11E-05	5.49E-05	-9.70E-07	7.99E-06
312	368755	755441	Residential	-4.65E+00	-2.71E+00	-3.96E-01	-1.33E+01	-1.96E+00	1.73E-02	-8.04E-01	-2.84E-01	1.54E+00	7.10E-01	5.09E-01	4.24E-01	8.64E-05	-3.33E-04	-5.46E-05	-2.90E-05	-9.76E-06
313	368657	755441	Residential	-5.75E+00	-3.35E+00	-5.20E-01	-1.65E+01	-2.42E+00	2.11E-02	-9.94E-01	-3.53E-01	1.86E+00	8.61E-01	6.16E-01	5.13E-01	9.48E-05	-1.50E-04	-7.55E-05	-1.31E-05	8.80E-07
314	368558	755440	Residential	-6.06E+00	-3.52E+00	-1.03E+00	-1.74E+01	-2.56E+00	1.64E-02	-1.04E+00	-3.89E-01	1.20E+00	6.15E-01	4.16E-01	3.45E-01	9.41E-05	1.31E-05	-8.00E-05	1.14E-06	9.58E-06
315	368459	755440	Residential	-5.25E+00	-3.02E+00	-1.56E+00	-1.51E+01	-2.22E+00	6.10E-03	-8.97E-01	-3.61E-01	4.04E-04	1.31E-01	3.90E-02	3.02E-02	8.76E-05	1.07E-04	-6.31E-05	9.36E-06	1.40E-05
316	368360	755440	Residential	-3.17E+00	-1.82E+00	-1.07E+00	-9.12E+00	-1.34E+00	2.16E-03	-5.40E-01	-2.23E-01	-1.96E-01	3.19E-03	-3.70E-02	-3.25E-02	8.16E-05	-8.56E-05	-1.12E-04	-7.47E-06	3.09E-06
317	368262	755439	Residential	-5.09E+00	-2.93E+00	-1.68E+00	-1.46E+01	-2.15E+00	3.89E-03	-8.68E-01	-3.57E-01	-2.61E-01	2.61E-02	-4.27E-02	-3.81E-02	7.92E-05	-4.99E-04	-2.12E-04	-4.36E-05	-1.94E-05
318	368186	755427	Residential	-2.45E+00	-1.41E+00	-6.13E-01	-7.03E+00	-1.03E+00	4.22E-03	-4.19E-01	-1.64E-01	1.79E-01	1.30E-01	7.31E-02	6.00E-02	7.33E-05	-6.69E-04	-2.52E-04	-5.84E-05	-2.91E-05
319	368111	755414	Residential	-1.79E+00	-1.03E+00	-5.27E-01	-5.15E+00	-7.56E-01	2.13E-03	-3.06E-01	-1.23E-01	7.24E-03	4.73E-02	1.54E-02	1.21E-02	6.93E-05	-7.37E-04	-2.65E-04	-6.42E-05	-3.31E-05
46	367504	757948	School	5.98E-01	3.36E-01	4.40E-01	1.74E+00	2.54E-01	2.47E-03	9.97E-02	5.06E-02	4.09E-01	1.43E-01	1.21E-01	1.02E-01	6.60E-05	-1.74E-04	-3.08E-05	-1.51E-05	-3.13E-06
47	367544	757873	School	3.35E-01	1.91E-01	1.71E-01	9.70E-01	1.42E-01	4.68E-04	5.66E-02	2.57E-02	1.11E-01	3.44E-02	3.17E-02	2.67E-02	6.11E-05	-5.51E-04	-1.29E-04	-4.81E-05	-2.39E-05
48	367587	757909	School	5.49E-01	3.09E-01	3.86E-01	1.59E+00	2.32E-01	2.05E-03	9.15E-02	4.58E-02	3.48E-01	1.20E-01	1.03E-01	8.65E-02	6.79E-05	-2.40E-04	-4.89E-05	-2.10E-05	-6.55E-06
49	367623	757866	School	4.41E-01	2.51E-01	2.22E-01	1.28E+00	1.87E-01	5.74E-04	7.45E-02	3.36E-02	1.41E-01	4.32E-02	4.00E-02	3.37E-02	6.61E-05	-4.49E-04	-1.03E-04	-3.92E-05	-1.80E-05
50	367694	757866	School	7.06E-01	3.98E-01	4.72E-01	2.05E+00	2.99E-01	2.35E-03	1.18E-01	5.80E-02	4.10E-01	1.40E-01	1.21E-01	1.02E-01	7.12E-05	-2.83E-04	-6.13E-05	-2.47E-05	-8.54E-06

Table 5-2
Summary of Incremental Acute Hazard Concentrations
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acrolein ($\mu g/m^3$)	benzene ($\mu g/m^3$)	formaldehyde ($\mu g/m^3$)	methyl alcohol ($\mu g/m^3$)	methyl ethyl ketone ($\mu g/m^3$)	phonel (carbolic acid) ($\mu g/m^3$)	styrene ($\mu g/m^3$)	toulene ($\mu g/m^3$)	xylene, total ($\mu g/m^3$)	arsenic ($\mu g/m^3$)	chlorine ($\mu g/m^3$)	copper ($\mu g/m^3$)	mercury ($\mu g/m^3$)	nickel ($\mu g/m^3$)	vanadium ($\mu g/m^3$)	sulfates ($\mu g/m^3$)
51	367716	757927	School	8.17E-01	4.53E-01	7.75E-01	2.38E+00	3.47E-01	5.49E-03	1.34E-01	7.54E-02	8.33E-01	3.01E-01	2.50E-01	2.10E-01	7.72E-05	2.12E-04	7.87E-05	1.85E-05	1.87E-05
52	367737	757988	School	6.84E-01	3.88E-01	4.02E-01	1.98E+00	2.89E-01	1.61E-03	1.15E-01	5.43E-02	3.11E-01	1.03E-01	9.05E-02	7.61E-02	6.98E-05	-6.16E-05	2.32E-05	-5.38E-06	3.27E-06
53	367727	758067	School	3.94E-01	2.39E-01	-2.47E-01	1.11E+00	1.65E-01	-4.88E-03	7.09E-02	1.39E-02	-5.71E-01	-2.30E-01	-1.79E-01	-1.50E-01	6.44E-05	-4.39E-04	-6.80E-05	-3.83E-05	-1.76E-05
54	367716	758146	School	-2.30E-03	2.40E-02	-7.54E-01	-4.71E-02	-3.63E-03	-9.12E-03	7.10E-03	-2.74E-02	-1.18E+00	-4.55E-01	-3.63E-01	-3.04E-01	5.69E-05	-6.66E-04	-1.37E-04	-5.81E-05	-3.05E-05
56	367723	758254	School	-7.29E-01	-3.94E-01	-1.00E+00	-2.14E+00	-3.10E-01	-8.70E-03	-1.17E-01	-7.86E-02	-1.23E+00	-4.57E-01	-3.74E-01	-3.14E-01	5.43E-05	-5.68E-04	-1.33E-04	-4.95E-05	-2.54E-05
57	367784	758221	School	-7.61E-01	-4.12E-01	-1.04E+00	-2.23E+00	-3.24E-01	-8.99E-03	-1.22E-01	-8.19E-02	-1.28E+00	-4.73E-01	-3.88E-01	-3.25E-01	5.59E-05	-5.56E-04	-1.31E-04	-4.85E-05	-2.47E-05
58	367845	758189	School	-8.27E-01	-4.50E-01	-1.04E+00	-2.42E+00	-3.52E-01	-8.61E-03	-1.33E-01	-8.55E-02	-1.24E+00	-4.57E-01	-3.75E-01	-3.14E-01	5.72E-05	-5.48E-04	-1.25E-04	-4.78E-05	-2.41E-05
106	370247	758254	School	2.10E+00	1.19E+00	1.11E+00	6.07E+00	8.88E-01	3.41E-03	3.54E-01	1.62E-01	7.57E-01	2.39E-01	2.17E-01	1.83E-01	1.56E-04	-7.48E-04	-1.60E-04	-6.52E-05	-2.56E-05
107	370250	758189	School	2.22E+00	1.25E+00	1.39E+00	6.42E+00	9.38E-01	6.20E-03	3.72E-01	1.79E-01	1.14E+00	3.82E-01	3.33E-01	2.80E-01	1.72E-04	-1.76E-04	-1.41E-05	-1.54E-05	6.69E-06
108	370308	758196	School	1.96E+00	1.09E+00	1.71E+00	5.70E+00	8.31E-01	1.13E-02	3.24E-01	1.75E-01	1.76E+00	6.29E-01	5.27E-01	4.42E-01	1.84E-04	6.27E-04	1.96E-04	5.46E-05	5.11E-05
109	370361	758236	School	1.44E+00	8.07E-01	1.07E+00	4.17E+00	6.09E-01	6.08E-03	2.39E-01	1.22E-01	1.00E+00	3.51E-01	2.98E-01	2.50E-01	1.85E-04	9.21E-04	2.65E-04	8.03E-05	6.70E-05
110	370415	758275	School	9.52E-01	5.43E-01	4.41E-01	2.75E+00	4.02E-01	7.85E-04	1.61E-01	7.12E-02	2.45E-01	7.05E-02	6.82E-02	5.76E-02	1.79E-04	1.12E-03	3.18E-04	9.75E-05	7.71E-05
202	372807	757781	School	-1.02E+00	-5.81E-01	-5.03E-01	-2.94E+00	-4.31E-01	-1.24E-03	-1.72E-01	-7.74E-02	-3.13E-01	-9.53E-02	-8.89E-02	-7.49E-02	6.08E-05	-2.42E-04	-5.01E-05	-2.11E-05	-7.31E-06
203	372901	757782	School	-9.33E-01	-5.27E-01	-5.94E-01	-2.70E+00	-3.95E-01	-2.75E-03	-1.56E-01	-7.57E-02	-4.96E-01	-1.68E-01	-1.46E-01	-1.23E-01	5.64E-05	-2.89E-04	-6.09E-05	-2.52E-05	-1.02E-05

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acetaldehyde Acute Hazard	acrolein ($\mu g/m^3$)	acrolein Acute Hazard	benzene ($\mu g/m^3$)	benzene Acute Hazard	formaldehyde ($\mu g/m^3$)	formaldehyde Acute Hazard	methyl alcohol ($\mu g/m^3$)	methyl alcohol Acute Hazard	methyl ethyl ketone ($\mu g/m^3$)	methyl ethyl ketone Acute Hazard	styrene ($\mu g/m^3$)	styrene Acute Hazard	toluene ($\mu g/m^3$)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
117	370814	758243	Offsite Worker	7.96E-01	1.69E-03	4.02E-01	1.61E-01	1.93E+00	1.49E-03	2.39E+00	4.34E-02	3.42E-01	1.22E-05	1.96E-02	1.51E-06	1.16E-01	5.52E-06	2.65E+00	7.17E-05
118	370810	758153	Offsite Worker	1.53E-01	3.26E-04	3.53E-02	1.41E-02	1.63E+00	1.25E-03	5.31E-01	9.66E-03	7.02E-02	2.51E-06	1.89E-02	1.46E-06	6.76E-02	3.22E-06	2.47E+00	6.68E-05
119	370807	758063	Offsite Worker	-5.95E-02	-1.27E-04	-6.52E-02	-2.61E-02	9.04E-01	6.96E-04	-1.16E-01	-2.12E-03	-2.19E-02	-7.82E-07	1.12E-02	8.62E-07	2.91E-02	1.39E-06	1.44E+00	3.89E-05
120	370803	757974	Offsite Worker	2.74E-01	5.83E-04	1.49E-01	5.96E-02	3.50E-01	2.70E-04	8.06E-01	1.47E-02	1.17E-01	4.16E-06	2.91E-03	2.24E-07	2.85E-02	1.36E-06	4.19E-01	1.13E-05
121	370835	757927	Offsite Worker	5.63E-01	1.20E-03	3.13E-01	1.25E-01	5.16E-01	3.97E-04	1.64E+00	2.99E-02	2.39E-01	8.54E-06	3.54E-03	2.72E-07	5.13E-02	2.44E-06	5.43E-01	1.47E-05
122	370868	757880	Offsite Worker	-2.27E-01	-4.82E-04	-1.22E-01	-4.88E-02	-3.22E-01	-2.47E-04	-6.62E-01	-1.20E-02	-9.65E-02	-3.45E-06	-2.84E-03	-2.18E-07	-2.49E-02	-1.18E-06	-4.00E-01	-1.08E-05
123	370921	757884	Offsite Worker	-6.09E-01	-1.29E-03	-3.26E-01	-1.30E-01	-9.23E-01	-7.10E-04	-1.79E+00	-3.25E-02	-2.60E-01	-9.27E-06	-8.30E-03	-6.39E-07	-6.88E-02	-3.28E-06	-1.16E+00	-3.15E-05
124	370975	757887	Offsite Worker	-9.24E-01	-1.97E-03	-5.08E-01	-2.03E-01	-1.01E+00	-7.76E-04	-2.70E+00	-4.90E-02	-3.93E-01	-1.40E-05	-7.82E-03	-6.02E-07	-9.02E-02	-4.30E-06	-1.15E+00	-3.11E-05
125	370975	757794	Offsite Worker	-1.67E+00	-3.56E-03	-9.65E-01	-3.86E-01	-4.35E-01	-3.34E-04	-4.80E+00	-8.73E-02	-7.05E-01	-2.52E-05	2.68E-03	2.06E-07	-1.13E-01	-5.38E-06	9.59E-02	2.59E-06
126	371026	757794	Offsite Worker	-2.00E+00	-4.26E-03	-1.17E+00	-4.66E-01	-2.78E-01	-2.14E-04	-5.74E+00	-1.04E-01	-8.45E-01	-3.02E-05	6.16E-03	4.74E-07	-1.27E-01	-6.03E-06	4.96E-01	1.34E-05
127	371076	757877	Offsite Worker	-1.73E+00	-3.68E-03	-1.01E+00	-4.02E-01	-3.07E-01	-2.36E-04	-4.97E+00	-9.03E-02	-7.30E-01	-2.61E-05	4.51E-03	3.47E-07	-1.12E-01	-5.32E-06	3.23E-01	8.74E-06
128	371126	757959	Offsite Worker	-1.32E+00	-2.82E-03	-7.61E-01	-3.04E-01	-4.68E-01	-3.60E-04	-3.81E+00	-6.93E-02	-5.59E-01	-2.00E-05	6.27E-04	4.82E-08	-9.39E-02	-4.47E-06	-1.17E-01	-3.17E-06
129	371119	758031	Offsite Worker	-1.05E+00	-2.23E-03	-5.85E-01	-2.34E-01	-9.03E-01	-6.94E-04	-3.05E+00	-5.55E-02	-4.45E-01	-1.59E-05	-5.94E-03	-4.57E-07	-9.37E-02	-4.46E-06	-9.25E-01	-2.50E-05
143	371953	757977	Offsite Worker	-6.24E-01	-1.33E-03	-3.42E-01	-1.37E-01	-7.18E-01	-5.53E-04	-1.82E+00	-3.31E-02	-2.65E-01	-9.47E-06	-5.74E-03	-4.41E-07	-6.22E-02	-2.96E-06	-8.35E-01	-2.26E-05
144	371948	757880	Offsite Worker	-3.24E-01	-6.89E-04	-1.79E-01	-7.14E-02	-3.38E-01	-2.60E-04	-9.43E-01	-1.71E-02	-1.38E-01	-4.91E-06	-2.56E-03	-1.97E-07	-3.11E-02	-1.48E-06	-3.79E-01	-1.02E-05
145	371943	757783	Offsite Worker	-1.03E-01	-2.19E-04	-6.16E-02	-2.46E-02	4.10E-02	3.15E-05	-2.90E-01	-5.27E-03	-4.31E-02	-1.54E-06	9.73E-04	7.49E-08	-4.53E-03	-2.16E-07	1.11E-01	3.00E-06
146	372016	757794	Offsite Worker	-2.19E-01	-4.66E-04	-1.29E-01	-5.16E-02	1.27E-02	9.78E-06	-6.24E-01	-1.13E-02	-9.22E-02	-3.29E-06	1.19E-03	9.12E-08	-1.23E-02	-5.86E-07	1.21E-01	3.27E-06
147	372102	757791	Offsite Worker	-3.00E-01	-6.39E-04	-1.70E-01	-6.79E-02	-1.92E-01	-1.48E-04	-8.68E-01	-1.58E-02	-1.27E-01	-4.54E-06	-9.02E-04	-6.94E-08	-2.44E-02	-1.16E-06	-1.61E-01	-4.36E-06
148	372178	757760	Offsite Worker	-5.27E-01	-1.12E-03	-2.84E-01	-1.14E-01	-7.38E-01	-5.67E-04	-1.55E+00	-2.81E-02	-2.24E-01	-8.01E-06	-6.43E-03	-4.95E-07	-5.73E-02	-2.73E-06	-9.10E-01	-2.46E-05
149	372177	757670	Offsite Worker	-4.80E-01	-1.02E-03	-2.67E-01	-1.07E-01	-4.42E-01	-3.40E-04	-1.40E+00	-2.54E-02	-2.04E-01	-7.28E-06	-3.07E-03	-2.36E-07	-4.39E-02	-2.09E-06	-4.69E-01	-1.27E-05
150	372176	757579	Offsite Worker	-9.69E-01	-2.06E-03	-5.38E-01	-2.15E-01	-9.04E-01	-6.96E-04	-2.82E+00	-5.12E-02	-4.11E-01	-1.47E-05	-6.34E-03	-4.88E-07	-8.90E-02	-4.24E-06	-9.65E-01	-2.61E-05
151	372174	757489	Offsite Worker	-9.95E-01	-2.12E-03	-5.56E-01	-2.22E-01	-8.25E-01	-6.35E-04	-2.89E+00	-5.25E-02	-4.22E-01	-1.51E-05	-5.26E-03	-4.05E-07	-8.77E-02	-4.17E-06	-8.29E-01	-2.24E-05
152	372173	757398	Offsite Worker	-6.12E-01	-1.30E-03	-3.26E-01	-1.31E-01	-9.66E-01	-7.43E-04	-1.80E+00	-3.28E-02	-2.61E-01	-9.32E-06	-8.79E-03	-6.77E-07	-7.05E-02	-3.36E-06	-1.23E+00	-3.32E-05
153	372171	757308	Offsite Worker	-2.83E-01	-6.01E-04	-1.36E-01	-5.45E-02	-8.77E-01	-6.74E-04	-8.55E-01	-1.55E-02	-1.22E-01	-4.36E-06	-9.28E-03	-7.14E-07	-4.81E-02	-2.29E-06	-1.24E+00	-3.36E-05
154	372055	757309	Offsite Worker	-8.00E-01	-1.70E-03	-4.40E-01	-1.76E-01	-8.80E-01	-6.77E-04	-2.33E+00	-4.24E-02	-3.40E-01	-1.21E-05	-6.86E-03	-5.27E-07	-7.83E-02	-3.73E-06	-1.01E+00	-2.72E-05
156	372055	757416	Offsite Worker	-1.14E+00	-2.43E-03	-6.41E-01	-2.56E-01	-8.43E-01	-6.48E-04	-3.31E+00	-6.01E-02	-4.83E-01	-1.73E-05	-4.78E-03	-3.68E-07	-9.68E-02	-4.61E-06	-7.89E-01	-2.13E-05
157	371952	757442	Offsite Worker	-1.42E+00	-3.03E-03	-7.99E-01	-3.20E-01	-1.08E+00	-8.29E-04	-4.13E+00	-7.51E-02	-6.04E-01	-2.16E-05	-6.27E-03	-4.83E-07	-1.22E-01	-5.80E-06	-1.02E+00	-2.77E-05
158	371950	757345	Offsite Worker	-5.96E-01	-1.27E-03	-3.36E-01	-1.34E-01	-4.08E-01	-3.14E-04	-1.72E+00	-3.14E-02	-2.52E-01	-9.02E-06	-2.11E-03	-1.63E-07	-4.94E-02	-2.35E-06	-3.62E-01	-9.79E-06
159	371864	757344	Offsite Worker	-6.07E-01	-1.29E-03	-3.39E-01	-1.35E-01	-5.15E-01	-3.96E-04	-1.76E+00	-3.20E-02	-2.57E-01	-9.19E-06	-3.36E-03	-2.58E-07	-5.39E-02	-2.57E-06	-5.25E-01	-1.42E-05
160	371790	757347	Offsite Worker	-6.96E-01	-1.48E-03	-3.88E-01	-1.55E-01	-6.08E-01	-4.68E-04	-2.02E+00	-3.68E-02	-2.95E-01	-1.06E-05	-4.06E-03	-3.13E-07	-6.25E-02	-2.98E-06	-6.29E-01	-1.70E-05
161	371708	757356	Offsite Worker	-9.99E-01	-2.13E-03	-5.65E-01	-2.26E-01	-6.38E-01	-4.91E-04	-2.89E+00	-5.26E-02	-4.23E-01	-1.51E-05	-2.98E-03	-2.29E-07	-8.12E-02	-3.87E-06	-5.35E-01	-1.44E-05
162	371615	757356	Offsite Worker	-1.16E+00	-2.46E-03	-6.57E-01	-2.63E-01	-6.49E-01	-5.00E-04	-3.34E+00	-6.07E-02	-4.89E-01	-1.75E-05	-2.37E-03	-1.82E-07	-9.07E-02	-4.32E-06	-4.80E-01	-1.30E-05
163	371523	757356	Offsite Worker	-1.16E+00	-2.46E-03	-6.52E-01	-2.61E-01	-7.89E-01	-6.07E-04	-3.35E+00	-6.09E-02	-4.90E-01	-1.75E-05	-4.06E-03	-3.12E-07	-9.58E-02	-4.56E-06	-6.98E-01	-1.89E-05
164	371430	757356	Offsite Worker	-9.35E-01	-1.99E-03	-5.15E-01	-2.06E-01	-9.83E-01	-7.56E-04	-2.73E+00	-4.96E-02	-3.97E-01	-1.42E-05	-7.47E-03	-5.74E-07	-8.99E-02	-4.28E-06	-1.11E+00	-2.99E-05
165	371338	757356	Offsite Worker	-8.49E-01	-1.81E-03	-4.54E-01	-1.81E-01	-1.32E+00	-1.02E-03	-2.50E+00	-4.54E-02	-3.62E-01	-1.29E-05	-1.20E-02	-9.24E-07	-9.73E-02	-4.63E-06	-1.68E+00	-4.54E-05
166	371245	757356	Offsite Worker	-8.97E-01	-1.91E-03	-4.79E-01	-1.92E-01	-1.41E+00	-1.08E-03	-2.64E+00	-4.80E-02	-3.83E-01	-1.37E-05	-1.28E-02	-9.85E-07	-1.03E-01	-4.91E-06	-1.79E+00	-4.84E-05
167	371153	757356	Offsite Worker	-9.54E-01	-2.03E-03	-5.10E-01	-2.04E-01	-1.49E+00	-1.15E-03	-2.81E+00	-5.10E-02	-4.07E-01	-1.45E-05	-1.35E-02	-1.04E-06	-1.09E-01	-5.21E-06	-1.89E+00	-5.10E-05
168	371061	757356	Offsite Worker	-1.02E+00	-2.16E-03	-5.44E-01	-2.18E-01	-1.57E+00	-1.20E-03	-2.99E+00	-5.44E-02	-4.34E-01	-1.55E-05	-1.41E-02	-1.09E-06	-1.16E-01	-5.51E-06	-1.98E+00	-5.35E-05
169	371005	757357	Offsite Worker	-1.02E+00	-2.16E-03	-5.41E-01	-2.16E-01	-1.63E+00	-1.26E-03	-2.99E+00	-5.44E-02	-4.34E-01	-1.55E-05	-1.50E-02	-1.15E-06	-1.18E-01	-5.63E-06	-2.09E+00	-5.64E-05
170	370998	757293	Offsite Worker	-1.30E+00	-2.76E-03	-7.74E-01	-3.09E-01	3.83E-01	2.95E-04	-3.68E+00	-6.70E-02	-5.45E-01	-1.95E-05	1.08E-02	8.30E-07	-6.17E-02	-2.94E-06	1.20E+00	3.25E-05
171	370998	757194	Offsite Worker	-8.50E-01	-1.81E-03	-5.14E-01	-2.06E-01	4.61E-01	3.55E-04	-2.40E+00	-4.36E-02	-3.56E-01	-1.27E-05	9.60E-03	7.38E-07	-3.29E-02	-1.57E-06	1.11E+00	3.01E-05
172	370998	757096	Offsite Worker	-2.34E+00	-4.97E-03	-1.30E+00	-5.18E-01	-2.25E+00	-1.73E-03	-6.80E+00	-1.24E-01	-9.92E-01	-3.54E-05	-1.61E-02	-1.24E-06	-2.17E-01	-1.03E-05	-2.43E+00	-6.56E-05
173	370998	756998	Offsite Worker	-3.69E-01	-7.86E-04	-2.25E-01	-8.99E-02	2.49E-01	1.92E-04	-1.04E+00	-1.88E-02	-1.55E-01	-5.52E-06	4.73E-03	3.64E-07	-1.26E-02	-5.99E-07	5.58E-01	1.51E-05
174	371057	756997	Offsite Worker	5.30E-02	1.13E-04	-4.17E-02	-1.67E-02	2.17E+00	1.67E-03	2.78E-01	5.05E-03	3.00E-02	1.07E-06	2.60E-02	2.00E-06	8.14E-02	3.88E-06	3.37E+00	9.11E-05
175	371153	756997	Offsite Worker	9.75E-01	2.07E-03	5.12E-01	2.05E-01	1.80E+00	1.38E-03	2.89E+00	5.26E-02	4.17E-01	1.49E-05	1.71E-02	1.32E-06	1.22E-01	5.79E-06	2.36E+00	6.37E-05
176	371249	756997	Offsite Worker	-1.64E+00	-3.48E-03	-9.54E-01	-3.82E-01	-1.62E-01	-1.24E-04	-4.68E+00	-8.52E-02	-6.90E-01	-2.46E-05	5.81E-03	4.47E-07	-1.01E-01	-4.81E-06	5.06E-01	1.37E-05
177	371345	756997	Offsite Worker	-2.06E+00	-4.38E-03	-1.19E+00	-4.77E-01	-4.78E-01	-3.67E-04	-5.92E+00	-1.08E-01	-8.70E-01	-3.11E-05	4.01E-03	3.08E-07	-1.37E-01	-6.53E-06	2.10E-01	5.67E-06
178	371440	756997	Offsite Worker	-1.44E+00	-3.07E-03	-8.39E-01	-3.35E-01	-1.99E-01	-1.53E-04	-4.13E+00	-7.51E-02	-6.08E-01	-2.17E-05	4.44E-03	3.41E-07	-9.10E-02	-4.33E-06	3.58E-01	9.68E-06
179	371536	756997	Offsite Worker	-4.70E-01	-1.00E-03	-2.73E-01	-1.09E-01	-7.61E-02	-5.85E-05	-1.34E+00	-2.44E-02	-1.98E-01	-7.08E-06	1.29E-03	9.95E-08	-3.01E-02	-1.44E-06	9.76E-02	2.64E-06
180	371632	756997	Offsite Worker	-8.09E-02	-1.72E-04	-5.57E-02	-2.23E-02	2.49E-01	1.91E-04	-2.14E-01	-3.89E-03	-3.32E-02	-1.19E-06	3.37E-03	2.59E-07	4.21E-03	2.00E-07	4.25E-01	1.15E-05
181	371728	756997	Offsite Worker	2.03E-01	4.33E-04	1.10E-01	4.39E-02	2.86E-01	2.20E-04	6.00E-01	1.09E-02	8.66E-02	3.09E-06	2.48E-03	1.91E-07	2.21E-02	1.05E-06	3.52E-01	9.51E-06
182	371824	756997	Offsite Worker	3.51E-01	7.47E-04	1.87E-01	7.48E-02	5.72E-01	4.40E-04	1.04E+00	1.89E-02	1.50E-01	5.36E-06	5.23E-03	4.02E-07	4.10E-02	1.95E-06	7.30E-01	1.97E-05

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acetaldehyde Acute Hazard	acrolein ($\mu g/m^3$)	acrolein Acute Hazard	benzene ($\mu g/m^3$)	benzene Acute Hazard	formaldehyde ($\mu g/m^3$)	formaldehyde Acute Hazard	methyl alcohol ($\mu g/m^3$)	methyl alcohol Acute Hazard	methyl ethyl ketone ($\mu g/m^3$)	methyl ethyl ketone Acute Hazard	styrene ($\mu g/m^3$)	styrene Acute Hazard	toluene ($\mu g/m^3$)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
183	371920	756997	Offsite Worker	-1.31E+00	-2.79E-03	-7.42E-01	-2.97E-01	-8.15E-01	-6.27E-04	-3.79E+00	-6.90E-02	-5.55E-01	-1.98E-05	-3.63E-03	-2.79E-07	-1.06E-01	-5.03E-06	-6.66E-01	-1.80E-05
184	372016	756997	Offsite Worker	4.12E-02	8.76E-05	1.74E-02	6.97E-03	2.01E-01	1.55E-04	1.31E-01	2.39E-03	1.80E-02	6.44E-07	2.22E-03	1.71E-07	9.62E-03	4.58E-07	2.94E-01	7.96E-06
185	372111	756997	Offsite Worker	3.65E-01	7.77E-04	2.39E-01	9.58E-02	-7.56E-01	-5.82E-04	1.00E+00	1.83E-02	1.51E-01	5.39E-06	-1.09E-02	-8.39E-07	-6.14E-03	-2.93E-07	-1.35E+00	-3.66E-05
186	372207	756997	Offsite Worker	1.03E+00	2.19E-03	5.26E-01	2.10E-01	2.30E+00	1.77E-03	3.07E+00	5.58E-02	4.41E-01	1.58E-05	2.30E-02	1.77E-06	1.43E-01	6.81E-06	3.13E+00	8.45E-05
187	372303	756997	Offsite Worker	2.50E+00	5.32E-03	1.41E+00	5.66E-01	1.52E+00	1.17E-03	7.23E+00	1.32E-01	1.06E+00	3.78E-05	6.47E-03	4.98E-07	2.00E-01	9.53E-06	1.21E+00	3.28E-05
188	372399	756997	Offsite Worker	2.64E+00	5.62E-03	1.50E+00	5.99E-01	1.54E+00	1.18E-03	7.64E+00	1.39E-01	1.12E+00	3.99E-05	6.02E-03	4.63E-07	2.09E-01	9.96E-06	1.18E+00	3.18E-05
189	372495	756997	Offsite Worker	2.19E-01	4.67E-04	1.16E-01	4.64E-02	3.81E-01	2.93E-04	6.50E-01	1.18E-02	9.38E-02	3.35E-06	3.56E-03	2.74E-07	2.65E-02	1.26E-06	4.94E-01	1.33E-05
190	372591	756997	Offsite Worker	-7.08E-02	-1.51E-04	-3.67E-02	-1.47E-02	-1.44E-01	-1.11E-04	-2.09E-01	-3.80E-03	-3.03E-02	-1.08E-06	-1.42E-03	-1.09E-07	-9.35E-03	-4.45E-07	-1.93E-01	-5.22E-06
191	372610	757063	Offsite Worker	-1.35E-01	-2.86E-04	-9.09E-02	-3.63E-02	3.56E-01	2.74E-04	-3.64E-01	-6.62E-03	-5.54E-02	-1.98E-06	4.94E-03	3.80E-07	5.01E-03	2.39E-07	6.19E-01	1.67E-05
192	372612	757132	Offsite Worker	4.51E-01	9.60E-04	2.37E-01	9.48E-02	8.20E-01	6.31E-04	1.34E+00	2.43E-02	1.93E-01	6.89E-06	7.77E-03	5.97E-07	5.58E-02	2.66E-06	1.07E+00	2.90E-05
193	372614	757201	Offsite Worker	8.77E-01	1.87E-03	4.90E-01	1.96E-01	7.42E-01	5.71E-04	2.55E+00	4.64E-02	3.72E-01	1.33E-05	4.80E-03	3.69E-07	7.78E-02	3.70E-06	7.53E-01	2.03E-05
194	372616	757270	Offsite Worker	4.39E-01	9.33E-04	2.36E-01	9.45E-02	6.25E-01	4.81E-04	1.29E+00	2.35E-02	1.87E-01	6.68E-06	5.47E-03	4.21E-07	4.81E-02	2.29E-06	7.74E-01	2.09E-05
195	372627	757351	Offsite Worker	8.56E-02	1.82E-04	4.93E-02	1.97E-02	2.72E-02	2.09E-05	2.48E-01	4.51E-03	3.61E-02	1.29E-06	-8.94E-05	-6.87E-09	5.92E-03	2.82E-07	1.75E-03	4.73E-08
196	372651	757422	Offsite Worker	-2.91E-01	-6.19E-04	-1.61E-01	-6.45E-02	-2.84E-01	-2.18E-04	-8.46E-01	-1.54E-02	-1.24E-01	-4.41E-06	-2.06E-03	-1.59E-07	-2.72E-02	-1.30E-06	-3.10E-01	-8.38E-06
197	372676	757494	Offsite Worker	-5.95E-01	-1.26E-03	-3.38E-01	-1.35E-01	-3.24E-01	-2.49E-04	-1.72E+00	-3.12E-02	-2.52E-01	-8.98E-06	-1.10E-03	-8.43E-08	-4.63E-02	-2.20E-06	-2.31E-01	-6.23E-06
198	372704	757569	Offsite Worker	-1.08E+00	-2.29E-03	-6.19E-01	-2.47E-01	-3.90E-01	-3.00E-04	-3.10E+00	-5.64E-02	-4.55E-01	-1.63E-05	4.05E-04	3.12E-08	-7.67E-02	-3.65E-06	-1.09E-01	-2.95E-06
199	372733	757645	Offsite Worker	-1.06E+00	-2.26E-03	-6.06E-01	-2.42E-01	-5.57E-01	-4.28E-04	-3.07E+00	-5.59E-02	-4.50E-01	-1.61E-05	-1.68E-03	-1.29E-07	-8.20E-02	-3.91E-06	-3.77E-01	-1.02E-05
200	372746	757702	Offsite Worker	-9.68E-01	-2.06E-03	-5.48E-01	-2.19E-01	-5.84E-01	-4.49E-04	-2.80E+00	-5.09E-02	-4.10E-01	-1.46E-05	-2.46E-03	-1.89E-07	-7.73E-02	-3.68E-06	-4.63E-01	-1.25E-05
201	372746	757768	Offsite Worker	-1.02E+00	-2.17E-03	-5.82E-01	-2.33E-01	-5.01E-01	-3.86E-04	-2.94E+00	-5.35E-02	-4.31E-01	-1.54E-05	-1.22E-03	-9.36E-08	-7.74E-02	-3.69E-06	-3.10E-01	-8.38E-06
204	372994	757783	Offsite Worker	-9.51E-01	-2.02E-03	-5.37E-01	-2.15E-01	-6.05E-01	-4.66E-04	-2.75E+00	-5.00E-02	-4.02E-01	-1.44E-05	-2.81E-03	-2.16E-07	-7.71E-02	-3.67E-06	-5.06E-01	-1.37E-05
205	373087	757783	Offsite Worker	-9.88E-01	-2.10E-03	-5.59E-01	-2.24E-01	-6.04E-01	-4.64E-04	-2.86E+00	-5.20E-02	-4.18E-01	-1.49E-05	-2.61E-03	-2.01E-07	-7.93E-02	-3.77E-06	-4.85E-01	-1.31E-05
206	373180	757784	Offsite Worker	-8.80E-01	-1.87E-03	-5.00E-01	-2.00E-01	-4.79E-01	-3.68E-04	-2.54E+00	-4.62E-02	-3.72E-01	-1.33E-05	-1.61E-03	-1.24E-07	-6.85E-02	-3.26E-06	-3.40E-01	-9.19E-06
207	373274	757785	Offsite Worker	-7.54E-01	-1.60E-03	-4.30E-01	-1.72E-01	-3.41E-01	-2.62E-04	-2.17E+00	-3.95E-02	-3.19E-01	-1.14E-05	-5.47E-04	-4.21E-08	-5.61E-02	-2.67E-06	-1.84E-01	-4.97E-06
208	373367	757786	Offsite Worker	-6.63E-01	-1.41E-03	-3.81E-01	-1.52E-01	-2.39E-01	-1.84E-04	-1.91E+00	-3.47E-02	-2.80E-01	-1.00E-05	2.57E-04	1.97E-08	-4.72E-02	-2.25E-06	-6.62E-02	-1.79E-06
209	373418	757742	Offsite Worker	-4.91E-01	-1.05E-03	-2.86E-01	-1.14E-01	-5.62E-02	-4.32E-05	-1.41E+00	-2.56E-02	-2.07E-01	-7.39E-06	1.65E-03	1.27E-07	-3.06E-02	-1.46E-06	1.40E-01	3.79E-06
210	373418	757653	Offsite Worker	8.23E-02	1.75E-04	3.55E-02	1.42E-02	3.81E-01	2.93E-04	2.58E-01	4.68E-03	3.60E-02	1.29E-06	4.21E-03	3.24E-07	1.85E-02	8.82E-07	5.57E-01	1.51E-05
211	373419	757564	Offsite Worker	8.10E-01	1.72E-03	4.59E-01	1.84E-01	4.80E-01	3.69E-04	2.35E+00	4.26E-02	3.43E-01	1.22E-05	1.94E-03	1.49E-07	6.44E-02	3.07E-06	3.73E-01	1.01E-05
212	373419	757475	Offsite Worker	1.04E+00	2.20E-03	5.95E-01	2.38E-01	3.83E-01	2.95E-04	2.99E+00	5.43E-02	4.38E-01	1.56E-05	-3.04E-04	-2.34E-08	7.40E-02	3.53E-06	1.17E-01	3.15E-06
213	373420	757386	Offsite Worker	7.59E-01	1.61E-03	4.31E-01	1.72E-01	4.28E-01	3.29E-04	2.19E+00	3.99E-02	3.21E-01	1.15E-05	1.56E-03	1.20E-07	5.95E-02	2.83E-06	3.16E-01	8.53E-06
214	373420	757297	Offsite Worker	4.48E-01	9.54E-04	2.47E-01	9.89E-02	4.66E-01	3.59E-04	1.31E+00	2.38E-02	1.90E-01	6.80E-06	3.50E-03	2.70E-07	4.29E-02	2.04E-06	5.21E-01	1.41E-05
215	373421	757207	Offsite Worker	7.52E-01	1.60E-03	4.24E-01	1.69E-01	5.15E-01	3.96E-04	2.18E+00	3.96E-02	3.18E-01	1.14E-05	2.65E-03	2.04E-07	6.23E-02	2.97E-06	4.56E-01	1.23E-05
216	373421	757118	Offsite Worker	8.26E-01	1.76E-03	4.67E-01	1.87E-01	5.13E-01	3.94E-04	2.39E+00	4.35E-02	3.50E-01	1.25E-05	2.26E-03	1.74E-07	6.65E-02	3.17E-06	4.17E-01	1.13E-05
217	373292	757117	Offsite Worker	8.23E-01	1.75E-03	4.64E-01	1.85E-01	5.62E-01	4.33E-04	2.38E+00	4.34E-02	3.48E-01	1.24E-05	2.88E-03	2.22E-07	6.81E-02	3.24E-06	4.97E-01	1.34E-05
218	373213	757118	Offsite Worker	8.08E-01	1.72E-03	4.55E-01	1.82E-01	5.57E-01	4.28E-04	2.34E+00	4.26E-02	3.42E-01	1.22E-05	2.88E-03	2.22E-07	6.71E-02	3.19E-06	4.94E-01	1.34E-05
219	373158	757066	Offsite Worker	9.41E-01	2.00E-03	5.31E-01	2.12E-01	6.33E-01	4.87E-04	2.73E+00	4.96E-02	3.99E-01	1.42E-05	3.17E-03	2.44E-07	7.75E-02	3.69E-06	5.51E-01	1.49E-05
220	373084	757026	Offsite Worker	1.03E+00	2.20E-03	5.85E-01	2.34E-01	6.34E-01	4.88E-04	2.99E+00	5.44E-02	4.37E-01	1.56E-05	2.75E-03	2.11E-07	8.29E-02	3.95E-06	5.11E-01	1.38E-05
221	373009	757011	Offsite Worker	1.08E+00	2.31E-03	6.13E-01	2.45E-01	6.79E-01	5.23E-04	3.14E+00	5.71E-02	4.59E-01	1.64E-05	3.05E-03	2.35E-07	8.75E-02	4.17E-06	5.58E-01	1.51E-05
222	372922	757009	Offsite Worker	1.11E+00	2.37E-03	6.28E-01	2.51E-01	7.62E-01	5.86E-04	3.23E+00	5.88E-02	4.72E-01	1.69E-05	3.91E-03	3.01E-07	9.23E-02	4.39E-06	6.73E-01	1.82E-05
223	372835	757007	Offsite Worker	1.10E+00	2.33E-03	6.18E-01	2.47E-01	7.37E-01	5.67E-04	3.18E+00	5.78E-02	4.64E-01	1.66E-05	3.69E-03	2.84E-07	9.03E-02	4.30E-06	6.43E-01	1.74E-05
224	372747	757006	Offsite Worker	1.18E+00	2.51E-03	6.70E-01	2.68E-01	6.90E-01	5.31E-04	3.42E+00	6.22E-02	5.00E-01	1.79E-05	2.71E-03	2.09E-07	9.36E-02	4.46E-06	5.29E-01	1.43E-05
225	372660	757004	Offsite Worker	6.90E-01	1.47E-03	3.98E-01	1.59E-01	1.85E-01	1.43E-04	1.98E+00	3.61E-02	2.91E-01	1.04E-05	-1.05E-03	-8.07E-08	4.68E-02	2.23E-06	-3.16E-02	-8.55E-07
226	372651	757063	Offsite Worker	2.21E-01	4.70E-04	1.15E-01	4.59E-02	4.44E-01	3.42E-04	6.58E-01	1.20E-02	9.47E-02	3.38E-06	4.32E-03	3.32E-07	2.89E-02	1.37E-06	5.92E-01	1.60E-05
227	372629	756931	Offsite Worker	7.54E-01	1.60E-03	4.29E-01	1.72E-01	3.91E-01	3.00E-04	2.18E+00	3.96E-02	3.19E-01	1.14E-05	1.13E-03	8.68E-08	5.79E-02	2.76E-06	2.60E-01	7.01E-06
228	372631	756857	Offsite Worker	1.70E+00	3.62E-03	9.64E-01	3.86E-01	1.04E+00	8.00E-04	4.93E+00	8.96E-02	7.21E-01	2.57E-05	4.47E-03	3.44E-07	1.37E-01	6.50E-06	8.35E-01	2.26E-05
229	372634	756783	Offsite Worker	2.03E+00	4.32E-03	1.15E+00	4.60E-01	1.17E+00	9.00E-04	5.87E+00	1.07E-01	8.59E-01	3.07E-05	4.48E-03	3.45E-07	1.60E-01	7.63E-06	8.85E-01	2.39E-05
230	372702	756778	Offsite Worker	8.84E-01	1.88E-03	5.00E-01	2.00E-01	5.65E-01	4.35E-04	2.56E+00	4.66E-02	3.74E-01	1.34E-05	2.62E-03	2.01E-07	7.18E-02	3.42E-06	4.72E-01	1.27E-05
231	372756	756775	Offsite Worker	7.19E-01	1.53E-03	4.02E-01	1.61E-01	5.89E-01	4.53E-04	2.09E+00	3.80E-02	3.05E-01	1.09E-05	3.69E-03	2.84E-07	6.31E-02	3.00E-06	5.86E-01	1.58E-05
232	372729	756712	Offsite Worker	5.17E-01	1.10E-03	2.89E-01	1.16E-01	4.20E-01	3.23E-04	1.50E+00	2.73E-02	2.19E-01	7.83E-06	2.61E-03	2.01E-07	4.52E-02	2.15E-06	4.16E-01	1.12E-05
233	372703	756650	Offsite Worker	-3.03E-01	-6.44E-04	-1.92E-01	-7.68E-02	4.33E-01	3.33E-04	-8.41E-01	-1.53E-02	-1.26E-01	-4.50E-06	6.68E-03	5.14E-07	-1.98E-03	-9.41E-08	8.18E-01	2.21E-05
234	372677	756588	Offsite Worker	-4.41E-01	-9.39E-04	-2.68E-01	-1.07E-01	2.86E-01	2.20E-04	-1.25E+00	-2.26E-02	-1.85E-01	-6.60E-06	5.56E-03	4.28E-07	-1.53E-02	-7.31E-07	6.53E-01	1.76E-05
235	372619	756588	Offsite Worker	-6.97E-01	-1.48E-03	-4.20E-01	-1.68E-01	3.37E-01	2.59E-04	-1.97E+00	-3.59E-02	-2.92E-01	-1.04E-05	7.39E-03	5.68E-07	-2.84E-02	-1.35E-06	8.51E-01	2.30E-05
236	372622	756509	Offsite Worker	-4.05E+00	-8.61E-03	-2.33E+00	-9.34E-01	-1.12E+00	-8.64E-04	-1.16E+01	-2.11E-01	-1.71E+00	-6.10E-05	5.66E-03	4.36E-07	-2.76E-01	-1.31E-05	1.25E-01	3.37E-06

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde ($\mu g/m^3$)	acetaldehyde Acute Hazard	acrolein ($\mu g/m^3$)	acrolein Acute Hazard	benzene ($\mu g/m^3$)	benzene Acute Hazard	formaldehyde ($\mu g/m^3$)	formaldehyde Acute Hazard	methyl alcohol ($\mu g/m^3$)	methyl alcohol Acute Hazard	methyl ethyl ketone ($\mu g/m^3$)	methyl ethyl ketone Acute Hazard	styrene ($\mu g/m^3$)	styrene Acute Hazard	toluene ($\mu g/m^3$)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
237	372700	756511	Offsite Worker	-4.43E+00	-9.42E-03	-2.55E+00	-1.02E+00	-1.31E+00	-1.01E-03	-1.27E+01	-2.32E-01	-1.87E+00	-6.68E-05	5.17E-03	3.98E-07	-3.05E-01	-1.45E-05	3.45E-03	9.32E-08
238	372789	756510	Offsite Worker	-4.54E+00	-9.67E-03	-2.62E+00	-1.05E+00	-1.42E+00	-1.10E-03	-1.31E+01	-2.38E-01	-1.92E+00	-6.85E-05	4.38E-03	3.37E-07	-3.16E-01	-1.50E-05	-1.16E-01	-3.14E-06
239	372871	756509	Offsite Worker	-4.20E+00	-8.93E-03	-2.42E+00	-9.67E-01	-1.29E+00	-9.95E-04	-1.21E+01	-2.19E-01	-1.77E+00	-6.33E-05	4.32E-03	3.32E-07	-2.91E-01	-1.38E-05	-7.16E-02	-1.93E-06
240	372871	756437	Offsite Worker	-1.76E+00	-3.74E-03	-1.04E+00	-4.15E-01	1.38E-01	1.06E-04	-5.02E+00	-9.14E-02	-7.41E-01	-2.65E-05	1.00E-02	7.73E-07	-9.73E-02	-4.63E-06	1.03E+00	2.80E-05
241	372970	756437	Offsite Worker	-1.12E+00	-2.38E-03	-6.72E-01	-2.69E-01	4.64E-01	3.57E-04	-3.18E+00	-5.77E-02	-4.70E-01	-1.68E-05	1.09E-02	8.42E-07	-4.84E-02	-2.30E-06	1.25E+00	3.37E-05
242	373069	756437	Offsite Worker	-6.41E-01	-1.36E-03	-4.00E-01	-1.60E-01	7.17E-01	5.52E-04	-1.79E+00	-3.26E-02	-2.68E-01	-9.56E-06	1.17E-02	9.02E-07	-1.14E-02	-5.42E-07	1.42E+00	3.84E-05
243	373168	756437	Offsite Worker	-4.40E-01	-9.36E-04	-2.84E-01	-1.14E-01	7.84E-01	6.03E-04	-1.21E+00	-2.21E-02	-1.82E-01	-6.52E-06	1.16E-02	8.91E-07	2.73E-03	1.30E-07	1.43E+00	3.87E-05
244	373267	756437	Offsite Worker	-4.97E-01	-1.06E-03	-3.14E-01	-1.26E-01	6.77E-01	5.21E-04	-1.38E+00	-2.51E-02	-2.07E-01	-7.39E-06	1.06E-02	8.12E-07	-4.44E-03	-2.12E-07	1.29E+00	3.49E-05
245	373412	756437	Offsite Worker	-5.60E-01	-1.19E-03	-3.47E-01	-1.39E-01	5.40E-01	4.16E-04	-1.57E+00	-2.86E-02	-2.34E-01	-8.35E-06	9.20E-03	7.08E-07	-1.30E-02	-6.21E-07	1.11E+00	2.99E-05
246	373409	756339	Offsite Worker	1.25E+00	2.66E-03	7.12E-01	2.85E-01	6.49E-01	5.00E-04	3.62E+00	6.58E-02	5.29E-01	1.89E-05	1.89E-03	1.45E-07	9.62E-02	4.58E-06	4.33E-01	1.17E-05
247	373406	756240	Offsite Worker	1.27E+00	2.71E-03	7.24E-01	2.89E-01	6.59E-01	5.07E-04	3.67E+00	6.68E-02	5.38E-01	1.92E-05	1.92E-03	1.47E-07	9.77E-02	4.65E-06	4.39E-01	1.19E-05
248	373403	756142	Offsite Worker	3.50E-01	7.45E-04	1.89E-01	7.55E-02	4.95E-01	3.81E-04	1.03E+00	1.87E-02	1.49E-01	5.33E-06	4.32E-03	3.33E-07	3.82E-02	1.82E-06	6.12E-01	1.65E-05
249	373400	756042	Offsite Worker	2.75E-01	5.85E-04	1.39E-01	5.57E-02	6.60E-01	5.08E-04	8.24E-01	1.50E-02	1.18E-01	4.22E-06	6.68E-03	5.13E-07	3.98E-02	1.90E-06	9.05E-01	2.44E-05
250	373397	755944	Offsite Worker	5.14E-01	1.09E-03	2.84E-01	1.14E-01	5.20E-01	4.00E-04	1.50E+00	2.73E-02	2.18E-01	7.80E-06	3.84E-03	2.95E-07	4.87E-02	2.32E-06	5.74E-01	1.55E-05
251	373393	755846	Offsite Worker	4.63E-01	9.85E-04	2.62E-01	1.05E-01	2.80E-01	2.15E-04	1.34E+00	2.44E-02	1.96E-01	6.99E-06	1.17E-03	9.02E-08	3.70E-02	1.76E-06	2.21E-01	5.98E-06
252	373390	755747	Offsite Worker	3.38E-01	7.19E-04	2.02E-01	8.08E-02	-1.12E-01	-8.58E-05	9.62E-01	1.75E-02	1.42E-01	5.07E-06	-2.97E-03	-2.28E-07	1.56E-02	7.43E-07	-3.33E-01	-8.99E-06
253	373309	755744	Offsite Worker	2.50E-01	5.31E-04	1.51E-01	6.06E-02	-1.49E-01	-1.15E-04	7.07E-01	1.28E-02	1.05E-01	3.73E-06	-3.00E-03	-2.31E-07	9.09E-03	4.33E-07	-3.51E-01	-9.47E-06
254	373229	755743	Offsite Worker	1.26E-01	2.68E-04	7.93E-02	3.17E-02	-1.58E-01	-1.22E-04	3.53E-01	6.42E-03	5.25E-02	1.88E-06	-2.52E-03	-1.94E-07	1.59E-03	7.58E-08	-3.07E-01	-8.30E-06
255	373143	755741	Offsite Worker	-5.77E-02	-1.23E-04	-2.91E-02	-1.16E-02	-1.42E-01	-1.09E-04	-1.72E-01	-3.12E-03	-2.48E-02	-8.86E-07	-1.45E-03	-1.12E-07	-8.50E-03	-4.05E-07	-1.96E-01	-5.30E-06
256	373143	755823	Offsite Worker	1.90E-01	4.05E-04	1.06E-01	4.24E-02	1.65E-01	1.27E-04	5.54E-01	1.01E-02	8.07E-02	2.88E-06	1.09E-03	8.36E-08	1.70E-02	8.09E-07	1.69E-01	4.58E-06
257	373143	755906	Offsite Worker	2.89E-01	6.14E-04	1.55E-01	6.21E-02	4.23E-01	3.25E-04	8.50E-01	1.55E-02	1.23E-01	4.40E-06	3.74E-03	2.88E-07	3.20E-02	1.53E-06	5.27E-01	1.42E-05
258	373065	755906	Offsite Worker	-8.95E-02	-1.90E-04	-5.99E-02	-2.40E-02	2.22E-01	1.70E-04	-2.42E-01	-4.41E-03	-3.69E-02	-1.32E-06	3.10E-03	2.38E-07	2.78E-03	1.32E-07	3.88E-01	1.05E-05
259	373065	755827	Offsite Worker	-1.38E-01	-2.93E-04	-8.16E-02	-3.27E-02	3.02E-02	2.33E-05	-3.90E-01	-7.09E-03	-5.78E-02	-2.06E-06	1.01E-03	7.79E-08	-6.92E-03	-3.30E-07	1.11E-01	2.99E-06
260	373068	755733	Offsite Worker	-2.47E-01	-5.26E-04	-1.40E-01	-5.61E-02	-1.42E-01	-1.09E-04	-7.14E-01	-1.30E-02	-1.05E-01	-3.74E-06	-5.49E-04	-4.23E-08	-1.95E-02	-9.30E-07	-1.08E-01	-2.92E-06
261	373007	755733	Offsite Worker	-3.33E-01	-7.08E-04	-1.89E-01	-7.57E-02	-1.72E-01	-1.32E-04	-9.59E-01	-1.74E-02	-1.41E-01	-5.02E-06	-5.08E-04	-3.90E-08	-2.56E-02	-1.22E-06	-1.15E-01	-3.12E-06
262	372941	755733	Offsite Worker	-5.69E-01	-1.21E-03	-3.24E-01	-1.29E-01	-2.99E-01	-2.30E-04	-1.64E+00	-2.99E-02	-2.41E-01	-8.59E-06	-9.23E-04	-7.10E-08	-4.39E-02	-2.09E-06	-2.05E-01	-5.53E-06
263	372941	755636	Offsite Worker	-2.47E-02	-5.25E-05	1.55E-03	6.21E-04	-4.77E-01	-3.67E-04	-9.57E-02	-1.74E-03	-1.21E-02	-4.31E-07	-5.66E-03	-4.36E-07	-1.87E-02	-8.90E-07	-7.36E-01	-1.99E-05
264	372941	755539	Offsite Worker	-2.76E-01	-5.86E-04	-1.27E-01	-5.08E-02	-1.03E+00	-7.92E-04	-8.44E-01	-1.53E-02	-1.20E-01	-4.27E-06	-1.12E-02	-8.58E-07	-5.32E-02	-2.53E-06	-1.48E+00	-4.01E-05
265	372941	755442	Offsite Worker	3.62E-01	7.70E-04	2.27E-01	9.06E-02	-4.24E-01	-3.26E-04	1.01E+00	1.84E-02	1.51E-01	5.39E-06	-6.87E-03	-5.28E-07	5.71E-03	2.72E-07	-8.33E-01	-2.25E-05
266	372913	755342	Offsite Worker	8.80E-01	1.87E-03	5.36E-01	2.15E-01	-6.00E-01	-4.62E-04	2.48E+00	4.52E-02	3.69E-01	1.32E-05	-1.15E-02	-8.82E-07	2.95E-02	1.40E-06	-1.35E+00	-3.65E-05
267	372817	755346	Offsite Worker	6.07E-01	1.29E-03	3.91E-01	1.56E-01	-1.04E+00	-7.97E-04	1.68E+00	3.05E-02	2.52E-01	9.00E-06	-1.54E-02	-1.19E-06	-2.14E-03	-1.02E-07	-1.90E+00	-5.15E-05
268	372720	755349	Offsite Worker	4.99E-01	1.06E-03	3.36E-01	1.34E-01	-1.28E+00	-9.83E-04	1.36E+00	2.47E-02	2.06E-01	7.35E-06	-1.79E-02	-1.37E-06	-1.72E-02	-8.17E-07	-2.23E+00	-6.03E-05
269	372624	755352	Offsite Worker	-3.71E-01	-7.89E-04	-1.80E-01	-7.19E-02	-1.12E+00	-8.64E-04	-1.12E+00	-2.04E-02	-1.60E-01	-5.72E-06	-1.18E-02	-9.11E-07	-6.22E-02	-2.96E-06	-1.59E+00	-4.29E-05
270	372527	755349	Offsite Worker	-5.83E+00	-1.24E-02	-3.30E+00	-1.32E+00	-3.65E+00	-2.81E-03	-1.69E+01	-3.07E-01	-2.47E+00	-8.81E-05	-1.65E-02	-1.27E-06	-4.71E-01	-2.24E-05	-3.00E+00	-8.12E-05
271	372431	755353	Offsite Worker	-5.92E+00	-1.26E-02	-3.32E+00	-1.33E+00	-4.61E+00	-3.54E-03	-1.72E+01	-3.13E-01	-2.51E+00	-8.97E-05	-2.76E-02	-2.12E-06	-5.11E-01	-2.43E-05	-4.45E+00	-1.20E-04
272	372334	755356	Offsite Worker	-1.01E-01	-2.15E-04	-6.30E-02	-2.52E-02	1.11E-01	8.52E-05	-2.82E-01	-5.12E-03	-4.22E-02	-1.51E-06	1.81E-03	1.40E-07	-1.90E-03	-9.06E-08	2.20E-01	5.94E-06
273	372237	755359	Offsite Worker	7.46E-01	1.59E-03	4.20E-01	1.68E-01	5.34E-01	4.11E-04	2.16E+00	3.94E-02	3.16E-01	1.13E-05	2.91E-03	2.24E-07	6.26E-02	2.98E-06	4.88E-01	1.32E-05
274	372141	755362	Offsite Worker	1.38E+00	2.93E-03	8.12E-01	3.25E-01	-1.58E-01	-1.21E-04	3.93E+00	7.14E-02	5.79E-01	2.07E-05	-8.48E-03	-6.52E-07	7.42E-02	3.54E-06	-8.88E-01	-2.40E-05
275	372044	755366	Offsite Worker	1.53E-01	3.26E-04	8.75E-02	3.50E-02	7.47E-02	5.75E-05	4.44E-01	8.08E-03	6.49E-02	2.32E-06	1.65E-04	1.27E-08	1.16E-02	5.52E-07	4.47E-02	1.21E-06
276	371948	755369	Offsite Worker	-2.84E-01	-6.04E-04	-1.59E-01	-6.37E-02	-2.20E-01	-1.69E-04	-8.23E-01	-1.50E-02	-1.20E-01	-4.30E-06	-1.31E-03	-1.01E-07	-2.45E-02	-1.17E-06	-2.12E-01	-5.74E-06
277	371851	755372	Offsite Worker	-3.68E-02	-7.82E-05	-2.99E-03	-1.20E-03	-5.53E-01	-4.25E-04	-1.34E-01	-2.44E-03	-1.74E-02	-6.23E-07	-6.52E-03	-5.02E-07	-2.21E-02	-1.05E-06	-8.49E-01	-2.29E-05
278	371755	755375	Offsite Worker	-2.11E-01	-4.48E-04	-1.06E-01	-4.26E-02	-5.09E-01	-3.91E-04	-6.29E-01	-1.14E-02	-9.05E-02	-3.23E-06	-5.17E-03	-3.97E-07	-3.07E-02	-1.46E-06	-6.99E-01	-1.89E-05
279	371658	755378	Offsite Worker	-9.01E-01	-1.92E-03	-5.13E-01	-2.05E-01	-4.62E-01	-3.55E-04	-2.60E+00	-4.73E-02	-3.81E-01	-1.36E-05	-1.31E-03	-1.00E-07	-6.91E-02	-3.29E-06	-3.04E-01	-8.21E-06
280	371562	755382	Offsite Worker	1.01E+00	2.16E-03	5.82E-01	2.33E-01	3.49E-01	2.69E-04	2.92E+00	5.31E-02	4.28E-01	1.53E-05	-6.07E-04	-4.67E-08	7.15E-02	3.40E-06	7.43E-02	2.01E-06
281	371465	755385	Offsite Worker	2.78E+00	5.92E-03	1.58E+00	6.32E-01	1.53E+00	1.17E-03	8.04E+00	1.46E-01	1.18E+00	4.20E-05	5.22E-03	4.02E-07	2.17E-01	1.03E-05	1.09E+00	2.95E-05
282	371368	755388	Offsite Worker	1.77E+00	3.76E-03	9.93E-01	3.97E-01	1.35E+00	1.04E-03	5.14E+00	9.34E-02	7.50E-01	2.68E-05	7.85E-03	6.04E-07	1.51E-01	7.21E-06	1.28E+00	3.46E-05
283	371272	755391	Offsite Worker	5.15E-01	1.10E-03	2.80E-01	1.12E-01	6.66E-01	5.12E-04	1.51E+00	2.75E-02	2.19E-01	7.83E-06	5.59E-03	4.30E-07	5.40E-02	2.57E-06	8.01E-01	2.16E-05
284	371175	755395	Offsite Worker	5.00E-01	1.06E-03	2.81E-01	1.12E-01	3.76E-01	2.90E-04	1.45E+00	2.64E-02	2.12E-01	7.57E-06	2.16E-03	1.66E-07	4.26E-02	2.03E-06	3.55E-01	9.60E-06
285	371079	755398	Offsite Worker	1.77E+00	3.77E-03	9.80E-01	3.92E-01	1.75E+00	1.34E-03	5.16E+00	9.39E-02	7.52E-01	2.69E-05	1.27E-02	9.78E-07	1.66E-01	7.91E-06	1.91E+00	5.16E-05
286	371042	755478	Offsite Worker	1.48E+00	3.15E-03	8.43E-01	3.37E-01	7.83E-01	6.02E-04	4.29E+00	7.79E-02	6.27E-01	2.24E-05	2.40E-03	1.85E-07	1.14E-01	5.45E-06	5.34E-01	1.44E-05
287	371009	755538	Offsite Worker	1.66E+00	3.54E-03	9.53E-01	3.81E-01	6.77E-01	5.21E-04	4.80E+00	8.72E-02	7.03E-01	2.51E-05	2.61E-04	2.01E-08	1.21E-01	5.77E-06	2.84E-01	7.69E-06
288	370975	755597	Offsite Worker	6.02E-01	1.28E-03	3.43E-01	1.37E-01	3.01E-01	2.31E-04	1.74E+00	3.17E-02	2.55E-01	9.10E-06	7.51E-04	5.78E-08	4.58E-02	2.18E-06	1.88E-01	5.09E-06

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m³)	acetaldehyde Acute Hazard	acrolein (µg/m³)	acrolein Acute Hazard	benzene (µg/m³)	benzene Acute Hazard	formaldehyde (µg/m³)	formaldehyde Acute Hazard	methyl alcohol (µg/m³)	methyl alcohol Acute Hazard	methyl ethyl ketone (µg/m³)	methyl ethyl ketone Acute Hazard	styrene (µg/m³)	styrene Acute Hazard	toluene (µg/m³)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
289	370925	755597	Offsite Worker	-2.75E-01	-5.86E-04	-1.53E-01	-6.11E-02	-2.60E-01	-2.00E-04	-7.99E-01	-1.45E-02	-1.17E-01	-4.17E-06	-1.85E-03	-1.42E-07	-2.54E-02	-1.21E-06	-2.80E-01	-7.55E-06
290	370860	755547	Offsite Worker	1.94E+00	4.12E-03	1.09E+00	4.34E-01	1.48E+00	1.14E-03	5.62E+00	1.02E-01	8.20E-01	2.93E-05	8.65E-03	6.66E-07	1.66E-01	7.90E-06	1.41E+00	3.81E-05
291	370796	755497	Offsite Worker	2.26E+00	4.80E-03	1.27E+00	5.07E-01	1.70E+00	1.31E-03	6.56E+00	1.19E-01	9.57E-01	3.42E-05	9.80E-03	7.54E-07	1.93E-01	9.17E-06	1.61E+00	4.34E-05
292	370733	755428	Offsite Worker	1.69E+00	3.59E-03	9.45E-01	3.78E-01	1.31E+00	1.01E-03	4.90E+00	8.90E-02	7.14E-01	2.55E-05	7.85E-03	6.04E-07	1.45E-01	6.92E-06	1.27E+00	3.43E-05
293	370634	755428	Offsite Worker	-4.79E-01	-1.02E-03	-3.08E-01	-1.23E-01	7.94E-01	6.11E-04	-1.32E+00	-2.41E-02	-1.99E-01	-7.11E-06	1.19E-02	9.14E-07	7.80E-04	3.72E-08	1.46E+00	3.96E-05
294	370536	755428	Offsite Worker	-1.86E+00	-3.97E-03	-1.08E+00	-4.32E-01	-3.75E-01	-2.89E-04	-5.35E+00	-9.73E-02	-7.87E-01	-2.81E-05	4.32E-03	3.32E-07	-1.22E-01	-5.81E-06	2.79E-01	7.55E-06
295	370437	755428	Offsite Worker	-1.47E+00	-3.13E-03	-8.80E-01	-3.52E-01	5.48E-01	4.22E-04	-4.17E+00	-7.58E-02	-6.17E-01	-2.20E-05	1.36E-02	1.05E-06	-6.56E-02	-3.12E-06	1.54E+00	4.16E-05
296	370338	755427	Offsite Worker	-1.80E+00	-3.82E-03	-1.05E+00	-4.20E-01	-9.85E-02	-7.58E-05	-5.14E+00	-9.35E-02	-7.57E-01	-2.70E-05	7.35E-03	5.66E-07	-1.08E-01	-5.15E-06	6.81E-01	1.84E-05
307	369249	755442	Offsite Worker	2.95E+00	6.27E-03	1.69E+00	6.75E-01	1.23E+00	9.42E-04	8.50E+00	1.55E-01	1.25E+00	4.45E-05	7.71E-04	5.93E-08	2.16E-01	1.03E-05	5.43E-01	1.47E-05
308	369151	755442	Offsite Worker	6.00E+00	1.28E-02	3.40E+00	1.36E+00	3.57E+00	2.75E-03	1.74E+01	3.16E-01	2.54E+00	9.08E-05	1.46E-02	1.12E-06	4.78E-01	2.28E-05	2.79E+00	7.55E-05
309	369052	755442	Offsite Worker	4.47E+00	9.51E-03	2.50E+00	1.00E+00	3.59E+00	2.76E-03	1.30E+01	2.36E-01	1.90E+00	6.77E-05	2.21E-02	1.70E-06	3.89E-01	1.85E-05	3.53E+00	9.55E-05
320	368035	755402	Offsite Worker	-3.88E+00	-8.26E-03	-2.23E+00	-8.90E-01	-1.53E+00	-1.17E-03	-1.12E+01	-2.03E-01	-1.64E+00	-5.86E-05	2.67E-06	2.06E-10	-2.81E-01	-1.34E-05	-5.83E-01	-1.58E-05
321	367960	755389	Offsite Worker	-3.65E+00	-7.76E-03	-2.09E+00	-8.38E-01	-1.37E+00	-1.05E-03	-1.05E+01	-1.91E-01	-1.54E+00	-5.51E-05	8.39E-04	6.45E-08	-2.61E-01	-1.24E-05	-4.40E-01	-1.19E-05
322	367863	755390	Offsite Worker	-3.06E+00	-6.51E-03	-1.76E+00	-7.03E-01	-1.06E+00	-8.16E-04	-8.81E+00	-1.60E-01	-1.29E+00	-4.62E-05	1.72E-03	1.32E-07	-2.16E-01	-1.03E-05	-2.37E-01	-6.41E-06
323	367766	755392	Offsite Worker	-2.61E+00	-5.56E-03	-1.51E+00	-6.05E-01	-6.50E-01	-5.00E-04	-7.51E+00	-1.37E-01	-1.10E+00	-3.94E-05	4.58E-03	3.52E-07	-1.75E-01	-8.35E-06	1.99E-01	5.39E-06
324	367669	755393	Offsite Worker	-2.24E+00	-4.77E-03	-1.31E+00	-5.22E-01	-3.16E-01	-2.43E-04	-6.43E+00	-1.17E-01	-9.46E-01	-3.38E-05	6.85E-03	5.27E-07	-1.42E-01	-6.76E-06	5.49E-01	1.48E-05
325	367572	755394	Offsite Worker	-2.03E+00	-4.33E-03	-1.19E+00	-4.75E-01	-1.24E-01	-9.56E-05	-5.82E+00	-1.06E-01	-8.57E-01	-3.06E-05	8.18E-03	6.29E-07	-1.23E-01	-5.84E-06	7.52E-01	2.03E-05
326	367475	755395	Offsite Worker	-2.03E+00	-4.31E-03	-1.18E+00	-4.74E-01	-1.46E-01	-1.12E-04	-5.80E+00	-1.06E-01	-8.54E-01	-3.05E-05	7.88E-03	6.07E-07	-1.23E-01	-5.86E-06	7.15E-01	1.93E-05
327	370400	756850	On-Site Occupational	2.73E-01	5.80E-04	1.06E-01	4.24E-02	1.62E+00	1.25E-03	8.93E-01	1.62E-02	1.21E-01	4.30E-06	1.82E-02	1.40E-06	7.39E-02	3.52E-06	2.40E+00	6.48E-05
328	369032	756750	On-Site Occupational	-4.46E+00	-9.49E-03	-2.63E+00	-1.05E+00	5.65E-01	4.34E-04	-1.27E+01	-2.31E-01	-1.88E+00	-6.70E-05	2.80E-02	2.16E-06	-2.39E-01	-1.14E-05	2.96E+00	7.99E-05
329	368737	756629	On-Site Occupational	3.33E+00	7.09E-03	1.88E+00	7.53E-01	2.15E+00	1.66E-03	9.66E+00	1.76E-01	1.41E+00	5.04E-05	1.02E-02	7.83E-07	2.72E-01	1.29E-05	1.82E+00	4.91E-05
330	368907	757031	On-Site Occupational	-5.13E+00	-1.09E-02	-2.99E+00	-1.19E+00	-6.58E-01	-5.06E-04	-1.47E+01	-2.67E-01	-2.16E+00	-7.72E-05	1.64E-02	1.26E-06	-3.22E-01	-1.53E-05	1.36E+00	3.66E-05
331	368990	756274	On-Site Occupational	-4.32E+00	-9.20E-03	-2.47E+00	-9.87E-01	-1.99E+00	-1.53E-03	-1.25E+01	-2.27E-01	-1.83E+00	-6.53E-05	-3.52E-03	-2.71E-07	-3.23E-01	-1.54E-05	-1.10E+00	-2.98E-05
332	369550	756745	On-Site Occupational	-3.77E+00	-8.02E-03	-1.87E+00	-7.49E-01	-1.00E+01	-7.72E-03	-1.13E+01	-2.06E-01	-1.62E+00	-5.79E-05	-1.04E-01	-7.97E-06	-5.82E-01	-2.77E-05	-1.40E+01	-3.77E-04
1	367379	755396	Recreational	-2.28E+00	-4.86E-03	-1.33E+00	-5.30E-01	-3.73E-01	-2.87E-04	-6.55E+00	-1.19E-01	-9.63E-01	-3.44E-05	6.35E-03	4.89E-07	-1.46E-01	-6.96E-06	4.78E-01	1.29E-05
2	367340	755485	Recreational	-3.52E+00	-7.48E-03	-2.02E+00	-8.09E-01	-1.17E+00	-9.02E-04	-1.01E+01	-1.84E-01	-1.49E+00	-5.31E-05	2.55E-03	1.96E-07	-2.47E-01	-1.18E-05	-1.99E-01	-5.38E-06
3	367301	755573	Recreational	-4.62E+00	-9.84E-03	-2.65E+00	-1.06E+00	-1.80E+00	-1.38E-03	-1.33E+01	-2.42E-01	-1.95E+00	-6.98E-05	2.86E-04	2.20E-08	-3.34E-01	-1.59E-05	-6.58E-01	-1.78E-05
4	367263	755661	Recreational	-5.48E+00	-1.17E-02	-3.13E+00	-1.25E+00	-2.40E+00	-1.84E-03	-1.58E+01	-2.87E-01	-2.32E+00	-8.27E-05	-2.93E-03	-2.25E-07	-4.05E-01	-1.93E-05	-1.20E+00	-3.25E-05
5	367224	755749	Recreational	-5.16E+00	-1.10E-02	-2.95E+00	-1.18E+00	-2.44E+00	-1.87E-03	-1.49E+01	-2.71E-01	-2.18E+00	-7.80E-05	-4.90E-03	-3.77E-07	-3.88E-01	-1.85E-05	-1.41E+00	-3.81E-05
6	367186	755838	Recreational	-2.93E+00	-6.23E-03	-1.67E+00	-6.68E-01	-1.44E+00	-1.10E-03	-8.46E+00	-1.54E-01	-1.24E+00	-4.42E-05	-3.43E-03	-2.63E-07	-2.22E-01	-1.06E-05	-8.83E-01	-2.39E-05
7	367147	755926	Recreational	-1.55E+00	-3.30E-03	-8.75E-01	-3.50E-01	-1.07E+00	-8.26E-04	-4.50E+00	-8.18E-02	-6.58E-01	-2.35E-05	-5.61E-03	-4.32E-07	-1.29E-01	-6.15E-06	-9.59E-01	-2.59E-05
8	367109	756014	Recreational	-1.75E+00	-3.72E-03	-9.80E-01	-3.92E-01	-1.36E+00	-1.04E-03	-5.08E+00	-9.23E-02	-7.41E-01	-2.65E-05	-8.11E-03	-6.24E-07	-1.51E-01	-7.18E-06	-1.31E+00	-3.54E-05
9	367070	756103	Recreational	-1.08E+00	-2.29E-03	-6.18E-01	-2.47E-01	-3.77E-01	-2.90E-04	-3.10E+00	-5.63E-02	-4.54E-01	-1.62E-05	5.54E-04	4.26E-08	-7.62E-02	-3.63E-06	-8.98E-02	-2.43E-06
10	367032	756191	Recreational	-2.67E+00	-5.69E-03	-1.54E+00	-6.14E-01	-9.90E-01	-7.61E-04	-7.70E+00	-1.40E-01	-1.13E+00	-4.03E-05	7.53E-04	5.79E-08	-1.91E-01	-9.10E-06	-3.04E-01	-8.23E-06
11	366993	756279	Recreational	-3.34E+00	-7.12E-03	-1.90E+00	-7.59E-01	-1.88E+00	-1.44E-03	-9.67E+00	-1.76E-01	-1.41E+00	-5.05E-05	-6.79E-03	-5.22E-07	-2.62E-01	-1.25E-05	-1.38E+00	-3.73E-05
12	366954	756367	Recreational	-3.45E+00	-7.34E-03	-1.95E+00	-7.79E-01	-2.32E+00	-1.79E-03	-1.00E+01	-1.82E-01	-1.46E+00	-5.22E-05	-1.17E-02	-8.97E-07	-2.84E-01	-1.35E-05	-2.03E+00	-5.48E-05
13	366916	756456	Recreational	-3.66E+00	-7.78E-03	-2.09E+00	-8.36E-01	-1.61E+00	-1.24E-03	-1.05E+01	-1.92E-01	-1.55E+00	-5.52E-05	-2.13E-03	-1.64E-07	-2.71E-01	-1.29E-05	-8.24E-01	-2.23E-05
14	366877	756544	Recreational	-2.93E+00	-6.24E-03	-1.68E+00	-6.73E-01	-1.11E+00	-8.56E-04	-8.45E+00	-1.54E-01	-1.24E+00	-4.43E-05	5.08E-04	3.91E-08	-2.11E-01	-1.00E-05	-3.75E-01	-1.01E-05
15	366839	756632	Recreational	-2.67E+00	-5.69E-03	-1.53E+00	-6.13E-01	-1.08E+00	-8.34E-04	-7.70E+00	-1.40E-01	-1.13E+00	-4.03E-05	-3.99E-04	-3.07E-08	-1.95E-01	-9.26E-06	-4.53E-01	-1.22E-05
16	366800	756720	Recreational	-2.26E+00	-4.81E-03	-1.29E+00	-5.16E-01	-1.05E+00	-8.10E-04	-6.52E+00	-1.19E-01	-9.55E-01	-3.41E-05	-1.99E-03	-1.53E-07	-1.69E-01	-8.06E-06	-5.96E-01	-1.61E-05
17	366762	756809	Recreational	-1.78E+00	-3.79E-03	-1.02E+00	-4.07E-01	-8.41E-01	-6.47E-04	-5.14E+00	-9.35E-02	-7.54E-01	-2.69E-05	-1.69E-03	-1.30E-07	-1.34E-01	-6.38E-06	-4.86E-01	-1.31E-05
18	366723	756897	Recreational	-1.39E+00	-2.96E-03	-7.93E-01	-3.17E-01	-6.39E-01	-4.92E-04	-4.01E+00	-7.28E-02	-5.87E-01	-2.10E-05	-1.13E-03	-8.68E-08	-1.04E-01	-4.94E-06	-3.54E-01	-9.58E-06
19	366685	756985	Recreational	-1.10E+00	-2.34E-03	-6.22E-01	-2.49E-01	-6.88E-01	-5.29E-04	-3.18E+00	-5.78E-02	-4.65E-01	-1.66E-05	-3.09E-03	-2.38E-07	-8.88E-02	-4.23E-06	-5.65E-01	-1.53E-05
20	366646	757074	Recreational	-9.01E-01	-1.92E-03	-5.07E-01	-2.03E-01	-6.35E-01	-4.88E-04	-2.61E+00	-4.75E-02	-3.82E-01	-1.36E-05	-3.40E-03	-2.61E-07	-7.53E-02	-3.59E-06	-5.74E-01	-1.55E-05
21	366607	757162	Recreational	-1.09E+00	-2.31E-03	-6.23E-01	-2.49E-01	-4.30E-01	-3.31E-04	-3.13E+00	-5.69E-02	-4.59E-01	-1.64E-05	-3.72E-05	-2.86E-09	-7.87E-02	-3.75E-06	-1.68E-01	-4.54E-06
22	366569	757250	Recreational	-1.42E+00	-3.03E-03	-8.21E-01	-3.28E-01	-3.87E-01	-2.98E-04	-4.09E+00	-7.43E-02	-6.00E-01	-2.14E-05	2.09E-03	1.60E-07	-9.67E-02	-4.60E-06	5.61E-02	1.52E-06
23	366530	757338	Recreational	-1.40E+00	-2.98E-03	-8.07E-01	-3.23E-01	-4.35E-01	-3.35E-04	-4.03E+00	-7.32E-02	-5.91E-01	-2.11E-05	1.40E-03	1.07E-07	-9.71E-02	-4.63E-06	-2.96E-02	-8.01E-07
24	366492	757427	Recreational	-1.24E+00	-2.65E-03	-7.14E-01	-2.86E-01	-4.64E-01	-3.57E-04	-3.58E+00	-6.51E-02	-5.25E-01	-1.88E-05	3.05E-04	2.34E-08	-8.91E-02	-4.24E-06	-1.47E-01	-3.98E-06
25	366453	757515	Recreational	-1.05E+00	-2.24E-03	-6.00E-01	-2.40E-01	-5.40E-01	-4.15E-04	-3.05E+00	-5.54E-02	-4.46E-01	-1.59E-05	-1.52E-03	-1.17E-07	-8.08E-02	-3.85E-06	-3.54E-01	-9.58E-06
26	366415	757603	Recreational	-8.43E-01	-1.79E-03	-4.76E-01	-1.91E-01	-5.31E-01	-4.09E-04	-2.44E+00	-4.43E-02	-3.57E-01	-1.27E-05	-2.42E-03	-1.86E-07	-6.82E-02	-3.25E-06	-4.40E-01	-1.19E-05
27	366376	757692	Recreational	-7.73E-01	-1.64E-03	-4.34E-01	-1.74E-01	-5.70E-01	-4.39E-04	-2.24E+00	-4.08E-02	-3.28E-01	-1.17E-05	-3.22E-03	-2.48E-07	-6.55E-02	-3.12E-06	-5.33E-01	-1.44E-05
84	369336	758100	Recreational	-3.43E-01	-7.29E-04	-1.45E-01	-5.78E-02	-1.68E+00	-1.29E-03	-1.07E+00	-1.95E-02	-1.50E-01	-5.36E-06	-1.87E-02	-1.44E-06	-8.06E-02	-3.84E-06	-2.47E+00	-6.67E-05

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde $(\mu g/m^3)$	acetaldehyde Acute Hazard	acrolein $(\mu g/m^3)$	acrolein Acute Hazard	benzene $(\mu g/m^3)$	benzene Acute Hazard	formaldehyde $(\mu g/m^3)$	formaldehyde Acute Hazard	methyl alcohol $(\mu g/m^3)$	methyl alcohol Acute Hazard	methyl ethyl ketone $(\mu g/m^3)$	methyl ethyl ketone Acute Hazard	styrene $(\mu g/m^3)$	styrene Acute Hazard	toluene $(\mu g/m^3)$	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
85	369269	758170	Recreational	9.23E-01	1.96E-03	5.94E-01	2.37E-01	-1.55E+00	-1.19E-03	2.56E+00	4.65E-02	3.83E-01	1.37E-05	-2.32E-02	-1.79E-06	-2.50E-03	-1.19E-07	-2.86E+00	-7.74E-05
86	369202	758239	Recreational	1.29E+00	2.74E-03	8.14E-01	3.26E-01	-1.75E+00	-1.34E-03	3.59E+00	6.52E-02	5.36E-01	1.91E-05	-2.73E-02	-2.10E-06	1.18E-02	5.60E-07	-3.33E+00	-9.01E-05
87	369264	758285	Recreational	5.31E-01	1.13E-03	3.53E-01	1.41E-01	-1.25E+00	-9.59E-04	1.45E+00	2.64E-02	2.19E-01	7.83E-06	-1.76E-02	-1.36E-06	-1.42E-02	-6.76E-07	-2.20E+00	-5.94E-05
88	369326	758330	Recreational	5.75E-02	1.22E-04	6.81E-02	2.72E-02	-1.02E+00	-7.88E-04	1.10E-01	1.99E-03	2.06E-02	7.36E-07	-1.27E-02	-9.76E-07	-3.37E-02	-1.60E-06	-1.63E+00	-4.41E-05
89	369389	758376	Recreational	5.08E-01	1.08E-03	3.15E-01	1.26E-01	-5.14E-01	-3.95E-04	1.43E+00	2.60E-02	2.12E-01	7.58E-06	-8.65E-03	-6.66E-07	1.10E-02	5.22E-07	-1.04E+00	-2.82E-05
90	369389	758462	Recreational	5.95E-01	1.27E-03	3.65E-01	1.46E-01	-4.84E-01	-3.73E-04	1.68E+00	3.05E-02	2.49E-01	8.89E-06	-8.71E-03	-6.70E-07	1.71E-02	8.13E-07	-1.04E+00	-2.80E-05
91	369389	758548	Recreational	7.30E-01	1.55E-03	4.41E-01	1.76E-01	-3.83E-01	-2.95E-04	2.07E+00	3.76E-02	3.06E-01	1.09E-05	-8.13E-03	-6.25E-07	2.86E-02	1.36E-06	-9.40E-01	-2.54E-05
28	366338	757780	Residential	-4.77E-01	-1.01E-03	-2.63E-01	-1.05E-01	-5.03E-01	-3.87E-04	-1.39E+00	-2.53E-02	-2.03E-01	-7.23E-06	-3.82E-03	-2.94E-07	-4.59E-02	-2.18E-06	-5.65E-01	-1.53E-05
29	366402	757746	Residential	-5.42E-01	-1.15E-03	-3.01E-01	-1.20E-01	-5.17E-01	-3.98E-04	-1.58E+00	-2.87E-02	-2.30E-01	-8.22E-06	-3.68E-03	-2.83E-07	-5.02E-02	-2.39E-06	-5.57E-01	-1.51E-05
30	366467	757713	Residential	-6.01E-01	-1.28E-03	-3.35E-01	-1.34E-01	-5.31E-01	-4.09E-04	-1.75E+00	-3.18E-02	-2.55E-01	-9.10E-06	-3.58E-03	-2.75E-07	-5.41E-02	-2.58E-06	-5.52E-01	-1.49E-05
31	366531	757679	Residential	-6.65E-01	-1.41E-03	-3.71E-01	-1.49E-01	-5.50E-01	-4.23E-04	-1.93E+00	-3.51E-02	-2.82E-01	-1.01E-05	-3.50E-03	-2.70E-07	-5.85E-02	-2.79E-06	-5.53E-01	-1.49E-05
32	366567	757773	Residential	-4.00E-02	-8.51E-05	-1.27E-02	-5.07E-03	-3.20E-01	-2.46E-04	-1.31E-01	-2.39E-03	-1.80E-02	-6.42E-07	-3.69E-03	-2.84E-07	-1.39E-02	-6.62E-07	-4.83E-01	-1.31E-05
33	366625	757758	Residential	-2.26E-02	-4.81E-05	-3.88E-03	-1.55E-03	-2.79E-01	-2.15E-04	-7.93E-02	-1.44E-03	-1.05E-02	-3.75E-07	-3.28E-03	-2.52E-07	-1.14E-02	-5.44E-07	-4.27E-01	-1.15E-05
34	366682	757744	Residential	-4.15E-03	-8.84E-06	5.37E-03	2.15E-03	-2.32E-01	-1.79E-04	-2.39E-02	-4.35E-04	-2.57E-03	-9.18E-08	-2.80E-03	-2.15E-07	-8.65E-03	-4.12E-07	-3.62E-01	-9.79E-06
35	366768	757788	Residential	5.22E-01	1.11E-03	3.09E-01	1.24E-01	-8.46E-02	-6.51E-05	1.49E+00	2.71E-02	2.20E-01	7.84E-06	-3.52E-03	-2.71E-07	2.73E-02	1.30E-06	-3.76E-01	-1.02E-05
36	366854	757833	Residential	6.41E-01	1.36E-03	3.70E-01	1.48E-01	1.72E-01	1.32E-04	1.84E+00	3.35E-02	2.71E-01	9.66E-06	-9.81E-04	-7.55E-08	4.34E-02	2.07E-06	-3.02E-02	-8.16E-07
37	366941	757877	Residential	-5.80E-02	-1.23E-04	-2.94E-02	-1.18E-02	-1.37E-01	-1.05E-04	-1.72E-01	-3.13E-03	-2.49E-02	-8.90E-07	-1.39E-03	-1.07E-07	-8.34E-03	-3.97E-07	-1.88E-01	-5.07E-06
38	367027	757922	Residential	-6.00E-02	-1.28E-04	-3.40E-02	-1.36E-02	-3.57E-02	-2.74E-05	-1.72E-01	-3.14E-03	-2.54E-02	-9.07E-07	-1.53E-04	-1.18E-08	-4.80E-03	-2.29E-07	-2.85E-02	-7.71E-07
39	367113	757966	Residential	1.94E-01	4.14E-04	1.13E-01	4.53E-02	2.67E-02	2.06E-05	5.59E-01	1.02E-02	8.20E-02	2.93E-06	-6.11E-04	-4.70E-08	1.22E-02	5.83E-07	-4.94E-02	-1.34E-06
40	367192	757916	Residential	7.45E-02	1.59E-04	4.42E-02	1.77E-02	-1.45E-02	-1.11E-05	2.14E-01	3.88E-03	3.13E-02	1.12E-06	-5.38E-04	-4.14E-08	3.78E-03	1.80E-07	-5.81E-02	-1.57E-06
41	367264	757916	Residential	1.66E-01	3.54E-04	9.70E-02	3.88E-02	1.44E-02	1.11E-05	4.77E-01	8.68E-03	7.01E-02	2.50E-06	-6.26E-04	-4.81E-08	1.02E-02	4.84E-07	-5.56E-02	-1.50E-06
42	367335	757916	Residential	1.62E-01	3.46E-04	9.02E-02	3.61E-02	1.51E-01	1.16E-04	4.74E-01	8.62E-03	6.89E-02	2.46E-06	1.05E-03	8.04E-08	1.49E-02	7.08E-07	1.60E-01	4.32E-06
43	367343	757966	Residential	4.44E-01	9.45E-04	2.51E-01	1.00E-01	2.86E-01	2.20E-04	1.29E+00	2.34E-02	1.88E-01	6.72E-06	1.34E-03	1.03E-07	3.61E-02	1.72E-06	2.40E-01	6.48E-06
44	367404	757995	Residential	6.37E-01	1.36E-03	3.57E-01	1.43E-01	5.14E-01	3.95E-04	1.85E+00	3.37E-02	2.70E-01	9.65E-06	3.17E-03	2.44E-07	5.56E-02	2.65E-06	5.07E-01	1.37E-05
45	367465	758024	Residential	7.26E-01	1.54E-03	4.11E-01	1.64E-01	4.51E-01	3.47E-04	2.10E+00	3.82E-02	3.07E-01	1.10E-05	2.00E-03	1.54E-07	5.85E-02	2.78E-06	3.68E-01	9.94E-06
55	367673	758189	Residential	-1.24E-01	-2.63E-04	-4.82E-02	-1.93E-02	-7.26E-01	-5.59E-04	-3.93E-01	-7.14E-03	-5.47E-02	-1.95E-06	-8.21E-03	-6.32E-07	-3.35E-02	-1.59E-06	-1.08E+00	-2.92E-05
59	367816	758096	Residential	-2.83E-01	-6.02E-04	-1.31E-01	-5.23E-02	-1.05E+00	-8.10E-04	-8.66E-01	-1.58E-02	-1.23E-01	-4.39E-06	-1.14E-02	-8.78E-07	-5.45E-02	-2.60E-06	-1.52E+00	-4.10E-05
60	367898	758066	Residential	2.18E-01	4.65E-04	1.63E-01	6.54E-02	-1.05E+00	-8.10E-04	5.68E-01	1.03E-02	8.83E-02	3.15E-06	-1.38E-02	-1.06E-06	-2.54E-02	-1.21E-06	-1.75E+00	-4.73E-05
61	367980	758035	Residential	2.62E+00	5.57E-03	1.54E+00	6.14E-01	-4.17E-02	-3.20E-05	7.48E+00	1.36E-01	1.10E+00	3.93E-05	-1.30E-02	-9.98E-07	1.50E-01	7.17E-06	-1.28E+00	-3.47E-05
62	368062	758005	Residential	5.00E+00	1.06E-02	2.89E+00	1.16E+00	1.07E+00	8.24E-04	1.43E+01	2.61E-01	2.11E+00	7.53E-05	-1.08E-02	-8.34E-07	3.29E-01	1.57E-05	-6.50E-01	-1.76E-05
63	368144	757975	Residential	8.37E+00	1.78E-02	4.82E+00	1.93E+00	2.57E+00	1.98E-03	2.41E+01	4.38E-01	3.53E+00	1.26E-04	-8.79E-03	-6.76E-07	5.79E-01	2.76E-05	1.22E-01	3.30E-06
64	368226	757945	Residential	6.46E+00	1.37E-02	3.73E+00	1.49E+00	1.82E+00	1.40E-03	1.86E+01	3.38E-01	2.73E+00	9.73E-05	-8.68E-03	-6.67E-07	4.41E-01	2.10E-05	-1.51E-01	-4.08E-06
65	368301	757943	Residential	1.45E+00	3.09E-03	8.53E-01	3.41E-01	-4.80E-02	-3.70E-05	4.15E+00	7.55E-02	6.11E-01	2.18E-05	-7.51E-03	-5.78E-07	8.26E-02	3.93E-06	-7.52E-01	-2.03E-05
66	368376	757941	Residential	-7.53E-01	-1.60E-03	-4.19E-01	-1.68E-01	-6.74E-01	-5.19E-04	-2.19E+00	-3.98E-02	-3.19E-01	-1.14E-05	-4.59E-03	-3.53E-07	-6.81E-02	-3.24E-06	-7.06E-01	-1.91E-05
67	368452	757940	Residential	-1.04E+00	-2.20E-03	-5.94E-01	-2.38E-01	-3.80E-01	-2.92E-04	-2.98E+00	-5.42E-02	-4.37E-01	-1.56E-05	3.17E-04	2.44E-08	-7.39E-02	-3.52E-06	-1.14E-01	-3.08E-06
68	368527	757938	Residential	1.35E+00	2.87E-03	7.65E-01	3.06E-01	8.00E-01	6.15E-04	3.91E+00	7.11E-02	5.72E-01	2.04E-05	3.24E-03	2.49E-07	1.07E-01	5.11E-06	6.22E-01	1.68E-05
69	368563	757880	Residential	1.94E+00	4.14E-03	1.11E+00	4.44E-01	8.75E-01	6.73E-04	5.61E+00	1.02E-01	8.22E-01	2.94E-05	1.32E-03	1.02E-07	1.45E-01	6.88E-06	4.63E-01	1.25E-05
70	368636	757926	Residential	2.73E+00	5.82E-03	1.56E+00	6.24E-01	1.31E+00	1.01E-03	7.90E+00	1.44E-01	1.16E+00	4.13E-05	2.80E-03	2.16E-07	2.06E-01	9.82E-06	7.74E-01	2.09E-05
71	368709	757971	Residential	2.73E+00	5.80E-03	1.56E+00	6.23E-01	1.22E+00	9.42E-04	7.87E+00	1.43E-01	1.15E+00	4.12E-05	1.82E-03	1.40E-07	2.03E-01	9.65E-06	6.45E-01	1.74E-05
72	368782	758017	Residential	1.95E+00	4.15E-03	1.11E+00	4.46E-01	9.27E-01	7.13E-04	5.64E+00	1.02E-01	8.25E-01	2.95E-05	1.91E-03	1.47E-07	1.47E-01	7.00E-06	5.41E-01	1.46E-05
73	368855	758062	Residential	-4.39E-01	-9.34E-04	-2.46E-01	-9.85E-02	-3.28E-01	-2.53E-04	-1.27E+00	-2.31E-02	-1.86E-01	-6.64E-06	-1.90E-03	-1.46E-07	-3.74E-02	-1.78E-06	-3.11E-01	-8.39E-06
74	368928	758108	Residential	-8.08E-01	-1.72E-03	-4.20E-01	-1.68E-01	-1.60E+00	-1.23E-03	-2.40E+00	-4.36E-02	-3.46E-01	-1.23E-05	-1.55E-02	-1.19E-06	-1.05E-01	-4.99E-06	-2.13E+00	-5.75E-05
75	369001	758153	Residential	-6.59E-01	-1.40E-03	-3.29E-01	-1.32E-01	-1.71E+00	-1.32E-03	-1.98E+00	-3.59E-02	-2.84E-01	-1.01E-05	-1.76E-02	-1.35E-06	-1.00E-01	-4.77E-06	-2.37E+00	-6.41E-05
76	369058	758074	Residential	-4.79E-01	-1.02E-03	-2.18E-01	-8.74E-02	-1.86E+00	-1.43E-03	-1.47E+00	-2.67E-02	-2.08E-01	-7.43E-06	-2.02E-02	-1.55E-06	-9.49E-02	-4.52E-06	-2.68E+00	-7.25E-05
77	369102	758103	Residential	9.02E-01	1.92E-03	5.71E-01	2.28E-01	-1.25E+00	-9.63E-04	2.51E+00	4.57E-02	3.75E-01	1.34E-05	-1.95E-02	-1.50E-06	7.15E-03	3.41E-07	-2.38E+00	-6.43E-05
78	369145	758132	Residential	7.52E-01	1.60E-03	4.96E-01	1.98E-01	-1.63E+00	-1.25E-03	2.06E+00	3.75E-02	3.11E-01	1.11E-05	-2.33E-02	-1.79E-06	-1.51E-02	-7.21E-07	-2.90E+00	-7.84E-05
79	369200	758065	Residential	8.19E-01	1.74E-03	5.51E-01	2.20E-01	-2.09E+00	-1.61E-03	2.23E+00	4.05E-02	3.38E-01	1.21E-05	-2.92E-02	-2.25E-06	-2.79E-02	-1.33E-06	-3.65E+00	-9.87E-05
80	369255	757998	Residential	6.09E-01	1.29E-03	4.33E-01	1.73E-01	-2.27E+00	-1.74E-03	1.62E+00	2.94E-02	2.48E-01	8.87E-06	-3.04E-02	-2.33E-06	-4.66E-02	-2.22E-06	-3.83E+00	-1.04E-04
81	369310	757931	Residential	2.06E-01	4.38E-04	2.03E-01	8.13E-02	-2.46E+00	-1.89E-03	4.56E-01	8.29E-03	7.81E-02	2.79E-06	-3.07E-02	-2.36E-06	-7.68E-02	-3.66E-06	-3.94E+00	-1.07E-04
82	369356	757981	Residential	-5.87E-01	-1.25E-03	-2.65E-01	-1.06E-01	-2.37E+00	-1.82E-03	-1.81E+00	-3.29E-02	-2.55E-01	-9.12E-06	-2.59E-02	-1.99E-06	-1.20E-01	-5.70E-06	-3.44E+00	-9.29E-05
83	369403	758031	Residential	1.85E-01	3.93E-04	1.38E-01	5.51E-02	-8.79E-01	-6.76E-04	4.82E-01	8.76E-03	7.47E-02	2.67E-06	-1.15E-02	-8.88E-07	-2.11E-02	-1.00E-06	-1.46E+00	-3.96E-05
92	369389	758634	Residential	9.00E-01	1.92E-03	5.35E-01	2.14E-01	-2.21E-01	-1.70E-04	2.56E+00	4.66E-02	3.78E-01	1.35E-05	-6.98E-03	-5.37E-07	4.43E-02	2.11E-06	-7.66E-01	-2.07E-05

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde (μg/m³)	acetaldehyde Acute Hazard	acrolein (μg/m³)	acrolein Acute Hazard	benzene (μg/m³)	benzene Acute Hazard	formaldehyde (μg/m³)	formaldehyde Acute Hazard	methyl alcohol (μg/m³)	methyl alcohol Acute Hazard	methyl ethyl ketone (μg/m³)	methyl ethyl ketone Acute Hazard	styrene (μg/m³)	styrene Acute Hazard	toluene (μg/m³)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
93	369469	758630	Residential	8.66E-01	1.84E-03	5.22E-01	2.09E-01	-4.11E-01	-3.16E-04	2.45E+00	4.46E-02	3.63E-01	1.30E-05	-9.11E-03	-7.00E-07	3.54E-02	1.69E-06	-1.05E+00	-2.83E-05
94	369549	758625	Residential	9.33E-02	1.98E-04	8.68E-02	3.47E-02	-9.57E-01	-7.36E-04	2.16E-01	3.92E-03	3.59E-02	1.28E-06	-1.20E-02	-9.26E-07	-2.92E-02	-1.39E-06	-1.54E+00	-4.17E-05
95	369630	758621	Residential	-1.21E-02	-2.58E-05	3.63E-02	1.45E-02	-1.29E+00	-9.96E-04	-1.04E-01	-1.90E-03	-9.67E-03	-3.45E-07	-1.56E-02	-1.20E-06	-4.75E-02	-2.26E-06	-2.02E+00	-5.46E-05
96	369710	758617	Residential	-1.52E-01	-3.23E-04	-2.66E-02	-1.06E-02	-1.86E+00	-1.43E-03	-5.36E-01	-9.74E-03	-7.06E-02	-2.52E-06	-2.18E-02	-1.68E-06	-7.62E-02	-3.63E-06	-2.85E+00	-7.69E-05
97	369791	758613	Residential	-1.30E-01	-2.76E-04	-3.54E-02	-1.41E-02	-1.21E+00	-9.30E-04	-4.35E-01	-7.92E-03	-5.88E-02	-2.10E-06	-1.40E-02	-1.08E-06	-5.12E-02	-2.44E-06	-1.83E+00	-4.96E-05
98	369791	758514	Residential	-1.34E-01	-2.85E-04	-3.21E-02	-1.28E-02	-1.38E+00	-1.06E-03	-4.57E-01	-8.31E-03	-6.12E-02	-2.19E-06	-1.61E-02	-1.24E-06	-5.77E-02	-2.75E-06	-2.10E+00	-5.68E-05
99	369791	758416	Residential	-2.19E-01	-4.66E-04	-7.23E-02	-2.89E-02	-1.67E+00	-1.29E-03	-7.17E-01	-1.30E-02	-9.82E-02	-3.51E-06	-1.92E-02	-1.48E-06	-7.33E-02	-3.49E-06	-2.52E+00	-6.81E-05
100	369791	758318	Residential	-5.75E-01	-1.22E-03	-2.60E-01	-1.04E-01	-2.30E+00	-1.77E-03	-1.77E+00	-3.21E-02	-2.50E-01	-8.93E-06	-2.52E-02	-1.94E-06	-1.17E-01	-5.56E-06	-3.34E+00	-9.03E-05
101	369881	758318	Residential	-9.04E-01	-1.92E-03	-4.57E-01	-1.83E-01	-2.18E+00	-1.68E-03	-2.70E+00	-4.92E-02	-3.88E-01	-1.39E-05	-2.21E-02	-1.70E-06	-1.31E-01	-6.26E-06	-3.00E+00	-8.10E-05
102	369972	758318	Residential	-8.90E-01	-1.89E-03	-5.00E-01	-2.00E-01	-6.71E-01	-5.16E-04	-2.58E+00	-4.69E-02	-3.77E-01	-1.35E-05	-3.90E-03	-3.00E-07	-7.60E-02	-3.62E-06	-6.37E-01	-1.72E-05
103	370062	758318	Residential	1.08E-01	2.29E-04	5.63E-02	2.25E-02	2.06E-01	1.59E-04	3.22E-01	5.86E-03	4.61E-02	1.65E-06	1.97E-03	1.51E-07	1.37E-02	6.51E-07	2.71E-01	7.33E-06
104	370153	758318	Residential	5.46E-01	1.16E-03	3.17E-01	1.27E-01	1.08E-01	8.30E-05	1.57E+00	2.85E-02	2.30E-01	8.22E-06	-1.31E-03	-1.01E-07	3.56E-02	1.69E-06	-8.69E-02	-2.35E-06
105	370243	758318	Residential	2.03E+00	4.31E-03	1.15E+00	4.61E-01	1.09E+00	8.42E-04	5.86E+00	1.07E-01	8.57E-01	3.06E-05	3.57E-03	2.75E-07	1.57E-01	7.49E-06	7.67E-01	2.07E-05
111	370408	758347	Residential	1.15E+00	2.45E-03	6.48E-01	2.59E-01	8.02E-01	6.17E-04	3.34E+00	6.07E-02	4.88E-01	1.74E-05	4.21E-03	3.24E-07	9.58E-02	4.56E-06	7.18E-01	1.94E-05
112	370490	758344	Residential	2.28E-01	4.84E-04	1.31E-01	5.25E-02	6.83E-02	5.25E-05	6.57E-01	1.20E-02	9.61E-02	3.43E-06	-2.75E-04	-2.12E-08	1.56E-02	7.45E-07	-6.55E-04	-1.77E-08
113	370572	758341	Residential	-3.12E-01	-6.63E-04	-2.01E-01	-8.05E-02	5.52E-01	4.24E-04	-8.58E-01	-1.56E-02	-1.29E-01	-4.62E-06	8.15E-03	6.27E-07	1.76E-03	8.40E-08	1.01E+00	2.72E-05
114	370654	758338	Residential	-1.78E-02	-3.80E-05	-2.66E-02	-1.06E-02	4.81E-01	3.70E-04	-2.18E-02	-3.96E-04	-5.82E-03	-2.08E-07	5.89E-03	4.53E-07	1.63E-02	7.76E-07	7.60E-01	2.05E-05
115	370735	758335	Residential	3.27E-01	6.96E-04	1.79E-01	7.17E-02	3.83E-01	2.94E-04	9.60E-01	1.75E-02	1.39E-01	4.97E-06	3.06E-03	2.35E-07	3.28E-02	1.56E-06	4.45E-01	1.20E-05
116	370817	758333	Residential	7.45E-01	1.59E-03	3.88E-01	1.55E-01	1.45E+00	1.12E-03	2.21E+00	4.03E-02	3.19E-01	1.14E-05	1.40E-02	1.08E-06	9.57E-02	4.56E-06	1.92E+00	5.20E-05
130	371183	758027	Residential	-1.16E+00	-2.47E-03	-6.63E-01	-2.65E-01	-4.80E-01	-3.70E-04	-3.34E+00	-6.07E-02	-4.90E-01	-1.75E-05	-3.13E-04	-2.41E-08	-8.47E-02	-4.04E-06	-2.14E-01	-5.78E-06
131	371248	758024	Residential	-1.74E+00	-3.70E-03	-1.01E+00	-4.04E-01	-2.52E-01	-1.94E-04	-4.98E+00	-9.06E-02	-7.33E-01	-2.62E-05	5.22E-03	4.01E-07	-1.10E-01	-5.25E-06	4.14E-01	1.12E-05
132	371326	758075	Residential	-1.86E+00	-3.96E-03	-1.08E+00	-4.33E-01	-2.65E-01	-2.04E-04	-5.33E+00	-9.69E-02	-7.84E-01	-2.80E-05	5.64E-03	4.34E-07	-1.18E-01	-5.60E-06	4.50E-01	1.22E-05
133	371404	758127	Residential	-1.85E+00	-3.94E-03	-1.07E+00	-4.29E-01	-4.01E-01	-3.09E-04	-5.32E+00	-9.68E-02	-7.82E-01	-2.79E-05	3.96E-03	3.04E-07	-1.22E-01	-5.82E-06	2.33E-01	6.31E-06
134	371481	758178	Residential	-1.86E+00	-3.96E-03	-1.07E+00	-4.29E-01	-5.42E-01	-4.17E-04	-5.34E+00	-9.72E-02	-7.85E-01	-2.80E-05	2.29E-03	1.76E-07	-1.28E-01	-6.08E-06	1.67E-02	4.53E-07
135	371559	758230	Residential	-1.87E+00	-3.97E-03	-1.07E+00	-4.29E-01	-6.76E-01	-5.20E-04	-5.38E+00	-9.77E-02	-7.89E-01	-2.82E-05	7.00E-04	5.39E-08	-1.33E-01	-6.33E-06	-1.90E-01	-5.13E-06
136	371637	758281	Residential	-1.83E+00	-3.90E-03	-1.05E+00	-4.20E-01	-7.53E-01	-5.79E-04	-5.29E+00	-9.61E-02	-7.75E-01	-2.77E-05	-3.88E-04	-2.99E-08	-1.34E-01	-6.37E-06	-3.25E-01	-8.79E-06
137	371715	758333	Residential	-1.75E+00	-3.73E-03	-1.00E+00	-4.01E-01	-7.68E-01	-5.90E-04	-5.06E+00	-9.19E-02	-7.41E-01	-2.65E-05	-9.51E-04	-7.31E-08	-1.30E-01	-6.18E-06	-3.86E-01	-1.04E-05
138	371769	758261	Residential	-1.73E+00	-3.69E-03	-9.89E-01	-3.96E-01	-8.08E-01	-6.22E-04	-5.00E+00	-9.09E-02	-7.32E-01	-2.62E-05	-1.54E-03	-1.19E-07	-1.30E-01	-6.19E-06	-4.59E-01	-1.24E-05
139	371822	758189	Residential	-1.87E+00	-3.97E-03	-1.08E+00	-4.31E-01	-5.01E-01	-3.85E-04	-5.36E+00	-9.75E-02	-7.88E-01	-2.81E-05	2.82E-03	2.17E-07	-1.27E-01	-6.03E-06	8.40E-02	2.27E-06
140	371894	758160	Residential	-1.83E+00	-3.90E-03	-1.06E+00	-4.22E-01	-5.65E-01	-4.34E-04	-5.27E+00	-9.58E-02	-7.73E-01	-2.76E-05	1.87E-03	1.44E-07	-1.27E-01	-6.04E-06	-3.24E-02	-8.76E-07
141	371894	758081	Residential	-1.45E+00	-3.07E-03	-8.30E-01	-3.32E-01	-5.06E-01	-3.89E-04	-4.16E+00	-7.56E-02	-6.10E-01	-2.18E-05	7.43E-04	5.71E-08	-1.02E-01	-4.87E-06	-1.21E-01	-3.26E-06
142	371959	758074	Residential	-1.02E+00	-2.16E-03	-5.76E-01	-2.31E-01	-5.90E-01	-4.54E-04	-2.94E+00	-5.34E-02	-4.30E-01	-1.54E-05	-2.32E-03	-1.78E-07	-8.04E-02	-3.83E-06	-4.52E-01	-1.22E-05
155	372055	757363	Residential	-7.75E-01	-1.65E-03	-4.32E-01	-1.73E-01	-6.75E-01	-5.19E-04	-2.25E+00	-4.10E-02	-3.29E-01	-1.17E-05	-4.49E-03	-3.45E-07	-6.95E-02	-3.31E-06	-6.96E-01	-1.88E-05
297	370239	755427	Residential	-2.06E+00	-4.38E-03	-1.16E+00	-4.62E-01	-1.53E+00	-1.18E-03	-5.97E+00	-1.09E-01	-8.72E-01	-3.12E-05	-8.73E-03	-6.72E-07	-1.75E-01	-8.33E-06	-1.44E+00	-3.89E-05
298	370138	755427	Residential	-6.39E-01	-1.36E-03	-3.46E-01	-1.38E-01	-8.52E-01	-6.56E-04	-1.87E+00	-3.40E-02	-2.72E-01	-9.72E-06	-7.29E-03	-5.61E-07	-6.80E-02	-3.24E-06	-1.04E+00	-2.81E-05
299	370040	755427	Residential	-3.05E+00	-6.50E-03	-1.72E+00	-6.88E-01	-2.06E+00	-1.58E-03	-8.84E+00	-1.61E-01	-1.29E+00	-4.62E-05	-1.04E-02	-8.00E-07	-2.52E-01	-1.20E-05	-1.80E+00	-4.87E-05
300	369941	755426	Residential	-4.56E+00	-9.69E-03	-2.62E+00	-1.05E+00	-1.60E+00	-1.23E-03	-1.31E+01	-2.38E-01	-1.92E+00	-6.87E-05	2.33E-03	1.79E-07	-3.23E-01	-1.54E-05	-3.83E-01	-1.04E-05
301	369842	755426	Residential	-5.57E+00	-1.19E-02	-3.24E+00	-1.29E+00	-9.71E-01	-7.47E-04	-1.60E+01	-2.91E-01	-2.35E+00	-8.39E-05	1.48E-02	1.14E-06	-3.59E-01	-1.71E-05	1.07E+00	2.90E-05
302	369741	755435	Residential	-3.43E+00	-7.30E-03	-1.97E+00	-7.88E-01	-1.27E+00	-9.74E-04	-9.88E+00	-1.80E-01	-1.45E+00	-5.18E-05	9.92E-04	7.63E-08	-2.45E-01	-1.17E-05	-3.87E-01	-1.05E-05
303	369643	755434	Residential	-2.37E+00	-5.05E-03	-1.36E+00	-5.45E-01	-8.06E-01	-6.20E-04	-6.82E+00	-1.24E-01	-1.00E+00	-3.58E-05	1.52E-03	1.17E-07	-1.67E-01	-7.95E-06	-1.59E-01	-4.30E-06
304	369544	755434	Residential	-3.48E-01	-7.40E-04	-1.97E-01	-7.87E-02	-2.16E-01	-1.66E-04	-1.00E+00	-1.83E-02	-1.47E-01	-5.26E-06	-9.70E-04	-7.46E-08	-2.81E-02	-1.34E-06	-1.77E-01	-4.79E-06
305	369445	755434	Residential	-5.63E-02	-1.20E-04	-5.36E-02	-2.14E-02	6.14E-01	4.72E-04	-1.25E-01	-2.27E-03	-2.16E-02	-7.70E-07	7.69E-03	5.91E-07	1.89E-02	8.98E-07	9.86E-01	2.66E-05
306	369346	755434	Residential	1.84E+00	3.91E-03	1.08E+00	4.33E-01	-1.22E-01	-9.36E-05	5.25E+00	9.55E-02	7.74E-01	2.76E-05	-1.02E-02	-7.88E-07	1.02E-01	4.87E-06	-1.05E+00	-2.83E-05
310	368953	755441	Residential	2.42E+00	5.16E-03	1.36E+00	5.43E-01	1.92E+00	1.48E-03	7.04E+00	1.28E-01	1.03E+00	3.67E-05	1.17E-02	8.97E-07	2.10E-01	1.00E-05	1.87E+00	5.06E-05
311	368854	755441	Residential	-6.42E-01	-1.37E-03	-4.19E-01	-1.67E-01	1.25E+00	9.64E-04	-1.77E+00	-3.21E-02	-2.66E-01	-9.50E-06	1.82E-02	1.40E-06	7.91E-03	3.77E-07	2.26E+00	6.11E-05
312	368755	755441	Residential	-4.65E+00	-9.88E-03	-2.71E+00	-1.08E+00	-3.96E-01	-3.04E-04	-1.33E+01	-2.42E-01	-1.96E+00	-6.99E-05	1.73E-02	1.33E-06	-2.84E-01	-1.35E-05	1.54E+00	4.17E-05
313	368657	755441	Residential	-5.75E+00	-1.22E-02	-3.35E+00	-1.34E+00	-5.20E-01	-4.00E-04	-1.65E+01	-2.99E-01	-2.42E+00	-8.65E-05	2.11E-02	1.62E-06	-3.53E-01	-1.68E-05	1.86E+00	5.03E-05
314	368558	755440	Residential	-6.06E+00	-1.29E-02	-3.52E+00	-1.41E+00	-1.03E+00	-7.94E-04	-1.74E+01	-3.16E-01	-2.56E+00	-9.13E-05	1.64E-02	1.26E-06	-3.89E-01	-1.85E-05	1.20E+00	3.25E-05
315	368459	755440	Residential	-5.25E+00	-1.12E-02	-3.02E+00	-1.21E+00	-1.56E+00	-1.20E-03	-1.51E+01	-2.74E-01	-2.22E+00	-7.91E-05	6.10E-03	4.69E-07	-3.61E-01	-1.72E-05	4.04E-04	1.09E-08
316	368360	755440	Residential	-3.17E+00	-6.74E-03	-1.82E+00	-7.29E-01	-1.07E+00	-8.21E-04	-9.12E+00	-1.66E-01	-1.34E+00	-4.78E-05	2.16E-03	1.66E-07	-2.23E-01	-1.06E-05	-1.96E-01	-5.31E-06
317	368262	755439	Residential	-5.09E+00	-1.08E-02	-2.93E+00	-1.17E+00	-1.68E+00	-1.29E-03	-1.46E+01	-2.66E-01	-2.15E+00	-7.68E-05	3.89E-03	3.00E-07	-3.57E-01	-1.70E-05	-2.61E-01	-7.05E-06
318	368186	755427	Residential	-2.45E+00	-5.20E-03	-1.41E+00	-5.65E-01	-6.13E-01	-4.71E-04	-7.03E+00	-1.28E-01	-1.03E+00	-3.69E-05	4.22E-03	3.25E-07	-1.64E-01	-7.82E-06	1.79E-01	4.83E-06

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	acetaldehyde (µg/m^3)	acetaldehyde Acute Hazard	acrolein (µg/m^3)	acrolein Acute Hazard	benzene (µg/m^3)	benzene Acute Hazard	formaldehyde (µg/m^3)	formaldehyde Acute Hazard	methyl alcohol (µg/m^3)	methyl alcohol Acute Hazard	methyl ethyl ketone (µg/m^3)	methyl ethyl ketone Acute Hazard	styrene (µg/m^3)	styrene Acute Hazard	toluene (µg/m^3)	toluene Acute Hazard
			CalEPA Acute REL		470		2.5		1300		55		28000		13000		21000		37000
319	368111	755414	Residential	-1.79E+00	-3.81E-03	-1.03E+00	-4.13E-01	-5.27E-01	-4.06E-04	-5.15E+00	-9.36E-02	-7.56E-01	-2.70E-05	2.13E-03	1.64E-07	-1.23E-01	-5.86E-06	7.24E-03	1.96E-07
46	367504	757948	School	5.98E-01	1.27E-03	3.36E-01	1.34E-01	4.40E-01	3.38E-04	1.74E+00	3.16E-02	2.54E-01	9.06E-06	2.47E-03	1.90E-07	5.06E-02	2.41E-06	4.09E-01	1.11E-05
47	367544	757873	School	3.35E-01	7.14E-04	1.91E-01	7.64E-02	1.71E-01	1.32E-04	9.70E-01	1.76E-02	1.42E-01	5.07E-06	4.68E-04	3.60E-08	2.57E-02	1.22E-06	1.11E-01	3.01E-06
48	367587	757909	School	5.49E-01	1.17E-03	3.09E-01	1.24E-01	3.86E-01	2.97E-04	1.59E+00	2.89E-02	2.32E-01	8.30E-06	2.05E-03	1.58E-07	4.58E-02	2.18E-06	3.48E-01	9.40E-06
49	367623	757866	School	4.41E-01	9.39E-04	2.51E-01	1.01E-01	2.22E-01	1.71E-04	1.28E+00	2.32E-02	1.87E-01	6.66E-06	5.74E-04	4.41E-08	3.36E-02	1.60E-06	1.41E-01	3.81E-06
50	367694	757866	School	7.06E-01	1.50E-03	3.98E-01	1.59E-01	4.72E-01	3.63E-04	2.05E+00	3.72E-02	2.99E-01	1.07E-05	2.35E-03	1.81E-07	5.80E-02	2.76E-06	4.10E-01	1.11E-05
51	367716	757927	School	8.17E-01	1.74E-03	4.53E-01	1.81E-01	7.75E-01	5.96E-04	2.38E+00	4.33E-02	3.47E-01	1.24E-05	5.49E-03	4.22E-07	7.54E-02	3.59E-06	8.33E-01	2.25E-05
52	367737	757988	School	6.84E-01	1.46E-03	3.88E-01	1.55E-01	4.02E-01	3.10E-04	1.98E+00	3.60E-02	2.89E-01	1.03E-05	1.61E-03	1.24E-07	5.43E-02	2.58E-06	3.11E-01	8.40E-06
53	367727	758067	School	3.94E-01	8.38E-04	2.39E-01	9.57E-02	-2.47E-01	-1.90E-04	1.11E+00	2.03E-02	1.65E-01	5.89E-06	-4.88E-03	-3.75E-07	1.39E-02	6.64E-07	-5.71E-01	-1.54E-05
54	367716	758146	School	-2.30E-03	-4.90E-06	2.40E-02	9.58E-03	-7.54E-01	-5.80E-04	-4.71E-02	-8.56E-04	-3.63E-03	-1.30E-07	-9.12E-03	-7.02E-07	-2.74E-02	-1.30E-06	-1.18E+00	-3.19E-05
56	367723	758254	School	-7.29E-01	-1.55E-03	-3.94E-01	-1.57E-01	-1.00E+00	-7.73E-04	-2.14E+00	-3.89E-02	-3.10E-01	-1.11E-05	-8.70E-03	-6.69E-07	-7.86E-02	-3.75E-06	-1.23E+00	-3.33E-05
57	367784	758221	School	-7.61E-01	-1.62E-03	-4.12E-01	-1.65E-01	-1.04E+00	-8.01E-04	-2.23E+00	-4.06E-02	-3.24E-01	-1.16E-05	-8.99E-03	-6.92E-07	-8.19E-02	-3.90E-06	-1.28E+00	-3.45E-05
58	367845	758189	School	-8.27E-01	-1.76E-03	-4.50E-01	-1.80E-01	-1.04E+00	-7.97E-04	-2.42E+00	-4.40E-02	-3.52E-01	-1.26E-05	-8.61E-03	-6.62E-07	-8.55E-02	-4.07E-06	-1.24E+00	-3.34E-05
106	370247	758254	School	2.10E+00	4.47E-03	1.19E+00	4.78E-01	1.11E+00	8.54E-04	6.07E+00	1.10E-01	8.88E-01	3.17E-05	3.41E-03	2.62E-07	1.62E-01	7.72E-06	7.57E-01	2.05E-05
107	370250	758189	School	2.22E+00	4.72E-03	1.25E+00	5.01E-01	1.39E+00	1.07E-03	6.42E+00	1.17E-01	9.38E-01	3.35E-05	6.20E-03	4.77E-07	1.79E-01	8.52E-06	1.14E+00	3.07E-05
108	370308	758196	School	1.96E+00	4.17E-03	1.09E+00	4.37E-01	1.71E+00	1.31E-03	5.70E+00	1.04E-01	8.31E-01	2.97E-05	1.13E-02	8.72E-07	1.75E-01	8.36E-06	1.76E+00	4.76E-05
109	370361	758236	School	1.44E+00	3.06E-03	8.07E-01	3.23E-01	1.07E+00	8.23E-04	4.17E+00	7.59E-02	6.09E-01	2.18E-05	6.08E-03	4.68E-07	1.22E-01	5.81E-06	1.00E+00	2.71E-05
110	370415	758275	School	9.52E-01	2.02E-03	5.43E-01	2.17E-01	4.41E-01	3.39E-04	2.75E+00	5.00E-02	4.02E-01	1.44E-05	7.85E-04	6.04E-08	7.12E-02	3.39E-06	2.45E-01	6.63E-06
202	372807	757781	School	-1.02E+00	-2.17E-03	-5.81E-01	-2.32E-01	-5.03E-01	-3.87E-04	-2.94E+00	-5.35E-02	-4.31E-01	-1.54E-05	-1.24E-03	-9.52E-08	-7.74E-02	-3.69E-06	-3.13E-01	-8.46E-06
203	372901	757782	School	-9.33E-01	-1.98E-03	-5.27E-01	-2.11E-01	-5.94E-01	-4.57E-04	-2.70E+00	-4.91E-02	-3.95E-01	-1.41E-05	-2.75E-03	-2.12E-07	-7.57E-02	-3.60E-06	-4.96E-01	-1.34E-05

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	xylene, total (µg/m^3)	xylene, total Acute Hazard	arsenic (µg/m^3)	arsenic Acute Hazard	chlorine (µg/m^3)	chlorine Acute Hazard	copper (µg/m^3)	copper Acute Hazard	mercury (µg/m^3)	mercury Acute Hazard	nickel (µg/m^3)	nickel Acute Hazard	vanadium (µg/m^3)	vanadium Acute Hazard	sulfates (µg/m^3)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.6		6		30		120
117	370814	758243	Offsite Worker	1.00E+00	4.56E-05	8.11E-01	4.05E+00	6.79E-01	3.24E-03	1.26E-04	1.26E-06	-5.86E-04	-9.76E-04	-1.51E-04	-2.52E-05	-5.11E-05	-1.70E-06	-1.96E-05	-1.64E-07
118	370810	758153	Offsite Worker	9.49E-01	4.31E-05	7.60E-01	3.80E+00	6.37E-01	3.03E-03	1.33E-04	1.33E-06	-8.73E-04	-1.45E-03	-2.66E-04	-4.43E-05	-7.61E-05	-2.54E-06	-3.44E-05	-2.87E-07
119	370807	758063	Offsite Worker	5.57E-01	2.53E-05	4.44E-01	2.22E+00	3.72E-01	1.77E-03	1.52E-04	1.52E-06	-1.06E-03	-1.76E-03	-3.57E-04	-5.94E-05	-9.22E-05	-3.07E-06	-4.26E-05	-3.55E-07
120	370803	757974	Offsite Worker	1.54E-01	7.01E-06	1.27E-01	6.33E-01	1.06E-01	5.06E-04	1.52E-04	1.52E-06	-1.08E-03	-1.80E-03	-3.98E-04	-6.64E-05	-9.44E-05	-3.15E-06	-4.40E-05	-3.67E-07
121	370835	757927	Offsite Worker	1.95E-01	8.86E-06	1.63E-01	8.14E-01	1.37E-01	6.50E-04	1.53E-04	1.53E-06	-6.15E-04	-1.03E-03	-2.69E-04	-4.48E-05	-5.37E-05	-1.79E-06	-1.87E-05	-1.56E-07
122	370868	757880	Offsite Worker	-1.49E-01	-6.77E-06	-1.22E-01	-6.09E-01	-1.02E-01	-4.86E-04	1.86E-04	1.86E-06	-1.03E-04	-1.72E-04	-4.16E-05	-6.93E-06	-8.98E-06	-2.99E-07	1.20E-05	1.00E-07
123	370921	757884	Offsite Worker	-4.34E-01	-1.97E-05	-3.54E-01	-1.77E+00	-2.97E-01	-1.41E-03	1.95E-04	1.95E-06	4.28E-05	7.13E-05	3.72E-05	6.19E-06	3.73E-06	1.24E-07	2.07E-05	1.73E-07
124	370975	757887	Offsite Worker	-4.21E-01	-1.91E-05	-3.47E-01	-1.74E+00	-2.91E-01	-1.39E-03	1.83E-04	1.83E-06	2.44E-04	4.07E-04	1.16E-04	1.93E-05	2.13E-05	7.11E-07	3.04E-05	2.54E-07
125	370975	757794	Offsite Worker	7.83E-02	3.56E-06	4.16E-02	2.08E-01	3.41E-02	1.62E-04	1.70E-04	1.70E-06	2.67E-04	4.45E-04	6.30E-05	1.05E-05	2.33E-05	7.76E-07	3.04E-05	2.53E-07
126	371026	757794	Offsite Worker	2.41E-01	1.10E-05	1.67E-01	8.37E-01	1.39E-01	6.63E-04	1.60E-04	1.60E-06	2.15E-04	3.58E-04	1.68E-05	2.81E-06	1.88E-05	6.25E-07	2.67E-05	2.22E-07
127	371076	757877	Offsite Worker	1.67E-01	7.61E-06	1.12E-01	5.61E-01	9.31E-02	4.43E-04	1.59E-04	1.59E-06	4.24E-04	7.07E-04	1.39E-04	2.32E-05	3.70E-05	1.23E-06	3.78E-05	3.15E-07
128	371126	757959	Offsite Worker	-1.25E-02	-5.68E-07	-2.65E-02	-1.33E-01	-2.28E-02	-1.09E-04	1.57E-04	1.57E-06	4.59E-04	7.65E-04	1.57E-04	2.62E-05	4.00E-05	1.33E-06	3.96E-05	3.30E-07
129	371119	758031	Offsite Worker	-3.31E-01	-1.50E-05	-2.77E-01	-1.39E+00	-2.33E-01	-1.11E-03	1.63E-04	1.63E-06	2.32E-04	3.87E-04	7.87E-05	1.31E-05	2.02E-05	6.75E-07	2.79E-05	2.32E-07
143	371953	757977	Offsite Worker	-3.07E-01	-1.39E-05	-2.53E-01	-1.26E+00	-2.12E-01	-1.01E-03	8.04E-05	8.04E-07	-2.24E-04	-3.74E-04	-3.18E-06	-5.30E-07	-1.96E-05	-6.52E-07	-4.50E-06	-3.75E-08
144	371948	757880	Offsite Worker	-1.38E-01	-6.28E-06	-1.14E-01	-5.72E-01	-9.60E-02	-4.57E-04	8.35E-05	8.35E-07	-2.07E-04	-3.44E-04	-1.26E-06	-2.10E-07	-1.80E-05	-6.01E-07	-3.25E-06	-2.71E-08
145	371943	757783	Offsite Worker	4.51E-02	2.05E-06	3.48E-02	1.74E-01	2.91E-02	1.38E-04	8.93E-05	8.93E-07	-6.16E-06	-1.03E-05	3.80E-05	6.33E-06	-5.37E-07	-1.79E-08	8.09E-06	6.75E-08
146	372016	757794	Offsite Worker	5.19E-02	2.36E-06	3.87E-02	1.94E-01	3.23E-02	1.54E-04	8.51E-05	8.51E-07	4.88E-05	8.14E-05	5.14E-05	8.57E-06	4.26E-06	1.42E-07	1.07E-05	8.88E-08
147	372102	757791	Offsite Worker	-5.49E-02	-2.49E-06	-4.76E-02	-2.38E-01	-4.00E-02	-1.90E-04	8.17E-05	8.17E-07	7.33E-05	1.22E-04	5.60E-05	9.33E-06	6.39E-06	2.13E-07	1.17E-05	9.71E-08
148	372178	757760	Offsite Worker	-3.38E-01	-1.54E-05	-2.77E-01	-1.38E+00	-2.32E-01	-1.10E-03	8.01E-05	8.01E-07	-8.41E-06	-1.40E-05	2.20E-05	3.67E-06	-7.33E-07	-2.44E-08	7.10E-06	5.92E-08
149	372177	757670	Offsite Worker	-1.69E-01	-7.68E-06	-1.41E-01	-7.05E-01	-1.18E-01	-5.63E-04	8.39E-05	8.39E-07	-2.29E-04	-3.82E-04	-3.47E-05	-5.79E-06	-2.00E-05	-6.66E-07	-4.44E-06	-3.70E-08
150	372176	757579	Offsite Worker	-3.48E-01	-1.58E-05	-2.90E-01	-1.45E+00	-2.43E-01	-1.16E-03	7.40E-05	7.40E-07	-5.26E-04	-8.77E-04	-9.42E-05	-1.57E-05	-4.59E-05	-1.53E-06	-2.14E-05	-1.78E-07
151	372174	757489	Offsite Worker	-2.95E-01	-1.34E-05	-2.48E-01	-1.24E+00	-2.08E-01	-9.92E-04	7.00E-05	7.00E-07	-5.38E-04	-8.97E-04	-1.06E-04	-1.77E-05	-4.70E-05	-1.57E-06	-2.24E-05	-1.87E-07
152	372173	757398	Offsite Worker	-4.59E-01	-2.08E-05	-3.74E-01	-1.87E+00	-3.13E-01	-1.49E-03	8.33E-05	8.33E-07	-6.37E-04	-1.06E-03	-1.22E-04	-2.04E-05	-5.55E-05	-1.85E-06	-2.64E-05	-2.20E-07
153	372171	757308	Offsite Worker	-4.72E-01	-2.15E-05	-3.80E-01	-1.90E+00	-3.19E-01	-1.52E-03	9.18E-05	9.18E-07	-2.12E-04	-3.54E-04	-4.42E-05	-7.37E-06	-1.85E-05	-6.18E-07	-2.78E-06	-2.32E-08
154	372055	757309	Offsite Worker	-3.68E-01	-1.67E-05	-3.04E-01	-1.52E+00	-2.55E-01	-1.21E-03	1.16E-04	1.16E-06	-2.77E-04	-4.62E-04	-5.78E-05	-9.63E-06	-2.42E-05	-8.05E-07	-4.00E-06	-3.33E-08
156	372055	757416	Offsite Worker	-2.76E-01	-1.25E-05	-2.35E-01	-1.17E+00	-1.97E-01	-9.39E-04	7.66E-05	7.66E-07	-7.36E-04	-1.23E-03	-1.66E-04	-2.77E-05	-6.42E-05	-2.14E-06	-3.24E-05	-2.70E-07
157	371952	757442	Offsite Worker	-3.60E-01	-1.64E-05	-3.05E-01	-1.53E+00	-2.56E-01	-1.22E-03	8.19E-05	8.19E-07	-6.22E-04	-1.04E-03	-1.35E-04	-2.25E-05	-5.42E-05	-1.81E-06	-2.58E-05	-2.15E-07
158	371950	757345	Offsite Worker	-1.25E-01	-5.68E-06	-1.07E-01	-5.37E-01	-9.01E-02	-4.29E-04	1.09E-04	1.09E-06	-5.25E-04	-8.74E-04	-1.01E-04	-1.69E-05	-4.57E-05	-1.52E-06	-1.79E-05	-1.50E-07
159	371864	757344	Offsite Worker	-1.87E-01	-8.52E-06	-1.57E-01	-7.87E-01	-1.32E-01	-6.29E-04	1.11E-04	1.11E-06	-5.68E-04	-9.46E-04	-1.21E-04	-2.02E-05	-4.95E-05	-1.65E-06	-2.01E-05	-1.67E-07
160	371790	757347	Offsite Worker	-2.25E-01	-1.02E-05	-1.89E-01	-9.44E-01	-1.58E-01	-7.55E-04	1.14E-04	1.14E-06	-6.13E-04	-1.02E-03	-1.44E-04	-2.40E-05	-5.34E-05	-1.78E-06	-2.22E-05	-1.85E-07
161	371708	757356	Offsite Worker	-1.81E-01	-8.25E-06	-1.57E-01	-7.87E-01	-1.32E-01	-6.30E-04	1.12E-04	1.12E-06	-6.75E-04	-1.13E-03	-1.76E-04	-2.94E-05	-5.89E-05	-1.96E-06	-2.58E-05	-2.15E-07
162	371615	757356	Offsite Worker	-1.56E-01	-7.11E-06	-1.39E-01	-6.97E-01	-1.17E-01	-5.58E-04	1.17E-04	1.17E-06	-7.00E-04	-1.17E-03	-1.97E-04	-3.28E-05	-6.11E-05	-2.04E-06	-2.67E-05	-2.22E-07
163	371523	757356	Offsite Worker	-2.41E-01	-1.09E-05	-2.07E-01	-1.03E+00	-1.74E-01	-8.27E-04	1.28E-04	1.28E-06	-6.56E-04	-1.09E-03	-1.91E-04	-3.18E-05	-5.72E-05	-1.91E-06	-2.32E-05	-1.94E-07
164	371430	757356	Offsite Worker	-4.03E-01	-1.83E-05	-3.34E-01	-1.67E+00	-2.80E-01	-1.33E-03	1.41E-04	1.41E-06	-5.88E-04	-9.80E-04	-1.58E-04	-2.63E-05	-5.13E-05	-1.71E-06	-1.84E-05	-1.53E-07
165	371338	757356	Offsite Worker	-6.27E-01	-2.85E-05	-5.11E-01	-2.56E+00	-4.29E-01	-2.04E-03	1.54E-04	1.54E-06	-5.80E-04	-9.67E-04	-1.41E-04	-2.35E-05	-5.06E-05	-1.69E-06	-1.67E-05	-1.39E-07
166	371245	757356	Offsite Worker	-6.68E-01	-3.04E-05	-5.45E-01	-2.72E+00	-4.57E-01	-2.17E-03	1.71E-04	1.71E-06	-6.71E-04	-1.12E-03	-1.62E-04	-2.70E-05	-5.85E-05	-1.95E-06	-2.00E-05	-1.67E-07
167	371153	757356	Offsite Worker	-7.04E-01	-3.20E-05	-5.75E-01	-2.87E+00	-4.82E-01	-2.29E-03	1.87E-04	1.87E-06	-7.54E-04	-1.26E-03	-1.79E-04	-2.99E-05	-6.58E-05	-2.19E-06	-2.29E-05	-1.91E-07
168	371061	757356	Offsite Worker	-7.38E-01	-3.36E-05	-6.02E-01	-3.01E+00	-5.05E-01	-2.40E-03	2.08E-04	2.08E-06	-7.80E-04	-1.30E-03	-1.80E-04	-2.99E-05	-6.81E-05	-2.27E-06	-2.24E-05	-1.87E-07
169	371005	757357	Offsite Worker	-7.80E-01	-3.55E-05	-6.36E-01	-3.18E+00	-5.33E-01	-2.54E-03	2.27E-04	2.27E-06	-6.92E-04	-1.15E-03	-1.47E-04	-2.46E-05	-6.03E-05	-2.01E-06	-1.59E-05	-1.32E-07
170	370998	757293	Offsite Worker	4.95E-01	2.25E-05	3.79E-01	1.90E+00	3.17E-01	1.51E-03	2.45E-04	2.45E-06	-5.25E-04	-8.74E-04	-1.69E-04	-2.82E-05	-4.57E-05	-1.52E-06	-5.18E-06	-4.32E-08
171	370998	757194	Offsite Worker	4.50E-01	2.05E-05	3.49E-01	1.75E+00	2.92E-01	1.39E-03	2.82E-04	2.82E-06	-5.64E-04	-9.40E-04	-1.22E-04	-2.03E-05	-4.92E-05	-1.64E-06	-3.71E-06	-3.09E-08
172	370998	757096	Offsite Worker	-8.79E-01	-3.99E-05	-7.31E-01	-3.66E+00	-6.13E-01	-2.92E-03	3.30E-04	3.30E-06	-7.55E-04	-1.26E-03	-1.62E-04	-2.70E-05	-6.59E-05	-2.20E-06	-9.53E-06	-7.94E-08
173	370998	756998	Offsite Worker	2.24E-01	1.02E-05	1.74E-01	8.70E-01	1.46E-01	6.93E-04	3.36E-04	3.36E-06	-1.46E-03	-2.44E-03	-3.84E-04	-6.40E-05	-1.28E-04	-4.25E-06	-4.71E-05	-3.92E-07
174	371057	756997	Offsite Worker	1.30E+00	5.90E-05	1.04E+00	5.19E+00	8.69E-01	4.14E-03	3.00E-04	3.00E-06	-1.35E-03	-2.25E-03	-3.61E-04	-6.02E-05	-1.18E-04	-3.93E-06	-4.45E-05	-3.70E-07
175	371153	756997	Offsite Worker	8.84E-01	4.02E-05	7.19E-01	3.59E+00	6.02E-01	2.87E-03	2.55E-04	2.55E-06	-1.19E-03	-1.98E-03	-3.23E-04	-5.38E-05	-1.04E-04	-3.45E-06	-3.99E-05	-3.33E-07
176	371249	756997	Offsite Worker	2.36E-01	1.07E-05	1.68E-01	8.39E-01	1.40E-01	6.65E-04	2.11E-04	2.11E-06	-1.01E-03	-1.68E-03	-2.84E-04	-4.74E-05	-8.79E-05	-2.93E-06	-3.44E-05	-2.87E-07
177	371345	756997	Offsite Worker	1.32E-01	5.99E-06	7.96E-02	3.98E-01	6.57E-02	3.13E-04	2.06E-04	2.06E-06	-1.04E-03	-1.74E-03	-2.67E-04	-4.46E-05	-9.08E-05	-3.03E-06	-3.67E-05	-3.06E-07
178	371440	756997	Offsite Worker	1.74E-01	7.89E-06	1.21E-01	6.03E-01	1.00E-01	4.78E-04	1.87E-04	1.87E-06	-1.00E-03	-1.67E-03	-2.43E-04	-4.06E-05	-8.73E-05	-2.91E-06	-3.63E-05	-3.02E-07
179	371536	756997	Offsite Worker	4.89E-02	2.22E-06	3.32E-02	1.66E-01	2.76E-02	1.31E-04	1.70E-04	1.70E-06	-8.43E-04	-1.41E-03	-1.85E-04	-3.08E-05	-7.35E-05	-2.45E-06	-2.94E-05	-2.45E-07
180	371632	756997	Offsite Worker	1.65E-01	7.52E-06	1.31E-01	6.56E-01	1.10E-01	5.23E-04	1.51E-04	1.51E-06	-4.84E-04	-8.07E-04	-1.06E-04	-1.77E-05	-4.23E-05	-1.41E-06	-1.19E-05	-9.88E-08
181	371728	756997	Offsite Worker	1.30E-01	5.92E-06	1.07E-01	5.33E-01	8.93E-02	4.25E-04	1.43E-04	1.43E-06	-3.98E-04	-6.63E-04	-6.20E-05	-1.03E-05	-3.47E-05	-1.16E-06	-7.95E-06	-6.63E-08
182	371824	756997	Offsite Worker	2.72E-01	1.24E-05	2.22E-01	1.11E+00	1.86E-01	8.86E-04	1.25E-04	1.25E-06	-2.75E-04	-4.59E-04	-4.05E-05	-6.74E-06	-2.40E-05	-8.00E-07	-2.99E-06	-2.49E-08

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	xylene, total (µg/m^3)	xylene, total Acute Hazard	arsenic (µg/m^3)	arsenic Acute Hazard	chlorine (µg/m^3)	chlorine Acute Hazard	copper (µg/m^3)	copper Acute Hazard	mercury (µg/m^3)	mercury Acute Hazard	nickel (µg/m^3)	nickel Acute Hazard	vanadium (µg/m^3)	vanadium Acute Hazard	sulfates (µg/m^3)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.6		6		30		120
183	371920	756997	Offsite Worker	-2.24E-01	-1.02E-05	-1.96E-01	-9.78E-01	-1.64E-01	-7.83E-04	1.08E-04	1.08E-06	-1.60E-04	-2.66E-04	-2.87E-05	-4.78E-06	-1.39E-05	-4.64E-07	1.63E-06	1.36E-08
184	372016	756997	Offsite Worker	1.12E-01	5.10E-06	9.02E-02	4.51E-01	7.55E-02	3.60E-04	9.81E-05	9.81E-07	-3.65E-04	-6.08E-04	-2.55E-05	-4.25E-06	-3.18E-05	-1.06E-06	-1.04E-05	-8.66E-08
185	372111	756997	Offsite Worker	-5.32E-01	-2.42E-05	-4.20E-01	-2.10E+00	-3.52E-01	-1.67E-03	7.78E-05	7.78E-07	-7.52E-04	-1.25E-03	-2.06E-04	-3.43E-05	-6.56E-05	-2.19E-06	-3.32E-05	-2.76E-07
186	372207	756997	Offsite Worker	1.18E+00	5.36E-05	9.55E-01	4.77E+00	8.00E-01	3.81E-03	9.38E-05	9.38E-07	4.32E-05	7.19E-05	5.82E-05	9.70E-06	3.76E-06	1.25E-07	1.12E-05	9.31E-08
187	372303	756997	Offsite Worker	4.05E-01	1.84E-05	3.55E-01	1.77E+00	2.98E-01	1.42E-03	7.61E-05	7.61E-07	2.18E-04	3.64E-04	2.34E-05	3.89E-06	1.90E-05	6.34E-07	1.89E-05	1.58E-07
188	372399	756997	Offsite Worker	3.87E-01	1.76E-05	3.42E-01	1.71E+00	2.88E-01	1.37E-03	9.86E-05	9.86E-07	1.54E-03	2.57E-03	3.73E-04	6.22E-05	1.34E-04	4.47E-06	9.22E-05	7.68E-07
189	372495	756997	Offsite Worker	1.85E-01	8.40E-06	1.50E-01	7.52E-01	1.26E-01	6.00E-04	8.11E-05	8.11E-07	3.41E-04	5.68E-04	3.87E-05	6.46E-06	2.97E-05	9.91E-07	2.60E-05	2.17E-07
190	372591	756997	Offsite Worker	-7.29E-02	-3.31E-06	-5.91E-02	-2.95E-01	-4.95E-02	-2.36E-04	6.71E-05	6.71E-07	-2.74E-04	-4.56E-04	-1.73E-05	-2.89E-06	-2.39E-05	-7.96E-07	-8.42E-06	-7.02E-08
191	372610	757063	Offsite Worker	2.42E-01	1.10E-05	1.92E-01	9.58E-01	1.60E-01	7.64E-04	7.09E-05	7.09E-07	6.96E-05	1.16E-04	2.53E-05	4.21E-06	6.07E-06	2.02E-07	1.04E-05	8.70E-08
192	372612	757132	Offsite Worker	4.02E-01	1.83E-05	3.27E-01	1.63E+00	2.74E-01	1.30E-03	7.24E-05	7.24E-07	1.75E-04	2.92E-04	3.54E-05	5.89E-06	1.53E-05	5.09E-07	1.63E-05	1.35E-07
193	372614	757201	Offsite Worker	2.68E-01	1.22E-05	2.25E-01	1.13E+00	1.89E-01	9.00E-04	7.06E-05	7.06E-07	5.19E-04	8.65E-04	1.29E-04	2.16E-05	4.53E-05	1.51E-06	3.46E-05	2.88E-07
194	372616	757270	Offsite Worker	2.87E-01	1.31E-05	2.35E-01	1.17E+00	1.97E-01	9.38E-04	7.15E-05	7.15E-07	4.29E-04	7.15E-04	8.79E-05	1.46E-05	3.74E-05	1.25E-06	2.98E-05	2.49E-07
195	372627	757351	Offsite Worker	-1.63E-03	-7.40E-08	-2.31E-04	-1.16E-03	-1.54E-04	-7.33E-07	7.50E-05	7.50E-07	1.19E-04	1.98E-04	2.53E-05	4.22E-06	1.04E-05	3.45E-07	1.35E-05	1.12E-07
196	372651	757422	Offsite Worker	-1.12E-01	-5.11E-06	-9.34E-02	-4.67E-01	-7.84E-02	-3.73E-04	7.09E-05	7.09E-07	-3.34E-04	-5.56E-04	-5.61E-05	-9.34E-06	-2.91E-05	-9.70E-07	-1.13E-05	-9.40E-08
197	372676	757494	Offsite Worker	-7.42E-02	-3.37E-06	-6.67E-02	-3.34E-01	-5.62E-02	-2.67E-04	5.49E-05	5.49E-07	-6.22E-04	-1.04E-03	-1.30E-04	-2.16E-05	-5.42E-05	-1.81E-06	-2.83E-05	-2.36E-07
198	372704	757569	Offsite Worker	-1.54E-02	-6.98E-07	-2.57E-02	-1.29E-01	-2.20E-02	-1.05E-04	4.93E-05	4.93E-07	-4.55E-04	-7.58E-04	-9.44E-05	-1.57E-05	-3.96E-05	-1.32E-06	-1.98E-05	-1.65E-07
199	372733	757645	Offsite Worker	-1.19E-01	-5.41E-06	-1.08E-01	-5.42E-01	-9.12E-02	-4.34E-04	5.40E-05	5.40E-07	-3.29E-04	-5.48E-04	-5.20E-05	-8.67E-06	-2.87E-05	-9.56E-07	-1.26E-05	-1.05E-07
200	372746	757702	Offsite Worker	-1.55E-01	-7.03E-06	-1.36E-01	-6.78E-01	-1.14E-01	-5.43E-04	5.69E-05	5.69E-07	-3.47E-04	-5.78E-04	-6.42E-05	-1.07E-05	-3.02E-05	-1.01E-06	-1.33E-05	-1.11E-07
201	372746	757768	Offsite Worker	-9.43E-02	-4.29E-06	-8.81E-02	-4.40E-01	-7.42E-02	-3.54E-04	6.23E-05	6.23E-07	-2.51E-04	-4.19E-04	-5.17E-05	-8.61E-06	-2.19E-05	-7.31E-07	-7.66E-06	-6.38E-08
204	372994	757783	Offsite Worker	-1.71E-01	-7.79E-06	-1.49E-01	-7.44E-01	-1.25E-01	-5.95E-04	5.42E-05	5.42E-07	-2.88E-04	-4.80E-04	-5.71E-05	-9.51E-06	-2.51E-05	-8.38E-07	-1.04E-05	-8.68E-08
205	373087	757783	Offsite Worker	-1.63E-01	-7.39E-06	-1.42E-01	-7.11E-01	-1.20E-01	-5.69E-04	5.12E-05	5.12E-07	-2.71E-04	-4.52E-04	-5.23E-05	-8.71E-06	-2.36E-05	-7.88E-07	-9.77E-06	-8.14E-08
206	373180	757784	Offsite Worker	-1.09E-01	-4.97E-06	-9.83E-02	-4.92E-01	-8.27E-02	-3.94E-04	4.81E-05	4.81E-07	-2.49E-04	-4.15E-04	-4.68E-05	-7.81E-06	-2.17E-05	-7.23E-07	-8.85E-06	-7.38E-08
207	373274	757785	Offsite Worker	-5.21E-02	-2.37E-06	-5.11E-02	-2.55E-01	-4.31E-02	-2.05E-04	4.52E-05	4.52E-07	-2.13E-04	-3.55E-04	-4.09E-05	-6.81E-06	-1.86E-05	-6.19E-07	-7.21E-06	-6.00E-08
208	373367	757786	Offsite Worker	-9.09E-03	-4.13E-07	-1.55E-02	-7.77E-02	-1.33E-02	-6.34E-05	4.22E-05	4.22E-07	-2.04E-04	-3.40E-04	-3.45E-05	-5.75E-06	-1.78E-05	-5.93E-07	-7.02E-06	-5.85E-08
209	373418	757742	Offsite Worker	6.62E-02	3.01E-06	4.67E-02	2.34E-01	3.89E-02	1.85E-04	4.26E-05	4.26E-07	-1.47E-04	-2.45E-04	-1.88E-05	-3.13E-06	-1.28E-05	-4.27E-07	-3.88E-06	-3.23E-08
210	373418	757653	Offsite Worker	2.13E-01	9.67E-06	1.71E-01	8.55E-01	1.43E-01	6.82E-04	4.75E-05	4.75E-07	-1.94E-04	-3.23E-04	-3.05E-05	-5.08E-06	-1.69E-05	-5.64E-07	-5.97E-06	-4.97E-08
211	373419	757564	Offsite Worker	1.23E-01	5.61E-06	1.09E-01	5.43E-01	9.14E-02	4.35E-04	5.24E-05	5.24E-07	-1.77E-04	-2.96E-04	-1.81E-05	-3.01E-06	-1.55E-05	-5.16E-07	-4.61E-06	-3.84E-08
212	373419	757475	Offsite Worker	1.90E-02	8.65E-07	2.81E-02	1.41E-01	2.41E-02	1.15E-04	5.40E-05	5.40E-07	-1.27E-04	-2.12E-04	-1.82E-05	-3.03E-06	-1.11E-05	-3.69E-07	-1.74E-06	-1.45E-08
213	373420	757386	Offsite Worker	1.03E-01	4.67E-06	9.15E-02	4.57E-01	7.70E-02	3.67E-04	4.76E-05	4.76E-07	2.22E-05	3.70E-05	8.19E-06	1.36E-06	1.94E-06	6.45E-08	5.69E-06	4.74E-08
214	373420	757297	Offsite Worker	1.89E-01	8.61E-06	1.57E-01	7.85E-01	1.32E-01	6.27E-04	5.15E-05	5.15E-07	2.31E-04	3.85E-04	7.67E-05	1.28E-05	2.01E-05	6.72E-07	1.73E-05	1.44E-07
215	373421	757207	Offsite Worker	1.57E-01	7.13E-06	1.35E-01	6.74E-01	1.13E-01	5.39E-04	5.38E-05	5.38E-07	2.36E-04	3.94E-04	7.99E-05	1.33E-05	2.06E-05	6.87E-07	1.78E-05	1.48E-07
216	373421	757118	Offsite Worker	1.40E-01	6.37E-06	1.22E-01	6.11E-01	1.03E-01	4.89E-04	5.54E-05	5.54E-07	2.23E-04	3.71E-04	7.31E-05	1.22E-05	1.94E-05	6.48E-07	1.72E-05	1.44E-07
217	373292	757117	Offsite Worker	1.71E-01	7.77E-06	1.47E-01	7.34E-01	1.23E-01	5.87E-04	5.80E-05	5.80E-07	2.29E-04	3.81E-04	7.73E-05	1.29E-05	2.00E-05	6.65E-07	1.78E-05	1.48E-07
218	373213	757118	Offsite Worker	1.70E-01	7.74E-06	1.46E-01	7.30E-01	1.23E-01	5.84E-04	5.88E-05	5.88E-07	2.35E-04	3.91E-04	7.99E-05	1.33E-05	2.05E-05	6.83E-07	1.82E-05	1.52E-07
219	373158	757066	Offsite Worker	1.89E-01	8.59E-06	1.63E-01	8.14E-01	1.37E-01	6.51E-04	6.07E-05	6.07E-07	2.24E-04	3.73E-04	7.79E-05	1.30E-05	1.95E-05	6.51E-07	1.78E-05	1.48E-07
220	373084	757026	Offsite Worker	1.71E-01	7.77E-06	1.50E-01	7.48E-01	1.26E-01	5.99E-04	6.19E-05	6.19E-07	2.21E-04	3.69E-04	7.77E-05	1.29E-05	1.93E-05	6.43E-07	1.78E-05	1.48E-07
221	373009	757011	Offsite Worker	1.88E-01	8.54E-06	1.64E-01	8.18E-01	1.38E-01	6.55E-04	6.49E-05	6.49E-07	2.69E-04	4.48E-04	7.90E-05	1.32E-05	2.34E-05	7.81E-07	2.06E-05	1.72E-07
222	372922	757009	Offsite Worker	2.32E-01	1.05E-05	1.99E-01	9.95E-01	1.67E-01	7.96E-04	6.96E-05	6.96E-07	3.59E-04	5.99E-04	8.11E-05	1.35E-05	3.13E-05	1.04E-06	2.59E-05	2.16E-07
223	372835	757007	Offsite Worker	2.20E-01	1.00E-05	1.90E-01	9.48E-01	1.59E-01	7.59E-04	7.16E-05	7.16E-07	3.80E-04	6.33E-04	8.05E-05	1.34E-05	3.31E-05	1.10E-06	2.72E-05	2.27E-07
224	372747	757006	Offsite Worker	1.74E-01	7.92E-06	1.54E-01	7.70E-01	1.30E-01	6.17E-04	7.15E-05	7.15E-07	2.77E-04	4.62E-04	7.49E-05	1.25E-05	2.42E-05	8.05E-07	2.17E-05	1.80E-07
225	372660	757004	Offsite Worker	-2.95E-02	-1.34E-06	-1.50E-02	-7.48E-02	-1.22E-02	-5.82E-05	6.62E-05	6.62E-07	-1.53E-04	-2.55E-04	4.73E-06	7.88E-07	-1.33E-05	-4.45E-07	-2.00E-06	-1.67E-08
226	372651	757063	Offsite Worker	2.22E-01	1.01E-05	1.80E-01	9.02E-01	1.51E-01	7.20E-04	6.77E-05	6.77E-07	-1.44E-05	-2.40E-05	2.85E-05	4.75E-06	-1.26E-06	-4.19E-08	5.61E-06	4.68E-08
227	372629	756931	Offsite Worker	8.11E-02	3.69E-06	7.42E-02	3.71E-01	6.25E-02	2.98E-04	7.16E-05	7.16E-07	5.86E-05	9.77E-05	8.52E-05	1.42E-05	5.11E-06	1.70E-07	9.91E-06	8.26E-08
228	372631	756857	Offsite Worker	2.79E-01	1.27E-05	2.44E-01	1.22E+00	2.05E-01	9.78E-04	6.55E-05	6.55E-07	1.88E-04	3.14E-04	3.29E-05	5.48E-06	1.64E-05	5.47E-07	1.63E-05	1.36E-07
229	372634	756783	Offsite Worker	2.90E-01	1.32E-05	2.57E-01	1.29E+00	2.16E-01	1.03E-03	6.48E-05	6.48E-07	2.36E-04	3.93E-04	3.65E-05	6.09E-06	2.06E-05	6.86E-07	1.88E-05	1.57E-07
230	372702	756778	Offsite Worker	1.60E-01	7.26E-06	1.39E-01	6.93E-01	1.16E-01	5.55E-04	6.49E-05	6.49E-07	2.67E-04	4.44E-04	3.27E-05	5.44E-06	2.33E-05	7.75E-07	2.05E-05	1.71E-07
231	372756	756775	Offsite Worker	2.08E-01	9.45E-06	1.75E-01	8.75E-01	1.47E-01	7.00E-04	6.27E-05	6.27E-07	2.25E-04	3.76E-04	3.03E-05	5.05E-06	1.97E-05	6.55E-07	1.81E-05	1.50E-07
232	372729	756712	Offsite Worker	1.47E-01	6.70E-06	1.24E-01	6.21E-01	1.04E-01	4.96E-04	5.87E-05	5.87E-07	8.58E-05	1.43E-04	1.37E-06	2.29E-07	7.48E-06	2.49E-07	1.02E-05	8.47E-08
233	372703	756650	Offsite Worker	3.23E-01	1.47E-05	2.54E-01	1.27E+00	2.13E-01	1.01E-03	5.43E-05	5.43E-07	-6.79E-06	-1.13E-05	-3.20E-05	-5.33E-06	-5.92E-07	-1.97E-08	4.76E-06	3.97E-08
234	372677	756588	Offsite Worker	2.62E-01	1.19E-05	2.04E-01	1.02E+00	1.71E-01	8.13E-04	5.04E-05	5.04E-07	2.60E-04	4.33E-04	-5.27E-05	-8.79E-06	2.27E-05	7.56E-07	1.88E-05	1.56E-07
235	372619	756588	Offsite Worker	3.45E-01	1.57E-05	2.67E-01	1.34E+00	2.23E-01	1.06E-03	5.07E-05	5.07E-07	3.58E-04	5.97E-04	-1.34E-04	-2.24E-05	3.12E-05	1.04E-06	2.41E-05	2.01E-07
236	372622	756509	Offsite Worker	1.49E-01	6.76E-06	6.83E-02	3.41E-01	5.53E-02	2.63E-04	5.26E-05	5.26E-07	1.78E-04	2.97E-04	6.28E-06	1.05E-06	1.55E-05	5.18E-07	1.46E-05	1.21E-07

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	xylene, total ($\mu g/m^3$)	xylene, total Acute Hazard	arsenic ($\mu g/m^3$)	arsenic Acute Hazard	chlorine ($\mu g/m^3$)	chlorine Acute Hazard	copper ($\mu g/m^3$)	copper Acute Hazard	mercury ($\mu g/m^3$)	mercury Acute Hazard	nickel ($\mu g/m^3$)	nickel Acute Hazard	vanadium ($\mu g/m^3$)	vanadium Acute Hazard	sulfates ($\mu g/m^3$)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.6		6		30		120
237	372700	756511	Offsite Worker	1.12E-01	5.07E-06	3.38E-02	1.69E-01	2.63E-02	1.25E-04	5.27E-05	5.27E-07	2.91E-04	4.86E-04	3.83E-06	6.39E-07	2.54E-05	8.47E-07	2.07E-05	1.72E-07
238	372789	756510	Offsite Worker	6.84E-02	3.11E-06	-2.11E-03	-1.06E-02	-3.88E-03	-1.85E-05	5.45E-05	5.45E-07	2.91E-04	4.86E-04	-2.04E-05	-3.41E-06	2.54E-05	8.47E-07	2.08E-05	1.74E-07
239	372871	756509	Offsite Worker	7.69E-02	3.50E-06	9.01E-03	4.51E-02	5.60E-03	2.67E-05	5.42E-05	5.42E-07	2.39E-04	3.98E-04	-1.74E-05	-2.90E-06	2.08E-05	6.94E-07	1.80E-05	1.50E-07
240	372871	756437	Offsite Worker	4.43E-01	2.01E-05	3.32E-01	1.66E+00	2.77E-01	1.32E-03	5.79E-05	5.79E-07	1.86E-04	3.10E-04	1.48E-04	2.46E-05	1.62E-05	5.41E-07	1.55E-05	1.29E-07
241	372970	756437	Offsite Worker	5.08E-01	2.31E-05	3.92E-01	1.96E+00	3.28E-01	1.56E-03	5.59E-05	5.59E-07	1.89E-04	3.14E-04	1.39E-04	2.32E-05	1.64E-05	5.48E-07	1.54E-05	1.29E-07
242	373069	756437	Offsite Worker	5.64E-01	2.56E-05	4.42E-01	2.21E+00	3.70E-01	1.76E-03	5.40E-05	5.40E-07	1.86E-04	3.09E-04	1.31E-04	2.18E-05	1.62E-05	5.40E-07	1.51E-05	1.26E-07
243	373168	756437	Offsite Worker	5.63E-01	2.56E-05	4.44E-01	2.22E+00	3.72E-01	1.77E-03	5.28E-05	5.28E-07	1.80E-04	3.00E-04	1.24E-04	2.06E-05	1.57E-05	5.23E-07	1.47E-05	1.22E-07
244	373267	756437	Offsite Worker	5.10E-01	2.32E-05	4.01E-01	2.00E+00	3.36E-01	1.60E-03	5.16E-05	5.16E-07	1.73E-04	2.89E-04	1.17E-04	1.95E-05	1.51E-05	5.04E-07	1.42E-05	1.18E-07
245	373412	756437	Offsite Worker	4.40E-01	2.00E-05	3.45E-01	1.72E+00	2.88E-01	1.37E-03	5.09E-05	5.09E-07	1.62E-04	2.70E-04	1.07E-04	1.79E-05	1.41E-05	4.72E-07	1.35E-05	1.13E-07
246	373409	756339	Offsite Worker	1.36E-01	6.16E-06	1.24E-01	6.20E-01	1.04E-01	4.97E-04	5.96E-05	5.96E-07	2.21E-04	3.69E-04	1.05E-04	1.74E-05	1.93E-05	6.43E-07	1.75E-05	1.46E-07
247	373406	756240	Offsite Worker	1.37E-01	6.25E-06	1.26E-01	6.28E-01	1.06E-01	5.04E-04	6.23E-05	6.23E-07	2.87E-04	4.79E-04	1.32E-04	2.19E-05	2.51E-05	8.35E-07	2.14E-05	1.78E-07
248	373403	756142	Offsite Worker	2.27E-01	1.03E-05	1.86E-01	9.29E-01	1.56E-01	7.41E-04	5.80E-05	5.80E-07	3.48E-04	5.80E-04	1.16E-04	1.93E-05	3.03E-05	1.01E-06	2.42E-05	2.02E-07
249	373400	756042	Offsite Worker	3.42E-01	1.55E-05	2.76E-01	1.38E+00	2.32E-01	1.10E-03	5.73E-05	5.73E-07	2.14E-04	3.56E-04	1.24E-04	2.07E-05	1.86E-05	6.21E-07	1.69E-05	1.41E-07
250	373397	755944	Offsite Worker	2.08E-01	9.46E-06	1.73E-01	8.64E-01	1.45E-01	6.90E-04	5.08E-05	5.08E-07	1.13E-04	1.88E-04	6.55E-05	1.09E-05	9.82E-06	3.27E-07	1.09E-05	9.05E-08
251	373393	755846	Offsite Worker	7.37E-02	3.35E-06	6.47E-02	3.23E-01	5.44E-02	2.59E-04	5.02E-05	5.02E-07	-2.41E-05	-4.02E-05	2.49E-05	4.14E-06	-2.10E-06	-7.01E-08	3.43E-06	2.86E-08
252	373390	755747	Offsite Worker	-1.37E-01	-6.22E-06	-1.05E-01	-5.25E-01	-8.78E-02	-4.18E-04	5.04E-05	5.04E-07	-2.04E-04	-3.41E-04	-4.77E-06	-7.95E-07	-1.78E-05	-5.94E-07	-6.26E-06	-5.21E-08
253	373309	755744	Offsite Worker	-1.41E-01	-6.43E-06	-1.10E-01	-5.49E-01	-9.19E-02	-4.38E-04	5.09E-05	5.09E-07	-2.25E-04	-3.75E-04	-1.12E-05	-1.87E-06	-1.96E-05	-6.54E-07	-7.33E-06	-6.11E-08
254	373229	755743	Offsite Worker	-1.22E-01	-5.53E-06	-9.56E-02	-4.78E-01	-8.00E-02	-3.81E-04	5.14E-05	5.14E-07	-2.40E-04	-4.00E-04	-1.58E-05	-2.63E-06	-2.09E-05	-6.97E-07	-8.08E-06	-6.73E-08
255	373143	755741	Offsite Worker	-7.42E-02	-3.37E-06	-6.00E-02	-3.00E-01	-5.03E-02	-2.39E-04	5.21E-05	5.21E-07	-2.49E-04	-4.15E-04	-2.03E-05	-3.38E-06	-2.17E-05	-7.25E-07	-8.51E-06	-7.09E-08
256	373143	755823	Offsite Worker	6.04E-02	2.75E-06	5.06E-02	2.53E-01	4.25E-02	2.02E-04	5.68E-05	5.68E-07	-2.34E-04	-3.89E-04	1.29E-06	2.15E-07	-2.04E-05	-6.79E-07	-7.22E-06	-6.02E-08
257	373143	755906	Offsite Worker	1.96E-01	8.90E-06	1.60E-01	8.00E-01	1.34E-01	6.39E-04	5.67E-05	5.67E-07	-7.82E-05	-1.30E-04	1.32E-05	2.20E-06	-6.82E-06	-2.27E-07	1.14E-06	9.48E-09
258	373065	755906	Offsite Worker	1.52E-01	6.89E-06	1.20E-01	6.00E-01	1.00E-01	4.78E-04	5.95E-05	5.95E-07	-1.39E-04	-2.31E-04	1.07E-05	1.79E-06	-1.21E-05	-4.04E-07	-1.87E-06	-1.56E-08
259	373065	755827	Offsite Worker	4.59E-02	2.09E-06	3.50E-02	1.75E-01	2.92E-02	1.39E-04	5.81E-05	5.81E-07	-2.46E-04	-4.11E-04	6.20E-07	1.03E-07	-2.15E-05	-7.16E-07	-7.79E-06	-6.49E-08
260	373068	755733	Offsite Worker	-3.55E-02	-1.62E-06	-3.15E-02	-1.57E-01	-2.65E-02	-1.26E-04	5.19E-05	5.19E-07	-2.29E-04	-3.82E-04	-2.59E-05	-4.32E-06	-2.00E-05	-6.67E-07	-7.47E-06	-6.22E-08
261	373007	755733	Offsite Worker	-3.63E-02	-1.65E-06	-3.31E-02	-1.66E-01	-2.79E-02	-1.33E-04	5.07E-05	5.07E-07	-2.28E-04	-3.80E-04	-4.74E-05	-7.89E-06	-1.99E-05	-6.63E-07	-7.51E-06	-6.26E-08
262	372941	755733	Offsite Worker	-6.48E-02	-2.95E-06	-5.89E-02	-2.94E-01	-4.96E-02	-2.36E-04	4.88E-05	4.88E-07	-3.12E-04	-5.19E-04	-8.38E-05	-1.40E-05	-2.72E-05	-9.06E-07	-1.22E-05	-1.01E-07
263	372941	755636	Offsite Worker	-2.83E-01	-1.29E-05	-2.26E-01	-1.13E+00	-1.90E-01	-9.03E-04	4.56E-05	4.56E-07	-8.37E-04	-1.39E-03	-2.24E-04	-3.74E-05	-7.30E-05	-2.43E-06	-4.08E-05	-3.40E-07
264	372941	755539	Offsite Worker	-5.65E-01	-2.57E-05	-4.55E-01	-2.27E+00	-3.81E-01	-1.81E-03	4.78E-05	4.78E-07	-8.26E-04	-1.38E-03	-2.14E-04	-3.56E-05	-7.21E-05	-2.40E-06	-4.00E-05	-3.33E-07
265	372941	755442	Offsite Worker	-3.30E-01	-1.50E-05	-2.59E-01	-1.30E+00	-2.17E-01	-1.03E-03	4.89E-05	4.89E-07	-6.46E-04	-1.08E-03	-1.71E-04	-2.85E-05	-5.64E-05	-1.88E-06	-3.02E-05	-2.52E-07
266	372913	755342	Offsite Worker	-5.42E-01	-2.47E-05	-4.22E-01	-2.11E+00	-3.53E-01	-1.68E-03	5.59E-05	5.59E-07	-4.65E-04	-7.75E-04	-1.26E-04	-2.10E-05	-4.06E-05	-1.35E-06	-1.98E-05	-1.65E-07
267	372817	755346	Offsite Worker	-7.49E-01	-3.41E-05	-5.91E-01	-2.95E+00	-4.95E-01	-2.36E-03	5.70E-05	5.70E-07	-5.21E-04	-8.69E-04	-1.37E-04	-2.28E-05	-4.55E-05	-1.52E-06	-2.27E-05	-1.89E-07
268	372720	755349	Offsite Worker	-8.73E-01	-3.97E-05	-6.91E-01	-3.46E+00	-5.79E-01	-2.76E-03	5.48E-05	5.48E-07	-6.01E-04	-1.00E-03	-1.75E-04	-2.91E-05	-5.24E-05	-1.75E-06	-2.72E-05	-2.27E-07
269	372624	755352	Offsite Worker	-6.03E-01	-2.74E-05	-4.86E-01	-2.43E+00	-4.07E-01	-1.94E-03	6.76E-05	6.76E-07	2.35E-04	3.92E-04	4.11E-05	6.84E-06	2.05E-05	6.83E-07	1.90E-05	1.59E-07
270	372527	755349	Offsite Worker	-1.01E+00	-4.60E-05	-8.82E-01	-4.41E+00	-7.41E-01	-3.53E-03	5.38E-05	5.38E-07	-1.34E-04	-2.23E-04	-4.15E-05	-6.91E-06	-1.17E-05	-3.89E-07	-2.13E-06	-1.78E-08
271	372431	755353	Offsite Worker	-1.57E+00	-7.13E-05	-1.33E+00	-6.64E+00	-1.11E+00	-5.31E-03	5.42E-05	5.42E-07	-5.15E-04	-8.59E-04	-1.31E-04	-2.19E-05	-4.49E-05	-1.50E-06	-2.26E-05	-1.89E-07
272	372334	755356	Offsite Worker	8.71E-02	3.96E-06	6.83E-02	3.41E-01	5.71E-02	2.72E-04	7.28E-05	7.28E-07	5.27E-04	8.78E-04	1.43E-04	2.38E-05	4.60E-05	1.53E-06	3.52E-05	2.94E-07
273	372237	755359	Offsite Worker	1.69E-01	7.70E-06	1.45E-01	7.23E-01	1.22E-01	5.79E-04	6.97E-05	6.97E-07	2.21E-04	3.69E-04	6.33E-05	1.06E-05	1.93E-05	6.44E-07	1.85E-05	1.54E-07
274	372141	755362	Offsite Worker	-3.77E-01	-1.71E-05	-2.84E-01	-1.42E+00	-2.37E-01	-1.13E-03	6.88E-05	6.88E-07	1.31E-04	2.18E-04	3.57E-05	5.95E-06	1.14E-05	3.79E-07	1.35E-05	1.13E-07
275	372044	755366	Offsite Worker	1.33E-02	6.04E-07	1.25E-02	6.26E-02	1.06E-02	5.03E-05	6.77E-05	6.77E-07	4.28E-05	7.13E-05	7.00E-06	1.17E-06	3.73E-06	1.24E-07	8.69E-06	7.24E-08
276	371948	755369	Offsite Worker	-7.49E-02	-3.40E-06	-6.34E-02	-3.17E-01	-5.32E-02	-2.53E-04	7.75E-05	7.75E-07	3.51E-05	5.85E-05	-4.33E-05	-7.22E-06	3.06E-06	1.02E-07	9.21E-06	7.67E-08
277	371851	755372	Offsite Worker	-3.26E-01	-1.48E-05	-2.61E-01	-1.31E+00	-2.19E-01	-1.04E-03	8.94E-05	8.94E-07	3.01E-05	5.02E-05	-1.48E-05	-2.46E-06	2.63E-06	8.76E-08	1.01E-05	8.38E-08
278	371755	755375	Offsite Worker	-2.64E-01	-1.20E-05	-2.14E-01	-1.07E+00	-1.79E-01	-8.53E-04	1.04E-04	1.04E-06	1.54E-04	2.57E-04	2.15E-05	3.58E-06	1.34E-05	4.47E-07	1.81E-05	1.51E-07
279	371658	755378	Offsite Worker	-9.49E-02	-4.31E-06	-8.70E-02	-4.35E-01	-7.33E-02	-3.49E-04	1.10E-04	1.10E-06	1.93E-04	3.21E-04	4.03E-05	6.71E-06	1.68E-05	5.60E-07	2.07E-05	1.73E-07
280	371562	755382	Offsite Worker	3.19E-03	1.45E-07	1.52E-02	7.60E-02	1.32E-02	6.29E-05	1.07E-04	1.07E-06	3.98E-05	6.63E-05	9.76E-06	1.63E-06	3.47E-06	1.16E-07	1.22E-05	1.02E-07
281	371465	755385	Offsite Worker	3.52E-01	1.60E-05	3.16E-01	1.58E+00	2.66E-01	1.27E-03	1.06E-04	1.06E-06	-2.49E-04	-4.14E-04	-6.61E-05	-1.10E-05	-2.17E-05	-7.23E-07	-3.39E-06	-2.82E-08
282	371368	755388	Offsite Worker	4.50E-01	2.04E-05	3.81E-01	1.91E+00	3.20E-01	1.52E-03	1.09E-04	1.09E-06	-5.65E-04	-9.42E-04	-1.48E-04	-2.47E-05	-4.93E-05	-1.64E-06	-2.01E-05	-1.68E-07
283	371272	755391	Offsite Worker	2.96E-01	1.34E-05	2.43E-01	1.21E+00	2.03E-01	9.69E-04	1.09E-04	1.09E-06	-8.15E-04	-1.36E-03	-2.08E-04	-3.47E-05	-7.10E-05	-2.37E-06	-3.36E-05	-2.80E-07
284	371175	755395	Offsite Worker	1.24E-01	5.65E-06	1.05E-01	5.27E-01	8.86E-02	4.22E-04	1.10E-04	1.10E-06	-9.32E-04	-1.55E-03	-2.32E-04	-3.86E-05	-8.13E-05	-2.71E-06	-3.98E-05	-3.32E-07
285	371079	755398	Offsite Worker	6.92E-01	3.15E-05	5.75E-01	2.87E+00	4.82E-01	2.30E-03	1.19E-04	1.19E-06	-7.61E-04	-1.27E-03	-1.79E-04	-2.98E-05	-6.63E-05	-2.21E-06	-2.97E-05	-2.48E-07
286	371042	755478	Offsite Worker	1.69E-01	7.66E-06	1.53E-01	7.66E-01	1.29E-01	6.14E-04	1.26E-04	1.26E-06	-8.84E-04	-1.47E-03	-2.21E-04	-3.69E-05	-7.71E-05	-2.57E-06	-3.57E-05	-2.98E-07
287	371009	755538	Offsite Worker	6.79E-02	3.09E-06	7.50E-02	3.75E-01	6.36E-02	3.03E-04	1.35E-04	1.35E-06	-9.40E-04	-1.57E-03	-2.46E-04	-4.11E-05	-8.20E-05	-2.73E-06	-3.78E-05	-3.15E-07
288	370975	755597	Offsite Worker	5.73E-02	2.61E-06	5.33E-02	2.67E-01	4.49E-02	2.14E-04	1.32E-04	1.32E-06	-1.94E-04	-3.23E-04	-1.31E-04	-2.19E-05	-1.69E-05	-5.63E-07	2.02E-06	1.68E-08

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	xylene, total (µg/m³)	xylene, total Acute Hazard	arsenic (µg/m³)	arsenic Acute Hazard	chlorine (µg/m³)	chlorine Acute Hazard	copper (µg/m³)	copper Acute Hazard	mercury (µg/m³)	mercury Acute Hazard	nickel (µg/m³)	nickel Acute Hazard	vanadium (µg/m³)	vanadium Acute Hazard	sulfates (µg/m³)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.6		6		30		120
289	370925	755597	Offsite Worker	-1.01E-01	-4.60E-06	-8.43E-02	-4.21E-01	-7.07E-02	-3.37E-04	1.44E-04	1.44E-06	3.06E-04	5.10E-04	9.43E-06	1.57E-06	2.67E-05	8.89E-07	3.00E-05	2.50E-07
290	370860	755547	Offsite Worker	4.95E-01	2.25E-05	4.20E-01	2.10E+00	3.52E-01	1.68E-03	1.43E-04	1.43E-06	-4.45E-05	-7.41E-05	-1.27E-05	-2.12E-06	-3.88E-06	-1.29E-07	1.11E-05	9.21E-08
291	370796	755497	Offsite Worker	5.63E-01	2.56E-05	4.78E-01	2.39E+00	4.01E-01	1.91E-03	1.28E-04	1.28E-06	-1.09E-03	-1.82E-03	-2.71E-04	-4.52E-05	-9.50E-05	-3.17E-06	-4.66E-05	-3.88E-07
292	370733	755428	Offsite Worker	4.47E-01	2.03E-05	3.78E-01	1.89E+00	3.17E-01	1.51E-03	1.05E-04	1.05E-06	-6.59E-04	-1.10E-03	-2.15E-04	-3.58E-05	-5.75E-05	-1.92E-06	-2.56E-05	-2.13E-07
293	370634	755428	Offsite Worker	5.77E-01	2.62E-05	4.55E-01	2.27E+00	3.80E-01	1.81E-03	1.22E-04	1.22E-06	-7.93E-04	-1.32E-03	-2.21E-04	-3.69E-05	-6.92E-05	-2.31E-06	-3.12E-05	-2.60E-07
294	370536	755428	Offsite Worker	1.54E-01	6.99E-06	9.96E-02	4.98E-01	8.26E-02	3.93E-04	1.37E-04	1.37E-06	-9.28E-04	-1.55E-03	-2.59E-04	-4.32E-05	-8.09E-05	-2.70E-06	-3.70E-05	-3.08E-07
295	370437	755428	Offsite Worker	6.30E-01	2.87E-05	4.85E-01	2.43E+00	4.06E-01	1.93E-03	1.48E-04	1.48E-06	-2.45E-04	-4.08E-04	-8.24E-05	-1.37E-05	-2.14E-05	-7.12E-07	7.31E-07	6.09E-09
296	370338	755427	Offsite Worker	3.07E-01	1.40E-05	2.23E-01	1.11E+00	1.86E-01	8.85E-04	1.68E-04	1.68E-06	1.73E-04	2.88E-04	6.41E-05	1.07E-05	1.51E-05	5.02E-07	2.52E-05	2.10E-07
307	369249	755442	Offsite Worker	1.36E-01	6.17E-06	1.45E-01	7.26E-01	1.23E-01	5.86E-04	1.22E-04	1.22E-06	5.85E-04	9.74E-04	1.58E-04	2.64E-05	5.10E-05	1.70E-06	4.30E-05	3.58E-07
308	369151	755442	Offsite Worker	9.27E-01	4.21E-05	8.15E-01	4.08E+00	6.85E-01	3.26E-03	9.08E-05	9.08E-07	-1.32E-04	-2.20E-04	-6.57E-05	-1.10E-05	-1.15E-05	-3.84E-07	1.46E-06	1.22E-08
309	369052	755442	Offsite Worker	1.25E+00	5.68E-05	1.05E+00	5.27E+00	8.85E-01	4.22E-03	8.08E-05	8.08E-07	-8.45E-04	-1.41E-03	-2.11E-04	-3.52E-05	-7.37E-05	-2.46E-06	-3.79E-05	-3.16E-07
320	368035	755402	Offsite Worker	-1.28E-01	-5.82E-06	-1.51E-01	-7.54E-01	-1.28E-01	-6.10E-04	6.58E-05	6.58E-07	-7.10E-04	-1.18E-03	-2.53E-04	-4.21E-05	-6.19E-05	-2.06E-06	-3.21E-05	-2.67E-07
321	367960	755389	Offsite Worker	-7.86E-02	-3.57E-06	-1.08E-01	-5.42E-01	-9.25E-02	-4.40E-04	6.31E-05	6.31E-07	-6.07E-04	-1.01E-03	-2.21E-04	-3.68E-05	-5.30E-05	-1.77E-06	-2.68E-05	-2.23E-07
322	367863	755390	Offsite Worker	-1.53E-02	-6.98E-07	-5.05E-02	-2.52E-01	-4.37E-02	-2.08E-04	5.99E-05	5.99E-07	-3.25E-04	-5.42E-04	-1.49E-04	-2.48E-05	-2.83E-05	-9.45E-07	-1.19E-05	-9.88E-08
323	367766	755392	Offsite Worker	1.42E-01	6.45E-06	8.07E-02	4.03E-01	6.64E-02	3.16E-04	6.14E-05	6.14E-07	7.93E-05	1.32E-04	3.08E-07	5.13E-08	6.91E-06	2.30E-07	1.01E-05	8.39E-08
324	367669	755393	Offsite Worker	2.68E-01	1.22E-05	1.86E-01	9.29E-01	1.54E-01	7.36E-04	5.79E-05	5.79E-07	1.78E-04	2.96E-04	3.59E-05	5.98E-06	1.55E-05	5.16E-07	1.50E-05	1.25E-07
325	367572	755394	Offsite Worker	3.40E-01	1.55E-05	2.46E-01	1.23E+00	2.05E-01	9.78E-04	5.44E-05	5.44E-07	2.22E-04	3.70E-04	3.61E-05	6.01E-06	1.94E-05	6.45E-07	1.71E-05	1.42E-07
326	367475	755395	Offsite Worker	3.26E-01	1.48E-05	2.35E-01	1.18E+00	1.96E-01	9.33E-04	5.60E-05	5.60E-07	1.90E-04	3.17E-04	3.70E-05	6.16E-06	1.66E-05	5.52E-07	1.55E-05	1.29E-07
327	370400	756850	On-Site Occupational	9.15E-01	4.16E-05	7.34E-01	3.67E+00	6.15E-01	2.93E-03	1.45E-03	1.45E-05	-1.77E-04	-2.94E-04	-1.16E-04	-1.94E-05	-1.54E-05	-5.14E-07	1.27E-04	1.06E-06
328	369032	756750	On-Site Occupational	1.25E+00	5.68E-05	9.43E-01	4.72E+00	7.88E-01	3.75E-03	2.50E-04	2.50E-06	3.25E-03	5.41E-03	8.07E-04	1.35E-04	2.83E-04	9.44E-06	1.98E-04	1.65E-06
329	368737	756629	On-Site Occupational	6.17E-01	2.81E-05	5.35E-01	2.67E+00	4.49E-01	2.14E-03	1.47E-04	1.47E-06	8.54E-04	1.42E-03	3.78E-04	6.30E-05	7.45E-05	2.48E-06	5.99E-05	4.99E-07
330	368907	757031	On-Site Occupational	6.50E-01	2.96E-05	4.55E-01	2.28E+00	3.79E-01	1.80E-03	1.57E-04	1.57E-06	-2.83E-04	-4.71E-04	1.91E-05	3.18E-06	-2.47E-05	-8.22E-07	-3.89E-07	-3.24E-09
331	368990	756274	On-Site Occupational	-3.18E-01	-1.45E-05	-3.08E-01	-1.54E+00	-2.60E-01	-1.24E-03	1.70E-04	1.70E-06	-1.41E-03	-2.36E-03	-5.02E-04	-8.37E-05	-1.23E-04	-4.11E-06	-6.01E-05	-5.01E-07
332	369550	756745	On-Site Occupational	-5.29E+00	-2.40E-04	-4.27E+00	-2.14E+01	-3.58E+00	-1.70E-02	2.80E-04	2.80E-06	-1.47E-02	-2.45E-02	-3.75E-03	-6.25E-04	-1.28E-03	-4.28E-05	-7.66E-04	-6.38E-06
1	367379	755396	Recreational	2.41E-01	1.10E-05	1.64E-01	8.21E-01	1.36E-01	6.50E-04	5.54E-05	5.54E-07	2.48E-04	4.14E-04	4.69E-05	7.82E-06	2.16E-05	7.21E-07	1.86E-05	1.55E-07
2	367340	755485	Recreational	1.09E-02	4.96E-07	-3.52E-02	-1.76E-01	-3.11E-02	-1.48E-04	5.57E-05	5.57E-07	2.78E-04	4.63E-04	6.15E-05	1.03E-05	2.42E-05	8.08E-07	2.02E-05	1.68E-07
3	367301	755573	Recreational	-1.38E-01	-6.29E-06	-1.68E-01	-8.42E-01	-1.43E-01	-6.82E-04	5.73E-05	5.73E-07	2.50E-04	4.16E-04	5.85E-05	9.74E-06	2.18E-05	7.26E-07	1.89E-05	1.57E-07
4	367263	755661	Recreational	-3.27E-01	-1.49E-05	-3.30E-01	-1.65E+00	-2.79E-01	-1.33E-03	5.92E-05	5.92E-07	3.61E-04	6.02E-04	7.49E-05	1.25E-05	3.15E-05	1.05E-06	2.50E-05	2.09E-07
5	367224	755749	Recreational	-4.15E-01	-1.89E-05	-3.96E-01	-1.98E+00	-3.34E-01	-1.59E-03	6.46E-05	6.46E-07	6.39E-04	1.06E-03	1.91E-04	3.18E-05	5.57E-05	1.86E-06	4.05E-05	3.37E-07
6	367186	755838	Recreational	-2.67E-01	-1.22E-05	-2.50E-01	-1.25E+00	-2.11E-01	-1.00E-03	6.40E-05	6.40E-07	6.91E-04	1.15E-03	2.05E-04	3.41E-05	6.03E-05	2.01E-06	4.33E-05	3.61E-07
7	367147	755926	Recreational	-3.31E-01	-1.50E-05	-2.84E-01	-1.42E+00	-2.38E-01	-1.14E-03	6.00E-05	6.00E-07	4.37E-04	7.28E-04	1.46E-04	2.44E-05	3.81E-05	1.27E-06	2.92E-05	2.43E-07
8	367109	756014	Recreational	-4.62E-01	-2.10E-05	-3.91E-01	-1.95E+00	-3.28E-01	-1.56E-03	5.02E-05	5.02E-07	1.09E-04	1.82E-04	5.27E-05	8.79E-06	9.51E-06	3.17E-07	1.06E-05	8.84E-08
9	367070	756103	Recreational	-7.89E-03	-3.59E-07	-1.97E-02	-9.87E-02	-1.70E-02	-8.11E-05	4.36E-05	4.36E-07	-1.40E-04	-2.33E-04	-2.49E-05	-4.15E-06	-1.22E-05	-4.06E-07	-3.40E-06	-2.84E-08
10	367032	756191	Recreational	-5.08E-02	-2.31E-06	-7.40E-02	-3.70E-01	-6.32E-02	-3.01E-04	4.71E-05	4.71E-07	4.15E-05	6.92E-05	2.19E-05	3.66E-06	3.62E-06	1.21E-07	6.68E-06	5.57E-08
11	366993	756279	Recreational	-4.49E-01	-2.04E-05	-4.00E-01	-2.00E+00	-3.37E-01	-1.60E-03	4.87E-05	4.87E-07	1.08E-04	1.81E-04	6.60E-05	1.10E-05	9.46E-06	3.15E-07	1.04E-05	8.69E-08
12	366954	756367	Recreational	-6.95E-01	-3.16E-05	-5.98E-01	-2.99E+00	-5.03E-01	-2.39E-03	4.59E-05	4.59E-07	3.25E-05	5.42E-05	4.96E-05	8.26E-06	2.83E-06	9.45E-08	6.08E-06	5.07E-08
13	366916	756456	Recreational	-2.27E-01	-1.03E-05	-2.27E-01	-1.13E+00	-1.92E-01	-9.12E-04	4.44E-05	4.44E-07	-3.84E-06	-6.40E-06	1.88E-05	3.13E-06	-3.35E-07	-1.12E-08	3.98E-06	3.32E-08
14	366877	756544	Recreational	-7.16E-02	-3.25E-06	-9.38E-02	-4.69E-01	-7.99E-02	-3.81E-04	4.66E-05	4.66E-07	1.59E-04	2.66E-04	3.13E-05	5.21E-06	1.39E-05	4.64E-07	1.30E-05	1.08E-07
15	366839	756632	Recreational	-1.08E-01	-4.91E-06	-1.20E-01	-5.99E-01	-1.02E-01	-4.84E-04	5.13E-05	5.13E-07	3.08E-04	5.14E-04	8.18E-05	1.36E-05	2.69E-05	8.96E-07	2.14E-05	1.79E-07
16	366800	756720	Recreational	-1.74E-01	-7.89E-06	-1.67E-01	-8.34E-01	-1.41E-01	-6.70E-04	4.99E-05	4.99E-07	3.29E-04	5.49E-04	7.65E-05	1.28E-05	2.87E-05	9.58E-07	2.24E-05	1.87E-07
17	366762	756809	Recreational	-1.43E-01	-6.50E-06	-1.37E-01	-6.83E-01	-1.15E-01	-5.49E-04	5.03E-05	5.03E-07	2.62E-04	4.36E-04	7.00E-05	1.17E-05	2.28E-05	7.61E-07	1.88E-05	1.57E-07
18	366723	756897	Recreational	-1.02E-01	-4.64E-06	-9.89E-02	-4.95E-01	-8.35E-02	-3.98E-04	5.12E-05	5.12E-07	1.84E-04	3.07E-04	5.22E-05	8.69E-06	1.60E-05	5.35E-07	1.47E-05	1.23E-07
19	366685	756985	Recreational	-1.91E-01	-8.66E-06	-1.66E-01	-8.30E-01	-1.39E-01	-6.64E-04	4.64E-05	4.64E-07	-1.08E-05	-1.79E-05	-2.63E-05	-4.38E-06	-9.39E-07	-3.13E-08	3.80E-06	3.17E-08
20	366646	757074	Recreational	-1.99E-01	-9.05E-06	-1.70E-01	-8.51E-01	-1.43E-01	-6.81E-04	4.29E-05	4.29E-07	-2.46E-04	-4.11E-04	-9.38E-05	-1.56E-05	-2.15E-05	-7.16E-07	-9.22E-06	-7.68E-08
21	366607	757162	Recreational	-3.77E-02	-1.71E-06	-4.37E-02	-2.19E-01	-3.71E-02	-1.77E-04	4.11E-05	4.11E-07	-4.61E-04	-7.69E-04	-1.27E-04	-2.12E-05	-4.02E-05	-1.34E-06	-2.10E-05	-1.75E-07
22	366569	757250	Recreational	5.70E-02	2.59E-06	2.78E-02	1.39E-01	2.26E-02	1.08E-04	4.31E-05	4.31E-07	-1.86E-04	-3.10E-04	-6.22E-05	-1.04E-05	-1.62E-05	-5.40E-07	-5.94E-06	-4.95E-08
23	366530	757338	Recreational	2.34E-02	1.06E-06	1.21E-03	6.05E-03	3.62E-04	1.72E-06	4.64E-05	4.64E-07	6.59E-05	1.10E-04	1.50E-05	2.50E-06	5.74E-06	1.91E-07	7.92E-06	6.60E-08
24	366492	757427	Recreational	-2.59E-02	-1.18E-06	-3.62E-02	-1.81E-01	-3.09E-02	-1.47E-04	4.21E-05	4.21E-07	-1.56E-04	-2.59E-04	-3.57E-05	-5.95E-06	-1.36E-05	-4.52E-07	-4.40E-06	-3.67E-08
25	366453	757515	Recreational	-1.10E-01	-5.02E-06	-1.01E-01	-5.07E-01	-8.54E-02	-4.07E-04	4.12E-05	4.12E-07	-3.55E-04	-5.91E-04	-8.34E-05	-1.39E-05	-3.09E-05	-1.03E-06	-1.52E-05	-1.27E-07
26	366415	757603	Recreational	-1.49E-01	-6.75E-06	-1.29E-01	-6.46E-01	-1.09E-01	-5.17E-04	3.91E-05	3.91E-07	-4.00E-04	-6.67E-04	-1.06E-04	-1.77E-05	-3.49E-05	-1.16E-06	-1.79E-05	-1.49E-07
27	366376	757692	Recreational	-1.86E-01	-8.46E-06	-1.58E-01	-7.92E-01	-1.33E-01	-6.33E-04	3.65E-05	3.65E-07	-2.84E-04	-4.73E-04	-9.13E-05	-1.52E-05	-2.47E-05	-8.24E-07	-1.18E-05	-9.86E-08
84	369336	758100	Recreational	-9.43E-01	-4.29E-05	-7.58E-01	-3.79E+00	-6.35E-01	-3.02E-03	1.31E-04	1.31E-06	-9.35E-04	-1.56E-03	-2.12E-04	-3.54E-05	-8.15E-05	-2.72E-06	-3.80E-05	-3.17E-07

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	xylene, total (μg/m^3)	xylene, total Acute Hazard	arsenic (μg/m^3)	arsenic Acute Hazard	chlorine (μg/m^3)	chlorine Acute Hazard	copper (μg/m^3)	copper Acute Hazard	mercury (μg/m^3)	mercury Acute Hazard	nickel (μg/m^3)	nickel Acute Hazard	vanadium (μg/m^3)	vanadium Acute Hazard	sulfates (μg/m^3)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.6		6		30		120
85	369269	758170	Recreational	-1.13E+00	-5.12E-05	-8.88E-01	-4.44E+00	-7.44E-01	-3.54E-03	1.19E-04	1.19E-06	-5.56E-04	-9.27E-04	-1.27E-04	-2.12E-05	-4.85E-05	-1.62E-06	-1.87E-05	-1.56E-07
86	369202	758239	Recreational	-1.32E+00	-5.99E-05	-1.04E+00	-5.18E+00	-8.67E-01	-4.13E-03	1.10E-04	1.10E-06	-4.43E-04	-7.38E-04	-9.68E-05	-1.61E-05	-3.86E-05	-1.29E-06	-1.35E-05	-1.12E-07
87	369264	758285	Recreational	-8.61E-01	-3.91E-05	-6.81E-01	-3.41E+00	-5.70E-01	-2.72E-03	1.11E-04	1.11E-06	-5.58E-04	-9.30E-04	-1.27E-04	-2.12E-05	-4.87E-05	-1.62E-06	-1.96E-05	-1.63E-07
88	369326	758330	Recreational	-6.31E-01	-2.87E-05	-5.03E-01	-2.51E+00	-4.21E-01	-2.01E-03	1.06E-04	1.06E-06	-9.44E-04	-1.57E-03	-2.33E-04	-3.88E-05	-8.23E-05	-2.74E-06	-4.08E-05	-3.40E-07
89	369389	758376	Recreational	-4.14E-01	-1.88E-05	-3.25E-01	-1.62E+00	-2.72E-01	-1.29E-03	1.06E-04	1.06E-06	-9.39E-04	-1.56E-03	-2.25E-04	-3.76E-05	-8.19E-05	-2.73E-06	-4.06E-05	-3.38E-07
90	369389	758462	Recreational	-4.15E-01	-1.88E-05	-3.24E-01	-1.62E+00	-2.71E-01	-1.29E-03	9.89E-05	9.89E-07	-9.28E-04	-1.55E-03	-2.23E-04	-3.72E-05	-8.09E-05	-2.70E-06	-4.07E-05	-3.39E-07
91	369389	758548	Recreational	-3.81E-01	-1.73E-05	-2.95E-01	-1.48E+00	-2.47E-01	-1.18E-03	9.18E-05	9.18E-07	-8.96E-04	-1.49E-03	-2.17E-04	-3.62E-05	-7.81E-05	-2.60E-06	-3.96E-05	-3.30E-07
28	366338	757780	Residential	-2.06E-01	-9.36E-06	-1.71E-01	-8.53E-01	-1.43E-01	-6.81E-04	3.76E-05	3.76E-07	4.16E-05	6.94E-05	-1.22E-05	-2.03E-06	3.63E-06	1.21E-07	5.79E-06	4.83E-08
29	366402	757746	Residential	-2.01E-01	-9.15E-06	-1.68E-01	-8.38E-01	-1.41E-01	-6.70E-04	3.74E-05	3.74E-07	-4.88E-05	-8.13E-05	-3.72E-05	-6.21E-06	-4.25E-06	-1.42E-07	9.04E-07	7.53E-09
30	366467	757713	Residential	-1.98E-01	-9.00E-06	-1.66E-01	-8.29E-01	-1.39E-01	-6.62E-04	3.75E-05	3.75E-07	-1.32E-04	-2.21E-04	-6.04E-05	-1.01E-05	-1.16E-05	-3.85E-07	-3.59E-06	-2.99E-08
31	366531	757679	Residential	-1.97E-01	-8.93E-06	-1.65E-01	-8.27E-01	-1.39E-01	-6.61E-04	3.76E-05	3.76E-07	-2.20E-04	-3.66E-04	-8.42E-05	-1.40E-05	-1.92E-05	-6.39E-07	-8.28E-06	-6.90E-08
32	366567	757773	Residential	-1.85E-01	-8.43E-06	-1.49E-01	-7.43E-01	-1.24E-01	-5.93E-04	4.10E-05	4.10E-07	7.52E-05	1.25E-04	-1.42E-06	-2.37E-07	6.56E-06	2.19E-07	7.92E-06	6.60E-08
33	366625	757758	Residential	-1.64E-01	-7.46E-06	-1.31E-01	-6.57E-01	-1.10E-01	-5.24E-04	4.18E-05	4.18E-07	7.21E-05	1.20E-04	-2.02E-06	-3.36E-07	6.29E-06	2.10E-07	7.83E-06	6.52E-08
34	366682	757744	Residential	-1.40E-01	-6.35E-06	-1.12E-01	-5.58E-01	-9.35E-02	-4.45E-04	4.25E-05	4.25E-07	6.65E-05	1.11E-04	-3.46E-06	-5.76E-07	5.80E-06	1.93E-07	7.59E-06	6.33E-08
35	366768	757788	Residential	-1.58E-01	-7.18E-06	-1.20E-01	-5.99E-01	-1.00E-01	-4.76E-04	4.56E-05	4.56E-07	5.82E-06	9.70E-06	-5.91E-06	-9.84E-07	5.07E-07	1.69E-08	4.61E-06	3.84E-08
36	366854	757833	Residential	-2.77E-02	-1.26E-06	-1.41E-02	-7.07E-02	-1.15E-02	-5.50E-05	4.72E-05	4.72E-07	-1.80E-04	-3.00E-04	-3.10E-05	-5.17E-06	-1.57E-05	-5.23E-07	-5.23E-06	-4.36E-08
37	366941	757877	Residential	-7.10E-02	-3.23E-06	-5.75E-02	-2.87E-01	-4.82E-02	-2.29E-04	4.34E-05	4.34E-07	-5.55E-04	-9.25E-04	-1.35E-04	-2.25E-05	-4.84E-05	-1.61E-06	-2.58E-05	-2.15E-07
38	367027	757922	Residential	-9.62E-03	-4.37E-07	-8.44E-03	-4.22E-02	-7.09E-03	-3.38E-05	4.25E-05	4.25E-07	-6.76E-04	-1.13E-03	-1.72E-04	-2.87E-05	-5.89E-05	-1.96E-06	-3.24E-05	-2.70E-07
39	367113	757966	Residential	-2.40E-02	-1.09E-06	-1.68E-02	-8.38E-02	-1.39E-02	-6.64E-05	4.66E-05	4.66E-07	-6.27E-04	-1.05E-03	-1.54E-04	-2.56E-05	-5.47E-05	-1.82E-06	-2.94E-05	-2.45E-07
40	367192	757916	Residential	-2.44E-02	-1.11E-06	-1.85E-02	-9.27E-02	-1.55E-02	-7.38E-05	4.77E-05	4.77E-07	-6.83E-04	-1.14E-03	-1.69E-04	-2.82E-05	-5.96E-05	-1.99E-06	-3.23E-05	-2.69E-07
41	367264	757916	Residential	-2.57E-02	-1.17E-06	-1.84E-02	-9.22E-02	-1.54E-02	-7.32E-05	5.01E-05	5.01E-07	-6.62E-04	-1.10E-03	-1.61E-04	-2.69E-05	-5.77E-05	-1.92E-06	-3.09E-05	-2.58E-07
42	367335	757916	Residential	5.75E-02	2.61E-06	4.79E-02	2.40E-01	4.02E-02	1.91E-04	5.28E-05	5.28E-07	-6.15E-04	-1.03E-03	-1.48E-04	-2.46E-05	-5.37E-05	-1.79E-06	-2.82E-05	-2.35E-07
43	367343	757966	Residential	8.12E-02	3.69E-06	7.04E-02	3.52E-01	5.92E-02	2.82E-04	5.71E-05	5.71E-07	-3.93E-04	-6.55E-04	-8.78E-05	-1.46E-05	-3.43E-05	-1.14E-06	-1.58E-05	-1.32E-07
44	367404	757995	Residential	1.79E-01	8.15E-06	1.51E-01	7.56E-01	1.27E-01	6.04E-04	6.39E-05	6.39E-07	-1.01E-04	-1.69E-04	-1.12E-05	-1.87E-06	-8.83E-06	-2.94E-07	5.72E-07	4.77E-09
45	367465	758024	Residential	1.24E-01	5.61E-06	1.08E-01	5.39E-01	9.06E-02	4.31E-04	6.96E-05	6.96E-07	2.15E-04	3.59E-04	7.79E-05	1.30E-05	1.88E-05	6.25E-07	1.82E-05	1.51E-07
55	367673	758189	Residential	-4.13E-01	-1.88E-05	-3.32E-01	-1.66E+00	-2.78E-01	-1.32E-03	5.49E-05	5.49E-07	-7.02E-04	-1.17E-03	-1.49E-04	-2.48E-05	-6.12E-05	-2.04E-06	-3.26E-05	-2.72E-07
59	367816	758096	Residential	-5.78E-01	-2.63E-05	-4.65E-01	-2.33E+00	-3.90E-01	-1.86E-03	5.97E-05	5.97E-07	-6.83E-04	-1.14E-03	-1.44E-04	-2.39E-05	-5.96E-05	-1.99E-06	-3.12E-05	-2.60E-07
60	367898	758066	Residential	-6.81E-01	-3.09E-05	-5.41E-01	-2.70E+00	-4.53E-01	-2.16E-03	6.20E-05	6.20E-07	-7.25E-04	-1.21E-03	-1.57E-04	-2.62E-05	-6.32E-05	-2.11E-06	-3.32E-05	-2.77E-07
61	367980	758035	Residential	-5.60E-01	-2.55E-05	-4.15E-01	-2.07E+00	-3.46E-01	-1.65E-03	6.27E-05	6.27E-07	-7.94E-04	-1.32E-03	-1.70E-04	-2.84E-05	-6.92E-05	-2.31E-06	-3.68E-05	-3.07E-07
62	368062	758005	Residential	-3.75E-01	-1.71E-05	-2.37E-01	-1.19E+00	-1.96E-01	-9.35E-04	6.46E-05	6.46E-07	-8.25E-04	-1.37E-03	-1.72E-04	-2.86E-05	-7.19E-05	-2.40E-06	-3.83E-05	-3.19E-07
63	368144	757975	Residential	-1.62E-01	-7.36E-06	-2.47E-02	-1.24E-01	-1.68E-02	-8.00E-05	7.40E-05	7.40E-07	-6.66E-04	-1.11E-03	-1.05E-04	-1.75E-05	-5.81E-05	-1.94E-06	-2.89E-05	-2.41E-07
64	368226	757945	Residential	-2.19E-01	-9.97E-06	-9.45E-02	-4.73E-01	-7.62E-02	-3.63E-04	8.18E-05	8.18E-07	-5.26E-04	-8.77E-04	-5.86E-05	-9.77E-06	-4.59E-05	-1.53E-06	-2.06E-05	-1.72E-07
65	368301	757943	Residential	-3.26E-01	-1.48E-05	-2.43E-01	-1.21E+00	-2.02E-01	-9.64E-04	8.33E-05	8.33E-07	-3.16E-04	-5.26E-04	-1.77E-05	-2.94E-06	-2.75E-05	-9.17E-07	-9.14E-06	-7.62E-08
66	368376	757941	Residential	-2.54E-01	-1.15E-05	-2.12E-01	-1.06E+00	-1.78E-01	-8.47E-04	7.99E-05	7.99E-07	-2.55E-04	-4.25E-04	-3.33E-05	-5.54E-06	-2.22E-05	-7.41E-07	-6.20E-06	-5.16E-08
67	368452	757940	Residential	-1.83E-02	-8.34E-07	-2.76E-02	-1.38E-01	-2.36E-02	-1.12E-04	8.05E-05	8.05E-07	-2.38E-04	-3.96E-04	-4.24E-05	-7.07E-06	-2.07E-05	-6.91E-07	-5.21E-06	-4.34E-08
68	368527	757938	Residential	2.06E-01	9.36E-06	1.81E-01	9.07E-01	1.53E-01	7.27E-04	8.48E-05	8.48E-07	-3.69E-04	-6.15E-04	-1.60E-05	-2.67E-06	-3.22E-05	-1.07E-06	-1.19E-05	-9.90E-08
69	368563	757880	Residential	1.30E-01	5.91E-06	1.28E-01	6.40E-01	1.08E-01	5.15E-04	8.36E-05	8.36E-07	-3.17E-04	-5.28E-04	-1.04E-05	-1.73E-06	-2.76E-05	-9.22E-07	-9.18E-06	-7.65E-08
70	368636	757926	Residential	2.30E-01	1.05E-05	2.18E-01	1.09E+00	1.84E-01	8.75E-04	8.35E-05	8.35E-07	-5.14E-04	-8.57E-04	-9.37E-05	-1.56E-05	-4.48E-05	-1.49E-06	-1.98E-05	-1.65E-07
71	368709	757971	Residential	1.81E-01	8.21E-06	1.78E-01	8.92E-01	1.51E-01	7.17E-04	8.32E-05	8.32E-07	-8.37E-04	-1.39E-03	-1.96E-04	-3.27E-05	-7.30E-05	-2.43E-06	-3.72E-05	-3.10E-07
72	368782	758017	Residential	1.60E-01	7.25E-06	1.52E-01	7.59E-01	1.28E-01	6.10E-04	8.19E-05	8.19E-07	-6.67E-04	-1.11E-03	-1.24E-04	-2.06E-05	-5.82E-05	-1.94E-06	-2.82E-05	-2.35E-07
73	368855	758062	Residential	-1.09E-01	-4.95E-06	-9.25E-02	-4.63E-01	-7.77E-02	-3.70E-04	9.45E-05	9.45E-07	-6.75E-04	-1.13E-03	-1.27E-04	-2.12E-05	-5.89E-05	-1.96E-06	-2.75E-05	-2.29E-07
74	368928	758108	Residential	-8.00E-01	-3.64E-05	-6.49E-01	-3.25E+00	-5.44E-01	-2.59E-03	8.85E-05	8.85E-07	-9.05E-04	-1.51E-03	-2.02E-04	-3.36E-05	-7.89E-05	-2.63E-06	-4.04E-05	-3.37E-07
75	369001	758153	Residential	-8.99E-01	-4.08E-05	-7.26E-01	-3.63E+00	-6.08E-01	-2.90E-03	1.11E-04	1.11E-06	-4.38E-04	-7.30E-04	-8.88E-05	-1.48E-05	-3.82E-05	-1.27E-06	-1.32E-05	-1.10E-07
76	369058	758074	Residential	-1.02E+00	-4.65E-05	-8.23E-01	-4.11E+00	-6.89E-01	-3.28E-03	1.16E-04	1.16E-06	-4.78E-04	-7.97E-04	-1.05E-04	-1.75E-05	-4.17E-05	-1.39E-06	-1.48E-05	-1.24E-07
77	369102	758103	Residential	-9.40E-01	-4.27E-05	-7.40E-01	-3.70E+00	-6.19E-01	-2.95E-03	1.06E-04	1.06E-06	-1.05E-03	-1.74E-03	-2.66E-04	-4.43E-05	-9.12E-05	-3.04E-06	-4.63E-05	-3.86E-07
78	369145	758132	Residential	-1.14E+00	-5.17E-05	-8.99E-01	-4.49E+00	-7.52E-01	-3.58E-03	9.93E-05	9.93E-07	-1.22E-03	-2.03E-03	-3.32E-04	-5.53E-05	-1.06E-04	-3.54E-06	-5.63E-05	-4.69E-07
79	369200	758065	Residential	-1.43E+00	-6.49E-05	-1.13E+00	-5.65E+00	-9.47E-01	-4.51E-03	1.10E-04	1.10E-06	-1.15E-03	-1.92E-03	-3.06E-04	-5.10E-05	-1.01E-04	-3.35E-06	-5.17E-05	-4.31E-07
80	369255	757998	Residential	-1.49E+00	-6.79E-05	-1.18E+00	-5.92E+00	-9.92E-01	-4.72E-03	1.30E-04	1.30E-06	-9.42E-04	-1.57E-03	-2.17E-04	-3.61E-05	-8.22E-05	-2.74E-06	-3.85E-05	-3.21E-07
81	369310	757931	Residential	-1.52E+00	-6.93E-05	-1.22E+00	-6.08E+00	-1.02E+00	-4.85E-03	1.53E-04	1.53E-06	-5.85E-04	-9.75E-04	-1.20E-04	-2.00E-05	-5.10E-05	-1.70E-06	-1.70E-05	-1.42E-07
82	369356	757981	Residential	-1.31E+00	-5.96E-05	-1.05E+00	-5.27E+00	-8.83E-01	-4.20E-03	1.47E-04	1.47E-06	-9.55E-04	-1.59E-03	-2.21E-04	-3.69E-05	-8.33E-05	-2.78E-06	-3.76E-05	-3.13E-07
83	369403	758031	Residential	-5.69E-01	-2.59E-05	-4.52E-01	-2.26E+00	-3.79E-01	-1.80E-03	1.42E-04	1.42E-06	-1.25E-03	-2.09E-03	-3.13E-04	-5.21E-05	-1.09E-04	-3.64E-06	-5.40E-05	-4.50E-07
92	369389	758634	Residential	-3.18E-01	-1.45E-05	-2.43E-01	-1.21E+00	-2.03E-01	-9.66E-04	8.67E-05	8.67E-07	-8.50E-04	-1.42E-03	-2.08E-04	-3.47E-05	-7.41E-05	-2.47E-06	-3.76E-05	-3.13E-07

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	xylene, total (µg/m³)	xylene, total Acute Hazard	arsenic (µg/m³)	arsenic Acute Hazard	chlorine (µg/m³)	chlorine Acute Hazard	copper (µg/m³)	copper Acute Hazard	mercury (µg/m³)	mercury Acute Hazard	nickel (µg/m³)	nickel Acute Hazard	vanadium (µg/m³)	vanadium Acute Hazard	sulfates (µg/m³)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.6		6		30		120
93	369469	758630	Residential	-4.25E-01	-1.93E-05	-3.29E-01	-1.64E+00	-2.75E-01	-1.31E-03	9.96E-05	9.96E-07	-3.19E-04	-5.32E-04	-4.88E-05	-8.13E-06	-2.78E-05	-9.28E-07	-7.80E-06	-6.50E-08
94	369549	758625	Residential	-5.97E-01	-2.71E-05	-4.76E-01	-2.38E+00	-3.98E-01	-1.90E-03	1.09E-04	1.09E-06	-3.06E-04	-5.10E-04	-8.43E-05	-1.41E-05	-2.67E-05	-8.90E-07	-6.19E-06	-5.16E-08
95	369630	758621	Residential	-7.79E-01	-3.54E-05	-6.23E-01	-3.11E+00	-5.21E-01	-2.48E-03	1.10E-04	1.10E-06	-5.58E-04	-9.30E-04	-1.35E-04	-2.24E-05	-4.87E-05	-1.62E-06	-1.96E-05	-1.64E-07
96	369710	758617	Residential	-1.09E+00	-4.97E-05	-8.76E-01	-4.38E+00	-7.33E-01	-3.49E-03	9.18E-05	9.18E-07	-5.64E-04	-9.40E-04	-1.86E-04	-3.10E-05	-4.92E-05	-1.64E-06	-2.17E-05	-1.81E-07
97	369791	758613	Residential	-7.04E-01	-3.20E-05	-5.64E-01	-2.82E+00	-4.72E-01	-2.25E-03	8.66E-05	8.66E-07	-7.29E-04	-1.22E-03	-2.13E-04	-3.54E-05	-6.36E-05	-2.12E-06	-3.11E-05	-2.59E-07
98	369791	758514	Residential	-8.06E-01	-3.67E-05	-6.46E-01	-3.23E+00	-5.41E-01	-2.58E-03	9.32E-05	9.32E-07	-9.90E-04	-1.65E-03	-2.82E-04	-4.70E-05	-8.63E-05	-2.88E-06	-4.45E-05	-3.71E-07
99	369791	758416	Residential	-9.66E-01	-4.39E-05	-7.75E-01	-3.87E+00	-6.49E-01	-3.09E-03	9.92E-05	9.92E-07	-1.28E-03	-2.14E-03	-3.59E-04	-5.98E-05	-1.12E-04	-3.74E-06	-5.98E-05	-4.99E-07
100	369791	758318	Residential	-1.27E+00	-5.79E-05	-1.02E+00	-5.12E+00	-8.58E-01	-4.09E-03	1.15E-04	1.15E-06	-1.49E-03	-2.49E-03	-3.94E-04	-6.57E-05	-1.30E-04	-4.34E-06	-6.96E-05	-5.80E-07
101	369881	758318	Residential	-1.13E+00	-5.15E-05	-9.16E-01	-4.58E+00	-7.68E-01	-3.66E-03	1.15E-04	1.15E-06	-1.61E-03	-2.68E-03	-3.97E-04	-6.61E-05	-1.40E-04	-4.67E-06	-7.57E-05	-6.31E-07
102	369972	758318	Residential	-2.24E-01	-1.02E-05	-1.90E-01	-9.49E-01	-1.59E-01	-7.59E-04	1.21E-04	1.21E-06	-1.32E-03	-2.20E-03	-3.45E-04	-5.75E-05	-1.15E-04	-3.84E-06	-5.98E-05	-4.99E-07
103	370062	758318	Residential	1.02E-01	4.62E-06	8.25E-02	4.13E-01	6.92E-02	3.29E-04	1.41E-04	1.41E-06	-6.39E-04	-1.07E-03	-1.49E-04	-2.48E-05	-5.57E-05	-1.86E-06	-2.11E-05	-1.76E-07
104	370153	758318	Residential	-4.74E-02	-2.16E-06	-3.11E-02	-1.55E-01	-2.58E-02	-1.23E-04	1.53E-04	1.53E-06	-6.32E-04	-1.05E-03	-1.07E-04	-1.79E-05	-5.51E-05	-1.84E-06	-1.96E-05	-1.64E-07
105	370243	758318	Residential	2.45E-01	1.11E-05	2.21E-01	1.10E+00	1.86E-01	8.85E-04	1.58E-04	1.58E-06	-8.64E-04	-1.44E-03	-1.61E-04	-2.68E-05	-7.53E-05	-2.51E-06	-3.16E-05	-2.63E-07
111	370408	758347	Residential	2.48E-01	1.13E-05	2.12E-01	1.06E+00	1.78E-01	8.49E-04	1.62E-04	1.62E-06	5.97E-04	9.95E-04	1.75E-04	2.91E-05	5.21E-05	1.74E-06	4.75E-05	3.96E-07
112	370490	758344	Residential	-6.22E-03	-2.83E-07	-2.12E-03	-1.06E-02	-1.67E-03	-7.96E-06	1.65E-04	1.65E-06	1.17E-03	1.94E-03	3.54E-04	5.91E-05	1.02E-04	3.39E-06	7.84E-05	6.53E-07
113	370572	758341	Residential	3.96E-01	1.80E-05	3.12E-01	1.56E+00	2.61E-01	1.24E-03	1.54E-04	1.54E-06	8.10E-04	1.35E-03	3.07E-04	5.12E-05	7.07E-05	2.36E-06	5.82E-05	4.85E-07
114	370654	758338	Residential	2.93E-01	1.33E-05	2.34E-01	1.17E+00	1.96E-01	9.33E-04	1.38E-04	1.38E-06	2.19E-04	3.65E-04	1.65E-04	2.75E-05	1.91E-05	6.37E-07	2.48E-05	2.07E-07
115	370735	758335	Residential	1.63E-01	7.42E-06	1.34E-01	6.72E-01	1.13E-01	5.37E-04	1.29E-04	1.29E-06	-2.68E-04	-4.47E-04	-1.37E-05	-2.28E-06	-2.34E-05	-7.80E-07	-2.30E-06	-1.91E-08
116	370817	758333	Residential	7.22E-01	3.28E-05	5.86E-01	2.93E+00	4.91E-01	2.34E-03	1.22E-04	1.22E-06	-2.64E-04	-4.41E-04	-2.09E-05	-3.49E-06	-2.31E-05	-7.68E-07	-2.71E-06	-2.26E-08
130	371183	758027	Residential	-5.38E-02	-2.45E-06	-5.75E-02	-2.87E-01	-4.87E-02	-2.32E-04	1.53E-04	1.53E-06	5.17E-04	8.61E-04	1.62E-04	2.70E-05	4.51E-05	1.50E-06	4.23E-05	3.52E-07
131	371248	758024	Residential	2.03E-01	9.21E-06	1.40E-01	7.01E-01	1.17E-01	5.55E-04	1.40E-04	1.40E-06	5.41E-04	9.02E-04	1.75E-04	2.92E-05	4.72E-05	1.57E-06	4.23E-05	3.53E-07
132	371326	758075	Residential	2.20E-01	9.98E-06	1.52E-01	7.61E-01	1.27E-01	6.03E-04	1.33E-04	1.33E-06	5.81E-04	9.68E-04	1.83E-04	3.05E-05	5.06E-05	1.69E-06	4.38E-05	3.65E-07
133	371404	758127	Residential	1.36E-01	6.18E-06	8.55E-02	4.27E-01	7.07E-02	3.37E-04	1.26E-04	1.26E-06	5.90E-04	9.84E-04	1.81E-04	3.02E-05	5.15E-05	1.72E-06	4.37E-05	3.64E-07
134	371481	758178	Residential	5.26E-02	2.39E-06	1.88E-02	9.39E-02	1.49E-02	7.08E-05	1.19E-04	1.19E-06	5.88E-04	9.80E-04	1.77E-04	2.95E-05	5.13E-05	1.71E-06	4.29E-05	3.57E-07
135	371559	758230	Residential	-2.67E-02	-1.22E-06	-4.47E-02	-2.23E-01	-3.83E-02	-1.82E-04	1.11E-04	1.11E-06	5.79E-04	9.66E-04	1.71E-04	2.85E-05	5.05E-05	1.68E-06	4.17E-05	3.47E-07
136	371637	758281	Residential	-7.99E-02	-3.63E-06	-8.67E-02	-4.34E-01	-7.35E-02	-3.50E-04	1.06E-04	1.06E-06	5.65E-04	9.42E-04	1.64E-04	2.73E-05	4.93E-05	1.64E-06	4.05E-05	3.37E-07
137	371715	758333	Residential	-1.05E-01	-4.78E-06	-1.06E-01	-5.30E-01	-8.96E-02	-4.27E-04	1.02E-04	1.02E-06	5.48E-04	9.14E-04	1.56E-04	2.60E-05	4.78E-05	1.59E-06	3.91E-05	3.26E-07
138	371769	758261	Residential	-1.34E-01	-6.09E-06	-1.29E-01	-6.43E-01	-1.09E-01	-5.17E-04	9.05E-05	9.05E-07	3.42E-04	5.69E-04	9.98E-05	1.66E-05	2.98E-05	9.93E-07	2.69E-05	2.24E-07
139	371822	758189	Residential	7.87E-02	3.58E-06	3.96E-02	1.98E-01	3.23E-02	1.54E-04	8.51E-05	8.51E-07	-8.27E-06	-1.38E-05	-3.40E-05	-5.67E-06	-7.21E-07	-2.40E-08	7.58E-06	6.32E-08
140	371894	758160	Residential	3.30E-02	1.50E-06	3.47E-03	1.74E-02	2.06E-03	9.80E-06	9.41E-05	9.41E-07	-1.30E-04	-2.17E-04	-4.29E-05	-7.14E-06	-1.13E-05	-3.78E-07	1.87E-06	1.56E-08
141	371894	758081	Residential	-1.07E-02	-4.86E-07	-2.66E-02	-1.33E-01	-2.29E-02	-1.09E-04	9.41E-05	9.41E-07	-2.07E-04	-3.44E-04	-4.55E-05	-7.59E-06	-1.80E-05	-6.00E-07	-2.25E-06	-1.88E-08
142	371959	758074	Residential	-1.49E-01	-6.77E-06	-1.32E-01	-6.59E-01	-1.11E-01	-5.28E-04	8.63E-05	8.63E-07	-2.20E-04	-3.67E-04	-3.67E-05	-6.11E-06	-1.92E-05	-6.40E-07	-3.71E-06	-3.09E-08
155	372055	757363	Residential	-2.49E-01	-1.13E-05	-2.09E-01	-1.04E+00	-1.75E-01	-8.35E-04	1.00E-04	1.00E-06	-5.56E-04	-9.26E-04	-1.02E-04	-1.71E-05	-4.85E-05	-1.62E-06	-2.05E-05	-1.71E-07
297	370239	755427	Residential	-5.03E-01	-2.29E-05	-4.28E-01	-2.14E+00	-3.59E-01	-1.71E-03	1.72E-04	1.72E-06	3.55E-04	5.91E-04	1.14E-04	1.91E-05	3.09E-05	1.03E-06	3.53E-05	2.94E-07
298	370138	755427	Residential	-3.85E-01	-1.75E-05	-3.15E-01	-1.58E+00	-2.64E-01	-1.26E-03	1.50E-04	1.50E-06	-2.33E-04	-3.88E-04	-8.55E-05	-1.43E-05	-2.03E-05	-6.77E-07	1.61E-06	1.34E-08
299	370040	755427	Residential	-6.19E-01	-2.81E-05	-5.33E-01	-2.66E+00	-4.47E-01	-2.13E-03	1.38E-04	1.38E-06	-4.80E-04	-8.00E-04	-1.92E-04	-3.20E-05	-4.19E-05	-1.40E-06	-1.28E-05	-1.07E-07
300	369941	755426	Residential	-3.44E-02	-1.56E-06	-8.44E-02	-4.22E-01	-7.28E-02	-3.47E-04	1.67E-04	1.67E-06	5.60E-04	9.33E-04	1.49E-04	2.48E-05	4.88E-05	1.63E-06	4.59E-05	3.82E-07
301	369842	755426	Residential	5.53E-01	2.51E-05	3.72E-01	1.86E+00	3.09E-01	1.47E-03	1.56E-04	1.56E-06	5.24E-04	8.73E-04	1.77E-04	2.96E-05	4.57E-05	1.52E-06	4.29E-05	3.58E-07
302	369741	755435	Residential	-6.38E-02	-2.90E-06	-9.38E-02	-4.69E-01	-8.02E-02	-3.82E-04	1.31E-04	1.31E-06	7.39E-05	1.23E-04	1.90E-05	3.16E-06	6.44E-06	2.15E-07	1.64E-05	1.36E-07
303	369643	755434	Residential	-2.43E-03	-1.10E-07	-3.16E-02	-1.58E-01	-2.75E-02	-1.31E-04	1.21E-04	1.21E-06	1.78E-04	2.97E-04	4.65E-05	7.76E-06	1.55E-05	5.17E-07	2.10E-05	1.75E-07
304	369544	755434	Residential	-5.98E-02	-2.72E-06	-5.21E-02	-2.61E-01	-4.38E-02	-2.09E-04	1.24E-04	1.24E-06	-1.82E-04	-3.04E-04	-5.02E-05	-8.36E-06	-1.59E-05	-5.30E-07	1.86E-06	1.55E-08
305	369445	755434	Residential	3.81E-01	1.73E-05	3.04E-01	1.52E+00	2.54E-01	1.21E-03	1.27E-04	1.27E-06	-5.43E-04	-9.05E-04	-1.01E-04	-1.68E-05	-4.73E-05	-1.58E-06	-1.73E-05	-1.44E-07
306	369346	755434	Residential	-4.50E-01	-2.04E-05	-3.36E-01	-1.68E+00	-2.81E-01	-1.34E-03	1.23E-04	1.23E-06	-2.39E-04	-3.98E-04	-3.52E-05	-5.86E-06	-2.08E-05	-6.95E-07	-1.27E-06	-1.06E-08
310	368953	755441	Residential	6.62E-01	3.01E-05	5.59E-01	2.79E+00	4.69E-01	2.23E-03	8.92E-05	8.92E-07	-7.01E-04	-1.17E-03	-1.40E-04	-2.33E-05	-6.11E-05	-2.04E-06	-2.93E-05	-2.44E-07
311	368854	755441	Residential	8.87E-01	4.03E-05	7.00E-01	3.50E+00	5.86E-01	2.79E-03	9.11E-05	9.11E-07	-1.11E-05	-1.85E-05	5.49E-05	9.15E-06	-9.70E-07	-3.23E-08	7.99E-06	6.66E-08
312	368755	755441	Residential	7.10E-01	3.23E-05	5.09E-01	2.55E+00	4.24E-01	2.02E-03	8.64E-05	8.64E-07	-3.33E-04	-5.54E-04	-5.46E-05	-9.10E-06	-2.90E-05	-9.67E-07	-9.76E-06	-8.14E-08
313	368657	755441	Residential	8.61E-01	3.91E-05	6.16E-01	3.08E+00	5.13E-01	2.44E-03	9.48E-05	9.48E-07	-1.50E-04	-2.49E-04	-7.55E-05	-1.26E-05	-1.31E-05	-4.35E-07	8.80E-07	7.33E-09
314	368558	755440	Residential	6.15E-01	2.80E-05	4.16E-01	2.08E+00	3.45E-01	1.64E-03	9.41E-05	9.41E-07	1.31E-05	2.18E-05	-8.00E-05	-1.33E-05	1.14E-06	3.80E-08	9.58E-06	7.98E-08
315	368459	755440	Residential	1.31E-01	5.95E-06	3.90E-02	1.95E-01	3.02E-02	1.44E-04	8.76E-05	8.76E-07	1.07E-04	1.79E-04	-6.31E-05	-1.05E-05	9.36E-06	3.12E-07	1.40E-05	1.17E-07
316	368360	755440	Residential	3.19E-03	1.45E-07	-3.70E-02	-1.85E-01	-3.25E-02	-1.55E-04	8.16E-05	8.16E-07	-8.56E-05	-1.43E-04	-1.12E-04	-1.87E-05	-7.47E-06	-2.49E-07	3.09E-06	2.57E-08
317	368262	755439	Residential	2.61E-02	1.19E-06	-4.27E-02	-2.14E-01	-3.81E-02	-1.82E-04	7.92E-05	7.92E-07	-4.99E-04	-8.32E-04	-2.12E-04	-3.53E-05	-4.36E-05	-1.45E-06	-1.94E-05	-1.62E-07
318	368186	755427	Residential	1.30E-01	5.90E-06	7.31E-02	3.65E-01	6.00E-02	2.86E-04	7.33E-05	7.33E-07	-6.69E-04	-1.12E-03	-2.52E-04	-4.19E-05	-5.84E-05	-1.95E-06	-2.91E-05	-2.43E-07

Table 5-3
Summary of Incremental Acute Hazard Concentrations and Hazard Indices
for the MSC North Project over the 2019 Without Project scenario

Receptor Number	X	Y	Receptor Type	xylene, total (μg/m^3)	xylene, total Acute Hazard	arsenic (μg/m^3)	arsenic Acute Hazard	chlorine (μg/m^3)	chlorine Acute Hazard	copper (μg/m^3)	copper Acute Hazard	mercury (μg/m^3)	mercury Acute Hazard	nickel (μg/m^3)	nickel Acute Hazard	vanadium (μg/m^3)	vanadium Acute Hazard	sulfates (μg/m^3)	sulfates Acute Hazard
			CalEPA Acute REL		22000		0.2		210		100		0.6		6		30		120
319	368111	755414	Residential	4.73E-02	2.15E-06	1.54E-02	7.71E-02	1.21E-02	5.75E-05	6.93E-05	6.93E-07	-7.37E-04	-1.23E-03	-2.65E-04	-4.41E-05	-6.42E-05	-2.14E-06	-3.31E-05	-2.76E-07
46	367504	757948	School	1.43E-01	6.49E-06	1.21E-01	6.07E-01	1.02E-01	4.86E-04	6.60E-05	6.60E-07	-1.74E-04	-2.89E-04	-3.08E-05	-5.14E-06	-1.51E-05	-5.05E-07	-3.13E-06	-2.61E-08
47	367544	757873	School	3.44E-02	1.56E-06	3.17E-02	1.58E-01	2.67E-02	1.27E-04	6.11E-05	6.11E-07	-5.51E-04	-9.19E-04	-1.29E-04	-2.15E-05	-4.81E-05	-1.60E-06	-2.39E-05	-1.99E-07
48	367587	757909	School	1.20E-01	5.47E-06	1.03E-01	5.15E-01	8.65E-02	4.12E-04	6.79E-05	6.79E-07	-2.40E-04	-4.01E-04	-4.89E-05	-8.16E-06	-2.10E-05	-6.99E-07	-6.55E-06	-5.45E-08
49	367623	757866	School	4.32E-02	1.96E-06	4.00E-02	2.00E-01	3.37E-02	1.60E-04	6.61E-05	6.61E-07	-4.49E-04	-7.49E-04	-1.03E-04	-1.72E-05	-3.92E-05	-1.31E-06	-1.80E-05	-1.50E-07
50	367694	757866	School	1.40E-01	6.38E-06	1.21E-01	6.05E-01	1.02E-01	4.84E-04	7.12E-05	7.12E-07	-2.83E-04	-4.72E-04	-6.13E-05	-1.02E-05	-2.47E-05	-8.24E-07	-8.54E-06	-7.12E-08
51	367716	757927	School	3.01E-01	1.37E-05	2.50E-01	1.25E+00	2.10E-01	1.00E-03	7.72E-05	7.72E-07	2.12E-04	3.53E-04	7.87E-05	1.31E-05	1.85E-05	6.16E-07	1.87E-05	1.56E-07
52	367737	757988	School	1.03E-01	4.66E-06	9.05E-02	4.53E-01	7.61E-02	3.62E-04	6.98E-05	6.98E-07	-6.16E-05	-1.03E-04	2.32E-05	3.86E-06	-5.38E-06	-1.79E-07	3.27E-06	2.72E-08
53	367727	758067	School	-2.30E-01	-1.05E-05	-1.79E-01	-8.94E-01	-1.50E-01	-7.12E-04	6.44E-05	6.44E-07	-4.39E-04	-7.32E-04	-6.80E-05	-1.13E-05	-3.83E-05	-1.28E-06	-1.76E-05	-1.46E-07
54	367716	758146	School	-4.55E-01	-2.07E-05	-3.63E-01	-1.82E+00	-3.04E-01	-1.45E-03	5.69E-05	5.69E-07	-6.66E-04	-1.11E-03	-1.37E-04	-2.28E-05	-5.81E-05	-1.94E-06	-3.05E-05	-2.54E-07
56	367723	758254	School	-4.57E-01	-2.08E-05	-3.74E-01	-1.87E+00	-3.14E-01	-1.50E-03	5.43E-05	5.43E-07	-5.68E-04	-9.46E-04	-1.33E-04	-2.22E-05	-4.95E-05	-1.65E-06	-2.54E-05	-2.12E-07
57	367784	758221	School	-4.73E-01	-2.15E-05	-3.88E-01	-1.94E+00	-3.25E-01	-1.55E-03	5.59E-05	5.59E-07	-5.56E-04	-9.27E-04	-1.31E-04	-2.18E-05	-4.85E-05	-1.62E-06	-2.47E-05	-2.06E-07
58	367845	758189	School	-4.57E-01	-2.08E-05	-3.75E-01	-1.87E+00	-3.14E-01	-1.50E-03	5.72E-05	5.72E-07	-5.48E-04	-9.14E-04	-1.25E-04	-2.09E-05	-4.78E-05	-1.59E-06	-2.41E-05	-2.01E-07
106	370247	758254	School	2.39E-01	1.09E-05	2.17E-01	1.09E+00	1.83E-01	8.72E-04	1.56E-04	1.56E-06	-7.48E-04	-1.25E-03	-1.60E-04	-2.67E-05	-6.52E-05	-2.17E-06	-2.56E-05	-2.13E-07
107	370250	758189	School	3.82E-01	1.74E-05	3.33E-01	1.67E+00	2.80E-01	1.33E-03	1.72E-04	1.72E-06	-1.76E-04	-2.94E-04	-1.41E-05	-2.35E-06	-1.54E-05	-5.12E-07	6.69E-06	5.57E-08
108	370308	758196	School	6.29E-01	2.86E-05	5.27E-01	2.64E+00	4.42E-01	2.11E-03	1.84E-04	1.84E-06	6.27E-04	1.04E-03	1.96E-04	3.26E-05	5.46E-05	1.82E-06	5.11E-05	4.26E-07
109	370361	758236	School	3.51E-01	1.59E-05	2.98E-01	1.49E+00	2.50E-01	1.19E-03	1.85E-04	1.85E-06	9.21E-04	1.53E-03	2.65E-04	4.42E-05	8.03E-05	2.68E-06	6.70E-05	5.59E-07
110	370415	758275	School	7.05E-02	3.21E-06	6.82E-02	3.41E-01	5.76E-02	2.74E-04	1.79E-04	1.79E-06	1.12E-03	1.86E-03	3.18E-04	5.31E-05	9.75E-05	3.25E-06	7.71E-05	6.43E-07
202	372807	757781	School	-9.53E-02	-4.33E-06	-8.89E-02	-4.44E-01	-7.49E-02	-3.57E-04	6.08E-05	6.08E-07	-2.42E-04	-4.04E-04	-5.01E-05	-8.36E-06	-2.11E-05	-7.05E-07	-7.31E-06	-6.09E-08
203	372901	757782	School	-1.68E-01	-7.63E-06	-1.46E-01	-7.29E-01	-1.23E-01	-5.83E-04	5.64E-05	5.64E-07	-2.89E-04	-4.81E-04	-6.09E-05	-1.02E-05	-2.52E-05	-8.39E-07	-1.02E-05	-8.52E-08