APPENDIX O

Re-Evaluation of Air Pathway Analysis
Revised Air Pathway Risk Assessment

GeoSyntec Consultants

July 12, 2002

RE-EVALUATION OF AIR PATHWAY ANALYSIS

REVISED AIR PATHWAY RISK ASSESSMENT

ASCON SITE
HUNTINGTON BEACH, CALIFORNIA

Submitted to:

State of California Environmental Protection Agency
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

Submitted by:

Ascon Site Cooperating Parties
Atlantic Richfield Company, Chevron USA Inc. and Texaco Inc., Conoco Inc.,
The Dow Chemical Company, Exxon Mobil Corporation, Philips Petroleum Company,
Shell Oil Company, Southern California Edison Company, and TRW Inc.

Prepared by:

GeoSyntec Consultants
924 Anacapa Street, Suite 4A
Santa Barbara, California 93101
(805) 897-3800

12 July 2002

TABLE OF CONTENTS

Page

TABLE OF CONTENTS (continued)

TABLES

TABLE OF CONTENTS (continued)

FIGURES

APPENDICES

1. INTRODUCTION

This report presents the results of the air pathway re-evaluation for the Ascon Site (the Site) located in Huntington Beach, California. This report was prepared by GeoSyntec Consultants, Inc. (GeoSyntec) on behalf of the Ascon Site Cooperating Parties for submittal to the Department of Toxic Substances Control (DTSC).

The air pathway has been re-evaluated for the baseline risk assessment to provide a more refined and realistic estimate of potential site emissions and the resultant predicted exposure point concentrations (EPCs) at offsite locations. The refinements focused on three aspects of the analysis: (1) source term assumption of chemicals in Lagoons 1 – 5, (2) flux equation used to estimate flux from lagoons into air, and (3) air dispersion model. In addition, recent changes in toxicity values were incorporated into the assessment.

1.1 Report Organization

This report presents the results of the revised air pathway risk assessment in the context of the following risk assessment components:

- **Section 2 - Project Background and Data Review** presents background information on the Site and previous work that relates to the report. Site-related chemicals of potential concern (COPCs) (defined as potentially hazardous chemicals clearly associated with the Site) are identified

- **Section 3 - Exposure Assessment** presents the development of the emissions flux rates used in the air dispersion modeling as well as the air modeling approach used to estimate ambient air concentrations at offsite locations to be used as exposure point concentrations (EPCs).

- **Section 4 - Toxicity Assessment** presents the different types of toxicity and the toxicity values used in this assessment.

- **Section 5 - Risk Characterization** presents the synthesis of exposure and toxicity information to yield quantitative estimates of potential cancer risks and noncancer hazards.

- **Section 6 – Conclusions** provides a summary of the report.

The overall approach taken in this revised risk assessment is consistent with the Reasonable Maximum Exposure (RME) approach as defined by the USEPA (1989) which was used in the initial baseline risk assessment. The RME approach is defined as the "highest exposure that is reasonably expected to occur at a site." Due to the custom of adherence to conservative, health-protective regulatory policies, the actual levels of human exposure and the potential health risks associated with the Site are likely to be significantly lower than the quantitative estimates described in this revised risk assessment.

2. SITE BACKGROUND AND DATA REVIEW

2.1 Site Background

The Site is located at 21641 Magnolia Street in Huntington Beach, California and comprises approximately 38 acres situated at the corner of the intersection of Hamilton Avenue and Magnolia Street (Figure 2-1).

The Site was operated as a waste disposal facility from approximately 1938 through 1984. Wastes originally disposed at the Site include wastes from oil drilling operations such as drilling muds. From 1957 to 1971, records show that other wastes such as acids, slag, fuel oils, styrene and other wastes were also disposed on the Site. From 1971 to 1984 inert solid wastes such as concrete were disposed on the Site. These materials were used to cover portions of the Site. Since 1984 the Site has remained in its current condition.

The Site currently consists of five visible impoundments (Lagoons 1 – 5), one covered pit (Pit F) and several pits and lagoons that are no longer visible (Figure 2-2). The surfaces of three of the five lagoons (Lagoons 1, 2 and 3) appear to be relatively dry and primarily made up of soil. Significant portions of two of the lagoons (Lagoons 1 and 2) are made up of oily wastes and are liquid in nature. The remaining areas of the Site, excluding the roadways, are covered by construction debris and coastal vegetation such as ice plant.

A Remedial Investigation (RI) report for the Site was prepared in 1997. The RI report consolidated the results of data collected from 14 previous investigations as well as additional data collected during the RI. Analytical results are available for onsite soil, waste, groundwater, and soil vapor samples as well as offsite background soil samples. Chemicals detected at the Site include petroleum hydrocarbons, semi-volatile organic chemicals such as polynuclear aromatic hydrocarbons, metals and volatile organic compounds (VOCs).

A baseline risk assessment was prepared for the Site based on data collected during the RI. In that risk assessment, potential vapor emissions and subsequent offsite impacts from the five lagoons and one pit were evaluated using conservative screening level fate and transport modeling.

The results of the RI and baseline risk assessment indicated that several VOCs contributed the majority to estimated risks for the Site. These chemicals, 1,2-dichloroethane (1,2-DCA), 1,1,1 – trichloroethane (1,1,1-TCA), benzene, methylene

chloride, and styrene contributed to over 85 percent of the cumulative cancer risk and 99 percent of the noncancer hazard estimates presented in the baseline risk assessment.

Subsequent to the RI two pilot studies have been conducted to evaluate proposed remedial technologies for the Site. These pilot studies included excavation of waste and treatability studies such as stabilization mixing. Ambient air monitoring conducted during the pilot studies indicated the presence of several VOCs in ambient air that may have been attributable to excavation activities.

Due to the screening level nature of the baseline risk assessment, the air pathway assessment is being re-evaluated to provide a more refined and realistic estimate of potential risks that may be associated with chemicals detected at the Site. The focus of the more refined analysis is on the five chemicals identified above as they contributed the majority to estimated risks for the Site.

2.2 Data Evaluation

For the RME estimates in the initial baseline risk assessment completed in 1997, the chemical concentration in the waste was either the average or 95% upper confidence limit (UCL) of the mean for all COPCs in all lagoons. However, for several risk-driving chemicals (e.g., benzene, 1,2–dichloroethane and methylene chloride), their maximum concentrations detected in any lagoon were used as EPCs. In other words, the initial results of the baseline risk assessment for the RME scenario were based on the assumption that the maximum detected concentrations for these particular risk-driving COPCs are present throughout the entire area of the five lagoons.

In reviewing the data for these chemicals, it was noted that some of the lagoons had significantly lower chemicals concentrations than the highest observed value at the Site. Therefore the data were evaluated on a lagoon-specific basis to derive more appropriate estimates of the EPCs. Only the risk-driving VOCs (e.g., benzene, 1,2-dichloroethane, 1,1,1-trichlorethane, methylene chloride, and styrene) were re-evaluated. As a more refined yet conservative analysis, the maximum detected concentration in each lagoon was used in the lagoon-specific emission rate calculation. The revised emission rates were then used in the U.S. Environmental Protection Agency (USEPA)-approved Industrial Source Complex Short Term, Version 3 (ISCST3) model to provide estimates of the chemical EPCs at offsite locations as discussed in the following section.

3. EXPOSURE ASSESSMENT

The objective of the exposure assessment is to estimate the magnitude, frequency, duration, and routes of human exposure to COPCs associated with the Site. The exposure assessment is based on receptor scenarios that define the conditions of potential human exposure to site-related COPCs. In order for an exposure pathway to be complete, the following four elements must be present:

- A source and mechanism of chemical release
- A retention or transport medium
- A point of contact between the human receptor and the medium, and
- A route of exposure for the potential human receptor at the contact point.

There must be a complete exposure pathway from the source of chemicals in the environment (i.e., from soil) to human receptors in order for chemical intake to occur. If all exposure pathways are incomplete for human receptors, no chemical intake occurs and hence, no human health effects are associated with the COPCs.

This section presents the following elements of the exposure assessment:

- Estimation of chemical fluxes from the lagoons and Pit F
- Evaluation of the air dispersion model results with measured chemical concentrations
- Estimation of ambient air exposure point concentrations at offsite locations for use in the risk calculations
- Exposure assumptions used in the risk calculations

3.1 Exposure Point Concentration Estimation

Estimates of chemical concentrations at points of potential human exposure (EPCs) are necessary for evaluating the intake of COPCs by receptors of potential concern. Development of long-term exposure point concentrations from short-term monitoring data includes an underlying assumption about the representativeness of the monitoring data, both temporally and spatially, to simulate the current and future exposure conditions for a receptor traversing a particular region at the Site or near the Site.

Emissions into the atmosphere were computed from diffusion of VOCs from the soil and nonaqueous phase liquids. In order to be conservative, no downward VOC transport by infiltrating water and no biodegradation, which reduce the concentrations of COPCs over time, were assumed to occur. In addition, an infinite source term, with no depletion due to atmospheric emissions, was used; therefore, EPCs were estimated assuming that environmental concentrations would remain constant for an indefinite period of time. This general assumption of steady-state conditions also applies to sources and contaminant release mechanisms and results in a conservative estimation of long-term EPCs.

This section describes the methodology used to estimate chemical emission fluxes for the COPCs identified previously as well as the air dispersion modeling approach used to estimate ambient air concentrations to be used as exposure point concentrations in the risk assessment.

3.1.1 Estimation of Source Term and Flux from Lagoons

The first step in calculating exposure from site emissions is to estimate the chemical concentration within the source area. In the initial baseline risk assessment for the RME scenario, maximum concentrations of risk-driving VOCs detected in any lagoon were used as the source concentrations over the entire area of the lagoons. As discussed earlier, in this revised assessment, the chemical data collected for each lagoon was evaluated and the maximum detected value from each lagoon was selected as a conservative estimate of the initial source term used in the emission flux calculations.

The next step in the emission calculation is the calculation of the flux rate from the area source. In the initial baseline risk assessment, an equation was used that accounts for a chemical's presence in a non-aqueous liquid; in this case, assumed to be petroleum hydrocarbons. A preliminary review of the composition data for the lagoons presented in the RI indicate that much of the lagoons consist of sediment with small amounts of water and lesser amounts of oil. If the majority of material in the lagoons are more soil-like or covered by a soil/solid layer, then emission flux equations incorporating migration of chemicals though a soil matrix are more appropriate for those lagoons.

Based on the composition data and a site reconnaissance it was estimated that the surface of Lagoon 1 was made up of approximately 65% liquid and surface of Lagoon 2 was made up of approximately 50% liquid. These percentages were used in conjunction

with the emission flux calculations described below and the areas of the lagoons and Pit F to develop lagoon-specific fluxes. Areas were derived from material quantity descriptions in the Feasibility Study report (Environ, 1999).

3.1.1.1 Emission Rate Calculation for Soil/Sediment Matrix

Computation of Gas Concentration from Soil Data

The gas-phase concentration (C_g) was computed from soils data using the relationship:

$$C_g = C_m \rho_b / \{n_g + n_w/H + f_{oc} K_{oc} \rho_b / H)$$

Where:

C_m = measured soil concentration
ρ_b = bulk density
n_g = gas-filled porosity
n_w = water-filled porosity
H = (dimensionless) Henry's Law constant
f_{oc} = organic carbon fraction of the soil
K_{oc} = organic carbon partition coefficient

Derivation

The total VOC mass present is given by $C_s \rho_b$. This mass is the sum of the masses present in the pore-gas, pore-water, and soil-sorbed phases. Respectively, these masses are equal to (Kerfoot, 1991):

$M_g = C_g n_g$
$M_w = C_w n_w$ and
$M_s = C_s \rho_b$

At equilibrium, $Cw = C_g/H$ and $C_s = \rho_b f_{oc} K_{oc} C_w$, so that, expressed in terms of C_g:

$M_g = C_g n_g$
$M_w = C_g n_w/H$ and
$M_s = C_g \rho_b f_{oc} K_{oc}/H$

Then, in terms of Cg, the total mass is:

$$M_{tot} = Cg\,(n_g + n_w/H + \rho_b f_{oc} K_{oc}/H)$$

or

$$C_g = M_{tot} / (n_g + n_w/H + \rho_b f_{oc} K_{oc}/H)$$

Soil and Chemical Properties

Values for the soil properties in the above equations derived from USEPA (2000a) for subsurface soils (i.e., $n_w = 0.3$; $n_g = 0.13$; $\rho_b = 1.5$; $f_{oc} = 0.002$). These values are considered conservative given that soils at the Site are quite wet, minimizing gas-phase diffusion. Compound-specific values of H and K_{oc} from USEPA references were used.

Concentration Data to Be Used

The calculated gas concentration was based on the maximum detected soil concentration measured within each lagoon. The vertical distribution of concentrations was assumed to be a constant concentration beginning at 3 inches (7.5 cm) bgs to represent VOCs that were detected in surface soils which are typically collected from 0 to 6 inches bgs.

Diffusion Equation

Diffusional mass transport rates were calculated using Fick's Law, as cited by Jury. Due to the fact that aqueous diffusion rates are four to five orders of magnitude lower than gas-phase diffusivities, aqueous diffusion was not considered.

The vertical mass-transport is given by:

$$J = -D^* A \; C_g / z$$

Where J is the emission rate (g/sec), D* is the soil-gas diffusion coefficient (cm^2/sec), A is the area of the lagoon (cm^2), C_g is the gas-phase concentration (g/cm^3) computed from the measured soil concentration, and z is the minimum depth of contamination (7.5 cm)

Diffusion Coefficients

Soil-gas diffusion coefficients were computed using the equation due to Millington (1959):

$$D_{sg} = D_{air} \times \tau$$

Where:

$\tau = n_g^{10/3}/n_{tot}^2$

and n_{tot} is the total porosity of 0.43. (USEPA, 2000a)

3.1.1.2 Emission Rate Calculation for Non-Aqueous Phase Liquid Matrix

For a portion of Lagoons 1 and 2 and Pit F with evidence of non-aqueous liquid present, the equation presented in the baseline risk assessment report for emissions from liquids was used.

$$E = \left(2 * Pv * Wa * \sqrt{\frac{La * Da * U}{3.1416 * f}}\right) * \left(\frac{Wc}{W}\right)$$

where:

E = Emission Rate
Pv = Vapor Pressure
Wa = Width of Area Occupied by the Waste
La = Length of Source Area
Da = Diffusion Coefficient of Chemical in Air
U = Wind Speed
f = Correction Factor
Wc/W = Weight Fraction of the Chemical in Waste

Table 3-1 presents the emission flux estimates used in the risk assessment. Appendix A presents the emission flux calculation details.

3.1.2 Evaluation of Calculated Vapor Emissions and Air Dispersion Modeling Compared to Ambient Air Samples

As discussed in Section 2, subsequent to the remedial investigation and baseline risk assessment, a pilot study was performed in October 1999 to evaluate the implementability of the proposed remedy. During the pilot study ambient air monitoring was conducted at several locations around the Site during excavation and stabilization

activities. Although there are limitations in the data collected, this monitoring data was thought to be potentially useful in evaluating the approach used to calculate vapor emissions from the Site. This section discusses the dispersion modeling results in relation to the measured concentrations collected in October 1999. Based upon the information provided by the DTSC, the sampling event conducted on October 21, 1999 (day of maximum observed concentrations) was selected for this evaluation.

3.1.2.1 Air Dispersion Modeling Methodology

To provide a comparison of the emission calculations and predicted ambient air concentrations using modeling with the measured concentrations from the Pilot Study, the modeling program must be developed in a way to match up with the site conditions when the measurements were taken. In other words, the meteorological data used in the modeling should be similar to what was observed at the Site during the monitoring event.

Hourly meteorological input data was constructed from the 15-minute wind speed and wind direction observations supplied in the DTSC letter (February, 2000) from 8:00 am through 2:00 pm local time. Hourly wind speed data was calculated by averaging each of the four 15-minute observations. Due to the lack of actual 15-minute numeric values for the wind direction (the 15-minute observations were provided in 16-point compass directions – i.e., northwest), hourly wind direction data was estimated the predominant compass direction within the hour of concern. In addition, the wind directions were shifted 180 degrees to reflect wind flow (wind direction to) rather than wind direction (wind direction from), as required by the model. Table 3-2 summarizes the hourly wind speed and wind flow data used in the modeling.

Since there were no data available for this analysis to directly measure atmospheric stability, the 1981 hourly meteorological dataset for the South Coast Air Quality Management District (SCAQMD) Costa Mesa Monitoring Site was used to establish typical stability data for the modeling effort. This dataset has been developed, reviewed and approved for use in modeling evaluations by the SCAQMD. The dataset is representative of the meteorological conditions and represents typical coastal conditions for this region (SCAQMD, 2002). Reviewing the hours between 8:00 am and 2:00 pm for October, the atmosphere stability for this dataset is typically unstable to slightly unstable for this period (Stability Class 2 to Stability Class 3). Table 3-2 also summaries the stabilities used in the model evaluation.

There was also no mixing height readily available for the monitoring event. Although the model requires hourly mixing heights, these values do not affect concentrations when: 1) the sources are surface based; 2) the source and receptors are relative close (i.e., within 1 kilometer); and 3) the mixing heights are sufficiently high (greater than 50 m). Typically, during the daytime, the mixing heights in October are between 300 m and 500 m, therefore, the mixing heights associated with October 21, 1981 were utilized in the modeling and are shown in Table 3-2.

The USEPA-approved Industrial Source Complex Short Term, Version 3 (ISCST3) model was utilized for this analysis. This model has also been approved for use by the SCAQMD in modeling area source emissions in relative flat terrain. The model accepts hourly source data and meteorological data in order to calculate 1-hour average concentrations from each source at a specified set of receptor locations. The model also calculates an average concentration for each receptor location for all hours input. Four receptor locations were selected corresponding to the sampling locations S2, S6, S1 and S3 from the Pilot Study (see Figure 3-1).

Six area sources were utilized in the model to represent Lagoons 1 through 5 and Pit F. Unit emissions (i.e., 1 gm/sec-m^2) were used in the model to calculate unit concentrations from each area source. Post processing was conducted on the output of the ISCST3 modeling runs to calculate pollutant-specific concentrations from each source/receptor pair and the pollutant-specific concentrations from each source was summed to calculate the overall concentration at each receptor.

3.1.2.2 Modeling Versus Ambient Sampling Results

Table 3-3 shows the comparison of the 6-hour model predicted concentrations for the five compounds of interest (1,2-dichloroethane, 1,1,1-trichloroethane, benzene, methylene chloride, and styrene). Generally, the results indicate that the predicted concentrations of 1,2-dichloroethane were over-predicted at all of the four modeled sampling locations (1,2-dichloroethane was not detected in any of the samples) and benzene and styrene were under-predicted at all sampling locations, relative to the ambient monitored data. For the other two compounds, modeled concentrations were over-predicted at sampling Sites S6 and S2, while under-predicted at Sites S1 and S3.

However, upon closer observation of the meteorological data during sampling on October 21, 1999, the wind directions were observed from the northeast, south, and southwest for the 6-hour period. As such, the wind directions do not favor emissions from

the lagoons or the pit to impact upon the sampling location S3, located in the southeast corner of the property. As such, S3 could be seen as a background sample relative to the other sampling locations evaluated. In addition, S1, located on the west side of the property, would only briefly be exposed as the winds shifted from a southwest flow through a north flow and continuing through a northeast wind flow. This would be consistent with the close similarity of the observed values for the compounds analyzed at the two sampling locations (See Table 3-3).

By considering Location S3 as background and subtracting out the concentrations measured at S3 from the other three sets of sample concentrations at S2, S1, and S6, the calculated concentrations at each site are consistently higher that the measured concentrations, except for the benzene levels at S2. For this comparison, the measured benzene concentration is approximately 2 times higher than the predicted value and is well within the modeling domain of error.

Thus, using the emissions developed in Section 3.1.1, the modeled concentrations generally provide a conservative estimate of the ambient concentrations.

3.1.3 Acute and Chronic Air Quality Modeling of Onsite and Offsite Locations

3.1.3.1 Onsite and Offsite Air Dispersion Modeling Methodology

To predict the maximum short term and chronic concentrations for the chemicals of concern, the ISCST3 model was again utilized with the source configuration identified in Section 3.1. Maximum 1-hour and annual average unit concentrations were calculated in the model for each source independently using the 1-year hourly meteorological dataset from the SCAQMD Costa Mesa Monitoring Site located approximately 2.3 miles from east of the Site. As stated earlier, the SCAQMD has defined this site as appropriate for use in modeling impacts of emissions from coastal sources within this region (SCAQMD, 2002). In addition, at DTSC's request, the screening air dispersion model presented in the original baseline risk assessment, SCREEN 3, was run with the updated emission rates as presented in Appendix C.

Several sets of receptor locations were identified and input into the model to assess impacts for both onsite and offsite locations. A rectangular grid of receptors was placed within the property boundary at intervals of 50 m in both the north/south and east/west directions, representing the onsite receptor grid. Four additional sets of receptors grids were utilized to represent offsite locations. First, a series of receptors were placed

along the perimeter of the property boundary at 50-m intervals. Second, a series of receptors were placed at the nearest locations of residences along the eastern boundary of the property. As requested by DTSC, the last two receptors were placed at the southwest corner of the Edison High School (located to the northeast of the property) and at the fire station (located directly north) to represent the school and public access impacts.

Post-processing of the unit concentrations were performed to calculate pollutant-specific concentrations for the five chemicals of concern from each source and to combine the source contributions to estimate the maximum total concentrations from the Site on onsite and offsite receptors (Appendix B provides the source contribution breakdown).

3.1.3.2 Onsite and Offsite Modeling Results

Tables 3-4 and 3-5 summarize the results of the onsite and offsite exposure assessment from the existing site for 1-hour and annual average impacts, respectively. As seen from the tables, methylene chloride was predicted to have the highest concentrations at all locations, with styrene being the lowest. As expected, maximum concentrations for all chemicals were predicted to occur onsite; the lowest concentrations were predicted at the school boundary.

In general, the maximum onsite concentrations were approximately one order of magnitude (10 times) higher than the maximum offsite concentrations (occurring at the property boundary), except for styrene, which was only 60 percent greater than the maximum offsite concentration. Similarly, the concentrations decreased dramatically from the maximum offsite to the nearest residential with predicted values decreasing to 25 to 50 percent of the maximum property boundary conditions. The school located to the northeast had the lowest predicted concentrations, having the maximum concentrations between 30 and 50 percent of the maximum residential locations for the various chemicals.

In all cases, the maximum 1-hour concentrations are at levels that are below the acute ATSDR Minimal Risk Levels (MRL) or OEHHA Reference Exposure Levels (RELs) for all chemicals and receptor locations (See Tables 3-4 and 3-6). This indicates that the COPCS for the Site are not expected to cause acute effects. The annual average concentrations are evaluated further in terms of long-term chronic exposures in the risk assessment.

3.2 Exposure Pathway Evaluation

The ambient air concentrations predicted by the air dispersion modeling were used to estimate incremental cancer risk and noncancer hazard at offsite locations. As discussed in the previous section, for the chemicals evaluated in this assessment, chronic exposures are of most concern. Therefore the annual average concentrations were used in the risk assessment calculations. Table 3-7 presents these concentrations for the maximum offsite residential location and the maximum offsite worker location.

The RAGS guidelines (USEPA, 1989) recommend that exposure be quantified in a manner that will produce estimates for the Reasonable Maximum Exposure (RME) scenario. The RME considers the upper bound case described by using the 90th or 95th percentile of the actual distribution of most input parameters. The intent of the RME scenario is to focus the assessment on a conservative exposure that is within the range of possible exposures. Since the RME scenario uses a mixture of upper bound and central tendency assumptions and data, it is expected to overestimate the actual risk under the assumed exposure conditions. For this revised assessment, only the outdoor vapor inhalation pathway was quantitatively evaluated for offsite residents and offsite workers.

The "Average Daily Dose" (ADD) and "Lifetime Average Daily Dose" (LADD) are the parameters used to quantify exposure doses in site risk assessments. The ADD is used as a standard measure for characterizing long-term noncancer effects. The LADD addresses exposures that may occur over varying durations from a single event to an average 70-year human lifetime and are used to estimate potential cancer risks. The ADD and LADD incorporate the EPCs developed in Section 3.1 and exposure assumptions defined in this section to calculate an estimate of the daily intake or dose of a chemical into the body.

Exposure parameter values that were used in this revised risk assessment are presented in Table 3-8 and are similar to those used in the initial baseline risk assessment. Residential exposures for adults (24 years) and children (six years) were used in the risk calculations for an assumed total duration of 30 years, reflecting typical RME assumptions (USEPA, 1991). Exposures for adult workers were assumed to occur over a 25-year duration with a frequency of 250 days per year.

4. TOXICITY ASSESSMENT

The toxicity assessment characterizes the relationship between the magnitude of exposure to a COPC and the nature and magnitude of adverse health effects that may result from each exposure. For purposes of risk assessment, adverse health effects are classified into two broad categories: noncarcinogens and carcinogens. Toxicity values are generally developed based on the threshold approach for noncancer effects and the nonthreshold approach for cancer effects. Toxicity values may be based on epidemiological studies, short-term human studies, or subchronic or chronic animal data.

In this revised risk assessment, chronic toxicity criteria were selected (in order of preference) from the following sources: 1) Cal/EPA OEHHA *Toxicity Criteria Database for Carcinogens*, online (2002); 2) USEPA's (2002) *Integrated Risk Information System (IRIS)*; or 3) USEPA NCEA Superfund Health Risk Technical Support Center, as referenced in the Region IX Preliminary Remedial Goals table (USEPA, 2000b).

4.1 Identification of Cancer Slope Factors

Certain chemicals are regulated as carcinogens based on the likelihood that exposure to them could cause cancer in humans. Potential cancer effects are expressed as the probability that an individual will develop cancer from a lifetime of exposure. This probability is based on projected intakes and chemical-specific dose-response data called cancer slope factors (CSFs). The CSF defines the cancer risk due to constant lifetime exposure to one unit of a carcinogen (in units of risk per mg/kg-day). CSFs are derived by calculating the 95 percent upper confidence limit (95UCL) on the slope of the linearized portion of the dose-response curve obtained from the multistage cancer model. Use of the 95UCL of the slope means that there is only a 5 percent chance that the probability of a response could be greater then the estimated value for the experimental data used. This is a conservative approach and may overestimate the actual risk given that the actual risk is expected to be between zero and the calculated value. CSFs assume no threshold for effect (i.e., all exposures to a chemical are assumed to be associated with some risk; or, there is no threshold below which the risk is negligible or unlikely). If there are in fact thresholds for cancer, the true risks could be zero at sufficiently low doses.

The CSFs used in this revised risk assessment are presented in Table 4-1 and are from the OEHHA toxicity criteria database.

4.2 Identification of Noncancer Reference Doses

For the purpose of assessing risks associated with noncancer effects, the USEPA has adopted a science policy position that protective mechanisms such as repair, detoxification, and compensation must be overcome before an adverse health effect is manifested (1989). Therefore, a range of exposures exists from zero to some finite value (a threshold) that can be tolerated by the organism without appreciable risk of adverse effects occurring.

The reference dose (RfD) is a health-based criterion based on the assumption that thresholds exist for noncancer toxic effects (e.g. liver or kidney damage). In general, the RfD is an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime of exposure (USEPA, 1989). RfDs are expressed as acceptable daily doses in milligrams of compound per kilogram of body weight per day (mg/kg-day).

The RfDs used in this revised risk assessment are presented in Table 4-1. Chronic Reference Exposure Levels (RELs), developed by Cal/EPA (2001) for the Air Toxics Hot Spots program, were used to evaluate inhalation exposures for the following chemicals: benzene, 1,2-dichloroethane, methylene chloride, and styrene (Table 4-1). These RELs were converted to inhalation reference doses for use in the risk calculations

5. RISK CHARACTERIZATION

The risk characterization process integrates the quantitative and qualitative information gathered after evaluating the available data, and assessing chemical toxicity, exposure pathways and media of concern. The purpose is to estimate the likelihood, incidence, and magnitude of the potential human health effects to defined receptor populations that may occur as a result of exposure to the COPCs at the Site. Exposure to soil vapors via outdoor air inhalation was evaluated for adults and children residing offsite, as well as for adults working offsite.

5.1 Estimating Cancer Risks

Cancer risks are expressed as the upper-bound, increased likelihood of an individual developing cancer as a result of exposure to a particular chemical. For example, a cancer risk of 1×10^{-4} refers to an upper-bound increased chance of one in ten thousand of developing cancer over a lifetime (0.01% risk). The chemical-specific exposure estimate (i.e., the lifetime average daily dose or LADD) is multiplied by the chemical- and route-specific slope factor to arrive at a unitless probability (e.g., 1×10^{-4}) of an individual developing cancer. The following equation is used to estimate the excess cancer risk:

$$Excess\ Cancer\ Risk = LADD \times CSF$$

The excess cancer risks are then compared to the National Contingency Plan risk range of 1×10^{-6} to 1×10^{-4} (USEPA, 1990).

5.2 Estimating Noncancer Hazards

The potential for noncancer effects due to exposure to a particular chemical is expressed as the hazard quotient (HQ). A HQ is the ratio of the estimated intake or average daily dose (ADD) of a chemical to the corresponding chemical-specific toxicity value or RfD. The following equation is used to estimate the HQ:

$$Hazard\ Quotient = \frac{ADD}{RfD}$$

The chemical-specific HQs are then summed, resulting in what is referred to by the USEPA (1989) as the hazard index (HI), which is then compared to the DTSC and USEPA acceptable benchmark level of 1.0. Implicit in the HI is the assumption of a threshold level of exposure below which no adverse effects are expected to occur. For example, if the HI exceeds unity (i.e., is greater than 1.0), site-specific exposure exceeds the RfD. In this case, the potential for noncancer adverse effects is expected to occur from exposure to COPCs at the Site. In contrast, HIs less than 1.0 indicate that no adverse health effects are expected to occur from exposure to the COPCs.

5.3 Results of the Risk Characterization

The chemical-specific cancer risks and noncancer hazard indices (HIs) using the more refined air concentrations for the offsite receptors of concern are summarized in Table 5-1. The detailed risk calculation tables are presented in Appendix D.

Using the maximum predicted, annual average concentrations, the total cancer risk from exposures to VOCs via outdoor vapor inhalation was estimated at 3.6×10^{-5} for a child resident and at 5.2×10^{-5} for an adult resident living offsite. For an adult working offsite, the total cancer risk from exposures to VOCs via outdoor vapor inhalation was estimated at 3.5×10^{-5}. These cancer risk estimates are within the USEPA acceptable risk range goal of 1×10^{-6} to 1×10^{-4}. The estimated noncancer hazard indices (HIs) for a child (0.42) and adult (0.15) resident, as well as for an adult worker (0.087), did not exceed the benchmark level of 1.0 for noncancer effects (Table 5-1).

An important consideration in evaluating risks to chemicals in ambient air is the presence of chemicals due to sources other than the Site. This is especially important for chemicals such as benzene which has been shown to be present throughout metropolitan areas due to automobile emissions. Additional sources of chemicals to ambient air near the Site include the adjacent power plant and nearby waste water treatment plant.

To evaluate the contribution of background, predicted air concentrations were compared to concentrations detected during the ambient air monitoring conducted by SCAQMD in an area approximately ½ and 1 mile from the Site. An additional point of reference is the SCAQMD Long Beach Monitoring Station, the closest toxics monitoring station to the Site. While the monitoring durations differ, a general comparison can be made as to the presence of chemicals and their general concentrations. All of the chemicals evaluated in this assessment, with the exception of 1,2-DCA, were detected in the background samples. This finding is consistent with the air monitoring conducted

during the Pilot Study in October 1999 where 1,2-DCA was not detected in any of the perimeter sampling.

Predicted concentrations for benzene and styrene were similar (approximate factor of 2 to 4 difference) than those measured by SCAQMD in the site vicinity and the Long Beach monitoring station data (Table 5-2). Predicted concentrations for methylene chloride and 1,1,1-TCA were higher than concentrations measured at the monitoring station. As mentioned above, 1,2-DCA was not detected in background samples as well as Pilot Study samples collected in October 1999 during active excavation.

6. SUMMARY AND CONCLUSIONS

A revised air pathway risk assessment was conducted using conservative USEPA and DTSC guidelines for evaluating human health risks as well as more refined modeling of chemical emissions and air dispersion.

Revised emissions were calculated using the maximum detected concentration for 1,2-DCA, 1,1,1-TCA, benzene, methylene chloride, and styrene from each of the lagoons and Pit F. Using these emissions, air dispersion modeling was conducted to estimate both 1-hour and annual average off-site ambient air concentrations at several locations. The maximum 1-hour concentrations at all locations are at levels below regulatory thresholds for acute effects. Annual average concentrations were evaluated further in the risk assessment for chronic effects.

The risk assessment evaluated potential chronic exposures from predicted chemical concentrations in ambient air to offsite residents and workers. The maximum predicted concentrations at each type of location were used in the calculation of incremental cancer risk and noncancer hazard.

Results of this revised assessment indicate that the offsite annual average air concentrations of VOCs do not pose a significant cancer risk and noncancer hazard for offsite residents and offsite workers. Calculated cancer risk and noncancer hazard estimates were within the USEPA National Contingency Plan (1990) risk range goal of 1×10^{-6} to 1×10^{-4} or below the noncancer benchmark level of 1.0, respectively.

7. REFERENCES

California Environmental Protection Agency (Cal/EPA), 2002. Cancer Potency Factors - Toxicity Criteria Database. Office of Environmental Health Hazard Assessment. Website address: http://www.oehha.ca.gov/risk/chemicalDB/index.asp. June.

ESE, 1997. Environmental Science & Engineering, Inc. Baseline Health Risk Assessment, Former Ascon Landfill. June 9, 1997 (Revision No. 1)

Kerfoot, H.B., 1991. "Subsurface Partitioning of Volatile Organic Compounds: Effects of Temperature and Soil Moisture," *Ground Water*, 29(5): 678-684, June/July 1991.

Millington, R.J., 1959. "Gas Diffusion in Porous Media", *Science*, **130**, 100 – 102.

U.S. Environmental Protection Agency (USEPA), 1989. 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, DC.

USEPA, 1990. National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Final Rule. Federal Register: 6670-8852. March 8, 1990.

USEPA, 1991. Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual, Supplemental Guidance Standard Exposure Factors, Draft Final, March 25, 1991, OSWER Directive 9285.6-03, Office of Solid Waste and Emergency Response, Washington, DC.

USEPA, 1997. Exposure Factors Handbook. Office of Research and Development. EPA/600/P-95/002Ba. August 1996.

USEPA, 2000a. Users' Guide for the Johnson and Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings. USEPA Office of Emergency and Remedial Response. December.

USEPA, 2000b. *USEPA Region IX Preliminary Remediation Goals (PRGs) Table*. November.

USEPA, 2002. Integrated Risk Information System (IRIS) Substance File Online Database. June.

Tables

Table 3-1
Maximum Predicted Annual Average Concentrations
Air Pathway Risk Assessment
Ascon Site

	Maximum Concentration Detected Cs (mg/kg)	Soil/Sediment		Liquid		Emission Flux Used in Air Modeling (g/sec)
		Emission Flux (g/sec)	Emission Flux (g/sec-cm2)	Emission Flux (g/sec)	Emission Flux (g/sec-cm2)	
LAGOON L-1						
1,2-DCA	55	0.0411	7.01E-10	0.10400	4.21E-09	1.75E-01
1,1,1-TCA	2.1	0.0085	1.45E-10	0.00800	3.18E-10	1.51E-02
Benzene	4.4	0.0108	1.84E-10	0.00800	3.15E-10	1.58E-02
Methylene Chloride	110	0.1948	3.32E-09	1.04300	4.21E-08	1.67E+00
LAGOON L-2						
1,2-DCA	9	0.0070	1.15E-10	0.01200	8.10E-10	2.83E-02
1,1,1-TCA	240	1.0164	1.66E-08	0.65500	4.28E-08	1.82E+00
Benzene	5.2	0.0133	2.18E-10	0.00700	4.38E-10	2.01E-02
Methylene Chloride	12	0.0222	3.63E-10	0.08300	5.41E-09	1.77E-01
LAGOON L-3						
1,2-DCA	6.2	0.0060	7.90E-11	NA	NA	6.01E-03
1,1,1-TCA	13	0.0684	8.99E-10	NA	NA	6.84E-02
Benzene	17	0.0542	7.13E-10	NA	NA	5.42E-02
Methylene Chloride	10	0.0230	3.02E-10	NA	NA	2.30E-02
LAGOON L-4						
1,2-DCA	--	--	--	NA	NA	--
1,1,1-TCA	--	--	--	NA	NA	--
Benzene	1.6	0.0076	6.71E-11	NA	NA	7.63E-03
Methylene Chloride	34	0.1168	1.03E-09	NA	NA	1.17E-01
LAGOON L-5						
1,2-DCA	10	0.0102	1.27E-10	NA	NA	1.02E-02
1,1,1-TCA	0.2	0.0011	1.38E-11	NA	NA	1.11E-03
Benzene	0.3	0.0010	1.26E-11	NA	NA	1.01E-03
Methylene Chloride	7.8	0.0189	2.36E-10	NA	NA	1.89E-02
PIT F						
Benzene	3.5	NA	NA	4.90E-04	2.29E-10	4.90E-04
Styrene	720	NA	NA	5.70E-03	2.67E-09	5.70E-03

--- Not analyzed or not available
NA - Not Applicable

Table 3-2
Summary of the Onsite Meteorological Data
Used in the Comparative Modeling Analysis

Hour	Wind Speed (m/s)	Wind Flow Vector (deg)	Stability	Mixing Heitght (m)
9	1.00	225	2	363
10	1.00	225	2	352
11	1.34	0	2	340
12	1.68	0	2	328
13	1.90	45	2	317
14	2.24	45	3	305

Table 3-3
Comparison of Revised Lagoon and Pit Emissions with Measured Ambient Air Concentrations (October 21, 1999)

	Perimeter Sampling							
	Sample ID (Sample Collection Date / Time) [Sample Location] <Air Sampling Event>							
Chemical	S-2 JW-67 (10-21-99/0813-1417)	Modeled Predictions at S2 Location	S6 JW-19 (10-21-99/0810-1419)	Modeled Predictions at S6 Location	S1 JW-51 (10-21-99/0817-1423)	Modeled Predictions at S1 Location	S3 JW-53 (10-21-99/0820-1428)	Modeled Predictions at S3 Location
VOCs (ppbv)[1]	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
1,2-Dichloroethane	ND	3.50E+00	ND	1.01E+00	ND	4.01E-02	ND	4.61E-03
1,1,1-Trichloroethane	7.00E-01	3.16E+00	4.60E-01	9.98E+00	4.20E-01	1.66E-01	4.40E-01	3.25E-04
Benzene	5.40E+00	9.13E-01	3.70E+00	2.44E+00	3.40E+00	2.58E-01	3.30E+00	8.07E-03
Methylene Chloride	3.60E+00	1.02E+01	2.60E+00	1.78E+01	2.40E+00	8.09E-01	2.60E+00	3.62E-02
Styrene	4.70E+00	3.12E-02	2.80E+00	3.99E-04	2.20E+00	0.00E+00	2.20E+00	5.67E-02

Table 3-4
Maximum Predicted 1-Hour Average Concentrations Using the 1-Year SCAQMD Costa Mesa Meteorological Dataset

Chemical	Maximum Boundary Concentration (ug/m^3)	Maximum Residential Concentration (ug/m^3)	Maximum School Concentration (ug/m^3)	Maximum Fire Station Concentration (ug/m^3)	Maximum Onsite Concentration (ug/m^3)
1,2-DCA	2.51E+02	1.36E+02	5.62E+01	6.90E+01	1.13E+03
1,1,1-TCA	1.68E+03	9.53E+02	5.08E+02	6.40E+02	4.77E+03
Benzene	7.22E+01	4.63E+01	3.44E+01	4.71E+01	3.71E+02
Methylene Chloride	2.32E+03	1.25E+03	5.04E+02	6.37E+02	1.06E+04
Styrene	8.62E+01	2.28E+01	2.35E+00	2.85E+00	3.12E+02

Table 3-5
Maximum Predicted Annual Average Concentrations Using the 1-Year SCAQMD Costa Mesa Meteorological Dataset

Chemical	Maximum Boundary Concentration (ug/m^3)	Maximum Residential Concentration (ug/m^3)	Maximum School Concentration (ug/m^3)	Maximum Fire Station Concentration (ug/m^3)	Maximum Onsite Concentration (ug/m^3)
1,2-DCA	2.08E+01	5.40E+00	2.04E+00	2.65E+00	1.71E+02
1,1,1-TCA	1.36E+02	5.93E+01	1.80E+01	2.23E+01	7.01E+02
Benzene	5.19E+00	2.71E+00	1.44E+00	2.18E+00	1.20E+02
Methylene Chloride	1.60E+02	4.82E+01	1.82E+01	2.49E+01	1.62E+03
Styrene	3.57E+00	9.72E-01	5.13E-02	6.59E-02	5.85E+00

Table 3-6
Summary Table of MRLs and RELs
Air Pathway Risk Assessment
Ascon Landfill Site

VOCs	ATSDR - acute Minimal Risk Levels (ug/m^3)	OEHHA - acute Reference Exposure Level (ug/m^3)
1,2-DCA	2,466 (chronic) *	--
1,1,1-TCA	11,100	--
Benzene	163	1,300
Methylene Chloride	2118	14,000
Styrene	260 (chronic) *	21,000

Notes:

" -- " none available

* Data not considered sufficient to establish an inhalation acute-duration MRL
An **MRL** is an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse noncancer health effects over a specified duration of exposure. These substance-specific estimates, which are intended to serve as screening levels, are used by ATSDR health assessors and other responders to identify contaminants and potential health effects that may be of concern at hazardous waste sites. It is important to note that MRLs are not intended to define clean-up or action levels for ATSDR or other Agencies.

An **REL** is the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration.

Table 3-7
Maximum Predicted Annual Average Concentrations
Air Pathway Risk Assessment
Ascon Site

VOCs	Maximum Offsite Residential Concentration (ug/m^3)	Maximum Offsite Worker Concentration (ug/m^3)
1,2-DCA	5.40E+00	2.65E+00
1,1,1-TCA	5.93E+01	2.23E+01
Benzene	2.71E+00	2.18E+00
Methylene Chloride	4.82E+01	2.49E+01
Styrene	9.72E-01	6.59E-02

Table 3-8
Exposure Assumptions
Air Pathway Risk Assessment
Ascon Site

Exposure Parameters	Units	Offsite Residential Exposure Scenario			Offsite Worker Exposure Scenario	
		Adult	Child	Source	Adult Worker	Source
Chemical Concentration in Air (Cair)	mg/m^3	--	--	chemical-specific	--	chemical-specific
Inhalation Rate of Air (IR-A)	m^3/day	13.28	7.92	USEPA 1997	19.92	USEPA 1997
Exposure Frequency (EF)	days/year	350	350	USEPA 1991	250	USEPA 1991
Exposure Duration (ED)	years	24	6	USEPA 1991	25	USEPA 1991
Body Weight (BW)	kg	70	15	USEPA 1991	70	USEPA 1991
Averaging Time for Noncarcinogens (AT_n)	days	8,760	2,190	USEPA 1989 (ED*365 d/yr)	9,125	USEPA 1989 (ED*365 dys/yr)
Averaging Time for Carcinogens (AT_c)	days	25,550	25,550	USEPA 1989	25,550	USEPA 1989
Inhalation Cancer Slope Factor (CSF_i)	$(mg/kg\text{-}d)^{-1}$	chem-specific	chem-specific	Cal/EPA 2002	chem-specific	Cal/EPA 2002
Inhalation Reference Dose (RfD_i)	(mg/kg-d)	chem-specific	chem-specific	USEPA 2000b	chem-specific	USEPA 2000b

References:

Cal/EPA 2002. Cancer Potency Factors - Toxicity Criteria Database. OEHHA. Website: http://www.oehha.ca.gov/risk/chemicalDB/index.asp. June.

USEPA 1989. Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

USEPA 1991. RAGS Vol I: Human Health Evaluation Manual - Supp Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03

USEPA 1997. Exposure Factors Handbook. Volumes I-III. An Update to Exposure Factors Handbook EPA/600/8-89/043. EPA/600/P-95-002Fa. August.

USEPA 2000b. Region IX Preliminary Remedial Goals (PRGs). November.

Table 4-1
Chronic Toxicity Criteria
Air Pathway Risk Assessment
Ascon Site

Chemical	Chronic Inhalation Reference Dose RfDi [mg/kg-day]		Inhalation Cancer Slope Factor CSFi [mg/kg-day]$^{-1}$	
VOCs				
1,2-Dichloroethane	400 / 1.1E-01	A	7.2E-02	C
1,1,1-Trichloroethane	2.9E-01	N/E	--	
Benzene	60 / 1.7E-02	A	1.0E-01	C
Methylene chloride	400 / 1.1E-01	A	3.5E-03	C
Styrene	900 / 2.6E-01	A	--	

Notes:

" -- " = not available or not applicable

A = chronic inhalation reference exposure levels (first value listed, in micrograms per cubic meter) converted to an inhalation RfD (second value listed), eqn:
RfD = REL in ug/m3 x 0.001 mg/ug x 20 m3/day x 1/70 kg

C = Cal/EPA 2002. OEHHA Cancer Potency Factors - Toxicity Criteria Online Database

E = NCEA (N) toxicity value as listed in USEPA Region IX PRG Table (2000b)

Table 5-1
Cumulative Risk and Hazard
Outdoor Air Inhalation Pathway
Air Pathway Risk Assessment
Ascon Site

COPC	Offsite Residential Exposure Scenario					Offsite Worker Exposure Scenario		
	Modeled Air Conc (Cair) (mg/m^3)	Noncancer HQ Child	Cancer Risk Child	Noncancer HQ Adult	Cancer Risk Adult	Modeled Air Conc (Cair) (mg/m^3)	Noncancer HQ Worker	Cancer Risk Worker
VOCs								
1,2-Dichloroethane	5.40E-03	2.5E-02	1.7E-05	8.9E-03	2.4E-05	2.65E-03	4.7E-03	1.3E-05
1,1,1-Trichloroethane	5.93E-02	1.0E-01	--	3.7E-02	--	2.23E-02	1.5E-02	--
Benzene	2.71E-03	8.0E-02	1.2E-05	2.9E-02	1.7E-05	2.18E-03	2.5E-02	1.5E-05
Methylene chloride	4.82E-02	2.1E-01	7.3E-06	7.7E-02	1.1E-05	2.49E-02	4.2E-02	6.1E-06
Styrene	9.72E-04	1.9E-03	--	6.9E-04	--	6.59E-05	5.0E-05	--
Total Hazard Index and Cancer Risk =		**4.2E-01**	**3.6E-05**	**1.5E-01**	**5.2E-05**		**8.7E-02**	**3.5E-05**

Notes:

" -- " not applicable

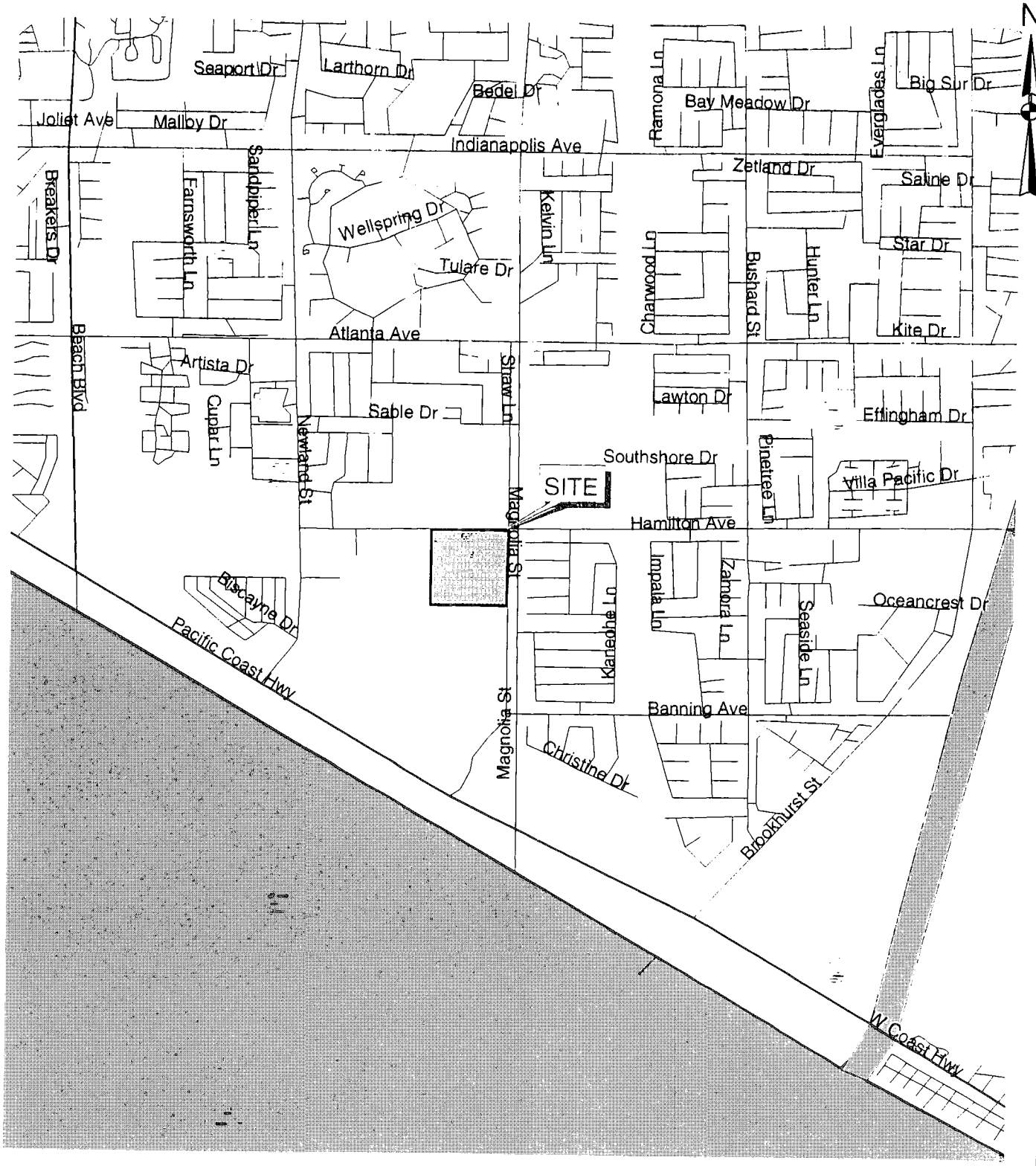
Cair: Exposure Point Concentration in milligrams per cubic meter used in the risk and hazard calculations

Table 5-2
Comparison of Predicted Air Concentrations with Background
Outdoor Air Inhalation Pathway
Air Pathway Risk Assessment
Ascon Site

Chemical	Maximum Residential Concentration (ug/m^3)	Maximum School Concentration (ug/m^3)	Maximum Fire Station Concentration (ug/m^3)	SCAQMD Monitoring December 2001 Maximum Concentration (ug/m^3)	SCAQMD Long Beach Monitoring Station (2001) Maximum Concentration (ug/m^3)
1,2-DCA	5.40E+00	2.04E+00	2.65E+00	<0.4	ND
1,1,1-TCA	5.93E+01	1.80E+01	2.23E+01	5.60E-01	0.44
Benzene	2.71E+00	1.44E+00	2.18E+00	1.63E+00	10.1
Methylene Chloride	4.82E+01	1.82E+01	2.49E+01	6.70E-01	4.24
Styrene	9.72E-01	5.13E-02	6.59E-02	4.33E-01	4.33

SCAQMD maximum detected concentrations for benzene and methylene chloride corrected for laboratory air results

Figures

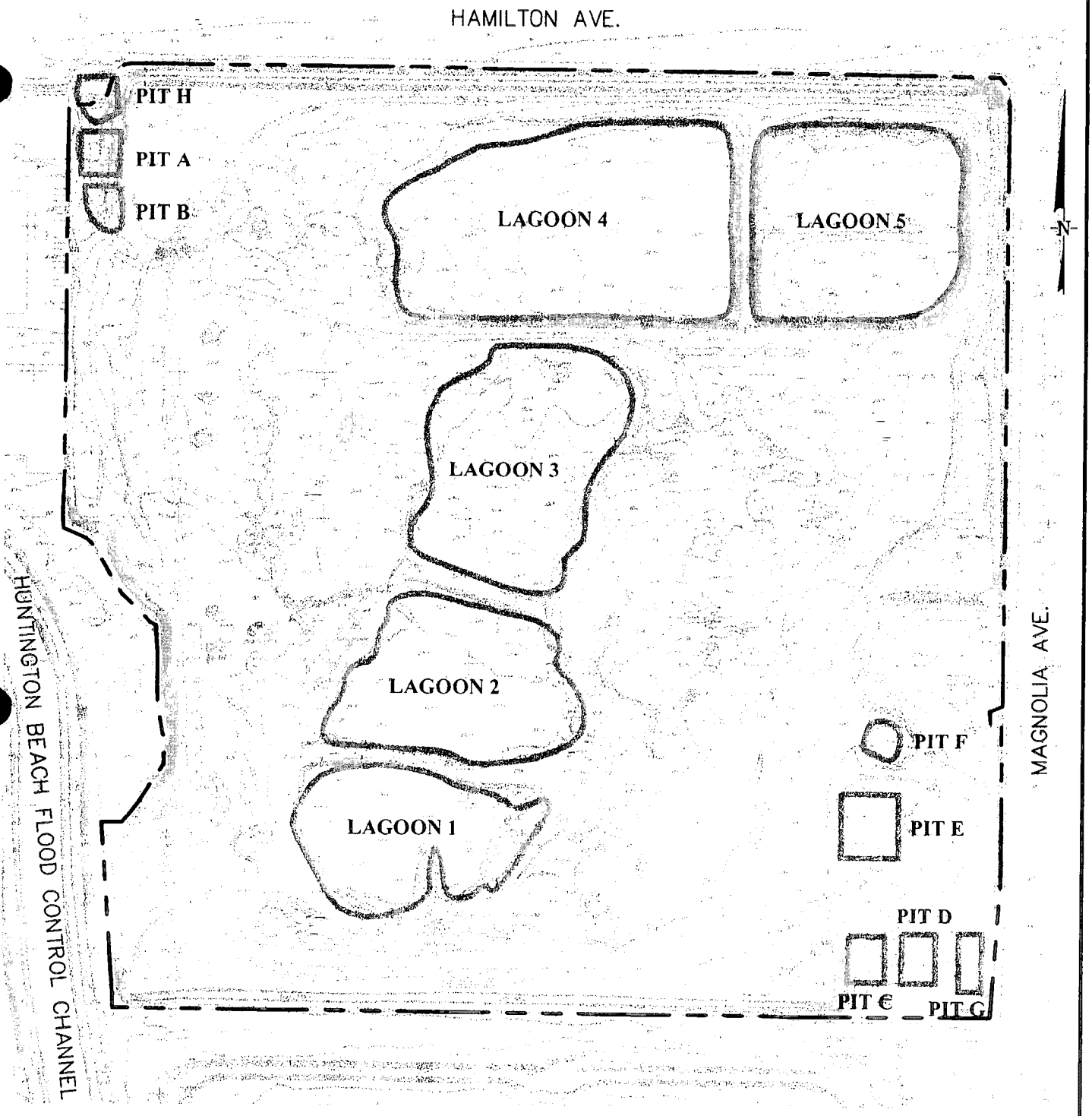


GEOSYNTEC CONSULTANTS

SITE LOCATION
ASCON
HUNTINGTON BEACH, CALIFORNIA

FIGURE NO.	2-1
PROJECT NO.	HX0131
FILE NO.	0131G001.APR
DATE:	JUNE 2002

A0001000006039



LEGEND

PROPERTY LINE

FOOTPRINT OF EXISTING PITS AND LAGOONS

0 100 200
SCALE IN FEET

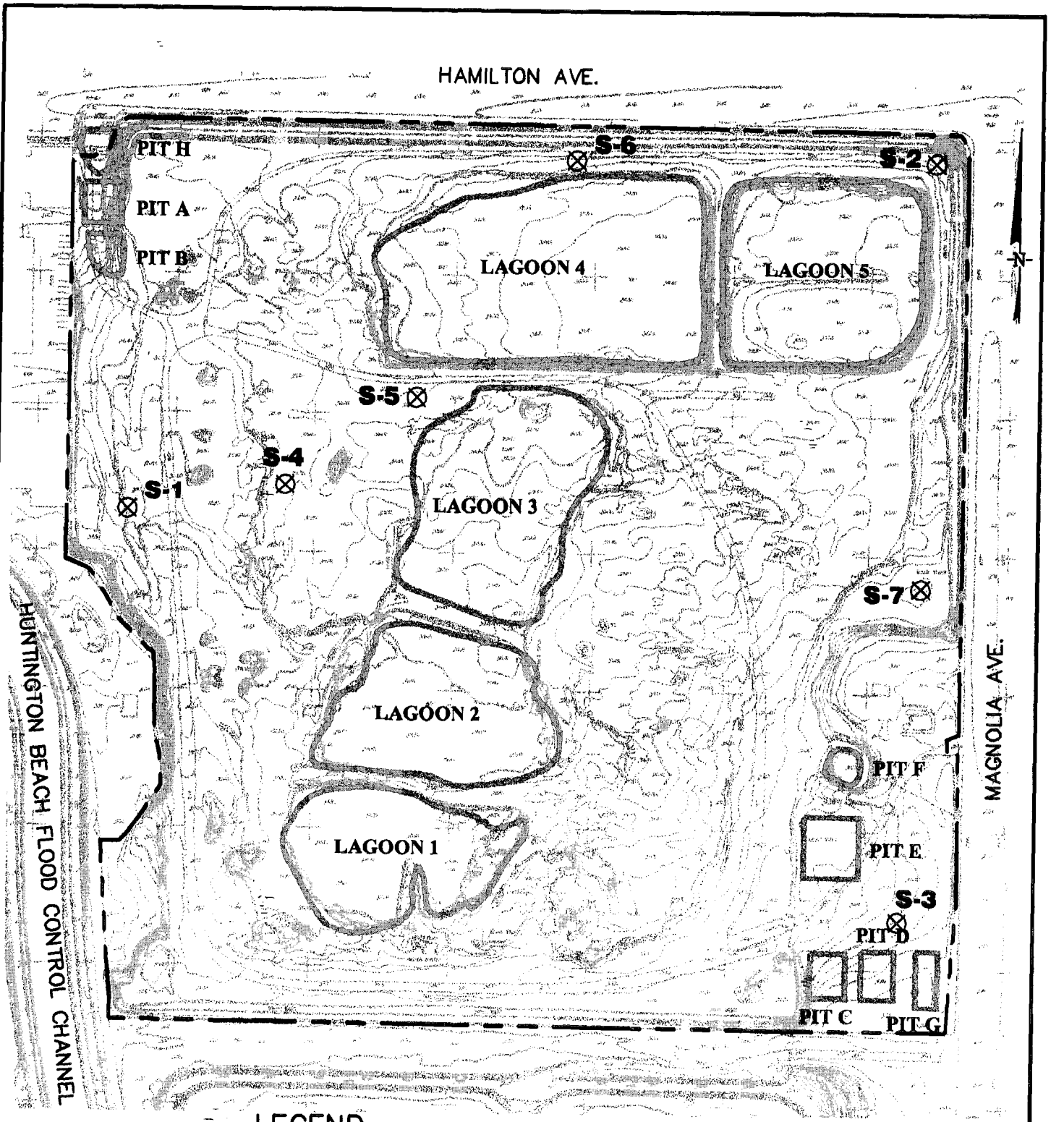
GEOSYNTEC CONSULTANTS

SITE PLAN
ASCON
HUNTINGTON BEACH, CALIFORNIA

FIGURE NO.	2-2
PROJECT NO.	HX0131
DOCUMENT NO.	
DATE:	28 JUNE 2002

0131F003.DWG 200206280955BDP

A0001000006040



LEGEND

PROPERTY LINE

FOOTPRINT OF EXISTING PITS AND LAGOONS

APPROXIMATE SAMPLING LOCATIONS

0 100 200
SCALE IN FEET

GEOSYNTEC CONSULTANTS

PILOT TEST AIR SAMPLING LOCATIONS (OCT, 1999)
ASCON
HUNTINGTON BEACH, CALIFORNIA

FIGURE NO.	3-1
PROJECT NO.	HX0131
DOCUMENT NO.	
DATE:	11 JULY 2002

0131F004.DWG 200207110844BDP

A0001000006041

Appendix A

APPENDIX A

EMISSION FLUX CALCULATIONS

Calculation of Chemical Emission Flux Assuming Non-Aqueous Liquids from Lagoon L-1

Parameter Symbol	Parameter Definition	Value	Units
f	Correction Factor	0.985-0.00775	Pv
G	Conversion Factor	24,860	cm^3/mole
W_A	Width of Portion of Lagoon that is Liquid (65%)	4,976	cm
L_A	Length of Portion of Lagoon that is Liquid (65%)	4,976	cm
U	Wind Speed	3.35	m/sec

Parameter Symbol	Parameter Definition	Units	Chemicals in Lagoon L-1			
			1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
Vp	True Vapor Pressure of Pure Compound	mm/Hg	123.7	78.7	95	435
Pv	Partial Vapor Pressure of Pure Compound	unitless	1.63E-01	1.04E-01	1.25E-01	5.72E-01
Da	Diffusivity Coefficient in Air	cm^2/sec	8.00E-02	9.10E-02	8.80E-02	1.01E-01
f	Correction Factor	unitless	0.984	0.984	0.984	0.981
MW	Molecular Weight	g/mole	133	99	78.1	85
W_c	Chemical Weight in Waste	mg/kg	2.10E+00	5.50E+01	4.40E+00	1.10E+02
W	Total Weight in Waste	mg/kg	4.80E+05	4.80E+05	4.80E+05	4.80E+05
W_c/W	Weight fraction of the chemical in waste	g/g	4.38E-06	1.15E-04	9.17E-06	2.29E-04

Calculated Emission Rate (E) and Mass Emission Flux (Q)		1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
$E = 2\ Pv\ W_a\ sqrt(L_a\ D_a\ U/3.1416\ f)^*\ (W_c/W)$	(cm^3/sec)	1.47E+00	2.62E+01	2.48E+00	3.05E+02
$Q = E\ (MW/G)$	g/sec	0.008	0.104	0.008	1.043
Specific Flux (Liquid)	g/sec/cm^2	3.18E-10	4.21E-09	3.15E-10	4.213E-08

Notes:
1,2-DCA = 1,2-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane

Calculation of Chemical Emission Flux Assuming Non-Aqueous Liquids from Lagoon L-2

Parameter Symbol	Parameter Definition	Value	Units
f	Correction Factor	0.985-0.00775	Pv
G	Conversion Factor	24,860	cm^3/mole
W_A	Width of Portion of Lagoon that is Liquid (50%)	3,912	cm
L_A	Length of Portion of Lagoon that is Liquid (50%)	3,912	cm
U	Wind Speed	3.35	m/sec

Parameter Symbol	Parameter Definition	Units	Chemicals in Lagoon L-2			
			1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
Vp	True Vapor Pressure of Pure Compound	mm/Hg	123.7	78.7	95	435
Pv	Partial Vapor Pressure of Pure Compound	unitless	1.63E-01	1.04E-01	1.25E-01	5.72E-01
Da	Diffusivity Coefficient in Air	cm^2/sec	8.00E-02	9.10E-02	8.80E-02	1.01E-01
f	Correction Factor	unitless	0.984	0.984	0.984	0.981
MW	Molecular Weight	g/mole	133	99	78.1	85
W_c	Chemical Weight in Waste	mg/kg	2.40E+02	9.00E+00	5.20E+00	1.20E+01
W	Total Weight in Waste	mg/kg	4.60E+05	4.60E+05	4.60E+05	4.60E+05
W_c/W	Weight fraction of the chemical in waste	g/g	5.22E-04	1.96E-05	1.13E-05	2.61E-05

Calculated Emission Rate (E) and Mass Emission Flux (Q)		1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
$E = 2\ Pv\ W_a\ sqrt(L_a\ D_a\ U/3.1416\ f)^*\ (W_c/W)$	(cm^3/sec)	1.22E+02	3.11E+00	2.14E+00	2.42E+01
Q = E (MW/G)	g/sec	0.655	0.012	0.007	0.083
Specific Flux (Liquid)	gram cm^{-2} sec^{-1}	4.28E-08	8.10E-10	4.38E-10	5.41E-09

Notes:
1,2-DCA = 1,2-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane

Calculation of Chemical Emission Flux Assuming Non-Aqueous Liquids from Pit F

Parameter Symbol	Parameter Definition	Value	Units
f	Correction Factor	0.985-0.00775	Pv
G	Conversion Factor	24,860	cm^3/mole
W_A	Width of Lagoon	1,463	cm
L_A	Length of Lagoon	1,463	cm
U	Wind Speed	3.35	m/sec

Parameter Symbol	Parameter Definition	Units	Chemicals in Lagoon Pit F	
			Benzene	Styrene
Vp	True Vapor Pressure of Pure Compound	mm/Hg	95	4.5
Pv	Partial Vapor Pressure of Pure Compound	Atmosphere	1.25E-01	5.92E-03
Da	Diffusivity Coefficient in Air	cm^2/sec	8.80E-02	7.10E-02
f	Correction Factor	unitless	0.984	0.985
MW	Molecular Weight	g/mole	78.1	104
W_c	Chemical Weight in Waste	mg/kg	3.50E+00	7.20E+02
W	Total Weight in Waste	mg/kg	9.70E+05	9.70E+05
W_c/W	Weight fraction of the chemical in waste	g/g	3.61E-06	7.42E-04

Calculated Emission Rate (E) and Mass Emission Flux (Q)		Benzene	Styrene
$E = 2\ Pv\ W_a\ sqrt(L_a\ D_a\ U/3.1416\ f)^*\ (W_c/W)$	(cm^3/sec)	1.56E-01	1.36E+00
$Q = E\ (MW/G)$	g/sec	4.90E-04	5.70E-03
Specific Flux (Liquid)	gram cm^{-2} sec	2.28799E-10	2.66537E-09

Calculation of Emission Flux Assuming Soil Matrix from Lagoon L-1

Parameter Symbol	Parameter Definition	Value	Units
ρb	Bulk Density	1.5	g/cm^3
n_g	Air-filled porosity	0.13	--
n_t	Total Porosity	0.43	--
n_w	Water-filled Porosity	0.3	--
foc	Organic Carbon Fraction of the Soil	0.002	--
z	Mimimun Depth of Contamination	7.5	cm
L_A	Length of Lagoon	7656	cm
A	Lagoon Area	58614336	cm^2

Parameter Symbol	Parameter Definition	Units	Chemicals in Lagoon L-1			
			1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
C_s	Measured Concentration in Soil	mg/kg	2.1	55	4.4	110
Kd	Soil/Water Coeficient	L/kg	0.304	0.028	0.166	0.0176
H	Henry's Law Constant	--	5.99E-01	4.04E-02	2.29E-01	8.38E-02
Dair	Diffusivity Coefficient in Air	cm^2/sec	0.08	0.091	0.088	0.101
Dw	Diffusivity Coefficient in Water	cm^2/sec	8.00E-06	9.00E-06	7.80E-06	1.10E-05
MW	Molecular Weight	g/mole	133.5	99	78.1	85
Koc	Organic Carbon Partition Coefficient	--	152	14	83	8.8
D_{sg}	Soil-Gas Diffusion Coefficient	cm^2/sec	4.82E-04	5.48E-04	5.30E-04	6.08E-04

	1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
Calculated Gas Concentration for the Lagoon (ug/cm^3)				
$C_g = C_s * \rho b/(n_g + (n_w/H) + foc\ Koc\ \rho b/H)$	2.26E+00	9.60E+00	2.61E+00	4.10E+01
Calculated Emission Flux for the Lagoon (g/sec)				
$J = D_{sg} A\ C_g / z$	8.52E-03	4.11E-02	1.08E-02	1.95E-01
Specific Flux ($g/cm^2/sec$)	1.45E-10	7.01E-10	1.84E-10	3.32E-09

Notes:

1,2-DCA = 1,2-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane

p:\blanc\ascon\Non-aq\Soil_Specific Fluxes_revised_07_08\L-1

Calculation of Emission Flux Assuming Soil Matrix from Lagoon L-2

Parameter Symbol	Parameter Definition	Value	Units
ρb	Bulk Density	1.5	g/cm^3
n_g	Air-filled porosity	0.13	--
n_t	Total Porosity	0.43	--
n_w	Water-filled Porosity	0.3	--
foc	Organic Carbon Fraction of the Soil	0.002	--
z	Mimimun Depth of Contamination	7.5	cm
L_A	Length of Lagoon	7824	cm
A	Lagoon Area	61214976	cm^2

Parameter Symbol	Parameter Definition	Units	Chemical in Lagoon L-2			
			1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
C_s	Measured Concentration in Soil	mg/kg	240	9	5.2	12
Kd	Soil/Water Coeficient	L/kg	0.304	0.028	0.166	0.0176
H	Henry's Law Constant	--	5.99E-01	4.04E-02	2.29E-01	8.38E-02
Dair	Diffusivity Coefficient in Air	cm^2/sec	0.08	0.091	0.088	0.101
Dw	Diffusivity Coefficient in Water	cm^2/sec	8.00E-06	9.00E-06	7.80E-06	1.10E-05
MW	Molecular Weight	g/mole	133.5	99	78.1	85
Koc	Organic Carbon Partition Coefficient	--	152	14	83	8.8
D_{sg}	Soil-Gas Diffusion Coefficient	cm^2/sec	4.82E-04	5.48E-04	5.30E-04	6.08E-04

	1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
Calculated Gas Concentration for the Lagoon (ug/cm^3)				
$C_g = C_s * \rho b/(n_g + (n_w/H) + foc\ Koc\ \rho b/H)$	2.59E+02	1.57E+00	3.09E+00	4.47E+00
Calculated Emission Flux for the Lagoon (g/sec)				
$J = D_{sg} A\ C_g / z$	1.02E+00	7.02E-03	1.33E-02	2.22E-02
Specific Flux ($g/cm^2/sec$)	1.66E-08	1.15E-10	2.18E-10	3.63E-10

Notes:

1,2-DCA = 1,2-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane

p:\blanc\ascon\Non-aq\Soil_Specific Fluxes_revised_07_08\L-2

Calculation of Emission Flux Assuming Soil Matrix from Lagoon L-3

Parameter Symbol	Parameter Definition	Value	Units
ρb	Bulk Density	1.5	g/cm^3
n_g	Air-filled porosity	0.13	--
n_t	Total Porosity	0.43	--
n_w	Water-filled Porosity	0.3	--
foc	Organic Carbon Fraction of the Soil	0.002	--
z	Mimimun Depth of Contamination	7.5	cm
L_A	Length of Lagoon	8721	cm
A	Lagoon Area	76055841	cm^2

Parameter Symbol	Parameter Definition	Units	Chemicals in Lagoon L-3			
			1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
C_s	Measured Concentration in Soil	mg/kg	13	6.2	17	10
Kd	Soil/Water Coeficient	L/kg	0.304	0.028	0.166	0.0176
H	Henry's Law Constant	--	5.99E-01	4.04E-02	2.29E-01	8.38E-02
Dair	Diffusivity Coefficient in Air	cm^2/sec	0.08	0.091	0.088	0.101
Dw	Diffusivity Coefficient in Water	cm^2/sec	8.00E-06	9.00E-06	7.80E-06	1.10E-05
MW	Molecular Weight	g/mole	133.5	99	78.1	85
Koc	Organic Carbon Partition Coefficient	--	152	14	83	8.8
D_{sg}	Soil-Gas Diffusion Coefficient	cm^2/sec	4.82E-04	5.48E-04	5.30E-04	6.08E-04

	1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
Calculated Gas Concentration for the Lagoon (ug/cm^3)				
$C_g = C_s * \rho b/(n_g + (n_w/H) + foc\ Koc\ \rho b/H)$	1.40E+01	1.08E+00	1.01E+01	3.73E+00
Calculated Emission Flux for the Lagoon (g/sec)				
$J = D_{sg} A\ C_g / z$	6.84E-02	6.01E-03	5.42E-02	2.30E-02
Specific Flux ($g/cm^2/sec$)	8.99E-10	7.90E-11	7.13E-10	3.02E-10

Notes:

1,2-DCA = 1,2-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane

p:\blanc\ascon\Non-aq\Soil_Specific Fluxes_revised_07_08\L-3

Calculation of Emission Flux Assuming Soil Matrix from Lagoon L-4

Parameter Symbol	Parameter Definition	Value	Units
ρb	Bulk Density	1.5	g/cm^3
n_g	Air-filled porosity	0.13	--
n_t	Total Porosity	0.43	--
n_w	Water-filled Porosity	0.3	--
foc	Organic Carbon Fraction of the Soil	0.002	--
z	Mimimun Depth of Contamination	7.5	cm
L_A	Length of Lagoon	10666	cm
A	Lagoon Area	113763556	cm^2

Parameter Symbol	Parameter Definition	Units	Chemicals in Lagoon L-4			
			1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
C_s	Measured Concentration in Soil	mg/kg	--	--	1.6	34
Kd	Soil/Water Coeficient	L/kg	0.304	0.028	0.166	0.0176
H	Henry's Law Constant	--	5.99E-01	4.04E-02	2.29E-01	8.38E-02
Dair	Diffusivity Coefficient in Air	cm^2/sec	0.08	0.091	0.088	0.101
Dw	Diffusivity Coefficient in Water	cm^2/sec	8.00E-06	9.00E-06	7.80E-06	1.10E-05
MW	Molecular Weight	g/mole	133.5	99	78.1	85
Koc	Organic Carbon Partition Coefficient	--	152	14	83	8.8
D_{sg}	Soil-Gas Diffusion Coefficient	cm^2/sec	4.82E-04	5.48E-04	5.30E-04	6.08E-04

	1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
Calculated Gas Concentration for the Lagoon (ug/cm^3)				
$C_g = C_s * \rho b/(n_g + (n_w/H) + foc\ Koc\ \rho b/H)$	NA	NA	9.50E-01	1.27E+01
Calculated Emission Flux for the Lagoon (g/sec)				
$J = D_{sg} A\ C_g / z$	NA	NA	7.63E-03	1.17E-01
Specific Flux ($g/cm^2/sec$)	NA	NA	6.71E-11	1.03E-09

Notes:

1,2-DCA = 1,2-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane

p:\blanc\ascon\Non-aq\Soil_Specific Fluxes_revised_07_08\L-4

Calculation of Emission Flux Assuming Soil Matrix from Lagoon L-5

Parameter Symbol	Parameter Definition	Value	Units
ρb	Bulk Density	1.5	g/cm^3
n_g	Air-filled porosity	0.13	--
n_t	Total Porosity	0.43	--
n_w	Water-filled Porosity	0.3	--
foc	Organic Carbon Fraction of the Soil	0.002	--
z	Mimimun Depth of Contamination	7.5	cm
L_A	Length of Lagoon	8947	cm
A	Lagoon Area	80048809	cm^2

Parameter Symbol	Parameter Definition	Units	Chemicals in Lagoon L-5			
			1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
C_s	Measured Concentration in Soil	mg/kg	0.2	10	0.3	7.8
Kd	Soil/Water Coeficient	L/kg	0.304	0.028	0.166	0.0176
H	Henry's Law Constant	--	5.99E-01	4.04E-02	2.29E-01	8.38E-02
Dair	Diffusivity Coefficient in Air	cm^2/sec	0.08	0.091	0.088	0.101
Dw	Diffusivity Coefficient in Water	cm^2/sec	8.00E-06	9.00E-06	7.80E-06	1.10E-05
MW	Molecular Weight	g/mole	133.5	99	78.1	85
Koc	Organic Carbon Partition Coefficient	--	152	14	83	8.8
D_{sg}	Soil-Gas Diffusion Coefficient	cm^2/sec	4.82E-04	5.48E-04	5.30E-04	6.08E-04

Calculated Gas Concentration for the Lagoon (ug/cm^3)	1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride
$C_g = C_s * \rho b/(n_g + (n_w/H) + foc\ Koc\ \rho b/H)$	2.16E-01	1.75E+00	1.78E-01	2.91E+00
Calculated Emission Flux for the Lagoon (g/sec)				
$J = D_{sg} A\ C_g / z$	1.11E-03	1.02E-02	1.01E-03	1.89E-02
Specific Flux ($g/cm^2/sec$)	1.38E-11	1.27E-10	1.26E-11	2.36E-10

Notes:

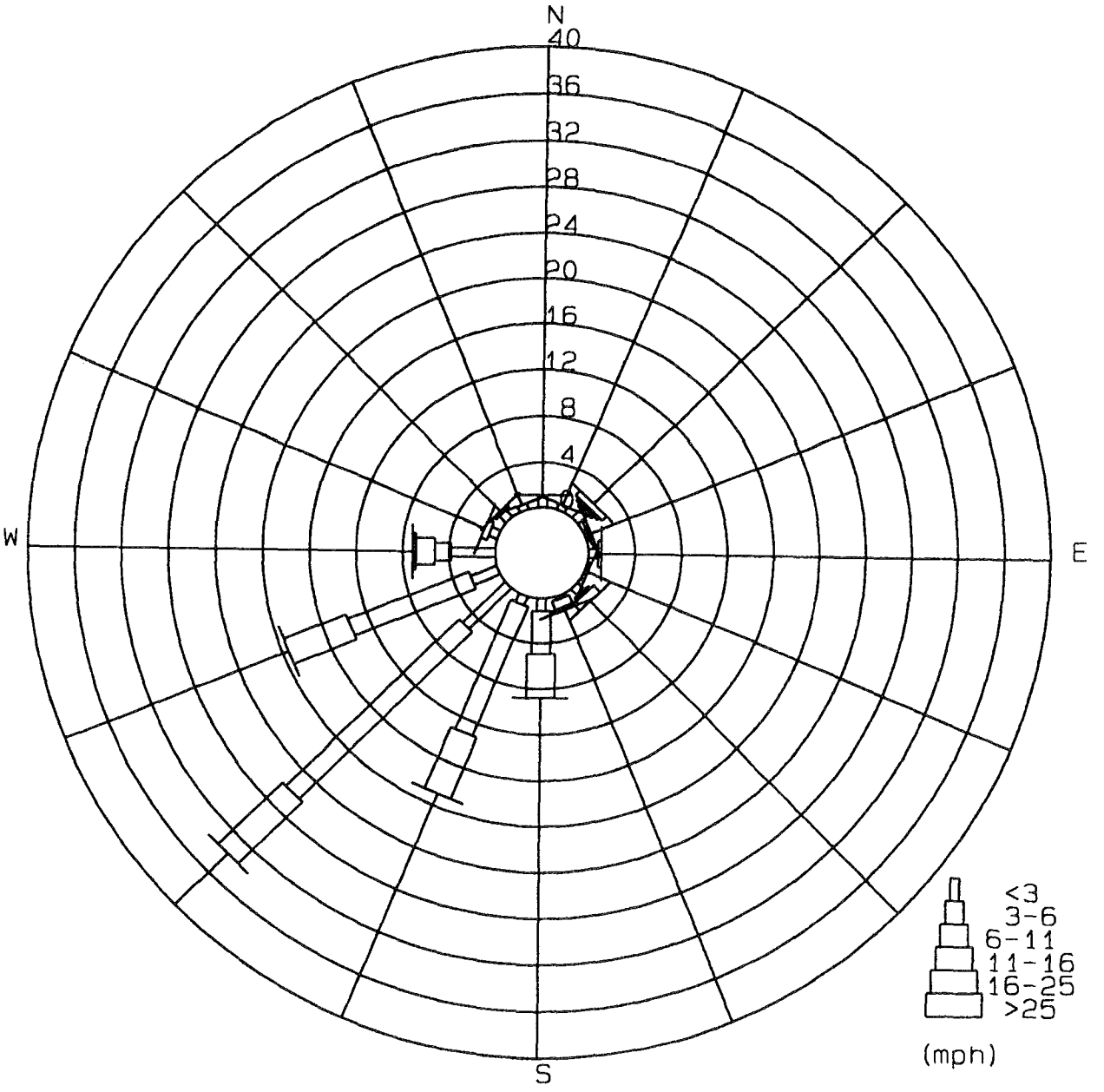
1,2-DCA = 1,2-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane

Appendix B

APPENDIX B

AIR DISPERSION MODELING

WIND FREQUENCY DISTRIBUTION
(PERCENT)



SCAQMD COSTA MESA MONITORING STATION
(ALL STABILITIES)

		0.00E+00	0.00E+00	0.00E+00		0	0.00E+00	5.70E-03	

Styrene - Annual

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL	
0	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.82E-02	4.82E-02	
50	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.39E-02	5.39E-02	
100	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.56E-02	6.56E-02	
150	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	8.90E-02	8.90E-02	
200	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.33E-01	1.33E-01	
250	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.77E-01	1.77E-01	
300	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.48E-01	1.48E-01	
350	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.02E-01	2.02E-01	
381	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.04E-01	1.04E-01	
381	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.80E-01	3.80E-01	
381	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.60E+00	1.60E+00	
381	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.57E+00	3.57E+00	
381	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.71E-01	7.71E-01	
381	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.95E-01	2.95E-01	
381	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.69E-01	1.69E-01	
381	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.12E-01	1.12E-01	
381	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.44E-02	7.44E-02	
350	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.61E-02	7.61E-02	
300	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.46E-02	6.46E-02	
250	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.75E-02	4.75E-02	
200	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.06E-02	4.06E-02	
150	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.13E-02	4.13E-02	
100	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.81E-02	3.81E-02	
50	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.20E-02	3.20E-02	
0	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.62E-02	2.62E-02	
0	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.65E-02	2.65E-02	
0	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.50E-02	2.50E-02	
0	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.95E-02	2.95E-02	
0	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.27E-02	6.27E-02	
0	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.20E-01	1.20E-01	
0	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.33E-01	1.33E-01	
0	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	9.07E-02	9.07E-02	
0	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.82E-02	4.82E-02	**3.57E+00**
Residences									
0	-50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.41E-02	3.41E-02	
410	-43	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.41E-02	5.41E-02	
432	36	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.77E-01	2.77E-01	
432	158	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	9.72E-01	9.72E-01	
432	238	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.64E-01	3.64E-01	
432	317	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.33E-01	1.33E-01	
432	396	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.83E-02	6.83E-02	**9.72E-01**
School									
410	461	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.13E-02	5.13E-02	

Fire Station									
346	432	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.59E-02	6.59E-02	
Residences									
-108	259	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.40E-02	2.40E-02	
-108	317	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.56E-02	1.56E-02	
-108	360	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.51E-02	1.51E-02	
-108	396	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.56E-02	1.56E-02	**2.40E-02**
Within Property									
50	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.05E-01	1.05E-01	
100	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.20E-01	1.20E-01	
150	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.39E-01	1.39E-01	
200	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.84E-01	1.84E-01	
250	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.30E-01	3.30E-01	
300	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.54E-01	4.54E-01	
350	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.37E-01	5.37E-01	
50	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.76E-01	1.76E-01	
100	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.45E-01	2.45E-01	
150	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.65E-01	3.65E-01	
200	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.97E-01	5.97E-01	
250	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.09E+00	1.09E+00	
300	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.35E+00	2.35E+00	
350	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.85E+00	5.85E+00	
50	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.54E-01	1.54E-01	
100	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.04E-01	2.04E-01	
150	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.77E-01	2.77E-01	
200	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.74E-01	3.74E-01	
250	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.75E-01	4.75E-01	
300	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.48E+00	1.48E+00	
350	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.65E+00	5.65E+00	
50	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.62E-02	6.62E-02	
100	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.96E-02	6.96E-02	
150	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	8.15E-02	8.15E-02	
200	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.34E-01	1.34E-01	
250	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.08E-01	3.08E-01	
300	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.82E-01	4.82E-01	
350	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	8.95E-01	8.95E-01	
50	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.49E-02	3.49E-02	
100	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.81E-02	4.81E-02	
150	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.82E-02	7.82E-02	
200	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.30E-01	1.30E-01	
250	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.86E-01	1.86E-01	
300	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.19E-01	2.19E-01	
350	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.52E-01	3.52E-01	
50	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.47E-02	3.47E-02	
100	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.10E-02	5.10E-02	
150	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.26E-02	7.26E-02	
200	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	9.60E-02	9.60E-02	
250	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.00E-01	1.00E-01	
300	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.37E-01	1.37E-01	
350	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.89E-01	1.89E-01	

50	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.58E-02	3.58E-02	
100	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.67E-02	4.67E-02	
150	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.85E-02	5.85E-02	
200	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.35E-02	6.35E-02	
250	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.61E-02	6.61E-02	
300	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	9.43E-02	9.43E-02	
350	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.18E-01	1.18E-01	
50	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.28E-02	3.28E-02	
100	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.95E-02	3.95E-02	
150	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.40E-02	4.40E-02	
200	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.33E-02	4.33E-02	
250	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.99E-02	4.99E-02	
300	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.85E-02	6.85E-02	
350	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	8.13E-02	8.13E-02	**5.85E+00**

1.67E+00	1.77E-01	2.30E-02	1.17E-01	1.89E-02	0.00E+00		

Methylene Chloride - Annual

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL
0	0	4.15E+01	2.79E+00	1.81E-01	0.446458944	7.57E-02	0.00E+00	4.50E+01
50	0	6.47E+01	3.37E+00	1.64E-01	0.398638747	8.35E-02	0.00E+00	6.87E+01
100	0	8.30E+01	3.41E+00	1.60E-01	0.407515718	8.15E-02	0.00E+00	8.70E+01
150	0	8.27E+01	3.80E+00	2.02E-01	0.485420866	7.17E-02	0.00E+00	8.73E+01
200	0	7.96E+01	3.24E+00	2.01E-01	0.553882329	6.84E-02	0.00E+00	8.36E+01
250	0	6.12E+01	2.89E+00	1.34E-01	0.509054619	7.95E-02	0.00E+00	6.48E+01
300	0	3.47E+01	3.07E+00	1.28E-01	0.372887702	9.51E-02	0.00E+00	3.84E+01
350	0	1.94E+01	2.15E+00	1.65E-01	0.290923241	9.31E-02	0.00E+00	2.21E+01
381	0	1.66E+01	1.56E+00	1.71E-01	0.307239948	7.93E-02	0.00E+00	1.87E+01
381	50	5.15E+01	1.83E+00	2.21E-01	0.485177822	1.03E-01	0.00E+00	5.42E+01
381	100	7.58E+01	5.19E+00	2.37E-01	0.813543956	1.42E-01	0.00E+00	8.22E+01
381	150	5.95E+01	8.40E+00	3.58E-01	1.319595571	2.25E-01	0.00E+00	6.98E+01
381	200	4.53E+01	6.98E+00	8.08E-01	1.788658834	4.81E-01	0.00E+00	5.54E+01
381	250	3.62E+01	5.23E+00	1.19E+00	2.117606873	1.42E+00	0.00E+00	4.62E+01
381	300	2.81E+01	4.12E+00	1.01E+00	6.106113971	3.09E+01	0.00E+00	7.03E+01
381	350	2.14E+01	3.16E+00	7.51E-01	9.595535954	3.30E+01	0.00E+00	6.79E+01
381	410	1.53E+01	2.23E+00	5.40E-01	6.490587189	2.30E+00	0.00E+00	2.69E+01
350	410	1.53E+01	2.31E+00	6.22E-01	8.954113159	2.37E+00	0.00E+00	2.96E+01
300	410	1.49E+01	2.28E+00	7.15E-01	15.45237729	1.82E+00	0.00E+00	3.52E+01
250	410	1.54E+01	2.32E+00	7.41E-01	20.99063153	1.00E+00	0.00E+00	4.04E+01
200	410	1.69E+01	2.55E+00	7.91E-01	17.49495465	5.29E-01	0.00E+00	3.82E+01
150	410	1.68E+01	2.43E+00	6.33E-01	8.908813381	3.11E-01	0.00E+00	2.91E+01
100	410	1.42E+01	1.90E+00	4.68E-01	4.32023496	2.34E-01	0.00E+00	2.11E+01
50	410	1.12E+01	1.52E+00	3.86E-01	2.566385257	2.03E-01	0.00E+00	1.59E+01
0	410	9.78E+00	1.43E+00	2.86E-01	1.955132713	1.84E-01	0.00E+00	1.36E+01
0	350	1.41E+01	2.11E+00	3.36E-01	5.088475633	3.85E-01	0.00E+00	2.20E+01
0	300	1.99E+01	2.75E+00	6.48E-01	4.5863139	4.19E-01	0.00E+00	2.83E+01
0	250	2.77E+01	3.11E+00	1.18E+00	2.20022919	2.87E-01	0.00E+00	3.45E+01
0	200	3.39E+01	5.71E+00	1.12E+00	1.392172434	1.60E-01	0.00E+00	4.22E+01
0	150	4.63E+01	1.31E+01	5.35E-01	1.125455502	1.12E-01	0.00E+00	6.11E+01
0	100	1.50E+02	8.77E+00	3.41E-01	0.881451557	9.64E-02	0.00E+00	1.60E+02
0	50	9.73E+01	3.88E+00	2.60E-01	0.639800939	8.58E-02	0.00E+00	1.02E+02
0	0	4.15E+01	2.79E+00	1.81E-01	0.446458944	7.57E-02	0.00E+00	4.50E+01
Residences								
0	-50	2.94E+01	1.94E+00	1.18E-01	0.317242169	6.42E-02	0.00E+00	3.18E+01
410	-43	1.00E+01	1.26E+00	1.27E-01	0.248735135	5.36E-02	0.00E+00	1.17E+01
432	36	3.23E+01	1.25E+00	1.54E-01	0.539408321	6.61E-02	0.00E+00	3.43E+01
432	158	4.09E+01	5.63E+00	3.25E-01	1.073500041	2.47E-01	0.00E+00	4.82E+01
432	238	2.90E+01	4.01E+00	7.75E-01	1.24445155	7.12E-01	0.00E+00	3.58E+01
432	317	2.17E+01	2.94E+00	6.32E-01	5.027140752	3.41E+00	0.00E+00	3.37E+01
432	396	1.55E+01	2.13E+00	4.44E-01	4.588306165	1.99E+00	0.00E+00	2.47E+01
School								
410	461	1.17E+01	1.63E+00	3.62E-01	3.702442412	8.68E-01	0.00E+00	1.82E+01

Fire Station								
346	432	1.34E+01	1.99E+00	5.32E-01	7.490355906	1.46E+00	0.00E+00	2.49E+01
Residences								
-108	259	1.21E+01	1.35E+00	5.63E-01	1.714481148	2.18E-01	0.00E+00	1.59E+01
-108	317	1.17E+01	1.16E+00	2.98E-01	2.675847646	2.62E-01	0.00E+00	1.61E+01
-108	360	1.05E+01	1.16E+00	1.68E-01	2.485933983	2.33E-01	0.00E+00	1.45E+01
-108	396	9.29E+00	1.10E+00	1.36E-01	1.741124915	1.76E-01	0.00E+00	1.24E+01
Within Property								
50	50	1.56E+02	5.93E+00	2.82E-01	0.580947918	1.02E-01	0.00E+00	1.63E+02
100	50	3.37E+02	7.84E+00	2.61E-01	0.546610855	1.14E-01	0.00E+00	3.46E+02
150	50	4.93E+02	8.86E+00	3.09E-01	0.632459356	1.08E-01	0.00E+00	5.03E+02
200	50	3.58E+02	8.26E+00	3.09E-01	0.737218598	9.61E-02	0.00E+00	3.67E+02
250	50	1.39E+02	6.53E+00	2.10E-01	0.665326467	1.04E-01	0.00E+00	1.46E+02
300	50	8.21E+01	4.09E+00	2.47E-01	0.474660299	1.28E-01	0.00E+00	8.71E+01
350	50	6.09E+01	2.26E+00	2.53E-01	0.420851623	1.25E-01	0.00E+00	6.39E+01
50	100	2.99E+02	1.41E+01	4.70E-01	0.897067174	1.19E-01	0.00E+00	3.14E+02
100	100	1.59E+03	2.90E+01	5.25E-01	0.820436842	1.48E-01	0.00E+00	1.62E+03
150	100	6.61E+03	6.07E+01	5.75E-01	0.87985424	1.65E-01	0.00E+00	6.67E+03
200	100	5.98E+03	5.14E+01	5.64E-01	1.036245273	1.53E-01	0.00E+00	6.04E+03
250	100	4.69E+02	1.78E+01	4.55E-01	0.916764305	1.49E-01	0.00E+00	4.88E+02
300	100	1.85E+02	9.18E+00	4.46E-01	0.665248178	1.83E-01	0.00E+00	1.95E+02
350	100	1.01E+02	6.21E+00	3.15E-01	0.702487755	1.77E-01	0.00E+00	1.09E+02
50	150	8.48E+01	2.32E+01	7.63E-01	1.368698764	1.38E-01	0.00E+00	1.10E+02
100	150	2.02E+02	6.52E+01	1.20E+00	1.382309263	1.79E-01	0.00E+00	2.70E+02
150	150	3.76E+02	5.44E+02	1.72E+00	1.390600823	2.34E-01	0.00E+00	9.23E+02
200	150	3.89E+02	5.26E+02	1.77E+00	1.584054992	2.64E-01	0.00E+00	9.20E+02
250	150	2.34E+02	5.14E+01	1.11E+00	1.386792735	2.52E-01	0.00E+00	2.88E+02
300	150	1.23E+02	2.03E+01	6.80E-01	1.115619206	2.90E-01	0.00E+00	1.46E+02
350	150	7.56E+01	1.12E+01	4.42E-01	1.272631873	2.75E-01	0.00E+00	8.88E+01
50	200	5.63E+01	8.80E+00	1.84E+00	1.925768717	1.83E-01	0.00E+00	6.91E+01
100	200	8.40E+01	2.00E+01	4.14E+00	2.462051343	2.25E-01	0.00E+00	1.11E+02
150	200	1.14E+02	5.42E+01	4.76E+01	2.663078456	3.07E-01	0.00E+00	2.19E+02
200	200	1.27E+02	6.20E+01	5.25E+01	2.848384788	4.39E-01	0.00E+00	2.45E+02
250	200	1.09E+02	3.18E+01	4.65E+00	2.584518957	5.13E-01	0.00E+00	1.49E+02
300	200	8.20E+01	1.54E+01	1.84E+00	2.263239676	5.77E-01	0.00E+00	1.02E+02
350	200	5.64E+01	9.06E+00	1.03E+00	2.198543068	5.27E-01	0.00E+00	6.92E+01
50	250	3.45E+01	5.52E+00	1.86E+00	2.867259306	3.40E-01	0.00E+00	4.51E+01
100	250	4.46E+01	8.68E+00	3.85E+00	4.316547225	4.11E-01	0.00E+00	6.18E+01
150	250	5.78E+01	1.34E+01	3.46E+01	6.258089304	5.21E-01	0.00E+00	1.13E+02
200	250	6.10E+01	1.56E+01	5.94E+01	7.571232508	7.36E-01	0.00E+00	1.44E+02
250	250	5.72E+01	1.34E+01	9.28E+00	7.172823953	1.22E+00	0.00E+00	8.82E+01
300	250	5.25E+01	9.78E+00	2.99E+00	5.07773493	1.81E+00	0.00E+00	7.22E+01
350	250	4.25E+01	6.56E+00	1.61E+00	3.04791741	1.77E+00	0.00E+00	5.55E+01
50	300	2.22E+01	3.69E+00	9.95E-01	6.745856486	5.52E-01	0.00E+00	3.42E+01
100	300	2.81E+01	4.63E+00	1.83E+00	11.71988731	7.63E-01	0.00E+00	4.70E+01
150	300	3.57E+01	6.38E+00	5.27E+00	32.96293119	1.13E+00	0.00E+00	8.15E+01
200	300	3.62E+01	7.04E+00	1.14E+01	239.7998231	1.90E+00	0.00E+00	2.96E+02
250	300	3.40E+01	6.58E+00	5.50E+00	234.0457967	4.32E+00	0.00E+00	2.84E+02
300	300	3.38E+01	6.06E+00	2.43E+00	22.56953584	4.96E+01	0.00E+00	1.14E+02
350	300	3.10E+01	4.86E+00	1.35E+00	8.585796566	5.29E+01	0.00E+00	9.87E+01

50	350	1.55E+01	2.37E+00	5.37E-01	7.713184588	4.96E-01	0.00E+00	2.66E+01
100	350	1.98E+01	2.88E+00	8.91E-01	13.70154227	6.64E-01	0.00E+00	3.79E+01
150	350	2.44E+01	3.86E+00	1.44E+00	40.54033096	9.47E-01	0.00E+00	7.12E+01
200	350	2.44E+01	4.09E+00	1.97E+00	298.6263042	1.55E+00	0.00E+00	3.31E+02
250	350	2.25E+01	3.80E+00	1.82E+00	299.4957929	3.68E+00	0.00E+00	3.31E+02
300	350	2.25E+01	3.77E+00	1.40E+00	41.15326145	4.91E+01	0.00E+00	1.18E+02
350	350	2.24E+01	3.48E+00	9.49E-01	14.57261653	5.43E+01	0.00E+00	9.57E+01
50	400	1.18E+01	1.62E+00	4.13E-01	3.085639571	2.42E-01	0.00E+00	1.71E+01
100	400	1.49E+01	2.02E+00	5.20E-01	4.888812141	2.78E-01	0.00E+00	2.26E+01
150	400	1.78E+01	2.61E+00	7.06E-01	10.75897653	3.51E-01	0.00E+00	3.22E+01
200	400	1.78E+01	2.73E+00	8.91E-01	24.12532171	5.61E-01	0.00E+00	4.61E+01
250	400	1.63E+01	2.49E+00	8.41E-01	28.72054997	1.14E+00	0.00E+00	4.95E+01
300	400	1.59E+01	2.46E+00	7.98E-01	18.98193785	2.30E+00	0.00E+00	4.04E+01
350	400	1.63E+01	2.47E+00	6.70E-01	9.888123116	3.09E+00	0.00E+00	3.24E+01

1.58E-02	2.01E-02	5.42E-02	7.63E-03	1.01E-03	4.90E-04	

Benzene - Annual

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL	
0	0	3.92E-01	3.18E-01	4.28E-01	0.029152645	4.04E-03	4.13E-03	1.17E+00	
50	0	6.10E-01	3.82E-01	3.86E-01	0.026030106	4.46E-03	4.63E-03	1.41E+00	
100	0	7.82E-01	3.87E-01	3.77E-01	0.02660975	4.35E-03	5.63E-03	1.58E+00	
150	0	7.80E-01	4.32E-01	4.75E-01	0.03169676	3.83E-03	7.64E-03	1.73E+00	
200	0	7.50E-01	3.69E-01	4.75E-01	0.036167121	3.65E-03	1.14E-02	1.64E+00	
250	0	5.77E-01	3.28E-01	3.16E-01	0.033239985	4.25E-03	1.52E-02	1.27E+00	
300	0	3.27E-01	3.48E-01	3.03E-01	0.024348628	5.08E-03	1.27E-02	1.02E+00	
350	0	1.83E-01	2.44E-01	3.90E-01	0.018996555	4.97E-03	1.73E-02	8.58E-01	
381	0	1.56E-01	1.77E-01	4.02E-01	0.020061995	4.23E-03	8.89E-03	7.69E-01	
381	50	4.86E-01	2.08E-01	5.21E-01	0.03168089	5.48E-03	3.26E-02	1.28E+00	
381	100	7.15E-01	5.90E-01	5.59E-01	0.053122371	7.57E-03	1.37E-01	2.06E+00	
381	150	5.61E-01	9.54E-01	8.44E-01	0.086166268	1.20E-02	3.07E-01	2.76E+00	
381	200	4.28E-01	7.93E-01	1.91E+00	0.116794917	2.56E-02	6.62E-02	3.34E+00	
381	250	3.41E-01	5.94E-01	2.82E+00	0.138274396	7.55E-02	2.53E-02	3.99E+00	
381	300	2.65E-01	4.68E-01	2.39E+00	0.398713865	1.65E+00	1.45E-02	5.19E+00	
381	350	2.02E-01	3.59E-01	1.77E+00	0.626564332	1.76E+00	9.58E-03	4.73E+00	
381	410	1.44E-01	2.54E-01	1.27E+00	0.423818998	1.23E-01	6.39E-03	2.23E+00	
350	410	1.45E-01	2.62E-01	1.47E+00	0.584681039	1.27E-01	6.53E-03	2.59E+00	
300	410	1.41E-01	2.59E-01	1.69E+00	1.009001322	9.73E-02	5.55E-03	3.20E+00	
250	410	1.45E-01	2.63E-01	1.75E+00	1.370635376	5.36E-02	4.08E-03	3.59E+00	
200	410	1.59E-01	2.89E-01	1.87E+00	1.142376479	2.82E-02	3.49E-03	3.49E+00	
150	410	1.58E-01	2.77E-01	1.49E+00	0.581723078	1.66E-02	3.54E-03	2.53E+00	
100	410	1.34E-01	2.16E-01	1.10E+00	0.282100463	1.25E-02	3.27E-03	1.75E+00	
50	410	1.06E-01	1.73E-01	9.10E-01	0.167578494	1.08E-02	2.74E-03	1.37E+00	
0	410	9.22E-02	1.62E-01	6.75E-01	0.127665242	9.82E-03	2.25E-03	1.07E+00	
0	350	1.33E-01	2.40E-01	7.92E-01	0.332264644	2.05E-02	2.28E-03	1.52E+00	
0	300	1.88E-01	3.12E-01	1.53E+00	0.299474747	2.23E-02	2.15E-03	2.35E+00	
0	250	2.61E-01	3.53E-01	2.78E+00	0.143669425	1.53E-02	2.54E-03	3.56E+00	
0	200	3.19E-01	6.49E-01	2.65E+00	0.090905354	8.52E-03	5.38E-03	3.72E+00	
0	150	4.36E-01	1.48E+00	1.26E+00	0.07348941	6.00E-03	1.03E-02	3.27E+00	
0	100	1.41E+00	9.97E-01	8.03E-01	0.057556567	5.15E-03	1.14E-02	3.29E+00	
0	50	9.17E-01	4.41E-01	6.13E-01	0.04177739	4.58E-03	7.79E-03	2.03E+00	
0	0	3.92E-01	3.18E-01	4.28E-01	0.029152645	4.04E-03	4.13E-03	1.17E+00	**5.19E+00**
Residences									
0	-50	2.77E-01	2.20E-01	2.79E-01	0.020715115	3.43E-03	2.93E-03	8.03E-01	
410	-43	9.44E-02	1.43E-01	3.00E-01	0.016241778	2.86E-03	4.64E-03	5.61E-01	
432	36	3.04E-01	1.42E-01	3.62E-01	0.035222005	3.53E-03	2.37E-02	8.71E-01	
432	158	3.86E-01	6.40E-01	7.68E-01	0.070096849	1.32E-02	8.35E-02	1.96E+00	
432	238	2.74E-01	4.55E-01	1.83E+00	0.081259552	3.80E-02	3.12E-02	2.71E+00	
432	317	2.04E-01	3.34E-01	1.49E+00	0.328259631	1.82E-01	1.14E-02	2.55E+00	
432	396	1.46E-01	2.42E-01	1.05E+00	0.299604837	1.06E-01	5.86E-03	1.85E+00	**2.71E+00**
School									
410	461	1.10E-01	1.85E-01	8.54E-01	0.241760165	4.63E-02	4.40E-03	1.44E+00	

Fire Station									
346	432	1.27E-01	2.26E-01	1.25E+00	0.489101377	7.81E-02	5.66E-03	2.18E+00	
Residences									
-108	259	1.14E-01	1.54E-01	1.33E+00	0.111951301	1.16E-02	2.06E-03	1.72E+00	
-108	317	1.10E-01	1.32E-01	7.04E-01	0.174726112	1.40E-02	1.34E-03	1.14E+00	
-108	360	9.88E-02	1.32E-01	3.95E-01	0.162325228	1.24E-02	1.29E-03	8.02E-01	
-108	396	8.76E-02	1.25E-01	3.21E-01	0.113691072	9.39E-03	1.34E-03	6.58E-01	**1.72E+00**
Within Property									
50	50	1.47E+00	6.73E-01	6.64E-01	0.037934436	5.46E-03	9.02E-03	2.86E+00	
100	50	3.18E+00	8.91E-01	6.15E-01	0.035692312	6.07E-03	1.03E-02	4.74E+00	
150	50	4.65E+00	1.01E+00	7.29E-01	0.041298003	5.76E-03	1.20E-02	6.44E+00	
200	50	3.38E+00	9.39E-01	7.28E-01	0.048138518	5.13E-03	1.58E-02	5.11E+00	
250	50	1.31E+00	7.42E-01	4.96E-01	0.043444143	5.57E-03	2.83E-02	2.62E+00	
300	50	7.74E-01	4.65E-01	5.82E-01	0.030994122	6.83E-03	3.90E-02	1.90E+00	
350	50	5.74E-01	2.57E-01	5.98E-01	0.027480551	6.66E-03	4.61E-02	1.51E+00	
50	100	2.82E+00	1.60E+00	1.11E+00	0.058576227	6.36E-03	1.51E-02	5.61E+00	
100	100	1.50E+01	3.29E+00	1.24E+00	0.05357246	7.87E-03	2.10E-02	1.96E+01	
150	100	6.23E+01	6.89E+00	1.36E+00	0.057452266	8.80E-03	3.14E-02	7.06E+01	
200	100	5.64E+01	5.84E+00	1.33E+00	0.067664207	8.16E-03	5.13E-02	6.37E+01	
250	100	4.42E+00	2.02E+00	1.07E+00	0.0598624	7.97E-03	9.36E-02	7.68E+00	
300	100	1.74E+00	1.04E+00	1.05E+00	0.043439031	9.76E-03	2.02E-01	4.09E+00	
350	100	9.56E-01	7.06E-01	7.43E-01	0.045870681	9.43E-03	5.03E-01	2.96E+00	
50	150	8.00E-01	2.64E+00	1.80E+00	0.089372582	7.38E-03	1.33E-02	5.35E+00	
100	150	1.90E+00	7.41E+00	2.84E+00	0.090261314	9.55E-03	1.75E-02	1.23E+01	
150	150	3.54E+00	6.18E+01	4.06E+00	0.090802732	1.25E-02	2.38E-02	6.95E+01	
200	150	3.67E+00	5.98E+01	4.17E+00	0.103434802	1.41E-02	3.21E-02	6.78E+01	
250	150	2.21E+00	5.84E+00	2.62E+00	0.090554073	1.35E-02	4.08E-02	1.08E+01	
300	150	1.16E+00	2.31E+00	1.60E+00	0.072847125	1.55E-02	1.27E-01	5.29E+00	
350	150	7.12E-01	1.28E+00	1.04E+00	0.083099656	1.47E-02	4.85E-01	3.62E+00	
50	200	5.31E-01	1.00E+00	4.34E+00	0.125747847	9.77E-03	5.68E-03	6.02E+00	
100	200	7.92E-01	2.27E+00	9.77E+00	0.160765752	1.20E-02	5.97E-03	1.30E+01	
150	200	1.08E+00	6.16E+00	1.12E+02	0.173892316	1.64E-02	7.00E-03	1.20E+02	
200	200	1.20E+00	7.05E+00	1.24E+02	0.185992353	2.34E-02	1.15E-02	1.32E+02	
250	200	1.03E+00	3.62E+00	1.10E+01	0.168762579	2.74E-02	2.64E-02	1.58E+01	
300	200	7.73E-01	1.75E+00	4.34E+00	0.147783851	3.08E-02	4.14E-02	7.08E+00	
350	200	5.31E-01	1.03E+00	2.44E+00	0.143559326	2.81E-02	7.68E-02	4.25E+00	
50	250	3.25E-01	6.28E-01	4.39E+00	0.187224812	1.81E-02	2.99E-03	5.55E+00	
100	250	4.20E-01	9.87E-01	9.08E+00	0.281859663	2.20E-02	4.13E-03	1.08E+01	
150	250	5.45E-01	1.52E+00	8.17E+01	0.408637471	2.78E-02	6.72E-03	8.42E+01	
200	250	5.75E-01	1.78E+00	1.40E+02	0.494382415	3.93E-02	1.12E-02	1.43E+02	
250	250	5.39E-01	1.52E+00	2.19E+01	0.46836734	6.51E-02	1.59E-02	2.45E+01	
300	250	4.95E-01	1.11E+00	7.06E+00	0.331563303	9.66E-02	1.88E-02	9.12E+00	
350	250	4.01E-01	7.46E-01	3.80E+00	0.199021331	9.43E-02	3.03E-02	5.27E+00	
50	300	2.09E-01	4.20E-01	2.35E+00	0.44048744	2.94E-02	2.98E-03	3.45E+00	
100	300	2.64E-01	5.26E-01	4.32E+00	0.765279126	4.07E-02	4.38E-03	5.92E+00	
150	300	3.37E-01	7.26E-01	1.24E+01	2.152396393	6.03E-02	6.23E-03	1.57E+01	
200	300	3.41E-01	8.00E-01	2.69E+01	15.65832454	1.01E-01	8.24E-03	4.38E+01	
250	300	3.20E-01	7.48E-01	1.30E+01	15.2826011	2.31E-01	8.61E-03	2.96E+01	
300	300	3.18E-01	6.89E-01	5.74E+00	1.473733851	2.65E+00	1.18E-02	1.09E+01	
350	300	2.92E-01	5.53E-01	3.18E+00	0.560630893	2.82E+00	1.62E-02	7.43E+00	

50	350	1.46E-01	2.70E-01	1.27E+00	0.503651529	2.65E-02	3.07E-03	2.22E+00	
100	350	1.87E-01	3.27E-01	2.10E+00	0.894676204	3.54E-02	4.01E-03	3.55E+00	
150	350	2.30E-01	4.38E-01	3.39E+00	2.647181515	5.06E-02	5.02E-03	6.76E+00	
200	350	2.30E-01	4.65E-01	4.66E+00	19.49954561	8.26E-02	5.45E-03	2.49E+01	
250	350	2.13E-01	4.32E-01	4.30E+00	19.55632102	1.96E-01	5.68E-03	2.47E+01	
300	350	2.12E-01	4.29E-01	3.31E+00	2.687204332	2.62E+00	8.10E-03	9.27E+00	
350	350	2.11E-01	3.96E-01	2.24E+00	0.951555159	2.90E+00	1.01E-02	6.70E+00	
50	400	1.11E-01	1.85E-01	9.75E-01	0.201484493	1.29E-02	2.81E-03	1.49E+00	
100	400	1.41E-01	2.29E-01	1.23E+00	0.319227121	1.48E-02	3.39E-03	1.93E+00	
150	400	1.68E-01	2.96E-01	1.67E+00	0.702534072	1.87E-02	3.78E-03	2.85E+00	
200	400	1.68E-01	3.10E-01	2.10E+00	1.57532275	3.00E-02	3.72E-03	4.19E+00	
250	400	1.53E-01	2.83E-01	1.98E+00	1.875379583	6.07E-02	4.28E-03	4.36E+00	
300	400	1.50E-01	2.80E-01	1.88E+00	1.239472738	1.23E-01	5.88E-03	3.68E+00	
350	400	1.54E-01	2.80E-01	1.58E+00	0.645669537	1.65E-01	6.98E-03	2.83E+00	**1.20E+02**

		1.51E-02	1.82E+00	6.84E-02	0	1.11E-03	0.00E+00	

1,1,1-TCA - Annual

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL	
0	0	3.75E-01	2.88E+01	5.40E-01	0	4.45E-03	0.00E+00	2.97E+01	
50	0	5.84E-01	3.46E+01	4.88E-01	0	4.90E-03	0.00E+00	3.57E+01	
100	0	7.49E-01	3.51E+01	4.76E-01	0	4.79E-03	0.00E+00	3.63E+01	
150	0	7.46E-01	3.91E+01	6.00E-01	0	4.21E-03	0.00E+00	4.05E+01	
200	0	7.18E-01	3.34E+01	5.99E-01	0	4.01E-03	0.00E+00	3.47E+01	
250	0	5.52E-01	2.97E+01	3.98E-01	0	4.67E-03	0.00E+00	3.07E+01	
300	0	3.13E-01	3.15E+01	3.82E-01	0	5.59E-03	0.00E+00	3.22E+01	
350	0	1.75E-01	2.21E+01	4.92E-01	0	5.47E-03	0.00E+00	2.28E+01	
381	0	1.50E-01	1.61E+01	5.08E-01	0	4.65E-03	0.00E+00	1.67E+01	
381	50	4.65E-01	1.88E+01	6.57E-01	0	6.03E-03	0.00E+00	2.00E+01	
381	100	6.84E-01	5.34E+01	7.05E-01	0	8.33E-03	0.00E+00	5.48E+01	
381	150	5.36E-01	8.64E+01	1.07E+00	0	1.32E-02	0.00E+00	8.80E+01	
381	200	4.09E-01	7.18E+01	2.41E+00	0	2.82E-02	0.00E+00	7.47E+01	
381	250	3.27E-01	5.38E+01	3.55E+00	0	8.31E-02	0.00E+00	5.78E+01	
381	300	2.54E-01	4.24E+01	3.02E+00	0	1.82E+00	0.00E+00	4.75E+01	
381	350	1.93E-01	3.25E+01	2.24E+00	0	1.94E+00	0.00E+00	3.68E+01	
381	410	1.38E-01	2.30E+01	1.61E+00	0	1.35E-01	0.00E+00	2.49E+01	
350	410	1.38E-01	2.37E+01	1.85E+00	0	1.39E-01	0.00E+00	2.59E+01	
300	410	1.35E-01	2.35E+01	2.13E+00	0	1.07E-01	0.00E+00	2.58E+01	
250	410	1.39E-01	2.39E+01	2.21E+00	0	5.90E-02	0.00E+00	2.63E+01	
200	410	1.52E-01	2.62E+01	2.35E+00	0	3.11E-02	0.00E+00	2.87E+01	
150	410	1.52E-01	2.51E+01	1.88E+00	0	1.83E-02	0.00E+00	2.71E+01	
100	410	1.28E-01	1.96E+01	1.39E+00	0	1.38E-02	0.00E+00	2.11E+01	
50	410	1.01E-01	1.57E+01	1.15E+00	0	1.19E-02	0.00E+00	1.69E+01	
0	410	8.82E-02	1.47E+01	8.52E-01	0	1.08E-02	0.00E+00	1.56E+01	
0	350	1.27E-01	2.17E+01	9.99E-01	0	2.26E-02	0.00E+00	2.29E+01	
0	300	1.80E-01	2.83E+01	1.93E+00	0	2.46E-02	0.00E+00	3.04E+01	
0	250	2.50E-01	3.20E+01	3.51E+00	0	1.68E-02	0.00E+00	3.57E+01	
0	200	3.05E-01	5.87E+01	3.34E+00	0	9.38E-03	0.00E+00	6.24E+01	
0	150	4.17E-01	1.34E+02	1.59E+00	0	6.60E-03	0.00E+00	1.36E+02	
0	100	1.35E+00	9.03E+01	1.01E+00	0	5.66E-03	0.00E+00	9.26E+01	
0	50	8.78E-01	3.99E+01	7.74E-01	0	5.04E-03	0.00E+00	4.16E+01	
0	0	3.75E-01	2.88E+01	5.40E-01	0	4.45E-03	0.00E+00	2.97E+01	**1.36E+02**
Residences									
0	-50	2.65E-01	2.00E+01	3.52E-01	0	3.77E-03	0.00E+00	2.06E+01	
410	-43	9.04E-02	1.29E+01	3.79E-01	0	3.15E-03	0.00E+00	1.34E+01	
432	36	2.91E-01	1.28E+01	4.57E-01	0	3.88E-03	0.00E+00	1.36E+01	
432	158	3.69E-01	5.80E+01	9.69E-01	0	1.45E-02	0.00E+00	5.93E+01	
432	238	2.62E-01	4.12E+01	2.31E+00	0	4.18E-02	0.00E+00	4.38E+01	
432	317	1.95E-01	3.03E+01	1.88E+00	0	2.00E-01	0.00E+00	3.26E+01	
432	396	1.40E-01	2.19E+01	1.32E+00	0	1.17E-01	0.00E+00	2.35E+01	**5.93E+01**
School									
410	461	1.05E-01	1.68E+01	1.08E+00	0	5.10E-02	0.00E+00	1.80E+01	

Fire Station									
346	432	1.21E-01	2.05E+01	1.58E+00	0	8.60E-02	0.00E+00	2.23E+01	
Residences									
-108	259	1.09E-01	1.39E+01	1.68E+00	0	1.28E-02	0.00E+00	1.57E+01	
-108	317	1.05E-01	1.19E+01	8.88E-01	0	1.54E-02	0.00E+00	1.29E+01	
-108	360	9.45E-02	1.19E+01	4.99E-01	0	1.37E-02	0.00E+00	1.25E+01	
-108	396	8.38E-02	1.13E+01	4.05E-01	0	1.03E-02	0.00E+00	1.18E+01	**1.57E+01**
Within Property									
50	50	1.41E+00	6.10E+01	8.39E-01	0	6.01E-03	0.00E+00	6.32E+01	
100	50	3.04E+00	8.07E+01	7.76E-01	0	6.68E-03	0.00E+00	8.45E+01	
150	50	4.45E+00	9.11E+01	9.20E-01	0	6.34E-03	0.00E+00	9.65E+01	
200	50	3.23E+00	8.50E+01	9.19E-01	0	5.64E-03	0.00E+00	8.92E+01	
250	50	1.25E+00	6.72E+01	6.27E-01	0	6.13E-03	0.00E+00	6.91E+01	
300	50	7.41E-01	4.21E+01	7.34E-01	0	7.51E-03	0.00E+00	4.36E+01	
350	50	5.49E-01	2.32E+01	7.55E-01	0	7.32E-03	0.00E+00	2.46E+01	
50	100	2.70E+00	1.45E+02	1.40E+00	0	7.00E-03	0.00E+00	1.49E+02	
100	100	1.43E+01	2.98E+02	1.56E+00	0	8.66E-03	0.00E+00	3.14E+02	
150	100	5.96E+01	6.24E+02	1.71E+00	0	9.68E-03	0.00E+00	6.86E+02	
200	100	5.40E+01	5.29E+02	1.68E+00	0	8.98E-03	0.00E+00	5.85E+02	
250	100	4.23E+00	1.83E+02	1.35E+00	0	8.77E-03	0.00E+00	1.89E+02	
300	100	1.67E+00	9.45E+01	1.33E+00	0	1.07E-02	0.00E+00	9.75E+01	
350	100	9.15E-01	6.39E+01	9.38E-01	0	1.04E-02	0.00E+00	6.58E+01	
50	150	7.65E-01	2.39E+02	2.27E+00	0	8.12E-03	0.00E+00	2.42E+02	
100	150	1.82E+00	6.71E+02	3.58E+00	0	1.05E-02	0.00E+00	6.77E+02	
150	150	3.39E+00	5.59E+03	5.12E+00	0	1.38E-02	0.00E+00	5.60E+03	
200	150	3.51E+00	5.42E+03	5.26E+00	0	1.55E-02	0.00E+00	5.43E+03	
250	150	2.11E+00	5.29E+02	3.31E+00	0	1.48E-02	0.00E+00	5.35E+02	
300	150	1.11E+00	2.09E+02	2.03E+00	0	1.70E-02	0.00E+00	2.12E+02	
350	150	6.82E-01	1.16E+02	1.32E+00	0	1.62E-02	0.00E+00	1.18E+02	
50	200	5.08E-01	9.05E+01	5.48E+00	0	1.08E-02	0.00E+00	9.65E+01	
100	200	7.58E-01	2.06E+02	1.23E+01	0	1.32E-02	0.00E+00	2.19E+02	
150	200	1.03E+00	5.58E+02	1.42E+02	0	1.80E-02	0.00E+00	7.01E+02	
200	200	1.15E+00	6.38E+02	1.56E+02	0	2.58E-02	0.00E+00	7.96E+02	
250	200	9.85E-01	3.28E+02	1.38E+01	0	3.01E-02	0.00E+00	3.42E+02	
300	200	7.39E-01	1.59E+02	5.47E+00	0	3.39E-02	0.00E+00	1.65E+02	
350	200	5.08E-01	9.33E+01	3.07E+00	0	3.10E-02	0.00E+00	9.69E+01	
50	250	3.11E-01	5.68E+01	5.54E+00	0	2.00E-02	0.00E+00	6.27E+01	
100	250	4.02E-01	8.94E+01	1.15E+01	0	2.42E-02	0.00E+00	1.01E+02	
150	250	5.22E-01	1.37E+02	1.03E+02	0	3.06E-02	0.00E+00	2.41E+02	
200	250	5.50E-01	1.61E+02	1.77E+02	0	4.32E-02	0.00E+00	3.38E+02	
250	250	5.16E-01	1.38E+02	2.76E+01	0	7.16E-02	0.00E+00	1.66E+02	
300	250	4.74E-01	1.01E+02	8.92E+00	0	1.06E-01	0.00E+00	1.10E+02	
350	250	3.83E-01	6.75E+01	4.79E+00	0	1.04E-01	0.00E+00	7.28E+01	
50	300	2.00E-01	3.80E+01	2.96E+00	0	3.24E-02	0.00E+00	4.12E+01	
100	300	2.53E-01	4.76E+01	5.45E+00	0	4.48E-02	0.00E+00	5.34E+01	
150	300	3.22E-01	6.57E+01	1.57E+01	0	6.64E-02	0.00E+00	8.18E+01	
200	300	3.27E-01	7.24E+01	3.39E+01	0	1.11E-01	0.00E+00	1.07E+02	
250	300	3.07E-01	6.77E+01	1.64E+01	0	2.54E-01	0.00E+00	8.47E+01	
300	300	3.04E-01	6.24E+01	7.25E+00	0	2.91E+00	0.00E+00	7.28E+01	
350	300	2.80E-01	5.00E+01	4.02E+00	0	3.11E+00	0.00E+00	5.75E+01	

50	350	1.40E-01	2.44E+01	1.60E+00	0	2.91E-02	0.00E+00	2.62E+01	
100	350	1.79E-01	2.96E+01	2.65E+00	0	3.90E-02	0.00E+00	3.25E+01	
150	350	2.20E-01	3.97E+01	4.28E+00	0	5.56E-02	0.00E+00	4.42E+01	
200	350	2.20E-01	4.21E+01	5.88E+00	0	9.09E-02	0.00E+00	4.83E+01	
250	350	2.03E-01	3.91E+01	5.43E+00	0	2.16E-01	0.00E+00	4.49E+01	
300	350	2.03E-01	3.88E+01	4.18E+00	0	2.88E+00	0.00E+00	4.61E+01	
350	350	2.02E-01	3.59E+01	2.82E+00	0	3.19E+00	0.00E+00	4.21E+01	
50	400	1.06E-01	1.67E+01	1.23E+00	0	1.42E-02	0.00E+00	1.81E+01	
100	400	1.35E-01	2.08E+01	1.55E+00	0	1.63E-02	0.00E+00	2.25E+01	
150	400	1.60E-01	2.68E+01	2.10E+00	0	2.06E-02	0.00E+00	2.91E+01	
200	400	1.61E-01	2.81E+01	2.65E+00	0	3.30E-02	0.00E+00	3.10E+01	
250	400	1.47E-01	2.56E+01	2.50E+00	0	6.68E-02	0.00E+00	2.84E+01	
300	400	1.43E-01	2.54E+01	2.38E+00	0	1.35E-01	0.00E+00	2.80E+01	
350	400	1.47E-01	2.54E+01	1.99E+00	0	1.81E-01	0.00E+00	2.77E+01	**7.01E+02**

		1.75E-01	2.83E-02	6.01E-03	0	1.02E-02	0.00E+00		

1,2-DCA - Annual

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL	
0	0	4.34E+00	4.48E-01	4.74E-02	0	4.10E-02	0.00E+00	4.88E+00	
50	0	6.76E+00	5.39E-01	4.28E-02	0	4.52E-02	0.00E+00	7.38E+00	
100	0	8.67E+00	5.46E-01	4.18E-02	0	4.41E-02	0.00E+00	9.30E+00	
150	0	8.64E+00	6.09E-01	5.27E-02	0	3.88E-02	0.00E+00	9.34E+00	
200	0	8.31E+00	5.20E-01	5.26E-02	0	3.70E-02	0.00E+00	8.92E+00	
250	0	6.39E+00	4.63E-01	3.50E-02	0	4.30E-02	0.00E+00	6.93E+00	
300	0	3.62E+00	4.91E-01	3.36E-02	0	5.15E-02	0.00E+00	4.20E+00	
350	0	2.02E+00	3.44E-01	4.32E-02	0	5.04E-02	0.00E+00	2.46E+00	
381	0	1.73E+00	2.50E-01	4.46E-02	0	4.29E-02	0.00E+00	2.07E+00	
381	50	5.38E+00	2.93E-01	5.77E-02	0	5.55E-02	0.00E+00	5.79E+00	
381	100	7.92E+00	8.32E-01	6.20E-02	0	7.67E-02	0.00E+00	8.89E+00	
381	150	6.21E+00	1.35E+00	9.36E-02	0	1.22E-01	0.00E+00	7.77E+00	
381	200	4.74E+00	1.12E+00	2.11E-01	0	2.60E-01	0.00E+00	6.33E+00	
381	250	3.78E+00	8.37E-01	3.12E-01	0	7.66E-01	0.00E+00	5.70E+00	
381	300	2.94E+00	6.59E-01	2.65E-01	0	1.67E+01	0.00E+00	2.06E+01	
381	350	2.24E+00	5.06E-01	1.96E-01	0	1.78E+01	0.00E+00	2.08E+01	
381	410	1.60E+00	3.58E-01	1.41E-01	0	1.24E+00	0.00E+00	3.34E+00	
350	410	1.60E+00	3.69E-01	1.63E-01	0	1.28E+00	0.00E+00	3.42E+00	
300	410	1.56E+00	3.65E-01	1.87E-01	0	9.86E-01	0.00E+00	3.10E+00	
250	410	1.60E+00	3.71E-01	1.94E-01	0	5.43E-01	0.00E+00	2.71E+00	
200	410	1.76E+00	4.08E-01	2.07E-01	0	2.86E-01	0.00E+00	2.66E+00	
150	410	1.75E+00	3.90E-01	1.66E-01	0	1.68E-01	0.00E+00	2.48E+00	
100	410	1.48E+00	3.04E-01	1.22E-01	0	1.27E-01	0.00E+00	2.03E+00	
50	410	1.17E+00	2.44E-01	1.01E-01	0	1.10E-01	0.00E+00	1.63E+00	
0	410	1.02E+00	2.29E-01	7.48E-02	0	9.95E-02	0.00E+00	1.42E+00	
0	350	1.47E+00	3.38E-01	8.78E-02	0	2.08E-01	0.00E+00	2.11E+00	
0	300	2.08E+00	4.40E-01	1.69E-01	0	2.26E-01	0.00E+00	2.92E+00	
0	250	2.89E+00	4.97E-01	3.09E-01	0	1.55E-01	0.00E+00	3.86E+00	
0	200	3.54E+00	9.14E-01	2.94E-01	0	8.64E-02	0.00E+00	4.83E+00	
0	150	4.83E+00	2.09E+00	1.40E-01	0	6.08E-02	0.00E+00	7.13E+00	
0	100	1.57E+01	1.41E+00	8.91E-02	0	5.22E-02	0.00E+00	1.72E+01	
0	50	1.02E+01	6.22E-01	6.80E-02	0	4.64E-02	0.00E+00	1.09E+01	
0	0	4.34E+00	4.48E-01	4.74E-02	0	4.10E-02	0.00E+00	4.88E+00	**2.08E+01**
Residences									
0	-50	3.07E+00	3.11E-01	3.09E-02	0	3.47E-02	0.00E+00	3.44E+00	
410	-43	1.05E+00	2.01E-01	3.33E-02	0	2.90E-02	0.00E+00	1.31E+00	
432	36	3.37E+00	2.00E-01	4.02E-02	0	3.57E-02	0.00E+00	3.65E+00	
432	158	4.27E+00	9.02E-01	8.51E-02	0	1.34E-01	0.00E+00	5.40E+00	
432	238	3.03E+00	6.42E-01	2.03E-01	0	3.85E-01	0.00E+00	4.26E+00	
432	317	2.26E+00	4.72E-01	1.65E-01	0	1.84E+00	0.00E+00	4.74E+00	
432	396	1.62E+00	3.41E-01	1.16E-01	0	1.08E+00	0.00E+00	3.15E+00	**5.40E+00**
School									
410	461	1.22E+00	2.61E-01	9.47E-02	0	4.70E-01	0.00E+00	2.04E+00	

Fire Station									
346	432	1.40E+00	3.19E-01	1.39E-01	0	7.92E-01	0.00E+00	2.65E+00	
Residences									
-108	259	1.26E+00	2.17E-01	1.47E-01	0	1.18E-01	0.00E+00	1.75E+00	
-108	317	1.22E+00	1.86E-01	7.80E-02	0	1.42E-01	0.00E+00	1.63E+00	
-108	360	1.09E+00	1.86E-01	4.38E-02	0	1.26E-01	0.00E+00	1.45E+00	
-108	396	9.70E-01	1.76E-01	3.56E-02	0	9.52E-02	0.00E+00	1.28E+00	**1.75E+00**
Within Property									
50	50	1.63E+01	9.49E-01	7.37E-02	0	5.54E-02	0.00E+00	1.74E+01	
100	50	3.52E+01	1.26E+00	6.82E-02	0	6.15E-02	0.00E+00	3.66E+01	
150	50	5.15E+01	1.42E+00	8.09E-02	0	5.84E-02	0.00E+00	5.31E+01	
200	50	3.74E+01	1.32E+00	8.07E-02	0	5.20E-02	0.00E+00	3.89E+01	
250	50	1.45E+01	1.05E+00	5.51E-02	0	5.65E-02	0.00E+00	1.57E+01	
300	50	8.58E+00	6.56E-01	6.45E-02	0	6.92E-02	0.00E+00	9.37E+00	
350	50	6.36E+00	3.62E-01	6.63E-02	0	6.75E-02	0.00E+00	6.86E+00	
50	100	3.12E+01	2.25E+00	1.23E-01	0	6.45E-02	0.00E+00	3.37E+01	
100	100	1.66E+02	4.64E+00	1.37E-01	0	7.98E-02	0.00E+00	1.71E+02	
150	100	6.90E+02	9.72E+00	1.50E-01	0	8.92E-02	0.00E+00	7.00E+02	
200	100	6.25E+02	8.24E+00	1.48E-01	0	8.27E-02	0.00E+00	6.33E+02	
250	100	4.90E+01	2.85E+00	1.19E-01	0	8.08E-02	0.00E+00	5.20E+01	
300	100	1.93E+01	1.47E+00	1.17E-01	0	9.90E-02	0.00E+00	2.10E+01	
350	100	1.06E+01	9.95E-01	8.24E-02	0	9.56E-02	0.00E+00	1.18E+01	
50	150	8.86E+00	3.72E+00	2.00E-01	0	7.48E-02	0.00E+00	1.28E+01	
100	150	2.11E+01	1.04E+01	3.15E-01	0	9.68E-02	0.00E+00	3.19E+01	
150	150	3.93E+01	8.71E+01	4.50E-01	0	1.27E-01	0.00E+00	1.27E+02	
200	150	4.07E+01	8.43E+01	4.62E-01	0	1.43E-01	0.00E+00	1.26E+02	
250	150	2.44E+01	8.24E+00	2.91E-01	0	1.36E-01	0.00E+00	3.31E+01	
300	150	1.29E+01	3.25E+00	1.78E-01	0	1.57E-01	0.00E+00	1.65E+01	
350	150	7.89E+00	1.80E+00	1.16E-01	0	1.49E-01	0.00E+00	9.96E+00	
50	200	5.89E+00	1.41E+00	4.82E-01	0	9.91E-02	0.00E+00	7.88E+00	
100	200	8.77E+00	3.21E+00	1.08E+00	0	1.22E-01	0.00E+00	1.32E+01	
150	200	1.19E+01	8.69E+00	1.24E+01	0	1.66E-01	0.00E+00	3.32E+01	
200	200	1.33E+01	9.94E+00	1.37E+01	0	2.37E-01	0.00E+00	3.72E+01	
250	200	1.14E+01	5.10E+00	1.22E+00	0	2.77E-01	0.00E+00	1.80E+01	
300	200	8.56E+00	2.47E+00	4.81E-01	0	3.12E-01	0.00E+00	1.18E+01	
350	200	5.89E+00	1.45E+00	2.70E-01	0	2.85E-01	0.00E+00	7.89E+00	
50	250	3.60E+00	8.85E-01	4.87E-01	0	1.84E-01	0.00E+00	5.16E+00	
100	250	4.65E+00	1.39E+00	1.01E+00	0	2.22E-01	0.00E+00	7.27E+00	
150	250	6.04E+00	2.14E+00	9.06E+00	0	2.82E-01	0.00E+00	1.75E+01	
200	250	6.37E+00	2.51E+00	1.55E+01	0	3.98E-01	0.00E+00	2.48E+01	
250	250	5.97E+00	2.14E+00	2.43E+00	0	6.60E-01	0.00E+00	1.12E+01	
300	250	5.49E+00	1.57E+00	7.83E-01	0	9.80E-01	0.00E+00	8.82E+00	
350	250	4.44E+00	1.05E+00	4.21E-01	0	9.56E-01	0.00E+00	6.87E+00	
50	300	2.32E+00	5.92E-01	2.60E-01	0	2.98E-01	0.00E+00	3.47E+00	
100	300	2.93E+00	7.41E-01	4.79E-01	0	4.13E-01	0.00E+00	4.56E+00	
150	300	3.73E+00	1.02E+00	1.38E+00	0	6.11E-01	0.00E+00	6.74E+00	
200	300	3.78E+00	1.13E+00	2.98E+00	0	1.03E+00	0.00E+00	8.92E+00	
250	300	3.55E+00	1.05E+00	1.44E+00	0	2.34E+00	0.00E+00	8.38E+00	
300	300	3.53E+00	9.71E-01	6.37E-01	0	2.68E+01	0.00E+00	3.20E+01	
350	300	3.24E+00	7.79E-01	3.53E-01	0	2.86E+01	0.00E+00	3.30E+01	

50	350	1.62E+00	3.80E-01	1.40E-01	0	2.68E-01	0.00E+00	2.41E+00	
100	350	2.07E+00	4.61E-01	2.33E-01	0	3.59E-01	0.00E+00	3.12E+00	
150	350	2.55E+00	6.18E-01	3.76E-01	0	5.12E-01	0.00E+00	4.06E+00	
200	350	2.55E+00	6.56E-01	5.17E-01	0	8.37E-01	0.00E+00	4.56E+00	
250	350	2.35E+00	6.08E-01	4.77E-01	0	1.99E+00	0.00E+00	5.43E+00	
300	350	2.35E+00	6.04E-01	3.67E-01	0	2.66E+01	0.00E+00	2.99E+01	
350	350	2.34E+00	5.58E-01	2.48E-01	0	2.94E+01	0.00E+00	3.25E+01	
50	400	1.23E+00	2.60E-01	1.08E-01	0	1.31E-01	0.00E+00	1.73E+00	
100	400	1.56E+00	3.23E-01	1.36E-01	0	1.50E-01	0.00E+00	2.17E+00	
150	400	1.86E+00	4.18E-01	1.85E-01	0	1.90E-01	0.00E+00	2.65E+00	
200	400	1.86E+00	4.38E-01	2.33E-01	0	3.04E-01	0.00E+00	2.84E+00	
250	400	1.70E+00	3.99E-01	2.20E-01	0	6.15E-01	0.00E+00	2.93E+00	
300	400	1.66E+00	3.95E-01	2.09E-01	0	1.24E+00	0.00E+00	3.51E+00	
350	400	1.70E+00	3.95E-01	1.75E-01	0	1.67E+00	0.00E+00	3.94E+00	**1.71E+02**

		0.00E+00	0.00E+00	0.00E+00		0	0.00E+00	5.70E-03	

Styrene - 1Hour

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL	
0	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.19E+00	2.19E+00	
50	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.80E+00	2.80E+00	
100	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.70E+00	3.70E+00	
150	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.09E+00	5.09E+00	
200	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.29E+00	7.29E+00	
250	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.07E+01	1.07E+01	
300	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.50E+01	1.50E+01	
350	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.67E+01	1.67E+01	
381	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.52E+01	1.52E+01	
381	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.49E+01	3.49E+01	
381	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	8.62E+01	8.62E+01	
381	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.35E+01	7.35E+01	
381	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.79E+01	2.79E+01	
381	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.29E+01	1.29E+01	
381	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.38E+00	7.38E+00	
381	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.80E+00	4.80E+00	
381	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.20E+00	3.20E+00	
350	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.24E+00	3.24E+00	
300	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.19E+00	3.19E+00	
250	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.98E+00	2.98E+00	
200	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.68E+00	2.68E+00	
150	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.35E+00	2.35E+00	
100	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.04E+00	2.04E+00	
50	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.75E+00	1.75E+00	
0	410	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.51E+00	1.51E+00	
0	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.75E+00	1.75E+00	
0	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.96E+00	1.96E+00	
0	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.15E+00	2.15E+00	
0	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.31E+00	2.31E+00	
0	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.41E+00	2.41E+00	
0	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.42E+00	2.42E+00	
0	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.34E+00	2.34E+00	
0	0	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.19E+00	2.19E+00	**8.62E+01**
Residences									
0	-50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.00E+00	2.00E+00	
410	-43	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	8.11E+00	8.11E+00	
432	36	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.56E+01	1.56E+01	
432	158	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.28E+01	2.28E+01	
432	238	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.09E+01	1.09E+01	
432	317	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.48E+00	5.48E+00	
432	396	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.24E+00	3.24E+00	**2.28E+01**
School									
410	461	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.35E+00	2.35E+00	

Fire Station									
346	432	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.85E+00	2.85E+00	
Residences									
-108	259	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.39E+00	1.39E+00	
-108	317	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.30E+00	1.30E+00	
-108	360	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.22E+00	1.22E+00	
-108	396	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.15E+00	1.15E+00	**1.39E+00**
Within Property									
50	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.05E+00	3.05E+00	
100	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.18E+00	4.18E+00	
150	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.10E+00	6.10E+00	
200	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	9.72E+00	9.72E+00	
250	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.74E+01	1.74E+01	
300	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.35E+01	3.35E+01	
350	50	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.52E+01	4.52E+01	
50	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.19E+00	3.19E+00	
100	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.45E+00	4.45E+00	
150	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.74E+00	6.74E+00	
200	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.15E+01	1.15E+01	
250	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.44E+01	2.44E+01	
300	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.86E+01	7.86E+01	
350	100	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.12E+02	3.12E+02	
50	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.17E+00	3.17E+00	
100	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.41E+00	4.41E+00	
150	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.64E+00	6.64E+00	
200	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.12E+01	1.12E+01	
250	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.32E+01	2.32E+01	
300	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.78E+01	6.78E+01	
350	150	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.67E+02	1.67E+02	
50	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.00E+00	3.00E+00	
100	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.07E+00	4.07E+00	
150	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	5.87E+00	5.87E+00	
200	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	9.13E+00	9.13E+00	
250	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.55E+01	1.55E+01	
300	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.71E+01	2.71E+01	
350	200	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.39E+01	3.39E+01	
50	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.73E+00	2.73E+00	
100	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.57E+00	3.57E+00	
150	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.83E+00	4.83E+00	
200	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.77E+00	6.77E+00	
250	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	9.58E+00	9.58E+00	
300	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.28E+01	1.28E+01	
350	250	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.40E+01	1.40E+01	
50	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.41E+00	2.41E+00	
100	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.02E+00	3.02E+00	
150	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.85E+00	3.85E+00	
200	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.94E+00	4.94E+00	
250	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	6.20E+00	6.20E+00	
300	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.33E+00	7.33E+00	
350	300	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	7.68E+00	7.68E+00	

50	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.09E+00	2.09E+00	
100	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.53E+00	2.53E+00	
150	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.06E+00	3.06E+00	
200	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.68E+00	3.68E+00	
250	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.30E+00	4.30E+00	
300	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.78E+00	4.78E+00	
350	350	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	4.92E+00	4.92E+00	
50	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	1.81E+00	1.81E+00	
100	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.11E+00	2.11E+00	
150	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.45E+00	2.45E+00	
200	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	2.81E+00	2.81E+00	
250	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.15E+00	3.15E+00	
300	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.39E+00	3.39E+00	
350	400	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	3.45E+00	3.45E+00	**3.12E+02**

1.67E+00	1.77E-01	2.30E-02	1.17E-01	1.89E-02	0.00E+00	

Methylene Chloride - 1Hour

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL	
0	0	1.54E+03	1.10E+02	9.23E+00	28.984589	3.98E+00	0.00E+00	1.70E+03	
50	0	1.91E+03	1.31E+02	1.06E+01	31.255432	4.45E+00	0.00E+00	2.08E+03	
100	0	1.97E+03	1.43E+02	1.19E+01	33.091176	4.95E+00	0.00E+00	2.16E+03	
150	0	1.96E+03	1.44E+02	1.27E+01	34.321721	5.42E+00	0.00E+00	2.15E+03	
200	0	1.96E+03	1.44E+02	1.29E+01	34.901623	5.85E+00	0.00E+00	2.16E+03	
250	0	1.96E+03	1.41E+02	1.21E+01	34.869269	6.16E+00	0.00E+00	2.15E+03	
300	0	1.67E+03	1.26E+02	1.07E+01	34.208853	6.34E+00	0.00E+00	1.84E+03	
350	0	1.27E+03	1.04E+02	9.10E+00	32.759484	6.36E+00	0.00E+00	1.42E+03	
381	0	1.07E+03	9.09E+01	8.23E+00	31.789355	6.30E+00	0.00E+00	1.21E+03	
381	50	1.22E+03	1.06E+02	9.42E+00	38.01366	7.79E+00	0.00E+00	1.38E+03	
381	100	1.26E+03	1.16E+02	1.05E+01	46.467605	9.85E+00	0.00E+00	1.45E+03	
381	150	1.17E+03	1.19E+02	1.14E+01	58.140275	1.29E+01	0.00E+00	1.37E+03	
381	200	9.92E+02	1.14E+02	1.23E+01	74.503961	1.83E+01	0.00E+00	1.21E+03	
381	250	8.12E+02	1.03E+02	1.31E+01	93.5527	3.26E+01	0.00E+00	1.05E+03	
381	300	6.65E+02	8.74E+01	1.37E+01	103.47708	1.22E+02	0.00E+00	9.91E+02	
381	350	5.50E+02	7.29E+01	1.31E+01	104.29797	1.24E+02	0.00E+00	8.64E+02	
381	410	4.47E+02	5.86E+01	1.12E+01	96.368036	2.52E+01	0.00E+00	6.39E+02	
350	410	4.70E+02	6.29E+01	1.28E+01	119.87147	2.51E+01	0.00E+00	6.91E+02	
300	410	5.01E+02	6.89E+01	1.54E+01	165.43443	2.52E+01	0.00E+00	7.76E+02	
250	410	5.24E+02	7.32E+01	1.74E+01	167.00092	2.42E+01	0.00E+00	8.06E+02	
200	410	5.36E+02	7.54E+01	1.89E+01	166.59172	1.81E+01	0.00E+00	8.15E+02	
150	410	5.39E+02	7.56E+01	1.88E+01	166.97161	1.32E+01	0.00E+00	8.14E+02	
100	410	5.33E+02	7.40E+01	1.58E+01	125.4224	1.00E+01	0.00E+00	7.59E+02	
50	410	5.18E+02	7.02E+01	1.25E+01	88.647793	7.88E+00	0.00E+00	6.97E+02	
0	410	4.93E+02	6.45E+01	1.01E+01	66.482553	6.33E+00	0.00E+00	6.40E+02	
0	350	6.21E+02	8.30E+01	1.14E+01	70.840889	6.64E+00	0.00E+00	7.93E+02	
0	300	7.75E+02	1.04E+02	1.23E+01	70.119088	6.66E+00	0.00E+00	9.68E+02	
0	250	1.00E+03	1.30E+02	1.32E+01	65.313285	6.46E+00	0.00E+00	1.22E+03	
0	200	1.35E+03	1.51E+02	1.41E+01	57.089338	6.07E+00	0.00E+00	1.58E+03	
0	150	1.82E+03	1.57E+02	1.42E+01	48.150806	5.57E+00	0.00E+00	2.05E+03	
0	100	2.11E+03	1.53E+02	1.29E+01	40.347995	5.02E+00	0.00E+00	2.32E+03	
0	50	1.99E+03	1.36E+02	1.10E+01	34.022365	4.48E+00	0.00E+00	2.18E+03	
0	0	1.54E+03	1.10E+02	9.23E+00	28.984589	3.98E+00	0.00E+00	1.70E+03	**2.32E+03**
Residences									
0	-50	1.13E+03	8.71E+01	7.72E+00	24.919649	3.54E+00	0.00E+00	1.25E+03	
410	-43	8.03E+02	7.03E+01	6.69E+00	26.657938	5.26E+00	0.00E+00	9.12E+02	
432	36	8.77E+02	7.94E+01	7.59E+00	33.241729	7.05E+00	0.00E+00	1.00E+03	
432	158	8.55E+02	8.91E+01	9.29E+00	51.614439	1.30E+01	0.00E+00	1.02E+03	
432	238	6.97E+02	8.19E+01	1.01E+01	67.572957	2.38E+01	0.00E+00	8.80E+02	
432	317	5.42E+02	6.79E+01	1.03E+01	75.774053	2.90E+01	0.00E+00	7.25E+02	
432	396	4.25E+02	5.38E+01	9.29E+00	72.747877	2.53E+01	0.00E+00	5.86E+02	**1.25E+03**
School									
410	461	3.65E+02	4.65E+01	8.55E+00	68.226692	1.56E+01	0.00E+00	5.04E+02	

Fire Station									
346	432	4.38E+02	5.83E+01	1.19E+01	108.0612	1.99E+01	0.00E+00	6.37E+02	
Residences									
-108	259	6.74E+02	7.40E+01	8.09E+00	39.994961	4.31E+00	0.00E+00	8.01E+02	
-108	317	5.56E+02	6.46E+01	7.68E+00	41.53913	4.38E+00	0.00E+00	6.75E+02	
-108	360	4.84E+02	5.75E+01	7.30E+00	41.43865	4.35E+00	0.00E+00	5.94E+02	
-108	396	4.32E+02	5.19E+01	6.93E+00	40.535442	4.28E+00	0.00E+00	5.36E+02	**8.01E+02**
Within Property									
50	50	3.19E+03	1.83E+02	1.33E+01	37.304621	5.11E+00	0.00E+00	3.43E+03	
100	50	4.98E+03	2.20E+02	1.53E+01	39.916112	5.81E+00	0.00E+00	5.27E+03	
150	50	4.98E+03	2.20E+02	1.68E+01	41.560465	6.51E+00	0.00E+00	5.27E+03	
200	50	4.97E+03	2.21E+02	1.74E+01	42.291979	7.14E+00	0.00E+00	5.26E+03	
250	50	3.79E+03	2.16E+02	1.60E+01	42.249784	7.59E+00	0.00E+00	4.07E+03	
300	50	2.26E+03	1.69E+02	1.32E+01	41.412557	7.83E+00	0.00E+00	2.50E+03	
350	50	1.52E+03	1.26E+02	1.07E+01	39.567143	7.87E+00	0.00E+00	1.70E+03	
50	100	3.46E+03	2.28E+02	1.68E+01	45.310863	5.86E+00	0.00E+00	3.76E+03	
100	100	1.01E+04	4.44E+02	2.06E+01	49.231139	6.85E+00	0.00E+00	1.06E+04	
150	100	1.32E+04	6.05E+02	2.33E+01	51.436431	7.92E+00	0.00E+00	1.39E+04	
200	100	1.45E+04	6.09E+02	2.56E+01	52.207496	8.91E+00	0.00E+00	1.52E+04	
250	100	4.20E+03	3.52E+02	2.19E+01	52.166941	9.60E+00	0.00E+00	4.64E+03	
300	100	2.42E+03	2.03E+02	1.58E+01	51.259539	9.91E+00	0.00E+00	2.70E+03	
350	100	1.58E+03	1.41E+02	1.21E+01	48.826057	9.94E+00	0.00E+00	1.80E+03	
50	150	2.62E+03	2.31E+02	2.02E+01	56.173869	6.68E+00	0.00E+00	2.93E+03	
100	150	2.97E+03	4.52E+02	3.02E+01	62.769258	8.06E+00	0.00E+00	3.52E+03	
150	150	2.95E+03	1.10E+03	3.71E+01	65.849907	9.73E+00	0.00E+00	4.17E+03	
200	150	2.96E+03	1.14E+03	4.67E+01	66.391972	1.14E+01	0.00E+00	4.22E+03	
250	150	2.85E+03	3.56E+02	2.83E+01	66.377529	1.26E+01	0.00E+00	3.31E+03	
300	150	2.04E+03	2.06E+02	1.78E+01	65.675897	1.30E+01	0.00E+00	2.34E+03	
350	150	1.43E+03	1.44E+02	1.32E+01	62.14875	1.30E+01	0.00E+00	1.66E+03	
50	200	1.57E+03	2.23E+02	1.99E+01	70.694643	7.46E+00	0.00E+00	1.89E+03	
100	200	1.60E+03	3.89E+02	3.49E+01	84.4603	9.33E+00	0.00E+00	2.12E+03	
150	200	1.59E+03	4.15E+02	1.28E+02	90.284689	1.19E+01	0.00E+00	2.24E+03	
200	200	1.60E+03	4.15E+02	1.25E+02	90.230181	1.52E+01	0.00E+00	2.24E+03	
250	200	1.59E+03	3.33E+02	3.51E+01	90.26517	1.79E+01	0.00E+00	2.07E+03	
300	200	1.43E+03	1.99E+02	2.00E+01	90.102049	1.83E+01	0.00E+00	1.76E+03	
350	200	1.15E+03	1.38E+02	1.44E+01	83.042716	1.83E+01	0.00E+00	1.41E+03	
50	250	1.09E+03	1.70E+02	1.78E+01	86.372401	8.08E+00	0.00E+00	1.37E+03	
100	250	1.12E+03	1.96E+02	2.80E+01	119.04263	1.04E+01	0.00E+00	1.47E+03	
150	250	1.12E+03	1.97E+02	1.22E+02	146.89812	1.38E+01	0.00E+00	1.60E+03	
200	250	1.12E+03	1.97E+02	1.19E+02	146.3713	1.94E+01	0.00E+00	1.60E+03	
250	250	1.10E+03	1.93E+02	4.78E+01	146.41636	2.95E+01	0.00E+00	1.52E+03	
300	250	1.04E+03	1.59E+02	2.29E+01	146.14193	3.26E+01	0.00E+00	1.40E+03	
350	250	9.04E+02	1.21E+02	1.57E+01	114.36053	3.27E+01	0.00E+00	1.19E+03	
50	300	8.29E+02	1.23E+02	1.61E+01	94.736574	8.40E+00	0.00E+00	1.07E+03	
100	300	8.53E+02	1.32E+02	2.37E+01	138.94876	1.09E+01	0.00E+00	1.16E+03	
150	300	8.59E+02	1.34E+02	5.29E+01	276.49204	1.46E+01	0.00E+00	1.34E+03	
200	300	8.56E+02	1.34E+02	6.88E+01	634.8027	2.08E+01	0.00E+00	1.71E+03	
250	300	8.40E+02	1.31E+02	4.72E+01	641.15861	3.53E+01	0.00E+00	1.69E+03	
300	300	7.95E+02	1.18E+02	2.60E+01	243.40689	1.19E+02	0.00E+00	1.30E+03	
350	300	7.20E+02	9.91E+01	1.67E+01	131.66923	1.15E+02	0.00E+00	1.08E+03	

50	350	6.59E+02	9.29E+01	1.46E+01	95.591156	8.37E+00	0.00E+00	8.71E+02	
100	350	6.80E+02	9.89E+01	2.06E+01	139.39239	1.09E+01	0.00E+00	9.49E+02	
150	350	6.87E+02	1.01E+02	3.17E+01	277.64897	1.46E+01	0.00E+00	1.11E+03	
200	350	6.83E+02	1.01E+02	3.02E+01	617.18148	2.08E+01	0.00E+00	1.45E+03	
250	350	6.67E+02	9.78E+01	2.63E+01	624.44479	3.53E+01	0.00E+00	1.45E+03	
300	350	6.35E+02	9.07E+01	2.14E+01	244.24965	1.21E+02	0.00E+00	1.11E+03	
350	350	5.86E+02	8.00E+01	1.57E+01	132.19539	1.17E+02	0.00E+00	9.31E+02	
50	400	5.38E+02	7.34E+01	1.29E+01	90.786887	7.99E+00	0.00E+00	7.23E+02	
100	400	5.54E+02	7.74E+01	1.66E+01	131.33041	1.02E+01	0.00E+00	7.90E+02	
150	400	5.60E+02	7.92E+01	2.03E+01	197.73397	1.35E+01	0.00E+00	8.71E+02	
200	400	5.57E+02	7.89E+01	2.02E+01	198.72624	1.89E+01	0.00E+00	8.74E+02	
250	400	5.44E+02	7.66E+01	1.85E+01	199.30798	2.70E+01	0.00E+00	8.66E+02	
300	400	5.20E+02	7.19E+01	1.62E+01	192.83464	2.87E+01	0.00E+00	8.30E+02	
350	400	4.87E+02	6.53E+01	1.33E+01	124.90485	2.87E+01	0.00E+00	7.19E+02	**1.06E+04**

1.58E-02 2.01E-02 5.42E-02 7.63E-03 1.01E-03 4.90E-04

Benzene - 1Hour

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL	
0	0	1.45E+01	1.25E+01	2.18E+01	1.8926206	2.13E-01	1.88E-01	5.11E+01	
50	0	1.80E+01	1.49E+01	2.51E+01	2.040901	2.38E-01	2.40E-01	6.05E+01	
100	0	1.86E+01	1.62E+01	2.80E+01	2.1607704	2.64E-01	3.17E-01	6.55E+01	
150	0	1.84E+01	1.63E+01	2.99E+01	2.241122	2.89E-01	4.37E-01	6.77E+01	
200	0	1.85E+01	1.63E+01	3.03E+01	2.2789881	3.12E-01	6.26E-01	6.84E+01	
250	0	1.85E+01	1.60E+01	2.85E+01	2.2768755	3.29E-01	9.21E-01	6.66E+01	
300	0	1.57E+01	1.43E+01	2.51E+01	2.2337519	3.38E-01	1.28E+00	5.90E+01	
350	0	1.20E+01	1.18E+01	2.15E+01	2.1391118	3.39E-01	1.43E+00	4.92E+01	
381	0	1.01E+01	1.03E+01	1.94E+01	2.0757648	3.36E-01	1.30E+00	4.35E+01	
381	50	1.15E+01	1.20E+01	2.22E+01	2.4821963	4.16E-01	3.00E+00	5.17E+01	
381	100	1.19E+01	1.32E+01	2.48E+01	3.0342176	5.26E-01	7.40E+00	6.08E+01	
381	150	1.10E+01	1.35E+01	2.69E+01	3.7964135	6.90E-01	6.31E+00	6.22E+01	
381	200	9.36E+00	1.30E+01	2.89E+01	4.864921	9.77E-01	2.39E+00	5.95E+01	
381	250	7.66E+00	1.17E+01	3.10E+01	6.1087557	1.74E+00	1.11E+00	5.93E+01	
381	300	6.27E+00	9.94E+00	3.22E+01	6.7567928	6.53E+00	6.33E-01	6.24E+01	
381	350	5.19E+00	8.28E+00	3.09E+01	6.8103949	6.59E+00	4.12E-01	5.82E+01	
381	410	4.22E+00	6.66E+00	2.64E+01	6.2925901	1.35E+00	2.74E-01	4.52E+01	
350	410	4.43E+00	7.14E+00	3.01E+01	7.8273051	1.34E+00	2.79E-01	5.11E+01	
300	410	4.73E+00	7.83E+00	3.62E+01	10.802452	1.34E+00	2.74E-01	6.12E+01	
250	410	4.94E+00	8.32E+00	4.12E+01	10.904739	1.29E+00	2.56E-01	6.69E+01	
200	410	5.05E+00	8.57E+00	4.46E+01	10.87802	9.63E-01	2.30E-01	7.03E+01	
150	410	5.08E+00	8.60E+00	4.44E+01	10.902825	7.05E-01	2.02E-01	6.99E+01	
100	410	5.03E+00	8.41E+00	3.73E+01	8.1897666	5.36E-01	1.75E-01	5.97E+01	
50	410	4.88E+00	7.98E+00	2.95E+01	5.7884776	4.21E-01	1.51E-01	4.87E+01	
0	410	4.65E+00	7.33E+00	2.37E+01	4.3411433	3.38E-01	1.30E-01	4.05E+01	
0	350	5.86E+00	9.43E+00	2.68E+01	4.6257317	3.54E-01	1.50E-01	4.72E+01	
0	300	7.30E+00	1.18E+01	2.89E+01	4.5785998	3.55E-01	1.68E-01	5.32E+01	
0	250	9.43E+00	1.48E+01	3.11E+01	4.264793	3.45E-01	1.85E-01	6.01E+01	
0	200	1.27E+01	1.71E+01	3.33E+01	3.72779	3.24E-01	1.99E-01	6.74E+01	
0	150	1.72E+01	1.78E+01	3.35E+01	3.1441264	2.97E-01	2.07E-01	7.22E+01	
0	100	1.99E+01	1.74E+01	3.05E+01	2.6346225	2.68E-01	2.08E-01	7.09E+01	
0	50	1.88E+01	1.54E+01	2.60E+01	2.2215748	2.39E-01	2.01E-01	6.29E+01	
0	0	1.45E+01	1.25E+01	2.18E+01	1.8926206	2.13E-01	1.88E-01	5.11E+01	**7.22E+01**
Residences									
0	-50	1.06E+01	9.90E+00	1.82E+01	1.6271903	1.89E-01	1.72E-01	4.07E+01	
410	-43	7.57E+00	7.99E+00	1.58E+01	1.7406962	2.81E-01	6.96E-01	3.41E+01	
432	36	8.27E+00	9.02E+00	1.79E+01	2.1706012	3.76E-01	1.34E+00	3.91E+01	
432	158	8.06E+00	1.01E+01	2.19E+01	3.3702929	6.92E-01	1.96E+00	4.61E+01	
432	238	6.57E+00	9.30E+00	2.39E+01	4.4123439	1.27E+00	9.35E-01	4.63E+01	
432	317	5.11E+00	7.71E+00	2.43E+01	4.9478548	1.55E+00	4.71E-01	4.41E+01	
432	396	4.00E+00	6.11E+00	2.19E+01	4.7502532	1.35E+00	2.78E-01	3.84E+01	**4.63E+01**
School									
410	461	3.44E+00	5.28E+00	2.02E+01	4.4550312	8.32E-01	2.02E-01	3.44E+01	

Fire Station									
346	432	4.13E+00	6.62E+00	2.80E+01	7.0561245	1.06E+00	2.45E-01	4.71E+01	
Residences									
-108	259	6.36E+00	8.41E+00	1.91E+01	2.6115702	2.30E-01	1.19E-01	3.68E+01	
-108	317	5.25E+00	7.35E+00	1.81E+01	2.7124006	2.34E-01	1.11E-01	3.38E+01	
-108	360	4.56E+00	6.53E+00	1.72E+01	2.7058395	2.32E-01	1.04E-01	3.13E+01	
-108	396	4.08E+00	5.90E+00	1.63E+01	2.6468623	2.28E-01	9.84E-02	2.93E+01	**3.68E+01**
Within Property									
50	50	3.01E+01	2.08E+01	3.13E+01	2.4358978	2.73E-01	2.62E-01	8.52E+01	
100	50	4.70E+01	2.50E+01	3.61E+01	2.6064216	3.10E-01	3.59E-01	1.11E+02	
150	50	4.70E+01	2.50E+01	3.96E+01	2.7137937	3.47E-01	5.23E-01	1.15E+02	
200	50	4.69E+01	2.51E+01	4.11E+01	2.7615597	3.81E-01	8.34E-01	1.17E+02	
250	50	3.57E+01	2.45E+01	3.77E+01	2.7588045	4.05E-01	1.49E+00	1.03E+02	
300	50	2.13E+01	1.93E+01	3.11E+01	2.7041357	4.18E-01	2.87E+00	7.77E+01	
350	50	1.43E+01	1.43E+01	2.51E+01	2.5836348	4.20E-01	3.88E+00	6.06E+01	
50	100	3.27E+01	2.59E+01	3.95E+01	2.9586853	3.13E-01	2.74E-01	1.02E+02	
100	100	9.50E+01	5.05E+01	4.85E+01	3.2146694	3.65E-01	3.82E-01	1.98E+02	
150	100	1.25E+02	6.88E+01	5.49E+01	3.3586694	4.23E-01	5.79E-01	2.53E+02	
200	100	1.37E+02	6.92E+01	6.03E+01	3.409018	4.75E-01	9.90E-01	2.71E+02	
250	100	3.96E+01	4.01E+01	5.17E+01	3.4063698	5.12E-01	2.10E+00	1.37E+02	
300	100	2.28E+01	2.30E+01	3.73E+01	3.3471188	5.29E-01	6.75E+00	9.37E+01	
350	100	1.49E+01	1.60E+01	2.85E+01	3.1882186	5.31E-01	2.68E+01	8.99E+01	
50	150	2.47E+01	2.63E+01	4.77E+01	3.6680122	3.56E-01	2.72E-01	1.03E+02	
100	150	2.80E+01	5.13E+01	7.12E+01	4.0986745	4.30E-01	3.79E-01	1.55E+02	
150	150	2.79E+01	1.25E+02	8.76E+01	4.2998331	5.19E-01	5.70E-01	2.46E+02	
200	150	2.79E+01	1.29E+02	1.10E+02	4.3352286	6.11E-01	9.65E-01	2.73E+02	
250	150	2.69E+01	4.04E+01	6.68E+01	4.3342855	6.73E-01	1.99E+00	1.41E+02	
300	150	1.92E+01	2.35E+01	4.21E+01	4.2884707	6.92E-01	5.82E+00	9.56E+01	
350	150	1.35E+01	1.64E+01	3.12E+01	4.0581569	6.93E-01	1.43E+01	8.01E+01	
50	200	1.48E+01	2.53E+01	4.71E+01	4.6161822	3.98E-01	2.58E-01	9.24E+01	
100	200	1.51E+01	4.42E+01	8.23E+01	5.5150449	4.98E-01	3.50E-01	1.48E+02	
150	200	1.50E+01	4.71E+01	3.02E+02	5.8953628	6.35E-01	5.04E-01	3.71E+02	
200	200	1.50E+01	4.72E+01	2.95E+02	5.8918036	8.10E-01	7.84E-01	3.64E+02	
250	200	1.50E+01	3.79E+01	8.29E+01	5.8940883	9.56E-01	1.33E+00	1.44E+02	
300	200	1.35E+01	2.26E+01	4.71E+01	5.8834369	9.77E-01	2.32E+00	9.24E+01	
350	200	1.09E+01	1.57E+01	3.39E+01	5.4224802	9.76E-01	2.91E+00	6.98E+01	
50	250	1.03E+01	1.93E+01	4.19E+01	5.6399003	4.31E-01	2.34E-01	7.78E+01	
100	250	1.05E+01	2.23E+01	6.60E+01	7.7731842	5.54E-01	3.06E-01	1.07E+02	
150	250	1.05E+01	2.23E+01	2.88E+02	9.5920772	7.36E-01	4.15E-01	3.32E+02	
200	250	1.05E+01	2.24E+01	2.80E+02	9.5576775	1.04E+00	5.81E-01	3.24E+02	
250	250	1.04E+01	2.20E+01	1.13E+02	9.5606198	1.58E+00	8.23E-01	1.57E+02	
300	250	9.76E+00	1.81E+01	5.40E+01	9.5426999	1.74E+00	1.09E+00	9.42E+01	
350	250	8.52E+00	1.38E+01	3.70E+01	7.4674548	1.74E+00	1.20E+00	6.97E+01	
50	300	7.82E+00	1.39E+01	3.79E+01	6.1860597	4.48E-01	2.07E-01	6.65E+01	
100	300	8.05E+00	1.50E+01	5.59E+01	9.0730044	5.82E-01	2.59E-01	8.89E+01	
150	300	8.10E+00	1.52E+01	1.25E+02	18.054234	7.81E-01	3.31E-01	1.67E+02	
200	300	8.07E+00	1.52E+01	1.62E+02	41.451018	1.11E+00	4.24E-01	2.28E+02	
250	300	7.92E+00	1.49E+01	1.11E+02	41.866043	1.89E+00	5.32E-01	1.78E+02	
300	300	7.49E+00	1.34E+01	6.13E+01	15.893857	6.37E+00	6.29E-01	1.05E+02	
350	300	6.78E+00	1.13E+01	3.95E+01	8.5976693	6.15E+00	6.59E-01	7.29E+01	

50	350	6.21E+00	1.06E+01	3.45E+01	6.2418618	4.47E-01	1.80E-01	5.81E+01	
100	350	6.41E+00	1.12E+01	4.85E+01	9.1019723	5.79E-01	2.17E-01	7.60E+01	
150	350	6.47E+00	1.15E+01	7.48E+01	18.129778	7.78E-01	2.63E-01	1.12E+02	
200	350	6.44E+00	1.14E+01	7.12E+01	40.300396	1.11E+00	3.16E-01	1.31E+02	
250	350	6.29E+00	1.11E+01	6.20E+01	40.774672	1.89E+00	3.69E-01	1.22E+02	
300	350	5.98E+00	1.03E+01	5.05E+01	15.948887	6.44E+00	4.10E-01	8.96E+01	
350	350	5.52E+00	9.09E+00	3.71E+01	8.6320263	6.25E+00	4.23E-01	6.70E+01	
50	400	5.07E+00	8.34E+00	3.04E+01	5.9281551	4.27E-01	1.55E-01	5.03E+01	
100	400	5.23E+00	8.80E+00	3.92E+01	8.5755452	5.46E-01	1.81E-01	6.26E+01	
150	400	5.28E+00	9.00E+00	4.78E+01	12.91153	7.23E-01	2.11E-01	7.59E+01	
200	400	5.25E+00	8.97E+00	4.78E+01	12.976323	1.01E+00	2.41E-01	7.62E+01	
250	400	5.13E+00	8.70E+00	4.37E+01	13.014309	1.44E+00	2.71E-01	7.23E+01	
300	400	4.91E+00	8.17E+00	3.82E+01	12.591616	1.53E+00	2.91E-01	6.57E+01	
350	400	4.59E+00	7.42E+00	3.13E+01	8.1559722	1.53E+00	2.97E-01	5.33E+01	**3.71E+02**

		1.51E-02	1.82E+00	6.84E-02		0	1.11E-03	0.00E+00	

1,1,1-TCA - 1Hour

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL	
0	0	1.39E+01	1.13E+03	2.75E+01	0	2.34E-01	0.00E+00	1.17E+03	
50	0	1.72E+01	1.35E+03	3.16E+01	0	2.62E-01	0.00E+00	1.40E+03	
100	0	1.78E+01	1.47E+03	3.53E+01	0	2.91E-01	0.00E+00	1.52E+03	
150	0	1.77E+01	1.48E+03	3.77E+01	0	3.19E-01	0.00E+00	1.54E+03	
200	0	1.77E+01	1.48E+03	3.83E+01	0	3.44E-01	0.00E+00	1.54E+03	
250	0	1.77E+01	1.45E+03	3.60E+01	0	3.62E-01	0.00E+00	1.50E+03	
300	0	1.50E+01	1.30E+03	3.17E+01	0	3.72E-01	0.00E+00	1.34E+03	
350	0	1.15E+01	1.07E+03	2.71E+01	0	3.74E-01	0.00E+00	1.11E+03	
381	0	9.65E+00	9.35E+02	2.45E+01	0	3.70E-01	0.00E+00	9.70E+02	
381	50	1.10E+01	1.09E+03	2.80E+01	0	4.57E-01	0.00E+00	1.13E+03	
381	100	1.14E+01	1.19E+03	3.13E+01	0	5.79E-01	0.00E+00	1.24E+03	
381	150	1.05E+01	1.22E+03	3.40E+01	0	7.59E-01	0.00E+00	1.27E+03	
381	200	8.95E+00	1.18E+03	3.65E+01	0	1.07E+00	0.00E+00	1.22E+03	
381	250	7.33E+00	1.06E+03	3.91E+01	0	1.92E+00	0.00E+00	1.11E+03	
381	300	6.00E+00	9.00E+02	4.07E+01	0	7.18E+00	0.00E+00	9.54E+02	
381	350	4.97E+00	7.50E+02	3.90E+01	0	7.25E+00	0.00E+00	8.01E+02	
381	410	4.04E+00	6.03E+02	3.33E+01	0	1.48E+00	0.00E+00	6.42E+02	
350	410	4.24E+00	6.47E+02	3.80E+01	0	1.48E+00	0.00E+00	6.90E+02	
300	410	4.52E+00	7.09E+02	4.57E+01	0	1.48E+00	0.00E+00	7.61E+02	
250	410	4.72E+00	7.53E+02	5.19E+01	0	1.42E+00	0.00E+00	8.12E+02	
200	410	4.84E+00	7.76E+02	5.63E+01	0	1.06E+00	0.00E+00	8.38E+02	
150	410	4.87E+00	7.78E+02	5.60E+01	0	7.75E-01	0.00E+00	8.40E+02	
100	410	4.81E+00	7.61E+02	4.71E+01	0	5.90E-01	0.00E+00	8.14E+02	
50	410	4.67E+00	7.23E+02	3.72E+01	0	4.63E-01	0.00E+00	7.65E+02	
0	410	4.45E+00	6.64E+02	2.99E+01	0	3.72E-01	0.00E+00	6.99E+02	
0	350	5.61E+00	8.54E+02	3.38E+01	0	3.90E-01	0.00E+00	8.94E+02	
0	300	6.99E+00	1.07E+03	3.65E+01	0	3.91E-01	0.00E+00	1.12E+03	
0	250	9.03E+00	1.34E+03	3.93E+01	0	3.79E-01	0.00E+00	1.39E+03	
0	200	1.22E+01	1.55E+03	4.20E+01	0	3.57E-01	0.00E+00	1.61E+03	
0	150	1.65E+01	1.62E+03	4.23E+01	0	3.27E-01	0.00E+00	1.68E+03	
0	100	1.91E+01	1.58E+03	3.85E+01	0	2.95E-01	0.00E+00	1.64E+03	
0	50	1.80E+01	1.39E+03	3.28E+01	0	2.63E-01	0.00E+00	1.45E+03	
0	0	1.39E+01	1.13E+03	2.75E+01	0	2.34E-01	0.00E+00	1.17E+03	**1.68E+03**
Residences									
0	-50	1.02E+01	8.97E+02	2.30E+01	0	2.08E-01	0.00E+00	9.30E+02	
410	-43	7.24E+00	7.24E+02	1.99E+01	0	3.09E-01	0.00E+00	7.51E+02	
432	36	7.91E+00	8.17E+02	2.26E+01	0	4.14E-01	0.00E+00	8.48E+02	
432	158	7.71E+00	9.17E+02	2.77E+01	0	7.62E-01	0.00E+00	9.53E+02	
432	238	6.28E+00	8.43E+02	3.01E+01	0	1.39E+00	0.00E+00	8.80E+02	
432	317	4.89E+00	6.98E+02	3.07E+01	0	1.71E+00	0.00E+00	7.36E+02	
432	396	3.83E+00	5.54E+02	2.77E+01	0	1.49E+00	0.00E+00	5.87E+02	**9.53E+02**
School									
410	461	3.29E+00	4.78E+02	2.55E+01	0	9.15E-01	0.00E+00	5.08E+02	

Fire Station									
346	432	3.96E+00	6.00E+02	3.53E+01	0	1.17E+00	0.00E+00	6.40E+02	
Residences									
-108	259	6.09E+00	7.62E+02	2.41E+01	0	2.53E-01	0.00E+00	7.92E+02	
-108	317	5.02E+00	6.65E+02	2.29E+01	0	2.57E-01	0.00E+00	6.93E+02	
-108	360	4.37E+00	5.92E+02	2.17E+01	0	2.55E-01	0.00E+00	6.18E+02	
-108	396	3.90E+00	5.34E+02	2.06E+01	0	2.51E-01	0.00E+00	5.59E+02	**7.92E+02**
Within Property									
50	50	2.88E+01	1.88E+03	3.96E+01	0	3.00E-01	0.00E+00	1.95E+03	
100	50	4.50E+01	2.27E+03	4.56E+01	0	3.41E-01	0.00E+00	2.36E+03	
150	50	4.50E+01	2.27E+03	5.00E+01	0	3.82E-01	0.00E+00	2.36E+03	
200	50	4.49E+01	2.27E+03	5.19E+01	0	4.19E-01	0.00E+00	2.37E+03	
250	50	3.42E+01	2.22E+03	4.76E+01	0	4.46E-01	0.00E+00	2.30E+03	
300	50	2.04E+01	1.74E+03	3.92E+01	0	4.60E-01	0.00E+00	1.80E+03	
350	50	1.37E+01	1.29E+03	3.17E+01	0	4.62E-01	0.00E+00	1.34E+03	
50	100	3.13E+01	2.34E+03	4.99E+01	0	3.44E-01	0.00E+00	2.42E+03	
100	100	9.09E+01	4.57E+03	6.13E+01	0	4.02E-01	0.00E+00	4.72E+03	
150	100	1.19E+02	6.23E+03	6.93E+01	0	4.65E-01	0.00E+00	6.42E+03	
200	100	1.31E+02	6.27E+03	7.62E+01	0	5.23E-01	0.00E+00	6.48E+03	
250	100	3.79E+01	3.63E+03	6.52E+01	0	5.64E-01	0.00E+00	3.73E+03	
300	100	2.18E+01	2.09E+03	4.70E+01	0	5.82E-01	0.00E+00	2.16E+03	
350	100	1.43E+01	1.45E+03	3.60E+01	0	5.84E-01	0.00E+00	1.50E+03	
50	150	2.36E+01	2.38E+03	6.03E+01	0	3.92E-01	0.00E+00	2.46E+03	
100	150	2.68E+01	4.65E+03	8.99E+01	0	4.73E-01	0.00E+00	4.77E+03	
150	150	2.67E+01	1.13E+04	1.11E+02	0	5.72E-01	0.00E+00	1.15E+04	
200	150	2.67E+01	1.17E+04	1.39E+02	0	6.72E-01	0.00E+00	1.19E+04	
250	150	2.57E+01	3.66E+03	8.43E+01	0	7.41E-01	0.00E+00	3.77E+03	
300	150	1.84E+01	2.12E+03	5.31E+01	0	7.61E-01	0.00E+00	2.20E+03	
350	150	1.29E+01	1.48E+03	3.94E+01	0	7.63E-01	0.00E+00	1.54E+03	
50	200	1.41E+01	2.29E+03	5.94E+01	0	4.38E-01	0.00E+00	2.37E+03	
100	200	1.44E+01	4.01E+03	1.04E+02	0	5.48E-01	0.00E+00	4.13E+03	
150	200	1.43E+01	4.27E+03	3.81E+02	0	6.98E-01	0.00E+00	4.67E+03	
200	200	1.44E+01	4.27E+03	3.72E+02	0	8.91E-01	0.00E+00	4.66E+03	
250	200	1.44E+01	3.43E+03	1.05E+02	0	1.05E+00	0.00E+00	3.55E+03	
300	200	1.29E+01	2.05E+03	5.94E+01	0	1.07E+00	0.00E+00	2.12E+03	
350	200	1.04E+01	1.42E+03	4.28E+01	0	1.07E+00	0.00E+00	1.48E+03	
50	250	9.85E+00	1.75E+03	5.29E+01	0	4.74E-01	0.00E+00	1.81E+03	
100	250	1.01E+01	2.02E+03	8.33E+01	0	6.09E-01	0.00E+00	2.11E+03	
150	250	1.01E+01	2.02E+03	3.63E+02	0	8.10E-01	0.00E+00	2.40E+03	
200	250	1.01E+01	2.03E+03	3.53E+02	0	1.14E+00	0.00E+00	2.39E+03	
250	250	9.97E+00	1.99E+03	1.42E+02	0	1.73E+00	0.00E+00	2.14E+03	
300	250	9.34E+00	1.64E+03	6.82E+01	0	1.91E+00	0.00E+00	1.72E+03	
350	250	8.16E+00	1.25E+03	4.67E+01	0	1.92E+00	0.00E+00	1.30E+03	
50	300	7.48E+00	1.26E+03	4.78E+01	0	4.93E-01	0.00E+00	1.32E+03	
100	300	7.70E+00	1.36E+03	7.06E+01	0	6.40E-01	0.00E+00	1.44E+03	
150	300	7.75E+00	1.38E+03	1.58E+02	0	8.59E-01	0.00E+00	1.54E+03	
200	300	7.73E+00	1.38E+03	2.05E+02	0	1.22E+00	0.00E+00	1.59E+03	
250	300	7.57E+00	1.35E+03	1.40E+02	0	2.07E+00	0.00E+00	1.50E+03	
300	300	7.17E+00	1.22E+03	7.73E+01	0	7.00E+00	0.00E+00	1.31E+03	
350	300	6.49E+00	1.02E+03	4.98E+01	0	6.77E+00	0.00E+00	1.08E+03	

50	350	5.95E+00	9.56E+02	4.35E+01	0	4.91E-01	0.00E+00	1.01E+03	
100	350	6.13E+00	1.02E+03	6.12E+01	0	6.37E-01	0.00E+00	1.09E+03	
150	350	6.20E+00	1.04E+03	9.44E+01	0	8.56E-01	0.00E+00	1.14E+03	
200	350	6.16E+00	1.04E+03	8.99E+01	0	1.22E+00	0.00E+00	1.13E+03	
250	350	6.02E+00	1.01E+03	7.83E+01	0	2.08E+00	0.00E+00	1.09E+03	
300	350	5.72E+00	9.33E+02	6.38E+01	0	7.09E+00	0.00E+00	1.01E+03	
350	350	5.29E+00	8.23E+02	4.68E+01	0	6.87E+00	0.00E+00	8.82E+02	
50	400	4.85E+00	7.55E+02	3.84E+01	0	4.69E-01	0.00E+00	7.99E+02	
100	400	5.00E+00	7.97E+02	4.95E+01	0	6.01E-01	0.00E+00	8.52E+02	
150	400	5.06E+00	8.15E+02	6.03E+01	0	7.96E-01	0.00E+00	8.81E+02	
200	400	5.03E+00	8.12E+02	6.03E+01	0	1.11E+00	0.00E+00	8.78E+02	
250	400	4.91E+00	7.88E+02	5.51E+01	0	1.59E+00	0.00E+00	8.50E+02	
300	400	4.69E+00	7.40E+02	4.82E+01	0	1.69E+00	0.00E+00	7.95E+02	
350	400	4.39E+00	6.72E+02	3.95E+01	0	1.69E+00	0.00E+00	7.18E+02	**4.77E+03**

		1.75E-01	2.83E-02	6.01E-03	0	1.02E-02	0.00E+00

1,2-DCA - 1Hour

Property Boundary

		LAG1	LAG2	LAG3	LAG4	LAG5	PITF	TOTAL
0	0	1.61E+02	1.76E+01	2.41E+00	0	2.15E+00	0.00E+00	1.83E+02
50	0	1.99E+02	2.10E+01	2.78E+00	0	2.41E+00	0.00E+00	2.25E+02
100	0	2.06E+02	2.28E+01	3.10E+00	0	2.68E+00	0.00E+00	2.34E+02
150	0	2.04E+02	2.30E+01	3.32E+00	0	2.93E+00	0.00E+00	2.34E+02
200	0	2.05E+02	2.30E+01	3.36E+00	0	3.17E+00	0.00E+00	2.35E+02
250	0	2.05E+02	2.26E+01	3.17E+00	0	3.33E+00	0.00E+00	2.34E+02
300	0	1.74E+02	2.02E+01	2.79E+00	0	3.43E+00	0.00E+00	2.00E+02
350	0	1.33E+02	1.66E+01	2.38E+00	0	3.44E+00	0.00E+00	1.55E+02
381	0	1.12E+02	1.46E+01	2.15E+00	0	3.41E+00	0.00E+00	1.32E+02
381	50	1.28E+02	1.70E+01	2.46E+00	0	4.21E+00	0.00E+00	1.51E+02
381	100	1.32E+02	1.86E+01	2.75E+00	0	5.33E+00	0.00E+00	1.59E+02
381	150	1.22E+02	1.90E+01	2.98E+00	0	6.99E+00	0.00E+00	1.51E+02
381	200	1.04E+02	1.83E+01	3.21E+00	0	9.90E+00	0.00E+00	1.35E+02
381	250	8.49E+01	1.65E+01	3.44E+00	0	1.76E+01	0.00E+00	1.22E+02
381	300	6.94E+01	1.40E+01	3.58E+00	0	6.62E+01	0.00E+00	1.53E+02
381	350	5.75E+01	1.17E+01	3.42E+00	0	6.68E+01	0.00E+00	1.39E+02
381	410	4.67E+01	9.39E+00	2.93E+00	0	1.36E+01	0.00E+00	7.27E+01
350	410	4.91E+01	1.01E+01	3.34E+00	0	1.36E+01	0.00E+00	7.61E+01
300	410	5.24E+01	1.10E+01	4.02E+00	0	1.36E+01	0.00E+00	8.10E+01
250	410	5.47E+01	1.17E+01	4.56E+00	0	1.31E+01	0.00E+00	8.41E+01
200	410	5.60E+01	1.21E+01	4.95E+00	0	9.76E+00	0.00E+00	8.28E+01
150	410	5.63E+01	1.21E+01	4.92E+00	0	7.14E+00	0.00E+00	8.05E+01
100	410	5.57E+01	1.19E+01	4.14E+00	0	5.43E+00	0.00E+00	7.71E+01
50	410	5.41E+01	1.12E+01	3.27E+00	0	4.26E+00	0.00E+00	7.29E+01
0	410	5.15E+01	1.03E+01	2.63E+00	0	3.43E+00	0.00E+00	6.79E+01
0	350	6.49E+01	1.33E+01	2.97E+00	0	3.59E+00	0.00E+00	8.48E+01
0	300	8.09E+01	1.67E+01	3.21E+00	0	3.60E+00	0.00E+00	1.04E+02
0	250	1.05E+02	2.08E+01	3.45E+00	0	3.49E+00	0.00E+00	1.32E+02
0	200	1.41E+02	2.41E+01	3.69E+00	0	3.28E+00	0.00E+00	1.72E+02
0	150	1.91E+02	2.52E+01	3.72E+00	0	3.01E+00	0.00E+00	2.22E+02
0	100	2.21E+02	2.46E+01	3.38E+00	0	2.71E+00	0.00E+00	2.51E+02
0	50	2.08E+02	2.17E+01	2.88E+00	0	2.42E+00	0.00E+00	2.35E+02
0	0	1.61E+02	1.76E+01	2.41E+00	0	2.15E+00	0.00E+00	1.83E+02
Residences								
0	-50	1.18E+02	1.40E+01	2.02E+00	0	1.91E+00	0.00E+00	1.36E+02
410	-43	8.39E+01	1.13E+01	1.75E+00	0	2.84E+00	0.00E+00	9.97E+01
432	36	9.16E+01	1.27E+01	1.99E+00	0	3.81E+00	0.00E+00	1.10E+02
432	158	8.93E+01	1.43E+01	2.43E+00	0	7.01E+00	0.00E+00	1.13E+02
432	238	7.28E+01	1.31E+01	2.65E+00	0	1.28E+01	0.00E+00	1.01E+02
432	317	5.67E+01	1.09E+01	2.70E+00	0	1.57E+01	0.00E+00	8.59E+01
432	396	4.43E+01	8.62E+00	2.43E+00	0	1.37E+01	0.00E+00	6.91E+01
School								
410	461	3.81E+01	7.44E+00	2.24E+00	0	8.43E+00	0.00E+00	5.62E+01

Fire Station								
346	432	4.58E+01	9.34E+00	3.10E+00	0	1.08E+01	0.00E+00	6.90E+01
Residences								
-108	259	7.05E+01	1.19E+01	2.12E+00	0	2.33E+00	0.00E+00	8.68E+01
-108	317	5.81E+01	1.04E+01	2.01E+00	0	2.37E+00	0.00E+00	7.28E+01
-108	360	5.05E+01	9.21E+00	1.91E+00	0	2.35E+00	0.00E+00	6.40E+01
-108	396	4.52E+01	8.31E+00	1.81E+00	0	2.31E+00	0.00E+00	5.76E+01
Within Property								
50	50	3.33E+02	2.93E+01	3.48E+00	0	2.76E+00	0.00E+00	3.69E+02
100	50	5.21E+02	3.53E+01	4.00E+00	0	3.14E+00	0.00E+00	5.63E+02
150	50	5.20E+02	3.53E+01	4.39E+00	0	3.52E+00	0.00E+00	5.64E+02
200	50	5.19E+02	3.53E+01	4.56E+00	0	3.86E+00	0.00E+00	5.63E+02
250	50	3.96E+02	3.46E+01	4.19E+00	0	4.10E+00	0.00E+00	4.39E+02
300	50	2.37E+02	2.71E+01	3.44E+00	0	4.24E+00	0.00E+00	2.71E+02
350	50	1.59E+02	2.01E+01	2.79E+00	0	4.26E+00	0.00E+00	1.86E+02
50	100	3.62E+02	3.65E+01	4.38E+00	0	3.17E+00	0.00E+00	4.06E+02
100	100	1.05E+03	7.12E+01	5.38E+00	0	3.70E+00	0.00E+00	1.13E+03
150	100	1.38E+03	9.70E+01	6.09E+00	0	4.28E+00	0.00E+00	1.49E+03
200	100	1.52E+03	9.76E+01	6.69E+00	0	4.82E+00	0.00E+00	1.63E+03
250	100	4.39E+02	5.65E+01	5.73E+00	0	5.19E+00	0.00E+00	5.06E+02
300	100	2.52E+02	3.25E+01	4.13E+00	0	5.36E+00	0.00E+00	2.94E+02
350	100	1.66E+02	2.25E+01	3.16E+00	0	5.38E+00	0.00E+00	1.97E+02
50	150	2.74E+02	3.70E+01	5.29E+00	0	3.61E+00	0.00E+00	3.20E+02
100	150	3.10E+02	7.24E+01	7.89E+00	0	4.36E+00	0.00E+00	3.94E+02
150	150	3.09E+02	1.76E+02	9.72E+00	0	5.26E+00	0.00E+00	5.00E+02
200	150	3.09E+02	1.82E+02	1.22E+01	0	6.19E+00	0.00E+00	5.10E+02
250	150	2.98E+02	5.70E+01	7.41E+00	0	6.82E+00	0.00E+00	3.69E+02
300	150	2.13E+02	3.31E+01	4.67E+00	0	7.01E+00	0.00E+00	2.57E+02
350	150	1.49E+02	2.31E+01	3.46E+00	0	7.02E+00	0.00E+00	1.83E+02
50	200	1.64E+02	3.57E+01	5.22E+00	0	4.03E+00	0.00E+00	2.09E+02
100	200	1.67E+02	6.24E+01	9.13E+00	0	5.05E+00	0.00E+00	2.44E+02
150	200	1.66E+02	6.65E+01	3.35E+01	0	6.43E+00	0.00E+00	2.73E+02
200	200	1.67E+02	6.65E+01	3.27E+01	0	8.21E+00	0.00E+00	2.74E+02
250	200	1.66E+02	5.34E+01	9.19E+00	0	9.69E+00	0.00E+00	2.39E+02
300	200	1.49E+02	3.18E+01	5.22E+00	0	9.90E+00	0.00E+00	1.96E+02
350	200	1.20E+02	2.22E+01	3.76E+00	0	9.89E+00	0.00E+00	1.56E+02
50	250	1.14E+02	2.72E+01	4.65E+00	0	4.37E+00	0.00E+00	1.50E+02
100	250	1.17E+02	3.14E+01	7.32E+00	0	5.61E+00	0.00E+00	1.61E+02
150	250	1.17E+02	3.15E+01	3.19E+01	0	7.46E+00	0.00E+00	1.87E+02
200	250	1.17E+02	3.15E+01	3.10E+01	0	1.05E+01	0.00E+00	1.90E+02
250	250	1.15E+02	3.10E+01	1.25E+01	0	1.60E+01	0.00E+00	1.75E+02
300	250	1.08E+02	2.55E+01	5.99E+00	0	1.76E+01	0.00E+00	1.57E+02
350	250	9.44E+01	1.94E+01	4.11E+00	0	1.77E+01	0.00E+00	1.36E+02
50	300	8.66E+01	1.96E+01	4.20E+00	0	4.54E+00	0.00E+00	1.15E+02
100	300	8.91E+01	2.12E+01	6.20E+00	0	5.90E+00	0.00E+00	1.22E+02
150	300	8.97E+01	2.14E+01	1.38E+01	0	7.92E+00	0.00E+00	1.33E+02
200	300	8.95E+01	2.14E+01	1.80E+01	0	1.13E+01	0.00E+00	1.40E+02
250	300	8.77E+01	2.10E+01	1.23E+01	0	1.91E+01	0.00E+00	1.40E+02
300	300	8.30E+01	1.89E+01	6.80E+00	0	6.45E+01	0.00E+00	1.73E+02
350	300	7.52E+01	1.59E+01	4.38E+00	0	6.24E+01	0.00E+00	1.58E+02

50	350	6.88E+01	1.49E+01	3.82E+00	0	4.53E+00	0.00E+00	9.21E+01
100	350	7.10E+01	1.58E+01	5.38E+00	0	5.87E+00	0.00E+00	9.81E+01
150	350	7.17E+01	1.62E+01	8.30E+00	0	7.88E+00	0.00E+00	1.04E+02
200	350	7.13E+01	1.61E+01	7.90E+00	0	1.12E+01	0.00E+00	1.07E+02
250	350	6.97E+01	1.57E+01	6.88E+00	0	1.91E+01	0.00E+00	1.11E+02
300	350	6.63E+01	1.45E+01	5.60E+00	0	6.53E+01	0.00E+00	1.52E+02
350	350	6.12E+01	1.28E+01	4.11E+00	0	6.33E+01	0.00E+00	1.41E+02
50	400	5.62E+01	1.18E+01	3.37E+00	0	4.32E+00	0.00E+00	7.56E+01
100	400	5.79E+01	1.24E+01	4.35E+00	0	5.54E+00	0.00E+00	8.02E+01
150	400	5.85E+01	1.27E+01	5.30E+00	0	7.33E+00	0.00E+00	8.39E+01
200	400	5.82E+01	1.26E+01	5.30E+00	0	1.02E+01	0.00E+00	8.63E+01
250	400	5.68E+01	1.23E+01	4.85E+00	0	1.46E+01	0.00E+00	8.86E+01
300	400	5.43E+01	1.15E+01	4.24E+00	0	1.55E+01	0.00E+00	8.56E+01
350	400	5.08E+01	1.05E+01	3.47E+00	0	1.55E+01	0.00E+00	8.03E+01

100	300	529.9468	0	1-HR	PTF	1ST	NA
150	300	675.679	0	1-HR	PTF	1ST	NA
200	300	866.2753	0	1-HR	PTF	1ST	NA
250	300	1087.324	0	1-HR	PTF	1ST	NA
300	300	1285.03	0	1-HR	PTF	1ST	NA
350	300	1346.863	0	1-HR	PTF	1ST	NA
50	350	366.9948	0	1-HR	PTF	1ST	NA
100	350	442.9561	0	1-HR	PTF	1ST	NA
150	350	536.4954	0	1-HR	PTF	1ST	NA
200	350	644.4921	0	1-HR	PTF	1ST	NA
250	350	754.3197	0	1-HR	PTF	1ST	NA
300	350	838.3159	0	1-HR	PTF	1ST	NA
350	350	863.186	0	1-HR	PTF	1ST	NA
50	400	316.8647	0	1-HR	PTF	1ST	NA
100	400	369.9527	0	1-HR	PTF	1ST	NA
150	400	430.308	0	1-HR	PTF	1ST	NA
200	400	492.5321	0	1-HR	PTF	1ST	NA
250	400	553.0671	0	1-HR	PTF	1ST	NA
300	400	594.3832	0	1-HR	PTF	1ST	NA
350	400	605.8781	0	1-HR	PTF	1ST	NA

0	0	384.9214	0	1-HR	PTF	1ST	NA
0	-50	351.3882	0	1-HR	PTF	1ST	NA
410	-43	1421.837	0	1-HR	PTF	1ST	NA
432	36	2728.646	0	1-HR	PTF	1ST	NA
432	158	4004.817	0	1-HR	PTF	1ST	NA
432	238	1910.078	0	1-HR	PTF	1ST	NA
432	317	961.5086	0	1-HR	PTF	1ST	NA
432	396	568.1789	0	1-HR	PTF	1ST	NA
410	461	412.7275	0	1-HR	PTF	1ST	NA
346	432	499.8139	0	1-HR	PTF	1ST	NA
-108	259	244.0748	0	1-HR	PTF	1ST	NA
-108	317	227.1415	0	1-HR	PTF	1ST	NA
-108	360	213.1238	0	1-HR	PTF	1ST	NA
-108	396	200.9008	0	1-HR	PTF	1ST	NA
50	50	535.5335	0	1-HR	PTF	1ST	NA
100	50	732.7177	0	1-HR	PTF	1ST	NA
150	50	1069.318	0	1-HR	PTF	1ST	NA
200	50	1704.22	0	1-HR	PTF	1ST	NA
250	50	3044.474	0	1-HR	PTF	1ST	NA
300	50	5868.32	0	1-HR	PTF	1ST	NA
350	50	7934.464	0	1-HR	PTF	1ST	NA
50	100	559.5717	0	1-HR	PTF	1ST	NA
100	100	781.2644	0	1-HR	PTF	1ST	NA
150	100	1181.718	0	1-HR	PTF	1ST	NA
200	100	2022.412	0	1-HR	PTF	1ST	NA
250	100	4286.222	0	1-HR	PTF	1ST	NA
300	100	13786.23	0	1-HR	PTF	1ST	NA
350	100	54699.52	0	1-HR	PTF	1ST	NA
50	150	556.1547	0	1-HR	PTF	1ST	NA
100	150	774.257	0	1-HR	PTF	1ST	NA
150	150	1164.52	0	1-HR	PTF	1ST	NA
200	150	1971.833	0	1-HR	PTF	1ST	NA
250	150	4062.392	0	1-HR	PTF	1ST	NA
300	150	11888.83	0	1-HR	PTF	1ST	NA
350	150	29242.58	0	1-HR	PTF	1ST	NA
50	200	526.1992	0	1-HR	PTF	1ST	NA
100	200	714.4101	0	1-HR	PTF	1ST	NA
150	200	1029.571	0	1-HR	PTF	1ST	NA
200	200	1600.876	0	1-HR	PTF	1ST	NA
250	200	2720.714	0	1-HR	PTF	1ST	NA
300	200	4745.437	0	1-HR	PTF	1ST	NA
350	200	5938.004	0	1-HR	PTF	1ST	NA
50	250	478.2375	0	1-HR	PTF	1ST	NA
100	250	625.4936	0	1-HR	PTF	1ST	NA
150	250	847.5092	0	1-HR	PTF	1ST	NA
200	250	1186.982	0	1-HR	PTF	1ST	NA
250	250	1680.609	0	1-HR	PTF	1ST	NA
300	250	2236.492	0	1-HR	PTF	1ST	NA
350	250	2447.209	0	1-HR	PTF	1ST	NA
50	300	422.2083	0	1-HR	PTF	1ST	NA

```
CO STARTING
CO TITLEONE ASCON LAGOONS AND PIT F RISK ASSESSMENT MODELING
CO TITLETWO UNIT EMISSIONS AND SOURCE SEPARATIONS - PDF RECEPTORS
CO MODELOPT CONC  URBAN  NOCALM
CO AVERTIME  1 PERIOD
CO POLLUTID OTHER
CO RUNORNOT RUN
CO ERRORFIL ERRORS.OUT
CO FINISHED


SO STARTING
** SOURCE LOCATION CARDS:
**          SRCID SRCTYP        XS            YS            ZS

SO LOCATION   LAGON1 AREA         105.000        64.000         0.0
SO LOCATION   LAGON2 AREA         121.000       108.000         0.0
SO LOCATION   LAGON3 AREA         133.000       197.000         0.0
SO LOCATION   LAGON4 AREA         168.000       295.000         0.0
SO LOCATION   LAGON5 AREA         286.000       283.000         0.0
SO LOCATION   PITF   AREA         337.000       111.000         0.0

** SOURCE PARAMETER CARDS:
** POINT:   SRCID       QS          RH        XDIS      YDIS   ANGLE
SO SRCPARAM   LAGON1    1.88E-04   0.0        105.       51.    0.0
SO SRCPARAM   LAGON2    1.44E-04   0.0         95.       73.    0.0
SO SRCPARAM   LAGON3    1.17E-04   0.0         79.      108.   17.0
SO SRCPARAM   LAGON4    1.17E-04   0.0        108.       79.    0.0
SO SRCPARAM   LAGON5    1.38E-04   0.0         95.       76.    0.0
SO SRCPARAM   PITF      6.61E-03   0.0         10.       16.    0.0

SO SRCGROUP LAG1 LAGON1
SO SRCGROUP LAG2 LAGON2
SO SRCGROUP LAG3 LAGON3
SO SRCGROUP LAG4 LAGON4
SO SRCGROUP LAG5 LAGON5
SO SRCGROUP PTF  PITF
SO FINISHED

RE STARTING
RE DISCCART              16.    188.
RE DISCCART             333.    318.
RE DISCCART             320.     36.
RE DISCCART             160.    318.
RE DISCCART             320.    173.


RE FINISHED


ME STARTING
ME INPUTFIL COS10219.ASC                          CARD
ME ANEMHGHT   10.000 METERS
ME SURFDATA  53126  1981            COSTAMESA
ME UAIRDATA  91919  1981            LOYOLA-MT
ME WINDCATS    1.54    3.09    5.14    8.23   10.80
```

```
ME FINISHED


OU STARTING
OU RECTABLE ALLAVE FIRST  SECOND
OU MAXTABLE ALLAVE  50
OU PLOTFILE 1      LAG1 FIRST LAG1021.GRD 99
OU PLOTFILE 1      LAG2 FIRST LAG1021.GRD 99
OU PLOTFILE 1      LAG3 FIRST LAG1021.GRD 99
OU PLOTFILE 1      LAG4 FIRST LAG1021.GRD 99
OU PLOTFILE 1      LAG5 FIRST LAG1021.GRD 99
OU PLOTFILE 1      PTF  FIRST LAG1021.GRD 99
OU PLOTFILE PERIOD LAG1   LAG1021.GRD 99
OU PLOTFILE PERIOD LAG2   LAG1021.GRD 99
OU PLOTFILE PERIOD LAG3   LAG1021.GRD 99
OU PLOTFILE PERIOD LAG4   LAG1021.GRD 99
OU PLOTFILE PERIOD LAG5   LAG1021.GRD 99
OU PLOTFILE PERIOD PTF    LAG1021.GRD 99

OU FINISHED

***********************************
*** SETUP Finishes Successfully ***
***********************************
```

```
                                           ***     MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Intermediate Terrain Processing is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

  --  SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION.  DDPLETE =  F
**Model Uses NO WET DEPLETION.  WDPLETE =  F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses URBAN Dispersion.

**Model Uses User-Specified Options:
           1. Final Plume Rise.
           2. Stack-tip Downwash.
           3. Buoyancy-induced Dispersion.
           4. Not Use Calms Processing Routine.
           5. Not Use Missing Data Processing Routine.
           6. Default Wind Profile Exponents.
           7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates  1 Short Term Average(s) of:   1-HR
    and Calculates PERIOD Averages

**This Run Includes:     6 Source(s);      6 Source Group(s); and       5 Receptor(s)

**The Model Assumes A Pollutant Type of:  OTHER

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
         Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs:  Anem. Hgt. (m) =    10.00 ;    Decay Coef. =    0.000     ;   Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =     1.2 MB of RAM.

**Input Runstream File:          LAG10219.DTA
**Output Print File:             LAG10219.LST
```

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
LAGON1	0	0.18800E-03	105.0	64.0	0.0	0.00	105.00	51.00	0.00	0.00	
LAGON2	0	0.14400E-03	121.0	108.0	0.0	0.00	95.00	73.00	0.00	0.00	
LAGON3	0	0.11700E-03	133.0	197.0	0.0	0.00	79.00	108.00	17.00	0.00	
LAGON4	0	0.11700E-03	168.0	295.0	0.0	0.00	108.00	79.00	0.00	0.00	
LAGON5	0	0.13800E-03	286.0	283.0	0.0	0.00	95.00	76.00	0.00	0.00	
PITF	0	0.66100E-02	337.0	111.0	0.0	0.00	10.00	16.00	0.00	0.00	

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
LAG1	LAGON1 ,
LAG2	LAGON2 ,
LAG3	LAGON3 ,
LAG4	LAGON4 ,
LAG5	LAGON5 ,
PTF	PITF ,

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZFLAG)
(METERS)

(16.0,	188.0,	0.0,	0.0);	(333.0,	318.0,	0.0,	0.0);	□□□□□□□□□□□□□□□□□□□□□□
(320.0,	36.0,	0.0,	0.0);	(160.0,	318.0,	0.0,	0.0);	
(320.0,	173.0,	0.0,	0.0);					

```
                                              *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                               (1=YES; 0=NO)

                     1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
                     1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
                     1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
                     1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
                     1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
                     1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
                     1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
                     1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

                         NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.


                                         *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                                (METERS/SEC)

                                                   1.54,    3.09,    5.14,    8.23,   10.80,

                                                       *** WIND PROFILE EXPONENTS ***

                         STABILITY                              WIND SPEED CATEGORY
                         CATEGORY         1              2              3              4              5              6
                            A        .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00
                            B        .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00     .15000E+00
                            C        .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00     .20000E+00
                            D        .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00     .25000E+00
                            E        .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00
                            F        .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00     .30000E+00

                                              *** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
                                                          (DEGREES KELVIN PER METER)

                         STABILITY                              WIND SPEED CATEGORY
                         CATEGORY         1              2              3              4              5              6
                            A        .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
                            B        .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
                            C        .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
                            D        .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00     .00000E+00
                            E        .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01     .20000E-01
                            F        .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01     .35000E-01
```

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE FIRST 6 HOURS OF METEOROLOGICAL DATA ***

FILE: COS10219.ASC
FORMAT: CARD
SURFACE STATION NO.: 53126 UPPER AIR STATION NO.: 91919
NAME: COSTAMESA NAME: LOYOLA-MT
YEAR: 1981 YEAR: 1981

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	WIND (M/S)	VERT TEMP (M)	USTAR (M)	M-O LENGTH (mm/HR)	Z-0	IPCODE	PRATE
00	10	21	09	225.0	1.00	292.6	2	363.5	363.5	0.000	0.000	0.0000	0.0	0.0000	0	0.00
00	10	21	10	225.0	1.00	294.8	2	351.8	351.8	0.000	0.000	0.0000	0.0	0.0000	0	0.00
00	10	21	11	0.0	1.34	295.4	2	340.1	340.1	0.000	0.000	0.0000	0.0	0.0000	0	0.00
00	10	21	12	0.0	1.68	295.9	2	328.4	328.4	0.000	0.000	0.0000	0.0	0.0000	0	0.00
00	10	21	13	45.0	1.90	296.5	2	316.7	316.7	0.000	0.000	0.0000	0.0	0.0000	0	0.00
00	10	21	14	68.0	2.24	296.5	3	305.0	305.0	0.000	0.000	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE PERIOD (6 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG1 ***
INCLUDING SOURCE(S): LAGON1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
16.00	188.00	0.19461	333.00	318.00	5.04811
320.00	36.00	0.06762	160.00	318.00	15.80684
320.00	173.00	21.87571			

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE PERIOD (6 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG2 ***
INCLUDING SOURCE(S): LAGON2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
16.00	188.00	0.02115	333.00	318.00	7.98600
320.00	36.00	0.00000	160.00	318.00	26.95521
320.00	173.00	18.81746			

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE PERIOD (6 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG3 ***
INCLUDING SOURCE(S): LAGON3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
16.00	188.00	12.52150	333.00	318.00	24.09300
320.00	36.00	0.00000	160.00	318.00	94.92738
320.00	173.00	0.24244			

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE PERIOD (6 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG4 ***
INCLUDING SOURCE(S): LAGON4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
16.00	188.00	17.95108	333.00	318.00	10.91171
320.00	36.00	0.00000	160.00	318.00	244.25844
320.00	173.00	0.00000			

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE PERIOD (6 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG5 ***
INCLUDING SOURCE(S): LAGON5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
16.00	188.00	5.14362	333.00	318.00	1268.81238
320.00	36.00	0.67299	160.00	318.00	2.28960
320.00	173.00	7.94311			

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE PERIOD (6 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PTF ***
INCLUDING SOURCE(S): PITF ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
16.00	188.00	0.00000	333.00	318.00	23.28016
320.00	36.00	49.00006	160.00	318.00	0.29781
320.00	173.00	144.69470			

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG1 ***
INCLUDING SOURCE(S): LAGON1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	
16.00	188.00	0.64956	(81102111)	333.00	318.00	21.98866	(81102113)	□□
320.00	36.00	0.40570	(81102114)	160.00	318.00	51.83458	(81102111)	
320.00	173.00	86.08682	(81102114)					

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG2 ***
INCLUDING SOURCE(S): LAGON2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	0.06345	(81102109)	333.00	318.00	34.84755	(81102113)
320.00	36.00	0.00000	(00000000)	160.00	318.00	88.65324	(81102111)
320.00	173.00	94.01711	(81102114)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG3 ***
INCLUDING SOURCE(S): LAGON3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	37.56450	(81102109)	333.00	318.00	94.54082	(81102114)
320.00	36.00	0.00000	(00000000)	160.00	318.00	315.50122	(81102111)
320.00	173.00	1.43653	(81102114)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG4 ***
INCLUDING SOURCE(S): LAGON4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	53.85325	(81102109)	333.00	318.00	58.55423	(81102114)
320.00	36.00	0.00000	(00000000)	160.00	318.00	720.29132	(81102109)
320.00	173.00	0.00000	(00000000)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG5 ***
INCLUDING SOURCE(S): LAGON5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	15.43085	(81102109)	333.00	318.00	1782.30371	(81102109)
320.00	36.00	2.01898	(81102109)	160.00	318.00	6.86880	(81102109)
320.00	173.00	23.82933	(81102109)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PTF ***
INCLUDING SOURCE(S): PITF ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	0.00000	(00000000)	333.00	318.00	77.55231	(81102111)
320.00	36.00	147.00018	(81102109)	160.00	318.00	0.99401	(81102111)
320.00	173.00	482.95447	(81102111)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 2ND HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG1 ***
INCLUDING SOURCE(S): LAGON1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	0.51810	(81102112)	333.00	318.00	3.63546	(81102111)
320.00	36.00	0.00000	(00000000)	160.00	318.00	41.34425	(81102112)
320.00	173.00	45.12849	(81102113)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 2ND HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG2 ***
INCLUDING SOURCE(S): LAGON2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	0.06345	(81102110)	333.00	318.00	9.29558	(81102114)
320.00	36.00	0.00000	(00000000)	160.00	318.00	70.71152	(81102112)
320.00	173.00	18.88768	(81102113)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 2ND HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG3 ***
INCLUDING SOURCE(S): LAGON3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	37.56450	(81102110)	333.00	318.00	49.84018	(81102113)
320.00	36.00	0.00000	(00000000)	160.00	318.00	251.64980	(81102112)
320.00	173.00	0.01809	(81102113)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 2ND HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG4 ***
INCLUDING SOURCE(S): LAGON4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	53.85325	(81102110)	333.00	318.00	6.91600	(81102113)
320.00	36.00	0.00000	(00000000)	160.00	318.00	720.29132	(81102110)
320.00	173.00	0.00000	(00000000)				

CONC URBAN FLAT NOCALM

*** THE 2ND HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG5 ***
INCLUDING SOURCE(S): LAGON5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	15.43085	(81102110)	333.00	318.00	1782.30371	(81102110)
320.00	36.00	2.01898	(81102110)	160.00	318.00	6.86880	(81102110)
320.00	173.00	23.82933	(81102110)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE 2ND HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PTF ***
INCLUDING SOURCE(S): PITF ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
16.00	188.00	0.00000	(00000000)	333.00	318.00	61.85720	(81102112)
320.00	36.00	147.00018	(81102110)	160.00	318.00	0.79284	(81102112)
320.00	173.00	385.21371	(81102112)				

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG1 ***
INCLUDING SOURCE(S): LAGON1 ,

** CONC OF OTHER IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	86.08682	(81102114)	AT (	320.00,	173.00)	DC	26.	0.00000	(00000000)	AT (	0.00,	0.00)	
2.	51.83458	(81102111)	AT (	160.00,	318.00)	DC	27.	0.00000	(00000000)	AT (	0.00,	0.00)	
3.	45.12849	(81102113)	AT (	320.00,	173.00)	DC	28.	0.00000	(00000000)	AT (	0.00,	0.00)	
4.	41.34425	(81102112)	AT (	160.00,	318.00)	DC	29.	0.00000	(00000000)	AT (	0.00,	0.00)	
5.	21.98866	(81102113)	AT (	333.00,	318.00)	DC	30.	0.00000	(00000000)	AT (	0.00,	0.00)	
6.	3.63546	(81102111)	AT (	333.00,	318.00)	DC	31.	0.00000	(00000000)	AT (	0.00,	0.00)	
7.	2.89971	(81102112)	AT (	333.00,	318.00)	DC	32.	0.00000	(00000000)	AT (	0.00,	0.00)	
8.	1.76481	(81102114)	AT (	333.00,	318.00)	DC	33.	0.00000	(00000000)	AT (	0.00,	0.00)	
9.	1.66220	(81102113)	AT (	160.00,	318.00)	DC	34.	0.00000	(00000000)	AT (	0.00,	0.00)	
10.	0.64956	(81102111)	AT (	16.00,	188.00)	DC	35.	0.00000	(00000000)	AT (	0.00,	0.00)	
11.	0.51810	(81102112)	AT (	16.00,	188.00)	DC	36.	0.00000	(00000000)	AT (	0.00,	0.00)	
12.	0.40570	(81102114)	AT (	320.00,	36.00)	DC	37.	0.00000	(00000000)	AT (	0.00,	0.00)	
13.	0.02165	(81102111)	AT (	320.00,	173.00)	DC	38.	0.00000	(00000000)	AT (	0.00,	0.00)	
14.	0.01727	(81102112)	AT (	320.00,	173.00)	DC	39.	0.00000	(00000000)	AT (	0.00,	0.00)	
15.	0.00000	(00000000)	AT (	0.00,	0.00)		40.	0.00000	(00000000)	AT (	0.00,	0.00)	
16.	0.00000	(00000000)	AT (	0.00,	0.00)		41.	0.00000	(00000000)	AT (	0.00,	0.00)	
17.	0.00000	(00000000)	AT (	0.00,	0.00)		42.	0.00000	(00000000)	AT (	0.00,	0.00)	
18.	0.00000	(00000000)	AT (	0.00,	0.00)		43.	0.00000	(00000000)	AT (	0.00,	0.00)	
19.	0.00000	(00000000)	AT (	0.00,	0.00)		44.	0.00000	(00000000)	AT (	0.00,	0.00)	
20.	0.00000	(00000000)	AT (	0.00,	0.00)		45.	0.00000	(00000000)	AT (	0.00,	0.00)	
21.	0.00000	(00000000)	AT (	0.00,	0.00)		46.	0.00000	(00000000)	AT (	0.00,	0.00)	
22.	0.00000	(00000000)	AT (	0.00,	0.00)		47.	0.00000	(00000000)	AT (	0.00,	0.00)	
23.	0.00000	(00000000)	AT (	0.00,	0.00)		48.	0.00000	(00000000)	AT (	0.00,	0.00)	
24.	0.00000	(00000000)	AT (	0.00,	0.00)		49.	0.00000	(00000000)	AT (	0.00,	0.00)	
25.	0.00000	(00000000)	AT (	0.00,	0.00)		50.	0.00000	(00000000)	AT (	0.00,	0.00)	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG2 ***
INCLUDING SOURCE(S): LAGON2 ,

** CONC OF OTHER IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	94.01711	(81102114)	AT (	320.00,	173.00)	DC	26.	0.00000	(00000000)	AT (	0.00,	0.00)	
2.	88.65324	(81102111)	AT (	160.00,	318.00)	DC	27.	0.00000	(00000000)	AT (	0.00,	0.00)	
3.	70.71152	(81102112)	AT (	160.00,	318.00)	DC	28.	0.00000	(00000000)	AT (	0.00,	0.00)	
4.	34.84755	(81102113)	AT (	333.00,	318.00)	DC	29.	0.00000	(00000000)	AT (	0.00,	0.00)	
5.	18.88768	(81102113)	AT (	320.00,	173.00)	DC	30.	0.00000	(00000000)	AT (	0.00,	0.00)	
6.	9.29558	(81102114)	AT (	333.00,	318.00)	DC	31.	0.00000	(00000000)	AT (	0.00,	0.00)	
7.	2.36649	(81102113)	AT (	160.00,	318.00)	DC	32.	0.00000	(00000000)	AT (	0.00,	0.00)	
8.	2.09881	(81102111)	AT (	333.00,	318.00)	DC	33.	0.00000	(00000000)	AT (	0.00,	0.00)	
9.	1.67405	(81102112)	AT (	333.00,	318.00)	DC	34.	0.00000	(00000000)	AT (	0.00,	0.00)	
10.	0.06345	(81102109)	AT (	16.00,	188.00)	DC	35.	0.00000	(00000000)	AT (	0.00,	0.00)	
11.	0.06345	(81102110)	AT (	16.00,	188.00)	DC	36.	0.00000	(00000000)	AT (	0.00,	0.00)	
12.	0.00000	(00000000)	AT (	0.00,	0.00)		37.	0.00000	(00000000)	AT (	0.00,	0.00)	
13.	0.00000	(00000000)	AT (	0.00,	0.00)		38.	0.00000	(00000000)	AT (	0.00,	0.00)	
14.	0.00000	(00000000)	AT (	0.00,	0.00)		39.	0.00000	(00000000)	AT (	0.00,	0.00)	
15.	0.00000	(00000000)	AT (	0.00,	0.00)		40.	0.00000	(00000000)	AT (	0.00,	0.00)	
16.	0.00000	(00000000)	AT (	0.00,	0.00)		41.	0.00000	(00000000)	AT (	0.00,	0.00)	
17.	0.00000	(00000000)	AT (	0.00,	0.00)		42.	0.00000	(00000000)	AT (	0.00,	0.00)	
18.	0.00000	(00000000)	AT (	0.00,	0.00)		43.	0.00000	(00000000)	AT (	0.00,	0.00)	
19.	0.00000	(00000000)	AT (	0.00,	0.00)		44.	0.00000	(00000000)	AT (	0.00,	0.00)	
20.	0.00000	(00000000)	AT (	0.00,	0.00)		45.	0.00000	(00000000)	AT (	0.00,	0.00)	
21.	0.00000	(00000000)	AT (	0.00,	0.00)		46.	0.00000	(00000000)	AT (	0.00,	0.00)	
22.	0.00000	(00000000)	AT (	0.00,	0.00)		47.	0.00000	(00000000)	AT (	0.00,	0.00)	
23.	0.00000	(00000000)	AT (	0.00,	0.00)		48.	0.00000	(00000000)	AT (	0.00,	0.00)	
24.	0.00000	(00000000)	AT (	0.00,	0.00)		49.	0.00000	(00000000)	AT (	0.00,	0.00)	
25.	0.00000	(00000000)	AT (	0.00,	0.00)		50.	0.00000	(00000000)	AT (	0.00,	0.00)	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG3 ***
INCLUDING SOURCE(S): LAGON3 ,

** CONC OF OTHER IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	315.50122	(81102111)	AT (	160.00,	318.00)	DC	26.	0.00000	(00000000)	AT (	0.00,	0.00)	
2.	251.64980	(81102112)	AT (	160.00,	318.00)	DC	27.	0.00000	(00000000)	AT (	0.00,	0.00)	
3.	94.54082	(81102114)	AT (	333.00,	318.00)	DC	28.	0.00000	(00000000)	AT (	0.00,	0.00)	
4.	49.84018	(81102113)	AT (	333.00,	318.00)	DC	29.	0.00000	(00000000)	AT (	0.00,	0.00)	
5.	37.56450	(81102109)	AT (	16.00,	188.00)	DC	30.	0.00000	(00000000)	AT (	0.00,	0.00)	
6.	37.56450	(81102110)	AT (	16.00,	188.00)	DC	31.	0.00000	(00000000)	AT (	0.00,	0.00)	
7.	2.41330	(81102113)	AT (	160.00,	318.00)	DC	32.	0.00000	(00000000)	AT (	0.00,	0.00)	
8.	1.43653	(81102114)	AT (	320.00,	173.00)	DC	33.	0.00000	(00000000)	AT (	0.00,	0.00)	
9.	0.09846	(81102111)	AT (	333.00,	318.00)	DC	34.	0.00000	(00000000)	AT (	0.00,	0.00)	
10.	0.07853	(81102112)	AT (	333.00,	318.00)	DC	35.	0.00000	(00000000)	AT (	0.00,	0.00)	
11.	0.01809	(81102113)	AT (	320.00,	173.00)	DC	36.	0.00000	(00000000)	AT (	0.00,	0.00)	
12.	0.00000	(00000000)	AT (	0.00,	0.00)		37.	0.00000	(00000000)	AT (	0.00,	0.00)	
13.	0.00000	(00000000)	AT (	0.00,	0.00)		38.	0.00000	(00000000)	AT (	0.00,	0.00)	
14.	0.00000	(00000000)	AT (	0.00,	0.00)		39.	0.00000	(00000000)	AT (	0.00,	0.00)	
15.	0.00000	(00000000)	AT (	0.00,	0.00)		40.	0.00000	(00000000)	AT (	0.00,	0.00)	
16.	0.00000	(00000000)	AT (	0.00,	0.00)		41.	0.00000	(00000000)	AT (	0.00,	0.00)	
17.	0.00000	(00000000)	AT (	0.00,	0.00)		42.	0.00000	(00000000)	AT (	0.00,	0.00)	
18.	0.00000	(00000000)	AT (	0.00,	0.00)		43.	0.00000	(00000000)	AT (	0.00,	0.00)	
19.	0.00000	(00000000)	AT (	0.00,	0.00)		44.	0.00000	(00000000)	AT (	0.00,	0.00)	
20.	0.00000	(00000000)	AT (	0.00,	0.00)		45.	0.00000	(00000000)	AT (	0.00,	0.00)	
21.	0.00000	(00000000)	AT (	0.00,	0.00)		46.	0.00000	(00000000)	AT (	0.00,	0.00)	
22.	0.00000	(00000000)	AT (	0.00,	0.00)		47.	0.00000	(00000000)	AT (	0.00,	0.00)	
23.	0.00000	(00000000)	AT (	0.00,	0.00)		48.	0.00000	(00000000)	AT (	0.00,	0.00)	
24.	0.00000	(00000000)	AT (	0.00,	0.00)		49.	0.00000	(00000000)	AT (	0.00,	0.00)	
25.	0.00000	(00000000)	AT (	0.00,	0.00)		50.	0.00000	(00000000)	AT (	0.00,	0.00)	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG4 ***
INCLUDING SOURCE(S): LAGON4 ,

** CONC OF OTHER IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	720.29132	(81102109)	AT (	160.00,	318.00)	DC	26.	0.00000	(00000000)	AT (	0.00,	0.00)	
2.	720.29132	(81102110)	AT (	160.00,	318.00)	DC	27.	0.00000	(00000000)	AT (	0.00,	0.00)	
3.	58.55423	(81102114)	AT (	333.00,	318.00)	DC	28.	0.00000	(00000000)	AT (	0.00,	0.00)	
4.	53.85325	(81102109)	AT (	16.00,	188.00)	DC	29.	0.00000	(00000000)	AT (	0.00,	0.00)	
5.	53.85325	(81102110)	AT (	16.00,	188.00)	DC	30.	0.00000	(00000000)	AT (	0.00,	0.00)	
6.	13.88951	(81102111)	AT (	160.00,	318.00)	DC	31.	0.00000	(00000000)	AT (	0.00,	0.00)	
7.	11.07854	(81102112)	AT (	160.00,	318.00)	DC	32.	0.00000	(00000000)	AT (	0.00,	0.00)	
8.	6.91600	(81102113)	AT (	333.00,	318.00)	DC	33.	0.00000	(00000000)	AT (	0.00,	0.00)	
9.	0.00000	(00000000)	AT (	0.00,	0.00)		34.	0.00000	(00000000)	AT (	0.00,	0.00)	
10.	0.00000	(00000000)	AT (	0.00,	0.00)		35.	0.00000	(00000000)	AT (	0.00,	0.00)	
11.	0.00000	(00000000)	AT (	0.00,	0.00)		36.	0.00000	(00000000)	AT (	0.00,	0.00)	
12.	0.00000	(00000000)	AT (	0.00,	0.00)		37.	0.00000	(00000000)	AT (	0.00,	0.00)	
13.	0.00000	(00000000)	AT (	0.00,	0.00)		38.	0.00000	(00000000)	AT (	0.00,	0.00)	
14.	0.00000	(00000000)	AT (	0.00,	0.00)		39.	0.00000	(00000000)	AT (	0.00,	0.00)	
15.	0.00000	(00000000)	AT (	0.00,	0.00)		40.	0.00000	(00000000)	AT (	0.00,	0.00)	
16.	0.00000	(00000000)	AT (	0.00,	0.00)		41.	0.00000	(00000000)	AT (	0.00,	0.00)	
17.	0.00000	(00000000)	AT (	0.00,	0.00)		42.	0.00000	(00000000)	AT (	0.00,	0.00)	
18.	0.00000	(00000000)	AT (	0.00,	0.00)		43.	0.00000	(00000000)	AT (	0.00,	0.00)	
19.	0.00000	(00000000)	AT (	0.00,	0.00)		44.	0.00000	(00000000)	AT (	0.00,	0.00)	
20.	0.00000	(00000000)	AT (	0.00,	0.00)		45.	0.00000	(00000000)	AT (	0.00,	0.00)	
21.	0.00000	(00000000)	AT (	0.00,	0.00)		46.	0.00000	(00000000)	AT (	0.00,	0.00)	
22.	0.00000	(00000000)	AT (	0.00,	0.00)		47.	0.00000	(00000000)	AT (	0.00,	0.00)	
23.	0.00000	(00000000)	AT (	0.00,	0.00)		48.	0.00000	(00000000)	AT (	0.00,	0.00)	
24.	0.00000	(00000000)	AT (	0.00,	0.00)		49.	0.00000	(00000000)	AT (	0.00,	0.00)	
25.	0.00000	(00000000)	AT (	0.00,	0.00)		50.	0.00000	(00000000)	AT (	0.00,	0.00)	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: LAG5 ***
INCLUDING SOURCE(S): LAGON5 ,

** CONC OF OTHER IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	1782.30371	(81102109)	AT (	333.00,	318.00)	DC	26.	0.00000	(00000000)	AT (	0.00,	0.00)	
2.	1782.30371	(81102110)	AT (	333.00,	318.00)	DC	27.	0.00000	(00000000)	AT (	0.00,	0.00)	
3.	1211.05664	(81102111)	AT (	333.00,	318.00)	DC	28.	0.00000	(00000000)	AT (	0.00,	0.00)	
4.	965.96191	(81102112)	AT (	333.00,	318.00)	DC	29.	0.00000	(00000000)	AT (	0.00,	0.00)	
5.	959.20917	(81102114)	AT (	333.00,	318.00)	DC	30.	0.00000	(00000000)	AT (	0.00,	0.00)	
6.	912.03967	(81102113)	AT (	333.00,	318.00)	DC	31.	0.00000	(00000000)	AT (	0.00,	0.00)	
7.	23.82933	(81102109)	AT (	320.00,	173.00)	DC	32.	0.00000	(00000000)	AT (	0.00,	0.00)	
8.	23.82933	(81102110)	AT (	320.00,	173.00)	DC	33.	0.00000	(00000000)	AT (	0.00,	0.00)	
9.	15.43085	(81102109)	AT (	16.00,	188.00)	DC	34.	0.00000	(00000000)	AT (	0.00,	0.00)	
10.	15.43085	(81102110)	AT (	16.00,	188.00)	DC	35.	0.00000	(00000000)	AT (	0.00,	0.00)	
11.	6.86880	(81102109)	AT (	160.00,	318.00)	DC	36.	0.00000	(00000000)	AT (	0.00,	0.00)	
12.	6.86880	(81102110)	AT (	160.00,	318.00)	DC	37.	0.00000	(00000000)	AT (	0.00,	0.00)	
13.	2.01898	(81102109)	AT (	320.00,	36.00)	DC	38.	0.00000	(00000000)	AT (	0.00,	0.00)	
14.	2.01898	(81102110)	AT (	320.00,	36.00)	DC	39.	0.00000	(00000000)	AT (	0.00,	0.00)	
15.	0.00000	(00000000)	AT (	0.00,	0.00)		40.	0.00000	(00000000)	AT (	0.00,	0.00)	
16.	0.00000	(00000000)	AT (	0.00,	0.00)		41.	0.00000	(00000000)	AT (	0.00,	0.00)	
17.	0.00000	(00000000)	AT (	0.00,	0.00)		42.	0.00000	(00000000)	AT (	0.00,	0.00)	
18.	0.00000	(00000000)	AT (	0.00,	0.00)		43.	0.00000	(00000000)	AT (	0.00,	0.00)	
19.	0.00000	(00000000)	AT (	0.00,	0.00)		44.	0.00000	(00000000)	AT (	0.00,	0.00)	
20.	0.00000	(00000000)	AT (	0.00,	0.00)		45.	0.00000	(00000000)	AT (	0.00,	0.00)	
21.	0.00000	(00000000)	AT (	0.00,	0.00)		46.	0.00000	(00000000)	AT (	0.00,	0.00)	
22.	0.00000	(00000000)	AT (	0.00,	0.00)		47.	0.00000	(00000000)	AT (	0.00,	0.00)	
23.	0.00000	(00000000)	AT (	0.00,	0.00)		48.	0.00000	(00000000)	AT (	0.00,	0.00)	
24.	0.00000	(00000000)	AT (	0.00,	0.00)		49.	0.00000	(00000000)	AT (	0.00,	0.00)	
25.	0.00000	(00000000)	AT (	0.00,	0.00)		50.	0.00000	(00000000)	AT (	0.00,	0.00)	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PTF ***
INCLUDING SOURCE(S): PITF ,

** CONC OF OTHER IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	482.95447	(81102111)	AT (	320.00,	173.00)	DC	26.	0.00000	(00000000)	AT (	0.00,	0.00)	
2.	385.21371	(81102112)	AT (	320.00,	173.00)	DC	27.	0.00000	(00000000)	AT (	0.00,	0.00)	
3.	147.00018	(81102109)	AT (	320.00,	36.00)	DC	28.	0.00000	(00000000)	AT (	0.00,	0.00)	
4.	147.00018	(81102110)	AT (	320.00,	36.00)	DC	29.	0.00000	(00000000)	AT (	0.00,	0.00)	
5.	77.55231	(81102111)	AT (	333.00,	318.00)	DC	30.	0.00000	(00000000)	AT (	0.00,	0.00)	
6.	61.85720	(81102112)	AT (	333.00,	318.00)	DC	31.	0.00000	(00000000)	AT (	0.00,	0.00)	
7.	0.99401	(81102111)	AT (	160.00,	318.00)	DC	32.	0.00000	(00000000)	AT (	0.00,	0.00)	
8.	0.79284	(81102112)	AT (	160.00,	318.00)	DC	33.	0.00000	(00000000)	AT (	0.00,	0.00)	
9.	0.27144	(81102113)	AT (	333.00,	318.00)	DC	34.	0.00000	(00000000)	AT (	0.00,	0.00)	
10.	0.00000	(00000000)	AT (	0.00,	0.00)		35.	0.00000	(00000000)	AT (	0.00,	0.00)	
11.	0.00000	(00000000)	AT (	0.00,	0.00)		36.	0.00000	(00000000)	AT (	0.00,	0.00)	
12.	0.00000	(00000000)	AT (	0.00,	0.00)		37.	0.00000	(00000000)	AT (	0.00,	0.00)	
13.	0.00000	(00000000)	AT (	0.00,	0.00)		38.	0.00000	(00000000)	AT (	0.00,	0.00)	
14.	0.00000	(00000000)	AT (	0.00,	0.00)		39.	0.00000	(00000000)	AT (	0.00,	0.00)	
15.	0.00000	(00000000)	AT (	0.00,	0.00)		40.	0.00000	(00000000)	AT (	0.00,	0.00)	
16.	0.00000	(00000000)	AT (	0.00,	0.00)		41.	0.00000	(00000000)	AT (	0.00,	0.00)	
17.	0.00000	(00000000)	AT (	0.00,	0.00)		42.	0.00000	(00000000)	AT (	0.00,	0.00)	
18.	0.00000	(00000000)	AT (	0.00,	0.00)		43.	0.00000	(00000000)	AT (	0.00,	0.00)	
19.	0.00000	(00000000)	AT (	0.00,	0.00)		44.	0.00000	(00000000)	AT (	0.00,	0.00)	
20.	0.00000	(00000000)	AT (	0.00,	0.00)		45.	0.00000	(00000000)	AT (	0.00,	0.00)	
21.	0.00000	(00000000)	AT (	0.00,	0.00)		46.	0.00000	(00000000)	AT (	0.00,	0.00)	
22.	0.00000	(00000000)	AT (	0.00,	0.00)		47.	0.00000	(00000000)	AT (	0.00,	0.00)	
23.	0.00000	(00000000)	AT (	0.00,	0.00)		48.	0.00000	(00000000)	AT (	0.00,	0.00)	
24.	0.00000	(00000000)	AT (	0.00,	0.00)		49.	0.00000	(00000000)	AT (	0.00,	0.00)	
25.	0.00000	(00000000)	AT (	0.00,	0.00)		50.	0.00000	(00000000)	AT (	0.00,	0.00)	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE SUMMARY OF MAXIMUM PERIOD (6 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
LAG1	1ST HIGHEST VALUE IS	21.87571 AT (	320.00,	173.00,	0.00,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	15.80684 AT (	160.00,	318.00,	0.00,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	5.04811 AT (	333.00,	318.00,	0.00,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	0.19461 AT (	16.00,	188.00,	0.00,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	0.06762 AT (	320.00,	36.00,	0.00,	0.00)	DC	NA
	6TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	7TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	8TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	9TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	10TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
LAG2	1ST HIGHEST VALUE IS	26.95521 AT (	160.00,	318.00,	0.00,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	18.81746 AT (	320.00,	173.00,	0.00,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	7.98600 AT (	333.00,	318.00,	0.00,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	0.02115 AT (	16.00,	188.00,	0.00,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	6TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	7TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	8TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	9TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	10TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
LAG3	1ST HIGHEST VALUE IS	94.92738 AT (	160.00,	318.00,	0.00,	0.00)	DC	NA
	2ND HIGHEST VALUE IS	24.09300 AT (	333.00,	318.00,	0.00,	0.00)	DC	NA
	3RD HIGHEST VALUE IS	12.52150 AT (	16.00,	188.00,	0.00,	0.00)	DC	NA
	4TH HIGHEST VALUE IS	0.24244 AT (	320.00,	173.00,	0.00,	0.00)	DC	NA
	5TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	6TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	7TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	8TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	9TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		
	10TH HIGHEST VALUE IS	0.00000 AT (	0.00,	0.00,	0.00,	0.00)		

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE SUMMARY OF MAXIMUM PERIOD (6 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
LAG4	1ST HIGHEST VALUE IS	244.25844 AT	(160.00, 318.00, 0.00, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	17.95108 AT	(16.00, 188.00, 0.00, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	10.91171 AT	(333.00, 318.00, 0.00, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	5TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	6TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	7TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	8TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	9TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	10TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
LAG5	1ST HIGHEST VALUE IS	1268.81238 AT	(333.00, 318.00, 0.00, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	7.94311 AT	(320.00, 173.00, 0.00, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	5.14362 AT	(16.00, 188.00, 0.00, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	2.28960 AT	(160.00, 318.00, 0.00, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	0.67299 AT	(320.00, 36.00, 0.00, 0.00)	DC	NA
	6TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	7TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	8TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	9TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	10TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
PTF	1ST HIGHEST VALUE IS	144.69470 AT	(320.00, 173.00, 0.00, 0.00)	DC	NA
	2ND HIGHEST VALUE IS	49.00006 AT	(320.00, 36.00, 0.00, 0.00)	DC	NA
	3RD HIGHEST VALUE IS	23.28016 AT	(333.00, 318.00, 0.00, 0.00)	DC	NA
	4TH HIGHEST VALUE IS	0.29781 AT	(160.00, 318.00, 0.00, 0.00)	DC	NA
	5TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	6TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	7TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	8TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	9TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		
	10TH HIGHEST VALUE IS	0.00000 AT	(0.00, 0.00, 0.00, 0.00)		

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

**MODELOPTs:
CONC URBAN FLAT NOCALM

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID			AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
LAG1	HIGH	1ST HIGH VALUE IS	86.08682	ON 81102114: AT (	320.00,	173.00,	0.00,	0.00)	DC	NA
	HIGH	2ND HIGH VALUE IS	45.12849	ON 81102113: AT (	320.00,	173.00,	0.00,	0.00)	DC	NA
LAG2	HIGH	1ST HIGH VALUE IS	94.01711	ON 81102114: AT (	320.00,	173.00,	0.00,	0.00)	DC	NA
	HIGH	2ND HIGH VALUE IS	70.71152	ON 81102112: AT (	160.00,	318.00,	0.00,	0.00)	DC	NA
LAG3	HIGH	1ST HIGH VALUE IS	315.50122	ON 81102111: AT (	160.00,	318.00,	0.00,	0.00)	DC	NA
	HIGH	2ND HIGH VALUE IS	251.64980	ON 81102112: AT (	160.00,	318.00,	0.00,	0.00)	DC	NA
LAG4	HIGH	1ST HIGH VALUE IS	720.29132	ON 81102109: AT (	160.00,	318.00,	0.00,	0.00)	DC	NA
	HIGH	2ND HIGH VALUE IS	720.29132	ON 81102110: AT (	160.00,	318.00,	0.00,	0.00)	DC	NA
LAG5	HIGH	1ST HIGH VALUE IS	1782.30371	ON 81102109: AT (	333.00,	318.00,	0.00,	0.00)	DC	NA
	HIGH	2ND HIGH VALUE IS	1782.30371	ON 81102110: AT (	333.00,	318.00,	0.00,	0.00)	DC	NA
PTF	HIGH	1ST HIGH VALUE IS	482.95447	ON 81102111: AT (	320.00,	173.00,	0.00,	0.00)	DC	NA
	HIGH	2ND HIGH VALUE IS	385.21371	ON 81102112: AT (	320.00,	173.00,	0.00,	0.00)	DC	NA

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

```
**MODELOPTs:
CONC                    URBAN  FLAT                                NOCALM


*** Message Summary : ISCST3 Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            0 Warning Message(s)
A Total of            0 Informational Message(s)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
              ***  NONE  ***


   ************************************
   *** ISCST3 Finishes Successfully ***
   ************************************
```

Appendix C

APPENDIX C

SCREEN3 CALCULATIONS

APPENDIX C
REVISED SCREEN3 MODELING ASSESSMENT
ASCON SITE
HUNTINGTON BEACH, CALIFORNIA

As requested by the DTSC, the identical modeling approach used in the 1997 baseline health risk assessment (BHRA) in calculating offsite concentrations was applied to the revised emissions identified in Section 3.1 of the main report. Since the only change in the approach is the emission rates and the emission rate is a linear function of the resultant concentration, the impacts will vary in direct proportion to the change in emission rates used in the original BHRA.

Table C-1 summarizes the original emission rates in the BHRA as well as the emissions rates developed in Section 3.1 of the main report. As seen in the table, the emissions for the chemicals of concern vary from an increase in the overall 1,1,1-TCA emissions to a maximum reduction in styrene emissions. Table C-1 also displays the resultant maximum concentrations associated with predicted offsite impacts. The maximum concentration is associated with the methylene chloride emissions, while the lowest concentrations are associated with the styrene emissions.

A comparison of the revised modeled concentrations associated with the 1-year annual meteorological monitoring dataset modeling analysis, the revised SCREEN3 modeling analysis, and the original BHRA modeling analysis was conducted. Table C-2 summarizes the maximum residential annual average offsite chemical-specific concentrations from the three assessments. Table C-3 presents the SCREEN3 calculations.

As seen from Table C-2, the maximum annual average concentrations using the one-year meteorological dataset and the revised emissions when compared to the BHRA results show a decrease in all of the chemicals of concern for offsite maximums, ranging from a 40 to 90 percent reduction. A comparison of the SCREEN3 modeling results and the BHRA results indicate that the resultant SCREEN3 concentrations show a general decrease for offsite maximum locations, except for a slight increase for 1,1,1-TCA. A comparison of the maximum annual average concentrations using the one-year meteorological dataset with the SCREEN3 results indicate a decrease in 1,2-DCA, 1,1,1-TCA and benzene concentrations with an increase in methylene chloride and styrene.

Table C-1
Comparison of Revised SCREEN3 Modeling Results
Versus Original BHRA Modeling Results

Chemical	BHRA Mass Emission Rate (mg/sec)	Revised Mass Emission Rate (mg/sec)	BHRA Offsite Air Concentration (mg/m3)	Revised SCREEN3 Offsite Air Concentration (mg/m3)
1,2-DCA	7.25E+02	2.19E+02	9.25E-02	2.79E-02
1,1,1-TCA	1.73E+03	1.90E+03	2.21E-01	2.42E-01
Benzene	2.10E+02	9.92E+01	2.68E-02	1.27E-02
Methylene Chloride	7.27E+03	2.01E+03	9.27E-01	2.56E-01
Styrene	4.86E+02	6.36E+00	6.19E-02	8.11E-04

Table C-2
Comparison of Maximum Predicted Onsite and Offsite Concentrations of the 1-Year SCAQMD Modeling Analysis, the Revised SCREEN3 Modeling Analysis, and the BHRA Modeling Analysis

Chemical	1-Year SCAQMD Offsite Air Concentration (mg/m3)	BHRA Offsite Air Concentration (mg/m3)	Revised SCREEN3 Offsite Air Concentration (mg/m3)
1,2-DCA	5.40E-03	9.25E-02	2.78E-02
1,1,1-TCA	5.93E-02	2.21E-01	2.36E-01
Benzene	2.71E-03	2.68E-02	1.26E-02
Methylene Chloride	4.82E-02	9.27E-01	2.55E-02
Styrene	9.72E-04	6.19E-02	7.27E-04

Table C-3

Calculation of Offsite Concentations Using SCREEN3

Parameter Symbol	Parameter Definition	Value	Units
U	Wind Speed	3.35	m/sec
WDF	Wind Direction Dilution Factor	0.4	unitless
σz	Standard Deviation of the Plume	5	m
L	Distance from the site center (emission source) to the receptor	220	m
L'	Distance from the site center to the virtual upwind point source and is given by 2.5 times the width of the site	975	m
LV	L' + L	1195	m

	1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride	Styrene
Calculated Emission Flux for the Lagoon (g/sec) - J	1.900E+00	2.190E-01	9.920E-02	2.010E+00	6.360E-03

		1,1,1-TCA	1,2-DCA	Benzene	Methylene Chloride	Styrene
$C_o = ((16J / Lv (2\pi)^{1/2})\sigma_z\ U)\ WDF$	mg/m^3	2.42E-01	2.79E-02	1.27E-02	2.56E-01	8.11E-04

Appendix D

APPENDIX D

RISK CALCULATIONS

Table D-1
Noncancer Hazard from Vapor Inhalation
Offsite Residential Exposure Scenario
Revised Risk Assessment
Ascon Landfill Site

COPC	Maximum Air Conc. Cair (mg/m^3)	Inhalation Reference Dose (mg/kg-d)	RME Residential Exposure Scenario	
			Average Daily Intake (mg/kg-d) Child	Hazard Quotient (Unitless) Child
VOCs				
1,2-Dichloroethane	5.40E-03	1.1E-01	2.7E-03	2.5E-02
1,1,1-Trichloroethane	5.93E-02	2.9E-01	3.0E-02	1.0E-01
Benzene	2.71E-03	1.7E-02	1.4E-03	8.0E-02
Methylene Chloride	4.82E-02	1.1E-01	2.4E-02	2.1E-01
Styrene	9.72E-04	2.6E-01	4.9E-04	1.9E-03
Total Hazard Index				**4.2E-01**

Notes:
" – " not applicable
Equations:
Child Resident $INTAKE_{nc}$ (mg/kg-day) = $((Cair * EF_c * ED_c * IR\text{-}A_c) / (AT_{nc} * BW_c))$
Noncancer Hazard = $(INTAKE_{nc} / RfD)$

Table D-2
Cancer Risk from Vapor Inhalation
Offsite Residential Exposure Scenario
Revised Risk Assessment
Ascon Landfill Site

COPC	Maximum Air Conc. Cair (mg/m^3)	Inhalation Slope Factor $(mg/kg\text{-}d)^{-1}$	RME Residential Exposure Scenario	
			Average Daily Intake (mg/kg-d) Child	Cancer Risk (Unitless) Child
VOCs				
1,2-Dichloroethane	5.40E-03	7.2E-02	2.3E-04	1.7E-05
1,1,1-Trichloroethane	5.93E-02	--	2.6E-03	--
Benzene	2.71E-03	1.0E-01	1.2E-04	1.2E-05
Methylene Chloride	4.82E-02	3.5E-03	2.1E-03	7.3E-06
Styrene	9.72E-04	--	4.2E-05	--
Total Cancer Risk				**3.6E-05**

Notes:
" -- " not applicable
Equations:
Child Resident $INTAKE_{cancer}$ (mg/kg-day) = ((Cair * EF_c * ED_c * IR-A_c) / (AT_{cancer} * BW_c))
Cancer Risk = ($INTAKE_{cancer}$ * CSF)

RiskCalcTables_July_revised.xls/D2 ca ChildResid/7/14/02

Table D-3
Noncancer Hazard from Vapor Inhalation
Offsite Residential Exposure Scenario
Revised Risk Assessment
Ascon Landfill Site

COPC	Maximum Air Conc. Cair (mg/m^3)	Inhalation Reference Dose (mg/kg-d)	RME Residential Exposure Scenario	
			Average Daily Intake (mg/kg-d) Adult	Hazard Quotient (Unitless) Adult
VOCs				
1,2-Dichloroethane	5.40E-03	1.1E-01	9.8E-04	8.9E-03
1,1,1-Trichloroethane	5.93E-02	2.9E-01	1.1E-02	3.7E-02
Benzene	2.71E-03	1.7E-02	4.9E-04	2.9E-02
Methylene Chloride	4.82E-02	1.1E-01	8.8E-03	7.7E-02
Styrene	9.72E-04	2.6E-01	1.8E-04	6.9E-04
Total Hazard Index				**1.5E-01**

Notes:
" – " not applicable
Equations:
Adult Resident $INTAKE_{nc}$ (mg/kg-day) = $((Cair * EF_a * ED_a * IR\text{-}A_a) / (AT_{nc} * BW_a))$
Noncancer Hazard = $(INTAKE_{nc} / RfD)$

RiskCalcTables_July_revised.xls/D3 nc AdultResid/7/14/02

Table D-4
Cancer Risk from Vapor Inhalation
Offsite Residential Exposure Scenario
Revised Risk Assessment
Ascon Landfill Site

COPC	Maximum Air Conc. Cair (mg/m^3)	Inhalation Slope Factor $(mg/kg\text{-}d)^{-1}$	RME Residential Exposure Scenario	
			Average Daily Intake (mg/kg-d) Adult	Cancer Risk (Unitless) Adult
VOCs				
1,2-Dichloroethane	5.40E-03	7.2E-02	3.4E-04	2.4E-05
1,1,1-Trichloroethane	5.93E-02	--	3.7E-03	--
Benzene	2.71E-03	1.0E-01	1.7E-04	1.7E-05
Methylene Chloride	4.82E-02	3.5E-03	3.0E-03	1.1E-05
Styrene	9.72E-04	--	6.1E-05	--
Total Cancer Risk				**5.2E-05**

Notes:
" – " not applicable
Equations:
Adult Resident $INTAKE_{cancer}$ (mg/kg-day) = $((Cair * EF_a * ED_a * IR\text{-}A_a) / (AT_{cancer} * BW_a))$
Cancer Risk = $(INTAKE_{cancer} * CSF)$

Table D-5
Noncancer Hazard from Vapor Inhalation
Offsite Worker Exposure Scenario
Revised Risk Assessment
Ascon Landfill Site

COPC	Maximum Air Conc. Cair (mg/m^3)	Inhalation Reference Dose (mg/kg-d)	RME Worker Exposure Scenario	
			Average Daily Intake (mg/kg-d) Worker	Hazard Quotient (Unitless) Worker
VOCs				
1,2-Dichloroethane	2.65E-03	1.1E-01	5.2E-04	4.7E-03
1,1,1-Trichloroethane	2.23E-02	2.9E-01	4.3E-03	1.5E-02
Benzene	2.18E-03	1.7E-02	4.2E-04	2.5E-02
Methylene Chloride	2.49E-02	1.1E-01	4.9E-03	4.2E-02
Styrene	6.59E-05	2.6E-01	1.3E-05	5.0E-05
Total Hazard Index				**8.7E-02**

Notes:
" – " not applicable
Equations:
Worker $INTAKE_{nc}$ (mg/kg-day) = $((Cair * EF_w * ED_w * IR\text{-}A_w) / (AT_{nc} * BW_w))$
Noncancer Hazard = $(INTAKE_{nc} / RfD)$

RiskCalcTables_July_revised.xls/B5 nc OffsiteWorkers/7/14/02

Table D-6
Cancer Risk from Vapor Inhalation
Offsite Worker Exposure Scenario
Revised Risk Assessment
Ascon Landfill Site

COPC	Maximum Air Conc. Cair (mg/m^3)	Inhalation Slope Factor $(mg/kg\text{-}d)^{-1}$	RME Worker Exposure Scenario	
			Average Daily Intake (mg/kg-d) Worker	Cancer Risk (Unitless) Worker
VOCs				
1,2-Dichloroethane	2.65E-03	7.2E-02	1.8E-04	1.3E-05
1,1,1-Trichloroethane	2.23E-02	--	1.6E-03	--
Benzene	2.18E-03	1.0E-01	1.5E-04	1.5E-05
Methylene Chloride	2.49E-02	3.5E-03	1.7E-03	6.1E-06
Styrene	6.59E-05	--	4.6E-06	--
Total Cancer Risk				**3.5E-05**

Notes:
" -- " not applicable
Equations:
Worker $INTAKE_{cancer}$ (mg/kg-day) = $((Cair * EF_w * ED_w * IR\text{-}A_w) / (AT_{cancer} * BW_w))$
Cancer Risk = $(INTAKE_{cancer} * CSF)$

RiskCalcTables_July_revised.xls/D6 ca Offsite Workers/7/14/02

Table D-7
Summary of Cancer Risk and Noncancer Hazard
Offsite Residential and Worker Scenarios
Revised Risk Assessment
Ascon Landfill Site

Receptors of Concern	Cancer Risk	Noncancer HI
Offsite Child Resident	3.6E-05	4.2E-01
Offsite Adult Resident	5.2E-05	1.5E-01
Offsite Worker	3.5E-05	8.7E-02