Appendix F

Human Health Risk Assessment
San Gabriel Valley Area 3
Superfund Site

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Prepared for
United States Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, CA 94105

Prepared by
CH2M HILL
6 Hutton Centre Drive
Suite 700
Santa Ana, California 92707

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Attachment

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Acronyms and Abbreviations

Area 3	San Gabriel Valley Area 3 Superfund Site
ca	cancer evaluation
CalEPA	California Environmental Protection Agency
CHHSL	California Human Health Screening Level
cm/hr	centimeters per hour
COPC	contaminants of potential concern
DQO	data quality objective
DTSC	California Department of Toxic Substances Control
ELCR	excess lifetime cancer risk
EPA	United States Environmental Protection Agency
EPC	exposure point concentration
HHRA	human health risk assessment
HI	hazard index
HQ	hazard quotient
IRIS	Integrated Risk Information System
kg	kilogram
L/cm^3	liters per cubic centimeter
L/day	liters per day
L/m^3	liters per cubic meter
MCL	maximum contaminant level
$\mu g/m^3$	micrograms per cubic meter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mg/m^3	milligrams per cubic meter
nc	noncancer evaluation
NE	northeastern
NL	notification level

NW	northwestern
PCE	tetrachloroethene
QA/QC	quality assurance and quality control
RfD	reference dose
RI	remedial investigation
RSL	regional screening level
SE	southeastern
SVOC	semivolatile organic compound
SW	southwestern
TCE	trichloroethene
VOC	volatile organic compound

Glossary

1.0E-06 Risk: A screening criterion and estimate of risk that indicates for every 1 million people exposed to carcinogens throughout their lifetimes, the average incidence of cancer might increase by one case of cancer.

baseline condition: A risk assessment term describing current conditions without consideration of any changes to chemical concentrations that would occur either from remedial action or natural attenuation, or changes in land use that might modify the exposure assumptions.

chronic: Long-term exposure or adverse effect. Sub-lethal effects (e.g., growth or reproduction) that may be measured over a long exposure period.

contaminant: A substance not naturally present in the environment or present in unnatural concentrations that can, in sufficient concentration, adversely alter an environment.

contaminants of concern: The contaminants which have been shown through a risk assessment to be those that are likely to be causing risk to receptors at a site.

contaminants of potential concern: Contaminants that potentially pose a risk to human health or the environment.

contamination: The presence of hazardous substances in the environment.

data quality objectives: Performance and acceptance criteria that clarify study objectives, define the appropriate type of data, and specify tolerable levels of potential decision errors that will be used as the basis for establishing the quality and quantity of data needed to support decisions.

EPA San Gabriel Basin Database: A collection of electronic data maintained by EPA from testing performed at groundwater wells throughout the San Gabriel Valley. The database includes construction information and historical laboratory data from monitoring wells and production wells.

evaluation criterion: A standard or reference point on which a decision will be assessed.

exposure pathway: Route by which a contaminant travels from a source (e.g., leaky tank or contaminated soil) to receptors. A pathway can involve multiple media (e.g., soil runoff to surface waters and sediment, or volatilization to the atmosphere).

exposure point: Where an environmental contaminant contacts/enters into an organism (e.g., inhalation, ingestion, dermal exposure).

exposure point concentration: An estimate of the true arithmetic mean concentration of a chemical in a medium at an exposure point.

excess lifetime cancer risk: The incremental increase in the probability of developing cancer in one's lifetime in addition to the background probability of developing cancer (that is, if no exposure to chemicals occur).

fate: The processes by which the contaminant moves through and is transformed in the environment.

feasibility study: The mechanism for the development, screening, and detailed evaluation of alternative remedial actions.

groundwater: Water occurring underground, in the zone of saturation in an aquifer.

hazard index: A summation of the hazard quotients for all chemicals to which an individual is exposed. A hazard index value of 1 or less indicates that no adverse human health effects (noncancer) are expected to occur.

hazard quotient: The ratio of the estimated intake to the reference dose. The value is used to evaluate the potential for noncancer health effects, such as organ damage, from chemical exposures.

human health risk assessment: Qualitative and quantitative evaluation of the risk posed to human health by the actual or potential presence of specific contaminants.

Key contaminants of potential concern: The contaminants detected multiple times in groundwater at production wells within Area 3 at concentrations that exceed evaluation criteria.

maximum contaminant level: The maximum permissible level of a contaminant in water that is delivered to any user of a public water system.

notification level: Health-based advisory level (formerly referred to as Action Levels) established by the California Department of Public Health for certain chemicals for which no established drinking water standards exist.

potential human exposure pathway model: A schematic diagram that identifies the primary source of contamination in the environment, shows how chemicals might move in the environment, and identifies the different receptors who might come into contact with contaminated media.

primary data: Data generated or collected by the investigator during an investigative process.

reasonable maximum exposure: The highest exposure to contamination that is reasonably expected to occur at a site.

receptor: A plant or animal species used to estimate the potential exposure to contamination and likelihood of adverse effects to similar organisms in the environment.

reference dose: A numerical estimate of a daily oral exposure to a contaminant that is not likely to cause harmful effects to the human population, including sensitive subgroups such as children, during a lifetime.

remedial action: The actual construction or implementation phase of a Superfund site cleanup that follows remedial design.

remedial investigation: Actions undertaken to characterize the full nature and extent of contamination, including characterization of hazardous substances, identification of contaminant sources, and assessment of human health and ecological risk.

secondary data: Data collected or generated by a party other than the investigator during the investigative process.

Superfund: The program operated under the legislative authority of CERCLA and SARA that funds and carries out EPA solid waste emergency and long-term response actions, including conducting or supervising cleanup actions.

tetrachloroethene: A volatile organic compound primarily used for dry cleaning clothing and in manufacturing processes as a solvent and metal degreaser.

trichloroethene: A volatile organic compound that is a colorless or blue organic liquid with a chloroform-like odor. TCE is primarily used in manufacturing processes as a solvent, metal degreaser, and textile degreaser.

uncertainty: Variability in natural processes, imperfect or incomplete knowledge, or errors in modeling and estimating the potential for risk to human and ecological receptors.

Unified Soil Classification System: The soil classification system used in engineering and geology disciplines to describe the texture and grain size of a soil.

volatile organic compound: An organic (carbon-containing) compound that evaporates readily at room temperature.

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F. Human Health Risk Assessment

This appendix describes the ***human health risk assessment*** (HHRA) conducted as part of ***remedial investigation*** (RI) activities for the San Gabriel Valley Area 3 ***Superfund*** Site (Area 3). The risk assessment evaluates potential impacts to public health from the ***contamination*** of drinking water aquifers in Area 3 and the potential need for a comprehensive ***remedial action*** to address contaminated groundwater throughout Area 3.

Each section of this report provides a discussion of the subject, followed by any tables or figures cited in the text. In addition, exhibits and text boxes noted in the margins present key concepts, tables, and figures.

F.1 Introduction

This section presents the approach, methodology, and results of the HHRA. The HHRA evaluates current and potential future cancer risks and noncancer health hazards from exposure of adult and child residents under ***baseline conditions*** to ***contaminants of potential concern*** (COPCs) observed in ***groundwater*** underlying Area 3, based on the data set described in the *San Gabriel Valley Area 3 Superfund Site Remedial Investigation Report*, Section 2.6. The United States Environmental Protection Agency (EPA) will use the results and conclusions to determine if an action is warranted to mitigate potential health effects. Table 6-1 in the RI presents the ***data quality objectives*** (DQOs) developed to guide data collection, analysis, and interpretation for the HHRA. Appendix C provides the data quality and usability assessment of the primary and secondary data collected during the RI.

*The glossary explains words presented in **bold, italicized** text.*

Table 6-1 presents the DQOs for the HHRA.

Appendix C provides the data quality and usability assessment of the primary and secondary data collected during the RI.

The DQOs define the evaluation to be completed in this subtask and identify potential evaluation results. Methods to avoid incorrect results are also provided. Table 6-1 defines that the risk assessment will only evaluate groundwater data for potentially complete exposure pathways for adult and child residents. Incomplete exposure pathways for groundwater, soil data and soil vapor data are excluded. Table 6-1 also lists the data needs to complete the subtask and how the data will be used. The table also includes an evaluation of the assessment conducted to determine the quality and usability of the data set.

Table F-1 presents a list of measurement points, including monitoring wells and production wells located in the five geographic areas, identified as southwestern (SW), northwestern (NW), central, northeastern (NE), and southeastern (SE) Area 3. Figure 2-1 in the RI shows the location of the wells or measurement points. The bullets below summarize the measurement points:

Table F-1 presents a list of measurement points, including monitoring wells and production wells located in Area 3.

Figure 2-1 shows the location of the wells.

- **SW Area 3** contains 19 facility monitoring wells.
- **NW Area 3** contains two production wells.
- **Central Area 3** contains five monitoring wells and 13 production wells.
- **NE Area 3** contains 16 facility monitoring wells and 12 production wells.
- **SE Area 3** contains 11 production wells.

F.2 Approach

This HHRA evaluates "baseline conditions." Baseline conditions assume no implementation of treatment to address contaminant concentrations in groundwater underlying Area 3 and no changes in concentrations. This evaluation helps to confirm that an action is necessary to protect public health.

Currently, local water purveyors comply with drinking water standards and blend water drawn from contaminated wells with water drawn from wells that yield uncontaminated water. Alternatively, purveyors discontinue use of contaminated wells or use wellhead treatment systems to reduce concentrations of ***volatile organic compounds*** (VOCs) to below ***maximum contaminant levels*** (MCLs) before serving the water.

The methods used to conduct this HHRA are consistent with the following regulatory guidelines.

- *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A)* (EPA, 1989)
- *Supplemental Guidance for Human Health Multimedia Risk Assessments of Hazardous Waste Sites and Permitted Facilities* (California Department of Toxic Substances Control [DTSC], 1992)
- Other pertinent EPA (1991a, 1991b, 1991c, 2004a) and DTSC (1994) guidance documents and memoranda

EPA and DTSC risk assessment framework consists of the following basic steps.

- Data Evaluation/Hazard Identification (Section F.2.1)
- Exposure Assessment (Section F.2.2)
- Toxicity Assessment (Section F.2.3)
- Risk Characterization (Section F.2.4)
- ***Uncertainty*** Analysis (Section F.3)

Exposure routes considered in this risk assessment include ingestion, inhalation of VOCs, and dermal contact with groundwater for the following ***receptors***.

- Adult – ***reasonable maximum exposure***
- Child – reasonable maximum exposure

This human health risk evaluation compares ***exposure point concentrations*** (EPCs) for data collected from all production and monitoring wells in Area 3 against EPA's regional screening level (RSL) values for tap water (EPA, 2008) and full-risk calculations based on monitoring well data.

F.2.1 Data Evaluation/Hazard Identification

This step consists of reviewing, evaluating, and compiling groundwater analytical results for all COPCs detected in Area 3 to complete the baseline assessment. The ***Key contaminants of potential concern*** (COPCs) are a subset of

the COPCs. The HHRA considers data through December 2007 contained in the ***EPA San Gabriel Basin Database***.

The processes to determine the COPCs include the following.

- Evaluate contaminants in groundwater for risks and hazards.
- Use data from most recent sample event; analytical results generally show consistency among sampling events for COPCs in groundwater.
- Use highest concentration detected in groundwater at a multiport monitoring well (i.e., at a well with multiple screened intervals) or at a facility with multiple wells as the EPC to represent reasonable maximum exposure conditions.
- Use one-half of the detection limit as a concentration value if the most recent result for a contaminant in groundwater shows nondetect.

F.2.2 Exposure Assessment

The exposure assessment builds on results of the data evaluation/hazard identification process to address exposures that could result under current conditions in Area 3 and from reasonably anticipated potential land uses in the future. The exposure assessment focuses on the following items.

- Populations that might be exposed
- Routes and ***exposure pathways*** by which individuals could become exposed
- Magnitude, frequency, and duration of potential exposures

The HHRA evaluates potential exposures to adult and child resident receptors. Although potential exposures to industrial/commercial workers also exist, this assessment uses residential exposures as the most conservative value.

F.2.2.1 Potential Human Exposure Pathway Model

Figure F-1 presents the ***potential human exposure pathway model***, which summarizes information about contamination and transport through the environment to potential human receptors in a schematic presentation. The potential human exposure pathway model consists of the following components.

Figure F-1 presents the potential human exposure pathway model.

- Potential primary contamination sources (commercial and industrial facilities in Area 3)
- Contamination release mechanisms (spills and leaks)
- Potential secondary contamination sources (contaminated soil)
- Contaminant transport mechanisms (for example, infiltration to groundwater)
- Contaminated exposure media (for example, groundwater)

- Potentially complete exposure pathways (for example, consumption of drinking water)
- Exposure routes (ingestion, direct dermal contact, and inhalation of VOCs during domestic water use)
- Potentially exposed receptors (for example, residents and golf course workers)

Exhibit F-1 presents the potentially complete exposure pathways for Area 3.

The exposure routes presented in Exhibit F-1 have potentially complete exposure pathways. To maximize the health protective assumptions, the HHRA evaluates the potential exposure risks to residential receptors only.

EXHIBIT F-1
Potentially Complete Exposure Pathways in Area 3

Receptor	Exposure Pathway	Exposure Route
Adult resident and child resident	Consumption of drinking water	Ingestion
	Showering/bathing	Dermal Contact
	Typical domestic activities (e.g., toilet flushing, dishwashing, and laundering)	Inhalation*
Golf course greens keepers/landscapers	Contact with irrigation water	Ingestion, Dermal Contact, Inhalation*

*Applicable to VOCs only.[1]

F.2.2.2 Reasonable Maximum Exposure

Table F-2 presents the exposure assumptions for the HHRA.

The HHRA provides a reasonable maximum exposure estimate for adult and child residents. Table F-2 presents a complete list of exposure assumptions used to estimate potential hazards and risks for adult and child residents. This combination of conservative assumptions helps ensure that the risk estimates represent the maximum likely exposure.

F.2.2.3 Quantification of Exposure

For the ingestion and dermal pathways, this assessment estimates intakes using the standard equations listed below. For the inhalation pathway, the assessment evaluates exposures to VOCs migrating from groundwater to indoor air by converting COPC concentrations in groundwater to concentrations in indoor air using a volatilization factor and adjusting for exposure duration and exposure frequency. The assessment uses either the unit risk factor for cancer risks or the reference concentration for noncancer hazards to calculate the risk estimates.

[1]VOCs are operationally defined as constituents with a Henry's Law constant of greater than 1×10^{-5} atmospheres-cubic meters per mole and a molecular weight of less than 200 grams per mole (EPA, 1991a).

Ingestion of Groundwater

$$Intake = \frac{C_w \times IR_w \times EF \times ED}{BW \times AT}$$

where:

Intake = COPC daily intake (milligrams per kilogram [mg/kg] body weight/day)
C_w = COPC concentration in groundwater (milligrams per liter [mg/L])
IR_w = groundwater ingestion rate (liters per day [L/day])
EF = exposure frequency (days/year)
ED = exposure duration (years)
BW = body weight (kilograms [kg])
AT = averaging time (days)

Dermal Contact with Groundwater

$$Intake = \frac{C_w \times SA \times Kp \times ET \times EF \times ED \times CF}{BW \times AT}$$

where:

Intake = COPC daily intake (mg/kg body weight/day)
C_w = COPC concentration in groundwater (mg/L)
SA = exposed skin surface area
Kp = dermal permeability coefficient (centimeters per hour [cm/hr]); (presented in Table F-6)
ET = exposure time (hours/day)
EF = exposure frequency (days/year)
ED = exposure duration (years)
CF = conversion factor (liter per cubic centimeter [L/cm^3])
BW = body weight (kg)
AT = averaging time (days)

Inhalation of COPCs from Groundwater

As described above, volatilization of COPCs from groundwater to indoor air is estimated by applying a volatilization factor to the groundwater concentration. After adjusting for exposure frequency and exposure duration, risks from COPCs in air are calculated by using the appropriate toxicity values, as shown in Sections F.2.4.2 and F.2.4.5.

Table F-6 presents the dermal permeability coefficients used in the HHRA.

$$C_{air} = C_w \times VF$$

where:

C_{air} = COPC concentration in indoor air (milligrams per cubic meter [mg/m^3])
C_w = COPC concentration in groundwater (mg/L)
VF_w = volatilization factor (liters per cubic meter [L/m^3])

F.2.3 Toxicity Assessment

The HHRA incorporates use of high-quality toxicity criteria, obtained in accordance with EPA Office of Solid Waste and Emergency Response *Directive 9285.7-53* (December 5, 2003), for the estimation of risks and hazards during the HHRA process. This hierarchy for prioritizing the toxicity values consists of the three tiers described below:

- **Tier 1 –** IRIS database (www.epa.gov/iris/subst/index.html) (EPA, 2009).
- **Tier 2 –** Provisional Peer Reviewed Toxicity Values developed by the Office of Research and Development/National Center for Environmental Assessment/Superfund Health Risk Technical Support Center.
- **Tier 3 –** Other toxicity values developed by EPA, California EPA, the Agency for Toxic Substances and Disease Registry, and the World Health Organization.

This HHRA uses toxicity values compiled based on the above criteria as part of the EPA RSL tables (EPA, 2008). The RSL values supersede the toxicity values presented in the EPA Region 9 Preliminary Remediation Goal tables (EPA, 2004c) and omit toxicity values from EPA's National Center for Environmental Assessment.

Tables F-3 and F-4 provide toxicity values for the COPCs in Area 3. Table F-5 presents EPA RSLs for tap water for the COPCs.

Attachment F-1 provides the toxicological profiles.

Oral and dermal toxicity values are expressed in terms of slope factors for cancer effects and ***reference doses*** (RfD) for noncancer effects. Inhalation toxicity values (or reference concentrations) for noncancer effects represent air concentrations considered protective for the inhalation exposure route. For cancer effects, inhalation toxicity values are expressed as unit risk factors. Tables F-3 and F-4 provide toxicity values for the COPCs in Area 3. Table F-5 presents RSLs for tap water for the COPCs. Attachment F-1 presents the toxicological profiles from the Agency for Toxic Substances and Disease Registry.

F.2.4 Risk Characterization

The risk characterization quantifies risk estimates by combining results of the exposure assessment (estimated COPC intakes) with results of the dose-response assessment (toxicity values identified in the toxicity assessment) to estimate potential health effects. The quantification approach differs for potential noncancer and cancer effects.

The HHRA derives the risk estimates associated with exposure to carcinogenic and noncarcinogenic COPCs in groundwater using the equations presented below. The HHRA determines health risk estimates using a risk evaluation criterion level approach, as described below based on data from production wells.

The HHRA evaluates the potential for cancer effects by estimating ***excess lifetime cancer risk*** (ELCR), the incremental increase in the probability of developing cancer during one's lifetime beyond the background probability of developing cancer if no exposure to COPCs occurs. For example, a 2E-06 ELCR means that,

for every 1 million people exposed to carcinogens throughout their lifetimes, the average incidence of cancer might increase by two cases of cancer. The actual cancer risk is likely to be less than that predicted in the HHRA due to the use of conservative exposure assumptions (EPA, 1989).

The HHRA estimates exposures, potential cancer risks, and noncancer hazards. The HHRA assumes that residents are the most likely receptors to be exposed to COPCs in groundwater on a daily basis. The HHRA also assumes continued, unrestricted use of groundwater in the future.

F.2.4.1 Cancer Effects for Ingestion and Dermal Pathways

The risk assessment estimates ELCRs for the ingestion and dermal pathways using the following equation.

$$ELCR_{Ing+Der} = CSF \times Intake$$

where:

$ELCR_{Ing+Der}$ = excess lifetime cancer risk from ingestion and dermal exposure
CSF = cancer slope factor $(mg/kg\text{-}day)^{-1}$
Intake = chronic daily intake averaged over a lifetime (mg/kg-day)

F.2.4.2 Cancer Effects for Inhalation of COPCs from Groundwater

The risk assessment estimates the theoretical ELCR from inhalation of VOCs from domestic use of groundwater according to the following equation. Table F-2 presents the default exposure parameter values used in the calculation.

Table F-2 presents the exposure assumptions used in the HHRA.

$$ELCR_{Inh} = URF \times \frac{C_{air} \times EF \times ED \times ET}{AT_C \times 365\ days/year}$$

where:

$ELCR_{Inh}$ = excess lifetime cancer risk from inhalation
URF = inhalation unit-risk factor [(COPC micrograms per cubic meter $[\mu g/m^3])^{-1}$]
C_{air} = COPC concentration in air $(\mu g/m^3)$
EF = exposure frequency (days/year)
ED = exposure duration (years)
ET = exposure time for inhalation of volatiles (hours/day)
AT_C = averaging time for carcinogens (70 years)

F.2.4.3 Cumulative Excess Cancer Effects

The HHRA estimates the total excess cancer risk for each exposure route by adding cancer risks for all COPCs across all exposure routes consistent with EPA guidelines (EPA, 1989). Although synergistic[2] or antagonistic[3] interactions might occur between COPCs, information is generally not available to quantitatively

[2]Synergistic interactions result in a total effect greater than the sum of the individual COPC effects.
[3]Antagonistic interactions result in a total effect less than the sum of the individual COPC effects.

predict the effects of potential interactions. The following equation estimates the excess cancer risks caused by exposure to multiple carcinogens from a single exposure route.

$$Risk_T = \sum_1^N Risk_i$$

where:

$Risk_T$ = total excess cancer risk from a given route of exposure
$Risk_i$ = excess cancer risk for the ith COPC
N = number of COPCs

F.2.4.4 Noncancer Effects for Ingestion and Dermal Pathways

The HHRA estimates the likelihood that a receptor will develop an adverse effect by comparing the predicted level of exposure for a particular COPC (***chronic*** daily intake) with the RfD (i.e., the highest level of exposure considered protective). The following ratio of the chronic daily intake divided by RfD is termed the ***hazard quotient*** (HQ).

$$HQ_{Ing+Der} = \frac{Intake}{RfD}$$

where:

$HQ_{Ing+Der}$ = hazard quotient from ingestion and dermal pathways
RfD = reference dose (mg/kg-day) of COPC
Intake = chronic daily intake (mg/kg-day)

An HQ greater than 1 (i.e., exposure exceeds the RfD) indicates potential noncancer health effects. To assess the potential for noncancer health effects posed by exposure to multiple COPCs, the HHRA uses a ***hazard index*** (HI) approach according to EPA guidance (EPA, 1989). This approach assumes that the noncancer hazard associated with exposure to more than one COPC is additive and omits consideration of synergistic or antagonistic interactions.

F.2.4.5 Noncancer Effects for Inhalation of COPCs from Groundwater

Hazard estimates resulting from inhalation of volatile COPCs in groundwater are calculated per EPA (2004b) using the following equation:

$$HQ_{Inh} = \frac{1}{RfC} \times \frac{C_{air} \times EF \times ED \times ET}{AT_{NC} \times 365\ days/year}$$

where:

HQ_{Inh} = hazard quotient from inhalation
RfC = reference concentration (µg/m^3)
C_{air} = COPC concentration in air (µg/m^3)
EF = exposure frequency (days/year)
ED = exposure duration (years)
ET = exposure time for inhalation of volatiles (hours/day)
AT_{NC} = averaging time for noncarcinogens (=ED; years)

F.2.4.6 Cumulative Noncancer Effects

In some instances, the HI exceeds 1 even if all the HQs for individual COPCs are less than 1. The HI is calculated as follows:

$$HI = \sum_{1}^{N} HQ_i$$

where:

HI = hazard index from a given route of exposure
Ei = daily intake of the ith COPC (mg/kg-day)
$HQ_{i\ i}$ = reference dose of the ith COPC (mg/kg-day)
N = number of COPCs

Additionally, the evaluation considers cumulative excess cancer risks across all relevant exposure routes for each receptor. The evaluation adds the risks for oral, inhalation of VOCs, and dermal contact routes of exposure to determine the cumulative excess cancer risk. In a similar manner, the evaluation adds noncancer health hazards across exposure routes to determine the cumulative noncancer health hazards.

F.2.4.7 Risk Screening Evaluation

The risk assessment evaluates human health risks and hazards based on a comparison with data from Area 3 with RSLs for tap water (EPA, 2008). The RSL values are calculated using data for an adult resident receptor for noncancer results and an integrated adult-child resident receptor for cancer results. The assessment uses the following procedures for conducting the risk evaluation.

- Cancer risk estimates – Divide the site-specific COPC concentration by the tap water RSL designated for cancer evaluation ("ca"). Multiply the resulting ratio by ***1E-06*** to estimate COPC-specific risk for a reasonable maximum exposure scenario. For multiple COPCs, add the risks for each COPC.
- Noncancer hazard estimates – Divide the site-specific COPC concentration by the tap water RSL designated for noncancer evaluation ("nc"). For multiple COPCs, add the resulting ratios. The cumulative ratio represents a noncarcinogenic HI.

F.3 Uncertainty Analysis for the Human Health Risk Assessment

This HHRA qualitatively analyzes uncertainty to identify methods or approaches that could lead to incorrect conclusions based on the results of the HHRA. The risk assessment evaluates the sources of uncertainty associated to increase confidence in the outcomes and decisions made based on the HHRA.

Considered collectively, the factors contributing to uncertainty are likely to yield estimates of health hazards and risks that are conservative and, therefore,

protective of public health. The discussion below considers the following sources of uncertainties associated with the data set for Area 3.

- Uncertainty in data collection and analysis
- ***Fate*** and transport estimation
- Exposure estimation
- Toxicological data
- Risk characterization

F.3.1 Uncertainty in Data Collection and Analysis

Uncertainty associated with sampling and analysis includes the inherent variability (standard error) in the analyses, representativeness of the samples, sampling errors, and the heterogeneous nature of the sample matrix.

For collection of ***primary data***, a quality assurance/quality control (QA/QC) program and review of data reduce errors associated with sampling and analysis. To evaluate the suitability of the ***secondary data***, EPA evaluated the effectiveness of the QA/QC program in place during secondary data collection. The assessment of data quality and usability presented in Appendix C indicates that the data set is usable for the HHRA, which increases confidence in the recommendations.

The identification of COPCs could present a source of uncertainty if a COPC was overlooked. The selection of COPCs, including VOCs, SVOCs, inorganic ions, and metals, considers all detected COPCs in groundwater for a period of 5 years starting in 2002.

EPA eliminated from consideration contaminants analyzed for but not detected in groundwater since 2002. The detection limits for most COPCs did not exceed the applicable ***evaluation criteria*** (either the RSL for tap water, MCL, or ***notification level*** [NL]). Although the detection limit exceeds the evaluation criterion for several COPCs, the overall conclusions of the risk assessment remain valid. The data quality and usability assessment in Appendix C evaluates the adequacy of sensitivity in the data set.

The comprehensive approach used to identify the COPCs contributes to the high confidence in the results of the HHRA. It is unlikely that additional Key COPCs for Area 3 will be identified, unless changes in evaluation criteria or in guidelines for toxicity evaluations emerge.

F.3.2 Uncertainty in Fate and Transport Estimation

The risk assessment for residential uses of groundwater assumes that no dilution or reduction in COPC concentration occurs during an exposure duration of 30 years (6 years for children and 24 years for adult). The evaluation assumes that the potential future resident would consume COPCs at concentrations currently observed in groundwater for the full 24-year exposure duration. These assumptions are highly conservative and, therefore, likely to overestimate exposure to COPCs.

F.3.3 Uncertainty in Exposure Estimation

Exposure estimation requires numerous assumptions to describe potential exposure routes as described in Section F.2.

Uncertainties exist regarding the likelihood of exposure, the frequency of contact with contaminated media, the concentration of COPCs at exposure points, and the period of exposure. Assumptions in this HHRA tend to simplify and conservatively approximate potential exposure to contamination, thereby serving to maximize confidence with the recommendations of the HHRA.

Baseline conditions assume no implementation of treatment to address COPC concentrations in groundwater underlying Area 3 and that no changes in COPC concentrations will occur in the future. This approach likely overestimates exposures in each exposure pathway considered.

The assumptions used to calculate risk from inhalation of VOCs, as described in Section F.2.2.3, could also overestimate exposure. In Southern California, the climate is conducive to opening windows year-round to ventilate bathrooms, kitchens, and laundry rooms and to quickly exchange humid indoor air with outside air.

The assessment of dermal exposure to influent water, as described in Section F.2.2.3, is based on the conservative assumption that the dermal contact with water occurs during a 35-minute shower for adults or a 60-minute bath, as shown in Table F-2.

Table F-2 presents the exposure assumptions used in the HHRA.

F.3.4 Uncertainty in Toxicological Data

Use of toxicological data derived primarily from animal studies presents inherent uncertainties that include extrapolation from high dose to low dose and from animals to humans. Other potential sources of uncertainty include the animal species used for the model, gender differences, and age, as well as differences in uptake, metabolism, organ distribution, and target site susceptibility. Uncertainty analysis of toxicological data considers these factors, thereby increasing the likelihood that estimated excess cancer risks or noncancer hazards are health protective.

F.3.4.1 Dermal Toxicological Factors

Dermal RfDs or slope factors have not been established. Therefore, the risk assessment uses oral toxicity factors to estimate health impacts from dermal exposures, which can differ significantly from oral exposures. For example, not all of a COPC that encounters a person's skin will travel across the various layers of epidermal tissue, and the toxic effects produced from this route of exposure might not be the same as when the COPC is ingested.

Using oral toxicity values to estimate dermal exposures could result in underestimation or overestimation of risks, depending on whether a COPC is more toxic or less toxic by the dermal route versus ingestion. However, the dermal pathway is the least likely exposure route for residents in Area 3.

Therefore, no significant uncertainty results from using oral toxicity factors to determine health impacts from dermal exposure.

F.3.4.2 Toxicity Values for Trichloroethene

The carcinogenic toxicity values for ***trichloroethene*** (TCE), including the California EPA value, used in this risk assessment, present uncertainty. EPA is independently evaluating data related to TCE, as recommended by a National Academy of Sciences committee (National Research Council) report (published July 27, 2006). Research into the toxicity of TCE might result in either a more conservative or a less conservative toxicity value in the future.

F.3.5 Uncertainty in Risk Characterization

One type of uncertainty comes from the assumption that the total potential risk of developing cancer from exposure to site COPCs is the sum of the risk attributed to each individual COPC. Another type of uncertainty comes from the assumption that the total potential risk for developing noncancer adverse effects is the sum of the HQs estimated for exposure to each individual COPC. This approach does not account for the possible interactions between COPCs.

Another uncertainty comes from the estimation of the risks and hazards from potential exposures to groundwater underlying Area 3 used as domestic tap water. This estimation uses the EPA risk assessment calculations and the EPA RSL tap water comparison ratio approach. RSLs do not evaluate dermal exposures to groundwater. However, the risk and hazards for adult risk calculations and RSL comparisons were similar. Evaluation of risks and hazards from potential exposures to groundwater from production wells uses the RSL comparison approach only. Because the risk calculations and RSL comparisons yield similar estimates for risks and hazards, no significant uncertainty resulted from the method this assessment used to evaluate risks.

F.4 Results of Human Health Risk Assessment

Figures F-2 and F-3 present the estimated potential cancer risks for adult residents and hazard indices for child residents, respectively.

The evaluation focuses on potential cancer risks and noncancer hazards for adult and child resident receptors from groundwater contamination in Area 3.

Figures F-2 and F-3 present the estimated potential cancer risks for adult residents and hazard indices for child residents, respectively, with the locations of corresponding measurement points. Results of the risk calculations based on the adult resident receptor yield the most conservative cancer risk estimate and the risk calculations based on the child resident receptor yield most conservative noncancer health hazards. The presence of several COPCs identified in Table 4-7 also contribute to the estimated risks.

Table 4-7 summarizes the COPCs that also contribute to estimated risks.

The evaluation of potential cancer risks and noncancer health hazards is based on comparison of calculated values to the following criteria:

- ELCR values that exceed the risk evaluation criterion of 1E-06.
- HI values that exceed the noncancer hazard evaluation criterion of 1.

Exhibits F-2 through F-6 summarize the calculated adult excess cancer and child noncancer results. Tables provided in this appendix show the complete set of results for the evaluation of data from each measurement point. The following discussions below summarize the calculated adult excess cancer and child noncancer results.

F.4.1 SW Area 3 – Evaluation of Cancer Risks and Noncancer Hazards

As shown in Exhibit F-2, estimates of excess cancer risk for the adult resident exceed the risk evaluation criterion of 1E-06. The highest risk estimate (1E-03) is based on data collected at Facility 1, primarily due to the presence of TCE in groundwater. Two estimated noncancer hazards for the child resident exceed the risk evaluation criterion of 1. The highest HI (2) is based on data collected at Facility 22, due to the presence of ***tetrachloroethene*** (PCE) in groundwater.

Exhibit F-2 summarizes the risk results for SW Area 3.

EXHIBIT F-2
Summary of Estimated Cancer Risks and Noncancer Hazards at Measurement Points in SW Area 3

Measurement Point	Excess Cancer Risk Level	Hazard Index	Primary Contributing COPC(s)
EPAMW11	3E-04	2	PCE, TCE, arsenic*
EPAMW18	1E-04	0.3	Arsenic*
Facility 1	1E-03	0.8	PCE, TCE, cis-1,2-DCE
Facility 3	2E-04	0.2	PCE, TCE, cis-1,2-DCE
Facility 4	1E-04	0.1	PCE, TCE, carbon tetrachloride
Facility 5	9E-06	0.01	PCE, TCE, cis-1,2-DCE
Facility 6	1E-04	0.2	PCE, TCE, cis-1,2-DCE
Facility 7	5E-06	0.4	PCE, TCE, perchlorate
Facility 8	3E-04	0.4	PCE, TCE
Facility 10	3E-04	0.5	PCE
Facility 22	1E-03	2	PCE
Facility 32	5E-05	0.1	PCE, TCE, naphthalene*

*Contaminant is not considered a Key COPC. Key COPCs include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), 1,2,3-trichloropropane (1,2,3-TCP), carbon tetrachloride, perchlorate and nitrate. Key COPCs are used to identify regional groundwater contamination.

The actual cancer risk is likely to be less than that predicted in the HHRA due to the use of conservative exposure assumptions (EPA, 1989).

Table F-7 summarizes the risk results for SW Area 3.

Table F-7 summarizes the excess cancer risk estimates for Area 3 based on data collected in SW Area 3. Tables F-12 through F-97 present calculated EPCs, risk calculation worksheets, and detailed summary risk results for adult and child residents for all COPCs in groundwater.

Tables F-12 through F-97 present groundwater EPCs, risk calculation worksheets, and detailed summary risk results for adult and child residents in SW Area 3.

F.4.2 NW Area 3 – Evaluation of Cancer Risks and Noncancer Hazards

As shown in Exhibit F-3, the estimated cumulative integrated adult-child excess cancer risks exceed the risk evaluation criterion of 1E-06. The primary contributors to risk include TCE and PCE in groundwater, both of which have an HI that is less than the risk evaluation criterion of 1.

Exhibit F-3 summarizes the risk results for NW Area 3.

EXHIBIT F-3
Summary of Estimated Cancer Risks and Noncancer Hazards at Measurement Points in NW Area 3

Measurement Point	Excess Cancer Risk Level	Hazard Index	Primary Contributing COPC(s)
01900934	7E-06	0.08	TCE, perchlorate
01901679	4E-05	0.5	PCE, perchlorate, nitrate

The actual cancer risk is likely to be less than that predicted in the HHRA due to the use of conservative exposure assumptions (EPA, 1989).

Table F-8 summarizes the risk results for NW Area 3.

Table F-8 summarizes the excess cancer risk estimates for Area 3 based on data collected in NW Area 3. Tables F-98 and F-99 present groundwater EPCs and risk results based on comparison with RSLs for tap water.

Tables F-98 through F-99 present groundwater EPCs, risk calculation worksheets, and detailed summary risk results for adult and child residents in NW Area 3.

F.4.3 Central Area 3 – Evaluation of Cancer Risks and Noncancer Hazards

As shown in Exhibit F-4, estimates of excess cancer risk for the adult resident and integrated adult-child excess cancer risks exceed the risk evaluation criterion of 1E-06. The primary risk drivers include PCE, TCE, 1,2,3-TCP, and arsenic in groundwater. The highest risk estimate (1E-04) is based on data collected at EPAMW15. Three estimates of noncancer hazard for the resident child exceed the risk evaluation criterion of 1, with the highest HI (3) based on data collected at EPAMW14 primarily because of the presence of arsenic in groundwater.

Exhibit F-4 summarizes the risk results for Central Area 3.

EXHIBIT F-4
Summary of Estimated Cancer Risks and Noncancer Hazards at Measurement Points in Central Area 3

Measurement Point	Excess Cancer Risk Level	Hazard Index	Primary Contributing COPC(s)
EPAMW12A	2E-04	1	Arsenic*, NDMA*, perchlorate
EPAMW13	8E-05	2	Arsenic*, dibromochloropropane*, perchlorate
EPAMW14	7E-04	3	Arsenic*
EPAMW15	1E-04	2	Dibromochloropropane*, perchlorate, nitrate
EPAMW17	4E-04	1	Arsenic*
01900010	2E-05	0.0005	1,2,3-TCP
01900011	8E-06	0.2	TCE, perchlorate, nitrate
01900012	2E-05	0.4	TCE, perchlorate, nitrate
01900014	3E-07	0.1	TCE, perchlorate, nitrate
01900015	8E-07	0.1	TCE, perchlorate, nitrate
01901681	1E-04	0.1	PCE, TCE, perchlorate
01901682	1E-06	0.09	PCE, TCE, nitrate
01903014	3E-05	0.01	PCE, 1,2,3-TCP
01903086	3E-05	0.09	PCE, 1,2,3-TCP, nitrate
01903097	9E-06	0.2	PCE, nitrate

*Contaminant is not considered a Key COPC. Key COPCs are used to identify regional groundwater contamination.

The actual cancer risk is likely to be less than that predicted in the HHRA due to the use of conservative exposure assumptions (EPA, 1989).

Table F-9 summarizes the risk results for Central Area 3. Tables F-100 through F-136 present groundwater EPCs, risk calculation worksheets, and detailed summary risk results for adult and child residents by COPC.

Table F-9 summarizes the risk results for Central Area 3.

Tables F-100 through F-136 present groundwater EPCs, risk calculation worksheets, and detailed summary risk results for adult and child residents in Central Area 3.

F.4.4 NE Area 3 – Evaluation of Cancer Risks and Noncancer Hazards

As shown in Exhibit F-5, estimates of excess cancer risk for the adult resident and integrated adult-child excess cancer risks exceed the risk evaluation criterion of 1E-06. The primary contributors to risk include arsenic, PCE, perchlorate, and nitrate in groundwater. Two estimates of noncancer hazard for the resident child exceed the risk evaluation criterion of 1 with the highest HI (38) based on data collected at Facility 19.

Exhibit F-5 summarizes the risk results for NE Area 3.

EXHIBIT F-5
Summary of Estimated Cancer Risks and Noncancer Hazards at Measurement Points in NE Area 3

Measurement Point	Excess Cancer Risk Level	Hazard Index	Primary Contributing COPC(s)
EPAMW16	3E-05	1	Arsenic*
Facility 19	5E-03	38	PCE, 1,2,4-trimethylbenzene*
Facility 21	8E-06	0.02	PCE, benzene*
01900017	N/A	0.2	Nitrate, perchlorate
01900026	N/A	0.04	Nitrate
01900547	1E-05	0.5	Arsenic*, perchlorate, nitrate
01900935	5E-04	0.4	PCE, nitrate, perchlorate
01901671	5E-06	0.2	Atrazine*, nitrate, perchlorate
01902785	2E-05	0.01	PCE
01902786	1E-04	0.1	PCE
01902972	N/A	0.07	Nitrate
01902979	1E-05	0.2	Arsenic*, PCE, perchlorate
01903059	N/A	0.1	Perchlorate
08000157	N/A	0.02	Nitrate

*Contaminant is not considered a Key COPC. Key COPCs are used to identify regional groundwater contamination.

The actual cancer risk is likely to be less than that predicted in the HHRA due to the use of conservative exposure assumptions (EPA, 1989).

N/A – Excess cancer risk not calculated as COPCs only contribute to noncancer health risks.

Table F-10 summarizes the risk results for NE Area 3. Tables F-137 through F-159 present groundwater EPCs, risk calculation worksheets, and detailed summary risk results for adult and child residents by COPC in NE Area 3.

Table F-10 summarizes the risk results for NE Area 3.

Tables F-137 through F-159 present groundwater EPCs, risk calculation worksheets, and detailed summary risk results for adult and child residents in NE Area 3.

F.4.5 SE Area 3 – Evaluation of Cancer Risks and Noncancer Hazards

As shown in Exhibit F-6, six of the seven estimated values for cumulative excess cancer risk exceed the risk evaluation criterion of 1E-06. The primary risk drivers include PCE and TCE in groundwater. The highest risk estimate (2E-05) is based on data collected at production well 01900927. None of the estimated noncancer hazards exceed the risk evaluation criterion of 1.

Exhibit F-6 summarizes the risk results for SE Area 3.

EXHIBIT F-6
Summary of Estimated Cancer Risks and Noncancer Hazards at Measurement Points in SE Area 3

Measurement Point	Excess Cancer Risk Level	Hazard Index	Primary Contributing COPC(s)
01900514	N/A	0.009	Nitrate
01900515	8E-06	0.004	PCE
01900926	9E-06	0.1	PCE, nitrate, perchlorate
01900927	2E-05	0.2	PCE, nitrate, perchlorate
01901669	9E-06	0.005	PCE, TCE
08000067	1E-05	0.07	PCE, nitrate
08000123	1E-07	0.02	TCE, nitrate
08000133	3E-06	0.01	PCE, 1,2,3-TCP, nitrate
08000146	N/A	0.004	Nitrate

N/A – Excess cancer risk not calculated as COPCs only contribute to noncancer health risks.

The actual cancer risk is likely to be less than that predicted in the HHRA due to the use of conservative exposure assumptions (EPA, 1989).

Table F-11 summarizes the risk results for SE Area 3.

Tables F-160 through F-161 present groundwater EPCs and risk results based on comparison with RSLs for tap water.

Table F-11 summarizes the risk results for SE Area 3. Tables F-160 through F-161 present groundwater EPCs and risk results based on comparison with RSLs for tap water.

F.5 Conclusions of the Human Health Risk Assessment

The HHRA evaluates the need for a comprehensive remedial action to address regional groundwater contamination in Area 3, rather than the need for discrete actions to address contamination observed at individual facilities. This HHRA confirms that COPCs adversely affect the groundwater resources in each of the five regions of Area 3.

The risk estimates based on data collected from 42 of 52 measurement points exceed the 1E-06 risk evaluation criterion, based mainly on the presence of PCE and TCE contamination. The noncancer hazard indices based on data collected from 9 of the 52 measurement points equal or exceed the noncancer risk evaluation criterion of 1. The highest cancer risk estimate of 5E-03 and highest HI estimate of 38 are based on data collected from Facility 19 in NE Area 3.

F.6 Recommendations of the Human Health Risk Assessment

Results of the HHRA indicate that groundwater is significantly impacted by COPCs at multiple locations in Area 3. Due to this contamination, untreated groundwater in many parts of Area 3 is unsuitable as a source of tap water for domestic use. The HHRA recommends that action be taken to protect human health in Area 3.

Section 8 in the RI discusses the next steps for Area 3, which includes a ***feasibility study*** to evaluate remedial alternatives to address the regional groundwater contamination in Area 3. The ***contaminants of concern*** include the contaminants that were identified in the HHRA as potential risk contributors and will be addressed during the feasibility study. The potential risk contributors include Key COPCs and the following COPCs: arsenic, naphthalene, NDMA, dibromochloropropane, 1,2,4-trimethylbenzene, benzene, and atrazine. Groundwater monitoring will continue during the feasibility study and the additional data collected by EPA, facilities, and water purveyors will be evaluated to determine the impact of these contaminants in groundwater underlying Area 3.

F.7 References

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Tables

Table F-1
List of Groundwater Wells by Geographic Area
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

SW Area 3	NW Area 3	Central Area 3	NE Area 3	SE Area 3
EPAMW11	01900934	EPAMW12A	EPAMW16	01900016
EPAMW18	01091679	EPAMW13	01900017	01900514
W12ASMW1 (Facility 1)		EPAMW14	01900026	01900515
W12ASMW2 (Facility 1)		EPAMW15	01900547	01900921
W12ASMW3 (Facility 1)		EPAMW17	01900935	01900926
W12CVMW3 (Facility 3)		01900010	01901671	01900927
W12CVMW4 (Facility 3)		01900011	01902785	01901669
W12CVMW5 (Facility 3)		01900012	01902786	08000067
W12CPMW1 (Facility 4)		01900013	01902789	08000123
W12CW202 (Facility 5)		01900014	01902792	08000133
W12IWMW1 (Facility 6)		01900015	01902979	08000146
W12RDFW1 (Facility 7)		01900018	01903059	
W12PMMW1 (Facility 8)		01901672	08000157	
W12USMW1 (Facility 10)		01901681	W11TCSW1 (Facility 19)	
W12VCGM1 (Facility 22)		01901682	W11TCSW2 (Facility 19)	
W12ARMW1 (Facility 32)		01903014	W11TCSW3 (Facility 19)	
W12ARMW2 (Facility 32)		01903086	W11TCSW4 (Facility 19)	
W12ARMW3 (Facility 32)		01903097	W11TCSW5 (Facility 19)	
W12ARMW4 (Facility 32)			W11TCSW6 (Facility 19)	
			W11TCSW7 (Facility 19)	
			W11TCSW8 (Facility 19)	
			W11TCSW9 (Facility 19)	
			W11TCSW10 (Facility 19)	
			W11TCSW11 (Facility 19)	
			W11TCSW12 (Facility 19)	
			W12NVJW1 (Facility 21)	
			W12NVJW2 (Facility 21)	
			W12NVJW3 (Facility 21)	
			W12NVW1R (Facility 21)	

Notes:

SW = southwestern

NW = northwestern

NE = northeastern

SE = southeastern

Table F-2
Groundwater Exposure Assumptions
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Parameter	Variable	Reasonable Maximum Exposure (RME) Scenario			
		Adult Future Resident Groundwater	Source	Child Future Resident Groundwater	Source
Exposure Frequency (days/year)	EF	350	EPA, 1989	350	EPA, 1989
Exposure Time for dermal exposure (hours/day)	ET_d	0.58	EPA, 2004	1	EPA, 2004
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24	EPA, 1991	24	EPA, 1991
Exposure Duration (years)	ED	24	EPA, 1989	6	EPA, 1989
Ingestion Rate (Liter /day)	IngR	2	EPA, 1989	1	EPA, 1989
Volatilization Factor (Liter/cubic meter)	VFw	0.5	EPA, 1991	0.5	EPA, 1991
Skin Surface Area (square centimeters)	SA	18,000	EPA, 2004	6,600	EPA, 2004
Body Weight (kilograms)	BW	70	EPA, 1989	15	EPA, 1989
Averaging Time for carcinogens (days)	ATc	25,550	EPA, 1989	25,550	EPA, 1989
Averaging Time for noncarcinogens (days)	ATnc	8,760	EPA, 1989	2190	EPA, 1989
Conversion Factor (Liter/cubic centimeters)	CF1	0.001		0.001	
Constituent Specific Permeability Constant	Kp	Chemical Specific	EPA, 2004	Chemical Specific	EPA, 2004

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Table F-3
Carcinogenic Toxicity Values
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

COPC	Oral Carcinogenic Slope Factor [mg/kg/day]$^{-1}$	Carcinogenic Slope Factor Source	Inhalation Unit Risk Factor [µg/m^3]	Inhalation Unit Risk Factor Source
Volatile Organic Compounds				
acetone	N/A	N/A	N/A	NA
benzene	**1.0E-01**	OEHHA	**2.9E-05**	OEHHA
bromodichloromethane	**1.3E-01**	OEHHA	**3.7E-05**	OEHHA
bromoform	**7.9E-03**	IRIS	**1.1E-06**	IRIS
bromomethane	N/A	N/A	N/A	NA
2-butanone (methyl ethyl ketone)	N/A	N/A	N/A	N/A
carbon disulfide	N/A	N/A	N/A	N/A
carbon tetrachloride	**1.5E-01**	OEHHA	**4.2E-05**	OEHHA
chloroform	**3.1E-02**	OEHHA	**5.3E-06**	OEHHA
chlorobenzene	N/A	N/A	N/A	NA
chloromethane (methyl chloride)	N/A	N/A	N/A	N/A
cis-1,2-dichloroethene	N/A	N/A	N/A	NA
cis-1,3-dichloropropene	**1.0E-01**	IRIS	**4.0E-06**	IRIS
dibromochloromethane	**9.4E-02**	OEHHA	**2.7E-05**	OEHHA
dibromochloropropane	**1.4E+00**	Heast	**6.9E-07**	Heast
1,2-dibromomethane	N/A	N/A	N/A	N/A
1,4-dichlorobenzene	**5.4E-03**	OEHHA	**1.1E-05**	OEHHA
dichlorodifluoromethane	N/A	N/A	N/A	NA
1,1-dichloroethane	**5.7E-03**	OEHHA	**1.6E-06**	OEHHA
1,2-dichloroethane	**4.7E-02**	OEHHA	**2.1E-05**	OEHHA
1,1-dichloroethene	N/A	N/A	N/A	NA
diisopropylether	N/A	N/A	N/A	N/A
ethylbenzene	**1.1E-02**	OEHHA	**2.5E-06**	OEHHA
isopropylbenzene (cumene)	N/A	N/A	N/A	N/A
m,p-xylene	N/A	N/A	N/A	NA
methyl tert-butyl ether (MTBE)	N/A	N/A	N/A	N/A
methylene chloride	N/A	N/A	N/A	N/A
n-butylbenzene	N/A	N/A	N/A	N/A
n-Propylbenzene	N/A	N/A	N/A	N/A
naphthalene	N/A	N/A	**3.4E-05**	OEHHA
o-xylene	N/A	N/A	N/A	NA
sec-butylbenzene	N/A	N/A	N/A	N/A
tert-butyl alcohol	N/A	N/A	N/A	N/A
tetrachloroethene	**5.4E-01**	OEHHA	**5.9E-06**	OEHHA
toluene	N/A	N/A	N/A	N/A
trans-1,2-dichloroethene	N/A	N/A	N/A	N/A
1,2,4-trichlorobenzene	**3.6E-03**	OEHHA	N/A	N/A
1,1,2-trichloroethane	**7.2E-02**	OEHHA	**1.6E-05**	OEHHA
trichlorofluoromethane	N/A	N/A	N/A	N/A
1,2,3-trichloropropane	**7.0E+00**	H per EPA RSL	N/A	N/A
trichloroethene	**1.3E-02**	OEHHA	**2.0E-06**	OEHHA
1,2,4-trimethylbenzene	N/A	N/A	N/A	N/A
1,3,5-trimethylbenzene	N/A	N/A	N/A	N/A
vinyl chloride	**7.2E-01**	IRIS	**7.8E-05**	OEHHA
xylene (total)	N/A	N/A	N/A	N/A

Notes:

Bold indicates toxicity data.

COPC = contaminant of potential concern

mg/kg/day = milligrams per kilogram per day

µg/m^3 = micrograms per cubic meter

N/A : not applicable - toxicity value or associated information not established

References:

RSL - USEPA Regional Screening Level Tables (2008).

OEHHA: Office of Environmental Health and Human Services (CalEPA) Toxicity database (2008).

HEAST: Health Effects Assessment Summary Tables (1997).

IRIS: Integrated Risk Information System. EPA 2008.

Table F-3
Carcinogenic Toxicity Values
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

COPC	Oral Carcinogenic Slope Factor [mg/kg/day]$^{-1}$	Carcinogenic Slope Factor Source	Inhalation Unit Risk Factor [µg/m^3]	Inhalation Unit Risk Factor Source
Semivolatile Organic Compounds				
bis(2-ethylhexyl)phthalate	N/A	N/A	N/A	N/A
benzyl alcohol	N/A	N/A	N/A	N/A
3,3-dichlorobenzidine	N/A	N/A	N/A	N/A
1,4-dioxane	**2.7E-02**	OEHHA	**7.7E-06**	OEHHA
n-nitrosodimethlylamine	N/A	N/A	N/A	N/A
Metals and Inorganic Ions				
arsenic	**9.5E+00**	OEHHA	**3.3E-03**	OEHHA
chromium (Total)	N/A	N/A	**1.2E-02**	I per RSL
chromium (VI)	N/A	N/A	**1.5E-01**	OEHHA
perchlorate	N/A	N/A	N/A	N/A

Notes:

Bold value indicates toxicity data.

COPC = contaminant of potential concern

mg/kg/day = milligrams per kilogram per day

µg/m^3 = micrograms per cubic meter

N/A : not available/applicable - toxicity value or associated information not available

References:

RSL - USEPA Regional Screening Level Tables (2008).

OEHHA: Office of Environmental Health and Human Services (CalEPA) Toxicity database (2008).

HEAST: Health Effects Assessment Summary Tables (1997).

IRIS: Integrated Risk Information System. EPA 2008.

Table F-4
Non-cancer Toxicity Values
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

COPC	Oral Reference Dose [mg/kg/day]	Oral RfD Source	Primary Target Organ	Inhalation Reference Concentration [mg/m^3]	Inhalation Reference Concentration Source
Volatile Organic Compounds					
acetone	**0.9**	IRIS	Nephropathy	**31000**	ATSDR
benzene	**0.004**	IRIS	Lymphocytes	**60**	OEHHA
bromodichloromethane	**0.02**	IRIS	Renal cytomegaly	N/A	N/A
bromoform	**0.02**	IRIS	Hepatic legions	N/A	N/A
bromomethane	**0.0014**	IRIS	Stomach	**5**	IRIS
2-butanone (methyl ethyl ketone)	N/A	N/A	Body Weight	N/A	N/A
carbon disulfide	**0.1**	IRIS	Reproductive	**700**	IRIS
carbon Tetrachloride	**0.0007**	IRIS	Liver	**190**	ATSDR
chlorobenzene	**0.02**	IRIS	N/A	**50**	PPRTV
chloroform	**0.01**	IRIS	Liver	**98**	ATSDR
chloromethane	N/A	N/A	Route Extrapolation	**90**	IRIS
cis-1,2-dichloroethene	**0.01**	PPRTV	N/A	N/A	N/A
cis-1,3-dichloropropene	**0.03**	IRIS	N/A	**20**	IRIS
dibromochloromethane	**0.02**	IRIS	Liver	N/A	N/A
dibromochloropropane	N/A	N/A	Route extrapolation	**0.2**	IRIS
1,2-dibromomethane	**0.01**	HEAST	N/A	N/A	N/A
1,4-dichlorobenzene	N/A	N/A	N/A	**800**	OEHHA
dichlorodifluoromethane	**0.2**	IRIS	Body Weight	**199.5**	HEAST
1,1-dichloroethane	**0.2**	PPRTV	N/A	**500**	HEAST
1,2-dichloroethane	**0.02**	PPRTV	N/A	**2400**	ATSDR
1,1-dichloroethene	**0.05**	IRIS	Liver	**200**	IRIS
diisopropylether	N/A	N/A	N/A	**0.4**	PPRTV
ethylbenzene	**0.1**	IRIS	Liver, Kidney	**2000**	OEHHA
isopropylbenzene (cumene)	N/A	N/A	Kidney	N/A	N/A
m,p-xylene	**0.2**	IRIS	Weight, mortality	**700**	OEHHA
methyl tert-butyl ether (MTBE)	N/A	N/A	Route extrapolation	N/A	N/A
methylene chloride (Dichloromethane)	N/A	N/A	Liver	N/A	N/A
n-butylbenzene	N/A	N/A	N/A	N/A	N/A
n-propylbenzene	N/A	N/A	N/A	N/A	N/A
naphthalene	**0.02**	IRIS	Weight	**9**	OEHHA
o-xylene	**0.2**	IRIS	Weight, mortality	**700**	OEHHA
sec-butylbenzene	N/A	N/A	N/A	N/A	N/A
tert-butyl alcohol	N/A	N/A	N/A	N/A	N/A
tetrachloroethene	**0.01**	IRIS	Liver	**270**	ATSDR
toluene	**0.08**	IRIS	Kidney	**300**	OEHHA
trans-1,2-Dichloroethene	**0.02**	IRIS	Blood	**59.5**	PPRTV
1,2,4-trichlorobenzene	**0.01**	IRIS	Adrenal weight	**3.85**	PPRTV
trichloroethene	N/A	N/A	N/A	N/A	N/A
trichlorofluoromethane	**0.3**	IRIS	Histopathology	**700**	HEAST
1,1,2-trichloroethane	**0.004**	IRIS	N/A	N/A	N/A
1,2,3-trichloropropane	**0.006**	IRIS	Blood	N/A	N/A
1,2,4-trimethylbenzene	N/A	N/A	N/A	**10**	PPRTV
1,3,5-trimethylbenzene	**0.05**	PPRTV	N/A	**5.95**	PPRTV
vinyl chloride	**0.003**	IRIS	Liver	**100**	IRIS
xylene (total)	N/A	N/A	Weight, mortality	N/A	N/A

Notes:

Bold value indicates toxicity data.

COPC = contaminant of potential concern

mg/kg/day = milligrams per kilogram per day

mg/m^3 = milligrams per cubic meter

N/A : not applicable - toxicity value or associated information not established

References

HEAST: Health Effects Assessment Summary Tables (1997).

IRIS: Integrated Risk Information System. EPA 2008.

PPRTV : Provisional Peer Reviewed Toxicity Value as presented in EPA RSL table (2008).

Table F-4
Non-cancer Toxicity Values
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

COPC	Oral Reference Dose [mg/kg/day]	Oral RfD Source	Primary Target Organ	Inhalation Reference Concentration [mg/m^3]	Inhalation Reference Concentration Source
Semivolatile Organic Compounds					
bis(2-ethylhexyl)phthalate	N/A	N/A	Liver	N/A	N/A
benzyl alcohol	**0.5**	PPRTV	N/A	N/A	N/A
3,3-dichlorobenzidine	N/A	N/A	N/A	N/A	N/A
1,4-dioxane	N/A	N/A	N/A	**3000**	OEHHA
n-nitrosodimethlylamine	N/A	N/A	N/A	N/A	N/A
Metals and Inorganic Ions					
arsenic	**0.0003**	IRIS	Skin, Circulatory	**0.03**	OEHHA
chromium (III)	**1.5**	IRIS	N/A	N/A	N/A
chromium (VI)	**0.003**	IRIS	N/A	**0.1**	IRIS
perchlorate	N/A	N/A	Thyroid	N/A	N/A

Notes:
Bold value indicates toxicity data.
COPC = contaminant of potential concern
mg/kg/day = milligrams per kilogram per day
mg/m^3 = milligrams per cubic meter
N/A : not applicable - toxicity value or associated information not established
References
HEAST: Health Effects Assessment Summary Tables (1997).
IRIS: Integrated Risk Information System. EPA 2008.
PPRTV : Provisional Peer Reviewed Toxicity Value as presented in EPA RSL table (2008).

Table F-5
EPA Regional Screening Levels for Tap Water (September 2008)
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

COPC	Tap Water RSL (µg/L) Cancer Risk = 1 x 10^{-6}	Tap Water RSL (µg/L) Chronic Hazard Quotient = 1
Volatile Organic Compounds		
acetone	N/A	N/A
benzene	**0.41**	**44**
bromodichloromethane	**1.1**	**730**
bromoform	**8.5**	**730**
bromomethane	N/A	**8.7**
2-butanone	N/A	N/A
carbon disulfide	N/A	**1000**
carbon tetrachloride	**0.2**	**24**
chlorobenzene	N/A	**91**
chloroform	**0.19**	**130**
chloromethane	**1.8**	**190**
cis-1,2-dichloroethene	N/A	**370**
cis-1,3-dichloropropene	**0.43**	**40**
dibromochloromethane	**0.8**	**730**
dibromochloropropane	N/A	N/A
1,2-dibromomethane	**0.0065**	**18**
dichlorodifluoromethane	N/A	**390**
1,1-dichloroethane	N/A	N/A
1,2-dichloroethane	**0.15**	**640**
1,1-dichloroethene	N/A	**340**
diisopropylether	N/A	N/A
ethylbenzene	**1.5**	**1300**
Isopropylbenzene	N/A	N/A
m,p-Xylene	N/A	**1400**
methyl tert-butyl ether	**N/A**	**N/A**
methylene chloride	**4.8**	**1100**
n-butylbenzene	N/A	N/A
n-propylbenzene	N/A	N/A
naphthalene	N/A	N/A
o-xylene	N/A	**1400**
sec-butylbenzene	N/A	N/A
tert-buty alcohol	N/A	N/A
tetrachloroethene	**0.11**	**220**
toluene	N/A	**2300**
trans-1,2-dichloroethene	N/A	**110**
1,2,4-trichlorobenzene	**19**	**8.2**
1,1,2-trichloroethane	**0.2**	**150**
trichloroethene	**1.7**	N/A
trichlorofluoromethane	N/A	**1300**
1,2,3-trichloropropane	**0.01**	**220**
1,3,5-trimethylbenzene	N/A	N/A
vinyl chloride	**0.016**	**72**

Notes:

Bold value indicates toxicity data.

COPC = contaminant of potential concern

µg/L = micrograms per liter

N/A = EPA tap water RSL value not established

RSL = regional screening level

Table F-5
EPA Regional Screening Levels for Tap Water (September 2008)
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

COPC	Tap Water RSL (µg/L) Cancer Risk = 1 x 10^{-6}	Tap Water RSL (µg/L) Chronic Hazard Quotient = 1
Semivolatile Organic Compounds		
n-nitrosodimethylamine	**0.00042**	**0.29**
bis(2-ethylhexyl)phthalate	N/A	N/A
3,3-dichlorobenzidine	**0.2**	N/A
1,4-dioxane	**6.1**	N/A
benzyl alcohol	N/A	**18000**
Metals		
arsenic	**0.045**	**11**
chromium	N/A	N/A
chromium (VI)	N/A	**110**
Inorganic Ions		
perchlorate	N/A	**26**
Herbicides		
atrazine	**0.3**	**1300**
bolero	N/A	N/A
bromacil	N/A	N/A
ordram	N/A	N/A
simazine	**0.6**	**180**

Notes:

Bold value indicates toxicity data.

COPC = contaminant of potential concern

µg/L = micrograms per liter

N/A = EPA tap water RSL value not established

RSL = regional screening level

Table F-6
Dermal Permeability Coefficients
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

COPC	Dermal Permeability Coefficients (cm/hr)
Volatile Organic Compounds	
acetone	5.7E-04
benzene	2.1E-02
bromodichloromethane	4.6E-03
bromoform	2.2E-03
bromomethane	2.8E-03
2-butanone	9.6E-04
carbon disulfide	1.7E-02
carbon tetrachloride	6.6E-04
chlorobenzene	2.8E-02
chloroform	6.8E-03
chloromethane	3.3E-03
cis-1,2-dichloroethene	1.1E-02
cis-1,3-dichloropropylene	1.7E-04
dibromochloromethane	3.5E-03
dibromochloropropane	8.7E-03
1,2-dibromomethane	2.2E-03
1,4-dichlorobenzene	4.2E-02
dichlorodifluoromethane	9.0E-03
1,1-dichloroethane	6.7E-03
1,2-dichloroethane	4.2E-03
1,1-dichloroethene	1.2E-02
diisopropylether	5.4E-03
ethylbenzene	4.9E-02
isopropylbenzene	1.4E-01
m,p-xylene	5.3E-02
methyl tert-butyl ether	N/A
methylene chloride	3.5E-03
n-butylbenzene	2.2E-01
n-propylbenzene	9.2E-02
naphthalene	4.7E-02
o-xylene	7.0E-02
sec-butylbenzene	2.9E-01
tert-buty alcohol	N/A
tetrachloroethene	3.3E-02
toluene	3.1E-02
trans-1,2-dichloroethene	N/A
1,2,4-trichlorobenzene	6.6E-02
1,1,2-trichloroethane	6.4E-03
trichloroethene	1.2E-02
trichlorofluoromethane	1.3E-02
1,2,3-trichloropropane	9.8E-03
1,2,4-trimethylbenzene	1.3E-01
1,3,5-trimethylbenzene	9.4E-02
vinyl chloride	5.6E-03
xylene (total)	5.3E-02

Notes:
COPC = contaminant of potential concern
cm/hr = centimeter per hour
N/A = Dermal permeability value not established

Table F-6
Dermal Permeability Coefficients
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

COPC	Dermal Permeability Coefficients (cm/hr)
Semivolatile Organic Compounds	
bis(2-ethylhexyl)phthalate	2.5E-02
benzyl alcohol	2.1E-03
3,3-dichlorobenzidine	5.1E-04
1,4-dioxane	1.3E-05
n-nitrosodimethlylamine	2.7E-04
Metals and Inorganic Ions	
arsenic	1.0E-03
chromium (total)	1.0E-03
chromium (VI)	2.0E-03
perchlorate	N/A

Notes:

COPC = contaminant of potential concern

cm/hr = centimeter per hour

N/A = Dermal permeability value not established

Table F-7
Human Health Risk Assessment Results - Based on SW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	Excess Cancer Risk Level	Hazard Index
EPAMW11	3E-04	2
EPAMW18	1E-04	0.3
Facility 1	1E-03	0.8
Facility 3	2E-04	0.2
Facility 4	1E-04	0.1
Facility 5	9E-06	0.01
Facility 6	1E-04	0.2
Facility 7	5E-06	0.4
Facility 8	3E-04	0.4
Facility 10	3E-04	0.5
Facility 22	1E-03	2
Facility 32	5E-05	0.1

Notes:

Results of the risk calculations indicate the adult receptor provides the most conservative cancer risk estimate and the risk calculations indicate the child receptor provides most conservative noncancer health hazards.
SW - southwestern

Table F-8
Human Health Risk Assessment Results - Based on NW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	Excess Cancer Risk Level	Hazard Index
01900934	7E-06	0.08
01901679	4E-05	0.5

Notes:

Results of the risk calculations indicate the adult receptor provides the most conservative cancer risk estimate and the risk calculations indicate the child receptor provides most conservative noncancer health hazards.
NW - northwestern

Table F-9
Human Health Risk Assessment Results - Based on Central Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	Excess Cancer Risk Level	Hazard Index
EPAMW12A	2E-04	1
EPAMW13	8E-05	2
EPAMW14	7E-04	3
EPAMW15	1E-04	2
EPAMW17	4E-04	1
01900010	2E-05	0.0005
01900011	8E-06	0.2
01900012	2E-05	0.4
01900014	3E-07	0.1
01900015	8E-07	0.1
01901681	1E-04	0.1
01901682	1E-06	0.09
01903086	3E-05	0.09
01903014	3E-05	0.01
01903097	9E-06	0.2

Notes:

Results of the risk calculations indicate the adult receptor provides the most conservative cancer risk estimate and the risk calculations indicate the child receptor provides most conservative noncancer health hazards.

Table F-10

Human Health Risk Assessment Results - Based on NE Area 3 Data

Remedial Investigation

San Gabriel Valley Area 3 Superfund Site

Measurement Point	Excess Cancer Risk Level	Hazard Index
EPAMW16	3E-05	1
Facility 19	5E-03	38
Facility 21	8E-06	0.02
01900017	N/A	0.2
01900026	N/A	0.04
01900547	1E-05	0.5
01900935	5E-04	0.4
01901671	5E-06	0.2
01902785	2E-05	0.01
01902786	1E-04	0.1
01902789	N/A	0.1
01902972	N/A	0.01
01902979	1E-05	0.2
01903059	N/A	0.1
08000157	N/A	0.02

Notes:

N/A - No VOCs detected at this location

Results of the risk calculations indicate the adult receptor provides the most conservative cancer risk estimate and the risk calculations indicate the child receptor provides most conservative noncancer health hazards.

NE- northeastern

Table F-11

Human Health Risk Assessment Results - Based on SE Area 3 Data

Remedial Investigation

San Gabriel Valley Area 3 Superfund Site

Measurement Point	Excess Cancer Risk Level	Hazard Index
01900514	N/A	0.009
01900515	8.E-06	0.004
01900926	9E-06	0.1
01900927	2E-05	0.2
01901669	9E-06	0.005
08000067	1E-05	0.07
08000123	1E-07	0.02
08000133	3E-06	0.01
08000146	N/A	0.004

Notes:

N/A - No VOCs detected at this location

Results of the risk calculations indicate the adult receptor provides the most conservative cancer risk estimate and the risk calculations indicate the child receptor provides most conservative noncancer health hazards.

SE - southeastern

Table F-12
Groundwater Exposure Point Concentrations - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
EPAMW11	***Volatile Organic Compounds***		
	trichloroethene	1.70E-01	2007
	tetrachloroethene	1.30E-02	2007
	carbon tetrachloride	1.20E-03	2007
	chloroform	1.00E-03	2007
	1,1-dichloroethane	2.50E-04	2007
	1,2-dichloroethane	6.10E-04	2007
	1,1-dichloroethene	2.40E-03	2007
	cis-1,2-dichloroethene	4.00E-03	2007
	trans-1,2-dichloroethene	2.00E-04	2007
	cis-1,3-dichloropropene	2.50E-04	2007[a]
	1,1,2-trichloroethane	1.50E-04	2007
	benzene	2.50E-04	2007[a]
	dichlorodifluoromethane	2.80E-04	2007
	methylene chloride	2.80E-04	2007
	methyl-tert-butyl ether	2.10E-04	2007
	toluene	2.50E-04	2007[a]
	Semivolatile Organic Compounds		
	1,4-dioxane	4.00E-04	2005[a]
	n-nitrosodimethylamine	9.00E-07	2005
	Metals and Inorganic Ions		
	arsenic	7.50E-04	2005
	chromium	1.37E-02	2005
	chromium (VI)	9.98E-03	2007
	nitrate	1.10E+01	2007
	perchlorate	5.00E-03	2007

Notes:

[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.

COPC = contaminant of potential concern

mg/L = milligrams per liter

Table F-13
Estimates of Reasonable Maximum Exposure - Carcinogenic Effects - Adult Resident - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	1.60E-03	1.30E-02	2.08E-05
	tetrachloroethene	1.30E-02	1.22E-04	5.40E-01	6.59E-05
	carbon tetrachloride	1.20E-03	1.13E-05	1.50E-01	1.69E-06
	chloroform	1.00E-03	9.39E-06	3.10E-02	2.91E-07
	1,1-dichloroethane	2.50E-04	2.35E-06	5.70E-03	1.34E-08
	1,2-dichloroethane	6.10E-04	5.73E-06	4.70E-02	2.69E-07
	1,1-dichloroethene	2.40E-03	2.25E-05	N/A	--
	cis-1,2-dichloroethene	4.00E-03	3.76E-05	N/A	--
	trans-1,2-dichloroethene	2.00E-04	1.88E-06	N/A	--
	cis-1,3-dichloropropene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	1,1,2-trichloroethane	1.50E-04	1.41E-06	7.20E-02	1.01E-07
	benzene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	dichlorodifluoromethane	2.80E-04	2.63E-06	N/A	--
	methylene chloride	2.80E-04	2.63E-06	1.40E-02	3.68E-08
	methyl-tert-butyl ether	2.10E-04	1.97E-06	1.80E-03	3.55E-09
	toluene	2.50E-04	2.35E-06	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	3.76E-06	2.70E-02	1.01E-07
	n-nitrosodimethylamine	9.00E-07	8.45E-09	5.10E+01	4.31E-07
	Metals and Inorganic Ions				
	arsenic	7.50E-04	7.05E-06	9.45E+00	6.66E-05
	chromium	1.37E-02	1.29E-04	N/A	--
	chromium (VI)	9.98E-03	9.37E-05	N/A	--
	nitrate	1.10E+01	1.03E-01	N/A	--
	perchlorate	5.00E-03	4.70E-05	N/A	--
				Total Risk for Oral Route:	1.6E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-13
Estimates of Reasonable Maximum Exposure - Carcinogenic Effects - Adult Resident - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	1.00E-04	1.30E-02	1.30E-06
	tetrachloroethene	1.30E-02	2.10E-05	5.40E-01	1.14E-05
	carbon tetrachloride	1.20E-03	3.88E-08	1.50E-01	5.83E-09
	chloroform	1.00E-03	3.33E-07	3.10E-02	1.03E-08
	1,1-dichloroethane	2.50E-04	8.21E-08	5.70E-03	4.68E-10
	1,2-dichloroethane	6.10E-04	1.26E-07	4.70E-02	5.90E-09
	1,1-dichloroethene	2.40E-03	1.41E-06	N/A	--
	cis-1,2-dichloroethene	4.00E-03	2.13E-06	N/A	--
	trans-1,2-dichloroethene	2.00E-04	7.55E-08	N/A	--
	cis-1,3-dichloropropene	2.50E-04	2.08E-09	1.00E-01	2.08E-10
	1,1,2-trichloroethane	1.50E-04	4.71E-08	7.20E-02	3.39E-09
	benzene	2.50E-04	2.54E-07	1.00E-01	2.54E-08
	dichlorodifluoromethane	2.80E-04	1.24E-07	N/A	--
	methylene chloride	2.80E-04	4.81E-08	1.40E-02	6.73E-10
	methyl-tert-butyl ether	2.10E-04	2.65E-08	1.80E-03	4.76E-11
	toluene	2.50E-04	3.80E-07	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	2.55E-10	2.70E-02	6.88E-12
	n-nitrosodimethylamine	9.00E-07	1.17E-11	5.10E+01	5.96E-10
	Metals and Inorganic Ions				
	arsenic	7.50E-04	3.68E-08	9.45E+00	3.48E-07
	chromium	1.37E-02	6.72E-07	N/A	--
	chromium (VI)	9.98E-03	9.79E-07	N/A	--
	nitrate	1.10E+01	5.39E-04	N/A	--
	perchlorate	5.00E-03	N/A	N/A	--
				Total Risk for Dermal Route:	1.3E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-13
Estimates of Reasonable Maximum Exposure - Carcinogenic Effects - Adult Resident - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	2.79E+01	2.00E-06	5.59E-05
	tetrachloroethene	1.30E-02	2.14E+00	5.90E-06	1.26E-05
	carbon tetrachloride	1.20E-03	1.97E-01	4.20E-05	8.28E-06
	chloroform	1.00E-03	1.64E-01	5.30E-06	8.71E-07
	1,1-dichloroethane	2.50E-04	4.11E-02	1.60E-06	6.58E-08
	1,2-dichloroethane	6.10E-04	1.00E-01	2.10E-05	2.11E-06
	1,1-dichloroethene	2.40E-03	3.95E-01	N/A	--
	cis-1,2-dichloroethene	4.00E-03	6.58E-01	N/A	--
	trans-1,2-dichloroethene	2.00E-04	3.29E-02	N/A	--
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	1,1,2-trichloroethane	1.50E-04	2.47E-02	1.60E-05	3.95E-07
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	dichlorodifluoromethane	2.80E-04	4.60E-02	N/A	--
	methylene chloride	2.80E-04	4.60E-02	1.00E-06	4.60E-08
	methyl-tert-butyl ether	2.10E-04	3.45E-02	2.60E-07	8.98E-09
	toluene	2.50E-04	4.11E-02	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	NV	7.70E-06	--
	n-nitrosodimethylamine	9.00E-07	NV	1.40E-02	--
	Metals and Inorganic Ions				
	arsenic	7.50E-04	NV	3.30E-03	--
	chromium	1.37E-02	NV	1.20E-02	--
	chromium (VI)	9.98E-03	NV	1.50E-01	--
	nitrate	1.10E+01	NV	N/A	--
	perchlorate	5.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	8.2E-05
				Total Risk Across All Exposure Routes/Pathways :	**3E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-14
Estimates of Reasonable Maximum Exposure - Non-cancer Effects - Adult Resident - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	4.66E-03	N/A	--
	tetrachloroethene	1.30E-02	3.56E-04	1.00E-02	3.56E-02
	carbon tetrachloride	1.20E-03	3.29E-05	7.00E-04	4.70E-02
	chloroform	1.00E-03	2.74E-05	1.00E-02	2.74E-03
	1,1-dichloroethane	2.50E-04	6.85E-06	2.00E-01	3.42E-05
	1,2-dichloroethane	6.10E-04	1.67E-05	2.00E-02	8.36E-04
	1,1-dichloroethene	2.40E-03	6.58E-05	5.00E-02	1.32E-03
	cis-1,2-dichloroethene	4.00E-03	1.10E-04	1.00E-02	1.10E-02
	trans-1,2-dichloroethene	2.00E-04	5.48E-06	2.00E-02	2.74E-04
	cis-1,3-dichloropropene	2.50E-04	6.85E-06	3.00E-02	2.28E-04
	1,1,2-trichloroethane	1.50E-04	4.11E-06	4.00E-03	1.03E-03
	benzene	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	dichlorodifluoromethane	2.80E-04	7.67E-06	2.00E-01	3.84E-05
	methylene chloride	2.80E-04	7.67E-06	6.00E-02	1.28E-04
	methyl-tert-butyl ether	2.10E-04	5.75E-06	N/A	--
	toluene	2.50E-04	6.85E-06	8.00E-02	8.56E-05
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	1.10E-05	N/A	--
	n-nitrosodimethylamine	9.00E-07	2.47E-08	8.00E-06	3.08E-03
	Metals and Inorganic Ions				
	arsenic	7.50E-04	2.05E-05	3.00E-04	6.85E-02
	chromium	1.37E-02	3.75E-04	1.50E+00	2.50E-04
	chromium (VI)	9.98E-03	2.73E-04	3.00E-03	9.11E-02
	nitrate	1.10E+01	3.01E-01	1.60E+00	1.88E-01
	perchlorate	5.00E-03	1.37E-04	7.00E-04	1.96E-01
				Total Risk for Oral Route:	0.6

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-14
Estimates of Reasonable Maximum Exposure - Non-cancer Effects - Adult Resident - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	2.92E-04	N/A	--
	tetrachloroethene	1.30E-02	6.14E-05	1.00E-02	6.14E-03
	carbon tetrachloride	1.20E-03	1.13E-07	7.00E-04	1.62E-04
	chloroform	1.00E-03	9.72E-07	1.00E-02	9.72E-05
	1,1-dichloroethane	2.50E-04	2.40E-07	2.00E-01	1.20E-06
	1,2-dichloroethane	6.10E-04	3.66E-07	2.00E-02	1.83E-05
	1,1-dichloroethene	2.40E-03	4.12E-06	5.00E-02	8.24E-05
	cis-1,2-dichloroethene	4.00E-03	6.22E-06	1.00E-02	6.22E-04
	trans-1,2-dichloroethene	2.00E-04	2.20E-07	2.00E-02	1.10E-05
	cis-1,3-dichloropropene	2.50E-04	6.08E-09	3.00E-02	2.03E-07
	1,1,2-trichloroethane	1.50E-04	1.37E-07	4.00E-03	3.43E-05
	benzene	2.50E-04	7.40E-07	4.00E-03	1.85E-04
	dichlorodifluoromethane	2.80E-04	3.60E-07	2.00E-01	1.80E-06
	methylene chloride	2.80E-04	1.40E-07	6.00E-02	2.34E-06
	methyl-tert-butyl ether	2.10E-04	7.72E-08	N/A	--
	toluene	2.50E-04	1.11E-06	8.00E-02	1.39E-05
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	7.44E-10	N/A	--
	n-nitrosodimethylamine	9.00E-07	3.41E-11	8.00E-06	4.26E-06
	Metals and Inorganic Ions				
	arsenic	7.50E-04	1.07E-07	3.00E-04	3.58E-04
	chromium	1.37E-02	1.96E-06	1.50E+00	1.31E-06
	chromium (VI)	9.98E-03	2.85E-06	3.00E-03	9.52E-04
	nitrate	1.10E+01	1.57E-03	1.60E+00	9.83E-04
	perchlorate	5.00E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.010

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
µg/m^3 = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-14
Estimates of Reasonable Maximum Exposure - Non-cancer Effects - Adult Resident - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	8.15E+01	N/A	--
	tetrachloroethene	1.30E-02	6.23E+00	2.70E+02	2.31E-02
	carbon tetrachloride	1.20E-03	5.75E-01	1.90E+02	3.03E-03
	chloroform	1.00E-03	4.79E-01	9.80E+01	4.89E-03
	1,1-dichloroethane	2.50E-04	1.20E-01	5.00E+02	2.40E-04
	1,2-dichloroethane	6.10E-04	2.92E-01	2.40E+03	1.22E-04
	1,1-dichloroethene	2.40E-03	1.15E+00	2.00E+02	5.75E-03
	cis-1,2-dichloroethene	4.00E-03	1.92E+00	3.50E+01	5.48E-02
	trans-1,2-dichloroethene	2.00E-04	9.59E-02	5.95E+01	1.61E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	1,1,2-trichloroethane	1.50E-04	7.19E-02	1.40E+01	5.14E-03
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	dichlorodifluoromethane	2.80E-04	1.34E-01	2.00E+02	6.73E-04
	methylene chloride	2.80E-04	1.34E-01	4.00E+02	3.36E-04
	methyl-tert-butyl ether	2.10E-04	1.01E-01	3.00E+03	3.36E-05
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	NV	3.00E+03	--
	n-nitrosodimethylamine	9.00E-07	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.50E-04	NV	3.00E-02	--
	chromium	1.37E-02	NV	N/A	--
	chromium (VI)	9.98E-03	NV	1.00E-01	--
	nitrate	1.10E+01	NV	1.00E+04	--
	perchlorate	5.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.1
				Total Risk Across All Exposure Routes/Pathways :	0.8

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
µg/m^3 = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-15
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects- Child Resident- Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	9.32E-04	1.30E-02	1.21E-05
	tetrachloroethene	1.30E-02	7.12E-05	5.40E-01	3.85E-05
	carbon tetrachloride	1.20E-03	6.58E-06	1.50E-01	9.86E-07
	chloroform	1.00E-03	5.48E-06	3.10E-02	1.70E-07
	1,1-dichloroethane	2.50E-04	1.37E-06	5.70E-03	7.81E-09
	1,2-dichloroethane	6.10E-04	3.34E-06	4.70E-02	1.57E-07
	1,1-dichloroethene	2.40E-03	1.32E-05	N/A	--
	cis-1,2-dichloroethene	4.00E-03	2.19E-05	N/A	--
	trans-1,2-dichloroethene	2.00E-04	1.10E-06	N/A	--
	cis-1,3-dichloropropene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	1,1,2-trichloroethane	1.50E-04	8.22E-07	7.20E-02	5.92E-08
	benzene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	dichlorodifluoromethane	2.80E-04	1.53E-06	N/A	--
	methylene chloride	2.80E-04	1.53E-06	1.40E-02	2.15E-08
	methyl-tert-butyl ether	2.10E-04	1.15E-06	1.80E-03	2.07E-09
	toluene	2.50E-04	1.37E-06	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	2.19E-06	2.70E-02	5.92E-08
	n-nitrosodimethylamine	9.00E-07	4.93E-09	5.10E+01	2.52E-07
	Metals and Inorganic Ions				
	arsenic	7.50E-04	4.11E-06	9.45E+00	3.88E-05
	chromium	1.37E-02	7.51E-05	N/A	--
	chromium (VI)	9.98E-03	5.47E-05	N/A	--
	nitrate	1.10E+01	6.03E-02	N/A	--
	perchlorate	5.00E-03	2.74E-05	N/A	--
				Total Risk for Oral Route:	9.1E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-15
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects- Child Resident- Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	7.38E-05	1.30E-02	9.59E-07
	tetrachloroethene	1.30E-02	1.55E-05	5.40E-01	8.38E-06
	carbon tetrachloride	1.20E-03	2.86E-08	1.50E-01	4.30E-09
	chloroform	1.00E-03	2.46E-07	3.10E-02	7.62E-09
	1,1-dichloroethane	2.50E-04	6.06E-08	5.70E-03	3.45E-10
	1,2-dichloroethane	6.10E-04	9.27E-08	4.70E-02	4.35E-09
	1,1-dichloroethene	2.40E-03	1.04E-06	N/A	--
	cis-1,2-dichloroethene	4.00E-03	1.57E-06	N/A	--
	trans-1,2-dichloroethene	2.00E-04	5.57E-08	N/A	--
	cis-1,3-dichloropropene	2.50E-04	1.54E-09	1.00E-01	1.54E-10
	1,1,2-trichloroethane	1.50E-04	3.47E-08	7.20E-02	2.50E-09
	benzene	2.50E-04	1.87E-07	1.00E-01	1.87E-08
	dichlorodifluoromethane	2.80E-04	9.11E-08	N/A	--
	methylene chloride	2.80E-04	3.54E-08	1.40E-02	4.96E-10
	methyl-tert-butyl ether	2.10E-04	1.95E-08	1.80E-03	3.51E-11
	toluene	2.50E-04	2.80E-07	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	1.88E-10	2.70E-02	5.08E-12
	n-nitrosodimethylamine	9.00E-07	8.63E-12	5.10E+01	4.40E-10
	Metals and Inorganic Ions				
	arsenic	7.50E-04	2.71E-08	9.45E+00	2.56E-07
	chromium	1.37E-02	4.95E-07	N/A	--
	chromium (VI)	9.98E-03	7.22E-07	N/A	--
	nitrate	1.10E+01	3.98E-04	N/A	--
	perchlorate	5.00E-03	N/A	N/A	--
				Total Risk for Dermal Route:	9.6E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-15
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects- Child Resident- Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	2.79E+01	2.00E-06	5.59E-05
	tetrachloroethene	1.30E-02	2.14E+00	5.90E-06	1.26E-05
	carbon tetrachloride	1.20E-03	1.97E-01	4.20E-05	8.28E-06
	chloroform	1.00E-03	1.64E-01	5.30E-06	8.71E-07
	1,1-dichloroethane	2.50E-04	4.11E-02	1.60E-06	6.58E-08
	1,2-dichloroethane	6.10E-04	1.00E-01	2.10E-05	2.11E-06
	1,1-dichloroethene	2.40E-03	3.95E-01	N/A	--
	cis-1,2-dichloroethene	4.00E-03	6.58E-01	N/A	--
	trans-1,2-dichloroethene	2.00E-04	3.29E-02	N/A	--
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	1,1,2-trichloroethane	1.50E-04	2.47E-02	1.60E-05	3.95E-07
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	dichlorodifluoromethane	2.80E-04	4.60E-02	N/A	--
	methylene chloride	2.80E-04	4.60E-02	1.00E-06	4.60E-08
	methyl-tert-butyl ether	2.10E-04	3.45E-02	2.60E-07	8.98E-09
	toluene	2.50E-04	4.11E-02	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	NV	7.70E-06	--
	n-nitrosodimethylamine	9.00E-07	NV	1.40E-02	--
	Metals and Inorganic Ions				
	arsenic	7.50E-04	NV	3.30E-03	--
	chromium	1.37E-02	NV	1.20E-02	--
	chromium (VI)	9.98E-03	NV	1.50E-01	--
	nitrate	1.10E+01	NV	N/A	--
	perchlorate	5.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	8.2E-05
				Total Risk Across All Exposure Routes/Pathways :	**2E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-16
Estimates of Reasonable Maximum Exposure- Non-cancer Effects- Child Resident- Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	1.09E-02	N/A	--
	tetrachloroethene	1.30E-02	8.31E-04	1.00E-02	8.31E-02
	carbon tetrachloride	1.20E-03	7.67E-05	7.00E-04	1.10E-01
	chloroform	1.00E-03	6.39E-05	1.00E-02	6.39E-03
	1,1-dichloroethane	2.50E-04	1.60E-05	2.00E-01	7.99E-05
	1,2-dichloroethane	6.10E-04	3.90E-05	2.00E-02	1.95E-03
	1,1-dichloroethene	2.40E-03	1.53E-04	5.00E-02	3.07E-03
	cis-1,2-dichloroethene	4.00E-03	2.56E-04	1.00E-02	2.56E-02
	trans-1,2-dichloroethene	2.00E-04	1.28E-05	2.00E-02	6.39E-04
	cis-1,3-dichloropropene	2.50E-04	1.60E-05	3.00E-02	5.33E-04
	1,1,2-trichloroethane	1.50E-04	9.59E-06	4.00E-03	2.40E-03
	benzene	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	dichlorodifluoromethane	2.80E-04	1.79E-05	2.00E-01	8.95E-05
	methylene chloride	2.80E-04	1.79E-05	6.00E-02	2.98E-04
	methyl-tert-butyl ether	2.10E-04	1.34E-05	N/A	--
	toluene	2.50E-04	1.60E-05	8.00E-02	2.00E-04
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	2.56E-05	N/A	--
	n-nitrosodimethylamine	9.00E-07	5.75E-08	8.00E-06	7.19E-03
	Metals and Inorganic Ions				
	arsenic	7.50E-04	4.79E-05	3.00E-04	1.60E-01
	chromium	1.37E-02	8.76E-04	1.50E+00	5.84E-04
	chromium (VI)	9.98E-03	6.38E-04	3.00E-03	2.13E-01
	nitrate	1.10E+01	7.03E-01	1.60E+00	4.39E-01
	perchlorate	5.00E-03	3.20E-04	7.00E-04	4.57E-01
				Total Risk for Oral Route:	2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-16
Estimates of Reasonable Maximum Exposure- Non-cancer Effects- Child Resident- Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	8.61E-04	N/A	--
	tetrachloroethene	1.30E-02	1.81E-04	1.00E-02	1.81E-02
	carbon tetrachloride	1.20E-03	3.34E-07	7.00E-04	4.77E-04
	chloroform	1.00E-03	2.87E-06	1.00E-02	2.87E-04
	1,1-dichloroethane	2.50E-04	7.07E-07	2.00E-01	3.53E-06
	1,2-dichloroethane	6.10E-04	1.08E-06	2.00E-02	5.40E-05
	1,1-dichloroethene	2.40E-03	1.22E-05	5.00E-02	2.43E-04
	cis-1,2-dichloroethene	4.00E-03	1.84E-05	1.00E-02	1.84E-03
	trans-1,2-dichloroethene	2.00E-04	6.50E-07	2.00E-02	3.25E-05
	cis-1,3-dichloropropene	2.50E-04	1.79E-08	3.00E-02	5.98E-07
	1,1,2-trichloroethane	1.50E-04	4.05E-07	4.00E-03	1.01E-04
	benzene	2.50E-04	2.18E-06	4.00E-03	5.46E-04
	dichlorodifluoromethane	2.80E-04	1.06E-06	2.00E-01	5.32E-06
	methylene chloride	2.80E-04	4.13E-07	6.00E-02	6.89E-06
	methyl-tert-butyl ether	2.10E-04	2.28E-07	N/A	--
	toluene	2.50E-04	3.27E-06	8.00E-02	4.09E-05
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	2.19E-09	N/A	--
	n-nitrosodimethylamine	9.00E-07	1.01E-10	8.00E-06	1.26E-05
	Metals and Inorganic Ions				
	arsenic	7.50E-04	3.16E-07	3.00E-04	1.05E-03
	chromium	1.37E-02	5.78E-06	1.50E+00	3.85E-06
	chromium (VI)	9.98E-03	8.42E-06	3.00E-03	2.81E-03
	nitrate	1.10E+01	4.64E-03	1.60E+00	2.90E-03
	perchlorate	5.00E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.029

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-16
Estimates of Reasonable Maximum Exposure- Non-cancer Effects- Child Resident- Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.70E-01	8.15E+01	N/A	--
	tetrachloroethene	1.30E-02	6.23E+00	2.70E+02	2.31E-02
	carbon tetrachloride	1.20E-03	5.75E-01	1.90E+02	3.03E-03
	chloroform	1.00E-03	4.79E-01	9.80E+01	4.89E-03
	1,1-dichloroethane	2.50E-04	1.20E-01	5.00E+02	2.40E-04
	1,2-dichloroethane	6.10E-04	2.92E-01	2.40E+03	1.22E-04
	1,1-dichloroethene	2.40E-03	1.15E+00	2.00E+02	5.75E-03
	cis-1,2-dichloroethene	4.00E-03	1.92E+00	3.50E+01	5.48E-02
	trans-1,2-dichloroethene	2.00E-04	9.59E-02	5.95E+01	1.61E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	1,1,2-trichloroethane	1.50E-04	7.19E-02	1.40E+01	5.14E-03
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	dichlorodifluoromethane	2.80E-04	1.34E-01	2.00E+02	6.73E-04
	methylene chloride	2.80E-04	1.34E-01	4.00E+02	3.36E-04
	methyl-tert-butyl ether	2.10E-04	1.01E-01	3.00E+03	3.36E-05
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	Semivolatile Organic Compounds				
	1,4-dioxane	4.00E-04	NV	8.57E-01	--
	n-nitrosodimethylamine	9.00E-07	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.50E-04	NV	3.00E-02	--
	chromium	1.37E-02	NV	N/A	--
	chromium (VI)	9.98E-03	NV	1.00E-01	--
	nitrate	1.10E+01	NV	1.00E+04	--
	perchlorate	5.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.1
				Total Risk Across All Exposure Routes/Pathways :	2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-17
Risk Results Detailed Summary - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	2.1E-05	1.3E-06	5.6E-05	7.8E-05	31%	1.2E-05	9.6E-07	5.6E-05	6.9E-05	38%
tetrachloroethene	6.6E-05	1.1E-05	1.3E-05	9.0E-05	36%	3.8E-05	8.4E-06	1.3E-05	5.9E-05	33%
carbon tetrachloride	1.7E-06	5.8E-09	8.3E-06	1.0E-05	4%	9.9E-07	4.3E-09	8.3E-06	9.3E-06	5%
chloroform	2.9E-07	1.0E-08	8.7E-07	1.2E-06	<0.5%	1.7E-07	7.6E-09	8.7E-07	1.0E-06	1%
1,1-dichloroethane	1.3E-08	4.7E-10	6.6E-08	8.0E-08	<0.5%	7.8E-09	3.5E-10	6.6E-08	7.4E-08	<0.5%
1,2-dichloroethane	2.7E-07	5.9E-09	2.1E-06	2.4E-06	1%	1.6E-07	4.4E-09	2.1E-06	2.3E-06	1%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
trans-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,3-dichloropropene	2.3E-07	2.1E-10	1.6E-07	4.0E-07	<0.5%	1.4E-07	1.5E-10	1.6E-07	3.0E-07	<0.5%
1,1,2-trichloroethane	1.0E-07	3.4E-09	3.9E-07	5.0E-07	<0.5%	5.9E-08	2.5E-09	3.9E-07	4.6E-07	<0.5%
benzene	2.3E-07	2.5E-08	1.2E-06	1.5E-06	1%	1.4E-07	1.9E-08	1.2E-06	1.3E-06	1%
dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--
methylene chloride	3.7E-08	6.7E-10	4.6E-08	8.4E-08	<0.5%	2.1E-08	5.0E-10	4.6E-08	6.8E-08	<0.5%
methyl-tert-butyl ether	3.6E-09	4.8E-11	9.0E-09	1.3E-08	<0.5%	2.1E-09	3.5E-11	9.0E-09	1.1E-08	<0.5%
toluene	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	9.0E-05	1.3E-05	8.2E-05	**1.8E-04**	73%	5.2E-05	9.4E-06	8.2E-05	**1.4E-04**	78%
Semivolatile Organic Compounds										
1,4-dioxane	1.0E-07	6.9E-12	--	1.0E-07	<0.5%	5.9E-08	5.1E-12	--	5.9E-08	<0.5%
n-nitrosodimethylamine	4.3E-07	6.0E-10	--	4.3E-07	<0.5%	2.5E-07	4.4E-10	--	2.5E-07	<0.5%
Subtotal SVOCs	5.3E-07	6.0E-10	--	5.3E-07	<0.5%	3.1E-07	4.4E-10	--	3.1E-07	<0.5%
Metals and Inorganic Ions										
arsenic	6.7E-05	3.5E-07	--	6.7E-05	27%	3.9E-05	2.6E-07	--	3.9E-05	21%
chromium	--	--	--		--	--	--	--		--
chromium (VI)	--	--	--		--	--	--	--		--
nitrate	--	--	--		--	--	--	--		--
perchlorate	--	--	--		--	--	--	--		--
Subtotal Metals & Inorganic Ions	6.7E-05	3.5E-07	--	**6.7E-05**	26.6%	3.9E-05	2.6E-07	--	**3.9E-05**	21.4%
Total:	**1.6E-04**	1.3E-05	**8.2E-05**	**3E-04**	100%	9.1E-05	9.6E-06	8.2E-05	**2E-04**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-17
Risk Results Detailed Summary - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	3.6E-02	6.1E-03	2.3E-02	6.5E-02	8%	8.3E-02	1.8E-02	2.3E-02	1.2E-01	8%
carbon tetrachloride	4.7E-02	1.6E-04	3.0E-03	5.0E-02	7%	1.1E-01	4.8E-04	3.0E-03	1.1E-01	7%
chloroform	2.7E-03	9.7E-05	4.9E-03	7.7E-03	1%	6.4E-03	2.9E-04	4.9E-03	1.2E-02	1%
1,1-dichloroethane	3.4E-05	1.2E-06	2.4E-04	2.8E-04	<0.5%	8.0E-05	3.5E-06	2.4E-04	3.2E-04	<0.5%
1,2-dichloroethane	8.4E-04	1.8E-05	1.2E-04	9.8E-04	<0.5%	1.9E-03	5.4E-05	1.2E-04	2.1E-03	<0.5%
1,1-dichloroethene	1.3E-03	8.2E-05	5.8E-03	7.2E-03	1%	3.1E-03	2.4E-04	5.8E-03	9.1E-03	1%
cis-1,2-dichloroethene	1.1E-02	6.2E-04	5.5E-02	6.6E-02	9%	2.6E-02	1.8E-03	5.5E-02	8.2E-02	5%
trans-1,2-dichloroethene	2.7E-04	1.1E-05	1.6E-03	1.9E-03	<0.5%	6.4E-04	3.2E-05	1.6E-03	2.3E-03	<0.5%
cis-1,3-dichloropropene	2.3E-04	2.0E-07	6.0E-03	6.2E-03	1%	5.3E-04	6.0E-07	6.0E-03	6.5E-03	<0.5%
1,1,2-trichloroethane	1.0E-03	3.4E-05	5.1E-03	6.2E-03	1%	2.4E-03	1.0E-04	5.1E-03	7.6E-03	<0.5%
benzene	1.7E-03	1.9E-04	2.0E-03	3.9E-03	1%	4.0E-03	5.5E-04	2.0E-03	6.5E-03	<0.5%
dichlorodifluoromethane	3.8E-05	1.8E-06	6.7E-04	7.1E-04	<0.5%	8.9E-05	5.3E-06	6.7E-04	7.7E-04	<0.5%
methylene chloride	1.3E-04	2.3E-06	3.4E-04	4.7E-04	<0.5%	3.0E-04	6.9E-06	3.4E-04	6.4E-04	<0.5%
methyl-tert-butyl ether	--	--	3.4E-05	3.4E-05	<0.5%	--	--	3.4E-05	3.4E-05	<0.5%
toluene	8.6E-05	1.4E-05	4.0E-04	5.0E-04	<0.5%	2.0E-04	4.1E-05	4.0E-04	6.4E-04	<0.5%
Subtotal VOCs	1.0E-01	7.4E-03	1.1E-01	2.2E-01	<0.5%	2.4E-01	2.2E-02	1.1E-01	3.7E-01	22%
Semivolatile Organic Compounds										
1,4-dioxane	--	--	--	--	--	--	--	--	--	--
n-nitrosodimethylamine	3.1E-03	4.3E-06	--	3.1E-03	<0.5%	7.2E-03	1.3E-05	--	7.2E-03	<0.5%
Subtotal SVOCs	3.1E-03	4.3E-06	--	3.1E-03	<0.5%	7.2E-03	1.3E-05	--	7.2E-03	<0.5%
Metals and Inorganic Ions										
arsenic	6.8E-02	3.6E-04	--	6.9E-02	9%	1.6E-01	1.1E-03	--	1.6E-01	10%
chromium	2.5E-04	1.3E-06	--	2.5E-04	<0.5%	5.8E-04	3.9E-06	--	5.9E-04	<0.5%
chromium (VI)	9.1E-02	9.5E-04	--	9.2E-02	12%	2.1E-01	2.8E-03	--	2.2E-01	13%
nitrate	1.9E-01	9.8E-04	--	1.9E-01	25%	4.4E-01	2.9E-03	--	4.4E-01	27%
perchlorate	2.0E-01	--	--	2.0E-01	26%	4.6E-01	--	--	4.6E-01	28%
Subtotal Metals & Inorganic Ions	5.4E-01	2.3E-03	--	5.5E-01	71%	1.3E+00	6.8E-03	--	1.3E+00	77%
Total:	0.6	0.010	0.1081	0.8	100%	**2**	0.03	0.1081	**2**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-18
Risk Results Summary - Based on EPAMW11 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	9.0E-05	1.3E-05	8.2E-05	**1.8E-04**	5.2E-05	9.4E-06	8.2E-05	**1.4E-04**
Subtotal SVOCs	5.3E-07	6.0E-10	--	5.3E-07	3.1E-07	4.4E-10	--	3.1E-07
Subtotal Metals & Inorganic Ions	6.7E-05	3.5E-07	--	**6.7E-05**	3.9E-05	2.6E-07	--	**3.9E-05**
Total:	**2E-04**	1E-05	8E-05	**3E-04**	9E-05	1E-05	8E-05	**2E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	1.0E-01	7.4E-03	1.1E-01	2.2E-01	2.4E-01	2.2E-02	1.1E-01	3.7E-01
Subtotal SVOCs	3.1E-03	4.3E-06	--	3.1E-03	7.2E-03	1.3E-05	--	7.2E-03
Subtotal Metals & Inorganic Ions	5.4E-01	2.3E-03	--	5.5E-01	1.3E+00	6.8E-03	--	1.3E+00
Total:	0.6	0.010	0.1	0.8	**2**	0.03	0.1	**2**

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-19
Groundwater Exposure Point Concentrations - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
EPAMW18	***Volatile Organic Compounds***		
	trichloroethene	2.50E-04	2007[a]
	1,1-dichloroethene	8.50E-05	2007
	acetone	2.50E-03	2007[a]
	benzene	2.50E-04	2007[a]
	bromodichloromethane	2.50E-04	2007[a]
	bromoform	2.50E-04	2007[a]
	chloroform	2.00E-04	2007
	chloromethane	2.50E-04	2007[a]
	dibromochloromethane	2.50E-04	2007[a]
	cis-1,3-dichloropropene	2.50E-04	2007[a]
	methylene chloride	2.60E-04	2007
	toluene	7.60E-05	2007
	Semivolatile Organic Compounds		
	bis(2-ethylhexyl) phthalate	3.00E-04	2007[a]
	n-nitrosodimethylamine	2.00E-06	2007
	Metals and Inorganic Ions		
	arsenic	1.30E-03	2006
	chromium	4.80E-04	2006[a]
	nitrate	1.70E+00	2007
	perchlorate	1.00E-03	2007[a]

Notes:

[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.

COPC = contaminant of potential concern

mg/L = milligrams per liter

Table F-20
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects- Adult Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	2.35E-06	1.30E-02	3.05E-08
	1,1-dichloroethene	8.50E-05	7.98E-07	N/A	--
	acetone	2.50E-03	2.35E-05	N/A	--
	benzene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	bromodichloromethane	2.50E-04	2.35E-06	1.30E-01	3.05E-07
	bromoform	2.50E-04	2.35E-06	7.90E-03	1.86E-08
	chloroform	2.00E-04	1.88E-06	3.10E-02	5.82E-08
	chloromethane	2.50E-04	2.35E-06	1.30E-02	3.05E-08
	dibromochloromethane	2.50E-04	2.35E-06	9.40E-02	2.21E-07
	cis-1,3-dichloropropene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	methylene chloride	2.60E-04	2.44E-06	1.40E-02	3.42E-08
	toluene	7.60E-05	7.14E-07	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	2.82E-06	3.00E-03	8.45E-09
	n-nitrosodimethylamine	2.00E-06	1.88E-08	5.10E+01	9.58E-07
	Metals and Inorganic Ions				
	arsenic	1.30E-03	1.22E-05	9.45E+00	1.15E-04
	chromium	4.80E-04	4.51E-06	N/A	--
	nitrate	1.70E+00	1.60E-02	N/A	--
	perchlorate	1.00E-03	9.39E-06	N/A	--
				Total Risk for Oral Route:	1.2E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-20
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects- Adult Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.47E-07	1.30E-02	1.91E-09
	1,1-dichloroethene	8.50E-05	5.00E-08	N/A	--
	acetone	2.50E-03	6.97E-08	N/A	--
	benzene	2.50E-04	2.54E-07	1.00E-01	2.54E-08
	bromodichloromethane	2.50E-04	5.64E-08	1.30E-01	7.33E-09
	bromoform	2.50E-04	2.70E-08	7.90E-03	2.13E-10
	chloroform	2.00E-04	6.67E-08	3.10E-02	2.07E-09
	chloromethane	2.50E-04	4.05E-08	1.30E-02	5.26E-10
	dibromochloromethane	2.50E-04	4.28E-08	9.40E-02	4.02E-09
	cis-1,3-dichloropropene	2.50E-04	2.08E-09	1.00E-01	2.08E-10
	methylene chloride	2.60E-04	4.46E-08	1.40E-02	6.25E-10
	toluene	7.60E-05	1.16E-07	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	3.68E-07	3.00E-03	1.10E-09
	n-nitrosodimethylamine	2.00E-06	2.60E-11	5.10E+01	1.33E-09
	Metals and Inorganic Ions				
	arsenic	1.30E-03	6.37E-08	9.45E+00	6.02E-07
	chromium	4.80E-04	2.35E-08	N/A	--
	nitrate	1.70E+00	8.34E-05	N/A	--
	perchlorate	1.00E-03	N/A	N/A	--
				Total Risk for Dermal Route:	6.5E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-20
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects- Adult Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	4.11E-02	2.00E-06	8.22E-08
	1,1-dichloroethene	8.50E-05	1.40E-02	N/A	--
	acetone	2.50E-03	4.11E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	bromodichloromethane	2.50E-04	4.11E-02	3.70E-05	1.52E-06
	bromoform	2.50E-04	4.11E-02	1.11E-06	4.56E-08
	chloroform	2.00E-04	3.29E-02	5.30E-06	1.74E-07
	chloromethane	2.50E-04	4.11E-02	1.80E-06	7.40E-08
	dibromochloromethane	2.50E-04	4.11E-02	2.70E-05	1.11E-06
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	methylene chloride	2.60E-04	4.27E-02	1.00E-06	4.27E-08
	toluene	7.60E-05	1.25E-02	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	NV	2.40E-06	--
	n-nitrosodimethylamine	2.00E-06	NV	1.40E-02	--
	Metals and Inorganic Ions				
	arsenic	1.30E-03	NV	3.30E-03	--
	chromium	4.80E-04	NV	1.20E-02	--
	nitrate	1.70E+00	NV	N/A	--
	perchlorate	1.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	4.4E-06
				Total Risk Across All Exposure Routes/Pathways :	**1E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-21
Estimates of Reasonable Maximum Exposure - Non-cancer Effects - Adult Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	6.85E-06	N/A	--
	1,1-dichloroethene	8.50E-05	2.33E-06	5.00E-02	4.66E-05
	acetone	2.50E-03	6.85E-05	9.00E-01	7.61E-05
	benzene	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	bromodichloromethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	bromoform	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	chloroform	2.00E-04	5.48E-06	1.00E-02	5.48E-04
	chloromethane	2.50E-04	6.85E-06	N/A	--
	dibromochloromethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	cis-1,3-dichloropropene	2.50E-04	6.85E-06	3.00E-02	2.28E-04
	methylene chloride	2.60E-04	7.12E-06	6.00E-02	1.19E-04
	toluene	7.60E-05	2.08E-06	8.00E-02	2.60E-05
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	8.22E-06	2.00E-02	4.11E-04
	n-nitrosodimethylamine	2.00E-06	5.48E-08	8.00E-06	6.85E-03
	Metals and Inorganic Ions				
	arsenic	1.30E-03	3.56E-05	3.00E-04	1.19E-01
	chromium	4.80E-04	1.32E-05	1.50E+00	8.77E-06
	nitrate	1.70E+00	4.66E-02	1.60E+00	2.91E-02
	perchlorate	1.00E-03	2.74E-05	7.00E-04	3.91E-02
				Total Risk for Oral Route:	0.2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-21
Estimates of Reasonable Maximum Exposure - Non-cancer Effects - Adult Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	4.29E-07	N/A	
	1,1-dichloroethene	8.50E-05	1.46E-07	5.00E-02	2.92E-06
	acetone	2.50E-03	2.03E-07	9.00E-01	2.26E-07
	benzene	2.50E-04	7.40E-07	4.00E-03	1.85E-04
	bromodichloromethane	2.50E-04	1.64E-07	2.00E-02	8.22E-06
	bromoform	2.50E-04	7.87E-08	2.00E-02	3.93E-06
	chloroform	2.00E-04	1.94E-07	1.00E-02	1.94E-05
	chloromethane	2.50E-04	1.18E-07	N/A	--
	dibromochloromethane	2.50E-04	1.25E-07	2.00E-02	6.24E-06
	cis-1,3-dichloropropene	2.50E-04	6.08E-09	3.00E-02	2.03E-07
	methylene chloride	2.60E-04	1.30E-07	6.00E-02	2.17E-06
	toluene	7.60E-05	3.37E-07	8.00E-02	4.21E-06
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	1.07E-06	2.00E-02	5.36E-05
	n-nitrosodimethylamine	2.00E-06	7.58E-11	8.00E-06	9.47E-06
	Metals and Inorganic Ions				
	arsenic	1.30E-03	1.86E-07	3.00E-04	6.20E-04
	chromium	4.80E-04	6.86E-08	1.50E+00	4.58E-08
	nitrate	1.70E+00	2.43E-04	1.60E+00	1.52E-04
	perchlorate	1.00E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.0011

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-21
Estimates of Reasonable Maximum Exposure - Non-cancer Effects - Adult Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.20E-01	N/A	
	1,1-dichloroethene	8.50E-05	4.08E-02	2.00E+02	2.04E-04
	acetone	2.50E-03	1.20E+00	3.10E+04	3.87E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	bromodichloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	bromoform	2.50E-04	1.20E-01	N/A	
	chloroform	2.00E-04	9.59E-02	9.80E+01	9.78E-04
	chloromethane	2.50E-04	1.20E-01	9.00E+01	1.33E-03
	dibromochloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	methylene chloride	2.60E-04	1.25E-01	4.00E+02	3.12E-04
	toluene	7.60E-05	3.64E-02	3.00E+02	1.21E-04
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	NV	7.00E+01	
	n-nitrosodimethylamine	2.00E-06	NV	N/A	
	Metals and Inorganic Ions				
	arsenic	1.30E-03	NV	3.00E-02	
	chromium	4.80E-04	NV	N/A	
	nitrate	1.70E+00	NV	1.00E+04	
	perchlorate	1.00E-03	NV	N/A	
				Total Risk for Inhalation Route:	0.01
				Total HI Across All Exposure Routes/Pathways :	0.2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-22
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects- Child Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.37E-06	1.30E-02	1.78E-08
	1,1-dichloroethene	8.50E-05	4.66E-07	N/A	--
	acetone	2.50E-03	1.37E-05	N/A	--
	benzene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	bromodichloromethane	2.50E-04	1.37E-06	1.30E-01	1.78E-07
	bromoform	2.50E-04	1.37E-06	7.90E-03	1.08E-08
	chloroform	2.00E-04	1.10E-06	3.10E-02	3.40E-08
	chloromethane	2.50E-04	1.37E-06	1.30E-02	1.78E-08
	dibromochloromethane	2.50E-04	1.37E-06	9.40E-02	1.29E-07
	cis-1,3-dichloropropene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	methylene chloride	2.60E-04	1.42E-06	1.40E-02	1.99E-08
	toluene	7.60E-05	4.16E-07	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	1.64E-06	3.00E-03	4.93E-09
	n-nitrosodimethylamine	2.00E-06	1.10E-08	5.10E+01	5.59E-07
	Metals and Inorganic Ions				
	arsenic	1.30E-03	7.12E-06	9.45E+00	6.73E-05
	chromium	4.80E-04	2.63E-06	N/A	--
	nitrate	1.70E+00	9.32E-03	N/A	--
	perchlorate	1.00E-03	5.48E-06	N/A	--
				Total Risk for Oral Route:	6.9E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-22
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects- Child Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.08E-07	1.30E-02	1.41E-09
	1,1-dichloroethene	8.50E-05	3.69E-08	N/A	--
	acetone	2.50E-03	5.14E-08	N/A	--
	benzene	2.50E-04	1.87E-07	1.00E-01	1.87E-08
	bromodichloromethane	2.50E-04	4.16E-08	1.30E-01	5.41E-09
	bromoform	2.50E-04	1.99E-08	7.90E-03	1.57E-10
	chloroform	2.00E-04	4.92E-08	3.10E-02	1.52E-09
	chloromethane	2.50E-04	2.98E-08	1.30E-02	3.88E-10
	dibromochloromethane	2.50E-04	3.16E-08	9.40E-02	2.97E-09
	cis-1,3-dichloropropene	2.50E-04	1.54E-09	1.00E-01	1.54E-10
	methylene chloride	2.60E-04	3.29E-08	1.40E-02	4.61E-10
	toluene	7.60E-05	8.52E-08	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	2.71E-07	3.00E-03	8.14E-10
	n-nitrosodimethylamine	2.00E-06	1.92E-11	5.10E+01	9.78E-10
	Metals and Inorganic Ions				
	arsenic	1.30E-03	4.70E-08	9.45E+00	4.44E-07
	chromium	4.80E-04	1.74E-08	N/A	--
	nitrate	1.70E+00	6.15E-05	N/A	--
	perchlorate	1.00E-03	N/A	N/A	--
				Total Risk for Dermal Route:	4.8E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-22
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects- Child Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	4.11E-02	2.00E-06	8.22E-08
	1,1-dichloroethene	8.50E-05	1.40E-02	N/A	--
	acetone	2.50E-03	4.11E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	bromodichloromethane	2.50E-04	4.11E-02	3.70E-05	1.52E-06
	bromoform	2.50E-04	4.11E-02	1.11E-06	4.56E-08
	chloroform	2.00E-04	3.29E-02	5.30E-06	1.74E-07
	chloromethane	2.50E-04	4.11E-02	1.80E-06	7.40E-08
	dibromochloromethane	2.50E-04	4.11E-02	2.70E-05	1.11E-06
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	methylene chloride	2.60E-04	4.27E-02	1.00E-06	4.27E-08
	toluene	7.60E-05	1.25E-02	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	NV	2.40E-06	--
	n-nitrosodimethylamine	2.00E-06	NV	1.40E-02	--
	Metals and Inorganic Ions				
	arsenic	1.30E-03	NV	3.30E-03	--
	chromium	4.80E-04	NV	1.20E-02	--
	nitrate	1.70E+00	NV	N/A	--
	perchlorate	1.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	4.4E-06
				Total Risk Across All Exposure Routes/Pathways :	**7E-05**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-23
Estimates of Reasonable Maximum Exposure - Non-cancer Effects - Child Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.60E-05	N/A	--
	1,1-dichloroethene	8.50E-05	5.43E-06	5.00E-02	1.09E-04
	acetone	2.50E-03	1.60E-04	9.00E-01	1.78E-04
	benzene	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	bromodichloromethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	bromoform	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	chloroform	2.00E-04	1.28E-05	1.00E-02	1.28E-03
	chloromethane	2.50E-04	1.60E-05	N/A	--
	dibromochloromethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	cis-1,3-dichloropropene	2.50E-04	1.60E-05	3.00E-02	5.33E-04
	methylene chloride	2.60E-04	1.66E-05	6.00E-02	2.77E-04
	toluene	7.60E-05	4.86E-06	8.00E-02	6.07E-05
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	1.92E-05	2.00E-02	9.59E-04
	n-nitrosodimethylamine	2.00E-06	1.28E-07	8.00E-06	1.60E-02
	Metals and Inorganic Ions				
	arsenic	1.30E-03	8.31E-05	3.00E-04	2.77E-01
	chromium	4.80E-04	3.07E-05	1.50E+00	2.05E-05
	nitrate	1.70E+00	1.09E-01	1.60E+00	6.79E-02
	perchlorate	1.00E-03	6.39E-05	7.00E-04	9.13E-02
				Total Risk for Oral Route:	0.5

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-23
Estimates of Reasonable Maximum Exposure - Non-cancer Effects - Child Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.27E-06	N/A	--
	1,1-dichloroethene	8.50E-05	4.30E-07	5.00E-02	8.61E-06
	acetone	2.50E-03	6.00E-07	9.00E-01	6.67E-07
	benzene	2.50E-04	2.18E-06	4.00E-03	5.46E-04
	bromodichloromethane	2.50E-04	4.85E-07	2.00E-02	2.43E-05
	bromoform	2.50E-04	2.32E-07	2.00E-02	1.16E-05
	chloroform	2.00E-04	5.74E-07	1.00E-02	5.74E-05
	chloromethane	2.50E-04	3.48E-07	N/A	--
	dibromochloromethane	2.50E-04	3.68E-07	2.00E-02	1.84E-05
	cis-1,3-dichloropropene	2.50E-04	1.79E-08	3.00E-02	5.98E-07
	methylene chloride	2.60E-04	3.84E-07	6.00E-02	6.40E-06
	toluene	7.60E-05	9.94E-07	8.00E-02	1.24E-05
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	3.16E-06	2.00E-02	1.58E-04
	n-nitrosodimethylamine	2.00E-06	2.24E-10	8.00E-06	2.80E-05
	Metals and Inorganic Ions				
	arsenic	1.30E-03	5.48E-07	3.00E-04	1.83E-03
	chromium	4.80E-04	2.03E-07	1.50E+00	1.35E-07
	nitrate	1.70E+00	7.17E-04	1.60E+00	4.48E-04
	perchlorate	1.00E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.003

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-23
Estimates of Reasonable Maximum Exposure - Non-cancer Effects - Child Resident - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.20E-01	N/A	--
	1,1-dichloroethene	8.50E-05	4.08E-02	2.00E+02	2.04E-04
	acetone	2.50E-03	1.20E+00	3.10E+04	3.87E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	bromodichloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	bromoform	2.50E-04	1.20E-01	N/A	--
	chloroform	2.00E-04	9.59E-02	9.80E+01	9.78E-04
	chloromethane	2.50E-04	1.20E-01	9.00E+01	1.33E-03
	dibromochloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	methylene chloride	2.60E-04	1.25E-01	4.00E+02	3.12E-04
	toluene	7.60E-05	3.64E-02	3.00E+02	1.21E-04
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	NV	7.00E+01	--
	n-nitrosodimethylamine	2.00E-06	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	1.30E-03	NV	3.00E-02	--
	chromium	4.80E-04	NV	N/A	--
	nitrate	1.70E+00	NV	1.00E+04	--
	perchlorate	1.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.01
				Total HI Across All Exposure Routes/Pathways :	0.5

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-24
Risk Results Detailed Summary - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	3.1E-08	1.9E-09	8.2E-08	1.1E-07	<0.5%	1.8E-08	1.4E-09	8.2E-08	1.0E-07	<0.5%
1,1-dichloroethene	--	--	--	0.0E+00	--	--	--	--	--	--
acetone	--	--	--	0.0E+00	--	--	--	--	--	--
benzene	2.3E-07	2.5E-08	1.2E-06	1.5E-06	1%	1.4E-07	1.9E-08	1.2E-06	1.3E-06	2%
bromodichloromethane	3.1E-07	7.3E-09	1.5E-06	1.8E-06	2%	1.8E-07	5.4E-09	1.5E-06	1.7E-06	2%
bromoform	1.9E-08	2.1E-10	4.6E-08	6.4E-08	<0.5%	1.1E-08	1.6E-10	4.6E-08	5.7E-08	<0.5%
chloroform	5.8E-08	2.1E-09	1.7E-07	2.3E-07	<0.5%	3.4E-08	1.5E-09	1.7E-07	2.1E-07	<0.5%
chloromethane	3.1E-08	5.3E-10	7.4E-08	1.1E-07	<0.5%	1.8E-08	3.9E-10	7.4E-08	9.2E-08	<0.5%
dibromochloromethane	2.2E-07	4.0E-09	1.1E-06	1.3E-06	1%	1.3E-07	3.0E-09	1.1E-06	1.2E-06	2%
cis-1,3-dichloropropene	2.3E-07	2.1E-10	1.6E-07	4.0E-07	<0.5%	1.4E-07	1.5E-10	1.6E-07	3.0E-07	<0.5%
methylene chloride	3.4E-08	6.2E-10	4.3E-08	7.8E-08	<0.5%	2.0E-08	4.6E-10	4.3E-08	6.3E-08	<0.5%
toluene	--	--	--	0.0E+00		--	--	--		
Subtotal VOCs	1.2E-06	4.2E-08	4.4E-06	**5.6E-06**	5%	6.8E-07	3.1E-08	4.4E-06	**5.1E-06**	7%
Semivolatile Organic Compounds										
bis(2-ethylhexyl) phthalate	8.5E-09	1.1E-09	--	9.6E-09	<0.5%	4.9E-09	8.1E-10	--	5.7E-09	<0.5%
n-nitrosodimethylamine	9.6E-07	1.3E-09	--	9.6E-07	1%	5.6E-07	9.8E-10	--	5.6E-07	1%
Subtotal SVOCs	9.7E-07	2.4E-09	--	9.7E-07	1%	5.6E-07	1.8E-09	0.0E+00	5.7E-07	1%
Metals and Inorganic Ions	0.0E+00			0.0E+00						
arsenic	1.2E-04	6.0E-07	--	1.2E-04	95%	6.7E-05	4.4E-07	--	6.8E-05	93%
chromium	--	--	--	0.0E+00	--	--	--	--	--	--
nitrate	--	--	--	0.0E+00	--	--	--	--	--	--
perchlorate	--	--	--	0.0E+00	--	--	--	--	--	--
Subtotal Metals	1.2E-04	6.0E-07	--	**1.2E-04**	95%	6.7E-05	4.4E-07	--	**6.8E-05**	93%
Total:	1E-04	6E-07	--	**1E-04**	100%	7E-05	5E-07	4E-06	**7E-05**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-24
Risk Results Detailed Summary - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	4.7E-05	2.9E-06	2.0E-04	2.5E-04	<0.5%	1.1E-04	8.6E-06	2.0E-04	3.2E-04	<0.5%
acetone	7.6E-05	2.3E-07	3.9E-05	1.1E-04	<0.5%	1.8E-04	6.7E-07	3.9E-05	2.2E-04	<0.5%
benzene	1.7E-03	1.9E-04	2.0E-03	3.9E-03	3%	4.0E-03	5.5E-04	2.0E-03	6.5E-03	1%
bromodichloromethane	3.4E-04	8.2E-06	1.7E-03	2.1E-03	1%	8.0E-04	2.4E-05	1.7E-03	2.5E-03	1%
bromoform	3.4E-04	3.9E-06	--	3.5E-04	<0.5%	8.0E-04	1.2E-05	--	8.1E-04	<0.5%
chloroform	5.5E-04	1.9E-05	9.8E-04	1.5E-03	1%	1.3E-03	5.7E-05	9.8E-04	2.3E-03	<0.5%
chloromethane	--	--	1.3E-03	1.3E-03	1%	--	--	1.3E-03	1.3E-03	<0.5%
dibromochloromethane	3.4E-04	6.2E-06	1.7E-03	2.1E-03	1%	8.0E-04	1.8E-05	1.7E-03	2.5E-03	1%
cis-1,3-dichloropropene	2.3E-04	2.0E-07	6.0E-03	6.2E-03	4%	5.3E-04	6.0E-07	6.0E-03	6.5E-03	1%
methylene chloride	1.2E-04	2.2E-06	3.1E-04	4.3E-04	<0.5%	2.8E-04	6.4E-06	3.1E-04	6.0E-04	<0.5%
toluene	2.6E-05	4.2E-06	1.2E-04	1.5E-04	<0.5%	6.1E-05	1.2E-05	1.2E-04	1.9E-04	<0.5%
Subtotal VOCs	3.8E-03	2.3E-04	1.4E-02	1.8E-02	13%	8.8E-03	6.9E-04	1.4E-02	2.4E-02	4%
Semivolatile Organic Compounds										
bis(2-ethylhexyl) phthalate	4.1E-04	5.4E-05	--	4.6E-04	<0.5%	9.6E-04	1.6E-04	--	1.1E-03	<0.5%
n-nitrosodimethylamine	6.8E-03	9.5E-06	--	6.9E-03	5%	1.6E-02	2.8E-05	--	1.6E-02	3%
Subtotal SVOCs	7.3E-03	6.3E-05	--	7.3E-03	5%	1.7E-02	1.9E-04	--	1.7E-02	3%
Metals and Inorganic Ions										
arsenic	1.2E-01	6.2E-04	--	1.2E-01	82%	2.8E-01	1.8E-03	--	2.8E-01	58%
chromium	8.8E-06	4.6E-08	--	8.8E-06	<0.5%	2.0E-05	1.4E-07	--	2.1E-05	<0.5%
nitrate	2.9E-02	1.5E-04	--	2.9E-02	20%	6.8E-02	4.5E-04	--	6.8E-02	14%
perchlorate	3.9E-02	--	--	3.9E-02	27%	9.1E-02	--	--	9.1E-02	19%
Subtotal Metals	1.9E-01	7.7E-04	--	1.2E-01	82%	4.4E-01	2.3E-03	--	4.4E-01	91%
Total:	0.2	0.0011	0.01	0.1	100%	0.5	0.003	0.01	0.5	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-25
Risk Results Summary - Based on EPAMW18 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	1.2E-06	4.2E-08	4.4E-06	**5.6E-06**	6.8E-07	3.1E-08	4.4E-06	**5.1E-06**
Subtotal SVOCs	9.7E-07	2.4E-09	--	9.7E-07	5.6E-07	1.8E-09	--	5.7E-07
Subtotal Metals	1.2E-04	6.0E-07	--	**1.2E-04**	6.7E-05	4.4E-07	--	**6.8E-05**
Total:	1E-04	6E-07	4E-06	**1E-04**	7E-05	5E-07	4E-06	**7E-05**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	3.8E-03	2.3E-04	1.4E-02	1.8E-02	8.8E-03	6.9E-04	1.4E-02	2.4E-02
Subtotal SVOCs	7.3E-03	6.3E-05	--	7.3E-03	1.7E-02	1.9E-04	--	1.7E-02
Subtotal Metals	1.9E-01	7.7E-04	--	1.2E-01	4.4E-01	2.3E-03	--	4.4E-01
Total:	0.2	0.0011	0.01	0.1	0.5	0.003	0.01	0.5

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-26
Groundwater Exposure Point Concentrations - Based on Facility 1
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 1	***Volatile Organic Compounds***		
	trichloroethene	1.70E+00	2007
	tetrachloroethene	2.80E-02	2007
	carbon tetrachloride	5.80E-04	2007
	1,1-dichloroethene	1.60E-02	2007
	1,1-dichloroethane	2.00E-03	2007
	1,2-dichloroethane	1.00E-02	2007
	cis-1,2-dichloroethene	1.70E-02	2007
	benzene	1.25E-04	2007[a]
	chloroform	2.50E-03	2007
	Semivolatile Organic Compounds		
	1,4-dioxane	8.00E-03	2006

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-27
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 1 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	1.60E-02	1.30E-02	2.08E-04
	tetrachloroethene	2.80E-02	2.63E-04	5.40E-01	1.42E-04
	carbon tetrachloride	5.80E-04	5.45E-06	1.50E-01	8.17E-07
	1,1-dichloroethene	1.60E-02	1.50E-04	N/A	--
	1,1-dichloroethane	2.00E-03	1.88E-05	5.70E-03	1.07E-07
	1,2-dichloroethane	1.00E-02	9.39E-05	4.70E-02	4.41E-06
	cis-1,2-dichloroethene	1.70E-02	1.60E-04	N/A	--
	benzene	1.25E-04	1.17E-06	1.00E-01	1.17E-07
	chloroform	2.50E-03	2.35E-05	3.10E-02	7.28E-07
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	7.51E-05	2.70E-02	2.03E-06
				Total Risk for Oral Route:	3.6E-04
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	1.00E-03	1.30E-02	1.30E-05
	tetrachloroethene	2.80E-02	4.53E-05	5.40E-01	2.45E-05
	1,1-dichloroethane	2.00E-03	6.57E-07	5.70E-03	3.75E-09
	1,1-dichloroethene	1.60E-02	9.41E-06	N/A	--
	1,2-dichloroethane	1.00E-02	2.06E-06	4.70E-02	9.68E-08
	cis-1,2-dichloroethene	1.70E-02	9.07E-06	N/A	--
	benzene	1.25E-04	1.27E-07	1.00E-01	1.27E-08
	carbon tetrachloride	5.80E-04	1.88E-08	1.50E-01	2.82E-09
	chloroform	2.50E-03	8.34E-07	3.10E-02	2.58E-08
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	5.10E-09	2.70E-02	1.38E-10
				Total Risk for Dermal Route:	3.8E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-27
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 1 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	2.79E+02	2.00E-06	5.59E-04
	tetrachloroethene	2.80E-02	4.60E+00	5.90E-06	2.72E-05
	1,1-dichloroethane	2.00E-03	3.29E-01	1.60E-06	5.26E-07
	1,1-dichloroethene	1.60E-02	2.63E+00	N/A	--
	1,2-dichloroethane	1.00E-02	1.64E+00	2.10E-05	3.45E-05
	cis-1,2-dichloroethene	1.70E-02	2.79E+00	N/A	--
	benzene	1.25E-04	2.05E-02	2.90E-05	5.96E-07
	carbon tetrachloride	5.80E-04	9.53E-02	4.20E-05	4.00E-06
	chloroform	2.50E-03	4.11E-01	5.30E-06	2.18E-06
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	NV	7.70E-06	--
				Total Risk for Inhalation Route:	6.3E-04
				Total Risk Across All Exposure Routes/Pathways :	**1E-03**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-28
Estimates of Reasonable Maximum Exposure- Non-cancer Effects- Adult Resident - Based on Facility 1 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	4.66E-02	N/A	
	tetrachloroethene	2.80E-02	7.67E-04	1.00E-02	7.67E-02
	1,1-dichloroethane	5.80E-04	1.59E-05	2.00E-01	7.95E-05
	1,1-dichloroethene	1.60E-02	4.38E-04	5.00E-02	8.77E-03
	1,2-dichloroethane	2.00E-03	5.48E-05	2.00E-02	2.74E-03
	cis-1,2-dichloroethene	8.20E-06	2.25E-07	1.00E-02	2.25E-05
	benzene	1.70E-02	4.66E-04	4.00E-03	1.16E-01
	carbon tetrachloride	1.25E-04	3.42E-06	7.00E-04	4.89E-03
	chloroform	2.50E-03	6.85E-05	1.00E-02	6.85E-03
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	2.19E-04	N/A	--
				Total Risk for Oral Route:	0.22
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	2.92E-03	N/A	
	tetrachloroethene	2.80E-02	1.32E-04	1.00E-02	1.32E-02
	1,1-dichloroethane	2.00E-03	1.92E-06	2.00E-01	9.58E-06
	1,1-dichloroethene	1.60E-02	2.75E-05	5.00E-02	5.49E-04
	1,2-dichloroethane	1.00E-02	6.01E-06	2.00E-02	3.00E-04
	cis-1,2-dichloroethene	1.70E-02	2.64E-05	1.00E-02	2.64E-03
	benzene	1.25E-04	3.70E-07	4.00E-03	9.25E-05
	carbon tetrachloride	5.80E-04	5.47E-08	7.00E-04	7.82E-05
	chloroform	2.50E-03	2.43E-06	1.00E-02	2.43E-04
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	1.49E-08	N/A	--
				Total Risk for Dermal Route:	0.017

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-28
Estimates of Reasonable Maximum Exposure- Non-cancer Effects- Adult Resident - Based on Facility 1 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	8.15E+02	N/A	
	tetrachloroethene	2.80E-02	1.34E+01	2.70E+02	4.97E-02
	1,1-dichloroethane	2.00E-03	9.59E-01	5.00E+02	1.92E-03
	1,1-dichloroethene	1.60E-02	7.67E+00	2.00E+02	3.84E-02
	1,2-dichloroethane	1.00E-02	4.79E+00	2.40E+03	2.00E-03
	cis-1,2-dichloroethene	1.70E-02	8.15E+00	3.50E+01	2.33E-01
	benzene	1.25E-04	5.99E-02	6.00E+01	9.99E-04
	carbon tetrachloride	5.80E-04	2.78E-01	1.90E+02	1.46E-03
	chloroform	2.50E-03	1.20E+00	9.80E+01	1.22E-02
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	NV	3.00E+03	--
				Total Risk for Inhalation Route:	0.3
				Total Risk Across All Exposure Routes/Pathways :	0.6

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-29
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 1 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	9.32E-03	1.30E-02	1.21E-04
	tetrachloroethene	2.80E-02	1.53E-04	5.40E-01	8.28E-05
	1,1-dichloroethane	2.00E-03	1.10E-05	5.70E-03	6.25E-08
	1,1-dichloroethene	1.60E-02	8.77E-05	N/A	--
	1,2-dichloroethane	1.00E-02	5.48E-05	4.70E-02	2.58E-06
	cis-1,2-dichloroethene	1.70E-02	9.32E-05	N/A	--
	benzene	1.25E-04	6.85E-07	1.00E-01	6.85E-08
	carbon tetrachloride	5.80E-04	3.18E-06	1.50E-01	4.77E-07
	chloroform	2.50E-03	1.37E-05	3.10E-02	4.25E-07
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	4.38E-05	2.70E-02	1.18E-06
				Total Risk for Oral Route:	2.1E-04
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	7.38E-04	1.30E-02	9.59E-06
	tetrachloroethene	2.80E-02	3.34E-05	5.40E-01	1.80E-05
	1,1-dichloroethane	2.00E-03	4.85E-07	5.70E-03	2.76E-09
	1,1-dichloroethene	1.60E-02	6.94E-06	N/A	--
	1,2-dichloroethane	1.00E-02	1.52E-06	4.70E-02	7.14E-08
	cis-1,2-dichloroethene	1.70E-02	6.69E-06	N/A	--
	benzene	1.25E-04	9.36E-08	1.00E-01	9.36E-09
	carbon tetrachloride	5.80E-04	1.38E-08	1.50E-01	2.08E-09
	chloroform	2.50E-03	6.15E-07	3.10E-02	1.91E-08
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	3.76E-09	2.70E-02	1.02E-10
				Total Risk for Dermal Route:	2.8E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-29
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 1 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	2.79E+02	2.00E-06	5.59E-04
	tetrachloroethene	2.80E-02	4.60E+00	5.90E-06	2.72E-05
	1,1-dichloroethane	2.00E-03	3.29E-01	1.60E-06	5.26E-07
	1,1-dichloroethene	1.60E-02	2.63E+00	N/A	--
	1,2-dichloroethane	1.00E-02	1.64E+00	2.10E-05	3.45E-05
	cis-1,2-dichloroethene	1.70E-02	2.79E+00	N/A	--
	benzene	1.25E-04	2.05E-02	2.90E-05	5.96E-07
	carbon tetrachloride	5.80E-04	9.53E-02	4.20E-05	4.00E-06
	chloroform	2.50E-03	4.11E-01	5.30E-06	2.18E-06
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	NV	7.70E-06	--
				Total Risk for Inhalation Route:	6.3E-04
				Total Risk Across All Exposure Routes/Pathways :	**9E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-30
Estimates of Reasonable Maximum Exposure - Non-cancer Effects-Child Resident -Based on Facility 1 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	1.09E-01	N/A	--
	tetrachloroethene	2.80E-02	1.79E-03	1.00E-02	1.79E-01
	1,1-dichloroethane	2.00E-03	1.28E-04	2.00E-01	6.39E-04
	1,1-dichloroethene	1.60E-02	1.02E-03	5.00E-02	2.05E-02
	1,2-dichloroethane	1.00E-02	6.39E-04	2.00E-02	3.20E-02
	cis-1,2-dichloroethene	1.70E-02	1.09E-03	1.00E-02	1.09E-01
	benzene	1.25E-04	7.99E-06	4.00E-03	2.00E-03
	carbon tetrachloride	5.80E-04	3.71E-05	7.00E-04	5.30E-02
	chloroform	2.50E-03	1.60E-04	1.00E-02	1.60E-02
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	5.11E-04	N/A	--
				Total Risk for Oral Route:	0.41
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	8.61E-03	N/A	--
	tetrachloroethene	2.80E-02	3.90E-04	1.00E-02	3.90E-02
	1,1-dichloroethane	2.00E-03	5.65E-06	2.00E-01	2.83E-05
	1,1-dichloroethene	1.60E-02	8.10E-05	5.00E-02	1.62E-03
	1,2-dichloroethane	1.00E-02	1.77E-05	2.00E-02	8.86E-04
	cis-1,2-dichloroethene	1.70E-02	7.80E-05	1.00E-02	7.80E-03
	benzene	1.25E-04	1.09E-06	4.00E-03	2.73E-04
	carbon tetrachloride	5.80E-04	1.62E-07	7.00E-04	2.31E-04
	chloroform	2.50E-03	7.17E-06	1.00E-02	7.17E-04
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	4.39E-08	N/A	--
				Total Risk for Dermal Route:	0.051

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-30
Estimates of Reasonable Maximum Exposure - Non-cancer Effects-Child Resident -Based on Facility 1 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.70E+00	8.15E+02	N/A	--
	tetrachloroethene	2.80E-02	1.34E+01	2.70E+02	4.97E-02
	1,1-dichloroethane	2.00E-03	9.59E-01	5.00E+02	1.92E-03
	1,1-dichloroethene	1.60E-02	7.67E+00	2.00E+02	3.84E-02
	1,2-dichloroethane	1.00E-02	4.79E+00	2.40E+03	2.00E-03
	cis-1,2-dichloroethene	1.70E-02	8.15E+00	3.50E+01	2.33E-01
	benzene	1.25E-04	5.99E-02	6.00E+01	9.99E-04
	carbon tetrachloride	5.80E-04	2.78E-01	1.90E+02	1.46E-03
	chloroform	2.50E-03	1.20E+00	9.80E+01	1.22E-02
	Semivolatile Organic Compounds				
	1,4-dioxane	8.00E-03	NV	3.00E+03	--
				Total Risk for Inhalation Route:	0.3
				Total Risk Across All Exposure Routes/Pathways :	0.8

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-31
Risk Results Detailed Summary - Based on Facility 1
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	**2.1E-04**	1.3E-05	**5.6E-04**	**7.8E-04**	76%	**1.2E-04**	9.6E-06	**5.6E-04**	**6.9E-04**	80%
tetrachloroethene	**1.4E-04**	2.4E-05	2.7E-05	**1.9E-04**	19%	8.3E-05	1.8E-05	2.7E-05	**1.3E-04**	15%
carbon tetrachloride	8.2E-07	2.8E-09	4.0E-06	4.8E-06	<0.5%	4.8E-07	2.1E-09	4.0E-06	4.5E-06	1%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethane	1.1E-07	3.7E-09	5.3E-07	6.4E-07	<0.5%	6.2E-08	2.8E-09	5.3E-07	5.9E-07	<0.5%
1,2-dichloroethane	4.4E-06	9.7E-08	3.5E-05	3.9E-05	4%	2.6E-06	7.1E-08	3.5E-05	3.7E-05	4%
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
benzene	1.2E-07	1.3E-08	6.0E-07	7.3E-07	<0.5%	6.8E-08	9.4E-09	6.0E-07	6.7E-07	<0.5%
chloroform	7.3E-07	2.6E-08	2.2E-06	2.9E-06	<0.5%	4.2E-07	1.9E-08	2.2E-06	2.6E-06	<0.5%
Subtotal VOCs	**3.6E-04**	3.8E-05	**6.3E-04**	**1.0E-03**	100%	**2.1E-04**	2.8E-05	**6.3E-04**	**8.6E-04**	100%
Semivolatile Organic Compounds										
1,4-dioxane	2.0E-06	1.4E-10	--	2.0E-06	<0.5%	1.2E-06	1.0E-10	--	1.2E-06	<0.5%
Subtotal SVOCs	2.0E-06	1.4E-10	--	2.0E-06	<0.5%	1.2E-06	1.0E-10	--	1.2E-06	<0.5%
Total:	**4E-04**	4E-05	**6E-04**	**1E-03**	100%	**2E-04**	3E-05	**6E-04**	**9E-04**	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene						--	--	--		
tetrachloroethene	7.7E-02	1.3E-02	5.0E-02	1.4E-01	24%	1.8E-01	3.9E-02	5.0E-02	2.7E-01	33%
carbon tetrachloride	4.9E-03	7.8E-05	1.5E-03	6.4E-03	1%	5.3E-02	2.3E-04	1.5E-03	5.5E-02	7%
1,1-dichloroethene	8.8E-03	5.5E-04	3.8E-02	4.8E-02	8%	2.0E-02	1.6E-03	3.8E-02	6.0E-02	8%
1,1-dichloroethane	7.9E-05	9.6E-06	1.9E-03	2.0E-03	<0.5%	6.4E-04	2.8E-05	1.9E-03	2.6E-03	<0.5%
1,2-dichloroethane	2.7E-03	3.0E-04	2.0E-03	5.0E-03	1%	3.2E-02	8.9E-04	2.0E-03	3.5E-02	4%
cis-1,2-dichloroethene	2.2E-05	2.6E-03	2.3E-01	2.4E-01	41%	1.1E-01	7.8E-03	2.3E-01	3.5E-01	44%
benzene	1.2E-01	9.3E-05	1.0E-03	1.2E-01	21%	2.0E-03	2.7E-04	1.0E-03	3.3E-03	<0.5%
chloroform	6.8E-03	2.4E-04	1.2E-02	1.9E-02	3%	1.6E-02	7.2E-04	1.2E-02	2.9E-02	4%
Subtotal VOCs	2.2E-01	1.7E-02	3.4E-01	5.7E-01	100%	4.1E-01	5.1E-02	3.4E-01	8.0E-01	100%
Semivolatile Organic Compounds										
1,4-dioxane	--	--	--	--	--	--	--	--	--	--
Subtotal SVOCs	--	--	--	--	--	--	--	--	--	--
Total:	0.2	0.02	0.3	0.6	100%	0.4	0.05	0.3	0.8	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-32
Risk Results Summary - Based on Facility 1
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs	**3.6E-04**	3.8E-05	**6.3E-04**	**1.0E-03**	**2.1E-04**	2.8E-05	**6.3E-04**	**8.6E-04**
SVOCs	2.0E-06	1.4E-10	--	**2.0E-06**	1.2E-06	1.0E-10	--	**1.2E-06**
Total:	**4E-04**	4E-05	**6E-04**	**1E-03**	**2E-04**	3E-05	**6E-04**	**9E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs	2.2E-01	1.7E-02	3.4E-01	0.57	4.1E-01	5.1E-02	3.4E-01	0.80
SVOCs	--	--	--	--	--	--	--	--
Total:	0.2	0.02	0.3	0.6	0.4	0.05	0.3	0.8

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-33
Groundwater Exposure Point Concentrations - Based on Facility 3
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 3	***Volatile Organic Compounds***		
	trichloroethene	1.18E-01	2007
	tetrachloroethene	1.60E-02	2007
	carbon tetrachloride	5.00E-04	2007[a]
	1,1-dichloroethane	5.00E-04	2007[a]
	1,2-dichloroethane	5.00E-04	2007[a]
	cis-1,2-dichloroethene	3.00E-03	2007
	chloroform	5.00E-04	2007[a]
	dichlorodifluoromethane	5.00E-04	2007[a]
	methyl-tert-butyl ether	5.00E-04	2007[a]
	1,1-dichloroethene	5.00E-04	2007[a]

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-34
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	1.11E-03	1.30E-02	1.44E-05
	tetrachloroethene	1.60E-02	1.50E-04	5.40E-01	8.12E-05
	carbon tetrachloride	5.00E-04	4.70E-06	1.50E-01	7.05E-07
	1,1-dichloroethane	5.00E-04	4.70E-06	5.70E-03	2.68E-08
	1,2-dichloroethane	5.00E-04	4.70E-06	4.70E-02	2.21E-07
	cis-1,2-dichloroethene	3.00E-03	2.82E-05	N/A	--
	chloroform	5.00E-04	4.70E-06	3.10E-02	1.46E-07
	dichlorodifluoromethane	5.00E-04	4.70E-06	N/A	--
	methyl-tert-butyl ether	5.00E-04	4.70E-06	1.80E-03	8.45E-09
	1,1-dichloroethene	5.00E-04	4.70E-06	N/A	--
				Total Risk for Oral Route:	9.7E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-34
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	2.99E-05	1.30E-02	3.89E-07
	tetrachloroethene	1.60E-02	1.12E-05	5.40E-01	6.03E-06
	carbon tetrachloride	5.00E-04	6.97E-09	1.50E-01	1.05E-09
	1,1-dichloroethane	5.00E-04	7.08E-08	5.70E-03	4.04E-10
	1,2-dichloroethane	5.00E-04	4.44E-08	4.70E-02	2.09E-09
	cis-1,2-dichloroethene	3.00E-03	6.90E-07	N/A	--
	chloroform	5.00E-04	7.19E-08	3.10E-02	2.23E-09
	dichlorodifluoromethane	5.00E-04	9.51E-08	N/A	--
	methyl-tert-butyl ether	5.00E-04	2.72E-08	1.80E-03	4.89E-11
	1,1-dichloroethene	5.00E-04	1.27E-07	N/A	--
				Total Risk for Dermal Route:	6.4E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-34
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	1.94E+01	2.00E-06	3.88E-05
	tetrachloroethene	1.60E-02	2.63E+00	5.90E-06	1.55E-05
	carbon tetrachloride	5.00E-04	8.22E-02	4.20E-05	3.45E-06
	1,1-dichloroethane	5.00E-04	8.22E-02	1.60E-06	1.32E-07
	1,2-dichloroethane	5.00E-04	8.22E-02	2.10E-05	1.73E-06
	cis-1,2-dichloroethene	3.00E-03	4.93E-01	N/A	--
	chloroform	5.00E-04	8.22E-02	5.30E-06	4.36E-07
	dichlorodifluoromethane	5.00E-04	8.22E-02	N/A	--
	methyl-tert-butyl ether	5.00E-04	8.22E-02	2.60E-07	2.14E-08
	1,1-dichloroethene	5.00E-04	8.22E-02	N/A	--
				Total Risk for Inhalation Route:	6.0E-05
				Total Risk Across All Exposure Routes/Pathways :	**2E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-35
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	3.23E-03	N/A	--
	tetrachloroethene	1.60E-02	4.38E-04	1.00E-02	4.38E-02
	carbon tetrachloride	5.00E-04	1.37E-05	7.00E-04	1.96E-02
	1,1-dichloroethane	5.00E-04	1.37E-05	2.00E-01	6.85E-05
	1,2-dichloroethane	5.00E-04	1.37E-05	2.00E-02	6.85E-04
	cis-1,2-dichloroethene	3.00E-03	8.22E-05	1.00E-02	8.22E-03
	chloroform	5.00E-04	1.37E-05	1.00E-02	1.37E-03
	dichlorodifluoromethane	5.00E-04	1.37E-05	2.00E-01	6.85E-05
	methyl-tert-butyl ether	5.00E-04	1.37E-05	N/A	--
	1,1-dichloroethene	5.00E-04	1.37E-05	5.00E-02	2.74E-04
				Total Risk for Oral Route:	0.07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-35
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	6.98E-05	N/A	0.00E+00
	tetrachloroethene	1.60E-02	2.60E-05	1.00E-02	2.60E-03
	carbon tetrachloride	5.00E-04	1.63E-08	7.00E-04	2.32E-05
	1,1-dichloroethane	5.00E-04	1.65E-07	2.00E-01	8.26E-07
	1,2-dichloroethane	5.00E-04	1.04E-07	2.00E-02	5.18E-06
	cis-1,2-dichloroethene	3.00E-03	1.61E-06	1.00E-02	1.61E-04
	chloroform	5.00E-04	1.68E-07	1.00E-02	1.68E-05
	dichlorodifluoromethane	5.00E-04	2.22E-07	2.00E-01	1.11E-06
	methyl-tert-butyl ether	5.00E-04	6.34E-08	N/A	0.00E+00
	1,1-dichloroethene	5.00E-04	2.96E-07	5.00E-02	5.92E-06
				Total Risk for Dermal Route:	0.003

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
µg/m^3 = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-35
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	5.66E+01	N/A	--
	tetrachloroethene	1.60E-02	7.67E+00	2.70E+02	2.84E-02
	carbon tetrachloride	5.00E-04	2.40E-01	1.90E+02	1.26E-03
	1,1-dichloroethane	5.00E-04	2.40E-01	5.00E+02	4.79E-04
	1,2-dichloroethane	5.00E-04	2.40E-01	2.40E+03	9.99E-05
	cis-1,2-dichloroethene	3.00E-03	1.44E+00	3.50E+01	4.11E-02
	chloroform	5.00E-04	2.40E-01	9.80E+01	2.45E-03
	dichlorodifluoromethane	5.00E-04	2.40E-01	2.00E+02	1.20E-03
	methyl-tert-butyl ether	5.00E-04	2.40E-01	3.00E+03	7.99E-05
	1,1-dichloroethene	5.00E-04	2.40E-01	2.00E+02	1.20E-03
				Total Risk for Inhalation Route:	0.08
				Total Risk Across All Exposure Routes/Pathways :	**0.08**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
µg/m^3 = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-36
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	6.47E-04	1.30E-02	8.41E-06
	tetrachloroethene	1.60E-02	8.77E-05	5.40E-01	4.73E-05
	carbon tetrachloride	5.00E-04	2.74E-06	1.50E-01	4.11E-07
	1,1-dichloroethane	5.00E-04	2.74E-06	5.70E-03	1.56E-08
	1,2-dichloroethane	5.00E-04	2.74E-06	4.70E-02	1.29E-07
	cis-1,2-dichloroethene	3.00E-03	1.64E-05	N/A	--
	chloroform	5.00E-04	2.74E-06	3.10E-02	8.49E-08
	dichlorodifluoromethane	5.00E-04	2.74E-06	N/A	--
	methyl-tert-butyl ether	5.00E-04	2.74E-06	1.80E-03	4.93E-09
	1,1-dichloroethene	5.00E-04	2.74E-06	N/A	--
				Total Risk for Oral Route:	5.6E-05

Notes: N/A = not applicable - toxicity value or associated information not established.

COPC = contaminant of potential concern

NV = Not volatile

mg/L = milligrams per liter

mg/kg/day = milligrams per kilogram per day

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

-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-36
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	1.01E-05	1.30E-02	1.31E-07
	tetrachloroethene	1.60E-02	3.76E-06	5.40E-01	2.03E-06
	carbon tetrachloride	5.00E-04	2.35E-09	1.50E-01	3.53E-10
	1,1-dichloroethane	5.00E-04	2.39E-08	5.70E-03	1.36E-10
	1,2-dichloroethane	5.00E-04	1.50E-08	4.70E-02	7.03E-10
	cis-1,2-dichloroethene	3.00E-03	2.32E-07	N/A	--
	chloroform	5.00E-04	2.42E-08	3.10E-02	7.51E-10
	dichlorodifluoromethane	5.00E-04	3.21E-08	N/A	--
	methyl-tert-butyl ether	5.00E-04	9.15E-09	1.80E-03	1.65E-11
	1,1-dichloroethene	5.00E-04	4.27E-08	N/A	--
				Total Risk for Dermal Route:	2.2E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-36
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	1.94E+01	2.00E-06	3.88E-05
	tetrachloroethene	1.60E-02	2.63E+00	5.90E-06	1.55E-05
	carbon tetrachloride	5.00E-04	8.22E-02	4.20E-05	3.45E-06
	1,1-dichloroethane	5.00E-04	8.22E-02	1.60E-06	1.32E-07
	1,2-dichloroethane	5.00E-04	8.22E-02	2.10E-05	1.73E-06
	cis-1,2-dichloroethene	3.00E-03	4.93E-01	N/A	--
	chloroform	5.00E-04	8.22E-02	5.30E-06	4.36E-07
	dichlorodifluoromethane	5.00E-04	8.22E-02	N/A	--
	methyl-tert-butyl ether	5.00E-04	8.22E-02	2.60E-07	2.14E-08
	1,1-dichloroethene	5.00E-04	8.22E-02	N/A	--
				Total Risk for Inhalation Route:	6.0E-05
				Total Risk Across All Exposure Routes/Pathways :	**1E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-37
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	7.54E-03	N/A	--
	tetrachloroethene	1.60E-02	1.02E-03	1.00E-02	1.02E-01
	carbon tetrachloride	5.00E-04	3.20E-05	7.00E-04	4.57E-02
	1,1-dichloroethane	5.00E-04	3.20E-05	2.00E-01	1.60E-04
	1,2-dichloroethane	5.00E-04	3.20E-05	2.00E-02	1.60E-03
	cis-1,2-dichloroethene	3.00E-03	1.92E-04	1.00E-02	1.92E-02
	chloroform	5.00E-04	3.20E-05	1.00E-02	3.20E-03
	dichlorodifluoromethane	5.00E-04	3.20E-05	2.00E-01	1.60E-04
	methyl-tert-butyl ether	5.00E-04	3.20E-05	N/A	--
	1,1-dichloroethene	5.00E-04	3.20E-05	5.00E-02	6.39E-04
				Total Risk for Oral Route:	0.2

Notes: N/A = not applicable - toxicity value or associated information not established.

COPC = contaminant of potential concern

NV = Not volatile

mg/L = milligrams per liter

mg/kg/day = milligrams per kilogram per day

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

-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-37
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	1.18E-04	N/A	--
	tetrachloroethene	1.60E-02	4.39E-05	1.00E-02	4.39E-03
	carbon tetrachloride	5.00E-04	2.74E-08	7.00E-04	3.92E-05
	1,1-dichloroethane	5.00E-04	2.78E-07	2.00E-01	1.39E-06
	1,2-dichloroethane	5.00E-04	1.75E-07	2.00E-02	8.73E-06
	cis-1,2-dichloroethene	3.00E-03	2.71E-06	1.00E-02	2.71E-04
	chloroform	5.00E-04	2.83E-07	1.00E-02	2.83E-05
	dichlorodifluoromethane	5.00E-04	3.74E-07	2.00E-01	1.87E-06
	methyl-tert-butyl ether	5.00E-04	1.07E-07	N/A	--
	1,1-dichloroethene	5.00E-04	4.99E-07	5.00E-02	9.97E-06
				Total Risk for Dermal Route:	0.005

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-37
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.18E-01	5.66E+01	N/A	--
	tetrachloroethene	1.60E-02	7.67E+00	2.70E+02	2.84E-02
	carbon tetrachloride	5.00E-04	2.40E-01	1.90E+02	1.26E-03
	1,1-dichloroethane	5.00E-04	2.40E-01	5.00E+02	4.79E-04
	1,2-dichloroethane	5.00E-04	2.40E-01	2.40E+03	9.99E-05
	cis-1,2-dichloroethene	3.00E-03	1.44E+00	3.50E+01	4.11E-02
	chloroform	5.00E-04	2.40E-01	9.80E+01	2.45E-03
	dichlorodifluoromethane	5.00E-04	2.40E-01	2.00E+02	1.20E-03
	methyl-tert-butyl ether	5.00E-04	2.40E-01	3.00E+03	7.99E-05
	1,1-dichloroethene	5.00E-04	2.40E-01	2.00E+02	1.20E-03
				Total Risk for Inhalation Route:	0.08
				Total Risk Across All Exposure Routes/Pathways :	0.285

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-38
Risk Results Detailed Summary - Based on Facility 3
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	1.4E-05	3.9E-07	3.9E-05	6.7E-05	33%	8.4E-06	1.3E-07	3.9E-05	5.7E-05	43%
tetrachloroethene	8.1E-05	6.0E-06	1.6E-05	**1.3E-04**	63%	4.7E-05	2.0E-06	1.6E-05	6.9E-05	51%
carbon tetrachloride	7.0E-07	1.0E-09	3.5E-06	5.2E-06	3%	4.1E-07	3.5E-10	3.5E-06	4.7E-06	4%
1,1-dichloroethane	2.7E-08	4.0E-10	1.3E-07	2.0E-07	<0.5%	1.6E-08	1.4E-10	1.3E-07	1.8E-07	<0.5%
1,2-dichloroethane	2.2E-07	2.1E-09	1.7E-06	2.4E-06	1%	1.3E-07	7.0E-10	1.7E-06	2.3E-06	2%
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
chloroform	1.5E-07	2.2E-09	4.4E-07	7.3E-07	<0.5%	8.5E-08	7.5E-10	4.4E-07	6.3E-07	<0.5%
dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--
methyl-tert-butyl ether	8.5E-09	4.9E-11	2.1E-08	3.7E-08	<0.5%	4.9E-09	1.6E-11	2.1E-08	3.2E-08	<0.5%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
Total:	1E-04	6E-06	6E-05	**2E-04**	100%	6E-05	2E-06	6E-05	**1E-04**	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--		--	--	--	--	--
tetrachloroethene	4.4E-02	2.6E-03	2.8E-02	4.6E-02	60%	1.0E-01	4.4E-03	2.8E-02	1.1E-01	60%
carbon tetrachloride	2.0E-02	2.3E-05	1.3E-03	2.0E-02	25%	4.6E-02	3.9E-05	1.3E-03	4.6E-02	26%
1,1-dichloroethane	6.8E-05	8.3E-07	4.8E-04	7.0E-05	<0.5%	1.6E-04	1.4E-06	4.8E-04	1.6E-04	<0.5%
1,2-dichloroethane	6.8E-04	5.2E-06	1.0E-04	6.9E-04	1%	1.6E-03	8.7E-06	1.0E-04	1.6E-03	1%
cis-1,2-dichloroethene	8.2E-03	1.6E-04	4.1E-02	8.4E-03	11%	1.9E-02	2.7E-04	4.1E-02	1.9E-02	11%
chloroform	1.4E-03	1.7E-05	2.4E-03	1.4E-03	2%	3.2E-03	2.8E-05	2.4E-03	3.2E-03	2%
dichlorodifluoromethane	6.8E-05	1.1E-06	1.2E-03	7.1E-05	<0.5%	1.6E-04	1.9E-06	1.2E-03	1.6E-04	<0.5%
methyl-tert-butyl ether	--	--	8.0E-05	8.0E-08	<0.5%	--	--	8.0E-05	8.0E-08	<0.5%
1,1-dichloroethene	2.7E-04	5.9E-06	1.2E-03	2.8E-04	<0.5%	6.4E-04	1.0E-05	1.2E-03	6.5E-04	<0.5%
Total:	0.07	0.003	0.07628	0.08	100%	0.2	0.005	0.07628	0.2	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-39
Risk Results Summary - Based on Facility 3
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	9.7E-05	6.4E-06	6.0E-05	**2.0E-04**	5.6E-05	2.2E-06	6.0E-05	**1.3E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	0.07	0.003	0.08	0.08	0.2	0.005	0.08	0.2

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-40
Groundwater Exposure Point Concentrations - Based on Facility 4
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 4	***Volatile Organic Compounds***		
	Trichloroethene	1.03E-01	2007
	Tetrachloroethene	9.71E-03	2007
	cis-1,2-Dichloroethene	3.34E-03	2007
	Carbon tetrachloride	5.10E-04	2007
	Chloroform	7.30E-04	2007
	o-Xylene	6.00E-04	2007

Notes:
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-41
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 4 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	9.68E-04	1.30E-02	1.26E-05
	Tetrachloroethene	9.71E-03	9.12E-05	5.40E-01	4.93E-05
	cis-1,2-Dichloroethene	3.34E-03	3.14E-05	N/A	--
	Carbon tetrachloride	5.10E-04	4.79E-06	1.50E-01	7.19E-07
	Chloroform	7.30E-04	6.86E-06	3.10E-02	2.13E-07
	o-Xylene	6.00E-04	5.64E-06	N/A	--
				Total Risk for Oral Route:	6.3E-05
Dermal	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	2.61E-05	1.30E-02	3.40E-07
	Tetrachloroethene	9.71E-03	6.77E-06	5.40E-01	3.66E-06
	cis-1,2-Dichloroethene	3.34E-03	7.68E-07	N/A	--
	Carbon tetrachloride	5.10E-04	7.11E-09	1.50E-01	1.07E-09
	Chloroform	7.30E-04	1.05E-07	3.10E-02	3.25E-09
	o-Xylene	6.00E-04	8.93E-07	N/A	--
				Total Risk for Dermal Route:	4.0E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-41
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 4 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	1.69E+01	2.00E-06	3.39E-05
	Tetrachloroethene	9.71E-03	1.60E+00	5.90E-06	9.42E-06
	cis-1,2-Dichloroethene	3.34E-03	5.49E-01	N/A	--
	Carbon tetrachloride	5.10E-04	8.38E-02	4.20E-05	3.52E-06
	Chloroform	7.30E-04	1.20E-01	5.30E-06	6.36E-07
	o-Xylene	6.00E-04	9.86E-02	N/A	--
				Total Risk for Inhalation Route:	4.7E-05
				Total Risk Across All Exposure Routes/Pathways :	**1E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-42
Estimates of Reasonable Maximum Exposure- Non-cancer Effects- Adult Resident- Based on Facility 4 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	2.82E-03	N/A	--
	Tetrachloroethene	9.71E-03	2.66E-04	1.00E-02	2.66E-02
	cis-1,2-Dichloroethene	3.34E-03	9.15E-05	1.00E-02	9.15E-03
	Carbon tetrachloride	5.10E-04	1.40E-05	7.00E-04	2.00E-02
	Chloroform	7.30E-04	2.00E-05	1.00E-02	2.00E-03
	o-Xylene	6.00E-04	1.64E-05	2.00E-01	8.22E-05
				Total Risk for Oral Route:	0.06
Dermal	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	6.10E-05	N/A	--
	Tetrachloroethene	9.71E-03	1.58E-05	1.00E-02	1.58E-03
	cis-1,2-Dichloroethene	3.34E-03	1.79E-06	1.00E-02	1.79E-04
	Carbon tetrachloride	5.10E-04	1.66E-08	7.00E-04	2.37E-05
	Chloroform	7.30E-04	2.45E-07	1.00E-02	2.45E-05
	o-Xylene	6.00E-04	2.08E-06	2.00E-01	1.04E-05
				Total Risk for Dermal Route:	0.002

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-42
Estimates of Reasonable Maximum Exposure- Non-cancer Effects- Adult Resident- Based on Facility 4 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	4.94E+01	N/A	--
	Tetrachloroethene	9.71E-03	4.66E+00	2.70E+02	1.72E-02
	cis-1,2-Dichloroethene	3.34E-03	1.60E+00	3.50E+01	4.58E-02
	Carbon tetrachloride	5.10E-04	2.45E-01	1.90E+02	1.29E-03
	Chloroform	7.30E-04	3.50E-01	9.80E+01	3.57E-03
	o-Xylene	6.00E-04	2.88E-01	7.00E+02	4.11E-04
				Total Risk for Inhalation Route:	0.07
				Total Risk Across All Exposure Routes/Pathways :	0.06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-43
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 4 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	5.64E-04	1.30E-02	7.34E-06
	Tetrachloroethene	9.71E-03	5.32E-05	5.40E-01	2.87E-05
	cis-1,2-Dichloroethene	3.34E-03	1.83E-05	N/A	--
	Carbon tetrachloride	5.10E-04	2.79E-06	1.50E-01	4.19E-07
	Chloroform	7.30E-04	4.00E-06	3.10E-02	1.24E-07
	o-Xylene	6.00E-04	3.29E-06	N/A	--
				Total Risk for Oral Route:	3.7E-05
Dermal	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	8.80E-06	1.30E-02	1.14E-07
	Tetrachloroethene	9.71E-03	2.28E-06	5.40E-01	1.23E-06
	cis-1,2-Dichloroethene	3.34E-03	2.59E-07	N/A	--
	Carbon tetrachloride	5.10E-04	2.40E-09	1.50E-01	3.60E-10
	Chloroform	7.30E-04	3.54E-08	3.10E-02	1.10E-09
	o-Xylene	6.00E-04	3.01E-07	N/A	--
				Total Risk for Dermal Route:	1.3E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-43
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 4 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	1.69E+01	2.00E-06	3.39E-05
	Tetrachloroethene	9.71E-03	1.60E+00	5.90E-06	9.42E-06
	cis-1,2-Dichloroethene	3.34E-03	5.49E-01	N/A	--
	Carbon tetrachloride	5.10E-04	8.38E-02	4.20E-05	3.52E-06
	Chloroform	7.30E-04	1.20E-01	5.30E-06	6.36E-07
	o-Xylene	6.00E-04	9.86E-02	N/A	--
				Total Risk for Inhalation Route:	4.7E-05
				Total Risk Across All Exposure Routes/Pathways :	**1E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-44
Estimates of Reasonable Maximum Exposure- Non-cancer Effects- Child Resident- Based on Facility 4 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	6.58E-03	N/A	--
	Tetrachloroethene	9.71E-03	6.21E-04	1.00E-02	6.21E-02
	cis-1,2-Dichloroethene	3.34E-03	2.14E-04	1.00E-02	2.14E-02
	Carbon tetrachloride	5.10E-04	3.26E-05	7.00E-04	4.66E-02
	Chloroform	7.30E-04	4.67E-05	1.00E-02	4.67E-03
	o-Xylene	6.00E-04	3.84E-05	2.00E-01	1.92E-04
				Total Risk for Oral Route:	0.1
Dermal	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	1.03E-04	N/A	--
	Tetrachloroethene	9.71E-03	2.66E-05	1.00E-02	2.66E-03
	cis-1,2-Dichloroethene	3.34E-03	3.02E-06	1.00E-02	3.02E-04
	Carbon tetrachloride	5.10E-04	2.80E-08	7.00E-04	4.00E-05
	Chloroform	7.30E-04	4.13E-07	1.00E-02	4.13E-05
	o-Xylene	6.00E-04	3.51E-06	2.00E-01	1.76E-05
				Total Risk for Dermal Route:	0.003

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-44
Estimates of Reasonable Maximum Exposure- Non-cancer Effects- Child Resident- Based on Facility 4 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	Trichloroethene	1.03E-01	4.94E+01	N/A	--
	Tetrachloroethene	9.71E-03	4.66E+00	2.70E+02	1.72E-02
	cis-1,2-Dichloroethene	3.34E-03	1.60E+00	3.50E+01	4.58E-02
	Carbon tetrachloride	5.10E-04	2.45E-01	1.90E+02	1.29E-03
	Chloroform	7.30E-04	3.50E-01	9.80E+01	3.57E-03
	o-Xylene	6.00E-04	2.88E-01	7.00E+02	4.11E-04
				Total Risk for Inhalation Route:	0.07
				Total Risk Across All Exposure Routes/Pathways :	0.1

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-45
Risk Results Detailed Summary - Based on Facility 4
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
Trichloroethene	1.3E-05	3.4E-07	3.4E-05	5.8E-05	41%	7.3E-06	1.1E-07	3.4E-05	5.0E-05	51%
Tetrachloroethene	4.9E-05	3.7E-06	9.4E-06	7.7E-05	54%	2.9E-05	1.2E-06	9.4E-06	4.2E-05	43%
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	7.2E-07	1.1E-09	3.5E-06	5.3E-06	4%	4.2E-07	3.6E-10	3.5E-06	4.8E-06	5%
Chloroform	2.1E-07	3.3E-09	6.4E-07	1.1E-06	1%	1.2E-07	1.1E-09	6.4E-07	9.2E-07	1%
o-Xylene	--	--	--	--	--	--	--	--	--	--
Total:	6E-05	4E-06	5E-05	**1E-04**	100%	4E-05	1E-06	5E-05	**1E-04**	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
Trichloroethene	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	2.7E-02	1.6E-03	1.7E-02	2.8E-02	47%	6.2E-02	2.7E-03	1.7E-02	6.5E-02	47%
cis-1,2-Dichloroethene	9.2E-03	1.8E-04	4.6E-02	9.4E-03	16%	2.1E-02	3.0E-04	4.6E-02	2.2E-02	16%
Carbon tetrachloride	2.0E-02	2.4E-05	1.3E-03	2.0E-02	33%	4.7E-02	4.0E-05	1.3E-03	4.7E-02	34%
Chloroform	2.0E-03	2.4E-05	3.6E-03	2.0E-03	3%	4.7E-03	4.1E-05	3.6E-03	4.7E-03	3%
o-Xylene	8.2E-05	1.0E-05	4.1E-04	9.3E-05	<0.5%	1.9E-04	1.8E-05	4.1E-04	2.1E-04	<0.5%
Total:	0.06	0.002	0.07	0.06	100%	0.1	0.003	0.07	0.1	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-46
Risk Results Summary - Based on Facility 4
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	6E-05	4E-06	5E-05	**1E-04**	4E-05	1E-06	5E-05	**1E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	0.06	0.002	0.07	0.06	0.1	0.003	0.07	0.1

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-47
Groundwater Exposure Point Concentrations - Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 5	***Volatile Organic Compounds***		
	trichloroethene	4.00E-03	2007
	tetrachloroethene	1.00E-03	2007
	cis-1,2-dichloroethene	2.50E-04	2007[a]
	Metals		
	chromium	2.76E-02	2006

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-48
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	3.76E-05	1.30E-02	4.88E-07
	tetrachloroethene	1.00E-03	9.39E-06	5.40E-01	5.07E-06
	cis-1,2-dichloroethene	2.50E-04	2.35E-06	N/A	--
	Metals				
	chromium	2.76E-02	2.59E-04	N/A	--
				Total Risk for Oral Route:	5.56E-06
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	2.35E-06	1.30E-02	3.06E-08
	tetrachloroethene	1.00E-03	1.62E-06	5.40E-01	8.74E-07
	cis-1,2-dichloroethene	2.50E-04	1.33E-07	N/A	--
	Metals				
	chromium	2.76E-02	1.35E-06	N/A	--
				Total Risk for Dermal Route:	9.04E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-48
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	6.58E-01	2.00E-06	1.32E-06
	tetrachloroethene	1.00E-03	1.64E-01	5.90E-06	9.70E-07
	cis-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	Metals				
	chromium	2.76E-02	NV	1.20E-02	--
				Total Risk for Inhalation Route:	2.28E-06
				Total Risk Across All Exposure Routes/Pathways :	**9E-06**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-49

Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 5 Data

Remedial Investigation

San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	1.10E-04	N/A	--
	tetrachloroethene	1.00E-03	2.74E-05	1.00E-02	2.74E-03
	cis-1,2-dichloroethene	2.50E-04	6.85E-06	1.00E-02	6.85E-04
	Metals				
	chromium	2.76E-02	7.56E-04	1.50E+00	1.13E-03
				Total Risk for Oral Route:	0.005
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	6.86E-06	N/A	--
	tetrachloroethene	1.00E-03	4.72E-06	1.00E-02	4.72E-04
	cis-1,2-dichloroethene	2.50E-04	3.89E-07	1.00E-02	3.89E-05
	Metals				
	chromium	2.76E-02	3.95E-06	1.50E+00	5.92E-06
				Total Risk for Dermal Route:	0.0005

Notes: N/A = not applicable - toxicity value or associated information not established.

COPC = contaminant of potential concern

NV = Not volatile

mg/L = milligrams per liter

mg/kg/day = milligrams per kilogram per day

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

-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-49
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	1.92E+00	N/A	--
	tetrachloroethene	1.00E-03	4.79E-01	2.70E+02	1.78E-03
	cis-1,2-dichloroethene	2.50E-04	1.20E-01	3.50E+01	3.42E-03
	Metals				
	chromium	2.76E-02	NV	N/A	--
				Total Risk for Inhalation Route:	0.005
				Total Risk Across All Exposure Routes/Pathways :	0.010

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table E-50
Estimates of Reasonable Maxiumum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	2.19E-05	1.30E-02	2.85E-07
	tetrachloroethene	1.00E-03	5.48E-06	5.40E-01	2.96E-06
	cis-1,2-dichloroethene	2.50E-04	1.37E-06	N/A	--
	Metals				
	chromium	2.76E-02	1.51E-04	N/A	--
				Total Risk for Oral Route:	3.2E-06
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	1.74E-06	1.30E-02	2.26E-08
	tetrachloroethene	1.00E-03	1.19E-06	5.40E-01	6.44E-07
	cis-1,2-dichloroethene	2.50E-04	9.83E-08	N/A	--
	Metals				
	chromium	2.76E-02	9.98E-07	N/A	--
				Total Risk for Dermal Route:	6.7E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table E-50
Estimates of Reasonable Maxiumum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	6.58E-01	2.00E-06	1.32E-06
	tetrachloroethene	1.00E-03	1.64E-01	5.90E-06	9.70E-07
	cis-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	Metals				
	chromium	2.76E-02	NV	1.20E-02	--
				Total Risk for Inhalation Route:	2.3E-06
				Total Risk Across All Exposure Routes/Pathways :	**6E-06**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table E-51
Estimates of Reasonable Maxiumum Exposure- Non-cancer Effects-Child Resident- Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	2.56E-04	N/A	--
	tetrachloroethene	1.00E-03	6.39E-05	1.00E-02	6.39E-03
	cis-1,2-dichloroethene	2.50E-04	1.60E-05	1.00E-02	1.60E-03
	Metals				
	chromium	2.76E-02	1.76E-03	1.50E+00	1.18E-03
				Total Risk for Oral Route:	0.009
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	2.03E-05	N/A	--
	tetrachloroethene	1.00E-03	1.39E-05	1.00E-02	1.39E-03
	cis-1,2-dichloroethene	2.50E-04	1.15E-06	1.00E-02	1.15E-04
	Metals				
	chromium	2.76E-02	1.16E-05	1.50E+00	7.76E-06
				Total Risk for Dermal Route:	0.0015

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table E-51
Estimates of Reasonable Maxiumum Exposure- Non-cancer Effects-Child Resident- Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	1.92E+00	N/A	--
	tetrachloroethene	1.00E-03	4.79E-01	2.70E+02	1.78E-03
	cis-1,2-dichloroethene	2.50E-04	1.20E-01	3.50E+01	3.42E-03
	Metals				
	chromium	2.76E-02	NV	N/A	--
				Total Risk for Inhalation Route:	0.005
				Total Risk Across All Exposure Routes/Pathways :	0.02

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-52
Risk Results Detailed Summary - Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	4.9E-07	3.1E-08	1.3E-06	1.8E-06	21%	2.8E-07	2.3E-08	1.3E-06	1.6E-06	26%
tetrachloroethene	5.1E-06	8.7E-07	9.7E-07	6.9E-06	79%	3.0E-06	6.4E-07	9.7E-07	4.6E-06	74%
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	5.6E-06	9.0E-07	2.3E-06	**8.8E-06**	100%	3.2E-06	6.7E-07	2.3E-06	**6.2E-06**	100%
Metals										
chromium	--	--	--	--	--	--	--	--	--	--
Subtotal Metals	--	--	--	--	--	--	--	--	--	--
Total:	6E-06	9E-07	2E-06	**9E-06**	100%	3E-06	7E-07	2E-06	**6E-06**	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	2.7E-03	4.7E-04	1.8E-03	5.0E-03	49%	6.4E-03	1.4E-03	1.8E-03	9.6E-03	65%
cis-1,2-dichloroethene	6.8E-04	3.9E-05	3.4E-03	4.1E-03	40%	1.6E-03	1.1E-04	3.4E-03	5.1E-03	35%
Subtotal VOCs	3.4E-03	5.1E-04	5.2E-03	9.1E-03	89%	8.0E-03	1.5E-03	5.2E-03	1.5E-02	100%
Metals										
chromium	1.1E-03	5.9E-06	--	1.1E-03	11%	1.2E-03	7.8E-06	--	1.2E-03	8%
Subtotal Metals	1.1E-03	5.9E-06	--	1.1E-03	--	1.2E-03	7.8E-06	--	--	--
Total:	0.005	0.001	0.005	0.01	100%	0.009	0.002	0.005	0.01	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-53
Risk Results Summary - Based on Facility 5 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	6E-06	9E-07	2E-06	**9E-06**	3E-06	7E-07	2E-06	**6E-06**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	0.005	0.0005	0.005	0.01	0.009	0.002	0.005	0.01

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-54
Groundwater Exposure Point Concentrations - Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 6	***Volatile Organic Compounds***		
	trichloroethene	9.14E-02	2007
	tetrachloroethene	8.87E-03	2007
	cis-1,2-dichloroethene	4.09E-03	2007
	carbon tetrachloride	2.50E-04	2007[a]
	chloroform	7.40E-04	2007
	m,p-xylene	1.13E-02	2007
	1,1-dichloroethene	2.50E-04	2007[a]
	dichlorodifluoromethane	2.50E-04	2007[a]
	ethylbenzene	8.70E-04	2007
	toluene	8.50E-04	2007
	o-xylene	6.35E-03	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-55
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	8.59E-04	1.30E-02	1.12E-05
	tetrachloroethene	8.87E-03	8.33E-05	5.40E-01	4.50E-05
	cis-1,2-dichloroethene	4.09E-03	3.84E-05	N/A	--
	carbon tetrachloride	2.50E-04	2.35E-06	1.50E-01	3.52E-07
	chloroform	7.40E-04	6.95E-06	3.10E-02	2.15E-07
	m,p-xylene	1.13E-02	1.06E-04	N/A	--
	1,1-dichloroethene	2.50E-04	2.35E-06	N/A	--
	dichlorodifluoromethane	2.50E-04	2.35E-06	N/A	--
	ethylbenzene	8.70E-04	8.17E-06	1.10E-02	8.99E-08
	toluene	8.50E-04	7.98E-06	N/A	--
	o-xylene	6.35E-03	5.96E-05	N/A	--
				Total Risk for Oral Route:	5.7E-05
Dermal	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	5.38E-05	1.30E-02	6.99E-07
	tetrachloroethene	8.87E-03	1.44E-05	5.40E-01	7.75E-06
	cis-1,2-dichloroethene	4.09E-03	2.18E-06	N/A	--
	carbon tetrachloride	2.50E-04	8.09E-09	1.50E-01	1.21E-09
	chloroform	7.40E-04	2.47E-07	3.10E-02	7.65E-09
	m,p-xylene	1.13E-02	2.94E-05	N/A	--
	1,1-dichloroethene	2.50E-04	1.47E-07	N/A	--
	dichlorodifluoromethane	2.50E-04	1.72E-09	N/A	--
	ethylbenzene	8.70E-04	2.09E-06	1.10E-02	2.30E-08
	toluene	8.50E-04	1.29E-06	N/A	--
	o-xylene	6.35E-03	2.19E-05	N/A	--
				Total Risk for Dermal Route:	8.5E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-55
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	1.50E+01	2.00E-06	3.00E-05
	tetrachloroethene	8.87E-03	1.46E+00	5.90E-06	8.60E-06
	cis-1,2-dichloroethene	4.09E-03	6.72E-01	N/A	--
	carbon tetrachloride	2.50E-04	4.11E-02	4.20E-05	1.73E-06
	chloroform	7.40E-04	1.22E-01	5.30E-06	6.45E-07
	m,p-xylene	1.13E-02	1.86E+00	N/A	--
	1,1-dichloroethene	2.50E-04	4.11E-02	N/A	--
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	ethylbenzene	8.70E-04	1.43E-01	2.50E-06	3.58E-07
	toluene	8.50E-04	1.40E-01	N/A	--
	o-xylene	6.35E-03	1.04E+00	N/A	--
				Total Risk for Inhalation Route:	4.1E-05
				Total Risk Across All Exposure Routes/Pathways :	**1E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-56
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	2.50E-03	N/A	--
	tetrachloroethene	8.87E-03	2.43E-04	1.00E-02	2.43E-02
	cis-1,2-dichloroethene	4.09E-03	1.12E-04	1.00E-02	1.12E-02
	carbon tetrachloride	2.50E-04	6.85E-06	7.00E-04	9.78E-03
	chloroform	7.40E-04	2.03E-05	1.00E-02	2.03E-03
	m,p-xylene	1.13E-02	3.10E-04	2.00E-01	1.55E-03
	1,1-dichloroethene	2.50E-04	6.85E-06	5.00E-02	1.37E-04
	dichlorodifluoromethane	2.50E-04	6.85E-06	2.00E-01	3.42E-05
	ethylbenzene	8.70E-04	2.38E-05	1.00E-01	2.38E-04
	toluene	8.50E-04	2.33E-05	8.00E-02	2.91E-04
	o-xylene	6.35E-03	1.74E-04	2.00E-01	8.70E-04
				Total Risk for Oral Route:	0.05
Dermal	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	1.57E-04	N/A	--
	tetrachloroethene	8.87E-03	4.19E-05	1.00E-02	4.19E-03
	cis-1,2-dichloroethene	4.09E-03	6.36E-06	1.00E-02	6.36E-04
	carbon tetrachloride	2.50E-04	2.36E-08	7.00E-04	3.37E-05
	chloroform	7.40E-04	7.20E-07	1.00E-02	7.20E-05
	m,p-xylene	1.13E-02	8.57E-05	2.00E-01	4.28E-04
	1,1-dichloroethene	2.50E-04	4.29E-07	5.00E-02	8.58E-06
	dichlorodifluoromethane	2.50E-04	5.01E-09	2.00E-01	2.50E-08
	ethylbenzene	8.70E-04	6.10E-06	1.00E-01	6.10E-05
	toluene	8.50E-04	3.77E-06	8.00E-02	4.71E-05
	o-xylene	6.35E-03	6.39E-05	2.00E-01	3.20E-04
				Total Risk for Dermal Route:	0.006

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-56
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	4.38E+01	N/A	--
	tetrachloroethene	8.87E-03	4.25E+00	2.70E+02	1.58E-02
	cis-1,2-dichloroethene	4.09E-03	1.96E+00	3.50E+01	5.60E-02
	carbon tetrachloride	2.50E-04	1.20E-01	1.90E+02	6.31E-04
	chloroform	7.40E-04	3.55E-01	9.80E+01	3.62E-03
	m,p-xylene	1.13E-02	5.42E+00	7.00E+02	7.74E-03
	1,1-dichloroethene	2.50E-04	1.20E-01	2.00E+02	5.99E-04
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	ethylbenzene	8.70E-04	4.17E-01	2.00E+03	2.09E-04
	toluene	8.50E-04	4.08E-01	3.00E+02	1.36E-03
	o-xylene	6.35E-03	3.04E+00	7.00E+02	4.35E-03
				Total Risk for Inhalation Route:	0.09
				Total Risk Across All Exposure Routes/Pathways :	0.15

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-57
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	5.01E-04	1.30E-02	6.51E-06
	tetrachloroethene	8.87E-03	4.86E-05	5.40E-01	2.62E-05
	cis-1,2-dichloroethene	4.09E-03	2.24E-05	N/A	--
	carbon tetrachloride	2.50E-04	1.37E-06	1.50E-01	2.05E-07
	chloroform	7.40E-04	4.05E-06	3.10E-02	1.26E-07
	m,p-xylene	1.13E-02	6.19E-05	N/A	--
	1,1-dichloroethene	2.50E-04	1.37E-06	N/A	--
	dichlorodifluoromethane	2.50E-04	1.37E-06	N/A	--
	ethylbenzene	8.70E-04	4.77E-06	1.10E-02	5.24E-08
	toluene	8.50E-04	4.66E-06	N/A	--
	o-xylene	6.35E-03	3.48E-05	N/A	--
				Total Risk for Oral Route:	3.3E-05
Dermal	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	3.97E-05	1.30E-02	5.16E-07
	tetrachloroethene	8.87E-03	1.06E-05	5.40E-01	5.72E-06
	cis-1,2-dichloroethene	4.09E-03	1.61E-06	N/A	--
	carbon tetrachloride	2.50E-04	5.97E-09	1.50E-01	8.95E-10
	chloroform	7.40E-04	1.82E-07	3.10E-02	5.64E-09
	m,p-xylene	1.13E-02	2.17E-05	N/A	--
	1,1-dichloroethene	2.50E-04	1.08E-07	N/A	--
	dichlorodifluoromethane	2.50E-04	1.27E-09	N/A	--
	ethylbenzene	8.70E-04	1.54E-06	1.10E-02	1.70E-08
	toluene	8.50E-04	9.53E-07	N/A	--
	o-xylene	6.35E-03	1.62E-05	N/A	--
				Total Risk for Dermal Route:	6.3E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-57
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	1.50E+01	2.00E-06	3.00E-05
	tetrachloroethene	8.87E-03	1.46E+00	5.90E-06	8.60E-06
	cis-1,2-dichloroethene	4.09E-03	6.72E-01	N/A	--
	carbon tetrachloride	2.50E-04	4.11E-02	4.20E-05	1.73E-06
	chloroform	7.40E-04	1.22E-01	5.30E-06	6.45E-07
	m,p-xylene	1.13E-02	1.86E+00	N/A	--
	1,1-dichloroethene	2.50E-04	4.11E-02	N/A	--
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	ethylbenzene	8.70E-04	1.43E-01	2.50E-06	3.58E-07
	toluene	8.50E-04	1.40E-01	N/A	--
	o-xylene	6.35E-03	1.04E+00	N/A	--
				Total Risk for Inhalation Route:	4.1E-05
				Total Risk Across All Exposure Routes/Pathways :	**8E-05**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-58
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	5.84E-03	N/A	--
	tetrachloroethene	8.87E-03	5.67E-04	1.00E-02	5.67E-02
	cis-1,2-dichloroethene	4.09E-03	2.61E-04	1.00E-02	2.61E-02
	carbon tetrachloride	2.50E-04	1.60E-05	7.00E-04	2.28E-02
	chloroform	7.40E-04	4.73E-05	1.00E-02	4.73E-03
	m,p-xylene	1.13E-02	7.22E-04	2.00E-01	3.61E-03
	1,1-dichloroethene	2.50E-04	1.60E-05	5.00E-02	3.20E-04
	dichlorodifluoromethane	2.50E-04	1.60E-05	2.00E-01	7.99E-05
	ethylbenzene	8.70E-04	5.56E-05	1.00E-01	5.56E-04
	toluene	8.50E-04	5.43E-05	8.00E-02	6.79E-04
	o-xylene	6.35E-03	4.06E-04	2.00E-01	2.03E-03
				Total Risk for Oral Route:	0.1

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-58
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	4.63E-04	N/A	--
	tetrachloroethene	8.87E-03	1.23E-04	1.00E-02	1.23E-02
	cis-1,2-dichloroethene	4.09E-03	1.88E-05	1.00E-02	1.88E-03
	carbon tetrachloride	2.50E-04	6.96E-08	7.00E-04	9.95E-05
	chloroform	7.40E-04	2.12E-06	1.00E-02	2.12E-04
	m,p-xylene	1.13E-02	2.53E-04	2.00E-01	1.26E-03
	1,1-dichloroethene	2.50E-04	1.27E-06	5.00E-02	2.53E-05
	dichlorodifluoromethane	2.50E-04	1.48E-08	2.00E-01	7.38E-08
	ethylbenzene	8.70E-04	1.80E-05	1.00E-01	1.80E-04
	toluene	8.50E-04	1.11E-05	8.00E-02	1.39E-04
	o-xylene	6.35E-03	1.89E-04	2.00E-01	9.43E-04
				Total Risk for Dermal Route:	0.017

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-58
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	9.14E-02	4.38E+01	N/A	--
	tetrachloroethene	8.87E-03	4.25E+00	2.70E+02	1.58E-02
	cis-1,2-dichloroethene	4.09E-03	1.96E+00	3.50E+01	5.60E-02
	carbon tetrachloride	2.50E-04	1.20E-01	1.90E+02	6.31E-04
	chloroform	7.40E-04	3.55E-01	9.80E+01	3.62E-03
	m,p-xylene	1.13E-02	5.42E+00	7.00E+02	7.74E-03
	1,1-dichloroethene	2.50E-04	1.20E-01	2.00E+02	5.99E-04
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	ethylbenzene	8.70E-04	4.17E-01	2.00E+03	2.09E-04
	toluene	8.50E-04	4.08E-01	3.00E+02	1.36E-03
	o-xylene	6.35E-03	3.04E+00	7.00E+02	4.35E-03
				Total Risk for Inhalation Route:	0.09
				Total Risk Across All Exposure Routes/Pathways :	0.2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-59
Risk Results Detailed Summary - Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
trichloroethene	1.1E-05	7.0E-07	3.0E-05	4.2E-05	39%	6.5E-06	5.2E-07	3.0E-05	3.7E-05	46%
tetrachloroethene	4.5E-05	7.8E-06	8.6E-06	6.1E-05	58%	2.6E-05	5.7E-06	8.6E-06	4.1E-05	50%
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
carbon tetrachloride	3.5E-07	1.2E-09	1.7E-06	2.1E-06	2%	2.1E-07	9.0E-10	1.7E-06	1.9E-06	2%
chloroform	2.2E-07	7.6E-09	6.4E-07	8.7E-07	1%	1.3E-07	5.6E-09	6.4E-07	7.8E-07	1%
m,p-xylene	--	--	--	--	--	--	--	--	--	--
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--
ethylbenzene	9.0E-08	2.3E-08	3.6E-07	4.7E-07	<0.5%	5.2E-08	1.7E-08	3.6E-07	4.3E-07	1%
toluene	--	--	--	--	--	--	--	--	--	--
o-xylene	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	5.7E-05	8.5E-06	4.1E-05	1.1E-04	100%	3.3E-05	6.3E-06	4.1E-05	8.1E-05	99%
Total:	6E-05	8E-06	4E-05	**1E-04**	100%	3E-05	6E-06	4E-05	**8E-05**	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	2.4E-02	4.2E-03	1.6E-02	4.4E-02	30%	5.7E-02	1.2E-02	1.6E-02	8.5E-02	38%
cis-1,2-dichloroethene	1.1E-02	6.4E-04	5.6E-02	6.8E-02	46%	2.6E-02	1.9E-03	5.6E-02	8.4E-02	37%
carbon tetrachloride	9.8E-03	3.4E-05	6.3E-04	1.0E-02	7%	2.3E-02	9.9E-05	6.3E-04	2.4E-02	10%
chloroform	2.0E-03	7.2E-05	3.6E-03	5.7E-03	4%	4.7E-03	2.1E-04	3.6E-03	8.6E-03	4%
m,p-xylene	1.5E-03	4.3E-04	7.7E-03	9.7E-03	7%	3.6E-03	1.3E-03	7.7E-03	1.3E-02	6%
1,1-dichloroethene	1.4E-04	8.6E-06	6.0E-04	7.4E-04	1%	3.2E-04	2.5E-05	6.0E-04	9.4E-04	<0.5%
dichlorodifluoromethane	3.4E-05	2.5E-08	6.0E-04	6.4E-04	<0.5%	8.0E-05	7.4E-08	6.0E-04	6.8E-04	<0.5%
ethylbenzene	2.4E-04	6.1E-05	2.1E-04	5.1E-04	<0.5%	5.6E-04	1.8E-04	2.1E-04	9.4E-04	<0.5%
toluene	2.9E-04	4.7E-05	1.4E-03	1.7E-03	1%	6.8E-04	1.4E-04	1.4E-03	2.2E-03	1%
o-xylene	8.7E-04	3.2E-04	4.3E-03	5.5E-03	4%	2.0E-03	9.4E-04	4.3E-03	7.3E-03	3%
Subtotal VOCs	5.0E-02	5.8E-03	9.1E-02	1.5E-01	99%	1.2E-01	1.7E-02	9.1E-02	2.3E-01	99%
Total:	0.05	0.006	0.09	0.1	100%	0.1	0.02	0.09	0.2	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-60
Risk Results Summary - Based on Facility 6 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	**Hypothetical Future Residential**							
	Adult Resident				**Child Resident**			
	Reasonable Maximum Exposure							
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Ingestion**	**Dermal**	**Inhalation**	**Total**
VOCs Total:	6E-05	8E-06	4E-05	**1E-04**	3E-05	6E-06	4E-05	**8E-05**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	**Hypothetical Future Residential**							
	Adult Resident				**Child Resident**			
	Reasonable Maximum Exposure							
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Ingestion**	**Dermal**	**Inhalation**	**Total**
VOCs Total:	0.05	0.006	0.09	0.1	0.1	0.02	0.09	0.2

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-61
Groundwater Exposure Point Concentrations - Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 7	***Volatile Organic Compounds***		
	trichloroethene	6.10E-04	2005
	tetrachloroethene	6.50E-04	2005
	1,1-dichloroethene	2.93E-02	2005
	toluene	2.50E-04	2005[a]
	Inorganic Ions		
	perchlorate	3.10E-03	2003

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-62
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Facility 7 Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	5.73E-06	1.30E-02	7.45E-08
	tetrachloroethene	6.50E-04	6.11E-06	5.40E-01	3.30E-06
	1,1-dichloroethene	2.93E-02	2.75E-04	N/A	--
	toluene	2.50E-04	2.35E-06	N/A	--
	Inorganic Ions				
	perchlorate	3.10E-03	2.91E-05	N/A	--
				Total Risk for Oral Route:	3.4E-06
Dermal	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	3.59E-07	1.30E-02	4.67E-09
	tetrachloroethene	6.50E-04	1.05E-06	5.40E-01	5.68E-07
	1,1-dichloroethene	2.93E-02	1.72E-05	N/A	--
	toluene	2.50E-04	3.80E-07	N/A	--
	Inorganic Ions				
	perchlorate	3.10E-03	N/A	N/A	--
				Total Risk for Dermal Route:	5.7E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-62
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Facility 7 Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	1.00E-01	2.00E-06	2.01E-07
	tetrachloroethene	6.50E-04	1.07E-01	5.90E-06	6.30E-07
	1,1-dichloroethene	2.93E-02	4.82E+00	N/A	--
	toluene	2.50E-04	4.11E-02	N/A	--
	Inorganic Ions				
	perchlorate	3.10E-03	NV	N/A	--
				Total Risk for Inhalation Route:	8.3E-07
				Total Risk Across All Exposure Routes/Pathways :	5E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-63
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Facility 7 Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	1.67E-05	N/A	--
	tetrachloroethene	6.50E-04	1.78E-05	1.00E-02	1.78E-03
	1,1-dichloroethene	2.93E-02	8.03E-04	5.00E-02	1.61E-02
	toluene	2.50E-04	6.85E-06	8.00E-02	8.56E-05
	Inorganic Ions				
	perchlorate	3.10E-03	8.49E-05	7.00E-04	1.21E-01
				Total Risk for Oral Route:	0.1
Dermal	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	1.05E-06	N/A	--
	tetrachloroethene	6.50E-04	3.07E-06	1.00E-02	3.07E-04
	1,1-dichloroethene	2.93E-02	5.03E-05	5.00E-02	1.01E-03
	toluene	2.50E-04	1.11E-06	8.00E-02	1.39E-05
	Inorganic Ions				
	perchlorate	3.10E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.0013

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-63
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Facility 7 Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	2.92E-01	N/A	--
	tetrachloroethene	6.50E-04	3.12E-01	2.70E+02	1.15E-03
	1,1-dichloroethene	2.93E-02	1.40E+01	2.00E+02	7.02E-02
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	Inorganic Ions				
	perchlorate	3.10E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.07
				Total Risk Across All Exposure Routes/Pathways :	0.2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-64
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Facility 7 Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	3.34E-06	1.30E-02	4.35E-08
	tetrachloroethene	6.50E-04	3.56E-06	5.40E-01	1.92E-06
	1,1-dichloroethene	2.93E-02	1.61E-04	N/A	--
	toluene	2.50E-04	1.37E-06	N/A	--
	Inorganic Ions				
	perchlorate	3.10E-03	1.70E-05	N/A	--
				Total Risk for Oral Route:	2.0E-06
Dermal	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	2.65E-07	1.30E-02	3.44E-09
	tetrachloroethene	6.50E-04	7.76E-07	5.40E-01	4.19E-07
	1,1-dichloroethene	2.93E-02	1.27E-05	N/A	--
	toluene	2.50E-04	2.80E-07	N/A	--
	Inorganic Ions				
	perchlorate	3.10E-03	N/A	N/A	--
				Total Risk for Dermal Route:	4.2E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-64
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Facility 7 Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	1.00E-01	2.00E-06	2.01E-07
	tetrachloroethene	6.50E-04	1.07E-01	5.90E-06	6.30E-07
	1,1-dichloroethene	2.93E-02	4.82E+00	N/A	--
	toluene	2.50E-04	4.11E-02	N/A	--
	Inorganic Ions				
	perchlorate	3.10E-03	NV	N/A	--
				Total Risk for Inhalation Route:	8.3E-07
				Total Risk Across All Exposure Routes/Pathways :	3E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-65
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Facility 7 Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	3.90E-05	N/A	--
	tetrachloroethene	6.50E-04	4.16E-05	1.00E-02	4.16E-03
	1,1-dichloroethene	2.93E-02	1.87E-03	5.00E-02	3.75E-02
	toluene	2.50E-04	1.60E-05	8.00E-02	2.00E-04
	Inorganic Ions				
	perchlorate	3.10E-03	1.98E-04	7.00E-04	2.83E-01
				Total Risk for Oral Route:	0.3
Dermal	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	3.09E-06	N/A	--
	tetrachloroethene	6.50E-04	9.05E-06	1.00E-02	9.05E-04
	1,1-dichloroethene	2.93E-02	1.48E-04	5.00E-02	2.97E-03
	toluene	2.50E-04	3.27E-06	8.00E-02	4.09E-05
	Inorganic Ions				
	perchlorate	3.10E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.004

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-65
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Facility 7 Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	6.10E-04	2.92E-01	N/A	--
	tetrachloroethene	6.50E-04	3.12E-01	2.70E+02	1.15E-03
	1,1-dichloroethene	2.93E-02	1.40E+01	2.00E+02	7.02E-02
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	Inorganic Ions				
	perchlorate	3.10E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.07
				Total Risk Across All Exposure Routes/Pathways :	0.4

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-66
Risk Results Detailed Summary - Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	7.4E-08	4.7E-09	2.0E-07	2.8E-07	6%	4.3E-08	3.4E-09	2.0E-07	2.5E-07	8%
tetrachloroethene	3.3E-06	5.7E-07	6.3E-07	4.5E-06	94%	1.9E-06	4.2E-07	6.3E-07	3.0E-06	92%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	3.4E-06	5.7E-07	8.3E-07	**4.8E-06**	100%	2.0E-06	4.2E-07	8.3E-07	**3.2E-06**	100%
Inorganic Ions										
perchlorate	--	--	--	--	--	--	--	--	--	--
Subtotal Inorganic Ions	--	--	--	--	--	--	--	--	--	--
Total:	3E-06	6E-07	8E-07	**5E-06**	100%	2E-06	4E-07	8E-07	**3E-06**	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	1.8E-03	3.1E-04	1.2E-03	3.2E-03	2%	4.2E-03	9.1E-04	1.2E-03	6.2E-03	2%
1,1-dichloroethene	1.6E-02	1.0E-03	7.0E-02	8.7E-02	41%	3.7E-02	3.0E-03	7.0E-02	1.1E-01	28%
toluene	8.6E-05	1.4E-05	4.0E-04	5.0E-04	<0.5%	2.0E-04	4.1E-05	4.0E-04	6.4E-04	<0.5%
Subtotal VOCs	1.8E-02	1.3E-03	7.2E-02	9.1E-02	43%	4.2E-02	3.9E-03	7.2E-02	1.2E-01	29%
Inorganic Ions										
perchlorate	1.2E-01	--	--	1.2E-01	57%	2.8E-01	--	--	2.8E-01	71%
Subtotal Inorganic Ions	1.2E-01	0.0E+00	0.0E+00	1.2E-01	57%	2.8E-01	0.0E+00	0.0E+00	2.8E-01	71%
Total:	0.1	0.001	0.07	0.2	100%	0.3	0.004	0.07	0.4	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-67
Risk Results Summary - Based on Facility 7 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs	3.4E-06	5.7E-07	8.3E-07	4.8E-06	2.0E-06	4.2E-07	8.3E-07	3.2E-06
Inorganic Ions:	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Total:	3E-06	6E-07	8E-07	**5E-06**	2E-06	4E-07	8E-07	**3E-06**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs	1.8E-02	1.3E-03	7.2E-02	9.1E-02	4.2E-02	3.9E-03	7.2E-02	1.2E-01
Inorganic Ions:	1.2E-01	0.0E+00	0.0E+00	1.2E-01	2.8E-01	0.0E+00	0.0E+00	2.8E-01
Total:	0.1	0.001	0.07	0.2	0.3	0.004	0.07	0.4

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-68
Groundwater Exposure Point Concentrations - Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 8	***Volatile Organic Compounds***		
	trichloroethene	4.01E-02	2007
	tetrachloroethene	3.42E-02	2007
	1,1-dichloroethene	2.50E-04	2007[a]
	cis-1,2-dichloroethene	4.22E-03	2007
	chloroform	1.94E-03	2007
	trans-1,2-dichloroethene	2.50E-04	2007[a]
	toluene	2.50E-04	2007[a]
	Semivolatile Organic Compounds		
	1,4-dioxane	1.00E-03	2007[a]

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-69
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	3.77E-04	1.30E-02	4.90E-06
	tetrachloroethene	3.42E-02	3.21E-04	5.40E-01	1.73E-04
	1,1-dichloroethene	2.50E-04	2.35E-06	N/A	--
	cis-1,2-dichloroethene	4.22E-03	3.96E-05	N/A	--
	chloroform	1.94E-03	1.82E-05	3.10E-02	5.65E-07
	trans-1,2-dichloroethene	2.50E-04	2.35E-06	N/A	--
	toluene	2.50E-04	2.35E-06	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	9.39E-06	2.70E-02	2.54E-07
				Total Risk for Oral Route:	1.79E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-69
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	2.36E-05	1.30E-02	3.07E-07
	tetrachloroethene	3.42E-02	5.53E-05	5.40E-01	2.99E-05
	1,1-dichloroethene	2.50E-04	1.47E-07	N/A	--
	cis-1,2-dichloroethene	4.22E-03	2.25E-06	N/A	--
	chloroform	1.94E-03	6.47E-07	3.10E-02	2.01E-08
	trans-1,2-dichloroethene	2.50E-04	9.44E-08	N/A	--
	toluene	2.50E-04	3.80E-07	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	6.37E-10	2.70E-02	1.72E-11
				Total Risk for Dermal Route:	3.02E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-69
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	6.59E+00	2.00E-06	1.32E-05
	tetrachloroethene	3.42E-02	5.62E+00	5.90E-06	3.32E-05
	1,1-dichloroethene	2.50E-04	4.11E-02	N/A	--
	cis-1,2-dichloroethene	4.22E-03	6.94E-01	N/A	--
	chloroform	1.94E-03	3.19E-01	5.30E-06	1.69E-06
	trans-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	toluene	2.50E-04	4.11E-02	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	NV	7.70E-06	--
				Total Risk for Inhalation Route:	4.8E-05
				Total Risk Across All Exposure Routes/Pathways :	**3E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-70

Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 8 Data

Remedial Investigation

San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	1.10E-03	N/A	--
	tetrachloroethene	3.42E-02	9.37E-04	1.00E-02	9.37E-02
	1,1-dichloroethene	2.50E-04	6.85E-06	5.00E-02	1.37E-04
	cis-1,2-dichloroethene	4.22E-03	1.16E-04	1.00E-02	1.16E-02
	chloroform	1.94E-03	5.32E-05	1.00E-02	5.32E-03
	trans-1,2-dichloroethene	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	toluene	2.50E-04	6.85E-06	8.00E-02	8.56E-05
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	2.74E-05	N/A	--
				Total Risk for Oral Route:	0.1

Notes: N/A = not applicable - toxicity value or associated information not established.

COPC = contaminant of potential concern

NV = Not volatile

mg/L = milligrams per liter

mg/kg/day = milligrams per kilogram per day

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

-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-70
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	6.88E-05	N/A	--
	tetrachloroethene	3.42E-02	1.61E-04	1.00E-02	1.61E-02
	1,1-dichloroethene	2.50E-04	4.29E-07	5.00E-02	8.58E-06
	cis-1,2-dichloroethene	4.22E-03	6.56E-06	1.00E-02	6.56E-04
	chloroform	1.94E-03	1.89E-06	1.00E-02	1.89E-04
	trans-1,2-dichloroethene	2.50E-04	2.75E-07	2.00E-02	1.38E-05
	toluene	2.50E-04	1.11E-06	8.00E-02	1.39E-05
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	1.86E-09	N/A	--
				Total Risk for Dermal Route:	0.0

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-70
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	1.92E+01	N/A	--
	tetrachloroethene	3.42E-02	1.64E+01	2.70E+02	6.07E-02
	1,1-dichloroethene	2.50E-04	1.20E-01	2.00E+02	5.99E-04
	cis-1,2-dichloroethene	4.22E-03	2.02E+00	3.50E+01	5.78E-02
	chloroform	1.94E-03	9.30E-01	9.80E+01	9.49E-03
	trans-1,2-dichloroethene	2.50E-04	1.20E-01	5.95E+01	2.01E-03
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	NV	3.00E+03	--
				Total Risk for Inhalation Route:	0.1
				Total Risk Across All Exposure Routes/Pathways :	0.3

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-71
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	2.20E-04	1.30E-02	2.86E-06
	tetrachloroethene	3.42E-02	1.87E-04	5.40E-01	1.01E-04
	1,1-dichloroethene	2.50E-04	1.37E-06	N/A	--
	cis-1,2-dichloroethene	4.22E-03	2.31E-05	N/A	--
	chloroform	1.94E-03	1.06E-05	3.10E-02	3.30E-07
	trans-1,2-dichloroethene	2.50E-04	1.37E-06	N/A	--
	toluene	2.50E-04	1.37E-06	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	5.48E-06	2.70E-02	1.48E-07
				Total Risk for Oral Route:	1.05E-04
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	1.74E-05	1.30E-02	2.26E-07
	tetrachloroethene	3.42E-02	4.08E-05	5.40E-01	2.20E-05
	1,1-dichloroethene	2.50E-04	1.08E-07	N/A	--
	cis-1,2-dichloroethene	4.22E-03	1.66E-06	N/A	--
	chloroform	1.94E-03	4.77E-07	3.10E-02	1.48E-08
	trans-1,2-dichloroethene	2.50E-04	6.96E-08	N/A	--
	toluene	2.50E-04	2.80E-07	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	4.70E-10	2.70E-02	1.27E-11
				Total Risk for Dermal Route:	2.23E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-71
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	6.59E+00	2.00E-06	1.32E-05
	tetrachloroethene	3.42E-02	5.62E+00	5.90E-06	3.32E-05
	1,1-dichloroethene	2.50E-04	4.11E-02	N/A	--
	cis-1,2-dichloroethene	4.22E-03	6.94E-01	N/A	--
	chloroform	1.94E-03	3.19E-01	5.30E-06	1.69E-06
	trans-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	toluene	2.50E-04	4.11E-02	N/A	--
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	NV	7.70E-06	--
				Total Risk for Inhalation Route:	4.8E-05
				Total Risk Across All Exposure Routes/Pathways :	**2E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-72
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	2.56E-03	N/A	--
	tetrachloroethene	3.42E-02	2.19E-03	1.00E-02	2.19E-01
	1,1-dichloroethene	2.50E-04	1.60E-05	5.00E-02	3.20E-04
	cis-1,2-dichloroethene	4.22E-03	2.70E-04	1.00E-02	2.70E-02
	chloroform	1.94E-03	1.24E-04	1.00E-02	1.24E-02
	trans-1,2-dichloroethene	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	toluene	2.50E-04	6.85E-06	8.00E-02	8.56E-05
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	6.39E-05	N/A	--
				Total Risk for Oral Route:	0.3

Notes: N/A = not applicable - toxicity value or associated information not established.

COPC = contaminant of potential concern

NV = Not volatile

mg/L = milligrams per liter

mg/kg/day = milligrams per kilogram per day

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

-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-72
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	2.03E-04	N/A	--
	tetrachloroethene	3.42E-02	4.76E-04	1.00E-02	4.76E-02
	1,1-dichloroethene	2.50E-04	1.27E-06	5.00E-02	2.53E-05
	cis-1,2-dichloroethene	4.22E-03	1.94E-05	1.00E-02	1.94E-03
	chloroform	1.94E-03	5.57E-06	1.00E-02	5.57E-04
	trans-1,2-dichloroethene	2.50E-04	8.12E-07	2.00E-02	4.06E-05
	toluene	2.50E-04	3.27E-06	8.00E-02	4.09E-05
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	5.48E-09	N/A	--
				Total Risk for Dermal Route:	0.05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-72
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.01E-02	1.92E+01	N/A	--
	tetrachloroethene	3.42E-02	1.64E+01	2.70E+02	6.07E-02
	1,1-dichloroethene	2.50E-04	1.20E-01	2.00E+02	5.99E-04
	cis-1,2-dichloroethene	4.22E-03	2.02E+00	3.50E+01	5.78E-02
	chloroform	1.94E-03	9.30E-01	9.80E+01	9.49E-03
	trans-1,2-dichloroethene	2.50E-04	1.20E-01	5.95E+01	2.01E-03
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	Semivolatile Organic Compounds				
	1,4-dioxane	1.00E-03	NV	3.00E+03	--
				Total Risk for Inhalation Route:	0.1
				Total Risk Across All Exposure Routes/Pathways :	0.4

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-73
Risk Results Detailed Summary - Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	4.9E-06	3.1E-07	1.3E-05	1.8E-05	7%	2.9E-06	2.3E-07	1.3E-05	1.6E-05	9%
tetrachloroethene	**1.7E-04**	3.0E-05	3.3E-05	**2.4E-04**	92%	1.0E-04	2.2E-05	3.3E-05	**1.6E-04**	89%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
chloroform	5.6E-07	2.0E-08	1.7E-06	2.3E-06	1%	3.3E-07	1.5E-08	1.7E-06	2.0E-06	1%
trans-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	**1.8E-04**	3.0E-05	4.8E-05	**2.6E-04**	100%	1.0E-04	2.2E-05	4.8E-05	**1.7E-04**	100%
Semivolatile Organic Compounds										
1,4-dioxane	2.5E-07	1.7E-11	--	2.5E-07	<0.5%	1.5E-07	1.3E-11	--	1.5E-07	<0.5%
Subtotal SVOCs	2.5E-07	1.7E-11	0.0E+00	2.5E-07	0.1%	1.5E-07	1.3E-11	0.0E+00	1.5E-07	0.1%
Total:	**2E-04**	3E-05	5E-05	**3E-04**	100%	1E-04	2E-05	5E-05	**2E-04**	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	9.4E-02	1.6E-02	6.1E-02	1.7E-01	66%	2.2E-01	4.8E-02	6.1E-02	3.3E-01	74%
1,1-dichloroethene	1.4E-04	8.6E-06	6.0E-04	7.4E-04	<0.5%	3.2E-04	2.5E-05	6.0E-04	9.4E-04	<0.5%
cis-1,2-dichloroethene	1.2E-02	6.6E-04	5.8E-02	7.0E-02	27%	2.7E-02	1.9E-03	5.8E-02	8.7E-02	20%
chloroform	5.3E-03	1.9E-04	9.5E-03	1.5E-02	6%	1.2E-02	5.6E-04	9.5E-03	2.2E-02	5%
trans-1,2-dichloroethene	3.4E-04	1.4E-05	2.0E-03	2.4E-03	1%	8.0E-04	4.1E-05	2.0E-03	2.9E-03	1%
toluene	8.6E-05	1.4E-05	4.0E-04	5.0E-04	<0.5%	8.6E-05	4.1E-05	4.0E-04	5.3E-04	<0.5%
Subtotal VOCs	1.1E-01	1.7E-02	1.3E-01	2.6E-01	100%	2.6E-01	5.0E-02	1.3E-01	4.4E-01	100%
Semivolatile Organic Compounds										
1,4-dioxane	--	--	--	--	--	--	--	--	--	--
Subtotal SVOCs	--	--	--	--	--	--	--	--	--	--
Total:	0.1	0.02	0.1	0.3	100%	0.3	0.05	0.1	0.4	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-74
Risk Results Summary - Based on Facility 8 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	**1.8E-04**	3.0E-05	4.8E-05	**2.6E-04**	1.0E-04	2.2E-05	4.8E-05	**1.7E-04**
Subtotal SVOCs	2.5E-07	1.7E-11	--	2.5E-07	1.5E-07	1.3E-11	--	1.5E-07
Total:	**2E-04**	3E-05	5E-05	**3E-04**	1E-04	2E-05	5E-05	**2E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	1.1E-01	1.7E-02	1.3E-01	2.6E-01	2.6E-01	5.0E-02	1.3E-01	4.4E-01
Subtotal SVOCs	--	--	--	--	--	--	--	--
Total:	0.1	0.02	0.1	0.3	0.3	0.05	0.1	0.4

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-75
Groundwater Exposure Point Concentrations - Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 10	***Volatile Organic Compounds***		
	trichloroethene	8.44E-02	2007
	tetrachloroethene	4.48E-02	2007
	1,1-dichloroethene	2.50E-04	2007[a]
	cis-1,2-dichloroethene	2.10E-03	2007
	Metals		
	chromium	6.00E-03	2006

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-76
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident-Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	7.93E-04	1.30E-02	1.03E-05
	tetrachloroethene	4.48E-02	4.21E-04	5.40E-01	2.27E-04
	1,1-dichloroethene	2.50E-04	2.35E-06	N/A	--
	cis-1,2-dichloroethene	2.10E-03	1.97E-05	N/A	--
	Metals				
	chromium	6.00E-03	5.64E-05	N/A	--
				Total Risk for Oral Route:	2.4E-04
Dermal	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	4.97E-05	1.30E-02	6.46E-07
	tetrachloroethene	4.48E-02	7.25E-05	5.40E-01	3.91E-05
	1,1-dichloroethene	2.50E-04	1.47E-07	N/A	--
	cis-1,2-dichloroethene	2.10E-03	1.12E-06	N/A	--
	Metals				
	chromium	6.00E-03	2.94E-07	N/A	--
				Total Risk for Dermal Route:	4.0E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-76
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident-Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	1.39E+01	2.00E-06	2.77E-05
	tetrachloroethene	4.48E-02	7.36E+00	5.90E-06	4.34E-05
	1,1-dichloroethene	2.50E-04	4.11E-02	N/A	--
	cis-1,2-dichloroethene	2.10E-03	3.45E-01	N/A	--
	Metals				
	chromium	6.00E-03	NV	1.20E-02	--
				Total Risk for Inhalation Route:	7.1E-05
				Total Risk Across All Exposure Routes/Pathways :	**3E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-77
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident-Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	2.31E-03	N/A	--
	tetrachloroethene	4.48E-02	1.23E-03	1.00E-02	1.23E-01
	1,1-dichloroethene	2.50E-04	6.85E-06	5.00E-02	1.37E-04
	cis-1,2-dichloroethene	2.10E-03	5.75E-05	1.00E-02	5.75E-03
	Metals				
	chromium	6.00E-03	1.64E-04	1.50E+00	1.10E-04
				Total Risk for Oral Route:	0.1
Dermal	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	1.45E-04	N/A	--
	tetrachloroethene	4.48E-02	2.11E-04	1.00E-02	2.11E-02
	1,1-dichloroethene	2.50E-04	4.29E-07	5.00E-02	8.58E-06
	cis-1,2-dichloroethene	2.10E-03	3.27E-06	1.00E-02	3.27E-04
	Metals				
	chromium	6.00E-03	8.58E-07	1.50E+00	5.72E-07
				Total Risk for Dermal Route:	0.02

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-77
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident-Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	4.05E+01	N/A	--
	tetrachloroethene	4.48E-02	2.15E+01	2.70E+02	7.96E-02
	1,1-dichloroethene	2.50E-04	1.20E-01	2.00E+02	5.99E-04
	cis-1,2-dichloroethene	2.10E-03	1.01E+00	3.50E+01	2.88E-02
	Metals				
	chromium	6.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.1
				Total Risk Across All Exposure Routes/Pathways :	0.3

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-78
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident-Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	4.62E-04	1.30E-02	6.01E-06
	tetrachloroethene	4.48E-02	2.45E-04	5.40E-01	1.33E-04
	1,1-dichloroethene	2.50E-04	1.37E-06	N/A	--
	cis-1,2-dichloroethene	2.10E-03	1.15E-05	N/A	--
	Metals				
	chromium	6.00E-03	3.29E-05	N/A	--
				Total Risk for Oral Route:	1.4E-04
Dermal	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	3.66E-05	1.30E-02	4.76E-07
	tetrachloroethene	4.48E-02	5.35E-05	5.40E-01	2.89E-05
	1,1-dichloroethene	2.50E-04	1.08E-07	N/A	--
	cis-1,2-dichloroethene	2.10E-03	8.26E-07	N/A	--
	Metals				
	chromium	6.00E-03	2.17E-07	N/A	--
				Total Risk for Dermal Route:	2.9E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-78
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident-Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	1.39E+01	2.00E-06	2.77E-05
	tetrachloroethene	4.48E-02	7.36E+00	5.90E-06	4.34E-05
	1,1-dichloroethene	2.50E-04	4.11E-02	N/A	--
	cis-1,2-dichloroethene	2.10E-03	3.45E-01	N/A	--
	Metals				
	chromium	6.00E-03	NV	1.20E-02	--
				Total Risk for Inhalation Route:	7.1E-05
				Total Risk Across All Exposure Routes/Pathways :	**2E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-79
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident-Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	5.40E-03	N/A	--
	tetrachloroethene	4.48E-02	2.86E-03	1.00E-02	2.86E-01
	1,1-dichloroethene	2.50E-04	1.60E-05	5.00E-02	3.20E-04
	cis-1,2-dichloroethene	2.10E-03	1.34E-04	1.00E-02	1.34E-02
	Metals				
	chromium	6.00E-03	3.84E-04	1.50E+00	2.56E-04
				Total Risk for Oral Route:	0.3
Dermal	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	4.27E-04	N/A	--
	tetrachloroethene	4.48E-02	6.24E-04	1.00E-02	6.24E-02
	1,1-dichloroethene	2.50E-04	1.27E-06	5.00E-02	2.53E-05
	cis-1,2-dichloroethene	2.10E-03	9.64E-06	1.00E-02	9.64E-04
	Metals				
	chromium	6.00E-03	2.53E-06	1.50E+00	1.69E-06
				Total Risk for Dermal Route:	0.06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-79
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident-Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	8.44E-02	4.05E+01	N/A	--
	tetrachloroethene	4.48E-02	2.15E+01	2.70E+02	7.96E-02
	1,1-dichloroethene	2.50E-04	1.20E-01	2.00E+02	5.99E-04
	cis-1,2-dichloroethene	2.10E-03	1.01E+00	3.50E+01	2.88E-02
	Metals				
	chromium	6.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.1
				Total Risk Across All Exposure Routes/Pathways :	0.5

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-80
Risk Results Detailed Summary - Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
trichloroethene	1.0E-05	6.5E-07	2.8E-05	3.9E-05	11%	6.0E-06	4.8E-07	2.8E-05	3.4E-05	14%
tetrachloroethene	**2.3E-04**	3.9E-05	4.3E-05	**3.1E-04**	89%	**1.3E-04**	2.9E-05	4.3E-05	**2.0E-04**	86%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	**2.4E-04**	4.0E-05	7.1E-05	**3.5E-04**	100%	**1.4E-04**	2.9E-05	7.1E-05	**2.4E-04**	100%
Metals										
chromium	--	--	--	--	--	--	--	--	--	--
Subtotal Metals	--	--	--	--	--	--	--	--	--	--
Total:	**2E-04**	4E-05	7E-05	**3E-04**	100%	**1E-04**	3E-05	7E-05	**2E-04**	100%

cer Effects Risk Results - Hazard Quotients										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	1.2E-01	2.1E-02	8.0E-02	2.2E-01	86%	2.9E-01	6.2E-02	8.0E-02	4.3E-01	91%
1,1-dichloroethene	1.4E-04	8.6E-06	6.0E-04	7.4E-04	<0.5%	3.2E-04	2.5E-05	6.0E-04	9.4E-04	<0.5%
cis-1,2-dichloroethene	5.8E-03	3.3E-04	2.9E-02	3.5E-02	13%	1.3E-02	9.6E-04	2.9E-02	4.3E-02	9%
Subtotal VOCs	**1.3E-01**	**2.1E-02**	**1.1E-01**	**2.6E-01**	100%	**3.0E-01**	**6.3E-02**	**1.1E-01**	**4.7E-01**	100%
Metals										
chromium	1.1E-04	5.7E-07	--	1.1E-04	<0.5%	1.1E-04	5.7E-07	--	1.1E-04	<0.5%
Subtotal Metals	**1.1E-04**	5.7E-07	--	**1.1E-04**	<0.5%	**1.1E-04**	5.7E-07	--	**1.1E-04**	<0.5%
Total:	0.1	0.02	0.1	0.3	100%	0.3	0.06	0.1	0.5	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-81
Risk Results Summary - Based on Facility 10 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	**2.4E-04**	4.0E-05	7.1E-05	**3.5E-04**	**1.4E-04**	2.9E-05	7.1E-05	**2.4E-04**
Subtotal Metals	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Total:	**2E-04**	4E-05	7E-05	**3E-04**	**1E-04**	3E-05	7E-05	**2E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	**1.3E-01**	**2.1E-02**	**1.1E-01**	**2.6E-01**	**3.0E-01**	**6.3E-02**	**1.1E-01**	**4.7E-01**
Subtotal Metals	**1.1E-04**	5.7E-07	**--**	**1.1E-04**	**1.1E-04**	5.7E-07	**--**	**1.1E-04**
Total:	0.1	0.02	0.1	0.3	0.3	0.06	0.1	0.5

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-82
Groundwater Exposure Point Concentrations - Based on Facility 22 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 22	***Volatile Organic Compounds***		
	tetrachloroethene	1.90E-01	2006
	Metals		
	chromium	3.70E-03	2006

Notes:
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-83
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident-Based on Facility 22 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Oral	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	1.78E-03	5.40E-01	9.64E-04
	Metals				
	chromium	3.70E-03	3.48E-05	N/A	--
				Total Risk for Oral Route:	9.6E-04
Dermal	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	3.07E-04	5.40E-01	1.66E-04
	Metals				
	chromium	3.70E-03	1.81E-07	N/A	--
				Total Risk for Dermal Route:	1.7E-04
Inhalation	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	3.12E+01	5.90E-06	1.84E-04
	Metals				
	chromium	3.70E-03	NV	1.20E-02	
				Total Risk for Inhalation Route:	1.8E-04
				Total Risk Across All Exposure Routes/Pathways :	**1E-03**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-84
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident-Based on Facility 22 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	5.21E-03	1.00E-02	5.21E-01
	Metals				
	chromium	3.70E-03	1.01E-04	1.50E+00	6.76E-05
				Total Risk for Oral Route:	0.5
Dermal	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	8.97E-04	1.00E-02	8.97E-02
	Metals				
	chromium	3.70E-03	5.29E-07	1.50E+00	3.53E-07
				Total Risk for Dermal Route:	0.090
Inhalation	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	9.11E+01	2.70E+02	3.37E-01
	Metals				
	chromium	3.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.34
				Total Risk Across All Exposure Routes/Pathways :	0.9

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-85
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident-Based on Facility 22 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Oral	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	1.04E-03	5.40E-01	5.62E-04
	Metals				
	chromium	3.70E-03	2.03E-05	N/A	--
				Total Risk for Oral Route:	5.6E-04
Dermal	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	2.27E-04	5.40E-01	1.22E-04
	Metals				
	chromium	3.70E-03	1.34E-07	N/A	--
				Total Risk for Dermal Route:	1.2E-04
Inhalation	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	3.12E+01	5.90E-06	1.84E-04
	Metals				
	chromium	3.70E-03	NV	1.20E-02	--
				Total Risk for Inhalation Route:	1.8E-04
				Total Risk Across All Exposure Routes/Pathways :	**9E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-86
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident-Based on Facility 22 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	1.21E-02	1.00E-02	1.21E+00
	Metals				
	chromium	3.70E-03	2.37E-04	1.50E+00	1.58E-04
				Total Risk for Oral Route:	1.2
Dermal	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	2.65E-03	1.00E-02	2.65E-01
	Metals				
	chromium	3.70E-03	1.56E-06	1.50E+00	1.04E-06
				Total Risk for Dermal Route:	0.265
Inhalation	***Volatile Organic Compounds***				
	tetrachloroethene	1.90E-01	9.11E+01	2.70E+02	3.37E-01
	Metals				
	chromium	3.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.34
				Total Risk Across All Exposure Routes/Pathways :	2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-87
Risk Results Detailed Summary - Based on Facility 22 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
tetrachloroethene	**9.6E-04**	**1.7E-04**	**1.8E-04**	**1.3E-03**	100%	**5.6E-04**	**1.2E-04**	**1.8E-04**	**8.7E-04**	100%
Metals										
chromium	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Total:	**1E-03**	**2E-04**	**2E-04**	**1E-03**	100%	**6E-04**	**1E-04**	**2E-04**	**9E-04**	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
tetrachloroethene	5.2E-01	9.0E-02	3.4E-01	9.5E-01	100%	1.2E+00	2.6E-01	3.4E-01	**1.8E+00**	100%
Metals										
chromium	6.8E-05	3.5E-07	**--**	6.8E-05	<0.5%	1.6E-04	1.0E-06	**--**	1.6E-04	<0.5%
Total:	0.5	0.09	0.3	0.9	100%	1	0.26	0.3	**2**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-88
Risk Results Detailed Summary - Based on Facility 22 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Volatile Organic Compounds								
tetrachloroethene	**9.6E-04**	**1.7E-04**	**1.8E-04**	**1.3E-03**	**5.6E-04**	**1.2E-04**	**1.8E-04**	**8.7E-04**
Metals								
chromium	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Total:	**1E-03**	**2E-04**	**2E-04**	**1E-03**	**6E-04**	**1E-04**	**2E-04**	**9E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Volatile Organic Compounds								
tetrachloroethene	5.2E-01	9.0E-02	3.4E-01	9.5E-01	1.2E+00	2.6E-01	3.4E-01	**1.8E+00**
Metals								
chromium	6.8E-05	3.5E-07	**--**	6.8E-05	1.6E-04	1.0E-06	**--**	1.6E-04
Total:	0.5	0.09	0.3	0.9	1	0.26	0.3	**2**

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-89
Groundwater Exposure Point Concentrations - Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 32	***Volatile Organic Compounds***		
	trichloroethene	5.10E-02	2005
	tetrachloroethene	2.80E-03	2005
	1,1-dichloroethene	1.00E-03	2005
	cis-1,2-dichloroethene	2.50E-04	2005[a]
	methyl-tert-butyl ether	1.60E-03	2005
	methylene chloride	2.50E-04	2005[a]
	naphthalene	1.30E-03	2005

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-90
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident-Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	4.79E-04	1.30E-02	6.23E-06
	tetrachloroethene	2.80E-03	2.63E-05	5.40E-01	1.42E-05
	1,1-dichloroethene	1.00E-03	9.39E-06	N/A	--
	cis-1,2-dichloroethene	2.50E-04	2.35E-06	N/A	--
	methyl-tert-butyl ether	1.60E-03	1.50E-05	1.80E-03	2.71E-08
	methylene chloride	2.50E-04	2.35E-06	1.40E-02	3.29E-08
	naphthalene	1.30E-03	1.22E-05	N/A	--
				Total Risk for Oral Route:	2.05E-05
Dermal	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	3.00E-05	1.30E-02	3.90E-07
	tetrachloroethene	2.80E-03	4.53E-06	5.40E-01	2.45E-06
	1,1-dichloroethene	1.00E-03	5.88E-07	N/A	--
	cis-1,2-dichloroethene	2.50E-04	1.33E-07	N/A	--
	methyl-tert-butyl ether	1.60E-03	2.02E-07	1.80E-03	3.63E-10
	methylene chloride	2.50E-04	1.72E-09	1.40E-02	2.40E-11
	naphthalene	1.30E-03	3.00E-06	N/A	--
				Total Risk for Dermal Route:	2.84E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-90
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident-Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	8.38E+00	2.00E-06	1.68E-05
	tetrachloroethene	2.80E-03	4.60E-01	5.90E-06	2.72E-06
	1,1-dichloroethene	1.00E-03	1.64E-01	N/A	--
	cis-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	methyl-tert-butyl ether	1.60E-03	2.63E-01	2.60E-07	6.84E-08
	methylene chloride	2.50E-04	4.11E-02	1.00E-06	4.11E-08
	naphthalene	1.30E-03	2.14E-01	3.40E-05	7.27E-06
				Total Risk for Inhalation Route:	2.7E-05
				Total Risk Across All Exposure Routes/Pathways :	**5E-05**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-91
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident-Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	1.40E-03	N/A	--
	tetrachloroethene	2.80E-03	7.67E-05	1.00E-02	7.67E-03
	1,1-dichloroethene	1.00E-03	2.74E-05	5.00E-02	5.48E-04
	cis-1,2-dichloroethene	2.50E-04	6.85E-06	1.00E-02	6.85E-04
	methyl-tert-butyl ether	1.60E-03	4.38E-05	N/A	--
	methylene chloride	2.50E-04	6.85E-06	6.00E-02	1.14E-04
	naphthalene	1.30E-03	3.56E-05	2.00E-02	1.78E-03
				Total Risk for Oral Route:	0.011
Dermal	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	8.75E-05	N/A	--
	tetrachloroethene	2.80E-03	1.32E-05	1.00E-02	1.32E-03
	1,1-dichloroethene	1.00E-03	1.72E-06	5.00E-02	3.43E-05
	cis-1,2-dichloroethene	2.50E-04	3.89E-07	1.00E-02	3.89E-05
	methyl-tert-butyl ether	1.60E-03	5.88E-07	N/A	--
	methylene chloride	2.50E-04	5.01E-09	6.00E-02	8.34E-08
	naphthalene	1.30E-03	8.74E-06	2.00E-02	4.37E-04
				Total Risk for Dermal Route:	0.0018

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-91
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident-Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.58
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	2.45E+01	N/A	--
	tetrachloroethene	2.80E-03	1.34E+00	2.70E+02	4.97E-03
	1,1-dichloroethene	1.00E-03	4.79E-01	2.00E+02	2.40E-03
	cis-1,2-dichloroethene	2.50E-04	1.20E-01	3.50E+01	3.42E-03
	methyl-tert-butyl ether	1.60E-03	7.67E-01	3.00E+03	2.56E-04
	methylene chloride	2.50E-04	1.20E-01	4.00E+02	3.00E-04
	naphthalene	1.30E-03	6.23E-01	9.00E+00	6.93E-02
				Total Risk for Inhalation Route:	0.081
				Total Risk Across All Exposure Routes/Pathways :	0.1

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-92
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident-Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	2.79E-04	1.30E-02	3.63E-06
	tetrachloroethene	2.80E-03	1.53E-05	5.40E-01	8.28E-06
	1,1-dichloroethene	1.00E-03	5.48E-06	N/A	--
	cis-1,2-dichloroethene	2.50E-04	1.37E-06	N/A	--
	methyl-tert-butyl ether	1.60E-03	8.77E-06	1.80E-03	1.58E-08
	methylene chloride	2.50E-04	1.37E-06	1.40E-02	1.92E-08
	naphthalene	1.30E-03	7.12E-06	N/A	--
				Total Risk for Oral Route:	1.20E-05
Dermal	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	2.21E-05	1.30E-02	2.88E-07
	tetrachloroethene	2.80E-03	3.34E-06	5.40E-01	1.80E-06
	1,1-dichloroethene	1.00E-03	4.34E-07	N/A	--
	cis-1,2-dichloroethene	2.50E-04	9.83E-08	N/A	--
	methyl-tert-butyl ether	1.60E-03	1.49E-07	1.80E-03	2.68E-10
	methylene chloride	2.50E-04	1.27E-09	1.40E-02	1.77E-11
	naphthalene	1.30E-03	2.21E-06	N/A	--
				Total Risk for Dermal Route:	2.09E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-92
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident-Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	8.38E+00	2.00E-06	1.68E-05
	tetrachloroethene	2.80E-03	4.60E-01	5.90E-06	2.72E-06
	1,1-dichloroethene	1.00E-03	1.64E-01	N/A	--
	cis-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	methyl-tert-butyl ether	1.60E-03	2.63E-01	2.60E-07	6.84E-08
	methylene chloride	2.50E-04	4.11E-02	1.00E-06	4.11E-08
	naphthalene	1.30E-03	2.14E-01	3.40E-05	7.27E-06
				Total Risk for Inhalation Route:	2.7E-05
				Total Risk Across All Exposure Routes/Pathways :	**4E-05**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-93
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident-Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	3.26E-03	N/A	--
	tetrachloroethene	2.80E-03	1.79E-04	1.00E-02	1.79E-02
	1,1-dichloroethene	1.00E-03	6.39E-05	5.00E-02	1.28E-03
	cis-1,2-dichloroethene	2.50E-04	1.60E-05	1.00E-02	1.60E-03
	methyl-tert-butyl ether	1.60E-03	1.02E-04	N/A	--
	methylene chloride	2.50E-04	1.60E-05	6.00E-02	2.66E-04
	naphthalene	1.30E-03	8.31E-05	2.00E-02	4.16E-03
				Total Risk for Oral Route:	0.025
Dermal	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	2.58E-04	N/A	--
	tetrachloroethene	2.80E-03	3.90E-05	1.00E-02	3.90E-03
	1,1-dichloroethene	1.00E-03	5.06E-06	5.00E-02	1.01E-04
	cis-1,2-dichloroethene	2.50E-04	1.15E-06	1.00E-02	1.15E-04
	methyl-tert-butyl ether	1.60E-03	1.73E-06	N/A	--
	methylene chloride	2.50E-04	1.48E-08	6.00E-02	2.46E-07
	naphthalene	1.30E-03	2.58E-05	2.00E-02	1.29E-03
				Total Risk for Dermal Route:	0.005

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-93
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident-Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	5.10E-02	2.45E+01	N/A	--
	tetrachloroethene	2.80E-03	1.34E+00	2.70E+02	4.97E-03
	1,1-dichloroethene	1.00E-03	4.79E-01	2.00E+02	2.40E-03
	cis-1,2-dichloroethene	2.50E-04	1.20E-01	3.50E+01	3.42E-03
	methyl-tert-butyl ether	1.60E-03	7.67E-01	3.00E+03	2.56E-04
	methylene chloride	2.50E-04	1.20E-01	4.00E+02	3.00E-04
	naphthalene	1.30E-03	6.23E-01	9.00E+00	6.93E-02
				Total Risk for Inhalation Route:	0.08
				Total Risk Across All Exposure Routes/Pathways :	0.1

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-94
Risk Results Detailed Summary - Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
trichloroethene	6.2E-06	3.9E-07	1.7E-05	2.3E-05	47%	3.6E-06	2.9E-07	1.7E-05	2.1E-05	62%
tetrachloroethene	1.4E-05	2.4E-06	2.7E-06	1.9E-05	39%	8.3E-06	1.8E-06	2.7E-06	1.3E-05	38%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
methyl-tert-butyl ether	2.7E-08	3.6E-10	6.8E-08	9.6E-08	<0.5%	1.6E-08	2.7E-10	6.8E-08	8.4E-08	<0.5%
methylene chloride	3.3E-08	2.4E-11	4.1E-08	7.4E-08	<0.5%	1.9E-08	1.8E-11	4.1E-08	6.0E-08	<0.5%
naphthalene	--	--	7.3E-06	7.3E-06	14%	--	--	7.3E-06	--	--
Total:	2.0E-05	2.8E-06	2.7E-05	**5.0E-05**	100%	1.2E-05	2.1E-06	2.7E-05	**3.4E-05**	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	7.7E-03	1.3E-03	5.0E-03	1.4E-02	15%	1.8E-02	3.9E-03	5.0E-03	2.7E-02	24%
1,1-dichloroethene	5.5E-04	3.4E-05	2.4E-03	3.0E-03	3%	1.3E-03	1.0E-04	2.4E-03	3.8E-03	3%
cis-1,2-dichloroethene	6.8E-04	3.9E-05	3.4E-03	4.1E-03	4%	1.6E-03	1.1E-04	3.4E-03	5.1E-03	5%
methyl-tert-butyl ether	--	--	2.6E-04	2.6E-04	<0.5%	--	--	2.6E-04	2.6E-04	<0.5%
methylene chloride	1.1E-04	8.3E-08	3.0E-04	4.1E-04	<0.5%	2.7E-04	2.5E-07	3.0E-04	5.7E-04	1%
naphthalene	1.8E-03	4.4E-04	6.9E-02	7.1E-02	77%	4.2E-03	1.3E-03	6.9E-02	7.5E-02	67%
Total:	0.01	0.002	0.08	0.09	100%	0.03	0.005	0.08	0.1	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-95
Risk Results Summary - Based on Facility 32 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	**Hypothetical Future Residential**							
	Adult Resident				**Child Resident**			
	Reasonable Maximum Exposure							
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Ingestion**	**Dermal**	**Inhalation**	**Total**
VOCs Total:	2E-05	3E-06	3E-05	**5E-05**	1E-05	2E-06	3E-05	**3E-05**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	**Hypothetical Future Residential**							
	Adult Resident				**Child Resident**			
	Reasonable Maximum Exposure							
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Ingestion**	**Dermal**	**Inhalation**	**Total**
VOCs Total:	0.01	0.002	0.08	0.09	0.03	0.005	0.08	0.1

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-96
Groundwater Exposure Point Concentrations - Based on SW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
EPAMW11	trichloroethene	170	2007
	tetrachloroethene	13	2007
	carbon tetrachloride	1.2	2007
	chloroform	1	2007
	1,1-dichloroethane	0.25	2007
	1,2-dichloroethane	0.61	2007
	1,1-dichloroethene	2.4	2007
	cis-1,2-dichloroethene	4	2007
	trans-1,2-dichloroethene	0.2	2007
	cis-1,3-dichloropropene	0.25	2007[a]
	1,1,2-trichloroethane	0.15	2007
	benzene	0.25	2007[a]
	dichlorodifluoromethane	0.28	2007
	methylene chloride	0.28	2007
	methyl-tert-butyl ether	0.21	2007
	toluene	0.25	2007[a]
	1,4-dioxane	0.4	2005[a]
	n-nitrosodimethylamine	0.0009	2005
	arsenic	0.75	2005
	chromium	13.7	2005
	chromium (VI)	9.98	2007
	perchlorate	5	2007
EPAMW18	trichloroethene	0.25	2007[a]
	benzene	0.25	2007[a]
	bromodichloromethane	0.25	2007[a]
	chloroform	0.2	2007
	dibromochloromethane	0.25	2007[a]
	arsenic	1.3	2006
	chromium	0.48	2006[a]
	perchlorate	1	2007[a]
	1,1-dichloroethene	0.085	2007
	acetone	2.5	2007[a]
	bromoform	0.25	2007[a]
	chloromethane	0.25	2007a
	cis-1,3-dichloropropene	0.25	2007[a]
	methylene chloride	0.26	2007
	toluene	0.076	2007
	bis(2-ethylhexyl) phthalate	0.3	2007[a]
	n-nitrosodimethylamine	0.002	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
SW = southwestern
µg/L = micrograms per liter

Table F-96
Groundwater Exposure Point Concentrations - Based on SW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 1	trichloroethene	1700	2007
	tetrachloroethene	28	2007
	carbon tetrachloride	0.58	2007
	1,1-dichloroethene	16	2007
	1,1-dichloroethane	2	2007
	1,2-dichloroethane	10	2007
	cis-1,2-dichloroethene	17	2007
	benzene	0.125	2007[a]
	chloroform	2.5	2007
	1,4-dioxane	8	2006
Facility 3	trichloroethene	118	2007
	tetrachloroethene	16	2007
	carbon tetrachloride	0.5	2007[a]
	1,1-dichloroethane	0.5	2007[a]
	1,2-dichloroethane	0.5	2007[a]
	cis-1,2-dichloroethene	3	2007
	chloroform	0.5	2007[a]
	dichlorodifluoromethane	0.5	2007[a]
	methyl-tert-butyl ether	0.5	2007[a]
	1,1-dichloroethene	0.5	2007[a]
Facility 4	trichloroethene	103	2007
	tetrachloroethene	9.71	2007
	cis-1,2-dichloroethene	3.34	2007
	carbon tetrachloride	0.51	2007
	chloroform	0.73	2007
	o-xylene	0.6	2007
Facility 5	trichloroethene	4	2007
	tetrachloroethene	1	2007
	cis-1,2-dichloroethene	0.25	2007[a]
	chromium	27.6	2006
Facility 6	trichloroethene	91.4	2007
	tetrachloroethene	8.87	2007
	1,1-dichloroethene	0.25	2007[a]
	cis-1,2-dichloroethene	4.09	2007
	carbon tetrachloride	0.25	2007[a]
	chloroform	0.74	2007
	m,p-xylene	11.3	2007
	dichlorodifluoromethane	0.25	2007[a]
	ethylbenzene	0.87	2007
	toluene	0.85	2007
	o-xylene	6.35	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
SW = southwestern
µg/L = micrograms per liter

Table F-96
Groundwater Exposure Point Concentrations - Based on SW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 7	trichloroethene	0.61	2005
	tetrachloroethene	0.65	2005
	1,1-dichloroethene	29.3	2005
	toluene	0.25	2005[a]
	perchlorate	3.1	2003
Facility 8	trichloroethene	40.1	2007
	tetrachloroethene	34.2	2007
	1,1-dichloroethene	0.25	2007[a]
	cis-1,2-dichloroethene	4.22	2007
	chloroform	1.94	2007
	trans-1,2-dichloroethene	0.25	2007[a]
	toluene	0.25	2007[a]
	1,4-dioxane	1	2007[a]
Facility 10	trichloroethene	84.4	2007
	tetrachloroethene	44.8	2007
	1,1-dichloroethene	0.25	2007[a]
	cis-1,2-dichloroethene	2.1	2007
	chromium	6	2006
Facility 22	tetrachloroethene	190	2006
	chromium	3.7	2006
Facility 32	trichloroethene	51	2005
	tetrachloroethene	2.8	2005
	1,1-dichloroethene	1	2005
	cis-1,2-dichloroethene	0.25	2005[a]
	methyl-tert-butyl ether	1.6	2005
	methylene chloride	0.25	2005[a]
	naphthalene	1.3	2005

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
SW = southwestern
µg/L = micrograms per liter

Table F-97
Risk and Hazard Estimates - Based on SW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Most Recent Detected Groundwater Concentration [µg/L]	EPA Residential Tap Water RSL (cancer) [µg/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [µg/L]	Noncancer HI
EPAMW11	trichloroethene	170	1.70E+00	1.00E-04	--	--
	tetrachloroethene	13	1.10E-01	1.18E-04	2.20E+02	5.91E-02
	carbon tetrachloride	1.2	2.00E-01	6.00E-06	2.40E+01	5.00E-02
	chloroform	1	1.90E-01	5.26E-06	1.30E+02	7.69E-03
	1,1-dichloroethane	0.25	2.40E+00	1.04E-07	7.30E+03	3.42E-05
	1,2-dichloroethane	0.61	1.50E-01	4.07E-06	6.40E+02	9.53E-04
	1,1-dichloroethene	2.4	--	--	3.40E+02	7.06E-03
	cis-1,2-dichloroethene	4	--	--	3.70E+02	1.08E-02
	trans-1,2-dichloroethene	0.2	--	--	1.10E+02	1.82E-03
	cis-1,3-dichloropropene	0.25	4.30E-01	5.81E-07	4.00E+01	6.25E-03
	1,1,2-trichloroethane	0.15	2.40E-01	6.25E-07	1.50E+02	1.00E-03
	benzene	0.25	4.10E-01	6.10E-07	4.40E+01	5.68E-03
	dichlorodifluoromethane	0.28	--	--	3.90E+02	7.18E-04
	methylene chloride	0.28	4.80E+00	5.83E-08	1.10E+03	2.55E-04
	methyl-tert-butyl ether	0.21	1.20E+01	1.75E-08	6.30E+03	3.33E-05
	toluene	0.25	--	--	2.30E+03	1.09E-04
	1,4-dioxane	0.4	6.10E+00	6.56E-08	--	--
	n-nitrosodimethylamine	0.0009	4.20E-04	2.14E-06	2.90E-01	3.10E-03
	arsenic	0.75	4.50E-02	1.67E-05	1.10E+01	6.82E-02
	chromium	13.7	--	--	--	--
	chromium (VI)	9.98	--	--	1.10E+02	9.07E-02
	perchlorate	5	--	--	2.60E+01	1.92E-01
	Total			**3E-04**		0.5
EPAMW18	trichloroethene	0.25	1.70E+00	1.47E-07	--	--
	benzene	0.25	4.10E-01	6.10E-07	4.40E+01	5.68E-03
	bromodichloromethane	0.25	1.10E+00	2.27E-07	7.30E+02	3.42E-04
	chloroform	0.2	1.90E-01	1.05E-06	1.30E+02	1.54E-03
	dibromochloromethane	0.25	8.00E-01	3.13E-07	7.30E+02	3.42E-04
	arsenic	1.3	4.50E-02	2.89E-05	1.10E+01	1.18E-01
	chromium	0.48	--	--	--	--
	perchlorate	1	--	--	2.60E+01	3.85E-02
	1,1-dichloroethene	0.085	--	--	3.40E+02	2.50E-04
	acetone	2.5	--	--	2.20E+04	1.14E-04
	bromoform	0.25	8.50E+00	2.94E-08	7.30E+02	3.42E-04
	chloromethane	0.25	1.80E+00	1.39E-07	1.90E+02	1.32E-03
	cis-1,3-dichloropropene	0.25	4.30E-01	5.81E-07	4.00E+01	6.25E-03
	methylene chloride	0.26	4.80E+00	5.42E-08	1.10E+03	2.36E-04
	toluene	0.076	--	--	2.30E+03	3.30E-05
	bis(2-ethylhexyl) phthalate	0.3	4.80E+00	6.25E-08	7.30E+02	4.11E-04
	n-nitrosodimethylamine	0.002	4.20E-04	4.76E-06	2.90E-01	6.90E-03
	Total			**4E-05**		0.2

Notes:
COPC = contaminant of potential concern
SW = southwestern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-97
Risk and Hazard Estimates - Based on SW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Most Recent Detected Groundwater Concentration [µg/L]	EPA Residential Tap Water RSL (cancer) [µg/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [µg/L]	Noncancer HI
Facility 1	trichloroethene	1700	1.70E+00	1.00E-03	--	--
	tetrachloroethene	28	1.10E-01	2.55E-04	2.20E+02	1.27E-01
	carbon tetrachloride	0.58	2.00E-01	2.90E-06	2.40E+01	2.42E-02
	1,1-dichloroethene	16	--	--	3.40E+02	4.71E-02
	1,1-dichloroethane	2	2.40E+00	8.33E-07	7.30E+03	2.74E-04
	1,2-dichloroethane	10	1.50E-01	6.67E-05	6.40E+02	1.56E-02
	cis-1,2-dichloroethene	17	--	--	3.70E+02	4.59E-02
	benzene	0.125	4.10E-01	3.05E-07	4.40E+01	2.84E-03
	chloroform	2.5	1.90E-01	1.32E-05	1.30E+02	1.92E-02
	1,4-dioxane	8	6.10E+00	1.31E-06	--	--
	Total			**1E-03**		0.3
Facility 3	trichloroethene	118	1.70E+00	6.94E-05	--	--
	tetrachloroethene	16	1.10E-01	1.45E-04	2.20E+02	7.27E-02
	carbon tetrachloride	0.5	2.00E-01	2.50E-06	2.40E+01	2.08E-02
	1,1-dichloroethane	0.5	2.40E+00	2.08E-07	7.30E+03	6.85E-05
	1,2-dichloroethane	0.5	1.50E-01	3.33E-06	6.40E+02	7.81E-04
	cis-1,2-dichloroethene	3	--	--	3.70E+02	8.11E-03
	chloroform	0.5	1.90E-01	2.63E-06	1.30E+02	3.85E-03
	dichlorodifluoromethane	0.5	--	--	3.90E+02	1.28E-03
	methyl-tert-butyl ether	0.5	1.20E+01	4.17E-08	6.30E+03	7.94E-05
	1,1-dichloroethene	0.5	--	--	3.40E+02	1.47E-03
	Total			**2E-04**		0.1
Facility 4	trichloroethene	103	1.70E+00	6.06E-05	--	--
	tetrachloroethene	10	1.10E-01	8.83E-05	2.20E+02	4.41E-02
	cis-1,2-dichloroethene	3.3	--	--	3.70E+02	9.03E-03
	carbon tetrachloride	0.51	2.00E-01	2.55E-06	2.40E+01	2.13E-02
	chloroform	0.73	1.90E-01	3.84E-06	1.30E+02	5.62E-03
	o-xylene	0.6	--	--	1.40E+03	4.29E-04
	Total			**2E-04**		0.08
Facility 5	trichloroethene	4	1.70E+00	2.35E-06	--	--
	tetrachloroethene	1	1.10E-01	9.09E-06	2.20E+02	4.55E-03
	cis-1,2-dichloroethene	0.25	--	--	3.70E+02	6.76E-04
	chromium	28	--	--	--	--
	Total			**1E-05**		0.01
Facility 6	trichloroethene	91.4	1.70E+00	5.38E-05	--	--
	tetrachloroethene	8.87	1.10E-01	8.06E-05	2.20E+02	4.03E-02
	1,1-dichloroethene	0.25	--	--	3.40E+02	7.35E-04
	cis-1,2-dichloroethene	4.09	--	--	3.70E+02	1.11E-02
	carbon tetrachloride	0.25	2.00E-01	1.25E-06	2.40E+01	1.04E-02
	chloroform	0.74	1.90E-01	3.89E-06	1.30E+02	5.69E-03
	m,p-xylene	11.3	--	--	1.40E+03	8.07E-03
	dichlorodifluoromethane	0.25	--	--	3.90E+02	6.41E-04
	ethylbenzene	0.87	1.50E+00	5.80E-07	1.30E+03	6.69E-04
	toluene	0.85	--	--	2.30E+03	3.70E-04
	o-xylene	6.35	--	--	1.40E+03	4.54E-03
	Total			**1E-04**		0.08

Notes:
COPC = contaminant of potential concern
SW = southwestern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-97
Risk and Hazard Estimates - Based on SW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Most Recent Detected Groundwater Concentration [µg/L]	EPA Residential Tap Water RSL (cancer) [µg/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [µg/L]	Noncancer HI
Facility 7	trichloroethene	0.61	1.70E+00	3.59E-07	--	--
	tetrachloroethene	0.65	1.10E-01	5.91E-06	2.20E+02	2.95E-03
	1,1-dichloroethene	29.3	--	--	3.40E+02	8.62E-02
	toluene	0.25	--	--	2.30E+03	1.09E-04
	perchlorate	3.1	--	--	2.60E+01	1.19E-01
	Total			6E-06		0.2
Facility 8	trichloroethene	40.1	1.70E+00	2.36E-05	--	--
	tetrachloroethene	34.2	1.10E-01	3.11E-04	2.20E+02	1.55E-01
	1,1-dichloroethene	0.3	--	--	3.40E+02	7.35E-04
	cis-1,2-dichloroethene	4.2	--	--	3.70E+02	1.14E-02
	chloroform	1.9	1.90E-01	1.02E-05	1.30E+02	1.49E-02
	trans-1,2-dichloroethene	0.3	--	--	1.10E+02	2.27E-03
	toluene	0.3	--	--	2.30E+03	1.09E-04
	1,4-dioxane	1.0	6.10E+00	1.64E-07	--	--
	Total			**3E-04**		0.2
Facility 10	trichloroethene	84.4	1.70E+00	4.96E-05		
	tetrachloroethene	44.8	1.10E-01	4.07E-04	2.20E+02	2.04E-01
	1,1-dichloroethene	0.3	--	--	3.40E+02	7.35E-04
	cis-1,2-dichloroethene	2.1	--	--	3.70E+02	5.68E-03
	chromium	6.0	--	--	--	--
	Total			**5E-04**		0.2
Facility 22	tetrachloroethene	190	1.10E-01	1.73E-03	2.20E+02	8.64E-01
	chromium	3.7	--	--	--	--
	Total			**2E-03**		0.9
Facility 32	trichloroethene	51	1.70E+00	3.00E-05	--	--
	tetrachloroethene	2.8	1.10E-01	2.55E-05	2.20E+02	1.27E-02
	1,1-dichloroethene	1.0	--	--	3.40E+02	2.94E-03
	cis-1,2-dichloroethene	0.3	--	--	3.70E+02	6.76E-04
	methyl-tert-butyl ether	1.6	1.20E+01	1.33E-07	6.30E+03	2.54E-04
	methylene chloride	0.3	4.80E+00	5.21E-08	1.10E+03	2.27E-04
	naphthalene	1.3	1.40E-01	9.29E-06	6.20E+00	2.10E-01
	Total			**6E-05**		0.2

Notes:
COPC = contaminant of potential concern
SW = southwestern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-98
Groundwater Exposure Point Concentrations - Based on NW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
01900934	trichloroethene	12.2	2001
	cis-1,2-dichloroethene	0.9	2001
	dichlorodifluoromethane	0.5	2001[a]
	perchlorate	2	1997[a]
01901679	tetrachloroethene	4.8	2007
	carbon tetrachloride	0.25	2007[a]
	nitrate	10,400	2007
	perchlorate	6.8	2001

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
NW = northwestern
µg/L = micrograms per liter

Table F-99
Risk and Hazard Estimates - Based on NW Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration [ug/L]	EPA Residential Tap Water RSL (cancer) [ug/L]	Cancer Risk	Percent Contribution (cancer)	EPA Residential Tap Water RSL (noncancer) [ug/L]	Noncancer HI	Percent Contribution (noncancer)
01900934	trichloroethene	12.2	1.70E+00	7.18E-06	100%	**	--	--
	cis-1,2-dichloroethene	0.9	**	--	--	3.70E+02	2.43E-03	3.0%
	dichlorodifluoromethane	0.5	**	--	--	3.90E+02	1.28E-03	1.6%
	perchlorate	2	**	--	--	2.60E+01	7.69E-02	95.4%
	Total			7E-06	100%		0.08	100.0%
01901679	tetrachloroethene	4.8	1.10E-01	4.36E-05	97%	2.20E+02	2.18E-02	5%
	carbon tetrachloride	0.25	2.00E-01	1.25E-06	3%	2.40E+01	1.04E-02	2%
	nitrate	10,400	**	--	--	5.80E+04	1.79E-01	38%
	perchlorate	6.8	**	--	--	2.60E+01	2.62E-01	55%
	Total			4E-05	100%		0.5	100%

Notes:
COPC = contaminant of potential concern
NW = northwestern
µg/L = micrograms per liter
RSL = EPA Regional Screening Level
** indicate a RSL has not been established
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-100
Groundwater Exposure Point Concentrations - Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
EPAMW12A	***Volatile Organic Compounds***		
	trichloroethene	5.30E-02	2007
	tetrachloroethene	3.20E-03	2007
	1,1-dichloroethane	2.50E-04	2007[a]
	1,1-dichloroethene	1.60E-03	2007
	cis-1,2-dichloroethene	1.20E-02	2007
	1,2-dichloroethane	2.50E-04	2007[a]
	1,2,3-trichloropropane	2.50E-06	2007[a]
	acetone	2.50E-03	2007[a]
	bromoform	3.70E-04	2007[a]
	carbon disulfide	2.50E-04	2007[a]
	chloroform	6.10E-04	2007
	cis-1,3-dichloropropene	2.50E-04	2007[a]
	dichlorodifluoromethane	2.50E-04	2007[a]
	methylene Chloride	2.50E-04	2007
	methyl-tert-butyl ether	2.50E-04	2007
	toluene	1.20E-03	2007
	trans-1,2-dichloroethene	1.60E-04	2007
	Semivolatile Organic Compounds		
	n-nitrosodimethylamine	7.40E-05	2005
	Metals and Inorganic Ions		
	arsenic	8.70E-04	2007
	chromium	1.00E-06	2005
	nitrate	2.50E-02	2007
	perchlorate	2.70E-03	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-101
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Oral	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	4.98E-04	1.30E-02	6.47E-06
	tetrachloroethene	3.20E-03	3.01E-05	5.40E-01	1.62E-05
	1,1-dichloroethane	2.50E-04	2.35E-06	5.70E-03	1.34E-08
	1,1-dichloroethene	1.60E-03	1.50E-05	N/A	--
	cis-1,2-dichloroethene	1.20E-02	1.13E-04	N/A	--
	1,2-dichloroethane	2.50E-04	2.35E-06	4.70E-02	1.10E-07
	1,2,3-trichloropropane	2.50E-06	2.35E-08	7.00E+00	1.64E-07
	acetone	2.50E-03	2.35E-05	N/A	--
	bromoform	3.70E-04	3.48E-06	7.90E-03	2.75E-08
	carbon disulfide	2.50E-04	2.35E-06	N/A	--
	chloroform	6.10E-04	5.73E-06	3.10E-02	1.78E-07
	cis-1,3-dichloropropene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	dichlorodifluoromethane	2.50E-04	2.35E-06	N/A	--
	methylene Chloride	2.50E-04	2.35E-06	1.40E-02	3.29E-08
	methyl-tert-butyl ether	2.50E-04	2.35E-06	1.80E-03	4.23E-09
	toluene	1.20E-03	1.13E-05	N/A	--
	trans-1,2-dichloroethene	1.60E-04	1.50E-06	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	6.95E-07	5.10E+01	3.55E-05
	Metals and Inorganic Ions				
	arsenic	8.70E-04	8.17E-06	9.45E+00	7.72E-05
	chromium	1.00E-06	9.39E-09	N/A	--
	nitrate	2.50E-02	2.35E-04	N/A	--
	perchlorate	2.70E-03	2.54E-05	N/A	--
				Total Risk for Oral Route:	1.4E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-101
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	3.12E-05	1.30E-02	4.05E-07
	tetrachloroethene	3.20E-03	5.18E-06	5.40E-01	2.80E-06
	1,1-dichloroethane	2.50E-04	8.21E-08	5.70E-03	4.68E-10
	1,1-dichloroethene	1.60E-03	9.41E-07	N/A	--
	cis-1,2-dichloroethene	1.20E-02	6.40E-06	N/A	--
	1,2-dichloroethane	2.50E-04	5.15E-08	4.70E-02	2.42E-09
	1,2,3-trichloropropane	2.50E-06	1.20E-09	7.00E+00	8.43E-09
	acetone	2.50E-03	6.97E-08	N/A	--
	bromoform	3.70E-04	3.99E-08	7.90E-03	3.15E-10
	carbon disulfide	2.50E-04	2.08E-07	N/A	--
	chloroform	6.10E-04	2.03E-07	3.10E-02	6.31E-09
	cis-1,3-dichloropropene	2.50E-04	2.08E-09	1.00E-01	2.08E-10
	dichlorodifluoromethane	2.50E-04	1.10E-07	N/A	--
	methylene Chloride	2.50E-04	4.29E-08	1.40E-02	6.01E-10
	methyl-tert-butyl ether	2.50E-04	3.15E-08	1.80E-03	5.67E-11
	toluene	1.20E-03	1.82E-06	N/A	--
	trans-1,2-dichloroethene	1.60E-04	6.04E-08	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	9.62E-10	5.10E+01	4.90E-08
	Metals and Inorganic Ions				
	arsenic	8.70E-04	4.27E-08	9.45E+00	4.03E-07
	chromium	1.00E-06	4.90E-11	N/A	--
	nitrate	2.50E-02	1.23E-06	N/A	--
	perchlorate	2.70E-03	N/A	N/A	--
				Total Risk for Dermal Route:	3.7E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-101
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	8.71E+00	2.00E-06	1.74E-05
	tetrachloroethene	3.20E-03	5.26E-01	5.90E-06	3.10E-06
	1,1-dichloroethane	2.50E-04	4.11E-02	1.60E-06	6.58E-08
	1,1-dichloroethene	1.60E-03	2.63E-01	N/A	--
	cis-1,2-dichloroethene	1.20E-02	1.97E+00	N/A	--
	1,2-dichloroethane	2.50E-04	4.11E-02	2.10E-05	8.63E-07
	1,2,3-trichloropropane	2.50E-06	4.11E-04	N/A	--
	acetone	2.50E-03	4.11E-01	N/A	--
	bromoform	3.70E-04	6.08E-02	1.11E-06	6.75E-08
	carbon disulfide	2.50E-04	4.11E-02	N/A	--
	chloroform	6.10E-04	1.00E-01	5.30E-06	5.31E-07
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	methylene Chloride	2.50E-04	4.11E-02	1.00E-06	4.11E-08
	methyl-tert-butyl ether	2.50E-04	4.11E-02	2.60E-07	1.07E-08
	toluene	1.20E-03	1.97E-01	N/A	--
	trans-1,2-dichloroethene	1.60E-04	2.63E-02	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	NV	1.40E-02	--
	Metals and Inorganic Ions				
	arsenic	8.70E-04	NV	3.30E-03	--
	chromium	1.00E-06	NV	1.20E-02	--
	nitrate	2.50E-02	NV	N/A	--
	perchlorate	2.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	2.2E-05
				Total Risk Across All Exposure Routes/Pathways :	**2E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-102
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	1.45E-03	N/A	--
	tetrachloroethene	3.20E-03	8.77E-05	1.00E-02	8.77E-03
	1,1-dichloroethane	2.50E-04	6.85E-06	2.00E-01	3.42E-05
	1,1-dichloroethene	1.60E-03	4.38E-05	5.00E-02	8.77E-04
	cis-1,2-dichloroethene	1.20E-02	3.29E-04	1.00E-02	3.29E-02
	1,2-dichloroethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	1,2,3-trichloropropane	2.50E-06	6.85E-08	6.00E-03	1.14E-05
	acetone	2.50E-03	6.85E-05	9.00E-01	7.61E-05
	bromoform	3.70E-04	1.01E-05	2.00E-02	5.07E-04
	carbon disulfide	2.50E-04	6.85E-06	1.00E-01	6.85E-05
	chloroform	6.10E-04	1.67E-05	1.00E-02	1.67E-03
	cis-1,3-dichloropropene	2.50E-04	6.85E-06	3.00E-02	2.28E-04
	dichlorodifluoromethane	2.50E-04	6.85E-06	2.00E-01	3.42E-05
	methylene Chloride	2.50E-04	6.85E-06	6.00E-02	1.14E-04
	methyl-tert-butyl ether	2.50E-04	6.85E-06	N/A	--
	toluene	1.20E-03	3.29E-05	8.00E-02	4.11E-04
	trans-1,2-dichloroethene	1.60E-04	4.38E-06	2.00E-02	2.19E-04
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	2.03E-06	8.00E-06	2.53E-01
	Metals and Inorganic Ions				
	arsenic	8.70E-04	2.38E-05	3.00E-04	7.95E-02
	chromium	1.00E-06	2.74E-08	1.50E+00	1.83E-08
	nitrate	2.50E-02	6.85E-04	1.60E+00	4.28E-04
	perchlorate	2.70E-03	7.40E-05	7.00E-04	1.06E-01
				Total Risk for Oral Route:	0.4

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-102
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	9.10E-05	N/A	
	tetrachloroethene	3.20E-03	1.51E-05	1.00E-02	1.51E-03
	1,1-dichloroethane	2.50E-04	2.40E-07	2.00E-01	1.20E-06
	1,1-dichloroethene	1.60E-03	2.75E-06	5.00E-02	5.49E-05
	cis-1,2-dichloroethene	1.20E-02	1.87E-05	1.00E-02	1.87E-03
	1,2-dichloroethane	2.50E-04	1.50E-07	2.00E-02	7.51E-06
	1,2,3-trichloropropane	2.50E-06	3.51E-09	6.00E-03	5.86E-07
	acetone	2.50E-03	2.03E-07	9.00E-01	2.26E-07
	bromoform	3.70E-04	1.16E-07	2.00E-02	5.82E-06
	carbon disulfide	2.50E-04	6.08E-07	1.00E-01	6.08E-06
	chloroform	6.10E-04	5.93E-07	1.00E-02	5.93E-05
	cis-1,3-dichloropropene	2.50E-04	6.08E-09	3.00E-02	2.03E-07
	dichlorodifluoromethane	2.50E-04	3.22E-07	2.00E-01	1.61E-06
	methylene Chloride	2.50E-04	1.25E-07	6.00E-02	2.09E-06
	methyl-tert-butyl ether	2.50E-04	9.19E-08	N/A	--
	toluene	1.20E-03	5.32E-06	8.00E-02	6.65E-05
	trans-1,2-dichloroethene	1.60E-04	1.76E-07	2.00E-02	8.81E-06
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	2.80E-09	8.00E-06	3.51E-04
	Metals and Inorganic Ions				
	arsenic	8.70E-04	1.24E-07	3.00E-04	4.15E-04
	chromium	1.00E-06	1.43E-10	1.50E+00	9.53E-11
	nitrate	2.50E-02	3.58E-06	1.60E+00	2.23E-06
	perchlorate	2.70E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.004

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-102
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	2.54E+01	N/A	
	tetrachloroethene	3.20E-03	1.53E+00	2.70E+02	5.68E-03
	1,1-dichloroethane	2.50E-04	1.20E-01	5.00E+02	2.40E-04
	1,1-dichloroethene	1.60E-03	7.67E-01	2.00E+02	3.84E-03
	cis-1,2-dichloroethene	1.20E-02	5.75E+00	3.50E+01	1.64E-01
	1,2-dichloroethane	2.50E-04	1.20E-01	2.40E+03	4.99E-05
	1,2,3-trichloropropane	2.50E-06	1.20E-03	4.90E+00	2.45E-04
	acetone	2.50E-03	1.20E+00	3.10E+04	3.87E-05
	bromoform	3.70E-04	1.77E-01	N/A	--
	carbon disulfide	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	chloroform	6.10E-04	2.92E-01	9.80E+01	2.98E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	methylene Chloride	2.50E-04	1.20E-01	4.00E+02	3.00E-04
	methyl-tert-butyl ether	2.50E-04	1.20E-01	3.00E+03	4.00E-05
	toluene	1.20E-03	5.75E-01	3.00E+02	1.92E-03
	trans-1,2-dichloroethene	1.60E-04	7.67E-02	5.95E+01	1.29E-03
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	8.70E-04	NV	3.00E-02	--
	chromium	1.00E-06	NV	N/A	--
	nitrate	2.50E-02	NV	1.00E+04	--
	perchlorate	2.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.2
				Total Risk Across All Exposure Routes/Pathways :	0.6

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-103
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	2.90E-04	1.30E-02	3.78E-06
	tetrachloroethene	3.20E-03	1.75E-05	5.40E-01	9.47E-06
	1,1-dichloroethane	2.50E-04	1.37E-06	5.70E-03	7.81E-09
	1,1-dichloroethene	1.60E-03	8.77E-06	N/A	--
	cis-1,2-dichloroethene	1.20E-02	6.58E-05	N/A	--
	1,2-dichloroethane	2.50E-04	1.37E-06	4.70E-02	6.44E-08
	1,2,3-trichloropropane	2.50E-06	1.37E-08	7.00E+00	9.59E-08
	acetone	2.50E-03	1.37E-05	N/A	--
	bromoform	3.70E-04	2.03E-06	7.90E-03	1.60E-08
	carbon disulfide	2.50E-04	1.37E-06	N/A	--
	chloroform	6.10E-04	3.34E-06	3.10E-02	1.04E-07
	cis-1,3-dichloropropene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	dichlorodifluoromethane	2.50E-04	1.37E-06	N/A	--
	methylene Chloride	2.50E-04	1.37E-06	1.40E-02	1.92E-08
	methyl-tert-butyl ether	2.50E-04	1.37E-06	1.80E-03	2.47E-09
	toluene	1.20E-03	6.58E-06	N/A	--
	trans-1,2-dichloroethene	1.60E-04	8.77E-07	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	4.05E-07	5.10E+01	2.07E-05
	Metals and Inorganic Ions				
	arsenic	8.70E-04	4.77E-06	9.45E+00	4.50E-05
	chromium	1.00E-06	5.48E-09	N/A	--
	nitrate	2.50E-02	1.37E-04	N/A	--
	perchlorate	2.70E-03	1.48E-05	N/A	--
				Total Risk for Oral Route:	7.9E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-103
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	2.30E-05	1.30E-02	2.99E-07
	tetrachloroethene	3.20E-03	3.82E-06	5.40E-01	2.06E-06
	1,1-dichloroethane	2.50E-04	6.06E-08	5.70E-03	3.45E-10
	1,1-dichloroethene	1.60E-03	6.94E-07	N/A	--
	cis-1,2-dichloroethene	1.20E-02	4.72E-06	N/A	--
	1,2-dichloroethane	2.50E-04	3.80E-08	4.70E-02	1.78E-09
	1,2,3-trichloropropane	2.50E-06	8.89E-10	7.00E+00	6.22E-09
	acetone	2.50E-03	5.14E-08	N/A	--
	bromoform	3.70E-04	2.94E-08	7.90E-03	2.33E-10
	carbon disulfide	2.50E-04	1.54E-07	N/A	--
	chloroform	6.10E-04	1.50E-07	3.10E-02	4.65E-09
	cis-1,3-dichloropropene	2.50E-04	1.54E-09	1.00E-01	1.54E-10
	dichlorodifluoromethane	2.50E-04	8.14E-08	N/A	--
	methylene Chloride	2.50E-04	3.16E-08	1.40E-02	4.43E-10
	methyl-tert-butyl ether	2.50E-04	2.32E-08	1.80E-03	4.18E-11
	toluene	1.20E-03	1.35E-06	N/A	--
	trans-1,2-dichloroethene	1.60E-04	4.46E-08	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	7.09E-10	5.10E+01	3.62E-08
	Metals and Inorganic Ions				
	arsenic	8.70E-04	3.15E-08	9.45E+00	2.97E-07
	chromium	1.00E-06	3.62E-11	N/A	--
	nitrate	2.50E-02	9.04E-07	N/A	--
	perchlorate	2.70E-03	N/A	N/A	--
				Total Risk for Dermal Route:	2.7E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-103
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	8.71E+00	2.00E-06	1.74E-05
	tetrachloroethene	3.20E-03	5.26E-01	5.90E-06	3.10E-06
	1,1-dichloroethane	2.50E-04	4.11E-02	1.60E-06	6.58E-08
	1,1-dichloroethene	1.60E-03	2.63E-01	N/A	--
	cis-1,2-dichloroethene	1.20E-02	1.97E+00	N/A	--
	1,2-dichloroethane	2.50E-04	4.11E-02	2.10E-05	8.63E-07
	1,2,3-trichloropropane	2.50E-06	4.11E-04	N/A	--
	acetone	2.50E-03	4.11E-01	N/A	--
	bromoform	3.70E-04	6.08E-02	1.11E-06	6.75E-08
	carbon disulfide	2.50E-04	4.11E-02	N/A	--
	chloroform	6.10E-04	1.00E-01	5.30E-06	5.31E-07
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	methylene Chloride	2.50E-04	4.11E-02	1.00E-06	4.11E-08
	methyl-tert-butyl ether	2.50E-04	4.11E-02	2.60E-07	1.07E-08
	toluene	1.20E-03	1.97E-01	N/A	--
	trans-1,2-dichloroethene	1.60E-04	2.63E-02	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	NV	1.40E-02	--
	Metals and Inorganic Ions				
	arsenic	8.70E-04	NV	3.30E-03	--
	chromium	1.00E-06	NV	1.20E-02	--
	nitrate	2.50E-02	NV	N/A	--
	perchlorate	2.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	2.2E-05
				Total Risk Across All Exposure Routes/Pathways :	**1E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-104
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	3.39E-03	N/A	--
	tetrachloroethene	3.20E-03	2.05E-04	1.00E-02	2.05E-02
	1,1-dichloroethane	2.50E-04	1.60E-05	2.00E-01	7.99E-05
	1,1-dichloroethene	1.60E-03	1.02E-04	5.00E-02	2.05E-03
	cis-1,2-dichloroethene	1.20E-02	7.67E-04	1.00E-02	7.67E-02
	1,2-dichloroethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	1,2,3-trichloropropane	2.50E-06	1.60E-07	6.00E-03	2.66E-05
	acetone	2.50E-03	1.60E-04	9.00E-01	1.78E-04
	bromoform	3.70E-04	2.37E-05	2.00E-02	1.18E-03
	carbon disulfide	2.50E-04	1.60E-05	1.00E-01	1.60E-04
	chloroform	6.10E-04	3.90E-05	1.00E-02	3.90E-03
	cis-1,3-dichloropropene	2.50E-04	1.60E-05	3.00E-02	5.33E-04
	dichlorodifluoromethane	2.50E-04	1.60E-05	2.00E-01	7.99E-05
	methylene Chloride	2.50E-04	1.60E-05	6.00E-02	2.66E-04
	methyl-tert-butyl ether	2.50E-04	1.60E-05	N/A	--
	toluene	1.20E-03	7.67E-05	8.00E-02	9.59E-04
	trans-1,2-dichloroethene	1.60E-04	1.02E-05	2.00E-02	5.11E-04
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	4.73E-06	8.00E-06	5.91E-01
	Metals and Inorganic Ions				
	arsenic	8.70E-04	5.56E-05	3.00E-04	1.85E-01
	chromium	1.00E-06	6.39E-08	1.50E+00	4.26E-08
	nitrate	2.50E-02	1.60E-03	1.60E+00	9.99E-04
	perchlorate	2.70E-03	1.73E-04	7.00E-04	2.47E-01
				Total Risk for Oral Route:	0.9

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-104
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	2.68E-04	N/A	--
	tetrachloroethene	3.20E-03	4.46E-05	1.00E-02	4.46E-03
	1,1-dichloroethane	2.50E-04	7.07E-07	2.00E-01	3.53E-06
	1,1-dichloroethene	1.60E-03	8.10E-06	5.00E-02	1.62E-04
	cis-1,2-dichloroethene	1.20E-02	5.51E-05	1.00E-02	5.51E-03
	1,2-dichloroethane	2.50E-04	4.43E-07	2.00E-02	2.22E-05
	1,2,3-trichloropropane	2.50E-06	1.04E-08	6.00E-03	1.73E-06
	acetone	2.50E-03	6.00E-07	9.00E-01	6.67E-07
	bromoform	3.70E-04	3.43E-07	2.00E-02	1.72E-05
	carbon disulfide	2.50E-04	1.79E-06	1.00E-01	1.79E-05
	chloroform	6.10E-04	1.75E-06	1.00E-02	1.75E-04
	cis-1,3-dichloropropene	2.50E-04	1.79E-08	3.00E-02	5.98E-07
	dichlorodifluoromethane	2.50E-04	9.49E-07	2.00E-01	4.75E-06
	methylene Chloride	2.50E-04	3.69E-07	6.00E-02	6.15E-06
	methyl-tert-butyl ether	2.50E-04	2.71E-07	N/A	--
	toluene	1.20E-03	1.57E-05	8.00E-02	1.96E-04
	trans-1,2-dichloroethene	1.60E-04	5.20E-07	2.00E-02	2.60E-05
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	8.27E-09	8.00E-06	1.03E-03
	Metals and Inorganic Ions				
	arsenic	8.70E-04	3.67E-07	3.00E-04	1.22E-03
	chromium	1.00E-06	4.22E-10	1.50E+00	2.81E-10
	nitrate	2.50E-02	1.05E-05	1.60E+00	6.59E-06
	perchlorate	2.70E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.013

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-104
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	5.30E-02	2.54E+01	N/A	--
	tetrachloroethene	3.20E-03	1.53E+00	2.70E+02	5.68E-03
	1,1-dichloroethane	2.50E-04	1.20E-01	5.00E+02	2.40E-04
	1,1-dichloroethene	1.60E-03	7.67E-01	2.00E+02	3.84E-03
	cis-1,2-dichloroethene	1.20E-02	5.75E+00	3.50E+01	1.64E-01
	1,2-dichloroethane	2.50E-04	1.20E-01	2.40E+03	4.99E-05
	1,2,3-trichloropropane	2.50E-06	1.20E-03	4.90E+00	2.45E-04
	acetone	2.50E-03	1.20E+00	3.10E+04	3.87E-05
	bromoform	3.70E-04	1.77E-01	N/A	--
	carbon disulfide	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	chloroform	6.10E-04	2.92E-01	9.80E+01	2.98E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	methylene Chloride	2.50E-04	1.20E-01	4.00E+02	3.00E-04
	methyl-tert-butyl ether	2.50E-04	1.20E-01	3.00E+03	4.00E-05
	toluene	1.20E-03	5.75E-01	3.00E+02	1.92E-03
	trans-1,2-dichloroethene	1.60E-04	7.67E-02	5.95E+01	1.29E-03
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	7.40E-05	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	8.70E-04	NV	3.00E-02	--
	chromium	1.00E-06	NV	N/A	--
	nitrate	2.50E-02	NV	1.00E+04	--
	perchlorate	2.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.19
				Total Risk Across All Exposure Routes/Pathways :	1

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-105
Risk Results Detailed Summary - Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
trichloroethene	6.5E-06	4.1E-07	1.7E-05	2.4E-05	15%	3.8E-06	3.0E-07	1.7E-05	2.1E-05	21%
tetrachloroethene	1.6E-05	2.8E-06	3.1E-06	2.2E-05	14%	9.5E-06	2.1E-06	3.1E-06	1.5E-05	14%
1,1-dichloroethane	1.3E-08	4.7E-10	6.6E-08	8.0E-08	<0.5%	7.8E-09	3.5E-10	6.6E-08	7.4E-08	<0.5%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-dichloroethane	1.1E-07	2.4E-09	8.6E-07	9.8E-07	1%	6.4E-08	1.8E-09	8.6E-07	9.3E-07	1%
1,2,3-trichloropropane	1.6E-07	8.4E-09	--	1.7E-07	<0.5%	9.6E-08	6.2E-09	--	1.0E-07	<0.5%
acetone	--	--	--	--	--	--	--	--	--	--
bromoform	2.7E-08	3.2E-10	6.8E-08	9.5E-08	<0.5%	1.6E-08	2.3E-10	6.8E-08	8.4E-08	<0.5%
carbon disulfide	--	--	--	--	--	--	--	--	--	--
chloroform	1.8E-07	6.3E-09	5.3E-07	7.2E-07	<0.5%	1.0E-07	4.7E-09	5.3E-07	6.4E-07	1%
cis-1,3-dichloropropene	2.3E-07	2.1E-10	1.6E-07	4.0E-07	<0.5%	1.4E-07	1.5E-10	1.6E-07	3.0E-07	<0.5%
dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--
methylene Chloride	3.3E-08	6.0E-10	4.1E-08	7.5E-08	<0.5%	1.9E-08	4.4E-10	4.1E-08	6.1E-08	<0.5%
methyl-tert-butyl ether	4.2E-09	5.7E-11	1.1E-08	1.5E-08	<0.5%	2.5E-09	4.2E-11	1.1E-08	1.3E-08	<0.5%
toluene	--	--	--	--	--	--	--	--	--	--
trans-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	2.3E-05	3.2E-06	2.2E-05	4.9E-05	30%	1.4E-05	2.4E-06	2.2E-05	3.8E-05	37%
Semivolatile Organic Compounds									0.0E+00	
n-nitrosodimethylamine	3.5E-05	4.9E-08	--	3.5E-05	22%	2.1E-05	3.6E-08	--	2.1E-05	20%
Subtotal SVOCs	3.5E-05	4.9E-08	--	3.5E-05	22%	2.1E-05	3.6E-08	--	2.1E-05	20%
Metals and Inorganic Ions										
arsenic	7.7E-05	4.0E-07	--	7.8E-05	48%	4.5E-05	3.0E-07	--	4.5E-05	43%
chromium	--	--	--	--	--	--	--	--	--	--
nitrate	--	--	--	--	--	--	--	--	--	--
perchlorate	--	--	--	--	--	--	--	--	--	--
Subtotal Metals & Inorganic Ions	7.7E-05	4.0E-07	--	7.8E-05	48%	4.5E-05	3.0E-07	--	4.5E-05	43%
Total:	**1E-04**	4E-06	2E-05	**2E-04**	100%	8E-05	3E-06	2E-05	**1E-04**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-105
Risk Results Detailed Summary - Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	**Hypothetical Future Residential**									
	Adult Resident					**Child Resident**				
	Reasonable Maximum Exposure									
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**	**Ingestion**	**Dermal**	**Inhalation**	**Total**	**Percent Contribution**
Volatile Organic Compounds										
trichloroethene	--	--		0.0E+00	<0.5%	--	--	--	0.0E+00	<0.5%
tetrachloroethene	8.8E-03	1.5E-03	5.7E-03	1.6E-02	2%	2.0E-02	4.5E-03	5.7E-03	3.1E-02	2%
1,1-dichloroethane	3.4E-05	1.2E-06	2.4E-04	2.8E-04	<0.5%	8.0E-05	3.5E-06	2.4E-04	3.2E-04	<0.5%
1,1-dichloroethene	8.8E-04	5.5E-05	3.8E-03	4.8E-03	<0.5%	2.0E-03	1.6E-04	3.8E-03	6.0E-03	<0.5%
cis-1,2-dichloroethene	3.3E-02	1.9E-03	1.6E-01	2.0E-01	19%	7.7E-02	5.5E-03	1.6E-01	2.5E-01	19%
1,2-dichloroethane	3.4E-04	7.5E-06	5.0E-05	4.0E-04	<0.5%	8.0E-04	2.2E-05	5.0E-05	8.7E-04	<0.5%
1,2,3-trichloropropane	1.1E-05	5.9E-07	2.4E-04	2.6E-04	<0.5%	2.7E-05	1.7E-06	2.4E-04	2.7E-04	<0.5%
acetone	7.6E-05	2.3E-07	3.9E-05	1.1E-04	<0.5%	1.8E-04	6.7E-07	3.9E-05	2.2E-04	<0.5%
bromoform	5.1E-04	5.8E-06	--	5.1E-04	<0.5%	1.2E-03	1.7E-05	--	1.2E-03	<0.5%
carbon disulfide	6.8E-05	6.1E-06	1.7E-04	2.5E-04	<0.5%	1.6E-04	1.8E-05	1.7E-04	3.5E-04	<0.5%
chloroform	1.7E-03	5.9E-05	3.0E-03	4.7E-03	1%	3.9E-03	1.8E-04	3.0E-03	7.1E-03	1%
cis-1,3-dichloropropene	2.3E-04	2.0E-07	6.0E-03	6.2E-03	<0.5%	5.3E-04	6.0E-07	6.0E-03	6.5E-03	<0.5%
dichlorodifluoromethane	3.4E-05	1.6E-06	6.0E-04	6.4E-04	<0.5%	8.0E-05	4.7E-06	6.0E-04	6.9E-04	<0.5%
methylene Chloride	1.1E-04	2.1E-06	3.0E-04	4.2E-04	<0.5%	2.7E-04	6.2E-06	3.0E-04	5.7E-04	<0.5%
methyl-tert-butyl ether	--	--	4.0E-05	4.0E-05	<0.5%	--	--	4.0E-05	4.0E-05	<0.5%
toluene	4.1E-04	6.7E-05	1.9E-03	2.4E-03	<0.5%	9.6E-04	2.0E-04	1.9E-03	3.1E-03	<0.5%
trans-1,2-dichloroethene	2.2E-04	8.8E-06	1.3E-03	1.5E-03	<0.5%	5.1E-04	2.6E-05	1.3E-03	1.8E-03	<0.5%
Subtotal VOCs	4.6E-02	3.6E-03	1.9E-01	2.4E-01	23%	1.1E-01	1.1E-02	1.9E-01	3.1E-01	23%
Semivolatile Organic Compounds										
n-nitrosodimethylamine	2.5E-01	3.5E-04	--	2.5E-01	37%	5.9E-01	1.0E-03	--	5.9E-01	44%
Subtotal SVOCs	2.5E-01	3.5E-04	--	2.5E-01	37%	5.9E-01	1.0E-03	--	5.9E-01	44%
Metals and Inorganic Ions										
arsenic	7.9E-02	4.1E-04	--	8.0E-02	14%	1.9E-01	1.2E-03	--	1.9E-01	14%
chromium	1.8E-08	9.5E-11	--	1.8E-08	<0.5%	4.3E-08	2.8E-10	--	4.3E-08	<0.5%
nitrate	4.3E-04	2.2E-06	--	4.3E-04	<0.5%	1.0E-03	6.6E-06	--	1.0E-03	<0.5%
perchlorate	1.1E-01	--	--	1.1E-01	19%	2.5E-01	--	--	2.5E-01	19%
Subtotal Metals & Inorganic Ions	1.9E-01	4.2E-04	--	1.9E-01	33%	4.3E-01	1.2E-03	--	4.3E-01	33%
Total:	0.5	0.004	0.2	0.7	100%	1	0.01	0.2	1	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-106
Risk Results Summary - Based on EPAMW12A Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	2.3E-05	3.2E-06	2.2E-05	4.9E-05	1.4E-05	2.4E-06	2.2E-05	3.8E-05
Subtotal SVOCs	3.5E-05	4.9E-08	0.0E+00	3.5E-05	2.1E-05	3.6E-08	0.0E+00	2.1E-05
Subtotal Metals & Inorganic Ions	7.7E-05	4.0E-07	0.0E+00	7.8E-05	4.5E-05	3.0E-07	0.0E+00	4.5E-05
Total:	**1E-04**	4E-06	2E-05	**2E-04**	8E-05	3E-06	2E-05	**1E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	4.6E-02	3.6E-03	1.9E-01	2.4E-01	1.1E-01	1.1E-02	1.9E-01	3.1E-01
Subtotal SVOCs	2.5E-01	3.5E-04	--	--	--	--	--	--
Subtotal Metals & Inorganic Ions	1.9E-01	4.2E-04	0.0E+00	1.9E-01	4.3E-01	1.2E-03	0.0E+00	4.3E-01
Total:	0.5	0.004	0.2	0.7	1	0.01	0.2	1

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-107
Groundwater Exposure Point Concentrations - Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
	Volatile Organic Compounds		
	trichloroethene	1.40E-02	2007
	tetrachloroethene	1.80E-04	2007
	1,1-dichloroethene	1.40E-04	2007
	cis-1,2-dichloroethene	5.20E-03	2007
	2-butanone	2.00E-04	2007
	acetone	2.50E-03	2007[a]
	benzene	2.50E-04	2007[a]
	bromoform	2.50E-04	2007[a]
	carbon disulfide	1.40E-03	2007
	chloroform	6.00E-04	2007
	chloromethane	5.60E-04	2007
	dibromochloropropane	2.50E-04	2007[a]
	dichlorodifluoromethane	4.30E-04	2007
EPAMW13	cis-1,3-dichloropropene	2.50E-04	2007[a]
	methylene chloride	2.50E-04	2007
	vinyl chloride	5.60E-04	2007
	toluene	5.30E-05	2007
	trans-1,2-dichloroethene	2.50E-04	2007[a]
	trichlorofluoromethane	2.50E-04	2007[a]
	Semivolatile Organic Compounds		
	n-nitrosodimethylamine	1.00E-06	2005[a]
	bis(2-ethylhexyl) phthalate	2.50E-03	2005[a]
	Metals and Inorganic Ions		
	arsenic	6.00E-04	2005
	chromium	4.80E-03	2005
	chromium (VI)	5.03E-03	2007
	nitrate	7.10E+00	2007
	perchlorate	3.70E-03	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-108
Estimates of Reasonabe Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	1.32E-04	1.30E-02	1.71E-06
	tetrachloroethene	1.80E-04	1.69E-06	5.40E-01	9.13E-07
	1,1-dichloroethene	1.40E-04	1.32E-06	N/A	--
	cis-1,2-dichloroethene	5.20E-03	4.88E-05	N/A	--
	2-butanone	2.00E-04	1.88E-06	N/A	--
	acetone	2.50E-03	2.35E-05	N/A	--
	benzene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	bromoform	2.50E-04	2.35E-06	7.90E-03	1.86E-08
	carbon disulfide	1.40E-03	1.32E-05	N/A	--
	chloroform	6.00E-04	5.64E-06	3.10E-02	1.75E-07
	chloromethane	5.60E-04	5.26E-06	1.30E-02	6.84E-08
	dibromochloropropane	2.50E-04	2.35E-06	1.40E+00	3.29E-06
	dichlorodifluoromethane	4.30E-04	4.04E-06	N/A	--
	cis-1,3-dichloropropene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	methylene chloride	2.50E-04	2.35E-06	1.40E-02	3.29E-08
	vinyl chloride	5.60E-04	5.26E-06	7.20E-01	3.79E-06
	toluene	5.30E-05	4.98E-07	N/A	--
	trans-1,2-dichloroethene	2.50E-04	2.35E-06	N/A	--
	trichlorofluoromethane	2.50E-04	2.35E-06	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	9.39E-09	5.10E+01	4.79E-07
	bis(2-ethylhexyl) phthalate	2.50E-03	2.35E-05	3.00E-03	7.05E-08
	Metals and Inorganic Ions				
	arsenic	6.00E-04	5.64E-06	9.45E+00	5.33E-05
	chromium	4.80E-03	4.51E-05	N/A	--
	chromium (VI)	5.03E-03	4.72E-05	N/A	--
	nitrate	7.10E+00	6.67E-02	N/A	--
	perchlorate	3.70E-03	3.48E-05	N/A	--
				Total Risk for Oral Route:	6.4E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-108
Estimates of Reasonabe Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	8.24E-06	1.30E-02	1.07E-07
	tetrachloroethene	1.80E-04	2.91E-07	5.40E-01	1.57E-07
	1,1-dichloroethene	1.40E-04	8.24E-08	N/A	--
	cis-1,2-dichloroethene	5.20E-03	2.77E-06	N/A	--
	2-butanone	2.00E-04	9.41E-09	N/A	--
	acetone	2.50E-03	6.97E-08	N/A	--
	benzene	2.50E-04	2.54E-07	1.00E-01	2.54E-08
	bromoform	2.50E-04	2.70E-08	7.90E-03	2.13E-10
	carbon disulfide	1.40E-03	1.17E-06	N/A	--
	chloroform	6.00E-04	2.00E-07	3.10E-02	6.20E-09
	chloromethane	5.60E-04	9.06E-08	1.30E-02	1.18E-09
	dibromochloropropane	2.50E-04	1.07E-07	1.40E+00	1.49E-07
	dichlorodifluoromethane	4.30E-04	1.90E-07	N/A	--
	cis-1,3-dichloropropene	2.50E-04	2.08E-09	1.00E-01	2.08E-10
	methylene chloride	2.50E-04	4.29E-08	1.40E-02	6.01E-10
	vinyl chloride	5.60E-04	1.54E-07	7.20E-01	1.11E-07
	toluene	5.30E-05	8.06E-08	N/A	--
	trans-1,2-dichloroethene	2.50E-04	9.44E-08	N/A	--
	trichlorofluoromethane	2.50E-04	1.59E-07	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	1.30E-11	5.10E+01	6.63E-10
	bis(2-ethylhexyl) phthalate	2.50E-03	3.06E-06	3.00E-03	9.19E-09
	Metals and Inorganic Ions				
	arsenic	6.00E-04	2.94E-08	9.45E+00	2.78E-07
	chromium	4.80E-03	2.35E-07	N/A	--
	chromium (VI)	5.03E-03	4.93E-07	N/A	--
	nitrate	7.10E+00	3.48E-04	N/A	--
	perchlorate	3.70E-03	N/A	N/A	--
				Total Risk for Dermal Route:	8.5E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-108
Estimates of Reasonabe Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	2.30E+00	2.00E-06	4.60E-06
	tetrachloroethene	1.80E-04	2.96E-02	5.90E-06	1.75E-07
	1,1-dichloroethene	1.40E-04	2.30E-02	N/A	--
	cis-1,2-dichloroethene	5.20E-03	8.55E-01	N/A	--
	2-butanone	2.00E-04	3.29E-02	N/A	--
	acetone	2.50E-03	4.11E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	bromoform	2.50E-04	4.11E-02	1.11E-06	4.56E-08
	carbon disulfide	1.40E-03	2.30E-01	N/A	--
	chloroform	6.00E-04	9.86E-02	5.30E-06	5.23E-07
	chloromethane	5.60E-04	9.21E-02	1.80E-06	1.66E-07
	dibromochloropropane	2.50E-04	4.11E-02	6.90E-07	2.84E-08
	dichlorodifluoromethane	4.30E-04	7.07E-02	N/A	--
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	methylene chloride	2.50E-04	4.11E-02	1.00E-06	4.11E-08
	vinyl chloride	5.60E-04	9.21E-02	7.80E-05	7.18E-06
	toluene	5.30E-05	8.71E-03	N/A	--
	trans-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	trichlorofluoromethane	2.50E-04	4.11E-02	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	1.40E-02	--
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	2.40E-06	--
	Metals and Inorganic Ions				
	arsenic	6.00E-04	NV	3.30E-03	--
	chromium	4.80E-03	NV	1.20E-02	--
	chromium (VI)	5.03E-03	NV	1.50E-01	--
	nitrate	7.10E+00	NV	N/A	--
	perchlorate	3.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	1.4E-05
				Total Risk Across All Exposure Routes/Pathways :	**8E-05**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-109
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	3.84E-04	N/A	--
	tetrachloroethene	1.80E-04	4.93E-06	1.00E-02	4.93E-04
	1,1-dichloroethene	1.40E-04	3.84E-06	5.00E-02	7.67E-05
	cis-1,2-dichloroethene	5.20E-03	1.42E-04	1.00E-02	1.42E-02
	2-butanone	2.00E-04	5.48E-06	6.00E-01	9.13E-06
	acetone	2.50E-03	6.85E-05	9.00E-01	7.61E-05
	benzene	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	bromoform	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	carbon disulfide	1.40E-03	3.84E-05	1.00E-01	3.84E-04
	chloroform	6.00E-04	1.64E-05	1.00E-02	1.64E-03
	chloromethane	5.60E-04	1.53E-05	N/A	--
	dibromochloropropane	2.50E-04	6.85E-06	N/A	--
	dichlorodifluoromethane	4.30E-04	1.18E-05	2.00E-01	5.89E-05
	cis-1,3-dichloropropene	2.50E-04	6.85E-06	3.00E-02	2.28E-04
	methylene chloride	2.50E-04	6.85E-06	6.00E-02	1.14E-04
	vinyl chloride	5.60E-04	1.53E-05	3.00E-03	5.11E-03
	toluene	5.30E-05	1.45E-06	8.00E-02	1.82E-05
	trans-1,2-dichloroethene	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	trichlorofluoromethane	2.50E-04	6.85E-06	3.00E-01	2.28E-05
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	2.74E-08	8.00E-06	3.42E-03
	bis(2-ethylhexyl) phthalate	2.50E-03	6.85E-05	2.00E-02	3.42E-03
	Metals and Inorganic Ions				
	arsenic	6.00E-04	1.64E-05	3.00E-04	5.48E-02
	chromium	4.80E-03	1.32E-04	N/A	--
	chromium (VI)	5.03E-03	1.38E-04	3.00E-03	4.59E-02
	nitrate	7.10E+00	1.95E-01	1.60E+00	1.22E-01
	perchlorate	3.70E-03	1.01E-04	7.00E-04	1.45E-01
				Total Risk for Oral Route:	0.4

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-109
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	2.40E-05	N/A	--
	tetrachloroethene	1.80E-04	8.50E-07	1.00E-02	8.50E-05
	1,1-dichloroethene	1.40E-04	2.40E-07	5.00E-02	4.81E-06
	cis-1,2-dichloroethene	5.20E-03	8.09E-06	1.00E-02	8.09E-04
	2-butanone	2.00E-04	2.75E-08	6.00E-01	4.58E-08
	acetone	2.50E-03	2.03E-07	9.00E-01	2.26E-07
	benzene	2.50E-04	7.40E-07	4.00E-03	1.85E-04
	bromoform	2.50E-04	7.87E-08	2.00E-02	3.93E-06
	carbon disulfide	1.40E-03	3.40E-06	1.00E-01	3.40E-05
	chloroform	6.00E-04	5.83E-07	1.00E-02	5.83E-05
	chloromethane	5.60E-04	2.64E-07	N/A	--
	dibromochloropropane	2.50E-04	3.11E-07	N/A	--
	dichlorodifluoromethane	4.30E-04	5.53E-07	2.00E-01	2.77E-06
	cis-1,3-dichloropropene	2.50E-04	6.08E-09	3.00E-02	2.03E-07
	methylene chloride	2.50E-04	1.25E-07	6.00E-02	2.09E-06
	vinyl chloride	5.60E-04	4.48E-07	3.00E-03	1.49E-04
	toluene	5.30E-05	2.35E-07	8.00E-02	2.94E-06
	trans-1,2-dichloroethene	2.50E-04	2.75E-07	2.00E-02	1.38E-05
	trichlorofluoromethane	2.50E-04	4.65E-07	3.00E-01	1.55E-06
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	3.79E-11	8.00E-06	4.74E-06
	bis(2-ethylhexyl) phthalate	2.50E-03	8.94E-06	2.00E-02	4.47E-04
	Metals and Inorganic Ions				
	arsenic	6.00E-04	8.58E-08	3.00E-04	2.86E-04
	chromium	4.80E-03	6.86E-07	N/A	--
	chromium (VI)	5.03E-03	1.44E-06	3.00E-03	4.80E-04
	nitrate	7.10E+00	1.02E-03	1.60E+00	6.35E-04
	perchlorate	3.70E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.0032

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
µg/m^3 = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-109
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	6.71E+00	N/A	--
	tetrachloroethene	1.80E-04	8.63E-02	2.70E+02	3.20E-04
	1,1-dichloroethene	1.40E-04	6.71E-02	2.00E+02	3.36E-04
	cis-1,2-dichloroethene	5.20E-03	2.49E+00	3.50E+01	7.12E-02
	2-butanone	2.00E-04	9.59E-02	5.00E+03	1.92E-05
	acetone	2.50E-03	1.20E+00	3.10E+04	3.87E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	bromoform	2.50E-04	1.20E-01	N/A	--
	carbon disulfide	1.40E-03	6.71E-01	7.00E+02	9.59E-04
	chloroform	6.00E-04	2.88E-01	9.80E+01	2.94E-03
	chloromethane	5.60E-04	2.68E-01	9.00E+01	2.98E-03
	dibromochloropropane	2.50E-04	1.20E-01	2.00E-01	5.99E-01
	dichlorodifluoromethane	4.30E-04	2.06E-01	2.00E+02	1.03E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	methylene chloride	2.50E-04	1.20E-01	4.00E+02	3.00E-04
	vinyl chloride	5.60E-04	2.68E-01	1.00E+02	2.68E-03
	toluene	5.30E-05	2.54E-02	3.00E+02	8.47E-05
	trans-1,2-dichloroethene	2.50E-04	1.20E-01	5.95E+01	2.01E-03
	trichlorofluoromethane	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	N/A	--
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	7.00E+01	--
	Metals and Inorganic Ions				
	arsenic	6.00E-04	NV	3.00E-02	--
	chromium	4.80E-03	NV	N/A	--
	chromium (VI)	5.03E-03	NV	1.00E-01	--
	nitrate	7.10E+00	NV	1.00E+04	--
	perchlorate	3.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.69
				Total Risk Across All Exposure Routes/Pathways :	1.1

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
µg/m^3 = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-110
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	7.67E-05	1.30E-02	9.97E-07
	tetrachloroethene	1.80E-04	9.86E-07	5.40E-01	5.33E-07
	1,1-dichloroethene	1.40E-04	7.67E-07	N/A	--
	cis-1,2-dichloroethene	5.20E-03	2.85E-05	N/A	--
	2-butanone	2.00E-04	1.10E-06	N/A	--
	acetone	2.50E-03	1.37E-05	N/A	--
	benzene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	bromoform	2.50E-04	1.37E-06	7.90E-03	1.08E-08
	carbon disulfide	1.40E-03	7.67E-06	N/A	--
	chloroform	6.00E-04	3.29E-06	3.10E-02	1.02E-07
	chloromethane	5.60E-04	3.07E-06	1.30E-02	3.99E-08
	dibromochloropropane	2.50E-04	1.37E-06	1.40E+00	1.92E-06
	dichlorodifluoromethane	4.30E-04	2.36E-06	N/A	--
	cis-1,3-dichloropropene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	methylene chloride	2.50E-04	1.37E-06	1.40E-02	1.92E-08
	vinyl chloride	5.60E-04	3.07E-06	7.20E-01	2.21E-06
	toluene	5.30E-05	2.90E-07	N/A	--
	trans-1,2-dichloroethene	2.50E-04	1.37E-06	N/A	--
	trichlorofluoromethane	2.50E-04	1.37E-06	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	5.48E-09	5.10E+01	2.79E-07
	bis(2-ethylhexyl) phthalate	2.50E-03	1.37E-05	3.00E-03	4.11E-08
	Metals and Inorganic Ions				
	arsenic	6.00E-04	3.29E-06	9.45E+00	3.11E-05
	chromium	4.80E-03	2.63E-05	N/A	--
	chromium (VI)	5.03E-03	2.76E-05	N/A	--
	nitrate	7.10E+00	3.89E-02	N/A	--
	perchlorate	3.70E-03	2.03E-05	N/A	--
				Total Risk for Oral Route:	3.75E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-110
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	6.08E-06	1.30E-02	7.90E-08
	tetrachloroethene	1.80E-04	2.15E-07	5.40E-01	1.16E-07
	1,1-dichloroethene	1.40E-04	6.08E-08	N/A	--
	cis-1,2-dichloroethene	5.20E-03	2.05E-06	N/A	--
	2-butanone	2.00E-04	6.94E-09	N/A	--
	acetone	2.50E-03	5.14E-08	N/A	--
	benzene	2.50E-04	1.87E-07	1.00E-01	1.87E-08
	bromoform	2.50E-04	1.99E-08	7.90E-03	1.57E-10
	carbon disulfide	1.40E-03	8.61E-07	N/A	--
	chloroform	6.00E-04	1.48E-07	3.10E-02	4.57E-09
	chloromethane	5.60E-04	6.68E-08	1.30E-02	8.69E-10
	dibromochloropropane	2.50E-04	7.87E-08	1.40E+00	1.10E-07
	dichlorodifluoromethane	4.30E-04	1.40E-07	N/A	--
	cis-1,3-dichloropropene	2.50E-04	1.54E-09	1.00E-01	1.54E-10
	methylene chloride	2.50E-04	3.16E-08	1.40E-02	4.43E-10
	vinyl chloride	5.60E-04	1.13E-07	7.20E-01	8.17E-08
	toluene	5.30E-05	5.94E-08	N/A	--
	trans-1,2-dichloroethene	2.50E-04	6.96E-08	N/A	--
	trichlorofluoromethane	2.50E-04	1.18E-07	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	9.58E-12	5.10E+01	4.89E-10
	bis(2-ethylhexyl) phthalate	2.50E-03	2.26E-06	3.00E-03	6.78E-09
	Metals and Inorganic Ions				
	arsenic	6.00E-04	2.17E-08	9.45E+00	2.05E-07
	chromium	4.80E-03	1.74E-07	N/A	--
	chromium (VI)	5.03E-03	3.64E-07	N/A	--
	nitrate	7.10E+00	2.57E-04	N/A	--
	perchlorate	3.70E-03	N/A	N/A	--
				Total Risk for Dermal Route:	6.24E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-110
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	2.30E+00	2.00E-06	4.60E-06
	tetrachloroethene	1.80E-04	2.96E-02	5.90E-06	1.75E-07
	1,1-dichloroethene	1.40E-04	2.30E-02	N/A	--
	cis-1,2-dichloroethene	5.20E-03	8.55E-01	N/A	--
	2-butanone	2.00E-04	3.29E-02	N/A	--
	acetone	2.50E-03	4.11E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	bromoform	2.50E-04	4.11E-02	1.11E-06	4.56E-08
	carbon disulfide	1.40E-03	2.30E-01	N/A	--
	chloroform	6.00E-04	9.86E-02	5.30E-06	5.23E-07
	chloromethane	5.60E-04	9.21E-02	1.80E-06	1.66E-07
	dibromochloropropane	2.50E-04	4.11E-02	6.90E-07	2.84E-08
	dichlorodifluoromethane	4.30E-04	7.07E-02	N/A	--
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	methylene chloride	2.50E-04	4.11E-02	1.00E-06	4.11E-08
	vinyl chloride	5.60E-04	9.21E-02	7.80E-05	7.18E-06
	toluene	5.30E-05	8.71E-03	N/A	--
	trans-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	trichlorofluoromethane	2.50E-04	4.11E-02	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	1.40E-02	--
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	2.40E-06	--
	Metals and Inorganic Ions				
	arsenic	6.00E-04	NV	3.30E-03	--
	chromium	4.80E-03	NV	1.20E-02	--
	chromium (VI)	5.03E-03	NV	1.50E-01	--
	nitrate	7.10E+00	NV	N/A	--
	perchlorate	3.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	1.4E-05
				Total Risk Across All Exposure Routes/Pathways :	**5E-05**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-111
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	8.95E-04	N/A	--
	tetrachloroethene	1.80E-04	1.15E-05	1.00E-02	1.15E-03
	1,1-dichloroethene	1.40E-04	8.95E-06	5.00E-02	1.79E-04
	cis-1,2-dichloroethene	5.20E-03	3.32E-04	1.00E-02	3.32E-02
	2-butanone	2.00E-04	1.28E-05	6.00E-01	2.13E-05
	acetone	2.50E-03	1.60E-04	9.00E-01	1.78E-04
	benzene	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	bromoform	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	carbon disulfide	1.40E-03	8.95E-05	1.00E-01	8.95E-04
	chloroform	6.00E-04	3.84E-05	1.00E-02	3.84E-03
	chloromethane	5.60E-04	3.58E-05	N/A	--
	dibromochloropropane	2.50E-04	1.60E-05	N/A	--
	dichlorodifluoromethane	4.30E-04	2.75E-05	2.00E-01	1.37E-04
	cis-1,3-dichloropropene	2.50E-04	1.60E-05	3.00E-02	5.33E-04
	methylene chloride	2.50E-04	1.60E-05	6.00E-02	2.66E-04
	vinyl chloride	5.60E-04	3.58E-05	3.00E-03	1.19E-02
	toluene	5.30E-05	3.39E-06	8.00E-02	4.24E-05
	trans-1,2-dichloroethene	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	trichlorofluoromethane	2.50E-04	1.60E-05	3.00E-01	5.33E-05
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	6.39E-08	8.00E-06	7.99E-03
	bis(2-ethylhexyl) phthalate	2.50E-03	1.60E-04	2.00E-02	7.99E-03
	Metals and Inorganic Ions				
	arsenic	6.00E-04	3.84E-05	3.00E-04	1.28E-01
	chromium	4.80E-03	3.07E-04	N/A	--
	chromium (VI)	5.03E-03	3.22E-04	3.00E-03	1.07E-01
	nitrate	7.10E+00	4.54E-01	1.60E+00	2.84E-01
	perchlorate	3.70E-03	2.37E-04	7.00E-04	3.38E-01
				Total Risk for Oral Route:	0.9

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-111
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	7.09E-05	N/A	--
	tetrachloroethene	1.80E-04	2.51E-06	1.00E-02	2.51E-04
	1,1-dichloroethene	1.40E-04	7.09E-07	5.00E-02	1.42E-05
	cis-1,2-dichloroethene	5.20E-03	2.39E-05	1.00E-02	2.39E-03
	2-butanone	2.00E-04	8.10E-08	6.00E-01	1.35E-07
	acetone	2.50E-03	6.00E-07	9.00E-01	6.67E-07
	benzene	2.50E-04	2.18E-06	4.00E-03	5.46E-04
	bromoform	2.50E-04	2.32E-07	2.00E-02	1.16E-05
	carbon disulfide	1.40E-03	1.00E-05	1.00E-01	1.00E-04
	chloroform	6.00E-04	1.72E-06	1.00E-02	1.72E-04
	chloromethane	5.60E-04	7.80E-07	N/A	--
	dibromochloropropane	2.50E-04	9.19E-07	N/A	--
	dichlorodifluoromethane	4.30E-04	1.63E-06	2.00E-01	8.16E-06
	cis-1,3-dichloropropene	2.50E-04	1.79E-08	3.00E-02	5.98E-07
	methylene chloride	2.50E-04	3.69E-07	6.00E-02	6.15E-06
	vinyl chloride	5.60E-04	1.32E-06	3.00E-03	4.41E-04
	toluene	5.30E-05	6.93E-07	8.00E-02	8.67E-06
	trans-1,2-dichloroethene	2.50E-04	8.12E-07	2.00E-02	4.06E-05
	trichlorofluoromethane	2.50E-04	1.37E-06	3.00E-01	4.57E-06
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	1.12E-10	8.00E-06	1.40E-05
	bis(2-ethylhexyl) phthalate	2.50E-03	2.64E-05	2.00E-02	1.32E-03
	Metals and Inorganic Ions				
	arsenic	6.00E-04	2.53E-07	3.00E-04	8.44E-04
	chromium	4.80E-03	2.03E-06	N/A	--
	chromium (VI)	5.03E-03	4.24E-06	3.00E-03	1.41E-03
	nitrate	7.10E+00	3.00E-03	1.60E+00	1.87E-03
	perchlorate	3.70E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.009

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-111
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.40E-02	6.71E+00	N/A	--
	tetrachloroethene	1.80E-04	8.63E-02	2.70E+02	3.20E-04
	1,1-dichloroethene	1.40E-04	6.71E-02	2.00E+02	3.36E-04
	cis-1,2-dichloroethene	5.20E-03	2.49E+00	3.50E+01	7.12E-02
	2-butanone	2.00E-04	9.59E-02	5.00E+03	1.92E-05
	acetone	2.50E-03	1.20E+00	3.10E+04	3.87E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	bromoform	2.50E-04	1.20E-01	N/A	--
	carbon disulfide	1.40E-03	6.71E-01	7.00E+02	9.59E-04
	chloroform	6.00E-04	2.88E-01	9.80E+01	2.94E-03
	chloromethane	5.60E-04	2.68E-01	9.00E+01	2.98E-03
	dibromochloropropane	2.50E-04	1.20E-01	2.00E-01	5.99E-01
	dichlorodifluoromethane	4.30E-04	2.06E-01	2.00E+02	1.03E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	methylene chloride	2.50E-04	1.20E-01	4.00E+02	3.00E-04
	vinyl chloride	5.60E-04	2.68E-01	1.00E+02	2.68E-03
	toluene	5.30E-05	2.54E-02	3.00E+02	8.47E-05
	trans-1,2-dichloroethene	2.50E-04	1.20E-01	5.95E+01	2.01E-03
	trichlorofluoromethane	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	N/A	--
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	7.00E+01	--
	Metals and Inorganic Ions				
	arsenic	6.00E-04	NV	3.00E-02	--
	chromium	4.80E-03	NV	N/A	--
	chromium (VI)	5.03E-03	NV	1.00E-01	--
	nitrate	7.10E+00	NV	1.00E+04	--
	perchlorate	3.70E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.7
				Total Risk Across All Exposure Routes/Pathways :	2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-112
Risk Results Detailed Summary- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	1.7E-06	1.1E-07	4.6E-06	6.4E-06	8%	1.0E-06	7.9E-08	4.6E-06	5.7E-06	11%
tetrachloroethene	9.1E-07	1.6E-07	1.7E-07	1.2E-06	2%	5.3E-07	1.2E-07	1.7E-07	8.2E-07	2%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
2-butanone	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
benzene	2.3E-07	2.5E-08	1.2E-06	1.5E-06	<0.5%	1.4E-07	1.9E-08	1.2E-06	1.3E-06	<0.5%
bromoform	1.9E-08	2.1E-10	4.6E-08	6.4E-08	<0.5%	1.1E-08	1.6E-10	4.6E-08	5.7E-08	<0.5%
carbon disulfide	--	--	--	--	--	--	--	--	--	--
chloroform	1.7E-07	6.2E-09	5.2E-07	7.0E-07	1%	1.0E-07	4.6E-09	5.2E-07	6.3E-07	1%
chloromethane	6.8E-08	1.2E-09	1.7E-07	2.4E-07	<0.5%	4.0E-08	8.7E-10	1.7E-07	2.1E-07	<0.5%
dibromochloropropane	3.3E-06	1.5E-07	2.8E-08	3.5E-06	4%	1.9E-06	1.1E-07	2.8E-08	2.1E-06	4%
dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--
cis-1,3-dichloropropene	2.3E-07	2.1E-10	1.6E-07	4.0E-07	1%	1.4E-07	1.5E-10	1.6E-07	3.0E-07	1%
methylene chloride	3.3E-08	6.0E-10	4.1E-08	7.5E-08	<0.5%	1.9E-08	4.4E-10	4.1E-08	6.1E-08	<0.5%
vinyl chloride	3.8E-06	1.1E-07	7.2E-06	1.1E-05	14%	2.2E-06	8.2E-08	7.2E-06	9.5E-06	18%
toluene	--	--	--	--	--	--	--	--	--	--
trans-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
trichlorofluoromethane	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	1.0E-05	5.6E-07	1.4E-05	2.5E-05	32%	6.1E-06	4.1E-07	1.4E-05	2.1E-05	39%
Semivolatile Organic Compounds										
n-nitrosodimethylamine	4.8E-07	6.6E-10	--	4.8E-07	1%	2.8E-07	4.9E-10	--	2.8E-07	1%
bis(2-ethylhexyl) phthalate	7.0E-08	9.2E-09	--	8.0E-08	<0.5%	4.1E-08	6.8E-09	--	4.8E-08	<0.5%
Subtotal SVOCs	5.5E-07	9.9E-09	--	5.6E-07	1%	3.2E-07	7.3E-09	--	3.3E-07	1%
Metals and Inorganic Ions										
arsenic	5.3E-05	2.8E-07	--	5.4E-05	68%	3.1E-05	2.1E-07	--	3.1E-05	60%
chromium	--	--	--	--	--	--	--	--	--	--
chromium (VI)	--	--	--	--	--	--	--	--	--	--
nitrate	--	--	--	--	--	--	--	--	--	--
perchlorate	--	--	--	--	--	--	--	--	--	--
Subtotal Metals & Inorganic Ions	5.3E-05	2.8E-07	--	5.4E-05	68%	3.1E-05	2.1E-07	--	3.1E-05	60%
Total:	6E-05	8E-07	1E-05	8E-05	100%	4E-05	6E-07	1E-05	5E-05	100%

Notes:

COPC = contaminant of potential concern

-- indicate a risk or hazard was not calculated because toxicity value not established.

Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-112
Risk Results Detailed Summary- Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	4.9E-04	8.5E-05	3.2E-04	9.0E-04	<0.5%	1.2E-03	2.5E-04	3.2E-04	1.7E-03	<0.5%
1,1-dichloroethene	7.7E-05	4.8E-06	3.4E-04	4.2E-04	<0.5%	1.8E-04	1.4E-05	3.4E-04	5.3E-04	<0.5%
cis-1,2-dichloroethene	1.4E-02	8.1E-04	7.1E-02	8.6E-02	8%	3.3E-02	2.4E-03	7.1E-02	1.1E-01	7%
2-butanone	9.1E-06	4.6E-08	1.9E-05	2.8E-05	<0.5%	2.1E-05	1.4E-07	1.9E-05	4.1E-05	<0.5%
acetone	7.6E-05	2.3E-07	3.9E-05	1.1E-04	<0.5%	1.8E-04	6.7E-07	3.9E-05	2.2E-04	<0.5%
benzene	1.7E-03	1.9E-04	2.0E-03	3.9E-03	<0.5%	4.0E-03	5.5E-04	2.0E-03	6.5E-03	<0.5%
bromoform	3.4E-04	3.9E-06	--	3.5E-04	<0.5%	8.0E-04	1.2E-05	--	8.1E-04	<0.5%
carbon disulfide	3.8E-04	3.4E-05	9.6E-04	1.4E-03	<0.5%	8.9E-04	1.0E-04	9.6E-04	2.0E-03	<0.5%
chloroform	1.6E-03	5.8E-05	2.9E-03	4.6E-03	<0.5%	3.8E-03	1.7E-04	2.9E-03	6.9E-03	<0.5%
chloromethane	--	--	3.0E-03	3.0E-03	<0.5%	--	--	3.0E-03	3.0E-03	<0.5%
dibromochloropropane	--	--	6.0E-01	6.0E-01	55%	--	--	6.0E-01	6.0E-01	37%
dichlorodifluoromethane	5.9E-05	2.8E-06	1.0E-03	1.1E-03	<0.5%	1.4E-04	8.2E-06	1.0E-03	1.2E-03	<0.5%
cis-1,3-dichloropropene	2.3E-04	2.0E-07	6.0E-03	6.2E-03	1%	5.3E-04	6.0E-07	6.0E-03	6.5E-03	<0.5%
methylene chloride	1.1E-04	2.1E-06	3.0E-04	4.2E-04	<0.5%	2.7E-04	6.2E-06	3.0E-04	5.7E-04	<0.5%
vinyl chloride	5.1E-03	1.5E-04	2.7E-03	7.9E-03	1%	1.2E-02	4.4E-04	2.7E-03	1.5E-02	1%
toluene	1.8E-05	2.9E-06	8.5E-05	1.1E-04	<0.5%	4.2E-05	8.7E-06	8.5E-05	1.4E-04	<0.5%
trans-1,2-dichloroethene	3.4E-04	1.4E-05	2.0E-03	2.4E-03	<0.5%	8.0E-04	4.1E-05	2.0E-03	2.9E-03	<0.5%
trichlorofluoromethane	2.3E-05	1.5E-06	1.7E-04	2.0E-04	<0.5%	5.3E-05	4.6E-06	1.7E-04	2.3E-04	<0.5%
Subtotal VOCs	2.5E-02	1.4E-03	6.9E-01	7.2E-01	66%	5.8E-02	4.0E-03	6.9E-01	7.5E-01	46%
Semivolatile Organic Compounds										
n-nitrosodimethylamine	3.4E-03	4.7E-06	--	3.4E-03	<0.5%	8.0E-03	1.4E-05	--	8.0E-03	<0.5%
bis(2-ethylhexyl) phthalate	3.4E-03	4.5E-04	--	3.9E-03	<0.5%	8.0E-03	1.3E-03	--	9.3E-03	1%
Subtotal SVOCs	6.8E-03	4.5E-04	--	7.3E-03	1%	1.6E-02	1.3E-03	--	1.7E-02	1%
Metals and Inorganic Ions					<0.5%					
arsenic	5.5E-02	2.9E-04	--	5.5E-02	5%	1.3E-01	8.4E-04	--	1.3E-01	8%
chromium	--	--	--	--	--	--	--	--	--	--
chromium (VI)	4.6E-02	--	--	4.6E-02	4%	1.1E-01	1.4E-03	--	1.1E-01	7%
nitrate	1.2E-01	--	--	1.2E-01	<0.5%	2.8E-01	1.9E-03	--	2.9E-01	<0.5%
perchlorate	1.4E-01	--	--	1.4E-01	13%	3.4E-01	--	--	3.4E-01	21%
Subtotal Metals & Inorganic Ions	3.7E-01	2.9E-04	--	3.7E-01	34%	8.6E-01	4.1E-03	--	8.6E-01	53%
Total:	0.4	0.002	0.7	1	100%	0.9	0.009	0.7	**2**	100%

Notes:

COPC = contaminant of potential concern

-- indicate a risk or hazard was not calculated because toxicity value not established.

Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-113
Risk Results Summary - Based on EPAMW13 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	**Hypothetical Future Residential**							
	Adult Resident				**Child Resident**			
	Reasonable Maximum Exposure							
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Ingestion**	**Dermal**	**Inhalation**	**Total**
Subtotal VOCs	1.0E-05	5.6E-07	1.4E-05	2.5E-05	6.1E-06	4.1E-07	1.4E-05	2.1E-05
Subtotal SVOCs	5.5E-07	9.9E-09	--	5.6E-07	3.2E-07	7.3E-09	--	3.3E-07
Subtotal Metals & Inorganic Ions	5.3E-05	2.8E-07	--	5.4E-05	3.1E-05	2.1E-07	--	3.1E-05
Total:	6E-05	8E-07	1E-05	8E-05	4E-05	6E-07	1E-05	5E-05

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	**Hypothetical Future Residential**							
	Adult Resident				**Child Resident**			
	Reasonable Maximum Exposure							
	Ingestion	**Dermal**	**Inhalation**	**Total**	**Ingestion**	**Dermal**	**Inhalation**	**Total**
Subtotal VOCs	2.5E-02	1.4E-03	6.9E-01	7.2E-01	5.8E-02	4.0E-03	6.9E-01	7.5E-01
Subtotal SVOCs	6.8E-03	4.5E-04	--	7.3E-03	1.6E-02	1.3E-03	--	1.7E-02
Subtotal Metals & Inorganic Ions	3.7E-01	2.9E-04	--	3.7E-01	8.6E-01	4.1E-03	--	8.6E-01
Total:	0.4	0.002	0.7	1	0.9	0.009	0.7	**2**

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-114
Groundwater Exposure Point Concentrations - Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
EPAMW14	***Volatile Organic Compounds***		
	trichloroethene	2.50E-02	2007
	tetrachloroethene	6.90E-04	2007
	1,1-dichloroethene	4.20E-04	2007
	cis-1,2-dichloroethene	5.60E-03	2007
	carbon tetrachloride	2.50E-04	2007[a]
	1,2-dichloroethane	2.50E-04	2007[a]
	1,1,2-trichloroethane	2.50E-04	2007[a]
	acetone	2.60E-03	2007
	benzene	2.50E-04	2007[a]
	bromomethane	2.50E-04	2007[a]
	carbon disulfide	2.50E-04	2007[a]
	chloroform	5.00E-04	2007
	chloromethane	1.20E-03	2007
	dichlorodifluoromethane	2.50E-04	2007
	methylene chloride	3.80E-04	2007
	methyl-tert-butyl ether	2.50E-04	2007[a]
	toluene	2.50E-04	2007[a]
	trans-1,2-dichloroethene	1.20E-04	2007
	vinyl chloride	2.50E-04	2007[a]
	Semivolatile Organic Compounds		
	n-nitrosodimethylamine	1.00E-06	2004[a]
	bis(2-ethylhexyl) phthalate	2.40E-03	2005
	benzyl alcohol	3.00E-03	2004
	Metals and Inorganic Ions		
	arsenic	7.80E-03	2005
	chromium	7.00E-05	2005
	chromium (VI)	6.19E-03	2007
	nitrate	9.70E+00	2007
	perchlorate	3.80E-03	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-115
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	2.35E-04	1.30E-02	3.05E-06
	tetrachloroethene	6.90E-04	6.48E-06	5.40E-01	3.50E-06
	1,1-dichloroethene	4.20E-04	3.95E-06	N/A	--
	cis-1,2-dichloroethene	5.60E-03	5.26E-05	N/A	--
	carbon tetrachloride	2.50E-04	2.35E-06	1.50E-01	3.52E-07
	1,2-dichloroethane	2.50E-04	2.35E-06	4.70E-02	1.10E-07
	1,1,2-trichloroethane	2.50E-04	2.35E-06	7.20E-02	1.69E-07
	acetone	2.60E-03	2.44E-05	N/A	--
	benzene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	bromomethane	2.50E-04	2.35E-06	N/A	--
	carbon disulfide	2.50E-04	2.35E-06	N/A	--
	chloroform	5.00E-04	4.70E-06	3.10E-02	1.46E-07
	chloromethane	1.20E-03	1.13E-05	1.30E-02	1.47E-07
	dichlorodifluoromethane	2.50E-04	2.35E-06	N/A	--
	methylene chloride	3.80E-04	3.57E-06	1.40E-02	5.00E-08
	methyl-tert-butyl ether	2.50E-04	2.35E-06	1.80E-03	4.23E-09
	toluene	2.50E-04	2.35E-06	N/A	--
	trans-1,2-dichloroethene	1.20E-04	1.13E-06	N/A	--
	vinyl chloride	2.50E-04	2.35E-06	7.20E-01	1.69E-06
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	9.39E-09	5.10E+01	4.79E-07
	bis(2-ethylhexyl) phthalate	2.40E-03	2.25E-05	3.00E-03	6.76E-08
	benzyl alcohol	3.00E-03	2.82E-05	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.80E-03	7.33E-05	9.45E+00	6.92E-04
	chromium	7.00E-05	6.58E-07	N/A	--
	chromium (VI)	6.19E-03	5.81E-05	N/A	--
	nitrate	9.70E+00	9.11E-02	N/A	--
	perchlorate	3.80E-03	3.57E-05	N/A	--
				Total Risk for Oral Route:	7.0E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-115
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	1.47E-05	1.30E-02	1.91E-07
	tetrachloroethene	6.90E-04	1.12E-06	5.40E-01	6.03E-07
	1,1-dichloroethene	4.20E-04	2.47E-07	N/A	--
	cis-1,2-dichloroethene	5.60E-03	2.99E-06	N/A	--
	carbon tetrachloride	2.50E-04	8.09E-09	1.50E-01	1.21E-09
	1,2-dichloroethane	2.50E-04	5.15E-08	4.70E-02	2.42E-09
	1,1,2-trichloroethane	2.50E-04	7.85E-08	7.20E-02	5.65E-09
	acetone	2.60E-03	7.25E-08	N/A	--
	benzene	2.50E-04	2.54E-07	1.00E-01	2.54E-08
	bromomethane	2.50E-04	3.43E-08	N/A	--
	carbon disulfide	2.50E-04	2.08E-07	N/A	--
	chloroform	5.00E-04	1.67E-07	3.10E-02	5.17E-09
	chloromethane	1.20E-03	1.94E-07	1.30E-02	2.52E-09
	dichlorodifluoromethane	2.50E-04	1.10E-07	N/A	--
	methylene chloride	3.80E-04	6.52E-08	1.40E-02	9.13E-10
	methyl-tert-butyl ether	2.50E-04	3.15E-08	1.80E-03	5.67E-11
	toluene	2.50E-04	3.80E-07	N/A	--
	trans-1,2-dichloroethene	1.20E-04	4.53E-08	N/A	--
	vinyl chloride	2.50E-04	6.86E-08	7.20E-01	4.94E-08
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	1.30E-11	5.10E+01	6.63E-10
	bis(2-ethylhexyl) phthalate	2.40E-03	2.94E-06	3.00E-03	8.83E-09
	benzyl alcohol	3.00E-03	2.27E-07	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.80E-03	3.82E-07	9.45E+00	3.61E-06
	chromium	7.00E-05	3.43E-09	N/A	--
	chromium (VI)	6.19E-03	6.07E-07	N/A	--
	nitrate	9.70E+00	4.76E-04	N/A	--
	perchlorate	3.80E-03	N/A	N/A	--
				Total Risk for Dermal Route:	4.5E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-115
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Adult

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	4.11E+00	2.00E-06	8.22E-06
	tetrachloroethene	6.90E-04	1.13E-01	5.90E-06	6.69E-07
	1,1-dichloroethene	4.20E-04	6.90E-02	N/A	--
	cis-1,2-dichloroethene	5.60E-03	9.21E-01	N/A	--
	carbon tetrachloride	2.50E-04	4.11E-02	4.20E-05	1.73E-06
	1,2-dichloroethane	2.50E-04	4.11E-02	2.10E-05	8.63E-07
	1,1,2-trichloroethane	2.50E-04	4.11E-02	1.60E-05	6.58E-07
	acetone	2.60E-03	4.27E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	bromomethane	2.50E-04	4.11E-02	N/A	--
	carbon disulfide	2.50E-04	4.11E-02	N/A	--
	chloroform	5.00E-04	8.22E-02	5.30E-06	4.36E-07
	chloromethane	1.20E-03	1.97E-01	1.80E-06	3.55E-07
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	methylene chloride	3.80E-04	6.25E-02	1.00E-06	6.25E-08
	methyl-tert-butyl ether	2.50E-04	4.11E-02	2.60E-07	1.07E-08
	toluene	2.50E-04	4.11E-02	N/A	--
	trans-1,2-dichloroethene	1.20E-04	1.97E-02	N/A	--
	vinyl chloride	2.50E-04	4.11E-02	7.80E-05	3.21E-06
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	1.40E-02	--
	bis(2-ethylhexyl) phthalate	2.40E-03	NV	2.40E-06	--
	benzyl alcohol	3.00E-03	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.80E-03	NV	3.30E-03	--
	chromium	7.00E-05	NV	1.20E-02	--
	chromium (VI)	6.19E-03	NV	1.50E-01	--
	nitrate	9.70E+00	NV	N/A	--
	perchlorate	3.80E-03	NV	N/A	--
				Total Risk for Inhalation Route:	1.7E-05
				Total Risk Across All Exposure Routes/Pathways :	**7E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-116
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	6.85E-04	N/A	--
	tetrachloroethene	6.90E-04	1.89E-05	1.00E-02	1.89E-03
	1,1-dichloroethene	4.20E-04	1.15E-05	5.00E-02	2.30E-04
	cis-1,2-dichloroethene	5.60E-03	1.53E-04	1.00E-02	1.53E-02
	carbon tetrachloride	2.50E-04	6.85E-06	7.00E-04	9.78E-03
	1,2-dichloroethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	1,1,2-trichloroethane	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	acetone	2.60E-03	7.12E-05	9.00E-01	7.91E-05
	benzene	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	bromomethane	2.50E-04	6.85E-06	1.40E-03	4.89E-03
	carbon disulfide	2.50E-04	6.85E-06	1.00E-01	6.85E-05
	chloroform	5.00E-04	1.37E-05	1.00E-02	1.37E-03
	chloromethane	1.20E-03	3.29E-05	N/A	--
	dichlorodifluoromethane	2.50E-04	6.85E-06	2.00E-01	3.42E-05
	methylene chloride	3.80E-04	1.04E-05	6.00E-02	1.74E-04
	methyl-tert-butyl ether	2.50E-04	6.85E-06	N/A	--
	toluene	2.50E-04	6.85E-06	8.00E-02	8.56E-05
	trans-1,2-dichloroethene	1.20E-04	3.29E-06	2.00E-02	1.64E-04
	vinyl chloride	2.50E-04	6.85E-06	3.00E-03	2.28E-03
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	2.74E-08	8.00E-06	3.42E-03
	bis(2-ethylhexyl) phthalate	2.40E-03	6.58E-05	2.00E-02	3.29E-03
	benzyl alcohol	3.00E-03	8.22E-05	5.00E-01	1.64E-04
	Metals and Inorganic Ions				
	arsenic	7.80E-03	2.14E-04	3.00E-04	7.12E-01
	chromium	7.00E-05	1.92E-06	1.50E+00	1.28E-06
	chromium (VI)	6.19E-03	1.70E-04	3.00E-03	5.65E-02
	nitrate	9.70E+00	2.66E-01	1.60E+00	1.66E-01
	perchlorate	3.80E-03	1.04E-04	7.00E-04	1.49E-01
				Total Risk for Oral Route:	1.1

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-116
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	4.29E-05	N/A	--
	tetrachloroethene	6.90E-04	3.26E-06	1.00E-02	3.26E-04
	1,1-dichloroethene	4.20E-04	7.21E-07	5.00E-02	1.44E-05
	cis-1,2-dichloroethene	5.60E-03	8.71E-06	1.00E-02	8.71E-04
	carbon tetrachloride	2.50E-04	2.36E-08	7.00E-04	3.37E-05
	1,2-dichloroethane	2.50E-04	1.50E-07	2.00E-02	7.51E-06
	1,1,2-trichloroethane	2.50E-04	2.29E-07	4.00E-03	5.72E-05
	acetone	2.60E-03	1.94E-07	9.00E-01	2.15E-07
	benzene	2.50E-04	5.27E-07	4.00E-03	1.32E-04
	bromomethane	2.50E-04	1.02E-07	1.40E-03	7.25E-05
	carbon disulfide	2.50E-04	6.08E-07	1.00E-01	6.08E-06
	chloroform	5.00E-04	4.85E-07	1.00E-02	4.85E-05
	chloromethane	1.20E-03	5.65E-07	N/A	--
	dichlorodifluoromethane	2.50E-04	3.21E-07	2.00E-01	1.61E-06
	methylene chloride	3.80E-04	1.90E-07	6.00E-02	3.17E-06
	methyl-tert-butyl ether	2.50E-04	7.59E-08	N/A	--
	toluene	2.50E-04	1.09E-06	8.00E-02	1.37E-05
	trans-1,2-dichloroethene	1.20E-04	1.32E-07	2.00E-02	6.58E-06
	vinyl chloride	2.50E-04	2.00E-07	3.00E-03	6.66E-05
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	3.79E-11	8.00E-06	4.74E-06
	bis(2-ethylhexyl) phthalate	2.40E-03	8.58E-06	2.00E-02	4.29E-04
	benzyl alcohol	3.00E-03	8.97E-07	5.00E-01	1.79E-06
	Metals and Inorganic Ions				
	arsenic	7.80E-03	1.12E-06	3.00E-04	3.72E-03
	chromium	7.00E-05	1.00E-08	1.50E+00	6.67E-09
	chromium (VI)	6.19E-03	1.77E-06	3.00E-03	5.90E-04
	nitrate	9.70E+00	1.39E-03	1.60E+00	8.67E-04
	perchlorate	3.80E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.01

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-116
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	1.20E+01	N/A	
	tetrachloroethene	6.90E-04	3.31E-01	2.70E+02	1.23E-03
	1,1-dichloroethene	4.20E-04	2.01E-01	2.00E+02	1.01E-03
	cis-1,2-dichloroethene	5.60E-03	2.68E+00	3.50E+01	7.67E-02
	carbon tetrachloride	2.50E-04	1.20E-01	1.90E+02	6.31E-04
	1,2-dichloroethane	2.50E-04	1.20E-01	2.40E+03	4.99E-05
	1,1,2-trichloroethane	2.50E-04	1.20E-01	1.40E+01	8.56E-03
	acetone	2.60E-03	1.25E+00	3.10E+04	4.02E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	bromomethane	2.50E-04	1.20E-01	5.00E+00	2.40E-02
	carbon disulfide	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	chloroform	5.00E-04	2.40E-01	9.80E+01	2.45E-03
	chloromethane	1.20E-03	5.75E-01	9.00E+01	6.39E-03
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	methylene chloride	3.80E-04	1.82E-01	4.00E+02	4.55E-04
	methyl-tert-butyl ether	2.50E-04	1.20E-01	3.00E+03	4.00E-05
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	trans-1,2-dichloroethene	1.20E-04	5.75E-02	5.95E+01	9.67E-04
	vinyl chloride	2.50E-04	1.20E-01	1.00E+02	1.20E-03
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	N/A	--
	bis(2-ethylhexyl) phthalate	2.40E-03	NV	7.00E+01	--
	benzyl alcohol	3.00E-03	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.80E-03	NV	3.00E-02	--
	chromium	7.00E-05	NV	N/A	--
	chromium (VI)	6.19E-03	NV	1.00E-01	--
	nitrate	9.70E+00	NV	1.00E+04	--
	perchlorate	3.80E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.1
				Total Risk Across All Exposure Routes/Pathways :	**1**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-117
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	1.37E-04	1.30E-02	1.78E-06
	tetrachloroethene	6.90E-04	3.78E-06	5.40E-01	2.04E-06
	1,1-dichloroethene	4.20E-04	2.30E-06	N/A	--
	cis-1,2-dichloroethene	5.60E-03	3.07E-05	N/A	--
	carbon tetrachloride	2.50E-04	1.37E-06	1.50E-01	2.05E-07
	1,2-dichloroethane	2.50E-04	1.37E-06	4.70E-02	6.44E-08
	1,1,2-trichloroethane	2.50E-04	1.37E-06	7.20E-02	9.86E-08
	acetone	2.60E-03	1.42E-05	N/A	--
	benzene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	bromomethane	2.50E-04	1.37E-06	N/A	--
	carbon disulfide	2.50E-04	1.37E-06	N/A	--
	chloroform	5.00E-04	2.74E-06	3.10E-02	8.49E-08
	chloromethane	1.20E-03	6.58E-06	1.30E-02	8.55E-08
	dichlorodifluoromethane	2.50E-04	1.37E-06	N/A	--
	methylene chloride	3.80E-04	2.08E-06	1.40E-02	2.92E-08
	methyl-tert-butyl ether	2.50E-04	1.37E-06	1.80E-03	2.47E-09
	toluene	2.50E-04	1.37E-06	N/A	--
	trans-1,2-dichloroethene	1.20E-04	6.58E-07	N/A	--
	vinyl chloride	2.50E-04	1.37E-06	7.20E-01	9.86E-07
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	5.48E-09	5.10E+01	2.79E-07
	bis(2-ethylhexyl) phthalate	2.40E-03	1.32E-05	3.00E-03	3.95E-08
	benzyl alcohol	3.00E-03	1.64E-05	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.80E-03	4.27E-05	9.45E+00	4.04E-04
	chromium	7.00E-05	3.84E-07	N/A	--
	chromium (VI)	6.19E-03	3.39E-05	N/A	--
	nitrate	9.70E+00	5.32E-02	N/A	--
	perchlorate	3.80E-03	2.08E-05	N/A	--
				Total Risk for Oral Route:	4.10E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-117
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	1.08E-05	1.30E-02	1.41E-07
	tetrachloroethene	6.90E-04	8.23E-07	5.40E-01	4.45E-07
	1,1-dichloroethene	4.20E-04	1.82E-07	N/A	--
	cis-1,2-dichloroethene	5.60E-03	2.20E-06	N/A	--
	carbon tetrachloride	2.50E-04	5.97E-09	1.50E-01	8.95E-10
	1,2-dichloroethane	2.50E-04	3.80E-08	4.70E-02	1.78E-09
	1,1,2-trichloroethane	2.50E-04	5.79E-08	7.20E-02	4.17E-09
	acetone	2.60E-03	5.35E-08	N/A	--
	benzene	2.50E-04	1.87E-07	1.00E-01	1.87E-08
	bromomethane	2.50E-04	2.53E-08	N/A	--
	carbon disulfide	2.50E-04	1.54E-07	N/A	--
	chloroform	5.00E-04	1.23E-07	3.10E-02	3.81E-09
	chloromethane	1.20E-03	1.43E-07	1.30E-02	1.86E-09
	dichlorodifluoromethane	2.50E-04	8.14E-08	N/A	--
	methylene chloride	3.80E-04	4.81E-08	1.40E-02	6.73E-10
	methyl-tert-butyl ether	2.50E-04	2.32E-08	1.80E-03	4.18E-11
	toluene	2.50E-04	2.80E-07	N/A	--
	trans-1,2-dichloroethene	1.20E-04	3.34E-08	N/A	--
	vinyl chloride	2.50E-04	5.06E-08	7.20E-01	3.65E-08
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	9.58E-12	5.10E+01	4.89E-10
	bis(2-ethylhexyl) phthalate	2.40E-03	2.17E-06	3.00E-03	6.51E-09
	benzyl alcohol	3.00E-03	2.27E-07	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.80E-03	2.82E-07	9.45E+00	2.67E-06
	chromium	7.00E-05	2.53E-09	N/A	--
	chromium (VI)	6.19E-03	4.48E-07	N/A	--
	nitrate	9.70E+00	3.51E-04	N/A	--
	perchlorate	3.80E-03	N/A	N/A	--
				Total Risk for Dermal Route:	3.33E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-117
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	4.11E+00	2.00E-06	8.22E-06
	tetrachloroethene	6.90E-04	1.13E-01	5.90E-06	6.69E-07
	1,1-dichloroethene	4.20E-04	6.90E-02	N/A	--
	cis-1,2-dichloroethene	5.60E-03	9.21E-01	N/A	--
	carbon tetrachloride	2.50E-04	4.11E-02	4.20E-05	1.73E-06
	1,2-dichloroethane	2.50E-04	4.11E-02	2.10E-05	8.63E-07
	1,1,2-trichloroethane	2.50E-04	4.11E-02	1.60E-05	6.58E-07
	acetone	2.60E-03	4.27E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	bromomethane	2.50E-04	4.11E-02	N/A	--
	carbon disulfide	2.50E-04	4.11E-02	N/A	--
	chloroform	5.00E-04	8.22E-02	5.30E-06	4.36E-07
	chloromethane	1.20E-03	1.97E-01	1.80E-06	3.55E-07
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	methylene chloride	3.80E-04	6.25E-02	1.00E-06	6.25E-08
	methyl-tert-butyl ether	2.50E-04	4.11E-02	2.60E-07	1.07E-08
	toluene	2.50E-04	4.11E-02	N/A	--
	trans-1,2-dichloroethene	1.20E-04	1.97E-02	N/A	--
	vinyl chloride	2.50E-04	4.11E-02	7.80E-05	3.21E-06
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	1.40E-02	--
	bis(2-ethylhexyl) phthalate	2.40E-03	NV	2.40E-06	--
	benzyl alcohol	3.00E-03	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.80E-03	NV	3.30E-03	--
	chromium	7.00E-05	NV	1.20E-02	--
	chromium (VI)	6.19E-03	NV	1.50E-01	--
	nitrate	9.70E+00	NV	N/A	--
	perchlorate	3.80E-03	NV	N/A	--
				Total Risk for Inhalation Route:	1.7E-05
				Total Risk Across All Exposure Routes/Pathways :	**4E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-118
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	1.60E-03	N/A	--
	tetrachloroethene	6.90E-04	4.41E-05	1.00E-02	4.41E-03
	1,1-dichloroethene	4.20E-04	2.68E-05	5.00E-02	5.37E-04
	cis-1,2-dichloroethene	5.60E-03	3.58E-04	1.00E-02	3.58E-02
	carbon tetrachloride	2.50E-04	1.60E-05	7.00E-04	2.28E-02
	1,2-dichloroethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	1,1,2-trichloroethane	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	acetone	2.60E-03	1.66E-04	9.00E-01	1.85E-04
	benzene	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	bromomethane	2.50E-04	1.60E-05	1.40E-03	1.14E-02
	carbon disulfide	2.50E-04	1.60E-05	1.00E-01	1.60E-04
	chloroform	5.00E-04	3.20E-05	1.00E-02	3.20E-03
	chloromethane	1.20E-03	7.67E-05	N/A	--
	dichlorodifluoromethane	2.50E-04	1.60E-05	2.00E-01	7.99E-05
	methylene chloride	3.80E-04	2.43E-05	6.00E-02	4.05E-04
	methyl-tert-butyl ether	2.50E-04	1.60E-05	N/A	--
	toluene	2.50E-04	1.60E-05	8.00E-02	2.00E-04
	trans-1,2-dichloroethene	1.20E-04	7.67E-06	2.00E-02	3.84E-04
	vinyl chloride	2.50E-04	1.60E-05	3.00E-03	5.33E-03
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	6.39E-08	8.00E-06	7.99E-03
	bis(2-ethylhexyl) phthalate	2.40E-03	1.53E-04	2.00E-02	7.67E-03
	benzyl alcohol	3.00E-03	1.92E-04	5.00E-01	3.84E-04
	Metals and Inorganic Ions				
	arsenic	7.80E-03	4.99E-04	3.00E-04	1.66E+00
	chromium	7.00E-05	4.47E-06	1.50E+00	2.98E-06
	chromium (VI)	6.19E-03	3.96E-04	3.00E-03	1.32E-01
	nitrate	9.70E+00	6.20E-01	1.60E+00	3.88E-01
	perchlorate	3.80E-03	2.43E-04	7.00E-04	3.47E-01
				Total Risk for Oral Route:	2.6

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-118
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	1.27E-04	N/A	--
	tetrachloroethene	6.90E-04	9.61E-06	1.00E-02	9.61E-04
	1,1-dichloroethene	4.20E-04	2.13E-06	5.00E-02	4.25E-05
	cis-1,2-dichloroethene	5.60E-03	2.57E-05	1.00E-02	2.57E-03
	carbon tetrachloride	2.50E-04	6.96E-08	7.00E-04	9.95E-05
	1,2-dichloroethane	2.50E-04	4.43E-07	2.00E-02	2.22E-05
	1,1,2-trichloroethane	2.50E-04	6.75E-07	4.00E-03	1.69E-04
	acetone	2.60E-03	6.24E-07	9.00E-01	6.94E-07
	benzene	2.50E-04	2.18E-06	4.00E-03	5.46E-04
	bromomethane	2.50E-04	2.95E-07	1.40E-03	2.11E-04
	carbon disulfide	2.50E-04	1.79E-06	1.00E-01	1.79E-05
	chloroform	5.00E-04	1.43E-06	1.00E-02	1.43E-04
	chloromethane	1.20E-03	1.67E-06	N/A	--
	dichlorodifluoromethane	2.50E-04	9.49E-07	2.00E-01	4.75E-06
	methylene chloride	3.80E-04	5.61E-07	6.00E-02	9.35E-06
	methyl-tert-butyl ether	2.50E-04	2.71E-07	N/A	--
	toluene	2.50E-04	3.27E-06	8.00E-02	4.09E-05
	trans-1,2-dichloroethene	1.20E-04	3.90E-07	2.00E-02	1.95E-05
	vinyl chloride	2.50E-04	5.91E-07	3.00E-03	1.97E-04
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	1.12E-10	8.00E-06	1.40E-05
	bis(2-ethylhexyl) phthalate	2.40E-03	2.53E-05	2.00E-02	1.27E-03
	benzyl alcohol	3.00E-03	2.65E-06	5.00E-01	5.29E-06
	Metals and Inorganic Ions				
	arsenic	7.80E-03	3.29E-06	3.00E-04	1.10E-02
	chromium	7.00E-05	2.95E-08	1.50E+00	1.97E-08
	chromium (VI)	6.19E-03	5.22E-06	3.00E-03	1.74E-03
	nitrate	9.70E+00	4.09E-03	1.60E+00	2.56E-03
	perchlorate	3.80E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.02

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-118
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	1.0
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-02	1.20E+01	N/A	--
	tetrachloroethene	6.90E-04	3.31E-01	2.70E+02	1.23E-03
	1,1-dichloroethene	4.20E-04	2.01E-01	2.00E+02	1.01E-03
	cis-1,2-dichloroethene	5.60E-03	2.68E+00	3.50E+01	7.67E-02
	carbon tetrachloride	2.50E-04	1.20E-01	1.90E+02	6.31E-04
	1,2-dichloroethane	2.50E-04	1.20E-01	2.40E+03	4.99E-05
	1,1,2-trichloroethane	2.50E-04	1.20E-01	1.40E+01	8.56E-03
	acetone	2.60E-03	1.25E+00	3.10E+04	4.02E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	bromomethane	2.50E-04	1.20E-01	5.00E+00	2.40E-02
	carbon disulfide	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	chloroform	5.00E-04	2.40E-01	9.80E+01	2.45E-03
	chloromethane	1.20E-03	5.75E-01	9.00E+01	6.39E-03
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	methylene chloride	3.80E-04	1.82E-01	4.00E+02	4.55E-04
	methyl-tert-butyl ether	2.50E-04	1.20E-01	3.00E+03	4.00E-05
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	trans-1,2-dichloroethene	1.20E-04	5.75E-02	5.95E+01	9.67E-04
	vinyl chloride	2.50E-04	1.20E-01	1.00E+02	1.20E-03
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	N/A	--
	bis(2-ethylhexyl) phthalate	2.40E-03	NV	7.00E+01	--
	benzyl alcohol	3.00E-03	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	7.80E-03	NV	3.00E-02	--
	chromium	7.00E-05	NV	N/A	--
	chromium (VI)	6.19E-03	NV	1.00E-01	--
	nitrate	9.70E+00	NV	1.00E+04	--
	perchlorate	3.80E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.1
				Total Risk Across All Exposure Routes/Pathways :	3

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-119
Risk Results Detailed Summary - Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	3.1E-06	1.9E-07	8.2E-06	1.1E-05	2%	1.8E-06	1.4E-07	8.2E-06	1.0E-05	2%
tetrachloroethene	3.5E-06	6.0E-07	6.7E-07	4.8E-06	1%	2.0E-06	4.4E-07	6.7E-07	3.2E-06	1%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
carbon tetrachloride	3.5E-07	1.2E-09	1.7E-06	2.1E-06	<0.5%	2.1E-07	9.0E-10	1.7E-06	1.9E-06	<0.5%
1,2-dichloroethane	1.1E-07	2.4E-09	8.6E-07	9.8E-07	<0.5%	6.4E-08	1.8E-09	8.6E-07	9.3E-07	<0.5%
1,1,2-trichloroethane	1.7E-07	5.6E-09	6.6E-07	8.3E-07	<0.5%	9.9E-08	4.2E-09	6.6E-07	7.6E-07	<0.5%
acetone	--	--	--	--	--	--	--	--	--	--
benzene	2.3E-07	2.5E-08	1.2E-06	1.5E-06	<0.5%	1.4E-07	1.9E-08	1.2E-06	1.3E-06	<0.5%
bromomethane	--	--	--	--	--	--	--	--	--	--
carbon disulfide	--	--	--	--	--	--	--	--	--	--
chloroform	1.5E-07	5.2E-09	4.4E-07	5.9E-07	<0.5%	8.5E-08	3.8E-09	4.4E-07	5.2E-07	<0.5%
chloromethane	1.5E-07	2.5E-09	3.6E-07	5.0E-07	<0.5%	8.5E-08	1.9E-09	3.6E-07	4.4E-07	<0.5%
dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--
methylene chloride	5.0E-08	9.1E-10	6.2E-08	1.1E-07	<0.5%	2.9E-08	6.7E-10	6.2E-08	9.2E-08	<0.5%
methyl-tert-butyl ether	4.2E-09	5.7E-11	1.1E-08	1.5E-08	<0.5%	2.5E-09	4.2E-11	1.1E-08	1.3E-08	<0.5%
toluene	--	--	--	--	--	--	--	--	--	--
trans-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
vinyl chloride	1.7E-06	4.9E-08	3.2E-06	4.9E-06	1%	9.9E-07	3.6E-08	3.2E-06	4.2E-06	1%
Subtotal VOCs	9.5E-06	8.9E-07	1.7E-05	2.8E-05	4%	5.5E-06	6.5E-07	1.7E-05	2.4E-05	5%
Semi-volatile Organic Compounds										
n-nitrosodimethylamine	4.8E-07	6.6E-10	--	4.8E-07	<0.5%	2.8E-07	4.9E-10	--	2.8E-07	<0.5%
bis(2-ethylhexyl) phthalate	6.8E-08	8.8E-09	--	7.6E-08	<0.5%	3.9E-08	6.5E-09	--	4.6E-08	<0.5%
benzyl alcohol	--	--	--	--	--	--	--	--	--	--
Subtotal SVOCs	5.5E-07	9.5E-09	--	5.6E-07	<0.5%	3.2E-07	7.0E-09	--	3.3E-07	<0.5%
Metals and Inorganic Ions										
arsenic	**6.9E-04**	3.6E-06	--	**7.0E-04**	96%	**4.0E-04**	2.7E-06	--	**4.1E-04**	94%
chromium	--	--	--	--	--	--	--	--	--	--
chromium (VI)	--	--	--	--	--	--	--	--	--	--
nitrate	--	--	--	--	--	--	--	--	--	--
perchlorate	--	--	--	--	--	--	--	--	--	--
Subtotal Metals & Inorganic Ions	**6.9E-04**	3.6E-06	--	**7.0E-04**	96%	**4.0E-04**	2.7E-06	--	**4.1E-04**	94%
Total:	**7E-04**	5E-06	2E-05	**7E-04**	100%	**4E-04**	3E-06	2E-05	**4E-04**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-119
Risk Results Detailed Summary - Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	1.9E-03	3.3E-04	1.2E-03	3.4E-03	<0.5%	4.4E-03	9.6E-04	1.2E-03	6.6E-03	<0.5%
1,1-dichloroethene	2.3E-04	1.4E-05	1.0E-03	1.3E-03	<0.5%	5.4E-04	4.3E-05	1.0E-03	1.6E-03	<0.5%
cis-1,2-dichloroethene	1.5E-02	8.7E-04	7.7E-02	9.3E-02	7%	3.6E-02	2.6E-03	7.7E-02	1.2E-01	4%
carbon tetrachloride	9.8E-03	3.4E-05	6.3E-04	1.0E-02	1%	2.3E-02	9.9E-05	6.3E-04	2.4E-02	1%
1,2-dichloroethane	3.4E-04	7.5E-06	5.0E-05	4.0E-04	<0.5%	8.0E-04	2.2E-05	5.0E-05	8.7E-04	<0.5%
1,1,2-trichloroethane	1.7E-03	5.7E-05	8.6E-03	1.0E-02	1%	4.0E-03	1.7E-04	8.6E-03	1.3E-02	<0.5%
acetone	7.9E-05	2.2E-07	4.0E-05	1.2E-04	<0.5%	1.8E-04	6.9E-07	4.0E-05	2.3E-04	<0.5%
benzene	1.7E-03	1.3E-04	2.0E-03	3.8E-03	<0.5%	4.0E-03	5.5E-04	2.0E-03	6.5E-03	<0.5%
bromomethane	4.9E-03	7.3E-05	2.4E-02	2.9E-02	2%	1.1E-02	2.1E-04	2.4E-02	3.6E-02	1%
carbon disulfide	6.8E-05	6.1E-06	1.7E-04	2.5E-04	<0.5%	1.6E-04	1.8E-05	1.7E-04	3.5E-04	<0.5%
chloroform	1.4E-03	4.9E-05	2.4E-03	3.9E-03	<0.5%	3.2E-03	1.4E-04	2.4E-03	5.8E-03	<0.5%
chloromethane	--	--	6.4E-03	6.4E-03	1%	--	--	6.4E-03	6.4E-03	<0.5%
dichlorodifluoromethane	3.4E-05	1.6E-06	6.0E-04	6.4E-04	<0.5%	8.0E-05	4.7E-06	6.0E-04	6.9E-04	<0.5%
methylene chloride	1.7E-04	3.2E-06	4.6E-04	6.3E-04	<0.5%	4.0E-04	9.4E-06	4.6E-04	8.7E-04	<0.5%
methyl-tert-butyl ether	--	--	4.0E-05	4.0E-05	<0.5%	--	--	4.0E-05	4.0E-05	<0.5%
toluene	8.6E-05	1.4E-05	4.0E-04	5.0E-04	<0.5%	2.0E-04	4.1E-05	4.0E-04	6.4E-04	<0.5%
trans-1,2-dichloroethene	1.6E-04	6.6E-06	9.7E-04	1.1E-03	<0.5%	3.8E-04	1.9E-05	9.7E-04	1.4E-03	<0.5%
vinyl chloride	2.3E-03	6.7E-05	1.2E-03	3.5E-03	<0.5%	5.3E-03	2.0E-04	1.2E-03	6.7E-03	<0.5%
Subtotal VOCs	4.0E-02	1.7E-03	1.3E-01	1.7E-01	13%	9.4E-02	5.1E-03	1.3E-01	2.3E-01	8%
Semi-volatile Organic Compounds										
n-nitrosodimethylamine	3.4E-03	4.7E-06	--	3.4E-03	<0.5%	8.0E-03	1.4E-05	--	8.0E-03	<0.5%
bis(2-ethylhexyl) phthalate	3.3E-03	4.3E-04	--	3.7E-03	<0.5%	7.7E-03	1.3E-03	--	8.9E-03	<0.5%
benzyl alcohol	1.6E-04	1.8E-06	--	1.7E-04	<0.5%	3.8E-04	5.3E-06	--	3.9E-04	<0.5%
Subtotal SVOCs	6.9E-03	4.4E-04	--	7.3E-03	1%	1.6E-02	1.3E-03	--	1.7E-02	1%
Metals and Inorganic Ions										
arsenic	7.1E-01	3.7E-03	--	7.2E-01	57%	**1.7E+00**	1.1E-02	--	1.7E+00	60%
chromium	1.3E-06	6.7E-09	--	1.3E-06	<0.5%	3.0E-06	2.0E-08	--	3.0E-06	<0.5%
chromium (VI)	5.7E-02	5.9E-04	--	5.7E-02	5%	1.3E-01	1.7E-03	--	1.3E-01	5%
nitrate	1.7E-01	8.7E-04	--	1.7E-01	13%	3.9E-01	2.6E-03	--	3.9E-01	14%
perchlorate	1.5E-01	--	--	1.5E-01	12%	3.5E-01	--	--	3.5E-01	12%
Subtotal Metals & Inorganic Ions	1.1E+00	5.2E-03	--	1.1E+00	86%	2.5E+00	1.5E-02	--	**2.5E+00**	91%
Total:	1	0.007	0.1	1	100%	**3**	0.02	0.1	**3**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-120
Risk Results Summary - Based on EPAMW14 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	9.5E-06	8.9E-07	1.7E-05	2.8E-05	5.5E-06	6.5E-07	1.7E-05	2.4E-05
Subtotal SVOCs	5.5E-07	9.5E-09	--	5.6E-07	3.2E-07	7.0E-09	--	3.3E-07
Subtotal Metals & Inorganic Ions	**6.9E-04**	**8.7E-04**	**8.7E-04**	**8.7E-04**	**8.7E-04**	**8.7E-04**	**8.7E-04**	**8.7E-04**
Total:	**7E-04**	5E-06	2E-05	**7E-04**	**4E-04**	3E-06	2E-05	**4E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	**4.0E-02**	1.7E-03	1.3E-01	**1.7E-01**	9.4E-02	5.1E-03	1.3E-01	**2.3E-01**
Subtotal SVOCs	6.9E-03	4.4E-04	--	7.3E-03	1.6E-02	1.3E-03	--	1.7E-02
Subtotal Metals & Inorganic Ions	1.1E+00	5.2E-03	--	1.1E+00	**2.5E+00**	1.5E-02	--	**2.5E+00**
Total:	1	0.007	0.1	1	**3**	0.02	0.1	**3**

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-121
Groundwater Exposure Point Concentrations - Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
EPAMW15	***Volatile Organic Compounds***		
	trichloroethene	1.40E-03	2007
	tetrachloroethene	6.90E-03	2007
	1,2-dichloroethane	2.50E-04	2007[a]
	1,1-dichloroethene	9.20E-05	2007
	cis-1,2-dichloroethene	2.50E-04	2007[a]
	1,2,3-trichloropropane	2.30E-04	2007
	acetone	5.90E-02	2007
	benzene	5.00E-05	2007
	carbon disulfide	1.10E-03	2007
	carbon tetrachloride	2.50E-04	2007[a]
	chloroform	3.10E-04	2007
	chloromethane	1.50E-04	2007
	dibromochloropropane	2.50E-04	2007[a]
	cis-1,3-dichloropropene	2.50E-04	2007[a]
	methylene chloride	2.90E-04	2007
	methyl-tert-butyl ether	6.70E-05	2007
	vinyl chloride	5.20E-05	2007
	toluene	2.10E-04	2007
	Semivolatile Organic Compounds		
	n-nitrosodimethylamine	1.00E-06	2005
	bis(2-ethylhexyl) phthalate	2.50E-03	2005[a]
	1,4-dioxane	1.00E-02	2007[a]
	benzyl alcohol	3.10E-03	2004
	Metals and Inorganic Ions		
	arsenic	4.10E-04	2005
	chromium	6.20E-03	2005
	chromium (VI)	6.92E-03	2007
	nitrate	1.60E+01	2007
	perchlorate	2.80E-03	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-122
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	1.32E-05	1.30E-02	1.71E-07
	tetrachloroethene	6.90E-03	6.48E-05	5.40E-01	3.50E-05
	1,2-dichloroethane	2.50E-04	2.35E-06	4.70E-02	1.10E-07
	1,1-dichloroethene	9.20E-05	8.64E-07	N/A	--
	cis-1,2-dichloroethene	2.50E-04	2.35E-06	N/A	--
	1,2,3-trichloropropane	2.30E-04	2.16E-06	7.00E+00	1.51E-05
	acetone	5.90E-02	5.54E-04	N/A	--
	benzene	5.00E-05	4.70E-07	1.00E-01	4.70E-08
	carbon disulfide	1.10E-03	1.03E-05	N/A	--
	carbon tetrachloride	2.50E-04	2.35E-06	1.50E-01	3.52E-07
	chloroform	3.10E-04	2.91E-06	3.10E-02	9.03E-08
	chloromethane	1.50E-04	1.41E-06	1.30E-02	1.83E-08
	dibromochloropropane	2.50E-04	2.35E-06	1.40E+00	3.29E-06
	cis-1,3-dichloropropene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	methylene chloride	2.90E-04	2.72E-06	1.40E-02	3.81E-08
	methyl-tert-butyl ether	6.70E-05	6.29E-07	1.80E-03	1.13E-09
	vinyl chloride	5.20E-05	4.88E-07	7.20E-01	3.52E-07
	toluene	2.10E-04	1.97E-06	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	9.39E-09	5.10E+01	4.79E-07
	bis(2-ethylhexyl) phthalate	2.50E-03	2.35E-05	3.00E-03	7.05E-08
	1,4-dioxane	1.00E-02	9.39E-05	2.70E-02	2.54E-06
	benzyl alcohol	3.10E-03	2.91E-05	N/A	--
	Metals and Inorganic Ions				
	arsenic	4.10E-04	3.85E-06	9.45E+00	3.64E-05
	chromium	6.20E-03	5.82E-05	N/A	--
	chromium (VI)	6.92E-03	6.50E-05	N/A	--
	nitrate	1.60E+01	1.50E-01	N/A	--
	perchlorate	2.80E-03	2.63E-05	N/A	--
				Total Risk for Oral Route:	9.4E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-122
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	8.24E-07	1.30E-02	1.07E-08
	tetrachloroethene	6.90E-03	1.12E-05	5.40E-01	6.03E-06
	1,2-dichloroethane	2.50E-04	5.15E-08	4.70E-02	2.42E-09
	1,1-dichloroethene	9.20E-05	5.41E-08	N/A	--
	cis-1,2-dichloroethene	2.50E-04	1.33E-07	N/A	--
	1,2,3-trichloropropane	2.30E-04	1.11E-07	7.00E+00	7.76E-07
	acetone	5.90E-02	1.65E-06	N/A	--
	benzene	5.00E-05	5.07E-08	1.00E-01	5.07E-09
	carbon disulfide	1.10E-03	9.17E-07	N/A	--
	carbon tetrachloride	2.50E-04	8.09E-09	1.50E-01	1.21E-09
	chloroform	3.10E-04	1.03E-07	3.10E-02	3.20E-09
	chloromethane	1.50E-04	2.43E-08	1.30E-02	3.16E-10
	dibromochloropropane	2.50E-04	1.07E-07	1.40E+00	1.49E-07
	cis-1,3-dichloropropene	2.50E-04	2.08E-09	1.00E-01	2.08E-10
	methylene chloride	2.90E-04	4.98E-08	1.40E-02	6.97E-10
	methyl-tert-butyl ether	6.70E-05	8.44E-09	1.80E-03	1.52E-11
	vinyl chloride	5.20E-05	1.43E-08	7.20E-01	1.03E-08
	toluene	2.10E-04	3.19E-07	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	1.30E-11	5.10E+01	6.63E-10
	bis(2-ethylhexyl) phthalate	2.50E-03	3.06E-06	3.00E-03	9.19E-09
	1,4-dioxane	1.00E-02	6.37E-09	2.70E-02	1.72E-10
	benzyl alcohol	3.10E-03	3.18E-07	N/A	--
	Metals and Inorganic Ions				
	arsenic	4.10E-04	2.01E-08	9.45E+00	1.90E-07
	chromium	6.20E-03	3.04E-07	N/A	--
	chromium (VI)	6.92E-03	6.79E-07	N/A	--
	nitrate	1.60E+01	7.85E-04	N/A	--
	perchlorate	2.80E-03	N/A	N/A	--
				Total Risk for Dermal Route:	7.2E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-122
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	2.30E-01	2.00E-06	4.60E-07
	tetrachloroethene	6.90E-03	1.13E+00	5.90E-06	6.69E-06
	1,2-dichloroethane	2.50E-04	4.11E-02	2.10E-05	8.63E-07
	1,1-dichloroethene	9.20E-05	1.51E-02	N/A	--
	cis-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	1,2,3-trichloropropane	2.30E-04	3.78E-02	N/A	--
	acetone	5.90E-02	9.70E+00	N/A	--
	benzene	5.00E-05	8.22E-03	2.90E-05	2.38E-07
	carbon disulfide	1.10E-03	1.81E-01	N/A	--
	carbon tetrachloride	2.50E-04	4.11E-02	4.20E-05	1.73E-06
	chloroform	3.10E-04	5.10E-02	5.30E-06	2.70E-07
	chloromethane	1.50E-04	2.47E-02	1.80E-06	4.44E-08
	dibromochloropropane	2.50E-04	4.11E-02	6.90E-07	2.84E-08
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	methylene chloride	2.90E-04	4.77E-02	1.00E-06	4.77E-08
	methyl-tert-butyl ether	6.70E-05	1.10E-02	2.60E-07	2.86E-09
	vinyl chloride	5.20E-05	8.55E-03	7.80E-05	6.67E-07
	toluene	2.10E-04	3.45E-02	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	1.40E-02	--
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	2.40E-06	--
	1,4-dioxane	1.00E-02	NV	7.70E-06	--
	benzyl alcohol	3.10E-03	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	4.10E-04	NV	3.30E-03	--
	chromium	6.20E-03	NV	1.20E-02	--
	chromium (VI)	6.92E-03	NV	1.50E-01	--
	nitrate	1.60E+01	NV	N/A	--
	perchlorate	2.80E-03	NV	N/A	--
				Total Risk for Inhalation Route:	1.1E-05
				Total Risk Across All Exposure Routes/Pathways :	**1E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-123
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	3.84E-05	N/A	--
	tetrachloroethene	6.90E-03	1.89E-04	1.00E-02	1.89E-02
	1,2-dichloroethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	1,1-dichloroethene	9.20E-05	2.52E-06	5.00E-02	5.04E-05
	cis-1,2-dichloroethene	2.50E-04	6.85E-06	1.00E-02	6.85E-04
	1,2,3-trichloropropane	2.30E-04	6.30E-06	6.00E-03	1.05E-03
	acetone	5.90E-02	1.62E-03	9.00E-01	1.80E-03
	benzene	5.00E-05	1.37E-06	4.00E-03	3.42E-04
	carbon disulfide	1.10E-03	3.01E-05	1.00E-01	3.01E-04
	carbon tetrachloride	2.50E-04	6.85E-06	7.00E-04	9.78E-03
	chloroform	3.10E-04	8.49E-06	1.00E-02	8.49E-04
	chloromethane	1.50E-04	4.11E-06	N/A	--
	dibromochloropropane	2.50E-04	6.85E-06	N/A	--
	cis-1,3-dichloropropene	2.50E-04	6.85E-06	3.00E-02	2.28E-04
	methylene chloride	2.90E-04	7.95E-06	6.00E-02	1.32E-04
	methyl-tert-butyl ether	6.70E-05	1.84E-06	N/A	--
	vinyl chloride	5.20E-05	1.42E-06	3.00E-03	4.75E-04
	toluene	2.10E-04	5.75E-06	8.00E-02	7.19E-05
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	2.74E-08	8.00E-06	3.42E-03
	bis(2-ethylhexyl) phthalate	2.50E-03	6.85E-05	2.00E-02	3.42E-03
	1,4-dioxane	1.00E-02	2.74E-04	N/A	--
	benzyl alcohol	3.10E-03	8.49E-05	5.00E-01	1.70E-04
	Metals and Inorganic Ions				
	arsenic	4.10E-04	1.12E-05	3.00E-04	3.74E-02
	chromium	6.20E-03	1.70E-04	1.50E+00	1.13E-04
	chromium (VI)	6.92E-03	1.90E-04	3.00E-03	6.32E-02
	nitrate	1.60E+01	4.38E-01	1.60E+00	2.74E-01
	perchlorate	2.80E-03	7.67E-05	7.00E-04	1.10E-01
				Total Risk for Oral Route:	0.5

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-123
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	2.40E-06	N/A	
	tetrachloroethene	6.90E-03	3.26E-05	1.00E-02	3.26E-03
	1,2-dichloroethane	2.50E-04	1.50E-07	2.00E-02	7.51E-06
	1,1-dichloroethene	9.20E-05	1.58E-07	5.00E-02	3.16E-06
	cis-1,2-dichloroethene	2.50E-04	3.89E-07	1.00E-02	3.89E-05
	1,2,3-trichloropropane	2.30E-04	3.23E-07	6.00E-03	5.39E-05
	acetone	5.90E-02	4.80E-06	9.00E-01	5.33E-06
	benzene	5.00E-05	1.48E-07	4.00E-03	3.70E-05
	carbon disulfide	1.10E-03	2.67E-06	1.00E-01	2.67E-05
	carbon tetrachloride	2.50E-04	2.36E-08	7.00E-04	3.37E-05
	chloroform	3.10E-04	3.01E-07	1.00E-02	3.01E-05
	chloromethane	1.50E-04	7.08E-08	N/A	--
	dibromochloropropane	2.50E-04	3.11E-07	N/A	--
	cis-1,3-dichloropropene	2.50E-04	6.08E-09	3.00E-02	2.03E-07
	methylene chloride	2.90E-04	1.45E-07	6.00E-02	2.42E-06
	methyl-tert-butyl ether	6.70E-05	2.46E-08	N/A	--
	vinyl chloride	5.20E-05	4.16E-08	3.00E-03	1.39E-05
	toluene	2.10E-04	9.31E-07	8.00E-02	1.16E-05
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	3.79E-11	8.00E-06	4.74E-06
	bis(2-ethylhexyl) phthalate	2.50E-03	8.94E-06	2.00E-02	4.47E-04
	1,4-dioxane	1.00E-02	1.86E-08	N/A	--
	benzyl alcohol	3.10E-03	9.27E-07	5.00E-01	1.85E-06
	Metals and Inorganic Ions				
	arsenic	4.10E-04	5.86E-08	3.00E-04	1.95E-04
	chromium	6.20E-03	8.87E-07	1.50E+00	5.91E-07
	chromium (VI)	6.92E-03	1.98E-06	3.00E-03	6.60E-04
	nitrate	1.60E+01	2.29E-03	1.60E+00	1.43E-03
	perchlorate	2.80E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.006

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-123
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	6.71E-01	N/A	--
	tetrachloroethene	6.90E-03	3.31E+00	2.70E+02	1.23E-02
	1,2-dichloroethane	2.50E-04	1.20E-01	2.40E+03	4.99E-05
	1,1-dichloroethene	9.20E-05	4.41E-02	2.00E+02	2.21E-04
	cis-1,2-dichloroethene	2.50E-04	1.20E-01	3.50E+01	3.42E-03
	1,2,3-trichloropropane	2.30E-04	1.10E-01	4.90E+00	2.25E-02
	acetone	5.90E-02	2.83E+01	3.10E+04	9.13E-04
	benzene	5.00E-05	2.40E-02	6.00E+01	4.00E-04
	carbon disulfide	1.10E-03	5.27E-01	7.00E+02	7.53E-04
	carbon tetrachloride	2.50E-04	1.20E-01	1.90E+02	6.31E-04
	chloroform	3.10E-04	1.49E-01	9.80E+01	1.52E-03
	chloromethane	1.50E-04	7.19E-02	9.00E+01	7.99E-04
	dibromochloropropane	2.50E-04	1.20E-01	2.00E-01	5.99E-01
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	methylene chloride	2.90E-04	1.39E-01	4.00E+02	3.48E-04
	methyl-tert-butyl ether	6.70E-05	3.21E-02	3.00E+03	1.07E-05
	vinyl chloride	5.20E-05	2.49E-02	1.00E+02	2.49E-04
	toluene	2.10E-04	1.01E-01	3.00E+02	3.36E-04
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	N/A	--
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	7.00E+01	--
	1,4-dioxane	1.00E-02	NV	3.00E+03	--
	benzyl alcohol	3.10E-03	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	4.10E-04	NV	3.00E-02	--
	chromium	6.20E-03	NV	N/A	--
	chromium (VI)	6.92E-03	NV	1.00E-01	--
	nitrate	1.60E+01	NV	1.00E+04	--
	perchlorate	2.80E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.6
				Total Risk Across All Exposure Routes/Pathways :	1.2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-124
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Chilld Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	7.67E-06	1.30E-02	9.97E-08
	tetrachloroethene	6.90E-03	3.78E-05	5.40E-01	2.04E-05
	1,2-dichloroethane	2.50E-04	1.37E-06	4.70E-02	6.44E-08
	1,1-dichloroethene	9.20E-05	5.04E-07	N/A	--
	cis-1,2-dichloroethene	2.50E-04	1.37E-06	N/A	--
	1,2,3-trichloropropane	2.30E-04	1.26E-06	7.00E+00	8.82E-06
	acetone	5.90E-02	3.23E-04	N/A	--
	benzene	5.00E-05	2.74E-07	1.00E-01	2.74E-08
	carbon disulfide	1.10E-03	6.03E-06	N/A	--
	carbon tetrachloride	2.50E-04	1.37E-06	1.50E-01	2.05E-07
	chloroform	3.10E-04	1.70E-06	3.10E-02	5.27E-08
	chloromethane	1.50E-04	8.22E-07	1.30E-02	1.07E-08
	dibromochloropropane	2.50E-04	1.37E-06	1.40E+00	1.92E-06
	cis-1,3-dichloropropene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	methylene chloride	2.90E-04	1.59E-06	1.40E-02	2.22E-08
	methyl-tert-butyl ether	6.70E-05	3.67E-07	1.80E-03	6.61E-10
	vinyl chloride	5.20E-05	2.85E-07	7.20E-01	2.05E-07
	toluene	2.10E-04	1.15E-06	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	5.48E-09	5.10E+01	2.79E-07
	bis(2-ethylhexyl) phthalate	2.50E-03	1.37E-05	3.00E-03	4.11E-08
	1,4-dioxane	1.00E-02	5.48E-05	2.70E-02	1.48E-06
	benzyl alcohol	3.10E-03	1.70E-05	N/A	--
	Metals and Inorganic Ions				
	arsenic	4.10E-04	2.25E-06	9.45E+00	2.12E-05
	chromium	6.20E-03	3.40E-05	N/A	--
	chromium (VI)	6.92E-03	3.79E-05	N/A	--
	nitrate	1.60E+01	8.77E-02	N/A	--
	perchlorate	2.80E-03	1.53E-05	N/A	--
				Total Risk for Oral Route:	5.50E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-124
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Chilld Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	6.08E-07	1.30E-02	7.90E-09
	tetrachloroethene	6.90E-03	8.23E-06	5.40E-01	4.45E-06
	1,2-dichloroethane	2.50E-04	3.80E-08	4.70E-02	1.78E-09
	1,1-dichloroethene	9.20E-05	3.99E-08	N/A	--
	cis-1,2-dichloroethene	2.50E-04	9.83E-08	N/A	--
	1,2,3-trichloropropane	2.30E-04	8.18E-08	7.00E+00	5.72E-07
	acetone	5.90E-02	1.21E-06	N/A	--
	benzene	5.00E-05	3.74E-08	1.00E-01	3.74E-09
	carbon disulfide	1.10E-03	6.76E-07	N/A	--
	carbon tetrachloride	2.50E-04	5.97E-09	1.50E-01	8.95E-10
	chloroform	3.10E-04	7.62E-08	3.10E-02	2.36E-09
	chloromethane	1.50E-04	1.79E-08	1.30E-02	2.33E-10
	dibromochloropropane	2.50E-04	7.87E-08	1.40E+00	1.10E-07
	cis-1,3-dichloropropene	2.50E-04	1.54E-09	1.00E-01	1.54E-10
	methylene chloride	2.90E-04	3.67E-08	1.40E-02	5.14E-10
	methyl-tert-butyl ether	6.70E-05	6.23E-09	1.80E-03	1.12E-11
	vinyl chloride	5.20E-05	1.05E-08	7.20E-01	7.58E-09
	toluene	2.10E-04	2.35E-07	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	9.58E-12	5.10E+01	4.89E-10
	bis(2-ethylhexyl) phthalate	2.50E-03	2.26E-06	3.00E-03	6.78E-09
	1,4-dioxane	1.00E-02	4.70E-09	2.70E-02	1.27E-10
	benzyl alcohol	3.10E-03	2.34E-07	N/A	--
	Metals and Inorganic Ions				
	arsenic	4.10E-04	1.48E-08	9.45E+00	1.40E-07
	chromium	6.20E-03	2.24E-07	N/A	--
	chromium (VI)	6.92E-03	5.01E-07	N/A	--
	nitrate	1.60E+01	5.79E-04	N/A	--
	perchlorate	2.80E-03	N/A	N/A	--
				Total Risk for Dermal Route:	5.30E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-124
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Chilld Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	2.30E-01	2.00E-06	4.60E-07
	tetrachloroethene	6.90E-03	1.13E+00	5.90E-06	6.69E-06
	1,2-dichloroethane	2.50E-04	4.11E-02	2.10E-05	8.63E-07
	1,1-dichloroethene	9.20E-05	1.51E-02	N/A	--
	cis-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	1,2,3-trichloropropane	2.30E-04	3.78E-02	N/A	--
	acetone	5.90E-02	9.70E+00	N/A	--
	benzene	5.00E-05	8.22E-03	2.90E-05	2.38E-07
	carbon disulfide	1.10E-03	1.81E-01	N/A	--
	carbon tetrachloride	2.50E-04	4.11E-02	4.20E-05	1.73E-06
	chloroform	3.10E-04	5.10E-02	5.30E-06	2.70E-07
	chloromethane	1.50E-04	2.47E-02	1.80E-06	4.44E-08
	dibromochloropropane	2.50E-04	4.11E-02	6.90E-07	2.84E-08
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	methylene chloride	2.90E-04	4.77E-02	1.00E-06	4.77E-08
	methyl-tert-butyl ether	6.70E-05	1.10E-02	2.60E-07	2.86E-09
	vinyl chloride	5.20E-05	8.55E-03	7.80E-05	6.67E-07
	toluene	2.10E-04	3.45E-02	N/A	--
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	1.40E-02	--
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	2.40E-06	--
	1,4-dioxane	1.00E-02	NV	7.70E-06	--
	benzyl alcohol	3.10E-03	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	4.10E-04	NV	3.30E-03	--
	chromium	6.20E-03	NV	1.20E-02	--
	chromium (VI)	6.92E-03	NV	1.50E-01	--
	nitrate	1.60E+01	NV	N/A	--
	perchlorate	2.80E-03	NV	N/A	--
				Total Risk for Inhalation Route:	1.12E-05
				Total Risk Across All Exposure Routes/Pathways :	**7E-05**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-125
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	8.95E-05	N/A	--
	tetrachloroethene	6.90E-03	4.41E-04	1.00E-02	4.41E-02
	1,2-dichloroethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	1,1-dichloroethene	9.20E-05	5.88E-06	5.00E-02	1.18E-04
	cis-1,2-dichloroethene	2.50E-04	1.60E-05	1.00E-02	1.60E-03
	1,2,3-trichloropropane	2.30E-04	1.47E-05	6.00E-03	2.45E-03
	acetone	5.90E-02	3.77E-03	9.00E-01	4.19E-03
	benzene	5.00E-05	3.20E-06	4.00E-03	7.99E-04
	carbon disulfide	1.10E-03	7.03E-05	1.00E-01	7.03E-04
	carbon tetrachloride	2.50E-04	1.60E-05	7.00E-04	2.28E-02
	chloroform	3.10E-04	1.98E-05	1.00E-02	1.98E-03
	chloromethane	1.50E-04	9.59E-06	N/A	--
	dibromochloropropane	2.50E-04	1.60E-05	N/A	--
	cis-1,3-dichloropropene	2.50E-04	1.60E-05	3.00E-02	5.33E-04
	methylene chloride	2.90E-04	1.85E-05	6.00E-02	3.09E-04
	methyl-tert-butyl ether	6.70E-05	4.28E-06	N/A	--
	vinyl chloride	5.20E-05	3.32E-06	3.00E-03	1.11E-03
	toluene	2.10E-04	1.34E-05	8.00E-02	1.68E-04
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	6.39E-08	8.00E-06	7.99E-03
	bis(2-ethylhexyl) phthalate	2.50E-03	1.60E-04	2.00E-02	7.99E-03
	1,4-dioxane	1.00E-02	6.39E-04	N/A	--
	benzyl alcohol	3.10E-03	1.98E-04	5.00E-01	3.96E-04
	Metals and Inorganic Ions				
	arsenic	4.10E-04	2.62E-05	3.00E-04	8.74E-02
	chromium	6.20E-03	3.96E-04	1.50E+00	2.64E-04
	chromium (VI)	6.92E-03	4.42E-04	3.00E-03	1.47E-01
	nitrate	1.60E+01	1.02E+00	1.60E+00	6.39E-01
	perchlorate	2.80E-03	1.79E-04	7.00E-04	2.56E-01
				Total Risk for Oral Route:	1.2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-125
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	7.09E-06	N/A	--
	tetrachloroethene	6.90E-03	9.61E-05	1.00E-02	9.61E-03
	1,2-dichloroethane	2.50E-04	4.43E-07	2.00E-02	2.22E-05
	1,1-dichloroethene	9.20E-05	4.66E-07	5.00E-02	9.32E-06
	cis-1,2-dichloroethene	2.50E-04	1.15E-06	1.00E-02	1.15E-04
	1,2,3-trichloropropane	2.30E-04	9.54E-07	6.00E-03	1.59E-04
	acetone	5.90E-02	1.42E-05	9.00E-01	1.57E-05
	benzene	5.00E-05	4.37E-07	4.00E-03	1.09E-04
	carbon disulfide	1.10E-03	7.89E-06	1.00E-01	7.89E-05
	carbon tetrachloride	2.50E-04	6.96E-08	7.00E-04	9.95E-05
	chloroform	3.10E-04	8.89E-07	1.00E-02	8.89E-05
	chloromethane	1.50E-04	2.09E-07	N/A	--
	dibromochloropropane	2.50E-04	9.19E-07	N/A	--
	cis-1,3-dichloropropene	2.50E-04	1.79E-08	3.00E-02	5.98E-07
	methylene chloride	2.90E-04	4.28E-07	6.00E-02	7.14E-06
	methyl-tert-butyl ether	6.70E-05	7.27E-08	N/A	--
	vinyl chloride	5.20E-05	1.23E-07	3.00E-03	4.10E-05
	toluene	2.10E-04	2.75E-06	8.00E-02	3.43E-05
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	1.12E-10	8.00E-06	1.40E-05
	bis(2-ethylhexyl) phthalate	2.50E-03	2.64E-05	2.00E-02	1.32E-03
	1,4-dioxane	1.00E-02	5.48E-08	N/A	--
	benzyl alcohol	3.10E-03	2.74E-06	5.00E-01	5.47E-06
	Metals and Inorganic Ions				
	arsenic	4.10E-04	1.73E-07	3.00E-04	5.77E-04
	chromium	6.20E-03	2.62E-06	1.50E+00	1.74E-06
	chromium (VI)	6.92E-03	5.84E-06	3.00E-03	1.95E-03
	nitrate	1.60E+01	6.75E-03	1.60E+00	4.22E-03
	perchlorate	2.80E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.018

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-125
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	1.40E-03	6.71E-01	N/A	--
	tetrachloroethene	6.90E-03	3.31E+00	2.70E+02	1.23E-02
	1,2-dichloroethane	2.50E-04	1.20E-01	2.40E+03	4.99E-05
	1,1-dichloroethene	9.20E-05	4.41E-02	2.00E+02	2.21E-04
	cis-1,2-dichloroethene	2.50E-04	1.20E-01	3.50E+01	3.42E-03
	1,2,3-trichloropropane	2.30E-04	1.10E-01	4.90E+00	2.25E-02
	acetone	5.90E-02	2.83E+01	3.10E+04	9.13E-04
	benzene	5.00E-05	2.40E-02	6.00E+01	4.00E-04
	carbon disulfide	1.10E-03	5.27E-01	7.00E+02	7.53E-04
	carbon tetrachloride	2.50E-04	1.20E-01	1.90E+02	6.31E-04
	chloroform	3.10E-04	1.49E-01	9.80E+01	1.52E-03
	chloromethane	1.50E-04	7.19E-02	9.00E+01	7.99E-04
	dibromochloropropane	2.50E-04	1.20E-01	2.00E-01	5.99E-01
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	methylene chloride	2.90E-04	1.39E-01	4.00E+02	3.48E-04
	methyl-tert-butyl ether	6.70E-05	3.21E-02	3.00E+03	1.07E-05
	vinyl chloride	5.20E-05	2.49E-02	1.00E+02	2.49E-04
	toluene	2.10E-04	1.01E-01	3.00E+02	3.36E-04
	Semivolatile Organic Compounds				
	n-nitrosodimethylamine	1.00E-06	NV	N/A	--
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	7.00E+01	--
	1,4-dioxane	1.00E-02	NV	3.00E+03	--
	benzyl alcohol	3.10E-03	NV	N/A	--
	Metals and Inorganic Ions				
	arsenic	4.10E-04	NV	3.00E-02	--
	chromium	6.20E-03	NV	N/A	--
	chromium (VI)	6.92E-03	NV	1.00E-01	--
	nitrate	1.60E+01	NV	1.00E+04	--
	perchlorate	2.80E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.6
				Total Risk Across All Exposure Routes/Pathways :	2

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-126
Risk Results Detailed Summay - Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	1.7E-07	1.1E-08	4.6E-07	6.4E-07	1%	1.0E-07	7.9E-09	4.6E-07	5.7E-07	1%
tetrachloroethene	3.5E-05	6.0E-06	6.7E-06	4.8E-05	42%	2.0E-05	4.4E-06	6.7E-06	3.2E-05	44%
1,2-dichloroethane	1.1E-07	2.4E-09	8.6E-07	9.8E-07	1%	6.4E-08	1.8E-09	8.6E-07	9.3E-07	1%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2,3-trichloropropane	1.5E-05	7.8E-07	--	1.6E-05	14%	8.8E-06	5.7E-07	--	9.4E-06	13%
acetone	--	--	--	--	--	--	--	--	--	--
benzene	4.7E-08	5.1E-09	2.4E-07	2.9E-07	<0.5%	2.7E-08	3.7E-09	2.4E-07	2.7E-07	<0.5%
carbon disulfide	--	--	--	--	--	--	--	--	--	--
carbon tetrachloride	3.5E-07	1.2E-09	1.7E-06	2.1E-06	2%	2.1E-07	9.0E-10	1.7E-06	1.9E-06	3%
chloroform	9.0E-08	3.2E-09	2.7E-07	3.6E-07	<0.5%	5.3E-08	2.4E-09	2.7E-07	3.3E-07	<0.5%
chloromethane	1.8E-08	3.2E-10	4.4E-08	6.3E-08	<0.5%	1.1E-08	2.3E-10	4.4E-08	5.5E-08	<0.5%
dibromochloropropane	3.3E-06	1.5E-07	2.8E-08	3.5E-06	3%	1.9E-06	1.1E-07	2.8E-08	2.1E-06	3%
cis-1,3-dichloropropene	2.3E-07	2.1E-10	1.6E-07	4.0E-07	<0.5%	1.4E-07	1.5E-10	1.6E-07	3.0E-07	<0.5%
methylene chloride	3.8E-08	7.0E-10	4.8E-08	8.7E-08	<0.5%	2.2E-08	5.1E-10	4.8E-08	7.0E-08	<0.5%
methyl-tert-butyl ether	1.1E-09	1.5E-11	2.9E-09	4.0E-09	<0.5%	6.6E-10	1.1E-11	2.9E-09	3.5E-09	<0.5%
vinyl chloride	3.5E-07	1.0E-08	6.7E-07	1.0E-06	1%	2.1E-07	7.6E-09	6.7E-07	8.8E-07	1%
toluene	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	5.5E-05	7.0E-06	1.1E-05	7.3E-05	65%	3.2E-05	5.2E-06	1.1E-05	4.8E-05	68%
Semivolatile Organic Compounds										
n-nitrosodimethylamine	4.8E-07	6.6E-10	--	4.8E-07	<0.5%	2.8E-07	4.9E-10	--	2.8E-07	<0.5%
bis(2-ethylhexyl) phthalate	7.0E-08	9.2E-09	--	8.0E-08	<0.5%	4.1E-08	6.8E-09	--	4.8E-08	<0.5%
1,4-dioxane	2.5E-06	1.7E-10	--	2.5E-06	2%	1.5E-06	1.3E-10	--	1.5E-06	2%
benzyl alcohol	--	--	--	--	--	--	--	--	--	--
Subtotal SVOCs	3.1E-06	1.0E-08	--	3.1E-06	3%	1.8E-06	7.4E-09	--	1.8E-06	3%
Metals and Inorganic Ions										
arsenic	3.6E-05	1.9E-07	--	3.7E-05	32%	2.1E-05	1.4E-07	--	2.1E-05	30%
chromium	--	--	--	--	--	--	--	--	--	--
chromium (VI)	--	--	--	--	--	--	--	--	--	--
nitrate	--	--	--	--	--	--	--	--	--	--
perchlorate	--	--	--	--	--	--	--	--	--	--
Subtotal Metals & Inorganic Ions	3.6E-05	1.9E-07	--	3.7E-05	32%	2.1E-05	1.4E-07	--	2.1E-05	30%
Total:	9E-05	7E-06	1E-05	1E-04	100%	6E-05	5E-06	1E-05	7E-05	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-126
Risk Results Detailed Summay - Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	1.9E-02	3.3E-03	1.2E-02	3.4E-02	3%	4.4E-02	9.6E-03	1.2E-02	6.6E-02	3%
1,2-dichloroethane	3.4E-04	7.5E-06	5.0E-05	4.0E-04	<0.5%	8.0E-04	2.2E-05	5.0E-05	8.7E-04	<0.5%
1,1-dichloroethene	5.0E-05	3.2E-06	2.2E-04	2.7E-04	<0.5%	1.2E-04	9.3E-06	2.2E-04	3.5E-04	<0.5%
cis-1,2-dichloroethene	6.8E-04	3.9E-05	3.4E-03	4.1E-03	<0.5%	1.6E-03	1.1E-04	3.4E-03	5.1E-03	<0.5%
1,2,3-trichloropropane	1.1E-03	5.4E-05	2.3E-02	2.4E-02	2%	2.5E-03	1.6E-04	2.3E-02	2.5E-02	1%
acetone	1.8E-03	5.3E-06	9.1E-04	2.7E-03	<0.5%	4.2E-03	1.6E-05	9.1E-04	5.1E-03	<0.5%
benzene	3.4E-04	3.7E-05	4.0E-04	7.8E-04	<0.5%	8.0E-04	1.1E-04	4.0E-04	1.3E-03	<0.5%
carbon disulfide	3.0E-04	2.7E-05	7.5E-04	1.1E-03	<0.5%	7.0E-04	7.9E-05	7.5E-04	1.5E-03	<0.5%
carbon tetrachloride	9.8E-03	3.4E-05	6.3E-04	1.0E-02	1%	2.3E-02	9.9E-05	6.3E-04	2.4E-02	1%
chloroform	8.5E-04	3.0E-05	1.5E-03	2.4E-03	<0.5%	2.0E-03	8.9E-05	1.5E-03	3.6E-03	<0.5%
chloromethane	--	--	8.0E-04	8.0E-04	<0.5%	--	--	8.0E-04	8.0E-04	<0.5%
dibromochloropropane	--	--	6.0E-01	6.0E-01	51%	--	--	6.0E-01	6.0E-01	32%
cis-1,3-dichloropropene	2.3E-04	2.0E-07	6.0E-03	6.2E-03	1%	5.3E-04	6.0E-07	6.0E-03	6.5E-03	<0.5%
methylene chloride	1.3E-04	2.4E-06	3.5E-04	4.8E-04	<0.5%	3.1E-04	7.1E-06	3.5E-04	6.6E-04	<0.5%
methyl-tert-butyl ether	--	--	1.1E-05	1.1E-05	<0.5%	--	--	1.1E-05	1.1E-05	<0.5%
vinyl chloride	4.7E-04	1.4E-05	2.5E-04	7.4E-04	<0.5%	1.1E-03	4.1E-05	2.5E-04	1.4E-03	<0.5%
toluene	7.2E-05	1.2E-05	3.4E-04	4.2E-04	<0.5%	1.7E-04	3.4E-05	3.4E-04	5.4E-04	<0.5%
Subtotal VOCs	3.5E-02	3.5E-03	6.5E-01	6.9E-01	58%	8.2E-02	1.0E-02	6.5E-01	7.4E-01	39%
Semivolatile Organic Compounds										
n-nitrosodimethylamine	3.4E-03	4.7E-06	--	3.4E-03	<0.5%	8.0E-03	1.4E-05	--	8.0E-03	<0.5%
bis(2-ethylhexyl) phthalate	3.4E-03	4.5E-04	--	3.9E-03	<0.5%	8.0E-03	1.3E-03	--	9.3E-03	<0.5%
1,4-dioxane	--	--	--	--	--	--	--	--	--	--
benzyl alcohol	1.7E-04	1.9E-06	--	1.7E-04	<0.5%	4.0E-04	5.5E-06	--	4.0E-04	<0.5%
Subtotal SVOCs	7.0E-03	4.5E-04	--	7.5E-03	1%	1.6E-02	1.3E-03	--	1.8E-02	1%
Metals and Inorganic Ions										
arsenic	3.7E-02	2.0E-04	--	3.8E-02	3%	8.7E-02	5.8E-04	--	8.8E-02	5%
chromium	1.1E-04	5.9E-07	--	1.1E-04	<0.5%	2.6E-04	1.7E-06	--	2.7E-04	<0.5%
chromium (VI)	6.3E-02	6.6E-04	--	6.4E-02	5%	1.5E-01	1.9E-03	--	1.5E-01	8%
nitrate	2.7E-01	1.4E-03	--	2.8E-01	23%	6.4E-01	4.2E-03	--	6.4E-01	34%
perchlorate	1.1E-01	--	--	1.1E-01	9%	2.6E-01	--	--	2.6E-01	13%
Subtotal Metals & Inorganic Ions	4.8E-01	2.3E-03	--	4.9E-01	41%	1.1E+00	6.7E-03	--	1.1E+00	60%
Total:	0.5	0.006	0.6	1	100%	1.2	0.02	0.6	**2**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-127
Risk Results Summary - Based on EPAMW15 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	5.5E-05	7.0E-06	1.1E-05	7.3E-05	3.2E-05	5.2E-06	1.1E-05	4.8E-05
Subtotal SVOCs	3.1E-06	1.0E-08	--	3.1E-06	1.8E-06	7.4E-09	--	1.8E-06
Subtotal Metals & Inorganic Ions	3.6E-05	1.9E-07	--	3.7E-05	2.1E-05	1.4E-07	--	2.1E-05
Total:	9E-05	7E-06	1E-05	1E-04	6E-05	5E-06	1E-05	7E-05

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	3.5E-02	3.5E-03	6.5E-01	6.9E-01	8.2E-02	1.0E-02	6.5E-01	7.4E-01
Subtotal SVOCs	7.0E-03	4.5E-04	--	7.5E-03	1.6E-02	1.3E-03	--	1.8E-02
Subtotal Metals & Inorganic Ions	4.8E-01	2.3E-03	--	4.9E-01	1.1E+00	6.7E-03	--	1.1E+00
Total:	0.5	0.006	0.6	1	1.2	0.02	0.6	**2**

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-128
Groundwater Exposure Point Concentrations - Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
EPAMW17	***Volatile Organic Compounds***		
	trichloroethene	2.50E-04	2007[a]
	tetrachloroethene	2.50E-04	2007[a]
	1,1-dichloroethene	7.00E-05	2007
	1,2,3-trichloropropane	2.50E-06	2007[a]
	acetone	8.30E-04	2007
	benzene	2.50E-04	2007[a]
	bromodichloromethane	2.50E-04	2007[a]
	bromoform	2.50E-04	2007[a]
	carbon disulfide	2.50E-04	2007[a]
	chloroform	6.60E-04	2007
	dibromochloromethane	2.50E-04	2007[a]
	dichlorodifluoromethane	2.50E-04	2007[a]
	methylene chloride	2.60E-04	2007
	toluene	6.60E-05	2007
	trichlorofluoromethane	2.50E-04	2007[a]
	Semivolatile Organic Compounds		
	bis(2-ethylhexyl) phthalate	3.00E-04	2007[a]
	n-nitrosodimethylamine	2.00E-06	2006
	Metals		
	arsenic	4.40E-03	2006
	nitrate	2.50E-02	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-129
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	2.35E-06	1.30E-02	3.05E-08
	tetrachloroethene	2.50E-04	2.35E-06	5.40E-01	1.27E-06
	1,1-dichloroethene	7.00E-05	6.58E-07	N/A	--
	1,2,3-trichloropropane	2.50E-06	2.35E-08	7.00E+00	1.64E-07
	acetone	8.30E-04	7.80E-06	N/A	--
	benzene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	bromodichloromethane	2.50E-04	2.35E-06	1.30E-01	3.05E-07
	bromoform	2.50E-04	2.35E-06	7.90E-03	1.86E-08
	carbon disulfide	2.50E-04	2.35E-06	N/A	--
	chloroform	6.60E-04	6.20E-06	3.10E-02	1.92E-07
	dibromochloromethane	2.50E-04	2.35E-06	9.40E-02	2.21E-07
	dichlorodifluoromethane	2.50E-04	2.35E-06	N/A	--
	methylene chloride	2.60E-04	2.44E-06	1.40E-02	3.42E-08
	toluene	6.60E-05	6.20E-07	N/A	--
	trichlorofluoromethane	2.50E-04	2.35E-06	N/A	--
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	2.82E-06	3.00E-03	8.45E-09
	n-nitrosodimethylamine	2.00E-06	1.88E-08	5.10E+01	9.58E-07
	Metals				
	arsenic	4.40E-03	4.13E-05	9.45E+00	3.91E-04
	nitrate	2.50E-02	2.35E-04	N/A	--
				Total Risk for Oral Route:	3.9E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-129
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.47E-07	1.30E-02	1.91E-09
	tetrachloroethene	2.50E-04	4.05E-07	5.40E-01	2.18E-07
	1,1-dichloroethene	7.00E-05	4.12E-08	N/A	--
	1,2,3-trichloropropane	2.50E-06	1.20E-09	7.00E+00	8.43E-09
	acetone	8.30E-04	2.32E-08	N/A	--
	benzene	2.50E-04	2.54E-07	1.00E-01	2.54E-08
	bromodichloromethane	2.50E-04	5.64E-08	1.30E-01	7.33E-09
	bromoform	2.50E-04	2.70E-08	7.90E-03	2.13E-10
	carbon disulfide	2.50E-04	2.08E-07	N/A	--
	chloroform	6.60E-04	2.20E-07	3.10E-02	6.82E-09
	dibromochloromethane	2.50E-04	4.28E-08	9.40E-02	4.02E-09
	dichlorodifluoromethane	2.50E-04	1.10E-07	N/A	--
	methylene chloride	2.60E-04	4.46E-08	1.40E-02	6.25E-10
	toluene	6.60E-05	1.00E-07	N/A	--
	trichlorofluoromethane	2.50E-04	1.59E-07	N/A	--
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	3.68E-07	3.00E-03	1.10E-09
	n-nitrosodimethylamine	2.00E-06	2.60E-11	5.10E+01	1.33E-09
	Metals				
	arsenic	4.40E-03	2.16E-07	9.45E+00	2.04E-06
	nitrate	2.50E-02	1.23E-06	N/A	--
				Total Risk for Dermal Route:	2.3E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-129
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	4.11E-02	2.00E-06	8.22E-08
	tetrachloroethene	2.50E-04	4.11E-02	5.90E-06	2.42E-07
	1,1-dichloroethene	7.00E-05	1.15E-02	N/A	--
	1,2,3-trichloropropane	2.50E-06	4.11E-04	N/A	--
	acetone	8.30E-04	1.36E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	bromodichloromethane	2.50E-04	4.11E-02	3.70E-05	1.52E-06
	bromoform	2.50E-04	4.11E-02	1.11E-06	4.56E-08
	carbon disulfide	2.50E-04	4.11E-02	N/A	--
	chloroform	6.60E-04	1.08E-01	5.30E-06	5.75E-07
	dibromochloromethane	2.50E-04	4.11E-02	2.70E-05	1.11E-06
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	methylene chloride	2.60E-04	4.27E-02	1.00E-06	4.27E-08
	toluene	6.60E-05	1.08E-02	N/A	--
	trichlorofluoromethane	2.50E-04	4.11E-02	N/A	--
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	NV	2.40E-06	--
	n-nitrosodimethylamine	2.00E-06	NV	1.40E-02	--
	Metals				
	arsenic	4.40E-03	NV	3.30E-03	--
	nitrate	2.50E-02	NV	N/A	--
				Total Risk for Inhalation Route:	4.8E-06
				Total Risk Across All Exposure Routes/Pathways :	**4E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-130
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	6.85E-06	N/A	--
	tetrachloroethene	2.50E-04	6.85E-06	1.00E-02	6.85E-04
	1,1-dichloroethene	7.00E-05	1.92E-06	5.00E-02	3.84E-05
	1,2,3-trichloropropane	2.50E-06	6.85E-08	6.00E-03	1.14E-05
	acetone	8.30E-04	2.27E-05	9.00E-01	2.53E-05
	benzene	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	bromodichloromethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	bromoform	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	carbon disulfide	2.50E-04	6.85E-06	1.00E-01	6.85E-05
	chloroform	6.60E-04	1.81E-05	1.00E-02	1.81E-03
	dibromochloromethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	dichlorodifluoromethane	2.50E-04	6.85E-06	2.00E-01	3.42E-05
	methylene chloride	2.60E-04	7.12E-06	6.00E-02	1.19E-04
	toluene	6.60E-05	1.81E-06	8.00E-02	2.26E-05
	trichlorofluoromethane	2.50E-04	6.85E-06	3.00E-01	2.28E-05
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	8.22E-06	2.00E-02	4.11E-04
	n-nitrosodimethylamine	2.00E-06	5.48E-08	8.00E-06	6.85E-03
	Metals				
	arsenic	4.40E-03	1.21E-04	3.00E-04	4.02E-01
	nitrate	2.50E-02	6.85E-04	1.60E+00	4.28E-04
				Total Risk for Oral Route:	0.42

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-130
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	4.29E-07	N/A	--
	tetrachloroethene	2.50E-04	1.18E-06	1.00E-02	1.18E-04
	1,1-dichloroethene	7.00E-05	1.20E-07	5.00E-02	2.40E-06
	1,2,3-trichloropropane	2.50E-06	3.51E-09	6.00E-03	5.86E-07
	acetone	8.30E-04	6.75E-08	9.00E-01	7.50E-08
	benzene	2.50E-04	7.40E-07	4.00E-03	1.85E-04
	bromodichloromethane	2.50E-04	1.64E-07	2.00E-02	8.22E-06
	bromoform	2.50E-04	7.87E-08	2.00E-02	3.93E-06
	carbon disulfide	2.50E-04	6.08E-07	1.00E-01	6.08E-06
	chloroform	6.60E-04	6.42E-07	1.00E-02	6.42E-05
	dibromochloromethane	2.50E-04	1.25E-07	2.00E-02	6.24E-06
	dichlorodifluoromethane	2.50E-04	3.22E-07	2.00E-01	1.61E-06
	methylene chloride	2.60E-04	1.30E-07	6.00E-02	2.17E-06
	toluene	6.60E-05	2.93E-07	8.00E-02	3.66E-06
	trichlorofluoromethane	2.50E-04	4.65E-07	3.00E-01	1.55E-06
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	1.07E-06	2.00E-02	5.36E-05
	n-nitrosodimethylamine	2.00E-06	7.58E-11	8.00E-06	9.47E-06
	Metals				
	arsenic	4.40E-03	6.29E-07	3.00E-04	2.10E-03
	nitrate	2.50E-02	3.58E-06	1.60E+00	2.23E-06
				Total Risk for Dermal Route:	0.003

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-130
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.20E-01	N/A	--
	tetrachloroethene	2.50E-04	1.20E-01	2.70E+02	4.44E-04
	1,1-dichloroethene	7.00E-05	3.36E-02	2.00E+02	1.68E-04
	1,2,3-trichloropropane	2.50E-06	1.20E-03	4.90E+00	2.45E-04
	acetone	8.30E-04	3.98E-01	3.10E+04	1.28E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	bromodichloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	bromoform	2.50E-04	1.20E-01	N/A	--
	carbon disulfide	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	chloroform	6.60E-04	3.16E-01	9.80E+01	3.23E-03
	dibromochloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	methylene chloride	2.60E-04	1.25E-01	4.00E+02	3.12E-04
	toluene	6.60E-05	3.16E-02	3.00E+02	1.05E-04
	trichlorofluoromethane	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	NV	7.00E+01	--
	n-nitrosodimethylamine	2.00E-06	NV	N/A	--
	Metals				
	arsenic	4.40E-03	NV	3.00E-02	--
	nitrate	2.50E-02	NV	1.00E+04	--
				Total Risk for Inhalation Route:	0.01
				Total Risk Across All Exposure Routes/Pathways :	0.4

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-131
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.37E-06	1.30E-02	1.78E-08
	tetrachloroethene	2.50E-04	1.37E-06	5.40E-01	7.40E-07
	1,1-dichloroethene	7.00E-05	3.84E-07	N/A	--
	1,2,3-trichloropropane	2.50E-06	1.37E-08	7.00E+00	9.59E-08
	acetone	8.30E-04	4.55E-06	N/A	--
	benzene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	bromodichloromethane	2.50E-04	1.37E-06	1.30E-01	1.78E-07
	bromoform	2.50E-04	1.37E-06	7.90E-03	1.08E-08
	carbon disulfide	2.50E-04	1.37E-06	N/A	--
	chloroform	6.60E-04	3.62E-06	3.10E-02	1.12E-07
	dibromochloromethane	2.50E-04	1.37E-06	9.40E-02	1.29E-07
	dichlorodifluoromethane	2.50E-04	1.37E-06	N/A	--
	methylene chloride	2.60E-04	1.42E-06	1.40E-02	1.99E-08
	toluene	6.60E-05	3.62E-07	N/A	--
	trichlorofluoromethane	2.50E-04	1.37E-06	N/A	--
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	1.64E-06	3.00E-03	4.93E-09
	n-nitrosodimethylamine	2.00E-06	1.10E-08	5.10E+01	5.59E-07
	Metals				
	arsenic	4.40E-03	2.41E-05	9.45E+00	2.28E-04
	nitrate	2.50E-02	1.37E-04	N/A	--
				Total Risk for Oral Route:	2.3E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-131
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.08E-07	1.30E-02	1.41E-09
	tetrachloroethene	2.50E-04	2.98E-07	5.40E-01	1.61E-07
	1,1-dichloroethene	7.00E-05	3.04E-08	N/A	--
	1,2,3-trichloropropane	2.50E-06	8.89E-10	7.00E+00	6.22E-09
	acetone	8.30E-04	1.71E-08	N/A	--
	benzene	2.50E-04	1.87E-07	1.00E-01	1.87E-08
	bromodichloromethane	2.50E-04	4.16E-08	1.30E-01	5.41E-09
	bromoform	2.50E-04	1.99E-08	7.90E-03	1.57E-10
	carbon disulfide	2.50E-04	1.54E-07	N/A	--
	chloroform	6.60E-04	1.62E-07	3.10E-02	5.03E-09
	dibromochloromethane	2.50E-04	3.16E-08	9.40E-02	2.97E-09
	dichlorodifluoromethane	2.50E-04	8.14E-08	N/A	--
	methylene chloride	2.60E-04	3.29E-08	1.40E-02	4.61E-10
	toluene	6.60E-05	7.40E-08	N/A	--
	trichlorofluoromethane	2.50E-04	1.18E-07	N/A	--
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	2.71E-07	3.00E-03	8.14E-10
	n-nitrosodimethylamine	2.00E-06	1.92E-11	5.10E+01	9.78E-10
	Metals				
	arsenic	4.40E-03	1.59E-07	9.45E+00	1.50E-06
	nitrate	2.50E-02	9.04E-07	N/A	--
				Total Risk for Dermal Route:	1.7E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-131
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	4.11E-02	2.00E-06	8.22E-08
	tetrachloroethene	2.50E-04	4.11E-02	5.90E-06	2.42E-07
	1,1-dichloroethene	7.00E-05	1.15E-02	N/A	--
	1,2,3-trichloropropane	2.50E-06	4.11E-04	N/A	--
	acetone	8.30E-04	1.36E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	bromodichloromethane	2.50E-04	4.11E-02	3.70E-05	1.52E-06
	bromoform	2.50E-04	4.11E-02	1.11E-06	4.56E-08
	carbon disulfide	2.50E-04	4.11E-02	N/A	--
	chloroform	6.60E-04	1.08E-01	5.30E-06	5.75E-07
	dibromochloromethane	2.50E-04	4.11E-02	2.70E-05	1.11E-06
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	methylene chloride	2.60E-04	4.27E-02	1.00E-06	4.27E-08
	toluene	6.60E-05	1.08E-02	N/A	--
	trichlorofluoromethane	2.50E-04	4.11E-02	N/A	--
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	NV	2.40E-06	--
	n-nitrosodimethylamine	2.00E-06	NV	1.40E-02	--
	Metals				
	arsenic	4.40E-03	NV	3.30E-03	--
	nitrate	2.50E-02	NV	N/A	--
				Total Risk for Inhalation Route:	4.8E-06
				Total Risk Across All Exposure Routes/Pathways :	**2E-04**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-132
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface /	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Tin	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.60E-05	N/A	--
	tetrachloroethene	2.50E-04	1.60E-05	1.00E-02	1.60E-03
	1,1-dichloroethene	7.00E-05	4.47E-06	5.00E-02	8.95E-05
	1,2,3-trichloropropane	2.50E-06	1.60E-07	6.00E-03	2.66E-05
	acetone	8.30E-04	5.31E-05	9.00E-01	5.90E-05
	benzene	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	bromodichloromethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	bromoform	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	carbon disulfide	2.50E-04	1.60E-05	1.00E-01	1.60E-04
	chloroform	6.60E-04	4.22E-05	1.00E-02	4.22E-03
	dibromochloromethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	dichlorodifluoromethane	2.50E-04	1.60E-05	2.00E-01	7.99E-05
	methylene chloride	2.60E-04	1.66E-05	6.00E-02	2.77E-04
	toluene	6.60E-05	4.22E-06	8.00E-02	5.27E-05
	trichlorofluoromethane	2.50E-04	1.60E-05	3.00E-01	5.33E-05
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	1.92E-05	2.00E-02	9.59E-04
	n-nitrosodimethylamine	2.00E-06	1.28E-07	8.00E-06	1.60E-02
	Metals				
	arsenic	4.40E-03	2.81E-04	3.00E-04	9.38E-01
	nitrate	2.50E-02	1.60E-03	1.60E+00	9.99E-04
				Total Risk for Oral Route:	1.0

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
µg/m^3 = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-132
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface A	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Tim	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.27E-06	N/A	--
	tetrachloroethene	2.50E-04	3.48E-06	1.00E-02	3.48E-04
	1,1-dichloroethene	7.00E-05	3.54E-07	5.00E-02	7.09E-06
	1,2,3-trichloropropane	2.50E-06	1.04E-08	6.00E-03	1.73E-06
	acetone	8.30E-04	1.99E-07	9.00E-01	2.21E-07
	benzene	2.50E-04	2.18E-06	4.00E-03	5.46E-04
	bromodichloromethane	2.50E-04	4.85E-07	2.00E-02	2.43E-05
	bromoform	2.50E-04	2.32E-07	2.00E-02	1.16E-05
	carbon disulfide	2.50E-04	1.79E-06	1.00E-01	1.79E-05
	chloroform	6.60E-04	1.89E-06	1.00E-02	1.89E-04
	dibromochloromethane	2.50E-04	3.68E-07	2.00E-02	1.84E-05
	dichlorodifluoromethane	2.50E-04	9.49E-07	2.00E-01	4.75E-06
	methylene chloride	2.60E-04	3.84E-07	6.00E-02	6.40E-06
	toluene	6.60E-05	8.63E-07	8.00E-02	1.08E-05
	trichlorofluoromethane	2.50E-04	1.37E-06	3.00E-01	4.57E-06
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	3.16E-06	2.00E-02	1.58E-04
	n-nitrosodimethylamine	2.00E-06	2.24E-10	8.00E-06	2.80E-05
	Metals				
	arsenic	4.40E-03	1.86E-06	3.00E-04	6.19E-03
	nitrate	2.50E-02	1.05E-05	1.60E+00	6.59E-06
				Total Risk for Dermal Route:	0.008

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-132
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface /	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Tin	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.20E-01	N/A	--
	tetrachloroethene	2.50E-04	1.20E-01	2.70E+02	4.44E-04
	1,1-dichloroethene	7.00E-05	3.36E-02	2.00E+02	1.68E-04
	1,2,3-trichloropropane	2.50E-06	1.20E-03	4.90E+00	2.45E-04
	acetone	8.30E-04	3.98E-01	3.10E+04	1.28E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	bromodichloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	bromoform	2.50E-04	1.20E-01	N/A	--
	carbon disulfide	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	chloroform	6.60E-04	3.16E-01	9.80E+01	3.23E-03
	dibromochloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	methylene chloride	2.60E-04	1.25E-01	4.00E+02	3.12E-04
	toluene	6.60E-05	3.16E-02	3.00E+02	1.05E-04
	trichlorofluoromethane	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	Semi-volatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	3.00E-04	NV	7.00E+01	--
	n-nitrosodimethylamine	2.00E-06	NV	N/A	--
	Metals				
	arsenic	4.40E-03	NV	3.00E-02	--
	nitrate	2.50E-02	NV	1.00E+04	--
				Total Risk for Inhalation Route:	0.01
				Total Risk Across All Exposure Routes/Pathways :	**1**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-133
Risk Results Detailed Summary - Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	3.1E-08	1.9E-09	8.2E-08	1.1E-07	<0.5%	1.8E-08	1.4E-09	8.2E-08	1.0E-07	<0.5%
tetrachloroethene	1.3E-06	2.2E-07	2.4E-07	1.7E-06	<0.5%	7.4E-07	1.6E-07	2.4E-07	1.1E-06	<0.5%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2,3-trichloropropane	1.6E-07	8.4E-09	--	1.7E-07	<0.5%	9.6E-08	6.2E-09	--	1.0E-07	<0.5%
acetone	--	--	--	--	--	--	--	--	--	--
benzene	2.3E-07	2.5E-08	1.2E-06	1.5E-06	<0.5%	1.4E-07	1.9E-08	1.2E-06	1.3E-06	1%
bromodichloromethane	3.1E-07	7.3E-09	1.5E-06	1.8E-06	<0.5%	1.8E-07	5.4E-09	1.5E-06	1.7E-06	1%
bromoform	1.9E-08	2.1E-10	4.6E-08	6.4E-08	<0.5%	1.1E-08	1.6E-10	4.6E-08	5.7E-08	<0.5%
carbon disulfide	--	--	--	--	--	--	--	--	--	--
chloroform	1.9E-07	6.8E-09	5.8E-07	7.7E-07	<0.5%	1.1E-07	5.0E-09	5.8E-07	6.9E-07	<0.5%
dibromochloromethane	2.2E-07	4.0E-09	1.1E-06	1.3E-06	<0.5%	1.3E-07	3.0E-09	1.1E-06	1.2E-06	1%
dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--
methylene chloride	3.4E-08	6.2E-10	4.3E-08	7.8E-08	<0.5%	2.0E-08	4.6E-10	4.3E-08	6.3E-08	<0.5%
toluene	--	--	--	--	--	--	--	--	--	--
trichlorofluoromethane	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	2.5E-06	2.7E-07	4.8E-06	7.6E-06	2%	1.4E-06	2.0E-07	4.8E-06	6.5E-06	3%
Semivolatile Organic Compounds										
bis(2-ethylhexyl) phthalate	8.5E-09	1.1E-09	--	9.6E-09	<0.5%	4.9E-09	8.1E-10	--	5.7E-09	<0.5%
n-nitrosodimethylamine	9.6E-07	1.3E-09	--	9.6E-07	<0.5%	5.6E-07	9.8E-10	--	5.6E-07	<0.5%
Subtotal SVOCs	9.7E-07	2.4E-09	--	9.7E-07	<0.5%	5.6E-07	1.8E-09	--	5.7E-07	<0.5%
Metals										
arsenic	**3.9E-04**	2.0E-06	--	**3.9E-04**	98%	**2.3E-04**	1.5E-06	--	**2.3E-04**	97%
nitrate	--	--	--	--	--	--	--	--	--	--
Subtotal Metals	**3.9E-04**	2.0E-06	--	**3.9E-04**	--	**2.3E-04**	1.5E-06	--	**2.3E-04**	97%
Total:	**4E-04**	2E-06	5E-06	**4E-04**	100%	**2E-04**	2E-06	5E-06	**2E-04**	100%

Notes:
COPC = contaminant of potential concern
-- : Risk value was not calculated for this COPC within this medium either because there was no toxicity value or it was nonvolatile (inhalation pathway only).
Bolded results indicate an exceedance of EPA's evaluation criteria of 1E-06 or an HI of 1.

Table F-133
Risk Results Detailed Summary - Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	6.8E-04	1.2E-04	4.4E-04	1.2E-03	<0.5%	1.6E-03	3.5E-04	4.4E-04	2.4E-03	<0.5%
1,1-dichloroethene	3.8E-05	2.4E-06	1.7E-04	2.1E-04	<0.5%	8.9E-05	7.1E-06	1.7E-04	2.6E-04	<0.5%
1,2,3-trichloropropane	1.1E-05	5.9E-07	2.4E-04	2.6E-04	<0.5%	2.7E-05	1.7E-06	2.4E-04	2.7E-04	<0.5%
acetone	2.5E-05	7.5E-08	1.3E-05	3.8E-05	<0.5%	5.9E-05	2.2E-07	1.3E-05	7.2E-05	<0.5%
benzene	1.7E-03	1.9E-04	2.0E-03	3.9E-03	1%	4.0E-03	5.5E-04	2.0E-03	6.5E-03	1%
bromodichloromethane	3.4E-04	8.2E-06	1.7E-03	2.1E-03	<0.5%	8.0E-04	2.4E-05	1.7E-03	2.5E-03	<0.5%
bromoform	3.4E-04	3.9E-06	--	3.5E-04	<0.5%	8.0E-04	1.2E-05	--	8.1E-04	<0.5%
carbon disulfide	6.8E-05	6.1E-06	1.7E-04	2.5E-04	<0.5%	1.6E-04	1.8E-05	1.7E-04	3.5E-04	<0.5%
chloroform	1.8E-03	6.4E-05	3.2E-03	5.1E-03	1%	4.2E-03	1.9E-04	3.2E-03	7.6E-03	1%
dibromochloromethane	3.4E-04	6.2E-06	1.7E-03	2.1E-03	<0.5%	8.0E-04	1.8E-05	1.7E-03	2.5E-03	<0.5%
dichlorodifluoromethane	3.4E-05	1.6E-06	6.0E-04	6.4E-04	<0.5%	8.0E-05	4.7E-06	6.0E-04	6.9E-04	<0.5%
methylene chloride	1.2E-04	2.2E-06	3.1E-04	4.3E-04	<0.5%	2.8E-04	6.4E-06	3.1E-04	6.0E-04	<0.5%
toluene	2.3E-05	3.7E-06	1.1E-04	1.3E-04	<0.5%	5.3E-05	1.1E-05	1.1E-04	1.7E-04	<0.5%
trichlorofluoromethane	2.3E-05	1.5E-06	1.7E-04	2.0E-04	<0.5%	5.3E-05	4.6E-06	1.7E-04	2.3E-04	<0.5%
Subtotal VOCs	5.6E-03	4.0E-04	1.1E-02	1.7E-02	4%	1.3E-02	1.2E-03	1.1E-02	2.5E-02	3%
Semivolatile Organic Compounds										
bis(2-ethylhexyl) phthalate	4.1E-04	5.4E-05	--	4.6E-04	<0.5%	9.6E-04	1.6E-04	--	1.1E-03	<0.5%
n-nitrosodimethylamine	6.8E-03	9.5E-06	--	6.9E-03	2%	1.6E-02	2.8E-05	--	1.6E-02	2%
Subtotal SVOCs	7.3E-03	6.3E-05	--	7.3E-03	2%	1.7E-02	1.9E-04	--	1.7E-02	2%
Metals										
arsenic	4.0E-01	2.1E-03	--	4.0E-01	94%	9.4E-01	6.2E-03	--	9.4E-01	96%
nitrate	4.3E-04	2.2E-06	--	4.3E-04	<0.5%	1.0E-03	6.6E-06	--	1.0E-03	<0.5%
Subtotal Metals	4.0E-01	2.1E-03	--	4.0E-01	94%	9.4E-01	6.2E-03	--	9.4E-01	96%
Total:	0.4	0.003	0.01	0.4	100%	1	0.008	0.01	1	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of EPA's evaluation criterion of 1E-06 or an HI of 1.

Table E-134
Risk Results Summary - Based on EPAMW17 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	2.5E-06	2.7E-07	4.8E-06	7.6E-06	1.4E-06	2.0E-07	4.8E-06	6.5E-06
Subtotal SVOCs	9.7E-07	2.4E-09	**--**	9.7E-07	5.6E-07	1.8E-09	**--**	5.7E-07
Subtotal Metals	3.9E-04	2.0E-06	--	**3.9E-04**	**2.3E-04**	1.5E-06	--	**2.3E-04**
Total:	**4E-04**	2E-06	5E-06	**4E-04**	**2E-04**	2E-06	5E-06	**2E-04**

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	5.6E-03	4.0E-04	1.1E-02	1.7E-02	1.3E-02	1.2E-03	1.1E-02	2.5E-02
Subtotal SVOCs	7.3E-03	6.3E-05	--	7.3E-03	1.7E-02	1.9E-04	--	1.7E-02
Subtotal Metals	4.0E-01	2.1E-03	--	4.0E-01	9.4E-01	6.2E-03	--	9.4E-01
Total:	0.4	0.003	0.01	0.4	1	0.008	0.01	1

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile organic compounds
-- indicates a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of EPA's evaluation criterion of 1E-06 or an HI of 1.

Table F-135
Groundwater Exposure Point Concentrations - Based on Central Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (µg/L)	Sample Date
EPAMW12A	trichloroethene	5.30E+01	2007
	tetrachloroethene	3.20E+00	2007
	1,1-dichloroethane	2.50E-01	2007[a]
	1,1-dichloroethene	1.60E+00	2007
	cis-1,2-dichloroethene	1.20E+01	2007
	1,2-dichloroethane	2.50E-01	2007[a]
	1,2,3-trichloropropane	2.50E-03	2007[a]
	acetone	2.50E+00	2007[a]
	bromoform	3.70E-01	2007[a]
	carbon disulfide	2.50E-01	2007[a]
	chloroform	6.10E-01	2007
	cis-1,3-dichloropropene	2.50E-01	2007[a]
	dichlorodifluoromethane	2.50E-01	2007[a]
	methylene chloride	2.50E-01	2007
	methyl-tert-butyl ether	2.50E-01	2007
	toluene	1.20E+00	2007
	trans-1,2-dichloroethene	1.60E-01	2007
	n-nitrosodimethylamine	7.40E-02	2005
	arsenic	8.70E-01	2007
	chromium	1.00E-03	2005
	nitrate	2.50E+01	2007
	perchlorate	2.70E+00	2007
EPAMW13	trichloroethene	1.40E+01	2007
	tetrachloroethene	1.80E-01	2007
	1,1-dichloroethene	1.40E-01	2007
	cis-1,2-dichloroethene	5.20E+00	2007
	2-butanone	2.00E-01	2007
	acetone	2.50E+00	2007[a]
	benzene	2.50E-01	2007[a]
	bromoform	2.50E-01	2007[a]
	carbon disulfide	1.40E+00	2007
	chloroform	6.00E-01	2007
	chloromethane	5.60E-01	2007
	dibromochloropropane	2.50E-01	2007[a]
	dichlorodifluoromethane	4.30E-01	2007
	cis-1,3-dichloropropene	2.50E-01	2007[a]
	methylene chloride	2.50E-01	2007
	vinyl chloride	5.60E-01	2007
	toluene	5.30E-02	2007
	trans-1,2-dichloroethene	2.50E-01	2007[a]
	trichlorofluoromethane	2.50E-01	2007[a]
	n-nitrosodimethylamine	1.00E-03	2005[a]
	bis(2-ethylhexyl) phthalate	2.50E+00	2005[a]
	arsenic	6.00E-01	2005
	chromium	4.80E+00	2005
	chromium (VI)	5.03E+00	2007
	nitrate	7.10E+03	2007
	perchlorate	3.70E+00	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
µg/L = micrograms per liter

Table F-135
Groundwater Exposure Point Concentrations - Based on Central Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (µg/L)	Sample Date
EPAMW14	trichloroethene	2.50E+01	2007
	tetrachloroethene	6.90E-01	2007
	1,1-dichloroethene	4.20E-01	2007
	cis-1,2-dichloroethene	5.60E+00	2007
	carbon tetrachloride	2.50E-01	2007[a]
	1,2-dichloroethane	2.50E-01	2007[a]
	1,1,2-trichloroethane	2.50E-01	2007[a]
	acetone	2.60E+00	2007
	benzene	2.50E-01	2007[a]
	bromomethane	2.50E-01	2007[a]
	carbon disulfide	2.50E-01	2007[a]
	chloroform	5.00E-01	2007
	chloromethane	1.20E+00	2007
	dichlorodifluoromethane	2.50E-01	2007
	methylene chloride	3.80E-01	2007
	methyl-tert-butyl ether	2.50E-01	2007[a]
	toluene	2.50E-01	2007[a]
	trans-1,2-dichloroethene	1.20E-01	2007
	vinyl chloride	2.50E-01	2007[a]
	n-nitrosodimethylamine	1.00E-03	2004[a]
	bis(2-ethylhexyl) phthalate	2.40E+00	2005
	benzyl alcohol	3.00E+00	2004
	arsenic	7.80E+00	2005
	chromium	7.00E-02	2005
	chromium (VI)	6.19E+00	2007
	nitrate	9.70E+03	2007
	perchlorate	3.80E+00	2007
EPAMW15	trichloroethene	1.40E+00	2007
	tetrachloroethene	6.90E+00	2007
	1,2-dichloroethane	2.50E-01	2007[a]
	1,1-dichloroethene	9.20E-02	2007
	cis-1,2-dichloroethene	2.50E-01	2007[a]
	1,2,3-trichloropropane	2.30E-01	2007
	acetone	5.90E+01	2007
	benzene	5.00E-02	2007
	carbon disulfide	1.10E+00	2007
	carbon tetrachloride	2.50E-01	2007[a]
	chloroform	3.10E-01	2007
	chloromethane	1.50E-01	2007
	dibromochloropropane	2.50E-01	2007[a]
	cis-1,3-dichloropropene	2.50E-01	2007[a]
	methylene chloride	2.90E-01	2007
	methyl-tert-butyl ether	6.70E-02	2007
	vinyl chloride	5.20E-02	2007
	toluene	2.10E-01	2007
	n-nitrosodimethylamine	1.00E-03	2005
	bis(2-ethylhexyl) phthalate	2.50E+00	2005[a]
	1,4-dioxane	1.00E+01	2007[a]
	benzyl alcohol	3.10E+00	2004
	arsenic	4.10E-01	2005
	chromium	6.20E+00	2005
	chromium (VI)	6.92E+00	2007
	nitrate	1.60E+04	2007
	perchlorate	2.80E+00	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
µg/L = micrograms per liter

Table F-135
Groundwater Exposure Point Concentrations - Based on Central Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (µg/L)	Sample Date
EPAMW17	trichloroethene	2.50E-01	2007[a]
	tetrachloroethene	2.50E-01	2007[a]
	1,1-dichloroethene	7.00E-02	2007
	1,2,3-trichloropropane	2.50E-03	2007[a]
	acetone	8.30E-01	2007
	benzene	2.50E-01	2007[a]
	bromodichloromethane	2.50E-01	2007[a]
	bromoform	2.50E-01	2007[a]
	carbon disulfide	2.50E-01	2007[a]
	chloroform	6.60E-01	2007
	dibromochloromethane	2.50E-01	2007[a]
	dichlorodifluoromethane	2.50E-01	2007[a]
	methylene chloride	2.60E-01	2007
	toluene	6.60E-02	2007
	trichlorofluoromethane	2.50E-01	2007[a]
	bis(2-ethylhexyl) phthalate	3.00E-01	2007[a]
	n-nitrosodimethylamine	2.00E-03	2006
	arsenic	4.40E+00	2006
	nitrate	2.50E+01	2006
01900010	trichloroethene	4.60E+00	2001
	1,2,3-trichloropropane	1.20E-01	2002
01900011	trichloroethene	1.40E+01	2007
	cis-1,2-dichloroethene	2.10E+00	2007
	nitrate	8.10E+03	2007
	perchlorate	2.20E+00	2007
01900012	trichloroethene	2.40E+01	2005
	tetrachloroethene	1.90E-01	2005
	1,1-dichloroethene	2.50E-01	2005[a]
	cis-1,2-dichloroethene	3.80E+00	2005
	carbon tetrachloride	1.60E-01	2005
	chloroform	2.20E-01	2005
	cis-1,3-dichloropropene	2.50E-01	2005a
	trans-1,2-dichloroethene	2.50E-01	2005[a]
	nitrate	8.96E+03	2007
	perchlorate	4.80E+00	2005
01900013	No VOCs detected	N/A	--
01900014	trichloroethene	5.00E-01	2007
	nitrate	4.06E+03	2007
	perchlorate	2.00E+00	2007
01900015	trichloroethene	1.30E+00	2007
	nitrate	3.16E+03	2007
	perchlorate	2.00E+00	2007
01900018	No VOCs detected	N/A	--
01901672	No VOCs detected	N/A	--
01901681	trichloroethene	4.50E+00	2001
	tetrachloroethene	1.03E+01	2001
	perchlorate	2.00E+00	1997[a]
01901682	trichloroethene	1.00E+00	2007
	tetrachloroethene	1.40E+00	2007
	nitrate	4.72E+03	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
µg/L = micrograms per liter

Table F-135
Groundwater Exposure Point Concentrations - Based on Central Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (µg/L)	Sample Date
01903014	trichloroethene	2.50E-01	1998[a]
	tetrachloroethene	1.60E+00	2007
	1,2,3-trichloropropane	1.10E-01	2002
	bis(2-ethylhexyl) phthalate	1.50E+00	2000[a]
01903086	trichloroethene	7.00E-01	2007
	tetrachloroethene	2.60E+00	2007
	1,2,3-trichloropropane	2.50E-02	2003
	nitrate	3.88E+03	2007
01903097	trichloroethene	6.20E+00	2007
	tetrachloroethene	6.00E-01	2007
	cis-1,2-dichloroethene	8.00E-01	2007
	nitrate	9.91E+03	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
µg/L = micrograms per liter

Table F-136
Risk and Hazard Estimates - Based on Central Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Groundwater Exposure Point Concentration [µg/L]	EPA Residential Tap Water RSL (cancer) [µg/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [µg/L]	Noncancer HI
EPAMW12A	trichloroethene	5.3E+01	1.7E+00	3.1E-05	--	--
	tetrachloroethene	3.2E+00	1.1E-01	2.9E-05	2.2E+02	1.5E-02
	1,1-dichloroethane	2.5E-01	2.4E+00	1.0E-07	7.3E+03	3.4E-05
	1,1-dichloroethene	1.6E+00	--	--	3.4E+02	4.7E-03
	cis-1,2-dichloroethene	1.2E+01	--	--	3.7E+02	3.2E-02
	1,2-dichloroethane	2.5E-01	1.5E-01	1.7E-06	6.4E+02	3.9E-04
	1,2,3-trichloropropane	2.5E-03	9.6E-03	2.6E-07	2.2E+02	1.1E-05
	acetone	2.5E+00	--	--	2.2E+04	1.1E-04
	bromoform	3.7E-01	8.5E+00	4.4E-08	7.3E+02	5.1E-04
	carbon disulfide	2.5E-01	--	--	1.0E+03	2.5E-04
	chloroform	6.1E-01	1.9E-01	3.2E-06	1.3E+02	4.7E-03
	cis-1,3-dichloropropene	2.5E-01	4.3E-01	5.8E-07	4.0E+01	6.3E-03
	dichlorodifluoromethane	2.5E-01	--	--	3.9E+02	6.4E-04
	methylene chloride	2.5E-01	4.8E+00	5.2E-08	1.1E+03	2.3E-04
	methyl-tert-butyl ether	2.5E-01	1.2E+01	2.1E-08	6.3E+03	4.0E-05
	toluene	1.2E+00	--	--	2.3E+03	5.2E-04
	trans-1,2-dichloroethene	1.6E-01	--	--	1.1E+02	1.5E-03
	n-nitrosodimethylamine	7.4E-02	4.2E-04	**1.8E-04**	2.9E-01	2.6E-01
	arsenic	8.7E-01	4.5E-02	1.9E-05	1.1E+01	7.9E-02
	chromium	1.0E-03	--	--	--	--
	nitrate	2.5E+01	--	--	5.8E+04	4.3E-04
	perchlorate	2.7E+00	--	--	2.6E+01	1.0E-01
	Total			**3E-04**		**1**
EPAMW13	trichloroethene	1.4E+01	1.7E+00	8.2E-06	--	--
	tetrachloroethene	1.8E-01	1.1E-01	1.6E-06	2.2E+02	8.2E-04
	1,1-dichloroethene	1.4E-01	--	--	3.4E+02	4.1E-04
	cis-1,2-dichloroethene	5.2E+00	--	--	3.7E+02	1.4E-02
	2-butanone	2.0E-01	--	--	7.1E+03	2.8E-05
	acetone	2.5E+00	--	--	2.2E+04	1.1E-04
	benzene	2.5E-01	4.1E-01	6.1E-07	4.4E+01	5.7E-03
	bromoform	2.5E-01	8.5E+00	2.9E-08	7.3E+02	3.4E-04
	carbon disulfide	1.4E+00	--	--	1.0E+03	1.4E-03
	chloroform	6.0E-01	1.9E-01	3.2E-06	1.3E+02	4.6E-03
	chloromethane	5.6E-01	1.8E+00	3.1E-07	1.9E+02	2.9E-03
	dibromochloropropane	2.5E-01	3.2E-04	**7.8E-04**	3.9E-01	6.4E-01
	dichlorodifluoromethane	4.3E-01	--	--	3.9E+02	1.1E-03
	cis-1,3-dichloropropene	2.5E-01	4.3E-01	5.8E-07	4.0E+01	6.3E-03
	methylene chloride	2.5E-01	4.8E+00	5.2E-08	1.1E+03	2.3E-04
	vinyl chloride	5.6E-01	1.6E-02	3.5E-05	7.2E+01	7.8E-03
	toluene	5.3E-02	--	--	2.3E+03	2.3E-05
	trans-1,2-dichloroethene	2.5E-01	--	--	1.1E+02	2.3E-03
	trichlorofluoromethane	2.5E-01	--	--	1.3E+03	1.9E-04
	n-nitrosodimethylamine	1.0E-03	4.2E-04	2.4E-06	2.9E-01	3.4E-03
	bis(2-ethylhexyl) phthalate	2.5E+00	4.8E+00	5.2E-07	7.3E+02	3.4E-03
	arsenic	6.0E-01	4.5E-02	1.3E-05	1.1E+01	5.5E-02
	chromium	4.8E+00	--	--	--	--
	chromium (VI)	5.0E+00	--	--	1.1E+02	4.6E-02
	nitrate	7.1E+03	--	--	5.8E+04	1.2E-01
	perchlorate	3.7E+00	--	--	2.6E+01	1.4E-01
	Total			**8E-04**		1

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile organic compounds
-- indicates a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of EPA's evaluation criterion of 1E-06 or an HI of 1.

Table F-136
Risk and Hazard Estimates - Based on Central Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Groundwater Exposure Point Concentration [µg/L]	EPA Residential Tap Water RSL (cancer) [µg/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [µg/L]	Noncancer HI
EPAMW14	trichloroethene	2.5E+01	1.7E+00	1.5E-05	--	--
	tetrachloroethene	6.9E-01	1.1E-01	6.3E-06	2.2E+02	3.1E-03
	1,1-dichloroethene	4.2E-01	--	--	3.4E+02	1.2E-03
	cis-1,2-dichloroethene	5.6E+00	--	--	3.7E+02	1.5E-02
	carbon tetrachloride	2.5E-01	2.0E-01	1.3E-06	2.4E+01	1.0E-02
	1,2-dichloroethane	2.5E-01	1.5E-01	1.7E-06	6.4E+02	3.9E-04
	1,1,2-trichloroethane	2.5E-01	2.4E-01	1.0E-06	1.5E+02	1.7E-03
	acetone	2.6E+00	--	--	2.2E+04	1.2E-04
	benzene	2.5E-01	4.1E-01	6.1E-07	4.4E+01	5.7E-03
	bromomethane	2.5E-01	--	--	8.7E+00	2.9E-02
	carbon disulfide	2.5E-01	--	--	1.0E+03	2.5E-04
	chloroform	5.0E-01	1.9E-01	2.6E-06	1.3E+02	3.8E-03
	chloromethane	1.2E+00	1.8E+00	6.7E-07	1.9E+02	6.3E-03
	dichlorodifluoromethane	2.5E-01	--	--	3.9E+02	6.4E-04
	methylene chloride	3.8E-01	4.8E+00	7.9E-08	1.1E+03	3.5E-04
	methyl-tert-butyl ether	2.5E-01	1.2E+01	2.1E-08	6.3E+03	4.0E-05
	toluene	2.5E-01	--	--	2.3E+03	1.1E-04
	trans-1,2-dichloroethene	1.2E-01	--	--	1.1E+02	1.1E-03
	vinyl chloride	2.5E-01	1.6E-02	1.6E-05	7.2E+01	3.5E-03
	n-nitrosodimethylamine	1.0E-03	4.2E-04	2.4E-06	2.9E-01	3.4E-03
	bis(2-ethylhexyl) phthalate	2.4E+00	4.8E+00	5.0E-07	7.3E+02	3.3E-03
	benzyl alcohol	3.0E+00	--	--	1.8E+04	1.7E-04
	arsenic	7.8E+00	4.5E-02	**1.7E-04**	1.1E+01	7.1E-01
	chromium	7.0E-02	--	--	--	--
	chromium (VI)	6.2E+00	--	--	1.1E+02	5.6E-02
	nitrate	9.7E+03	--	--	5.8E+04	1.7E-01
	perchlorate	3.8E+00	--	--	2.6E+01	1.5E-01
	Total			**2E-04**		**1**
EPAMW15	trichloroethene	1.4E+00	1.7E+00	8.2E-07	--	--
	tetrachloroethene	6.9E+00	1.1E-01	6.3E-05	2.2E+02	3.1E-02
	1,2-dichloroethane	2.5E-01	1.5E-01	1.7E-06	6.4E+02	3.9E-04
	1,1-dichloroethene	9.2E-02	--	--	3.4E+02	2.7E-04
	cis-1,2-dichloroethene	2.5E-01	--	--	3.7E+02	6.8E-04
	1,2,3-trichloropropane	2.3E-01	9.6E-03	2.4E-05	2.2E+02	1.0E-03
	acetone	5.9E+01	--	--	2.2E+04	2.7E-03
	benzene	5.0E-02	4.1E-01	1.2E-07	4.4E+01	1.1E-03
	carbon disulfide	1.1E+00	--	--	1.0E+03	1.1E-03
	carbon tetrachloride	2.5E-01	2.0E-01	1.3E-06	2.4E+01	1.0E-02
	chloroform	3.1E-01	1.9E-01	1.6E-06	1.3E+02	2.4E-03
	chloromethane	1.5E-01	1.8E+00	8.3E-08	1.9E+02	7.9E-04
	dibromochloropropane	2.5E-01	3.2E-04	**7.8E-04**	3.9E-01	6.4E-01
	cis-1,3-dichloropropene	2.5E-01	4.3E-01	5.8E-07	4.0E+01	6.3E-03
	methylene chloride	2.9E-01	4.8E+00	6.0E-08	1.1E+03	2.6E-04
	methyl-tert-butyl ether	6.7E-02	1.2E+01	5.6E-09	6.3E+03	1.1E-05
	vinyl chloride	5.2E-02	1.6E-02	3.3E-06	7.2E+01	7.2E-04
	toluene	2.1E-01	--	--	2.3E+03	9.1E-05
	n-nitrosodimethylamine	1.0E-03	4.2E-04	2.4E-06	2.9E-01	3.4E-03
	bis(2-ethylhexyl) phthalate	2.5E+00	4.8E+00	5.2E-07	7.3E+02	3.4E-03
	1,4-dioxane	1.0E+01	6.1E+00	1.6E-06	--	--
	benzyl alcohol	3.1E+00	--	--	1.8E+04	1.7E-04
	arsenic	4.1E-01	4.5E-02	9.1E-06	1.1E+01	3.7E-02
	chromium	6.2E+00	--	--	--	--
	chromium (VI)	6.9E+00	--	--	1.1E+02	6.3E-02
	nitrate	1.6E+04	--	--	5.8E+04	2.8E-01
	perchlorate	2.8E+00	--	--	2.6E+01	1.1E-01
	Total			**9E-04**		**1**

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile organic compounds
-- indicates a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of EPA's evaluation criterion of 1E-06 or an HI of 1.

Table F-136
Risk and Hazard Estimates - Based on Central Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Groundwater Exposure Point Concentration [µg/L]	EPA Residential Tap Water RSL (cancer) [µg/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [µg/L]	Noncancer HI
EPAMW17	trichloroethene	2.5E-01	1.7E+00	1.5E-07	--	--
	tetrachloroethene	2.5E-01	1.1E-01	2.3E-06	2.2E+02	1.1E-03
	1,1-dichloroethene	7.0E-02	--	--	3.4E+02	2.1E-04
	1,2,3-trichloropropane	2.5E-03	9.6E-03	2.6E-07	2.2E+02	1.1E-05
	acetone	8.3E-01	--	--	2.2E+04	3.8E-05
	benzene	2.5E-01	4.1E-01	6.1E-07	4.4E+01	5.7E-03
	bromodichloromethane	2.5E-01	1.1E+00	2.3E-07	7.3E+02	3.4E-04
	bromoform	2.5E-01	8.5E+00	2.9E-08	7.3E+02	3.4E-04
	carbon disulfide	2.5E-01	--	--	1.0E+03	2.5E-04
	chloroform	6.6E-01	1.9E-01	3.5E-06	1.3E+02	5.1E-03
	dibromochloromethane	2.5E-01	8.0E-01	3.1E-07	7.3E+02	3.4E-04
	dichlorodifluoromethane	2.5E-01	--	--	3.9E+02	6.4E-04
	methylene chloride	2.6E-01	4.8E+00	5.4E-08	1.1E+03	2.4E-04
	toluene	6.6E-02	--	--	2.3E+03	2.9E-05
	trichlorofluoromethane	2.5E-01	--	--	1.3E+03	1.9E-04
	bis(2-ethylhexyl) phthalate	3.0E-01	4.8E+00	6.3E-08	7.3E+02	4.1E-04
	n-nitrosodimethylamine	2.0E-03	4.2E-04	4.8E-06	2.9E-01	6.9E-03
	arsenic	4.4E+00	4.5E-02	9.8E-05	1.1E+01	4.0E-01
	nitrate	2.5E+01	--	--	5.8E+04	4.3E-04
	Total			**1E-04**		0.4
01900010	trichloroethene	4.60E+00	1.7E+00	2.7E-06	--	--
	1,2,3-trichloropropane	1.20E-01	9.6E-03	1.3E-05	2.2E+02	5.5E-04
	Total			**2E-05**		0.0005
01900011	trichloroethene	1.40E+01	1.7E+00	8.2E-06	--	--
	cis-1,2-dichloroethene	2.10E+00	--	--	3.7E+02	5.7E-03
	nitrate	8.10E+03	--	--	5.8E+04	1.4E-01
	perchlorate	2.20E+00	--	--	2.6E+01	8.5E-02
	Total			**8E-06**		0.2
01900012	trichloroethene	2.40E+01	1.7E+00	1.4E-05	--	--
	tetrachloroethene	1.90E-01	1.1E-01	1.7E-06	2.2E+02	8.6E-04
	1,1-dichloroethene	2.50E-01	--	--	3.4E+02	7.4E-04
	cis-1,2-dichloroethene	3.80E+00	--	--	3.7E+02	1.0E-02
	carbon tetrachloride	1.60E-01	2.0E-01	8.0E-07	2.4E+01	6.7E-03
	chloroform	2.20E-01	1.9E-01	1.2E-06	1.3E+02	1.7E-03
	cis-1,3-dichloropropene	2.50E-01	4.3E-01	5.8E-07	4.0E+01	6.3E-03
	trans-1,2-dichloroethene	2.50E-01	--	--	1.1E+02	2.3E-03
	nitrate	8.96E+03	--	--	5.8E+04	1.5E-01
	perchlorate	4.80E+00	--	--	2.6E+01	1.8E-01
	Total			**2E-05**		0.4
01900013	No VOCs detected	N/A				
01900014	trichloroethene	5.00E-01	1.7E+00	2.9E-07	--	--
	nitrate	4.06E+03	--	--	5.8E+04	7.0E-02
	perchlorate	2.00E+00	--	--	2.6E+01	7.7E-02
	Total			3E-07		0.1
01900015	trichloroethene	1.30E+00	1.7E+00	7.6E-07	--	--
	nitrate	3.16E+03	--	--	5.8E+04	5.4E-02
	perchlorate	2.00E+00	--	--	2.6E+01	7.7E-02
	Total			8E-07		0.1
01900018	No VOCs detected	N/A	--	--	--	--
01901672	No VOCs detected	N/A	--	--	--	--
01901681	trichloroethene	4.50E+00	1.7E+00	2.6E-06	--	--
	tetrachloroethene	1.03E+01	1.1E-01	9.4E-05	2.2E+02	4.7E-02
	perchlorate	2.00E+00	--	--	2.6E+01	7.7E-02
	Total			**1E-04**		0.1
01901682	trichloroethene	1.00E+00	1.7E+00	5.9E-07	--	--
	tetrachloroethene	1.00E+00	1.1E-01	9.1E-06	2.2E+02	4.5E-03
	nitrate	4.72E+03	--	--	5.8E+04	8.1E-02
	Total			**1E-05**		0.09

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile organic compounds
-- indicates a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of EPA's evaluation criterion of 1E-06 or an HI of 1.

Table F-136
Risk and Hazard Estimates - Based on Central Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Groundwater Exposure Point Concentration [µg/L]	EPA Residential Tap Water RSL (cancer) [µg/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [µg/L]	Noncancer HI
01903014	trichloroethene	2.50E-01	1.7E+00	1.5E-07	--	**--**
	tetrachloroethene	1.60E+00	1.1E-01	1.5E-05	2.2E+02	7.3E-03
	1,2,3-trichloropropane	1.10E-01	9.6E-03	1.1E-05	2.2E+02	5.0E-04
	bis(2-ethylhexyl) phthalate	1.50E+00	4.8E+00	3.1E-07	7.3E+02	2.1E-03
	Total			3E-05		0.01
01903086	trichloroethene	7.00E-01	1.7E+00	4.1E-07	--	**--**
	tetrachloroethene	2.60E+00	1.1E-01	2.4E-05	2.2E+02	1.2E-02
	1,2,3-trichloropropane	2.60E+00	9.6E-03	**2.7E-04**	2.2E+02	1.2E-02
	nitrate	3.88E+03	--	**--**	5.8E+04	6.7E-02
	Total			**3E-04**		0.09
01903097	trichloroethene	6.20E+00	1.7E+00	3.6E-06	--	**--**
	tetrachloroethene	6.00E-01	1.1E-01	5.5E-06	2.2E+02	2.7E-03
	cis-1,2-dichloroethene	6.00E-01	--	**--**	3.7E+02	1.6E-03
	nitrate	9.91E+03	--	**--**	5.8E+04	1.7E-01
	Total			**9E-06**		0.2

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile organic compounds
-- indicates a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of EPA's evaluation criterion of 1E-06 or an HI of 1.

Table F-137
Groundwater Exposure Point Concentrations - Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
EPAMW16	***Volatile Organic Compounds***		
	trichloroethene	2.50E-04	2007[a]
	tetrachloroethene	1.70E-04	2007
	1,1-dichloroethene	2.50E-04	2007[a]
	1,2,3-trichloropropane	2.50E-06	2007[a]
	1,1,2-trichloroethane	2.50E-04	2007[a]
	acetone	2.90E-03	2007
	bromodichloromethane	2.50E-04	2007[a]
	bromoform	2.50E-04	2007[a]
	bromomethane	2.50E-04	2007[a]
	benzene	2.50E-04	2007[a]
	carbon disulfide	2.50E-04	2007[a]
	chloroform	3.80E-04	2007
	chloromethane	2.50E-04	2007[a]
	cis-1,3-dichloropropene	2.50E-04	2007[a]
	dibromochloromethane	2.50E-04	2007[a]
	dichlorodifluoromethane	2.50E-04	2007[a]
	methylene chloride	1.00E-03	2007
	methyl-tert-butyl ether	2.50E-04	2007[a]
	toluene	2.50E-04	2007[a]
	Semivolatile Organic Compounds		
	bis(2-ethylhexyl) phthalate	2.50E-03	2007[a]
	n-nitrosodimethylamine	4.16E-06	2007
	1,4-dioxane	1.00E-03	2007[a]
	Metals and Inorganic Ions		
	arsenic	2.50E-04	2006
	chromium	4.80E-03	2006
	chromium (VI)	5.35E-03	2007
	nitrate	5.42E+00	2007
	perchlorate	3.00E-03	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-138
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$**	**Cancer Risk [-]**
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	2.35E-06	1.30E-02	3.05E-08
	tetrachloroethene	1.70E-04	1.60E-06	5.40E-01	8.62E-07
	1,1-dichloroethene	2.50E-04	2.35E-06	N/A	--
	1,2,3-trichloropropane	2.50E-06	2.35E-08	7.00E+00	1.64E-07
	1,1,2-trichloroethane	2.50E-04	2.35E-06	7.20E-02	1.69E-07
	acetone	2.90E-03	2.72E-05	N/A	--
	bromodichloromethane	2.50E-04	2.35E-06	1.30E-01	3.05E-07
	bromoform	2.50E-04	2.35E-06	7.90E-03	1.86E-08
	bromomethane	2.50E-04	2.35E-06	N/A	--
	benzene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	carbon disulfide	2.50E-04	2.35E-06	N/A	--
	chloroform	3.80E-04	3.57E-06	3.10E-02	1.11E-07
	chloromethane	2.50E-04	2.35E-06	1.30E-02	3.05E-08
	cis-1,3-dichloropropene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	dibromochloromethane	2.50E-04	2.35E-06	9.40E-02	2.21E-07
	dichlorodifluoromethane	2.50E-04	2.35E-06	N/A	--
	methylene chloride	1.00E-03	9.39E-06	1.40E-02	1.32E-07
	methyl-tert-butyl ether	2.50E-04	2.35E-06	1.80E-03	4.23E-09
	toluene	2.50E-04	2.35E-06	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	2.35E-05	3.00E-03	7.05E-08
	n-nitrosodimethylamine	4.16E-06	3.91E-08	5.10E+01	1.99E-06
	1,4-dioxane	1.00E-03	9.39E-06	2.70E-02	2.54E-07
	Metals and Inorganic Ions				
	arsenic	2.50E-04	2.35E-06	9.45E+00	2.22E-05
	chromium	4.80E-03	4.51E-05	N/A	--
	chromium (VI)	5.35E-03	5.03E-05	N/A	--
	nitrate	5.42E+00	5.09E-02	N/A	--
	perchlorate	3.00E-03	2.82E-05	N/A	--
				Total Risk for Oral Route:	2.7E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-138
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.47E-07	1.30E-02	1.91E-09
	tetrachloroethene	1.70E-04	2.75E-07	5.40E-01	1.49E-07
	1,1-dichloroethene	2.50E-04	1.47E-07	N/A	--
	1,2,3-trichloropropane	2.50E-06	1.20E-09	7.00E+00	8.43E-09
	1,1,2-trichloroethane	2.50E-04	7.85E-08	7.20E-02	5.65E-09
	acetone	2.90E-03	8.09E-08	N/A	--
	bromodichloromethane	2.50E-04	5.64E-08	1.30E-01	7.33E-09
	bromoform	2.50E-04	2.70E-08	7.90E-03	2.13E-10
	bromomethane	2.50E-04	3.43E-08	N/A	--
	benzene	2.50E-04	2.54E-07	1.00E-01	2.54E-08
	carbon disulfide	2.50E-04	2.08E-07	N/A	--
	chloroform	3.80E-04	1.27E-07	3.10E-02	3.93E-09
	chloromethane	2.50E-04	4.05E-08	1.30E-02	5.26E-10
	cis-1,3-dichloropropene	2.50E-04	2.08E-09	1.00E-01	2.08E-10
	dibromochloromethane	2.50E-04	4.28E-08	9.40E-02	4.02E-09
	dichlorodifluoromethane	2.50E-04	1.10E-07	N/A	--
	methylene chloride	1.00E-03	1.72E-07	1.40E-02	2.40E-09
	methyl-tert-butyl ether	2.50E-04	3.15E-08	1.80E-03	5.67E-11
	toluene	2.50E-04	3.80E-07	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	3.06E-06	3.00E-03	9.19E-09
	n-nitrosodimethylamine	4.16E-06	5.41E-11	5.10E+01	2.76E-09
	1,4-dioxane	1.00E-03	6.37E-10	2.70E-02	1.72E-11
	Metals and Inorganic Ions				
	arsenic	2.50E-04	1.23E-08	9.45E+00	1.16E-07
	chromium	4.80E-03	2.35E-07	N/A	--
	chromium (VI)	5.35E-03	5.25E-07	N/A	--
	nitrate	5.42E+00	2.66E-04	N/A	--
	perchlorate	3.00E-03	N/A	N/A	--
				Total Risk for Dermal Route:	3.4E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-138
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Adult Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	4.11E-02	2.00E-06	8.22E-08
	tetrachloroethene	1.70E-04	2.79E-02	5.90E-06	1.65E-07
	1,1-dichloroethene	2.50E-04	4.11E-02	N/A	--
	1,2,3-trichloropropane	2.50E-06	4.11E-04	N/A	--
	1,1,2-trichloroethane	2.50E-04	4.11E-02	1.60E-05	6.58E-07
	acetone	2.90E-03	4.77E-01	N/A	
	bromodichloromethane	2.50E-04	4.11E-02	3.70E-05	1.52E-06
	bromoform	2.50E-04	4.11E-02	1.11E-06	4.56E-08
	bromomethane	2.50E-04	4.11E-02	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	carbon disulfide	2.50E-04	4.11E-02	N/A	--
	chloroform	3.80E-04	6.25E-02	5.30E-06	3.31E-07
	chloromethane	2.50E-04	4.11E-02	1.80E-06	7.40E-08
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	dibromochloromethane	2.50E-04	4.11E-02	2.70E-05	1.11E-06
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	methylene chloride	1.00E-03	1.64E-01	1.00E-06	1.64E-07
	methyl-tert-butyl ether	2.50E-04	4.11E-02	2.60E-07	1.07E-08
	toluene	2.50E-04	4.11E-02	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	2.40E-06	--
	n-nitrosodimethylamine	4.16E-06	NV	1.40E-02	--
	1,4-dioxane	1.00E-03	NV	7.70E-06	--
	Metals and Inorganic Ions				
	arsenic	2.50E-04	NV	3.30E-03	--
	chromium	4.80E-03	NV	1.20E-02	--
	chromium (VI)	5.35E-03	NV	1.50E-01	--
	nitrate	5.42E+00	NV	N/A	--
	perchlorate	3.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	5.5E-06
				Total Risk Across All Exposure Routes/Pathways :	**3E-05**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-139
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	6.85E-06	N/A	--
	tetrachloroethene	1.70E-04	4.66E-06	1.00E-02	4.66E-04
	1,1-dichloroethene	2.50E-04	6.85E-06	5.00E-02	1.37E-04
	1,2,3-trichloropropane	2.50E-06	6.85E-08	6.00E-03	1.14E-05
	1,1,2-trichloroethane	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	acetone	2.90E-03	7.95E-05	9.00E-01	8.83E-05
	bromodichloromethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	bromoform	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	bromomethane	2.50E-04	6.85E-06	1.40E-03	4.89E-03
	benzene	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	carbon disulfide	2.50E-04	6.85E-06	1.00E-01	6.85E-05
	chloroform	3.80E-04	1.04E-05	1.00E-02	1.04E-03
	chloromethane	2.50E-04	6.85E-06	N/A	--
	cis-1,3-dichloropropene	2.50E-04	6.85E-06	3.00E-02	2.28E-04
	dibromochloromethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	dichlorodifluoromethane	2.50E-04	6.85E-06	2.00E-01	3.42E-05
	methylene chloride	1.00E-03	2.74E-05	6.00E-02	4.57E-04
	methyl-tert-butyl ether	2.50E-04	6.85E-06	N/A	--
	toluene	2.50E-04	6.85E-06	8.00E-02	8.56E-05
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	6.85E-05	2.00E-02	3.42E-03
	n-nitrosodimethylamine	4.16E-06	1.14E-07	8.00E-06	1.42E-02
	1,4-dioxane	1.00E-03	2.74E-05	N/A	--
	Metals and Inorganic Ions				
	arsenic	2.50E-04	6.85E-06	3.00E-04	2.28E-02
	chromium	4.80E-03	1.32E-04	1.50E+00	8.77E-05
	chromium (VI)	5.35E-03	1.47E-04	3.00E-03	4.89E-02
	nitrate	5.42E+00	1.48E-01	1.60E+00	9.28E-02
	perchlorate	3.00E-03	8.22E-05	7.00E-04	1.17E-01
				Total Risk for Oral Route:	0.3

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-139
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	4.29E-07	N/A	--
	tetrachloroethene	1.70E-04	8.02E-07	1.00E-02	8.02E-05
	1,1-dichloroethene	2.50E-04	4.29E-07	5.00E-02	8.58E-06
	1,2,3-trichloropropane	2.50E-06	3.51E-09	6.00E-03	5.86E-07
	1,1,2-trichloroethane	2.50E-04	2.29E-07	4.00E-03	5.72E-05
	acetone	2.90E-03	2.36E-07	9.00E-01	2.62E-07
	bromodichloromethane	2.50E-04	1.64E-07	2.00E-02	8.22E-06
	bromoform	2.50E-04	7.87E-08	2.00E-02	3.93E-06
	bromomethane	2.50E-04	1.00E-07	1.40E-03	7.15E-05
	benzene	2.50E-04	7.40E-07	4.00E-03	1.85E-04
	carbon disulfide	2.50E-04	6.08E-07	1.00E-01	6.08E-06
	chloroform	3.80E-04	3.70E-07	1.00E-02	3.70E-05
	chloromethane	2.50E-04	1.18E-07	N/A	--
	cis-1,3-dichloropropene	2.50E-04	6.08E-09	3.00E-02	2.03E-07
	dibromochloromethane	2.50E-04	1.25E-07	2.00E-02	6.24E-06
	dichlorodifluoromethane	2.50E-04	3.22E-07	2.00E-01	1.61E-06
	methylene chloride	1.00E-03	5.01E-07	6.00E-02	8.34E-06
	methyl-tert-butyl ether	2.50E-04	9.19E-08	N/A	--
	toluene	2.50E-04	1.11E-06	8.00E-02	1.39E-05
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	8.94E-06	2.00E-02	4.47E-04
	n-nitrosodimethylamine	4.16E-06	1.58E-10	8.00E-06	1.97E-05
	1,4-dioxane	1.00E-03	1.86E-09	N/A	--
	Metals and Inorganic Ions				
	arsenic	2.50E-04	3.58E-08	3.00E-04	1.19E-04
	chromium	4.80E-03	6.86E-07	1.50E+00	4.58E-07
	chromium (VI)	5.35E-03	1.53E-06	3.00E-03	5.10E-04
	nitrate	5.42E+00	7.75E-04	1.60E+00	4.84E-04
	perchlorate	3.00E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.002

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-139
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.20E-01	N/A	--
	tetrachloroethene	1.70E-04	8.15E-02	2.70E+02	3.02E-04
	1,1-dichloroethene	2.50E-04	1.20E-01	2.00E+02	5.99E-04
	1,2,3-trichloropropane	2.50E-06	1.20E-03	4.90E+00	2.45E-04
	1,1,2-trichloroethane	2.50E-04	1.20E-01	1.40E+01	8.56E-03
	acetone	2.90E-03	1.39E+00	3.10E+04	4.49E-05
	bromodichloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	bromoform	2.50E-04	1.20E-01	N/A	--
	bromomethane	2.50E-04	1.20E-01	5.00E+00	2.40E-02
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	carbon disulfide	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	chloroform	3.80E-04	1.82E-01	9.80E+01	1.86E-03
	chloromethane	2.50E-04	1.20E-01	9.00E+01	1.33E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	dibromochloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	methylene chloride	1.00E-03	4.79E-01	4.00E+02	1.20E-03
	methyl-tert-butyl ether	2.50E-04	1.20E-01	3.00E+03	4.00E-05
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	1.20E+00	7.00E+01	1.71E-02
	n-nitrosodimethylamine	4.16E-06	1.99E-03	N/A	--
	1,4-dioxane	1.00E-03	4.79E-01	3.00E+03	1.60E-04
	Metals and Inorganic Ions				
	arsenic	2.50E-04	NV	3.00E-02	--
	chromium	4.80E-03	NV	N/A	--
	chromium (VI)	5.35E-03	NV	1.00E-01	--
	nitrate	5.42E+00	NV	1.00E+04	--
	perchlorate	3.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.07
				Total Risk Across All Exposure Routes/Pathways :	0.4

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-140
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.37E-06	1.30E-02	1.78E-08
	tetrachloroethene	1.70E-04	9.32E-07	5.40E-01	5.03E-07
	1,1-dichloroethene	2.50E-04	1.37E-06	N/A	--
	1,2,3-trichloropropane	2.50E-06	1.37E-08	7.00E+00	9.59E-08
	1,1,2-trichloroethane	2.50E-04	1.37E-06	7.20E-02	9.86E-08
	acetone	2.90E-03	1.59E-05	N/A	--
	bromodichloromethane	2.50E-04	1.37E-06	1.30E-01	1.78E-07
	bromoform	2.50E-04	1.37E-06	7.90E-03	1.08E-08
	bromomethane	2.50E-04	1.37E-06	N/A	--
	benzene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	carbon disulfide	2.50E-04	1.37E-06	N/A	--
	chloromethane	2.50E-04	1.37E-06	1.30E-02	1.78E-08
	cis-1,3-dichloropropene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	dibromochloromethane	2.50E-04	1.37E-06	9.40E-02	1.29E-07
	dichlorodifluoromethane	2.50E-04	1.37E-06	N/A	--
	methylene chloride	1.00E-03	5.48E-06	1.40E-02	7.67E-08
	methyl-tert-butyl ether	2.50E-04	1.37E-06	1.80E-03	2.47E-09
	toluene	2.50E-04	1.37E-06	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	1.37E-05	3.00E-03	4.11E-08
	n-nitrosodimethylamine	4.16E-06	2.28E-08	5.10E+01	1.16E-06
	1,4-dioxane	1.00E-03	5.48E-06	2.70E-02	1.48E-07
	Metals and Inorganic Ions				
	arsenic	2.50E-04	1.37E-06	9.45E+00	1.29E-05
	chromium	4.80E-03	2.63E-05	N/A	--
	chromium (VI)	5.35E-03	2.93E-05	N/A	--
	nitrate	5.42E+00	2.97E-02	N/A	--
	perchlorate	3.00E-03	1.64E-05	N/A	--
				Total Risk for Oral Route:	1.6E-05

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-140
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.08E-07	1.30E-02	1.41E-09
	tetrachloroethene	1.70E-04	2.03E-07	5.40E-01	1.10E-07
	1,1-dichloroethene	2.50E-04	1.08E-07	N/A	--
	1,2,3-trichloropropane	2.50E-06	8.89E-10	7.00E+00	6.22E-09
	1,1,2-trichloroethane	2.50E-04	5.79E-08	7.20E-02	4.17E-09
	acetone	2.90E-03	5.97E-08	N/A	--
	bromodichloromethane	2.50E-04	4.16E-08	1.30E-01	5.41E-09
	bromoform	2.50E-04	1.99E-08	7.90E-03	1.57E-10
	bromomethane	2.50E-04	2.53E-08	N/A	--
	benzene	2.50E-04	1.87E-07	1.00E-01	1.87E-08
	carbon disulfide	2.50E-04	1.54E-07	N/A	--
	chloromethane	2.50E-04	2.98E-08	1.30E-02	3.88E-10
	cis-1,3-dichloropropene	2.50E-04	1.54E-09	1.00E-01	1.54E-10
	dibromochloromethane	2.50E-04	3.16E-08	9.40E-02	2.97E-09
	dichlorodifluoromethane	2.50E-04	8.14E-08	N/A	--
	methylene chloride	1.00E-03	1.27E-07	1.40E-02	1.77E-09
	methyl-tert-butyl ether	2.50E-04	2.32E-08	1.80E-03	4.18E-11
	toluene	2.50E-04	2.80E-07	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	2.26E-06	3.00E-03	6.78E-09
	n-nitrosodimethylamine	4.16E-06	3.99E-11	5.10E+01	2.03E-09
	1,4-dioxane	1.00E-03	4.70E-10	2.70E-02	1.27E-11
	Metals and Inorganic Ions				
	arsenic	2.50E-04	9.04E-09	9.45E+00	8.54E-08
	chromium	4.80E-03	1.74E-07	N/A	--
	chromium (VI)	5.35E-03	3.87E-07	N/A	--
	nitrate	5.42E+00	1.96E-04	N/A	--
	perchlorate	3.00E-03	N/A	N/A	--
				Total Risk for Dermal Route:	2.5E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-140
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Cancer Slope Factor, $[mg/kg/day]^{-1}$ or Unit Risk Factor, $[ug/m^3]^{-1}$	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	4.11E-02	2.00E-06	8.22E-08
	tetrachloroethene	1.70E-04	2.79E-02	5.90E-06	1.65E-07
	1,1-dichloroethene	2.50E-04	4.11E-02	N/A	--
	1,2,3-trichloropropane	2.50E-06	4.11E-04	N/A	--
	1,1,2-trichloroethane	2.50E-04	4.11E-02	1.60E-05	6.58E-07
	acetone	2.90E-03	4.77E-01	N/A	--
	bromodichloromethane	2.50E-04	4.11E-02	3.70E-05	1.52E-06
	bromoform	2.50E-04	4.11E-02	1.11E-06	4.56E-08
	bromomethane	2.50E-04	4.11E-02	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	carbon disulfide	2.50E-04	4.11E-02	N/A	--
	chloroform	3.80E-04	6.25E-02	5.30E-06	3.31E-07
	chloromethane	2.50E-04	4.11E-02	1.80E-06	7.40E-08
	cis-1,3-dichloropropene	2.50E-04	4.11E-02	4.00E-06	1.64E-07
	dibromochloromethane	2.50E-04	4.11E-02	2.70E-05	1.11E-06
	dichlorodifluoromethane	2.50E-04	4.11E-02	N/A	--
	methylene chloride	1.00E-03	1.64E-01	1.00E-06	1.64E-07
	methyl-tert-butyl ether	2.50E-04	4.11E-02	2.60E-07	1.07E-08
	toluene	2.50E-04	4.11E-02	N/A	--
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	NV	2.40E-06	--
	n-nitrosodimethylamine	4.16E-06	NV	1.40E-02	--
	1,4-dioxane	1.00E-03	NV	7.70E-06	--
	Metals and Inorganic Ions				
	arsenic	2.50E-04	NV	3.30E-03	--
	chromium	4.80E-03	NV	1.20E-02	--
	chromium (VI)	5.35E-03	NV	1.50E-01	--
	nitrate	5.42E+00	NV	N/A	--
	perchlorate	3.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	5.5E-06
				Total Risk Across All Exposure Routes/Pathways :	**2E-05**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-141
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.60E-05	N/A	--
	tetrachloroethene	1.70E-04	1.09E-05	1.00E-02	1.09E-03
	1,1-dichloroethene	2.50E-04	1.60E-05	5.00E-02	3.20E-04
	1,2,3-trichloropropane	2.50E-06	1.60E-07	6.00E-03	2.66E-05
	1,1,2-trichloroethane	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	acetone	2.90E-03	1.85E-04	9.00E-01	2.06E-04
	bromodichloromethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	bromoform	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	bromomethane	2.50E-04	1.60E-05	1.40E-03	1.14E-02
	benzene	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	carbon disulfide	2.50E-04	1.60E-05	1.00E-01	1.60E-04
	chloroform	3.80E-04	2.43E-05	1.00E-02	2.43E-03
	chloromethane	2.50E-04	1.60E-05	N/A	--
	cis-1,3-dichloropropene	2.50E-04	1.60E-05	3.00E-02	5.33E-04
	dibromochloromethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	dichlorodifluoromethane	2.50E-04	1.60E-05	2.00E-01	7.99E-05
	methylene chloride	1.00E-03	6.39E-05	6.00E-02	1.07E-03
	methyl-tert-butyl ether	2.50E-04	1.60E-05	N/A	--
	toluene	2.50E-04	1.60E-05	8.00E-02	2.00E-04
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	1.60E-04	2.00E-02	7.99E-03
	n-nitrosodimethylamine	4.16E-06	2.66E-07	8.00E-06	3.32E-02
	1,4-dioxane	1.00E-03	6.39E-05	N/A	--
	Metals and Inorganic Ions				
	arsenic	2.50E-04	1.60E-05	3.00E-04	5.33E-02
	chromium	4.80E-03	3.07E-04	1.50E+00	2.05E-04
	chromium (VI)	5.35E-03	3.42E-04	3.00E-03	1.14E-01
	nitrate	5.42E+00	3.46E-01	1.60E+00	2.17E-01
	perchlorate	3.00E-03	1.92E-04	7.00E-04	2.74E-01
				Total Risk for Oral Route:	0.73

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-141
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.27E-06	N/A	--
	tetrachloroethene	1.70E-04	2.37E-06	1.00E-02	2.37E-04
	1,1-dichloroethene	2.50E-04	1.27E-06	5.00E-02	2.53E-05
	1,2,3-trichloropropane	2.50E-06	1.04E-08	6.00E-03	1.73E-06
	1,1,2-trichloroethane	2.50E-04	6.75E-07	4.00E-03	1.69E-04
	acetone	2.90E-03	6.96E-07	9.00E-01	7.74E-07
	bromodichloromethane	2.50E-04	4.85E-07	2.00E-02	2.43E-05
	bromoform	2.50E-04	2.32E-07	2.00E-02	1.16E-05
	bromomethane	2.50E-04	2.95E-07	1.40E-03	2.11E-04
	benzene	2.50E-04	2.18E-06	4.00E-03	5.46E-04
	carbon disulfide	2.50E-04	1.79E-06	1.00E-01	1.79E-05
	chloroform	3.80E-04	1.09E-06	1.00E-02	1.09E-04
	chloromethane	2.50E-04	3.48E-07	N/A	--
	cis-1,3-dichloropropene	2.50E-04	1.79E-08	3.00E-02	5.98E-07
	dibromochloromethane	2.50E-04	3.68E-07	2.00E-02	1.84E-05
	dichlorodifluoromethane	2.50E-04	9.49E-07	2.00E-01	4.75E-06
	methylene chloride	1.00E-03	1.48E-06	6.00E-02	2.46E-05
	methyl-tert-butyl ether	2.50E-04	2.71E-07	N/A	--
	toluene	2.50E-04	3.27E-06	8.00E-02	4.09E-05
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	2.64E-05	2.00E-02	1.32E-03
	n-nitrosodimethylamine	4.16E-06	4.65E-10	8.00E-06	5.81E-05
	1,4-dioxane	1.00E-03	5.48E-09	N/A	--
	Metals and Inorganic Ions				
	arsenic	2.50E-04	1.05E-07	3.00E-04	3.52E-04
	chromium	4.80E-03	2.03E-06	1.50E+00	1.35E-06
	chromium (VI)	5.35E-03	4.51E-06	3.00E-03	1.50E-03
	nitrate	5.42E+00	2.29E-03	1.60E+00	1.43E-03
	perchlorate	3.00E-03	N/A	7.00E-04	--
				Total Risk for Dermal Route:	0.0061

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-141
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	2.50E-04	1.20E-01	N/A	--
	tetrachloroethene	1.70E-04	8.15E-02	2.70E+02	3.02E-04
	1,1-dichloroethene	2.50E-04	1.20E-01	2.00E+02	5.99E-04
	1,2,3-trichloropropane	2.50E-06	1.20E-03	4.90E+00	2.45E-04
	1,1,2-trichloroethane	2.50E-04	1.20E-01	1.40E+01	8.56E-03
	acetone	2.90E-03	1.39E+00	3.10E+04	4.49E-05
	bromodichloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	bromoform	2.50E-04	1.20E-01	N/A	--
	bromomethane	2.50E-04	1.20E-01	5.00E+00	2.40E-02
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	carbon disulfide	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	chloroform	3.80E-04	1.82E-01	9.80E+01	1.86E-03
	chloromethane	2.50E-04	1.20E-01	9.00E+01	1.33E-03
	cis-1,3-dichloropropene	2.50E-04	1.20E-01	2.00E+01	5.99E-03
	dibromochloromethane	2.50E-04	1.20E-01	7.00E+01	1.71E-03
	dichlorodifluoromethane	2.50E-04	1.20E-01	2.00E+02	6.01E-04
	methylene chloride	1.00E-03	4.79E-01	4.00E+02	1.20E-03
	methyl-tert-butyl ether	2.50E-04	1.20E-01	3.00E+03	4.00E-05
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	Semivolatile Organic Compounds				
	bis(2-ethylhexyl) phthalate	2.50E-03	1.20E+00	7.00E+01	1.71E-02
	n-nitrosodimethylamine	4.16E-06	1.99E-03	N/A	--
	1,4-dioxane	1.00E-03	4.79E-01	3.00E+03	1.60E-04
	Metals and Inorganic Ions				
	arsenic	2.50E-04	NV	3.00E-02	--
	chromium	4.80E-03	NV	N/A	--
	chromium (VI)	5.35E-03	NV	1.00E-01	--
	nitrate	5.42E+00	NV	1.00E+04	--
	perchlorate	3.00E-03	NV	N/A	--
				Total Risk for Inhalation Route:	0.07
				Total Risk Across All Exposure Routes/Pathways :	0.8

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-142
Risk Results Detailed Summary - Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	3.1E-08	1.9E-09	8.2E-08	1.1E-07	<0.5%	1.8E-08	1.4E-09	8.2E-08	1.0E-07	<0.5%
tetrachloroethene	8.6E-07	1.5E-07	1.6E-07	1.2E-06	4%	5.0E-07	1.1E-07	1.6E-07	7.8E-07	4%
1,1-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2,3-trichloropropane	1.6E-07	8.4E-09	--	1.7E-07	1%	9.6E-08	6.2E-09	--	--	--
1,1,2-trichloroethane	1.7E-07	5.6E-09	6.6E-07	8.3E-07	3%	9.9E-08	4.2E-09	6.6E-07	7.6E-07	4%
acetone	--	--	--	--	--	--	--	--	--	--
bromodichloromethane	3.1E-07	7.3E-09	1.5E-06	1.8E-06	6%	1.8E-07	5.4E-09	1.5E-06	1.7E-06	8%
bromoform	1.9E-08	2.1E-10	4.6E-08	6.4E-08	<0.5%	1.1E-08	1.6E-10	4.6E-08	--	--
bromomethane	--	--	--	--	--	--	--	--	--	--
benzene	2.3E-07	2.5E-08	1.2E-06	1.5E-06	4%	1.4E-07	1.9E-08	1.2E-06	1.3E-06	6%
carbon disulfide	--	--	--	--	--	--	--	--	--	--
chloroform	1.1E-07	3.9E-09	3.3E-07	4.5E-07	1%	6.5E-08	2.9E-09	3.3E-07	4.0E-07	2%
chloromethane	3.1E-08	5.3E-10	7.4E-08	1.1E-07	<0.5%	1.8E-08	3.9E-10	7.4E-08	9.2E-08	<0.5%
cis-1,3-dichloropropene	2.3E-07	2.1E-10	1.6E-07	4.0E-07	1%	1.4E-07	1.5E-10	1.6E-07	3.0E-07	1%
dibromochloromethane	2.2E-07	4.0E-09	1.1E-06	1.3E-06	4%	1.3E-07	3.0E-09	1.1E-06	1.2E-06	6%
dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--
methylene chloride	1.3E-07	2.4E-09	1.6E-07	3.0E-07	1%	7.7E-08	1.8E-09	1.6E-07	2.4E-07	1%
methyl-tert-butyl ether	4.2E-09	5.7E-11	1.1E-08	1.5E-08	<0.5%	2.5E-09	4.2E-11	1.1E-08	1.3E-08	<0.5%
toluene	--	--	--	--	--	--	--	--	--	--
Subtotal VOCs	2.5E-06	2.1E-07	5.5E-06	8.2E-06	25%	1.5E-06	1.5E-07	5.5E-06	7.0E-06	33%
Semivolatile Organic Compounds						0				
bis(2-ethylhexyl) phthalate	7.0E-08	9.2E-09	--	8.0E-08	<0.5%	4.1E-08	6.8E-09	--	4.8E-08	<0.5%
n-nitrosodimethylamine	2.0E-06	2.8E-09	--	2.0E-06	6%	1.2E-06	2.0E-09	--	1.2E-06	5%
1,4-dioxane	2.5E-07	1.7E-11	--	2.5E-07	1%	1.5E-07	1.3E-11	--	1.5E-07	1%
Subtotal SVOCs	2.3E-06	1.2E-08	--	2.3E-06	7%	1.4E-06	8.8E-09	--	1.4E-06	6%
Metals and Inorganic Ions						0				
arsenic	2.2E-05	1.2E-07	--	2.2E-05	68%	1.3E-05	8.5E-08	--	1.3E-05	61%
chromium	--	--	--	--	--	--	--	--	--	--
chromium (VI)	--	--	--	--	--	--	--	--	--	--
nitrate	--	--	--	--	--	--	--	--	--	--
perchlorate	--	--	--	--	--	--	--	--	--	--
Subtotal Metals and Inorganics	2.2E-05	1.2E-07	--	2.2E-05	68%	1.3E-05	8.5E-08	--	1.3E-05	61%
Total:	2.7E-05	3.4E-07	5.5E-06	3.3E-05	100%	1.6E-05	2.5E-07	5.5E-06	2.1E-05	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-142
Risk Results Detailed Summary - Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	4.7E-04	8.0E-05	3.0E-04	8.5E-04	<0.5%	1.1E-03	2.4E-04	3.0E-04	1.6E-03	<0.5%
1,1-dichloroethene	1.4E-04	8.6E-06	6.0E-04	7.4E-04	<0.5%	3.2E-04	2.5E-05	6.0E-04	9.4E-04	<0.5%
1,2,3-trichloropropane	1.1E-05	5.9E-07	2.4E-04	2.6E-04	<0.5%	2.7E-05	1.7E-06	2.4E-04	2.7E-04	<0.5%
1,1,2-trichloroethane	1.7E-03	5.7E-05	8.6E-03	1.0E-02	3%	4.0E-03	1.7E-04	8.6E-03	1.3E-02	2%
acetone	8.8E-05	2.6E-07	4.5E-05	1.3E-04	<0.5%	2.1E-04	7.7E-07	4.5E-05	2.5E-04	<0.5%
bromodichloromethane	3.4E-04	8.2E-06	1.7E-03	2.1E-03	1%	8.0E-04	2.4E-05	1.7E-03	2.5E-03	<0.5%
bromoform	3.4E-04	3.9E-06	--	3.5E-04	<0.5%	8.0E-04	1.2E-05	--	8.1E-04	<0.5%
bromomethane	4.9E-03	7.2E-05	2.4E-02	2.9E-02	8%	1.1E-02	2.1E-04	2.4E-02	3.6E-02	4%
benzene	1.7E-03	1.9E-04	2.0E-03	3.9E-03	1%	4.0E-03	5.5E-04	2.0E-03	6.5E-03	1%
carbon disulfide	6.8E-05	6.1E-06	1.7E-04	2.5E-04	<0.5%	1.6E-04	1.8E-05	1.7E-04	3.5E-04	<0.5%
chloroform	1.0E-03	3.7E-05	1.9E-03	2.9E-03	1%	2.4E-03	1.1E-04	1.9E-03	4.4E-03	1%
chloromethane	--	--	1.3E-03	1.3E-03	<0.5%	--	--	1.3E-03	1.3E-03	<0.5%
cis-1,3-dichloropropene	2.3E-04	2.0E-07	6.0E-03	6.2E-03	2%	5.3E-04	6.0E-07	6.0E-03	6.5E-03	1%
dibromochloromethane	3.4E-04	6.2E-06	1.7E-03	2.1E-03	1%	8.0E-04	1.8E-05	1.7E-03	2.5E-03	<0.5%
dichlorodifluoromethane	3.4E-05	1.6E-06	6.0E-04	6.4E-04	<0.5%	8.0E-05	4.7E-06	6.0E-04	6.9E-04	<0.5%
methylene chloride	4.6E-04	8.3E-06	1.2E-03	1.7E-03	<0.5%	1.1E-03	2.5E-05	1.2E-03	2.3E-03	<0.5%
methyl-tert-butyl ether	--	--	4.0E-05	4.0E-05	<0.5%	--	--	4.0E-05	4.0E-05	<0.5%
toluene	8.6E-05	1.4E-05	4.0E-04	5.0E-04	<0.5%	2.0E-04	4.1E-05	4.0E-04	6.4E-04	<0.5%
Subtotal VOCs	1.2E-02	4.9E-04	5.1E-02	6.3E-02	17%	2.8E-02	1.4E-03	5.1E-02	8.0E-02	10%
Semivolatile Organic Compounds										
bis(2-ethylhexyl) phthalate	3.4E-03	4.5E-04	1.7E-02	2.1E-02	5%	8.0E-03	1.3E-03	1.7E-02	2.6E-02	3%
n-nitrosodimethylamine	1.4E-02	2.0E-05	--	1.4E-02	4%	3.3E-02	5.8E-05	--	3.3E-02	4%
1,4-dioxane	--	--	1.6E-04	1.6E-04	<0.5%	--	--	1.6E-04	1.6E-04	<0.5%
Subtotal SVOCs	1.8E-02	4.7E-04	1.7E-02	3.5E-02	9%	4.1E-02	1.4E-03	1.7E-02	6.0E-02	7%
Metals and Inorganic Ions										
arsenic	2.3E-02	1.2E-04	--	2.3E-02	6%	5.3E-02	3.5E-04	--	5.4E-02	7%
chromium	8.8E-05	4.6E-07	--	8.8E-05	<0.5%	2.0E-04	1.4E-06	--	2.1E-04	<0.5%
chromium (VI)	4.9E-02	5.1E-04	--	4.9E-02	13%	1.1E-01	1.5E-03	--	1.2E-01	14%
nitrate	9.3E-02	4.8E-04	--	9.3E-02	24%	2.2E-01	1.4E-03	--	2.2E-01	27%
perchlorate	1.2E-01	--	--	1.2E-01	31%	2.7E-01	--	--	2.7E-01	34%
Subtotal Metals and Inorganics	2.8E-01	1.1E-03	--	2.8E-01	74%	6.6E-01	3.3E-03	--	6.6E-01	83%
Total:	0.3	0.001	0.07	0.4	100%	0.7	0.006	0.07	0.8	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-143
Risk Results Summary - Based on EPAMW16 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	2.5E-06	2.1E-07	5.5E-06	8.2E-06	1.5E-06	1.5E-07	5.5E-06	7.0E-06
Subtotal SVOCs	2.3E-06	1.2E-08	--	2.3E-06	1.4E-06	8.8E-09	--	1.4E-06
Subtotal Metals and Inorganics	2.2E-05	1.2E-07	--	2.2E-05	1.3E-05	8.5E-08	--	1.3E-05
Total:	3E-05	3E-07	6E-06	3E-05	2E-05	2E-07	6E-06	2E-05

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
Subtotal VOCs	1.2E-02	4.9E-04	5.1E-02	6.3E-02	2.8E-02	1.4E-03	5.1E-02	8.0E-02
Subtotal SVOCs	1.8E-02	4.7E-04	1.7E-02	3.5E-02	4.1E-02	1.4E-03	1.7E-02	6.0E-02
Subtotal Metals and Inorganics	2.8E-01	1.1E-03	--	2.8E-01	6.6E-01	3.3E-03	--	6.6E-01
Total:	0.3	0.002	0.07	0.4	0.7	0.006	0.07	0.8

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
SVOCs = semivolatile orangic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-144
Groundwater Exposure Point Concentrations- Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 19	***Volatile Organic Compounds***		
	trichloroethene	4.00E-03	2007
	tetrachloroethene	6.40E-01	2007
	1,2-dichloroethane	2.50E-04	2007[a]
	trans-1,2-dichloroethene	2.50E-04	2007[a]
	cis-1,2-dichloroethene	2.50E-04	2007[a]
	1,2,4-trimethylbenzene	3.60E-01	2004
	1,2-dibromomethane	5.00E-04	2007[a]
	1,3,5-trimethylbenzene	7.90E-02	2004
	acetone	1.00E-03	2007[a]
	benzene	2.50E-04	2007[a]
	chloroform	5.00E-04	2007[a]
	diisopropylether	5.00E-04	2007[a]
	ethylbenzene	2.50E-04	2007[a]
	isopropylbenzene	2.50E-04	2007[a]
	m,p-xylene	1.50E+00	2004
	n-butylbenzene	3.50E-03	2004
	n-propylbenzene	1.70E-02	2004
	naphthalene	2.40E-02	2004
	o-xylene	5.80E-01	2004
	sec-butylbenzene	1.00E-03	2004
	tert-butyl alcohol	4.71E-02	2007
	toluene	2.50E-04	2007[a]
	total xylene	2.50E-04	2007[a]
	Inorganics		
	nitrate	1.85E+01	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-145
Estimates of Reasonable Maximum Exposure-Carcinogenic Effects-Adult Resident-Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	3.76E-05	1.30E-02	4.88E-07
	tetrachloroethene	6.40E-01	6.01E-03	5.40E-01	3.24E-03
	1,2-dichloroethane	2.50E-04	2.35E-06	4.70E-02	1.10E-07
	trans-1,2-dichloroethene	2.50E-04	2.35E-06	N/A	--
	cis-1,2-dichloroethene	2.50E-04	2.35E-06	N/A	--
	1,2,4-trimethylbenzene	3.60E-01	3.38E-03	N/A	--
	1,2-dibromomethane	5.00E-04	4.70E-06	N/A	--
	1,3,5-trimethylbenzene	7.90E-02	7.42E-04	N/A	--
	acetone	1.00E-03	9.39E-06	N/A	--
	benzene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	chloroform	5.00E-04	4.70E-06	3.10E-02	1.46E-07
	diisopropylether	5.00E-04	4.70E-06	N/A	--
	ethylbenzene	2.50E-04	2.35E-06	1.10E-02	2.58E-08
	isopropylbenzene	2.50E-04	2.35E-06	N/A	--
	m,p-xylene	1.50E+00	1.41E-02	N/A	--
	n-butylbenzene	3.50E-03	3.29E-05	N/A	--
	n-propylbenzene	1.70E-02	1.60E-04	N/A	--
	naphthalene	2.40E-02	2.25E-04	N/A	--
	o-xylene	5.80E-01	5.45E-03	N/A	--
	sec-butylbenzene	1.00E-03	9.39E-06	N/A	--
	tert-butyl alcohol	4.71E-02	4.42E-04	N/A	--
	toluene	2.50E-04	2.35E-06	N/A	--
	total xylene	2.50E-04	2.35E-06	N/A	--
	Inorganic Compounds				
	nitrate	1.85E+01	1.74E-01	N/A	--
				Total Risk for Oral Route:	3.2E-03

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-145
Estimates of Reasonable Maximum Exposure-Carcinogenic Effects-Adult Resident-Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Cancer Risk [-]
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	2.35E-06	1.30E-02	3.06E-08
	tetrachloroethene	6.40E-01	1.03E-03	5.40E-01	5.59E-04
	1,2-dichloroethane	2.50E-04	5.15E-08	4.70E-02	2.42E-09
	trans-1,2-dichloroethene	2.50E-04	9.44E-08	N/A	--
	cis-1,2-dichloroethene	2.50E-04	1.83E-07	N/A	--
	1,2,4-trimethylbenzene	3.60E-01	2.35E-03	N/A	--
	1,2-dibromomethane	5.00E-04	6.55E-08	N/A	--
	1,3,5-trimethylbenzene	7.90E-02	3.66E-04	N/A	--
	acetone	1.00E-03	2.79E-08	N/A	--
	benzene	2.50E-04	2.54E-07	1.00E-01	2.54E-08
	chloroform	5.00E-04	1.67E-07	3.10E-02	5.17E-09
	diisopropylether	5.00E-04	1.32E-07	N/A	--
	ethylbenzene	2.50E-04	6.01E-07	1.10E-02	6.61E-09
	isopropylbenzene	2.50E-04	1.72E-06	N/A	--
	m,p-xylene	1.50E+00	3.90E-03	N/A	--
	n-butylbenzene	3.50E-03	3.75E-05	N/A	--
	n-propylbenzene	1.70E-02	7.64E-05	N/A	--
	naphthalene	2.40E-02	5.53E-05	N/A	--
	o-xylene	5.80E-01	2.00E-03	N/A	--
	sec-butylbenzene	1.00E-03	1.43E-05	N/A	--
	tert-butyl alcohol	4.71E-02	N/A	N/A	--
	toluene	2.50E-04	3.80E-07	N/A	--
	total xylene	2.50E-04	6.50E-07	N/A	--
	Inorganic Compounds				
	nitrate	1.85E+01	9.07E-04	N/A	--
				Total Risk for Dermal Route:	5.6E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-145
Estimates of Reasonable Maximum Exposure-Carcinogenic Effects-Adult Resident-Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	6.58E-01	2.00E-06	1.32E-06
	tetrachloroethene	6.40E-01	1.05E+02	5.90E-06	6.20E-04
	1,2-dichloroethane	2.50E-04	4.11E-02	2.10E-05	8.63E-07
	trans-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	cis-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	1,2,4-trimethylbenzene	3.60E-01	5.92E+01	N/A	--
	1,2-dibromomethane	5.00E-04	8.22E-02	N/A	--
	1,3,5-trimethylbenzene	7.90E-02	1.30E+01	N/A	--
	acetone	1.00E-03	1.64E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	chloroform	5.00E-04	8.22E-02	5.30E-06	4.36E-07
	diisopropylether	5.00E-04	8.22E-02	N/A	--
	ethylbenzene	2.50E-04	4.11E-02	2.50E-06	1.03E-07
	isopropylbenzene	2.50E-04	4.11E-02	N/A	--
	m,p-xylene	1.50E+00	2.47E+02	N/A	--
	n-butylbenzene	3.50E-03	5.75E-01	N/A	--
	n-propylbenzene	1.70E-02	2.79E+00	N/A	--
	naphthalene	2.40E-02	3.95E+00	3.40E-05	1.34E-04
	o-xylene	5.80E-01	9.53E+01	N/A	--
	sec-butylbenzene	1.00E-03	1.64E-01	N/A	--
	tert-butyl alcohol	4.71E-02	7.74E+00	N/A	--
	toluene	2.50E-04	4.11E-02	N/A	--
	total xylene	2.50E-04	4.11E-02	N/A	--
	Inorganic Compounds				
	nitrate	1.85E+01	3.04E+03	N/A	--
				Total Risk for Inhalation Route:	7.6E-04
				Total Risk Across All Exposure Routes/Pathways :	**5E-03**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-146
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	1.10E-04	N/A	--
	tetrachloroethene	6.40E-01	1.75E-02	1.00E-02	1.75E+00
	1,2-dichloroethane	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	trans-1,2-dichloroethene	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	cis-1,2-dichloroethene	2.50E-04	6.85E-06	1.00E-02	6.85E-04
	1,2,4-trimethylbenzene	3.60E-01	9.86E-03	5.00E-02	1.97E-01
	1,2-dibromomethane	5.00E-04	1.37E-05	1.00E-02	1.37E-03
	1,3,5-trimethylbenzene	7.90E-02	2.16E-03	5.00E-02	4.33E-02
	acetone	1.00E-03	2.74E-05	9.00E-01	3.04E-05
	benzene	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	chloroform	5.00E-04	1.37E-05	1.00E-02	1.37E-03
	diisopropylether	5.00E-04	1.37E-05	N/A	--
	ethylbenzene	2.50E-04	6.85E-06	1.00E-01	6.85E-05
	isopropylbenzene	2.50E-04	6.85E-06	1.00E-01	6.85E-05
	m,p-xylene	1.50E+00	4.11E-02	2.00E-01	2.05E-01
	n-butylbenzene	3.50E-03	9.59E-05	4.00E-02	2.40E-03
	n-propylbenzene	1.70E-02	4.66E-04	4.00E-02	1.16E-02
	naphthalene	2.40E-02	6.58E-04	2.00E-02	3.29E-02
	o-xylene	5.80E-01	1.59E-02	2.00E-01	7.95E-02
	sec-butylbenzene	1.00E-03	2.74E-05	4.00E-02	6.85E-04
	tert-butyl alcohol	4.71E-02	1.29E-03	N/A	--
	toluene	2.50E-04	6.85E-06	8.00E-02	8.56E-05
	total xylene	2.50E-04	6.85E-06	2.00E-01	3.42E-05
	Inorganic Compounds				
	nitrate	1.85E+01	5.07E-01	1.60E+00	3.17E-01
				Total Risk for Oral Route:	3

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-146
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	6.86E-06	N/A	--
	tetrachloroethene	6.40E-01	3.02E-03	1.00E-02	3.02E-01
	1,2-dichloroethane	2.50E-04	1.50E-07	2.00E-02	7.51E-06
	trans-1,2-dichloroethene	2.50E-04	2.75E-07	2.00E-02	1.38E-05
	cis-1,2-dichloroethene	2.50E-04	5.33E-07	1.00E-02	5.33E-05
	1,2,4-trimethylbenzene	3.60E-01	6.85E-03	5.00E-02	1.37E-01
	1,2-dibromomethane	5.00E-04	1.91E-07	1.00E-02	1.91E-05
	1,3,5-trimethylbenzene	7.90E-02	1.07E-03	5.00E-02	2.13E-02
	acetone	1.00E-03	8.14E-08	9.00E-01	9.04E-08
	benzene	2.50E-04	7.40E-07	4.00E-03	1.85E-04
	chloroform	5.00E-04	4.86E-07	1.00E-02	4.86E-05
	diisopropylether	5.00E-04	3.86E-07	N/A	--
	ethylbenzene	2.50E-04	1.75E-06	1.00E-01	1.75E-05
	isopropylbenzene	2.50E-04	5.01E-06	1.00E-01	5.01E-05
	m,p-xylene	1.50E+00	1.14E-02	2.00E-01	5.68E-02
	n-butylbenzene	3.50E-03	1.09E-04	4.00E-02	2.73E-03
	n-propylbenzene	1.70E-02	2.23E-04	4.00E-02	5.57E-03
	naphthalene	2.40E-02	1.61E-04	2.00E-02	8.07E-03
	o-xylene	5.80E-01	5.84E-03	2.00E-01	2.92E-02
	sec-butylbenzene	1.00E-03	4.17E-05	4.00E-02	1.04E-03
	tert-butyl alcohol	4.71E-02	N/A	N/A	--
	toluene	2.50E-04	1.11E-06	8.00E-02	1.39E-05
	total xylene	2.50E-04	1.89E-06	2.00E-01	9.47E-06
	Inorganic Compounds				
	nitrate	1.85E+01	2.65E-03	1.60E+00	1.65E-03
				Total Risk for Dermal Route:	0.6

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-146
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Adult Resident- Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	1.92E+00	N/A	--
	tetrachloroethene	6.40E-01	3.07E+02	2.70E+02	1.14E+00
	1,2-dichloroethane	2.50E-04	1.20E-01	2.40E+03	4.99E-05
	trans-1,2-dichloroethene	2.50E-04	1.20E-01	5.95E+01	2.01E-03
	cis-1,2-dichloroethene	2.50E-04	1.20E-01	3.50E+01	3.42E-03
	1,2,4-trimethylbenzene	3.60E-01	1.73E+02	1.00E+01	1.73E+01
	1,2-dibromomethane	5.00E-04	2.40E-01	N/A	--
	1,3,5-trimethylbenzene	7.90E-02	3.79E+01	5.95E+00	6.37E+00
	acetone	1.00E-03	4.79E-01	3.10E+04	1.55E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	chloroform	5.00E-04	2.40E-01	9.80E+01	2.45E-03
	diisopropylether	5.00E-04	2.40E-01	4.00E-01	5.99E-01
	ethylbenzene	2.50E-04	1.20E-01	2.00E+03	5.99E-05
	isopropylbenzene	2.50E-04	1.20E-01	4.00E+02	3.00E-04
	m,p-xylene	1.50E+00	7.19E+02	7.00E+02	1.03E+00
	n-butylbenzene	3.50E-03	1.68E+00	N/A	--
	n-propylbenzene	1.70E-02	8.15E+00	3.50E+01	2.33E-01
	naphthalene	2.40E-02	1.15E+01	3.00E+00	3.84E+00
	o-xylene	5.80E-01	2.78E+02	7.00E+02	3.97E-01
	sec-butylbenzene	1.00E-03	4.79E-01	1.40E+02	3.42E-03
	tert-butyl alcohol	4.71E-02	2.26E+01	N/A	--
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	total xylene	2.50E-04	1.20E-01	1.00E+02	1.20E-03
	Inorganic Compounds				
	nitrate	1.85E+01	8.87E+03	1.00E+04	8.87E-01
				Total Risk for Inhalation Route:	32
				Total Risk Across All Exposure Routes/Pathways :	**35**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-147
Estimates of Reasonable Maximum Exposure-Carcinogenic Effects-Child Resident-Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	2.19E-05	1.30E-02	2.85E-07
	tetrachloroethene	6.40E-01	3.50E-03	5.40E-01	1.89E-03
	1,2-dichloroethane	2.50E-04	1.37E-06	4.70E-02	6.44E-08
	trans-1,2-dichloroethene	2.50E-04	1.37E-06	N/A	--
	cis-1,2-dichloroethene	2.50E-04	1.37E-06	N/A	--
	1,2,4-trimethylbenzene	3.60E-01	1.97E-03	N/A	--
	1,2-dibromomethane	5.00E-04	2.74E-06	N/A	--
	1,3,5-trimethylbenzene	7.90E-02	4.33E-04	N/A	--
	acetone	1.00E-03	5.48E-06	N/A	--
	benzene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	chloroform	5.00E-04	2.74E-06	3.10E-02	8.49E-08
	diisopropylether	5.00E-04	2.74E-06	N/A	--
	ethylbenzene	2.50E-04	1.37E-06	1.10E-02	1.51E-08
	isopropylbenzene	2.50E-04	1.37E-06	N/A	--
	m,p-xylene	1.50E+00	8.22E-03	N/A	--
	n-butylbenzene	3.50E-03	1.92E-05	N/A	--
	n-propylbenzene	1.70E-02	9.32E-05	N/A	--
	naphthalene	2.40E-02	1.32E-04	N/A	--
	o-xylene	5.80E-01	3.18E-03	N/A	--
	sec-butylbenzene	1.00E-03	5.48E-06	N/A	--
	tert-butyl alcohol	4.71E-02	2.58E-04	N/A	--
	toluene	2.50E-04	1.37E-06	N/A	--
	total xylene	2.50E-04	1.37E-06	N/A	--
	Inorganic Compounds				
	nitrate	1.85E+01	1.01E-01	N/A	--
				Total Risk for Oral Route:	1.9E-03

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-147
Estimates of Reasonable Maximum Exposure-Carcinogenic Effects-Child Resident-Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Cancer Risk [-]**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	1.74E-06	1.30E-02	2.26E-08
	tetrachloroethene	6.40E-01	7.63E-04	5.40E-01	4.12E-04
	1,2-dichloroethane	2.50E-04	3.80E-08	4.70E-02	1.78E-09
	trans-1,2-dichloroethene	2.50E-04	6.96E-08	N/A	--
	cis-1,2-dichloroethene	2.50E-04	1.35E-07	N/A	--
	1,2,4-trimethylbenzene	3.60E-01	1.73E-03	N/A	--
	1,2-dibromomethane	5.00E-04	4.83E-08	N/A	--
	1,3,5-trimethylbenzene	7.90E-02	2.70E-04	N/A	--
	acetone	1.00E-03	2.06E-08	N/A	--
	benzene	2.50E-04	1.87E-07	1.00E-01	1.87E-08
	chloroform	5.00E-04	1.23E-07	3.10E-02	3.81E-09
	diisopropylether	5.00E-04	9.76E-08	N/A	--
	ethylbenzene	2.50E-04	4.43E-07	1.10E-02	4.87E-09
	isopropylbenzene	2.50E-04	1.27E-06	N/A	--
	m,p-xylene	1.50E+00	2.88E-03	N/A	--
	n-butylbenzene	3.50E-03	2.76E-05	N/A	--
	n-propylbenzene	1.70E-02	5.64E-05	N/A	--
	naphthalene	2.40E-02	4.08E-05	N/A	--
	o-xylene	5.80E-01	1.48E-03	N/A	--
	sec-butylbenzene	1.00E-03	1.05E-05	N/A	--
	tert-butyl alcohol	4.71E-02	N/A	N/A	--
	toluene	2.50E-04	2.80E-07	N/A	--
	total xylene	2.50E-04	4.79E-07	N/A	--
	Inorganic Compounds				
	nitrate	1.85E+01	6.69E-04	N/A	--
				Total Risk for Dermal Route:	4.1E-04

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
µg/m^3 = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-147
Estimates of Reasonable Maximum Exposure-Carcinogenic Effects-Child Resident-Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	6.58E-01	2.00E-06	1.32E-06
	tetrachloroethene	6.40E-01	1.05E+02	5.90E-06	6.20E-04
	1,2-dichloroethane	2.50E-04	4.11E-02	2.10E-05	8.63E-07
	trans-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	cis-1,2-dichloroethene	2.50E-04	4.11E-02	N/A	--
	1,2,4-trimethylbenzene	3.60E-01	5.92E+01	N/A	--
	1,2-dibromomethane	5.00E-04	8.22E-02	N/A	--
	1,3,5-trimethylbenzene	7.90E-02	1.30E+01	N/A	--
	acetone	1.00E-03	1.64E-01	N/A	--
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	chloroform	5.00E-04	8.22E-02	5.30E-06	4.36E-07
	diisopropylether	5.00E-04	8.22E-02	N/A	--
	ethylbenzene	2.50E-04	4.11E-02	2.50E-06	1.03E-07
	isopropylbenzene	2.50E-04	4.11E-02	N/A	--
	m,p-xylene	1.50E+00	2.47E+02	N/A	--
	n-butylbenzene	3.50E-03	5.75E-01	N/A	--
	n-propylbenzene	1.70E-02	2.79E+00	N/A	--
	naphthalene	2.40E-02	3.95E+00	3.40E-05	1.34E-04
	o-xylene	5.80E-01	9.53E+01	N/A	--
	sec-butylbenzene	1.00E-03	1.64E-01	N/A	--
	tert-butyl alcohol	4.71E-02	7.74E+00	N/A	--
	toluene	2.50E-04	4.11E-02	N/A	--
	total xylene	2.50E-04	4.11E-02	N/A	--
	Inorganic Compounds				
	nitrate	1.85E+01	3.04E+03	N/A	--
				Total Risk for Inhalation Route:	7.6E-04
				Total Risk Across All Exposure Routes/Pathways :	**3E-03**

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-148
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Oral	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	2.56E-04	N/A	--
	tetrachloroethene	6.40E-01	4.09E-02	1.00E-02	4.09E+00
	1,2-dichloroethane	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	trans-1,2-dichloroethene	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	cis-1,2-dichloroethene	2.50E-04	1.60E-05	1.00E-02	1.60E-03
	1,2,4-trimethylbenzene	3.60E-01	2.30E-02	5.00E-02	4.60E-01
	1,2-dibromomethane	5.00E-04	3.20E-05	1.00E-02	3.20E-03
	1,3,5-trimethylbenzene	7.90E-02	5.05E-03	5.00E-02	1.01E-01
	acetone	1.00E-03	6.39E-05	9.00E-01	7.10E-05
	benzene	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	chloroform	5.00E-04	3.20E-05	1.00E-02	3.20E-03
	diisopropylether	5.00E-04	3.20E-05	N/A	--
	ethylbenzene	2.50E-04	1.60E-05	1.00E-01	1.60E-04
	isopropylbenzene	2.50E-04	1.60E-05	1.00E-01	1.60E-04
	m,p-xylene	1.50E+00	9.59E-02	2.00E-01	4.79E-01
	n-butylbenzene	3.50E-03	2.24E-04	4.00E-02	5.59E-03
	n-propylbenzene	1.70E-02	1.09E-03	4.00E-02	2.72E-02
	naphthalene	2.40E-02	1.53E-03	2.00E-02	7.67E-02
	o-xylene	5.80E-01	3.71E-02	2.00E-01	1.85E-01
	sec-butylbenzene	1.00E-03	6.39E-05	4.00E-02	1.60E-03
	tert-butyl alcohol	4.71E-02	3.01E-03	N/A	--
	toluene	2.50E-04	1.60E-05	8.00E-02	2.00E-04
	total xylene	2.50E-04	1.60E-05	2.00E-01	7.99E-05
	Inorganic Compounds				
	nitrate	1.85E+01	1.18E+00	1.60E+00	7.39E-01
				Total Risk for Oral Route:	6

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-148
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Dermal	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	2.03E-05	N/A	--
	tetrachloroethene	6.40E-01	8.90E-03	1.00E-02	8.90E-01
	1,2-dichloroethane	2.50E-04	4.43E-07	2.00E-02	2.22E-05
	trans-1,2-dichloroethene	2.50E-04	8.12E-07	2.00E-02	4.06E-05
	cis-1,2-dichloroethene	2.50E-04	1.57E-06	1.00E-02	1.57E-04
	1,2,4-trimethylbenzene	3.60E-01	2.02E-02	5.00E-02	4.04E-01
	1,2-dibromomethane	5.00E-04	5.63E-07	1.00E-02	5.63E-05
	1,3,5-trimethylbenzene	7.90E-02	3.15E-03	5.00E-02	6.29E-02
	acetone	1.00E-03	2.40E-07	9.00E-01	2.67E-07
	benzene	2.50E-04	2.18E-06	4.00E-03	5.46E-04
	chloroform	5.00E-04	1.43E-06	1.00E-02	1.43E-04
	diisopropylether	5.00E-04	1.14E-06	N/A	--
	ethylbenzene	2.50E-04	5.17E-06	1.00E-01	5.17E-05
	isopropylbenzene	2.50E-04	1.48E-05	1.00E-01	1.48E-04
	m,p-xylene	1.50E+00	3.35E-02	2.00E-01	1.68E-01
	n-butylbenzene	3.50E-03	3.22E-04	4.00E-02	8.06E-03
	n-propylbenzene	1.70E-02	6.58E-04	4.00E-02	1.64E-02
	naphthalene	2.40E-02	4.76E-04	2.00E-02	2.38E-02
	o-xylene	5.80E-01	1.72E-02	2.00E-01	8.61E-02
	sec-butylbenzene	1.00E-03	1.23E-04	4.00E-02	3.07E-03
	tert-butyl alcohol	4.71E-02	N/A	N/A	--
	toluene	2.50E-04	3.27E-06	8.00E-02	4.09E-05
	total xylene	2.50E-04	5.59E-06	2.00E-01	2.80E-05
	Inorganic Compounds				
	nitrate	1.85E+01	7.81E-03	1.60E+00	4.88E-03
				Total Risk for Dermal Route:	1.7

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-148
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child
Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Hazard Quotient
Inhalation	***Volatile Organic Compounds***				
	trichloroethene	4.00E-03	1.92E+00	N/A	--
	tetrachloroethene	6.40E-01	3.07E+02	2.70E+02	1.14E+00
	1,2-dichloroethane	2.50E-04	1.20E-01	2.40E+03	4.99E-05
	trans-1,2-dichloroethene	2.50E-04	1.20E-01	5.95E+01	2.01E-03
	cis-1,2-dichloroethene	2.50E-04	1.20E-01	3.50E+01	3.42E-03
	1,2,4-trimethylbenzene	3.60E-01	1.73E+02	1.00E+01	1.73E+01
	1,2-dibromomethane	5.00E-04	2.40E-01	N/A	--
	1,3,5-trimethylbenzene	7.90E-02	3.79E+01	5.95E+00	6.37E+00
	acetone	1.00E-03	4.79E-01	3.10E+04	1.55E-05
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	chloroform	5.00E-04	2.40E-01	9.80E+01	2.45E-03
	diisopropylether	5.00E-04	2.40E-01	4.00E-01	5.99E-01
	ethylbenzene	2.50E-04	1.20E-01	2.00E+03	5.99E-05
	isopropylbenzene	2.50E-04	1.20E-01	4.00E+02	3.00E-04
	m,p-xylene	1.50E+00	7.19E+02	7.00E+02	1.03E+00
	n-butylbenzene	3.50E-03	1.68E+00	N/A	--
	n-propylbenzene	1.70E-02	8.15E+00	3.50E+01	2.33E-01
	naphthalene	2.40E-02	1.15E+01	3.00E+00	3.84E+00
	o-xylene	5.80E-01	2.78E+02	7.00E+02	3.97E-01
	sec-butylbenzene	1.00E-03	4.79E-01	1.40E+02	3.42E-03
	tert-butyl alcohol	4.71E-02	2.26E+01	N/A	--
	toluene	2.50E-04	1.20E-01	3.00E+02	4.00E-04
	total xylene	2.50E-04	1.20E-01	1.00E+02	1.20E-03
	Inorganic Compounds				
	nitrate	1.85E+01	8.87E+03	1.00E+04	8.87E-01
				Total Risk for Inhalation Route:	32
				Total Risk Across All Exposure Routes/Pathways :	40

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-149
Risk Results Detailed Summary - Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	4.9E-07	3.1E-08	1.3E-06	1.8E-06	<0.5%	2.8E-07	2.3E-08	1.3E-06	1.6E-06	<0.5%
tetrachloroethene	**3.2E-03**	**5.6E-04**	**6.2E-04**	**4.4E-03**	97%	**1.9E-03**	**4.1E-04**	**6.2E-04**	**2.9E-03**	95%
1,2-dichloroethane	1.1E-07	2.4E-09	8.6E-07	9.8E-07	<0.5%	6.4E-08	1.8E-09	8.6E-07	9.3E-07	<0.5%
trans-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
cis-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2,4-trimethylbenzene	--	--	--	--	--	--	--	--	--	--
1,2-dibromomethane	--	--	--	--	--	--	--	--	--	--
1,3,5-trimethylbenzene	--	--	--	--	--	--	--	--	--	--
acetone	--	--	--	--	--	--	--	--	--	--
benzene	2.3E-07	2.5E-08	1.2E-06	1.5E-06	<0.5%	1.4E-07	1.9E-08	1.2E-06	1.3E-06	<0.5%
chloroform	1.5E-07	5.2E-09	4.4E-07	5.9E-07	<0.5%	8.5E-08	3.8E-09	4.4E-07	5.2E-07	<0.5%
diisopropylether	--	--	--	--	--	--	--	--	--	--
ethylbenzene	2.6E-08	6.6E-09	1.0E-07	1.4E-07	<0.5%	1.5E-08	4.9E-09	1.0E-07	1.2E-07	<0.5%
isopropylbenzene	--	--	--	--	--	--	--	--	--	--
m,p-xylene	--	--	--	--	--	--	--	--	--	--
n-butylbenzene	--	--	--	--	--	--	--	--	--	--
n-propylbenzene	--	--	--	--	--	--	--	--	--	--
naphthalene	--	--	**1.3E-04**	**1.3E-04**	3%	--	--	**1.3E-04**	**1.3E-04**	4%
o-xylene	--	--	--	--	--	--	--	--	--	--
sec-butylbenzene	--	--	--	--	--	--	--	--	--	--
tert-butyl alcohol	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
total xylene	--	--	--	--	--	--	--	--	--	--
Inorganics										
nitrate	--	--	--	--	<0.5%	--	--	--	--	<0.5%
Total:	**3E-03**	**6E-04**	**8E-04**	**5E-03**	100%	**2E-03**	**4E-04**	**8E-04**	**3E-03**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-149
Risk Results Detailed Summary - Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
trichloroethene	--	--	--	--	--	--	--	--	--	--
tetrachloroethene	**1.8E+00**	3.0E-01	1.1E+00	**3.2E+00**	9%	**4.1E+00**	8.9E-01	1.1E+00	**6.1E+00**	15%
1,2-dichloroethane	3.4E-04	7.5E-06	5.0E-05	4.0E-04	<0.5%	8.0E-04	2.2E-05	5.0E-05	8.7E-04	<0.5%
trans-1,2-dichloroethene	3.4E-04	1.4E-05	2.0E-03	2.4E-03	<0.5%	8.0E-04	4.1E-05	2.0E-03	2.9E-03	<0.5%
cis-1,2-dichloroethene	6.8E-04	5.3E-05	3.4E-03	4.2E-03	<0.5%	1.6E-03	1.6E-04	3.4E-03	5.2E-03	<0.5%
1,2,4-trimethylbenzene	2.0E-01	1.4E-01	**1.7E+01**	**1.8E+01**	50%	4.6E-01	4.0E-01	**1.7E+01**	**1.8E+01**	46%
1,2-dibromomethane	1.4E-03	1.9E-05	--	1.4E-03	<0.5%	3.2E-03	5.6E-05	--	3.3E-03	<0.5%
1,3,5-trimethylbenzene	4.3E-02	2.1E-02	**6.4E+00**	**6.4E+00**	18%	1.0E-01	6.3E-02	**6.4E+00**	**6.5E+00**	16%
acetone	3.0E-05	9.0E-08	1.5E-05	4.6E-05	<0.5%	7.1E-05	2.7E-07	1.5E-05	8.7E-05	<0.5%
benzene	1.7E-03	1.9E-04	2.0E-03	3.9E-03	<0.5%	4.0E-03	5.5E-04	2.0E-03	6.5E-03	<0.5%
chloroform	1.4E-03	4.9E-05	2.4E-03	3.9E-03	<0.5%	3.2E-03	1.4E-04	2.4E-03	5.8E-03	<0.5%
diisopropylether	--	--	6.0E-01	6.0E-01	2%	--	--	6.0E-01	6.0E-01	2%
ethylbenzene	6.8E-05	1.8E-05	6.0E-05	1.5E-04	<0.5%	1.6E-04	5.2E-05	6.0E-05	2.7E-04	<0.5%
isopropylbenzene	6.8E-05	5.0E-05	3.0E-04	4.2E-04	<0.5%	1.6E-04	1.5E-04	3.0E-04	6.1E-04	<0.5%
m,p-xylene	2.1E-01	5.7E-02	1.0E+00	1.3E+00	4%	4.8E-01	1.7E-01	1.0E+00	**1.7E+00**	4%
n-butylbenzene	2.4E-03	2.7E-03	--	5.1E-03	<0.5%	5.6E-03	8.1E-03	--	1.4E-02	<0.5%
n-propylbenzene	1.2E-02	5.6E-03	2.3E-01	2.5E-01	1%	2.7E-02	1.6E-02	2.3E-01	2.8E-01	1%
naphthalene	3.3E-02	8.1E-03	**3.8E+00**	**3.9E+00**	11%	7.7E-02	2.4E-02	**3.8E+00**	**3.9E+00**	10%
o-xylene	7.9E-02	2.9E-02	4.0E-01	5.1E-01	1%	1.9E-01	8.6E-02	4.0E-01	6.7E-01	2%
sec-butylbenzene	6.8E-04	1.0E-03	3.4E-03	5.2E-03	<0.5%	1.6E-03	3.1E-03	3.4E-03	8.1E-03	<0.5%
tert-butyl alcohol	--	--	--	--	--	--	--	--	--	--
toluene	8.6E-05	1.4E-05	4.0E-04	5.0E-04	<0.5%	2.0E-04	4.1E-05	4.0E-04	6.4E-04	<0.5%
total xylene	3.4E-05	9.5E-06	1.2E-03	1.2E-03	<0.5%	8.0E-05	2.8E-05	1.2E-03	1.3E-03	<0.5%
Inorganics										
nitrate	3.2E-01	1.7E-03	8.9E-01	1.2E+00	3%	7.4E-01	4.9E-03	8.9E-01	**1.6E+00**	4%
Total:	**3**	0.6	**32**	**35**	100%	**6**	**2**	**32**	**40**	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-150
Risk Results Summary - Based on Facility 19 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	3E-03	6E-04	8E-04	5E-03	2E-03	4E-04	8E-04	3E-03

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	3	0.6	32	35	6	2	32	40

Notes:
COPC = contaminant of potential concern
VOCs = volatile organic compounds
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-151
Groundwater Exposure Point Concentrations - Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 21	***Volatile Organic Compounds***		
	tetrachloroethene	9.50E-04	2005
	benzene	2.50E-04	2005[a]
	chlorobenzene	2.50E-04	2005[a]
	chloroform	2.50E-04	2005[a]
	m,p-xylene	2.50E-04	2005[a]
	toluene	5.00E-04	2005[a]

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
mg/L = milligrams per liter

Table F-152
Estimates of Reasonable Maximum Exposure-Carcinogenic Effects-Adult Resident- Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Cancer Risk [-]**
Oral	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	8.92E-06	5.40E-01	4.82E-06
	benzene	2.50E-04	2.35E-06	1.00E-01	2.35E-07
	chlorobenzene	2.50E-04	2.35E-06	N/A	--
	chloroform	2.50E-04	2.35E-06	3.10E-02	7.28E-08
	m,p-xylene	2.50E-04	2.35E-06	N/A	--
	toluene	5.00E-04	4.70E-06	N/A	--
				Total Risk for Oral Route:	5.13E-06
Dermal	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	1.54E-06	5.40E-01	8.30E-07
	benzene	2.50E-04	2.54E-07	1.00E-01	2.54E-08
	chlorobenzene	2.50E-04	3.43E-07	N/A	--
	chloroform	2.50E-04	8.34E-08	3.10E-02	2.58E-09
	m,p-xylene	2.50E-04	6.50E-07	N/A	--
	toluene	5.00E-04	7.60E-07	N/A	--
				Total Risk for Dermal Route:	8.58E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-152
Estimates of Reasonable Maximum Exposure-Carcinogenic Effects-Adult Resident- Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Cancer Risk [-]**
Inhalation	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	1.56E-01	5.90E-06	9.21E-07
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	chlorobenzene	2.50E-04	4.11E-02	N/A	--
	chloroform	2.50E-04	4.11E-02	5.30E-06	2.18E-07
	m,p-xylene	2.50E-04	4.11E-02	N/A	--
	toluene	5.00E-04	8.22E-02	N/A	--
				Total Risk for Inhalation Route:	2.3E-06
				Total Risk Across All Exposure Routes/Pathways :	8E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-153
Estimates of Reasonable Maximum Exposure-Non-cancer Effects-Adult Resident- Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	2.60E-05	1.00E-02	2.60E-03
	benzene	2.50E-04	6.85E-06	4.00E-03	1.71E-03
	chlorobenzene	2.50E-04	6.85E-06	2.00E-02	3.42E-04
	chloroform	2.50E-04	6.85E-06	1.00E-02	6.85E-04
	m,p-xylene	2.50E-04	6.85E-06	2.00E-01	3.42E-05
	toluene	5.00E-04	1.37E-05	8.00E-02	1.71E-04
				Total Risk for Oral Route:	0.01
Dermal	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	4.48E-06	1.00E-02	4.48E-04
	benzene	2.50E-04	7.40E-07	4.00E-03	1.85E-04
	chlorobenzene	2.50E-04	1.00E-06	2.00E-02	5.01E-05
	chloroform	2.50E-04	2.43E-07	1.00E-02	2.43E-05
	m,p-xylene	2.50E-04	1.89E-06	2.00E-01	9.47E-06
	toluene	5.00E-04	2.22E-06	8.00E-02	2.77E-05
				Total Risk for Dermal Route:	0.0007

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-153
Estimates of Reasonable Maximum Exposure-Non-cancer Effects-Adult Resident- Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Adult

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	24
Ingestion Rate (L/day for water)	IngR	2
Skin Surface Area (cm^2/day)	SA	18000
Body Weight (kg)	BW	70
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	8760
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	4.55E-01	2.70E+02	1.69E-03
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	chlorobenzene	2.50E-04	1.20E-01	5.00E+01	2.40E-03
	chloroform	2.50E-04	1.20E-01	9.80E+01	1.22E-03
	m,p-xylene	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	toluene	5.00E-04	2.40E-01	3.00E+02	7.99E-04
				Total Risk for Inhalation Route:	0.01
				Total Risk Across All Exposure Routes/Pathways :	0.01

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-154
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident-Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Cancer Risk [-]
Oral	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	5.21E-06	5.40E-01	2.81E-06
	benzene	2.50E-04	1.37E-06	1.00E-01	1.37E-07
	chlorobenzene	2.50E-04	1.37E-06	N/A	--
	chloroform	2.50E-04	1.37E-06	3.10E-02	4.25E-08
	m,p-xylene	2.50E-04	1.37E-06	N/A	--
	toluene	5.00E-04	2.74E-06	N/A	--
				Total Risk for Oral Route:	2.99E-06
Dermal	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	1.13E-06	5.40E-01	6.12E-07
	benzene	2.50E-04	1.87E-07	1.00E-01	1.87E-08
	chlorobenzene	2.50E-04	2.53E-07	N/A	--
	chloroform	2.50E-04	6.15E-08	3.10E-02	1.91E-09
	m,p-xylene	2.50E-04	4.79E-07	N/A	--
	toluene	5.00E-04	5.61E-07	N/A	--
				Total Risk for Dermal Route:	6.33E-07

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-154
Estimates of Reasonable Maximum Exposure- Carcinogenic Effects-Child Resident-Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information

Exposure Scenario:	Residential
Scenario Timeframe:	Chronic
Exposure Medium:	Groundwater
Exposure:	RME
Receptor Population:	Residents
Receptor Age:	Child

Exposure Parameter (units)	Variable	Value
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	COPC	RME Medium EPC Value, Cw [mg/L]	Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]	Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]	Cancer Risk [-]
Inhalation	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	1.56E-01	5.90E-06	9.21E-07
	benzene	2.50E-04	4.11E-02	2.90E-05	1.19E-06
	chlorobenzene	2.50E-04	4.11E-02	N/A	--
	chloroform	2.50E-04	4.11E-02	5.30E-06	2.18E-07
	m,p-xylene	2.50E-04	4.11E-02	N/A	--
	toluene	5.00E-04	8.22E-02	N/A	--
				Total Risk for Inhalation Route:	2.3E-06
				Total Risk Across All Exposure Routes/Pathways :	6E-06

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-155
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Oral	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	6.07E-05	1.00E-02	6.07E-03
	benzene	2.50E-04	1.60E-05	4.00E-03	4.00E-03
	chlorobenzene	2.50E-04	1.60E-05	2.00E-02	7.99E-04
	chloroform	2.50E-04	1.60E-05	1.00E-02	1.60E-03
	m,p-xylene	2.50E-04	1.60E-05	2.00E-01	7.99E-05
	toluene	5.00E-04	3.20E-05	8.00E-02	4.00E-04
				Total Risk for Oral Route:	0.01
Dermal	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	1.32E-05	1.00E-02	1.32E-03
	benzene	2.50E-04	2.18E-06	4.00E-03	5.46E-04
	chlorobenzene	2.50E-04	2.95E-06	2.00E-02	1.48E-04
	chloroform	2.50E-04	7.17E-07	1.00E-02	7.17E-05
	m,p-xylene	2.50E-04	5.59E-06	2.00E-01	2.80E-05
	toluene	5.00E-04	6.54E-06	8.00E-02	8.17E-05
				Total Risk for Dermal Route:	0.0022

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-155
Estimates of Reasonable Maximum Exposure- Non-cancer Effects-Child Resident- Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Exposure Scenario Information		
	Exposure Scenario:	Residential
	Scenario Timeframe:	Chronic
	Exposure Medium:	Groundwater
	Exposure:	RME
	Receptor Population:	Residents
	Receptor Age:	Child

Exposure Parameter (units)	**Variable**	**Value**
Exposure Frequency (days/year)	EF	350
Exposure Time for dermal exposure (hours/day)	ET_d	0.6
Exposure Time for inhalation of volatiles (hours/day)	ET_i	24
Exposure Duration (years)	ED	6
Ingestion Rate (mg/day for soil; L/day for water)	IngR	1
Skin Surface Area (cm^2/day)	SA	6600
Body Weight (kg)	BW	15
Conversion Factor (ug/mg)	CF	1000
Averaging Time for carcinogens (days)	ATc	25550
Averaging Time for noncarcinogens (days)	ATnc	2190
Volatilization Factor from groundwater to indoor air (L/m^3)	VF	0.5
Constituent Specific Permeability Constant (cm/hr)	Kp	Chemical Specific

Risk Calculations

Exposure Route	**COPC**	**RME Medium EPC Value, Cw [mg/L]**	**Chronic Daily Intake, [mg/kg/day] or Inhalation Risk Factor [ug/m^3]**	**Reference Dose, [mg/kg/day] or Reference Concentration, [ug/m^3]**	**Hazard Quotient**
Inhalation	***Volatile Organic Compounds***				
	tetrachloroethene	9.50E-04	4.55E-01	2.70E+02	1.69E-03
	benzene	2.50E-04	1.20E-01	6.00E+01	2.00E-03
	chlorobenzene	2.50E-04	1.20E-01	5.00E+01	2.40E-03
	chloroform	2.50E-04	1.20E-01	9.80E+01	1.22E-03
	m,p-xylene	2.50E-04	1.20E-01	7.00E+02	1.71E-04
	toluene	5.00E-04	2.40E-01	3.00E+02	7.99E-04
				Total Risk for Inhalation Route:	0.01
				Total Risk Across All Exposure Routes/Pathways :	0.02

Notes: N/A = not applicable - toxicity value or associated information not established.
COPC = contaminant of potential concern
NV = Not volatile
mg/L = milligrams per liter
mg/kg/day = milligrams per kilogram per day
$\mu g/m^3$ = micrograms per cubic meter
-- indicate a risk or hazard was not calculated because toxicity value not established.

Table F-156
Risk Results Detailed Summary - Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
tetrachloroethene	4.8E-06	8.3E-07	9.2E-07	6.6E-06	79%	2.8E-06	6.1E-07	9.2E-07	4.3E-06	73%
benzene	2.3E-07	2.5E-08	1.2E-06	1.5E-06	17%	1.4E-07	1.9E-08	1.2E-06	1.3E-06	23%
chlorobenzene	--	--	--	--	--	--	--	--	--	--
chloroform	7.3E-08	2.6E-09	2.2E-07	2.9E-07	4%	4.2E-08	1.9E-09	2.2E-07	2.6E-07	4%
m,p-xylene	--	--	--	--	--	--	--	--	--	--
toluene	--	--	--	--	--	--	--	--	--	--
Total:	5E-06	9E-07	2E-06	8E-06	100%	3E-06	6E-07	2E-06	6E-06	100%

Non-cancer Effects Risk Results - Hazard Quotients										
COPC	Hypothetical Future Residential									
	Adult Resident					Child Resident				
	Reasonable Maximum Exposure									
	Ingestion	Dermal	Inhalation	Total	Percent Contribution	Ingestion	Dermal	Inhalation	Total	Percent Contribution
Volatile Organic Compounds										
tetrachloroethene	2.6E-03	4.5E-04	1.7E-03	4.7E-03	33%	6.1E-03	1.3E-03	1.7E-03	9.1E-03	39%
benzene	1.7E-03	1.9E-04	2.0E-03	3.9E-03	27%	4.0E-03	5.5E-04	2.0E-03	6.5E-03	28%
chlorobenzene	3.4E-04	5.0E-05	2.4E-03	2.8E-03	19%	8.0E-04	1.5E-04	2.4E-03	3.3E-03	14%
chloroform	6.8E-04	2.4E-05	1.2E-03	1.9E-03	13%	1.6E-03	7.2E-05	1.2E-03	2.9E-03	12%
m,p-xylene	3.4E-05	9.5E-06	1.7E-04	2.1E-04	1%	8.0E-05	2.8E-05	1.7E-04	2.8E-04	1%
toluene	1.7E-04	2.8E-05	8.0E-04	1.0E-03	7%	4.0E-04	8.2E-05	8.0E-04	1.3E-03	5%
Total:	0.006	0.0007	0.008	0.01	100%	0.01	0.002	0.008	0.02	100%

Notes:
COPC = contaminant of potential concern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-157
Risk Results Summary - Based on Facility 21 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Carcinogenic Effects Risk Results - Excess Lifetime Cancer Risk Estimates								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	5.1E-06	8.6E-07	2.3E-06	8.3E-06	3.0E-06	6.3E-07	2.3E-06	6.0E-06

Non-cancer Effects Risk Results - Hazard Quotients								
COPC	Hypothetical Future Residential							
	Adult Resident				Child Resident			
	Reasonable Maximum Exposure							
	Ingestion	Dermal	Inhalation	Total	Ingestion	Dermal	Inhalation	Total
VOCs Total:	5.5E-03	7.40E-04	8.30E-03	0.01	1.30E-02	2.20E-03	8.30E-03	0.02

Notes:

COPC = contaminant of potential concern

VOCs = volatile organic compounds

-- indicate a risk or hazard was not calculated because toxicity value not established.

Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-158
Groundwater Exposure Point Concentrations - Based on NE Area Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
EPAMW16	trichloroethene	2.50E-01	2007[a]
	tetrachloroethene	1.70E-01	2007
	1,1-dichloroethene	2.50E-01	2007[a]
	1,2,3-trichloropropane	2.50E-03	2007[a]
	1,1,2-trichloroethane	2.50E-01	2007[a]
	acetone	2.90E+00	2007
	bromodichloromethane	2.50E-01	2007[a]
	bromoform	2.50E-01	2007[a]
	bromomethane	2.50E-01	2007[a]
	benzene	2.50E-01	2007[a]
	carbon disulfide	2.50E-01	2007[a]
	chloroform	3.80E-01	2007
	chloromethane	2.50E-01	2007[a]
	cis-1,3-dichloropropene	2.50E-01	2007[a]
	dibromochloromethane	2.50E-01	2007[a]
	dichlorodifluoromethane	2.50E-01	2007[a]
	methylene chloride	1.00E+00	2007
	methyl-tert-butyl ether	2.50E-01	2007[a]
	toluene	2.50E-01	2007[a]
	bis(2-ethylhexyl) phthalate	2.50E+00	2007[a]
	n-nitrosodimethylamine	4.16E-03	2007
	1,4-dioxane	1.00E+00	2007[a]
	arsenic	2.50E-01	2006
	chromium	4.80E+00	2006
	chromium (VI)	5.35E+00	2007
	nitrate	5.40E+03	2007
	perchlorate	3.00E+00	2007
Facility 19	trichloroethene	4.00E+00	2007
	tetrachloroethene	6.40E+02	2007
	1,2-dichloroethane	2.50E-01	2007[a]
	trans-1,2-dichloroethene	2.50E-01	2007[a]
	cis-1,2-dichloroethene	2.50E-01	2007[a]
	1,2,4-trimethylbenzene	3.60E+02	2004
	1,2-dibromomethane	5.00E-01	2007[a]
	1,3,5-trimethylbenzene	7.90E+01	2004
	acetone	1.00E+00	2007[a]
	benzene	2.50E-01	2007[a]
	chloroform	5.00E-01	2007[a]
	diisopropylether	5.00E-01	2007[a]
	ethylbenzene	2.50E-01	2007[a]
	isopropylbenzene	2.50E-01	2007[a]
	m,p-xylene	1.50E+03	2004
	n-butylbenzene	3.50E+00	2004
	n-propylbenzene	1.70E+01	2004
	naphthalene	2.40E+01	2004
	o-xylene	5.80E+02	2004
	sec-butylbenzene	1.00E+00	2004
	tert-butyl alcohol	4.71E+01	2007
	toluene	2.50E-01	2007[a]
	total xylene	2.50E-01	2007[a]
	nitrate	1.84E+04	2007

Notes:

[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.

COPC = contaminant of potential concern

VOCs = volatile organic compounds

µg/L = micrograms per liter

Table F-158
Groundwater Exposure Point Concentrations - Based on NE Area Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
Facility 21	tetrachloroethene	9.50E-01	2005
	benzene	2.50E-01	2005[a]
	chlorobenzene	2.50E-01	2005[a]
	chloroform	2.50E-01	2005[a]
	m,p-xylene	2.50E-01	2005[a]
	toluene	5.00E-01	2005[a]
01900017	nitrate	4.58E+03	2007
	perchlorate	2	2007[a]
01900026	nitrate	2.60E+03	2007
01900547	1,2-dichloroethane	4.10E-01	2005
	acetone	2.20E+00	2005
	chloroform	3.60E-01	2005
	arsenic	4.20E-01	2005
	chromium	2.70E+00	2005
	chromium (VI)	2.83E+00	2005
	nitrate	1.20E+04	2007
	perchlorate	5.40E+00	2005
01900935	tetrachloroethene	4.60E+00	2007
	1,2,3-trichloropropane	2.50E-03	2003[a]
	nitrate	1.37E+04	2007
	perchlorate	4.00E+00	2007
01901671	bis(2-ethylhexyl) phthalate	3.90E+00	2003
	atrazine	6.00E-01	2003
	bolero	1.30E+00	2003
	bromacil	1.30E+01	2003
	ordram	2.60E+00	2003
	simazine	1.30E+00	2003
	nitrate	6.53E+03	2007
	perchlorate	2.00E+00	2007[a]
01902785	tetrachloroethene	1.80E+00	2007
01902786	tetrachloroethene	1.50E+01	1993
01902789	nitrate	4.15E+03	2007
	perchlorate	2.00E+00	2007[a]
01902792	nitrate	4.15E+03	2007
01902979	tetrachloroethene	1.30E-01	2005
	acetone	3.20E+00	2005
	perchlorate	1.10E+00	2005
	arsenic	6.00E-01	2005
	chromium	8.10E+00	2005
	chromium (VI)	8.18E+00	2005
01903059	nitrate	2.82E+03	2007
	perchlorate	2	2007[a]
08000157	nitrate	1.02E+03	2007

Notes:
[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.
COPC = contaminant of potential concern
VOCs = volatile organic compounds
µg/L = micrograms per liter

Table F-159
Risk and Hazard Estimates - Based on NE Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Groundwater Exposure Point Concentration [µg/L]	EPA Residential Tap Water RSL (cancer) [µg/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [µg/L]	Noncancer HI
EPAMW16	trichloroethene	2.5E-01	1.7E+00	1.5E-07	--	--
	tetrachloroethene	1.7E-01	1.1E-01	1.5E-06	2.2E+02	7.7E-04
	1,1-dichloroethene	2.5E-01	--	--	3.4E+02	7.4E-04
	1,2,3-trichloropropane	2.5E-03	9.6E-03	2.6E-07	2.2E+02	1.1E-05
	1,1,2-trichloroethane	2.5E-01	2.4E-01	1.0E-06	1.5E+02	1.7E-03
	acetone	2.9E+00	--	--	2.2E+04	1.3E-04
	bromodichloromethane	2.5E-01	1.1E+00	2.3E-07	7.3E+02	3.4E-04
	bromoform	2.5E-01	8.5E+00	2.9E-08	7.3E+02	3.4E-04
	bromomethane	2.5E-01	--	--	8.7E+00	2.9E-02
	benzene	2.5E-01	4.1E-01	6.1E-07	4.4E+01	5.7E-03
	carbon disulfide	2.5E-01	--	--	1.0E+03	2.5E-04
	chloroform	3.8E-01	1.9E-01	2.0E-06	1.3E+02	2.9E-03
	chloromethane	2.5E-01	1.8E+00	1.4E-07	1.9E+02	1.3E-03
	cis-1,3-dichloropropene	2.5E-01	4.3E-01	5.8E-07	4.0E+01	6.3E-03
	dibromochloromethane	2.5E-01	8.0E-01	3.1E-07	7.3E+02	3.4E-04
	dichlorodifluoromethane	2.5E-01	--	--	3.9E+02	6.4E-04
	methylene chloride	1.0E+00	4.8E+00	2.1E-07	1.1E+03	9.1E-04
	methyl-tert-butyl ether	2.5E-01	1.2E+01	2.1E-08	6.3E+03	4.0E-05
	toluene	2.5E-01	--	--	2.3E+03	1.1E-04
	bis(2-ethylhexyl) phthalate	2.5E+00	4.8E+00	5.2E-07	7.3E+02	3.4E-03
	n-nitrosodimethylamine	4.2E-03	4.2E-04	9.9E-06	2.9E-01	1.4E-02
	1,4-dioxane	1.0E+00	6.1E+00	1.6E-07	--	--
	arsenic	2.50E-01	4.5E-02	5.6E-06	1.1E+01	2.3E-02
	chromium	4.80E+00	--	--	--	--
	chromium (VI)	5.4E+00	--	--	1.1E+02	4.9E-02
	nitrate	5.4E+03	--	--	5.8E+04	9.3E-02
	perchlorate	3.0E+00	--	--	2.6E+01	1.2E-01
	Total			2E-05		0.3
Facility 19	trichloroethene	4.0E+00	1.7E+00	2.4E-06	--	--
	tetrachloroethene	6.4E+02	1.1E-01	**5.8E-03**	2.2E+02	**2.9E+00**
	1,2-dichloroethane	2.5E-01	1.5E-01	1.7E-06	6.4E+02	3.9E-04
	trans-1,2-dichloroethene	2.5E-01	--	--	1.1E+02	2.3E-03
	cis-1,2-dichloroethene	2.5E-01	--	--	3.7E+02	6.8E-04
	1,2,4-trimethylbenzene	3.6E+02	--	--	1.5E+01	**2.4E+01**
	1,2-dibromomethane	5.0E-01	6.5E-03	7.7E-05	1.8E+01	2.8E-02
	1,3,5-trimethylbenzene	7.9E+01	--	--	--	--
	acetone	1.0E+00	--	--	2.2E+04	4.5E-05
	benzene	2.5E-01	4.1E-01	6.1E-07	4.4E+01	5.7E-03
	chloroform	5.0E-01	1.9E-01	2.6E-06	1.3E+02	3.8E-03
	diisopropylether	5.0E-01	--	--	--	--
	ethylbenzene	2.5E-01	1.5E+00	1.7E-07	1.3E+03	1.9E-04
	isopropylbenzene	2.5E-01	--	--	--	--
	m,p-xylene	1.5E+03	--	--	1.4E+03	1.1E+00
	n-butylbenzene	3.5E+00	--	--	--	--
	n-propylbenzene	1.7E+01	--	--	--	--
	naphthalene	2.4E+01	--	--	--	--
	o-xylene	5.8E+02	--	--	1.4E+03	4.1E-01
	sec-butylbenzene	1.0E+00	--	--	--	--
	tert-butyl alcohol	4.7E+01	--	--	--	--
	toluene	2.5E-01	--	--	2.3E+03	1.1E-04
	total xylene	2.5E-01	--	--	1.4E+03	1.8E-04
	nitrate	1.8E+04	--	--	5.8E+04	3.2E-01
	Total			**6E-03**		**29**

Notes:
COPC = contaminant of potential concern
NE = northeastern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-159
Risk and Hazard Estimates - Based on NE Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Groundwater Exposure Point Concentration [µg/L]	EPA Residential Tap Water RSL (cancer) [µg/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [µg/L]	Noncancer HI
Facility 21	tetrachloroethene	9.50E-01	1.1E-01	8.6E-06	2.2E+02	**4.3E-03**
	benzene	2.50E-01	4.1E-01	6.1E-07	4.4E+01	5.7E-03
	chlorobenzene	2.5E-01	--	--	9.1E+01	2.7E-03
	chloroform	2.5E-01	1.9E-01	1.3E-06	1.3E+02	1.9E-03
	m,p-xylene	2.5E-01	--	--	1.4E+03	1.8E-04
	toluene	5.0E-01	--	--	2.3E+03	2.2E-04
	Total			1E-05		0.02
01900017	nitrate	4.6E+03	--	--	5.8E+04	7.9E-02
	perchlorate	2.0E+00	--	--	2.6E+01	7.7E-02
	Total					0.2
01900026	nitrate	2.6E+03			5.8E+04	4.5E-02
01900547	1,2-dichloroethane	4.1E-01	1.5E-01	2.7E-06	6.4E+02	6.4E-04
	acetone	2.2E+00	--	--	2.2E+04	1.0E-04
	chloroform	3.6E-01	1.9E-01	1.9E-06	1.3E+02	2.8E-03
	arsenic	4.2E-01	4.5E-02	9.3E-06	1.1E+01	3.8E-02
	chromium	2.7E+00	--	--	--	--
	chromium (VI)	2.8E+00	--	--	1.1E+02	2.6E-02
	nitrate	1.2E+04	--	--	5.8E+04	2.1E-01
	perchlorate	5.4E+00	--	--	2.6E+01	2.1E-01
	Total			1E-05		0.5
01900935	tetrachloroethene	4.6E+00	1.1E-01	4.2E-05	2.2E+02	2.1E-02
	1,2,3-trichloropropane	4.6E+00	9.6E-03	**4.8E-04**	2.2E+02	2.1E-02
	nitrate	1.4E+04	--	--	5.8E+04	2.4E-01
	perchlorate	4.0E+00	--	--	2.6E+01	1.5E-01
	Total			**5E-04**		0.4
01901671	bis(2-ethylhexyl) phthalate	3.9E+00	4.8E+00	8.1E-07	7.3E+02	5.3E-03
	atrazine	6.0E-01	2.9E-01	2.1E-06	1.3E+03	4.6E-04
	bolero	1.3E+00	--	--	--	--
	bromacil	1.3E+01	--	--	--	--
	ordram	2.6E+00	--	--	--	--
	simazine	1.3E+00	5.6E-01	2.3E-06	1.8E+02	7.2E-03
	nitrate	6.5E+03	--	--	5.8E+04	1.1E-01
	perchlorate	2.0E+00	--	--	2.6E+01	7.7E-02
	Total			5E-06		0.20
01902785	tetrachloroethene	1.8E+00	1.1E-01	2E-05	2.2E+02	0.01
01902786	tetrachloroethene	1.5E+01	1.1E-01	1E-04	2.2E+02	0.07
01902789	nitrate	1.5E+01	--	--	5.8E+04	2.6E-04
	perchlorate	2.0E+00	--	--	2.6E+01	7.7E-02
	Total					0.1
01902792	nitrate	4.2E+03			5.8E+04	7.2E-02
01902979	tetrachloroethene	1.3E-01	1.1E-01	1.2E-06	2.2E+02	5.9E-04
	acetone	3.2E+00	--	--	2.2E+04	1.5E-04
	perchlorate	1.10E+00	--	--	2.6E+01	4.2E-02
	arsenic	6.00E-01	4.5E-02	1.3E-05	1.1E+01	5.5E-02
	chromium	8.1E+00	--	--	--	--
	chromium (VI)	8.2E+00	--	--	1.1E+02	7.4E-02
	Total			1E-05		0.2
01903059	nitrate	8.1E+00	--	--	5.8E+04	1.4E-04
	perchlorate	2.0E+00	--	--	2.6E+01	7.7E-02
	Total					0.1
08000157	nitrate	1.0E+03	--	--	5.8E+04	0.02

Notes:
COPC = contaminant of potential concern
NE = northeastern
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Table F-160
Groundwater Exposure Point Concentrations - Based on SE Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration (mg/L)	Sample Date
01900016	No VOCs detected	N/A	--
01900514	nitrate	5.2E+02	2007
01900515	tetrachloroethene	9.0E-01	1997
01900921	No VOCs detected	N/A	--
01900926	trichloroethene	2.3E+00	2007
	tetrachloroethene	8.0E-01	2007
	nitrate	2.6E+03	2007
	perchlorate	2.0E+00	2007[a]
01900927	trichloroethene	4.7E+00	2007
	tetrachloroethene	2.2E+00	2007
	1,2,3-trichloropropane	2.5E-03	2007[a]
	nitrate	6.7E+03	2007
	perchlorate	2.0E+00	2007[a]
01901669	trichloroethene	2.5E-01	2001[a]
	tetrachloroethene	1.0E+00	2001
08000067	1,2,3-trichloropropane	2.5E-03	2007[a]
	trichloroethene	2.5E-01	2007[a]
	tetrachloroethene	1.2E+00	2007
	nitrate	3.5E+03	2007
08000123	trichloroethene	2.5E-01	2007[a]
	nitrate	1.1E+03	2007
08000133	tetrachloroethene	2.5E-01	2007[a]
	1,2,3-trichloropropane	2.5E-03	2003[a]
	nitrate	5.9E+02	2007
08000146	nitrate	2.3E+02	2007[a]

Notes:

[a]Chemical has been detected historically in this well so it has been retained as a COPC at 1/2 of the detection limit.

COPC = contaminant of potential concern

VOCs = volatile organic compounds

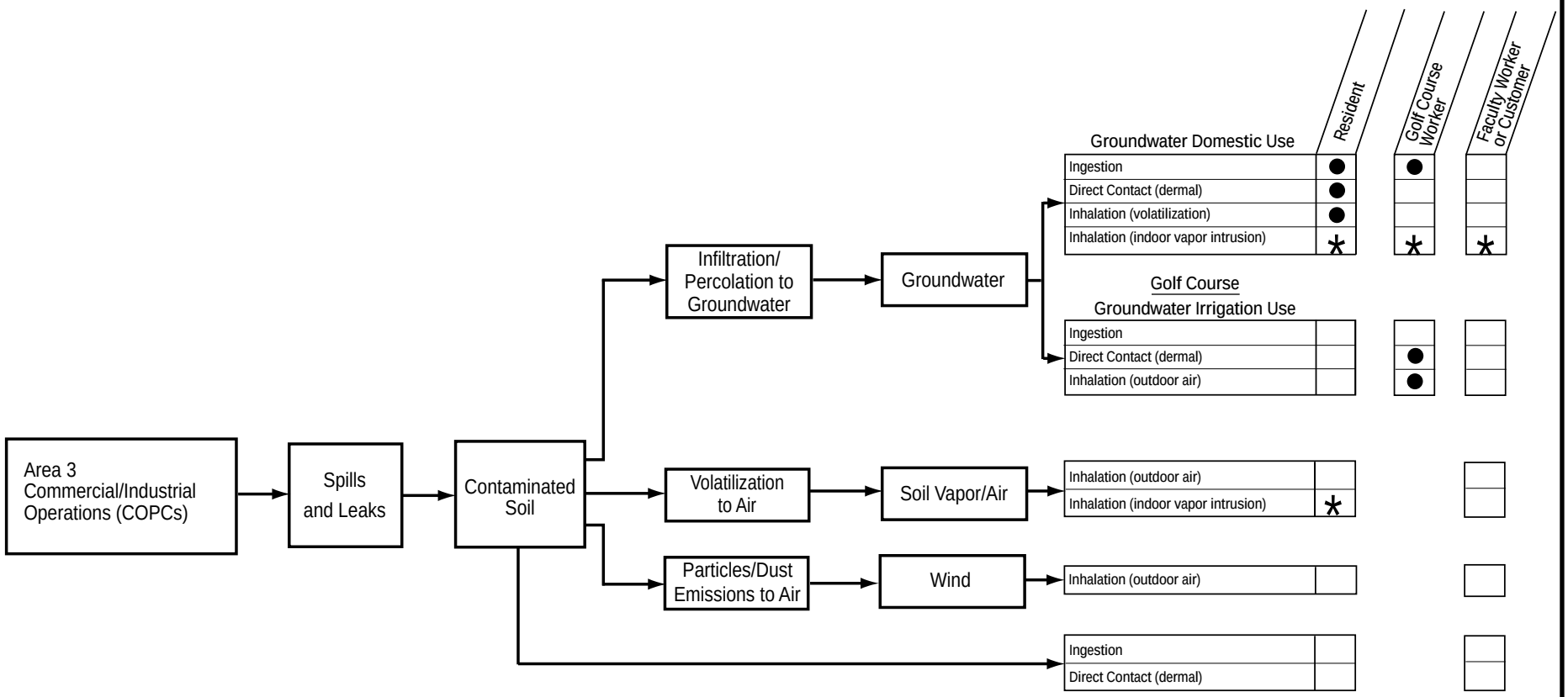
µg/L = micrograms per liter

Table F-161
Risk and Hazard Estimates - Based on SE Area 3 Data
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

Measurement Point	COPC	Exposure Point Concentration [ug/L]	EPA Residential Tap Water RSL (cancer) [ug/L]	Cancer Risk	EPA Residential Tap Water RSL (noncancer) [ug/L]	Noncancer HI
01900514	nitrate	5.2E+02	--	--	5.8E+04	0.009
01900515	tetrachloroethene	9.0E-01	1.1E-01	8E-06	2.2E+02	0.004
01900016	No VOCs detected	N/A	--	--	--	--
01900921	No VOCs detected	N/A	--	--	--	--
01900926	trichloroethene	2.3E+00	1.7E+00	1.4E-06		
	tetrachloroethene	8.0E-01	1.1E-01	7.3E-06	2.2E+02	3.6E-03
	nitrate	2.6E+03	--	--	5.8E+04	4.5E-02
	perchlorate	2.0E+00	--	--	2.6E+01	7.7E-02
	Total			9E-06		0.125
01900927	trichloroethene	4.7E+00	1.7E+00	2.8E-06	--	--
	tetrachloroethene	2.2E+00	1.1E-01	2.0E-05	2.2E+02	1.0E-02
	1,2,3-trichloropropane	2.5E-03	9.6E-03	2.6E-07	2.2E+02	1.1E-05
	nitrate	6.7E+03	--	--	5.8E+04	1.1E-01
	perchlorate	2.0E+00	--	--	2.6E+01	7.7E-02
	Total			2E-05		0.2
01901669	trichloroethene	2.50E-01	1.7E+00	1.5E-07	--	--
	tetrachloroethene	1.00E+00	1.1E-01	9.1E-06	2.2E+02	4.5E-03
	Total			9E-06		0.005
08000067	1,2,3-trichloropropane	2.5E-03	9.6E-03	2.6E-07	2.2E+02	1.1E-05
	trichloroethene	2.5E-01	1.7E+00	1.5E-07	--	--
	tetrachloroethene	1.2E+00	1.1E-01	1.1E-05	2.2E+02	5.5E-03
	nitrate	3.5E+03	--	--	5.8E+04	6.1E-02
	Total			1E-05		0.067
08000123	trichloroethene	2.5E-01	1.7E+00	1E-07	--	--
	nitrate	1.1E+03	--	--	5.8E+04	1.8E-02
	Total			1E-07		0.018
08000133	tetrachloroethene	2.5E-01	1.1E-01	2.3E-06	2.2E+02	1.1E-03
	1,2,3-trichloropropane	2.5E-03	9.6E-03	2.6E-07	2.2E+02	1.1E-05
	nitrate	5.9E+02	--	--	5.8E+04	1.0E-02
	Total			3E-06		0.011
08000146	nitrate	2.3E+02	--	--	5.8E+04	3.9E-03

Notes:
COPC = contaminant of potential concern
SE = southeastern
VOC - volatile organic compound
-- indicate a risk or hazard was not calculated because toxicity value not established.
Bolded results indicate an exceedance of the risk evaluation criterion of 1E-06 or an HI of 1.

Figures



LEGEND:

● = Potentially Complete Pathway

* = Pathway is being evaluated by California Regional Water Quality Control Board, Los Angeles Region (LARWQCB)

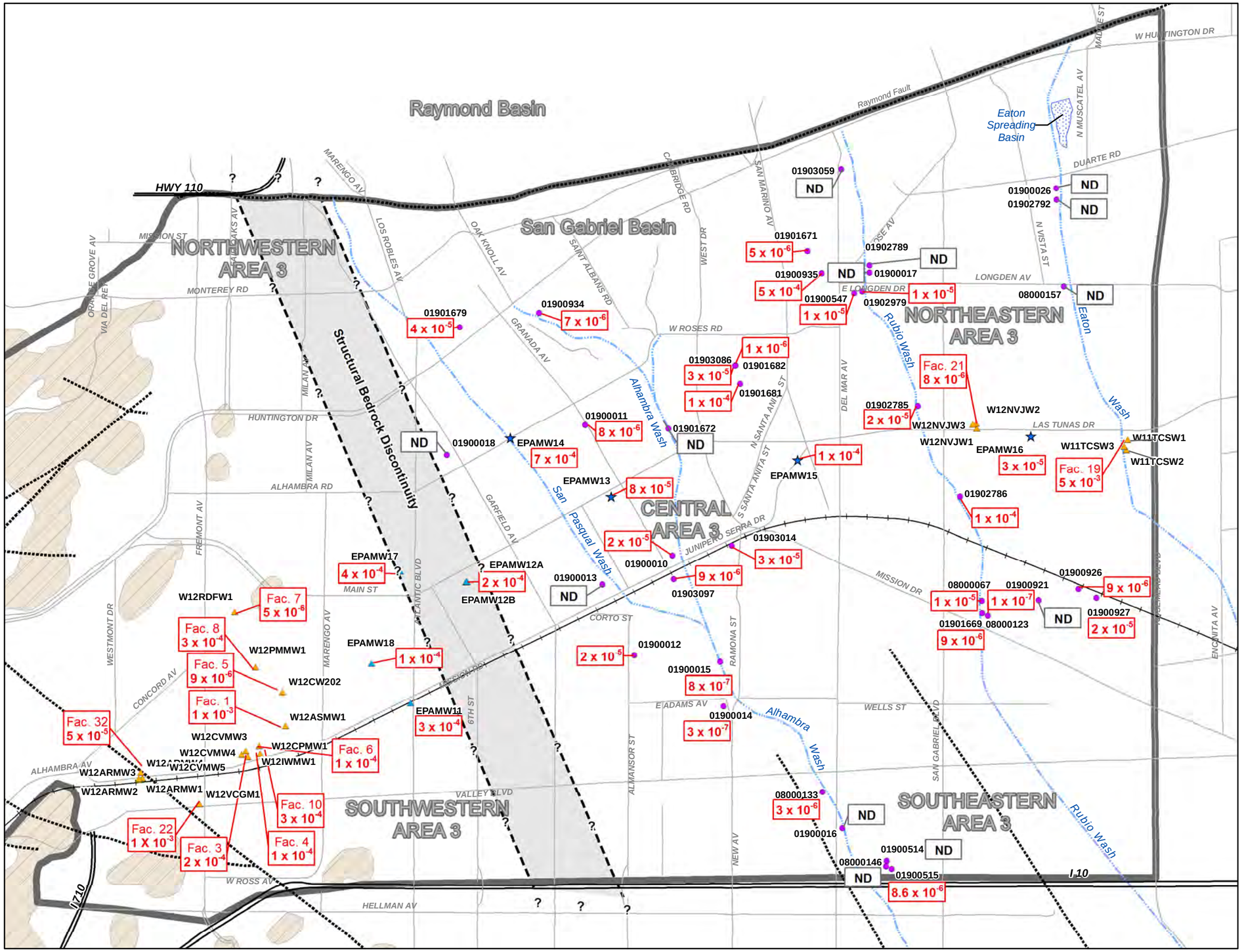
COPCs = Contaminants of Potential Concern

This figure (F-1) is the same as Figure 6-1 in Section 6.

Figure F-1
Potential Human Exposure Pathways Model
Remedial Investigation
San Gabriel Valley Area 3 Superfund Site

CH2MHILL

SCO385133.RR.01 sitemodel_5.ai 5/09



LEGEND

- Production Well
- EPA Conventional Monitoring Well
- EPA Multiport Monitoring Well
- Monitoring Well
- 1 Facility Identifer (See Table 4-9)
- Fac. 1 / 1 x 10^{-3} — Facility Cancer Risk estimate greater than evaluation criterion of 1 x 10^{-6}
- 2 x 10^{-7} — Excess Cancer Risk estimate equal or less than evaluation criterion of 1 x 10^{-6}
- ND — COPCs have not been detected
- Highway
- Major Street
- Railway
- Stream
- Fault (short dash indicates that fault impedes groundwater flow)
- Structural Bedrock Discontinuity
- Area 3 Site
- Spreading Ground
- Bedrock

Notes:

This Figure (F-2) is the same as Figure 6-2 in Section 6.

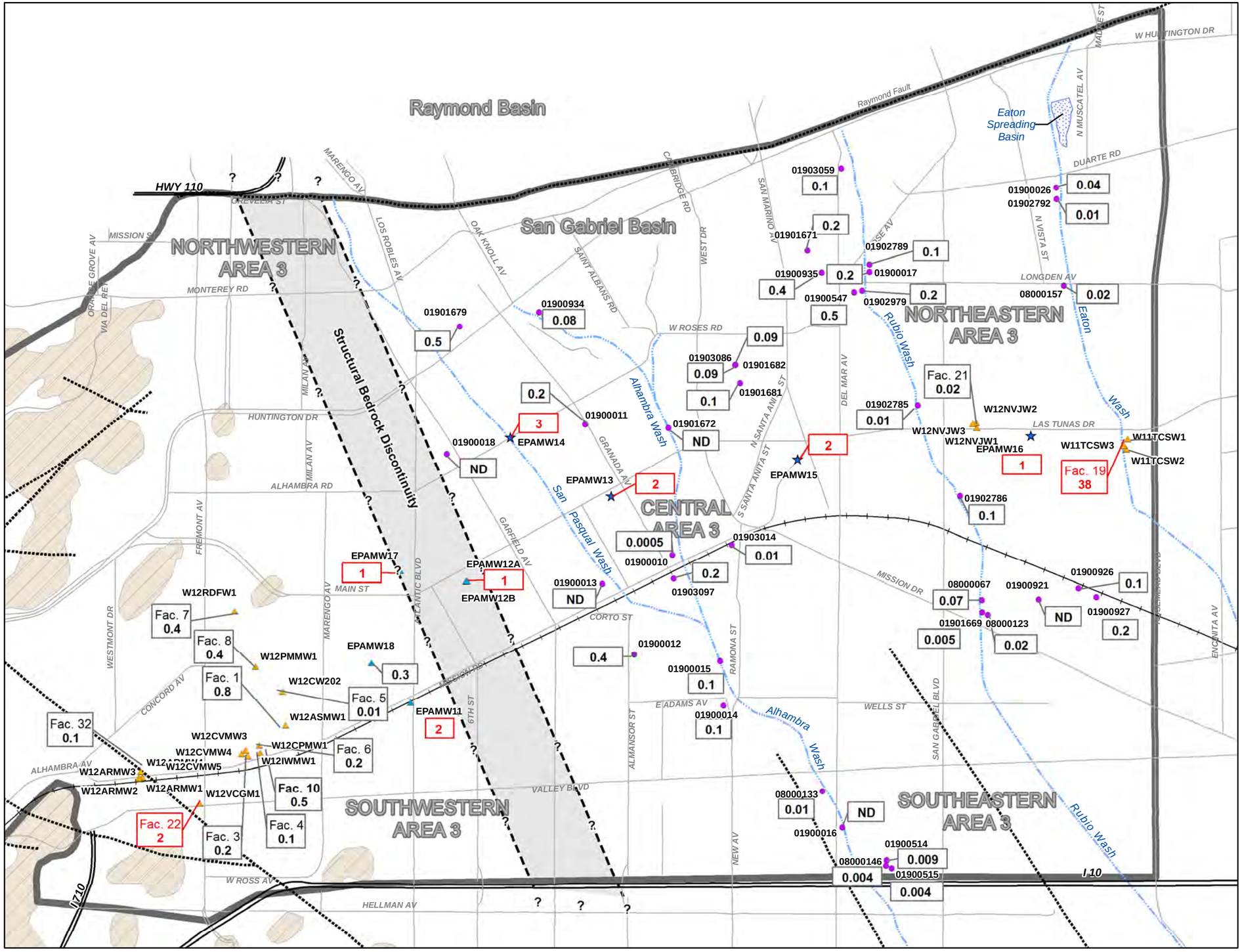
N

0 1,250 2,500 5,000

Feet

Figure F-2
Estimated Potential Excess Cancer Risks for Adult Resident
Area 3 Remedial Investigation

\\galt\proj\EPAF\ALOU\2008\MapFiles\alou_cumulative_CancerRisk.mxd



LEGEND

- Production Well
- EPA Conventional Monitoring Well
- EPA Multiport Monitoring Well
- Monitoring Well
- 1 Facility Identifer (See Table 4-9)
- Fac. 19 / 38 — Facility Hazard Index estimate equal or greater than evaluation criterion of 1
- 0.1 — Hazard Index estimate less than evaluation criterion of 1
- ND — COPCs have not been detected
- Highway
- Major Street
- Railway
- Stream
- Fault (short dash indicates that fault impedes groundwater flow)
- Area 3 Site
- Spreading Ground
- Bedrock

Notes:

This Figure (F-3) is the same as Figure 6-3 in Section 6.

N

0 1,250 2,500 5,000

Feet

Figure F-3
Estimated Potential Hazard Index for Child Resident
Area 3 Remedial Investigation

\\galt\proj\EPAF\ALOU\MapFiles\alou_cumulative_HazardIndex.mxd

Attachment F-1
Toxicological Profiles