DEPARTMENT OF THE ARMY
HEADQUARTERS, 63D REGIONAL READINESS COMMAND
4235 YORKTOWN AVENUE
LOS ALAMITOS, CA 90720-5002

REPLY TO
ATTENTION OF:

October 18, 2004

Environmental Division

Long Beach Health Department
Attn: Cheryl Sandel
2525 Grand Ave.
Long Beach, California 90815

Dear Ms. Sandel:

The 63D Regional Readiness Command, U.S. Army Reserve (63D RRC) requests your review and comment on the enclosed report, Results of Initial Evaluation of Catch Basin at Schroeder Hall U.S. Army Reserve Center, 3800 Willow St., Long Beach, California. This report provides the results of our investigation conducted in response to discovery of potential contamination at Schroeder Hall. We ask for your concurrence with our determination that no further action is required.

This investigation was undertaken in response to a discovery of potential contamination related to wastewaters from the vehicle washing pad (washrack) at Schroeder Hall. The catch basin, designed to receive storm water arising from the washpad, was found to have no connection to a storm sewer as originally thought. Rather, the bottom of the catch basin was open, allowing percolation into the subsoil. Although the washwater was designed to go through an oil/water separator to the sanitary sewer, an unreliable rain valve likely permitted some washwater occasionally to go to the catch basin, along with detergents, small amounts of petroleum, and possibly other contaminants. Since that discovery, the line to the basin has been eliminated and the rain valve has been replaced. We intend to demolish the basin, fill the hole, and restore the area once it is determined no further action is necessary.

We would like to point out that all samples were collected directly through the opening in the bottom of the catch basin. Therefore, we believe these samples represent worst case or "hotspot" conditions. All results were either non-detect, below the EPA Region 9 PRGs or RWQCB screening levels, or within the range of background concentrations found in other California soils.

Please contact Mr. Keith Schardein at 562-795-1442 if you have any questions concerning this investigation. We appreciate your review and look forward to receiving your comments.

Sincerely,

for KENNETH R. MORRIS
COL, GS, USAR
Deputy Chief of Staff, Engineer

Encl
as

DEPARTMENT OF THE ARMY
HEADQUARTERS, 63D REGIONAL READINESS COMMAND
4235 YORKTOWN AVENUE
LOS ALAMITOS, CA 90720-5002

REPLY TO
ATTENTION OF:

May 21, 2004

Environmental Division

Los Angeles Regional Water Quality Control Board
Attn: Mr. Arthur Heath
320 W. Fourth Street, Suite 200
Los Angeles, California 90013

Dear Mr. Heath:

The 63D Regional Readiness Command, U.S. Army Reserve (63D RRC) requests your review and comment on the three reports enclosed. These reports provide the results of investigations conducted in response to discoveries of potential contamination at Army Reserve facilities located in Bell, Long Beach, and Sherman Oaks. We ask for your concurrence with our determination that no further action is required.

These investigations were undertaken in response to discoveries of potential contamination related to wastewaters from vehicle washing pads (wash racks) at the three facilities. Results for these investigations were either non-detect, below the EPA Region 9 PRGs or RWQCB screening levels, or within the range of background concentrations found in other California soils.

In the case of the Bell and Long Beach facilities, catch basins designed to receive storm water arising from the washpads were found to have no connection to a storm sewer as originally thought. Rather, the bottoms of the catch basins were open, allowing percolation into the subsoil. Although the washwater is designed to go through an oil/water separator (OWS) to the sanitary sewer, an unreliable rain valve likely permitted some washwater to go to the catch basins, along with detergents, oil and grease, and possibly other contaminants. Since that discovery, the lines to the basins have been eliminated and the rain valves have been replaced. We intend to demolish the basins, fill the holes, and re-asphalt the areas once it is determined that no further action is necessary. We would like to point out that soil samples at Bell and Long Beach were all collected directly through the openings in the bottom of the catch basins. Therefore, we believe these samples represent worst case or "hotspot" conditions.

At the Sherman Oaks facility, we discovered that the OWS was leaking to the subsoil. We took the washrack immediately out of service and are in the process or replacing the OWS. The OWS had been leaking for no longer than six months and the facility manager reports that the washrack had been used very little, if at all, during that time.

Please contact Mr. Keith Schardein at 562-795-1442 if you have any questions concerning these investigations. We appreciate your review and look forward to receiving your comments.

Sincerely,

for JOSEPH MOSCARIELLO
COL, USAR
Deputy Chief of Staff, Engineer

Encl (3)
as

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

LOS ANGELES REG. WQCB
ATTN: MR. ARTHUR HEATH
320 W. FOURTH ST, STE 200
LOS ANGELES, CA 90013

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Tozie Chavez ☐ Agent ☑ Addressee

B. Received by (Printed Name)

C. Date of Delivery 5/28/04

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label) 7003 1680 0005 7336 8944

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

Final

Plan of Action

for

Initial Evaluation of Catch Basins and Oil Water Separators

at

Patton Hall, 5340 Bandini Blvd., Bell, California
Schroeder Hall, 3800 E. Willow St., Long Beach, California
Fremont Hall, 3227 State St., Santa Barbara, California
Hunter Hall, 2600 Castro Rd., San Pablo, California
Daniels Hall, 5161 Sepulveda Blvd., Sherman Oaks, California

Prepared for:

Department of The Army
Commander, 63D RRC
ATTN: AFRC-CCA-ENV BLDG 7 (Environmental DIV)
4235 Yorktown Avenue
Los Alamitos, California 90720-5002

Prepared by:

CDM Federal Programs Corporation
3760 Convoy Street, Suite 210
San Diego, California 92111

21 November 2003

Final

Plan of Action

for

Initial Evaluation of Catch Basins and Oil Water Separators

at

Patton Hall, 5340 Bandini Blvd., Bell, California
Schroeder Hall, 3800 E. Willow St., Long Beach, California
Fremont Hall, 3227 State St., Santa Barbara, California
Hunter Hall, 2600 Castro Rd., San Pablo, California
Daniels Hall, 5161 Sepulveda Blvd., Sherman Oaks, California

Prepared by: Archana Kukreti — 11/20/03
Archana Kukreti, Date
Environmental Engineer

Approved by: Matt Brook — 11/20/03
Matthew Brookshire, Date
Project Manager

Approved by: — 11/20/03
Randa Chichakli, Date
Quality Assurance Coordinator

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Appendix A Screening Criteria

Acronyms and Abbreviations

63D RRC	63D Regional Readiness Command
bgs	below ground surface
°C	degrees Celsius
CDM	CDM Federal Programs Corporation
IDW	investigation-derived waste
LUFT	Leaking Underground Fuel Tank
OVM	organic vapor monitor
OWS	oil water separator
POA	plan of action
PPE	personal protective equipment
PRGs	preliminary remediation goals
QA/QC	quality assurance/quality control
QAPP	quality assurance project plan
RWQCB	Regional Water Quality Control Board
SHASP	site health and safety plan
SOPs	standard operating procedures
TPHs	total petroleum hydrocarbons
VOCs	volatile organic compounds
USAR	United States Army Reserve
U.S. EPA	United States Environmental Protection Agency

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Section 1
Introduction and Background

CDM Federal Programs Corporation (CDM) has prepared this plan of action (POA) pursuant to Task Order DA7 005469 with Adecco Technical for the United States Army Reserve 63D Regional Readiness Command (RRC) to perform an initial evaluation of potential contaminants in catch basins associated with the oil-water separator (OWS) located in the facility vehicle wash racks at the following United States Army Reserve (USAR) facilities:

1. Patton Hall, 5340 Bandini Blvd., Bell, California
2. Schroeder Hall, 3800 E. Willow St., Long Beach, California
3. Fremont Hall, 3227 State St., Santa Barbara, California.

In addition to these three sites, an initial evaluation of the OWS at Hunter Hall, 2600 Castro Rd., San Pablo, California and Daniels Hall, 5161 Sepulveda Blvd., Sherman Oaks, California will also be performed.

At each of these facilities the OWS receives flows from the vehicle and equipment wash rack. During periods of rain, a storm water diversion valve automatically diverts storm water runoff from the wash rack into a drainage pipe, which drains into each respective catch basin. The catch basins had been assumed to be connected to the storm water system but subsequent to an investigation at USAR Center in Tustin, it was found that the catch basin is a concrete sump with an opening at the bottom that drains into the surrounding soil. Typically, a layer of gravel was placed below the opening to aid infiltration (CDM 2003).

Additionally, it was found that the storm water diversion valve must be manually reset to the open position following a rainfall event. If not reset, runoff coming from the vehicle wash racks flows directly into the catch basin instead of flowing into the OWS. Therefore, any potential contaminants that would have gone through the OWS would actually drain into the surrounding soil. As a result of this finding, the pipe carrying diverted storm water at the Bell facility has been grouted closed and instead a new pipe has been installed at the storm water diverter valve to carry storm water runoff to surface drainage (CDM 2003). The 63D RRC intends to make similar improvements to the rest of the facilities and ultimately remove the catch basins and remediate contamination as needed.

CDM has been tasked to perform an initial evaluation to investigate and assess the potential presence, nature, and extent of a release of environmental contaminants to the catch basins/OWS and surrounding subsurface soil. Based on the findings, further investigation or no further action will be recommended for soil and groundwater in the vicinity of the catch basins.

Section 2
Objectives

The objectives of the catch basin/OWS evaluations are:

- Assess nature and extent of contamination at the site through soil sampling.
- Compare sample results to screening criteria to provide preliminary conservative screening of potential risk.
- Recommend no further action or further investigation based on the results of the investigation.

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Section 3
Sampling Approach

CDM proposes that each catch basin/OWS evaluation include collecting soil samples using a hand auger and a scoop. Grab soil samples from the bottom of the catch basin, 2 feet below ground surface (bgs), and 5 feet bgs (ground surface is considered the bottom of the catch basin for purposes of these catch basin evaluations) be taken from each catch basin. Ground surface is considered the bottom of the catch basin for purposes of these evaluations. However, in the event that a catch basin is found to be submerged in water during a sampling event then a grab sample of the standing water will be collected. Additionally, grab soil samples at the level of the bottom of the catch basin and 2 feet below that level will be collected from a location close to the catch basin.

In case of the OWS at Hunter Hall, grab soil samples will be taken from 5 ft bgs and 7 ft bgs from a location as close as possible to the concrete vault of the OWS. All soil and water samples collected will be field screened with an organic vapor monitor (OVM) and sent to the laboratory to be analyzed for:

1. Volatile organic compounds (VOCs) using United States Environmental Protection Agency (U.S. EPA) Method 8260B,
2. Total petroleum hydrocarbons (TPHs) (volatile and extractable) using California Leaking Underground Fuel Tank (LUFT) Method 8015 modified,
3. Metals using U.S. EPA Method 6010 and applicable 7000 series methods.

Soil sampling results obtained will be compared to the following screening criteria:

1. U.S. EPA Region 9 - Industrial and Residential Preliminary Remediation Goals (PRGs), October 2002 (U.S. EPA 2002).
2. California Regional Water Quality Control Board's (RWQCB) Interim Site Assessment and Cleanup Guidebook, May 1996 (RWQCB 1996).
3. Bradford et al, Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report, UC-Riverside and CAL-EPA DTSC, March 1996 (Bradford *et al* 1996).

The screening criteria listed above are attached in Appendix A. Laboratory analytical data will be tabulated and evaluated to assess the nature of contamination and the vertical extent of soil contamination in the catch basins. Analytical data will also be compared to the screening criteria and the results of the comparison will provide a preliminary conservative screening of the potential risk associated with residual contaminants in soil beneath the catch basin. Further action recommendations for each site will be based on the results of the preliminary screening.

Section 4
Field Methods and Procedures

This section describes the methods and procedures to be used during the sampling program with respect to site access, sample collection, sample handling and documentation, equipment decontamination, photographs, quality assurance/quality control (QA/QC) requirements and procedures and management and disposal of investigation-derived waste (IDW). These will be in accordance with CDM's Standard Operating Procedures (SOPs), included in Appendix D of CDM's *Final Work Plan for Site Inspection of Catch Basin at Tustin United States Army Reserve Center* (CDM 2003).

4.1 Site Access

Access to the facility will be arranged through Mr. Keith Schardein (Adecco Technical). CDM will give a minimum of 14 days notice to Mr. Schardein before requiring access to the facilities. No vehicle passes or personal identification badges will be required.

4.2 Sample Collection

This section describes the number and locations of samples that will be collected during this sampling program, as well as the specific procedures that will be implemented for obtaining samples.

4.2.1 Number of Samples

Three grab soil samples, one each from the bottom of the catch basin, 2 feet bgs, and 5 feet bgs (ground surface is considered the bottom of the catch basin for purposes of these evaluations), and one duplicate sample will be taken from each catch basin. Two grab soil samples, one each from 5 feet bgs and 7 feet bgs, and one duplicate sample will be taken from a location as close as possible to the concrete vault of the OWS at Hunter Hall and Daniels Hall. A total of eighteen samples (thirteen primary samples and five duplicate samples) will be collected from the five sites and sent to the subcontractor laboratory for analysis.

4.2.2 Sampling Locations

Samples will be collected from the opening at the bottom of each catch basin for sites located in Bell, Long Beach and Santa Barbara, however, for the San Pablo and Sherman Oaks sites the samples will be collected from a location as close as possible to the concrete vault of the OWS.

4.2.3 Sampling Procedures and Equipment

Manual hand augering will be used for coring and a scoop will be used for collection of grab samples.

4.2.3.1 Manual Hand Augering Soil Sampling

After the auger has reached the desired depth, it will be removed from the hole. The auger will be either decontaminated or replaced with a fresh auger prior to collection of each sample. The soil obtained from the desired depth will be placed on a plastic sheet and then scooped into a sample container using a decontaminated scoop. After sampling of each borehole is complete any excess soil returned to the borehole. The hand auger will be removed from the hole, decontaminated, and the sample handling area will be cleaned.

Samples will be immediately placed into the sample container after collection to minimize degradation by aeration. Soil samples for VOCs will be analyzed within one week from the date of collection to minimize the potential loss of VOCs. The analytical method holding time for VOCs is two weeks; CDM will reduce this time by half in order to enhance data quality.

Properly labeled sample containers will be placed in self-sealing plastic bags and packed into a cooler with ice (not dry ice). A record of the date and time of samples collected will be made in the field logbook. A chain-of-custody form will be filled out for each shipment of samples.

4.2.3.2 Field Equipment

A list of field equipment required for fieldwork is presented in Table 4-1. Additional equipment may be identified prior to fieldwork.

4.3 Sample Handling and Documentation

Sample handling is discussed in Section 4.3.1 and documentation in Section 4.3.2.

4.3.1 Sample Handling

Once collected, the soil samples will be placed in sample containers and a unique number coded to indicate the sampling location will identify each sample. Sample numbers will begin with the year and site abbreviation (e.g., "03BELL" indicates that the sample was collected in 2003 at the Bell USAR Center).

Each boring will have unique location identification, which is included as the next character set in the sample identification. This will be "SS" for a soil sample and a number representing the borehole (in this case as each site will have only one boring, all

three borings will be identified as "SS01" (indicates soil sample from borehole number 01). Any groundwater samples collected will be labeled with a "GW01" prefix. The next character will be either a "1" or "3", which indicates that the sample is a primary sample, or a duplicate sample, respectively. The final character set represents the sample depth interval for the primary and duplicate samples only.

The following is an example of sample identification:

03BELL-SS01-1-2

This example identifies that the sample was collected in the year 2003, at Bell USAR Center, was a soil sample collected from borehole number 1, is a primary sample, and was collected from a depth of 2 feet bgs.

Completed sample labels will be affixed to the sampling containers after the samples have been placed in the sample container. Preprinted labels may be used. The labels will include the sample identification number, the parameter(s) to be analyzed, the sampler's initials, and the preservative used (if any). At the time of sample collection, a member of the field team will add the date and time of sample collection. The samples will be secured on the sampling jar with clear, water proof tape.

4.2.3.3 Preservation

Sample containers will be provided pre-preserved by the subcontractor laboratory. Collected samples will be cooled to 4±2 degrees Celsius (°C) after collection and maintained at that temperature during shipment.

4.2.3.4 Sample Custody

All samples collected are considered environmental samples. Environmental sample labeling, shipping, and chain-of-custody procedures described in the Quality Assurance Project Plan (QAPP), Section B.2.3.1 (CDM 2003) will be followed.

4.2.3.5 Sample Packaging and Shipment

Samples will be packaged and shipped in accordance with SOP 2-5 (Packaging and Shipping of Environmental Samples, CDM 2003). After labeling and custody information has been verified, the samples will be placed in coolers for shipment to the analytical laboratory. Adequate packaging materials will be used to minimize the potential for breakage. In addition, adequate ice will be used to maintain cooler temperatures at 4±2°C during shipment. A chain-of-custody form will accompany each cooler, listing the samples inside the cooler, the desired analyses, and all other necessary information. The chain-of-custody form will be placed in a self-sealing plastic bag and affixed to the cooler lid. Signed custody seals will be applied to the front and back of the cooler lid, and the cooler adequately sealed over the custody seals.

The samples will be shipped to the subcontract analytical laboratory by an overnight delivery service or by laboratory courier. Shipping records (i.e., tracking number etc.) will be documented in the field logbook.

4.3.2 Sample Documentation

Sample documentation will be tracked on chain-of-custody forms and shipping documents. Copies of these documents will be maintained in the project files, as well as annotated in the applicable field logbook. The field logbook provides a means of recording all data collection activities performed at each site and will be completed, and maintained in accordance with SOP 4-1 (Field Logbook Content and Control, CDM 2003). Any deviations from the SOP will be noted in the field logbook.

4.4 Equipment Decontamination

Equipment decontamination minimizes the risk of exposure to cross-contamination of samples by hazardous substances and ensures the collection of representative samples. All equipment decontamination will conform to SOP 4-5 (Field Equipment Decontamination at Non-radioactive Sites, CDM 2003). Any deviations will be noted in the field logbook

4.5 Photographs

Appropriate fieldwork activities and sire features will be photographed for documentation purposes. Photographic activities will be performed in accordance with SOP 4-2 (Photographic Documentation of Field Activities, CDM 2003) and approval from the 63D RRC will be obtained for photographic activities

4.6 Quality Assurance/Quality Control

QA/QC will be maintained throughout the execution of this project with the implementation of the QAPP (CDM 2003). The QAPP was prepared in accordance with the U.S. EPA's QA/R-5 guidance (U.S. EPA 2001) that includes discussions on project management, measurement and data acquisition, assessment and oversight, data validation and usability, and references.

For the initial evaluations QC samples will consist only of field duplicates and will be collected, handled, and shipped in the same manner as the field samples.

4.7 Management and Disposal of Investigation-Derived Waste

IDW generated will consist of:

- Additional soil volume obtained during sampling,

- Personal protective equipment (PPE), and
- Wastewater from decontamination activities.

The soil will be placed back into the boring from which it was removed. The PPE will be disposed of as solid waste and the wastewater will be spread out on an asphalt area and allowed to evaporate.

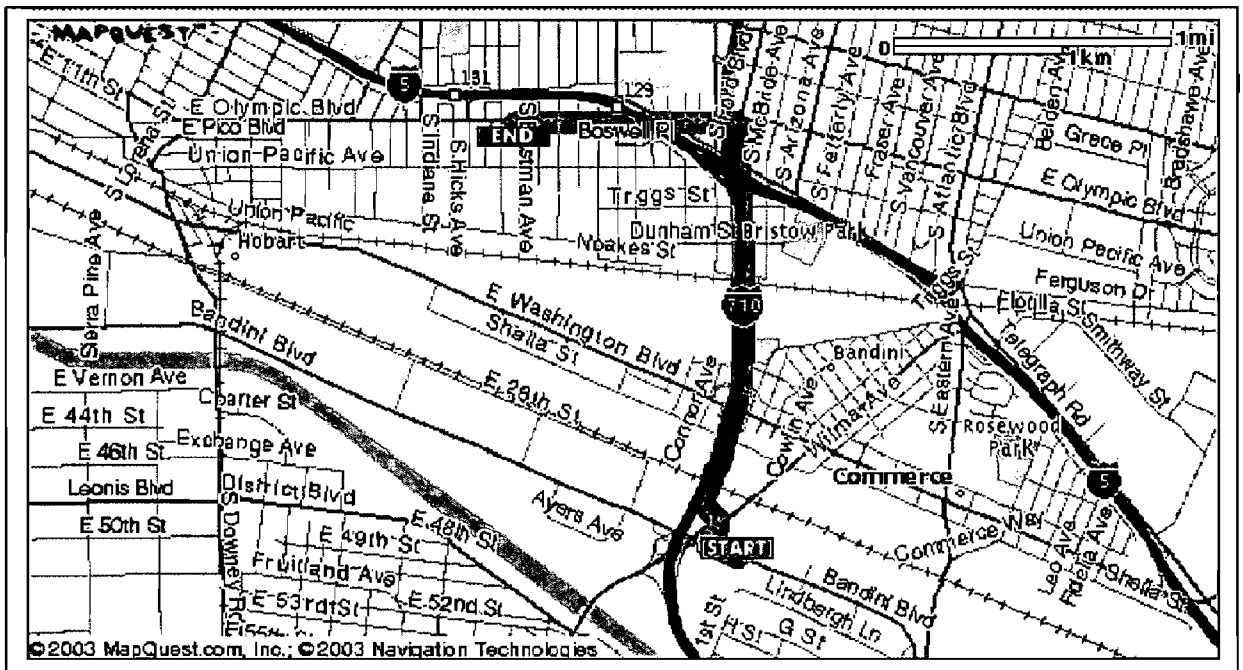
4.8 Site Health and Safety

A site health and safety plan (SHASP) is included as Appendix C of CDM's *Final Work Plan for Site Inspection of Catch Basin at Tustin United States Army Reserve Center* (CDM 2003). The SHASP will be followed to address the physical, chemical, and biological concerns associated with the initial evaluations. Hospital route maps from Bell, Long Beach, Santa Barbara, San Pablo, and Sherman Oaks USAR sites are presented in Figures 4-1, 4-2, 4-3, 4-4, and 4-5, respectively.

Table 4-1
Field Equipment and Supplies

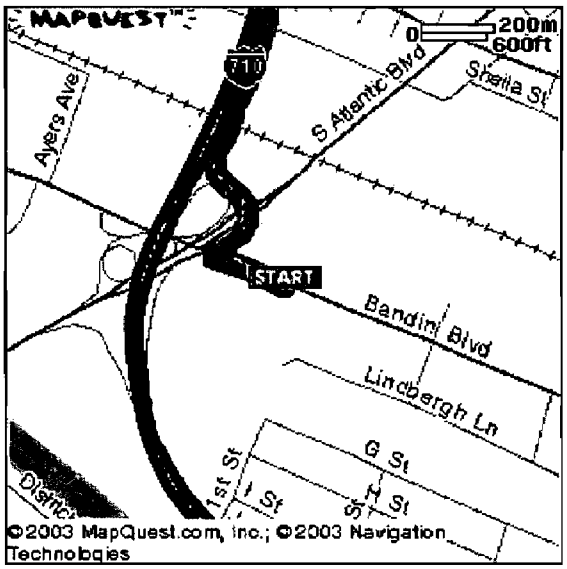
Rental Equipment	Field Supplies	
Truck	Field Logbook	Self-sealing Bags
Organic Vapor Monitor	Clear, Waterproof Tape	Chain-of-Custody Forms
Auger	Disposable Nitrile Gloves	Trash Bags
	Leather Work Gloves	Decontamination Buckets (3)
	Orange Cones	Eye Wash Station
	Yellow Caution Tape	Fire Extinguisher
	Decontamination Sprayer	First Aid Kit
	ASTM Type II Water, 5-Gallons	Safety Glasses
	Tool Box and Tools	Hard Hat
	Ice	Steel-toed Boots
	Cooler	Phosphate-Free Detergent
	Sample Containers (bottles)	Bubble Wrap
	Sample Labels	Strapping Tape
	Scoop	

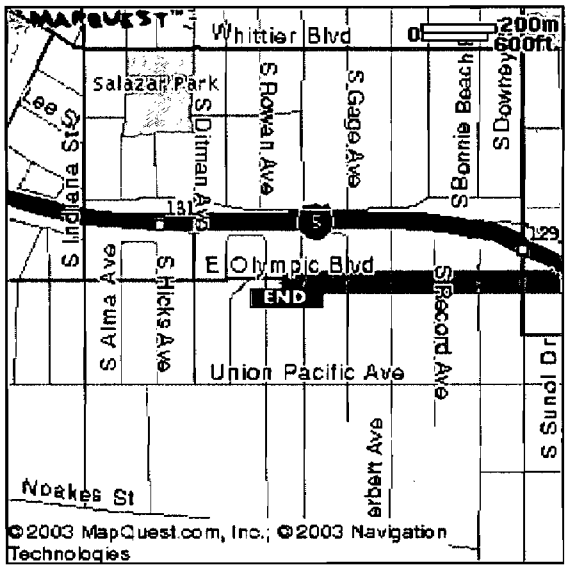
Acronyms and Abbreviations:
ASTM=American Society for Testing and Materials



Start: PATTON HALL
5340 Bandini Blvd.
Bell CA. 90201-6402

End: LOS ANGELES COMMUNITY HOSPITAL
4081 E. Olympic Blvd.
Los Angeles, CA. 90023-3330





1. Start out going West on BANDINI BLVD. (0.03 Miles)
2. Merge onto I-710 (1.32 miles)
3. Take the OLYMPIC BLVD exit. (0.18 Miles)
4. Turn LEFT onto E OLYMPIC BLVD. (0.81 Miles)

LOS ANGELES COMMUNITY HOSPITAL
4081 E. Olympic Blvd.
Los Angeles, CA. 90023-3330
(323) 267-0477

BELL USARC, PATTON HALL BELL, CALIFORNIA	HOSPITAL ROUTE MAP FOR PATTON HALL, BELL, CALIFORNIA Plan of Action for Evaluation of Catch Basins	FIGURE 4-1
CDM — DATE: 10/03 — FN: 004_SHASP		
MODIFIED BY: J. Brown — PROJECT NO. 2802-004		

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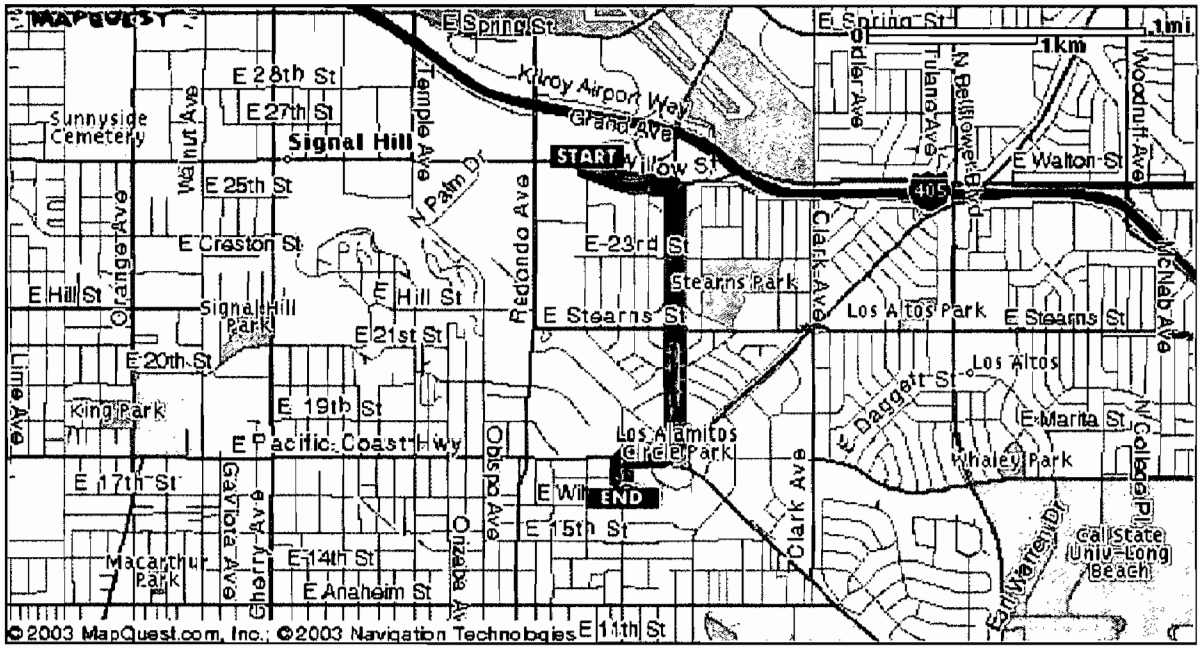
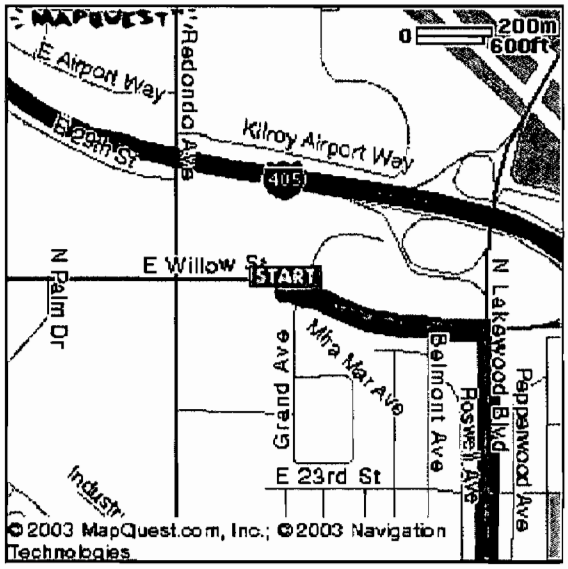
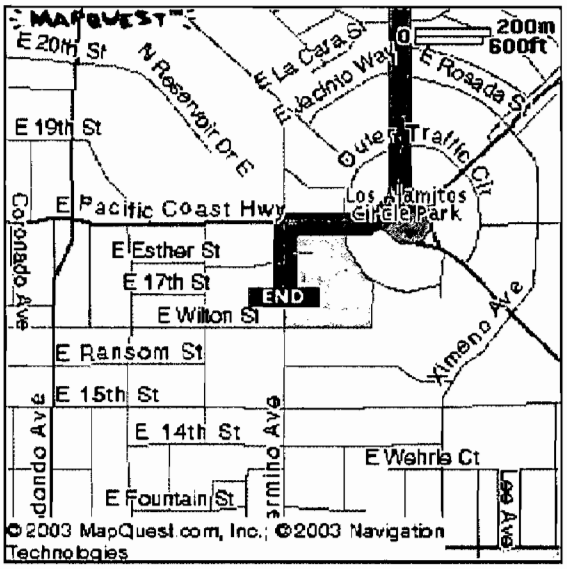


Start: SCHROEDER HALL
3800 E. Willow St.
Long Beach, CA. 90822-1002

End: COMMUNITY HOSPITAL OF LONG BEACH
1720 Termino Ave.
Long Beach CA. 90804-2104





1. Start out going East on E WILLOW ST toward GRAND AVE. (0.33 Miles)
2. Turn RIGHT onto N LAKEWOOD BLVD/CA-19 S. (0.89 Miles)
3. Enter next roundabout and take 1st exit onto E PACIFIC COAST HWY/CA-1 N. (0.18 Miles)
4. Turn LEFT onto TERMINO AVE. (0.09 Miles)

COMMUNITY HOSPITAL OF LONG BEACH
1720 Termino Ave.
Long Beach CA. 90804-2104
(562) 498-1000

LONG BEACH USAR CENTER, SCHROEDER HALL LONG BEACH, CALIFORNIA		HOSPITAL ROUTE MAP FOR SCHROEDER HALL, LONG BEACH, CALIFORNIA Plan of Action for Evaluation of Catch Basins	FIGURE
CDM	DATE: 10/03 FN: 004_SHASP		4-2
MODIFIED BY: J. Brown	PROJECT NO. 2802-004		

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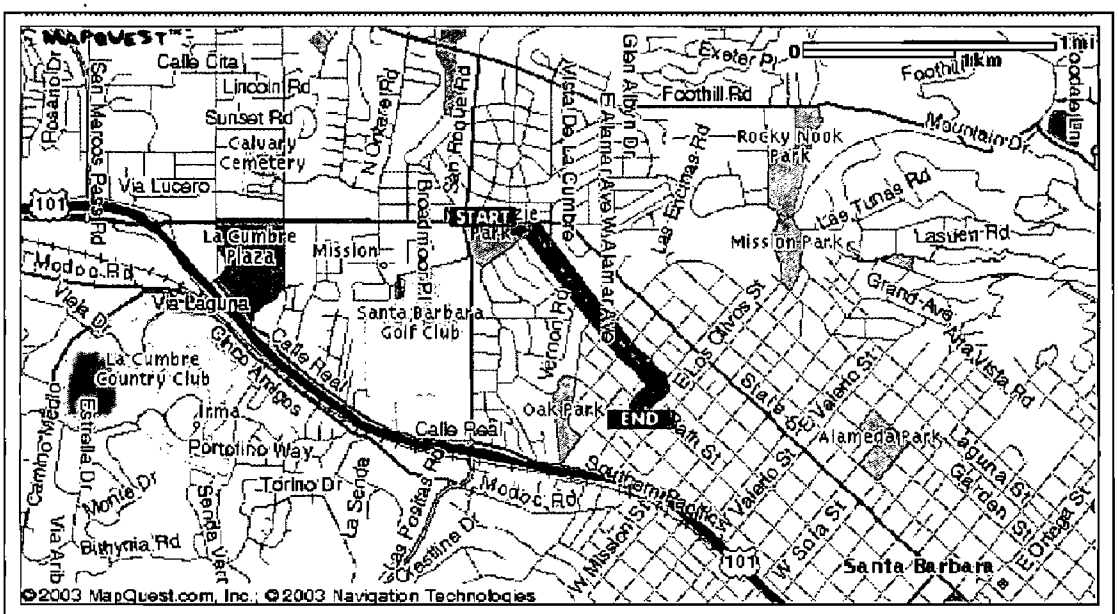
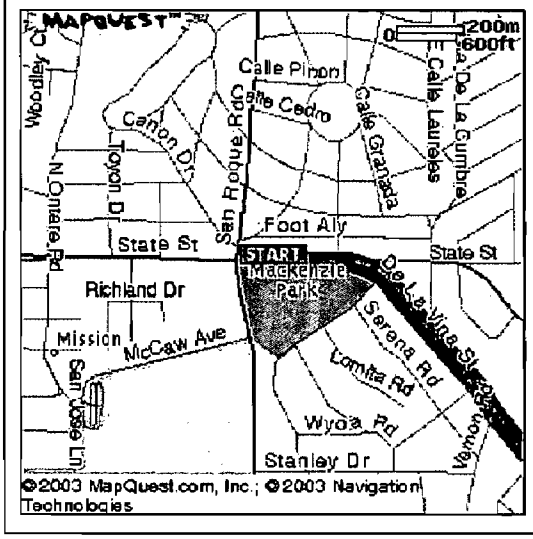
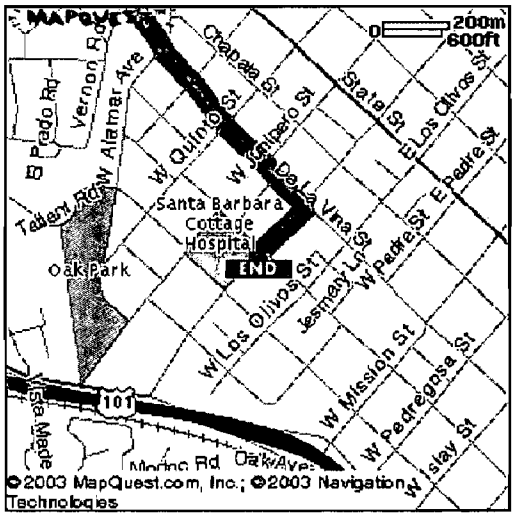


Start: FREMONT HALL
3227 State St.
Santa Barbara, CA. 93105-3328

End: SANTA BARBARA COTTAGE HOSPITAL
320 W. Pueblo St.
Santa Barbara, CA. 93105-4311





1. Start out going East on STATE ST toward CALLE PALO COLORADO. (0.14 Miles)
2. Turn SLIGHT RIGHT onto DE LA VINA ST. (0.83 Miles)
3. Turn RIGHT onto W PUEBLO ST. (0.12 Miles)

SANTA BARBARA COTTAGE HOSPITAL
320 W. Pueblo St.
Santa Barbara, CA. 93105-4311
(805) 682-7111

SANTA BARBARA USARC CENTER, FREMONT HALL SANTA BARBARA, CALIFORNIA	HOSPITAL ROUTE MAP FOR FREMONT HALL, SANTA BARBARA, CALIFORNIA Plan of Action for Evaluation of Catch Basins	FIGURE
CDM — DATE: 10/03 — FN: 004_SHASP		4-3
MODIFIED BY: J. Brown — PROJECT NO. 2802-004		

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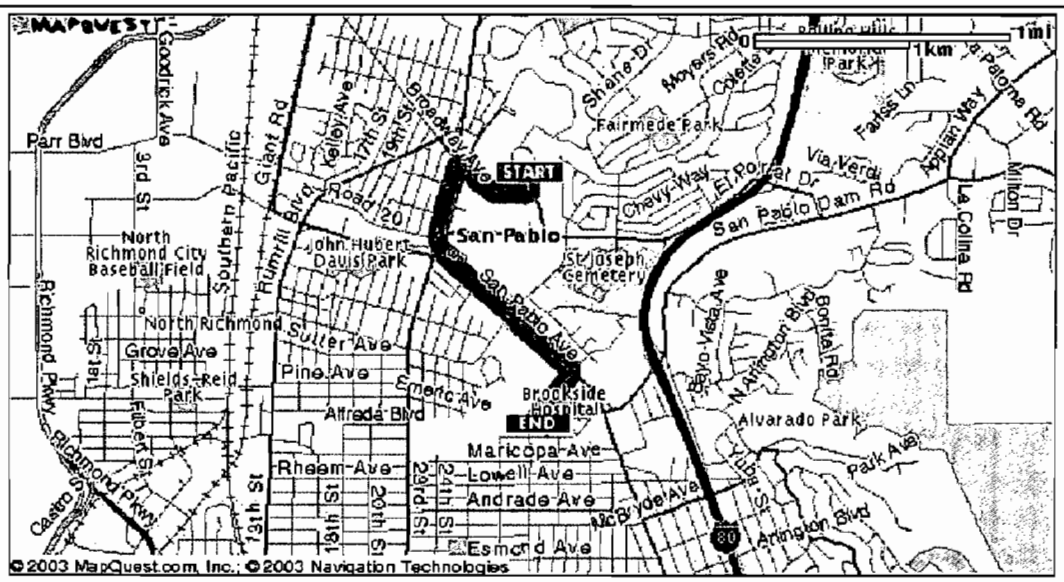
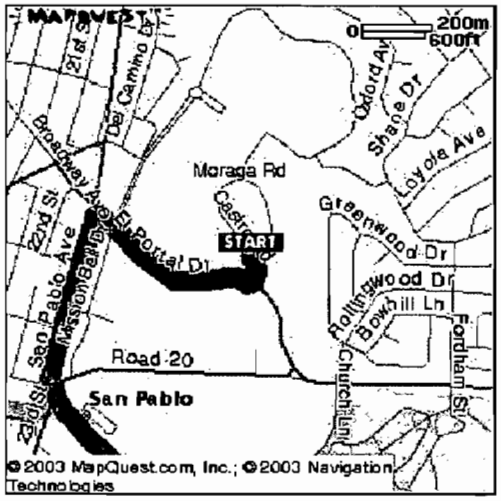
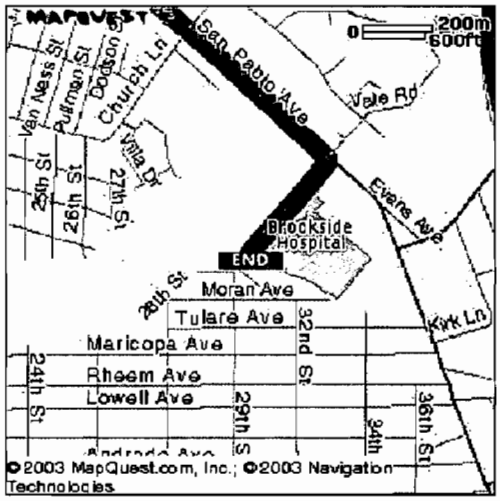


Start: HUNTER HALL
2600 Castro Rd.
San Pablo, CA. 94804-3164

End: DOCTOR'S MEDICAL CENTER
2000 Vale Road
San Pablo, CA 94806





1. Start out going South on CASTRO RD toward EL PORTAL DR. (0.06 Miles)
2. Turn RIGHT onto EL PORTAL DR. (0.32 Miles)
3. Turn LEFT onto SAN PABLO AVE. (1.06 Miles)
4. Turn RIGHT onto VALE RD. (0.22 Miles)

DOCTOR'S MEDICAL CENTER
2000 Vale Road
San Pablo, California 94806
Main Phone: 510-970-5000

SAN PABLO USARC CENTER, HUNTER HALL SAN PABLO, CALIFORNIA	HOSPITAL ROUTE MAP FOR HUNTER HALL, SAN PABLO, CALIFORNIA Plan of Action for Evaluation of Catch Basins	FIGURE 4-4
CDM — DATE: 10/03 — FN: 004_SHASP		
MODIFIED BY: J. Brown — PROJECT NO. 2802-004		

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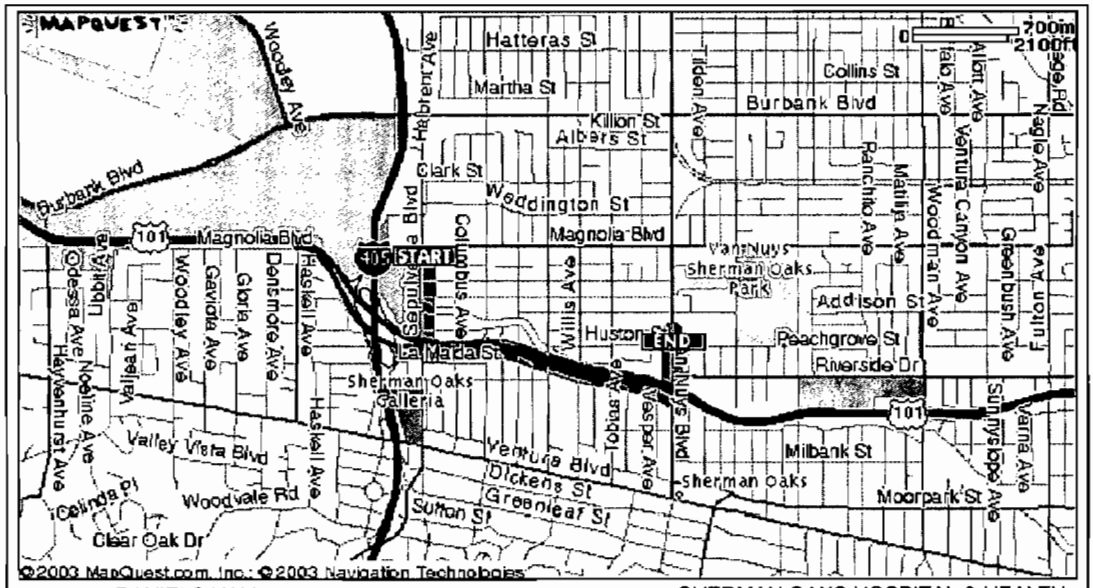
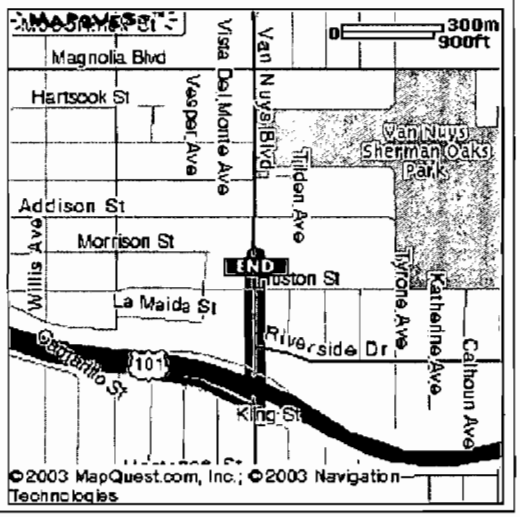


Start: DANIELS HALL
5161 Sepulveda Blvd.
Sherman Oaks, CA. 91403-1155

End: SHERMAN OAKS HOSPITAL & HEALTH
4929 Van Nuys Blvd.
Sherman Oaks, CA. 91403



1. Start out going South on SEPULVEDA BLVD toward HARTSOOK ST. (0.35 Miles)
2. Merge onto US-101 S via the ramp- on the left. (0.75 Miles)
3. Take the VAN NUYS BLVD exit. (0.29 Miles)
4. Turn LEFT onto VAN NUYS BLVD. (0.25 Miles)

SHERMAN OAKS HOSPITAL & HEALTH
4929 Van Nuys Blvd.
Sherman Oaks, CA. 91403
Main Phone: (818) 981-7111

SAN PABLO USARC CENTER, HUNTER HALL SAN PABLO, CALIFORNIA	HOSPITAL ROUTE MAP FOR DANIELS HALL, SHERMAN OAKS, CALIFORNIA Plan of Action for Evaluation of Catch Basins	FIGURE
CDM — DATE: 11/03 — FN: 004_SHASP		4-5
MODIFIED BY: J. Brown — PROJECT NO. 2802-004		

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Section 5
Deliverable

All analytical sampling results, conclusions, and recommendations will be presented in individual draft letter reports for each location (total of five reports), which will be submitted to the 63D RRC for review. Recommendations for further investigation and agency notification at the sites, if necessary, will be made in the reports. All deliverables will be provided in both hard copy and electronic, compact disc format, including attachments. The final version of each report will incorporate comments from the 63D RRC.

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Section 6
References

Bradford et al. 1996. *Background Concentrations of Trace and Major Elements in California Soils, Kearney Foundation Special Report. University of California-Riverside and California Environmental Protection Agency Department of Toxic Substances Control.* March.

California Regional Water Quality Control Board (RWQCB). 1996. *Site Assessment and Cleanup Guidebook.* Interim. May.

CDM. 2003. *Work Plan for Site Inspection of Catch Basin at Tustin United States Army Reserve Center.* Final. January.

U.S. EPA. 2001. *USEPA Requirements for Quality Assurance Project Plans,* USEPA QA/R-5, Interim Final.

U.S. EPA. Region 9. 2002. *Industrial and Residential Preliminary Remediation Goals (PRGs).* October.

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Appendix A

Screening Criteria

U.S. EPA Region 9 – Preliminary Remediation Goals

Key : SFo,i=Cancer Slope Factor oral, inhalation RfDo,i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca**(where: nc < 10X ca)
+++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION											CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
8.7E-03	i	4.0E-03	i	8.7E-03	r	4.0E-03	r	0	0.10	30560-19-1	Acephate	5.6E+01	ca**	2.0E+02	ca*	7.7E-01	ca*	7.7E+00	ca*		
				7.7E-03	i	2.6E-03	i	1		75-07-0	Acetaldehyde	1.1E+01	ca**	2.3E+01	ca**	8.7E-01	ca*	1.7E+00	ca		
		2.0E-02	i			2.0E-02	r	0	0.10	34256-82-1	Acetochlor	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		1.0E-01	i			1.0E-01	r	1		67-64-1	Acetone	1.6E+03	nc	6.0E+03	nc	3.7E+02	nc	6.1E+02	nc	1.6E+01	8.0E-01
		8.0E-04	h			8.0E-04	r	0	0.10	75-86-5	Acetone cyanohydrin	4.9E+01	nc	4.9E+02	nc	2.9E+00	nc	2.9E+01	nc		
		1.7E-02	r			1.7E-02	i	1		75-05-8	**Acetonitrile**	4.2E+02	nc	1.8E+03	nc	6.2E+01	nc	1.0E+02	nc		
		2.0E-02	h			5.7E-06	i	1		107-02-8	Acrolein	1.0E-01	nc	3.4E-01	nc	2.1E-02	nc	4.2E-02	nc		
4.5E+00	i	2.0E-04	i	4.5E+00	i	2.0E-04	r	0	0.10	79-06-1	Acrylamide	1.1E-01	ca	3.8E-01	ca	1.5E-03	ca	1.5E-02	ca		
		5.0E-01	i			2.9E-04	i	0	0.10	79-10-7	Acrylic acid	2.9E+04	nc	1.0E+05	max	1.0E+00	nc	1.8E+04	nc		
5.4E-01	i	1.0E-03	h	2.4E-01	i	5.7E-04	i	1		107-13-1	Acrylonitrile	2.1E-01	ca*	4.9E-01	ca*	2.8E-02	ca*	3.9E-02	ca*		
8.1E-02	h	1.0E-02	i	8.0E-02	r	1.0E-02	r	0	0.10	15972-60-8	Alachlor	6.0E+00	ca	2.1E+01	ca	8.4E-02	ca	8.4E-01	ca		
		1.5E-01	i			1.5E-01	r	0	0.10	1596-84-5	Alar	9.2E+03	nc	9.2E+04	nc	5.5E+02	nc	5.5E+03	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	116-06-3	Aldicarb	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	1646-88-4	Aldicarb sulfone	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
1.7E+01	i	3.0E-05	i	1.7E+01	i	3.0E-05	r	0	0.10	309-00-2	Aldrin	2.9E-02	ca*	1.0E-01	ca	3.9E-04	ca	4.0E-03	ca	5.0E-01	2.0E-02
		2.5E-01	i			2.5E-01	r	0	0.10	74223-64-6	Ally	1.5E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc		
		5.0E-03	i			5.0E-03	r	0	0.10	107-18-6	Allyl alcohol	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		5.0E-02	h			2.9E-04	i	0	0.10	107-05-1	Allyl chloride	3.0E+03	nc	3.0E+04	nc	1.0E+00	nc	1.8E+03	nc		
		1.0E+00	n			1.4E-03	n	0		7429-90-5	Aluminum	7.6E+04	nc	1.0E+05	max	5.1E+00	nc	3.6E+04	nc		
		4.0E-04	i					0		20859-73-8	Aluminum phosphide	3.1E+01	nc	4.1E+02	nc			1.5E+01	nc		
		3.0E-04	i			3.0E-04	r	0	0.10	67485-29-4	Amdro	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc		
		9.0E-03	i			9.0E-03	r	0	0.10	834-12-8	Ametryn	5.5E+02	nc	5.5E+03	nc	3.3E+01	nc	3.3E+02	nc		
		7.0E-02	h			7.0E-02	r	0	0.10	591-27-5	m-Aminophenol	4.3E+03	nc	4.3E+04	nc	2.6E+02	nc	2.6E+03	nc		
		2.0E-05	h			2.0E-05	r	0	0.10	504-24-5	4-Aminopyridine	1.2E+00	nc	1.2E+01	nc	7.3E-02	nc	7.3E-01	nc		
		2.5E-03	i			2.5E-03	r	0	0.10	33089-61-1	Amitraz	1.5E+02	nc	1.5E+03	nc	9.1E+00	nc	9.1E+01	nc		
						2.9E-02	i			7664-41-7	Ammonia					1.0E+02	nc				
		2.0E-01	i					0	0.10	7773-06-0	Ammonium sulfamate	1.2E+04	nc	1.0E+05	max			7.3E+03	nc		
5.7E-03	i	7.0E-03	n	5.7E-03	r	2.9E-04	i	0	0.10	62-53-3	Aniline	8.5E+01	ca**	3.0E+02	ca*	1.0E+00	nc	1.2E+01	ca*		
		4.0E-04	i					0		7440-36-0	Antimony and compounds	3.1E+01	nc	4.1E+02	nc			1.5E+01	nc	5.0E+00	3.0E-01
		5.0E-04	h					0		1314-60-9	Antimony pentoxide	3.9E+01	nc	5.1E+02	nc			1.8E+01	nc		
		9.0E-04	h					0		28300-74-5	Antimony potassium tartrate	7.0E+01	nc	9.2E+02	nc			3.3E+01	nc		
		4.0E-04	h					0		1332-81-6	Antimony tetroxide	3.1E+01	nc	4.1E+02	nc			1.5E+01	nc		
		4.0E-04	h			5.7E-05	i	0		1309-64-4	Antimony trioxide	3.1E+01	nc	4.1E+02	nc	2.1E-01	nc	1.5E+01	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	74115-24-5	Apollo	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
2.5E-02	i	5.0E-02	h	2.5E-02	i	5.0E-02	r	0	0.10	140-57-8	Aramite	1.9E+01	ca	6.9E+01	ca	2.7E-01	ca	2.7E+00	ca		
		3.0E-04	i					0	0.03	7440-38-2	Arsenic (noncancer endpoint)	2.2E+01	nc	2.6E+02	nc						

Key : SFo,i=Cancer Slope Factor oral, inhalation RfDo,i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca**(where: nc < 10X ca)
+++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.			Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
1.5E+00	i	3.0E-04	i	1.5E+01	i			0	0.03	7440-38-2		Arsenic (cancer endpoint)	3.9E-01	ca*	1.6E+00	ca	4.5E-04	ca	4.5E-02	ca	2.9E+01	1.0E+00
						1.4E-05	i	0		7784-42-1		Arsine (see arsenic for cancer endpoint)					5.2E-02	nc				
		9.0E-03	i			9.0E-03	r		0.10	76578-12-6		Assure	5.5E+02	nc	5.5E+03	nc	3.3E+01	nc	3.3E+02	nc		
		5.0E-02	i			5.0E-02	r	0	0.10	3337-71-1		Asulam	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
2.2E-01	h	3.5E-02	h	2.2E-01	r	3.5E-02	r	0	0.10	1912-24-9		Atrazine	2.2E+00	ca	7.8E+00	ca	3.1E-02	ca	3.0E-01	ca		
		4.0E-04	i			4.0E-04	r	0	0.10	71751-41-2		Avermectin B1	2.4E+01	nc	2.5E+02	nc	1.5E+00	nc	1.5E+01	nc		
1.1E-01	i			1.1E-01	i			0	0.10	103-33-3		Azobenzene	4.4E+00	ca	1.6E+01	ca	6.2E-02	ca	6.1E-01	ca		
		7.0E-02	i			1.4E-04	h	0		7440-39-3		Barium and compounds	5.4E+03	nc	6.7E+04	nc	5.2E-01	nc	2.6E+03	nc	1.6E+03	8.2E+01
		4.0E-03	i			4.0E-03	r	0	0.10	114-26-1		Baygon	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc		
		3.0E-02	i			3.0E-02	r	0	0.10	43121-43-3		Bayleton	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	68359-37-5		Baythroid	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
		3.0E-01	i			3.0E-01	r	0	0.10	1861-40-1		Benefin	1.8E+04	nc	1.0E+05	max	1.1E+03	nc	1.1E+04	nc		
		5.0E-02	i			5.0E-02	r	0	0.10	17804-35-2		Benomyl	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		3.0E-02	i			3.0E-02	r	0	0.10	25057-89-0		Bentazon	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
		1.0E-01	i			1.0E-01	r	0	0.10	100-52-7		Benzaldehyde	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
5.5E-02	i	3.0E-03	n	2.9E-02	i	1.7E-03	n	1		71-43-2		Benzene	6.0E-01	ca*	1.3E+00	ca*	2.3E-01	ca*	3.4E-01	ca*	3.0E-02	2.0E-03
2.3E+02	i	3.0E-03	i	2.3E+02	i	3.0E-03	r	0	0.10	92-87-5		Benzidine	2.1E-03	ca	7.5E-03	ca	2.9E-05	ca	2.9E-04	ca		
		4.0E+00	i			4.0E+00	r	0	0.10	65-85-0		Benzoic acid	1.0E+05	max	1.0E+05	max	1.5E+04	nc	1.5E+05	nc	4.0E+02	2.0E+01
1.3E+01	i			1.3E+01	r			0	0.10	98-07-7		Benzotrichloride	3.7E-02	ca	1.3E-01	ca	5.2E-04	ca	5.2E-03	ca		
		3.0E-01	h			3.0E-01	r	0	0.10	100-51-6		Benzyl alcohol	1.8E+04	nc	1.0E+05	max	1.1E+03	nc	1.1E+04	nc		
1.7E-01	i	2.9E-03	r	1.7E-01	r	2.9E-03	n	1		100-44-7		**Benzyl chloride**	8.9E-01	ca*	2.2E+00	ca	4.0E-02	ca	6.6E-02	ca		
		2.0E-03	i	8.4E+00	i	5.7E-06	i	0		7440-41-7		Beryllium and compounds	1.5E+02	nc	1.9E+03	ca**	8.0E-04	ca*	7.3E+01	nc	6.3E+01	3.0E+00
		1.0E-04	i			1.0E-04	r	0	0.10	141-66-2		Bidrin	6.1E+00	nc	6.2E+01	nc	3.7E-01	nc	3.6E+00	nc		
		1.5E-02	i			1.5E-02	r	0	0.10	82657-04-3		Biphenthrin (Talstar)	9.2E+02	nc	9.2E+03	nc	5.5E+01	nc	5.5E+02	nc		
		5.0E-02	i			5.0E-02	r	1		92-52-4		1,1-Biphenyl	3.5E+02	sat	3.5E+02	sat	1.8E+02	nc	3.0E+02	nc		
1.1E+00	i			1.2E+00	i			1		111-44-4		Bis(2-chloroethyl)ether	2.1E-01	ca	5.5E-01	ca	5.8E-03	ca	9.8E-03	ca	4.0E-04	2.0E-05
7.0E-02	x	4.0E-02	i	3.5E-02	x	4.0E-02	r	1		39638-32-9		Bis(2-chloroisopropyl)ether	2.9E+00	ca	7.4E+00	ca	1.9E-01	ca	2.7E-01	ca		
2.2E+02	i			2.2E+02	i			1		542-88-1		Bis(chloromethyl)ether	1.9E-04	ca	4.3E-04	ca	3.1E-05	ca	5.2E-05	ca		
7.0E-02	x	4.0E-02	i	3.5E-02	x	4.0E-02	r	1		108-60-1		Bis(2-chloro-1-methylethyl)ether	2.9E+00	ca	7.4E+00	ca	1.9E-01	ca	2.7E-01	ca		
1.4E-02	i	2.0E-02	i	1.4E-02	r	2.2E-02	r	0	0.10	117-81-7		Bis(2-ethylhexyl)phthalate (DEHP)	3.5E+01	ca*	1.2E+02	ca	4.8E-01	ca	4.8E+00	ca		
		5.0E-02	i			5.0E-02	r	0	0.10	80-05-7		Bisphenol A	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		2.0E-01	i			5.7E-03	x	0		7440-42-8		**Boron**	1.6E+04	nc	1.0E+05	max	2.1E+01	nc	7.3E+03	nc		
						2.0E-04	h	0		7637-07-2		Boron trifluoride					7.3E-01	nc				
		4.00E-03	i							15541-45-4		**Bromate**	3.1E+02	nc	4.1E+03	nc	0.0E+00		1.5E+02	nc		
		2.0E-02	n			2.9E-03	n	1		108-86-1		Bromobenzene	2.8E+01	nc	9.2E+01	nc	1.0E+01	nc	2.0E+01	nc		
6.2E-02	i	2.0E-02	i	6.2E-02	r	2.0E-02	r	1		75-27-4		Bromodichloromethane	8.2E-01	ca	1.8E+00	ca	1.1E-01	ca	1.8E-01	ca	6.0E-01	3.0E-02

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TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
7.9E-03	i	2.0E-02	i	3.9E-03	i	2.0E-02	r	0	0.10	75-25-2	Bromoform (tribromomethane)	6.2E+01	ca*	2.2E+02	ca*	1.7E+00	ca*	8.5E+00	ca*	8.0E-01	4.0E-02
		1.4E-03	i			1.4E-03	i	1		74-83-9	Bromomethane (Methyl bromide)	3.9E+00	nc	1.3E+01	nc	5.2E+00	nc	8.7E+00	nc	2.0E-01	1.0E-02
		5.0E-03	h			5.0E-03	r	0	0.10	2104-96-3	Bromophos	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	1689-84-5	Bromoxynil	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	1689-99-2	Bromoxynil octanoate	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
9.8E-01	r			9.8E-01	i			1		106-99-0	**1,3-Butadiene**	6.5E-03	ca	1.4E-02	ca	6.9E-03	ca	1.1E-02	ca		
		1.0E-01	i			2.6E-03	n	0	0.10	71-36-3	**1-Butanol**	6.1E+03	nc	6.1E+04	nc	9.5E+00	nc	3.6E+03	nc	1.7E+01	9.0E-01
		5.0E-02	i			5.0E-02	r	0	0.10	2008-41-5	Butylate	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		4.00E-02	n			4.00E-02	r	1		104-51-8	**n-Butylbenzene**	2.4E+02	sat	2.4E+02	sat	1.5E+02	nc	2.4E+02	nc		
		4.00E-02	n			4.00E-02	r	1		135-9-88	**sec-Butylbenzene**	2.2E+02	sat	2.2E+02	sat	1.5E+02	nc	2.4E+02	nc		
		4.00E-02	n			4.00E-02	r	1		98-06-6	**tert-Butylbenzene**	3.9E+02	sat	3.9E+02	sat	1.5E+02	nc	2.4E+02	nc		
		2.0E-01	i			2.0E-01	r	0	0.10	85-68-7	Butyl benzyl phthalate	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc	9.3E+02	8.1E+02
		1.0E+00	i			1.0E+00	r	0	0.10	85-70-1	Butylphthalyl butylglycolate	6.1E+04	nc	1.0E+05	max	3.7E+03	nc	3.6E+04	nc		
2.5E-01	h	3.0E-04	h	2.5E-01	r	3.0E-04	r	0	0.10	75-60-5	**Cacodylic acid**	1.9E+00	ca**	6.9E+00	ca*	2.7E-02	ca*	2.7E-01	ca*		
		5.0E-04	i	6.3E+00	i			0	0.001	7440-43-9	Cadmium and compounds	3.7E+01	nc	4.5E+02	nc	1.1E-03	ca	1.8E+01	nc	8.0E+00	4.0E-01
		5.0E-01	i			5.0E-01	r	0	0.10	105-60-2	Caprolactam	3.1E+04	nc	1.0E+05	max	1.8E+03	nc	1.8E+04	nc		
8.6E-03	h	2.0E-03	i	8.6E-03	r	2.0E-03	r	0	0.10	2425-06-1	Captafol	5.7E+01	ca**	2.0E+02	ca**	7.8E-01	ca**	7.8E+00	ca**		
3.5E-03	h	1.3E-01	i	3.5E-03	r	1.3E-01	r	0	0.10	133-06-2	Captan	1.4E+02	ca*	4.9E+02	ca	1.9E+00	ca	1.9E+01	ca		
		1.0E-01	i			1.1E-01	r	0	0.10	63-25-2	Carbaryl	6.1E+03	nc	6.2E+04	nc	4.0E+02	nc	3.6E+03	nc		
2.0E-02	h			2.0E-02	r			0	0.10	86-74-8	Carbazole	2.4E+01	ca	8.6E+01	ca	3.4E-01	ca	3.4E+00	ca	6.0E-01	3.0E-02
		5.0E-03	i			5.0E-03	r	0	0.10	1563-66-2	Carbofuran	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		1.0E-01	i			2.0E-01	i	1		75-15-0	Carbon disulfide	3.6E+02	nc	7.2E+02	sat	7.3E+02	nc	1.0E+03	nc	3.2E+01	2.0E+00
1.3E-01	i	7.0E-04	i	5.3E-02	i	7.0E-04	r	1		56-23-5	Carbon tetrachloride	2.5E-01	ca**	5.5E-01	ca*	1.3E-01	ca*	1.7E-01	ca*	7.0E-02	3.0E-03
		1.0E-02	i			1.0E-02	r	0	0.10	55285-14-8	Carbosulfan	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		1.0E-01	i			1.0E-01	r	0	0.10	5234-68-4	Carboxin	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
		1.5E-02	i			1.5E-02	r	0	0.10	133-90-4	Chloramben	9.2E+02	nc	9.2E+03	nc	5.5E+01	nc	5.5E+02	nc		
4.0E-01	h			4.0E-01	r			0	0.10	118-75-2	Chloranil	1.2E+00	ca	4.3E+00	ca	1.7E-02	ca	1.7E-01	ca		
3.5E-01	i	5.0E-04	i	3.5E-01	i	2.0E-04	i	0	0.04	12789-03-6	Chlordane	1.6E+00	ca*	6.5E+00	ca*	1.9E-02	ca*	1.9E-01	ca*	1.0E+01	5.0E-01
		2.0E-02	i			2.0E-02	r	0	0.10	90982-32-4	Chlorimuron-ethyl	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		1.0E-01	i			5.71E-05	n			7782-50-5	Chlorine					2.1E-01	nc				
						5.7E-05	i			10049-04-4	Chlorine dioxide					2.1E-01	nc				
		2.0E-03	h			2.0E-03	r	0	0.10	79-11-8	Chloroacetic acid	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		8.6E-06	r			8.6E-06	i	1		532-27-4	2-Chloroacetophenone	3.3E-02	nc	1.1E-01	nc	3.1E-02	nc	5.2E-02	nc		
		4.0E-03	i			4.0E-03	r	0	0.10	106-47-8	4-Chloroaniline	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc	7.0E-01	3.0E-02
		2.0E-02	i			1.7E-02	n	1		108-90-7	Chlorobenzene	1.5E+02	nc	5.3E+02	nc	6.2E+01	nc	1.1E+02	nc	1.0E+00	7.0E-02

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SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		VOC	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
2.7E-01	h	2.0E-02	i	2.7E-01	h	2.0E-02	r	0	0.10	510-15-6	Chlorobenzilate	1.8E+00	ca	6.4E+00	ca	2.5E-02	ca	2.5E-01	ca		
		2.0E-01	h			2.0E-01	r	0	0.10	74-11-3	p-Chlorobenzoic acid	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc		
		2.0E-02	h			2.0E-02	r	0	0.10	98-56-6	4-Chlorobenzotrifluoride	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		2.0E-02	h			2.0E-03	h	1		126-99-8	2-Chloro-1,3-butadiene	3.6E+00	nc	1.2E+01	nc	7.3E+00	nc	1.4E+01	nc		
		4.0E-01	h			4.0E-01	r	1		109-69-3	1-Chlorobutane	4.8E+02	sat	4.8E+02	sat	1.5E+03	nc	2.4E+03	nc		
		1.4E+01	r			1.4E+01	i	1		75-68-3	1-Chloro-1,1-difluoroethane (HCFC-142b)	3.4E+02	sat	3.4E+02	sat	5.2E+04	nc	8.7E+04	nc		
		1.4E+01	r			1.4E+01	i	1		75-45-6	Chlorodifluoromethane	3.4E+02	sat	3.4E+02	sat	5.1E+04	nc	8.5E+04	nc		
2.9E-03	n	4.0E-01	n	2.9E-03	r	2.9E+00	i	1		75-00-3	Chloroethane	3.0E+00	ca	6.5E+00	ca	2.3E+00	ca	4.6E+00	ca		
		1.0E-02	i			8.6E-04	n	1		67-66-3	**Chloroform**	3.6E+00	ca/nc	1.2E+01	ca/nc	3.1E+00	ca/nc	6.2E+00	ca/nc	6.0E-01	3.0E-02
3.1E-02				1.9E-02				1			**Chloroform "CAL-Modified PRG"**	9.4E-01	ca	2.0E+00	ca	3.5E-01	ca	5.3E-01	ca		
1.3E-02	h			6.3E-03	h	8.6E-02	n	1		74-87-3	Chloromethane	1.2E+00	ca	2.6E+00	ca	1.1E+00	ca	1.5E+00	ca		
5.8E-01	h			5.8E-01	r			0	0.10	95-69-2	4-Chloro-2-methylaniline	8.4E-01	ca	3.0E+00	ca	1.2E-02	ca	1.2E-01	ca		
4.6E-01	h			4.6E-01	r			0	0.10	3165-93-3	4-Chloro-2-methylaniline hydrochloride	1.1E+00	ca	3.7E+00	ca	1.5E-02	ca	1.5E-01	ca		
		8.0E-02	i			8.0E-02	r	1		91-58-7	beta-Chloronaphthalene	4.9E+03	nc	2.3E+04	nc	2.9E+02	nc	4.9E+02	nc		
9.7E-03	h	1.0E-03	h	9.7E-03	r	2.0E-05	h	1		88-73-3	**o-Chloronitrobenzene**	1.4E+00	nc**	4.5E+00	nc**	7.3E-02	nc**	1.5E-01	nc**		
6.7E-03	h	1.0E-03	h	6.7E-03	r	1.7E-04	h	1		100-00-5	**p-Chloronitrobenzene**	1.0E+01	nc**	3.7E+01	nc**	6.2E-01	nc**	1.2E+00	nc**		
		5.0E-03	i			5.0E-03	r	1		95-57-8	2-Chlorophenol	6.3E+01	nc	2.4E+02	nc	1.8E+01	nc	3.0E+01	nc	4.0E+00	2.0E-01
		2.9E-02	r			2.9E-02	h	1		75-29-6	2-Chloropropane	1.7E+02	nc	5.9E+02	nc	1.0E+02	nc	1.7E+02	nc		
1.1E-02	h	1.5E-02	i	1.1E-02	r	1.5E-02	r	0	0.10	1897-45-6	Chlorothalonil	4.4E+01	ca*	1.6E+02	ca*	6.1E-01	ca*	6.1E+00	ca*		
		2.0E-02	i			2.0E-02	r	1		95-49-8	o-Chlorotoluene	1.6E+02	nc	5.6E+02	nc	7.3E+01	nc	1.2E+02	nc		
		2.0E-01	i			2.0E-01	r	0	0.10	101-21-3	Chlorpropham	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc		
		3.0E-03	i			3.0E-03	r	0	0.10	2921-88-2	Chlorpyrifos	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
		1.0E-02	h			1.0E-02	r	0	0.10	5598-13-0	Chlorpyrifos-methyl	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		5.0E-02	i			5.0E-02	r	0	0.10	64902-72-3	Chlorsulfuron	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		8.0E-04	h			8.0E-04	r	0	0.10	60238-56-4	Chlorthiophos	4.9E+01	nc	4.9E+02	nc	2.9E+00	nc	2.9E+01	nc		
				4.2E+01	i			0			Total Chromium (1:6 ratio Cr VI:Cr III)+++	2.1E+02	ca	4.5E+02	ca	1.6E-04	ca			3.8E+01	2.0E+00
		1.5E+00	i							16065-83-1	Chromium III	1.0E+05	max	1.0E+05	max	0.0E+00		5.5E+04	nc		
		3.0E-03	i	2.9E+02	i	2.2E-06	i	0		18540-29-9	Chromium VI+++	3.0E+01	ca**	6.4E+01	ca	2.3E-05	ca	1.1E+02	nc	3.8E+01	2.0E+00
		2.00E-02	n	9.8E+00	n	5.7E-06	n			7440-48-4	**Cobalt**	9.0E+02	ca**	1.9E+03	ca*	6.9E-04	ca*	7.3E+02	nc		
				2.2E+00	i			0		8007-45-2	Coke Oven Emissions					3.1E-03	ca				
		4.00E-02	h					0		7440-50-8	Copper and compounds	3.1E+03	nc	4.1E+04	nc			1.5E+03	nc		
1.9E+00	h			1.9E+00	r			1		123-73-9	Crotonaldehyde	5.3E-03	ca	1.1E-02	ca	3.5E-03	ca	5.9E-03	ca		
		1.0E-01	i			1.1E-01	i	1		98-82-8	Cumene (isopropylbenzene)	5.7E+02	nc	2.0E+03	nc	4.0E+02	nc	6.6E+02	nc		
8.4E-01	h	2.0E-03	h	8.4E-01	r	2.0E-03	r	0	0.10	21725-46-2	Cyanazine	5.8E-01	ca	2.1E+00	ca	8.0E-03	ca	8.0E-02	ca		
		2.0E-02	i					0	0.10	57-12-5	Cyanide (free)	1.2E+03	nc	1.2E+04	nc			7.3E+02	nc		
		2.0E-02	i			8.6E-04	i	1		74-90-8	Cyanide (hydrogen)	1.1E+01	nc	3.5E+01	nc	3.1E+00	nc	6.2E+00	nc		

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SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
		4.0E-02	i			4.0E-02	r	1		460-19-5	Cyanogen	1.3E+02	nc	4.3E+02	nc	1.5E+02	nc	2.4E+02	nc		
		9.0E-02	i			9.0E-02	r	1		506-68-3	Cyanogen bromide	2.9E+02	nc	9.7E+02	nc	3.3E+02	nc	5.5E+02	nc		
		5.0E-02	i			5.0E-02	r	1		506-77-4	Cyanogen chloride	1.6E+02	nc	5.4E+02	nc	1.8E+02	nc	3.0E+02	nc		
		5.7E+00	r			5.7E+00	n	1		110-82-7	Cyclohexane	1.4E+02	sat	1.4E+02	sat	2.1E+04	nc	3.5E+04	nc		
		5.0E+00	i			5.0E+00	r	0	0.10	108-94-1	Cyclohexanone	1.0E+05	max	1.0E+05	max	1.8E+04	nc	1.8E+05	nc		
		2.0E-01	i			2.0E-01	r	0	0.10	108-91-8	Cyclohexylamine	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc		
		5.0E-03	i			5.0E-03	r	0	0.10	68085-85-8	Cyhalothrin/Karate	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		1.0E-02	i			1.0E-02	r	0	0.10	52315-07-8	Cypermethrin	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		7.5E-03	i			7.5E-03	r	0	0.10	66215-27-8	Cyromazine	4.6E+02	nc	4.6E+03	nc	2.7E+01	nc	2.7E+02	nc		
		1.0E-02	i			1.0E-02	r	0	0.10	1861-32-1	Dacthal	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		3.0E-02	i			3.0E-02	r	0	0.10	75-99-0	Dalapon	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	39515-41-8	Danitol	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
2.4E-01	i			2.4E-01	r			0	0.03	72-54-8	DDD	2.4E+00	ca	1.0E+01	ca	2.8E-02	ca	2.8E-01	ca	1.6E+01	8.0E-01
3.4E-01	i			3.4E-01	r			0	0.03	72-55-9	DDE	1.7E+00	ca	7.0E+00	ca	2.0E-02	ca	2.0E-01	ca	5.4E+01	3.0E+00
3.4E-01	i	5.0E-04	i	3.4E-01	i	5.0E-04	r	0	0.03	50-29-3	DDT	1.7E+00	ca*	7.0E+00	ca*	2.0E-02	ca*	2.0E-01	ca*	3.2E+01	2.0E+00
		1.0E-02	i			1.0E-02	r	0	0.10	1163-19-5	Decabromodiphenyl ether	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		4.0E-05	i			4.0E-05	r	0	0.10	8065-48-3	Demeton	2.4E+00	nc	2.5E+01	nc	1.5E-01	nc	1.5E+00	nc		
6.1E-02	h			6.1E-02	r			0	0.10	2303-16-4	Diallate	8.0E+00	ca	2.8E+01	ca	1.1E-01	ca	1.1E+00	ca		
		9.0E-04	h			9.0E-04	r	0	0.10	333-41-5	Diazinon	5.5E+01	nc	5.5E+02	nc	3.3E+00	nc	3.3E+01	nc		
		4.0E-03	n			4.0E-03	r	1		132-64-9	Dibenzofuran	2.9E+02	nc	3.1E+03	nc	1.5E+01	nc	2.4E+01	nc		
		1.0E-02	i			1.0E-02	r	0	0.10	106-37-6	1,4-Dibromobenzene	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
8.4E-02	i	2.0E-02	i	8.4E-02	r	2.0E-02	r	1		124-48-1	Dibromochloromethane	1.1E+00	ca	2.6E+00	ca	8.0E-02	ca	1.3E-01	ca	4.0E-01	2.0E-02
1.4E+00	h	5.7E-05	r	2.4E-03	x	5.7E-05	i	1		96-12-8	1,2-Dibromo-3-chloropropane	4.5E-01	ca**	2.0E+00	ca**	2.1E-01	nc	4.8E-02	ca**		
7.0E+00				7.0E+00				1		96-12-8	**"CAL-Modified PRG"**	1.9E-02	ca	4.6E-02	ca	9.6E-04	ca	1.6E-03	ca		
8.5E+01	i	5.7E-05	r	7.7E-01	i	5.7E-05	h	1		106-93-4	1,2-Dibromoethane	6.9E-03	ca	2.8E-02	ca*	8.7E-03	ca*	7.6E-04	ca		
		1.0E-01	i			1.0E-01	r	0	0.10	84-74-2	Dibutyl phthalate	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc	2.3E+03	2.7E+02
		3.0E-02	i			3.0E-02	r	0	0.10	1918-00-9	Dicamba	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
		9.0E-02	i			5.7E-02	h	1		95-50-1	1,2-Dichlorobenzene	3.7E+02	sat	3.7E+02	sat	2.1E+02	nc	3.7E+02	nc	1.7E+01	9.0E-01
		9.00E-04	n			9.00E-04	r	1		541-73-1	1,3-Dichlorobenzene	1.6E+01	nc	6.3E+01	nc	3.3E+00	nc	5.5E+00	nc		
2.4E-02	h	3.00E-02	n	2.2E-02	n	3.00E-02	i	1		106-46-7	1,4-Dichlorobenzene	3.4E+00	ca	7.9E+00	ca	3.1E-01	ca	5.0E-01	ca	2.0E+00	1.0E-01
4.5E-01	i			4.5E-01	r			0	0.10	91-94-1	3,3-Dichlorobenzidine	1.1E+00	ca	3.8E+00	ca	1.5E-02	ca	1.5E-01	ca	7.0E-03	3.0E-04
		3.00E-02	n			3.00E-02	r		0.10	90-98-2	4,4'-Dichlorobenzophenone	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
9.3E+00	r			9.3E+00	h			1		764-41-0	1,4-Dichloro-2-butene	7.9E-03	ca	1.8E-02	ca	7.2E-04	ca	1.2E-03	ca		
		2.0E-01	i			5.7E-02	h	1		75-71-8	Dichlorodifluoromethane	9.4E+01	nc	3.1E+02	nc	2.1E+02	nc	3.9E+02	nc		
		1.0E-01	h			1.4E-01	h	1		75-34-3	1,1-Dichloroethane	5.1E+02	nc	1.7E+03	nc	5.2E+02	nc	8.1E+02	nc	2.3E+01	1.0E+00
5.7E-03				5.7E-03				1			"CAL-Modified PRG"	2.8E+00	ca	6.0E+00	ca	1.2E+00	ca	2.0E+00	ca		

Key : SFo,i=Cancer Slope Factor oral, inhalation RfDo,i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca**(where: nc < 10X ca)
+++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
9.1E-02	i	3.0E-02	n	9.1E-02	i	1.4E-03	n	1		107-06-2	1,2-Dichloroethane (EDC)	2.8E-01	ca*	6.0E-01	ca*	7.4E-02	ca*	1.2E-01	ca*	2.0E-02	1.0E-03
		5.0E-02	i			5.7E-02	i	1		75-35-4	**1,1-Dichloroethylene**	1.2E+02	nc	4.1E+02	nc	2.1E+02	nc	3.4E+02	nc	6.0E-02	3.0E-03
		1.0E-02	h			1.0E-02	r	1		156-59-2	1,2-Dichloroethylene (cis)	4.3E+01	nc	1.5E+02	nc	3.7E+01	nc	6.1E+01	nc	4.0E-01	2.0E-02
		2.0E-02	i			2.0E-02	r	1		156-60-5	1,2-Dichloroethylene (trans)	6.9E+01	nc	2.3E+02	nc	7.3E+01	nc	1.2E+02	nc	7.0E-01	3.0E-02
		3.0E-03	i			3.0E-03	r	0	0.10	120-83-2	2,4-Dichlorophenol	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc	1.0E+00	5.0E-02
		8.0E-03	i			8.0E-03	r	0	0.10	94-82-6	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	4.9E+02	nc	4.9E+03	nc	2.9E+01	nc	2.9E+02	nc		
		1.0E-02	i			1.0E-02	r	0	0.05	94-75-7	2,4-Dichlorophenoxyacetic Acid (2,4-D)	6.9E+02	nc	7.7E+03	nc	3.7E+01	nc	3.6E+02	nc		
6.8E-02	h	1.1E-03	r	6.8E-02	r	1.1E-03	i	1		78-87-5	1,2-Dichloropropane	3.4E-01	ca*	7.4E-01	ca*	9.9E-02	ca*	1.6E-01	ca*	3.0E-02	1.0E-03
1.0E-01	i	3.00E-02	i	1.4E-02	i	5.7E-03	i	1		542-75-6	1,3-Dichloropropene	7.8E-01	ca	1.8E+00	ca	4.8E-01	ca	4.0E-01	ca	4.0E-03	2.0E-04
		3.0E-03	i			3.0E-03	r	0	0.10	616-23-9	2,3-Dichloropropanol	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
2.9E-01	i	5.0E-04	i	2.9E-01	r	1.4E-04	i	0	0.10	62-73-7	Dichlorvos	1.7E+00	ca*	5.9E+00	ca*	2.3E-02	ca*	2.3E-01	ca*		
4.4E-01	x			4.4E-01	r			0	0.10	115-32-2	Dicofol	1.1E+00	ca	3.9E+00	ca	1.5E-02	ca	1.5E-01	ca		
		3.0E-02	h			5.7E-05	x	1		77-73-6	Dicyclopentadiene	5.4E-01	nc	1.8E+00	nc	2.1E-01	nc	4.2E-01	nc		
1.6E+01	i	5.0E-05	i	1.6E+01	i	5.0E-05	r	0	0.10	60-57-1	Dieldrin	3.0E-02	ca	1.1E-01	ca	4.2E-04	ca	4.2E-03	ca	4.0E-03	2.0E-04
		1.0E-02	h			5.7E-03	h	0	0.10	112-34-5	**Diethylene glycol, monobutyl ether**	6.1E+02	nc	6.2E+03	nc	2.1E+01	nc	3.6E+02	nc		
		6.0E-02	h			8.6E-04	h	0	0.10	111-90-0	**Diethylene glycol, monomethyl ether**	3.7E+03	nc	3.7E+04	nc	3.1E+00	nc	2.2E+03	nc		
		4.0E-03	h			4.0E-03	r	0	0.10	617-84-5	**Diethylformamide**	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc		
1.2E-03	i	6.0E-01	i	1.2E-03	r	6.0E-01	r	0	0.10	103-23-1	Di(2-ethylhexyl)adipate	4.1E+02	ca	1.4E+03	ca	5.6E+00	ca	5.6E+01	ca		
		8.0E-01	i			8.0E-01	r	0	0.10	84-66-2	Diethyl phthalate	4.9E+04	nc	1.0E+05	max	2.9E+03	nc	2.9E+04	nc		
4.7E+03	h			4.7E+03	r			0	0.10	56-53-1	Diethylstilbestrol	1.0E-04	ca	3.7E-04	ca	1.4E-06	ca	1.4E-05	ca		
		8.0E-02	i			8.0E-02	r	0	0.10	43222-48-6	Difenzoquat (Avenge)	4.9E+03	nc	4.9E+04	nc	2.9E+02	nc	2.9E+03	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	35367-38-5	Diflubenzuron	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		1.1E+01	r			1.1E+01	i	1		75-37-6	1,1-Difluoroethane					4.2E+04	nc	6.9E+04	nc		
		2.00E-02	n			2.00E-02	r		0.10	28553-12-0	Diisononyl phthalate	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		8.0E-02	i			8.0E-02	r	0	0.10	1445-75-6	Diisopropyl methylphosphonate	4.9E+03	nc	4.9E+04	nc	2.9E+02	nc	2.9E+03	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	55290-64-7	Dimethipin	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		2.0E-04	i			2.0E-04	r	0	0.10	60-51-5	Dimethoate	1.2E+01	nc	1.2E+02	nc	7.3E-01	nc	7.3E+00	nc		
1.4E-02	h			1.4E-02	r			0	0.10	119-90-4	3,3'-Dimethoxybenzidine	3.5E+01	ca	1.2E+02	ca	4.8E-01	ca	4.8E+00	ca		
		5.7E-06	r			5.7E-06	x	1		124-40-3	Dimethylamine	6.7E-02	nc	2.5E-01	nc	2.1E-02	nc	3.5E-02	nc		
		2.0E-03	i			2.0E-03	r	0	0.10	121-69-7	N-N-Dimethylaniline	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
7.5E-01	h			7.5E-01	r			0	0.10	95-68-1	2,4-Dimethylaniline	6.5E-01	ca	2.3E+00	ca	9.0E-03	ca	9.0E-02	ca		
5.8E-01	h			5.8E-01	r			0	0.10	21436-96-4	2,4-Dimethylaniline hydrochloride	8.4E-01	ca	3.0E+00	ca	1.2E-02	ca	1.2E-01	ca		
9.2E+00	h			9.2E+00	r			0	0.10	119-93-7	3,3'-Dimethylbenzidine	5.3E-02	ca	1.9E-01	ca	7.3E-04	ca	7.3E-03	ca		
		1.0E-01	h			8.6E-03	i	0	0.10	68-12-2	N,N-Dimethylformamide	6.1E+03	nc	6.2E+04	nc	3.1E+01	nc	3.6E+03	nc		
		1.0E-03	n			1.0E-03	r	0	0.10	122-09-8	Dimethylphenethylamine	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	105-67-9	2,4-Dimethylphenol	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc	9.0E+00	4.0E-01

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+++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
		6.0E-04	i			6.0E-04	r	0	0.10	576-26-1	2,6-Dimethylphenol	3.7E+01	nc	3.7E+02	nc	2.2E+00	nc	2.2E+01	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	95-65-8	3,4-Dimethylphenol	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		1.0E+01	h			1.0E+01	r	0	0.10	131-11-3	Dimethyl phthalate	1.0E+05	max	1.0E+05	max	3.7E+04	nc	3.6E+05	nc		
		1.0E-01	i			1.0E-01	r	0	0.10	120-61-6	Dimethyl terephthalate	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
		2.0E-03	i			2.0E-03	r	0	0.10	131-89-5	4,6-Dinitro-o-cyclohexyl phenol	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		1.0E-04	h			1.0E-04	r	0	0.10	528-29-0	**1,2-Dinitrobenzene**	6.1E+00	nc	6.2E+01	nc	3.7E-01	nc	3.6E+00	nc		
		1.0E-04	i			1.0E-04	r	0	0.10	99-65-0	1,3-Dinitrobenzene	6.1E+00	nc	6.2E+01	nc	3.7E-01	nc	3.6E+00	nc		
		1.0E-04	h			1.0E-04	r	0	0.10	100-25-4	**1,4-Dinitrobenzene**	6.1E+00	nc	6.2E+01	nc	3.7E-01	nc	3.6E+00	nc		
		2.0E-03	i			2.0E-03	r	0	0.10	51-28-5	2,4-Dinitrophenol	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc	3.0E-01	1.0E-02
6.8E-01	i			6.8E-01	r			0	0.10	25321-14-6	Dinitrotoluene mixture	7.2E-01	ca	2.5E+00	ca	9.9E-03	ca	9.9E-02	ca	8.0E-04	4.0E-05
		2.0E-03	i			2.0E-03	r	0	0.10	121-14-2	2,4-Dinitrotoluene (see DNT mixture for "ca")	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc	8.0E-04	4.0E-05
		1.0E-03	h			1.0E-03	r	0	0.10	606-20-2	2,6-Dinitrotoluene (see DNT mixture for "ca")	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc	7.0E-04	3.0E-05
		1.0E-03	i			1.0E-03	r	0	0.10	88-85-7	Dinoseb	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		4.0E-02	h			4.0E-02	r	0	0.10	117-84-0	**di-n-Octyl phthalate**	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc	1.0E+04	1.0E+04
1.1E-02	i			1.1E-02	r			0	0.10	123-91-1	1,4-Dioxane	4.4E+01	ca	1.6E+02	ca	6.1E-01	ca	6.1E+00	ca		
1.5E+05	h			1.5E+05	h			0	0.03	1746-01-6	Dioxin (2,3,7,8-TCDD)	3.9E-06	ca	1.6E-05	ca	4.5E-08	ca	4.5E-07	ca		
		3.0E-02	i			3.0E-02	r	0	0.10	957-51-7	Diphenamid	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	122-39-4	Diphenylamine	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
		3.00E-04	n			3.00E-04	r		0.10	74-31-7	N,N-Diphenyl-1,4 benzenediamine (DPPD)	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc		
8.0E-01	i			7.7E-01	i			0	0.10	122-66-7	1,2-Diphenylhydrazine	6.1E-01	ca	2.2E+00	ca	8.7E-03	ca	8.4E-02	ca		
		3.0E-03	n			3.0E-03	r	0	0.10	127-63-9	**Diphenyl sulfone**	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
		2.2E-03	i			2.2E-03	r	0	0.10	85-00-7	Diquat	1.3E+02	nc	1.4E+03	nc	8.0E+00	nc	8.0E+01	nc		
8.6E+00	h			8.6E+00	r			0	0.10	1937-37-7	Direct black 38	5.7E-02	ca	2.0E-01	ca	7.8E-04	ca	7.8E-03	ca		
8.1E+00	h			8.1E+00	r			0	0.10	2602-46-2	Direct blue 6	6.0E-02	ca	2.1E-01	ca	8.3E-04	ca	8.3E-03	ca		
9.3E+00	h			9.3E+00	r			0	0.10	16071-86-6	Direct brown 95	5.2E-02	ca	1.9E-01	ca	7.2E-04	ca	7.2E-03	ca		
		4.0E-05	i			4.0E-05	r	0	0.10	298-04-4	Disulfoton	2.4E+00	nc	2.5E+01	nc	1.5E-01	nc	1.5E+00	nc		
		1.0E-02	i			1.0E-02	r	0	0.10	505-29-3	1,4-Dithiane	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		2.0E-03	i			2.0E-03	r	0	0.10	330-54-1	Diuron	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		4.0E-03	i			4.0E-03	r	0	0.10	2439-10-3	Dodine	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc		
		2.0E-01	n							7429-91-6	Dysprosium	1.6E+04	nc	1.0E+05	max			7.3E+03	nc		
		6.0E-03	i			6.0E-03	r	0	0.10	115-29-7	Endosulfan	3.7E+02	nc	3.7E+03	nc	2.2E+01	nc	2.2E+02	nc	1.8E+01	9.0E-01
		2.0E-02	i			2.0E-02	r	0	0.10	145-73-3	Endothall	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		3.0E-04	i			3.0E-04	r	0	0.10	72-20-8	Endrin	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc	1.0E+00	5.0E-02
9.9E-03	i	2.0E-03	h	4.2E-03	h	2.9E-04	i	1		106-89-8	Epichlorohydrin	7.6E+00	nc	2.6E+01	nc	1.0E+00	nc	2.0E+00	nc		
		5.7E-03	r			5.7E-03	i	0	0.10	106-88-7	1,2-Epoxybutane	3.5E+02	nc	3.5E+03	nc	2.1E+01	nc	2.1E+02	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	759-94-4	EPTC (S-Ethyl dipropylthiocarbamate)	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		

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+++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
		5.0E-03	i			5.0E-03	r	0	0.10	16672-87-0	Ethephon (2-chloroethyl phosphonic acid)	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		5.0E-04	i			5.0E-04	r	0	0.10	563-12-2	Ethion	3.1E+01	nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc		
		4.0E-01	h			5.7E-02	i	0	0.10	110-80-5	2-Ethoxyethanol	2.4E+04	nc	1.0E+05	max	2.1E+02	nc	1.5E+04	nc		
		3.0E-01	h			3.0E-01	r	0	0.10	111-15-9	2-Ethoxyethanol acetate	1.8E+04	nc	1.0E+05	max	1.1E+03	nc	1.1E+04	nc		
		9.0E-01	i			9.0E-01	r	1		141-78-6	Ethyl acetate	1.9E+04	nc	3.7E+04	sat	3.3E+03	nc	5.5E+03	nc		
4.8E-02	h			4.8E-02	r			1		140-88-5	Ethyl acrylate	2.1E-01	ca	4.5E-01	ca	1.4E-01	ca	2.3E-01	ca		
3.85E-03	r	1.0E-01	i	3.85E-03	n	2.9E-01	i	1		100-41-4	**Ethylbenzene**	8.9E+00	ca	2.0E+01	ca	1.7E+00	ca	2.9E+00	ca	1.3E+01	7.0E-01
2.9E-03	n	4.0E-01	n	2.9E-03	r	2.9E+00	i	1		75-00-3	Ethyl chloride	3.0E+00	ca	6.5E+00	ca	2.3E+00	ca	4.6E+00	ca		
		3.0E-01	h			3.0E-01	r	0	0.10	109-78-4	Ethylene cyanohydrin	1.8E+04	nc	1.0E+05	max	1.1E+03	nc	1.1E+04	nc		
		2.0E-02	h			2.0E-02	r	0	0.10	107-15-3	Ethylene diamine	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		2.0E+00	i			2.0E+00	r	0	0.10	107-21-1	Ethylene glycol	1.0E+05	max	1.0E+05	max	7.3E+03	nc	7.3E+04	nc		
		5.0E-01	i			3.7E+00	i	0	0.10	111-76-2	Ethylene glycol, monobutyl ether	3.1E+04	nc	1.0E+05	max	1.4E+04	nc	1.8E+04	nc		
1.0E+00	h			3.5E-01	h			1		75-21-8	Ethylene oxide	1.4E-01	ca	3.4E-01	ca	1.9E-02	ca	2.4E-02	ca		
1.1E-01	h	8.0E-05	i	1.1E-01	r	8.0E-05	r	0	0.10	96-45-7	Ethylene thiourea (ETU)	4.4E+00	ca**	1.6E+01	ca**	6.1E-02	ca**	6.1E-01	ca**		
		2.0E-01	i			2.0E-01	r	1		60-29-7	Ethyl ether	1.8E+03	sat	1.8E+03	sat	7.3E+02	nc	1.2E+03	nc		
		9.0E-02	h			9.0E-02	r	1		97-63-2	Ethyl methacrylate	1.4E+02	sat	1.4E+02	sat	3.3E+02	nc	5.5E+02	nc		
		1.0E-05	i			1.0E-05	r	0	0.10	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	6.1E-01	nc	6.2E+00	nc	3.7E-02	nc	3.6E-01	nc		
		3.0E+00	i			3.0E+00	r	0	0.10	84-72-0	Ethylphthalyl ethyl glycolate	1.0E+05	max	1.0E+05	max	1.1E+04	nc	1.1E+05	nc		
		8.0E-03	i			8.0E-03	r	0	0.10	101200-48-0	Express	4.9E+02	nc	4.9E+03	nc	2.9E+01	nc	2.9E+02	nc		
		2.5E-04	i			2.5E-04	r	0	0.10	22224-92-6	Fenamiphos	1.5E+01	nc	1.5E+02	nc	9.1E-01	nc	9.1E+00	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	2164-17-2	Fluometuron	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
		6.0E-02	i					0	0.10	16984-48-8	Flouride	3.7E+03	nc	3.7E+04	nc			2.2E+03	nc		
		8.0E-02	i			8.0E-02	r	0	0.10	59756-60-4	Fluoridone	4.9E+03	nc	4.9E+04	nc	2.9E+02	nc	2.9E+03	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	56425-91-3	Flurprimidol	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		6.0E-02	i			6.0E-02	r	0	0.10	66332-96-5	Flutolanil	3.7E+03	nc	3.7E+04	nc	2.2E+02	nc	2.2E+03	nc		
		1.0E-02	i			1.0E-02	r	0	0.10	69409-94-5	Fluvalinate	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
3.5E-03	i	1.0E-01	i	3.5E-03	r	1.0E-01	r	0	0.10	133-07-3	Folpet	1.4E+02	ca*	4.9E+02	ca	1.9E+00	ca	1.9E+01	ca		
1.9E-01	i			1.9E-01	r			0	0.10	72178-02-0	Fomesafen	2.6E+00	ca	9.1E+00	ca	3.5E-02	ca	3.5E-01	ca		
		2.0E-03	i			2.0E-03	r	0	0.10	944-22-9	Fonofos	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		1.5E-01	i	4.6E-02	i			0	0.10	50-00-0	Formaldehyde	9.2E+03	nc	1.0E+05	nc	1.5E-01	ca	5.5E+03	nc		
		2.0E+00	h			2.0E+00	r	0	0.10	64-18-6	Formic Acid	1.0E+05	max	1.0E+05	max	7.3E+03	nc	7.3E+04	nc		
		3.0E+00	i			3.0E+00	r	0	0.10	39148-24-8	Fosetyl-al	1.0E+05	max	1.0E+05	max	1.1E+04	nc	1.1E+05	nc		
		3.0E+01	i			8.6E+00	h	1		76-13-1	Freon 113	5.6E+03	sat	5.6E+03	sat	3.1E+04	nc	5.9E+04	nc		
		1.0E-03	i			1.0E-03	r	1		110-00-9	Furan	2.5E+00	nc	8.5E+00	nc	3.7E+00	nc	6.1E+00	nc		
3.8E+00	h			3.8E+00	r			0	0.10	67-45-8	Furazolidone	1.3E-01	ca	4.5E-01	ca	1.8E-03	ca	1.8E-02	ca		
		3.0E-03	i			1.4E-02	h	0	0.10	98-01-1	Furfural	1.8E+02	nc	1.8E+03	nc	5.2E+01	nc	1.1E+02	nc		

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TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.			Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
5.0E+01	h			5.0E+01	r			0	0.10	531-82-8		Furium	9.7E-03	ca	3.4E-02	ca	1.3E-04	ca	1.3E-03	ca		
3.0E-02	i			3.0E-02	r			0	0.10	60568-05-0		Furmecyclox	1.6E+01	ca	5.7E+01	ca	2.2E-01	ca	2.2E+00	ca		
		4.0E-04	i			4.0E-04	r	0	0.10	77182-82-2		Glufosinate-ammonium	2.4E+01	nc	2.5E+02	nc	1.5E+00	nc	1.5E+01	nc		
		4.0E-04	i			2.9E-04	h	0	0.10	765-34-4		Glycidaldehyde	2.4E+01	nc	2.5E+02	nc	1.0E+00	nc	1.5E+01	nc		
		1.0E-01	i			1.0E-01	r	0	0.10	1071-83-6		Glyphosate	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
		5.0E-05	i			5.0E-05	r	0	0.10	69806-40-2		Haloxyfop-methyl	3.1E+00	nc	3.1E+01	nc	1.8E-01	nc	1.8E+00	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	79277-27-3		Harmony	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
4.5E+00	i	5.0E-04	i	4.6E+00	i	5.0E-04	r	0	0.10	76-44-8		Heptachlor	1.1E-01	ca	3.8E-01	ca	1.5E-03	ca	1.5E-02	ca	2.3E+01	1.0E+00
9.1E+00	i	1.3E-05	i	9.1E+00	i	1.3E-05	r	0	0.10	1024-57-3		Heptachlor epoxide	5.3E-02	ca*	1.9E-01	ca*	7.4E-04	ca*	7.4E-03	ca*	7.0E-01	3.0E-02
		2.0E-03	i			2.0E-03	r	0	0.10	87-82-1		Hexabromobenzene	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
1.6E+00	i	8.0E-04	i	1.6E+00	i	8.0E-04	r	0	0.10	118-74-1		Hexachlorobenzene	3.0E-01	ca	1.1E+00	ca	4.2E-03	ca	4.2E-02	ca	2.0E+00	1.0E-01
7.8E-02	i	3.00E-04	n	7.8E-02	i	3.00E-04	r	0	0.10	87-68-3		Hexachlorobutadiene	6.2E+00	ca**	2.2E+01	ca**	8.6E-02	ca*	8.6E-01	ca*	2.0E+00	1.0E-01
6.3E+00	i	5.0E-04	n	6.3E+00	i	5.0E-04	r	0	0.04	319-84-6		**HCH (alpha)**	9.0E-02	ca	3.6E-01	ca	1.1E-03	ca	1.1E-02	ca	5.0E-04	3.0E-05
1.8E+00	i	2.0E-04	n	1.8E+00	i	2.0E-04	r	0	0.04	319-85-7		**HCH (beta)**	3.2E-01	ca	1.3E+00	ca	3.7E-03	ca	3.7E-02	ca	3.0E-03	1.0E-04
1.3E+00	h	3.0E-04	i	1.3E+00	r	3.0E-04	r	0	0.04	58-89-9		HCH (gamma) Lindane	4.4E-01	ca*	1.7E+00	ca	5.2E-03	ca	5.2E-02	ca	9.0E-03	5.0E-04
1.8E+00	i			1.8E+00	i			0	0.04	608-73-1		HCH-technical	3.2E-01	ca	1.3E+00	ca	3.8E-03	ca	3.7E-02	ca	3.0E-03	1.0E-04
		6.0E-03	i			5.7E-05	i	0	0.10	77-47-4		**Hexachlorocyclopentadiene**	3.7E+02	nc	3.7E+03	nc	2.1E-01	nc	2.2E+02	nc	4.0E+02	2.0E+01
1.4E-02	i	1.0E-03	i	1.4E-02	i	1.0E-03	r	0	0.10	67-72-1		Hexachloroethane	3.5E+01	ca**	1.2E+02	ca**	4.8E-01	ca**	4.8E+00	ca**	5.0E-01	2.0E-02
		3.0E-04	i			3.0E-04	r	0	0.10	70-30-4		Hexachlorophene	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc		
1.1E-01	i	3.0E-03	i	1.1E-01	r	3.0E-03	r	0	0.10	121-82-4		Hexahydro-1,3,5-trinitro-1,3,5-triazine	4.4E+00	ca*	1.6E+01	ca	6.1E-02	ca	6.1E-01	ca		
		2.9E-06	r			2.9E-06	i	0	0.10	822-06-0		1,6-Hexamethylene diisocyanate	1.7E-01	nc	1.8E+00	nc	1.0E-02	nc	1.0E-01	nc		
		6.0E-02	h			5.7E-02	i	1		110-54-3		n-Hexane	1.1E+02	sat	1.1E+02	sat	2.1E+02	nc	3.5E+02	nc		
		3.3E-02	i			3.3E-02	r	0	0.10	51235-04-2		Hexazinone	2.0E+03	nc	2.0E+04	nc	1.2E+02	nc	1.2E+03	nc		
3.0E+00	i			1.7E+01	i			0	0.10	302-01-2		Hydrazine, hydrazine sulfate	1.6E-01	ca	5.7E-01	ca	3.9E-04	ca	2.2E-02	ca		
3.0E+00	n			1.7E+01	n				0.10	60-34-4		Hydrazine, monomethyl	1.6E-01	ca	5.7E-01	ca	4.0E-04	ca	2.2E-02	ca		
3.0E+00	n			1.7E+01	n				0.10	57-14-7		Hydrazine, dimethyl	1.6E-01	ca	5.7E-01	ca	4.0E-04	ca	2.2E-02	ca		
						5.7E-03	i			7647-01-0		Hydrogen chloride					2.1E+01	nc				
		2.0E-02	i			8.6E-04	i	1		74-90-8		Hydrogen cyanide	1.1E+01	nc	3.5E+01	nc	3.1E+00	nc	6.2E+00	nc		
		3.0E-03	i			2.9E-04	i			7783-06-4		Hydrogen sulfide					1.0E+00	nc	1.1E+02	nc		
		4.0E-02	h			4.0E-02	r	0	0.10	123-31-9		p-Hydroquinone	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	35554-44-0		Imazalil	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
		2.5E-01	i			2.5E-01	r	0	0.10	81335-37-7		Imazaquin	1.5E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc		
		4.0E-02	i			4.0E-02	r	0	0.10	36734-19-7		Iprodione	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc		
		3.0E-01	n					0		7439-89-6		Iron	2.3E+04	nc	1.0E+05	max			1.1E+04	nc		
		3.0E-01	i			3.0E-01	r	1		78-83-1		Isobutanol	1.3E+04	nc	4.0E+04	sat	1.1E+03	nc	1.8E+03	nc		
9.5E-04	i	2.0E-01	i	9.5E-04	r	2.0E-01	r	0	0.10	78-59-1		Isophorone	5.1E+02	ca*	1.8E+03	ca*	7.1E+00	ca	7.1E+01	ca	5.0E-01	3.0E-02

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TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.			Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
		1.5E-02	i			1.5E-02	r	0	0.10	33820-53-0		Isopropalin	9.2E+02	nc	9.2E+03	nc	5.5E+01	nc	5.5E+02	nc		
		1.0E-01	i			1.1E-01	r	0	0.10	1832-54-8		Isopropyl methyl phosphonic acid	6.1E+03	nc	6.2E+04	nc	4.0E+02	nc	3.6E+03	nc		
		5.0E-02	i			5.0E-02	r	0	0.10	82558-50-7		Isoxaben	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
8.0E+00	n	3.0E-04	n	8.0E+00	r	3.0E-04	r	0	0.10	143-50-0		**Kepone**	6.1E-02	ca	2.2E-01	ca	8.4E-04	ca	8.4E-03	ca		
		2.0E-03	i			2.0E-03	r	0	0.10	77501-63-4		Lactofen	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
For info see: www.epa.gov/oerpage/superfund/programs/lead/prods.htm#guidance										7439-92-1		Lead+++	4.0E+02	nc	7.5E+02	nc						
For info see: www.dtsc.ca.gov/ScienceTechnology/ledspred.html												**Lead "CAL-Modified PRG"+++**	1.5E+02									
		1.0E-07	i					0	0.10	78-00-2		Lead (tetraethyl)	6.1E-03	nc	6.2E-02	nc			3.6E-03	nc		
		2.0E-03	i			2.0E-03	r	0	0.10	330-55-2		Linuron	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		2.0E-02	x					0		7439-93-2		Lithium	1.6E+03	nc	2.0E+04	nc			7.3E+02	nc		
		2.0E-01	i			2.0E-01	r	0	0.10	83055-99-6		Londax	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	121-75-5		Malathion	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		1.0E-01	i			1.0E-01	r	0	0.10	108-31-6		Maleic anhydride	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
		5.0E-01	i			5.0E-01	r	1		123-33-1		Maleic hydrazide	1.7E+03	nc	2.4E+03	sat	1.8E+03	nc	3.0E+03	nc		
		2.0E-05	h			2.0E-05	r	0	0.10	109-77-3		Malononitrile	1.2E+00	nc	1.2E+01	nc	7.3E-02	nc	7.3E-01	nc		
		3.0E-02	h			3.0E-02	r	0	0.10	8018-01-7		Mancozeb	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
6.0E-02	o	5.0E-03	i	6.0E-02	r	5.0E-03	r	0	0.10	12427-38-2		Maneb	8.1E+00	ca*	2.9E+01	ca	1.1E-01	ca	1.1E+00	ca		
		2.4E-02	i			1.4E-05	i	0		7439-96-5		Manganese and compounds+++	1.8E+03	nc	1.9E+04	nc	5.1E-02	nc	8.8E+02	nc		
		9.0E-05	h			9.0E-05	r	0	0.10	950-10-7		Mephosfolan	5.5E+00	nc	5.5E+01	nc	3.3E-01	nc	3.3E+00	nc		
		3.0E-02	i			3.0E-02	r	0	0.10	24307-26-4		Mepiquat chloride	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
2.9E-02	n	1.0E-01	n	2.9E-02	r	1.0E-01	r	0	0.10	149-30-4		2-Mercaptobenzothiazole	1.7E+01	ca	5.9E+01	ca	2.3E-01	ca	2.3E+00	ca		
		3.0E-04	i					0		7487-94-7		Mercury and compounds	2.3E+01	nc	3.1E+02	nc			1.1E+01	nc		
						8.6E-05	i			7439-97-6		Mercury (elemental)					3.1E-01	nc				
		1.0E-04	i					0	0.10	22967-92-6		Mercury (methyl)	6.1E+00	nc	6.2E+01	nc			3.6E+00	nc		
		3.0E-05	i			3.0E-05	r	0	0.10	150-50-5		Merphos	1.8E+00	nc	1.8E+01	nc	1.1E-01	nc	1.1E+00	nc		
		3.0E-05	i			3.0E-05	r	0	0.10	78-48-8		Merphos oxide	1.8E+00	nc	1.8E+01	nc	1.1E-01	nc	1.1E+00	nc		
		6.0E-02	i			6.0E-02	r	0	0.10	57837-19-1		Metalaxyl	3.7E+03	nc	3.7E+04	nc	2.2E+02	nc	2.2E+03	nc		
		1.0E-04	i			2.0E-04	h	1		126-98-7		Methacrylonitrile	2.1E+00	nc	8.4E+00	nc	7.3E-01	nc	1.0E+00	nc		
		5.0E-05	i			5.0E-05	r	0	0.10	10265-92-6		Methamidophos	3.1E+00	nc	3.1E+01	nc	1.8E-01	nc	1.8E+00	nc		
		5.0E-01	i			5.0E-01	r	0	0.10	67-56-1		Methanol	3.1E+04	nc	1.0E+05	max	1.8E+03	nc	1.8E+04	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	950-37-8		Methidathion	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		2.5E-02	i			2.5E-02	r	1		16752-77-5		Methomyl	4.4E+01	nc	1.5E+02	nc	9.1E+01	nc	1.5E+02	nc		
		5.0E-03	i			5.0E-03	r	0	0.10	72-43-5		Methoxychlor	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc	1.6E+02	8.0E+00
		1.0E-03	h			5.7E-03	i	0	0.10	109-86-4		2-Methoxyethanol	6.1E+01	nc	6.2E+02	nc	2.1E+01	nc	3.6E+01	nc		
		2.0E-03	h			2.0E-03	r	0	0.10	110-49-6		2-Methoxyethanol acetate	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
4.6E-02	h			4.6E-02	r			0	0.10	99-59-2		2-Methoxy-5-nitroaniline	1.1E+01	ca	3.7E+01	ca	1.5E-01	ca	1.5E+00	ca		

Key : SFo,i=Cancer Slope Factor oral, inhalation RfDo,i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca**(where: nc < 10X ca)
+++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.			Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
		1.0E+00	h			1.0E+00	r	1		79-20-9		Methyl acetate	2.2E+04	nc	9.2E+04	nc	3.7E+03	nc	6.1E+03	nc		
		3.0E-02	h			3.0E-02	r	1		96-33-3		Methyl acrylate	7.0E+01	nc	2.3E+02	nc	1.1E+02	nc	1.8E+02	nc		
2.4E-01	h			2.4E-01	r			0	0.10	95-53-4		2-Methylaniline (o-toluidine)	2.0E+00	ca	7.2E+00	ca	2.8E-02	ca	2.8E-01	ca		
1.8E-01	h			1.8E-01	r			0	0.10	636-21-5		2-Methylaniline hydrochloride	2.7E+00	ca	9.6E+00	ca	3.7E-02	ca	3.7E-01	ca		
		5.0E-04	i			5.0E-04	r	0	0.10	94-74-6		2-Methyl-4-chlorophenoxyacetic acid	3.1E+01	nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc		
		1.0E-02	i			1.0E-02	r	0	0.10	94-81-5		4-(2-Methyl-4-chlorophenoxy) butyric acid	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	93-65-2		2-(2-Methyl-4-chlorophenoxy) propionic acid	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	16484-77-8		2-(2-Methyl-1,4-chlorophenoxy) propionic acid	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		8.6E-01	r			8.6E-01	h	1		108-87-2		Methylcyclohexane	2.6E+03	nc	8.7E+03	nc	3.1E+03	nc	5.2E+03	nc		
2.5E-01	h			2.5E-01	r			0	0.10	101-77-9		4,4'-Methylenebisbenzeneamine	1.9E+00	ca	6.9E+00	ca	2.7E-02	ca	2.7E-01	ca		
1.3E-01	h	7.0E-04	h	1.3E-01	h	7.0E-04	r	0	0.10	101-14-4		4,4'-Methylene bis(2-chloroaniline)	3.7E+00	ca*	1.3E+01	ca*	5.2E-02	ca*	5.2E-01	ca*		
4.6E-02	i			4.6E-02	r			0	0.10	101-61-1		4,4'-Methylene bis(N,N'-dimethyl)aniline	1.1E+01	ca	3.7E+01	ca	1.5E-01	ca	1.5E+00	ca		
		1.0E-02	h			1.0E-02	r	1		74-95-3		Methylene bromide	6.7E+01	nc	2.3E+02	nc	3.7E+01	nc	6.1E+01	nc		
7.5E-03	i	6.0E-02	i	1.6E-03	i	8.6E-01	h	1		75-09-2		Methylene chloride	9.1E+00	ca	2.1E+01	ca	4.1E+00	ca	4.3E+00	ca	2.0E-02	1.0E-03
		1.7E-04	r			1.7E-04	i	0	0.10	101-68-8		4,4'-Methylene diphenyl diisocyanate	1.0E+01	nc	1.0E+02	nc	6.2E-01	nc	6.2E+00	nc		
		6.0E-01	i			2.9E-01	i	1		78-93-3		Methyl ethyl ketone	7.3E+03	nc	2.7E+04	nc	1.0E+03	nc	1.9E+03	nc		
		8.0E-02	h			2.3E-02	h	1		108-10-1		Methyl isobutyl ketone	7.9E+02	nc	2.8E+03	nc	8.3E+01	nc	1.6E+02	nc		
		5.7E-04	r			5.7E-04	n	0	0.10	74-93-1		Methyl Mercaptan	3.5E+01	nc	3.5E+02	nc	2.1E+00	nc	2.1E+01	nc		
		1.4E+00	i			2.0E-01	i	1		80-62-6		Methyl methacrylate	2.2E+03	nc	2.7E+03	sat	7.3E+02	nc	1.4E+03	nc		
3.3E-02	h			3.3E-02	r			0	0.10	99-55-8		2-Methyl-5-nitroaniline	1.5E+01	ca	5.2E+01	ca	2.0E-01	ca	2.0E+00	ca		
		2.5E-04	i			2.5E-04	r	0	0.10	298-00-0		Methyl parathion	1.5E+01	nc	1.5E+02	nc	9.1E-01	nc	9.1E+00	nc		
		5.0E-02	i			5.0E-02	r	0	0.10	95-48-7		2-Methylphenol	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc	1.5E+01	8.0E-01
		5.0E-02	i			5.0E-02	r	0	0.10	108-39-4		3-Methylphenol	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		5.0E-03	h			5.0E-03	r	0	0.10	106-44-5		4-Methylphenol	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		2.0E-02	n			2.0E-02	r	0	0.10	993-13-5		Methyl phosphonic acid	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		6.0E-03	h			1.1E-02	h	1		25013-15-4		Methyl styrene (mixture)	1.3E+02	nc	5.4E+02	nc	4.2E+01	nc	6.0E+01	nc		
		7.0E-02	h			7.0E-02	r	1		98-83-9		Methyl styrene (alpha)	6.8E+02	sat	6.8E+02	sat	2.6E+02	nc	4.3E+02	nc		
3.3E-03	n	8.6E-01	r	3.5E-04	n	8.6E-01	i	1		1634-04-4		**Methyl tertbutyl ether (MTBE)**	6.2E+01	ca*	1.6E+02	ca	1.9E+01	ca	1.3E+01	ca		
1.8E-03				1.8E-03				1				"CAL-Modified PRG"	1.7E+01	ca	3.6E+01	ca	3.7E+00	ca	6.2E+00	ca		
		1.5E-01	i			1.5E-01	r	0	0.10	51218-45-2		Metolaclor (Dual)	9.2E+03	nc	9.2E+04	nc	5.5E+02	nc	5.5E+03	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	21087-64-9		Metribuzin	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
1.8E+00	x	2.0E-04	i	1.8E+00	r	2.0E-04	r	0	0.10	2385-85-5		Mirex	2.7E-01	ca*	9.6E-01	ca	3.7E-03	ca	3.7E-02	ca		
		2.0E-03	i			2.0E-03	r	0	0.10	2212-67-1		Molinate	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		5.0E-03	i					0		7439-98-7		Molybdenum	3.9E+02	nc	5.1E+03	nc			1.8E+02	nc		
		1.0E-01	i			1.0E-01	r	0	0.10	10599-90-3		Monochloramine	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
		2.0E-03	i			2.0E-03	r	0	0.10	300-76-5		Naled	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		

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+++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"										SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.			Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
		1.0E-01	i			1.0E-01	r	0	0.10	15299-99-7		Napropamide	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
		2.0E-02	i					0		7440-02-0		Nickel (soluble salts)	1.6E+03	nc	2.0E+04	nc			7.3E+02	nc	1.3E+02	7.0E+00
				8.4E-01	i			0				Nickel refinery dust					8.0E-03	ca				
				1.7E+00	i			0		12035-72-2		Nickel subsulfide			1.1E+04	ca	4.0E-03	ca				
Tap Water PRG Based on Infant NOAEL (see IRIS)										14797-55-8		Nitrate+++							1.0E+04	nc		
Tap Water PRG Based on Infant NOAEL (see IRIS)										14797-65-0		Nitrite+++							1.0E+03	nc		
		2.86E-05	r			2.86E-05	h	0	0.10	88-74-4		**2-Nitroaniline**	1.7E+00	nc	1.8E+01	nc	1.0E-01	nc	1.0E+00	nc		
		5.0E-04	i			5.7E-04	h	1		98-95-3		Nitrobenzene	2.0E+01	nc	1.0E+02	nc	2.1E+00	nc	3.4E+00	nc	1.0E-01	7.0E-03
		7.0E-02	h			7.0E-02	r	0	0.10	67-20-9		Nitrofurantoin	4.3E+03	nc	4.3E+04	nc	2.6E+02	nc	2.6E+03	nc		
1.5E+00	h			1.5E+00	r			0	0.10	59-87-0		Nitrofurazone	3.2E-01	ca	1.1E+00	ca	4.5E-03	ca	4.5E-02	ca		
1.4E-02	n			1.4E-02	r			0	0.10	55-63-0		Nitroglycerin	3.5E+01	ca	1.2E+02	ca	4.8E-01	ca	4.8E+00	ca		
		1.0E-01	i			1.0E-01	r	0	0.10	556-88-7		Nitroguanidine	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
9.4E+00	r	5.7E-03	r	9.4E+00	h	5.7E-03	i	1		79-46-9		2-Nitropropane					7.2E-04	ca	1.2E-03	ca		
5.4E+00	i			5.6E+00	i			1		924-16-3		N-Nitrosodi-n-butylamine	2.4E-02	ca	5.8E-02	ca	1.2E-03	ca	2.0E-03	ca		
2.8E+00	i			2.8E+00	r			0	0.10	1116-54-7		N-Nitrosodiethanolamine	1.7E-01	ca	6.2E-01	ca	2.4E-03	ca	2.4E-02	ca		
1.5E+02	i			1.5E+02	i			0	0.10	55-18-5		N-Nitrosodiethylamine	3.2E-03	ca	1.1E-02	ca	4.5E-05	ca	4.5E-04	ca		
5.1E+01	i			4.9E+01	i			0	0.10	62-75-9		N-Nitrosodimethylamine	9.5E-03	ca	3.4E-02	ca	1.4E-04	ca	1.3E-03	ca		
4.9E-03	i			4.9E-03	r			0	0.10	86-30-6		N-Nitrosodiphenylamine	9.9E+01	ca	3.5E+02	ca	1.4E+00	ca	1.4E+01	ca	1.0E+00	6.0E-02
7.0E+00	i			7.0E+00	r			0	0.10	621-64-7		N-Nitroso di-n-propylamine	6.9E-02	ca	2.5E-01	ca	9.6E-04	ca	9.6E-03	ca	5.0E-05	2.0E-06
2.2E+01	i			2.2E+01	r			0	0.10	10595-95-6		N-Nitroso-N-methylethylamine	2.2E-02	ca	7.8E-02	ca	3.1E-04	ca	3.1E-03	ca		
2.1E+00	i			2.1E+00	i			0	0.10	930-55-2		N-Nitrosopyrrolidine	2.3E-01	ca	8.2E-01	ca	3.1E-03	ca	3.2E-02	ca		
		1.0E-02	h			1.0E-02	r	1		99-08-1		m-Nitrotoluene	3.7E+02	nc	1.0E+03	sat	3.7E+01	nc	6.1E+01	nc		
		1.0E-02	h			1.0E-02	r	1		99-08-1		o-Nitrotoluene	3.7E+02	nc	1.0E+03	sat	3.7E+01	nc	6.1E+01	nc		
		1.0E-02	h			1.0E-02	r	1		99-99-0		p-Nitrotoluene	3.7E+02	nc	1.0E+03	sat	3.7E+01	nc	6.1E+01	nc		
		4.0E-02	i			4.0E-02	r	0	0.10	27314-13-2		Norflurazon	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc		
		7.0E-04	i			7.0E-04	r	0	0.10	85509-19-9		NuStar	4.3E+01	nc	4.3E+02	nc	2.6E+00	nc	2.6E+01	nc		
		3.0E-03	i			3.0E-03	r	0	0.10	32536-52-0		Octabromodiphenyl ether	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
		5.0E-02	i			5.0E-02	r	0	0.10	2691-41-0		Octahydro-1357-tetranitro-1357- tetrazocine (HMX)	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		2.0E-03	h			2.0E-03	r	0	0.10	152-16-9		Octamethylpyrophosphoramide	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		5.0E-02	i			5.0E-02	r	0	0.10	19044-88-3		Oryzalin	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		5.0E-03	i			5.0E-03	r	0	0.10	19666-30-9		Oxadiazon	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	23135-22-0		Oxamyl	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
		3.0E-03	i			3.0E-03	r	0	0.10	42874-03-3		Oxyfluorfen	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	76738-62-0		Paclobutrazol	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
		4.5E-03	i			4.5E-03	r	0	0.10	4685-14-7		Paraquat	2.7E+02	nc	2.8E+03	nc	1.6E+01	nc	1.6E+02	nc		
		6.0E-03	h			6.0E-03	r	0	0.10	56-38-2		Parathion	3.7E+02	nc	3.7E+03	nc	2.2E+01	nc	2.2E+02	nc		

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+++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION														CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
		5.0E-02	h			5.0E-02	r	0	0.10	1114-71-2	Pebulate	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		4.0E-02	i			4.0E-02	r	0	0.10	40487-42-1	Pendimethalin	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc		
2.3E-02	h			2.3E-02	r			0	0.10	87-84-3	Pentabromo-6-chloro cyclohexane	2.1E+01	ca	7.5E+01	ca	2.9E-01	ca	2.9E+00	ca		
		2.0E-03	i			2.0E-03	r	0	0.10	32534-81-9	Pentabromodiphenyl ether	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		8.0E-04	i			8.0E-04	r	0	0.10	608-93-5	Pentachlorobenzene	4.9E+01	nc	4.9E+02	nc	2.9E+00	nc	2.9E+01	nc		
2.6E-01	h	3.0E-03	i	2.6E-01	r	3.0E-03	r	0	0.10	82-68-8	Pentachloronitrobenzene	1.9E+00	ca*	6.6E+00	ca	2.6E-02	ca	2.6E-01	ca		
1.2E-01	i	3.0E-02	i	1.2E-01	r	3.0E-02	r	0	0.25	87-86-5	Pentachlorophenol	3.0E+00	ca	9.0E+00	ca	5.6E-02	ca	5.6E-01	ca	3.0E-02	1.0E-03
		1.00E-04	x					0		7601-90-3	Perchlorate	7.8E+00	ca/nc	1.0E+02	ca/nc			3.6E+00	ca/nc		
		5.0E-02	i			5.0E-02	r	0	0.10	52645-53-1	Permethrin	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		2.5E-01	i			2.5E-01	r	0	0.10	13684-63-4	Phenmedipham	1.5E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc		
		6.0E-01	i			6.0E-01	r	0	0.10	108-95-2	Phenol	3.7E+04	nc	1.0E+05	max	2.2E+03	nc	2.2E+04	nc	1.0E+02	5.0E+00
		2.0E-03	n			2.0E-03	r	0	0.10	92-84-2	Phenothiazine	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		6.0E-03	i			6.0E-03	r	0	0.10	108-45-2	m-Phenylenediamine	3.7E+02	nc	3.7E+03	nc	2.2E+01	nc	2.2E+02	nc		
		1.9E-01	h			1.9E-01	r	0	0.10	106-50-3	p-Phenylenediamine	1.2E+04	nc	1.0E+05	max	6.9E+02	nc	6.9E+03	nc		
		8.0E-05	i			8.0E-05	r	0	0.10	62-38-4	Phenylmercuric acetate	4.9E+00	nc	4.9E+01	nc	2.9E-01	nc	2.9E+00	nc		
1.9E-03	h			1.9E-03	r			0	0.10	90-43-7	2-Phenylphenol	2.5E+02	ca	8.9E+02	ca	3.5E+00	ca	3.5E+01	ca		
		2.0E-04	h			2.0E-04	r	0	0.10	298-02-2	Phorate	1.2E+01	nc	1.2E+02	nc	7.3E-01	nc	7.3E+00	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	732-11-6	Phosmet	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		3.0E-04	i			8.6E-05	i	0	0.10	7803-51-2	Phosphine	1.8E+01	nc	1.8E+02	nc	3.1E-01	nc	1.1E+01	nc		
						2.9E-03	i			7664-38-2	Phosphoric acid					1.0E+01	nc				
		2.0E-05	i					0		7723-14-0	Phosphorus (white)	1.6E+00	nc	2.0E+01	nc			7.3E-01	nc		
		1.0E+00	h			1.0E+00	r	0	0.10	100-21-0	p-Phthalic acid	6.1E+04	nc	1.0E+05	max	3.7E+03	nc	3.6E+04	nc		
		2.0E+00	i			3.4E-02	h	0	0.10	85-44-9	Phthalic anhydride	1.0E+05	max	1.0E+05	max	1.2E+02	nc	7.3E+04	nc		
		7.0E-02	i			7.0E-02	r	0	0.10	1918-02-1	Picloram	4.3E+03	nc	4.3E+04	nc	2.6E+02	nc	2.6E+03	nc		
		1.0E-02	i			1.0E-02	r	0	0.10	29232-93-7	Pirimiphos-methyl	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
8.9E+00	h	7.0E-06	h	8.9E+00	r	7.0E-06	r	0	0.10		Polybrominated biphenyls	5.5E-02	ca**	1.9E-01	ca*	7.6E-04	ca*	7.6E-03	ca*		
2.0E+00	i			2.0E+00	i			0	0.14	1336-36-3	Polychlorinated biphenyls (PCBs)	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
7.0E-02	i	7.0E-05	i	7.0E-02	i	7.0E-05	r	0	0.14	12674-11-2	Aroclor 1016	3.9E+00	nc	2.1E+01	ca**	9.6E-02	ca**	9.6E-01	ca**		
2.0E+00	i			2.0E+00	i			0	0.14	11104-28-2	Aroclor 1221	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
2.0E+00	i			2.0E+00	i			0	0.14	11141-16-5	Aroclor 1232	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
2.0E+00	i			2.0E+00	i			0	0.14	53469-21-9	Aroclor 1242	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
2.0E+00	i			2.0E+00	i			0	0.14	12672-29-6	Aroclor 1248	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
2.0E+00	i	2.0E-05	i	2.0E+00	i	2.0E-05	r	0	0.14	11097-69-1	Aroclor 1254	2.2E-01	ca**	7.4E-01	ca*	3.4E-03	ca*	3.4E-02	ca*		
2.0E+00	i			2.0E+00	i			0	0.14	11096-82-5	Aroclor 1260	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		

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TOXICITY INFORMATION										CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"										SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		VOC	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1+ (mg/kg)
4.5E+00	n			4.5E+00	r				0.10	61788-33-8	**Polychlorinated terphenyls**	1.1E-01	ca	3.8E-01	ca	1.5E-03	ca	1.5E-02	ca		
									0.13		Polynuclear aromatic hydrocarbons (PAHs)										
		6.0E-02	i			6.0E-02	r	1		83-32-9	Acenaphthene	3.7E+03	nc	2.9E+04	nc	2.2E+02	nc	3.7E+02	nc	5.7E+02	2.9E+01
		3.0E-01	i			3.0E-01	r	1		120-12-7	Anthracene	2.2E+04	nc	1.0E+05	max	1.1E+03	nc	1.8E+03	nc	1.2E+04	5.9E+02
7.3E-01	n			7.3E-01	r			0	0.13	56-55-3	**Benz[a]anthracene**	6.2E-01	ca	2.1E+00	ca	9.2E-03	ca	9.2E-02	ca	2.0E+00	8.0E-02
7.3E-01	n			7.3E-01	r			0	0.13	205-99-2	**Benzo[b]fluoranthene**	6.2E-01	ca	2.1E+00	ca	9.2E-03	ca	9.2E-02	ca	5.0E+00	2.0E-01
7.3E-02	n			7.3E-02	r			0	0.13	207-08-9	**Benzo[k]fluoranthene**	6.2E+00	ca	2.1E+01	ca	9.2E-02	ca	9.2E-01	ca	4.9E+01	2.0E+00
1.2E+00				3.9E-01					0.13	207-08-9	**"CAL-Modified PRG"**	3.8E-01	ca	1.3E+00	ca	1.7E-02	ca	5.6E-02	ca		
7.3E+00	i			7.3E+00	r			0	0.13	50-32-8	**Benzo[a]pyrene**	6.2E-02	ca	2.1E-01	ca	9.2E-04	ca	9.2E-03	ca	8.0E+00	4.0E-01
7.3E-03	n			7.3E-03	r			0	0.13	218-01-9	**Chrysene**	6.2E+01	ca	2.1E+02	ca	9.2E-01	ca	9.2E+00	ca	1.6E+02	8.0E+00
1.2E-01				3.9E-02					0.13		**"CAL-Modified PRG"**	3.8E+00	ca	1.3E+01	ca	1.7E-01	ca	5.6E-01	ca		
7.3E+00	n			7.3E+00	r			0	0.13	53-70-3	**Dibenz[ah]anthracene**	6.2E-02	ca	2.1E-01	ca	9.2E-04	ca	9.2E-03	ca	2.0E+00	8.0E-02
		4.0E-02	i			4.0E-02	r	0	0.13	206-44-0	Fluoranthene	2.3E+03	nc	2.2E+04	nc	1.5E+02	nc	1.5E+03	nc	4.3E+03	2.1E+02
		4.0E-02	i			4.0E-02	r	1		86-73-7	Fluorene	2.7E+03	nc	2.6E+04	nc	1.5E+02	nc	2.4E+02	nc	5.6E+02	2.8E+01
7.3E-01	n			7.3E-01	r			0	0.13	193-39-5	**Indeno[1,2,3-cd]pyrene**	6.2E-01	ca	2.1E+00	ca	9.2E-03	ca	9.2E-02	ca	1.4E+01	7.0E-01
		2.0E-02	i			8.6E-04	i	1		91-20-3	Naphthalene	5.6E+01	nc	1.9E+02	nc	3.1E+00	nc	6.2E+00	nc	8.4E+01	4.0E+00
		3.0E-02	i			3.0E-02	r	1		129-00-0	Pyrene	2.3E+03	nc	2.9E+04	nc	1.1E+02	nc	1.8E+02	nc	4.2E+03	2.1E+02
1.5E-01	i	9.0E-03	i	1.5E-01	r	9.0E-03	r	0	0.10	67747-09-5	Prochloraz	3.2E+00	ca	1.1E+01	ca	4.5E-02	ca	4.5E-01	ca		
		6.0E-03	h			6.0E-03	r	0	0.10	26399-36-0	Profluralin	3.7E+02	nc	3.7E+03	nc	2.2E+01	nc	2.2E+02	nc		
		1.5E-02	i			1.5E-02	r	0	0.10	1610-18-0	Prometon	9.2E+02	nc	9.2E+03	nc	5.5E+01	nc	5.5E+02	nc		
		4.0E-03	i			4.0E-03	r	0	0.10	7287-19-6	Prometryn	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc		
		7.5E-02	i			7.5E-02	r	0	0.10	23950-58-5	Pronamide	4.6E+03	nc	4.6E+04	nc	2.7E+02	nc	2.7E+03	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	1918-16-7	Propachlor	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
		5.0E-03	i			5.0E-03	r	0	0.10	709-98-8	Propanil	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	2312-35-8	Propargite	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		2.0E-03	i			2.0E-03	r	0	0.10	107-19-7	Propargyl alcohol	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	139-40-2	Propazine	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	122-42-9	Propham	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	60207-90-1	Propiconazole	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
		4.00E-02	n			4.00E-02	r	1		103-65-1	**n-Propylbenzene**	2.4E+02	sat	2.4E+02	sat	1.5E+02	nc	2.4E+02	nc		
		5.0E-01	h			8.6E-04	h	0	0.10	57-55-6	**Propylene glycol**	3.0E+04	nc	1.0E+05	max	3.1E+00	nc	1.8E+04	nc		
		7.0E-01	h			7.0E-01	r	0	0.10	52125-53-8	Propylene glycol, monoethyl ether	4.3E+04	nc	1.0E+05	max	2.6E+03	nc	2.6E+04	nc		
		7.0E-01	h			5.7E-01	i	0	0.10	107-98-2	Propylene glycol, monomethyl ether	4.3E+04	nc	1.0E+05	max	2.1E+03	nc	2.6E+04	nc		
2.4E-01	i	8.6E-03	r	1.3E-02	i	8.6E-03	i	1		75-56-9	Propylene oxide	1.9E+00	ca*	6.6E+00	ca*	5.2E-01	ca*	2.2E-01	ca		

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SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.			Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
		2.5E-01	i			2.5E-01	r	0	0.10	81335-77-5		Pursuit	1.5E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	51630-58-1		Pydrin	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	110-86-1		Pyridine	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		5.0E-04	i			5.0E-04	r	0	0.10	13593-03-8		Quinalphos	3.1E+01	nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc		
3.0E+00	i			3.0E+00	r			0	0.10	91-22-5		**Quinoline**	1.6E-01	ca	5.7E-01	ca	2.2E-03	ca	2.2E-02	ca		
1.1E-01	i	3.0E-03	i	1.1E-01	r	3.0E-03	r	0	0.10	121-82-4		RDX (Cyclonite)	4.4E+00	ca*	1.6E+01	ca	6.1E-02	ca	6.1E-01	ca		
		3.0E-02	i			3.0E-02	r	0	0.10	10453-86-8		Resmethrin	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
		5.0E-02	h			5.0E-02	r	0	0.10	299-84-3		Ronnel	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
		4.0E-03	i			4.0E-03	r	0	0.10	83-79-4		Rotenone	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	78587-05-0		Savey	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
		5.0E-03	i					0	0.10	7783-00-8		Selenious Acid	3.1E+02	nc	3.1E+03	nc			1.8E+02	nc		
		5.0E-03	i					0		7782-49-2		Selenium	3.9E+02	nc	5.1E+03	nc			1.8E+02	nc	5.0E+00	3.0E-01
		5.0E-03	h					0	0.10	630-10-4		Selenourea	3.1E+02	nc	3.1E+03	nc			1.8E+02	nc		
		9.0E-02	i			9.0E-02	r	0	0.10	74051-80-2		Sethoxydim	5.5E+03	nc	5.5E+04	nc	3.3E+02	nc	3.3E+03	nc		
		5.0E-03	i					0		7440-22-4		Silver and compounds	3.9E+02	nc	5.1E+03	nc			1.8E+02	nc	3.4E+01	2.0E+00
1.2E-01	h	5.0E-03	i	1.2E-01	r	2.0E-03	r	0	0.10	122-34-9		Simazine	4.1E+00	ca*	1.4E+01	ca	5.6E-02	ca	5.6E-01	ca		
		4.0E-03	i							26628-22-8		Sodium azide										
2.7E-01	h	3.0E-02	i	2.7E-01	r	3.0E-02	r	0	0.10	148-18-5		Sodium diethyldithiocarbamate	1.8E+00	ca	6.4E+00	ca	2.5E-02	ca	2.5E-01	ca		
		2.0E-05	i			2.0E-05	r	0	0.10	62-74-8		Sodium fluoroacetate	1.2E+00	nc	1.2E+01	nc	7.3E-02	nc	7.3E-01	nc		
		1.0E-03	h			1.0E-03	r	0	0.10	13718-26-8		Sodium metavanadate	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		6.0E-01	i					0		7440-24-6		Strontium, stable	4.7E+04	nc	1.0E+05	max			2.2E+04	nc		
		3.0E-04	i			3.0E-04	r	0	0.10	57-24-9		Strychnine	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc		
		2.0E-01	i			2.9E-01	i	1		100-42-5		Styrene	1.7E+03	sat	1.7E+03	sat	1.1E+03	nc	1.6E+03	nc	4.0E+00	2.0E-01
		1.00E-03	n			1.00E-03	r			80-07-9		1,1'-Sulfonylbis (4-chlorobenzene)	7.8E+01	nc	1.0E+03	nc	3.7E+00	nc	3.6E+01	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	88671-89-0		Systhane	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
1.5E+05	h			1.5E+05	h			0	0.03	1746-01-6		2,3,7,8-TCDD (dioxin)	3.9E-06	ca	1.6E-05	ca	4.5E-08	ca	4.5E-07	ca		
		7.0E-02	i			7.0E-02	r	0	0.10	34014-18-1		Tebuthiuron	4.3E+03	nc	4.3E+04	nc	2.6E+02	nc	2.6E+03	nc		
		2.0E-02	h			2.0E-02	r	0	0.10	3383-96-8		Temephos	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	5902-51-2		Terbacil	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
		2.5E-05	h			2.5E-05	r	0	0.10	13071-79-9		Terbufos	1.5E+00	nc	1.5E+01	nc	9.1E-02	nc	9.1E-01	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	886-50-0		Terbutryn	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		3.0E-04	i			3.0E-04	r	0	0.10	95-94-3		1,2,4,5-Tetrachlorobenzene	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc		
2.6E-02	i	3.0E-02	i	2.6E-02	i	3.0E-02	r	1		630-20-6		1,1,1,2-Tetrachloroethane	3.2E+00	ca	7.3E+00	ca	2.6E-01	ca	4.3E-01	ca		
2.0E-01	i	6.00E-02	n	2.0E-01	i	6.00E-02	r	1		79-34-5		1,1,2,2-Tetrachloroethane	4.1E-01	ca	9.3E-01	ca	3.3E-02	ca	5.5E-02	ca	3.0E-03	2.0E-04
5.2E-02	n	1.0E-02	i	1.00E-02	n	1.7E-01	n	1		127-18-4		**Tetrachloroethylene (PCE)**	1.5E+00	ca*	3.4E+00	ca*	6.7E-01	ca	6.6E-01	ca	6.0E-02	3.0E-03
		3.0E-02	i			3.0E-02	r	0	0.10	58-90-2		2,3,4,6-Tetrachlorophenol	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		

Key : SFo,i=Cancer Slope Factor oral, inhalation RfDo,i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca**(where: nc < 10X ca)
+++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.		Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
2.0E+01	h			2.0E+01	r			0	0.10	5216-25-1	p,a,a,a-Tetrachlorotoluene	2.4E-02	ca	8.6E-02	ca	3.4E-04	ca	3.4E-03	ca		
2.4E-02	h	3.0E-02	i	2.4E-02	r	3.0E-02	r	0	0.10	961-11-5	Tetrachlorovinphos	2.0E+01	ca*	7.2E+01	ca	2.8E-01	ca	2.8E+00	ca		
		5.0E-04	i			5.0E-04	r	0	0.10	3689-24-5	Tetraethyldithiopyrophosphate	3.1E+01	nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc		
7.6E-03	n	2.1E-01	n	6.8E-03	n	8.6E-02	n	1		109-99-9	**Tetrahydrofuran**	9.4E+00	ca	2.1E+01	ca	9.9E-01	ca	1.6E+00	ca		
		6.6E-05	i					0		7440-28-0	Thallium and compounds+++	5.2E+00	nc	6.7E+01	nc			2.4E+00	nc		
		1.0E-02	i			1.0E-02	r	0	0.10	28249-77-6	Thiobencarb	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		5.0E-02	n			5.0E-02	r	0	0.10	N/A	**Thiocyanate**	3.1E+03	nc	1.0E+05	max	1.8E+02	nc	1.8E+03	nc		
		3.0E-04	h			3.0E-04	r	0	0.10	39196-18-4	Thiofanox	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc		
		8.0E-02	i			8.0E-02	r	0	0.10	23564-05-8	Thiophanate-methyl	4.9E+03	nc	4.9E+04	nc	2.9E+02	nc	2.9E+03	nc		
		5.0E-03	i			5.0E-03	r	0	0.10	137-26-8	Thiram	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		6.0E-01	h					0			Tin (inorganic, see tributyltin oxide for organic tin)	4.7E+04	nc	1.0E+05	max			2.2E+04	nc		
		2.0E-01	i			1.1E-01	i	1		108-88-3	Toluene	5.2E+02	sat	5.2E+02	sat	4.0E+02	nc	7.2E+02	nc	1.2E+01	6.0E-01
3.2E+00	h			3.2E+00	r			0	0.10	95-80-7	Toluene-2,4-diamine	1.5E-01	ca	5.4E-01	ca	2.1E-03	ca	2.1E-02	ca		
		6.0E-01	h			6.0E-01	r	0	0.10	95-70-5	Toluene-2,5-diamine	3.7E+04	nc	1.0E+05	max	2.2E+03	nc	2.2E+04	nc		
		2.0E-01	h			2.0E-01	r	0	0.10	823-40-5	Toluene-2,6-diamine	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc		
2E-01	i			2E-01	r			0	0.10	106-49-0	p-Toluidine	2.6E+00	ca	9.1E+00	ca	3.5E-02	ca	3.5E-01	ca		
1.1E+00	i			1.1E+00	i			0	0.10	8001-35-2	Toxaphene	4.4E-01	ca	1.6E+00	ca	6.0E-03	ca	6.1E-02	ca	3.1E+01	2.0E+00
		7.5E-03	i			7.5E-03	r	0	0.10	66841-25-6	Tralomethrin	4.6E+02	nc	4.6E+03	nc	2.7E+01	nc	2.7E+02	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	2303-17-5	Triallate	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
		1.0E-02	i			1.0E-02	r	0	0.10	82097-50-5	Triasulfuron	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		5.0E-03	i			5.0E-03	r	0	0.10	615-54-3	1,2,4-Tribromobenzene	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		3.0E-04	i					0	0.10	56-35-9	Tributyltin oxide (TBTO)	1.8E+01	nc	1.8E+02	nc			1.1E+01	nc		
3.4E-02	h			3.4E-02	r			0	0.10	634-93-5	2,4,6-Trichloroaniline	1.4E+01	ca	5.1E+01	ca	2.0E-01	ca	2.0E+00	ca		
2.9E-02	h			2.9E-02	r			0	0.10	33663-50-2	2,4,6-Trichloroaniline hydrochloride	1.7E+01	ca	5.9E+01	ca	2.3E-01	ca	2.3E+00	ca		
		1.0E-02	i			5.7E-02	h	1		120-82-1	1,2,4-Trichlorobenzene	6.5E+02	nc	3.0E+03	sat	2.1E+02	nc	1.9E+02	nc	5.0E+00	3.0E-01
		2.8E-01	n			6.3E-01	n	1		71-55-6	**1,1,1-Trichloroethane**	1.2E+03	sat	1.2E+03	sat	2.3E+03	nc	3.2E+03	nc	2.0E+00	1.0E-01
5.7E-02	i	4.0E-03	i	5.6E-02	i	4.0E-03	r	1		79-00-5	1,1,2-Trichloroethane	7.3E-01	ca*	1.6E+00	ca*	1.2E-01	ca	2.0E-01	ca	2.0E-02	9.0E-04
4.00E-01	n	3.00E-04	n	4.00E-01	n	1.00E-02	n	1		79-01-6	**Trichloroethylene (TCE)**	5.3E-02	ca	1.1E-01	ca	1.7E-02	ca	2.8E-02	ca	6.0E-02	3.0E-03
		3.0E-01	i			2.0E-01	h	1		75-69-4	Trichlorofluoromethane	3.9E+02	nc	2.0E+03	sat	7.3E+02	nc	1.3E+03	nc		
		1.0E-01	i			1.0E-01	r	0	0.10	95-95-4	2,4,5-Trichlorophenol	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc	2.7E+02	1.4E+01
1.1E-02	i	1.0E-04	n	1.1E-02	i	1.0E-04	r	0	0.10	88-06-2	**2,4,6-Trichlorophenol**	6.1E+00	nc**	6.2E+01	nc**	3.7E-01	nc**	3.6E+00	nc**	2.0E-01	8.0E-03
7.0E-02				7.0E-02					0.10	88-06-2	**"CAL-Modified PRG"**	6.9E+00	ca	2.5E+01	ca	9.6E-02	ca	9.6E-01	ca		
		1.0E-02	i			1.0E-02	r	0	0.10	93-76-5	2,4,5-Trichlorophenoxyacetic Acid	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
		8.0E-03	i			8.0E-03	r	0	0.10	93-72-1	2-(2,4,5-Trichlorophenoxy) propionic acid	4.9E+02	nc	4.9E+03	nc	2.9E+01	nc	2.9E+02	nc		
		5.0E-03	i			5.0E-03	r	1		598-77-6	1,1,2-Trichloropropane	1.5E+01	nc	5.1E+01	nc	1.8E+01	nc	3.0E+01	nc		
2.0E+00	n	6.0E-03	i	2.0E+00	r	1.4E-03	n	1		96-18-4	**1,2,3-Trichloropropane**	5.0E-03	ca	1.1E-02	ca	3.4E-03	ca	5.6E-03	ca		

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++++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION												CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs) "Direct Contact Exposure Pathways"								SOIL SCREENING LEVELS "Migration to Ground Water"	
SFo 1/(mg/kg-d)		RfDo (mg/kg-d)		SFi 1/(mg/kg-d)		RfDi (mg/kg-d)		V O C	skin abs. soils	CAS No.			Residential Soil (mg/kg)		Industrial Soil (mg/kg)		Ambient Air (ug/m^3)		Tap Water (ug/l)		DAF 20 (mg/kg)	DAF 1 (mg/kg)
		5.0E-03	h			5.0E-03	r	1		96-19-5		1,2,3-Trichloropropene	1.2E+01	nc	3.8E+01	nc	1.8E+01	nc	3.0E+01	nc		
		3.0E-03	i			3.0E-03	r	0	0.10	58138-08-2		Tridiphane	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
		2.0E-03	r			2.0E-03	i	1		121-44-8		Triethylamine	2.3E+01	nc	8.6E+01	nc	7.3E+00	nc	1.2E+01	nc		
7.7E-03	i	7.5E-03	i	7.7E-03	r	7.5E-03	r	0	0.10	1582-09-8		Trifluralin	6.3E+01	ca**	2.2E+02	ca*	8.7E-01	ca*	8.7E+00	ca*		
		1.400E-04	r			1.400E-04	n		0.10	552-30-7		Trimellitic Anhydride (TMAN)	8.6E+00	nc	8.6E+01	nc	5.1E-01	nc	5.1E+00			
		5.0E-02	n			1.7E-03	n	1		95-63-6		1,2,4-Trimethylbenzene	5.2E+01	nc	1.7E+02	nc	6.2E+00	nc	1.2E+01	nc		
		5.0E-02	n			1.7E-03	n	1		108-67-8		1,3,5-Trimethylbenzene	2.1E+01	nc	7.0E+01	nc	6.2E+00	nc	1.2E+01	nc		
3.7E-02	h			3.7E-02	r			0	0.10	512-56-1		Trimethyl phosphate	1.3E+01	ca	4.7E+01	ca	1.8E-01	ca	1.8E+00	ca		
		3.0E-02	i			3.0E-02	r	0	0.10	99-35-4		1,3,5-Trinitrobenzene	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
		1.0E-02	h			1.0E-02	r	0	0.10	479-45-8		Trinitrophenylmethylnitramine	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
3E-02	i	5.0E-04	i	3E-02	r	5.0E-04	r	0	0.10	118-96-7		2,4,6-Trinitrotoluene	1.6E+01	ca**	5.7E+01	ca**	2.2E-01	ca**	2.2E+00	ca**		
		5.00E-03	n			5.00E-03	r		0.10	791-28-6		**Triphenylphosphine oxide**	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
3.2E-03	n	1.1E-01	n	3.2E-03	r	1.1E-01	r		0.10	115-96-8		**Tris(2-chloroethyl) phosphate**	1.5E+02	ca*	5.4E+02	ca	2.1E+00	ca	2.1E+01	ca		
		2.00E-04	n							7440-61-0		Uranium (chemical toxicity only)	1.6E+01	nc	2.0E+02	nc			7.3E+00	nc		
		7.0E-03	h					0		7440-62-2		Vanadium and compounds	5.5E+02	nc	7.2E+03	nc			2.6E+02	nc	6.0E+03	3.0E+02
		1.0E-03	i			1.0E-03	r	0	0.10	1929-77-7		Vernam	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		2.5E-02	i			2.5E-02	r	0	0.10	50471-44-8		Vinclozolin	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
		1.0E+00	h			5.7E-02	i	1		108-05-4		Vinyl acetate	4.3E+02	nc	1.4E+03	nc	2.1E+02	nc	4.1E+02	nc	1.7E+02	8.0E+00
1.1E-01	r	8.6E-04	r	1.1E-01	h	8.6E-04	i	1		593-60-2		Vinyl bromide (bromoethene)	1.9E-01	ca*	4.2E-01	ca*	6.1E-02	ca*	1.0E-01	ca*		
1.5E+00	i	3.00E-03	i	3.1E-02	i	2.86E-02	i	1		75-01-4		**Vinyl chloride (child/adult)+++**	7.9E-02	ca			1.1E-01	ca	2.0E-02	ca	1.0E-02	7.0E-04
7.5E-01	i	3.00E-03	i	1.6E-02	i	2.86E-02	i	1		75-01-4		Vinyl chloride (adult)			7.5E-01	ca						
		3.0E-04	i			3.0E-04	r	0	0.10	81-81-2		Warfarin	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc		
		7.0E-01	i			2.9E-02	i	1	0.10	1330-20-7		**Xylenes**	2.7E+02	nc	4.2E+02	sat	1.1E+02	nc	2.1E+02	nc	2.1E+02	1.0E+01
		3.0E-01	i					0		7440-66-6		Zinc	2.3E+04	nc	1.0E+05	max			1.1E+04	nc	1.2E+04	6.2E+02
		3.0E-04	i					0		1314-84-7		Zinc phosphide	2.3E+01	nc	3.1E+02	nc			1.1E+01	nc		
		5.0E-02	i			5.0E-02	r	0	0.10	12122-67-7		Zineb	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		

Notice: Slight Revision to the PRG 2002 Table

Revision Date: 2/10/03

The following revisions were made to the 2002 PRGs tables

1. The Cal modified PRG for cadmium has been withdrawn per request by Dr. Michael Wade of California EPA's Department of Toxic Substances Control.

2. The typo ("0.00") for "Mercury (elemental)" in the Residential and Industrial Soil PRG columns has been removed. There should be no soil PRG entry for elemental mercury, as was the case with previous versions of the PRG table.

In addition, the entry for "Mercury chloride" has been replaced with the designation "Mercury and compounds" similar to earlier versions of the PRG table to avoid unnecessary confusion.

3. There were two entries for cumene (isopropylbenzene) in the original PRG 2002 table. The correct values are presented on page 4 under "cumene". The outdated values for this compound that were presented for "isopropylbenzene" on page 14 have been deleted.

RWQCB Interim Site Assessment and Cleanup Guidebook

CalEPA

Groundwater Protection

INTERIM SITE ASSESSMENT & CLEANUP GUIDEBOOK

May 1996
California Regional Water Quality Control Board
Los Angeles and Ventura Counties
Region 4

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

PREVENTING GROUNDWATER POLLUTION: ASSESSING YOUR SITE FOR CHEMICAL CONTAMINANTS

Table 4-1: Maximum Soil Screening Levels (mg/kg) for TPH and BTEX above Drinking Water Aquifers

	Distance Above Groundwater	Carbon Range		
TPH		C4-C12	C13-C22	C23-C32
	>150 feet	1,000	10,000	50,000
	20-150 feet	500	1,000	10,000
	<20 feet	100	100	1,000

	Distance Above Groundwater	Lithology			
BTEX		Gravel	Sand	Silt	Clay
	150 feet	B=0.044 T=2 E=8 X=23	B=0.077 T=4 E=17 X=48	B=0.165 T=9 E=34 X=93	B=0.8 T=43 E=170 X=465
	80 feet	B=0.022 T=1 E=4 X=11	B=0.033 T=2 E=7 X=20	B=0.066 T=4 E=15 X=40	B=0.34 T=18 E=73 X=200
	20 feet	B=0.011 T=0.15 E=0.7 X=1.75	B=0.011 T=0.3 E=0.7 X=1.75	B=0.011 T=0.45 E=2 X=5.3	B=0.044 T=2.3 E=9 X=24.5

- TPH = Total petroleum hydrocarbons.
- BTEX = benzene, toluene, ethylbenzene, and xylenes, respectively. MCLs (ppm): B=0.001, T=0.15, E=0.7, X=1.75.
- MTBE (methyl tertiary butyl ether) must be included in BTEX analyses.
- BTEX screening concentrations determined per the attenuation factor method as described in RWQCB Guidance for VOC Impacted Sites (March 1996), with a natural degradation factor of 11 for benzene. Table values for BTEX can be linearly interpolated between distance above groundwater and are proportional to fraction of each lithological thickness.
- Values in Table 4-1 are for soils above drinking water aquifers. All groundwaters are considered as drinking water resources unless exempted by one of the criteria as defined under SWRCB Resolution 88-63 (TDS>3000 mg/L, or deliverability <200 gal/day, or existing contamination that cannot be reasonably treated). Regional Board staff will make a determination of potential water use at a particular site considering water quality objectives and beneficial uses. For non-drinking water aquifers, regardless of depth, TPH for ">150 feet" category in the table should be used; BTEX screening levels are set at 100 times respective MCLs as preliminary levels determined to be protective of human health and the environment.
- Distance above groundwater must be measured from the highest anticipated water level. Lithology is based on the USCS scale.
- For BTEX, each component is not to exceed the specified screening level.
- For TPH, the total allowable for each carbon range is not to be exceeded. In areas of naturally-occurring hydrocarbons, Regional Board staff will make allowance for TPH levels.
- BTEX to be analyzed by EPA Method 8020 or EPA Method 8260 (usually for confirmation).
- TPH to be analyzed by EPA Methods 418.1 plus 8015 (Modified). Ranges of TPH to be analyzed by GC/MS carbon range methods (EPA Method 8260) or EPA Method 8015 (Modified).

Background Concentrations of Trace and Major Elements in California Soils

Table 1 A
Series and Location of Benchmark Soils'

Soil Series and Texture Phase	Soil No.	County	Longitude	North Latitude	Soil Taxonomy
Aiken scl	4	El Dorado	120°50'	38°39'	Clayey, oxidic, mesic, Xeric Haplohumufts
Aiken cl	5	El Dorado	120°57'	38°15'	
Aiken cl	6	Tehama	121°43'	40°26'	
Altamont cl	1	San Diego	117°13'	32°54'	Fine, montmorillonitic, thermic Typic Chromoxererts
Altamont cl	2	Glenn	122°22'	39°34'	
Altamont cl	3	Tehama	122°41'	40°14'	
Cajon fs	28	San Bernardino	117°40'	34°46'	Mixed, thermic, Typic Torripsamments
Coachella fs	7	Riverside	116°12'	33°42'	Sandy, mixed, hyperthermic Typic Torrifluvents
Fresno l	8	Kern	119°23'	35°23'	Fine-loamy, mixed, thermic Natric Durixeraffs
Fresno l	10	Merced	120°29'	37°10'	
Hanford sl	12	San Diego	116°47'	32°49'	Coarse-loamy, mixed, nonacid, thermic Typic Xerorthents
Hanford sl	11	San Joaquin	121°14'	38°11'	
Holland ls	14	El Dorado	120°41'	38°36'	Fine-loamy, mixed, mesic
Holland l	13	Fresno	119°22'	37°04'	
Holland ls	15	El Dorado	120°54'	38°49'	
Holtville sl	50	Imperial	115°23'	32°46'	Clayey over loamy, montmorillonitic (calcareous) hyperthermic Typic Torrifluvents
Hugo cl	17	Solano	122°00'	38°22'	Fine-loamy, mixed mesic dysrtic xerochrepts
Hugo cl	16	Humboldt	123°54'	40°45'	
Imperial cl	18	Imperial	115°34'	32°42'	Fine, montmorillonitic (calcareous), hyperthermic
Imperial cl	19	Riverside	114°36'	33°38'	
Imperial cl	20	Imperial	115°31'	32°56'	Vertic Torrifluvents
Kettlemen sl	21	Fresno	120°40'	36°35'	Fine-loamy, mixed (calcareous), Thermic Typic Torriorthents
Kettlemen sl	23	Fresno	120°20'	36°19'	
Kettlemen cl	22	Kern	119°22'	34°58'	

Soil Series and Texture Phase	Soil No.	County	Longitude	North Latitude	Soil Taxonomy
Lassen c	25	Tulare	119°00'	36°06'	Fine, montmorillonitic, mesic Typic Chromoxererts
Lassen c	24	Modoc	120°27'	41°32'	
Los Osos c	27	Santa Barbara	120°28'	34°35'	Fine, montmorillonitic, thermic, Typic Argixerolls
Los Osos cl	26	Lake	122°30'	38°53'	
Maymen sl	30	Lake	122°54'	39°16'	Loamy, mixed, mesic dystric Lithic Xerochrepts
Maymen sl	31	Tehama	122°41'	40°09'	
Maymen sl	29	Glenn	122°36'	39°34'	
Merced sl	9	San Joaquin	121°22'	38°05'	Fine, montmorillonitic, thermic Patchic Haploxerolls
Merced c	33	Fresno	120°12'	36°35'	
Merced cl	34	Merced	120°19'	37°28'	
Merced c	32	Kern	119°13'	35°12'	
Mojave l	36	San Bernardino	117°12'	34°32'	Not available
Mojave sl	35	San Bernardino	116°41'	34°58'	
Panoche cl	48	Fresno	Not available		Fine-loamy, mixed (calcareous), thermic Typic Torriorthents
Ramona sl	37	San Diego	116°54'	32°43'	Fine-loamy, mixed, thermic, Typic Haploxeraffs
Ramona sl	38	San Joaquin	121°13'	38°14'	
Redding cl	40	Tehama	122°12'	40°04'	Fine, mixed, thermic Abruptic Durixeralfs
Redding cl	39	Glenn	122°15'	39°41'	
San Joaquin sl	41	Merced	120°11'	37°10'	Not available
San Joaquin l	42	Tulare	119°05'	36°02'	
Venice	49	San Joaquin	121°31'	37°40'	Eric, thermic Typic Medihemists
Watsonville l	45	Santa Cruz	122°03'	36°57'	Fine, montmorillonitic, thermic Xeric Argialbolls
Watsonville l	43	Santa Barbara	120°27'	34°29'	
Watsonville l	44	Santa Cruz	121°42'	36°56'	
Yolo cl	46	Solano	121°47'	38°26'	Fine-silty, mixed, nonacid, thermic Typic Xerorthent
Yolo cl	47	Tehama	122°15'	40°03'	

[1]Table 1 A is alphabetical by soil series. Table 1 B is in numerical order by soil number.
[2]Texture phase abbreviations: l = loam, sl = sandy loam, ls = loamy sand, fs = fine sand, cl = clay loam, scl = sandy clay loam, c = clay (USDA-SCS classification scheme)

Table 1 B
Series and Location of Benchmark Soils[1]

Soil Series and Texture Phase	Soil No.	County	Longitude	North Latitude	Soil Taxonomy
Altamont cl	1	San Diego	117°13'	32°54'	Fine, montmorillonitic, thermic Typic Chromoxererts
Attamont cl	2	Glenn	122°22'	39°34'	
Alfamont cl	3	Tehama	122°41'	40°14'	
Aiken scl	4	El Dorado	120°50'	38°39'	Clayey, oxidic, mesic, Xeric HaplohumuRs
Aiken ci	5	El Dorado	120°57	38°15'	
Aiken ci	6	Tehama	121°43'	40°26'	
Coachella fs	7	Riverside	116°12'	33°42'	Sandy, mixed, hyperthermic Typic Torrifluvents
Fresno l	8	Kern	119°23'	35°23'	Fine-loamy, mixed, thermic Natric Durixeralfs
Merced sl	9	San Joaquin	121°22'	38°05'	Fine, montmorillonitic, thermic Pachic Haploxerolls
Fresno l	10	Merced	120°29'	37°10'	Fine-loamy, mixed, thermic Natric Durixeralfs
Hanford sl	11	San Joaquin	121°14'	38°11'	Coarse-loamy, mixed, nonacid, themnic Typic Xerorthents
Hardord sl	12	San Diego	116°47	32°49'	
Holland l	13	Fresno	119°22'	37°04'	Fine-loamy, mixed, mesic Ultic Haploxeralfs
Holland ls	14	El Dorado	120°41'	38°36'	
Holland ls	15	El Dorado	120°54'	38°49'	
Hugo cl	16	Humboldt	123°54'	40°45'	Fine-loamy, mixed mesic Dystric Xerochrepts
Hugo cl	17	Solano	122°00'	38°22'	
Imperial cl	18	Imperial	115°34'	32°42'	Fine, montmorillonitic (calcareous), hyperthermic
Imperial cl	19	Riverside	114°36'	33°38'	
imperial cl	20	Imperial	115°31'	32°56'	Vertic Torrifluvents
Kettlemen sl	21	Fresno	120°40'	36°35'	Fine-loamy, mixed (calcareous), thermic Typic Torriorthents
Kettlemen cl	22	Kern	119°22'	34°58'	
Kettlemen sl	23	Fresno	120°20'	36°19'	
Lassen c	24	Modoc	120°27	41°32'	Fine, montmorillonitic, mesic Typic Chromoxererts
Lassen c	25	Tulare	119°00'	36°06'	
Los Osos cl	26	Lake	122°30'	38°53'	Fine, montmorillonitic, thermic, Typic Argixerolls
Los Osos c	27	Santa Barbara	120°28'	34°35'	
Cajon fs	28	San Bernardino	117°40'	34°46'	Mixed, thermic, Typic Torripsamments
Maymen sl	29	Glenn	122°36'	39°34'	Loamy, mixed, mesic Dystric Lithic Xerochrepts
Maymen sl	30	Lake	122°54'	39°16'	

Maymen sl	31	Tehama	122°41'	40°09'	
Merced c	32	Kern	119°13'	35°12'	Fine, montmoriilonitic, thermic Pachic Haploxerolls
Merced c	33	Fresno	120°12'	36°35'	
Merced cl	34	Merced	120°19'	37°28'	
Mojave sl	35	San Bernardino	116°41'	34°58'	Fine-loamy, mixed, thermic Typic Haplargids
Mojave l	36	San Bernardino	117°12'	34°32	
Ramona sl	37	San Diego	116°54'	32°43'	Fine-loamy, mixed, thermic, Typic Haploxeraffs
Ramona sl	38	San Joaquin	121°13'	38°14'	
Redding cl	39	Glenn	122°15'	39°41'	Fine, mixed, thermic Abruptic Durixeralfs
Redding cl	40	Tehama	122°12'	40°04'	
San Joaquin sl	41	Merced	120°11'	37°10'	Fine, mixed, thermic Abruptic Durixeraffs
San Joaquin l	42	Tulare	119°05'	36°02'	
Watsonville l	43	Santa Barbara	120°27'	34°29'	Fine, montmorillonitic, thermic Xeric Argialbolls
Watsonville l	44	Santa Cruz	121°42'	36°56'	
Watsonville l	45	Santa Cruz	122°03'	36°57'	
Yolo cl	46	Solano	121°47'	38°26'	Fine-silty, mixed, nonacid, thermic Typic Xerorthent
Yolo cl	47	Tehama	122°15'	40°03'	
Panoche cl	48	Fresno	Not available		Fine-loamy, mixed (calcareous), thermic Typic Torriorthents
Venice	49	San Joaquin	121°31'	37°40'	Eric, thermic Typic Medihemists
Holtville sl	50	Imperial	115°23'	32°46'	Clayey over loamy, montmorillonitic (calcareous) hyperthermic Typic Torrifluvents

[1]Table 1 B is in numerical order by soil number. Table 1 A is alphabetical by soil series. [2]Texture phase abbreviations: I = loam, sl = sandy loam, Is = loamy sand, fs = fine sand, cl = clay loam, scl = sandy clay loam, c = clay (USDA-SCS classification scheme)

Table 2
Total Concentrations of Elements in Benchmark Soils

Soil No.	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Mg/Kg	%	Mg/Kg									
1	0.21	8.3	11.0	23	738	2.19	0.80	7360	0.11	305	8.8	36
2	0.37	8.1	8.3	17	654	1.20	0.38	5680	0.18	138	15.0	47
3	0.27	9.9	8.0	45	764	1.90	0.42	6948	0.44	121	24.1	110
4	0.37	9.7	3.9	16	659	1.90	0.25	6758	0.25	177	34.8	115
5	0.22	7.1	3.9	7	438	1.90	0.27	3782	0.95	217	38.8	242
6	0.22	9.6	1.2	1	260	1.10	0.24	6795	0.19	94	13.1	45
7	0.12	6.3	1.2	2	533	0.80	0.21	25090	0.16	292	6.9	35
8	0.28	7.6	4.2	74	526	1.25	0.39	22035	0.52	213	9.3	42
9	0.41	6.6	0.8	5	379	0.64	0.37	9587	0.05	161	4.3	26
10	0.80	6.3	1.1	13	517	1.38	0.29	17967	0.40	141	7.1	89
11	0.52	9.0	1.2	4	472	1.51	0.33	11081	0.31	184	7.6	27
12	4.30	8.3	0.6	10	250	0.60	0.24	24524	0.13	122	15.8	29
13	0.40	9.5	2.1	2	625	1.53	0.20	8592	0.36	208	10.8	26
14	3.30	8.7	6.9	34	358	1.43	0.34	16494	0.36	167	22.7	108
15	0.48	7.6	1.2	19	258	1.45	0.19	16658	0.56	85	18.3	107
16	0.42	6.8	5.7	27	375	1.70	0.39	2903	0.15	133	29.9	214
17	2.60	8.0	9.6	26	796	0.93	0.37	6488	0.20	173	15.9	73
18	0.16	6.4	5.2	36	371	1.48	0.45	36400	0.58	189	11.3	40
19	0.37	6.7	4.7	44	392	2.26	0.52	45577	0.43	216	10.0	52
20	0.43	5.9	5.4	33	385	1.76	0.41	41649	0.62	188	8.3	45
21	0.55	6.1	1.8	28	1400	1.14	0.34	15295	0.30	140	10.1	86
22	0.34	6.8	4.0	19	556	0.77	0.25	8243	1.70	115	8.1	50
23	8.30	6.9	4.4	19	677	0.83	0.31	20015	1.00	147	11.9	129
24	0.49	9.9	1.4	4	403	1.78	0.29	17812	1.10	154	26.6	92
25	0.18	8.5	1.7	5	248	0.66	0.28	24070	0.29	119	46.9	1579
26	0.22	10.6	1.4	3	525	1.17	0.33	9408	0.05	127	14.5	51
27	0.44	8.8	4.5	25	720	2.70	0.65	4559	0.44	240	14.2	102
28	0.28	5.8	1.0	5	576	0.68	0.60	15054	0.32	214	11.6	67
29	0.42	8.0	6.3	46	434	1.84	0.39	2777	0.31	153	26.4	181

Table 2 (continued)
Total Concentrations of Elements in Benchmark Soils

Soil No.	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Mg/Kg	%	Mg/Kg									
30	0.16	7.1	3.2	16	461	1.49	0.39	2451	0.13	107	12.9	70
31	3.80	7.7	6.8	30	440	1.47	0.30	2495	0.16	141	26.0	190
32	0.39	7.8	6.7	44	493	1.75	0.52	24853	0.14	234	8.7	38
33	0.27	8.3	3.9	26	552	1.45	0.58	11610	0.14	173	11.6	88
34	0.40	8.4	2.1	20	684	1.51	0.37	16160	0.05	158	16.0	68
35	0.12	6.9	3.8	11	571	1.10	0.39	16311	0.05	243	8.7	23
36	0.16	4.0	2.4	9	710	1.91	0.38	11229	0.14	239	8.0	47
37	2.50	10.4	1.7	17	221	0.86	0.64	29095	0.45	114	18.8	36
38	0.22	6.9	1.0	5	730	1.13	0.14	7653	0.05	155	7.9	49
39	0.63	5.0	2.1	8	158	0.92	0.25	2762	0.30	88	12.0	221
40	0.80	3.0	2.4	5	133	0.25	0.23	3422	0.11	83	8.8	102
41	0.13	7.0	1.4	8	531	0.50	0.29	14362	0.26	122	9.6	47
42	0.35	8.0	1.8	9	540	1.25	0.28	14131	0.24	167	10.8	50
43	0.16	5.2	1.4	7	571	1.42	0.35	3763	0.39	182	8.4	121
44	0.63	5.3	1.9	15	767	1.28	0.25	2570	0.18	148	9.2	129
45	0.22	4.9	1.1	9	565	0.68	0.11	6600	0.71	113	2.7	87
46	0.53	7.5	4.5	23	511	1.30	0.33	6076	0.21	114	22.1	397
47	0.58	7.5	3.0	22	361	1.03	0.20	10770	0.18	117	26.1	271
48	0.10	7.5	6.0	49	522	1.23	0.44	12531	0.18	139	17.8	147
49	0.20	3.5	4.7	25	324	0.25	0.34	24175	0.73	78	8.8	49
50	0.35	4.4	2.2	18	328	1.18	0.25	26824	0.58	121	4.3	29
AVG	0.80	7.3	3.5	19	509	1.28	0.35	14466	0.36	159	14.9	122
GEOM MEAN	0.41	7.1	2.8	14	468	1.14	0.33	10849	0.26	151	12.6	76
MAX	8.30	10.6	11.0	74	1400	2.70	0.80	45577	1.70	305	46.9	1579
MIN	0.10	3.0	0.6	1	133	0.25	0.11	2451	0.05	78	2.7	23
RANGE	8.20	7.6	10.4	73	1267	2.45	0.69	43126	1.65	227	44.2	1556
ESt.D.LiM.[1]	0.015	0.001	0.2	2	1	0.5	0.1	25	0.10	0.15	2.5	1

[1]Est.D.Lim. denotes the estimated detection limit for each element. In this table, concentrations less than the Est.D.Lim. are reported as one-half of the Est.D.Lim.
Descriptive statistics are calculated accordingly.

Table 2 (continued)
Total Concentrations of Elements in Benchmark Soils

Soil No.	Cs	Cu	Fe	Ga	Ge	Hg	I	K	La	Li	Mg	Mn
	-----mg/Kg-----		%	----------mg/Kg----------				%	----------mg/Kg----------			
1	7.3	36.6	3.2	22.0	1.6	0.90	1.24	3.00	38.5	33	7407	501
2	3.0	44.2	3.7	19.6	3.0	0.10	0.91	2.36	16.4	27	4913	549
3	4.5	66.9	5.7	27.6	3.5	0.70	0.94	1.48	13.0	90	11067	527
4	3.1	96.4	6.8	27.9	5.6	0.27	0.93	2.13	18.3	20	8745	1186
5	2.8	85.7	7.6	26.8	5.8	0.61	0.91	1.21	21.6	23	9586	1687
6	1.8	21.9	3.6	16.5	1.6	0.10	0.60	0.75	14.0	13	5888	618
7	1.8	14.8	2.9	18.0	2.0	0.10	0.72	2.48	39.3	21	11613	587
8	5.1	18.3	3.2	20.3	2.3	0.40	0.60	2.40	28.3	42	12928	682
9	1.5	13.7	2.0	11.5	1.9	0.27	0.49	1.78	20.4	11	5631	449
10	2.1	17.5	3.0	16.5	2.0	0.49	0.54	1.53	17.8	15	11000	598
11	1.9	24.4	3.0	14.3	2.8	0.10	0.49	2.91	24.6	13	6442	599
12	1.7	14.2	6.6	14.6	2.9	0.26	0.50	1.09	11.4	11	14345	1051
13	4.4	13.7	3.7	23.1	2.4	0.10	0.44	1.87	27.6	35	7920	911
14	3.2	21.6	5.3	18.7	2.5	0.22	0.43	1.51	18.6	50	12027	726
15	1.0	22.5	3.7	14.9	2.7	0.21	0.36	1.37	9.8	9	11364	584
16	2.8	34.5	4.0	15.0	1.9	0.10	0.33	1.03	18.2	40	15538	810
17	4.5	34.2	3.7	21.0	2.2	0.10	0.43	2.50	23.0	32	7147	574
18	5.5	16.5	2.6	15.4	2.2	0.10	0.34	2.38	25.6	23	12014	426
19	6.2	17.8	2.7	17.0	1.9	0.10	0.27	2.45	29.5	24	14305	480
20	5.1	17.7	2.3	15.3	3.0	0.10	0.33	2.16	25.4	18	12163	421
21	3.4	18.7	2.6	24.7	2.5	0.25	0.22	2.06	19.6	16	9628	456
22	2.6	11.8	1.8	13.7	2.6	0.29	0.25	2.25	16.3	7	4710	259
23	2.4	17.7	3.3	16.3	1.0	0.22	0.24	2.12	20.4	11	12036	542
24	2.1	45.2	5.8	19.3	3.7	0.10	0.27	0.57	16.5	8	11822	1217
25	2.2	52.7	4.5	13.3	2.1	0.57	0.26	1.05	15.5	8	32378	809
26	4.1	58.4	4.5	21.0	2.4	0.10	0.27	1.90	13.8	7	12014	768
27	8.7	28.7	4.3	24.5	3.9	0.39	0.25	2.93	32.3	14	9873	454
28	1.2	13.3	3.1	15.7	3.1	0.10	0.16	2.25	28.0	4	9678	470
29	3.5	50.3	5.0	20.0	4.8	0.75	0.28	1.72	17.3	13	12581	858

Table 2 (continued)
Total Concentrations of Elements in Benchmark Soils

Soil No.	Cs	Cu	Fe	Ga	Ge	Hg	I	K	La	Li	Mg	Mn
	-----mg/Kg-----		%	----------mg/Kg----------				%	----------mg/Kg----------			
30	3.2	29.0	2.6	18.2	1.5	0.22	0.26	0.84	16.7	8	7497	961
31	2.5	55.6	5.1	19.2	5.1	0.10	0.23	1.33	16.0	32	12381	824
32	4.3	22.3	3.4	19.1	2.5	0.10	0.23	2.15	33.4	51	8370	285
33	3.9	23.6	3.5	18.9	2.6	0.45	0.23	1.74	23.4	33	8238	260
34	3.4	24.8	4.4	20.4	2.5	0.66	0.28	2.08	21.7	61	15918	768
35	2.4	11.3	2.5	16.5	2.2	0.32	0.20	2.47	31.8	32	7861	433
36	2.0	15.1	3.1	17.9	2.8	0.10	0.22	1.69	33.8	25	7410	439
37	1.6	35.6	8.7	20.9	5.2	0.10	0.27	0.51	10.9	11	13725	1205
38	1.6	16.1	3.3	15.3	2.1	0.10	0.20	2.49	20.1	9	3664	890
39	1.0	20.7	2.5	8.3	3.5	0.10	0.17	0.36	10.1	15	3003	480
40	1.0	20.0	2.1	8.5	4.1	0.10	0.15	0.21	9.7	9	2402	382
41	1.3	10.6	2.3	14.0	0.3	0.10	0.19	1.63	14.2	8	5436	638
42	3.9	18.6	3.5	18.5	3.8	0.10	0.27	2.06	21.5	20	8396	736
43	2.3	11.4	1.3	12.7	2.2	0.63	0.62	1.56	23.8	7	1970	445
44	2.1	16.6	2.0	17.7	1.5	0.10	0.42	1.99	20.4	10	2384	593
45	2.4	9.5	1.0	12.8	1.5	0.10	0.43	1.67	15.0	5	1456	268
46	3.3	41.5	4.5	18.3	4.4	0.34	0.32	1.66	13.3	27	15324	674
47	2.6	51.3	5.2	18.5	3.8	0.57	0.24	1.03	13.4	28	20568	720
48	4.1	37.6	4.2	20.8	3.3	0.10	0.35	2.01	18.8	52	18414	535
49	1.5	24.4	2.4	10.4	2.4	0.25	0.67	0.42	9.9	27	7393	436
50	2.8	9.1	1.4	10.7	1.2	0.10	0.27	1.57	16.0	20	7616	253
AVG	3.1	28.7	3.7	17.6	2.8	0.26	0.40	1.73	20.3	23	9923	646
GEOM MEAN	2.7	24.0	3.4	17.1	2.5	0.20	0.35	1.54	19.0	18	8492	592
MAX	8.7	96.4	8.7	27.9	5.8	0.90	1.24	3.00	39.3	90	32378	1687
MIN	1.0	9.1	1.0	8.3	0.3	0.10	0.15	0.21	9.7	4	1456	253
RANGE	7.7	87.3	7.7	19.6	5.6	0.80	1.09	2.79	29.6	86	30922	1434
Est.D.Lim.[1]	0.25	0.25	.00025	0.15	0.5	0.2	0.15	0.05	0.15	2	10	2.5

[1]Est.D.Lim. denotes the estimated detection limit for each element. In this table, concentrations less than the Est.D.Lim. are reported as one-half of the Est.D.Lim.
Descriptive statistics are calculated accordingly.

Table 2 (continued)
Total Concentrations of Elements in Benchmark Soils

Soil No.	Mo	Na	Nb	Ni	P	Pb	Rb	Sb	Sc	Se	Si	Sn
	mg/Kg										%	Mg/Kg
1	1.4	14710	1.3	20	94	57.1	84.5	1.95	11.9	0.015	26.7	1.20
2	1.2	15620	0.9	25	231	29.7	48.0	1.46	11.6	0.015	31.0	1.25
3	0.4	8960	0.3	77	82	26.9	52.2	0.78	21.0	0.030	27.2	0.89
4	1.2	11790	0.8	51	359	22.4	53.1	1.15	18.0	0.015	23.7	0.75
5	0.7	10010	1.8	140	972	34.3	51.9	0.45	22.0	0.070	26.6	1.26
6	0.8	14400	1.3	25	13	15.6	19.5	0.29	12.0	0.015	22.4	1.13
7	2.4	16610	2.3	19	772	14.2	70.0	0.33	9.0	0.150	26.5	-0.77
8	9.6	29000	3.4	21	807	18.4	81.5	0.73	7.5	0.015	27.0	1.38
9	0.6	15050	1.5	12	213	21.3	39.8	0.36	4.9	0.015	32.4	0.82
10	1.2	15270	1.3	26	107	14.8	43.2	0.32	7.6	0.015	28.9	0.86
11	0.5	22240	1.0	13	515	22.7	42.8	0.38	6.1	0.015	34.0	0.98
12	0.7	19560	1.1	10	74	15.6	31.9	0.26	20.0	0.015	24.3	1.38
13	1.4	73400	4.0	16	1150	97.1	86.0	0.47	5.7	0.015	24.4	2.16
14	0.6	18800	0.5	64	378	22.1	53.7	0.25	11.4	0.015	28.3	0.58
15	0.2	17400	0.5	49	142	12.4	25.9	0.35	9.5	0.015	30.1	1.14
16	0.7	13970	1.9	142	697	34.0	46.5	0.46	8.5	0 015	28.3	1.46
17	0.6	16230	0.8	40	539	30.9	54.7	1.03	10.5	0.050	31.2	1.01
18	0.8	9870	1.9	21	740	44.3	59.8	0.73	4.7	0.190	28.8	1.46
19	1.3	9490	2.1	25	873	37.0	66.8	0.77	5.9	0.220	26.3	1.12
20	0.8	10690	2.0	22	736	33.8	55.9	0.68	5.2	0.180	29.9	1.47
21	1.4	14620	1.0	53	342	19.7	53.5	0.66	5.6	0.170	32.6	0.57
22	3.7	10980	2.1	27	509	14.6	48.4	0.45	2.8	0.180	30.3	1.07
23	0.9	18380	1.0	62	560	22.5	41.7	1.50	5.1	0.160	32.1	1.00
24	0.4	14370	3.4	57	252	16.7	18.9	0.44	15.5	0.015	23.9	0.68
25	1.3	11340	1.8	509	41	17.9	33.4	0.73	11.7	0.015	25.2	1.91
26	0.8	11970	0.5	27	385	24.1	47.7	0.73	17.0	0.015	26.0	0.53
27	1.3	20970	3.5	52	293	39.1	107.9	1.52	7.8	0.430	30.0	1.85
28	0.1	15650	1.3	30	657	13.2	43.0	0.16	6.7	0.015	30.0	0.94
29	1.1	15580	0.5	116	664	23.9	57.2	0.75	12.8	0.230	30.2	0.85

Table 2 (continued)
Total Concentrations of Elements in Benchmark Soils

Soil No.	Mo	Na	Nb	Ni	P	Pb	Rb	Sb	Sc	Se	Si	Sn
	mg/Kg										%	Mg/Kg
30	0.6	15620	1.8	47 610	20.6	57.6		0.28	7.3	0.015	34.0	0.77
31	0.6	14270	0.7	104 487	18.1	41.7		0.59	17.1	0.040	32.8	0.85
32	4.5	15110	4.3	21 407	22.4	68.5		1.40	8.5	0.015	26.3	1.91
33	2.4	15650	2.7	56 63	24.5	61.4		0.68	7.9	0.015	28.8	1.35
34	1.7	16830	3.1	29 463	17.5	67.4		0.46	10.0	0.015	25.9	1.19
35	0.9	17260	1.3	12 301	21.3	55.1		0.33	5.3	0.015	30.4	1.22
36	1.0	7580	1.8	23 314	26.7	61.8		0.32	6.0	0.015	35.6	1.01
37	0.5	19540	1.4	15 33	17.0	28.5		0.42	24.0	0.015	27.9	1.38
38	0.5	13800	1.1	23 257	21.3	42.1		0.37	5.0	0.015	35.9	0.25
39	0.4	15550	0.8	50 194	12.7	16.3		0.24	5.0	0.015	39.4	0.64
40	0.7	6630	0.6	30 124	14.0	14.3		0.16	5.0	0.015	37.1	1.04
41	0.3	17410	0.9	17 65	14.2	30.2		0.15	6.8	0.015	33.5	0.99
42	1.0	13800	0.8	22 107	17.8	61.3		0.60	8.8	0.015	32.7	0.92
43	1.7	13570	4.9	20 387	13.4	41.7		0.50	2.5	0.110	36.7	2.44
44	3.1	10230	1.4	27 309	19.7	43.5		0.57	4.2	0.015	27.3	1.32
45	2.6	12290	2.9	9 360	16.0	28.9		0.48	2.6	0.015	34.7	1.77
46	0.7	17040	1.5	212 467	18.9	40.5		0.50	11.0	0.015	27.2	1.05
47	0.7	17890	0.6	196 351	14.9	34.4		0.40	15.3	0.015	28.1	0.65
48	1.5	19290	1.3	113 357	23.1	55.8		0.60	13.5	0.015	28.8	0.81
49	2.2	5580	1.7	41 1210	27.4	21.1		0.42	4.2	0.140	13.2	1.04
50	0.3	10010	0.9	12 524	16.8	31.9		0.31	0.8	0.015	35.6	1.35
AVG	1.3	15838	1.7	57 412	23.9	48.5		0.60	9.5	0.058	29.4	1.11
GEO. MEAN	0.9	14500	1.4	36 290	21.7	44.6		0.50	8.2	0.028	29.0	1.03
MAX	9.6	73400	4.9	509 1210	97.1	107.9		1.95	24.0	0.430	39.4	2.44
MIN	0.1	5580	0.3	9 13	12.4	14.3		0.15	0.8	0.015	13.2	0.25
RANGE	9.5	67820	4.6	500 1197	84.7	93.6		1.80	23.2	0.415	26.2	2.19
Est.D.Lim.[1]	0.025	100	0.25	5 25	1	0.15		0.15	0.2	0.03	0.0005	0.5

[1] Est.D.Lim. denotes the estimated detection limit for each element. In this table, concentrations less than the Est.D.Lim. are reported as one-half of the Est.D.Lim
Descriptive statistics are calculated accordingly.

Table 2 (continued)
Total Concentrations of Elements in Benchmark Soils

Soil No.	Sr	Th	Ti	TL	U	V	W	Y	Zn	Zr
	mg/Kg									
1	84	36.2	4640	1.10	8.2	74	1.10	30.6	172	610
2	166	13.9	6463	0.62	5.7	134	0.22	22.6	165	232
3	38	10.1	6218	0.74	2.7	187	0.10	15.0	204	134
4	194	10.8	7337	0.85	3.8	236	0.16	31.2	149	151
5	47	8.8	12890	0.70	3.1	191	0.28	29.2	162.	230
6	155	9.8	5918	0.46	3.2	123	0.40	19.1	139	88
7	236	27.5	4351	0.62	8.5	60	0.36	43.2	170	32
8	210	25.4	4780	0.68	21.3	83	1.60	39.1	180	57
9	152	20.2	2885	0.34	4.6	55	0.33	29.4	182	51
10	151	12.8	4466	0.48	3.1	93	0.45	29.4	153	67
11	198	23.9	3864	0.41	5.1	80	0.28	26.6	97	56
12	92	11.0	5373	0.52	2.4	220	0.31	31.9	123	52
13	118	32.4	4650	0.87	10.7	89	0.74	23.4	236	53
14	84	18.0	5662	0.49	5.7	170	0.15	30.7	104	90
15	156	5.3	3590	0.29	1.9	123	0.19	26.8	141	29
16	68	8.1	4566	0.59	1.8	125	0.97	11.8	177	108
17	102	13.3	5225	0.57	3.2	133	0.42	22.8	193	99
18	169	15.8	3657	0.73	4.2	69	0.76	27.5	172	130
19	193	18.6	4778	0.75	4.4	84	0.73	31.8	179	180
20	197	15.9	3949	0.57	3.9	74	0.71	28.6	168	178
21	106	16.0	3740	0.42	3.4	92	0.60	25.3	165	81
22	176	13.7	2453	0.47	5.6	58	0.54	21.6	152	50
23	187	14.2	3963	0.47	2.9	113	0.47	25.0	107	92
24	182	8.2	6957	0.45	1.5	139	0.65	33:3	149	107
25	86	13.3	2757	0.36	4.3	77	0.95	16.8	133	45
26	231	9.8	3997	0.67	2.8	117	0.05	19.5	183	38
27	134	25.5	5683	0.90	5.8	133	1.20	24.8	144	105
28	116	19.5	3705	0.38	2.4	85	0.10	32.6	92	20
29	33	9.4	7096	0.69	1.6	185	0.22	15.6	157	164

Table 2 (continued)
Total Concentrations of Elements in Benchmark Soils

Soil No.	Sr	Th	Ti	TL	U	V	W	Y	Zn	Zr
	mg/Kg									
30	20	10.8	4814	0.63	3.0	102	0.44	8.5	144	68
31	24	7.3	7875	0.42	1.5	181	0.17	12.9	189	136
32	229	30.1	3499	0.79	17.3	77	6.50	36.9	164	43
33	172	23.1	3739	0.75	14.5	126	6.90	21.5	157	60
34	264	17.3	5178	0.68	6.4	115	1.20	33.9	176	48
35	179	25.1	3790	0.61	4.9	74	0.64	35.7	154	35
36	90	25.8	2950	0.77	3.9	75	0.72	30.6	94	19
37	158	5.9	7771	0.45	1.7	288	0.47	32.9	154	34
38	83	16.1	3644	0.42	3.4	96	0.28	20.9	91	58
39	23	6.0	4990	0.20	1.2	92	0.25	9.5	88	92
40	27	5.6	2388	0.17	1.2	76	0.24	10.8	136	24
41	65	10.4	3857	0.33	2.6	68	0.28	17.9	138	56
42	84	32.9	4565	0.81	6.7	94	0.28	24.4	155	60
43	87	17.3	4233	0.44	3.8	54	1.10	15.7	133	63
44	49	13.3	3454	0.58	4.3	88	0.50	15.6	100	56
45	69	11.3	2629	0.50	5.6	48	0.50	18.0	135	41
46	83	9.1	5539	0.50	2.1	139	0.48	16.4	119	100
47	74	7.2	6099	0.33	1.6	175	0.27	18.1	165	98
48	180	14.0	4913	0.59	4.0	138	0.37	25.7	132	111
49	271	9.8	2239	0.28	6.3	58	1.30	25.6	122	34
50	123	9.5	2012	0.49	2.5	39	0.36	18.1	150	95
AVG	128	15.7	4716	0.56	4.7	112	0.77	24.3	149	93
GEOM. MEAN	107	13.8	4419	0.52	3.8	101	0.45	22.9	145	72
MAX	271	36.2	12890	1.10	21.3	288	6.90	43.2	236	610
MIN	20	5.3	2012	0.17	1.2	39	0.05	8.5	88	19
RANGE	251	30.9	10878	0.93	20.1	249	6.85	34.7	148	591
Est.D.Lim.[1]	4	0.1	5	0.15	0.05	5	0.1	0.15	2.5	0.25

[1]Est.D.Lim. denotes the estimated detection limit for each element. In this table, concentrations less than the Est.D.Lim. are reported as one-half of the Est.D.Lim.
Descriptive statistics are calculated accordingly.

Table 3

Ranges In Concentration and Summary Statistics of 46 Elements in 50 Benchmark California Soils[a]

Parameter	Ag	AI	As	B	Ba	Be	BI	Ca	Cd	Ce
Mean	0.80	7.3	3.5	19	509	1.28	0.35	14466	0.36	159
Standard Deviation	1.43	1.7	2.5	15	210	0.52	0.14	10703	0.31	52
Coefficient of Variation (CV) (%)	178	24	71	79	41	41	39	74	88	33
Geometric Mean	0.41	7.1	2.8	14	468	1.14	0.33	10849	0.26	151
Geometric Deviation	2.64	1.3	2.1	2.6	1.54	1.79	1.46	2.25	2.27	1.38
Geometric CV (%)	636	19	76	19	0.30	157	448	0.02	876	0.9
Minimum	0.10	3.0	0.6	1	133	0.25	0.11	2451	0.05	78
Lower Quartile	0.22	6.3	1.4	7	375	0.92	0.25	6600	0.15	121
Median	0.37	7.5	2.7	17	519.5	1.265	0.335	11420	0.275	150.5
Upper Quartile	0.53	8.3	4.7	26	625	1.53	0.39	20015	0.44	188
Maximum	8.30	10.6	11.0	74	1400	2.70	0.80	45577	1.70	305
W:Normal[b]	0.4864	0.9761	0.8865	0.8935	0.9161	0.9883	0.9248	0.8848	0.7977	0.9426
Prob<W[c]	0.0001	0.5824	0.0001	0.0001	0.0015	0.9591	0.0039	0.0001	0.0001	0.0268
W:Ln Normal[d]	0.8708	0.9218	0.9556	0.9566	0.9562	0.8305	0.9816	0.9505	0.9764	0.9781
Prob<W	0.0001	0.0028	0.1021	0.1129	0.1082	0.0001	0.7863	0.061	0.5961	0.6564
Methods Reported[e]	1	2	3	2	2	1	1	2	1	1

[a]Please refer to Table 2 for concentration units for each element. Concentrations less than the Est.D.Lim. are reported as one-half of the Est.D.Lim. Descriptive statistics are calculated accordingly.
[b]w:Normal: Normal test statistic
[c]Prob<W: Associated probability for testing the hypothesis that the data come from a normal distribution
[d]W:Ln Normal: Normal test statistic for Ln transformed data

[e]Methods Reported
1 = ICP-MS (Inductively Coupled Plasma-Mass Spectroscopy)
2 = ICP-OES (ICP-Optical Emission Spectroscopy)
3 - ICP-OES Hydride

Table 3 (continued)
Ranges in Concentration and Summary Statistics of 46 Elements in 50 Benchmark California Soils[a]

Parameter	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hg	I
Mean	14.9	122	3.1	28.7	3.7	17.6	2.8	0.26	0.40
Standard Deviation	9.2	223	1.6	19.3	1.6	4.5	1.2	0.21	0.24
Coefficient of Variation (CV) (%)	62	183	53	67	43	25	43	80	60
Geometric Mean	12.6	76	2.7	24.0	3.4	17.1	2.5	0.20	0.35
Geometric Deviation	1.79	2.27	1.7	1.8	1.6	1.3	1.6	2.12	1.67
Geometric CV (%)	14	3	62	7	46	7	64	1059	476
Minimum	2.7	23	1.0	9.1	1.0	8.3	0.4	0.05	0.15
Lower Quartile	8.7	45	1.9	16.1	2.6	14.9	2.0	0.10	0.24
Median	11.6	69	2.6	21.6	3.3	17.9	2.5	0.19	0.30
Upper Quartile	18.3	115	3.9	36.6	4.5	20.3	3.5	0.34	0.49
Maximum	46.9	1579	8.7	96.4	8.7	27.9	5.8	0.90	1.24
W:Normal[b]	0.8510	0.3834	0.9001	0.8169	0.9396	0.9758	0.9410	0.8133	0.8138
Prob<W[c]	0.0001	0.0001	0.0003	0.0001	0.0194	0.5721	0.0226	0.0001	0.0001
W:Ln Normal[d]	0.9727	0.9265	0.9815	0.9544	0.9846	0.96	0.9379	0.9212	0.9372
Prob<W	0.4631	0.0047	0.783	0.0903	0.8799	0.1563	0.0162	0.0026	0.015
Methods Reported[e]	2	2	1	1	2	1	1	1	1

[a]Please refer to Table 2 for concentration units for each element. Concentrations less than the Est. D. Lim. are reported as one-half of the Est.D.Lim. Descriptive statistics are calculated accordingly.

[b]w:Normal: Normal test statistic
[c]Prob<W: Associated probability for testing the hypothesis that the data come from a normal distribution
[d]W:Ln Normal: Normal test statistic for Ln transformed data

[e]Methods Reported
1 = ICP-MS (Inductively Coupled Plasma-Mass Spectroscopy)
2 = ICP-OES (ICP-Optical Emission Spectroscopy)
3 = ICP-OES Hydride

Table 3 (continued)
Ranges in Concentration and Summary Statistics of 46 Elements in 50 Benchmark California Soils[a]

Parameter	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
Mean	1.73	20.3	23	9923	646	1.3	15838	1.7	57
Standard Deviation	0.69	7.5	17	5356	285	1.5	9309	1.1	80
Coefficient of Variation (CV) (%)	40	37	75	54	44	113	59	65	141
Geometric Mean	1.54	19.0	18	8492	592	0.9	14500	1.4	36
Geometric Deviation	1.77	1.4	2.0	1.80	1.5	2.23	1.5	1.9	2.4
Geometric CV (%)	115	7.5	11	0.02	0.3	239	0.01	141	7
Minimum	0.21	9.7	4	1456	253	0.1	5580	0.3	9
Lower quartile	1.33	15.0	10	6442	449	0.6	11790	0.9	21
Median	1.76	18.7	19	9166	590	0.85	15080	1.3	27
Upper Quartile	2.25	24.6	32	12036	809	1.4	17260	2	56
Maximum	3.00	39.3	90	32378	1687	9.6	73400	4.9	509
W:Normal[b]	0.9610	0.9350	0.8442	0.8978	0.9104	0.6126	0.5514	0.8747	0.5508
Prob<W[c]	0.1722	0.0118	0.0001	0.0002	0.0008	0.0001	0.0001	0.0001	0.0001
W:Ln Normal[d]	0.8352	0.9696	0.9776	0.92	0.9732	0.9849	0.904	0.9806	0.9388
Prob<W	0.0001	0.3634	0.6377	0.0023	0.4807	0.8873	0.0004	0.749	0.0178
Methods Reported[e]	2	1	2	2	2	1	2	1	2

[a]Please refer to Table 2 for concentration units for each element. Concentrations less than the Est.D.Lim. are reported as one-half of the Est.D.Lim. Descriptive statistics are calculated accordingly.

[b]w:Normal: Normal test statistic
[c]Prob<W: Associated probability for testing the hypothesis that the data come from a normal distribution
[d]W:Ln Normal: Normal test statistic for Ln transformed data

[e]Methods Reported
1 = ICP-MS (Inductively Coupled Plasma-Mass Spectroscopy)
2 = ICP-OES (ICP-Optical Emission Spectroscopy)
3 = ICP-OES Hydride

Table 3 (continued)
Ranges in Concentration and Summary Statistics of 46 Elements in 50 Benchmark California Soils[a]

Parameter	P	Pb	Rb	Sb	Sc	Se	Si	Sn	Sr
Mean	412	23.9	48.5	0.60	9.5	0.058	29.4	1.11	128
Standard Deviation	290	13.8	19.0	0.39	5.3	0.084	4.6	0.42	67.62
Coefficient of Variation (CV) (%)	70	58	39	66	55	147	16	38.	53
Geometric Mean	290	21.7	44.6	0.50	8.2	0.028	29.0	1.03	107
Geometric Dev	3	1.5	1.5	1.80	1.7	2.89	1.2	1.48	1.97
Geometric CV (%)	0.9	7	3	360	21	10149	4	143	2
Minimum	13	12.4	14.3	0.15	0.8	0.015	13.2	0.25	20
Lower Quartile	194	16	34.4	0.33	5.3	0.015	26.6	0.85	83
Median	360	20.6	47.9	0.47	8.0	0.015	28.8	1.04	121
Upper Quartile	560	26.7	57.6	0.73	11.9	0.050	32.6	1.35	180
Maximum	1210	97.1	107.9	1.95	24.0	0.430	39.4	2.44	271
W:Normal[b]	0.9330	0.6712	0.9680	0.8210	0.8966	0.5860	0.9662	0.9444	0.9501
Prob<W[c]	0.0950	0.0001	0.3202	0.0001	0.0002	0.0001	0.2500	0.0322	0.0587
W:Ln Normal[d]	0.9101	0.9118	0.9538	0.9704	0.9712	0.626	0.7089	0.9708	0.9045
Prob<W[e]	0.0008	0.0009	0.0849	0.39	0.415	0.0001	0.0001	0.4015	0.0004
Methods Reported	2	1	1	1	2	3	2	1	2

[a]Please refer to Table 2 for concentration units for each element. Concentrations less than the Est.D.Lim. are reported as one-half of the Est.D.Lim. Descriptive statistics are calculated accordingly.

[b]w:Normal: Normal test statistic
[c]Prob<W: Associated probability for testing the hypothesis that the data come from a normal distribution
[d]W:Ln Normal: Normal test statistic for Ln transformed data

[e]Methods Reported
1 = ICP-MS (Inductively Coupled Plasma-Mass Spectroscopy)
2 = ICP-OES (ICP-Optical Emission Spectroscopy)
3 = ICP-OES Hydride

Table 3 (continued)
Ranges in Concentration and Summary Statistics of 46 Elements In 50 Benchmark California Soils[a]

Parameter	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Mean	15.7	4716	0.56	4.7	112	0.77	24.3	149	93
Standard Deviation	7.6	185	0.19	3.9	53	1.27	8.1	32	90
Coefficient of Variation (CV) (%)	49	39	34	83	47	166	33	21	97
Geometric Mean	13.8	4419	0.52	3.8	101	0.45	22.9	145	72
Geometric Deviation	1.6	1	1.46	1.9	2	2.51	1.45	1	2
Geometric CV (%)	12	0.03	280	51	2	553	6	0.9	3
Minimum	5.3	2012	0.17	1.2	39	0.05	8.5	88	19
Lower Quartile	9.8	3657	0.42	2.5	75	0.28	18.0	133	48
Median	13.5	4516	0.54	3.8	94	0.45	24.9	153	63
Upper Quartile	19.5	5539	0.69	5.6	134	0.73	30.6	170	107
Maximum	36.2	12890	1.10	21.3	288	6.90	43.2	236	610
W:Normal[b]	0.9028	0.8778	0.9846	0.7174	0.8974	0.4405	0.9793	0.9696	0.6261
Prob<W[c]	0.0004	0.0001	0.8775	0.0001	0.0002	0.0001	0.7026	0.3657	0.0001
W:Ln Normal[d]	0.9611	0.9843	0.9633	0.9657	0.9809	0.9589	0.9467	0.9401	0.9497
Prob<W	0.1731	0.8699	0.212	0.2633	0.7619	0.1415	0.041	0.0205	0.0561
Methods Reported[e]	1	2	1	1	2	1	1	2	2

[a]Please refer to Table 2 for concentration units for each element. Concentrations less than the Est.D.Lim. are reported as one-half of the Est.D.Lim. Descriptive statistics are calculated accordingly.
[b]w:Normal: Normal test statistic
[c]Prob<W: Associated probability for testing the hypothesis that the data come from a normal distribution
[d]W:Ln Normal: Normal test statistic for Ln transformed data
[e]Methods Reported
1 = ICP-MS (Inductively Coupled Plasma-Mass Spectroscopy)
2 = ICP-OES (ICP-Optical Emission Spectroscopy)
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