APPENDIX 8.1E

HARP Model Risk Assessment Module Output

APPENDIX 8.1E

SCREENING HEALTH RISK ASSESSMENT (SHRA)

The SHRA has been prepared using CARB's Hotspots Analysis and Reporting Program (HARP) computer program and associated guidance in the OEHHA's *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (August 2003). The HARP model was used to assess potential cancer risk as well as chronic and acute risk impacts. The assessment shows that the potential cancer risks from the SBRP facility will be well below the significance level of 10 in one million, and the potential acute and chronic health hazard indices (HHI) will be well below the significance level of one. This appendix describes the procedures used to prepare this risk assessment.

8.1E.1 Modeling Inputs

The risk assessment module of the HARP model was run using unit ground-level impacts to obtain derived cancer risks for each non-criteria pollutant of interest.[7] Cancer risks were obtained for the derived (OEHHA) method, the derived (adjusted) method, average point estimate and high-end point estimate options. The HARP model output gives potential cancer risk by pollutant and route for each type of analysis, based on an exposure of 1.0 $\mu g/m^3$. The emission rates of the non-criteria pollutants (see Table 8.1B-8) were then combined with the HARP unit values to determine weighted input values that were used in the AERMOD model to determine actual cancer risk and hazard indices. HARP model output showing the calculated unit risks is included as Attachment 8.1E-1. Individual cancer risks are expressed in units of risk per $\mu g/m^3$ of exposure. To calculate the weighted risk for each source, the annual average emission rate in g/s for each pollutant was multiplied by the individual cancer risk for that pollutant in $(\mu g/m^3)^{-1}$. The resulting weighted cancer risks for each pollutant were then summed for the source. The same procedure was used to determine the acute and chronic health hazard indices associated with the proposed project.

Details of the calculations of risk "rates" for modeling are shown in Attachment 8.1E-2.

8.1E.2 Risk Analysis Method

The total weighted risk "rate" for each source was used in place of emission rates with AERMOD unit impact results to determine cancer risk and acute and chronic health hazard indices. The modeled value is total potential cancer risk or HHI, as appropriate, at each receptor. The modeling analysis for the health risk assessment was performed using the AERMOD model and San Diego Lindberg Field meteorological data.

For potential cancer risk and chronic health hazard index, the model was run with the stack parameters for the SBRP turbine operating case that produced the highest annual average full-load impacts in the screening analysis (Case 2—annual average ambient temperature with duct burning) and the "weighted risk" emission rates. For the acute health hazard index, Case 3 (extreme cold ambient temperature with duct burning) stack parameters were used as that operating case produced the highest one-hour average full-load impact in the screening analysis.

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[7] Procedure is described in Part B of Topic 8 of the HARP How-To Guides: How to Perform Health Analyses Using a Ground Level Concentration.

The contribution of each non-criteria pollutant to total cancer risk and total HHI for each analysis method was then determined using the individual contribution of each compound to the total weighted risk "rate." This allocation is shown in the tables in Attachment 8.1E-2.

8.1E.3 Summary of Results

The results of the SHRA are summarized in Table 8.1E-1. The significance of these results is discussed further in Section 8.6 of the AFC (Public Health).

Table 8.1E-1
Screening Level Risk Assessment Results

Risk Methodology	Modeled Risk
Modeled Cancer Risk for 70-Year Exposure (in one million)	
MEI: Derived (OEHHA) Method	1.05
MEI: Average Point Estimate	0.72
MEI: High-end Point Estimate	1.05
MEI: Derived (adjusted) Method	0.81
Nearest Residence: High-end Point Estimate	0.11
Modeled Worker Cancer Risk (in one million)	
Worker Exposure: Derived (OEHHA) Method	0.16
Modeled Acute and Chronic Impacts	
Acute HHI	0.09
Chronic HHI	0.02

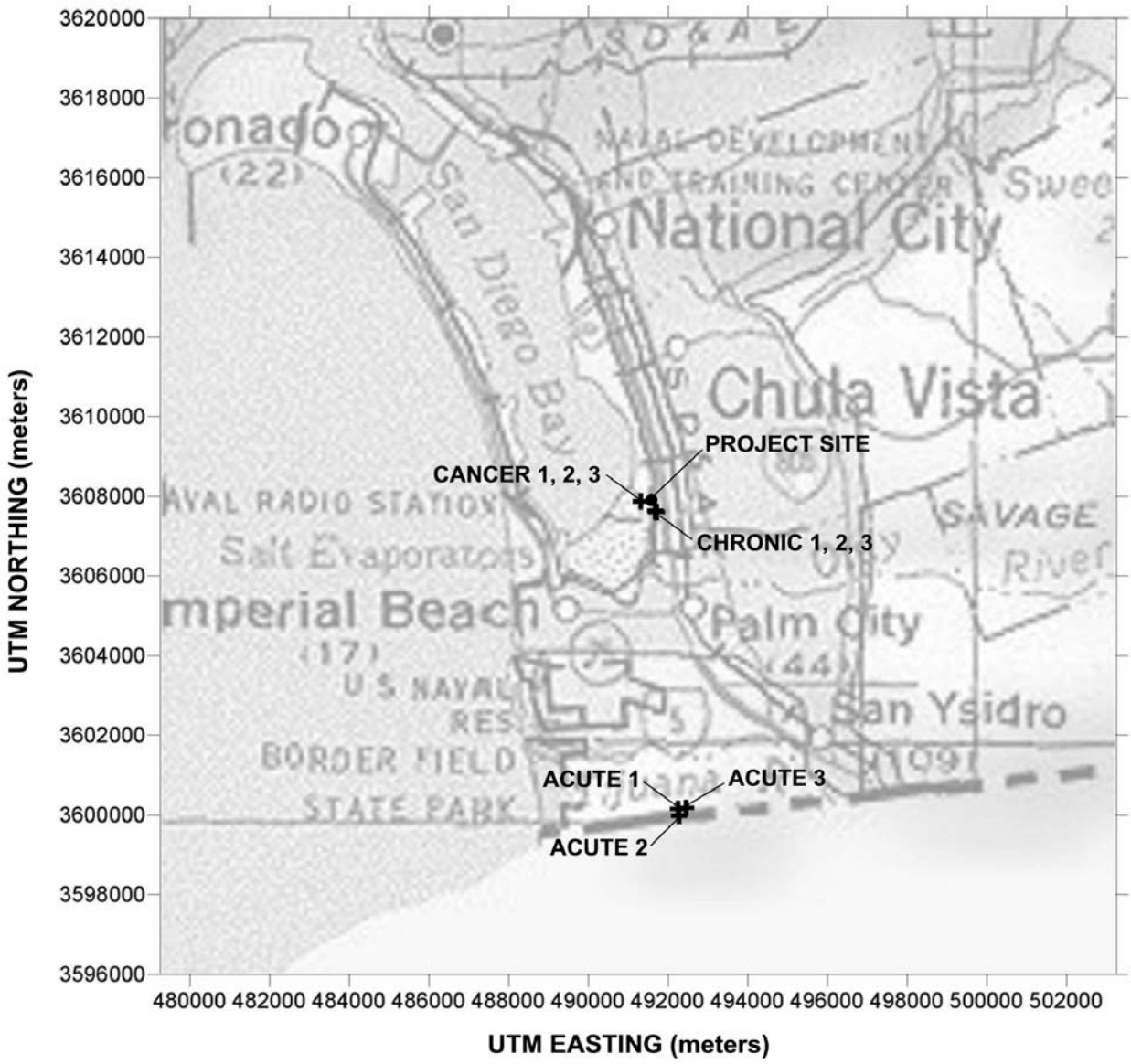
As shown in Table 8.1E-1, the potential cancer risk from the project is well below the significance level of 10 in one million. In addition, the potential acute and chronic HHIs are well below the significance level of one. Consequently, there are no significant public health impacts issues associated with the proposed project.

The locations of the three maximum cancer, acute and chronic risks from the expansion turbine are shown in Figure 8.1E-1.

The more detailed modeling results in Attachment 8.1E-2 show that the majority of the potential cancer risk from the proposed project is due to the Diesel-fueled fire water pump engine. The range of cancer risks shown are for the location of the maximum modeled concentration, which is close to the plant site, as shown in Figure 8.1E-1. The cancer risk at the nearest residence is much lower.

Figure 8.1E-1

Locations of Top Three Acute, Chronic and Cancer Risks from SBRP



Attachment 8.1E-1

HARP Model Risk Assessment Module Output

This file: C:\HARP\projects\demo\PointEstimateRisk.txt

Created by HARP Risk Module Version: 21.7.30
Creation date: 6/21/2004 12:20:51 PM

EXCEPTION REPORT
(there have been no changes or exceptions)

Point Estimate
GLC source: values edited by user
Exposure Duration: 70 year (adult resident)
Analysis Method: Derived (OEHHA) Method

CHEMICAL CROSS-REFERENCE TABLE

CHEM	CAS	ABBREVIATION	POLLUTANT NAME
0001	75070	Acetaldehyde	Acetaldehyde
0002	107028	Acrolein	Acrolein
0003	7664417	Ammonia	Ammonia
0004	71432	Benzene	Benzene
0005	106990	1,3-Butadiene	1,3-Butadiene
0006	9901	DieselExhPM	Diesel engine exhaust, particulate matter
0007	50000	Formaldehyde	Formaldehyde
0008	110543	Hexane	Hexane
0009	56553	B[a]anthracene	Benz[a]anthracene
0010	50328	B[a]P	Benzo[a]pyrene
0011	205992	B[b]fluoranthen	Benzo[b]fluoranthene
0012	207089	B[k]fluoranthen	Benzo[k]fluoranthene
0013	218019	Chrysene	Chrysene
0014	193395	In[1,2,3-cd]pyr	Indeno[1,2,3-cd]pyrene
0015	91203	Naphthalene	Naphthalene
0016	115071	Propylene	Propylene
0017	75569	Propylene Oxide	Propylene oxide
0018	108883	Toluene	Toluene
0019	1210	Xylenes	Xylenes (mixed)
0020	100414	Ethyl Benzene	Ethyl benzene
0021	120127	Anthracene	Anthracene
0022	53703	D[a,h]anthracen	Dibenz[a,h]anthracene

CHEMICAL GROUND LEVEL CONCENTRATIONS (micrograms/m^3)

CHEM	CAS	ABBREVIATION	AVERAGE	HOURLY MAX	WATER	PASTURE	FISH
0001	75070	Acetaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0002	107028	Acrolein	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0003	7664417	Ammonia	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0004	71432	Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0005	106990	1,3-Butadiene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0006	9901	DieselExhPM	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0007	50000	Formaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0008	110543	Hexane	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0009	56553	B[a]anthracene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0010	50328	B[a]P	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0011	205992	B[b]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0012	207089	B[k]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0013	218019	Chrysene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0014	193395	In[1,2,3-cd]pyr	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0015	91203	Naphthalene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0016	115071	Propylene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0017	75569	Propylene Oxide	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0018	108883	Toluene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0019	1210	Xylenes	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0020	100414	Ethyl Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0021	120127	Anthracene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0022	53703	D[a,h]anthracen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

DOMINANT PATHWAYS FOR CANCER

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG
0001	YES	-	-	-	-	-	-	-	-	-	-	-
0002	-	-	-	-	-	-	-	-	-	-	-	-
0003	-	-	-	-	-	-	-	-	-	-	-	-
0004	YES	-	-	-	-	-	-	-	-	-	-	-
0005	YES	-	-	-	-	-	-	-	-	-	-	-
0006	YES	-	-	-	-	-	-	-	-	-	-	-
0007	YES	-	-	-	-	-	-	-	-	-	-	-
0008	-	-	-	-	-	-	-	-	-	-	-	-
0009	-	YES	YES	-	-	-	-	-	-	-	-	-
0010	-	YES	YES	-	-	-	-	-	-	-	-	-
0011	-	YES	YES	-	-	-	-	-	-	-	-	-
0012	-	YES	YES	-	-	-	-	-	-	-	-	-
0013	-	YES	YES	-	-	-	-	-	-	-	-	-
0014	-	YES	YES	-	-	-	-	-	-	-	-	-
0015	-	-	-	-	-	-	-	-	-	-	-	-
0016	-	-	-	-	-	-	-	-	-	-	-	-
0017	YES	-	-	-	-	-	-	-	-	-	-	-
0018	-	-	-	-	-	-	-	-	-	-	-	-
0019	-	-	-	-	-	-	-	-	-	-	-	-
0020	-	-	-	-	-	-	-	-	-	-	-	-
0021	-	-	-	-	-	-	-	-	-	-	-	-
0022	YES	YES	-	-	-	-	-	-	-	-	-	-

DERIVED DOSE BY PATHWAY (mg/(kg-d)) FOR CANCER CALCULATIONS

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	TOTAL
0001	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-04
0002	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.37E-04
0003	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.97E-04
0004	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-03
0005	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-03
0006	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-03
0007	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-03
0008	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.66E-03
0009	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.21E-03
0010	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.77E-03
0011	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.32E-03
0012	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.87E-03
0013	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-02
0014	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-02
0015	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02
0016	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-02
0017	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02
0018	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-02
0019	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02
0020	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-02
0021	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-02
0022	3.77E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-02

DERIVED CANCER RISK

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL
0001	3.77E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-06
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0004	3.77E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-05
0005	2.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-04
0006	4.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-04
0007	7.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.91E-06
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0009	1.01E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.65E-03
0010	1.01E-03	1.35E-02	2.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-02	1.65E-02
0011	1.01E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.65E-03
0012	1.01E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.65E-03
0013	1.01E-05	1.35E-04	2.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-04	1.65E-04
0014	1.01E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.65E-03
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0017	4.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E-06
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0022	1.55E-03	4.60E-03	6.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-03	6.84E-03
SUM	3.67E-03	2.36E-02	3.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-02	3.08E-02

DOMINANT PATHWAYS FOR CHRONIC

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG
0001	YES	-	-	-	-	-	-	-	-	-	-	-
0002	YES	-	-	-	-	-	-	-	-	-	-	-
0003	YES	-	-	-	-	-	-	-	-	-	-	-
0004	YES	-	-	-	-	-	-	-	-	-	-	-
0005	YES	-	-	-	-	-	-	-	-	-	-	-
0006	YES	-	-	-	-	-	-	-	-	-	-	-
0007	YES	-	-	-	-	-	-	-	-	-	-	-
0008	YES	-	-	-	-	-	-	-	-	-	-	-
0009	YES	YES	YES	-	-	-	-	-	-	-	-	-
0010	YES	YES	YES	-	-	-	-	-	-	-	-	-
0011	YES	YES	YES	-	-	-	-	-	-	-	-	-
0012	YES	YES	YES	-	-	-	-	-	-	-	-	-
0013	YES	YES	YES	-	-	-	-	-	-	-	-	-
0014	YES	YES	YES	-	-	-	-	-	-	-	-	-
0015	YES	-	-	-	-	-	-	-	-	-	-	-
0016	YES	-	-	-	-	-	-	-	-	-	-	-
0017	YES	-	-	-	-	-	-	-	-	-	-	-
0018	YES	-	-	-	-	-	-	-	-	-	-	-
0019	YES	-	-	-	-	-	-	-	-	-	-	-
0020	YES	-	-	-	-	-	-	-	-	-	-	-
0021	YES	-	-	-	-	-	-	-	-	-	-	-
0022	YES	YES	YES	-	-	-	-	-	-	-	-	-

INHALATION CONCENTRATION (ug/m^3) AND DERIVED DOSE BY PATHWAY (mg/(kg-d)) FOR CHRONIC CALCULATIONS

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG
0001	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0002	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0003	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0004	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0005	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0006	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0007	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0008	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0009	1.00E+00	1.17E-03	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0010	1.00E+00	1.17E-03	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0011	1.00E+00	1.17E-03	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0012	1.00E+00	1.17E-03	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0013	1.00E+00	1.17E-03	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0014	1.00E+00	1.17E-03	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0015	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0016	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0017	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0018	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0019	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0020	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0021	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0022	1.00E+00	1.17E-03	1.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

DERIVED CHRONIC HI

CHEM	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	MAX
0001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	1.11E-01
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+01	0.00E+00	0.00E+00	1.67E+01
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	5.00E-03
0004	0.00E+00	1.67E-02	0.00E+00	1.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-02	1.67E-02
0005	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	5.00E-02

0006	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	Q.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	0.00E+00	2.00E-01
0007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-01	0.00E+00	0.00E+00	3.33E-01
0008	0.00E+00	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-04
0009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0010	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0012	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0013	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0014	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	1.11E-01
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-04	0.00E+00	0.00E+00	3.33E-04
0017	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-02	0.00E+00	0.00E+00	3.33E-02
0018	0.00E+00	3.33E-03	0.00E+00	3.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-03	0.00E+00	0.00E+00	3.33E-03
0019	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	1.43E-03
0020	0.00E+00	0.00E+00	0.00E+00	5.00E-04	5.00E-04	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0022	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
SUM	0.00E+00	2.16E-02	0.00E+00	2.05E-02	5.00E-04	1.70E+01	5.00E-04	0.00E+00	5.00E-04	5.00E-02	1.75E+01	0.00E+00	1.67E-02	1.75E+01

ACUTE HI

CHEM	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	MAX
0001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E+00	0.00E+00	0.00E+00	5.26E+00
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-04	0.00E+00	0.00E+00	3.13E-04
0004	0.00E+00	0.00E+00	0.00E+00	7.69E-04	0.00E+00	0.00E+00	0.00E+00	7.69E-04	0.00E+00	7.69E-04	0.00E+00	0.00E+00	7.69E-04	7.69E-04
0005	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0006	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-02	0.00E+00	1.06E-02	0.00E+00	0.00E+00	1.06E-02	0.00E+00	0.00E+00	1.06E-02
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0010	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0012	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0013	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0014	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0017	0.00E+00	0.00E+00	0.00E+00	3.23E-04	0.00E+00	3.23E-04	0.00E+00	0.00E+00	0.00E+00	3.23E-04	3.23E-04	0.00E+00	0.00E+00	3.23E-04
0018	0.00E+00	2.70E-05	0.00E+00	2.70E-05	0.00E+00	2.70E-05	0.00E+00	0.00E+00	0.00E+00	2.70E-05	2.70E-05	0.00E+00	0.00E+00	2.70E-05
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-05	0.00E+00	0.00E+00	4.55E-05
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0022	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
SUM	0.00E+00	2.70E-05	0.00E+00	1.12E-03	0.00E+00	5.27E+00	0.00E+00	1.14E-02	0.00E+00	1.12E-03	5.27E+00	0.00E+00	7.69E-04	5.27E+00

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s) 0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

*** Pathway disabled ***

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***

This file: C:\HARP\projects\demo\PointEstimateRisk.txt

Created by HARP Risk Module Version: 21.7.30
Creation date: 6/25/2004 11:17:45 AM

EXCEPTION REPORT
(there have been no changes or exceptions)

Point Estimate
GLC source: values edited by user
Exposure Duration: 70 year (adult resident)
Analysis Method: Average Point Estimate

CHEMICAL CROSS-REFERENCE TABLE

CHEM	CAS	ABBREVIATION	POLLUTANT NAME
0001	75070	Acetaldehyde	Acetaldehyde
0002	107028	Acrolein	Acrolein
0003	7664417	Ammonia	Ammonia
0004	71432	Benzene	Benzene
0005	106990	1,3-Butadiene	1,3-Butadiene
0006	9901	DieselExhPM	Diesel engine exhaust, particulate matter
0007	50000	Formaldehyde	Formaldehyde
0008	110543	Hexane	Hexane
0009	56553	B[a]anthracene	Benz[a]anthracene
0010	50328	B[a]P	Benzo[a]pyrene
0011	205992	B[b]fluoranthen	Benzo[b]fluoranthene
0012	207089	B[k]fluoranthen	Benzo[k]fluoranthene
0013	218019	Chrysene	Chrysene
0014	193395	In[1,2,3-cd]pyr	Indeno[1,2,3-cd]pyrene
0015	91203	Naphthalene	Naphthalene
0016	115071	Propylene	Propylene
0017	75569	Propylene Oxide	Propylene oxide
0018	108883	Toluene	Toluene
0019	1210	Xylenes	Xylenes (mixed)
0020	100414	Ethyl Benzene	Ethyl benzene
0021	120127	Anthracene	Anthracene
0022	53703	D[a,h]anthracen	Dibenz[a,h]anthracene

CHEMICAL GROUND LEVEL CONCENTRATIONS (micrograms/m^3)

CHEM	CAS	ABBREVIATION	AVERAGE	HOURLY MAX	WATER	PASTURE	FISH
0001	75070	Acetaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0002	107028	Acrolein	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0003	7664417	Ammonia	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0004	71432	Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0005	106990	1,3-Butadiene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0006	9901	DieselExhPM	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0007	50000	Formaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0008	110543	Hexane	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0009	56553	B[a]anthracene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0010	50328	B[a]P	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0011	205992	B[b]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0012	207089	B[k]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0013	218019	Chrysene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0014	193395	In[1,2,3-cd]pyr	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0015	91203	Naphthalene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0016	115071	Propylene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0017	75569	Propylene Oxide	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0018	108883	Toluene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0019	1210	Xylenes	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0020	100414	Ethyl Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0021	120127	Anthracene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0022	53703	D[a,h]anthracen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

AVERAGE DOSE BY PATHWAY (mg/(kg-d)) FOR CANCER CALCULATIONS

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	TOTAL
0001	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-04
0002	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E-04
0003	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-04
0004	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-03
0005	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03
0006	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-03
0007	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-03
0008	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-03
0009	2.60E-04	6.64E-05	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-03
0010	2.60E-04	6.64E-05	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-03
0011	2.60E-04	6.64E-05	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E-03
0012	2.60E-04	6.64E-05	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E-03
0013	2.60E-04	6.64E-05	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-03
0014	2.60E-04	6.64E-05	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.05E-03
0015	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-03
0016	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E-03
0017	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.83E-03
0018	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-03
0019	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-03
0020	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E-03
0021	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.86E-03
0022	2.60E-04	6.64E-05	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.36E-03

AVERAGE CANCER RISK

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL
0001	2.60E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-06
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0004	2.60E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-05
0005	1.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04
0006	2.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-04
0007	5.46E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-06
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0009	1.01E-04	7.96E-05	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-04	3.83E-04	
0010	1.01E-03	7.96E-04	2.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-03	3.83E-03	
0011	1.01E-04	7.96E-05	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-04	3.83E-04	
0012	1.01E-04	7.96E-05	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-04	3.83E-04	
0013	1.01E-05	7.96E-06	2.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-05	3.83E-05	
0014	1.01E-04	7.96E-05	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-04	3.83E-04	
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0017	3.38E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-06
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0022	1.07E-03	2.72E-04	6.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.62E-04	2.03E-03	
SUM	2.97E-03	1.39E-03	3.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.93E-03	7.90E-03	

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s) 0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

*** Pathway disabled ***

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***

This file: C:\HARP\projects\demo\PointEstimateRisk.txt

Created by HARP Risk Module Version: 21.7.30
Creation date: 6/25/2004 11:17:11 AM

EXCEPTION REPORT
(there have been no changes or exceptions)

Point Estimate
GLC source: values edited by user
Exposure Duration: 70 year (adult resident)
Analysis Method: High-end Point Estimate

CHEMICAL CROSS-REFERENCE TABLE

CHEM	CAS	ABBREVIATION	POLLUTANT NAME
0001	75070	Acetaldehyde	Acetaldehyde
0002	107028	Acrolein	Acrolein
0003	7664417	Ammonia	Ammonia
0004	71432	Benzene	Benzene
0005	106990	1,3-Butadiene	1,3-Butadiene
0006	9901	DieselExhPM	Diesel engine exhaust, particulate matter
0007	50000	Formaldehyde	Formaldehyde
0008	110543	Hexane	Hexane
0009	56553	B[a]anthracene	Benz[a]anthracene
0010	50328	B[a]P	Benzo[a]pyrene
0011	205992	B[b]fluoranthen	Benzo[b]fluoranthene
0012	207089	B[k]fluoranthen	Benzo[k]fluoranthene
0013	218019	Chrysene	Chrysene
0014	193395	In[1,2,3-cd]pyr	Indeno[1,2,3-cd]pyrene
0015	91203	Naphthalene	Naphthalene
0016	115071	Propylene	Propylene
0017	75569	Propylene Oxide	Propylene oxide
0018	108883	Toluene	Toluene
0019	1210	Xylenes	Xylenes (mixed)
0020	100414	Ethyl Benzene	Ethyl benzene
0021	120127	Anthracene	Anthracene
0022	53703	D[a,h]anthracen	Dibenz[a,h]anthracene

CHEMICAL GROUND LEVEL CONCENTRATIONS (micrograms/m^3)

CHEM	CAS	ABBREVIATION	AVERAGE	HOURLY MAX	WATER	PASTURE	FISH
0001	75070	Acetaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0002	107028	Acrolein	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0003	7664417	Ammonia	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0004	71432	Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0005	106990	1,3-Butadiene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0006	9901	DieselExhPM	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0007	50000	Formaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0008	110543	Hexane	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0009	56553	B[a]anthracene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0010	50328	B[a]P	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0011	205992	B[b]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0012	207089	B[k]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0013	218019	Chrysene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0014	193395	In[1,2,3-cd]pyr	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0015	91203	Naphthalene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0016	115071	Propylene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0017	75569	Propylene Oxide	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0018	108883	Toluene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0019	1210	Xylenes	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0020	100414	Ethyl Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0021	120127	Anthracene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0022	53703	D[a,h]anthracen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

HIGH-END DOSE BY PATHWAY (mg/(kg-d)) FOR CANCER CALCULATIONS

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	TOTAL
0001	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-04
0002	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E-04
0003	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-03
0004	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03
0005	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-03
0006	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-03
0007	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E-03
0008	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.01E-03
0009	3.77E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-03
0010	3.77E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.35E-03
0011	3.77E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-03
0012	3.77E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.69E-03
0013	3.77E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-02
0014	3.77E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02
0015	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02
0016	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-02
0017	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02
0018	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-02
0019	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-02
0020	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-02
0021	3.77E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-02
0022	3.77E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-02

HIGH-END CANCER RISK

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL
0001	3.77E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-06
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0004	3.77E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-05
0005	2.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-04
0006	4.15E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-04
0007	7.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.91E-06
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0009	1.47E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.70E-03
0010	1.47E-03	1.35E-02	2.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-02	1.70E-02
0011	1.47E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.70E-03
0012	1.47E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.70E-03
0013	1.47E-05	1.35E-04	2.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-04	1.70E-04
0014	1.47E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.70E-03
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0017	4.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E-06
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0022	1.55E-03	4.60E-03	6.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-03	6.84E-03
SUM	4.31E-03	2.36E-02	3.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-02	3.15E-02

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s) 0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

*** Pathway disabled ***

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***

This file: C:\HARP\projects\demo\PointEstimateRisk.txt

Created by HARP Risk Module Version: 21.7.30
Creation date: 6/25/2004 11:22:44 AM

EXCEPTION REPORT
(there have been no changes or exceptions)

Point Estimate
GLC source: values edited by user
Exposure Duration: 70 year (adult resident)
Analysis Method: Derived (Adjusted) Method

CHEMICAL CROSS-REFERENCE TABLE

CHEM	CAS	ABBREVIATION	POLLUTANT NAME
0001	75070	Acetaldehyde	Acetaldehyde
0002	107028	Acrolein	Acrolein
0003	7664417	Ammonia	Ammonia
0004	71432	Benzene	Benzene
0005	106990	1,3-Butadiene	1,3-Butadiene
0006	9901	DieselExhPM	Diesel engine exhaust, particulate matter
0007	50000	Formaldehyde	Formaldehyde
0008	110543	Hexane	Hexane
0009	56553	B[a]anthracene	Benz[a]anthracene
0010	50328	B[a]P	Benzo[a]pyrene
0011	205992	B[b]fluoranthen	Benzo[b]fluoranthene
0012	207089	B[k]fluoranthen	Benzo[k]fluoranthene
0013	218019	Chrysene	Chrysene
0014	193395	In[1,2,3-cd]pyr	Indeno[1,2,3-cd]pyrene
0015	91203	Naphthalene	Naphthalene
0016	115071	Propylene	Propylene
0017	75569	Propylene Oxide	Propylene oxide
0018	108883	Toluene	Toluene
0019	1210	Xylenes	Xylenes (mixed)
0020	100414	Ethyl Benzene	Ethyl benzene
0021	120127	Anthracene	Anthracene
0022	53703	D[a,h]anthracen	Dibenz[a,h]anthracene

CHEMICAL GROUND LEVEL CONCENTRATIONS (micrograms/m^3)

CHEM	CAS	ABBREVIATION	AVERAGE	HOURLY MAX	WATER	PASTURE	FISH
0001	75070	Acetaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0002	107028	Acrolein	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0003	7664417	Ammonia	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0004	71432	Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0005	106990	1,3-Butadiene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0006	9901	DieselExhPM	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0007	50000	Formaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0008	110543	Hexane	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0009	56553	B[a]anthracene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0010	50328	B[a]P	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0011	205992	B[b]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0012	207089	B[k]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0013	218019	Chrysene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0014	193395	In[1,2,3-cd]pyr	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0015	91203	Naphthalene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0016	115071	Propylene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0017	75569	Propylene Oxide	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0018	108883	Toluene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0019	1210	Xylenes	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0020	100414	Ethyl Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0021	120127	Anthracene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0022	53703	D[a,h]anthracen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

DOMINANT PATHWAYS FOR CANCER

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG
0001	A	-	-	-	-	-	-	-	-	-	-	-
0002	-	-	-	-	-	-	-	-	-	-	-	-
0003	-	-	-	-	-	-	-	-	-	-	-	-
0004	A	-	-	-	-	-	-	-	-	-	-	-
0005	A	-	-	-	-	-	-	-	-	-	-	-
0006	A	-	-	-	-	-	-	-	-	-	-	-
0007	A	-	-	-	-	-	-	-	-	-	-	-
0008	-	-	-	-	-	-	-	-	-	-	-	-
0009	-	YES	YES	-	-	-	-	-	-	-	-	-
0010	-	YES	YES	-	-	-	-	-	-	-	-	-
0011	-	YES	YES	-	-	-	-	-	-	-	-	-
0012	-	YES	YES	-	-	-	-	-	-	-	-	-
0013	-	YES	YES	-	-	-	-	-	-	-	-	-
0014	-	YES	YES	-	-	-	-	-	-	-	-	-
0015	-	-	-	-	-	-	-	-	-	-	-	-
0016	-	-	-	-	-	-	-	-	-	-	-	-
0017	A	-	-	-	-	-	-	-	-	-	-	-
0018	-	-	-	-	-	-	-	-	-	-	-	-
0019	-	-	-	-	-	-	-	-	-	-	-	-
0020	-	-	-	-	-	-	-	-	-	-	-	-
0021	-	-	-	-	-	-	-	-	-	-	-	-
0022	A	YES	-	-	-	-	-	-	-	-	-	-

DERIVED DOSE BY PATHWAY (mg/(kg-d)) FOR CANCER CALCULATIONS

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	TOTAL
0001	2.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-04
0002	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-04
0003	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-04
0004	2.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-03
0005	2.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-03
0006	2.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-03
0007	2.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-03
0008	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-03
0009	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E-03
0010	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.33E-03
0011	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-03
0012	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.43E-03
0013	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.98E-03
0014	2.60E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-02
0015	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-02
0016	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-02
0017	2.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-02
0018	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-02
0019	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-02
0020	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-02
0021	2.60E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-02
0022	2.90E-04	1.12E-03	1.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-02

DERIVED CANCER RISK

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL
0001	2.90E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-06
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0004	2.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-05
0005	1.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-04
0006	3.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-04
0007	6.08E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.08E-06
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0009	1.01E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.65E-03
0010	1.01E-03	1.35E-02	2.02E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-02	1.65E-02
0011	1.01E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.65E-03
0012	1.01E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.65E-03
0013	1.01E-05	1.35E-04	2.02E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-04	1.65E-04
0014	1.01E-04	1.35E-03	2.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-03	1.65E-03
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0017	3.76E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E-06
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0022	1.19E-03	4.60E-03	6.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-03	6.48E-03
SUM	3.15E-03	2.36E-02	3.54E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-02	3.03E-02

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s) 0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

*** Pathway disabled ***

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***

This file: C:\HARP\projects\demo\PointEstimateRisk.txt

Created by HARP Risk Module Version: 21.7.30
Creation date: 6/21/2004 12:21:13 PM

EXCEPTION REPORT
(there have been no changes or exceptions)

Point Estimate
GLC source: values edited by user
Exposure Duration: Standard work schedule (49 wks/yr, 5 days/wk, 8 hrs/day, 40 yrs)
Analysis Method: Point estimate

CHEMICAL CROSS-REFERENCE TABLE

CHEM	CAS	ABBREVIATION	POLLUTANT NAME
0001	75070	Acetaldehyde	Acetaldehyde
0002	107028	Acrolein	Acrolein
0003	7664417	Ammonia	Ammonia
0004	71432	Benzene	Benzene
0005	106990	1,3-Butadiene	1,3-Butadiene
0006	9901	DieselExhPM	Diesel engine exhaust, particulate matter
0007	50000	Formaldehyde	Formaldehyde
0008	110543	Hexane	Hexane
0009	56553	B[a]anthracene	Benz[a]anthracene
0010	50328	B[a]P	Benzo[a]pyrene
0011	205992	B[b]fluoranthen	Benzo[b]fluoranthene
0012	207089	B[k]fluoranthen	Benzo[k]fluoranthene
0013	218019	Chrysene	Chrysene
0014	193395	In[1,2,3-cd]pyr	Indeno[1,2,3-cd]pyrene
0015	91203	Naphthalene	Naphthalene
0016	115071	Propylene	Propylene
0017	75569	Propylene Oxide	Propylene oxide
0018	108883	Toluene	Toluene
0019	1210	Xylenes	Xylenes (mixed)
0020	100414	Ethyl Benzene	Ethyl benzene
0021	120127	Anthracene	Anthracene
0022	53703	D[a,h]anthracen	Dibenz[a,h]anthracene

CHEMICAL GROUND LEVEL CONCENTRATIONS (micrograms/m^3)

CHEM	CAS	ABBREVIATION	AVERAGE	HOURLY MAX	WATER	PASTURE	FISH
0001	75070	Acetaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0002	107028	Acrolein	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0003	7664417	Ammonia	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0004	71432	Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0005	106990	1,3-Butadiene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0006	9901	DieselExhPM	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0007	50000	Formaldehyde	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0008	110543	Hexane	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0009	56553	B[a]anthracene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0010	50328	B[a]P	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0011	205992	B[b]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0012	207089	B[k]fluoranthen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0013	218019	Chrysene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0014	193395	In[1,2,3-cd]pyr	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0015	91203	Naphthalene	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00
0016	115071	Propylene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0017	75569	Propylene Oxide	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0018	108883	Toluene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0019	1210	Xylenes	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0020	100414	Ethyl Benzene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0021	120127	Anthracene	1.000E+00	1.000E+00	0.000E+00	0.000E+00	0.000E+00
0022	53703	D[a,h]anthracen	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

AVERAGE DOSE BY PATHWAY (mg/(kg-d)) FOR CANCER CALCULATIONS

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	TOTAL
0001	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.72E-05
0002	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04
0003	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-04
0004	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-04
0005	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-04
0006	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-04
0007	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-04
0008	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-04
0009	5.72E-05	4.26E-04	5.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.96E-04
0010	5.72E-05	4.26E-04	5.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03
0011	5.72E-05	4.26E-04	5.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-03
0012	5.72E-05	4.26E-04	5.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-03
0013	5.72E-05	4.26E-04	5.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-03
0014	5.72E-05	4.26E-04	5.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.69E-03
0015	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-03
0016	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.80E-03
0017	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-03
0018	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.92E-03
0019	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.98E-03
0020	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.03E-03
0021	5.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.09E-03
0022	5.72E-05	4.26E-04	5.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E-03

AVERAGE CANCER RISK

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL
0001	5.72E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.72E-07
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0004	5.72E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.72E-06
0005	3.43E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E-05
0006	6.29E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.29E-05
0007	1.20E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-06
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0009	2.23E-05	5.12E-04	6.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-04	6.00E-04
0010	2.23E-04	5.12E-03	6.65E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-03	6.00E-03
0011	2.23E-05	5.12E-04	6.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-04	6.00E-04
0012	2.23E-05	5.12E-04	6.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-04	6.00E-04
0013	2.23E-06	5.12E-05	6.65E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-05	6.00E-05
0014	2.23E-05	5.12E-04	6.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-04	6.00E-04
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0017	7.43E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-07
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0022	2.34E-04	1.75E-03	2.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-03	2.21E-03
SUM	6.54E-04	8.96E-03	1.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	1.08E-02

INHALATION CONCENTRATION (ug/m^3) AND AVERAGE DOSE BY PATHWAY (mg/(kg-d)) FOR CHRONIC CALCULATIONS

CHEM	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG
0001	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0002	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0003	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0004	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0005	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0006	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0007	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0008	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0009	1.00E+00	1.11E-03	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0010	1.00E+00	1.11E-03	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0011	1.00E+00	1.11E-03	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0012	1.00E+00	1.11E-03	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0013	1.00E+00	1.11E-03	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0014	1.00E+00	1.11E-03	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0015	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0016	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0017	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0018	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0019	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0020	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0021	1.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0022	1.00E+00	1.11E-03	1.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

AVERAGE CHRONIC HI

CHEM	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	MAX
0001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	1.11E-01
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+01	0.00E+00	0.00E+00	1.67E+01
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-03	0.00E+00	0.00E+00	5.00E-03
0004	0.00E+00	1.67E-02	0.00E+00	1.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-02
0005	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-02	0.00E+00	0.00E+00	0.00E+00	5.00E-02
0006	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-01	0.00E+00	0.00E+00	2.00E-01
0007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-01	0.00E+00	0.00E+00	3.33E-01
0008	0.00E+00	1.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-04
0009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0010	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0012	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0013	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0014	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E-01	0.00E+00	0.00E+00	1.11E-01
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-04	0.00E+00	0.00E+00	3.33E-04
0017	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-02	0.00E+00	0.00E+00	3.33E-02
0018	0.00E+00	3.33E-03	0.00E+00	3.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.33E-03	0.00E+00	0.00E+00	3.33E-03
0019	0.00E+00	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-03	0.00E+00	0.00E+00	1.43E-03
0020	0.00E+00	0.00E+00	0.00E+00	5.00E-04	5.00E-04	0.00E+00	5.00E-04	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.00E-04
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0022	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
SUM	0.00E+00	2.16E-02	0.00E+00	2.05E-02	5.00E-04	1.70E+01	5.00E-04	0.00E+00	5.00E-04	5.00E-02	1.75E+01	0.00E+00	1.67E-02	1.75E+01

ACUTE HI

CHEM	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	MAX
0001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E+00	0.00E+00	0.00E+00	5.26E+00
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-04	0.00E+00	0.00E+00	3.13E-04
0004	0.00E+00	0.00E+00	0.00E+00	7.69E-04	0.00E+00	0.00E+00	0.00E+00	7.69E-04	0.00E+00	7.69E-04	0.00E+00	0.00E+00	7.69E-04	7.69E-04
0005	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0006	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-02	0.00E+00	1.06E-02	0.00E+00	0.00E+00	1.06E-02	0.00E+00	0.00E+00	1.06E-02
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0010	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0012	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0013	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0014	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0017	0.00E+00	0.00E+00	0.00E+00	3.23E-04	0.00E+00	3.23E-04	0.00E+00	0.00E+00	0.00E+00	3.23E-04	3.23E-04	0.00E+00	0.00E+00	3.23E-04
0018	0.00E+00	2.70E-05	0.00E+00	2.70E-05	0.00E+00	2.70E-05	0.00E+00	0.00E+00	0.00E+00	2.70E-05	2.70E-05	0.00E+00	0.00E+00	2.70E-05
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.55E-05	0.00E+00	0.00E+00	4.55E-05
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
0022	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-30
SUM	0.00E+00	2.70E-05	0.00E+00	1.12E-03	0.00E+00	5.27E+00	0.00E+00	1.14E-02	0.00E+00	1.12E-03	5.27E+00	0.00E+00	7.69E-04	5.27E+00

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s)	0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

*** Pathway disabled ***

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***

Attachment 8.1E-2

Calculation of Weighted Risk Rates for Modeling

Table 8.1E-2
South Bay Replacement Project
Calculation of Modeling Inputs and Cancer Risk for Gas Turbines

		Derived (OEHHA) Method			Average Point Estimate			High-End Point Estimate			Derived (Adjusted) Method			Worker Exp: Derived (OEHHA) Method		
Compound	Annual Average Emissions Per Turbine, g/s	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (2)	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (3)	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (4)	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (5)	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (6)
Ammonia	3.26E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Propylene	1.84E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acetaldehyde	9.75E-03	3.77E-06	3.68E-02	8.81E-03	2.60E-06	2.54E-02	6.29E-03	3.77E-06	3.68E-02	8.98E-03	2.90E-06	2.83E-02	6.91E-03	5.72E-07	5.58E-03	1.43E-03
Acrolein	8.82E-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Benzene	7.96E-04	3.77E-05	3.00E-02	7.19E-03	2.60E-05	2.07E-02	5.13E-03	3.77E-05	3.00E-02	7.33E-03	2.90E-05	2.31E-02	5.64E-03	5.72E-06	4.55E-03	1.17E-03
1,3-Butadiene	1.05E-04	2.26E-04	2.37E-02	5.68E-03	1.56E-04	1.64E-02	4.06E-03	2.26E-04	2.37E-02	5.79E-03	1.74E-04	1.83E-02	4.46E-03	3.43E-05	3.60E-03	9.22E-04
Ethylbenzene	7.79E-03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Formaldehyde	8.77E-02	7.91E-06	6.94E-01	1.66E-01	5.46E-06	4.79E-01	1.19E-01	7.91E-06	6.94E-01	1.69E-01	6.08E-06	5.33E-01	1.30E-01	1.20E-06	1.05E-01	2.70E-02
Hexane	6.19E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naphthalene	3.97E-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PAHs (listed individually below) (Note 1)	3.13E-05	1.65E-02	5.17E-01	1.24E-01	3.83E-03	1.20E-01	2.98E-02	1.70E-02	5.32E-01	1.30E-01	1.65E-02	5.17E-01	1.26E-01	6.00E-03	1.88E-01	4.82E-02
Benzo(a)anthracene		*1.65E-03*			*3.83E-04*			*1.70E-03*			*1.65E-02*			*6.00E-04*		
Benzo(a)pyrene		*1.65E-02*			*3.83E-03*			*1.70E-02*			*1.65E-03*			*6.00E-03*		
Benzo(b)fluoranthrene		*1.65E-03*			*3.83E-04*			*1.70E-03*			*1.65E-03*			*6.00E-04*		
Benzo(k)fluoranthrene		*1.65E-03*			*3.83E-04*			*1.70E-03*			*1.65E-03*			*6.00E-04*		
Chrysene		*1.65E-04*			*3.83E-05*			*1.70E-04*			*1.65E-04*			*6.00E-05*		
Dibenz(a,h)anthracene		*6.84E-03*			*2.03E-03*			*6.84E-03*			*6.48E-03*			*2.21E-03*		
Indeno(1,2,3-cd)pyrene		*1.65E-03*			*3.83E-04*			*1.70E-03*			*1.65E-03*			*6.00E-04*		
Propylene oxide	7.07E-03	4.90E-06	3.46E-02	8.30E-03	3.38E-06	2.39E-02	5.93E-03	4.90E-06	3.46E-02	8.46E-03	3.76E-06	2.66E-02	6.49E-03	7.43E-07	5.25E-03	1.35E-03
Toluene	3.18E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Xylene	1.56E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			1.34E+00 per ug/m3	3.20E-01 in one million		6.85E-01 per ug/m3	1.70E-01 in one million		1.35E+00 per ug/m3	3.30E-01 in one million		1.15E+00 per ug/m3	2.80E-01 in one million		3.12E-01 per ug/m3	8.00E-02 in one million

Table 8.1E-3
South Bay Replacement Project
Calculation of Modeling Inputs and HHIs for Gas Turbines

Compound	Max Hourly Emissions Per Turbine g/s	HARP Acute HI (per ug/m3)	Acute HHI Model Input (per ug/m3 per g/s)	Modeled Contribution to Acute HHI	Annual Average Emissions, g/s	HARP Chronic HI (per ug/m3)	Chronic HHI Model Input (per ug/m3 per g/s)	Modeled Contribution to Chronic HHI
Ammonia	4.1450	3.13E-04	1.30E-03	1.32E-02	3.26E+00	5.00E-03	1.63E-02	3.94E-03
Propylene	0.2341	--	--	--	1.84E-01	3.33E-04	6.14E-05	1.48E-05
Acetaldehyde	1.239E-02	--	--	--	9.75E-03	1.11E-01	1.08E-03	2.62E-04
Acrolein	1.120E-03	5.26E+00	5.89E-03	6.01E-02	8.82E-04	1.67E+01	1.47E-02	3.56E-03
Benzene	1.011E-03	7.69E-04	7.77E-07	7.92E-06	7.96E-04	1.67E-02	1.33E-05	3.21E-06
1,3-Butadiene	1.333E-04	--	--	--	1.05E-04	5.00E-02	5.25E-06	1.27E-06
Ethylbenzene	9.897E-03	--	--	--	7.79E-03	5.00E-04	3.90E-06	9.42E-07
Formaldehyde	1.114E-01	1.06E-02	1.18E-03	1.20E-02	8.77E-02	3.33E-01	2.92E-02	7.06E-03
Hexane	7.863E-02	--	--	--	6.19E-02	1.43E-04	8.85E-06	2.14E-06
Naphthalene	5.039E-04	--	--	--	3.97E-04	1.11E-01	4.40E-05	1.06E-05
PAHs (listed individually below)	3.977E-05	--	--	--	3.13E-05	--	--	--
Benzo(a)anthracene								
Benzo(a)pyrene								
Benzo(b)fluoranthrene								
Benzo(k)fluoranthrene								
Chrysene								
Dibenz(a,h)anthracene								
Indeno(1,2,3-cd)pyrene								
Propylene oxide	8.980E-03	3.23E-04	2.90E-06	2.96E-05	7.07E-03	3.33E-02	2.35E-04	5.69E-05
Toluene	4.038E-02	2.70E-05	1.09E-06	1.11E-05	3.18E-02	3.33E-03	1.06E-04	2.56E-05
Xylene	1.982E-02	4.55E-05	9.02E-07	9.19E-06	1.56E-02	1.43E-03	2.23E-05	5.40E-06
		Total =	8.38E-03	8.54E-02		Total =	6.18E-02	1.50E-02

Table 8.1E-4
South Bay Replacement Project
Cancer Risk Assessment Modeling Inputs and Results for Auxiliary Boiler and Fire Pump Engine

		Derived (OEHHA) Method			Average Point Estimate			High-End Point Estimate			Derived (Adjusted) Method			Worker Exposure: Derived (OEHHA) Method		
Compound	Annual Average Emissions, g/s	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (2)	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (3)	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (4)	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (5)	Unit Risk (per ug/m3)	Cancer Risk Model Input (per ug/m3 per g/s)	Modeled Contribution to Cancer Risk (6)
Auxiliary Boiler																
Propylene	1.39E-05	0	0	0.00E+00	0	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00
Acetaldehyde	8.05E-07	3.77E-06	3.03E-06	6.20E-06	2.60E-06	2.09E-06	4.27E-06	3.77E-06	3.03E-06	6.20E-06	2.90E-06	2.33E-06	4.77E-06	5.72E-07	4.60E-07	9.38E-07
Acrolein	7.15E-07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Benzene	1.52E-06	3.77E-05	5.73E-05	1.17E-04	2.60E-05	3.95E-05	8.07E-05	3.77E-05	5.73E-05	1.17E-04	2.90E-05	4.41E-05	9.01E-05	5.72E-06	8.69E-06	1.77E-05
Ethylbenzene	1.79E-05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Formaldehyde	3.22E-06	7.91E-06	2.55E-05	5.20E-05	5.46E-06	1.76E-05	3.59E-05	7.91E-06	2.55E-05	5.20E-05	6.08E-06	1.96E-05	4.00E-05	1.20E-06	3.86E-06	7.87E-06
Hexane	1.16E-06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naphthalene	2.68E-07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polycyclic Aromatic Hydrocarbons	8.94E-08	1.65E-02	1.47E-03	3.01E-03	3.83E-03	3.42E-04	6.99E-04	1.70E-02	1.52E-03	3.10E-03	1.65E-02	1.47E-03	3.02E-03	6.00E-03	5.36E-04	1.09E-03
Toluene	6.97E-06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Xylene	5.18E-06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			1.56E-03 per ug/m3	3.19E-03 in one million		4.02E-04 per ug/m3	8.20E-04 in one million		1.61E-03 per ug/m3	3.28E-03 in one million		1.54E-03 per ug/m3	3.15E-03 in one million		5.49E-04 per ug/m3	1.12E-03 in one million
Diesel Fire Pump Engine																
Diesel Exhaust Particulate	5.33E-05	4.15E-04	2.21E-02 per ug/m3	1.04E+00 in one million	2.86E-04	1.52E-02 per ug/m3	7.16E-01 in one million	4.15E-04	2.21E-02 per ug/m3	1.04E+00 in one million	3.19E-04	1.70E-02 per ug/m3	7.98E-01 in one million	6.29E-05	3.35E-03 per ug/m3	1.57E-01 in one million

Table 8.1E-5
South Bay Replacement Project
Calculation of Risk Assessment Modeling Inputs and Results for Auxiliary Boiler and Fire Pump Engine

Compound	Max Hourly Emissions for Aux Boiler. g/s	HARP Acute HI (per ug/m3)	Acute HHI Model Input (per ug/m3 per g/s)	Modeled Contribution to Acute HHI	Annual Average Emissions, g/s	HARP Chronic HI (per ug/m3)	Chronic HHI Model Input (per ug/m3 per g/s)	Modeled Contribution to Chronic HHI
Auxiliary Boiler								
Propylene	7.29E-05	--	--	--	1.39E-05	3.33E-04	4.61E-09	9.83E-09
Acetaldehyde	4.235E-06	--	--		8.05E-07	1.11E-01	8.93E-08	1.90E-07
Acrolein	3.765E-06	5.26E+00	1.98E-05	5.84E-04	7.15E-07	1.67E+01	1.19E-05	2.54E-05
Benzene	8.000E-06	7.69E-04	6.15E-09	1.82E-07	1.52E-06	1.67E-02	2.54E-08	5.41E-08
Ethylbenzene	9.412E-05	--	--		1.79E-05	5.00E-02	8.94E-07	1.90E-06
Formaldehyde	1.694E-05	1.06E-02	1.80E-07	5.30E-06	3.22E-06	3.33E-01	1.07E-06	2.28E-06
Hexane	6.118E-06	--	--	--	1.16E-06	1.43E-04	1.66E-10	3.54E-10
Naphthalene	1.412E-06	--	--	--	2.68E-07	1.11E-01	2.98E-08	6.34E-08
Polycyclic Aromatic Hydrocarbons	4.706E-07	--	--	--	8.94E-08	--	--	--
Toluene	3.671E-05	2.70E-05	9.91E-10	2.93E-08	6.97E-06	3.33E-03	2.32E-08	4.95E-08
Xylene	2.729E-05	4.55E-05	1.24E-09	3.67E-08	5.18E-06	1.43E-03	7.41E-09	1.58E-08
		Total =	2.00E-05	5.90E-04		Total =	1.41E-05	3.00E-05
Fire Pump Engine								
Particulate Em from Diesel-Fueled Engines	9.33E-03	n/a	n/a	n/a	5.33E-05	0.2	1.07E-05	5.00E-04
						Total =	1.07E-05	5.00E-04

Table 8.1E-6
South Bay Replacement Project
Summary of Modeling Input Values for HRA

Unit	Derived (OEHHA) Method Cancer Risk (Res)	Average Point Estimate Cancer Risk (Res)	High-end Point Estimate Cancer Risk (Res)	Derived (Adjusted) Method Cancer Risk (Res)	Derived (OEHHA) Method Cancer Risk (Worker)	Acute HHI Model Input (per ug/m3)	Chronic HHI Model Input (per ug/m3)
Each CTG	1.336E+00	6.851E-01	1.351E+00	1.146E+00	3.121E-01	8.376E-03	6.184E-02
Auxiliary Boiler	1.561E-03	4.015E-04	1.605E-03	1.541E-03	5.493E-04	1.999E-05	1.408E-05
Fire Pump Engine	2.211E-02	1.524E-02	2.211E-02	1.699E-02	3.351E-03	n/a	1.065E-05

All modeling input values are in units of per ug/m3