BLUEWATERS EXPANSION (UNITS III & IV)
AIR DISPERSION MODELLING STUDY
AND SCREENING HEALTH RISK ASSESSMENT

for

Devereaux Holdings Pty Ltd

March 2009

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Ref: AS110345 - BW III-IV Report_29 Mar 09 - V5.doc
Job Number: AS110345
29 March 2009

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EXECUTIVE SUMMARY

Devereaux Holdings Pty Ltd (Devereaux), a subsidiary of The Griffin Group, is proposing to expand the Bluewaters Power Station by installing two additional 208 MW generating units, to be known as Bluewaters III and IV. The additional generating units are to be situated adjacent to the approved Bluewaters I and II generating units. The Bluewaters Project is located within the Coolangatta Industrial Park, which is located approximately 4 km to the east northeast of the township of Collie, 200 km south of Perth.

Atmospheric emissions from the proposed Bluewaters III and IV generating units comprise mainly of products of combustion, including sulphur dioxide (SO_2), oxides of nitrogen (NO_x) and carbon monoxide, as well as particulate matter (PM). Trace levels of acid gases, Volatile Organic Compounds (VOCs) and metals will also be present in the atmospheric emissions.

The following air pollution control equipment will be installed in order to minimise atmospheric emissions from the proposed Bluewaters III and IV generating units:

- Dry Gas Desulphurisation;
- Low-NOx burners; and
- Electrostatic Precipitator (ESP) or a bag house filter.

Bluewaters I and II were approved on the basis that the flue gases will be discharged via two individual 100 m tall stacks. It is proposed to install two new 150 m tall stacks as part of the Bluewaters III and IV Project. The stack servicing Bluewaters III will be designed to accommodate the flue gases from Bluewaters II, and the stack servicing Bluewaters IV will be designed to accommodate the flue gases from Bluewaters I. The combination of the flue streams from two generating units into the one stack will result in increased buoyancy of the plume, and combined with the increased stack height, is intended to reduce the air quality impacts associated with the Bluewaters Project.

Devereaux commissioned ENVIRON Australia Pty Ltd (ENVIRON) to undertake an air dispersion modelling study and a screening health risk assessment, to predict the potential ambient air quality impacts associated with the expansion of the Bluewaters Project. The air quality impacts have been assessed for the Bluewaters Project in isolation for a number of potential operating scenarios, and cumulatively with other existing and approved industrial point emission sources in the Collie region.

The key findings of the air dispersion modelling are:

- the predicted ground level concentrations of sulphur dioxide, PM_{10} and $PM_{2.5}$ are significantly impacted by the emissions from the Muja Power Station, particularly Stages A and B;

- the maximum 1-hour average ground level concentration of sulphur dioxide is predicted to exceed the National Environment Protection Measure (NEPM) for Ambient Air Quality (NEPC, 2003) standard for both the baseline scenario (i.e. prior to the development of Bluewaters III and IV), and for all of the cumulative impacts resulting from the proposed operating scenarios considered in the modelling. However these exceedances are mainly attributable to emissions from the Muja

Power Station, and the maximum concentration predicted across the model domain are not significantly affected by Bluewaters III and IV; and

- the cumulative ground level concentrations of nitrogen dioxide, carbon monoxide and ozone are predicted to comply with the ambient standards set out in the NEPM for Ambient Air Quality.

The results of the air dispersion modelling indicate that the development of Bluewaters III and IV is generally predicted to result in no change, or a reduction in the predicted maximum 1-hour and 24-hour, and annual average ground level concentrations of sulphur dioxide compared to the baseline scenario. The modelling results predict a reduction in the maximum predicted 1-hour average concentrations in the area to the northeast of Collie when compared to the baseline scenario. The reduction in the predicted ground level concentrations occurs as a result of an improvement in the dispersion characteristics of the Bluewaters I and II emissions due to the increased stack height, and increase in plume buoyancy achieved by combining the flue gas streams with the Bluewaters III and IV emissions.

The screening-level health risk assessment has been confined to the inhalation pathway as this is expected to represent the most significant exposure route to atmospheric emissions from the Bluewaters Project. The compounds considered in the screening assessment (listed in Section 2.4.1) included products of combustion, PM_{10}, Volatile Organic Compounds (VOCs), metals and acid gases.

The exposure concentration for each of the compounds considered in the screening assessment was estimated based on ground level concentrations predicted by the air dispersion modelling. The emission rate for each of the compounds from the Bluewaters Project were estimated based on emission factors provided by the plant manufacturers, or derived from NPI emission factors. It is recommended that once the Bluewaters generating units are commissioned, a comprehensive stack monitoring program is undertaken to verify these emission estimates.

The potential health effects arising from the predicted short-term (acute) and long-term (chronic) exposure to non-carcinogenic compounds, and potential carcinogenic risks were considered in the screening assessment by comparing the predicted exposure concentration at a number of discrete receptor locations, with health protective guidelines for ambient air developed by reputable authorities such as the National Environment Protection Council (NEPC), the World Health Organisation (WHO) and the U.S Environmental Protection Agency (USEPA).

The Hazard Index (HI) was calculated to evaluate the potential for non-carcinogenic adverse health effects from simultaneous exposure to multiple compounds by summing the ratio of the predicted concentration in air to the health protective guidelines for individual compounds. The general rule of thumb for interpreting the HI is that:

- values less than one represent no cause for concern;
- values greater than one but less than 10 generally do not represent cause for concern because of the inherent conservatism embedded in the exposure and toxicity assessments; and
- values greater than ten may present some concern with respect to possible health effects (Toxikos, 2003).

To assess the potential health effects associated with exposure to carcinogens, the incremental carcinogenic risk was calculated to provide an indication of the incremental probability that an

individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens emitted from the modelled sources. The incremental carcinogenic risk that is considered acceptable varies amongst jurisdictions, typically ranging from one in a million ($1x10^{-6}$) to one in ten thousand ($1x10^{-4}$). The most stringent criterion of one in a million represents the USEPA's *de minimis*, or essentially negligible incremental risk level, and has therefore been adopted for this screening assessment as a conservative (i.e. health protective) indicator of acceptable carcinogenic risk.

The key findings of the screening-level health risk assessments are:

- the acute HIs are predicted to exceed one over the model domain including all of the discrete receptors for both the baseline and proposed scenarios primarily due to the predicted impacts of the emissions of particulates (PM_{10} and $PM_{2.5}$) and beryllium from Muja A and B. Removing the Muja A and B emissions from the analysis results in a significant reduction in the calculated acute HI with the emissions of sulphur dioxide predicted to become the primary contributor to the acute HIs;

- the acute hazard quotient for sulphur dioxide with Muja A and B included is generally only predicted to exceed one at a number of discrete receptors in the vicinity of the Muja Power Station. Without the Muja A and B emissions included in the analysis, the 99.9^{th} percentile 1-hour average ground level concentration of sulphur dioxide is predicted to exceed 350 $\mu g/m^3$ at only one discrete receptor to the east of the Muja Power Station;

- the chronic HIs are predicted to exceed one at a number of discrete receptor locations around the Muja Power Station, primarily due to the emissions from Muja A and B. Sulphur dioxide, particulates (both PM_{10} and $PM_{2.5}$), beryllium and fluoride were the predicted to be the major contributing substances. The removal of Muja A and B emissions from the analysis results in the chronic HIs predicted across the model domain all being less than one indicating no cause for concern arising from the other emission sources modelled;

- the incremental carcinogenic risk is predicted to be greater than one in a million across the majority of the model domain primarily due to the emissions of beryllium and PAHs from Muja A and B. The removal of the Muja A and B resulted in a significant reduction in the predicted incremental carcinogenic risk to a level below the USEPA's *de minimus* incremental risk threshold of one in a million (i.e. $1 x10^{-6}$) across the majority of the model domain; and

- with the removal of the Muja A and B emissions, the emissions of PAHs were found to be the most significant contributor to the calculated incremental carcinogenic risk (over 70% for the proposed scenario) and this is likely to be an artefact of the particularly conservative treatment of PAH emissions applied in this assessment.

As with any risk evaluation, there are areas of uncertainty in this screening assessment. To ensure that potential risks are not underestimated, conservative assumptions have been used to characterise exposure and toxicity where possible. Due to the resultant compounding of conservatism, it is considered likely that the quantitative risk indicators calculated in the screening assessment over-estimate potential health risks in the Collie region associated with the emissions from the industrial sources modelled.

It can be concluded from the results of the screening-level health risk assessment that the predicted cumulative impacts arising from the Bluewaters III and IV Power Station result in little to no change to the acute, chronic non-carcinogenic health effects and incremental carcinogenic risk in the Collie region. The modelling results also indicate that the emissions from Muja A and B are predicted to have significant impacts over the modelling domain primarily due to the emissions of particulates (both PM_{10} and $PM_{2.5}$), beryllium and PAHs that are high as there is no particulate scrubbing on the Muja A and B emissions prior to discharge.

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Bluewaters Expansion (Units III & IV)
Air Dispersion Modelling Study and
Screening Health Risk Assessment

for

Devereaux Holdings Pty Ltd

1. INTRODUCTION

1.1 BACKGROUND

Devereaux Holdings Pty Ltd (Devereaux), a subsidiary of The Griffin Group, is proposing to expand the Bluewaters Power Station by installing two additional 208 MW generating units, to be known as Bluewaters III and IV. The additional generating units are to be situated adjacent to the approved Bluewaters I and II Power Stations which are currently under construction. The Bluewaters Power Station is located within the Coolangatta Industrial Park, which is located approximately 4 km to the east northeast of the township of Collie, 200 km south of Perth and 50 km from the Bunbury port. Bluewaters III and IV will be connected to the South West Interconnected System (SWIS) or provide power direct to customers.

Devereaux commissioned ENVIRON Australia Pty Ltd (ENVIRON) to undertake an air dispersion modelling study and a screening health risk assessment to predict the potential ambient air quality impacts associated with the proposed operation of Bluewaters III and IV.

1.2 PROJECT DESCRIPTION

Devereaux is proposing to expand the Bluewaters Power Station by installing two additional coal-fired generating units, Bluewaters III and IV. Bluewaters I was granted Ministerial approval in August 2005, and Bluewaters II was granted Ministerial approval in May 2006. Development of the Bluewaters Project will occur in stages with construction on Bluewaters I and II already underway. The schedule for construction and commissioning of Bluewaters III and IV is subject to the receipt of regulatory approvals, and dependant upon future electricity demand.

The key project characteristics are summarised in Table 1.

Table 1: Key Project Characteristics

Element	Description
Project Purpose	To produce electricity to supply customers
Project Life	30 – 50 years (indicative only)
Power Plant Type	Subcritical coal-fired power station
Power Generating Capacity	Bluewaters III: 208 MWe (net) Bluewaters IV: 208 MWe (net)
Plant Thermal Efficiency	36.1%
Plant Operation	Base load operation 24 hours per day, 365 days per year
Shutdown Time	Plant maintenance shutdowns may be scheduled annually
Stacks	Two 150 m tall stacks
Boiler	Balanced draft pulverised coal steam generator matched to steam turbine capacity
Steam Turbine	Tandem compound reheat steam turbine with synchronous alternator – 230 MWe
Cooling Towers	Two sets of mechanical draft cooling towers
Coal Supply	Ewington coal mine, as the primary source
Coal Consumption	Approximately 974,000 tpa per unit, assuming continuous base load operation at full capacity
Air Pollution Control Equipment	Dry Gas Desulphurisation, Low-NOx burners, and ESP or bag house filter

1.2.1 Atmospheric Emissions

Atmospheric emissions from the proposed Bluewaters III and IV generating units will mainly comprise of products of combustion, including sulphur dioxide (SO_2), oxides of nitrogen (NO_x) and carbon monoxide, as well as particulate matter (PM). Trace levels of acid gases, Volatile Organic Compounds (VOCs) and metals will also be present in the atmospheric emissions.

Due to the presence of photochemical precursors (oxides of nitrogen and VOCs) in the emissions from the Bluewaters Power Station, and other existing industrial sources in the Collie region, there is a potential to generate photochemical oxidants such as ozone (O_3) under suitable climatic conditions.

1.2.2 Flue Gas Stack Configuration

It is proposed to install two new 150 m tall stacks as part of the Bluewaters III and IV Project. The stack servicing Bluewaters III will be designed to accommodate the flue gases from Bluewaters II, and the stack servicing Bluewaters IV will be designed to accommodate the flue gases from Bluewaters I.

Bluewaters I and II were approved on the basis that the flue gases will be discharged via two individual 100 m tall stacks. It is proposed to decommission these stacks as Bluewaters III and IV are brought into operation. The combination of the flue streams from two generating units into the one stack will result in increased plume buoyancy and this combined with the increased stack height, is predicted to reduce the air quality impacts associated with the Bluewaters Project.

1.2.3 Air Pollution Control Equipment

The following air pollution control equipment will be installed in order to minimise atmospheric emissions from the proposed Bluewaters III and IV generating units:

- Dry Gas Desulphurisation;
- Low-NOx burners; and
- Electrostatic Precipitator (ESP) or a bag house filter.

Dry Gas Desulphurisation involves the injection of a high reactivity lime reagent into the flue gas stream to remove sulphur dioxide and other acid gases from the emissions. It is anticipated that this will result in at least a 70% reduction in sulphur dioxide emissions from Bluewaters III and IV. Devereaux has indicated that dry desulphurisation, unlike wet desulphurisation, does not result in changes to the flue gas emission characteristics such as temperature, and volume, and so these parameters are not expected to change as a result of the Dry Gas Desulphurisation process.

Low NOx burners will be installed on Bluewaters III and IV to minimise the emissions of oxides of nitrogen. The design of the burners will reflect the objectives of Environmental Protection Authority (EPA) Guidance Statement Number 55 *Implementing Best Practice in Proposals Submitted to the Environmental Impact Assessment Process* (2003). Once the burners are installed and operational, emissions of oxides of nitrogen will be managed by a combination of continuous monitoring of the condition of the burners and a program of regular maintenance to ensure they operate within design tolerances.

Particulate emissions will be controlled through the installation of either an ESP or a bag house filter. Selection of the preferred technology for dust collection will be made during the final design stage, based upon the most appropriate technology for the coal and the operational experiences gained from Bluewaters I and II.

Collie coal, sourced from the Ewington coal mines, will be used to fire all of the Bluewaters generating units. Devereaux has indicated that through a range of processes employed at the mine, coal with a maximum sulphur content of 0.38% can be provided to the Bluewaters Power Station. This coal sulphur content can be achieved through a single, or a combination of different mechanisms, which include:

- selective mining;
- blending;
- washing the coal; and/or
- beneficiation that removes the higher sulphur pyritic coal.

Devereaux intends to test the effectiveness of other methods to further reduce the sulphur content in the pulverised coal, such as in-mill beneficiation that removes the higher sulphur pyritic coal during the grinding process conducted at the Power Station. This would allow Bluewaters to accept coal with sulphur content higher than 0.38% without exceeding the sulphur dioxide emission rate of 230 g/s per unit for Bluewaters I or II operating at full load (MCR). The effectiveness of in-mill beneficiation will be tested during the early stages of operation of Bluewaters I.

1.3 EXISTING ENVIRONMENT

1.3.1 Climate

The Collie region typically has two distinct seasons with warm to hot summers and cool wet winters. Temperatures can range from below zero during the winter months to above 40ºC during the summer. The mean summer maximum temperature is 31ºC and the mean summer minimum temperature is 12ºC. The mean winter maximum temperature is 16.5ºC and the mean winter minimum temperature is 4.7ºC.

The prevailing winds in the Collie region are typically south easterly and are most frequently experienced on summer mornings. West to north westerly winds commonly occur during summer afternoons. In winter, strong west to south westerly winds are common during the passage of cold fronts. Wind strengths recorded in the morning range on average between 4 kph and 10 kph throughout the year. Typically, by the afternoon, wind strengths increase to between 9 kph and 13 kph.

1.3.2 Surrounding Land Use

The land surrounding the Coolangatta Industrial Park is primarily used for farming, forestry and by the coal and power industries, and there is a significant area of State Forest to the south. There are a number of industries and mines operating (or in construction) in the immediate vicinity of the Bluewaters project.

The nearest sensitive receptors to the Bluewaters Project are located in the Collie town site, approximately 1.6 km to the southwest of the project site.

The location of the Project in a regional context is shown on Figure 1.

1.3.3 Existing Air Quality

An air quality monitoring station is operated at Roche Park in the Collie town site. This monitoring station measures the ambient concentrations of sulphur dioxide and particulate matter on a continuous basis. A summary of the ambient air quality monitoring data for the periods 2004 to 2006 (for sulphur dioxide) and 2005 to 2007 (or particulate) has been provided by the Department of Environment and Conservation (DEC), and is presented as Figures 2a and 2b respectively.

The monitoring data presented in Figure 2a indicate that ambient concentrations of sulphur dioxide comfortably complied with the Standards set out in the National Environment Protection Measure (NEPM) for Ambient Air Quality in the Collie town site.

However, the monitoring data presented in Figure 2b indicates that ambient concentrations of PM_{10} (particulate matter with an aerodynamic diameter of less than 10 microns) above the NEPM Standard have been recorded in the Collie town site, resulting in an exceedance of the NEPM Goal (i.e. 5 days per year above the NEPM Standard) during 2006. Further ambient concentrations of $PM_{2.5}$ above the NEPM Advisory Reporting Standards were recorded in the Collie town site for 2005, 2006 and 2007. The high PM_{10} and $PM_{2.5}$ concentrations that have been periodically recorded in

Collie are primarily attributed to smoke from bushfires (either controlled or uncontrolled), and from wood-fired heaters during the winter months.

There is insufficient published ambient air quality monitoring data available to adequately characterise the existing nitrogen dioxide, carbon monoxide and ozone levels in the Collie region.

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2. AIR DISPERSION MODELLING

2.1 SELECTION OF AIR DISPERSION MODEL

The air dispersion modelling of emissions from Bluewaters III and IV was conducted using The Air Pollution Model (TAPM). TAPM was developed by the CSIRO and consists of coupled prognostic meteorological and air pollution dispersion model components. The prognostic meteorological model predicts the meteorological conditions across the model domain based on synoptic scale meteorology, local topography and land surface characteristics (i.e. soil type, vegetation cover). The predicted meteorology, together with information on the characteristics of emission sources, is used as input to the air pollution dispersion component of the model to predict the ground level concentrations for each hour of the year at specified grid points across the modelled domain.

TAPM has the capability to more accurately simulate longer-range plume transport and terrain-induced winds than conventional Gaussian-based dispersion models such as ISCST3 (Industrial Source Complex Short-term Version 3) and Ausplume. Given the location of the Bluewaters Project relative to other existing and approved industrial emission sources in the Collie region, longer-range plume transport is an important consideration for the assessment of cumulative air quality impacts in the Collie region. TAPM was therefore selected for this assessment, consistent with recent modelling conducted for Bluewaters I and II.

2.2 METEOROLOGICAL DATA

The CSIRO's global dataset of synoptic meteorological data was used as input into the TAPM model, along with terrain elevation and land surface characterisation data for the Collie region, to generate a site-specific meteorological dataset. The synoptic meteorological data were derived from LAPS (Limited Area Prediction System) analysis data used by Bureau of Meteorology (BoM) for weather forecasting. The synoptic meteorological data used in the modelling has been obtained from the CSIRO for the Australian region for the year 2001.

Annual and seasonal wind roses for the Collie region have been generated, derived from TAPM predicted meteorology for the year 2001 (Figure 3a), and compared to wind roses derived from wind measurement data collected at the BoM's East Collie weather station for the year 2003 (Figure 3b) and 2004 (Figure 3c). Monitoring at the East Collie weather station did not commence until December 2002.

The wind roses presented in Figure 3a indicate that on an annual basis the predicted winds are predominantly from the southeast. In summer, moderate to strong southeasterly winds are predicted to be most prevalent, and in winter light to moderate northerly orientated winds are predicted to be most prevalent.

Comparison of the wind roses derived from wind measurement data collected at the East Collie weather station during 2003 and 2004, to the wind roses predicted by TAPM for the year 2001 indicates that the winds measured during 2003 are generally consistent with those predicted by TAPM for 2001, however there are some significant differences in the winds measured during 2004 compared to the winds measured during 2003, and compared to the winds predicted by TAPM for

2001. The key differences exhibited in the 2004 data include:

- east southeasterly winds occur more frequently; and
- during winter westerly through to northerly orientated winds occur less frequently, and easterly winds occur more frequently.

Notwithstanding that the winds experienced in Collie can vary from year to year, as illustrated by the differences in the winds measured at the East Collie weather station during 2003 and 2004, the winds predicted by TAPM for the year 2001 are consistent with that measured during 2003 and are therefore considered appropriate for use in the air dispersion modelling.

2.3 MODEL PARAMETERISATION

TAPM (Version 3.07) was used to predict the ground level concentrations across the modelled domain resulting from the proposed Bluewaters III and IV power station emissions considered in isolation, and cumulatively with other existing and approved industrial emission sources in the Collie region.

The TAPM meteorological simulation was set up using four nested grids (each 35 x 35 x 25) with horizontal grid spacing of 30 km (grid 1), 10 km (grid 2), 3 km (grid 3) and 1 km (grid 4). The TAPM default setting was used to define the vertical grid levels (25 levels). All grids were centred on Latitude 33º 23′ S Longitude 116º 14.5′ E (429,467 mE, 6,305,959 mN MGA94). A pollution grid was nested and centred within the inner-most meteorological grid. The pollution grid dimensions were 69 x 69 with a grid spacing of 500 m and a 45 x 45 subset of this was used in the analysis. The south west corner of the pollution grid used in the analysis was located at 418,967 mE and 6,294,959 mN (MGA94).

Land-use classifications were obtained from the data set accompanying the TAPM modelling package, with terrain elevation obtained from AUSLIG data (250 m horizontal grid resolution). The TAPM default Deep Soil Volumetric Moisture Content values were modified to be consistent with the values recommended by the CSIRO for the Collie region (CSIRO 2004), as follows:

- 0.1 for January to April;
- 0.2 for May to August;
- 0.15 for September to October; and
- 0.1 for November to December.

To remain consistent with the modelling carried out by CSIRO for Bluewaters I and II, the modelling also included:

- buoyancy enhancement factors (N_E) of 2.0 for Muja stacks C and D; and
- the use of the Lagrangian particle module on the innermost grid for predicting dispersion of emissions from Collie A and Bluewaters Power Station.

Oxides of nitrogen, PM_{10}, $PM_{2.5}$, carbon monoxide and ozone were modelled using the TAPM "reactive chemistry mode"; otherwise the TAPM "tracer mode" was used.

In "tracer mode" a unit emission rate was used to predict ground level concentrations for each hour of the year, for each model grid point, and for each emission source. The TAPM output files for each emission source were then post processed for the actual emission rate and then summed for each pollutant to produce the predicted cumulative ground level concentrations. The predicted ground level concentration files produced by post processing and the "reactive chemistry mode" runs were then analysed to produce the required statistics (including the maximum and 9th highest 1-hour, maximum and 2nd highest 8-hour average, maximum and 2nd highest 24-hour, and annual average concentrations) for each model grid point.

A sample TAPM model configuration file for a "tracer mode" run is presented as Appendix A.

2.4 EMISSIONS AND RELEASE CHARACTERISTICS

2.4.1 Bluewaters III and IV

Based on the findings of previous studies into the air quality impacts and health risks associated with power station emissions in the Collie region, the following air pollutant species have been included in the modelling and screening health risk assessment conducted for Bluewaters III and IV:

- Criteria pollutants:
  - Sulphur Dioxide;
  - Nitrogen Dioxide;
  - Ozone;
  - Particulates (PM_{10} and $PM_{2.5}$); and
  - Carbon Monoxide.

- Other pollutants:
  - Polycyclic Aromatic Hydrocarbons (PAH's);
  - Mercury;
  - Fluoride Compounds;
  - Arsenic;
  - Cadmium;
  - Chromium III;
  - Chromium VI;
  - Lead;
  - Dioxins and Furans (Total);
  - Hydrochloric Acid;
  - Beryllium;
  - Copper;
  - Nickel;
  - Boron;
  - Ammonia;
  - Benzene;
  - Cumene;
  - Toluene;
  - Xylenes; and

– Ethylbenzene.

The emissions and stack release parameters used in the air dispersion modelling to describe the proposed Bluewaters III and IV generating units are based on information provided by Devereaux assuming continuous full load operation, as follows:

- sulphur dioxide was derived based on the efficiency of the plant, the calorific value of the coal and the maximum coal sulphur content of 0.38% assuming that all of the sulphur in the coal is emitted as sulphur dioxide;
- oxides of nitrogen, PM_{10} and carbon monoxide emission rates obtained from the plant manufacturer based on the maximum expected emissions;
- $PM_{2.5}$ emissions estimated from the PM_{10} emission based on emission factors published by the US EPA in AP42 (US EPA, 1995) that indicate for bag houses, 58% of the PM_{10} emissions are in the $PM_{2.5}$ fraction; and
- annual emission rates for PAH, mercury, fluoride, arsenic, cadmium, chromium and lead were obtained from the plant manufacturer (Table 2), assuming continuous operation of the Bluewaters III and IV generating units.

Table 2: Mass Emission Rates for Selected Pollutants Provided by Plant Manufacturer

Compound	kg/year
PAH	6
Mercury	31
Fluoride Compounds	17,000
Arsenic	6.5
Cadmium	8.5
Chromium III(1)	1.5
Chromium VI(1)	1.5
Lead	31

Notes:
(1) Conservatively assumed to be equal to 1.5 kg/year, which is the rate supplied by the manufacturer for total chromium.

For the purposes of the screening health risk assessment it is necessary to speciate total chromium emissions into trivalent (chromium III) and hexavalent (chromium VI) forms. A chromium mass emission rate of 1.5 kg/y, expressed as total chromium, was supplied by the equipment manufacturer. It has been assumed that all of the chromium could be present in either the trivalent or hexavalent form, or therefore an emission rate of 1.5 kg/y has been assumed for both chromium III and chromium VI emissions, effectively doubling the emission rate of total chromium emissions from Bluewaters III and IV combined.

The emission rates from the Bluewaters III and IV for all of the other pollutants considered in the modelling were calculated using the emission factors for black coal combustion published in the National Pollutant Inventory (NPI) *Emission Estimation Technique Manual for Fossil Fuel Electric Power Generation* (2005), as presented in Table 3.

Table 3: NPI Emission Factors for Combustion of Black Coal

Compound	kg/tonne of coal
Dioxins and Furans (Total)	$8.8x10^{-10}$
Hydrogen Chloride	$6.0x10^{-01}$
Beryllium	$1.0x10^{-5}$
Copper	$3.09x10^{-5}$
Nickel	$1.4x10^{-4}$
Boron	$2.5x10^{-3}$
Ammonia	$2.8x10^{-4}$
Benzene	$6.45x10^{-5}$
Cumene	$2.7x10^{-6}$
Toluene	$1.2x10^{-4}$
Xylenes	$1.9x10^{-5}$
Ethylbenzene	$4.7x10^{-5}$

Coal consumption for Bluewaters III and IV has been estimated to be approximately 974,000 tpa per unit, based on the assumptions presented in Table 4.

Table 4: Design Specifications and Energy Inputs/Outputs (as sent) - Bluewaters III and IV

Parameter	Units	Bluewaters III	Bluewaters IV
Power Station Capacity	MW	208	208
Annual Energy Production	MWh	1,822,080	1,822,080
Annual Energy Production	GJ	6,559,488	6,559,488
Annual Efficiency of Power Station	%	36.1	36.1
Required Power Station Fuel Input	GJ	18,170,327	18,170,327
Average Specific Energy of Collie Coal	MJ/kg	18.7	18.7
Annual Equivalent Mass of Coal	**Tpa**	**~974,000**	**~974,000**

Notes:
(1) Assumed to be operating continuously at capacity for the entire year. The actual plant availability over the life of the power station is expected to be 92%.

Table 5 presents a summary of the emissions and stack release parameters used in the air dispersion modelling of the proposed Bluewaters III and IV generating units.

Table 5: Emissions Information and Stack Release Parameters – Bluewaters III and IV

Parameter	Units	BW III (1)	BW IV (1)
MGA94 Easting	m	428,195	428,119
MGA94 Northing	m	6,311,595	6,311,637
Stack Height	m	150	150
Stack Tip Diameter	m	5.66	5.66
Exit Temperature	°C	131	131
Exit Velocity(2)	m/s	25.5	25.5
Emissions			
Sulphur Dioxide(3)	g/s	69	69
Oxides of Nitrogen (4) (as NO_2)	g/s	112	112
PM_{10}	g/s	9.4	9.4
$PM_{2.5}$(5)	g/s	5.5	5.5
Carbon Monoxide	g/s	112	112
PAH	g/s	1.90×10^{-4}	1.90×10^{-4}
Mercury	g/s	1.11×10^{-3}	1.11×10^{-3}
Fluoride Compounds	g/s	5.39×10^{-1}	5.39×10^{-1}
Arsenic	g/s	2.06×10^{-4}	2.06×10^{-4}
Cadmium	g/s	2.70×10^{-4}	2.70×10^{-4}
Chromium III	g/s	4.76×10^{-5}	4.76×10^{-5}
Chromium VI	g/s	4.76×10^{-5}	4.76×10^{-5}
Lead	g/s	9.83×10^{-4}	9.83×10^{-4}
Dioxins and Furans (Total)	g/s	2.66×10^{-8}	2.66×10^{-8}
Hydrogen Chloride	g/s	1.82×10^{1}	1.82×10^{1}
Beryllium	g/s	3.33×10^{-4}	3.33×10^{-4}
Copper	g/s	9.36×10^{-4}	9.36×10^{-4}
Nickel	g/s	4.24×10^{-3}	4.24×10^{-3}
Boron	g/s	7.57×10^{-2}	7.57×10^{-2}
Ammonia	g/s	8.48×10^{-3}	8.48×10^{-3}
Benzene	g/s	1.95×10^{-3}	1.95×10^{-3}
Cumene	g/s	8.18×10^{-5}	8.18×10^{-5}
Toluene	g/s	3.63×10^{-3}	3.63×10^{-3}
Xylenes	g/s	5.75×10^{-4}	5.75×10^{-4}
Ethylbenzene	g/s	1.42×10^{-3}	1.42×10^{-3}

Notes:

(1) Bluewaters III and IV emission rates do not include the emissions from Bluewaters I and II.

(2) Emission exit velocity assumes discharge in combination with Bluewaters I (for Bluewaters IV) and Bluewaters II (for Bluewaters III). The emission velocity is half of this value when considered in isolation.

(3) Sulphur dioxide emissions have undergone dry desulphurisation for Bluewaters III and IV.

(4) The modelling has assumed that 10% of the oxides of nitrogen emissions are in the form of nitrogen dioxide (NO_2) at the point of discharge.

(5) Assumed to be 58% of PM_{10} emission rate based in US EPA (1995)

2.4.2 Existing Regional Emission Sources

The stack release parameters and emissions information used in the modelling to describe the existing and approved industrial sources in the Collie region included in the cumulative impact assessment, are presented in Table 6 and Table 7 respectively. Non-industrial emissions, such as those resulting from bushfires have not been included in the modelling as the magnitude, frequency and duration of these emissions are difficult to quantify due to their random occurrence. Further, there are insufficient background ambient monitoring data available for the region.

The emission rates used in this study for sources are based upon the previous cumulative air dispersion modelling assessments completed by SKM (2005) for the Collie A Power Station, and by ENVIRON (2006) for Bluewaters I and II, with the exception of ethylbenzene. Ethylbenzene was not included in the previous modelling assessments for the Bluewaters Project, and so the emission rates presented in Table 7 have been estimated using NPI emission factors, as previously described in Section 2.4.1.

Emissions from Muja A and B have been included in this report, as three of the four units were recommissioned as a result of the Varanus Island gas explosion that occurred in June 2008. For the purposes of this study it has been assumed that Muja A and B are operating at 100% capacity (i.e. all four units in operation). The proposed Collie B power station has not yet obtained Ministerial approval (Devereaux understands that Verve is seeking to withdraw its application), and therefore emissions associated with this proposed source have not been included in the modelling. It should be noted that Muja A and B (initially decommissioned in April 2007) and Collie B were excluded from previous air dispersion modelling completed by Griffin Energy, and assessed by the EPA, for the Bluewaters I and II Power Station.

Table 6: Stack Release Parameters - Existing and Approved Sources in the Collie Region

Source	Coordinate (MGA 94)		Stack Height (m)	Stack Tip Diameter (m)	Exit Temp (ºC)	Exit Velocity (m/s)
	Easting (m)	Northing (m)				
Muja A	435,785	6,298,979	98	3.94	200	19.0
Muja B	435,734	6,299,001	98	3.94	200	19.0
Muja C	435,636	6,299,074	151	5.91	133	20.4
Muja D	435,525	6,299,109	151	5.91	133	19.0
Collie A	431,227	6,310,439	170	5.23	152	24.4
Worsley Power Station	413,074	6,322,109	76	4	130	23.7
Worsley Boiler Extension	413,290	6,322,270	105	2.5	130	24.5
Bluewaters I	428,126	6,311,651	100	4	131	25.5
Bluewaters II	428,202	6,311,609	100	4	131	25.5

Table 7: Emissions Information - Existing and Approved Sources in the Collie Region

Emission rate (g/s)	Collie A	Worsley Existing	Worsley Extension	Muja A + B[1]	Muja C + D[1]	BW I	BW II
Sulphur dioxide	515	315	71	269	779	230	230
Oxides of nitrogen	158	110	62	256	399	112	112
PM_{10}	6.1	2.9	0.7	538	13.8	9.4	9.4
$PM_{2.5}$	2.6	1.6	0.4	140	5.9	5.5	5.5
Carbon monoxide	712	11	6.3	5.7	16.4	112	112
PAH	$4.24x10^{-4}$	$4.00x10^{-3}$	$1.47x10^{-4}$	$2.26x10^{-4}$	$6.55x10^{-4}$	$1.90x10^{-4}$	$1.90x10^{-4}$
Mercury	$1.78x10^{-3}$	$4.96x10^{-4}$	$1.13x10^{-4}$	$3.17x10^{-3}$	$3.54x10^{-3}$	$1.11x10^{-3}$	$1.11x10^{-3}$
Fluoride compounds	1.56	0.63	0.14	1.7	4.91	0.54	0.54
Arsenic	$9.69x10^{-4}$	$5.46x10^{-4}$	$1.24x10^{-4}$	$4.30x10^{-2}$	$1.38x10^{-3}$	$2.06x10^{-4}$	$2.06x10^{-4}$
Cadmium	$9.15x10^{-4}$	$7.01x10^{-5}$	$1.60x10^{-5}$	$6.79x10^{-3}$	$1.38x10^{-3}$	$2.70x10^{-4}$	$2.70x10^{-4}$
Chromium III	$2.92x10^{-3}$	$1.95x10^{-3}$	$1.01x10^{-3}$	$3.17x10^{-2}$	$4.26x10^{-3}$	$4.76x10^{-5}$	$4.76x10^{-5}$
Chromium IV	$1.54x10^{-4}$	$1.03x10^{-4}$	$5.32x10^{-5}$	$1.67x10^{-3}$	$2.23x10^{-4}$	$4.76x10^{-5}$	$4.76x10^{-5}$
Lead	$3.88x10^{-3}$	$2.59x10^{-3}$	$1.34x10^{-3}$	$1.31x10^{-1}$	$5.50x10^{-3}$	$9.83x10^{-4}$	$9.83x10^{-4}$
Dioxins and Furans (Total)	$3.73x10^{-8}$	$1.36x10^{-9}$	$3.09x10^{-10}$	$1.99x10^{-8}$	$5.76x10^{-8}$	$2.66x10^{-8}$	$2.66x10^{-8}$
Hydrochloric acid	6.1	1.0	0.2	13.6	39.3	18.2	18.2
Beryllium	$5.65x10^{-4}$	$3.77x10^{-4}$	$1.96x10^{-4}$	$9.28x10^{-2}$	$7.86x10^{-4}$	$3.33x10^{-4}$	$3.33x10^{-4}$
Copper	$2.84x10^{-3}$	$1.89x10^{-3}$	$9.82x10^{-4}$	$4.75x10^{-1}$	$3.99x10^{-3}$	$9.36x10^{-4}$	$9.36x10^{-4}$
Nickel	$4.62x10^{-3}$	$3.08x10^{-3}$	$1.60x10^{-3}$	$2.94x10^{-2}$	$7.20x10^{-3}$	$4.24x10^{-3}$	$4.24x10^{-3}$
Boron	$1.06x10^{-1}$	$7.07x10^{-2}$	$3.67x10^{-2}$	$9.05x10^{-2}$	$1.31x10^{-1}$	$7.57x10^{-2}$	$7.57x10^{-2}$
Ammonia	$1.19x10^{-2}$	$7.92x10^{-3}$	$4.11x10^{-3}$	$6.43x10^{-3}$	$1.83x10^{-2}$	$8.48x10^{-3}$	$8.48x10^{-3}$
Benzene	$2.83x10^{-3}$	$1.88x10^{-3}$	$9.78x10^{-4}$	$1.54x10^{-3}$	$4.45x10^{-3}$	$1.95x10^{-3}$	$1.95x10^{-3}$
Cumene	$1.15x10^{-4}$	$7.64x10^{-5}$	$3.96x10^{-5}$	$6.11x10^{-5}$	$1.77x10^{-4}$	$8.18x10^{-5}$	$8.18x10^{-5}$
Toluene	$5.09x10^{-3}$	$3.39x10^{-3}$	$1.76x10^{-3}$	$2.72x10^{-3}$	$7.86x10^{-3}$	$3.63x10^{-3}$	$3.63x10^{-3}$
Xylenes	$8.06x10^{-4}$	$5.37x10^{-4}$	$2.79x10^{-4}$	$4.30x10^{-4}$	$1.24x10^{-3}$	$5.75x10^{-4}$	$5.75x10^{-4}$
Ethylbenzene	$2.00x10^{-3}$	$1.33x10^{-3}$	$6.89x10^{-4}$	$9.24x10^{-4}$	$3.08x10^{-3}$	$1.42x10^{-3}$	$1.42x10^{-3}$

Notes:
(1) Values are for individual stages.
(2) $PM_{2.5}$ emissions were assumed to be 43% of PM_{10} emissions for Muja C and D and Collie A; 26% for Muja A and B; 54% for Worsley; and 58% for Bluewaters based on USEPA AP42 (US EPA, 1995).

2.5 SCENARIOS MODELLED

Construction and commissioning of the Bluewaters Project will occur in stages with construction of Bluewaters I and II already underway. The schedule for construction and commissioning of Bluewaters III and IV is subject to the receipt of regulatory approvals, and dependant upon future electricity demand.

Bluewaters I and II were approved on the basis that the flue gases would be discharged via two individual 100 m tall stacks (not yet constructed). However it is now proposed to discharge the flue gases from Bluewaters I via the new 150m tall stack to be constructed for Bluewaters IV and to discharge the flue gases from Bluewaters II via the new 150m tall stack to be constructed for Bluewaters III, once the Bluewaters III and IV units are brought into operation. The combination of the flue streams from two generating units into the one stack will result in increased buoyancy of the

plume, and combined with the increased stack height, is intended to reduce the air quality impacts associated with the Bluewaters Project.

Various operating scenarios have been included in the modelling to account for the staged commissioning schedule of the Bluewaters Project, and these are outlined in Section 2.5.1.1 (sulphur dioxide) and Section 2.5.1.2 (other contaminants).

2.5.1.1 Sulphur Dioxide

Previous studies have identified sulphur dioxide as the main pollutant of concern for the Collie region, and therefore it has been a particular focus of this air dispersion modelling study. The sulphur dioxide impacts arising from the Bluewaters Project in isolation, and cumulatively with other regional sources (refer to Section 2.4.2), have been assessed for a range of potential operating scenarios, as presented in Table 8.

Table 8: Bluewaters Power Station Operating Scenarios – Sulphur Dioxide

Scenario	BW I (100 m tall stack)	BW I (150 m tall stack)1	BW II (100 m tall stack)	BW II (150 m tall stack)2	BW III (150 m tall stack)	BW IV (150 m tall stack)	Other regional sources
1a	•		•				
1b (base scenario)	•		•				•
2a	•			•	•		
2b	•			•	•		•
3a	•			•			
3b	•			•			•
4a		•		•	•	•	
4b (proposed scenario)		•		•	•	•	•
5a		•		•		•	
5b		•		•		•	•
6a		•		•	•		
6b		•		•	•		•
7a		•		•			
7b		•		•			•

Notes:
(1) Bluewaters I 150 m stack is the same stack as that proposed for Bluewaters IV.
(2) Bluewaters II 150 m stack is the same stack as that proposed for Bluewaters III.

Scenario 1 represents operation of Bluewaters I and II, as approved. Scenario 2 (operation of Bluewaters II and III, as proposed; and operation of Bluewaters I, as approved), and Scenario 4 (operation of Bluewaters I to IV, as proposed) represent the most likely progression of the generating unit configuration and operation of the Bluewaters Project.

2.5.1.2 Other Contaminants

The air quality impacts arising from the emissions of contaminants other than sulphur dioxide have been assessed for the scenario involving the operation of all Bluewaters units (i.e. I to IV) with emissions released from the two 150 m tall stacks, cumulatively with other regional sources (i.e. Scenario 4b).

2.6 RECEPTOR LOCATIONS

The air dispersion modelling has included consideration of the potential impacts at a number of discrete receptor locations surrounding the Bluewaters Project site, as presented in Table 9. The locations of the receptors in relation to the Bluewaters Project site are presented on Figure 1. The first seven discrete receptors are the same as those used in previous air dispersion modelling assessments conducted by the CSIRO and ENVIRON for the Bluewaters I and II projects, with the remaining 64 receptors representing residential locations which are used in the screening health risk assessment.

Table 9: Discrete Receptor Locations

Receptor Name	Location (MGA 94)		Description
	Easting (m)	Northing (m)	
Muja PS (1)	435,650	6,299,000	Muja C-D power station site, located approximately 14.7 km south southeast of the Bluewaters site
Collie A PS (2)	431,227	6,310,439	Collie A power station site, located approximately 3.3 km east southeast of the Bluewaters site
Bluewaters Site (3)	428,132	6,311,645	Bluewaters project site
Collie (Centre) (4)	422,017	6,308,957	Centre of the Collie town site, approximately 6.7 km west southwest of the Bluewaters site
Collie (Northeast) (5)	425,080	6,309,476	North eastern most edge of the Collie town site, to represent the closest residential receptor. Approximately 3.7 km west southwest of the Bluewaters site
Collie (North) (6)	421,933	6,310,483	North of the Collie town site, approximately 6.3 km west of the Bluewaters site
Shotts (7)	432,170	6,306,014	Shotts monitoring station site (decommissioned), located approximately 7 km south southeast of the Bluewaters site
8 – 71	Various		Various residential receptors (included in the Screening Health Risk Assessment)

3. AMBIENT AIR QUALITY GUIDELINES

The air dispersion modelling results for criteria pollutants have been compared to the ambient air quality guidelines published by the National Environmental Protection Council (NEPC) in the National Environment Protection Measure (NEPM) for Ambient Air Quality (NEPC, 2003), as presented in Table 10.

Table 10: Ambient Air Quality Guidelines

Compound Name	Averaging Period	Guideline	Units	Maximum Allowable Exceedances
Sulphur dioxide	1-hour	571	$\mu g/m^3$	1 day a year
	24-hour	229	$\mu g/m^3$	1 day a year
	annual	57	$\mu g/m^3$	-
Nitrogen dioxide	24-hour	246	$\mu g/m^3$	1 day a year
	annual	62	$\mu g/m^3$	-
$PM_{2.5}$	24 h	25	$\mu g/m^3$	-
	annual	8	$\mu g/m^3$	-
PM_{10}	24 h	50	$\mu g/m^3$	5 days a year
Carbon monoxide	8 h	11,260	$\mu g/m^3$	1 day a year
Ozone	1-hour	214	$\mu g/m^3$	1 day a year

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4. MODEL RESULTS

4.1 SULPHUR DIOXIDE

4.1.1 Bluewaters Power Station in Isolation

TAPM was used to predict the ground level concentrations of sulphur dioxide resulting from the Bluewaters Power Station in isolation for each of the scenarios presented in Section 2.5.1.1. As the various Bluewaters III and IV development stages affect the stack release characteristics of Bluewaters I and II, the modelling has considered the emissions from all of the various potential Bluewaters operating scenarios.

The modelling results were analysed to determine the predicted maximum and 9th highest (or 99.9th percentile) 1-hour, maximum and 2nd highest (or 99.5th percentile) 24-hour, and annual average ground level concentrations of sulphur dioxide across the modelled domain. The results of the modelling are summarised in Table 11 and Figures 4 to 10.

Figures 4 to 10 present contours of the predicted maximum 1-hour average ground level concentrations of sulphur dioxide resulting from the Bluewaters Power Station in isolation for operating Scenario 1a (Bluewaters I and II, as approved) through Scenario 4a (Bluewaters I to IV operating as proposed) to Scenario 7a (Bluewaters I and II operating via 150 m stacks without Bluewaters II and IV operating). Areas for which the relevant NEPM guidelines are predicted to be exceeded are delineated by red contour lines.

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Table 11: Predicted Ground Level Concentrations of Sulphur Dioxide - Bluewaters Power Station in Isolation

Scenario	Receptor Location	Predicted Ground Level Concentrations (µg/m^3)									
		1-Hour Maximum		1-Hour 99.9th Percentile		24-Hour Maximum		24-Hour 99.5th Percentile		Annual Average	
		Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline
1a	Muja PS	148	26%	102	18%	16	7%	15	6%	0.9	1.5%
	Collie A PS	521	91%	197	34%	42	18%	35	15%	2.0	3.4%
	Bluewaters	473	83%	144	25%	42	18%	26	11%	1.6	2.9%
	Collie (Centre)	369	65%	158	28%	32	14%	31	14%	1.4	2.4%
	Collie (North-East)	543	95%	250	44%	58	25%	45	19%	2.3	4.0%
	Collie (North)	284	50%	180	32%	34	15%	31	14%	1.6	2.8%
	Shotts	255	45%	134	24%	25	11%	20	9%	1.3	2.2%
	Max across modelled domain	852	149%	311	55%	170	74%	145	63%	7.4	13.0%
2a	Muja PS	74	13%	60	10%	11	5%	8	3%	0.6	1.1%
	Collie A PS	275	48%	153	27%	24	11%	24	10%	1.6	2.8%
	Bluewaters	261	46%	132	23%	27	12%	23	10%	1.2	2.0%
	Collie (Centre)	205	36%	144	25%	31	13%	24	11%	1.1	1.9%
	Collie (North-East)	311	54%	189	33%	39	17%	36	16%	1.8	3.2%
	Collie (North)	177	31%	140	24%	30	13%	29	13%	1.5	2.6%
	Shotts	178	31%	100	18%	16	7%	16	7%	1.0	1.7%
	Max across modelled domain	428	75%	228	40%	124	54%	104	45%	5.6	9.7%

Scenario	Receptor Location	Predicted Ground Level Concentrations (µg/m^3)									
		1-Hour Maximum		1-Hour 99.9th Percentile		24-Hour Maximum		24-Hour 99.5th Percentile		Annual Average	
		Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline
3a	Muja PS	105	18%	65	11%	10	5%	9	4%	0.7	1.2%
	Collie A PS	331	58%	159	28%	27	12%	27	12%	1.6	2.9%
	Bluewaters	236	41%	132	23%	24	11%	22	10%	1.3	2.2%
	Collie (Centre)	290	51%	141	25%	31	14%	29	13%	1.1	2.0%
	Collie (North-East)	386	68%	208	36%	44	19%	40	17%	1.9	3.4%
	Collie (North)	169	30%	144	25%	29	13%	28	12%	1.4	2.5%
	Shotts	211	37%	118	21%	21	9%	18	8%	1.0	1.8%
	Max across modelled domain	526	92%	245	43%	132	58%	113	49%	6.1	10.8%
4a	Muja PS	79	14%	59	10%	12	5%	7	3%	0.4	0.7%
	Collie A PS	161	28%	131	23%	20	9%	19	8%	1.3	2.2%
	Bluewaters	326	57%	109	19%	28	12%	24	10%	0.8	1.4%
	Collie (Centre)	173	30%	133	23%	33	15%	20	9%	0.9	1.5%
	Collie (North-East)	220	38%	144	25%	33	14%	25	11%	1.4	2.4%
	Collie (North)	293	51%	138	24%	33	14%	29	13%	1.3	2.3%
	Shotts	141	25%	95	17%	15	7%	13	6%	0.7	1.3%
	Max across modelled domain	487	85%	201	35%	90	39%	76	33%	4.0	7.0%
5a	Muja PS	71	12%	54	9%	11	5%	6	2%	0.4	0.8%
	Collie A PS	159	28%	127	22%	22	10%	20	9%	1.3	2.2%
	Bluewaters	226	40%	111	19%	26	11%	19	8%	0.9	1.6%
	Collie (Centre)	222	39%	127	22%	31	14%	23	10%	0.9	1.5%
	Collie (North-East)	194	34%	161	28%	34	15%	26	12%	1.5	2.6%
	Collie (North)	221	39%	119	21%	27	12%	27	12%	1.2	2.2%
	Shotts	160	28%	98	17%	18	8%	14	6%	0.8	1.3%
	Max across modelled domain	405	71%	204	36%	91	40%	77	34%	4.2	7.5%

Scenario	Receptor Location	Predicted Ground Level Concentrations (µg/m^3)									
		1-Hour Maximum		1-Hour 99.9th Percentile		24-Hour Maximum		24-Hour 99.5th Percentile		Annual Average	
		Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline
6a	Muja PS	71	12%	54	9%	11	5%	6	2%	0.4	0.8%
	Collie A PS	165	29%	130	23%	22	10%	20	9%	1.3	2.3%
	Bluewaters	223	39%	107	19%	26	11%	19	8%	0.9	1.5%
	Collie (Centre)	227	40%	128	22%	31	14%	24	10%	0.9	1.5%
	Collie (North-East)	202	35%	162	28%	35	15%	27	12%	1.5	2.6%
	Collie (North)	226	40%	122	21%	28	12%	27	12%	1.2	2.2%
	Shotts	145	25%	97	17%	18	8%	13	6%	0.8	1.3%
	Max across modelled domain	380	67%	209	37%	93	41%	77	34%	4.3	7.5%
7a	Muja PS	105	18%	63	11%	10	5%	9	4%	0.5	0.8%
	Collie A PS	179	31%	141	25%	24	11%	22	10%	1.3	2.3%
	Bluewaters	194	34%	106	19%	24	10%	19	8%	1.0	1.7%
	Collie (Centre)	311	55%	129	23%	33	15%	29	13%	0.9	1.6%
	Collie (North-East)	301	53%	181	32%	36	16%	30	13%	1.5	2.7%
	Collie (North)	198	35%	131	23%	27	12%	26	11%	1.2	2.1%
	Shotts	170	30%	102	18%	23	10%	15	7%	0.8	1.4%
	Max across modelled domain	584	102%	216	38%	97	42%	85	37%	4.8	8.5%

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The results presented in Table 11 and Figures 4 to 10 indicate the following:

- the maximum 1-hour average ground level concentrations of sulphur dioxide predicted across the entire modelled domain comply with the NEPM standard for all of the proposed scenarios, except Scenarios 1a and 7a. For Scenario 7a, the maximum predicted 1-hour average concentration was approximately 2% greater than the NEPM standard but approximately 32% less than the base scenario (i.e. Scenario 1a);

- the predicted 9th highest 1-hour average ground level concentrations of sulphur dioxide comfortably comply with the NEPM guidelines (i.e. 55% of guideline or less) for all averaging periods across the entire modelled domain for all of the proposed scenarios;

- the maximum 24-hour and annual average ground level concentrations of sulphur dioxide predicted across the entire modelled domain comply with the NEPM standards; and

- the development of Bluewaters III and IV is predicted to reduce the maximum predicted ground level concentrations of sulphur dioxide across the modelled domain, compared to Bluewaters I and II (as approved). For example, the predicted maximum 1-hour average ground level concentration of sulphur dioxide for Scenario 4a (Bluewaters I to IV, as proposed) is approximately 43% lower than that predicted for Scenario 1a (BW I and II, as approved) due to the increased stack height, and improvement in plume buoyancy achieved by combining the power station emissions.

Scenario 7a represents the operation of Bluewaters I and II as proposed (i.e. exhaust gases emitted via a 150 m stack), but with a lower exit velocity to account for Bluewaters III and IV not operating. The exceedance of the NEPM 1-hour standard predicted for Scenario 7a does not represent cause for concern as:

- the maximum 1-hour average ground level concentration is predicted to exceed the NEPM standard only by approximately 2% at the maximally affected grid point in the model domain;

- the predicted area of the exceedance is confined to a single model grid point located to the northeast of the Bluewaters Power Station;

- The maximum ground level concentrations for Scenario 7a are predicted to comply with the NEPM guidelines at all of the other discrete receptor locations considered in the modelling, including the residential areas of the Collie town site;

- the 9th highest 1-hour average ground level concentration predicted across the model domain for Scenario 7a (216 µg/m^3) is well below the NEPM guideline;

- the maximum predicted 1-hour average ground level concentrations for Scenario 7a are lower than predicted for Bluewaters I and II, as currently approved; and

- it is unlikely that Scenario 7a will actually result in an exceedance of the NEPM guideline as this operating scenario will only occur if both the Bluewaters III and IV units are shut down, which is expected to occur infrequently and for short periods of time only.

4.2 CUMULATIVE IMPACTS OF SULPHUR DIOXIDE EMISSIONS

The cumulative sulphur dioxide impacts arising from the proposed Bluewaters Project and other regional emission sources (i.e. existing and approved industry in the Collie region) have been modelled, and the results are summarised in Table 12 and Table 13, and Figures 11 to 17.

Figures 11 to 17 present contours of the predicted maximum 1-hour average ground level concentrations of sulphur dioxide resulting from the Bluewaters Power Station for operating Scenarios 1b to 7b in combination with the other sources included in the modelling. The contours representing the NEPM standard concentrations are delineated by red contour lines.

It should be noted that Scenario 1b represents the cumulative impacts associated with all existing and approved regional sources, including Bluewaters I and II as approved, and has been included to provide a baseline against which to compare the air quality impacts of the Bluewaters III and IV proposal.

Table 13 presents the percentage change in the ground level concentrations predicted at the discrete receptor locations for the various operating scenarios, compared to the baseline scenario (i.e. Scenario 1b).

Table 12: Predicted Ground Level Concentrations of Sulphur Dioxide - Cumulative Impacts

Scenario	Receptor Location	Predicted Ground Level Concentrations (µg/m^3)									
		1-Hour Maximum		1-Hour 99.9th Percentile		24-Hour Maximum		24-Hour 99.5th Percentile		Annual Average	
		Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline
1b	Muja PS	702	123%	338	59%	85	37%	85	37%	5.6	10%
	Collie A PS	554	97%	312	55%	79	35%	69	30%	7.4	13%
	Bluewaters	478	84%	279	49%	72	31%	69	30%	8.5	15%
	Collie (Centre)	389	68%	246	43%	72	32%	62	27%	7.2	13%
	Collie (North-East)	607	106%	276	48%	67	29%	61	27%	8.8	15%
	Collie (North)	296	52%	218	38%	66	29%	58	25%	7.5	13%
	Shotts	514	90%	337	59%	143	62%	82	36%	8.0	14%
	Max across modelled domain	1661	291%	687	120%	376	164%	318	139%	16.7	29%
2b	Muja PS	702	123%	338	59%	85	37%	84	37%	5.4	9%
	Collie A PS	382	67%	285	50%	79	35%	69	30%	7.1	12%
	Bluewaters	413	72%	260	46%	71	31%	69	30%	8.0	14%
	Collie (Centre)	389	68%	232	41%	72	32%	62	27%	7.0	12%
	Collie (North-East)	407	71%	251	44%	61	27%	61	27%	8.3	15%
	Collie (North)	296	52%	207	36%	66	29%	58	25%	7.4	13%
	Shotts	514	90%	337	59%	143	62%	82	36%	7.8	14%
	Max across modelled domain	1661	291%	687	120%	376	164%	318	139%	16.5	29%

Scenario	Receptor Location	Predicted Ground Level Concentrations (µg/m^3)									
		1-Hour Maximum		1-Hour 99.9th Percentile		24-Hour Maximum		24-Hour 99.5th Percentile		Annual Average	
		Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline
3b	Muja PS	702	123%	338	59%	85	37%	85	37%	5.4	10%
	Collie A PS	382	67%	288	51%	79	35%	69	30%	7.1	12%
	Bluewaters	413	72%	252	44%	71	31%	69	30%	8.2	14%
	Collie (Centre)	389	68%	232	41%	72	32%	62	27%	7.0	12%
	Collie (North-East)	450	79%	251	44%	61	27%	61	27%	8.4	15%
	Collie (North)	296	52%	207	36%	66	29%	56	24%	7.3	13%
	Shotts	514	90%	337	59%	143	62%	82	36%	7.8	14%
	Max across modelled domain	1661	291%	687	120%	376	164%	318	139%	16.5	29%
4b	Muja PS	702	123%	338	59%	85	37%	84	37%	5.2	9%
	Collie A PS	382	67%	283	50%	79	35%	69	30%	6.7	12%
	Bluewaters	413	72%	264	46%	71	31%	69	30%	7.7	13%
	Collie (Centre)	389	68%	225	39%	72	32%	62	27%	6.7	12%
	Collie (North-East)	407	71%	245	43%	61	27%	61	27%	7.9	14%
	Collie (North)	393	69%	218	38%	66	29%	58	25%	7.2	13%
	Shotts	514	90%	337	59%	143	62%	82	36%	7.5	13%
	Max across modelled domain	1661	291%	687	120%	376	164%	318	139%	16.4	29%
5b	Muja PS	702	123%	338	59%	85	37%	84	37%	5.2	9%
	Collie A PS	382	67%	272	48%	79	35%	69	30%	6.7	12%
	Bluewaters	413	72%	252	44%	71	31%	69	30%	7.8	14%
	Collie (Centre)	389	68%	232	41%	72	32%	62	27%	6.8	12%
	Collie (North-East)	407	71%	245	43%	61	27%	61	27%	7.9	14%
	Collie (North)	318	56%	204	36%	66	29%	56	25%	7.1	13%
	Shotts	514	90%	337	59%	143	62%	82	36%	7.5	13%
	Max across modelled domain	1661	291%	687	120%	376	164%	318	139%	16.4	29%

Scenario	Receptor Location	Predicted Ground Level Concentrations (µg/m^3)									
		1-Hour Maximum		1-Hour 99.9th Percentile		24-Hour Maximum		24-Hour 99.5th Percentile		Annual Average	
		Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline
6b	Muja PS	702	123%	338	59%	85	37%	84	37%	5.2	9%
	Collie A PS	382	67%	272	48%	79	35%	69	30%	6.8	12%
	Bluewaters	413	72%	260	46%	71	31%	69	30%	7.7	14%
	Collie (Centre)	389	68%	232	41%	72	32%	62	27%	6.8	12%
	Collie (North-East)	407	71%	245	43%	61	27%	61	27%	7.9	14%
	Collie (North)	323	57%	204	36%	66	29%	57	25%	7.1	13%
	Shotts	514	90%	337	59%	143	62%	82	36%	7.5	13%
	Max across modelled domain	1661	291%	687	120%	376	164%	318	139%	16.4	29%
7b	Muja PS	702	123%	337	59%	85	37%	85	37%	5.2	9%
	Collie A PS	382	67%	272	48%	79	35%	69	30%	6.8	12%
	Bluewaters	413	72%	252	44%	71	31%	69	30%	7.9	14%
	Collie (Centre)	389	68%	232	41%	72	32%	62	27%	6.8	12%
	Collie (North-East)	407	71%	251	44%	61	27%	61	27%	8.0	14%
	Collie (North)	296	52%	204	36%	66	29%	55	24%	7.1	12%
	Shotts	514	90%	337	59%	143	62%	82	36%	7.6	13%
	Max across modelled domain	1661	291%	687	120%	376	164%	318	139%	16.4	29%

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Table 13: Percentage Change in Predicted Ground Level Concentrations of Sulphur Dioxide Relative to Baseline (Scenario 1b)

Scenario	Receptor Location	Percentage Change (%) in Predicted Ground Level Concentrations for SO_2 Relative to Baseline (Scenario 1b)				
		1-Hour		24-Hour		Annual Average
		Max	99.9th	Max	99.5th	
2b	Muja PS	0.0%	0.0%	0.1%	-0.8%	-4.0%
	Collie A PS	-31.1%	-8.6%	0.0%	0.0%	-4.6%
	Bluewaters	-13.6%	-6.7%	-0.6%	0.0%	-5.6%
	Collie (Centre)	0.0%	-5.7%	0.0%	0.0%	-3.5%
	Collie (North-East)	-32.9%	-8.8%	-8.5%	-1.1%	-5.1%
	Collie (North)	0.0%	-5.3%	0.0%	0.0%	-2.2%
	Shotts	0.0%	0.0%	0.0%	0.0%	-3.5%
	Max across modelled domain	0.0%	0.0%	0.0%	0.0%	-0.9%
3b	Muja PS	0.0%	0.0%	0.0%	-0.2%	-3.5%
	Collie A PS	-31.1%	-7.5%	0.0%	0.0%	-4.2%
	Bluewaters	-13.6%	-9.6%	-0.5%	0.0%	-4.2%
	Collie (Centre)	0.0%	-5.7%	0.0%	0.0%	-3.2%
	Collie (North-East)	-25.8%	-8.8%	-8.5%	-1.1%	-4.1%
	Collie (North)	0.0%	-5.3%	0.0%	-3.3%	-2.9%
	Shotts	0.0%	0.0%	0.0%	0.0%	-3.0%
	Max across modelled domain	0.0%	0.0%	0.0%	0.0%	-0.9%
4b	Muja PS	0.0%	0.0%	0.2%	-1.6%	-8.0%
	Collie A PS	-31.1%	-9.2%	0.0%	0.0%	-9.5%
	Bluewaters	-13.6%	-5.3%	-0.6%	0.0%	-10.1%
	Collie (Centre)	0.0%	-8.3%	0.0%	0.0%	-6.9%
	Collie (North-East)	-32.9%	-10.9%	-8.5%	-1.1%	-10.2%
	Collie (North)	32.7%	0.0%	0.0%	1.3%	-4.4%
	Shotts	0.0%	0.0%	0.0%	0.0%	-7.0%
	Max across modelled domain	0.0%	0.0%	0.0%	0.0%	-1.8%
5b	Muja PS	0.0%	0.0%	0.1%	-1.0%	-7.5%
	Collie A PS	-31.1%	-12.6%	0.0%	0.0%	-9.1%
	Bluewaters	-13.6%	-9.6%	-0.6%	0.0%	-8.7%
	Collie (Centre)	0.0%	-5.7%	0.0%	0.0%	-6.7%
	Collie (North-East)	-32.9%	-10.9%	-8.5%	-1.1%	-9.3%
	Collie (North)	7.3%	-6.7%	0.0%	-2.0%	-5.1%
	Shotts	0.0%	0.0%	0.0%	0.0%	-6.4%
	Max across modelled domain	0.0%	0.0%	0.0%	0.0%	-1.8%
6b	Muja PS	0.0%	0.0%	0.1%	-1.0%	-7.5%
	Collie A PS	-31.1%	-12.6%	0.0%	0.0%	-8.9%
	Bluewaters	-13.6%	-6.9%	-0.7%	0.0%	-9.2%
	Collie (Centre)	0.0%	-5.7%	0.0%	0.0%	-6.6%
	Collie (North-East)	-32.9%	-10.9%	-8.5%	-1.1%	-9.3%
	Collie (North)	9.0%	-6.7%	0.0%	-1.4%	-5.1%
	Shotts	0.0%	0.0%	0.0%	0.0%	-6.4%
	Max across modelled domain	0.0%	0.0%	0.0%	0.0%	-1.8%
7b	Muja PS	0.0%	0.0%	0.0%	-0.4%	-7.0%
	Collie A PS	-31.1%	-12.6%	0.0%	0.0%	-8.5%

Scenario	Receptor Location	Percentage Change (%) in Predicted Ground Level Concentrations for SO_2 Relative to Baseline (Scenario 1b)				
		1-Hour		24-Hour		Annual Average
		Max	99.9th	Max	99.5th	
	Bluewaters	-13.6%	-9.6%	-0.6%	0.0%	-7.8%
	Collie (Centre)	0.0%	-5.8%	0.0%	0.0%	-6.4%
	Collie (North-East)	-32.9%	-8.8%	-8.5%	-1.1%	-8.3%
	Collie (North)	0.0%	-6.7%	0.0%	-4.7%	-5.8%
	Shotts	0.0%	0.0%	0.0%	0.0%	-5.8%
	Max across modelled domain	0.0%	0.0%	0.0%	0.0%	-1.8%

The results presented in Table 12 and Table 13, and Figures 11 to 17 indicates the following:

- the maximum 1-hour averaged ground level concentrations of sulphur dioxide are predicted to exceed the NEPM standard over a large area around the Muja Power Station (all scenarios) and to the northeast of Collie for Scenario 1b. It should be noted that there are predicted exceedances of the NEPM 1-hour standard at a number of the residential receptors considered as part of this Screening Health Risk Assessment presented in Section 5;

- the maximum 1-hour average ground level concentration of sulphur dioxide predicted across the entire model domain was 1,661 µg/m^3 for all of the scenarios modelled with the primary contributor being the Muja Power Station emissions;

- the predicted 9th highest 1-hour average ground level concentrations of sulphur dioxide comply with the NEPM standard except for an area around the Muja Power Station for all of the proposed operating scenarios considered as part of the cumulative modelling;

- the development of Bluewaters III and IV (that results in the discharge of the Bluewaters I and II emissions via the new 150 m stacks) is predicted to reduce the ground level concentrations attributable to Bluewaters I and II as currently approved (i.e. 100 m stacks). Figures 11 to 17 indicate that Scenarios 2b to 7b are predicted to not result in any exceedances of the NEPM standard to the northeast of Collie as predicted for the baseline scenario (i.e. Scenario 1b). These reductions in the predicted ground level concentrations occur as a result of the improvement in the dispersion characteristics of the Bluewaters I and II emissions due to the increased stack height and improvement in plume buoyancy achieved by combining the flue gas streams; and

- the development of Bluewaters III and IV is generally predicted to result in no change, or a reduction in the predicted maximum 1-hour and 24-hour, and annual average ground level concentrations at the discrete receptors compared to the baseline scenario, as follows:

  – predicted reductions is the maximum 1-hour average ground level concentrations, most evident in the vicinity of the northeast of Collie and the Collie Power Station, with up to a 33% reduction in the maximum 1-hour average ground level concentration predicted for the Collie (North-East) receptor location;

- no increase in the predicted model domain maximum 1-hour average ground level concentration for any of the proposed operating scenarios;

- little change in the maximum predicted 24-hour average ground level concentrations at all receptors with the cumulative impacts predicted to remain well below the NEPM 24-hour standard except in the vicinity of the Muja Power Station; and

- the annual average ground level concentrations are predicted to decrease by up to 10.2% (Collie North-East receptor location for Scenario 4b) at all of the discrete receptor locations considered in the modelling.

4.3 CUMULATIVE IMPACTS OF OTHER CRITERIA POLLUTANTS

The cumulative impacts arising from emissions of oxides of nitrogen, PM_{10}, $PM_{2.5}$, carbon monoxide and ozone from the proposed Bluewaters Project and other regional emission sources (i.e. existing and approved industry in the Collie region) have been modelled using TAPM, and the results are presented in Table 14 and Figures 18 to 23. Figures 18 to 23 present contours of the predicted maximum ground level concentrations of nitrogen dioxide (1-hour average), PM_{10} (24-hour average), $PM_{2.5}$ (24-hour and annual average), carbon monoxide (8-hour average), and ozone (1-hour average) respectively.

The results presented in Table 14 and Figures 18 to 23 indicate the following:

- the maximum and 99.5th predicted 24-hour average ground level concentrations of PM_{10} are predicted to exceed the NEPM standard for all of the receptor locations presented in Table 14 with the exception of the 99.5th predicted 24-hour average concentration for the Collie North receptor. The predicted PM_{10} ground level concentrations are dominated by the impacts resulting from the emissions from the Muja A and B power station as illustrated by the predicted concentrations presented in Table 14 with Muja A and B removed[1] from the modelling;
- the maximum and 99.5th predicted 24-hour average ground level concentrations of $PM_{2.5}$ are predicted to exceed the NEPM standard for a number of receptor locations as presented in Table 14. As for PM_{10} the predicted $PM_{2.5}$ ground level concentrations are dominated by the impacts resulting from the emissions from the Muja A and B power station;
- the predicted ground level concentrations of nitrogen dioxide, carbon monoxide, and ozone along with the annual average concentrations for $PM_{2.5}$ are predicted to comfortably comply with the relevant NEPM ambient air quality guidelines across the entire modelled domain, as follows:

  - nitrogen dioxide equal to 23% (1-hour) and 4% (annual) of the NEPM standards;
  - $PM_{2.5}$ equal to a maximum of 57% (with Muja A and B included; but only 2% without Muja A and B included) of the annual reporting standard;
  - carbon monoxide equal to 2% (8-hour) of the NEPM standard; and
  - ozone equal to 49% (1-hour) of the NEPM standard.

[1] Muja A and B were removed in the PM_{10} and $PM_{2.5}$ analysis by subtracting the predicted concentrations for Muja A and B in isolation from those predicted for the cumulative run for each hour of the year and each grid point and then reanalyzing the data.

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Table 14: Predicted Ground Level Concentrations of Other Criteria Pollutants – Cumulative Impacts

Compound	Location	Predicted Ground Level Concentrations (µg/m^3)									
		1-Hour Maximum		1-hour 99.9th Percentile		24-Hour Maximum		24-hour 99.5th Percentile		Annual Average	
		Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline
Nitrogen Dioxide	Muja PS	37	15%	28	11%					1.6	3%
	Collie A PS	27	11%	23	9%					1.5	2%
	Bluewaters	28	11%	23	9%					1.5	2%
	Collie (Centre)	28	11%	22	9%					1.5	2%
	Collie (North-East)	26	11%	23	9%					1.6	3%
	Collie (North)	25	10%	22	9%					1.5	2%
	Shotts	32	13%	25	10%					1.4	2%
	Max across modelled domain	58	23%	40	16%					2.4	4%
PM_{10} (2)	Muja PS					55 (7)	110% (14%)	53 (7)	106% (13%)		
	Collie A PS					99 (25)	197% (49%)	77 (12)	153% (25%)		
	Bluewaters					71 (35)	142% (70%)	51 (9)	102% (19%)		
	Collie (Centre)					88 (15)	177% (30%)	57 (6)	114% (12%)		
	Collie (North-East)					63 (23)	126% (46%)	53 (7)	105% (15%)		
	Collie (North)					70 (5)	140% (9%)	41 (4)	82% (7%)		
	Shotts					134 (28)	269% (55%)	77 (19)	154% (37%)		
	Max across modelled domain					456 (68)	913% (135%)	430 (34)	859% (68%)		
$PM_{2.5}$ (2)	Muja PS					28 (2)	111% (8%)	12 (3)	50% (13%)	0.6 (0.1)	8% (1.4%)
	Collie A PS					71 (8)	285% (33%)	28 (4)	113% (15%)	1.1 (0.1)	13% (1.2%)
	Bluewaters					57 (8)	227% (32%)	19 (2)	76% (8%)	0.8 (0.1)	10% (0.9%)
	Collie (Centre)					20 (2)	79% (9%)	18 (1)	72% (4%)	1.2 (0.1)	15% (0.8%)
	Collie (North-East)					23 (4)	90% (16%)	21 (2)	86% (9%)	1.2 (0.1)	15% (1.2%)
	Collie (North)					14 (2)	55% (9%)	15 (1)	61% (6%)	1.0 (0.1)	13% (0.8%)
	Shotts					14 (2)	58% (7%)	08 (1)	33% (3%)	0.8 (0.0)	10% (0.1%)
	Max across modelled domain					119 (18)	476% (71%)	112 (9)	447% (35%)	4.6 (0.2)	57% (2.2%)

Compound	Location	Predicted Ground Level Concentrations (µg/m^3)									
		1-Hour Maximum		1-hour 99.9th Percentile		24-Hour Maximum		24-hour 99.5th Percentile		Annual Average	
		Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline	Conc.	% of Guideline
Carbon Monoxide (1)	Muja PS					66	1%	41	0%		
	Collie A PS					124	1%	78	1%		
	Bluewaters					201	2%	149	1%		
	Collie (Centre)					80	1%	77	1%		
	Collie (North-East)					115	1%	113	1%		
	Collie (North)					112	1%	109	1%		
	Shotts					97	1%	57	1%		
	Max across modelled domain					268	2%	205	2%		
Ozone	Muja PS	22	44%	19	39%						
	Collie A PS	23	45%	19	39%						
	Bluewaters	23	46%	19	39%						
	Collie (Centre)	24	47%	19	39%						
	Collie (North-East)	24	47%	19	39%						
	Collie (North)	24	48%	19	39%						
	Shotts	22	45%	19	39%						
	Max across modelled domain	24	48%	21	42%						

Notes:

(1) Carbon monoxide concentrations presented in the column labelled “24-hour maximum” are actually for an 8-hour averaging period, consistent with the relevant NEPM ambient air quality standard.

(2) For PM_{10} and $PM_{2.5}$, the numbers in brackets represent the predicted concentrations with Muja A and B removed from the modelling. Muja A and B were removed in the PM_{10} and $PM_{2.5}$ analysis by subtracting the predicted concentrations for Muja A and B in isolation from those predicted for the cumulative run for each hour of the year and each grid point and then reanalysing the data.

5. HEALTH RISK SCREENING ASSESSMENT

5.1 OVERVIEW OF THE SCREENING ASSESSMENT APPROACH

Health Risk Assessment (HRA) provides a systematic approach for characterising the nature and magnitude of the risks associated with environmental health hazards, and is an important tool for decision-making (enHealth, 2002). The generic steps involved in health risk assessment include:

- **Exposure Assessment**: defines the amount, frequency, duration and routes of exposure to compounds present in environmental media. In this assessment, exposure is estimated as the concentration of a compound that a person may be exposed to over both short- (i.e. acute) and long- (i.e. chronic) term exposure periods;

- **Toxicity Assessment**: identifies the nature and degree of toxicity of chemical compounds, and characterises the relationship between magnitude of exposure and adverse health effects (i.e. the dose-response relationship);

- **Risk Characterisation**: the combining of exposure and toxicity data to estimate the magnitude of potential health risks associated with exposure periods of interest; and

- **Uncertainty Assessment**: identification of potential sources of uncertainty and qualitative discussion of the magnitude of uncertainty and expected effects on risk estimates.

This HRA of atmospheric emissions from Bluewaters III and IV is considered to be a screening-level assessment in that it makes generally conservative default assumptions regarding the potential magnitude of exposure, and uses conservative toxicity criteria. The quantitative health risk indicators calculated for potential acute and chronic health effects are based on the assumption that the health effects arising from exposure to each of the individual compounds are additive.

As such, the results of the screening assessment are considered more likely to over- than under-estimate the potential health risks associated with atmospheric emissions from Bluewaters III and IV.

The screening HRA has only considered the potential health risks arising from the industrial emissions included within the air dispersion modelling.

5.2 EXPOSURE ASSESSMENT

5.2.1 Compounds Considered

The compounds considered in this screening assessment are confined to the compounds listed in Section 2.4.1.

As coal fired power stations typically emit very low levels of VOCs, and due to a lack of available data for estimating VOC emissions, the VOCs included in this study has been confined to benzene, toluene, ethylbenzene and xylenes (BTEX).

PM_{10} was used as an indicator of the potential air quality impacts associated with particulate emissions, as the majority of the emissions (US EPA, 1995) from Bluewaters are likely to fall into this size fraction. Particulate emissions from other power stations operating in the Collie region are also likely to comprise mainly of PM_{10}, with the exception of Muja A and B. Total Suspended Particulates (TSP) was not considered in this assessment as it is primarily related to nuisance effects. Ambient $PM_{2.5}$ concentrations were predicted by the "reactive chemistry mode" run of TAPM.

5.2.2 Receptor Locations

The closest residence to the Coolangatta estate is located approximately 1.6 km to the southwest (Receptor 35, Figure 1). The seven discrete receptors identified and used as part of the air dispersion modelling assessment (Section 4, Table 9) which includes industrial receptors such as Muja Power Station, Collie Power Station and Bluewaters Power Station along with 64 additional residential receptors, have been included in this screening HRA. The residential receptors represent multiple or single residences in and around the region identified via aerial photography of the region, and their locations are shown on Figures 1 and 4 through to 29.

5.2.3 Exposure Pathway(s)

This screening HRA has only considered exposure via the inhalation pathway, as this is expected to represent the most significant exposure route to atmospheric emissions from the Bluewaters Project.

5.2.4 Exposure Concentration

The results of the air dispersion modelling of cumulative impacts arising from the proposed Bluewaters III and IV generating units and other regional sources (i.e. existing and approved industries in the Collie region) have been used to estimate the exposure concentration. The predicted 99.9^{th} percentile (i.e. 9^{th} highest) 1-hour or the 99.5^{th} percentile 24-hour average ground level concentrations for each of the discrete receptor locations and over the entire modelled domain have been used to estimate the acute hazard index. The predicted 99.9^{th} percentile concentrations have been used to represent the realistic maximum concentration as used in previous studies. CSIRO (2005) state, for example, that:

> "These yearly maximum 1-hour average concentrations represent the most extreme hour in the year with respect to ground-level concentrations. In a different year with different meteorology the location and magnitude of these yearly maximum 1-hour average concentrations could change. This is why the 9th highest concentration (99.9th percentile) or robust highest concentration (RHC) is often chosen as the key statistic to represent the extremes, rather than the modelled or observed maximum."

The annual average ground level concentrations predicted at discrete receptor locations and over the entire modelled domain have been used to estimate chronic and life-time exposure.

5.3 TOXICITY ASSESSMENT

The toxicity assessment determines the relationship between the magnitude of exposure to a chemical of interest and the nature and severity of adverse health effects that may result from such exposure. Chemical toxicity is divided into two categories for purposes of risk assessment: carcinogenic and non-carcinogenic. Some chemicals exert both types of effects. Whilst all non-carcinogenic effects are assumed to occur only at exposure levels greater than some threshold at which defence mechanisms are overwhelmed, carcinogens are thought to act via both threshold and non-threshold mechanisms.

By convention, exposure to even one molecule of a genotoxic carcinogen is assumed to incur some small but finite risk of causing cancer; hence, the action of such compounds is considered to lack a threshold below which adverse effects are not expected to occur. In contrast, the effects of non-genotoxic carcinogens are thought to be manifested only at exposures in excess of compound-specific thresholds. Potential health risks are calculated differently for threshold and non-threshold effects because their toxicity criteria are based on different mechanistic assumptions and expressed in different units.

5.3.1 Non-Carcinogenic Effects

A non-carcinogenic effect is defined as any adverse response to a chemical that does not result in cancer. Any chemical can cause adverse health effects if given at a high enough dose. When the dose is sufficiently low, no adverse effect is observed. Thus, in characterising the non-carcinogenic effects of a chemical, the key parameter is the threshold dose at which an adverse effect first becomes evident. Doses below the threshold are considered to be "safe" (i.e. not associated with adverse effects), while doses above the threshold may cause an adverse effect.

The threshold dose is typically estimated from toxicological or epidemiological data by finding the highest dose level that produces No Observable Adverse Effect Level (NOAEL) or the lowest dose level that produces an observable adverse effect (a LOAEL). Where more than one such value is available, preference is given to studies using most sensitive species, strain and sex of experimental animal known, the assumption being that humans are no less sensitive than the most sensitive animal species tested. For the guidelines developed by all the authorities considered, NOAELs or LOAELs are divided by the product of a series of uncertainty factors representing experimental vs. environmental exposure duration, inter- and

intra-species variability and the quality and completeness of the toxicological database. This procedure ensures that the resultant health-protective guidelines are not higher than (and may be orders of magnitude lower than) the threshold level for adverse effects in the most sensitive potential receptor. Thus, there is a "margin of safety" built into the guideline, and doses equal to or less than that level are nearly certain to be without any adverse effect. The likelihood of an adverse effect at doses higher than the guideline increases, but because of the margin of safety, a greater dose does not mean that such an effect will necessarily occur.

5.3.1.1 Short-Term (Acute) Exposure

Health protective guidelines for acute non-carcinogenic health effects are expressed as concentrations in air that are not expected to cause any adverse effects as a result of continuous exposure over a defined averaging period (typically 24 hours or less). These guidelines are appropriate for comparison with exposure estimate averages of between 1-hour and 24-hours. Although derived from different sources, the guidelines selected for this assessment are all intended to be protective of continually exposed (i.e. residential) receptors, including potentially sensitive subpopulations.

5.3.1.2 Long-Term (Chronic) Exposure

Health protective guidelines for chronic non-carcinogenic health effects are expressed as concentrations in air that are not expected to cause any adverse health effects as a result of continuous long-term exposure (a year or more). These guidelines are appropriate for comparison with annual average exposure estimates.

5.3.2 Carcinogenic Effects

Cancers are generally defined as diseases of mutation affecting cell growth and differentiation. Although many chemicals are known to cause cancer at high doses in studies with experimental animals, relatively few chemicals have been shown to be carcinogenic in humans at doses likely to be encountered in the ambient environment. Cancers are relatively slow to develop, and usually require prolonged exposure to carcinogenic chemicals. As a result, potential carcinogenic risks are only calculated for long-term exposures.

The International Agency for Research on Cancer (IARC) classifies substances according to their potential for human carcinogenicity as indicated in Table 15.

In dealing with carcinogens, the World Health Organisation (WHO) has developed a "general rule" stating that for compounds in IARC Groups 1 and 2A, guideline values are derived with the use of quantitative risk assessment with low-dose risk extrapolation. For compounds in Groups 2B, 3 and 4, guideline values are derived with the use of a threshold (uncertainty factor) method (WHO 2000). Exceptions to this rule include cases where "it can be established with certainty that an increase in exposure to the compound is associated with an increase in cancer incidence only above a certain level of exposure" (i.e. a threshold) (WHO 2000).

Table 15: IARC Classification Criteria

Group	Description
1	Carcinogenic to humans (sufficient evidence of carcinogenicity to humans)
2A	Probably carcinogenic to humans (sufficient evidence of carcinogenicity in animals, limited evidence of carcinogenicity in humans)
2B	Possibly carcinogenic to humans (less than sufficient evidence of carcinogenicity in animals, limited evidence of carcinogenicity in humans)
3	Not classifiable as to carcinogenicity in humans (inadequate or limited evidence of carcinogenicity in animals, inadequate evidence of carcinogenicity in humans)
4	Probably not carcinogenic to humans (evidence suggesting lack of carcinogenicity in animals and humans)

In terms of incremental carcinogenic risk, the health protective guidelines are normally expressed as unit risk (UR) factors. A UR factor is defined as the theoretical upper bound probability of extra cases of cancer occurring in the exposed population assuming lifetime exposure by inhalation to 1 µg/m^3 of the chemical (hence units are per µg/m^3) (WHO 2000). The UR guidelines are appropriate for comparison with lifetime exposure but this assessment has used the annual average exposure estimates.

5.3.3 Health Protective Guidelines

5.3.3.1 Non-carcinogenic Health Effects

A number of national and international regulatory agencies have reviewed the toxicity of environmental chemicals and developed acceptable exposure criteria (herein referred to as "health protective guidelines') in accordance with both carcinogenic and non-carcinogenic endpoints.

The DEC has articulated an interim approach to adopting ambient air quality guideline values. This interim approach is to adopt the NEPM Standards for Ambient Air Quality. Where there are no NEPM criteria available, it is recommended that the WHO guidelines are utilised. In the absence of criteria from the NEPM and WHO, the DEC will adopt criteria from other jurisdictions (once assessed and determined to be applicable to the Western Australian context).

The health protective guidelines applied in the screening health assessment for acute and chronic exposure non-carcinogenic health effects are presented in Table 16 (acute) and Table 17 (chronic). Consistent with the DEC's interim approach, health protective guidelines published by the NEPC, followed by the WHO, have been applied in preference to other sources. This is also consistent with the enHealth Guidelines for Assessing Human Health Risks from Environmental Hazards (2002), and advice previously received from the Department of Health (Western Australia). The guidelines used in this screening health risk assessment have been sourced from the following reputable authorities:

- National Environment Protection (Ambient Air Quality) Measure (NEPC, 1998);
- National Environment Protection (Air Toxics) Measure (NEPC, 2004);

- World Health Organisation Air Quality Guidelines for Europe – Second Edition (WHO, 2000);
- World Health Organisation Air Quality Guidelines for Europe Global Update 2005 (WHO, 2006);
- U.S. Environment Protection Agency's (USEPA) Integrated Risk Information System (IRIS);
- California Office of Environmental Health Hazard Assessment's (OEHHA) Toxicity Criteria Database;
- National Guidelines for Fluoride in Ambient Air and Forage (ANZECC , 1990);
- Texas Commission on Environmental Quality Effects Screening Levels (ESL) (2008);
- State Environment Protection Policy (SEPP) (Air Quality Management) (Victorian EPA, 2001); and
- Approved methods for the modelling and assessment of air pollutants in New South Wales (NSW DEC, 2005).

The analysis of the air dispersion modelling presented in Section 4 considered the NEPM 1-hour standard for sulphur dioxide (Table 10). The NEPM standards are defined to protect the majority of the population from unacceptable health impacts resulting from exposure to these compounds. However, other organisations, such as the WHO, have found that sulphur dioxide can result in acute health effects for susceptible sub-populations such as exercising asthmatics over shorter time periods in the order of 10-minutes. As such the WHO (2000) recommended a 10-minute average guideline of 500 $\mu g/m^3$ for sulphur dioxide. This guideline included a safety factor of two, indicating that the lowest observed health impacts occurred at 10-minute average concentrations in the order of 1,000 $\mu g/m^3$. The WHO 10-minute guideline of 500 $\mu g/m^3$ has been applied in this screening HRA. In its global update, the WHO (2006) retained this 10-minute guideline.

As part of its global update, the WHO (2006) also proposed a revision of the 24-hour guideline for sulphur dioxide using a stepped approach of interim goals starting at the current guideline of 125 $\mu g/m^3$ to 50 $\mu g/m^3$ and then to the new guideline of 20 $\mu g/m^3$. These guidelines are based on a precautionary principal and the WHO (2006) note that "there is still considerable uncertainty as to whether sulphur dioxide is the pollutant responsible for the observed adverse effects or, rather, a surrogate for ultrafine particles or some other correlated substance." The WHO (2006) also notes that "the recommended 24-hour guideline may be quite difficult for some countries to achieve in the short term and we suggest a stepped approach using interim goals."

This screening health risk assessment has used the WHO (2006) 10-minute guideline of 500 $\mu g/m^3$ when determining the effects of acute non-carcinogenic exposure to sulphur dioxide. It is noted however, that the air dispersion modelling results presented in Section 4 and ambient monitoring results for Collie, indicate that the existing 24-hour average sulphur dioxide concentrations exceed the WHO (2006) guideline (i.e. 20 $\mu g/m^3$) but are generally below the interim WHO (2006) guideline of 125 $\mu g/m^3$.

Table 16: Health Protective Guidelines – Acute Non-Carcinogenic Health Effects

Compound Name	Guideline	Units	Averaging Period	Reference
Sulphur dioxide	5.00×10^{2}	$\mu g/m^3$	10 min	WHO[1]
Nitrogen dioxide	2.46×10^{2}	$\mu g/m^3$	1 h	NEPC
PM_{10}	5.00×10^{1}	$\mu g/m^3$	24 h	NEPC
$PM_{2.5}$	2.50×10^{1}	$\mu g/m^3$	24 h	NEPC
Carbon monoxide	1.13×10^{4}	$\mu g/m^3$	8 h	NEPC
Ozone	2.14×10^{2}	$\mu g/m^3$	1 h	NEPC
Polycyclic Aromatic Hydrocarbons	4.00×10^{-1}	$\mu g/m^3$	1 h	NSW EPA
Mercury	1.80×10^{0}	$\mu g/m^3$	1 h	OEHHA
Fluoride	2.90×10^{0}	$\mu g/m^3$	24 h	ANZECC
Arsenic	1.00×10^{-1}	$\mu g/m^3$	1 h	TEXAS
Cadmium	1.00×10^{-1}	$\mu g/m^3$	1 h	TEXAS
Chromium III	9.00×10^{0}	$\mu g/m^3$	1 h	NSW EPA
Chromium (VI)	1.00×10^{-1}	$\mu g/m^3$	1 h	NSW EPA
Lead	3.00×10^{0}	$\mu g/m^3$	1 h	VIC SEPP
Dioxins and furans	2.00×10^{-6}	$\mu g/m^3$	1 h	NSW EPA
Hydrogen chloride	2.10×10^{3}	$\mu g/m^3$	1 h	OEHHA
Beryllium	2.00×10^{-2}	$\mu g/m^3$	1 h	TEXAS
Copper	3.70×10^{0}	$\mu g/m^3$	1 h	NSW EPA
Nickel	6.00×10^{0}	$\mu g/m^3$	1 h	OEHHA
Boron	5.00×10^{1}	$\mu g/m^3$	1 h	TEXAS
Ammonia	3.20×10^{3}	$\mu g/m^3$	1 h	OEHHA
Benzene	2.90×10^{1}	$\mu g/m^3$	1 h	NSW EPA
Cumene	2.10×10^{1}	$\mu g/m^3$	1 h	NSW EPA
Toluene	3.77×10^{3}	$\mu g/m^3$	24 h	NEPC (AT)
Xylenes	1.09×10^{3}	$\mu g/m^3$	24 h	NEPC (AT)
Ethylbenzene	8.00×10^{3}	$\mu g/m^3$	1 h	NSW EPA

Notes:

(1) The shortest averaging time considered in the air dispersion modelling is 1-hour. Therefore the WHO 10-minute guideline of 500 $\mu g/m^3$ has been converted to an equivalent 1-hour average concentration of 350 $\mu g/m^3$ using the relationship of Hanna, Briggs and Hosker (1982). The 1-hour average concentration of 350 $\mu g/m^3$ was also referenced by the WHO in its 1987 edition of the Air Quality Guidelines for Europe (now superseded) as being equivalent to a 10-minute concentration of 500 $\mu g/m^3$.

Table 17: Health Protective Guidelines – Chronic Non-Carcinogenic Health Effects

Compound Name	Guideline	Units	Averaging Period	Reference
Sulphur dioxide	5.70×10^{1}	$\mu g/m^3$	Annual	NEPC
Nitrogen dioxide	6.20×10^{1}	$\mu g/m^3$	Annual	NEPC
PM_{10}	2.00×10^{1}	$\mu g/m^3$	Annual	WHO
$PM_{2.5}$	8.00×10^{0}	$\mu g/m^3$	Annual	NEPC
Polycyclic Aromatic Hydrocarbons (1)	3.00×10^{-4}	$\mu g/m^3$	Annual	NEPC (AT)
Mercury	1.00×10^{0}	$\mu g/m^3$	Annual	WHO
Fluoride	5.00×10^{-1}	$\mu g/m^3$	Annual	TEXAS
Arsenic	3.00×10^{-2}	$\mu g/m^3$	Annual	OEHHA
Cadmium	2.00×10^{-2}	$\mu g/m^3$	Annual	OEHHA
Chromium III	1.00×10^{-1}	$\mu g/m^3$	Annual	TEXAS
Chromium (VI)	1.00×10^{-1}	$\mu g/m^3$	Annual	IRIS
Lead	5.00×10^{-1}	$\mu g/m^3$	Annual	NEPC (AT)
Dioxins and furans	3.00×10^{-8}	$\mu g/m^3$	Annual	TEXAS
Hydrogen chloride	9.00×10^{0}	$\mu g/m^3$	Annual	OEHHA
Beryllium	7.00×10^{-3}	$\mu g/m^3$	Annual	OEHHA
Copper	1.00×10^{-1}	$\mu g/m^3$	Annual	TEXAS
Nickel	5.00×10^{1}	$\mu g/m^3$	Annual	OEHHA
Boron	5.00×10^{1}	$\mu g/m^3$	Annual	TEXAS
Ammonia	2.00×10^{2}	$\mu g/m^3$	Annual	OEHHA
Benzene	9.60×10^{0}	$\mu g/m^3$	Annual	NEPC (AT)
Cumene	4.00×10^{2}	$\mu g/m^3$	Annual	IRIS
Toluene	3.77×10^{2}	$\mu g/m^3$	Annual	NEPC (AT)
Xylenes	8.68×10^{2}	$\mu g/m^3$	Annual	NEPC (AT)
Ethylbenzene	2.00×10^{3}	$\mu g/m^3$	Annual	OEHHA

Notes:

(1) Air Toxics NEPM specifies an ambient Investigation Level for benzo[*a*]pyrene, which has been applied as a surrogate for PAHs.

It should be noted that some of the health protective guidelines applied in this assessment are taken from the Texas ESLs (2008 update), which tend to incorporate a particularly high level of conservatism and are not considered appropriate for use in deriving quantitative risk indicators for the assessment of potential health risks from exposure to multiple compounds. Notwithstanding this however, the ESLs cover a very extensive suite of compounds. Therefore, even though the ESLs are not health protective guidelines as such, they have been applied within this assessment to enable the potential health risks associated with these compounds to be qualitatively considered.

5.3.3.2 Carcinogenic Health Effects

A number of the compounds included in the screening assessment are classified by the IARC as Group 1 or Group 2A carcinogens, as presented in Table 18. The unit risk factors used in this assessment to calculate the incremental carcinogenic risk are also presented in Table 18.

Table 18: IARC Classification and Unit Risk Factors

Compound Name	Unit Risk Factor	Units	Reference	IARC Classification
Polycyclic Aromatic Hydrocarbons (1)	8.70×10^{-2}	per ng/m3	WHO	Group 1
Arsenic	1.50×10^{-3}	per µg/m3	WHO	Group 1
Cadmium	1.80×10^{-3}	per µg/m3	IRIS	Group 1
Chromium (VI)	4.00×10^{-2}	per µg/m3	WHO	Group 1
Lead	1.20×10^{-5}	per µg/m3	OEHHA	Group 2A/2B (2)
Beryllium	2.40×10^{-3}	per µg/m3	IRIS	Group 1
Nickel	3.80×10^{-4}	per µg/m3	WHO	Group 1
Benzene	6.00×10^{-6}	per µg/m3	WHO	Group 1

Notes:
(1) Benzo[*a*]pyrene unit risk factor applied as a surrogate for PAHs.
(2) Lead compounds, inorganic listed by IARC as Group 2A. Elemental lead listed by IARC as Group 2B.

Some individual PAHs are clearly carcinogenic and others appear not to cause cancer, but the majority of this large class of chemicals cannot be classified as to potential carcinogenicity due to lack of sufficient data. Benzo[a]pyrene is the most studied PAH compound, and is often used as a surrogate for other PAH compounds because of its relatively high environmental levels and high level of toxicity.

For the purposes of this assessment it has been assumed that all of the PAH emissions from both the Bluewaters Project and other regional sources are emitted as benzo[*a*]pyrene. This is considered to be a particularly conservative (i.e. health protective) assumption as published data indicates that at least 70% of PAHs emitted from power plants using fossil fuel are present in less toxic forms such as naphthalene, phenanthrene and derivatives (IPCS, 1998).

5.4 RISK CHARACTERISATION

Screening-level quantitative health risk indicators have been calculated for potential acute and chronic non-carcinogenic health effects, and carcinogenic risk for the proposed power station operating scenario involving the operation of all Bluewaters generating units (i.e. I to IV), considered cumulatively with other regional emission sources (Scenario 4b). These same quantitative health risk indicators have also been calculated for Scenario 1b, which represents the cumulative impacts associated with all existing and approved regional sources, including Bluewaters I and II as approved, to provide a baseline against which to compare the health impacts of the Bluewaters III and IV proposal.

5.4.1 Quantitative Risk Indicators

The Hazard Index (HI) is calculated to evaluate the potential for non-carcinogenic adverse health effects from simultaneous exposure to multiple compounds by summing the ratio of the estimated concentration in air to the health protective guidelines for individual compounds. The HI is calculated for acute (Equation 1) and chronic (Equation 2) exposures.

$$HI_{Acute} = \sum^{i} \frac{C_{\leq 24h}}{Gdl_{Acute}} \qquad \textbf{Equation 1}$$

$$HI_{Chronic} = \sum^{i} \frac{C_{Annual}}{Gdl_{Chronic}} \qquad \textbf{Equation 2}$$

HI_{Acute} = acute Hazard Index

$C_{\leq 24h}$ = Ground level concentration over an averaging period of typically ≤ 24-hours, matching the averaging time of the health protective guideline for compound (µg/m^3)

Gdl_{Acute} = acute health protective guideline for compound (µg/m^3)

$HI_{Chronic}$ = chronic Hazard Index

C_{Annual} = annual average ground level concentration for compound (µg/m^3)

$Gdl_{Chronic}$ = chronic health protective guideline for compound (µg/m^3)

The general rule of thumb for interpreting the HI is that:

- values less than one represent no cause for concern;
- values greater than one but less than 10 generally do not represent cause for concern because of the inherent conservatism embedded in the exposure and toxicity assessments; and
- values greater than ten may present some concern with respect to possible health effects (Toxikos, 2003).

The incremental carcinogenic risk provides an indication of the incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens, and is expressed as a unitless probability. The incremental carcinogenic risk for individual compounds is summed to calculate the potential total incremental carcinogenic risk from exposure to multiple compounds (Equation 3).

$$Risk = \sum_{1}^{i} C_{i\,Annual} \times \frac{EF \times ED}{AT} \times UR_i \qquad \textbf{Equation 3}$$

Where:

$Risk$ = lifetime incremental total cancer risk

C_{Annual} = annual average ground level concentration for compound (µg/m^3)

EF = exposure frequency (365 days/year)

ED = exposure duration (70 years)

AT = averaging time (365 days/year x 70 years, or 25,550 days)

UR_i = Unit Risk factor for compound (per µg/m^3)

The incremental carcinogenic risk that is considered acceptable varies amongst jurisdictions, typically ranging from one in a million ($1x10^{-6}$) to one in ten thousand ($1x10^{-4}$). The most stringent criterion of one in a million represents the USEPA's *de minimis*, or essentially negligible incremental risk level, and has therefore been adopted for this screening assessment as a conservative (i.e. health protective) indicator of acceptable carcinogenic risk.

5.4.2 Acute Non-Carcinogenic Effects

Table 19 presents the acute HIs calculated for the baseline (Scenario 1b) and proposed (Scenario 4b) emission scenarios and Figures 24 and 25 present the contours for the baseline and proposed emission scenarios respectively. Appendix B presents tables showing the contribution of individual compounds to the acute HIs.

Table 19: Summary of Acute Hazard Indices

Receptor	Baseline	Proposed	Receptor	Baseline	Proposed	Receptor	Baseline	Proposed
1	6.411	6.393	25	5.360	5.323	49	3.969	3.978
2	7.192	7.137	26	5.686	5.577	50	5.817	5.785
3	5.824	5.784	27	6.635	6.657	51	4.664	4.590
4	5.720	5.667	28	8.016	7.955	52	4.899	4.907
5	6.471	6.381	29	7.695	7.659	53	7.058	7.062
6	5.063	5.067	30	8.315	8.315	54	8.469	8.477
7	7.867	7.862	31	6.849	6.878	55	11.279	11.285
8	4.538	4.435	32	6.887	6.887	56	5.516	5.507
9	4.679	4.580	33	11.007	11.036	57	5.957	5.964
10	4.675	4.577	34	7.353	7.311	58	4.060	4.066
11	6.005	5.970	35	5.929	5.788	59	5.846	5.873
12	6.194	6.145	36	5.682	5.706	60	6.038	6.030
13	6.129	6.012	37	6.951	6.957	61	6.362	6.383
14	5.565	5.569	38	7.276	7.301	62	5.692	5.746
15	5.326	5.275	39	7.100	7.084	63	6.012	6.037
16	5.594	5.399	40	11.311	11.389	64	4.855	4.858
17	4.814	4.719	41	10.136	10.236	65	5.250	5.270

Receptor	Baseline	Proposed	Receptor	Baseline	Proposed	Receptor	Baseline	Proposed
18	4.906	4.785	42	4.313	4.230	66	6.746	6.751
19	4.473	4.441	43	5.143	4.926	67	7.219	7.232
20	4.814	4.750	44	5.148	4.885	68	7.080	7.197
21	4.805	4.763	45	5.092	4.973	69	8.164	8.071
22	4.935	4.873	46	4.921	4.860	70	7.108	7.107
23	5.015	4.938	47	4.967	4.958	71	5.459	5.494
24	7.264	7.276	48	5.069	5.051			
Max across modelled domain	Baseline	23.466						
	Proposed	23,253						

The data presented in Table 19 and Figures 24 and 25 show that the acute HIs for both the baseline and proposed emission scenarios are predicted to be greater than one for all of the discrete receptors with the maximally affected receptor being Receptor 40, located to the northwest of the Muja Power Station.

An analysis of the relative contribution of individual compounds to the acute HI indicates that beryllium, particulates (i.e. PM_{10} and $PM_{2.5}$) and sulphur dioxide are the major contributors to the acute HIs calculated for both the baseline and proposed emission scenarios. Further analysis of the data indicates that the Muja A and B emissions are a significant contributing source due to the high predicted ground level concentrations of beryllium and particulates. Table 20 presents the acute HIs for both the baseline and proposed emission scenarios adjusted to remove the predicted ground level concentrations associated with the Muja A and B power station[2].

Table 20: Summary of Acute Hazard Indices – Muja A and B Emissions Removed

Receptor	Baseline	Proposed	Receptor	Baseline	Proposed	Receptor	Baseline	Proposed
1	1.261	1.259	25	1.031	0.924	49	0.928	0.932
2	1.407	1.263	26	1.548	1.344	50	1.025	1.033
3	1.216	1.162	27	1.698	1.707	51	1.106	1.081
4	1.042	0.980	28	1.387	1.379	52	0.979	1.014
5	1.271	1.047	29	1.591	1.592	53	1.635	1.642
6	0.959	0.911	30	1.273	1.256	54	1.877	1.978
7	1.604	1.575	31	1.512	1.549	55	1.887	1.876
8	1.154	1.168	32	1.446	1.448	56	0.932	0.953

[2] Muja A and B were removed in the PM_{10} and $PM_{2.5}$ analysis by subtracting the predicted concentrations determined for Muja A and B in isolation based on a TAPM "reactive chemistry" run from those predicted for the cumulative run for each hour of the year and each grid point and then reanalysing the data. The cumulative impacts including Muja A and B were retained in the analysis for nitrogen dioxide, and ozone.

Receptor	Baseline	Proposed	Receptor	Baseline	Proposed	Receptor	Baseline	Proposed
9	1.576	1.451	33	1.717	1.721	57	0.953	0.914
10	1.495	1.392	34	1.358	1.350	58	0.747	0.740
11	1.227	1.172	35	1.548	1.329	59	1.222	1.106
12	1.309	1.282	36	1.394	1.337	60	0.930	0.899
13	1.314	1.194	37	1.157	1.114	61	1.014	1.042
14	1.085	1.100	38	1.319	1.338	62	1.067	1.085
15	1.416	1.380	39	1.156	1.157	63	0.972	0.988
16	1.455	1.352	40	1.492	1.427	64	0.905	0.905
17	1.453	1.332	41	1.332	1.352	65	0.950	0.951
18	1.670	1.538	42	1.416	1.219	66	1.203	1.219
19	1.325	1.245	43	1.446	1.242	67	1.171	1.218
20	1.300	1.194	44	1.185	0.955	68	1.059	1.193
21	1.278	1.205	45	0.987	0.888	69	1.114	1.107
22	1.144	1.081	46	1.004	0.881	70	1.165	1.130
23	1.114	1.076	47	1.027	0.997	71	1.042	1.016
24	1.194	1.105	48	1.069	0.991			
Max across modelled domain	Baseline	2.541						
	Proposed	2.516						

The data presented in Table 20 shows that the acute HIs predicted for the scenario where the Muja A and B emissions are removed are considerably lower than those calculated with the emissions included (i.e. Table 19) which demonstrates the significant predicted impacts of those emissions.

The data presented in Tables 19 and 20 show that the proposed Bluewaters III and IV project is predicted to result in similar or slightly reduced HIs across the model domain and the discrete receptors.

Further analysis of the calculated HIs for the case with the Muja A and B emission removed (see Appendix B) show that sulphur dioxide was the major contributor to the HIs presented in Table 20 and the percentage contributions for each receptor are presented in Table 21. PM_{10} was typically the second largest contributor to the calculated acute HIs for each receptor ranging from 5% to 29% under this scenario.

Table 21: Contribution of Sulphur Dioxide to Acute Hazard Index – Baseline and Proposed Emission Scenario with Muja A and B Emissions Removed

Receptor	Baseline	Proposed	Receptor	Baseline	Proposed	Receptor	Baseline	Proposed
1	53%	53%	25	54%	49%	49	54%	1
2	51%	45%	26	49%	41%	50	54%	2
3	49%	47%	27	36%	36%	51	59%	3
4	54%	50%	28	45%	46%	52	47%	4
5	57%	47%	29	47%	47%	53	40%	5
6	56%	52%	30	51%	51%	54	44%	6
7	43%	42%	31	43%	44%	55	55%	7
8	62%	59%	32	48%	48%	56	54%	8
9	59%	56%	33	51%	51%	57	54%	9
10	59%	57%	34	57%	57%	58	53%	10
11	57%	53%	35	49%	41%	59	52%	11
12	56%	54%	36	45%	42%	60	54%	12
13	59%	54%	37	50%	50%	61	54%	13
14	54%	53%	38	49%	48%	62	54%	14
15	57%	55%	39	54%	55%	63	55%	15
16	60%	57%	40	53%	55%	64	54%	16
17	58%	54%	41	58%	57%	65	56%	17
18	53%	51%	42	52%	44%	66	52%	18
19	51%	49%	43	62%	55%	67	55%	19
20	48%	44%	44	60%	56%	68	51%	20
21	47%	44%	45	58%	52%	69	55%	21
22	52%	49%	46	57%	52%	70	57%	22
23	60%	59%	47	49%	47%	71	56%	23
24	50%	46%	48	57%	53%			
Max across modelled domain	Baseline	66%						
	Proposed	63%						

A review of the compound contribution to the calculated acute HIs for each of the discrete receptors (see Appendix B) shows that the 99.9th percentile 1-hour average ground level concentration of sulphur dioxide is predicted to exceed 350 µg/m^3 (based on an individual hazard quotient of more than one) at 10 of the 71 discrete receptor locations when the Muja A and B emissions are included and only at one discrete receptor (i.e. Receptor 55) when the Muja A and B emissions are removed. The 10 receptors (which includes Receptor 55), with the exception of Receptor 16, are in the vicinity of the Muja Power Station. The air dispersion modelling indicates the emissions from Muja A and B are predicted to have a significant impact over the model domain and its removal is predicted to result in a very significant improvement in the ambient air quality, particularly in the vicinity of the Muja Power Station.

The changes in the acute HIs resulting from the Bluewaters III and IV Power Station emissions are small and the implementation generally shows a slight reduction in the predicted HIs across the model domain due to the increased stack height and improved buoyancy of the emission.

In summary, the calculated acute HIs determined from the predicted ground level concentrations resulting from the industrial emissions included in the model are significantly influenced by the Muja A and B Power Station, primarily as a result of its beryllium, particulates and sulphur dioxide emissions. Removing the Muja A and B emissions from the analysis (which is reflective of the period following their initial decommissioning in April 2007) shows that the emissions of sulphur dioxide are predicted to become the primary contributor to the acute HIs concentrations. This confirms that, excluding the Muja A and B emissions, sulphur dioxide is the primary industrial pollutant of concern in the Collie Region as noted in Section 2.5.1.1. The analysis indicates that the hazard quotient for sulphur dioxide is generally only predicted to exceed one at the discrete receptors in the vicinity of the Muja Power Station and that without the Muja A and B emissions the 99.9th percentile 1-hour average ground level concentration of sulphur dioxide is predicted to exceed 350 µg/m^3 at only one discrete receptor to the east of the Muja Power Station.

On the basis of this analysis, it is concluded the predicted cumulative impacts arising from the Bluewaters III and IV Power Station are acceptable in terms of potential acute health effects for the Collie region as the predicted impacts are dominated by the Muja A and B emissions and the proposed development does not significantly affect these impacts.

5.4.3 Chronic Non-Carcinogenic Effects

Table 22 presents the chronic HIs calculated for the baseline (Scenario 1b) and proposed (Scenario 4b) emission scenarios with Figures 26 and 27 presenting the contours of the calculated chronic HIs. Appendix B presents tables showing the contribution of individual compounds to the chronic HIs for the baseline and proposed emission scenarios.

Table 22: Summary of Chronic Hazard Indices

Receptor	Baseline	Proposed	Receptor	Baseline	Proposed	Receptor	Baseline	Proposed
1	0.812	0.874	25	0.865	0.927	49	0.483	0.520
2	0.778	0.823	26	0.832	0.866	50	0.548	0.582
3	0.700	0.716	27	0.759	0.814	51	0.559	0.593
4	0.830	0.886	28	0.868	0.936	52	0.528	0.571
5	0.875	0.918	29	0.946	1.019	53	0.807	0.869
6	0.760	0.819	30	0.765	0.824	54	0.961	1.039
7	0.929	0.991	31	0.625	0.669	55	1.023	1.106
8	0.675	0.677	32	0.662	0.709	56	0.441	0.474
9	0.711	0.716	33	0.961	1.041	57	0.639	0.685
10	0.736	0.726	34	0.691	0.748	58	0.497	0.522
11	0.645	0.683	35	0.823	0.810	59	0.807	0.853

Receptor	Baseline	Proposed	Receptor	Baseline	Proposed	Receptor	Baseline	Proposed
12	0.677	0.715	36	0.839	0.884	60	0.868	0.944
13	0.656	0.694	37	1.007	1.092	61	0.962	1.043
14	0.560	0.598	38	0.660	0.708	62	0.765	0.821
15	0.606	0.631	39	0.720	0.773	63	0.699	0.748
16	0.625	0.654	40	1.024	1.113	64	0.679	0.730
17	0.654	0.677	41	1.031	1.121	65	0.630	0.674
18	0.757	0.760	42	0.599	0.605	66	1.049	1.133
19	0.661	0.675	43	0.749	0.756	67	1.105	1.200
20	0.549	0.581	44	0.725	0.747	68	1.071	1.163
21	0.567	0.600	45	0.730	0.774	69	0.855	0.926
22	0.531	0.563	46	0.713	0.757	70	0.856	0.925
23	0.544	0.575	47	0.743	0.800	71	0.847	0.913
24	0.924	0.986	48	0.770	0.814			
Max across modelled domain	Baseline	2.825						
	Proposed	3.120						

Table 22 and Figures 26 and 27 shows that the chronic HIs calculated for the baseline and proposed emission scenario are predicted to be exceed one at a number of discrete receptors in the vicinity of the Muja Power Station. The major contributing substances are predicted to be particulates (both PM_{10} and $PM_{2.5}$), sulphur dioxide, beryllium, and fluoride.

As for the analysis of the acute HIs, the emissions from Muja A and B were predicted to be a major contributor to the chronic HIs. The removal of Muja A and B emissions from the analysis results in the maximum chronic HI predicted across the model domain to reduce to 0.531 and 0.428 for the baseline and proposed scenarios respectively. Under this scenario, the emissions of sulphur dioxide, nitrogen dioxide, and fluoride are the primary contributors, with sulphur dioxide generally being predicted to be the major contributor.

Appendix B presents the individual non-carcinogenic chronic hazard quotients for all of the substances included in the analysis which shows that the predicted annual average concentrations are all well below their respective ambient standards (as indicated by a hazard quotient of less than one) at all of the receptors, indicating no cause for concern.

5.4.4 Carcinogenic Effects

Table 23 presents the incremental carcinogenic risk calculated for the baseline (Scenario 1b) and proposed (Scenario 4b) emission scenarios with Figures 28 and 29 presenting the contours of the incremental carcinogenic risk. Appendix B presents tables showing the contribution of individual compounds to the incremental carcinogenic risk for the baseline and proposed emission scenarios.

Table 23: Summary of Incremental Carcinogenic Risk

Receptor	Baseline	Proposed	Receptor	Baseline	Proposed	Receptor	Baseline	Proposed
1	3.94×10^{-6}	3.92×10^{-6}	25	4.22×10^{-6}	4.21×10^{-6}	49	2.26×10^{-6}	2.30×10^{-6}
2	3.59×10^{-6}	3.59×10^{-6}	26	3.74×10^{-6}	3.75×10^{-6}	50	2.62×10^{-6}	2.65×10^{-6}
3	3.14×10^{-6}	3.10×10^{-6}	27	3.50×10^{-6}	3.50×10^{-6}	51	2.51×10^{-6}	2.55×10^{-6}
4	4.07×10^{-6}	4.06×10^{-6}	28	4.00×10^{-6}	4.01×10^{-6}	52	2.48×10^{-6}	2.52×10^{-6}
5	4.12×10^{-6}	4.10×10^{-6}	29	4.38×10^{-6}	4.39×10^{-6}	53	3.72×10^{-6}	3.73×10^{-6}
6	3.64×10^{-6}	3.68×10^{-6}	30	3.56×10^{-6}	3.56×10^{-6}	54	4.45×10^{-6}	4.45×10^{-6}
7	4.32×10^{-6}	4.31×10^{-6}	31	2.85×10^{-6}	2.85×10^{-6}	55	4.77×10^{-6}	4.76×10^{-6}
8	3.07×10^{-6}	3.04×10^{-6}	32	3.03×10^{-6}	3.03×10^{-6}	56	2.08×10^{-6}	2.08×10^{-6}
9	3.16×10^{-6}	3.15×10^{-6}	33	4.54×10^{-6}	4.54×10^{-6}	57	3.05×10^{-6}	3.05×10^{-6}
10	3.26×10^{-6}	3.20×10^{-6}	34	3.27×10^{-6}	3.26×10^{-6}	58	2.31×10^{-6}	2.30×10^{-6}
11	2.87×10^{-6}	2.92×10^{-6}	35	3.57×10^{-6}	3.48×10^{-6}	59	3.71×10^{-6}	3.74×10^{-6}
12	2.94×10^{-6}	2.99×10^{-6}	36	3.81×10^{-6}	3.85×10^{-6}	60	4.22×10^{-6}	4.24×10^{-6}
13	2.90×10^{-6}	2.94×10^{-6}	37	4.89×10^{-6}	4.90×10^{-6}	61	4.69×10^{-6}	4.69×10^{-6}
14	2.60×10^{-6}	2.63×10^{-6}	38	3.04×10^{-6}	3.05×10^{-6}	62	3.68×10^{-6}	3.68×10^{-6}
15	2.62×10^{-6}	2.66×10^{-6}	39	3.35×10^{-6}	3.36×10^{-6}	63	3.38×10^{-6}	3.38×10^{-6}
16	2.73×10^{-6}	2.76×10^{-6}	40	4.93×10^{-6}	4.94×10^{-6}	64	3.28×10^{-6}	3.29×10^{-6}
17	2.76×10^{-6}	2.80×10^{-6}	41	5.00×10^{-6}	5.01×10^{-6}	65	3.05×10^{-6}	3.05×10^{-6}
18	3.14×10^{-6}	3.14×10^{-6}	42	2.71×10^{-6}	2.69×10^{-6}	66	5.08×10^{-6}	5.08×10^{-6}
19	2.82×10^{-6}	2.84×10^{-6}	43	3.39×10^{-6}	3.36×10^{-6}	67	5.38×10^{-6}	5.38×10^{-6}
20	2.47×10^{-6}	2.51×10^{-6}	44	3.38×10^{-6}	3.36×10^{-6}	68	5.23×10^{-6}	5.24×10^{-6}
21	2.53×10^{-6}	2.56×10^{-6}	45	3.45×10^{-6}	3.47×10^{-6}	69	4.14×10^{-6}	4.15×10^{-6}
22	2.44×10^{-6}	2.48×10^{-6}	46	3.42×10^{-6}	3.43×10^{-6}	70	4.15×10^{-6}	4.15×10^{-6}
23	2.54×10^{-6}	2.56×10^{-6}	47	3.64×10^{-6}	3.66×10^{-6}	71	4.11×10^{-6}	4.11×10^{-6}
24	4.48×10^{-6}	4.48×10^{-6}	48	3.58×10^{-6}	3.60×10^{-6}			
Max across modelled domain	Baseline	1.40×10^{-5}						
	Proposed	1.40×10^{-5}						

Table 23 and Figures 28 and 29 show that the incremental carcinogenic risk calculated for the proposed emission scenario is predicted to exceed the USEPA's *de minimus* incremental risk threshold of one in a million (i.e. 1 $x10^{-6}$) across the model domain. The primary contributing substances to this are beryllium (between 31% to 51% contribution at the discrete receptors for the proposed emissions scenario) and PAHs (between 11% and 27% at the discrete receptors for the proposed emissions scenario) with hexavalent chromium and arsenic contributing up to 17% and 15% respectively (Appendix B).

As for the acute and chronic non-carcinogenic HI analysis, the emissions from Muja A and B are the major contributor to the calculated incremental carcinogenic risk. The removal of the Muja A and B emissions results in incremental carcinogenic risk for the model domain reducing

to 1.28 x 10^{-6} and 1.15 x 10^{-6} for the baseline and proposed scenarios respectively. Under this scenario (i.e. no Muja A and B emission), an analysis of the relative contribution of individual compounds to the incremental carcinogenic risk (Appendix B) indicates that for the proposed emission scenario over 70% is attributable to the emissions of PAHs. However this is considered likely to be an artefact of the particularly conservative treatment of PAH emissions applied in this assessment. Similarly, the relatively high contribution of chromium (<19%) to the incremental carcinogenic risk is also likely to be influenced by the conservative assumption related to hexavalent chromium emissions applied in this assessment.

In summary, the modelling results indicate that Muja A and B is predicted to be the dominant source influencing the incremental carcinogenic risks over the model domain primarily as a result of the emissions of beryllium, arsenic and hexavalent chromium which are relatively high due to the absence of any particulate scrubbing of the emissions. The calculated incremental carcinogenic risks show that the proposed Bluewaters III and IV Power Station is not predicted to result in cumulative impacts that provide any cause for concern.

5.5 UNCERTAINTIES ASSOCIATED WITH CALCULATED RISKS

The risk assessment process relies on a set of assumptions and estimates with varying degrees of certainty and variability. Major sources of uncertainty in risk assessment include:

- natural variability (e.g., differences in body weight in a population);
- lack of knowledge about basic physical, chemical, and biological properties and processes; and
- assumptions in the models used to estimate key inputs (e.g., emissions, air dispersion modelling, and dose-response models).

Perhaps the greatest single source of uncertainty in risk assessment is the chemicals' dose-response relationships, particularly carcinogenic unit risks.

For this screening assessment, uniformly conservative assumptions have been used, where possible, to ensure that potential exposures and associated health risks are over- rather than under-estimated. As a result of the resulting compounding of conservatism, the quantitative risk indicators are considered to be over-estimates, with the actual risk likely to be lower as a result of the atmospheric emissions from the industrial sources modelled.

The calculated acute HIs have only considered the emissions from the large industrial point sources in the Collie region and have not considered the potential impacts from other sources such as mines, bushfires and wood heaters which could result in higher overall acute HIs. Based on the available ambient monitoring data, the most notable of these is PM_{10} (Section 1.3.3) indicates that high ambient concentrations of PM_{10} have periodically been recorded at Roche Park in Collie most likely due to smoke from bushfires, burning of domestic rubbish, or wood heaters. Therefore, there may be times where non-industrial emissions contribute to the overall potential health impacts resulting from ambient air quality.

5.5.1 Emissions Characterisation and Quantification Uncertainty

There is uncertainty associated with the identification and quantification of atmospheric emissions from the Bluewaters Power Station and other regional point emission sources included in the modelling.

The compounds considered in this screening assessment are confined to the compounds listed in Section 2.4.1 and were selected based on the availability of emissions information for all power station sources in the Collie region.

The emissions rates for Bluewaters III and IV are estimates based on average emission factors provided by the plant manufacturers, or are derived from NPI emission factors. It is recommended that once the Bluewaters generating units are commissioned, a comprehensive stack monitoring program is undertaken to verify these estimates.

In the absence of information on the speciation of PAH emissions from the Bluewaters Project and other regional sources, and chromium emissions from the Bluewaters Project, conservative (i.e. health protective) assumptions have been applied to these groups of compounds, as discussed in Section 5.3.3.2 (PAHs) and Section 2.4.1 (chromium), tending to result in an over-estimate of the incremental carcinogenic risk associated with both the baseline and proposed emissions scenarios.

The emissions from Muja A and B are predicted to result in high ground level concentrations for a range of contaminants including particulates (i.e. PM_{10} and $PM_{2.5}$), beryllium, arsenic, and hexavalent chromium. The emission rates used in the modelling for these parameters were taken from SKM (2005) and are higher than other coal fired power stations in the area due to the absence of particulate scrubbing (e.g. electrostatic precipitator or bag-house) on Muja A and B. The modelling has also assumed that all four units associated with Muja A and B were operating at full capacity continuously. However, currently only three of the four units have been recommissioned since they were originally shutdown in April 2007.

5.5.2 Estimation of Exposure Concentration Uncertainty

The air dispersion modelling was completed using the TAPM model to predict the concentration of compounds in ambient air at discrete receptor locations. As is the case with any air dispersion model, the prediction of ground level concentration is subject to some error due to the assumptions inherent in the model.

The acute HIs were calculated based on the 9th highest (or 99.9th percentile 1-hour) and 99.5th percentile (or second highest) 24-hour predicted ground level concentrations. Concentrations in air at or above the 99.9th percentile are predicted to occur for less than 0.1% of the time, and the 99.5th percentile predicted ground level concentration to occur for less than 0.5% of the time. Therefore, for the vast majority of the year, the potential acute health effects are expected to be less significant than the calculated acute HIs suggest. It should also be noted that the predicted 9th highest 1-hour average ground level concentration is often considered to be representative of the actual maximum ambient concentration that may be experienced.

5.5.3 Exposure Assumptions Uncertainty

To calculate the incremental carcinogenic risk it has been assumed that residents located at the discrete receptor locations spend every hour of every day outdoors at that location for 70 years. Clearly, these exposure conditions are unlikely to be realised, with the actual exposure concentration in the indoor environment is typically expected to be lower than experienced in outdoor air, and the exposure frequency (i.e. days per year) and exposure duration (years) likely to be considerably lower as people move about.

The screening assessment has been confined to exposure via the inhalation pathway. There is therefore a potential that total exposure to specific compounds has been underestimated. An assessment of the potential exposure via alternative exposure routes is beyond the scope of this assessment.

5.5.4 Toxicity Assessment Uncertainty

The primary uncertainties associated with the toxicity assessment are related to the derivation of the health protective guidelines. Health protective guidelines published by reputable authorities which have been derived by applying various conservative (i.e. health protective) assumptions have been applied for this assessment. The extrapolation of animal bioassay results or occupational exposure studies to human risk at much lower levels of exposure involves a number of assumptions regarding effect threshold, interspecies extrapolation, high-to low-dose extrapolation, and route-to-route extrapolation. The scientific validity of these assumptions is uncertain because each of the individual extrapolations are intended to prevent underestimation of risk; in concert they result in unquantifiable but potentially very significant overestimation of risk.

It should be noted that some of the health protective guidelines applied in this assessment are taken from the Texas ESLs (2008 update), which tend to incorporate a particularly high level of conservatism and are not considered appropriate for use in deriving quantitative risk indicators for the assessment of potential health risks from exposure to multiple compounds. Notwithstanding this however, the ESLs cover a very extensive suite of compounds and therefore, even though the ESLs are not health protective guidelines as such, they have been applied within this assessment to enable the potential health risks associated with these compounds to be qualitatively considered. Of particular note in this regard, is that beryllium is predicted to be a major contributor to the acute HIs (when Muja A and B emissions are included) and the 1-hour guideline used in this assessment is based on the ESL.

5.5.5 Risk Characterisation Uncertainty

It should be noted that the summing of the quantitative risk indicators for individual compounds to calculate the overall risk from exposure to multiple compounds does not take into account that different compounds can target different organs and therefore the potential health risk arising from exposure to multiple compounds is not necessarily additive, nor does it account for potential antagonistic or synergistic effects. However, the additive approach is considered to be appropriate for screening assessment purposes, and is considered to be conservative (i.e. health protective) in most circumstances.

6. CONCLUSIONS

Air dispersion modelling and a screening-level health risk assessment has been conducted to assess the potential air quality impacts in the Collie region associated with the expansion of the Bluewaters Project. The air quality impacts have been assessed for the Bluewaters Project in isolation for a number of potential operating scenarios, and cumulatively with other existing and approved industrial sources in the Collie region.

The key findings of the air dispersion modelling are:

- the predicted ground level concentrations of sulphur dioxide, PM_{10} and $PM_{2.5}$ are significantly impacted by the emissions from Muja Power Station, particularly Stages A and B;

- the maximum 1-hour average ground level concentration of sulphur dioxide is predicted to exceed the NEPM standard for both the baseline scenario (i.e. prior to the development of Bluewaters III and IV), and for all of the cumulative impacts resulting from the proposed operating scenarios considered in the modelling. However these exceedances are mainly attributable to emissions from the Muja Power Station, and the maximum concentration predicted across the model domain are not significantly affected by Bluewaters III and IV; and

- the cumulative ground level concentrations of nitrogen dioxide, carbon monoxide and ozone are predicted to comply with the ambient standards set out in the NEPM for Ambient Air Quality.

The results of the air dispersion modelling indicate that the development of Bluewaters III and IV is generally predicted to result in no change, or a reduction in the predicted maximum 1-hour and 24-hour, and annual average ground level concentrations of sulphur dioxide compared to the baseline scenario. The modelling results predict a reduction in the maximum predicted 1-hour average concentrations in the area to the northeast of Collie when compared to the baseline scenario. The reduction in the predicted ground level concentrations occurs as a result of an improvement in the dispersion characteristics of the Bluewaters I and II emissions due to the increased stack height, and increase in plume buoyancy achieved by combining the flue gas streams with the Bluewaters III and IV emissions.

The key findings of the screening-level health risk assessments are:

- the acute HIs are predicted to exceed one over the model domain including all of the discrete receptors for both the baseline and proposed scenarios primarily due to the predicted impacts of the emissions of particulates (PM_{10} and $PM_{2.5}$) and beryllium from Muja A and B. Removing the Muja A and B emissions from the analysis results in a significant reduction in the calculated acute HI with the emissions of sulphur dioxide predicted to become the primary contributor to the acute HIs;

- the acute hazard quotient for sulphur dioxide with Muja A and B included is generally only predicted to exceed one at a number of discrete receptors in the vicinity of the Muja

Power Station. Without the Muja A and B emissions included in the analysis, the 99.9th percentile 1-hour average ground level concentration of sulphur dioxide is predicted to exceed 350 µg/m^3 at only one discrete receptor to the east of the Muja Power Station;

- the chronic HIs are predicted to exceed one at a number of discrete receptor locations around the Muja Power Station, primarily due to the emissions from Muja A and B. Sulphur dioxide, particulates (both PM_{10} and $PM_{2.5}$), beryllium and fluoride were the predicted to be the major contributing substances. The removal of Muja A and B emissions from the analysis results in the chronic HIs predicted across the model domain all being less than one indicating no cause for concern arising from the other emission sources modelled;

- the incremental carcinogenic risk is predicted to be greater than one in a million across the majority of the model domain primarily due to the emissions of beryllium and PAHs from Muja A and B. The removal of the Muja A and B resulted in a significant reduction in the predicted incremental carcinogenic risk to a level below the USEPA's *de minimus* incremental risk threshold of one in a million (i.e. 1 x10^{-6}) across the majority of the model domain; and

- with the removal of the Muja A and B emissions, the emissions of PAHs were found to be the most significant contributor to the calculated incremental carcinogenic risk (over 70% for the proposed scenario) and this is likely to be an artefact of the particularly conservative treatment of PAH emissions applied in this assessment.

As with any risk evaluation, there are areas of uncertainty in this screening assessment. To ensure that potential risks are not underestimated, conservative assumptions have been used to characterise exposure and toxicity where possible. Due to the resultant compounding of conservatism, it is considered likely that the quantitative risk indicators calculated in the screening assessment over-estimate potential health risks in the Collie region associated with the emissions from the industrial sources modelled.

It can be concluded from the results of the screening-level health risk assessment that the predicted cumulative impacts arising from the Bluewaters III and IV Power Station result in little to no change to the acute, chronic non-carcinogenic health effects and incremental carcinogenic risk in the Collie region. The modelling results also indicate that the emissions from Muja A and B are predicted to have significant impacts over the modelling domain primarily due to the emissions of particulates (both PM_{10} and $PM_{2.5}$), beryllium and PAHs that are high as there is no particulate scrubbing on the Muja A and B emissions prior to discharge.

7. REFERENCES

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FIGURES

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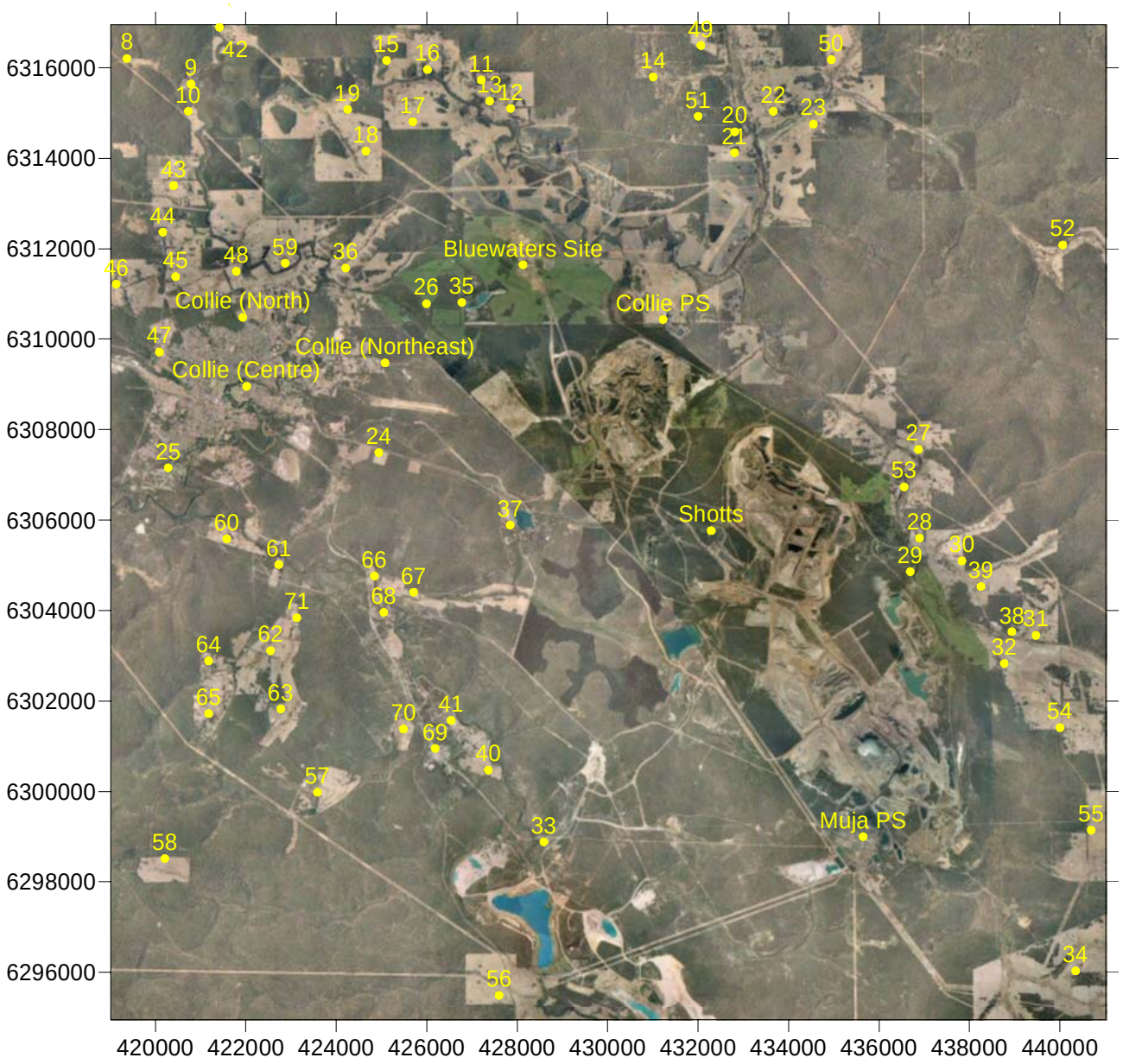
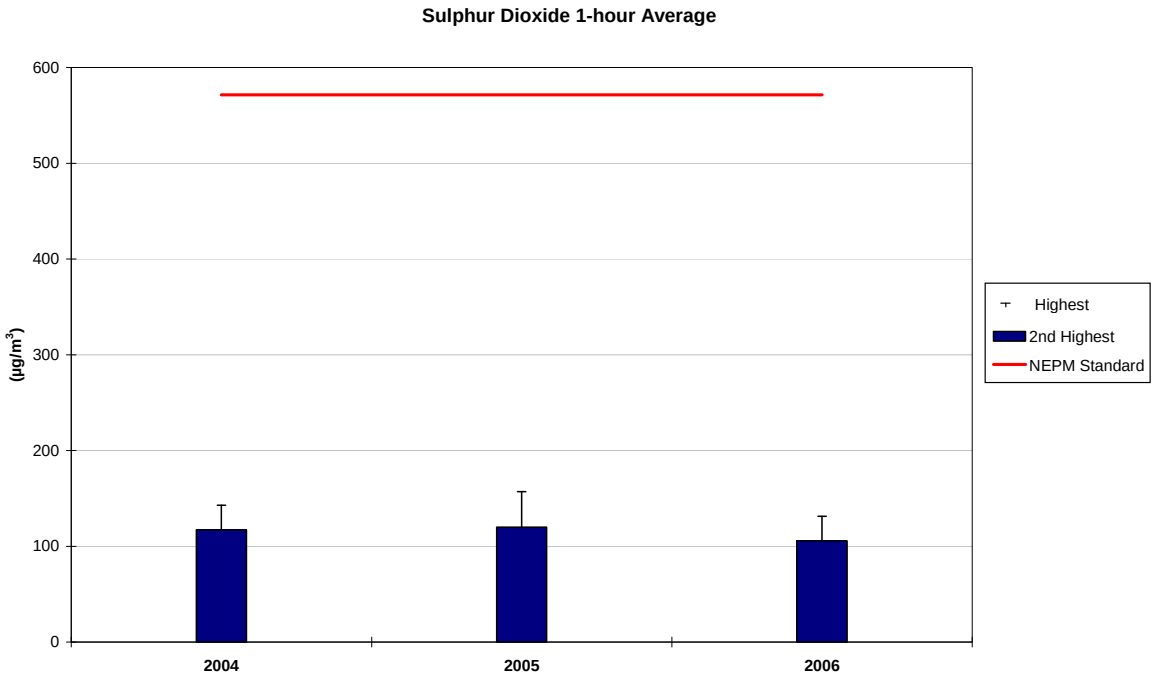
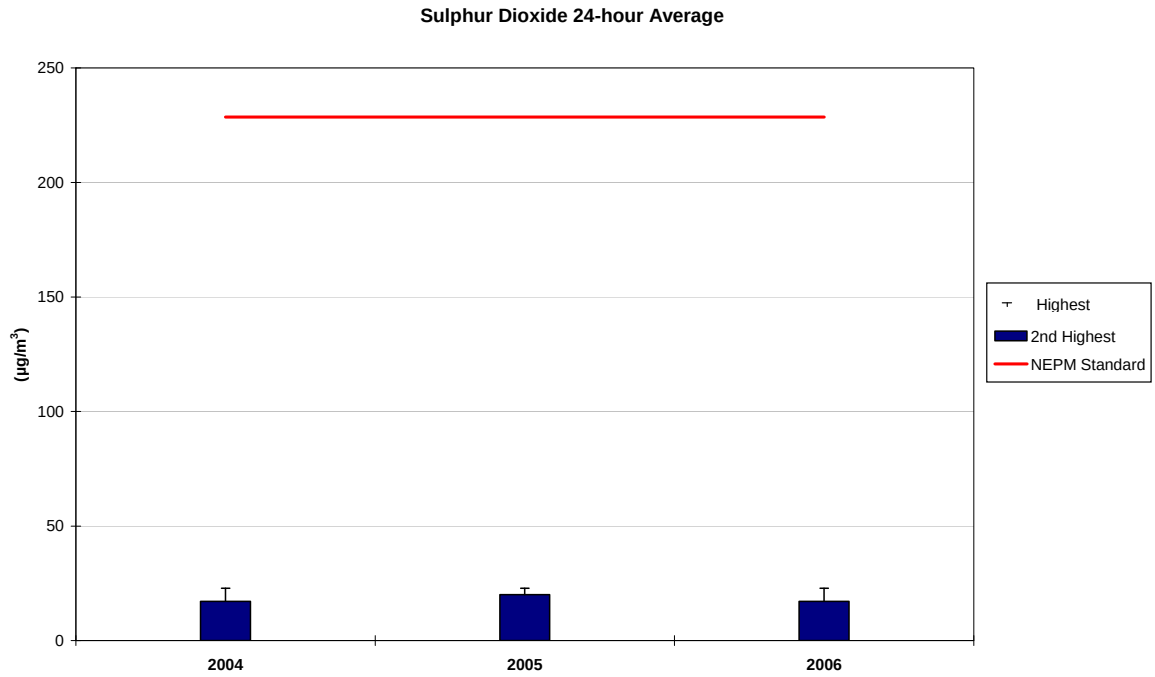


Figure 1. Site Location and Nominated Receptors for Air Modelling Assessment

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 11 Mar 09

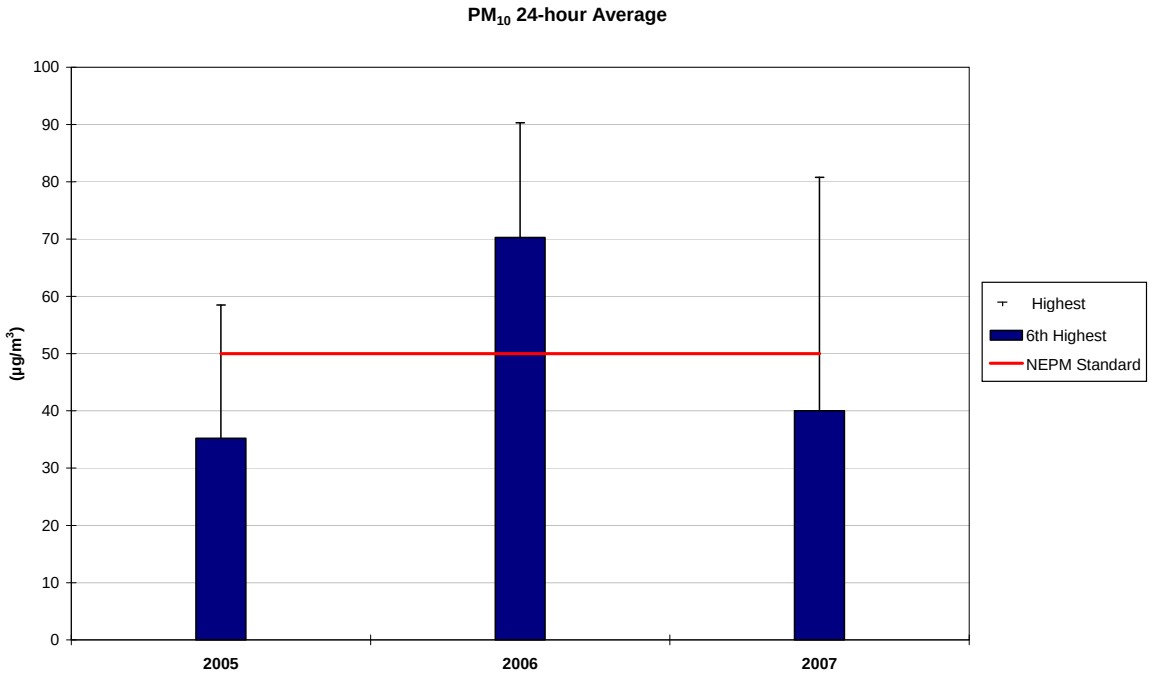


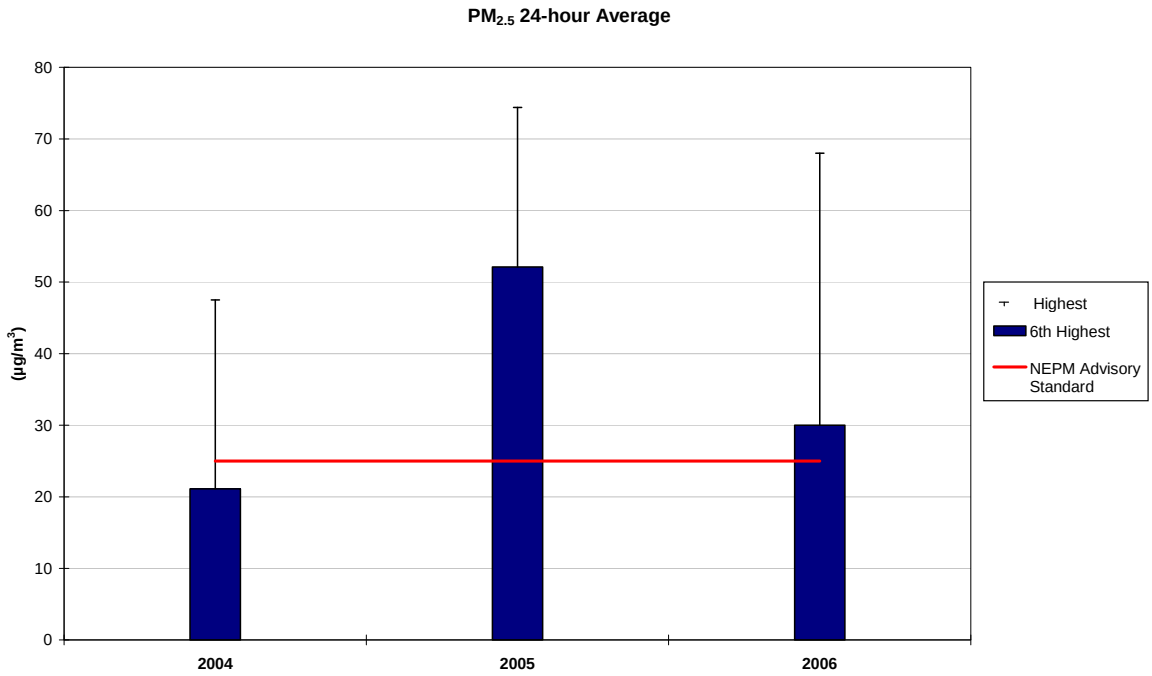


Year	Number of Exceedances (days)		Annual Average (µg/m^3) [NEPM Standard 57 µg/m^3]	Data Recovery (%)
	1-hour	24-hour		
2004	0	0	2.8	99.6
2005	0	0	2.5	99.6
2006	0	0	2.8	99.5

Figure2a. Ambient Sulphur Dioxide Monitoring Data for Roche Park, Collie

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: KH	Date: 16 Apr 08

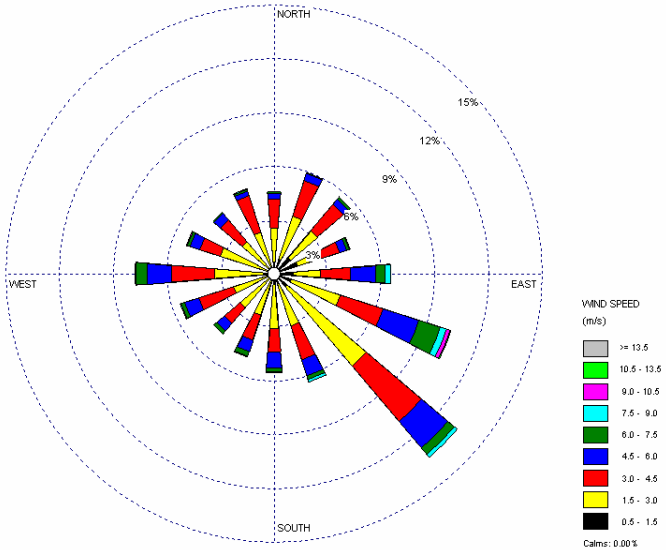




Year	Number of Exceedances (days)		$PM_{2.5}$ Annual Average (µg/m^3) [NEPM Advisory Standard 8 µg/m3]	Data Recovery (%)
	PM_{10}	$PM_{2.5}$		
2005	1	3	10.0	49
2006	9	14	10.8	99
2007	3	9	9.0	99

Figure2b. Ambient Particulate Matter Monitoring Data for Roche Park, Collie

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: KH	Date: 16 Apr 08



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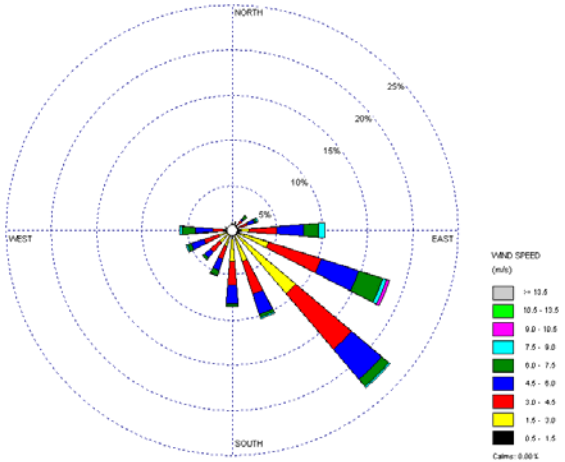

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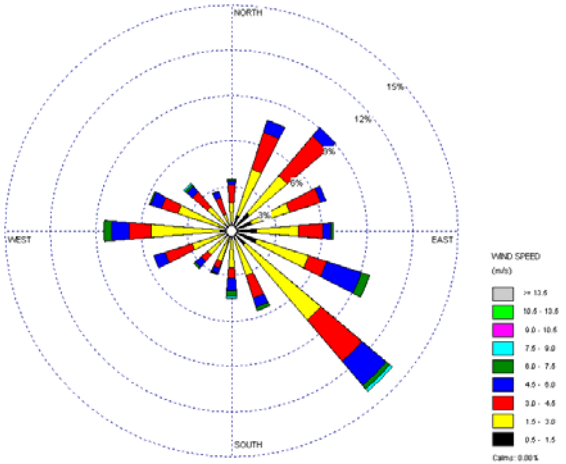

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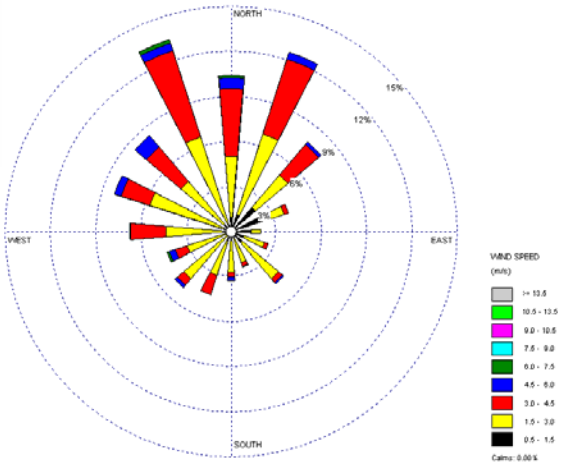

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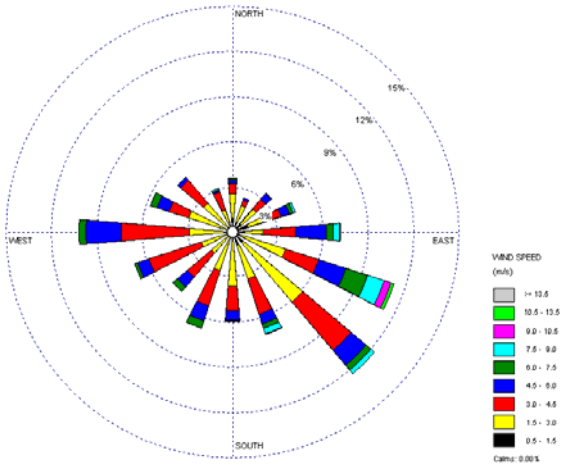
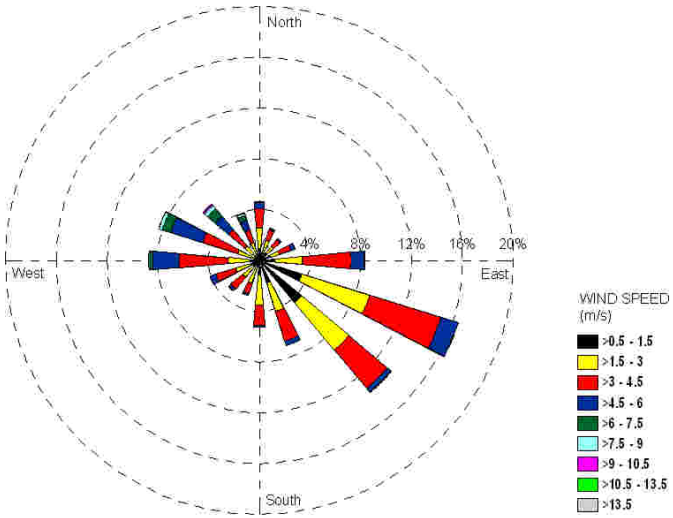


SPRING

Figure 3a. Annual and Seasonal Wind Roses for Collie (derived from TAPM Predictions for 2001)

Client: Devereaux Holdings	ENVIRON	
Project: Bluewaters III & IV Expansion	Drawing Ref: MP	Date: 10 Jan 08



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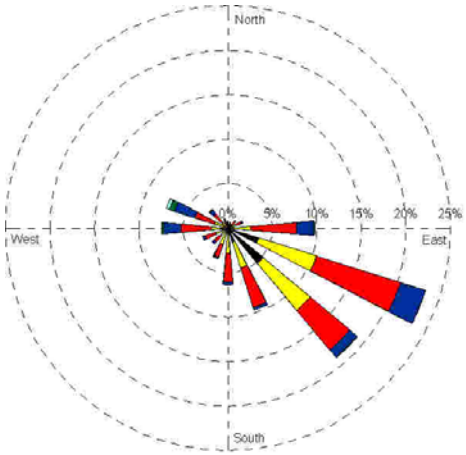

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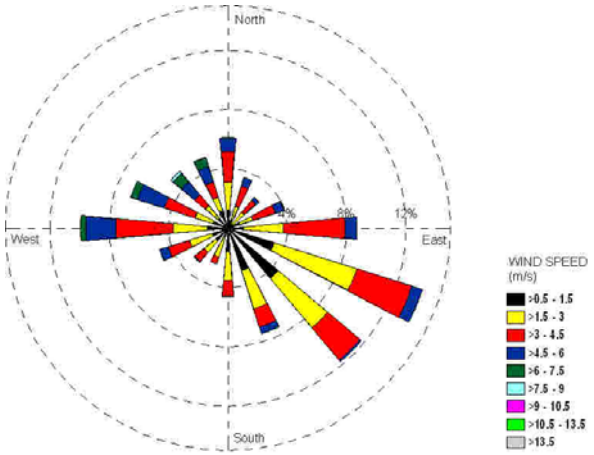

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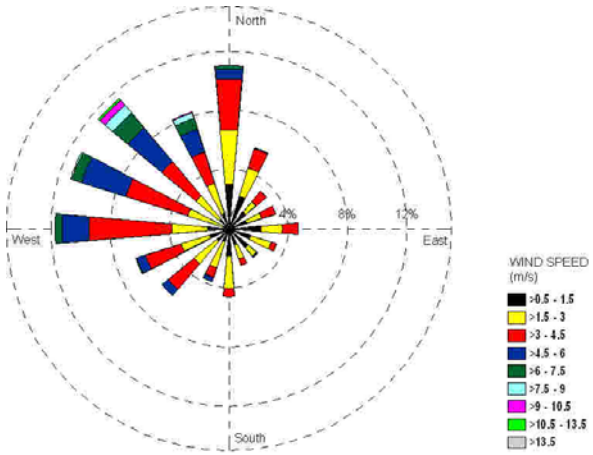

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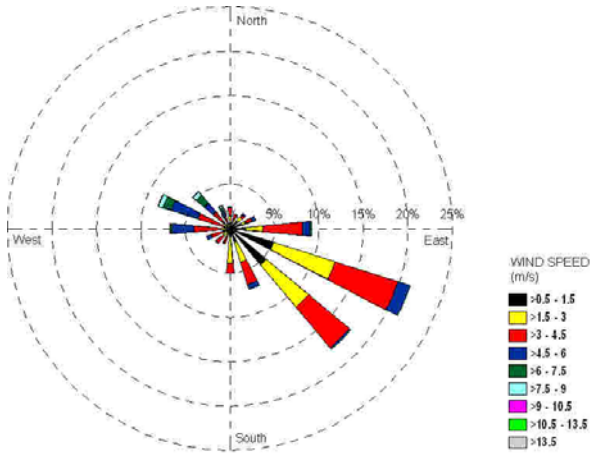
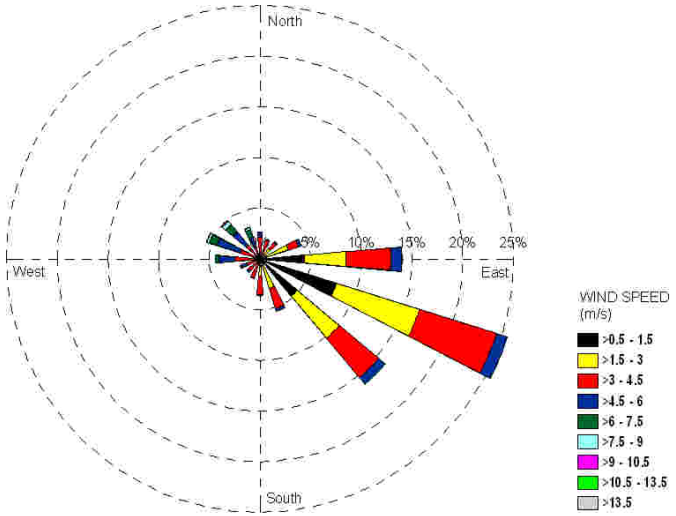


SPRING

Figure 3b. Annual and Seasonal Wind Roses for Collie (derived from BoM East Collie Monitoring Station 2003)

Client: Devereaux Holdings	ENVIRON	
Project: Bluewaters III and IV Expansion	Drawing Ref: MP	Date: 10 Jan 08



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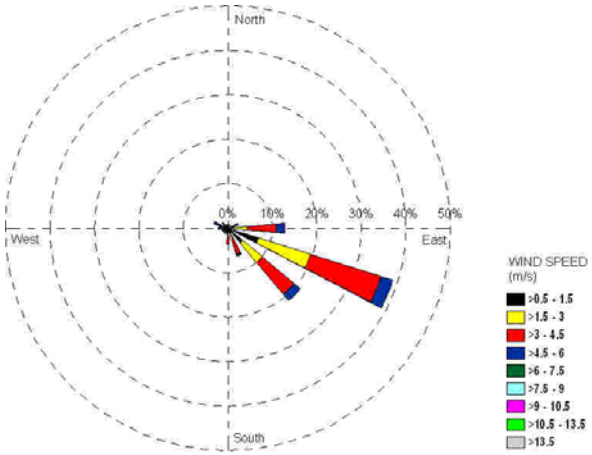

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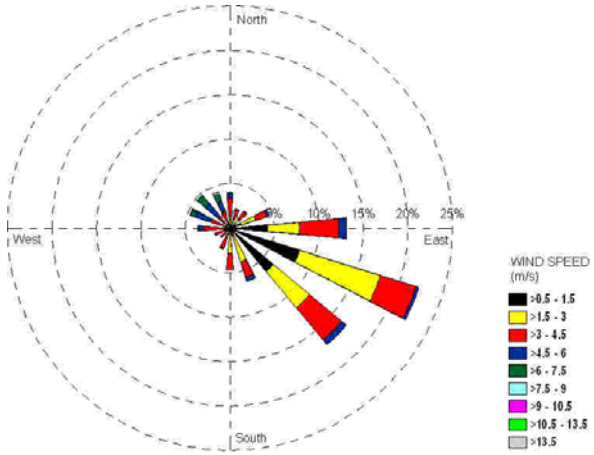

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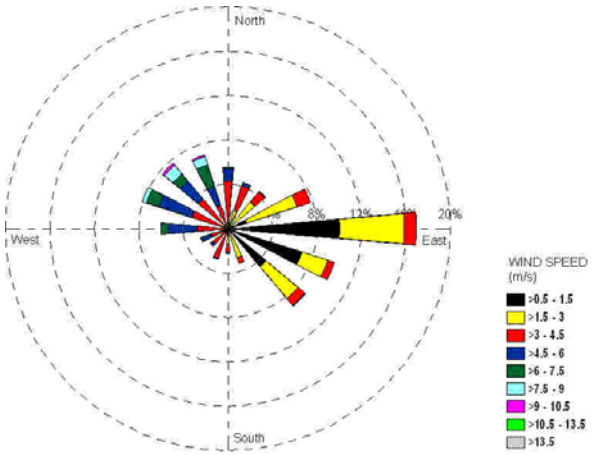

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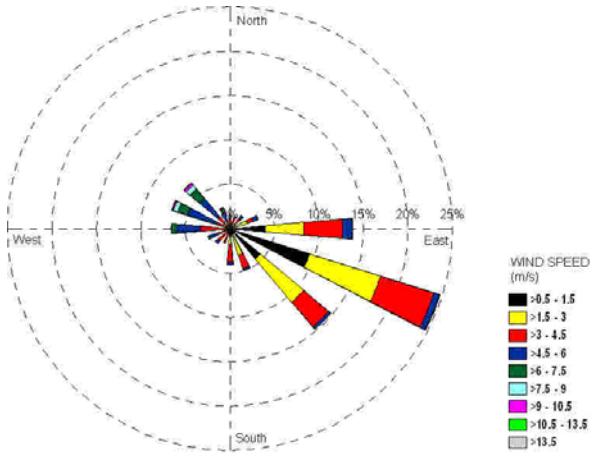


SPRING

Figure 3c. Annual and Seasonal Wind Roses for Collie (derived from BoM East Collie Monitoring Station 2004)

Client: Devereaux Holdings	ENVIRON	
Project: Bluewaters III and IV Expansion	Drawing Ref: MP	Date: 10 Jan 08

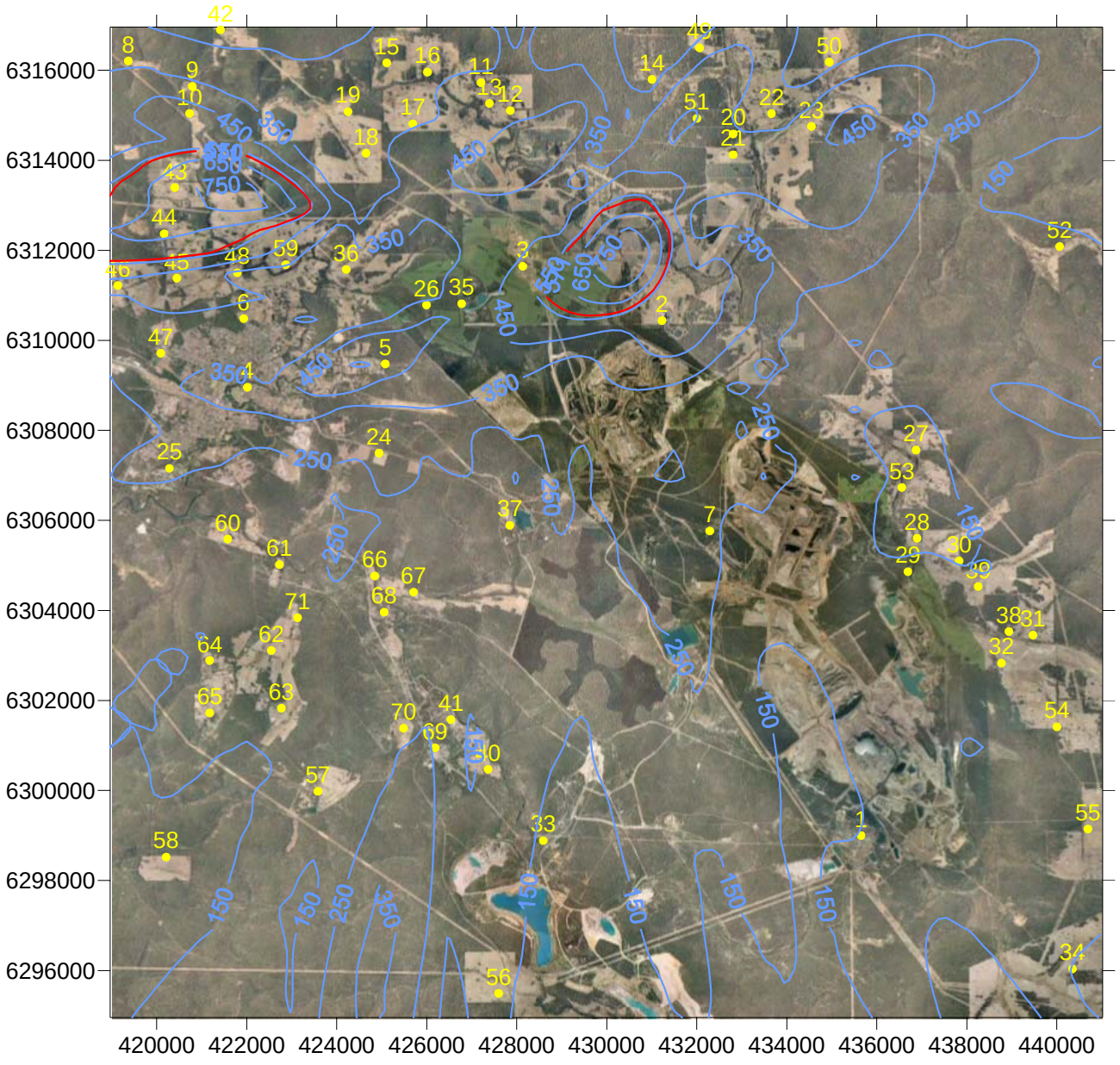


Figure 4. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) - Scenario 1a (Bluewaters I and II, as approved)

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

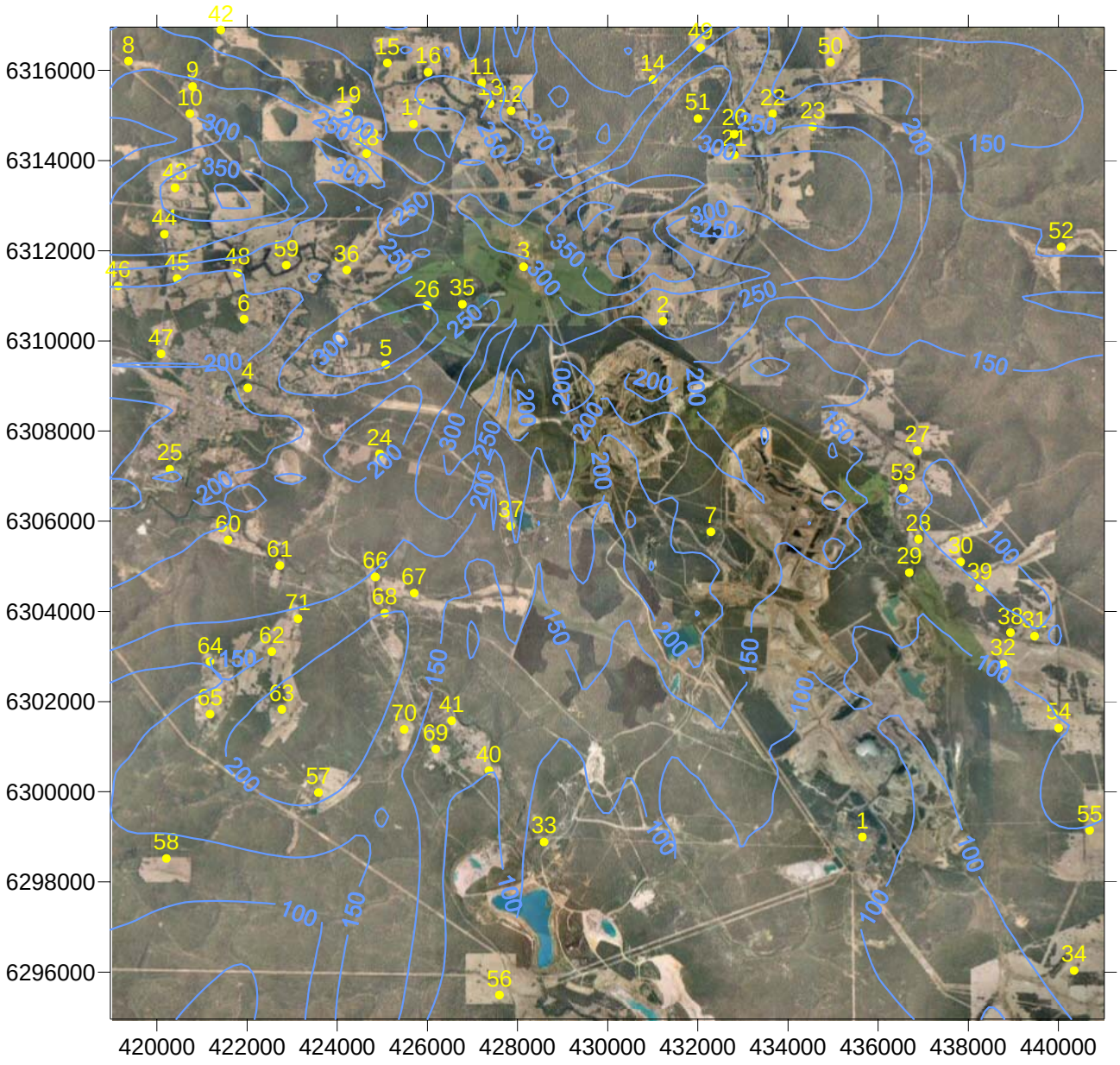


Figure 5. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) - Scenario 2a

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

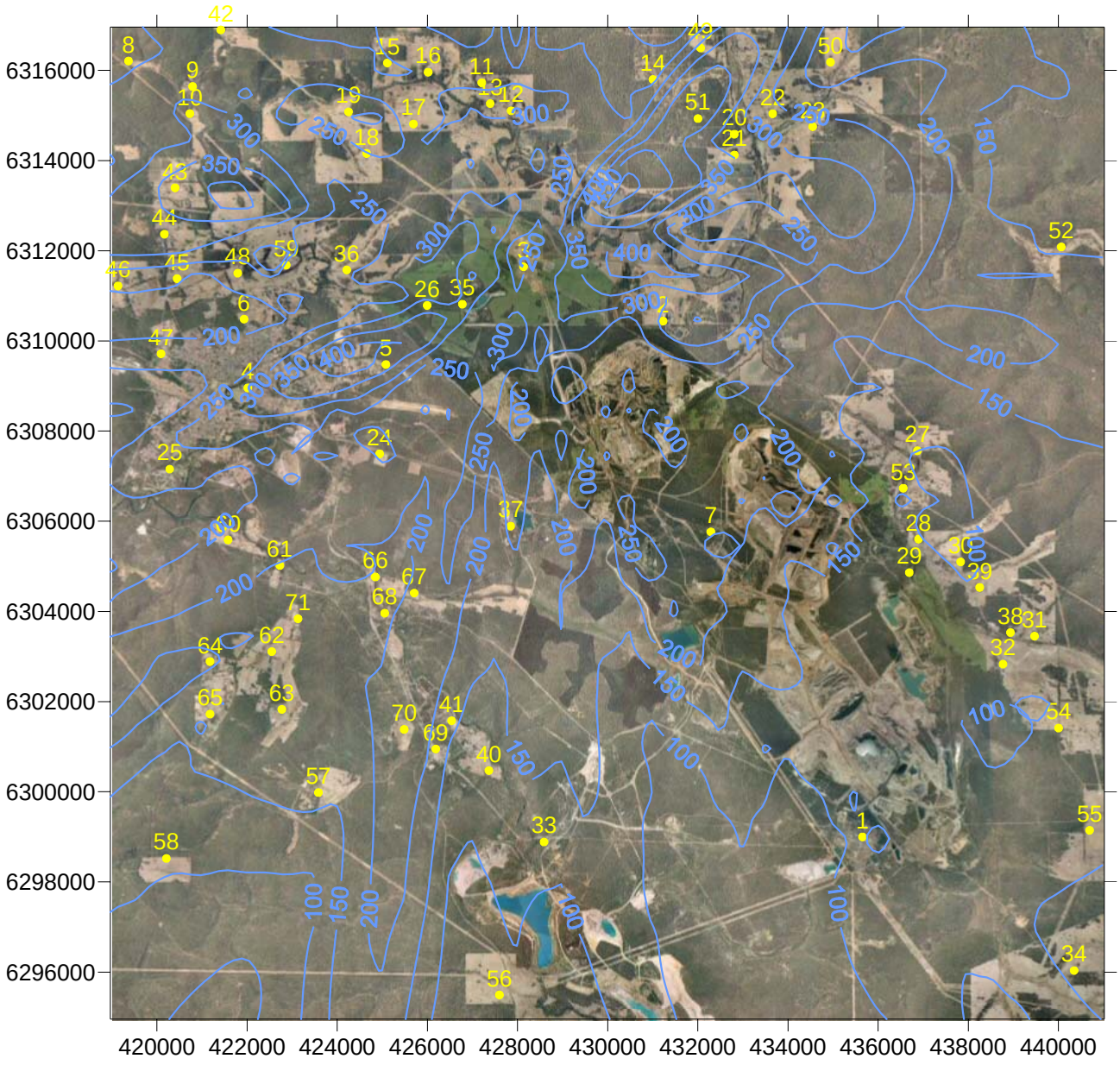


Figure 6. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) - Scenario 3a

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

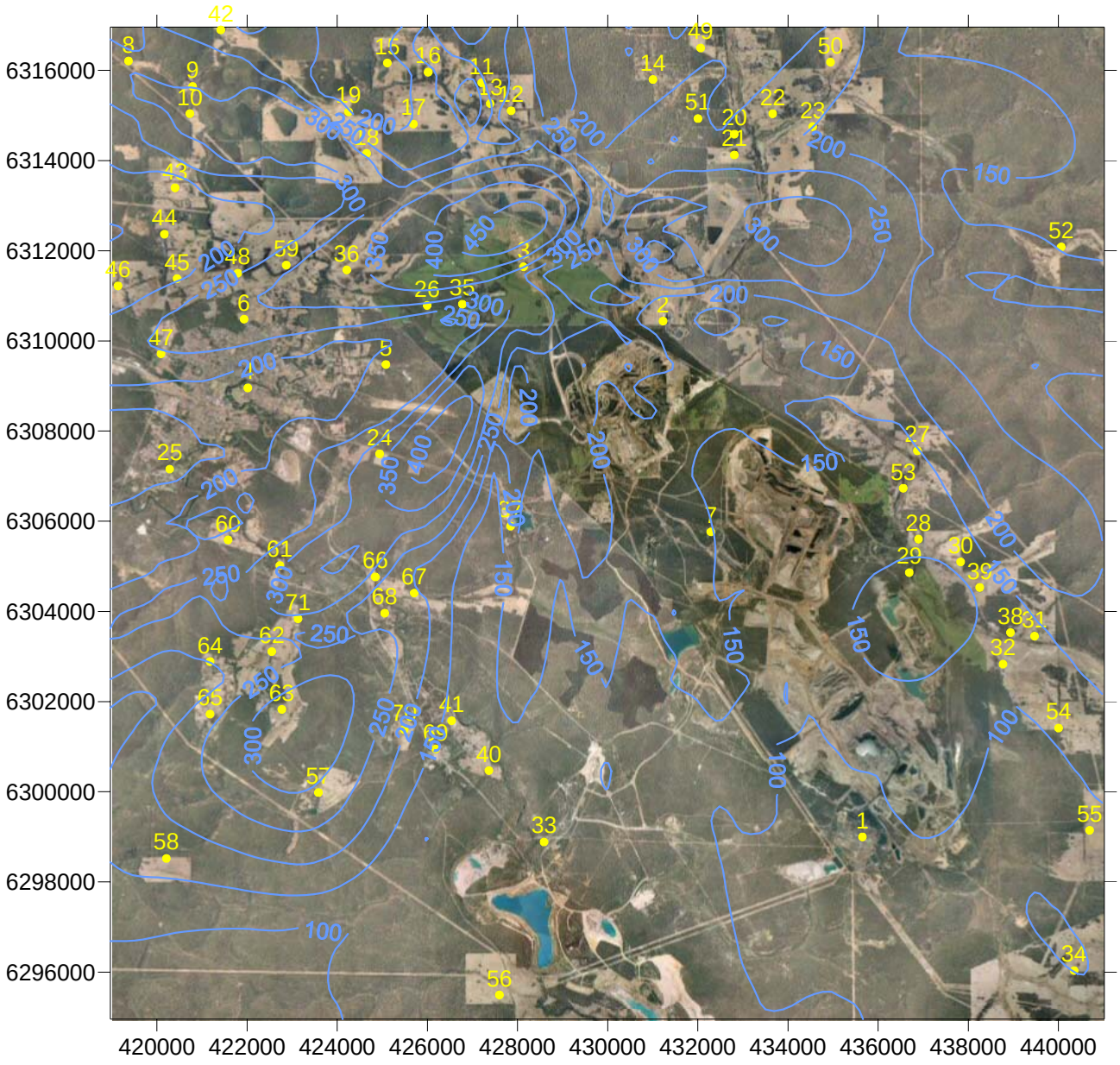


Figure 7. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) - Scenario 4a

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

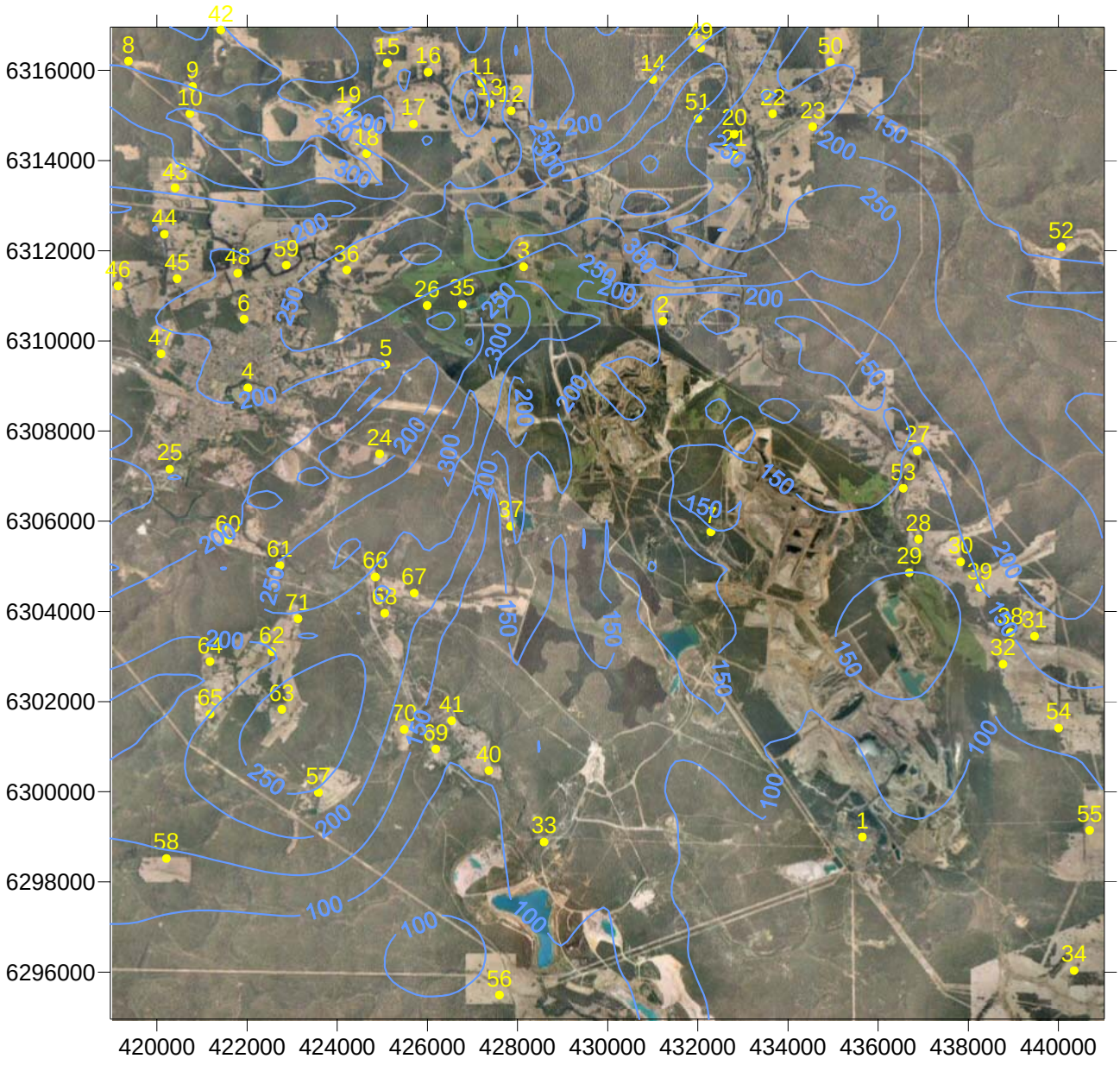


Figure 8. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) - Scenario 5a

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

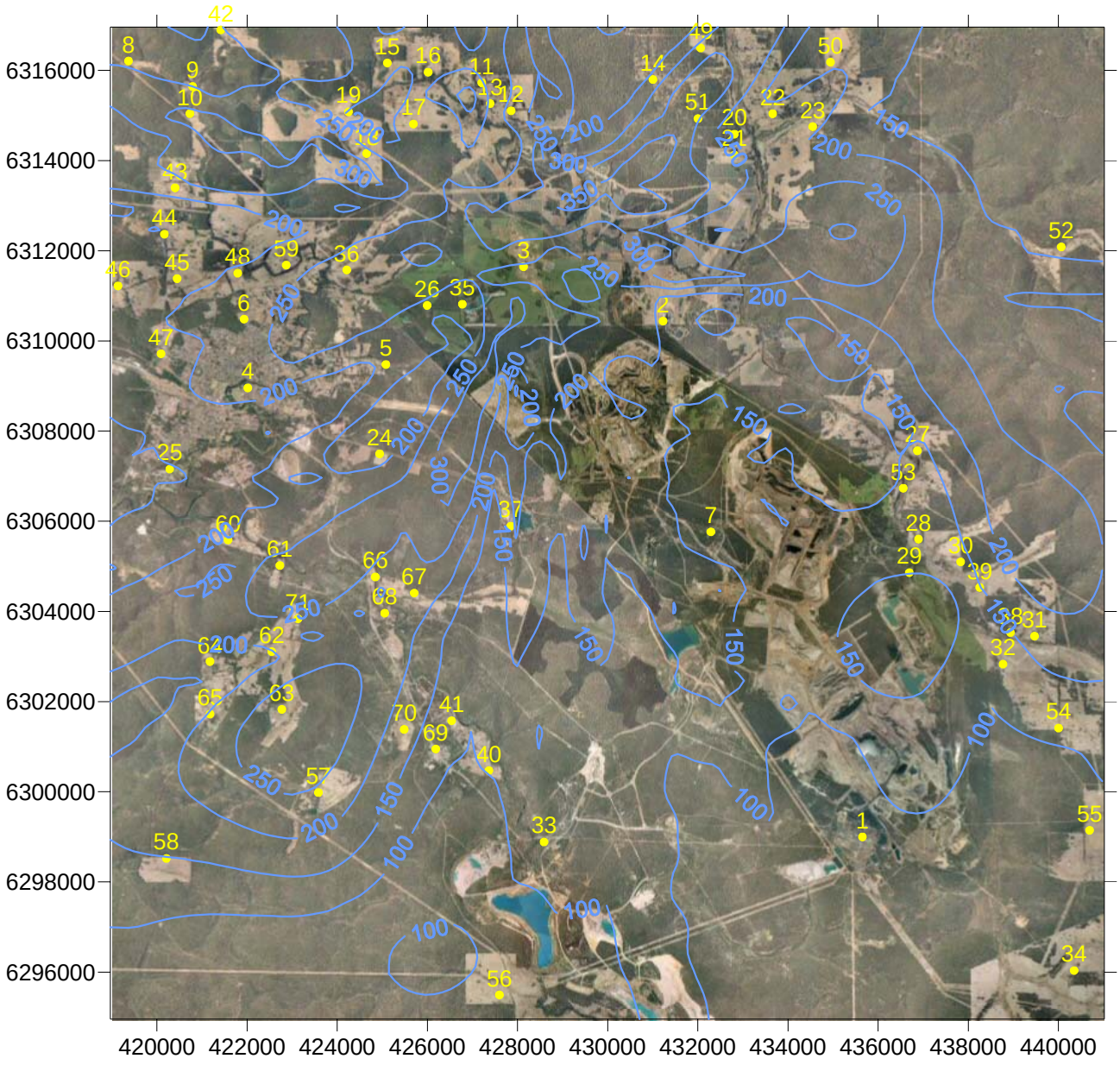


Figure 9. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) - Scenario 6a

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

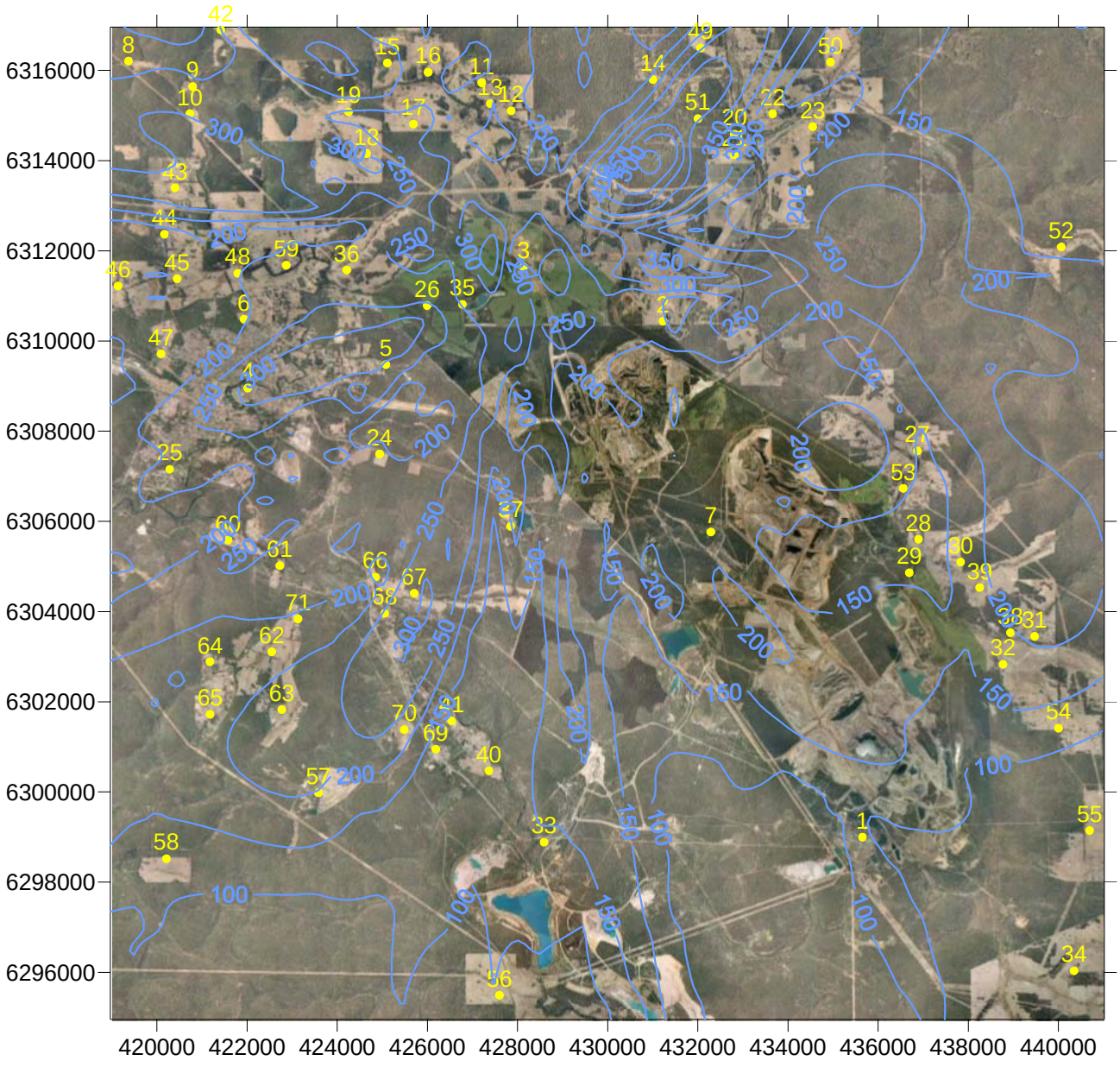


Figure 10. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) - Scenario 7a

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

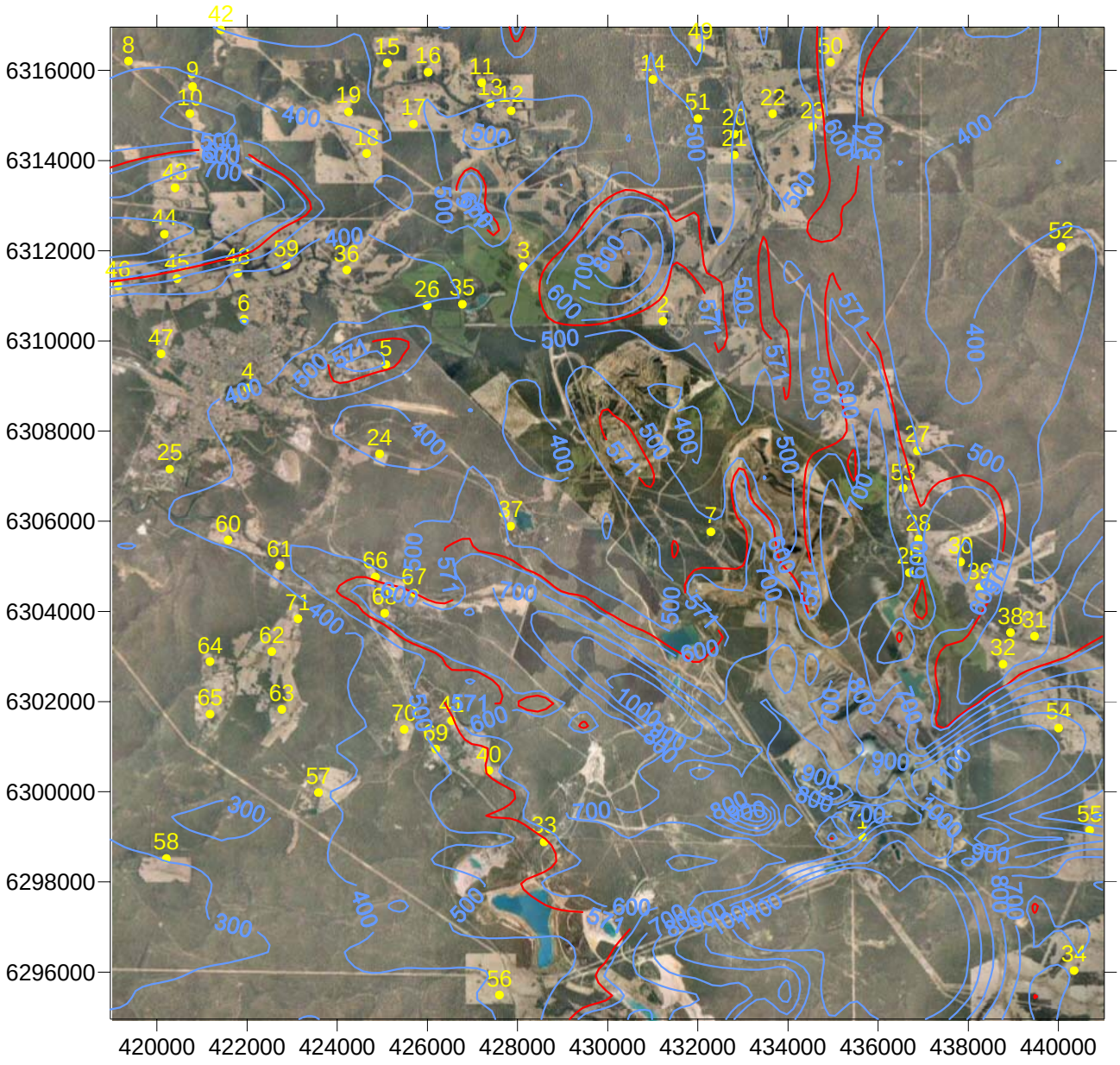


Figure 11. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) – Scenario 1b (Baseline: Bluewaters I and II as approved, and other regional sources)

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

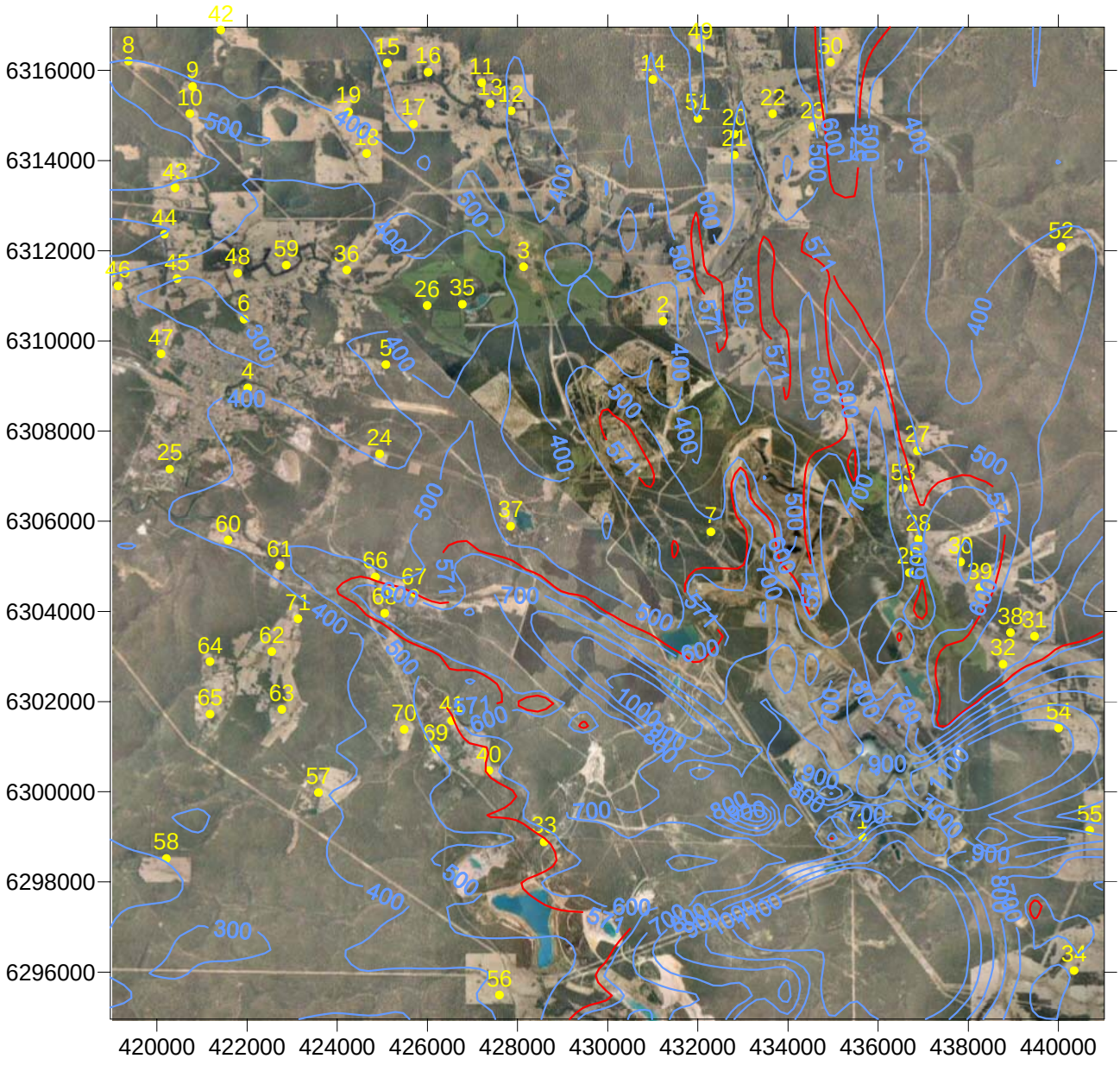


Figure 12. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) – Scenario 2b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

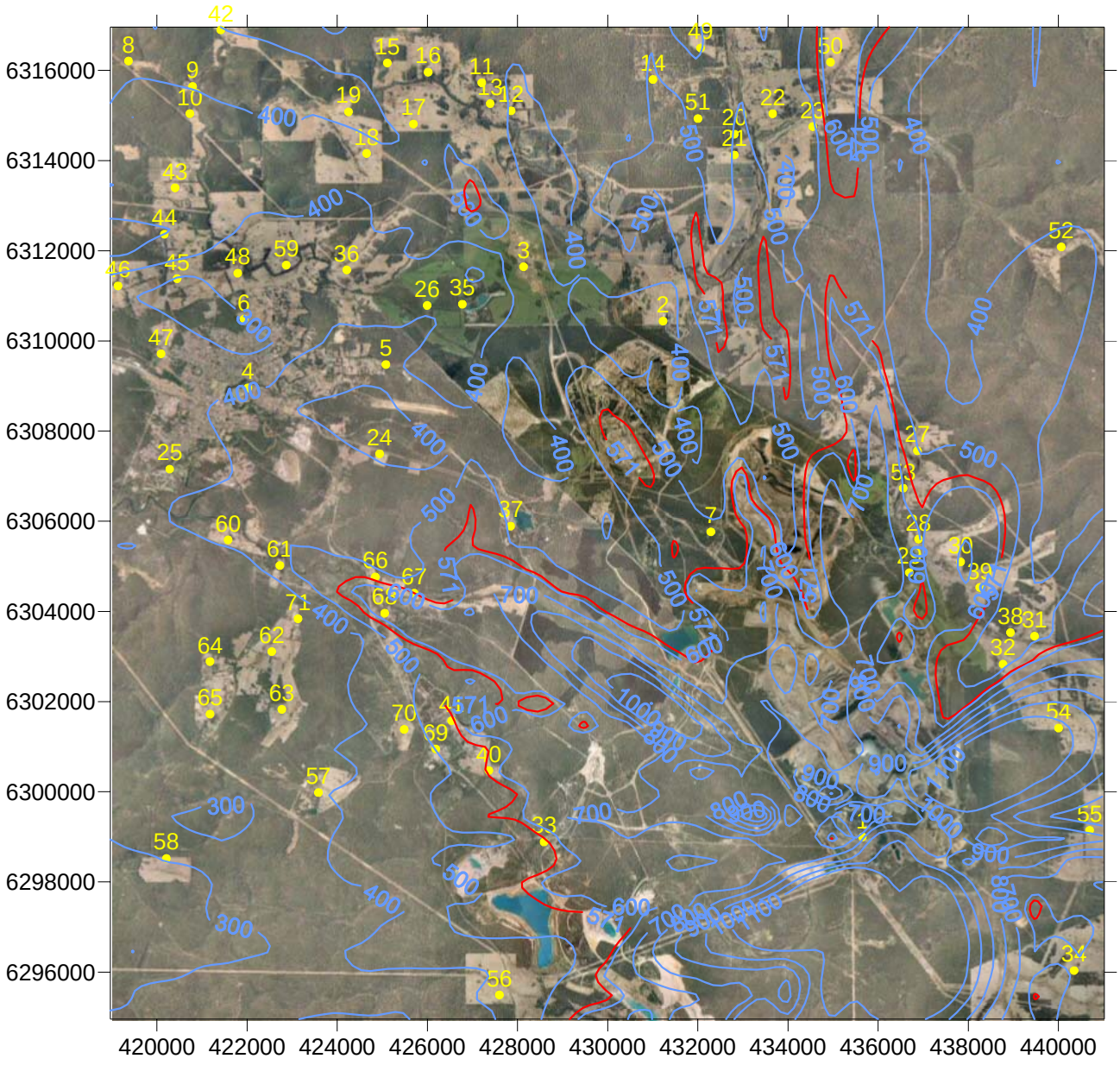


Figure 13. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) – Scenario 3b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

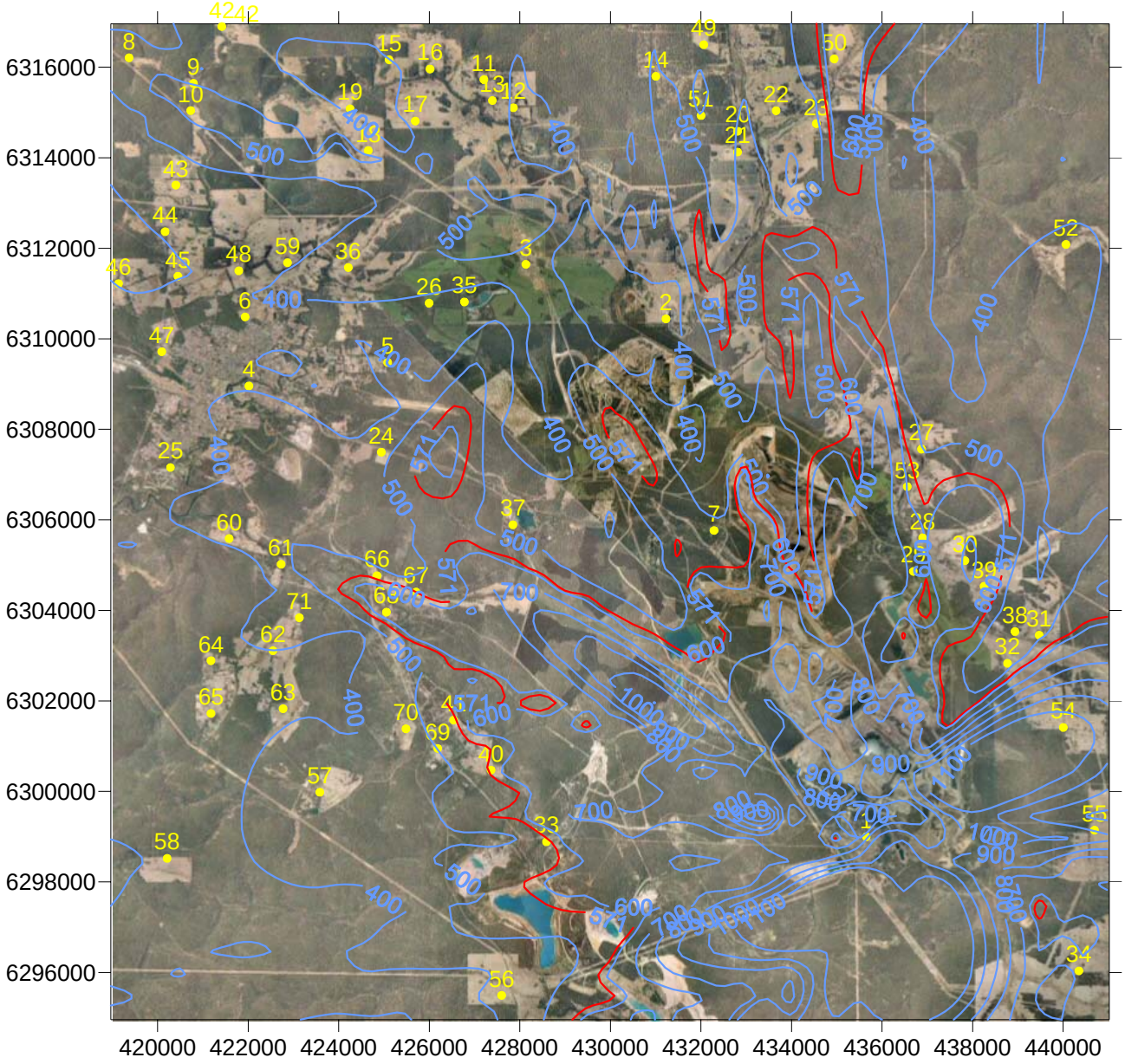


Figure 14. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) – Scenario 4b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

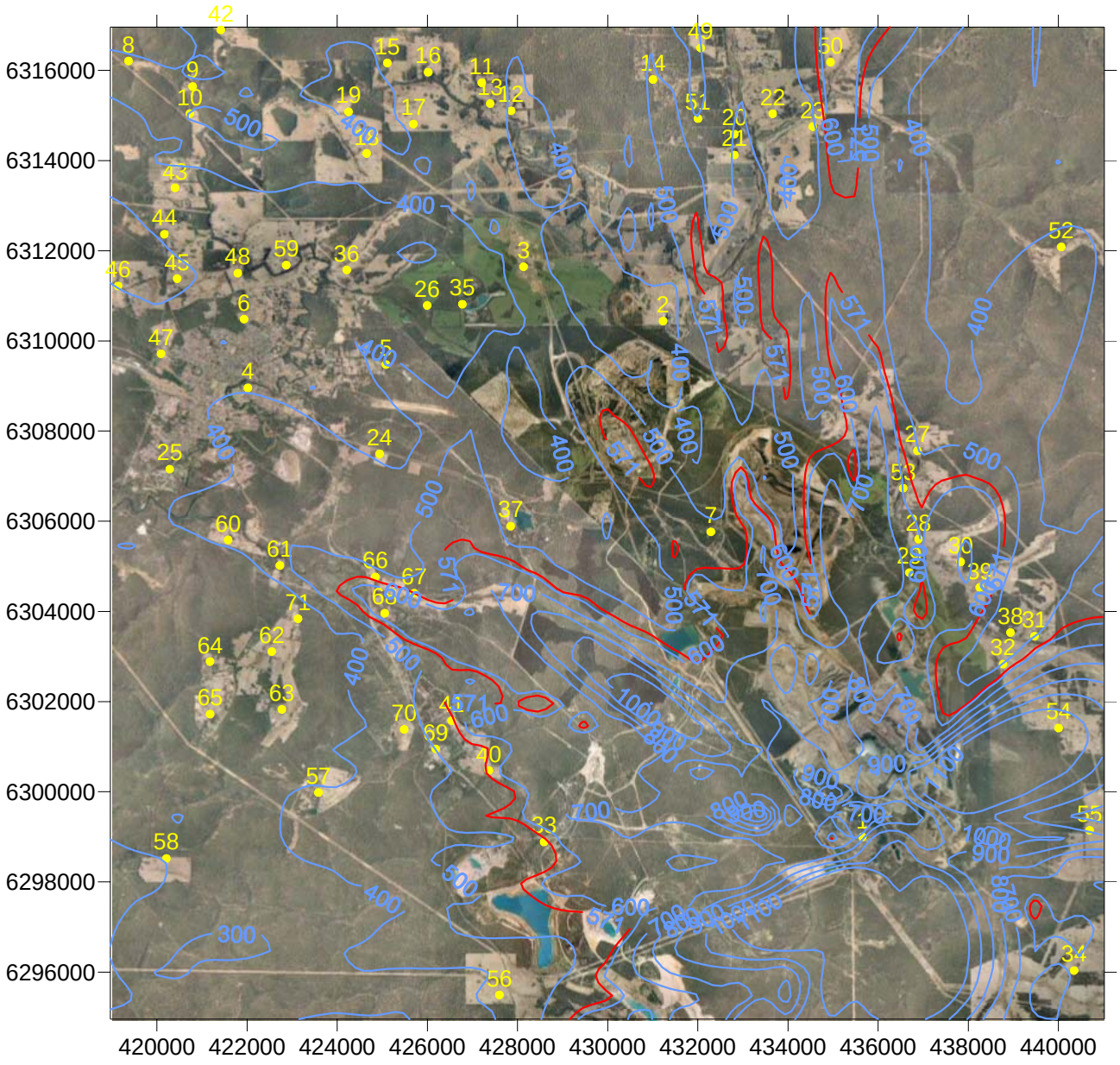


Figure 15. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) – Scenario 5b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

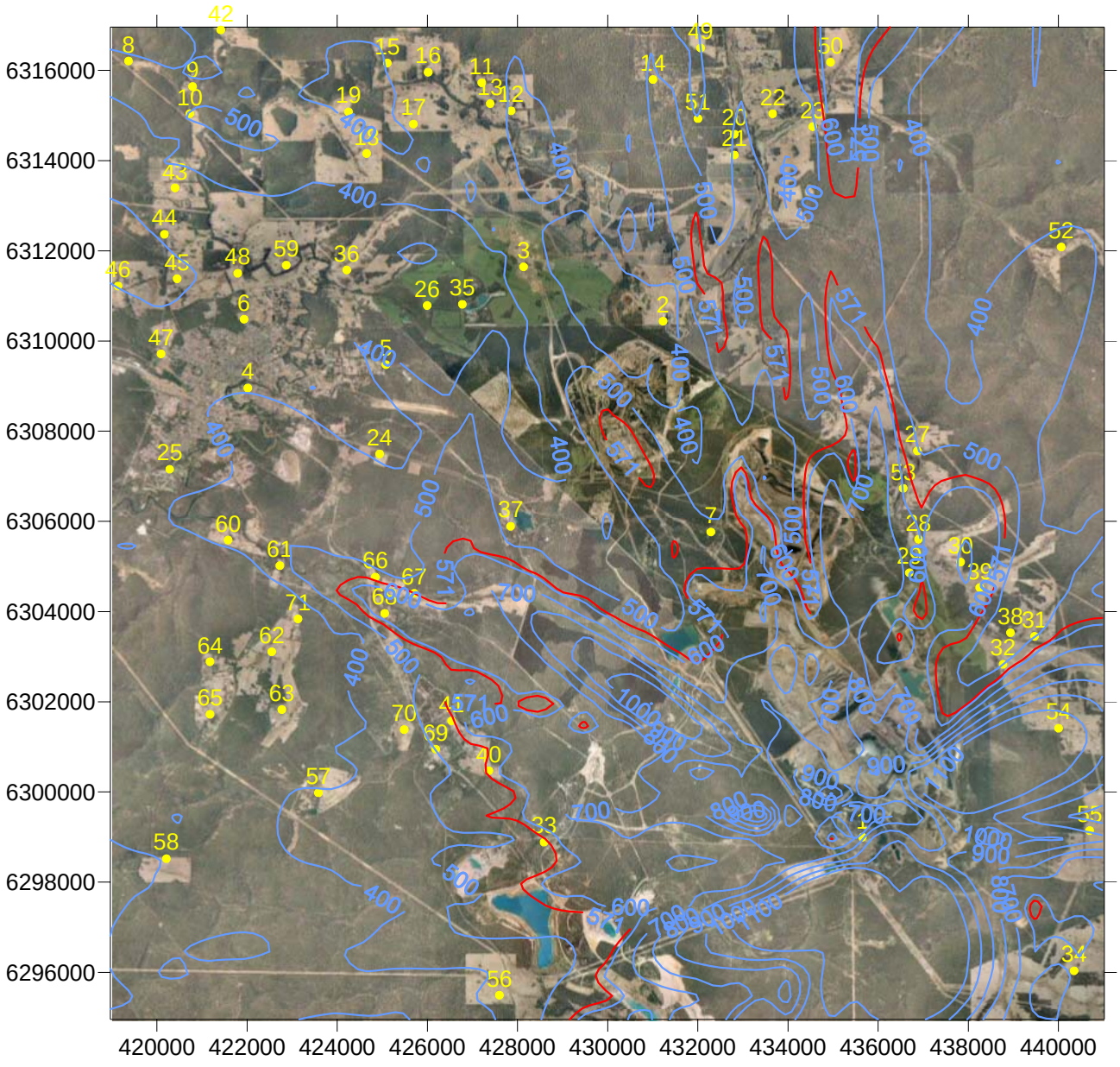


Figure 16. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) – Scenario 6b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 07

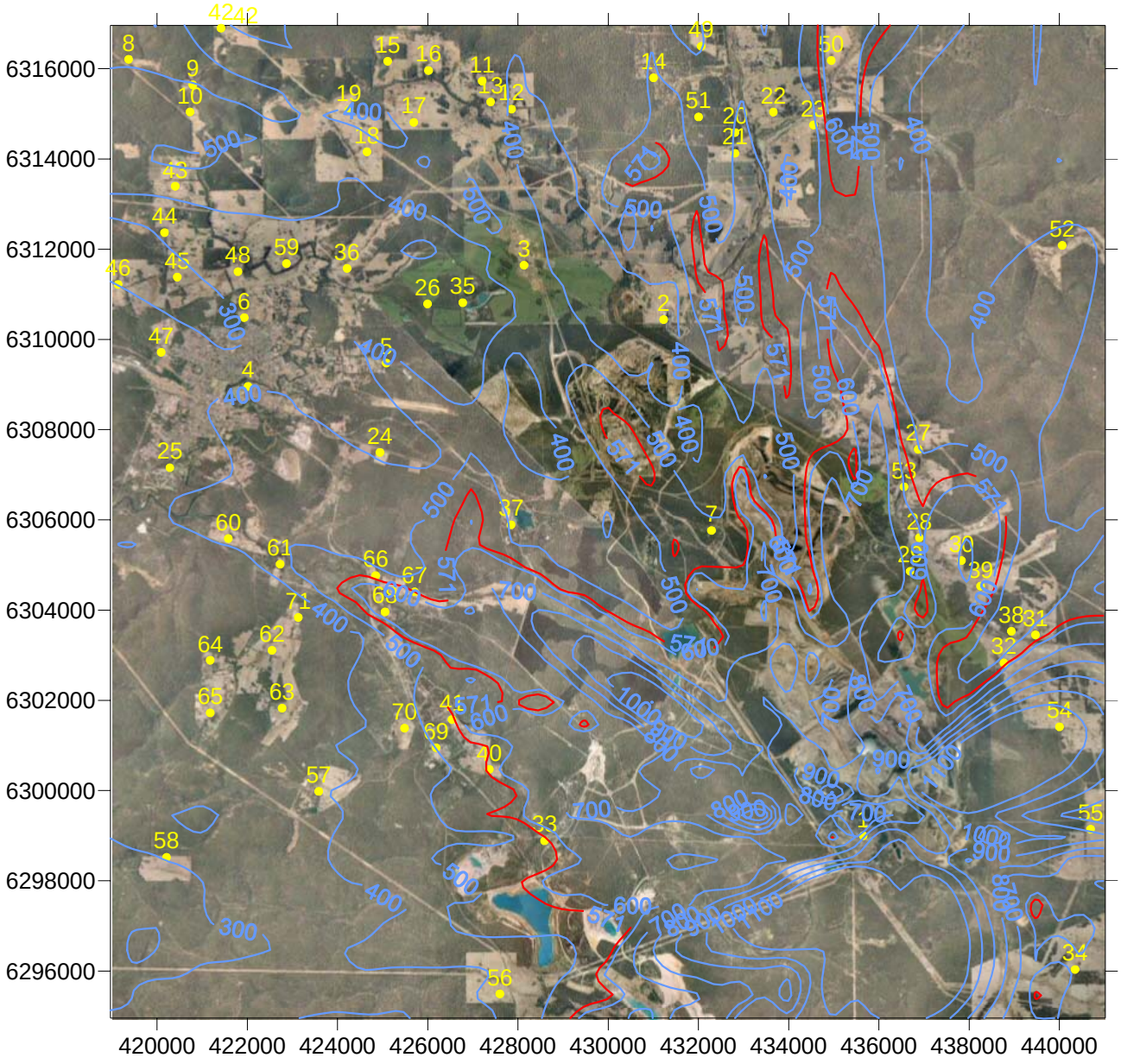


Figure 17. Predicted Maximum 1-Hour Average Ground Level Concentration of Sulphur Dioxide (µg/m³) – Scenario 7b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

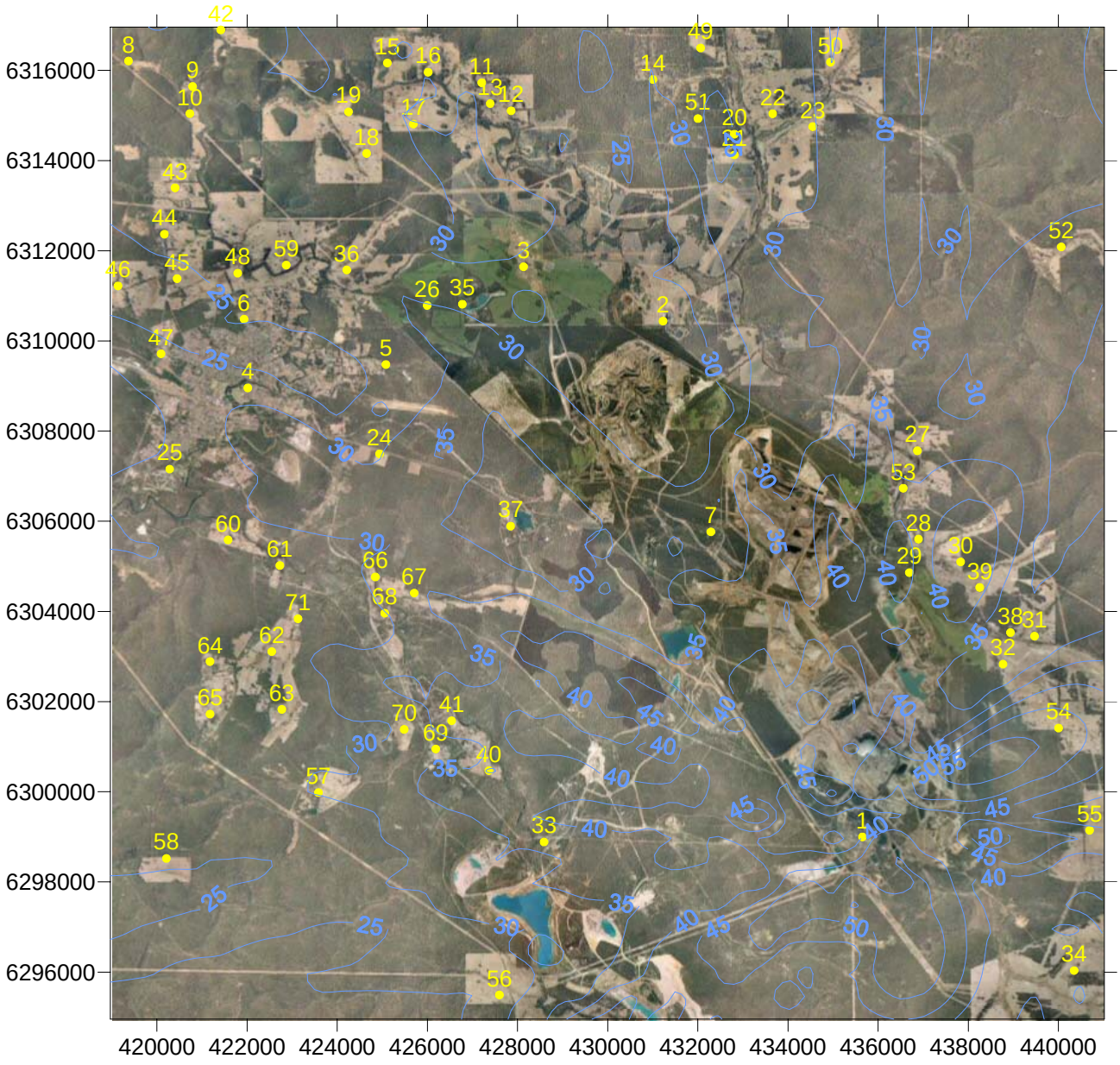
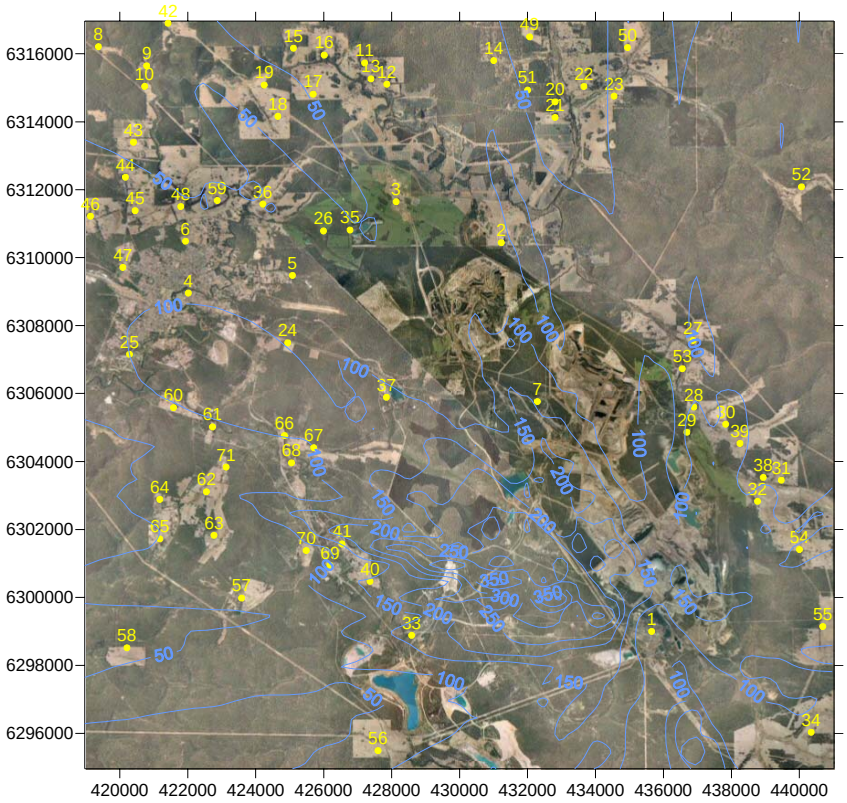
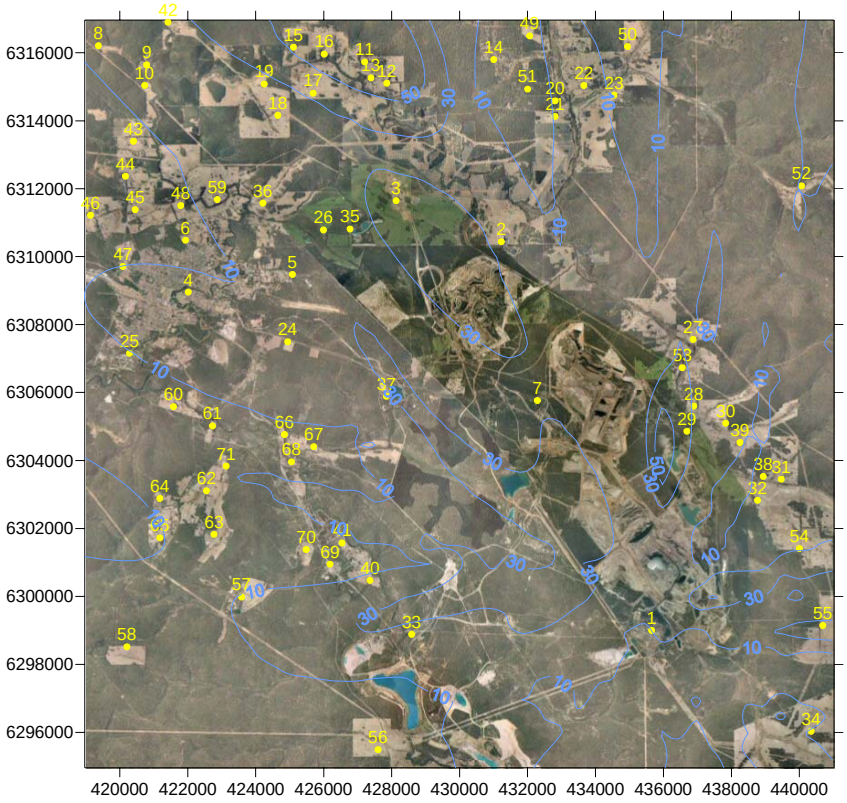


Figure 18. Predicted Maximum 1-hour Average Ground Level Concentration of Nitrogen Dioxide (µg/m³) – Scenario 4b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09



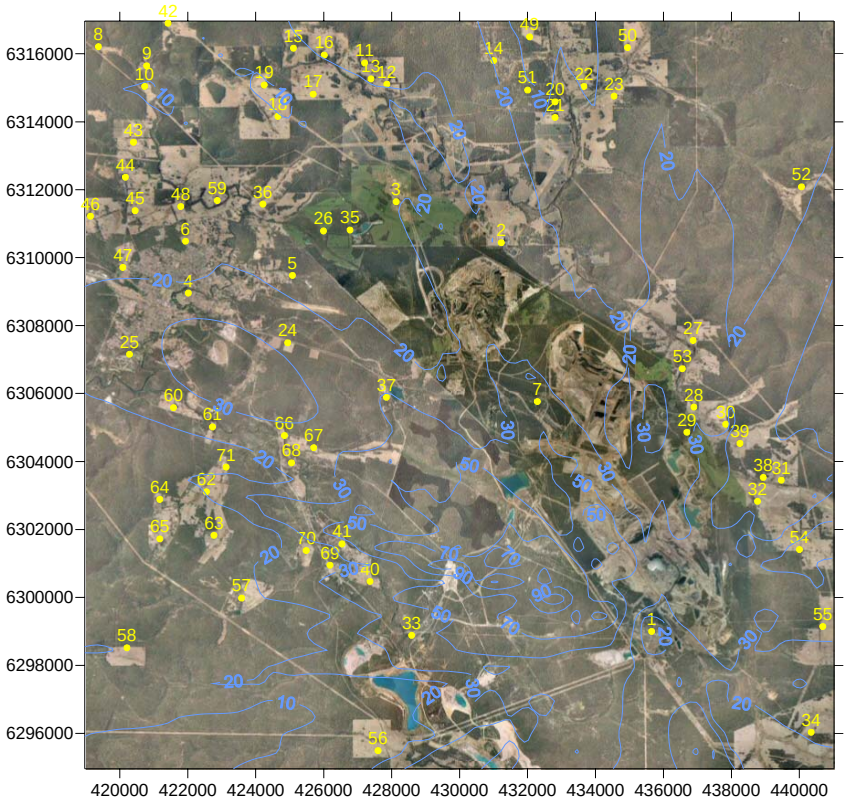
A) All Modelled Sources



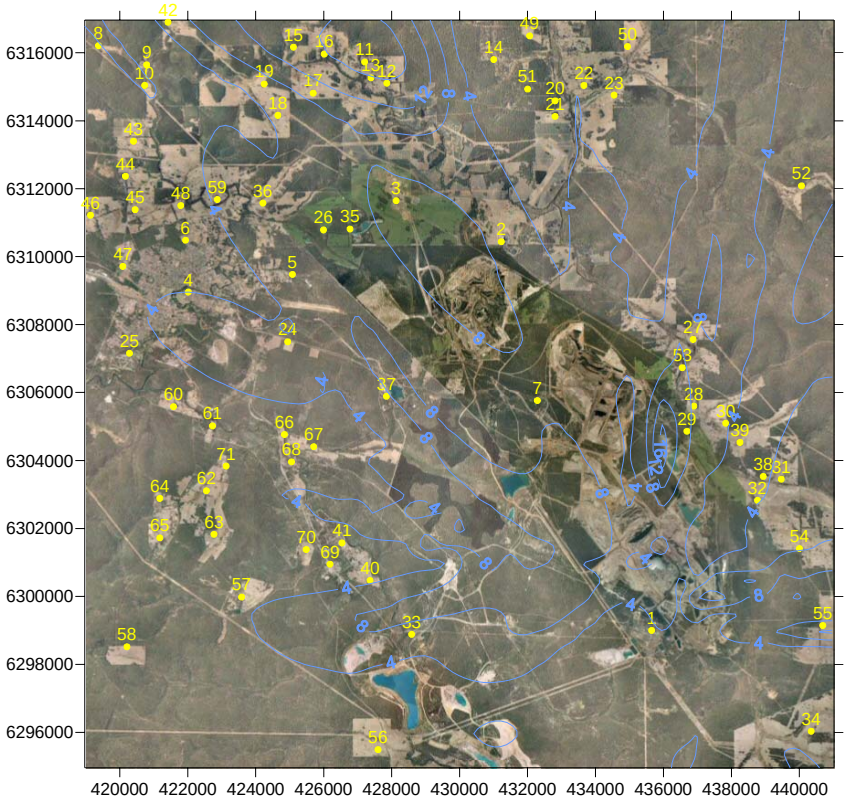
B) Muja A and B Excluded from Model Results

Figure 19. Predicted Maximum 24-hour Average Ground Level Concentration of PM_{10} (µg/m³) – Scenario 4b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09



A) All Modelled Sources



B) Muja A and B Excluded from Model Results

Figure 20. Predicted Maximum 24-hour Average Ground Level Concentration of $PM_{2.5}$ (µg/m³) – Scenario 4b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

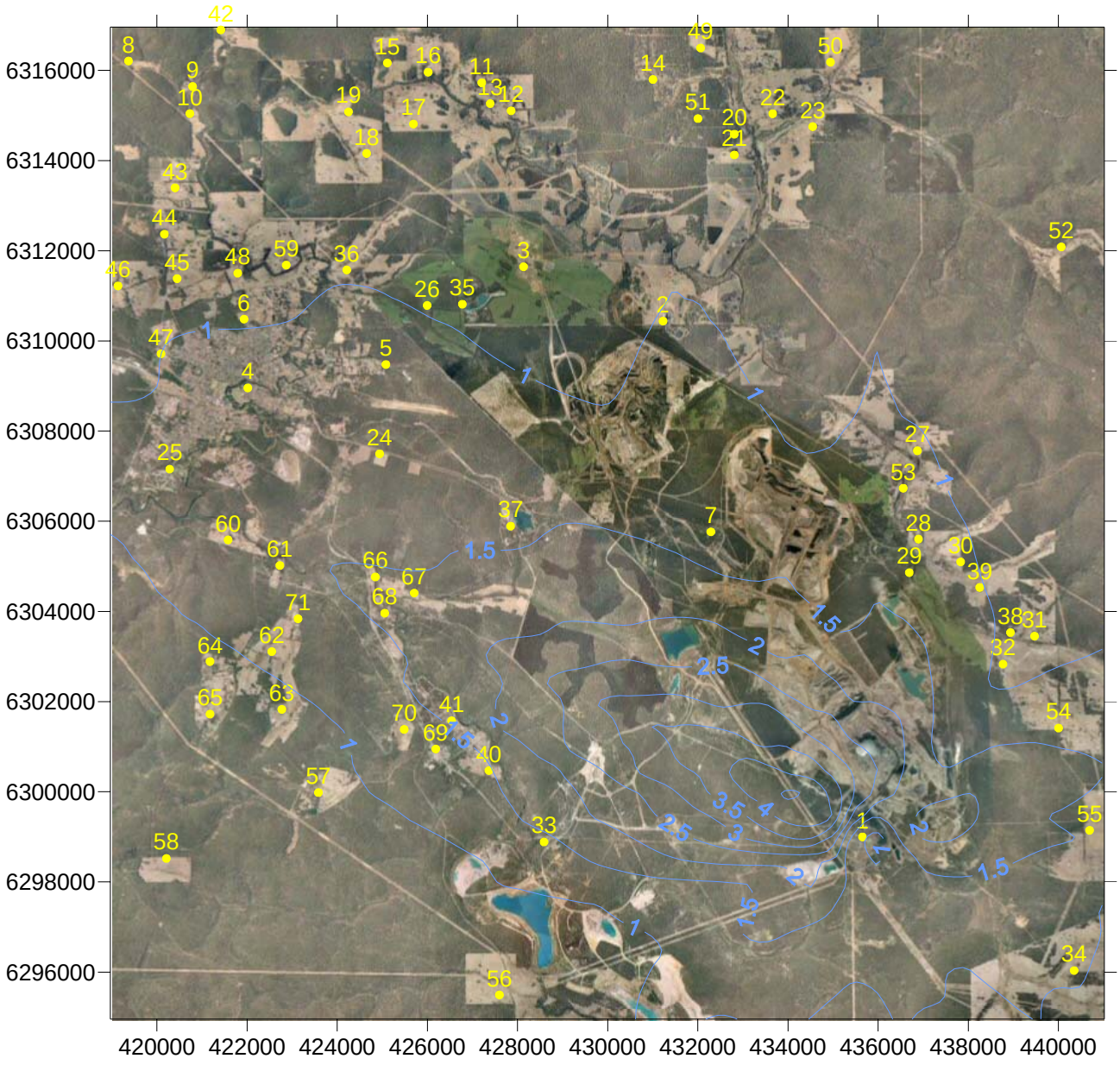


Figure 21. Predicted Annual Average Ground Level Concentration of $PM_{2.5}$ (µg/m³) Scenario 4b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

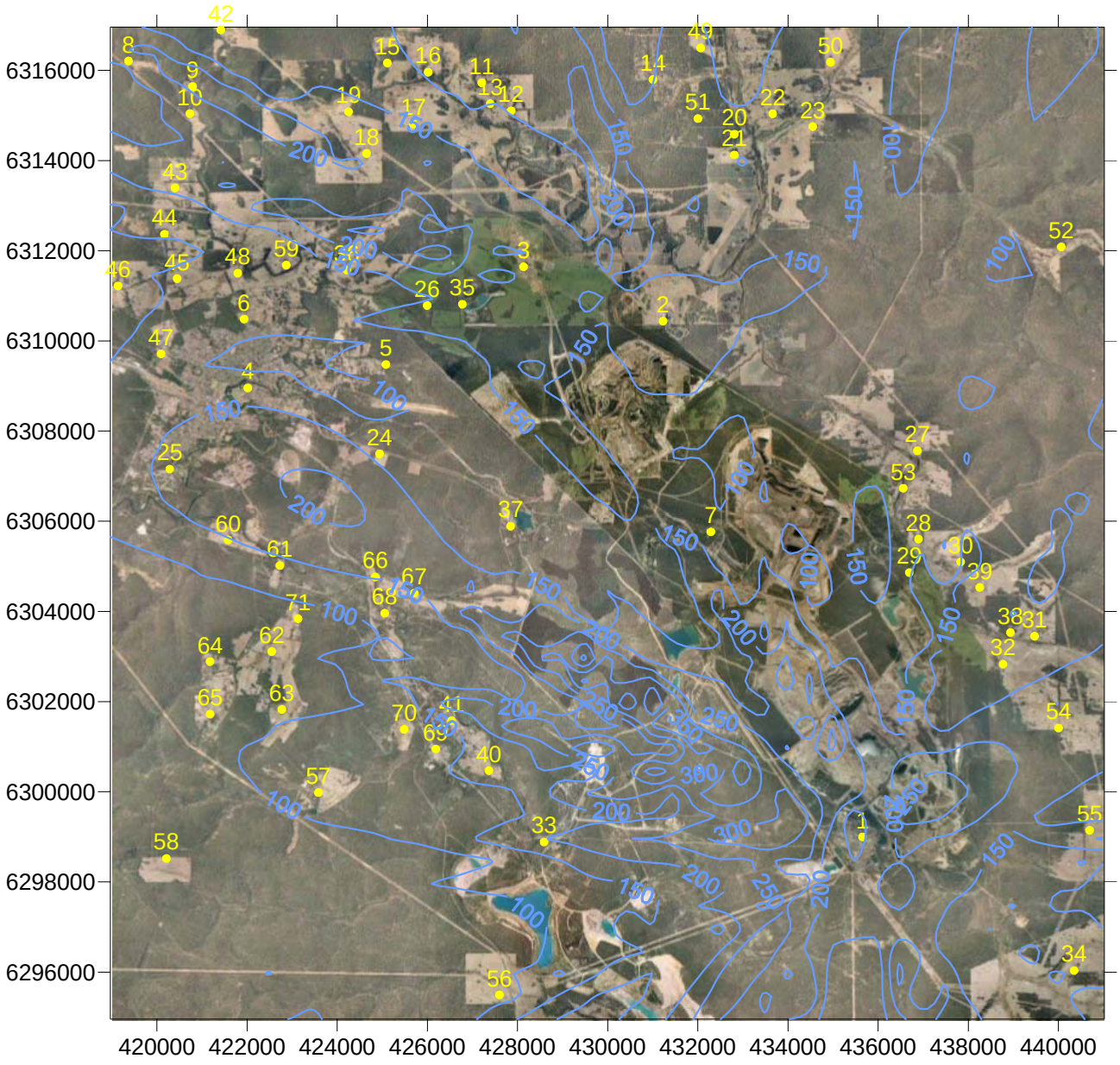


Figure 22. Predicted Maximum 8-hour Average Ground Level Concentration of Carbon Monoxide (µg/m³) – Scenario 4b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

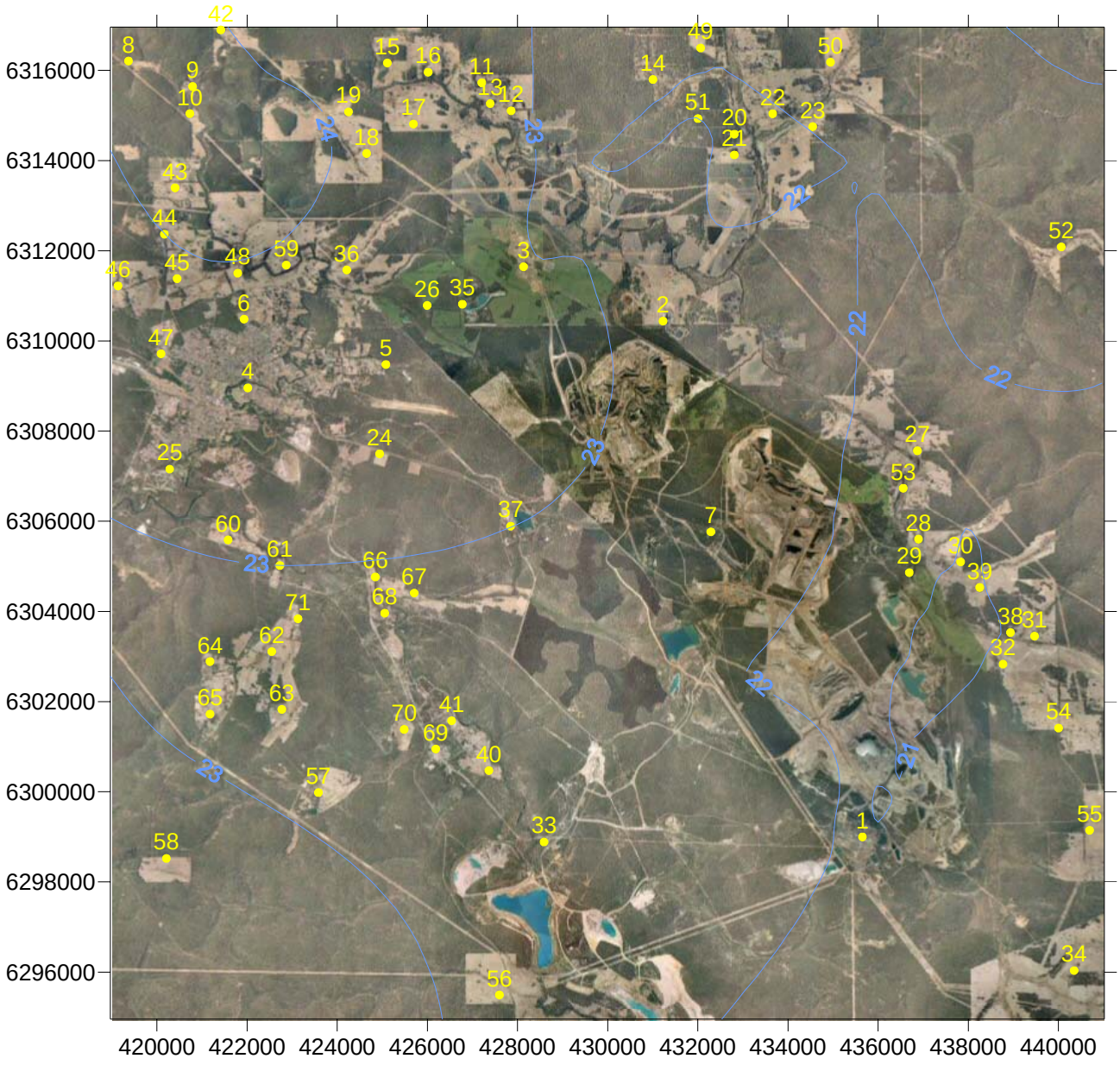
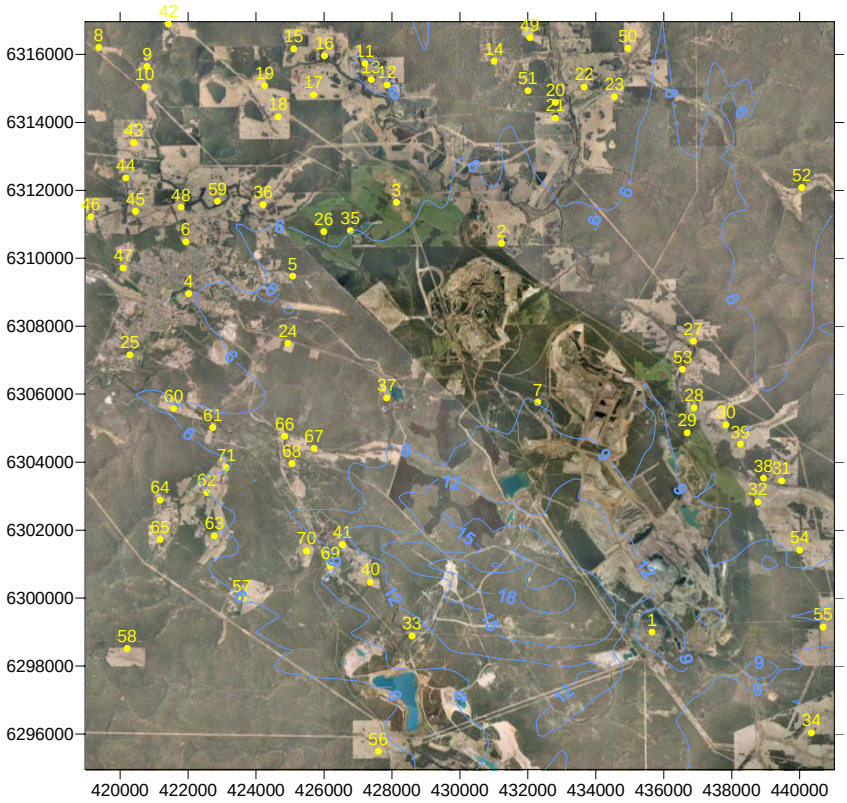
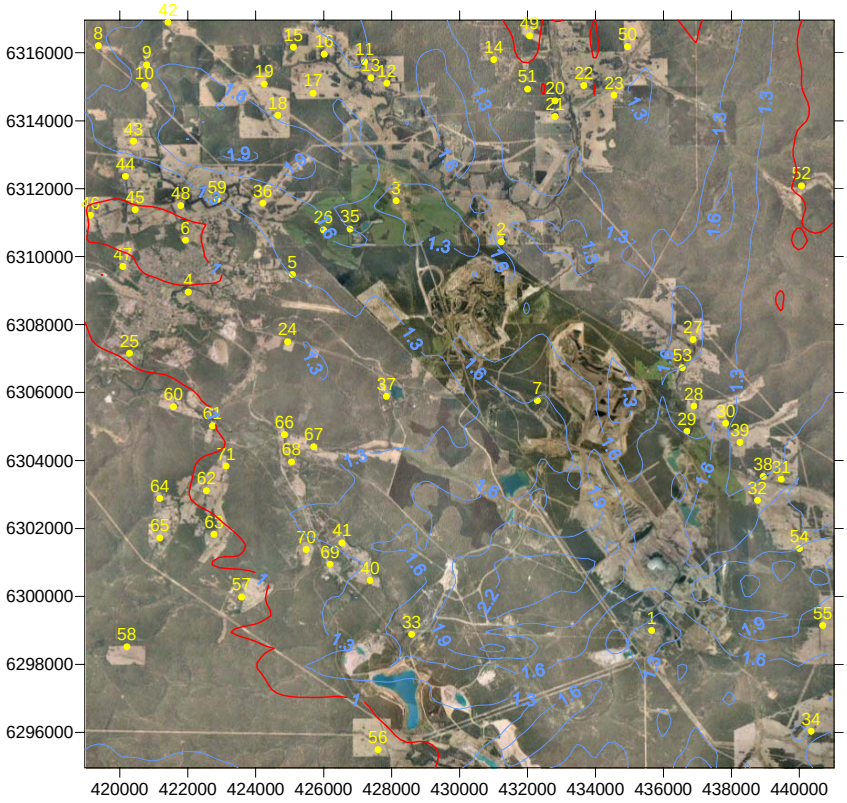


Figure 23. Predicted Maximum 1-hour Average Ground Level Concentration of Ozone (µg/m³) – Scenario 4b

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09



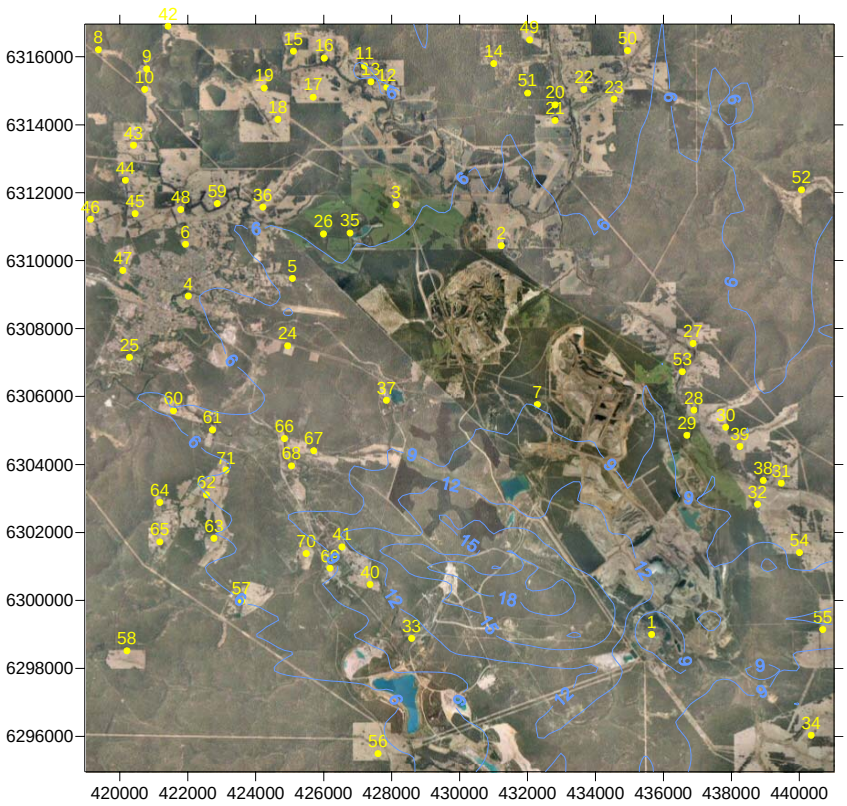
A) All Modelled Sources



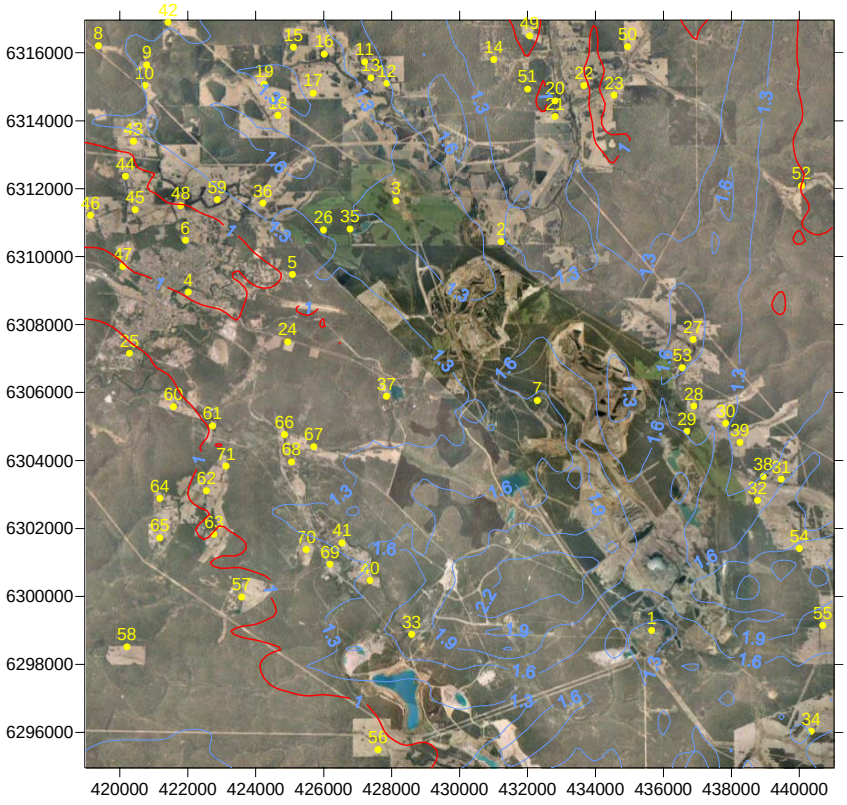
B) Muja A and B Excluded from Model Results

Figure 24. Acute Hazard Index – Baseline Emissions Scenario (Scenario 1b)

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09



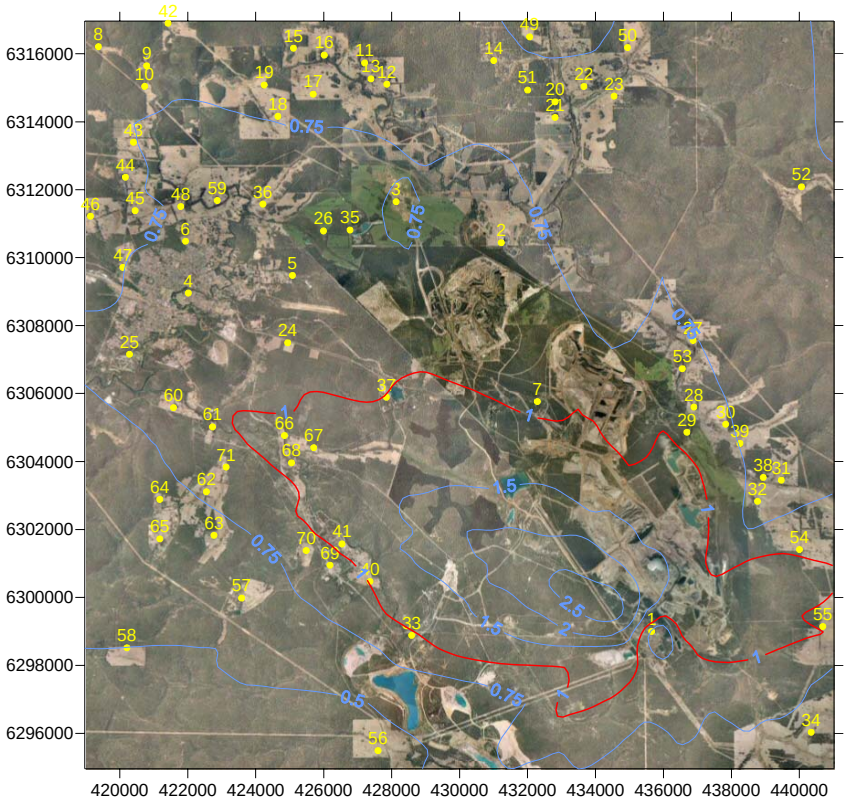
A) All Modelled Sources



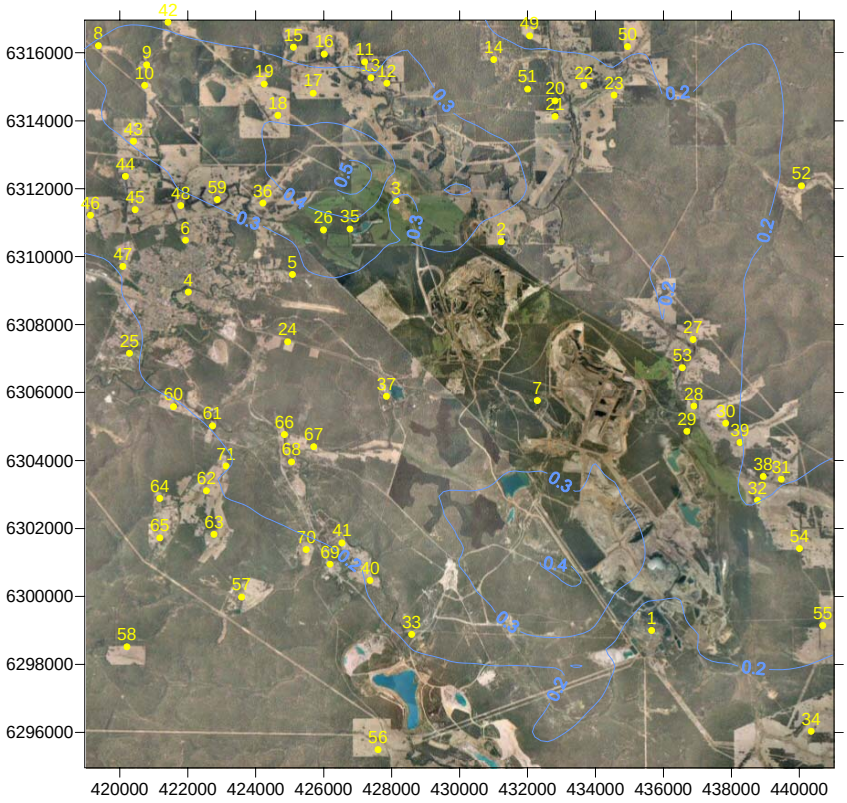
B) Muja A and B Excluded from Model Results

Figure 25. Acute Hazard Index – Proposed Emissions Scenario (Scenario 4b)

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09



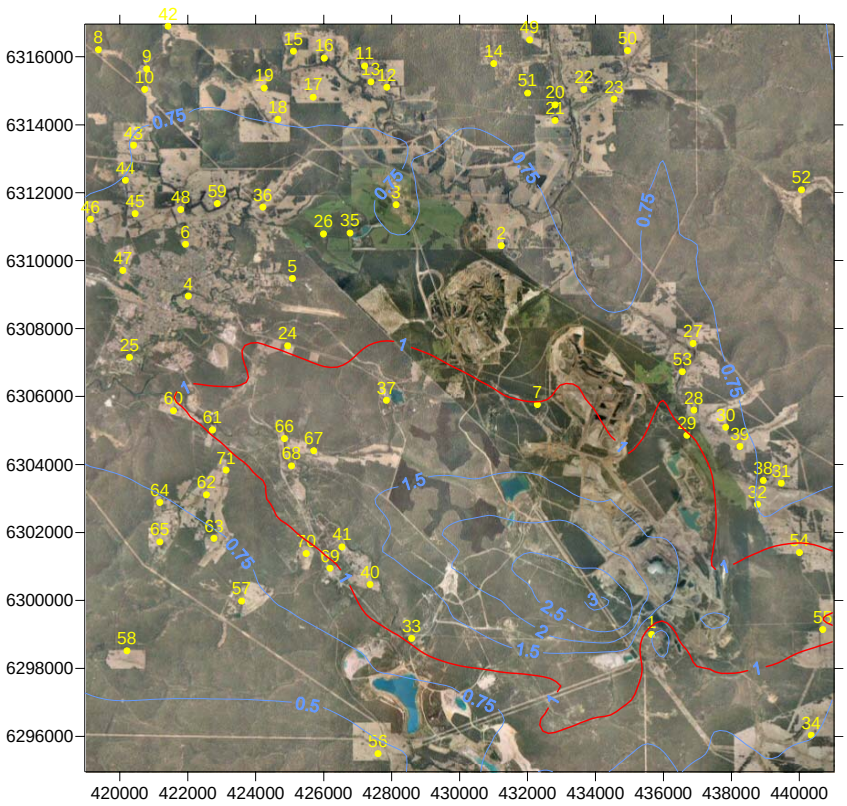
A) All Modelled Sources



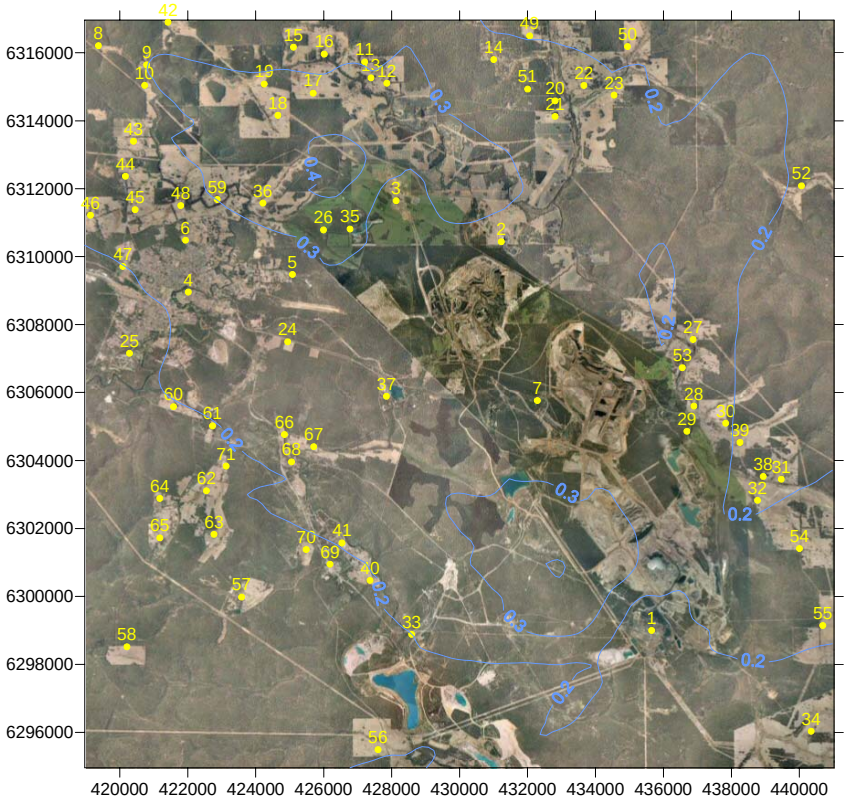
B) Muja A and B Excluded from Model Results

Figure 26. Chronic Hazard Index – Baseline Emissions Scenario (Scenario 1b)

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09



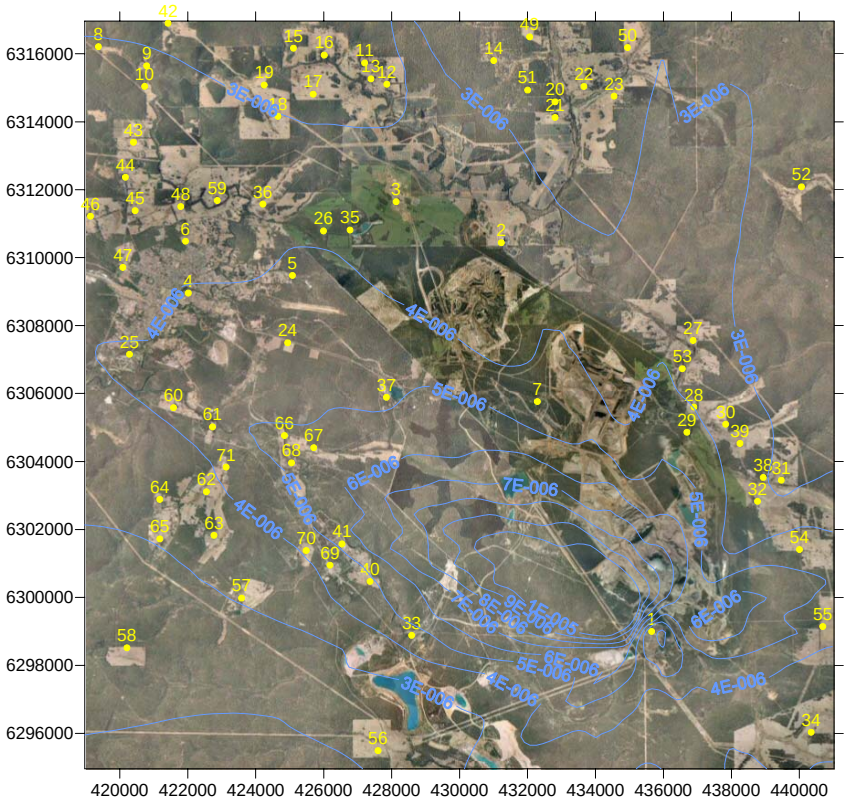
A) All Modelled Sources



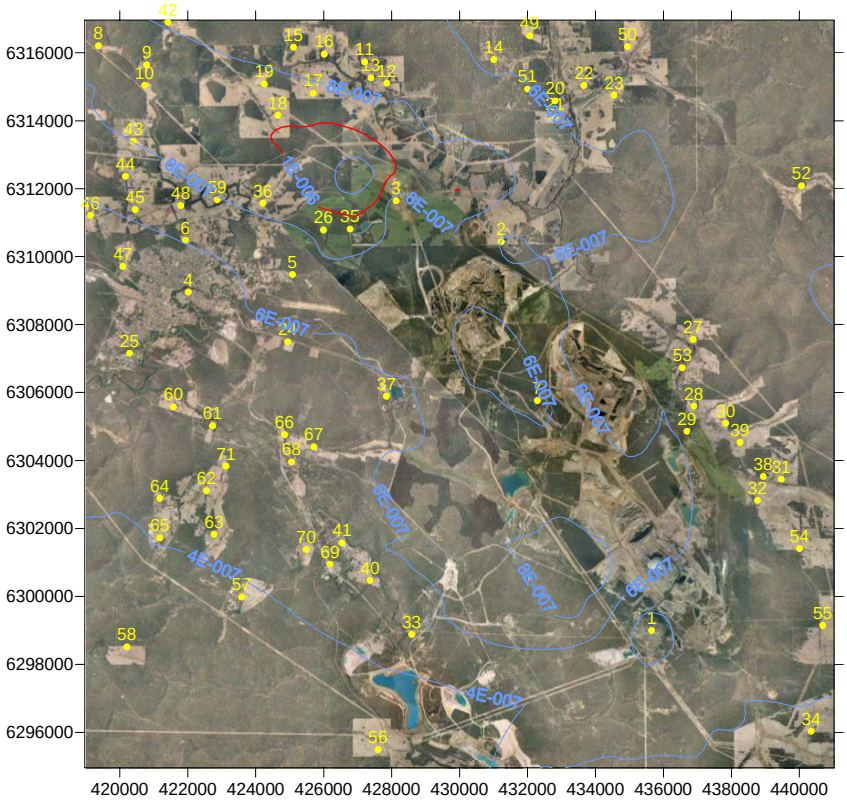
B) Muja A and B Excluded from Model Results

Figure 27. Chronic Hazard Index – Proposed Emission Scenario (Scenario 4b)

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09



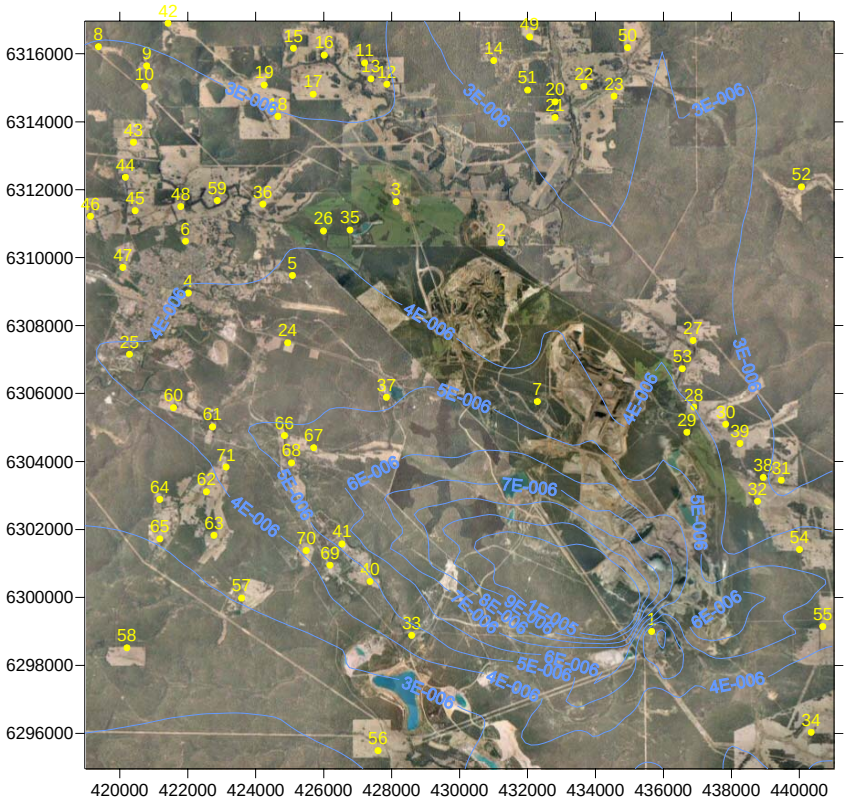
A) All Modelled Sources



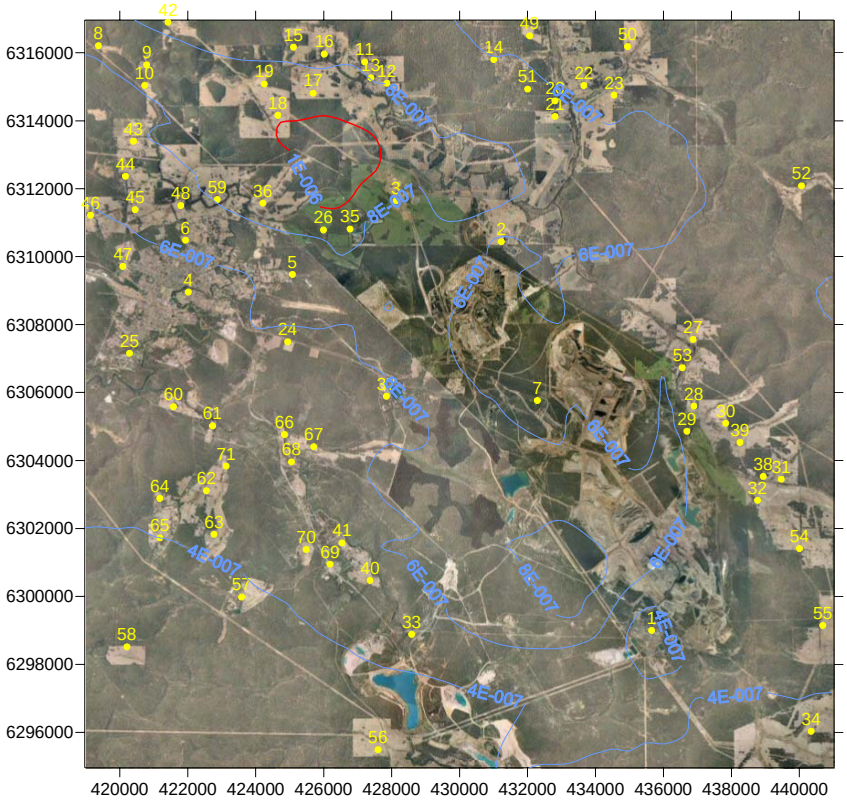
B) Muja A and B Excluded from Model Results

Figure 28. Incremental Carcinogenic Risk Contours – Baseline Emission Scenario (Scenario 1b)

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28Mar 09



A) All Modelled Sources



B) Muja A and B Excluded from Model Results

Figure 29. Incremental Carcinogenic Risk Contours - Proposed Emission Scenario (Scenario 4b)

Client: Devereaux Holdings	ENVIRON	
Bluewaters III & IV Expansion	Drawn: RK	Date: 28 Mar 09

APPENDIX A

Sample TAPM Input File

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```
|----------------------------------------|
| THE AIR POLLUTION MODEL (TAPM V3.0.7). |
| Copyright (C) CSIRO Australia.         |
| All Rights Reserved.                   |
|----------------------------------------|

----------------
RUN INFORMATION:
----------------
NUMBER OF GRIDS=            4
GRID CENTRE (longitude,latitude)=(   116.2417     ,  -33.38334     )
GRID CENTRE (cx,cy)=(      429467 ,     6305959 ) (m)
GRID DIMENSIONS (nx,ny,nz)=(          35 ,          35 ,          25 )
NUMBER OF VERTICAL LEVELS OUTPUT =          15
DATES (START,END)=(    20001230 ,    20011231 )
DATE FROM WHICH OUTPUT BEGINS =    20010101
LOCAL HOUR IS GMT+   7.700000
SYNOPTIC WIND SPEED MAXIMUM =          30 (m/s)
SYNOPTIC PRESSURE-GRADIENT SCALING FACTOR =   1.000000
SYNOPTIC PRESSURE-GRADIENT FILTERING FACTOR =   1.000000
VARY SYNOPTIC WITH 3-D SPACE AND TIME
INCLUDE VEGETATION
EXCLUDE NON-HYDROSTATIC EFFECTS
INCLUDE PROGNOSTIC RAIN EQUATION
EXCLUDE PROGNOSTIC SNOW EQUATION
INCLUDE PROGNOSTIC EDDY DISSIPATION RATE EQUATION
POLLUTION : 4 TRACERS (TR1,TR2,TR3,TR4)
EXCLUDE POLLUTANT CROSS-CORRELATION EQUATION
EXCLUDE POLLUTANT VARIANCE EQUATION
EXCLUDE 3-D POLLUTION OUTPUT (*.C3D)
POLLUTANT GRID DIMENSIONS (nxf,nyf)=(          69 ,          69 )
TR1 POLLUTANT SPECIES : GENERIC
TR2 POLLUTANT SPECIES : GENERIC
TR3 POLLUTANT SPECIES : GENERIC
TR4 POLLUTANT SPECIES : GENERIC
TR1 BACKGROUND =  0.0000000E+00 (ug/m3)
TR2 BACKGROUND =  0.0000000E+00 (ug/m3)
TR3 BACKGROUND =  0.0000000E+00 (ug/m3)
TR4 BACKGROUND =  0.0000000E+00 (ug/m3)
TR1 DECAY RATE =  0.0000000E+00 (per second)
TR2 DECAY RATE =  0.0000000E+00 (per second)
TR3 DECAY RATE =  0.0000000E+00 (per second)
TR4 DECAY RATE =  0.0000000E+00 (per second)

--------------------------------
START GRID           1 blue300a
GRID SPACING (delx,dely)=(       30000 ,       30000 ) (m)
POLLUTANT GRID SPACING (delxf,delyf)=(       15000 ,       15000 ) (m)
NO MET. DATA ASSIMILATION FILE AVAILABLE
NO CONCENTRATION BACKGROUND FILE AVAILABLE
NO BUILDING FILE AVAILABLE
NUMBER OF pse SOURCES=           3
NO lse EMISSION FILE AVAILABLE
NO ase EMISSION FILE AVAILABLE
NO gse EMISSION FILE AVAILABLE
NO bse EMISSION FILE AVAILABLE
NO whe EMISSION FILE AVAILABLE
NO vpx EMISSION FILE AVAILABLE
NO vdx EMISSION FILE AVAILABLE
NO vlx EMISSION FILE AVAILABLE
NO vpv EMISSION FILE AVAILABLE
INITIALISE
LARGE TIMESTEP =   300.0000
METEOROLOGICAL ADVECTION TIMESTEP =   300.0000     (s)
 Deep Soil Moisture Content (kg/kg)=  0.1000000
 Deep Soil & Sea Temperatures (K)  =   291.6000       291.6000
POLLUTION ADVECTION TIMESTEP =   300.0000     (s)
pse KEY :
is    = Source Number
ls    = Source Switch (-1=Off,0=EGM,1=EGM+LPM)
xs,ys = Source Position (m)
hs    = Source Height (m)
rs    = Source Radius (m)
es    = Buoyancy Enhancement Factor
fs_no = Fraction of NOX Emitted as NO
fs_fpm= Fraction of APM Emitted as FPM
INIT_pse
 is,  ls,       xs,       ys,       hs,       rs,       es,    fs_no,   fs_fpm
  1,   1,  428126., 6311651.,   100.00,     2.00,     1.00,     1.00,     0.50,
  2,   1,  428202., 6311609.,   100.00,     2.00,     1.00,     1.00,     0.50,
  3,   1,  413290., 6322270.,   105.00,     1.25,     1.00,     0.90,     0.00,
LAGRANGIAN (LPM) MODE IS OFF FOR THIS GRID
IN_pse
```

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APPENDIX B

Contribution of Compounds to HRA Calculations

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Table B1a: Acute Hazard Index for each Receptor

Acute HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7466-09-5	Sulphur Dioxide	9.64E-01	8.90E-01	7.97E-01	7.02E-01	7.88E-01	6.23E-01	9.64E-01	8.82E-01	9.44E-01	9.33E-01	8.25E-01	8.18E-01	8.36E-01	6.93E-01	8.68E-01	1.05E+00	9.36E-01	9.14E-01	7.22E-01
2	10102-44-0	Nitrogen Dioxide	1.13E-01	9.63E-02	9.02E-02	8.90E-02	9.58E-02	8.85E-02	1.02E-01	9.58E-02	1.01E-01	9.86E-02	9.21E-02	9.33E-02	9.21E-02	9.03E-02	9.91E-02	1.04E-01	9.31E-02	1.03E-01	9.10E-02
3	PM2.5	Particulate Matter < 2.5 µm	5.68E-01	8.11E-01	5.39E-01	6.12E-01	5.69E-01	4.38E-01	8.10E-01	3.39E-01	4.16E-01	3.53E-01	7.80E-01	7.80E-01	7.88E-01	5.55E-01	5.90E-01	6.29E-01	4.70E-01	4.13E-01	3.44E-01
4	PM10	Particulate Matter < 10 µm	1.07E+00	1.52E+00	1.02E+00	1.14E+00	1.05E+00	8.22E-01	1.54E+00	6.35E-01	7.22E-01	6.74E-01	1.45E+00	1.48E+00	1.48E+00	1.05E+00	1.04E+00	1.14E+00	8.73E-01	7.74E-01	6.37E-01
5	630-08-0	Carbon Monoxide	3.39E-03	6.02E-03	1.32E-02	6.32E-03	9.97E-03	8.63E-03	4.39E-03	9.48E-03	1.36E-02	1.01E-02	7.21E-03	7.73E-03	7.40E-03	6.40E-03	7.92E-03	7.15E-03	1.02E-02	1.59E-02	1.04E-02
6	10028-15-6	Ozone	9.88E-02	9.87E-02	9.90E-02	9.88E-02	9.89E-02	9.89E-02	9.89E-02	9.93E-02	1.01E-01	1.00E-01	1.04E-01	1.04E-01	1.04E-01	1.00E-01	1.04E-01	1.04E-01	1.04E-01	1.02E-01	1.04E-01
7	PAH	Polycyclic Aromatic Hydrocarbons	7.09E-04	6.46E-04	5.87E-04	5.08E-04	5.79E-04	4.58E-04	7.09E-04	6.81E-04	6.85E-04	6.75E-04	5.97E-04	5.94E-04	6.05E-04	5.06E-04	6.29E-04	7.66E-04	6.83E-04	6.60E-04	5.22E-04
8	7439-97-6	Mercury	1.41E-03	1.39E-03	1.20E-03	1.02E-03	1.43E-03	1.06E-03	1.59E-03	1.27E-03	1.19E-03	1.22E-03	1.10E-03	1.09E-03	1.10E-03	1.08E-03	1.08E-03	1.21E-03	1.07E-03	1.06E-03	9.24E-04
9	7782-41-4	Fluorine	1.79E-01	1.49E-01	1.30E-01	1.36E-01	1.32E-01	1.03E-01	1.79E-01	1.23E-01	1.21E-01	1.22E-01	1.44E-01	1.34E-01	1.35E-01	1.47E-01	1.28E-01	1.36E-01	1.34E-01	1.13E-01	9.91E-02
10	7440-38-2	Arsenic	2.76E-01	2.91E-01	2.52E-01	2.35E-01	2.98E-01	2.31E-01	3.34E-01	1.88E-01	1.80E-01	1.90E-01	2.09E-01	2.22E-01	2.15E-01	2.35E-01	1.99E-01	1.93E-01	1.75E-01	1.97E-01	1.97E-01
11	7440-43-9	Cadmium	4.58E-02	4.61E-02	3.97E-02	3.72E-02	4.72E-02	3.66E-02	5.28E-02	3.09E-02	2.98E-02	3.26E-02	3.41E-02	3.51E-02	3.59E-02	3.71E-02	3.15E-02	3.08E-02	2.89E-02	3.11E-02	3.14E-02
12	Cr III	Chromium III	2.33E-03	2.39E-03	2.06E-03	1.93E-03	2.45E-03	1.90E-03	2.74E-03	1.54E-03	1.49E-03	1.58E-03	1.74E-03	1.82E-03	1.79E-03	1.92E-03	1.63E-03	1.59E-03	1.43E-03	1.61E-03	1.61E-03
13	Cr IV	Chromium IV	1.11E-02	1.13E-02	9.77E-03	9.15E-03	1.16E-02	8.99E-03	1.30E-02	7.44E-03	7.20E-03	7.80E-03	8.24E-03	8.63E-03	8.46E-03	9.12E-03	7.73E-03	7.54E-03	6.94E-03	7.65E-03	7.66E-03
14	7439-92-1	Lead	2.81E-02	2.95E-02	2.56E-02	2.39E-02	3.03E-02	2.35E-02	3.39E-02	1.91E-02	1.83E-02	1.94E-02	2.12E-02	2.25E-02	2.18E-02	2.38E-02	2.02E-02	1.96E-02	1.77E-02	2.00E-02	2.00E-02
15	DioxFur	Dioxins and Furans	1.25E-02	1.23E-02	1.20E-02	1.12E-02	1.45E-02	1.07E-02	1.30E-02	1.45E-02	1.69E-02	1.60E-02	1.34E-02	1.42E-02	1.42E-02	9.94E-03	1.51E-02	1.62E-02	1.65E-02	1.69E-02	1.37E-02
16	7647-01-0	Hydrogen Chloride	8.05E-03	7.98E-03	7.75E-03	7.28E-03	9.43E-03	6.94E-03	8.46E-03	8.52E-03	1.04E-02	9.51E-03	8.62E-03	8.51E-03	9.18E-03	6.18E-03	9.65E-03	1.03E-02	1.08E-02	9.80E-03	7.72E-03
17	7440-41-7	Beryllium	2.95E+00	3.13E+00	2.72E+00	2.54E+00	3.22E+00	2.49E+00	3.61E+00	2.03E+00	1.94E+00	2.05E+00	2.24E+00	2.39E+00	2.31E+00	2.53E+00	2.14E+00	2.08E+00	1.88E+00	2.13E+00	2.13E+00
18	7440-50-8	Copper	7.54E-02	8.02E-02	6.95E-02	6.49E-02	8.24E-02	6.38E-02	9.23E-02	5.19E-02	4.97E-02	5.24E-02	5.75E-02	6.12E-02	5.92E-02	6.48E-02	5.48E-02	5.33E-02	4.82E-02	5.44E-02	5.44E-02
19	7440-02-0	Nickel	3.34E-03	3.33E-03	2.87E-03	2.69E-03	3.43E-03	2.64E-03	3.81E-03	2.43E-03	2.34E-03	2.46E-03	2.50E-03	2.54E-03	2.61E-03	2.68E-03	2.31E-03	2.23E-03	2.20E-03	2.25E-03	2.27E-03
20	7440-42-8	Boron	1.66E-03	1.83E-03	1.38E-03	1.34E-03	1.68E-03	1.25E-03	1.73E-03	1.68E-03	1.96E-03	1.83E-03	1.66E-03	1.61E-03	1.65E-03	1.25E-03	1.76E-03	1.97E-03	1.89E-03	1.92E-03	1.55E-03
21	7664-41-7	Ammonia	2.49E-06	2.49E-06	2.39E-06	2.23E-06	2.88E-06	2.12E-06	2.62E-06	2.90E-06	3.36E-06	3.19E-06	2.67E-06	2.82E-06	2.83E-06	2.00E-06	3.00E-06	3.22E-06	3.29E-06	3.36E-06	2.73E-06
22	71-43-2	Benzene	6.65E-05	6.55E-05	6.12E-05	5.65E-05	7.36E-05	5.43E-05	6.94E-05	7.41E-05	8.59E-05	8.17E-05	6.84E-05	7.16E-05	7.25E-05	5.26E-05	7.82E-05	8.29E-05	8.47E-05	8.59E-05	6.98E-05
23	98-82-8	Cumene	3.65E-06	3.67E-06	3.51E-06	3.27E-06	4.24E-06	3.12E-06	3.80E-06	4.26E-06	4.94E-06	4.68E-06	3.92E-06	4.15E-06	4.16E-06	2.91E-06	4.41E-06	4.74E-06	4.84E-06	4.94E-06	4.01E-06
24	108-88-3	Toluene	2.29E-07	2.13E-07	1.89E-07	1.67E-07	1.87E-07	1.76E-07	2.20E-07	2.57E-07	3.14E-07	3.26E-07	2.19E-07	2.12E-07	2.03E-07	2.01E-07	2.84E-07	3.11E-07	2.91E-07	4.75E-07	2.90E-07
25	1330-20-7	Xylenes	1.25E-07	1.16E-07	1.03E-07	9.14E-08	1.02E-07	9.61E-08	1.20E-07	1.41E-07	1.72E-07	1.79E-07	1.20E-07	1.16E-07	1.11E-07	1.10E-07	1.55E-07	1.70E-07	1.59E-07	2.60E-07	1.59E-07
26	100-41-4	Ethylbenzene	1.62E-07	1.67E-07	1.60E-07	1.49E-07	1.93E-07	1.42E-07	1.61E-07	1.91E-07	2.25E-07	2.13E-07	1.77E-07	1.85E-07	1.88E-07	1.28E-07	2.00E-07	2.15E-07	2.18E-07	2.25E-07	1.82E-07
		TOTAL	**6.411**	**7.192**	**5.824**	**5.720**	**6.471**	**5.063**	**7.867**	**4.538**	**4.679**	**4.675**	**6.005**	**6.194**	**6.129**	**5.565**	**5.326**	**5.594**	**4.814**	**4.906**	**4.473**

Acute HI - Proposed (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7466-09-5	Sulphur Dioxide	9.64E-01	8.08E-01	7.55E-01	6.44E-01	7.01E-01	6.23E-01	9.64E-01	7.83E-01	8.61E-01	8.44E-01	7.65E-01	7.59E-01	7.18E-01	6.93E-01	8.30E-01	8.91E-01	8.01E-01	7.92E-01	6.83E-01
2	10102-44-0	Nitrogen Dioxide	1.14E-01	9.48E-02	9.36E-02	8.92E-02	9.45E-02	9.14E-02	1.01E-01	9.66E-02	1.01E-01	9.77E-02	9.23E-02	9.34E-02	9.52E-02	9.11E-02	1.01E-01	1.04E-01	9.84E-02	9.96E-02	8.97E-02
3	PM2.5	Particulate Matter < 2.5 µm	5.62E-01	8.22E-01	5.38E-01	6.12E-01	5.69E-01	4.37E-01	8.09E-01	3.38E-01	4.10E-01	3.53E-01	7.91E-01	7.83E-01	7.87E-01	5.55E-01	5.78E-01	6.05E-01	4.84E-01	4.20E-01	3.46E-01
4	PM10	Particulate Matter < 10 µm	1.06E+00	1.53E+00	1.02E+00	1.14E+00	1.05E+00	8.20E-01	1.54E+00	6.33E-01	7.17E-01	6.74E-01	1.45E+00	1.49E+00	1.48E+00	1.05E+00	1.03E+00	1.12E+00	8.86E-01	7.78E-01	6.43E-01
5	630-08-0	Carbon Monoxide	3.59E-03	6.91E-03	1.32E-02	6.83E-03	9.97E-03	9.69E-03	5.08E-03	1.11E-02	1.55E-02	1.27E-02	6.68E-03	8.44E-03	7.25E-03	6.18E-03	8.75E-03	7.77E-03	1.03E-02	1.70E-02	1.08E-02
6	10028-15-6	Ozone	9.88E-02	9.87E-02	9.90E-02	9.88E-02	9.88E-02	9.89E-02	9.89E-02	9.92E-02	9.93E-02	9.92E-02	1.04E-01	1.02E-01	1.04E-01	1.00E-01	1.04E-01	1.04E-01	1.03E-01	1.01E-01	1.02E-01
7	PAH	Polycyclic Aromatic Hydrocarbons	7.09E-04	6.13E-04	5.85E-04	5.30E-04	5.49E-04	4.98E-04	7.09E-04	7.00E-04	7.30E-04	7.42E-04	6.53E-04	7.37E-04	6.21E-04	5.65E-04	7.16E-04	7.99E-04	7.20E-04	7.58E-04	5.84E-04
8	7439-97-6	Mercury	1.43E-03	1.34E-03	1.16E-03	1.02E-03	1.43E-03	1.08E-03	1.59E-03	1.28E-03	1.20E-03	1.22E-03	1.08E-03	1.17E-03	1.10E-03	1.10E-03	1.09E-03	1.21E-03	1.06E-03	1.06E-03	9.86E-04
9	7782-41-4	Fluorine	1.79E-01	1.49E-01	1.30E-01	1.36E-01	1.32E-01	1.03E-01	1.79E-01	1.20E-01	1.16E-01	1.12E-01	1.49E-01	1.34E-01	1.38E-01	1.47E-01	1.33E-01	1.45E-01	1.40E-01	1.04E-01	1.01E-01
10	7440-38-2	Arsenic	2.76E-01	2.91E-01	2.52E-01	2.35E-01	2.98E-01	2.31E-01	3.34E-01	1.88E-01	1.80E-01	1.90E-01	2.09E-01	2.22E-01	2.14E-01	2.35E-01	1.99E-01	1.93E-01	1.75E-01	1.97E-01	1.97E-01
11	7440-43-9	Cadmium	4.60E-02	4.61E-02	3.97E-02	3.72E-02	4.72E-02	3.66E-02	5.28E-02	2.96E-02	2.89E-02	3.07E-02	3.41E-02	3.51E-02	3.59E-02	3.71E-02	3.14E-02	3.08E-02	2.88E-02	3.11E-02	3.11E-02
12	Cr III	Chromium III	2.33E-03	2.39E-03	2.06E-03	1.93E-03	2.45E-03	1.90E-03	2.74E-03	1.54E-03	1.49E-03	1.57E-03	1.74E-03	1.82E-03	1.79E-03	1.92E-03	1.63E-03	1.59E-03	1.43E-03	1.61E-03	1.61E-03
13	Cr IV	Chromium IV	1.11E-02	1.13E-02	9.77E-03	9.15E-03	1.16E-02	8.99E-03	1.30E-02	7.29E-03	7.06E-03	7.46E-03	8.24E-03	8.63E-03	8.46E-03	9.12E-03	7.72E-03	7.54E-03	6.94E-03	7.65E-03	7.66E-03
14	7439-92-1	Lead	2.81E-02	2.95E-02	2.56E-02	2.39E-02	3.03E-02	2.35E-02	3.39E-02	1.91E-02	1.83E-02	1.93E-02	2.12E-02	2.25E-02	2.18E-02	2.38E-02	2.02E-02	1.96E-02	1.77E-02	2.00E-02	2.00E-02
15	DioxFur	Dioxins and Furans	1.26E-02	1.32E-02	1.20E-02	1.28E-02	1.35E-02	1.23E-02	1.26E-02	1.50E-02	1.85E-02	1.78E-02	1.55E-02	1.65E-02	1.59E-02	1.28E-02	1.67E-02	1.77E-02	1.76E-02	1.88E-02	1.38E-02
16	7647-01-0	Hydrogen Chloride	8.11E-03	8.18E-03	7.77E-03	8.00E-03	8.81E-03	8.02E-03	8.15E-03	8.86E-03	1.02E-02	1.03E-02	1.00E-02	1.01E-02	9.69E-03	8.21E-03	1.04E-02	1.15E-02	1.09E-02	1.11E-02	8.32E-03
17	7440-41-7	Beryllium	2.95E+00	3.13E+00	2.72E+00	2.54E+00	3.22E+00	2.49E+00	3.61E+00	2.03E+00	1.94E+00	2.05E+00	2.24E+00	2.39E+00	2.31E+00	2.53E+00	2.14E+00	2.08E+00	1.88E+00	2.13E+00	2.13E+00
18	7440-50-8	Copper	7.54E-02	8.02E-02	6.95E-02	6.49E-02	8.24E-02	6.38E-02	9.23E-02	5.19E-02	4.97E-02	5.24E-02	5.75E-02	6.12E-02	5.91E-02	6.48E-02	5.48E-02	5.33E-02	4.82E-02	5.44E-02	5.44E-02
19	7440-02-0	Nickel	3.40E-03	3.33E-03	2.87E-03	2.69E-03	3.43E-03	2.64E-03	3.81E-03	2.18E-03	2.10E-03	2.24E-03	2.50E-03	2.53E-03	2.61E-03	2.68E-03	2.30E-03	2.27E-03	2.45E-03	2.25E-03	2.27E-03
20	7440-42-8	Boron	1.66E-03	1.63E-03	1.49E-03	1.45E-03	1.65E-03	1.40E-03	1.73E-03	1.71E-03	2.10E-03	2.03E-03	1.76E-03	1.88E-03	1.86E-03	1.52E-03	1.93E-03	2.11E-03	2.01E-03	2.14E-03	1.57E-03
21	7664-41-7	Ammonia	2.52E-06	2.64E-06	2.37E-06	2.55E-06	2.69E-06	2.45E-06	2.52E-06	3.00E-06	3.69E-06	3.55E-06	3.09E-06	3.29E-06	3.16E-06	2.56E-06	3.33E-06	3.53E-06	3.50E-06	3.74E-06	2.75E-06
22	71-43-2	Benzene	6.73E-05	6.88E-05	6.27E-05	6.47E-05	6.83E-05	6.22E-05	6.68E-05	7.67E-05	9.44E-05	9.05E-05	7.85E-05	8.36E-05	8.22E-05	6.60E-05	8.48E-05	9.18E-05	8.88E-05	9.56E-05	7.02E-05
23	98-82-8	Cumene	3.70E-06	3.88E-06	3.50E-06	3.74E-06	3.96E-06	3.60E-06	3.71E-06	4.41E-06	5.42E-06	5.22E-06	4.54E-06	4.84E-06	4.64E-06	3.76E-06	4.90E-06	5.18E-06	5.14E-06	5.50E-06	4.04E-06
24	108-88-3	Toluene	2.27E-07	1.84E-07	1.87E-07	1.94E-07	1.65E-07	2.59E-07	2.20E-07	2.98E-07	3.98E-07	3.34E-07	2.51E-07	2.26E-07	2.23E-07	2.06E-07	2.97E-07	3.04E-07	3.19E-07	3.91E-07	3.01E-07
25	1330-20-7	Xylenes	1.24E-07	1.01E-07	1.02E-07	1.06E-07	8.99E-08	1.42E-07	1.20E-07	1.63E-07	2.18E-07	1.83E-07	1.38E-07	1.24E-07	1.22E-07	1.13E-07	1.62E-07	1.66E-07	1.75E-07	2.14E-07	1.65E-07
26	100-41-4	Ethylbenzene	1.62E-07	1.75E-07	1.59E-07	1.71E-07	1.76E-07	1.64E-07	1.61E-07	2.01E-07	2.47E-07	2.38E-07	2.07E-07	2.21E-07	2.11E-07	1.71E-07	2.22E-07	2.32E-07	2.34E-07	2.51E-07	1.84E-07
		TOTAL	**6.393**	**7.137**	**5.784**	**5.667**	**6.381**	**5.067**	**7.862**	**4.435**	**4.580**	**4.577**	**5.970**	**6.145**	**6.012**	**5.569**	**5.275**	**5.399**	**4.719**	**4.785**	**4.441**

Table B1a: Acute Hazard Index for each Receptor

Acute HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7466-09-5	Sulphur Dioxide	7.26E-01	7.33E-01	7.60E-01	9.59E-01	7.28E-01	6.81E-01	8.34E-01	8.94E-01	1.08E+00	1.21E+00	9.47E-01	9.85E-01	1.03E+00	1.38E+00	1.12E+00	8.51E-01	7.61E-01	8.42E-01	9.82E-01
2	10102-44-0	Nitrogen Dioxide	9.17E-02	8.99E-02	9.20E-02	9.69E-02	9.31E-02	9.03E-02	9.61E-02	1.05E-01	1.14E-01	1.22E-01	1.13E-01	1.08E-01	1.11E-01	1.34E-01	1.18E-01	9.53E-02	9.89E-02	9.65E-02	1.04E-01
3	PM2.5	Particulate Matter < 2.5 µm	4.03E-01	4.14E-01	3.80E-01	3.48E-01	9.42E-01	5.52E-01	5.01E-01	6.52E-01	8.61E-01	7.70E-01	1.07E+00	5.90E-01	5.22E-01	1.33E+00	7.28E-01	5.11E-01	4.70E-01	7.44E-01	6.38E-01
4	PM10	Particulate Matter < 10 µm	7.75E-01	7.96E-01	7.31E-01	6.37E-01	1.76E+00	1.02E+00	9.48E-01	1.24E+00	1.65E+00	1.47E+00	1.99E+00	1.13E+00	9.95E-01	2.52E+00	1.39E+00	9.68E-01	8.88E-01	1.42E+00	1.21E+00
5	630-08-0	Carbon Monoxide	8.28E-03	8.34E-03	6.83E-03	5.37E-03	7.14E-03	4.28E-03	1.12E-02	6.63E-03	4.01E-03	3.61E-03	4.42E-03	4.22E-03	3.34E-03	3.16E-03	2.36E-03	1.20E-02	8.84E-03	6.28E-03	3.69E-03
6	10028-15-6	Ozone	1.01E-01	1.01E-01	1.02E-01	1.03E-01	9.88E-02	9.89E-02	9.91E-02	9.91E-02	9.90E-02	9.90E-02	9.90E-02	9.92E-02	9.87E-02	9.89E-02	9.87E-02	9.90E-02	9.91E-02	9.88E-02	9.92E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	5.28E-04	5.39E-04	5.59E-04	6.94E-04	5.27E-04	5.46E-04	6.04E-04	6.58E-04	7.94E-04	8.93E-04	6.96E-04	7.25E-04	7.57E-04	1.01E-03	8.22E-04	6.20E-04	5.60E-04	6.19E-04	7.22E-04
8	7439-97-6	Mercury	1.02E-03	1.05E-03	1.03E-03	1.21E-03	1.23E-03	1.06E-03	1.12E-03	1.52E-03	1.63E-03	1.70E-03	1.50E-03	1.49E-03	1.43E-03	2.10E-03	1.75E-03	1.13E-03	1.28E-03	1.33E-03	1.51E-03
9	7782-41-4	Fluorine	9.26E-02	9.23E-02	8.85E-02	9.58E-02	1.60E-01	1.44E-01	1.06E-01	1.46E-01	1.67E-01	1.79E-01	1.61E-01	2.06E-01	2.01E-01	3.49E-01	1.31E-01	1.18E-01	1.18E-01	1.38E-01	1.84E-01
10	7440-38-2	Arsenic	2.14E-01	2.08E-01	2.22E-01	2.22E-01	2.79E-01	2.22E-01	2.47E-01	2.80E-01	3.24E-01	3.09E-01	3.16E-01	3.01E-01	3.15E-01	4.18E-01	3.04E-01	2.62E-01	2.60E-01	2.90E-01	3.26E-01
11	7440-43-9	Cadmium	3.46E-02	3.59E-02	3.59E-02	3.71E-02	4.46E-02	3.52E-02	3.90E-02	4.43E-02	5.12E-02	5.07E-02	4.98E-02	4.90E-02	4.97E-02	6.64E-02	5.15E-02	4.15E-02	4.18E-02	4.63E-02	5.14E-02
12	Cr III	Chromium III	1.76E-03	1.80E-03	1.86E-03	1.85E-03	2.30E-03	1.82E-03	2.02E-03	2.30E-03	2.66E-03	2.60E-03	2.58E-03	2.52E-03	2.58E-03	3.43E-03	2.60E-03	2.15E-03	2.15E-03	2.39E-03	2.67E-03
13	Cr IV	Chromium IV	8.34E-03	8.54E-03	8.84E-03	8.75E-03	1.09E-02	8.63E-03	9.60E-03	1.09E-02	1.26E-02	1.23E-02	1.23E-02	1.19E-02	1.22E-02	1.63E-02	1.23E-02	1.02E-02	1.02E-02	1.13E-02	1.26E-02
14	7439-92-1	Lead	2.18E-02	2.12E-02	2.26E-02	2.26E-02	2.83E-02	2.25E-02	2.51E-02	2.85E-02	3.30E-02	3.15E-02	3.20E-02	3.06E-02	3.20E-02	4.24E-02	3.10E-02	2.66E-02	2.64E-02	2.94E-02	3.31E-02
15	DioxFur	Dioxins and Furans	1.09E-02	1.11E-02	1.14E-02	1.27E-02	1.21E-02	1.09E-02	1.53E-02	1.16E-02	1.39E-02	1.57E-02	1.23E-02	1.27E-02	1.33E-02	1.78E-02	1.44E-02	1.51E-02	1.27E-02	1.19E-02	1.27E-02
16	7647-01-0	Hydrogen Chloride	7.08E-03	7.24E-03	7.43E-03	8.09E-03	7.89E-03	7.12E-03	9.95E-03	7.52E-03	9.07E-03	1.02E-02	7.91E-03	8.28E-03	8.44E-03	1.16E-02	9.37E-03	9.81E-03	8.24E-03	7.40E-03	8.26E-03
17	7440-41-7	Beryllium	2.25E+00	2.21E+00	2.40E+00	2.39E+00	3.00E+00	2.39E+00	2.67E+00	3.02E+00	3.50E+00	3.31E+00	3.40E+00	3.22E+00	3.40E+00	4.50E+00	3.25E+00	2.83E+00	2.80E+00	3.12E+00	3.51E+00
18	7440-50-8	Copper	5.77E-02	5.67E-02	6.14E-02	6.12E-02	7.69E-02	6.12E-02	6.83E-02	7.74E-02	8.96E-02	8.48E-02	8.71E-02	8.25E-02	8.70E-02	1.15E-01	8.31E-02	7.24E-02	7.16E-02	7.99E-02	8.99E-02
19	7440-02-0	Nickel	2.54E-03	2.65E-03	2.59E-03	2.74E-03	3.23E-03	2.55E-03	2.82E-03	3.20E-03	3.74E-03	3.68E-03	3.60E-03	3.56E-03	3.59E-03	4.80E-03	3.79E-03	2.99E-03	3.03E-03	3.35E-03	3.71E-03
20	7440-42-8	Boron	1.55E-03	1.42E-03	1.56E-03	1.69E-03	1.48E-03	1.36E-03	1.79E-03	1.62E-03	1.91E-03	1.93E-03	1.62E-03	1.56E-03	1.64E-03	2.32E-03	1.97E-03	1.80E-03	1.57E-03	1.72E-03	1.60E-03
21	7664-41-7	Ammonia	2.17E-06	2.22E-06	2.29E-06	2.53E-06	2.41E-06	2.26E-06	3.05E-06	2.31E-06	2.79E-06	3.15E-06	2.44E-06	2.53E-06	2.66E-06	3.57E-06	2.94E-06	3.00E-06	2.53E-06	2.37E-06	2.54E-06
22	71-43-2	Benzene	5.58E-05	5.94E-05	5.82E-05	6.77E-05	6.17E-05	5.73E-05	7.73E-05	6.17E-05	7.45E-05	8.39E-05	6.53E-05	6.79E-05	7.10E-05	9.51E-05	7.80E-05	7.61E-05	6.44E-05	6.07E-05	6.77E-05
23	98-82-8	Cumene	3.19E-06	3.26E-06	3.34E-06	3.72E-06	3.55E-06	3.32E-06	4.48E-06	3.38E-06	4.09E-06	4.60E-06	3.59E-06	3.73E-06	3.90E-06	5.21E-06	4.32E-06	4.41E-06	3.72E-06	3.48E-06	3.72E-06
24	108-88-3	Toluene	1.44E-07	1.60E-07	1.56E-07	1.98E-07	1.97E-07	1.77E-07	2.80E-07	1.80E-07	2.05E-07	2.20E-07	1.99E-07	2.53E-07	2.48E-07	4.30E-07	1.91E-07	2.24E-07	3.88E-07	1.70E-07	2.27E-07
25	1330-20-7	Xylenes	7.89E-08	8.79E-08	8.53E-08	1.08E-07	1.07E-07	9.66E-08	1.53E-07	9.84E-08	1.12E-07	1.20E-07	1.08E-07	1.38E-07	1.35E-07	2.35E-07	1.04E-07	1.23E-07	2.13E-07	9.26E-08	1.24E-07
26	100-41-4	Ethylbenzene	1.43E-07	1.47E-07	1.47E-07	1.57E-07	1.56E-07	1.51E-07	2.04E-07	1.48E-07	1.71E-07	1.95E-07	1.59E-07	1.65E-07	1.70E-07	2.28E-07	1.87E-07	2.01E-07	1.70E-07	1.47E-07	1.62E-07
		TOTAL	**4.814**	**4.805**	**4.935**	**5.015**	**7.264**	**5.360**	**5.686**	**6.635**	**8.016**	**7.695**	**8.315**	**6.849**	**6.887**	**11.007**	**7.353**	**5.929**	**5.682**	**6.951**	**7.276**

Acute HI - Proposed (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7466-09-5	Sulphur Dioxide	6.74E-01	6.98E-01	7.07E-01	8.68E-01	7.45E-01	6.45E-01	7.21E-01	8.94E-01	1.08E+00	1.21E+00	9.47E-01	9.96E-01	1.03E+00	1.38E+00	1.13E+00	7.14E-01	7.76E-01	8.42E-01	1.00E+00
2	10102-44-0	Nitrogen Dioxide	9.07E-02	9.14E-02	9.17E-02	9.72E-02	9.34E-02	9.04E-02	9.85E-02	1.04E-01	1.14E-01	1.21E-01	1.13E-01	1.08E-01	1.11E-01	1.34E-01	1.19E-01	9.56E-02	9.96E-02	9.75E-02	1.05E-01
3	PM2.5	Particulate Matter < 2.5 µm	4.01E-01	4.11E-01	3.79E-01	3.56E-01	9.39E-01	5.51E-01	5.02E-01	6.59E-01	8.40E-01	7.57E-01	1.07E+00	5.89E-01	5.21E-01	1.34E+00	7.10E-01	5.11E-01	4.71E-01	7.45E-01	6.39E-01
4	PM10	Particulate Matter < 10 µm	7.71E-01	7.91E-01	7.29E-01	6.43E-01	1.76E+00	1.02E+00	9.49E-01	1.25E+00	1.61E+00	1.44E+00	1.98E+00	1.13E+00	9.95E-01	2.53E+00	1.36E+00	9.67E-01	8.90E-01	1.42E+00	1.21E+00
5	630-08-0	Carbon Monoxide	8.28E-03	8.34E-03	6.83E-03	5.37E-03	8.07E-03	3.90E-03	1.13E-02	7.19E-03	4.30E-03	4.17E-03	5.51E-03	4.88E-03	4.23E-03	3.02E-03	3.02E-03	1.20E-02	1.09E-02	6.48E-03	4.63E-03
6	10028-15-6	Ozone	9.99E-02	9.98E-02	1.02E-01	1.01E-01	9.88E-02	9.89E-02	9.90E-02	9.91E-02	9.90E-02	9.90E-02	9.90E-02	9.92E-02	9.87E-02	9.89E-02	9.87E-02	9.90E-02	9.89E-02	9.88E-02	9.89E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	5.28E-04	5.51E-04	5.59E-04	6.58E-04	5.47E-04	5.18E-04	6.15E-04	6.58E-04	7.94E-04	8.93E-04	6.96E-04	7.33E-04	7.57E-04	1.01E-03	8.48E-04	6.09E-04	6.32E-04	6.45E-04	7.36E-04
8	7439-97-6	Mercury	1.02E-03	1.04E-03	1.03E-03	1.15E-03	1.24E-03	1.06E-03	1.12E-03	1.52E-03	1.63E-03	1.70E-03	1.50E-03	1.49E-03	1.43E-03	2.10E-03	1.75E-03	1.13E-03	1.34E-03	1.33E-03	1.55E-03
9	7782-41-4	Fluorine	8.61E-02	8.88E-02	8.17E-02	9.59E-02	1.60E-01	1.44E-01	1.06E-01	1.46E-01	1.67E-01	1.79E-01	1.61E-01	2.06E-01	2.01E-01	3.49E-01	1.29E-01	1.18E-01	1.18E-01	1.38E-01	1.84E-01
10	7440-38-2	Arsenic	2.14E-01	2.08E-01	2.22E-01	2.22E-01	2.79E-01	2.22E-01	2.47E-01	2.80E-01	3.24E-01	3.09E-01	3.16E-01	3.02E-01	3.15E-01	4.18E-01	3.04E-01	2.62E-01	2.60E-01	2.90E-01	3.26E-01
11	7440-43-9	Cadmium	3.46E-02	3.60E-02	3.59E-02	3.71E-02	4.46E-02	3.52E-02	3.90E-02	4.43E-02	5.12E-02	5.07E-02	4.98E-02	4.90E-02	4.97E-02	6.64E-02	5.14E-02	4.15E-02	4.18E-02	4.63E-02	5.14E-02
12	Cr III	Chromium III	1.76E-03	1.80E-03	1.86E-03	1.85E-03	2.30E-03	1.82E-03	2.02E-03	2.30E-03	2.66E-03	2.60E-03	2.58E-03	2.52E-03	2.58E-03	3.43E-03	2.60E-03	2.15E-03	2.15E-03	2.39E-03	2.67E-03
13	Cr IV	Chromium IV	8.34E-03	8.54E-03	8.84E-03	8.75E-03	1.09E-02	8.63E-03	9.60E-03	1.09E-02	1.26E-02	1.23E-02	1.23E-02	1.19E-02	1.22E-02	1.63E-02	1.24E-02	1.02E-02	1.02E-02	1.13E-02	1.26E-02
14	7439-92-1	Lead	2.18E-02	2.12E-02	2.26E-02	2.26E-02	2.83E-02	2.25E-02	2.51E-02	2.85E-02	3.30E-02	3.15E-02	3.20E-02	3.08E-02	3.20E-02	4.24E-02	3.10E-02	2.66E-02	2.64E-02	2.94E-02	3.31E-02
15	DioxFur	Dioxins and Furans	1.28E-02	1.31E-02	1.15E-02	1.27E-02	1.26E-02	1.09E-02	1.59E-02	1.21E-02	1.44E-02	1.57E-02	1.32E-02	1.38E-02	1.35E-02	1.78E-02	1.49E-02	1.33E-02	1.49E-02	1.31E-02	1.31E-02
16	7647-01-0	Hydrogen Chloride	8.08E-03	8.43E-03	7.44E-03	8.09E-03	7.81E-03	6.76E-03	1.04E-02	7.67E-03	9.07E-03	1.02E-02	7.99E-03	8.38E-03	8.66E-03	1.16E-02	9.58E-03	8.67E-03	9.64E-03	8.33E-03	8.42E-03
17	7440-41-7	Beryllium	2.25E+00	2.21E+00	2.40E+00	2.39E+00	3.00E+00	2.39E+00	2.67E+00	3.02E+00	3.50E+00	3.31E+00	3.40E+00	3.24E+00	3.40E+00	4.50E+00	3.25E+00	2.83E+00	2.80E+00	3.12E+00	3.51E+00
18	7440-50-8	Copper	5.77E-02	5.67E-02	6.14E-02	6.12E-02	7.69E-02	6.12E-02	6.83E-02	7.74E-02	8.96E-02	8.48E-02	8.71E-02	8.27E-02	8.70E-02	1.15E-01	8.31E-02	7.24E-02	7.16E-02	7.99E-02	8.99E-02
19	7440-02-0	Nickel	2.54E-03	2.65E-03	2.59E-03	2.74E-03	3.23E-03	2.55E-03	2.82E-03	3.20E-03	3.74E-03	3.68E-03	3.60E-03	3.56E-03	3.59E-03	4.80E-03	3.76E-03	2.99E-03	3.03E-03	3.35E-03	3.71E-03
20	7440-42-8	Boron	1.60E-03	1.60E-03	1.56E-03	1.58E-03	1.56E-03	1.36E-03	1.89E-03	1.70E-03	1.91E-03	1.94E-03	1.63E-03	1.58E-03	1.67E-03	2.32E-03	1.99E-03	1.68E-03	1.81E-03	1.81E-03	1.64E-03
21	7664-41-7	Ammonia	2.55E-06	2.61E-06	2.30E-06	2.53E-06	2.52E-06	2.25E-06	3.17E-06	2.42E-06	2.87E-06	3.17E-06	2.63E-06	2.76E-06	2.72E-06	3.57E-06	3.03E-06	2.65E-06	2.98E-06	2.62E-06	2.61E-06
22	71-43-2	Benzene	6.47E-05	6.66E-05	6.07E-05	6.64E-05	6.50E-05	5.83E-05	8.06E-05	6.45E-05	7.47E-05	8.40E-05	7.02E-05	7.25E-05	7.18E-05	9.51E-05	8.06E-05	7.01E-05	7.57E-05	6.64E-05	6.90E-05
23	98-82-8	Cumene	3.75E-06	3.83E-06	3.38E-06	3.72E-06	3.70E-06	3.31E-06	4.67E-06	3.54E-06	4.22E-06	4.61E-06	3.87E-06	4.04E-06	3.94E-06	5.21E-06	4.43E-06	3.89E-06	4.38E-06	3.84E-06	3.82E-06
24	108-88-3	Toluene	1.64E-07	2.16E-07	1.80E-07	1.71E-07	2.21E-07	1.77E-07	2.84E-07	1.80E-07	2.05E-07	2.20E-07	1.99E-07	2.53E-07	2.48E-07	4.30E-07	1.92E-07	1.99E-07	3.75E-07	1.89E-07	2.27E-07
25	1330-20-7	Xylenes	8.99E-08	1.18E-07	9.86E-08	9.37E-08	1.21E-07	9.66E-08	1.56E-07	9.84E-08	1.12E-07	1.20E-07	1.08E-07	1.38E-07	1.35E-07	2.35E-07	1.05E-07	1.09E-07	2.06E-07	1.04E-07	1.24E-07
26	100-41-4	Ethylbenzene	1.68E-07	1.75E-07	1.51E-07	1.65E-07	1.54E-07	1.51E-07	2.13E-07	1.55E-07	1.82E-07	2.01E-07	1.70E-07	1.77E-07	1.74E-07	2.28E-07	1.94E-07	1.77E-07	2.00E-07	1.69E-07	1.66E-07
		TOTAL	**4.750**	**4.763**	**4.873**	**4.938**	**7.276**	**5.323**	**5.577**	**6.657**	**7.955**	**7.659**	**8.315**	**6.878**	**6.887**	**11.036**	**7.311**	**5.788**	**5.706**	**6.957**	**7.301**

Table B1a: Acute Hazard Index for each Receptor

Acute HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7466-09-5	Sulphur Dioxide	9.81E-01	1.21E+00	1.14E+00	7.56E-01	9.17E-01	7.51E-01	6.30E-01	6.19E-01	6.27E-01	7.21E-01	5.94E-01	8.63E-01	7.42E-01	6.52E-01	9.87E-01	1.36E+00	1.69E+00	7.68E-01	8.27E-01
2	10102-44-0	Nitrogen Dioxide	1.13E-01	1.26E-01	1.24E-01	8.91E-02	1.04E-01	9.82E-02	9.10E-02	8.86E-02	8.96E-02	9.30E-02	8.43E-02	9.95E-02	8.82E-02	9.00E-02	1.07E-01	1.29E-01	1.42E-01	8.99E-02	1.00E-01
3	PM2.5	Particulate Matter < 2.5 µm	6.09E-01	1.55E+00	1.26E+00	3.68E-01	4.17E-01	6.06E-01	5.11E-01	5.83E-01	4.98E-01	4.13E-01	3.02E-01	4.47E-01	3.95E-01	4.46E-01	6.85E-01	8.10E-01	1.29E+00	5.13E-01	5.75E-01
4	PM10	Particulate Matter < 10 µm	1.16E+00	2.96E+00	2.35E+00	6.53E-01	7.82E-01	1.12E+00	9.30E-01	1.08E+00	9.17E-01	7.73E-01	5.73E-01	8.40E-01	7.52E-01	8.41E-01	1.31E+00	1.54E+00	2.48E+00	9.83E-01	1.11E+00
5	630-08-0	Carbon Monoxide	4.26E-03	5.22E-03	4.78E-03	7.68E-03	1.34E-02	9.82E-03	6.78E-03	6.32E-03	4.67E-03	7.64E-03	6.86E-03	5.05E-03	7.34E-03	4.85E-03	5.93E-03	3.12E-03	2.72E-03	2.39E-03	3.99E-03
6	10028-15-6	Ozone	9.90E-02	9.89E-02	9.89E-02	1.03E-01	9.92E-02	9.90E-02	9.90E-02	9.91E-02	9.90E-02	9.90E-02	1.02E-01	1.03E-01	1.02E-01	1.05E-01	9.92E-02	9.87E-02	9.87E-02	9.90E-02	9.90E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	7.22E-04	8.91E-04	8.41E-04	5.51E-04	6.63E-04	5.52E-04	4.60E-04	4.84E-04	4.57E-04	5.25E-04	4.37E-04	6.25E-04	5.37E-04	4.80E-04	7.26E-04	1.00E-03	1.24E-03	5.65E-04	6.08E-04
8	7439-97-6	Mercury	1.47E-03	1.97E-03	2.20E-03	9.99E-04	1.27E-03	1.07E-03	1.04E-03	1.05E-03	1.02E-03	1.12E-03	8.43E-04	1.22E-03	1.02E-03	9.35E-04	1.53E-03	2.07E-03	2.67E-03	1.08E-03	1.24E-03
9	7782-41-4	Fluorine	1.38E-01	2.79E-01	3.08E-01	1.04E-01	1.23E-01	1.18E-01	1.30E-01	1.23E-01	1.13E-01	1.19E-01	9.40E-02	1.42E-01	1.09E-01	1.16E-01	1.52E-01	2.25E-01	2.27E-01	1.07E-01	1.37E-01
10	7440-38-2	Arsenic	3.21E-01	4.08E-01	3.92E-01	1.78E-01	2.14E-01	1.88E-01	2.16E-01	1.86E-01	2.10E-01	2.28E-01	1.77E-01	2.66E-01	2.01E-01	2.12E-01	3.00E-01	3.46E-01	4.31E-01	2.37E-01	2.50E-01
11	7440-43-9	Cadmium	5.08E-02	6.63E-02	6.61E-02	2.85E-02	3.47E-02	3.02E-02	3.41E-02	3.02E-02	3.37E-02	3.71E-02	2.83E-02	4.20E-02	3.18E-02	3.35E-02	4.76E-02	5.64E-02	7.24E-02	3.85E-02	3.95E-02
12	Cr III	Chromium III	2.63E-03	3.38E-03	3.34E-03	1.47E-03	1.76E-03	1.52E-03	1.77E-03	1.55E-03	1.75E-03	1.90E-03	1.45E-03	2.18E-03	1.65E-03	1.74E-03	2.47E-03	2.89E-03	3.67E-03	1.98E-03	2.05E-03
13	Cr IV	Chromium IV	1.25E-02	1.60E-02	1.58E-02	6.99E-03	8.35E-03	7.41E-03	8.38E-03	7.35E-03	8.28E-03	9.02E-03	6.89E-03	1.03E-02	7.81E-03	8.24E-03	1.17E-02	1.37E-02	1.74E-02	9.38E-03	9.71E-03
14	7439-92-1	Lead	3.26E-02	4.15E-02	3.99E-02	1.81E-02	2.18E-02	1.93E-02	2.19E-02	1.90E-02	2.14E-02	2.32E-02	1.80E-02	2.70E-02	2.04E-02	2.15E-02	3.05E-02	3.52E-02	4.40E-02	2.40E-02	2.54E-02
15	DioxFur	Dioxins and Furans	1.27E-02	1.57E-02	1.57E-02	1.29E-02	1.73E-02	1.31E-02	1.12E-02	1.10E-02	9.42E-03	1.29E-02	8.98E-03	1.16E-02	1.14E-02	8.91E-03	1.28E-02	1.76E-02	2.19E-02	9.95E-03	1.11E-02
16	7647-01-0	Hydrogen Chloride	8.26E-03	1.02E-02	9.62E-03	7.74E-03	1.01E-02	8.52E-03	7.33E-03	7.18E-03	6.13E-03	8.38E-03	5.64E-03	7.28E-03	7.41E-03	5.57E-03	8.30E-03	1.15E-02	1.42E-02	6.48E-03	7.03E-03
17	7440-41-7	Beryllium	3.46E+00	4.40E+00	4.18E+00	1.92E+00	2.31E+00	2.02E+00	2.33E+00	2.00E+00	2.26E+00	2.45E+00	1.91E+00	2.87E+00	2.13E+00	2.29E+00	3.21E+00	3.72E+00	4.61E+00	2.56E+00	2.69E+00
18	7440-50-8	Copper	8.86E-02	1.12E-01	1.07E-01	4.92E-02	5.92E-02	5.14E-02	5.96E-02	5.13E-02	5.80E-02	6.28E-02	4.89E-02	7.35E-02	5.44E-02	5.86E-02	8.21E-02	9.51E-02	1.18E-01	6.54E-02	6.88E-02
19	7440-02-0	Nickel	3.70E-03	4.84E-03	4.84E-03	2.10E-03	2.74E-03	2.19E-03	2.47E-03	2.27E-03	2.44E-03	2.69E-03	2.05E-03	3.03E-03	2.29E-03	2.42E-03	3.44E-03	4.08E-03	5.30E-03	2.78E-03	2.85E-03
20	7440-42-8	Boron	1.60E-03	2.15E-03	2.27E-03	1.70E-03	1.95E-03	1.57E-03	1.31E-03	1.35E-03	1.17E-03	1.57E-03	1.04E-03	1.46E-03	1.35E-03	1.09E-03	1.71E-03	2.22E-03	2.93E-03	1.21E-03	1.40E-03
21	7664-41-7	Ammonia	2.54E-06	3.13E-06	3.12E-06	2.57E-06	3.44E-06	2.62E-06	2.24E-06	2.20E-06	1.88E-06	2.56E-06	1.79E-06	2.30E-06	2.27E-06	1.78E-06	2.54E-06	3.53E-06	4.36E-06	1.99E-06	2.24E-06
22	71-43-2	Benzene	6.77E-05	8.36E-05	8.00E-05	6.73E-05	8.80E-05	6.74E-05	5.69E-05	5.61E-05	4.91E-05	6.50E-05	4.62E-05	6.10E-05	6.07E-05	4.63E-05	6.80E-05	9.40E-05	1.16E-04	5.30E-05	5.76E-05
23	98-82-8	Cumene	3.72E-06	4.59E-06	4.59E-06	3.78E-06	5.06E-06	3.85E-06	3.29E-06	3.23E-06	2.76E-06	3.77E-06	2.63E-06	3.39E-06	3.33E-06	2.61E-06	3.74E-06	5.15E-06	6.39E-06	2.92E-06	3.25E-06
24	108-88-3	Toluene	1.87E-07	3.44E-07	3.79E-07	2.45E-07	4.40E-07	3.50E-07	2.55E-07	1.80E-07	1.60E-07	3.02E-07	1.49E-07	1.95E-07	1.80E-07	1.54E-07	1.87E-07	2.94E-07	2.79E-07	1.32E-07	1.68E-07
25	1330-20-7	Xylenes	1.02E-07	1.88E-07	2.07E-07	1.34E-07	2.41E-07	1.91E-07	1.40E-07	9.85E-08	8.76E-08	1.65E-07	8.18E-08	1.06E-07	9.85E-08	8.43E-08	1.02E-07	1.60E-07	1.52E-07	7.20E-08	9.19E-08
26	100-41-4	Ethylbenzene	1.61E-07	1.97E-07	2.08E-07	1.71E-07	2.31E-07	1.74E-07	1.50E-07	1.46E-07	1.21E-07	1.68E-07	1.16E-07	1.54E-07	1.52E-07	1.15E-07	1.62E-07	2.19E-07	2.78E-07	1.28E-07	1.39E-07
		TOTAL	**7.100**	**11.311**	**10.136**	**4.313**	**5.143**	**5.148**	**5.092**	**4.921**	**4.967**	**5.069**	**3.969**	**5.817**	**4.664**	**4.899**	**7.058**	**8.469**	**11.279**	**5.516**	**5.957**

Acute HI - Proposed (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7466-09-5	Sulphur Dioxide	9.81E-01	1.21E+00	1.14E+00	6.68E-01	7.09E-01	6.06E-01	5.95E-01	5.58E-01	6.20E-01	7.02E-01	6.00E-01	8.16E-01	6.70E-01	6.52E-01	9.87E-01	1.36E+00	1.69E+00	7.68E-01	8.34E-01
2	10102-44-0	Nitrogen Dioxide	1.15E-01	1.28E-01	1.21E-01	8.60E-02	9.93E-02	9.12E-02	8.90E-02	8.73E-02	8.98E-02	9.24E-02	8.43E-02	9.95E-02	8.78E-02	9.09E-02	1.06E-01	1.29E-01	1.43E-01	8.94E-02	1.02E-01
3	PM2.5	Particulate Matter < 2.5 µm	6.03E-01	1.58E+00	1.29E+00	3.74E-01	4.16E-01	5.83E-01	4.82E-01	5.83E-01	4.97E-01	4.13E-01	3.02E-01	4.52E-01	3.96E-01	4.47E-01	6.86E-01	8.08E-01	1.29E+00	5.05E-01	5.74E-01
4	PM10	Particulate Matter < 10 µm	1.14E+00	3.01E+00	2.42E+00	6.59E-01	7.81E-01	1.08E+00	9.06E-01	1.08E+00	9.14E-01	7.72E-01	5.73E-01	8.46E-01	7.54E-01	8.43E-01	1.31E+00	1.54E+00	2.48E+00	9.81E-01	1.10E+00
5	630-08-0	Carbon Monoxide	5.29E-03	5.22E-03	5.61E-03	9.31E-03	1.41E-02	8.10E-03	7.72E-03	6.46E-03	6.01E-03	9.58E-03	6.86E-03	5.04E-03	7.34E-03	5.33E-03	6.80E-03	3.93E-03	3.47E-03	2.51E-03	4.45E-03
6	10028-15-6	Ozone	9.88E-02	9.89E-02	9.89E-02	1.01E-01	9.90E-02	9.90E-02	9.90E-02	9.91E-02	9.90E-02	9.89E-02	1.01E-01	1.03E-01	1.01E-01	1.05E-01	9.92E-02	9.87E-02	9.87E-02	9.89E-02	9.90E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	7.22E-04	8.91E-04	8.41E-04	5.13E-04	6.41E-04	5.52E-04	4.86E-04	4.69E-04	5.24E-04	5.75E-04	4.95E-04	6.36E-04	5.82E-04	4.83E-04	7.26E-04	1.00E-03	1.24E-03	5.65E-04	6.13E-04
8	7439-97-6	Mercury	1.47E-03	1.97E-03	2.20E-03	9.51E-04	1.19E-03	1.03E-03	1.01E-03	1.03E-03	1.06E-03	1.12E-03	8.20E-04	1.22E-03	1.01E-03	9.35E-04	1.53E-03	2.07E-03	2.67E-03	1.08E-03	1.25E-03
9	7782-41-4	Fluorine	1.38E-01	2.79E-01	3.08E-01	1.03E-01	1.23E-01	1.11E-01	9.82E-02	1.23E-01	1.13E-01	1.19E-01	9.40E-02	1.45E-01	1.01E-01	1.16E-01	1.52E-01	2.35E-01	2.27E-01	1.07E-01	1.37E-01
10	7440-38-2	Arsenic	3.21E-01	4.08E-01	3.92E-01	1.78E-01	2.14E-01	1.84E-01	2.16E-01	1.86E-01	2.10E-01	2.28E-01	1.77E-01	2.66E-01	2.01E-01	2.12E-01	3.00E-01	3.46E-01	4.31E-01	2.37E-01	2.50E-01
11	7440-43-9	Cadmium	5.08E-02	6.63E-02	6.61E-02	2.83E-02	3.47E-02	2.91E-02	3.41E-02	3.02E-02	3.37E-02	3.71E-02	2.83E-02	4.20E-02	3.18E-02	3.35E-02	4.76E-02	5.64E-02	7.24E-02	3.85E-02	3.95E-02
12	Cr III	Chromium III	2.63E-03	3.38E-03	3.34E-03	1.47E-03	1.76E-03	1.51E-03	1.77E-03	1.55E-03	1.75E-03	1.90E-03	1.45E-03	2.18E-03	1.65E-03	1.74E-03	2.47E-03	2.89E-03	3.67E-03	1.98E-03	2.05E-03
13	Cr IV	Chromium IV	1.25E-02	1.60E-02	1.58E-02	6.95E-03	8.35E-03	7.16E-03	8.38E-03	7.35E-03	8.28E-03	9.02E-03	6.89E-03	1.03E-02	7.81E-03	8.24E-03	1.17E-02	1.37E-02	1.74E-02	9.38E-03	9.71E-03
14	7439-92-1	Lead	3.26E-02	4.15E-02	3.99E-02	1.81E-02	2.18E-02	1.87E-02	2.19E-02	1.90E-02	2.14E-02	2.32E-02	1.80E-02	2.70E-02	2.04E-02	2.15E-02	3.05E-02	3.52E-02	4.40E-02	2.40E-02	2.54E-02
15	DioxFur	Dioxins and Furans	1.31E-02	1.57E-02	1.67E-02	1.19E-02	1.59E-02	1.24E-02	1.25E-02	1.14E-02	1.01E-02	1.37E-02	1.14E-02	1.17E-02	1.41E-02	1.12E-02	1.30E-02	1.76E-02	2.19E-02	1.05E-02	1.08E-02
16	7647-01-0	Hydrogen Chloride	8.26E-03	1.02E-02	9.62E-03	6.86E-03	8.74E-03	7.70E-03	7.95E-03	7.06E-03	6.55E-03	8.74E-03	6.96E-03	7.53E-03	9.09E-03	7.09E-03	8.30E-03	1.15E-02	1.42E-02	6.85E-03	7.03E-03
17	7440-41-7	Beryllium	3.46E+00	4.40E+00	4.18E+00	1.92E+00	2.31E+00	1.99E+00	2.33E+00	2.00E+00	2.26E+00	2.45E+00	1.91E+00	2.87E+00	2.13E+00	2.29E+00	3.21E+00	3.72E+00	4.61E+00	2.56E+00	2.69E+00
18	7440-50-8	Copper	8.86E-02	1.12E-01	1.07E-01	4.92E-02	5.92E-02	5.09E-02	5.96E-02	5.13E-02	5.80E-02	6.28E-02	4.89E-02	7.35E-02	5.44E-02	5.86E-02	8.21E-02	9.51E-02	1.18E-01	6.54E-02	6.88E-02
19	7440-02-0	Nickel	3.70E-03	4.84E-03	4.84E-03	2.06E-03	2.53E-03	2.10E-03	2.46E-03	2.19E-03	2.44E-03	2.69E-03	2.09E-03	3.03E-03	2.29E-03	2.42E-03	3.44E-03	4.08E-03	5.30E-03	2.78E-03	2.85E-03
20	7440-42-8	Boron	1.64E-03	2.15E-03	2.27E-03	1.48E-03	1.80E-03	1.44E-03	1.45E-03	1.30E-03	1.17E-03	1.65E-03	1.31E-03	1.46E-03	1.60E-03	1.32E-03	1.71E-03	2.22E-03	2.98E-03	1.25E-03	1.40E-03
21	7664-41-7	Ammonia	2.63E-06	3.14E-06	3.35E-06	2.37E-06	3.18E-06	2.47E-06	2.48E-06	2.27E-06	2.02E-06	2.73E-06	2.27E-06	2.34E-06	2.80E-06	2.23E-06	2.64E-06	3.53E-06	4.39E-06	2.12E-06	2.18E-06
22	71-43-2	Benzene	7.00E-05	8.37E-05	8.92E-05	6.09E-05	8.12E-05	6.27E-05	6.30E-05	5.78E-05	5.12E-05	7.08E-05	5.81E-05	6.19E-05	7.12E-05	5.76E-05	6.86E-05	9.40E-05	1.17E-04	5.62E-05	5.76E-05
23	98-82-8	Cumene	3.84E-06	4.59E-06	4.90E-06	3.48E-06	4.67E-06	3.63E-06	3.65E-06	3.34E-06	2.94E-06	4.01E-06	3.33E-06	3.44E-06	4.12E-06	3.28E-06	3.85E-06	5.15E-06	6.41E-06	3.08E-06	3.16E-06
24	108-88-3	Toluene	1.69E-07	3.44E-07	3.79E-07	2.54E-07	4.57E-07	2.50E-07	2.76E-07	2.25E-07	1.63E-07	3.23E-07	1.88E-07	2.14E-07	1.96E-07	1.73E-07	1.87E-07	2.94E-07	2.79E-07	1.32E-07	1.73E-07
25	1330-20-7	Xylenes	9.26E-08	1.88E-07	2.07E-07	1.39E-07	2.50E-07	1.37E-07	1.51E-07	1.23E-07	8.90E-08	1.77E-07	1.03E-07	1.17E-07	1.08E-07	9.45E-08	1.02E-07	1.61E-07	1.52E-07	7.20E-08	9.47E-08
26	100-41-4	Ethylbenzene	1.67E-07	1.99E-07	2.11E-07	1.59E-07	2.13E-07	1.65E-07	1.66E-07	1.52E-07	1.34E-07	1.83E-07	1.52E-07	1.57E-07	1.84E-07	1.50E-07	1.68E-07	2.19E-07	2.78E-07	1.31E-07	1.29E-07
		TOTAL	**7.084**	**11.389**	**10.236**	**4.230**	**4.926**	**4.885**	**4.973**	**4.860**	**4.958**	**5.051**	**3.978**	**5.785**	**4.590**	**4.907**	**7.062**	**8.477**	**11.285**	**5.507**	**5.964**

Table B1a: Acute Hazard Index for each Receptor

Acute HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7466-09-5	Sulphur Dioxide	5.86E-01	7.78E-01	6.92E-01	7.18E-01	7.38E-01	7.48E-01	6.86E-01	7.42E-01	9.82E-01	9.60E-01	7.26E-01	9.88E-01	9.81E-01	7.33E-01
2	10102-44-0	Nitrogen Dioxide	8.93E-02	9.57E-02	9.00E-02	9.44E-02	1.02E-01	9.93E-02	9.66E-02	9.91E-02	1.09E-01	1.10E-01	9.97E-02	1.12E-01	1.12E-01	9.63E-02
3	PM2.5	Particulate Matter < 2.5 µm	3.68E-01	4.25E-01	6.75E-01	7.30E-01	7.11E-01	5.99E-01	4.55E-01	5.01E-01	8.82E-01	9.05E-01	7.98E-01	1.03E+00	7.58E-01	5.48E-01
4	PM10	Particulate Matter < 10 µm	6.67E-01	8.04E-01	1.29E+00	1.39E+00	1.24E+00	1.17E+00	7.94E-01	9.58E-01	1.60E+00	1.65E+00	1.53E+00	1.95E+00	1.43E+00	1.04E+00
5	630-08-0	Carbon Monoxide	4.64E-03	8.34E-03	5.35E-03	3.98E-03	5.30E-03	4.86E-03	4.77E-03	4.80E-03	7.09E-03	6.25E-03	5.64E-03	4.58E-03	4.69E-03	4.67E-03
6	10028-15-6	Ozone	9.90E-02	9.91E-02	9.89E-02	9.88E-02	9.90E-02	9.90E-02	9.91E-02	9.91E-02	9.89E-02	9.88E-02	9.89E-02	9.89E-02	9.89E-02	9.89E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	4.31E-04	5.72E-04	5.15E-04	5.38E-04	5.43E-04	5.50E-04	5.05E-04	5.46E-04	7.22E-04	7.06E-04	5.34E-04	7.27E-04	7.21E-04	5.52E-04
8	7439-97-6	Mercury	8.70E-04	1.31E-03	1.22E-03	1.25E-03	1.09E-03	1.24E-03	1.04E-03	1.08E-03	1.49E-03	1.49E-03	1.26E-03	1.63E-03	1.55E-03	1.26E-03
9	7782-41-4	Fluorine	8.71E-02	1.26E-01	1.39E-01	1.62E-01	2.45E-01	1.17E-01	1.32E-01	1.20E-01	1.67E-01	1.96E-01	1.86E-01	2.13E-01	1.82E-01	1.38E-01
10	7440-38-2	Arsenic	1.73E-01	2.81E-01	2.45E-01	2.54E-01	2.04E-01	2.55E-01	2.10E-01	2.19E-01	2.33E-01	2.67E-01	2.92E-01	3.04E-01	2.84E-01	2.25E-01
11	7440-43-9	Cadmium	2.79E-02	4.44E-02	3.96E-02	4.14E-02	3.40E-02	4.02E-02	3.40E-02	3.45E-02	4.00E-02	4.51E-02	4.62E-02	5.00E-02	4.77E-02	3.57E-02
12	Cr III	Chromium III	1.44E-03	2.31E-03	2.03E-03	2.09E-03	1.72E-03	2.09E-03	1.76E-03	1.79E-03	2.01E-03	2.31E-03	2.40E-03	2.55E-03	2.40E-03	1.85E-03
13	Cr IV	Chromium IV	6.81E-03	1.09E-02	9.61E-03	9.91E-03	8.14E-03	9.89E-03	8.35E-03	8.49E-03	9.52E-03	1.10E-02	1.14E-02	1.21E-02	1.14E-02	8.76E-03
14	7439-92-1	Lead	1.76E-02	2.86E-02	2.49E-02	2.58E-02	2.08E-02	2.59E-02	2.14E-02	2.22E-02	2.38E-02	2.72E-02	2.97E-02	3.09E-02	2.88E-02	2.28E-02
15	DioxFur	Dioxins and Furans	7.93E-03	1.27E-02	9.53E-03	1.01E-02	9.96E-03	9.68E-03	9.06E-03	9.90E-03	1.29E-02	1.24E-02	9.91E-03	1.28E-02	1.30E-02	9.71E-03
16	7647-01-0	Hydrogen Chloride	5.07E-03	8.25E-03	6.20E-03	6.57E-03	6.47E-03	6.29E-03	5.69E-03	6.41E-03	8.40E-03	8.08E-03	6.44E-03	8.32E-03	8.43E-03	6.17E-03
17	7440-41-7	Beryllium	1.87E+00	3.04E+00	2.64E+00	2.74E+00	2.21E+00	2.75E+00	2.24E+00	2.36E+00	2.50E+00	2.84E+00	3.16E+00	3.26E+00	3.06E+00	2.42E+00
18	7440-50-8	Copper	4.78E-02	7.77E-02	6.76E-02	7.02E-02	5.65E-02	7.04E-02	5.72E-02	6.04E-02	6.40E-02	7.26E-02	8.07E-02	8.34E-02	7.83E-02	6.20E-02
19	7440-02-0	Nickel	2.02E-03	3.21E-03	2.89E-03	2.99E-03	2.47E-03	2.90E-03	2.46E-03	2.49E-03	2.93E-03	3.28E-03	3.34E-03	3.64E-03	3.50E-03	2.58E-03
20	7440-42-8	Boron	1.01E-03	1.56E-03	1.33E-03	1.29E-03	1.27E-03	1.36E-03	1.23E-03	1.25E-03	1.67E-03	1.63E-03	1.35E-03	1.80E-03	1.74E-03	1.34E-03
21	7664-41-7	Ammonia	1.58E-06	2.54E-06	2.03E-06	2.06E-06	1.99E-06	1.95E-06	1.81E-06	2.00E-06	2.58E-06	2.49E-06	1.98E-06	2.56E-06	2.59E-06	1.98E-06
22	71-43-2	Benzene	4.10E-05	6.56E-05	5.14E-05	5.44E-05	5.31E-05	5.16E-05	4.78E-05	5.28E-05	6.78E-05	6.62E-05	5.28E-05	6.82E-05	6.91E-05	5.29E-05
23	98-82-8	Cumene	2.32E-06	3.71E-06	2.97E-06	2.98E-06	2.91E-06	2.83E-06	2.65E-06	2.89E-06	3.78E-06	3.63E-06	2.90E-06	3.74E-06	3.79E-06	2.90E-06
24	108-88-3	Toluene	1.07E-07	3.43E-07	1.71E-07	2.00E-07	3.01E-07	1.44E-07	1.63E-07	1.48E-07	2.06E-07	2.41E-07	2.29E-07	2.62E-07	2.24E-07	1.70E-07
25	1330-20-7	Xylenes	5.86E-08	1.88E-07	9.36E-08	1.09E-07	1.64E-07	7.88E-08	8.89E-08	8.07E-08	1.12E-07	1.32E-07	1.25E-07	1.43E-07	1.22E-07	9.29E-08
26	100-41-4	Ethylbenzene	1.01E-07	1.60E-07	1.28E-07	1.32E-07	1.26E-07	1.25E-07	1.15E-07	1.26E-07	1.62E-07	1.58E-07	1.28E-07	1.61E-07	1.64E-07	1.28E-07
		TOTAL	**4.060**	**5.846**	**6.038**	**6.362**	**5.692**	**6.012**	**4.855**	**5.250**	**6.746**	**7.219**	**7.080**	**8.164**	**7.108**	**5.459**

Acute HI - Proposed (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7466-09-5	Sulphur Dioxide	5.86E-01	7.98E-01	6.78E-01	7.31E-01	7.69E-01	7.70E-01	6.86E-01	7.62E-01	1.01E+00	9.60E-01	8.24E-01	9.88E-01	9.81E-01	7.65E-01
2	10102-44-0	Nitrogen Dioxide	8.90E-02	9.37E-02	9.01E-02	9.44E-02	1.04E-01	1.00E-01	9.72E-02	9.90E-02	1.10E-01	1.12E-01	9.85E-02	1.14E-01	1.11E-01	9.71E-02
3	PM2.5	Particulate Matter < 2.5 µm	3.69E-01	4.26E-01	6.76E-01	7.31E-01	7.18E-01	5.99E-01	4.54E-01	4.99E-01	8.73E-01	9.08E-01	8.02E-01	9.98E-01	7.57E-01	5.48E-01
4	PM10	Particulate Matter < 10 µm	6.72E-01	8.07E-01	1.29E+00	1.39E+00	1.25E+00	1.17E+00	7.94E-01	9.58E-01	1.58E+00	1.66E+00	1.53E+00	1.88E+00	1.43E+00	1.04E+00
5	630-08-0	Carbon Monoxide	5.15E-03	1.02E-02	5.39E-03	6.64E-03	6.55E-03	6.00E-03	6.62E-03	6.42E-03	8.29E-03	6.65E-03	6.62E-03	5.07E-03	5.56E-03	6.77E-03
6	10028-15-6	Ozone	9.90E-02	9.89E-02	9.89E-02	9.88E-02	9.90E-02	9.90E-02	9.91E-02	9.91E-02	9.89E-02	9.88E-02	9.89E-02	9.89E-02	9.89E-02	9.89E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	4.31E-04	5.98E-04	5.42E-04	5.99E-04	5.68E-04	5.66E-04	5.05E-04	5.62E-04	7.62E-04	7.20E-04	6.66E-04	7.27E-04	7.35E-04	5.65E-04
8	7439-97-6	Mercury	9.08E-04	1.39E-03	1.22E-03	1.26E-03	1.09E-03	1.27E-03	1.05E-03	1.08E-03	1.49E-03	1.49E-03	1.26E-03	1.63E-03	1.55E-03	1.27E-03
9	7782-41-4	Fluorine	8.71E-02	1.26E-01	1.39E-01	1.62E-01	2.45E-01	1.17E-01	1.32E-01	1.20E-01	1.67E-01	1.96E-01	1.86E-01	2.13E-01	1.82E-01	1.38E-01
10	7440-38-2	Arsenic	1.73E-01	2.81E-01	2.45E-01	2.54E-01	2.04E-01	2.55E-01	2.10E-01	2.19E-01	2.33E-01	2.67E-01	2.92E-01	3.04E-01	2.84E-01	2.25E-01
11	7440-43-9	Cadmium	2.79E-02	4.44E-02	3.96E-02	4.14E-02	3.40E-02	4.02E-02	3.40E-02	3.45E-02	4.00E-02	4.51E-02	4.62E-02	5.00E-02	4.77E-02	3.57E-02
12	Cr III	Chromium III	1.44E-03	2.31E-03	2.03E-03	2.09E-03	1.72E-03	2.09E-03	1.76E-03	1.79E-03	2.01E-03	2.31E-03	2.40E-03	2.55E-03	2.40E-03	1.85E-03
13	Cr IV	Chromium IV	6.81E-03	1.09E-02	9.61E-03	9.91E-03	8.14E-03	9.89E-03	8.35E-03	8.49E-03	9.52E-03	1.10E-02	1.14E-02	1.21E-02	1.14E-02	8.76E-03
14	7439-92-1	Lead	1.76E-02	2.86E-02	2.49E-02	2.58E-02	2.08E-02	2.59E-02	2.14E-02	2.22E-02	2.38E-02	2.72E-02	2.97E-02	3.09E-02	2.88E-02	2.28E-02
15	DioxFur	Dioxins and Furans	7.80E-03	1.44E-02	1.13E-02	1.05E-02	1.04E-02	1.04E-02	9.82E-03	1.04E-02	1.39E-02	1.41E-02	1.30E-02	1.28E-02	1.29E-02	9.98E-03
16	7647-01-0	Hydrogen Chloride	5.07E-03	9.23E-03	7.07E-03	6.85E-03	6.52E-03	6.48E-03	6.27E-03	6.74E-03	9.04E-03	9.15E-03	8.30E-03	8.32E-03	8.41E-03	6.49E-03
17	7440-41-7	Beryllium	1.87E+00	3.04E+00	2.64E+00	2.74E+00	2.21E+00	2.75E+00	2.24E+00	2.36E+00	2.50E+00	2.84E+00	3.16E+00	3.26E+00	3.06E+00	2.42E+00
18	7440-50-8	Copper	4.78E-02	7.77E-02	6.76E-02	7.02E-02	5.65E-02	7.04E-02	5.72E-02	6.04E-02	6.40E-02	7.26E-02	8.07E-02	8.34E-02	7.83E-02	6.20E-02
19	7440-02-0	Nickel	2.02E-03	3.21E-03	2.89E-03	2.99E-03	2.47E-03	2.90E-03	2.46E-03	2.49E-03	2.93E-03	3.28E-03	3.34E-03	3.64E-03	3.50E-03	2.58E-03
20	7440-42-8	Boron	1.07E-03	1.72E-03	1.50E-03	1.47E-03	1.30E-03	1.38E-03	1.26E-03	1.30E-03	1.78E-03	1.96E-03	1.64E-03	1.80E-03	1.74E-03	1.40E-03
21	7664-41-7	Ammonia	1.56E-06	2.86E-06	2.25E-06	2.10E-06	2.08E-06	2.07E-06	1.96E-06	2.07E-06	2.81E-06	2.81E-06	2.60E-06	2.56E-06	2.58E-06	2.06E-06
22	71-43-2	Benzene	4.16E-05	7.27E-05	5.76E-05	5.62E-05	5.56E-05	5.45E-05	5.14E-05	5.52E-05	7.15E-05	7.50E-05	6.95E-05	6.82E-05	6.90E-05	5.40E-05
23	98-82-8	Cumene	2.28E-06	4.21E-06	3.30E-06	3.08E-06	3.05E-06	3.04E-06	2.88E-06	3.03E-06	4.08E-06	4.12E-06	3.82E-06	3.74E-06	3.78E-06	3.03E-06
24	108-88-3	Toluene	1.16E-07	3.54E-07	1.71E-07	2.00E-07	3.01E-07	1.78E-07	1.85E-07	1.49E-07	2.29E-07	2.41E-07	2.29E-07	2.62E-07	2.24E-07	2.00E-07
25	1330-20-7	Xylenes	6.35E-08	1.94E-07	9.36E-08	1.09E-07	1.64E-07	9.74E-08	1.01E-07	8.16E-08	1.25E-07	1.32E-07	1.25E-07	1.43E-07	1.22E-07	1.10E-07
26	100-41-4	Ethylbenzene	9.80E-08	1.92E-07	1.50E-07	1.39E-07	1.33E-07	1.34E-07	1.30E-07	1.28E-07	1.74E-07	1.86E-07	1.68E-07	1.61E-07	1.63E-07	1.38E-07
		TOTAL	**4.066**	**5.873**	**6.030**	**6.383**	**5.746**	**6.037**	**4.858**	**5.270**	**6.751**	**7.232**	**7.197**	**8.071**	**7.107**	**5.494**

Table B1b: Acute Hazard Index for each Receptor

Acute HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7466-09-5	Sulphur Dioxide	6.71E-01	7.18E-01	5.98E-01	5.60E-01	7.19E-01	5.38E-01	6.90E-01	7.17E-01	9.29E-01	8.84E-01	7.02E-01	7.31E-01	7.72E-01	5.87E-01	8.08E-01	8.73E-01	8.40E-01	8.94E-01	6.82E-01
2	10102-44-0	Nitrogen Dioxide	1.13E-01	9.63E-02	9.02E-02	8.90E-02	9.58E-02	8.85E-02	1.02E-01	9.58E-02	1.01E-01	9.86E-02	9.21E-02	9.33E-02	9.21E-02	9.03E-02	9.91E-02	1.04E-01	9.31E-02	1.03E-01	9.10E-02
3	PM2.5	Particulate Matter < 2.5 µm	7.24E-02	1.22E-01	1.07E-01	6.20E-02	7.61E-02	4.29E-02	1.89E-01	5.10E-02	1.07E-01	9.79E-02	7.30E-02	8.97E-02	7.48E-02	6.17E-02	9.48E-02	8.39E-02	9.79E-02	1.45E-01	1.15E-01
4	PM10	Particulate Matter < 10 µm	1.36E-01	2.48E-01	1.92E-01	1.19E-01	1.43E-01	7.88E-02	3.73E-01	5.21E-02	1.76E-01	1.61E-01	1.36E-01	1.59E-01	1.42E-01	1.05E-01	1.58E-01	1.34E-01	1.63E-01	2.47E-01	1.97E-01
5	630-08-0	Carbon Monoxide	3.38E-03	5.97E-03	1.32E-02	6.32E-03	9.97E-03	8.63E-03	4.39E-03	9.48E-03	1.36E-02	1.01E-02	7.16E-03	7.72E-03	7.35E-03	6.35E-03	7.92E-03	7.09E-03	1.02E-02	1.59E-02	1.04E-02
6	10028-15-6	Ozone	9.88E-02	9.87E-02	9.90E-02	9.88E-02	9.89E-02	9.89E-02	9.89E-02	9.93E-02	1.01E-01	1.00E-01	1.04E-01	1.04E-01	1.04E-01	1.00E-01	1.04E-01	1.04E-01	1.04E-01	1.02E-01	1.04E-01
7	PAH	Polycyclic Aromatic Hydrocarbons	4.94E-04	5.18E-04	4.32E-04	4.10E-04	5.20E-04	3.96E-04	4.99E-04	6.09E-04	6.71E-04	6.39E-04	5.12E-04	5.30E-04	5.64E-04	4.29E-04	5.84E-04	6.35E-04	6.10E-04	6.45E-04	4.94E-04
8	7439-97-6	Mercury	5.93E-04	6.35E-04	5.67E-04	6.80E-04	6.75E-04	6.95E-04	6.49E-04	8.89E-04	9.31E-04	8.30E-04	6.54E-04	6.76E-04	6.92E-04	6.27E-04	7.40E-04	7.87E-04	7.59E-04	7.91E-04	6.59E-04
9	7782-41-4	Fluorine	1.26E-01	7.20E-02	7.39E-02	6.88E-02	7.48E-02	6.35E-02	1.04E-01	7.68E-02	8.42E-02	8.34E-02	6.53E-02	7.12E-02	7.04E-02	9.46E-02	9.00E-02	8.91E-02	8.90E-02	1.01E-01	7.56E-02
10	7440-38-2	Arsenic	4.16E-03	3.63E-03	3.37E-03	3.02E-03	2.97E-03	2.53E-03	4.09E-03	3.53E-03	3.97E-03	3.78E-03	3.50E-03	3.56E-03	3.43E-03	3.65E-03	3.70E-03	4.05E-03	3.87E-03	4.10E-03	3.42E-03
11	7440-43-9	Cadmium	4.16E-03	3.63E-03	3.32E-03	3.05E-03	3.14E-03	2.66E-03	4.09E-03	3.77E-03	4.21E-03	4.31E-03	3.76E-03	3.84E-03	3.60E-03	3.56E-03	4.06E-03	4.60E-03	4.21E-03	4.43E-03	3.62E-03
12	Cr III	Chromium III	1.43E-04	1.13E-04	1.08E-04	9.23E-05	9.51E-05	8.62E-05	1.40E-04	1.12E-04	1.12E-04	1.13E-04	1.09E-04	1.11E-04	1.11E-04	1.07E-04	1.07E-04	1.08E-04	1.01E-04	1.11E-04	1.07E-04
13	Cr IV	Chromium IV	7.71E-04	9.68E-04	1.02E-03	1.18E-03	1.14E-03	1.34E-03	8.57E-04	2.00E-03	1.77E-03	1.67E-03	1.14E-03	1.13E-03	1.18E-03	1.12E-03	1.24E-03	1.20E-03	1.29E-03	1.29E-03	1.28E-03
14	7439-92-1	Lead	5.53E-04	4.83E-04	4.47E-04	4.05E-04	4.16E-04	3.68E-04	5.44E-04	5.87E-04	5.64E-04	5.57E-04	4.88E-04	5.19E-04	4.72E-04	4.86E-04	5.26E-04	5.96E-04	5.37E-04	5.78E-04	4.82E-04
15	DioxFur	Dioxins and Furans	8.83E-03	1.14E-02	1.09E-02	9.63E-03	1.44E-02	1.04E-02	9.97E-03	1.33E-02	1.69E-02	1.59E-02	1.22E-02	1.39E-02	1.32E-02	9.50E-03	1.37E-02	1.50E-02	1.47E-02	1.67E-02	1.28E-02
16	7647-01-0	Hydrogen Chloride	5.74E-03	7.42E-03	7.02E-03	5.96E-03	9.41E-03	6.79E-03	6.48E-03	8.43E-03	9.83E-03	8.94E-03	7.89E-03	8.44E-03	8.08E-03	6.14E-03	8.87E-03	9.73E-03	9.04E-03	9.71E-03	7.26E-03
17	7440-41-7	Beryllium	1.19E-02	1.46E-02	1.39E-02	1.23E-02	1.81E-02	1.30E-02	1.32E-02	1.73E-02	2.21E-02	2.01E-02	1.57E-02	1.74E-02	1.68E-02	1.19E-02	1.77E-02	1.95E-02	1.86E-02	2.14E-02	1.67E-02
18	7440-50-8	Copper	3.01E-04	2.82E-04	2.43E-04	2.26E-04	2.62E-04	2.15E-04	2.96E-04	3.33E-04	3.51E-04	3.31E-04	2.89E-04	2.85E-04	2.99E-04	2.65E-04	3.12E-04	3.52E-04	3.30E-04	3.62E-04	2.92E-04
19	7440-02-0	Nickel	4.18E-04	6.07E-04	4.94E-04	5.04E-04	7.68E-04	5.54E-04	5.09E-04	7.09E-04	8.51E-04	8.02E-04	6.38E-04	6.88E-04	6.83E-04	4.77E-04	7.02E-04	7.73E-04	7.37E-04	8.41E-04	6.56E-04
20	7440-42-8	Boron	9.02E-04	1.30E-03	1.06E-03	1.10E-03	1.64E-03	1.19E-03	1.09E-03	1.52E-03	1.92E-03	1.81E-03	1.37E-03	1.52E-03	1.47E-03	1.07E-03	1.54E-03	1.67E-03	1.66E-03	1.86E-03	1.44E-03
21	7664-41-7	Ammonia	1.75E-06	2.28E-06	2.17E-06	1.92E-06	2.88E-06	2.08E-06	1.98E-06	2.66E-06	3.36E-06	3.17E-06	2.42E-06	2.77E-06	2.63E-06	1.89E-06	2.74E-06	2.99E-06	2.92E-06	3.34E-06	2.56E-06
22	71-43-2	Benzene	4.67E-05	5.79E-05	5.58E-05	4.88E-05	7.30E-05	5.27E-05	5.24E-05	6.83E-05	8.59E-05	8.06E-05	6.26E-05	7.02E-05	6.73E-05	4.80E-05	7.05E-05	7.72E-05	7.50E-05	8.56E-05	6.57E-05
23	98-82-8	Cumene	2.58E-06	3.35E-06	3.19E-06	2.82E-06	4.23E-06	3.05E-06	2.92E-06	3.91E-06	4.94E-06	4.67E-06	3.56E-06	4.07E-06	3.87E-06	2.78E-06	4.02E-06	4.40E-06	4.30E-06	4.91E-06	3.76E-06
24	108-88-3	Toluene	1.59E-07	1.72E-07	1.84E-07	1.41E-07	1.87E-07	1.51E-07	1.28E-07	2.43E-07	3.14E-07	3.26E-07	1.82E-07	1.85E-07	1.87E-07	1.59E-07	2.70E-07	2.35E-07	2.51E-07	4.75E-07	2.67E-07
25	1330-20-7	Xylenes	8.65E-08	9.45E-08	1.01E-07	7.73E-08	1.02E-07	8.25E-08	7.00E-08	1.33E-07	1.72E-07	1.79E-07	9.96E-08	1.01E-07	1.02E-07	8.69E-08	1.48E-07	1.29E-07	1.37E-07	2.60E-07	1.46E-07
26	100-41-4	Ethylbenzene	1.18E-07	1.53E-07	1.46E-07	1.29E-07	1.93E-07	1.39E-07	1.33E-07	1.78E-07	2.25E-07	2.13E-07	1.62E-07	1.85E-07	1.77E-07	1.27E-07	1.83E-07	2.01E-07	1.96E-07	2.24E-07	1.71E-07
		TOTAL	**1.261**	**1.407**	**1.216**	**1.042**	**1.271**	**0.959**	**1.604**	**1.154**	**1.576**	**1.495**	**1.227**	**1.309**	**1.314**	**1.085**	**1.416**	**1.455**	**1.453**	**1.670**	**1.325**

Acute HI - Proposed (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7466-09-5	Sulphur Dioxide	6.72E-01	5.71E-01	5.43E-01	4.92E-01	4.95E-01	4.72E-01	6.60E-01	6.92E-01	8.12E-01	7.93E-01	6.23E-01	6.87E-01	6.41E-01	5.87E-01	7.62E-01	7.76E-01	7.16E-01	7.91E-01	6.11E-01
2	10102-44-0	Nitrogen Dioxide	1.14E-01	9.48E-02	9.36E-02	8.92E-02	9.45E-02	9.14E-02	1.01E-01	9.66E-02	1.01E-01	9.77E-02	9.23E-02	9.34E-02	9.52E-02	9.11E-02	1.01E-01	1.04E-01	9.84E-02	9.96E-02	8.97E-02
3	PM2.5	Particulate Matter < 2.5 µm	7.11E-02	1.23E-01	1.04E-01	6.09E-02	7.83E-02	5.15E-02	1.89E-01	6.87E-02	9.42E-02	8.55E-02	7.22E-02	9.19E-02	7.55E-02	6.80E-02	9.16E-02	7.67E-02	9.58E-02	1.31E-01	1.09E-01
4	PM10	Particulate Matter < 10 µm	1.34E-01	2.48E-01	1.90E-01	1.16E-01	1.47E-01	7.47E-02	3.73E-01	5.96E-02	1.67E-01	1.51E-01	1.38E-01	1.61E-01	1.44E-01	1.11E-01	1.55E-01	1.31E-01	1.57E-01	2.36E-01	1.93E-01
5	630-08-0	Carbon Monoxide	3.59E-03	6.91E-03	1.32E-02	6.83E-03	9.97E-03	9.68E-03	5.07E-03	1.11E-02	1.55E-02	1.27E-02	6.63E-03	8.44E-03	7.23E-03	6.17E-03	8.74E-03	7.75E-03	1.03E-02	1.70E-02	1.08E-02
6	10028-15-6	Ozone	9.88E-02	9.87E-02	9.90E-02	9.88E-02	9.88E-02	9.89E-02	9.89E-02	9.92E-02	9.93E-02	9.92E-02	1.04E-01	1.02E-01	1.04E-01	1.00E-01	1.04E-01	1.04E-01	1.03E-01	1.01E-01	1.02E-01
7	PAH	Polycyclic Aromatic Hydrocarbons	4.94E-04	5.12E-04	4.66E-04	4.72E-04	4.78E-04	4.42E-04	5.43E-04	6.94E-04	7.30E-04	6.91E-04	5.83E-04	6.26E-04	6.20E-04	5.42E-04	6.44E-04	6.83E-04	6.55E-04	7.58E-04	5.70E-04
8	7439-97-6	Mercury	5.93E-04	6.47E-04	6.39E-04	6.88E-04	6.31E-04	7.14E-04	6.38E-04	9.68E-04	9.91E-04	9.79E-04	7.35E-04	7.71E-04	7.54E-04	6.76E-04	8.19E-04	8.42E-04	8.23E-04	8.98E-04	6.82E-04
9	7782-41-4	Fluorine	1.27E-01	7.20E-02	7.39E-02	6.89E-02	7.48E-02	6.65E-02	1.04E-01	8.17E-02	9.26E-02	8.48E-02	7.80E-02	7.58E-02	6.82E-02	9.05E-02	9.48E-02	8.85E-02	8.72E-02	9.06E-02	7.58E-02
10	7440-38-2	Arsenic	4.16E-03	3.55E-03	3.37E-03	2.97E-03	2.97E-03	2.77E-03	4.09E-03	3.77E-03	4.62E-03	4.00E-03	3.63E-03	3.95E-03	3.47E-03	3.72E-03	4.26E-03	4.29E-03	3.97E-03	4.32E-03	3.89E-03
11	7440-43-9	Cadmium	4.16E-03	3.54E-03	3.37E-03	3.07E-03	3.13E-03	2.98E-03	4.09E-03	4.36E-03	5.03E-03	4.93E-03	3.87E-03	4.34E-03	4.03E-03	3.64E-03	4.78E-03	4.83E-03	4.48E-03	4.97E-03	3.81E-03
12	Cr III	Chromium III	1.43E-04	1.13E-04	1.08E-04	9.23E-05	9.51E-05	8.62E-05	1.40E-04	1.12E-04	1.14E-04	1.15E-04	1.09E-04	1.13E-04	1.11E-04	1.10E-04	1.07E-04	1.09E-04	1.01E-04	1.11E-04	1.07E-04
13	Cr IV	Chromium IV	7.71E-04	9.30E-04	1.04E-03	1.18E-03	1.07E-03	1.34E-03	8.54E-04	2.00E-03	1.77E-03	1.68E-03	1.15E-03	1.13E-03	1.18E-03	1.12E-03	1.24E-03	1.20E-03	1.29E-03	1.30E-03	1.28E-03
14	7439-92-1	Lead	5.53E-04	4.81E-04	4.55E-04	4.05E-04	3.96E-04	3.93E-04	5.44E-04	5.90E-04	6.69E-04	6.19E-04	5.09E-04	5.34E-04	5.05E-04	4.96E-04	6.18E-04	6.22E-04	5.71E-04	6.42E-04	5.29E-04
15	DioxFur	Dioxins and Furans	8.83E-03	1.24E-02	1.14E-02	1.22E-02	1.29E-02	1.23E-02	1.06E-02	1.50E-02	1.85E-02	1.78E-02	1.53E-02	1.65E-02	1.56E-02	1.15E-02	1.63E-02	1.64E-02	1.70E-02	1.88E-02	1.38E-02
16	7647-01-0	Hydrogen Chloride	5.64E-03	7.66E-03	7.32E-03	7.72E-03	8.40E-03	8.02E-03	6.48E-03	8.86E-03	1.01E-02	1.03E-02	9.82E-03	1.01E-02	9.56E-03	7.30E-03	9.96E-03	1.05E-02	1.05E-02	1.11E-02	8.27E-03
17	7440-41-7	Beryllium	1.21E-02	1.63E-02	1.49E-02	1.56E-02	1.68E-02	1.54E-02	1.36E-02	1.98E-02	2.43E-02	2.30E-02	1.94E-02	2.08E-02	2.01E-02	1.57E-02	2.06E-02	2.13E-02	2.18E-02	2.46E-02	1.81E-02
18	7440-50-8	Copper	3.01E-04	2.74E-04	2.68E-04	2.51E-04	2.50E-04	2.41E-04	3.20E-04	3.55E-04	4.06E-04	3.67E-04	3.05E-04	3.66E-04	3.22E-04	2.82E-04	3.72E-04	3.82E-04	3.55E-04	4.12E-04	3.10E-04
19	7440-02-0	Nickel	4.04E-04	6.65E-04	5.28E-04	6.30E-04	6.81E-04	6.54E-04	5.15E-04	7.76E-04	9.31E-04	9.15E-04	7.96E-04	8.58E-04	7.96E-04	5.65E-04	7.98E-04	8.32E-04	8.51E-04	9.62E-04	7.07E-04
20	7440-42-8	Boron	8.77E-04	1.45E-03	1.14E-03	1.36E-03	1.46E-03	1.40E-03	1.20E-03	1.71E-03	2.10E-03	2.03E-03	1.71E-03	1.88E-03	1.74E-03	1.22E-03	1.77E-03	1.82E-03	1.83E-03	2.14E-03	1.57E-03
21	7664-41-7	Ammonia	1.75E-06	2.54E-06	2.26E-06	2.42E-06	2.57E-06	2.45E-06	2.12E-06	3.00E-06	3.69E-06	3.55E-06	3.05E-06	3.29E-06	3.12E-06	2.27E-06	3.24E-06	3.26E-06	3.38E-06	3.74E-06	2.75E-06
22	71-43-2	Benzene	4.71E-05	6.47E-05	5.81E-05	6.19E-05	6.74E-05	6.22E-05	5.37E-05	7.67E-05	9.44E-05	9.05E-05	7.76E-05	8.36E-05	7.98E-05	6.10E-05	8.27E-05	8.38E-05	8.76E-05	9.56E-05	7.02E-05
23	98-82-8	Cumene	2.58E-06	3.74E-06	3.33E-06	3.56E-06	3.78E-06	3.60E-06	3.11E-06	4.41E-06	5.42E-06	5.22E-06	4.49E-06	4.84E-06	4.58E-06	3.35E-06	4.77E-06	4.79E-06	4.98E-06	5.50E-06	4.04E-06
24	108-88-3	Toluene	1.61E-07	1.38E-07	1.87E-07	1.39E-07	1.59E-07	2.59E-07	1.43E-07	2.98E-07	3.98E-07	3.34E-07	2.50E-07	2.06E-07	2.19E-07	1.65E-07	2.73E-07	2.67E-07	2.78E-07	3.91E-07	2.78E-07
25	1330-20-7	Xylenes	8.79E-08	7.56E-08	1.02E-07	7.60E-08	8.74E-08	1.42E-07	7.83E-08	1.63E-07	2.18E-07	1.83E-07	1.37E-07	1.13E-07	1.20E-07	9.06E-08	1.49E-07	1.46E-07	1.52E-07	2.14E-07	1.52E-07
26	100-41-4	Ethylbenzene	1.18E-07	1.70E-07	1.52E-07	1.62E-07	1.73E-07	1.64E-07	1.42E-07	2.01E-07	2.47E-07	2.38E-07	2.05E-07	2.21E-07	2.09E-07	1.53E-07	2.17E-07	2.19E-07	2.27E-07	2.51E-07	1.84E-07
		TOTAL	**1.259**	**1.263**	**1.162**	**0.980**	**1.047**	**0.911**	**1.575**	**1.168**	**1.451**	**1.392**	**1.172**	**1.282**	**1.194**	**1.100**	**1.380**	**1.352**	**1.332**	**1.538**	**1.245**

Table B1b: Acute Hazard Index for each Receptor

Acute HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7466-09-5	Sulphur Dioxide	6.20E-01	6.07E-01	5.99E-01	6.72E-01	5.98E-01	5.60E-01	7.55E-01	6.06E-01	6.29E-01	7.49E-01	6.46E-01	6.57E-01	6.99E-01	8.73E-01	7.70E-01	7.58E-01	6.30E-01	5.83E-01	6.45E-01
2	10102-44-0	Nitrogen Dioxide	9.17E-02	8.99E-02	9.20E-02	9.69E-02	9.31E-02	9.03E-02	9.61E-02	1.05E-01	1.14E-01	1.22E-01	1.13E-01	1.08E-01	1.11E-01	1.34E-01	1.18E-01	9.53E-02	9.89E-02	9.65E-02	1.04E-01
3	PM2.5	Particulate Matter < 2.5 µm	1.28E-01	1.27E-01	8.48E-02	4.56E-02	9.62E-02	5.47E-02	1.61E-01	2.61E-01	1.38E-01	1.61E-01	9.41E-02	1.71E-01	1.37E-01	1.31E-01	8.69E-02	1.64E-01	1.48E-01	8.67E-02	1.16E-01
4	PM10	Particulate Matter < 10 µm	2.46E-01	2.38E-01	1.63E-01	8.79E-02	1.78E-01	1.04E-01	3.05E-01	4.99E-01	2.61E-01	3.03E-01	1.78E-01	3.28E-01	2.62E-01	2.44E-01	1.58E-01	2.99E-01	2.79E-01	1.63E-01	2.19E-01
5	630-08-0	Carbon Monoxide	8.28E-03	8.34E-03	6.83E-03	5.37E-03	7.14E-03	4.28E-03	1.12E-02	6.63E-03	4.01E-03	3.61E-03	4.42E-03	4.14E-03	3.34E-03	3.15E-03	2.33E-03	1.20E-02	8.84E-03	6.28E-03	3.69E-03
6	10028-15-6	Ozone	1.01E-01	1.01E-01	1.02E-01	1.03E-01	9.88E-02	9.89E-02	9.91E-02	9.91E-02	9.90E-02	9.90E-02	9.90E-02	9.92E-02	9.87E-02	9.89E-02	9.87E-02	9.90E-02	9.91E-02	9.88E-02	9.92E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	4.56E-04	4.43E-04	4.41E-04	4.95E-04	4.32E-04	4.24E-04	5.46E-04	4.46E-04	4.63E-04	5.51E-04	4.76E-04	4.83E-04	5.14E-04	6.42E-04	5.66E-04	5.58E-04	4.55E-04	4.25E-04	4.75E-04
8	7439-97-6	Mercury	6.00E-04	5.79E-04	6.09E-04	6.21E-04	5.74E-04	6.21E-04	7.18E-04	5.58E-04	5.79E-04	6.77E-04	6.11E-04	5.88E-04	6.17E-04	7.78E-04	6.79E-04	7.23E-04	6.31E-04	5.15E-04	5.97E-04
9	7782-41-4	Fluorine	6.22E-02	6.50E-02	5.65E-02	6.35E-02	7.81E-02	8.19E-02	6.47E-02	8.54E-02	1.06E-01	1.11E-01	9.99E-02	1.04E-01	9.53E-02	1.83E-01	8.07E-02	6.46E-02	8.30E-02	8.46E-02	9.30E-02
10	7440-38-2	Arsenic	3.23E-03	3.07E-03	2.86E-03	3.68E-03	3.11E-03	2.75E-03	3.15E-03	3.69E-03	3.90E-03	4.64E-03	4.01E-03	4.07E-03	4.33E-03	5.41E-03	4.67E-03	3.25E-03	3.16E-03	3.11E-03	4.00E-03
11	7440-43-9	Cadmium	3.23E-03	3.30E-03	3.19E-03	3.96E-03	3.11E-03	2.80E-03	3.39E-03	3.69E-03	3.90E-03	4.64E-03	4.01E-03	4.07E-03	4.33E-03	5.41E-03	4.66E-03	3.75E-03	3.24E-03	3.10E-03	4.00E-03
12	Cr III	Chromium III	9.88E-05	1.01E-04	9.06E-05	1.20E-04	1.07E-04	9.44E-05	1.06E-04	1.26E-04	1.34E-04	1.59E-04	1.37E-04	1.40E-04	1.48E-04	1.86E-04	1.53E-04	1.00E-04	1.02E-04	1.06E-04	1.37E-04
13	Cr IV	Chromium IV	1.10E-03	1.02E-03	1.01E-03	1.04E-03	1.07E-03	1.03E-03	1.12E-03	7.91E-04	8.43E-04	8.63E-04	7.50E-04	8.40E-04	7.77E-04	9.14E-04	8.63E-04	1.02E-03	1.22E-03	9.19E-04	7.37E-04
14	7439-92-1	Lead	4.34E-04	4.37E-04	4.18E-04	5.20E-04	4.13E-04	3.86E-04	4.40E-04	4.90E-04	5.18E-04	6.17E-04	5.32E-04	5.41E-04	5.76E-04	7.19E-04	6.34E-04	4.69E-04	4.31E-04	4.13E-04	5.32E-04
15	DioxFur	Dioxins and Furans	1.05E-02	1.05E-02	1.03E-02	9.38E-03	1.14E-02	9.06E-03	1.53E-02	7.87E-03	8.30E-03	9.69E-03	8.84E-03	9.11E-03	9.05E-03	1.13E-02	9.96E-03	1.51E-02	1.22E-02	9.28E-03	8.75E-03
16	7647-01-0	Hydrogen Chloride	6.85E-03	6.85E-03	5.86E-03	5.87E-03	7.42E-03	5.89E-03	9.92E-03	5.00E-03	5.31E-03	6.30E-03	5.67E-03	5.92E-03	5.84E-03	7.34E-03	6.42E-03	9.81E-03	7.98E-03	5.91E-03	5.68E-03
17	7440-41-7	Beryllium	1.32E-02	1.32E-02	1.29E-02	1.22E-02	1.47E-02	1.24E-02	1.91E-02	1.12E-02	1.15E-02	1.32E-02	1.20E-02	1.24E-02	1.24E-02	1.54E-02	1.37E-02	1.88E-02	1.55E-02	1.18E-02	1.19E-02
18	7440-50-8	Copper	2.45E-04	2.65E-04	2.39E-04	2.93E-04	2.26E-04	2.24E-04	2.69E-04	2.72E-04	2.82E-04	3.36E-04	2.90E-04	2.95E-04	3.13E-04	3.91E-04	3.45E-04	3.05E-04	2.42E-04	2.27E-04	2.89E-04
19	7440-02-0	Nickel	5.53E-04	5.52E-04	4.78E-04	4.59E-04	6.05E-04	4.76E-04	8.08E-04	3.84E-04	3.83E-04	4.24E-04	3.83E-04	3.96E-04	3.88E-04	4.70E-04	4.51E-04	7.97E-04	6.50E-04	4.82E-04	3.87E-04
20	7440-42-8	Boron	1.18E-03	1.18E-03	1.02E-03	9.82E-04	1.30E-03	1.05E-03	1.74E-03	8.72E-04	8.67E-04	9.40E-04	8.44E-04	8.81E-04	8.47E-04	1.04E-03	9.74E-04	1.71E-03	1.39E-03	1.03E-03	8.65E-04
21	7664-41-7	Ammonia	2.09E-06	2.10E-06	2.05E-06	1.87E-06	2.27E-06	1.85E-06	3.05E-06	1.62E-06	1.67E-06	1.92E-06	1.77E-06	1.81E-06	1.80E-06	2.24E-06	1.99E-06	3.00E-06	2.44E-06	1.85E-06	1.74E-06
22	71-43-2	Benzene	5.33E-05	5.33E-05	5.19E-05	4.78E-05	5.86E-05	4.83E-05	7.73E-05	4.22E-05	4.48E-05	5.16E-05	4.54E-05	4.86E-05	4.82E-05	6.02E-05	5.33E-05	7.61E-05	6.19E-05	4.74E-05	4.66E-05
23	98-82-8	Cumene	3.08E-06	3.08E-06	3.01E-06	2.75E-06	3.34E-06	2.72E-06	4.48E-06	2.39E-06	2.46E-06	2.84E-06	2.61E-06	2.67E-06	2.65E-06	3.30E-06	2.93E-06	4.41E-06	3.59E-06	2.72E-06	2.56E-06
24	108-88-3	Toluene	1.22E-07	1.46E-07	1.17E-07	1.51E-07	1.21E-07	1.21E-07	2.80E-07	1.22E-07	1.72E-07	1.65E-07	1.67E-07	1.84E-07	1.57E-07	2.26E-07	1.23E-07	2.24E-07	3.88E-07	1.25E-07	1.79E-07
25	1330-20-7	Xylenes	6.71E-08	7.99E-08	6.43E-08	8.25E-08	6.63E-08	6.60E-08	1.53E-07	6.68E-08	9.42E-08	8.98E-08	9.15E-08	1.01E-07	8.58E-08	1.23E-07	6.71E-08	1.23E-07	2.13E-07	6.82E-08	9.77E-08
26	100-41-4	Ethylbenzene	1.40E-07	1.40E-07	1.37E-07	1.25E-07	1.52E-07	1.24E-07	2.04E-07	1.09E-07	1.12E-07	1.30E-07	1.19E-07	1.22E-07	1.21E-07	1.51E-07	1.34E-07	2.01E-07	1.63E-07	1.24E-07	1.17E-07
		TOTAL	**1.300**	**1.278**	**1.144**	**1.114**	**1.194**	**1.031**	**1.548**	**1.698**	**1.387**	**1.591**	**1.273**	**1.512**	**1.446**	**1.717**	**1.358**	**1.548**	**1.394**	**1.157**	**1.319**

Acute HI - Proposed (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7466-09-5	Sulphur Dioxide	5.21E-01	5.31E-01	5.34E-01	6.31E-01	5.05E-01	4.52E-01	5.47E-01	6.06E-01	6.29E-01	7.49E-01	6.46E-01	6.83E-01	7.00E-01	8.73E-01	7.70E-01	5.42E-01	5.60E-01	5.61E-01	6.45E-01
2	10102-44-0	Nitrogen Dioxide	9.07E-02	9.14E-02	9.17E-02	9.72E-02	9.34E-02	9.04E-02	9.85E-02	1.04E-01	1.14E-01	1.21E-01	1.13E-01	1.08E-01	1.11E-01	1.34E-01	1.19E-01	9.56E-02	9.96E-02	9.75E-02	1.05E-01
3	PM2.5	Particulate Matter < 2.5 µm	1.25E-01	1.27E-01	8.40E-02	4.55E-02	9.73E-02	5.50E-02	1.60E-01	2.62E-01	1.36E-01	1.60E-01	8.70E-02	1.74E-01	1.36E-01	1.32E-01	8.00E-02	1.64E-01	1.50E-01	7.61E-02	1.20E-01
4	PM10	Particulate Matter < 10 µm	2.42E-01	2.38E-01	1.62E-01	8.78E-02	1.80E-01	1.04E-01	3.04E-01	5.00E-01	2.49E-01	3.01E-01	1.65E-01	3.34E-01	2.59E-01	2.47E-01	1.52E-01	3.01E-01	2.83E-01	1.43E-01	2.27E-01
5	630-08-0	Carbon Monoxide	8.28E-03	8.34E-03	6.83E-03	5.37E-03	8.04E-03	3.88E-03	1.13E-02	7.19E-03	4.27E-03	4.14E-03	5.51E-03	4.88E-03	4.23E-03	3.01E-03	2.99E-03	1.20E-02	1.09E-02	6.48E-03	4.63E-03
6	10028-15-6	Ozone	9.99E-02	9.98E-02	1.02E-01	1.01E-01	9.88E-02	9.89E-02	9.90E-02	9.91E-02	9.90E-02	9.90E-02	9.90E-02	9.92E-02	9.87E-02	9.89E-02	9.87E-02	9.90E-02	9.89E-02	9.88E-02	9.89E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	4.82E-04	4.80E-04	4.40E-04	4.81E-04	4.88E-04	4.52E-04	5.69E-04	4.77E-04	5.11E-04	5.78E-04	5.14E-04	5.18E-04	5.19E-04	6.42E-04	5.66E-04	5.16E-04	5.62E-04	4.59E-04	5.01E-04
8	7439-97-6	Mercury	6.32E-04	6.24E-04	5.72E-04	6.12E-04	6.02E-04	6.19E-04	7.39E-04	6.19E-04	6.17E-04	7.06E-04	6.21E-04	6.42E-04	6.36E-04	7.78E-04	6.80E-04	6.70E-04	7.08E-04	6.09E-04	6.34E-04
9	7782-41-4	Fluorine	5.98E-02	5.97E-02	5.65E-02	6.35E-02	7.81E-02	8.19E-02	6.47E-02	8.54E-02	1.06E-01	1.11E-01	9.99E-02	1.04E-01	9.53E-02	1.83E-01	8.35E-02	6.46E-02	7.91E-02	8.46E-02	9.30E-02
10	7440-38-2	Arsenic	3.23E-03	3.26E-03	3.31E-03	3.51E-03	3.12E-03	2.75E-03	3.20E-03	3.76E-03	3.90E-03	4.64E-03	4.01E-03	4.23E-03	4.34E-03	5.41E-03	4.77E-03	3.23E-03	3.34E-03	3.20E-03	4.00E-03
11	7440-43-9	Cadmium	3.23E-03	3.33E-03	3.32E-03	3.91E-03	3.13E-03	2.75E-03	3.39E-03	3.77E-03	3.90E-03	4.64E-03	4.01E-03	4.23E-03	4.34E-03	5.41E-03	4.68E-03	3.42E-03	3.50E-03	3.55E-03	4.00E-03
12	Cr III	Chromium III	9.88E-05	1.01E-04	9.06E-05	1.20E-04	1.07E-04	9.44E-05	1.06E-04	1.26E-04	1.34E-04	1.59E-04	1.37E-04	1.40E-04	1.49E-04	1.86E-04	1.53E-04	1.00E-04	1.02E-04	1.06E-04	1.37E-04
13	Cr IV	Chromium IV	1.10E-03	1.02E-03	1.01E-03	1.04E-03	1.13E-03	1.03E-03	1.15E-03	8.13E-04	8.33E-04	8.76E-04	7.56E-04	8.37E-04	8.03E-04	9.22E-04	8.75E-04	1.03E-03	1.26E-03	9.19E-04	7.37E-04
14	7439-92-1	Lead	4.29E-04	4.42E-04	4.48E-04	5.02E-04	4.16E-04	3.92E-04	4.40E-04	4.99E-04	5.19E-04	6.17E-04	5.32E-04	5.62E-04	5.77E-04	7.19E-04	6.34E-04	4.33E-04	4.44E-04	4.51E-04	5.32E-04
15	DioxFur	Dioxins and Furans	1.23E-02	1.31E-02	1.10E-02	1.11E-02	1.10E-02	9.18E-03	1.59E-02	9.96E-03	1.04E-02	1.13E-02	9.29E-03	9.80E-03	1.02E-02	1.14E-02	9.88E-03	1.30E-02	1.49E-02	1.19E-02	1.07E-02
16	7647-01-0	Hydrogen Chloride	8.03E-03	8.39E-03	7.14E-03	6.94E-03	7.14E-03	5.98E-03	1.04E-02	5.83E-03	6.08E-03	6.72E-03	6.03E-03	6.07E-03	6.08E-03	7.34E-03	6.42E-03	8.48E-03	9.64E-03	6.99E-03	6.19E-03
17	7440-41-7	Beryllium	1.55E-02	1.64E-02	1.40E-02	1.39E-02	1.50E-02	1.24E-02	2.00E-02	1.41E-02	1.39E-02	1.50E-02	1.30E-02	1.36E-02	1.36E-02	1.56E-02	1.37E-02	1.63E-02	1.88E-02	1.59E-02	1.46E-02
18	7440-50-8	Copper	2.57E-04	2.70E-04	2.61E-04	2.89E-04	2.57E-04	2.24E-04	2.81E-04	2.83E-04	2.91E-04	3.52E-04	3.10E-04	3.06E-04	3.16E-04	3.91E-04	3.45E-04	2.76E-04	2.80E-04	2.64E-04	3.03E-04
19	7440-02-0	Nickel	6.30E-04	6.72E-04	5.75E-04	5.66E-04	5.33E-04	4.88E-04	8.46E-04	5.06E-04	4.93E-04	5.38E-04	4.61E-04	4.85E-04	5.07E-04	4.77E-04	4.27E-04	6.92E-04	7.87E-04	5.70E-04	4.56E-04
20	7440-42-8	Boron	1.35E-03	1.44E-03	1.23E-03	1.21E-03	1.14E-03	1.07E-03	1.81E-03	1.19E-03	1.13E-03	1.20E-03	1.05E-03	1.07E-03	1.16E-03	1.04E-03	9.43E-04	1.48E-03	1.70E-03	1.28E-03	1.00E-03
21	7664-41-7	Ammonia	2.46E-06	2.61E-06	2.18E-06	2.22E-06	2.18E-06	1.88E-06	3.17E-06	2.08E-06	2.08E-06	2.25E-06	1.94E-06	1.99E-06	2.04E-06	2.26E-06	1.99E-06	2.59E-06	2.98E-06	2.38E-06	2.16E-06
22	71-43-2	Benzene	6.26E-05	6.61E-05	5.64E-05	5.62E-05	5.86E-05	4.83E-05	8.06E-05	5.35E-05	5.34E-05	5.85E-05	4.98E-05	5.22E-05	5.23E-05	6.02E-05	5.33E-05	6.58E-05	7.57E-05	6.32E-05	5.62E-05
23	98-82-8	Cumene	3.61E-06	3.83E-06	3.21E-06	3.26E-06	3.22E-06	2.76E-06	4.67E-06	3.06E-06	3.05E-06	3.31E-06	2.85E-06	2.93E-06	3.00E-06	3.34E-06	2.93E-06	3.81E-06	4.38E-06	3.50E-06	3.17E-06
24	108-88-3	Toluene	1.58E-07	2.16E-07	1.50E-07	1.71E-07	1.61E-07	1.05E-07	2.84E-07	1.37E-07	1.60E-07	1.60E-07	1.52E-07	1.67E-07	1.56E-07	2.26E-07	1.50E-07	1.94E-07	3.75E-07	1.69E-07	1.71E-07
25	1330-20-7	Xylenes	8.63E-08	1.18E-07	8.22E-08	9.37E-08	8.83E-08	5.74E-08	1.56E-07	7.51E-08	8.77E-08	8.79E-08	8.34E-08	9.15E-08	8.57E-08	1.23E-07	8.17E-08	1.06E-07	2.06E-07	9.26E-08	9.34E-08
26	100-41-4	Ethylbenzene	1.65E-07	1.75E-07	1.46E-07	1.48E-07	1.47E-07	1.26E-07	2.13E-07	1.39E-07	1.39E-07	1.51E-07	1.30E-07	1.34E-07	1.37E-07	1.52E-07	1.34E-07	1.74E-07	2.00E-07	1.60E-07	1.45E-07
		TOTAL	**1.194**	**1.205**	**1.081**	**1.076**	**1.105**	**0.924**	**1.344**	**1.707**	**1.379**	**1.592**	**1.256**	**1.549**	**1.448**	**1.721**	**1.350**	**1.329**	**1.337**	**1.114**	**1.338**

Table B1b: Acute Hazard Index for each Receptor

Acute HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7466-09-5	Sulphur Dioxide	6.29E-01	7.89E-01	7.72E-01	7.32E-01	8.99E-01	7.09E-01	5.68E-01	5.68E-01	5.03E-01	6.12E-01	5.03E-01	5.56E-01	6.47E-01	4.65E-01	6.49E-01	8.30E-01	1.03E+00	5.06E-01	5.15E-01
2	10102-44-0	Nitrogen Dioxide	1.13E-01	1.26E-01	1.24E-01	8.91E-02	1.04E-01	9.82E-02	9.10E-02	8.86E-02	8.96E-02	9.30E-02	8.43E-02	9.95E-02	8.82E-02	9.00E-02	1.07E-01	1.29E-01	1.42E-01	8.99E-02	1.00E-01
3	PM2.5	Particulate Matter < 2.5 µm	6.70E-02	1.07E-01	4.14E-02	1.28E-01	7.80E-02	7.43E-02	5.35E-02	4.71E-02	7.97E-02	6.98E-02	4.95E-02	5.41E-02	5.07E-02	7.37E-02	2.21E-01	2.19E-01	1.57E-01	4.99E-02	4.45E-02
4	PM10	Particulate Matter < 10 µm	1.22E-01	1.89E-01	7.38E-02	2.43E-01	8.20E-02	6.87E-02	6.30E-02	9.00E-02	1.52E-01	7.44E-02	8.34E-02	9.90E-02	8.85E-02	1.41E-01	4.20E-01	4.15E-01	2.75E-01	8.84E-02	8.30E-02
5	630-08-0	Carbon Monoxide	4.25E-03	5.21E-03	4.77E-03	7.68E-03	1.34E-02	9.82E-03	6.78E-03	6.17E-03	4.67E-03	7.64E-03	6.86E-03	5.05E-03	7.34E-03	4.84E-03	5.93E-03	3.11E-03	2.65E-03	2.39E-03	3.99E-03
6	10028-15-6	Ozone	9.90E-02	9.89E-02	9.89E-02	1.03E-01	9.92E-02	9.90E-02	9.90E-02	9.91E-02	9.90E-02	9.90E-02	1.02E-01	1.03E-01	1.02E-01	1.05E-01	9.92E-02	9.87E-02	9.87E-02	9.90E-02	9.90E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	4.63E-04	5.80E-04	5.68E-04	5.28E-04	6.49E-04	5.12E-04	4.36E-04	4.39E-04	3.76E-04	4.49E-04	3.64E-04	4.09E-04	4.76E-04	3.41E-04	4.78E-04	6.10E-04	7.62E-04	3.72E-04	3.74E-04
8	7439-97-6	Mercury	6.13E-04	6.97E-04	6.93E-04	8.35E-04	9.19E-04	8.96E-04	7.92E-04	8.94E-04	7.17E-04	7.29E-04	5.59E-04	5.61E-04	6.37E-04	4.51E-04	5.77E-04	7.33E-04	9.27E-04	4.67E-04	4.61E-04
9	7782-41-4	Fluorine	8.43E-02	1.33E-01	1.73E-01	6.55E-02	1.07E-01	7.58E-02	6.31E-02	6.22E-02	6.40E-02	6.80E-02	6.36E-02	7.06E-02	8.23E-02	6.97E-02	9.49E-02	1.35E-01	1.22E-01	6.61E-02	7.78E-02
10	7440-38-2	Arsenic	3.89E-03	4.89E-03	4.72E-03	3.25E-03	3.49E-03	2.88E-03	2.45E-03	2.31E-03	2.74E-03	2.70E-03	2.78E-03	3.38E-03	3.31E-03	2.85E-03	3.98E-03	5.14E-03	6.38E-03	3.14E-03	2.89E-03
11	7440-43-9	Cadmium	3.89E-03	4.89E-03	4.72E-03	3.65E-03	4.09E-03	3.09E-03	2.69E-03	2.58E-03	2.74E-03	2.93E-03	2.80E-03	3.38E-03	3.28E-03	2.85E-03	3.98E-03	5.14E-03	6.34E-03	3.14E-03	2.89E-03
12	Cr III	Chromium III	1.33E-04	1.66E-04	1.62E-04	9.57E-05	1.08E-04	9.61E-05	8.77E-05	8.78E-05	9.46E-05	9.16E-05	9.00E-05	1.16E-04	1.03E-04	9.10E-05	1.37E-04	1.76E-04	2.12E-04	1.08E-04	9.91E-05
13	Cr IV	Chromium IV	7.66E-04	8.86E-04	8.64E-04	1.65E-03	1.71E-03	1.65E-03	1.46E-03	1.65E-03	1.40E-03	1.46E-03	1.10E-03	1.02E-03	1.07E-03	8.14E-04	8.55E-04	8.73E-04	1.06E-03	6.29E-04	7.44E-04
14	7439-92-1	Lead	5.17E-04	6.50E-04	6.28E-04	4.55E-04	5.31E-04	4.05E-04	3.60E-04	3.57E-04	3.77E-04	3.93E-04	3.72E-04	4.48E-04	4.48E-04	3.78E-04	5.29E-04	6.83E-04	8.50E-04	4.17E-04	3.84E-04
15	DioxFur	Dioxins and Furans	8.20E-03	1.03E-02	1.01E-02	1.22E-02	1.73E-02	1.31E-02	1.11E-02	1.10E-02	8.12E-03	1.13E-02	8.66E-03	9.45E-03	9.86E-03	7.18E-03	8.50E-03	1.07E-02	1.33E-02	6.96E-03	7.20E-03
16	7647-01-0	Hydrogen Chloride	5.33E-03	6.63E-03	6.49E-03	6.68E-03	1.01E-02	8.23E-03	7.26E-03	7.14E-03	5.29E-03	7.35E-03	5.14E-03	6.09E-03	6.42E-03	4.48E-03	5.44E-03	6.98E-03	8.60E-03	4.43E-03	4.69E-03
17	7440-41-7	Beryllium	1.18E-02	1.39E-02	1.38E-02	1.63E-02	2.19E-02	1.67E-02	1.41E-02	1.37E-02	1.10E-02	1.54E-02	1.11E-02	1.18E-02	1.25E-02	9.63E-03	1.18E-02	1.47E-02	1.83E-02	9.45E-03	9.21E-03
18	7440-50-8	Copper	2.82E-04	3.54E-04	3.41E-04	2.80E-04	3.45E-04	2.62E-04	2.26E-04	2.28E-04	2.13E-04	2.54E-04	2.02E-04	2.49E-04	2.64E-04	2.08E-04	2.91E-04	3.72E-04	4.63E-04	2.27E-04	2.09E-04
19	7440-02-0	Nickel	3.84E-04	4.31E-04	4.23E-04	5.57E-04	8.69E-04	6.80E-04	5.81E-04	5.82E-04	3.86E-04	5.95E-04	4.03E-04	4.75E-04	4.98E-04	3.79E-04	3.95E-04	4.73E-04	5.73E-04	2.90E-04	3.68E-04
20	7440-42-8	Boron	8.76E-04	9.41E-04	9.24E-04	1.29E-03	1.95E-03	1.49E-03	1.25E-03	1.25E-03	9.24E-04	1.28E-03	8.98E-04	1.03E-03	1.07E-03	8.55E-04	9.28E-04	1.03E-03	1.25E-03	6.33E-04	8.03E-04
21	7664-41-7	Ammonia	1.75E-06	2.05E-06	2.01E-06	2.43E-06	3.44E-06	2.60E-06	2.22E-06	2.18E-06	1.64E-06	2.25E-06	1.73E-06	1.88E-06	1.96E-06	1.50E-06	1.70E-06	2.14E-06	2.66E-06	1.38E-06	1.43E-06
22	71-43-2	Benzene	4.49E-05	5.44E-05	5.40E-05	6.36E-05	8.80E-05	6.63E-05	5.66E-05	5.54E-05	4.19E-05	6.03E-05	4.41E-05	4.78E-05	4.98E-05	3.82E-05	4.50E-05	5.72E-05	7.13E-05	3.63E-05	3.64E-05
23	98-82-8	Cumene	2.57E-06	3.02E-06	2.97E-06	3.58E-06	5.06E-06	3.83E-06	3.26E-06	3.21E-06	2.41E-06	3.31E-06	2.54E-06	2.77E-06	2.89E-06	2.21E-06	2.49E-06	3.15E-06	3.92E-06	2.04E-06	2.11E-06
24	108-88-3	Toluene	1.62E-07	1.63E-07	2.13E-07	2.30E-07	4.19E-07	3.50E-07	2.31E-07	1.80E-07	1.23E-07	3.02E-07	1.42E-07	1.30E-07	1.64E-07	1.24E-07	1.23E-07	1.87E-07	1.61E-07	1.02E-07	9.59E-08
25	1330-20-7	Xylenes	8.87E-08	8.91E-08	1.16E-07	1.26E-07	2.30E-07	1.91E-07	1.27E-07	9.85E-08	6.71E-08	1.65E-07	7.80E-08	7.11E-08	9.00E-08	6.81E-08	6.75E-08	1.02E-07	8.77E-08	5.60E-08	5.23E-08
26	100-41-4	Ethylbenzene	1.17E-07	1.38E-07	1.36E-07	1.63E-07	2.30E-07	1.74E-07	1.49E-07	1.46E-07	1.10E-07	1.51E-07	1.16E-07	1.26E-07	1.32E-07	1.01E-07	1.14E-07	1.44E-07	1.79E-07	9.30E-08	9.61E-08
		TOTAL	**1.156**	**1.492**	**1.332**	**1.416**	**1.446**	**1.185**	**0.987**	**1.004**	**1.027**	**1.069**	**0.928**	**1.025**	**1.106**	**0.979**	**1.635**	**1.877**	**1.887**	**0.932**	**0.953**

Acute HI - Proposed (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7466-09-5	Sulphur Dioxide	6.31E-01	7.89E-01	7.72E-01	5.42E-01	6.81E-01	5.34E-01	4.66E-01	4.55E-01	4.73E-01	5.22E-01	5.03E-01	5.54E-01	6.24E-01	4.65E-01	6.49E-01	8.30E-01	1.03E+00	5.27E-01	4.66E-01
2	10102-44-0	Nitrogen Dioxide	1.15E-01	1.28E-01	1.21E-01	8.60E-02	9.93E-02	9.12E-02	8.90E-02	8.73E-02	8.98E-02	9.24E-02	8.43E-02	9.95E-02	8.78E-02	9.09E-02	1.06E-01	1.29E-01	1.43E-01	8.94E-02	1.02E-01
3	PM2.5	Particulate Matter < 2.5 µm	6.40E-02	7.95E-02	5.54E-02	1.28E-01	8.10E-02	4.52E-02	5.74E-02	4.64E-02	7.81E-02	7.13E-02	4.81E-02	5.41E-02	5.06E-02	9.48E-02	2.21E-01	2.50E-01	1.52E-01	4.97E-02	4.69E-02
4	PM10	Particulate Matter < 10 µm	1.17E-01	1.48E-01	8.15E-02	2.43E-01	9.32E-02	6.55E-02	5.87E-02	8.26E-02	1.49E-01	7.28E-02	8.21E-02	9.97E-02	8.68E-02	1.41E-01	4.20E-01	4.73E-01	2.67E-01	8.79E-02	8.77E-02
5	630-08-0	Carbon Monoxide	5.28E-03	5.21E-03	5.61E-03	9.31E-03	1.41E-02	8.10E-03	7.71E-03	6.46E-03	6.01E-03	9.57E-03	6.86E-03	5.04E-03	7.34E-03	5.32E-03	6.80E-03	3.93E-03	3.47E-03	2.51E-03	4.45E-03
6	10028-15-6	Ozone	9.88E-02	9.89E-02	9.89E-02	1.01E-01	9.90E-02	9.90E-02	9.90E-02	9.91E-02	9.90E-02	9.89E-02	1.01E-01	1.03E-01	1.01E-01	1.05E-01	9.92E-02	9.87E-02	9.87E-02	9.89E-02	9.90E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	5.24E-04	5.80E-04	5.68E-04	4.83E-04	6.33E-04	4.85E-04	4.50E-04	4.38E-04	4.00E-04	5.19E-04	4.60E-04	4.19E-04	5.06E-04	4.43E-04	5.24E-04	6.10E-04	7.63E-04	3.87E-04	3.74E-04
8	7439-97-6	Mercury	6.30E-04	7.05E-04	6.92E-04	8.12E-04	8.14E-04	8.37E-04	8.01E-04	8.20E-04	7.21E-04	7.50E-04	6.06E-04	6.41E-04	6.80E-04	5.50E-04	6.35E-04	7.33E-04	9.28E-04	4.75E-04	4.56E-04
9	7782-41-4	Fluorine	8.43E-02	1.33E-01	1.73E-01	6.36E-02	1.14E-01	6.42E-02	6.31E-02	5.99E-02	6.40E-02	7.25E-02	6.36E-02	7.44E-02	7.47E-02	6.97E-02	9.49E-02	1.45E-01	1.23E-01	6.61E-02	7.78E-02
10	7440-38-2	Arsenic	3.91E-03	4.89E-03	4.79E-03	3.15E-03	3.82E-03	3.02E-03	2.64E-03	2.58E-03	2.93E-03	2.97E-03	3.01E-03	3.38E-03	3.63E-03	2.87E-03	4.02E-03	5.14E-03	6.38E-03	3.14E-03	2.89E-03
11	7440-43-9	Cadmium	3.91E-03	4.89E-03	4.79E-03	3.40E-03	4.27E-03	3.36E-03	2.95E-03	2.74E-03	2.91E-03	3.30E-03	3.12E-03	3.44E-03	3.88E-03	2.91E-03	4.01E-03	5.14E-03	6.35E-03	3.27E-03	2.89E-03
12	Cr III	Chromium III	1.33E-04	1.66E-04	1.62E-04	9.57E-05	1.08E-04	9.61E-05	8.77E-05	8.78E-05	9.46E-05	9.16E-05	9.09E-05	1.16E-04	1.03E-04	9.09E-05	1.37E-04	1.76E-04	2.12E-04	1.08E-04	9.91E-05
13	Cr IV	Chromium IV	7.67E-04	9.09E-04	8.81E-04	1.65E-03	1.71E-03	1.65E-03	1.46E-03	1.65E-03	1.40E-03	1.46E-03	1.13E-03	1.02E-03	1.07E-03	8.14E-04	8.47E-04	8.79E-04	1.06E-03	6.29E-04	7.53E-04
14	7439-92-1	Lead	5.20E-04	6.50E-04	6.36E-04	4.42E-04	5.53E-04	4.55E-04	3.92E-04	4.11E-04	3.90E-04	4.33E-04	4.15E-04	4.57E-04	5.14E-04	3.86E-04	5.38E-04	6.83E-04	8.52E-04	4.34E-04	3.84E-04
15	DioxFur	Dioxins and Furans	9.74E-03	1.03E-02	1.00E-02	1.13E-02	1.58E-02	1.24E-02	1.25E-02	1.14E-02	9.08E-03	1.37E-02	1.07E-02	1.08E-02	1.23E-02	1.11E-02	1.06E-02	1.07E-02	1.33E-02	7.28E-03	6.75E-03
16	7647-01-0	Hydrogen Chloride	5.99E-03	6.71E-03	6.49E-03	6.56E-03	8.74E-03	7.70E-03	7.95E-03	7.06E-03	5.90E-03	8.74E-03	6.92E-03	6.64E-03	7.75E-03	6.26E-03	6.04E-03	6.98E-03	8.63E-03	4.73E-03	4.34E-03
17	7440-41-7	Beryllium	1.33E-02	1.41E-02	1.36E-02	1.48E-02	2.06E-02	1.57E-02	1.56E-02	1.44E-02	1.25E-02	1.73E-02	1.34E-02	1.47E-02	1.54E-02	1.44E-02	1.47E-02	1.47E-02	1.83E-02	9.68E-03	9.21E-03
18	7440-50-8	Copper	3.04E-04	3.54E-04	3.46E-04	2.82E-04	3.49E-04	2.56E-04	2.42E-04	2.37E-04	2.16E-04	2.65E-04	2.54E-04	2.49E-04	3.03E-04	2.33E-04	2.98E-04	3.72E-04	4.64E-04	2.36E-04	2.27E-04
19	7440-02-0	Nickel	4.53E-04	4.34E-04	4.33E-04	5.96E-04	7.97E-04	6.49E-04	6.62E-04	5.76E-04	4.82E-04	7.22E-04	5.65E-04	5.24E-04	6.34E-04	5.69E-04	5.49E-04	4.84E-04	5.61E-04	3.39E-04	3.30E-04
20	7440-42-8	Boron	1.03E-03	9.41E-04	9.46E-04	1.29E-03	1.79E-03	1.41E-03	1.42E-03	1.30E-03	1.03E-03	1.56E-03	1.22E-03	1.13E-03	1.40E-03	1.27E-03	1.24E-03	1.07E-03	1.23E-03	7.40E-04	7.19E-04
21	7664-41-7	Ammonia	1.93E-06	2.05E-06	2.00E-06	2.25E-06	3.15E-06	2.47E-06	2.48E-06	2.27E-06	1.81E-06	2.73E-06	2.13E-06	2.14E-06	2.45E-06	2.22E-06	2.20E-06	2.14E-06	2.67E-06	1.45E-06	1.34E-06
22	71-43-2	Benzene	5.15E-05	5.50E-05	5.32E-05	5.81E-05	8.09E-05	6.27E-05	6.30E-05	5.78E-05	4.83E-05	6.93E-05	5.41E-05	5.74E-05	6.21E-05	5.66E-05	5.66E-05	5.72E-05	7.15E-05	3.88E-05	3.60E-05
23	98-82-8	Cumene	2.85E-06	3.02E-06	2.94E-06	3.32E-06	4.64E-06	3.63E-06	3.65E-06	3.34E-06	2.66E-06	4.01E-06	3.14E-06	3.15E-06	3.60E-06	3.27E-06	3.24E-06	3.14E-06	3.93E-06	2.13E-06	1.98E-06
24	108-88-3	Toluene	1.59E-07	1.63E-07	2.13E-07	2.31E-07	4.57E-07	2.50E-07	2.76E-07	2.25E-07	1.60E-07	3.23E-07	1.81E-07	1.63E-07	1.96E-07	1.57E-07	1.44E-07	1.91E-07	1.68E-07	9.93E-08	1.08E-07
25	1330-20-7	Xylenes	8.70E-08	8.91E-08	1.16E-07	1.27E-07	2.50E-07	1.37E-07	1.51E-07	1.23E-07	8.75E-08	1.77E-07	9.92E-08	8.91E-08	1.08E-07	8.58E-08	7.87E-08	1.04E-07	9.18E-08	5.44E-08	5.91E-08
26	100-41-4	Ethylbenzene	1.30E-07	1.38E-07	1.34E-07	1.51E-07	2.11E-07	1.65E-07	1.66E-07	1.52E-07	1.21E-07	1.83E-07	1.43E-07	1.44E-07	1.64E-07	1.49E-07	1.48E-07	1.44E-07	1.79E-07	9.73E-08	9.02E-08
		TOTAL	**1.157**	**1.427**	**1.352**	**1.219**	**1.242**	**0.955**	**0.888**	**0.881**	**0.997**	**0.991**	**0.932**	**1.033**	**1.081**	**1.014**	**1.642**	**1.978**	**1.876**	**0.953**	**0.914**

Table B1b: Acute Hazard Index for each Receptor

Acute HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7466-09-5	Sulphur Dioxide	3.98E-01	6.40E-01	5.02E-01	5.47E-01	5.80E-01	5.30E-01	4.86E-01	5.33E-01	6.31E-01	6.43E-01	5.39E-01	6.17E-01	6.65E-01	5.79E-01
2	10102-44-0	Nitrogen Dioxide	8.93E-02	9.57E-02	9.00E-02	9.44E-02	1.02E-01	9.93E-02	9.66E-02	9.91E-02	1.09E-01	1.10E-01	9.97E-02	1.12E-01	1.12E-01	9.63E-02
3	PM2.5	Particulate Matter < 2.5 µm	2.49E-02	8.85E-02	3.80E-02	4.55E-02	3.22E-02	4.45E-02	3.93E-02	3.99E-02	6.85E-02	5.92E-02	5.84E-02	4.86E-02	4.83E-02	5.11E-02
4	PM10	Particulate Matter < 10 µm	4.62E-02	1.67E-01	6.92E-02	8.40E-02	4.83E-02	8.01E-02	7.03E-02	7.40E-02	1.41E-01	1.03E-01	1.11E-01	8.90E-02	9.04E-02	9.03E-02
5	630-08-0	Carbon Monoxide	4.64E-03	8.34E-03	5.35E-03	3.98E-03	5.30E-03	4.85E-03	4.76E-03	4.80E-03	7.09E-03	6.25E-03	5.62E-03	4.57E-03	4.68E-03	4.67E-03
6	10028-15-6	Ozone	9.90E-02	9.91E-02	9.89E-02	9.88E-02	9.90E-02	9.90E-02	9.91E-02	9.91E-02	9.89E-02	9.88E-02	9.89E-02	9.89E-02	9.89E-02	9.89E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	2.90E-04	4.63E-04	3.70E-04	4.02E-04	4.32E-04	3.90E-04	3.57E-04	3.86E-04	4.64E-04	4.73E-04	4.19E-04	4.58E-04	4.90E-04	4.26E-04
8	7439-97-6	Mercury	4.00E-04	6.48E-04	5.88E-04	5.93E-04	5.30E-04	4.87E-04	5.40E-04	5.01E-04	5.69E-04	5.75E-04	5.64E-04	6.25E-04	6.37E-04	5.62E-04
9	7782-41-4	Fluorine	5.84E-02	7.79E-02	9.37E-02	1.07E-01	1.67E-01	8.07E-02	7.78E-02	6.99E-02	1.07E-01	1.13E-01	1.11E-01	1.07E-01	1.07E-01	8.57E-02
10	7440-38-2	Arsenic	2.37E-03	2.80E-03	2.79E-03	2.83E-03	3.34E-03	3.29E-03	3.01E-03	2.92E-03	3.76E-03	3.58E-03	3.23E-03	3.81E-03	3.80E-03	3.36E-03
11	7440-43-9	Cadmium	2.37E-03	2.87E-03	2.79E-03	2.83E-03	3.34E-03	3.29E-03	3.01E-03	2.92E-03	3.76E-03	3.63E-03	3.21E-03	3.83E-03	3.80E-03	3.19E-03
12	Cr III	Chromium III	8.12E-05	9.20E-05	9.49E-05	9.70E-05	1.15E-04	1.13E-04	1.03E-04	1.00E-04	1.29E-04	1.23E-04	1.10E-04	1.29E-04	1.30E-04	1.15E-04
13	Cr IV	Chromium IV	8.10E-04	1.19E-03	9.52E-04	1.11E-03	8.35E-04	8.48E-04	9.74E-04	8.53E-04	1.00E-03	9.97E-04	9.54E-04	9.94E-04	1.01E-03	1.03E-03
14	7439-92-1	Lead	3.14E-04	3.91E-04	3.79E-04	3.76E-04	4.77E-04	4.37E-04	4.00E-04	3.88E-04	4.99E-04	4.83E-04	4.36E-04	5.08E-04	5.04E-04	4.47E-04
15	DioxFur	Dioxins and Furans	6.26E-03	1.19E-02	7.56E-03	7.69E-03	7.66E-03	7.90E-03	7.42E-03	7.01E-03	9.22E-03	9.14E-03	8.65E-03	8.05E-03	8.61E-03	8.41E-03
16	7647-01-0	Hydrogen Chloride	4.07E-03	7.72E-03	4.91E-03	5.01E-03	4.93E-03	4.63E-03	4.74E-03	4.48E-03	6.00E-03	5.84E-03	5.64E-03	5.23E-03	5.60E-03	5.28E-03
17	7440-41-7	Beryllium	8.32E-03	1.52E-02	1.05E-02	1.10E-02	1.06E-02	1.01E-02	9.49E-03	9.77E-03	1.25E-02	1.19E-02	1.11E-02	1.10E-02	1.17E-02	1.06E-02
18	7440-50-8	Copper	1.71E-04	2.34E-04	2.25E-04	2.41E-04	2.60E-04	2.38E-04	2.18E-04	2.11E-04	2.71E-04	2.88E-04	2.44E-04	2.77E-04	2.86E-04	2.48E-04
19	7440-02-0	Nickel	3.13E-04	6.05E-04	3.82E-04	4.06E-04	3.70E-04	3.63E-04	3.51E-04	3.17E-04	4.89E-04	4.67E-04	4.48E-04	3.77E-04	3.74E-04	4.29E-04
20	7440-42-8	Boron	7.01E-04	1.30E-03	8.19E-04	8.69E-04	8.27E-04	8.10E-04	7.65E-04	6.80E-04	1.05E-03	1.02E-03	9.60E-04	8.33E-04	8.12E-04	9.22E-04
21	7664-41-7	Ammonia	1.25E-06	2.36E-06	1.52E-06	1.61E-06	1.53E-06	1.58E-06	1.49E-06	1.39E-06	1.84E-06	1.82E-06	1.72E-06	1.60E-06	1.71E-06	1.68E-06
22	71-43-2	Benzene	3.16E-05	6.00E-05	4.03E-05	4.28E-05	4.04E-05	4.09E-05	3.80E-05	3.73E-05	4.77E-05	4.65E-05	4.40E-05	4.29E-05	4.59E-05	4.27E-05
23	98-82-8	Cumene	1.83E-06	3.47E-06	2.24E-06	2.37E-06	2.25E-06	2.32E-06	2.19E-06	2.05E-06	2.70E-06	2.68E-06	2.53E-06	2.36E-06	2.52E-06	2.47E-06
24	108-88-3	Toluene	8.46E-08	3.43E-07	1.15E-07	1.31E-07	2.06E-07	1.03E-07	1.09E-07	8.91E-08	1.31E-07	1.39E-07	1.36E-07	1.32E-07	1.36E-07	1.06E-07
25	1330-20-7	Xylenes	4.63E-08	1.88E-07	6.30E-08	7.18E-08	1.12E-07	5.60E-08	5.96E-08	4.88E-08	7.17E-08	7.58E-08	7.44E-08	7.22E-08	7.45E-08	5.76E-08
26	100-41-4	Ethylbenzene	8.35E-08	1.58E-07	1.02E-07	1.08E-07	1.03E-07	1.06E-07	9.99E-08	9.37E-08	1.23E-07	1.22E-07	1.16E-07	1.08E-07	1.15E-07	1.12E-07
		TOTAL	**0.747**	**1.222**	**0.930**	**1.014**	**1.067**	**0.972**	**0.905**	**0.950**	**1.203**	**1.171**	**1.059**	**1.114**	**1.165**	**1.042**

Acute HI - Proposed (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7466-09-5	Sulphur Dioxide	3.98E-01	5.09E-01	4.67E-01	5.69E-01	5.80E-01	5.47E-01	4.86E-01	5.33E-01	6.45E-01	6.65E-01	6.61E-01	6.15E-01	6.29E-01	5.54E-01
2	10102-44-0	Nitrogen Dioxide	8.90E-02	9.37E-02	9.01E-02	9.44E-02	1.04E-01	1.00E-01	9.72E-02	9.90E-02	1.10E-01	1.12E-01	9.85E-02	1.14E-01	1.11E-01	9.71E-02
3	PM2.5	Particulate Matter < 2.5 µm	2.43E-02	9.05E-02	3.59E-02	4.48E-02	3.91E-02	4.26E-02	3.69E-02	3.91E-02	6.75E-02	6.60E-02	5.92E-02	4.58E-02	4.86E-02	4.84E-02
4	PM10	Particulate Matter < 10 µm	4.18E-02	1.70E-01	6.81E-02	8.46E-02	5.43E-02	7.66E-02	6.83E-02	7.25E-02	1.40E-01	1.12E-01	1.12E-01	8.55E-02	9.08E-02	8.77E-02
5	630-08-0	Carbon Monoxide	5.14E-03	1.02E-02	5.39E-03	6.63E-03	6.55E-03	6.00E-03	6.61E-03	6.42E-03	8.29E-03	6.65E-03	6.62E-03	5.05E-03	5.54E-03	6.77E-03
6	10028-15-6	Ozone	9.90E-02	9.89E-02	9.89E-02	9.88E-02	9.90E-02	9.90E-02	9.91E-02	9.91E-02	9.89E-02	9.88E-02	9.89E-02	9.89E-02	9.89E-02	9.89E-02
7	PAH	Polycyclic Aromatic Hydrocarbons	2.93E-04	5.33E-04	4.30E-04	4.60E-04	4.32E-04	4.03E-04	3.80E-04	3.98E-04	5.02E-04	5.43E-04	5.29E-04	4.54E-04	4.63E-04	4.46E-04
8	7439-97-6	Mercury	4.09E-04	7.21E-04	6.42E-04	7.18E-04	5.62E-04	5.96E-04	5.73E-04	5.10E-04	6.30E-04	6.75E-04	6.94E-04	6.25E-04	5.94E-04	5.85E-04
9	7782-41-4	Fluorine	5.84E-02	7.92E-02	9.37E-02	1.07E-01	1.67E-01	8.07E-02	7.78E-02	6.99E-02	1.07E-01	1.13E-01	1.11E-01	1.07E-01	1.07E-01	8.57E-02
10	7440-38-2	Arsenic	2.37E-03	3.06E-03	2.97E-03	3.39E-03	3.59E-03	3.39E-03	3.01E-03	3.31E-03	4.00E-03	4.11E-03	3.73E-03	3.81E-03	3.90E-03	3.37E-03
11	7440-43-9	Cadmium	2.47E-03	3.22E-03	2.85E-03	3.42E-03	3.59E-03	3.39E-03	3.02E-03	3.31E-03	4.00E-03	4.18E-03	4.15E-03	3.81E-03	3.90E-03	3.43E-03
12	Cr III	Chromium III	8.12E-05	9.27E-05	9.49E-05	9.70E-05	1.15E-04	1.13E-04	1.03E-04	1.00E-04	1.29E-04	1.23E-04	1.10E-04	1.29E-04	1.30E-04	1.15E-04
13	Cr IV	Chromium IV	8.14E-04	1.25E-03	9.52E-04	1.13E-03	8.94E-04	9.36E-04	9.75E-04	8.55E-04	1.03E-03	9.97E-04	9.54E-04	9.95E-04	1.01E-03	1.10E-03
14	7439-92-1	Lead	3.28E-04	4.06E-04	3.97E-04	4.99E-04	4.77E-04	4.51E-04	4.00E-04	4.39E-04	5.31E-04	5.46E-04	5.35E-04	5.06E-04	5.18E-04	4.72E-04
15	DioxFur	Dioxins and Furans	5.61E-03	1.44E-02	9.80E-03	8.70E-03	7.76E-03	8.11E-03	8.12E-03	7.16E-03	1.04E-02	1.07E-02	1.10E-02	8.05E-03	8.70E-03	8.88E-03
16	7647-01-0	Hydrogen Chloride	3.42E-03	9.23E-03	6.28E-03	5.57E-03	4.93E-03	4.99E-03	5.14E-03	4.55E-03	6.80E-03	6.94E-03	7.13E-03	5.17E-03	5.56E-03	5.34E-03
17	7440-41-7	Beryllium	7.66E-03	1.80E-02	1.36E-02	1.19E-02	1.10E-02	1.13E-02	1.08E-02	9.77E-03	1.34E-02	1.37E-02	1.46E-02	1.10E-02	1.19E-02	1.21E-02
18	7440-50-8	Copper	1.78E-04	2.67E-04	2.47E-04	2.80E-04	2.63E-04	2.45E-04	2.32E-04	2.43E-04	2.89E-04	3.02E-04	3.20E-04	2.75E-04	2.82E-04	2.68E-04
19	7440-02-0	Nickel	2.78E-04	7.62E-04	5.11E-04	4.62E-04	3.43E-04	3.63E-04	3.51E-04	3.32E-04	5.53E-04	5.65E-04	5.33E-04	3.86E-04	4.29E-04	4.18E-04
20	7440-42-8	Boron	6.02E-04	1.64E-03	1.12E-03	1.04E-03	8.07E-04	8.10E-04	7.65E-04	7.23E-04	1.19E-03	1.21E-03	1.14E-03	8.33E-04	9.38E-04	9.96E-04
21	7664-41-7	Ammonia	1.11E-06	2.86E-06	2.16E-06	1.82E-06	1.54E-06	1.62E-06	1.62E-06	1.42E-06	2.08E-06	2.12E-06	2.18E-06	1.60E-06	1.73E-06	1.77E-06
22	71-43-2	Benzene	2.99E-05	7.27E-05	5.48E-05	4.63E-05	4.14E-05	4.24E-05	4.21E-05	3.82E-05	5.28E-05	5.52E-05	5.85E-05	4.29E-05	4.64E-05	4.73E-05
23	98-82-8	Cumene	1.64E-06	4.21E-06	3.18E-06	2.68E-06	2.27E-06	2.38E-06	2.38E-06	2.10E-06	3.06E-06	3.12E-06	3.21E-06	2.36E-06	2.55E-06	2.61E-06
24	108-88-3	Toluene	9.71E-08	3.54E-07	1.49E-07	1.52E-07	2.06E-07	1.03E-07	1.51E-07	1.13E-07	1.85E-07	1.91E-07	1.69E-07	1.32E-07	1.32E-07	1.31E-07
25	1330-20-7	Xylenes	5.32E-08	1.94E-07	8.17E-08	8.32E-08	1.12E-07	5.60E-08	8.24E-08	6.17E-08	1.01E-07	1.04E-07	9.22E-08	7.22E-08	7.23E-08	7.20E-08
26	100-41-4	Ethylbenzene	7.50E-08	1.92E-07	1.45E-07	1.22E-07	1.04E-07	1.09E-07	1.08E-07	9.57E-08	1.39E-07	1.42E-07	1.47E-07	1.08E-07	1.16E-07	1.19E-07
		TOTAL	**0.740**	**1.106**	**0.899**	**1.042**	**1.085**	**0.988**	**0.905**	**0.951**	**1.219**	**1.218**	**1.193**	**1.107**	**1.130**	**1.016**

Table B2a: Contribution to Acute Hazard Index for each Receptor (%)

Contribution to Acute HI - Baseline (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7466-09-5	Sulphur Dioxide	15.0%	12.4%	13.7%	12.3%	12.2%	12.3%	12.3%	19.4%	20.2%	20.0%	13.7%	13.2%	13.6%	12.5%	16.3%	18.8%	19.4%	18.6%	16.1%
2	10102-44-0	Nitrogen Dioxide	1.8%	1.3%	1.5%	1.6%	1.5%	1.7%	1.3%	2.1%	2.2%	2.1%	1.5%	1.5%	1.5%	1.6%	1.9%	1.9%	1.9%	2.1%	2.0%
3	PM2.5	Particulate Matter < 2.5 µm	8.9%	11.3%	9.3%	10.7%	8.8%	8.7%	10.3%	7.5%	8.9%	7.6%	13.0%	12.6%	12.9%	10.0%	11.1%	11.2%	9.8%	8.4%	7.7%
4	PM10	Particulate Matter < 10 µm	16.7%	21.1%	17.4%	20.0%	16.3%	16.2%	19.6%	14.0%	15.4%	14.4%	24.1%	24.0%	24.2%	18.8%	19.5%	20.4%	18.1%	15.8%	14.2%
5	630-08-0	Carbon Monoxide	0.1%	0.1%	0.2%	0.1%	0.2%	0.2%	0.1%	0.2%	0.3%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.3%	0.2%
6	10028-15-6	Ozone	1.5%	1.4%	1.7%	1.7%	1.5%	2.0%	1.3%	2.2%	2.2%	2.1%	1.7%	1.7%	1.7%	1.8%	2.0%	1.9%	2.2%	2.1%	2.3%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	2.8%	2.1%	2.2%	2.4%	2.0%	2.0%	2.3%	2.7%	2.6%	2.6%	2.4%	2.2%	2.2%	2.6%	2.4%	2.4%	2.8%	2.3%	2.2%
10	7440-38-2	Arsenic	4.3%	4.0%	4.3%	4.1%	4.6%	4.6%	4.2%	4.1%	3.9%	4.1%	3.5%	3.6%	3.5%	4.2%	3.7%	3.5%	3.6%	4.0%	4.4%
11	7440-43-9	Cadmium	0.7%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.7%	0.6%	0.6%	0.6%	0.7%	0.6%	0.6%	0.6%	0.6%	0.7%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.2%	0.2%
14	7439-92-1	Lead	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
15	DioxFur	Dioxins and Furans	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.4%	0.3%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%
16	7647-01-0	Hydrogen Chloride	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%
17	7440-41-7	Beryllium	46.0%	43.6%	46.6%	44.4%	49.8%	49.2%	45.8%	44.6%	41.5%	43.8%	37.4%	38.6%	37.7%	45.5%	40.2%	37.2%	39.1%	43.3%	47.6%
18	7440-50-8	Copper	1.2%	1.1%	1.2%	1.1%	1.3%	1.3%	1.2%	1.1%	1.1%	1.1%	1.0%	1.0%	1.0%	1.2%	1.0%	1.0%	1.0%	1.1%	1.2%
19	7440-02-0	Nickel	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
20	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Acute HI - Proposed (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7466-09-5	Sulphur Dioxide	15.1%	11.3%	13.1%	11.4%	11.0%	12.3%	12.3%	17.7%	18.8%	18.4%	12.8%	12.4%	11.9%	12.4%	15.7%	16.5%	17.0%	16.6%	15.4%
2	10102-44-0	Nitrogen Dioxide	1.8%	1.3%	1.6%	1.6%	1.5%	1.8%	1.3%	2.2%	2.2%	2.1%	1.5%	1.5%	1.6%	1.6%	1.9%	1.9%	2.1%	2.1%	2.0%
3	PM2.5	Particulate Matter < 2.5 µm	8.8%	11.5%	9.3%	10.8%	8.9%	8.6%	10.3%	7.6%	8.9%	7.7%	13.2%	12.7%	13.1%	10.0%	11.0%	11.2%	10.3%	8.8%	7.8%
4	PM10	Particulate Matter < 10 µm	16.6%	21.5%	17.5%	20.2%	16.5%	16.2%	19.6%	14.3%	15.7%	14.7%	24.4%	24.2%	24.6%	18.8%	19.5%	20.7%	18.8%	16.3%	14.5%
5	630-08-0	Carbon Monoxide	0.1%	0.1%	0.2%	0.1%	0.2%	0.2%	0.1%	0.3%	0.3%	0.3%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.2%	0.4%	0.2%
6	10028-15-6	Ozone	1.5%	1.4%	1.7%	1.7%	1.5%	2.0%	1.3%	2.2%	2.2%	2.2%	1.7%	1.7%	1.7%	1.8%	2.0%	1.9%	2.2%	2.1%	2.3%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	2.8%	2.1%	2.2%	2.4%	2.1%	2.0%	2.3%	2.7%	2.5%	2.4%	2.5%	2.2%	2.3%	2.6%	2.5%	2.7%	3.0%	2.2%	2.3%
10	7440-38-2	Arsenic	4.3%	4.1%	4.4%	4.2%	4.7%	4.6%	4.2%	4.2%	3.9%	4.1%	3.5%	3.6%	3.6%	4.2%	3.8%	3.6%	3.7%	4.1%	4.4%
11	7440-43-9	Cadmium	0.7%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.7%	0.6%	0.6%	0.6%	0.7%	0.6%	0.6%	0.6%	0.7%	0.7%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.2%	0.2%
14	7439-92-1	Lead	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%
15	DioxFur	Dioxins and Furans	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.4%	0.4%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.4%	0.4%	0.3%
16	7647-01-0	Hydrogen Chloride	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%
17	7440-41-7	Beryllium	46.1%	43.9%	46.9%	44.8%	50.5%	49.2%	45.9%	45.7%	42.4%	44.8%	37.6%	38.9%	38.4%	45.5%	40.6%	38.6%	39.9%	44.4%	47.9%
18	7440-50-8	Copper	1.2%	1.1%	1.2%	1.1%	1.3%	1.3%	1.2%	1.2%	1.1%	1.1%	1.0%	1.0%	1.0%	1.2%	1.0%	1.0%	1.0%	1.1%	1.2%
19	7440-02-0	Nickel	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
20	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B2a: Contribution to Acute Hazard Index for each Receptor (%)

Contribution to Acute HI - Baseline (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7466-09-5	Sulphur Dioxide	15.1%	15.2%	15.4%	19.1%	10.0%	12.7%	14.7%	13.5%	13.5%	15.8%	11.4%	14.4%	14.9%	12.5%	15.2%	14.4%	13.4%	12.1%	13.5%
2	10102-44-0	Nitrogen Dioxide	1.9%	1.9%	1.9%	1.9%	1.3%	1.7%	1.7%	1.6%	1.4%	1.6%	1.4%	1.6%	1.6%	1.2%	1.6%	1.6%	1.7%	1.4%	1.4%
3	PM2.5	Particulate Matter < 2.5 µm	8.4%	8.6%	7.7%	6.9%	13.0%	10.3%	8.8%	9.8%	10.7%	10.0%	12.9%	8.6%	7.6%	12.1%	9.9%	8.6%	8.3%	10.7%	8.8%
4	PM10	Particulate Matter < 10 µm	16.1%	16.6%	14.8%	12.7%	24.3%	19.1%	16.7%	18.7%	20.6%	19.1%	23.9%	16.4%	14.4%	22.9%	19.0%	16.3%	15.6%	20.4%	16.6%
5	630-08-0	Carbon Monoxide	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.2%	0.2%	0.1%	0.1%
6	10028-15-6	Ozone	2.1%	2.1%	2.1%	2.0%	1.4%	1.8%	1.7%	1.5%	1.2%	1.3%	1.2%	1.4%	1.4%	0.9%	1.3%	1.7%	1.7%	1.4%	1.4%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	1.9%	1.9%	1.8%	1.9%	2.2%	2.7%	1.9%	2.2%	2.1%	2.3%	1.9%	3.0%	2.9%	3.2%	1.8%	2.0%	2.1%	2.0%	2.5%
10	7440-38-2	Arsenic	4.4%	4.3%	4.5%	4.4%	3.8%	4.1%	4.3%	4.2%	4.0%	4.0%	3.8%	4.4%	4.6%	3.8%	4.1%	4.4%	4.6%	4.2%	4.5%
11	7440-43-9	Cadmium	0.7%	0.7%	0.7%	0.7%	0.6%	0.7%	0.7%	0.7%	0.6%	0.7%	0.6%	0.7%	0.7%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%
14	7439-92-1	Lead	0.5%	0.4%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.4%	0.4%	0.4%	0.5%	0.4%	0.5%
15	DioxFur	Dioxins and Furans	0.2%	0.2%	0.2%	0.3%	0.2%	0.2%	0.3%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%	0.2%	0.2%	0.2%
16	7647-01-0	Hydrogen Chloride	0.1%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%
17	7440-41-7	Beryllium	46.8%	46.1%	48.6%	47.7%	41.4%	44.6%	46.9%	45.6%	43.7%	43.1%	40.9%	47.1%	49.4%	40.9%	44.2%	47.7%	49.2%	44.9%	48.3%
18	7440-50-8	Copper	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.2%	1.2%	1.1%	1.1%	1.0%	1.2%	1.3%	1.0%	1.1%	1.2%	1.3%	1.1%	1.2%
19	7440-02-0	Nickel	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%
20	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Acute HI - Proposed (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7466-09-5	Sulphur Dioxide	14.2%	14.7%	14.5%	17.6%	10.2%	12.1%	12.9%	13.4%	13.6%	15.9%	11.4%	14.5%	14.9%	12.5%	15.4%	12.3%	13.6%	12.1%	13.7%
2	10102-44-0	Nitrogen Dioxide	1.9%	1.9%	1.9%	2.0%	1.3%	1.7%	1.8%	1.6%	1.4%	1.6%	1.4%	1.6%	1.6%	1.2%	1.6%	1.7%	1.7%	1.4%	1.4%
3	PM2.5	Particulate Matter < 2.5 µm	8.4%	8.6%	7.8%	7.2%	12.9%	10.4%	9.0%	9.9%	10.6%	9.9%	12.9%	8.6%	7.6%	12.1%	9.7%	8.8%	8.3%	10.7%	8.8%
4	PM10	Particulate Matter < 10 µm	16.2%	16.6%	15.0%	13.0%	24.2%	19.2%	17.0%	18.8%	20.2%	18.9%	23.9%	16.4%	14.4%	23.0%	18.6%	16.7%	15.6%	20.4%	16.6%
5	630-08-0	Carbon Monoxide	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	0.2%	0.1%	0.1%
6	10028-15-6	Ozone	2.1%	2.1%	2.1%	2.1%	1.4%	1.9%	1.8%	1.5%	1.2%	1.3%	1.2%	1.4%	1.4%	0.9%	1.3%	1.7%	1.7%	1.4%	1.4%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	1.8%	1.9%	1.7%	1.9%	2.2%	2.7%	1.9%	2.2%	2.1%	2.3%	1.9%	3.0%	2.9%	3.2%	1.8%	2.0%	2.1%	2.0%	2.5%
10	7440-38-2	Arsenic	4.5%	4.4%	4.6%	4.5%	3.8%	4.2%	4.4%	4.2%	4.1%	4.0%	3.8%	4.4%	4.6%	3.8%	4.2%	4.5%	4.6%	4.2%	4.5%
11	7440-43-9	Cadmium	0.7%	0.8%	0.7%	0.8%	0.6%	0.7%	0.7%	0.7%	0.6%	0.7%	0.6%	0.7%	0.7%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%
14	7439-92-1	Lead	0.5%	0.4%	0.5%	0.5%	0.4%	0.4%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.4%	0.4%	0.5%	0.5%	0.4%	0.5%
15	DioxFur	Dioxins and Furans	0.3%	0.3%	0.2%	0.3%	0.2%	0.2%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.2%	0.2%
16	7647-01-0	Hydrogen Chloride	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%
17	7440-41-7	Beryllium	47.4%	46.5%	49.2%	48.4%	41.3%	44.9%	47.8%	45.4%	44.0%	43.3%	40.9%	47.1%	49.4%	40.8%	44.4%	48.9%	49.0%	44.9%	48.1%
18	7440-50-8	Copper	1.2%	1.2%	1.3%	1.2%	1.1%	1.2%	1.2%	1.2%	1.1%	1.1%	1.0%	1.2%	1.3%	1.0%	1.1%	1.3%	1.3%	1.1%	1.2%
19	7440-02-0	Nickel	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%
20	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B2a: Contribution to Acute Hazard Index for each Receptor (%)

Contribution to Acute HI - Baseline (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7466-09-5	Sulphur Dioxide	13.8%	10.7%	11.3%	17.5%	17.8%	14.6%	12.4%	12.6%	12.6%	14.2%	15.0%	14.8%	15.9%	13.3%	14.0%	16.1%	15.0%	13.9%	13.9%
2	10102-44-0	Nitrogen Dioxide	1.6%	1.1%	1.2%	2.1%	2.0%	1.9%	1.8%	1.8%	1.8%	1.8%	2.1%	1.7%	1.9%	1.8%	1.5%	1.5%	1.3%	1.6%	1.7%
3	PM2.5	Particulate Matter < 2.5 µm	8.6%	13.7%	12.4%	8.5%	8.1%	11.8%	10.0%	11.8%	10.0%	8.2%	7.6%	7.7%	8.5%	9.1%	9.7%	9.6%	11.4%	9.3%	9.7%
4	PM10	Particulate Matter < 10 µm	16.3%	26.2%	23.2%	15.1%	15.2%	21.7%	18.3%	21.9%	18.5%	15.3%	14.4%	14.4%	16.1%	17.2%	18.6%	18.2%	22.0%	17.8%	18.6%
5	630-08-0	Carbon Monoxide	0.1%	0.0%	0.0%	0.2%	0.3%	0.2%	0.1%	0.1%	0.1%	0.2%	0.2%	0.1%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%
6	10028-15-6	Ozone	1.4%	0.9%	1.0%	2.4%	1.9%	1.9%	1.9%	2.0%	2.0%	2.0%	2.6%	1.8%	2.2%	2.1%	1.4%	1.2%	0.9%	1.8%	1.7%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	1.9%	2.5%	3.0%	2.4%	2.4%	2.3%	2.5%	2.5%	2.3%	2.4%	2.4%	2.4%	2.3%	2.4%	2.2%	2.7%	2.0%	1.9%	2.3%
10	7440-38-2	Arsenic	4.5%	3.6%	3.9%	4.1%	4.2%	3.7%	4.2%	3.8%	4.2%	4.5%	4.5%	4.6%	4.3%	4.3%	4.3%	4.1%	3.8%	4.3%	4.2%
11	7440-43-9	Cadmium	0.7%	0.6%	0.7%	0.7%	0.7%	0.6%	0.7%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.7%	0.7%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.2%	0.1%	0.2%	0.2%	0.2%	0.1%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
14	7439-92-1	Lead	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
15	DioxFur	Dioxins and Furans	0.2%	0.1%	0.2%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
16	7647-01-0	Hydrogen Chloride	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-41-7	Beryllium	48.8%	38.9%	41.3%	44.6%	45.0%	39.3%	45.7%	40.7%	45.6%	48.4%	48.2%	49.4%	45.6%	46.7%	45.4%	43.9%	40.9%	46.3%	45.2%
18	7440-50-8	Copper	1.2%	1.0%	1.1%	1.1%	1.2%	1.0%	1.2%	1.0%	1.2%	1.2%	1.2%	1.3%	1.2%	1.2%	1.2%	1.1%	1.0%	1.2%	1.2%
19	7440-02-0	Nickel	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
20	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Acute HI - Proposed (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7466-09-5	Sulphur Dioxide	13.9%	10.6%	11.2%	15.8%	14.4%	12.4%	12.0%	11.5%	12.5%	13.9%	15.1%	14.1%	14.6%	13.3%	14.0%	16.1%	15.0%	14.0%	14.0%
2	10102-44-0	Nitrogen Dioxide	1.6%	1.1%	1.2%	2.0%	2.0%	1.9%	1.8%	1.8%	1.8%	1.8%	2.1%	1.7%	1.9%	1.9%	1.5%	1.5%	1.3%	1.6%	1.7%
3	PM2.5	Particulate Matter < 2.5 µm	8.5%	13.9%	12.6%	8.8%	8.4%	11.9%	9.7%	12.0%	10.0%	8.2%	7.6%	7.8%	8.6%	9.1%	9.7%	9.5%	11.4%	9.2%	9.6%
4	PM10	Particulate Matter < 10 µm	16.2%	26.4%	23.7%	15.6%	15.9%	22.1%	18.2%	22.2%	18.4%	15.3%	14.4%	14.6%	16.4%	17.2%	18.6%	18.1%	22.0%	17.8%	18.5%
5	630-08-0	Carbon Monoxide	0.1%	0.0%	0.1%	0.2%	0.3%	0.2%	0.2%	0.1%	0.1%	0.2%	0.2%	0.1%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%
6	10028-15-6	Ozone	1.4%	0.9%	1.0%	2.4%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.5%	1.8%	2.2%	2.1%	1.4%	1.2%	0.9%	1.8%	1.7%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	1.9%	2.5%	3.0%	2.4%	2.5%	2.3%	2.0%	2.5%	2.3%	2.4%	2.4%	2.5%	2.2%	2.4%	2.2%	2.8%	2.0%	1.9%	2.3%
10	7440-38-2	Arsenic	4.5%	3.6%	3.8%	4.2%	4.4%	3.8%	4.3%	3.8%	4.2%	4.5%	4.5%	4.6%	4.4%	4.3%	4.3%	4.1%	3.8%	4.3%	4.2%
11	7440-43-9	Cadmium	0.7%	0.6%	0.6%	0.7%	0.7%	0.6%	0.7%	0.6%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.6%	0.7%	0.7%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.2%	0.1%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
14	7439-92-1	Lead	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
15	DioxFur	Dioxins and Furans	0.2%	0.1%	0.2%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%	0.2%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
16	7647-01-0	Hydrogen Chloride	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%	0.2%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-41-7	Beryllium	48.9%	38.6%	40.9%	45.5%	47.0%	40.7%	46.8%	41.2%	45.7%	48.6%	48.1%	49.6%	46.4%	46.6%	45.4%	43.8%	40.9%	46.4%	45.1%
18	7440-50-8	Copper	1.3%	1.0%	1.0%	1.2%	1.2%	1.0%	1.2%	1.1%	1.2%	1.2%	1.2%	1.3%	1.2%	1.2%	1.2%	1.1%	1.0%	1.2%	1.2%
19	7440-02-0	Nickel	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
20	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B2a: Contribution to Acute Hazard Index for each Receptor (%)

Contribution to Acute HI - Baseline (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7466-09-5	Sulphur Dioxide	14.4%	13.3%	11.5%	11.3%	13.0%	12.4%	14.1%	14.1%	14.6%	13.3%	10.3%	12.1%	13.8%	13.4%
2	10102-44-0	Nitrogen Dioxide	2.2%	1.6%	1.5%	1.5%	1.8%	1.7%	2.0%	1.9%	1.6%	1.5%	1.4%	1.4%	1.6%	1.8%
3	PM2.5	Particulate Matter < 2.5 µm	9.1%	7.3%	11.2%	11.5%	12.5%	10.0%	9.4%	9.5%	13.1%	12.5%	11.3%	12.6%	10.7%	10.0%
4	PM10	Particulate Matter < 10 µm	16.4%	13.7%	21.3%	21.8%	21.8%	19.5%	16.4%	18.2%	23.7%	22.9%	21.5%	23.8%	20.1%	19.0%
5	630-08-0	Carbon Monoxide	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	10028-15-6	Ozone	2.4%	1.7%	1.6%	1.6%	1.7%	1.6%	2.0%	1.9%	1.5%	1.4%	1.4%	1.2%	1.4%	1.8%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	2.1%	2.2%	2.3%	2.6%	4.3%	1.9%	2.7%	2.3%	2.5%	2.7%	2.6%	2.6%	2.6%	2.5%
10	7440-38-2	Arsenic	4.3%	4.8%	4.1%	4.0%	3.6%	4.2%	4.3%	4.2%	3.5%	3.7%	4.1%	3.7%	4.0%	4.1%
11	7440-43-9	Cadmium	0.7%	0.8%	0.7%	0.7%	0.6%	0.7%	0.7%	0.7%	0.6%	0.6%	0.7%	0.6%	0.7%	0.7%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.1%	0.2%	0.2%
14	7439-92-1	Lead	0.4%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
15	DioxFur	Dioxins and Furans	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%
16	7647-01-0	Hydrogen Chloride	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-41-7	Beryllium	46.0%	52.0%	43.8%	43.1%	38.8%	45.7%	46.0%	44.9%	37.0%	39.3%	44.6%	39.9%	43.1%	44.4%
18	7440-50-8	Copper	1.2%	1.3%	1.1%	1.1%	1.0%	1.2%	1.2%	1.1%	0.9%	1.0%	1.1%	1.0%	1.1%	1.1%
19	7440-02-0	Nickel	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Acute HI - Proposed (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7466-09-5	Sulphur Dioxide	14.4%	13.6%	11.2%	11.5%	13.4%	12.7%	14.1%	14.5%	15.0%	13.3%	11.5%	12.2%	13.8%	13.9%
2	10102-44-0	Nitrogen Dioxide	2.2%	1.6%	1.5%	1.5%	1.8%	1.7%	2.0%	1.9%	1.6%	1.6%	1.4%	1.4%	1.6%	1.8%
3	PM2.5	Particulate Matter < 2.5 µm	9.1%	7.2%	11.2%	11.5%	12.5%	9.9%	9.3%	9.5%	12.9%	12.6%	11.1%	12.4%	10.7%	10.0%
4	PM10	Particulate Matter < 10 µm	16.5%	13.7%	21.3%	21.8%	21.8%	19.4%	16.4%	18.2%	23.4%	22.9%	21.3%	23.3%	20.1%	18.9%
5	630-08-0	Carbon Monoxide	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	10028-15-6	Ozone	2.4%	1.7%	1.6%	1.5%	1.7%	1.6%	2.0%	1.9%	1.5%	1.4%	1.4%	1.2%	1.4%	1.8%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	2.1%	2.1%	2.3%	2.5%	4.3%	1.9%	2.7%	2.3%	2.5%	2.7%	2.6%	2.6%	2.6%	2.5%
10	7440-38-2	Arsenic	4.3%	4.8%	4.1%	4.0%	3.6%	4.2%	4.3%	4.1%	3.5%	3.7%	4.1%	3.8%	4.0%	4.1%
11	7440-43-9	Cadmium	0.7%	0.8%	0.7%	0.6%	0.6%	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.6%	0.7%	0.6%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.2%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.1%	0.2%	0.2%
14	7439-92-1	Lead	0.4%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
15	DioxFur	Dioxins and Furans	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
16	7647-01-0	Hydrogen Chloride	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-41-7	Beryllium	45.9%	51.7%	43.8%	43.0%	38.4%	45.5%	46.0%	44.7%	37.0%	39.2%	43.8%	40.4%	43.1%	44.1%
18	7440-50-8	Copper	1.2%	1.3%	1.1%	1.1%	1.0%	1.2%	1.2%	1.1%	0.9%	1.0%	1.1%	1.0%	1.1%	1.1%
19	7440-02-0	Nickel	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B2b: Contribution to Acute Hazard Index for each Receptor (%)

Contribution to Acute HI - Baseline (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7466-09-5	Sulphur Dioxide	53.3%	51.0%	49.2%	53.7%	56.6%	56.1%	43.0%	62.1%	58.9%	59.1%	57.2%	55.9%	58.8%	54.1%	57.1%	60.0%	57.8%	53.5%	51.5%
2	10102-44-0	Nitrogen Dioxide	9.0%	6.8%	7.4%	8.5%	7.5%	9.2%	6.4%	8.3%	6.4%	6.6%	7.5%	7.1%	7.0%	8.3%	7.0%	7.2%	6.4%	6.1%	6.9%
3	PM2.5	Particulate Matter < 2.5 µm	5.7%	8.7%	8.8%	5.9%	6.0%	4.5%	11.8%	4.4%	6.8%	6.5%	5.9%	6.9%	5.7%	5.7%	6.7%	5.8%	6.7%	8.7%	8.7%
4	PM10	Particulate Matter < 10 µm	10.8%	17.6%	15.8%	11.4%	11.2%	8.2%	23.3%	4.5%	11.2%	10.8%	11.0%	12.2%	10.8%	9.7%	11.1%	9.2%	11.2%	14.8%	14.9%
5	630-08-0	Carbon Monoxide	0.3%	0.4%	1.1%	0.6%	0.8%	0.9%	0.3%	0.8%	0.9%	0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.5%	0.7%	1.0%	0.8%
6	10028-15-6	Ozone	7.8%	7.0%	8.1%	9.5%	7.8%	10.3%	6.2%	8.6%	6.4%	6.7%	8.5%	7.9%	7.9%	9.2%	7.4%	7.2%	7.1%	6.1%	7.8%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%
9	7782-41-4	Fluorine	10.0%	5.1%	6.1%	6.6%	5.9%	6.6%	6.5%	6.7%	5.3%	5.6%	5.3%	5.4%	5.4%	8.7%	6.4%	6.1%	6.1%	6.0%	5.7%
10	7440-38-2	Arsenic	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%
11	7440-43-9	Cadmium	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
14	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15	DioxFur	Dioxins and Furans	0.7%	0.8%	0.9%	0.9%	1.1%	1.1%	0.6%	1.2%	1.1%	1.1%	1.0%	1.1%	1.0%	0.9%	1.0%	1.0%	1.0%	1.0%	1.0%
16	7647-01-0	Hydrogen Chloride	0.5%	0.5%	0.6%	0.6%	0.7%	0.7%	0.4%	0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.7%	0.6%	0.6%	0.5%
17	7440-41-7	Beryllium	0.9%	1.0%	1.1%	1.2%	1.4%	1.4%	0.8%	1.5%	1.4%	1.3%	1.3%	1.3%	1.3%	1.1%	1.2%	1.3%	1.3%	1.3%	1.3%
18	7440-50-8	Copper	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%
20	7440-42-8	Boron	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Acute HI - Proposed (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7466-09-5	Sulphur Dioxide	53.3%	45.2%	46.8%	50.2%	47.2%	51.8%	41.9%	59.3%	55.9%	57.0%	53.2%	53.6%	53.7%	53.4%	55.2%	57.4%	53.7%	51.4%	49.1%
2	10102-44-0	Nitrogen Dioxide	9.1%	7.5%	8.1%	9.1%	9.0%	10.0%	6.4%	8.3%	6.9%	7.0%	7.9%	7.3%	8.0%	8.3%	7.3%	7.7%	7.4%	6.5%	7.2%
3	PM2.5	Particulate Matter < 2.5 µm	5.6%	9.7%	8.9%	6.2%	7.5%	5.6%	12.0%	5.9%	6.5%	6.1%	6.2%	7.2%	6.3%	6.2%	6.6%	5.7%	7.2%	8.5%	8.7%
4	PM10	Particulate Matter < 10 µm	10.7%	19.7%	16.3%	11.9%	14.0%	8.2%	23.7%	5.1%	11.5%	10.9%	11.7%	12.5%	12.1%	10.0%	11.3%	9.7%	11.8%	15.4%	15.5%
5	630-08-0	Carbon Monoxide	0.3%	0.5%	1.1%	0.7%	1.0%	1.1%	0.3%	1.0%	1.1%	0.9%	0.6%	0.7%	0.6%	0.6%	0.6%	0.6%	0.8%	1.1%	0.9%
6	10028-15-6	Ozone	7.9%	7.8%	8.5%	10.1%	9.4%	10.9%	6.3%	8.5%	6.8%	7.1%	8.9%	8.0%	8.7%	9.1%	7.5%	7.7%	7.7%	6.6%	8.2%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7782-41-4	Fluorine	10.1%	5.7%	6.4%	7.0%	7.1%	7.3%	6.6%	7.0%	6.4%	6.1%	6.7%	5.9%	5.7%	8.2%	6.9%	6.5%	6.5%	5.9%	6.1%
10	7440-38-2	Arsenic	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
11	7440-43-9	Cadmium	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
14	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15	DioxFur	Dioxins and Furans	0.7%	1.0%	1.0%	1.2%	1.2%	1.4%	0.7%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.0%	1.2%	1.2%	1.3%	1.2%	1.1%
16	7647-01-0	Hydrogen Chloride	0.4%	0.6%	0.6%	0.8%	0.8%	0.9%	0.4%	0.8%	0.7%	0.7%	0.8%	0.8%	0.8%	0.7%	0.7%	0.8%	0.8%	0.7%	0.7%
17	7440-41-7	Beryllium	1.0%	1.3%	1.3%	1.6%	1.6%	1.7%	0.9%	1.7%	1.7%	1.7%	1.7%	1.6%	1.7%	1.4%	1.5%	1.6%	1.6%	1.6%	1.5%
18	7440-50-8	Copper	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7440-02-0	Nickel	0.0%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
20	7440-42-8	Boron	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B2b: Contribution to Acute Hazard Index for each Receptor (%)

Contribution to Acute HI - Baseline (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7466-09-5	Sulphur Dioxide	47.7%	47.5%	52.4%	60.3%	50.1%	54.3%	48.8%	35.7%	45.3%	47.1%	50.8%	43.5%	48.3%	50.8%	56.7%	49.0%	45.2%	50.4%	48.9%
2	10102-44-0	Nitrogen Dioxide	7.1%	7.0%	8.0%	8.7%	7.8%	8.8%	6.2%	6.2%	8.2%	7.7%	8.8%	7.1%	7.7%	7.8%	8.7%	6.2%	7.1%	8.3%	7.9%
3	PM2.5	Particulate Matter < 2.5 µm	9.8%	10.0%	7.4%	4.1%	8.1%	5.3%	10.4%	15.4%	10.0%	10.1%	7.4%	11.3%	9.5%	7.6%	6.4%	10.6%	10.6%	7.5%	8.8%
4	PM10	Particulate Matter < 10 µm	19.0%	18.6%	14.3%	7.9%	14.9%	10.1%	19.7%	29.4%	18.8%	19.0%	14.0%	21.7%	18.1%	14.2%	11.6%	19.3%	20.0%	14.1%	16.6%
5	630-08-0	Carbon Monoxide	0.6%	0.7%	0.6%	0.5%	0.6%	0.4%	0.7%	0.4%	0.3%	0.2%	0.3%	0.3%	0.2%	0.2%	0.2%	0.8%	0.6%	0.5%	0.3%
6	10028-15-6	Ozone	7.8%	7.9%	8.9%	9.2%	8.3%	9.6%	6.4%	5.8%	7.1%	6.2%	7.8%	6.6%	6.8%	5.8%	7.3%	6.4%	7.1%	8.5%	7.5%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	4.8%	5.1%	4.9%	5.7%	6.5%	7.9%	4.2%	5.0%	7.6%	7.0%	7.8%	6.9%	6.6%	10.7%	5.9%	4.2%	6.0%	7.3%	7.1%
10	7440-38-2	Arsenic	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%
11	7440-43-9	Cadmium	0.2%	0.3%	0.3%	0.4%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
14	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15	DioxFur	Dioxins and Furans	0.8%	0.8%	0.9%	0.8%	1.0%	0.9%	1.0%	0.5%	0.6%	0.6%	0.7%	0.6%	0.6%	0.7%	0.7%	1.0%	0.9%	0.8%	0.7%
16	7647-01-0	Hydrogen Chloride	0.5%	0.5%	0.5%	0.5%	0.6%	0.6%	0.6%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.6%	0.6%	0.5%	0.4%
17	7440-41-7	Beryllium	1.0%	1.0%	1.1%	1.1%	1.2%	1.2%	1.2%	0.7%	0.8%	0.8%	0.9%	0.8%	0.9%	0.9%	1.0%	1.2%	1.1%	1.0%	0.9%
18	7440-50-8	Copper	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
20	7440-42-8	Boron	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Acute HI - Proposed (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7466-09-5	Sulphur Dioxide	43.6%	44.1%	49.5%	58.6%	45.7%	48.9%	40.7%	35.5%	45.6%	47.0%	51.5%	44.1%	48.4%	50.7%	57.0%	40.8%	41.9%	50.4%	48.2%
2	10102-44-0	Nitrogen Dioxide	7.6%	7.6%	8.5%	9.0%	8.5%	9.8%	7.3%	6.1%	8.2%	7.6%	9.0%	7.0%	7.6%	7.8%	8.8%	7.2%	7.4%	8.8%	7.9%
3	PM2.5	Particulate Matter < 2.5 µm	10.5%	10.5%	7.8%	4.2%	8.8%	6.0%	11.9%	15.4%	9.9%	10.1%	6.9%	11.2%	9.4%	7.7%	5.9%	12.4%	11.2%	6.8%	9.0%
4	PM10	Particulate Matter < 10 µm	20.3%	19.7%	15.0%	8.2%	16.3%	11.3%	22.6%	29.3%	18.0%	18.9%	13.1%	21.5%	17.9%	14.4%	11.3%	22.7%	21.2%	12.8%	17.0%
5	630-08-0	Carbon Monoxide	0.7%	0.7%	0.6%	0.5%	0.7%	0.4%	0.8%	0.4%	0.3%	0.3%	0.4%	0.3%	0.3%	0.2%	0.2%	0.9%	0.8%	0.6%	0.3%
6	10028-15-6	Ozone	8.4%	8.3%	9.4%	9.4%	8.9%	10.7%	7.4%	5.8%	7.2%	6.2%	7.9%	6.4%	6.8%	5.7%	7.3%	7.4%	7.4%	8.9%	7.4%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%
9	7782-41-4	Fluorine	5.0%	5.0%	5.2%	5.9%	7.1%	8.9%	4.8%	5.0%	7.7%	6.9%	8.0%	6.7%	6.6%	10.6%	6.2%	4.9%	5.9%	7.6%	7.0%
10	7440-38-2	Arsenic	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.2%	0.3%	0.3%	0.3%
11	7440-43-9	Cadmium	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
14	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15	DioxFur	Dioxins and Furans	1.0%	1.1%	1.0%	1.0%	1.0%	1.0%	1.2%	0.6%	0.8%	0.7%	0.7%	0.6%	0.7%	0.7%	0.7%	1.0%	1.1%	1.1%	0.8%
16	7647-01-0	Hydrogen Chloride	0.7%	0.7%	0.7%	0.6%	0.6%	0.6%	0.8%	0.3%	0.4%	0.4%	0.5%	0.4%	0.4%	0.4%	0.5%	0.6%	0.7%	0.6%	0.5%
17	7440-41-7	Beryllium	1.3%	1.4%	1.3%	1.3%	1.4%	1.3%	1.5%	0.8%	1.0%	0.9%	1.0%	0.9%	0.9%	0.9%	1.0%	1.2%	1.4%	1.4%	1.1%
18	7440-50-8	Copper	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7440-02-0	Nickel	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%
20	7440-42-8	Boron	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B2b: Contribution to Acute Hazard Index for each Receptor (%)

Contribution to Acute HI - Baseline (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7466-09-5	Sulphur Dioxide	54.4%	52.9%	57.9%	51.7%	62.2%	59.8%	57.5%	56.6%	49.0%	57.3%	54.3%	54.2%	58.5%	47.5%	39.7%	44.2%	54.6%	54.3%	54.0%
2	10102-44-0	Nitrogen Dioxide	9.8%	8.4%	9.3%	6.3%	7.2%	8.3%	9.2%	8.8%	8.7%	8.7%	9.1%	9.7%	8.0%	9.2%	6.5%	6.8%	7.5%	9.6%	10.5%
3	PM2.5	Particulate Matter < 2.5 µm	5.8%	7.1%	3.1%	9.0%	5.4%	6.3%	5.4%	4.7%	7.8%	6.5%	5.3%	5.3%	4.6%	7.5%	13.5%	11.7%	8.3%	5.4%	4.7%
4	PM10	Particulate Matter < 10 µm	10.5%	12.7%	5.5%	17.2%	5.7%	5.8%	6.4%	9.0%	14.8%	7.0%	9.0%	9.7%	8.0%	14.4%	25.7%	22.1%	14.6%	9.5%	8.7%
5	630-08-0	Carbon Monoxide	0.4%	0.3%	0.4%	0.5%	0.9%	0.8%	0.7%	0.6%	0.5%	0.7%	0.7%	0.5%	0.7%	0.5%	0.4%	0.2%	0.1%	0.3%	0.4%
6	10028-15-6	Ozone	8.6%	6.6%	7.4%	7.2%	6.9%	8.4%	10.0%	9.9%	9.6%	9.3%	11.0%	10.0%	9.2%	10.7%	6.1%	5.3%	5.2%	10.6%	10.4%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
9	7782-41-4	Fluorine	7.3%	8.9%	13.0%	4.6%	7.4%	6.4%	6.4%	6.2%	6.2%	6.4%	6.9%	6.9%	7.4%	7.1%	5.8%	7.2%	6.5%	7.1%	8.2%
10	7440-38-2	Arsenic	0.3%	0.3%	0.4%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%
11	7440-43-9	Cadmium	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%
14	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15	DioxFur	Dioxins and Furans	0.7%	0.7%	0.8%	0.9%	1.2%	1.1%	1.1%	1.1%	0.8%	1.1%	0.9%	0.9%	0.9%	0.7%	0.5%	0.6%	0.7%	0.7%	0.8%
16	7647-01-0	Hydrogen Chloride	0.5%	0.4%	0.5%	0.5%	0.7%	0.7%	0.7%	0.7%	0.5%	0.7%	0.6%	0.6%	0.6%	0.5%	0.3%	0.4%	0.5%	0.5%	0.5%
17	7440-41-7	Beryllium	1.0%	0.9%	1.0%	1.2%	1.5%	1.4%	1.4%	1.4%	1.1%	1.4%	1.2%	1.2%	1.1%	1.0%	0.7%	0.8%	1.0%	1.0%	1.0%
18	7440-50-8	Copper	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	7440-42-8	Boron	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Acute HI - Proposed (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7466-09-5	Sulphur Dioxide	54.6%	55.3%	57.1%	44.5%	54.8%	55.9%	52.5%	51.7%	47.4%	52.7%	54.0%	53.7%	57.8%	45.9%	39.5%	42.0%	54.9%	55.3%	51.0%
2	10102-44-0	Nitrogen Dioxide	9.9%	9.0%	9.0%	7.1%	8.0%	9.5%	10.0%	9.9%	9.0%	9.3%	9.1%	9.6%	8.1%	9.0%	6.5%	6.5%	7.6%	9.4%	11.2%
3	PM2.5	Particulate Matter < 2.5 µm	5.5%	5.6%	4.1%	10.5%	6.5%	4.7%	6.5%	5.3%	7.8%	7.2%	5.2%	5.2%	4.7%	9.4%	13.5%	12.6%	8.1%	5.2%	5.1%
4	PM10	Particulate Matter < 10 µm	10.1%	10.4%	6.0%	19.9%	7.5%	6.9%	6.6%	9.4%	14.9%	7.3%	8.8%	9.6%	8.0%	13.9%	25.6%	23.9%	14.2%	9.2%	9.6%
5	630-08-0	Carbon Monoxide	0.5%	0.4%	0.4%	0.8%	1.1%	0.8%	0.9%	0.7%	0.6%	1.0%	0.7%	0.5%	0.7%	0.5%	0.4%	0.2%	0.2%	0.3%	0.5%
6	10028-15-6	Ozone	8.5%	6.9%	7.3%	8.3%	8.0%	10.4%	11.1%	11.3%	9.9%	10.0%	10.9%	9.9%	9.3%	10.3%	6.0%	5.0%	5.3%	10.4%	10.8%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
9	7782-41-4	Fluorine	7.3%	9.3%	12.8%	5.2%	9.2%	6.7%	7.1%	6.8%	6.4%	7.3%	6.8%	7.2%	6.9%	6.9%	5.8%	7.4%	6.5%	6.9%	8.5%
10	7440-38-2	Arsenic	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%
11	7440-43-9	Cadmium	0.3%	0.3%	0.4%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%
14	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15	DioxFur	Dioxins and Furans	0.8%	0.7%	0.7%	0.9%	1.3%	1.3%	1.4%	1.3%	0.9%	1.4%	1.1%	1.0%	1.1%	1.1%	0.6%	0.5%	0.7%	0.8%	0.7%
16	7647-01-0	Hydrogen Chloride	0.5%	0.5%	0.5%	0.5%	0.7%	0.8%	0.9%	0.8%	0.6%	0.9%	0.7%	0.6%	0.7%	0.6%	0.4%	0.4%	0.5%	0.5%	0.5%
17	7440-41-7	Beryllium	1.1%	1.0%	1.0%	1.2%	1.7%	1.6%	1.8%	1.6%	1.3%	1.7%	1.4%	1.4%	1.4%	1.4%	0.9%	0.7%	1.0%	1.0%	1.0%
18	7440-50-8	Copper	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
20	7440-42-8	Boron	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B2b: Contribution to Acute Hazard Index for each Receptor (%)

Contribution to Acute HI - Baseline (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7466-09-5	Sulphur Dioxide	53.3%	52.4%	54.0%	53.9%	54.3%	54.6%	53.7%	56.1%	52.5%	54.9%	50.9%	55.4%	57.1%	55.6%
2	10102-44-0	Nitrogen Dioxide	12.0%	7.8%	9.7%	9.3%	9.6%	10.2%	10.7%	10.4%	9.1%	9.4%	9.4%	10.0%	9.6%	9.2%
3	PM2.5	Particulate Matter < 2.5 µm	3.3%	7.2%	4.1%	4.5%	3.0%	4.6%	4.3%	4.2%	5.7%	5.1%	5.5%	4.4%	4.2%	4.9%
4	PM10	Particulate Matter < 10 µm	6.2%	13.6%	7.4%	8.3%	4.5%	8.2%	7.8%	7.8%	11.8%	8.8%	10.5%	8.0%	7.8%	8.7%
5	630-08-0	Carbon Monoxide	0.6%	0.7%	0.6%	0.4%	0.5%	0.5%	0.5%	0.5%	0.6%	0.5%	0.5%	0.4%	0.4%	0.4%
6	10028-15-6	Ozone	13.3%	8.1%	10.6%	9.7%	9.3%	10.2%	10.9%	10.4%	8.2%	8.4%	9.3%	8.9%	8.5%	9.5%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%
9	7782-41-4	Fluorine	7.8%	6.4%	10.1%	10.5%	15.7%	8.3%	8.6%	7.4%	8.9%	9.6%	10.5%	9.6%	9.2%	8.2%
10	7440-38-2	Arsenic	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
11	7440-43-9	Cadmium	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
14	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15	DioxFur	Dioxins and Furans	0.8%	1.0%	0.8%	0.8%	0.7%	0.8%	0.8%	0.7%	0.8%	0.8%	0.8%	0.7%	0.7%	0.8%
16	7647-01-0	Hydrogen Chloride	0.5%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
17	7440-41-7	Beryllium	1.1%	1.2%	1.1%	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
18	7440-50-8	Copper	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	7440-42-8	Boron	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Acute HI - Proposed (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7466-09-5	Sulphur Dioxide	53.8%	46.0%	52.0%	54.6%	53.4%	55.4%	53.6%	56.1%	52.9%	54.6%	55.4%	55.5%	55.7%	54.5%
2	10102-44-0	Nitrogen Dioxide	12.0%	8.5%	10.0%	9.1%	9.6%	10.1%	10.7%	10.4%	9.0%	9.2%	8.3%	10.3%	9.8%	9.6%
3	PM2.5	Particulate Matter < 2.5 µm	3.3%	8.2%	4.0%	4.3%	3.6%	4.3%	4.1%	4.1%	5.5%	5.4%	5.0%	4.1%	4.3%	4.8%
4	PM10	Particulate Matter < 10 µm	5.7%	15.4%	7.6%	8.1%	5.0%	7.8%	7.5%	7.6%	11.5%	9.2%	9.4%	7.7%	8.0%	8.6%
5	630-08-0	Carbon Monoxide	0.7%	0.9%	0.6%	0.6%	0.6%	0.6%	0.7%	0.7%	0.7%	0.5%	0.6%	0.5%	0.5%	0.7%
6	10028-15-6	Ozone	13.4%	8.9%	11.0%	9.5%	9.1%	10.0%	10.9%	10.4%	8.1%	8.1%	8.3%	8.9%	8.8%	9.7%
7	PAH	Polycyclic Aromatic Hydrocarbons	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8	7439-97-6	Mercury	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7782-41-4	Fluorine	7.9%	7.2%	10.4%	10.2%	15.4%	8.2%	8.6%	7.3%	8.8%	9.3%	9.3%	9.7%	9.5%	8.4%
10	7440-38-2	Arsenic	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
11	7440-43-9	Cadmium	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
12	Cr III	Chromium III	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	Cr IV	Chromium IV	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
14	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15	DioxFur	Dioxins and Furans	0.8%	1.3%	1.1%	0.8%	0.7%	0.8%	0.9%	0.8%	0.9%	0.9%	0.9%	0.7%	0.8%	0.9%
16	7647-01-0	Hydrogen Chloride	0.5%	0.8%	0.7%	0.5%	0.5%	0.5%	0.6%	0.5%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%
17	7440-41-7	Beryllium	1.0%	1.6%	1.5%	1.1%	1.0%	1.1%	1.2%	1.0%	1.1%	1.1%	1.2%	1.0%	1.1%	1.2%
18	7440-50-8	Copper	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7440-02-0	Nickel	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	7440-42-8	Boron	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
21	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
26	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B3a: Chronic Hazard Index for each Receptor

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7446-09-5	Sulphur Dioxide	9.86E-02	1.30E-01	1.49E-01	1.27E-01	1.54E-01	1.32E-01	1.41E-01	1.55E-01	1.65E-01	1.69E-01	1.40E-01	1.51E-01	1.43E-01	1.12E-01	1.42E-01	1.41E-01	1.59E-01	1.90E-01	1.62E-01
2	10102-44-0	Nitrogen Dioxide	2.65E-02	2.42E-02	2.62E-02	2.40E-02	2.54E-02	2.42E-02	2.38E-02	2.60E-02	2.66E-02	2.72E-02	2.38E-02	2.49E-02	2.41E-02	2.13E-02	2.34E-02	2.33E-02	2.52E-02	2.87E-02	2.62E-02
3	PM2.5	Particulate Matter < 2.5 µm	1.54E-01	1.29E-01	1.00E-01	1.41E-01	1.40E-01	1.22E-01	1.62E-01	8.84E-02	9.34E-02	9.74E-02	9.05E-02	9.40E-02	9.19E-02	8.16E-02	8.01E-02	8.52E-02	8.35E-02	9.43E-02	8.31E-02
4	PM10	Particulate Matter < 10 µm	2.31E-01	1.88E-01	1.44E-01	2.07E-01	2.03E-01	1.77E-01	2.40E-01	1.22E-01	1.28E-01	1.34E-01	1.27E-01	1.32E-01	1.29E-01	1.17E-01	1.10E-01	1.18E-01	1.13E-01	1.27E-01	1.13E-01
5	PAH	Polycyclic Aromatic Hydrocarbons	1.68E-02	2.20E-02	2.52E-02	2.15E-02	2.58E-02	2.24E-02	2.35E-02	2.71E-02	2.83E-02	2.89E-02	2.38E-02	2.54E-02	2.43E-02	1.92E-02	2.40E-02	2.40E-02	2.68E-02	3.18E-02	2.74E-02
6	7439-97-6	Mercury	4.89E-05	5.56E-05	5.66E-05	5.72E-05	6.42E-05	5.67E-05	6.05E-05	6.48E-05	6.62E-05	6.72E-05	5.53E-05	5.72E-05	5.57E-05	4.62E-05	5.45E-05	5.48E-05	5.92E-05	6.94E-05	6.09E-05
7	7782-41-4	Fluorine	5.66E-02	6.84E-02	7.06E-02	7.00E-02	7.88E-02	6.82E-02	8.20E-02	6.84E-02	7.16E-02	7.36E-02	6.28E-02	6.67E-02	6.42E-02	5.48E-02	6.16E-02	6.19E-02	6.75E-02	7.83E-02	6.90E-02
8	7440-38-2	Arsenic	1.30E-02	1.10E-02	8.98E-03	1.29E-02	1.26E-02	1.12E-02	1.37E-02	8.33E-03	8.57E-03	8.89E-03	8.05E-03	8.17E-03	8.11E-03	7.59E-03	7.07E-03	7.49E-03	7.26E-03	8.12E-03	7.41E-03
9	7440-43-9	Cadmium	3.26E-03	2.92E-03	2.54E-03	3.34E-03	3.36E-03	2.96E-03	3.59E-03	2.35E-03	2.44E-03	2.53E-03	2.27E-03	2.34E-03	2.30E-03	2.08E-03	2.05E-03	2.14E-03	2.15E-03	2.44E-03	2.19E-03
10	Cr III	Chromium III	2.99E-03	2.59E-03	2.22E-03	3.02E-03	2.97E-03	2.65E-03	3.22E-03	2.04E-03	2.09E-03	2.15E-03	1.95E-03	1.99E-03	1.97E-03	1.84E-03	1.73E-03	1.82E-03	1.78E-03	1.99E-03	1.83E-03
11	Cr IV	Chromium IV	1.66E-04	1.50E-04	1.31E-04	1.71E-04	1.71E-04	1.53E-04	1.80E-04	1.32E-04	1.33E-04	1.37E-04	1.20E-04	1.21E-04	1.20E-04	1.10E-04	1.09E-04	1.13E-04	1.13E-04	1.27E-04	1.16E-04
12	7439-92-1	Lead	2.39E-03	2.04E-03	1.67E-03	2.38E-03	2.33E-03	2.07E-03	2.53E-03	1.56E-03	1.60E-03	1.66E-03	1.50E-03	1.52E-03	1.51E-03	1.41E-03	1.32E-03	1.40E-03	1.36E-03	1.52E-03	1.39E-03
13	DioxFur	Dioxins and Furans	1.38E-02	1.95E-02	2.14E-02	1.81E-02	2.30E-02	1.90E-02	2.03E-02	2.32E-02	2.54E-02	2.65E-02	2.14E-02	2.34E-02	2.20E-02	1.61E-02	2.21E-02	2.20E-02	2.56E-02	3.11E-02	2.55E-02
14	7647-01-0	Hydrogen Chloride	2.96E-02	4.17E-02	3.77E-02	3.83E-02	4.77E-02	3.86E-02	4.33E-02	4.78E-02	5.22E-02	5.51E-02	4.24E-02	4.59E-02	4.32E-02	3.16E-02	4.46E-02	4.40E-02	5.17E-02	6.33E-02	5.11E-02
15	7440-41-7	Beryllium	1.19E-01	1.01E-01	8.08E-02	1.18E-01	1.15E-01	1.02E-01	1.25E-01	7.52E-02	7.73E-02	8.04E-02	7.27E-02	7.37E-02	7.32E-02	6.87E-02	6.37E-02	6.76E-02	6.53E-02	7.30E-02	6.66E-02
16	7440-50-8	Copper	4.28E-02	3.60E-02	2.89E-02	4.23E-02	4.11E-02	3.64E-02	4.47E-02	2.69E-02	2.76E-02	2.87E-02	2.60E-02	2.63E-02	2.61E-02	2.46E-02	2.27E-02	2.41E-02	2.33E-02	2.60E-02	2.38E-02
17	7440-02-0	Nickel	6.06E-06	5.82E-06	5.14E-06	6.39E-06	6.69E-06	5.83E-06	6.79E-06	5.28E-06	5.54E-06	5.75E-06	4.91E-06	5.11E-06	4.97E-06	4.25E-06	4.63E-06	4.77E-06	5.00E-06	5.83E-06	5.06E-06
18	7440-42-8	Boron	3.14E-05	4.01E-05	4.31E-05	3.88E-05	4.71E-05	4.00E-05	4.15E-05	4.87E-05	5.20E-05	5.36E-05	4.34E-05	4.65E-05	4.42E-05	3.35E-05	4.42E-05	4.41E-05	5.00E-05	6.03E-05	5.05E-05
19	7664-41-7	Ammonia	7.45E-07	1.03E-06	1.14E-06	9.72E-07	1.21E-06	1.02E-06	1.06E-06	1.30E-06	1.39E-06	1.43E-06	1.15E-06	1.24E-06	1.17E-06	8.81E-07	1.19E-06	1.18E-06	1.35E-06	1.63E-06	1.36E-06
20	71-43-2	Benzene	3.69E-06	5.10E-06	5.63E-06	4.81E-06	5.99E-06	5.06E-06	5.25E-06	6.39E-06	6.81E-06	7.02E-06	5.65E-06	6.07E-06	5.76E-06	4.35E-06	5.81E-06	5.77E-06	6.61E-06	7.97E-06	6.67E-06
21	98-82-8	Cumene	3.57E-09	4.97E-09	5.49E-09	4.67E-09	5.84E-09	4.93E-09	5.09E-09	6.27E-09	6.70E-09	6.91E-09	5.55E-09	5.96E-09	5.66E-09	4.24E-09	5.71E-09	5.67E-09	6.51E-09	7.86E-09	6.56E-09
22	108-88-3	Toluene	1.68E-07	2.34E-07	2.59E-07	2.20E-07	2.75E-07	2.32E-07	2.40E-07	2.95E-07	3.16E-07	3.25E-07	2.61E-07	2.81E-07	2.66E-07	2.00E-07	2.69E-07	2.67E-07	3.06E-07	3.70E-07	3.09E-07
23	1330-20-7	Xylenes	1.16E-08	1.61E-08	1.78E-08	1.51E-08	1.89E-08	1.60E-08	1.65E-08	2.03E-08	2.17E-08	2.24E-08	1.80E-08	1.93E-08	1.83E-08	1.37E-08	1.85E-08	1.84E-08	2.11E-08	2.54E-08	2.12E-08
24	100-41-4	Ethylbenzene	1.18E-08	1.68E-08	1.87E-08	1.56E-08	1.97E-08	1.66E-08	1.70E-08	2.14E-08	2.29E-08	2.36E-08	1.89E-08	2.04E-08	1.93E-08	1.44E-08	1.95E-08	1.94E-08	2.23E-08	2.69E-08	2.25E-08
		TOTAL	**0.812**	**0.778**	**0.700**	**0.830**	**0.875**	**0.760**	**0.929**	**0.675**	**0.711**	**0.736**	**0.645**	**0.677**	**0.656**	**0.560**	**0.606**	**0.625**	**0.654**	**0.757**	**0.661**

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7446-09-5	Sulphur Dioxide	9.07E-02	1.18E-01	1.34E-01	1.18E-01	1.38E-01	1.26E-01	1.31E-01	1.33E-01	1.41E-01	1.38E-01	1.30E-01	1.38E-01	1.32E-01	1.07E-01	1.27E-01	1.28E-01	1.41E-01	1.61E-01	1.42E-01
2	10102-44-0	Nitrogen Dioxide	2.57E-02	2.39E-02	2.49E-02	2.40E-02	2.53E-02	2.46E-02	2.32E-02	2.47E-02	2.56E-02	2.55E-02	2.39E-02	2.51E-02	2.43E-02	2.17E-02	2.35E-02	2.35E-02	2.53E-02	2.80E-02	2.58E-02
3	PM2.5	Particulate Matter < 2.5 µm	2.31E-01	1.87E-01	1.43E-01	2.07E-01	2.03E-01	1.78E-01	2.39E-01	1.22E-01	1.28E-01	1.33E-01	1.28E-01	1.33E-01	1.31E-01	1.17E-01	1.11E-01	1.19E-01	1.14E-01	1.26E-01	1.13E-01
4	PM10	Particulate Matter < 10 µm	2.31E-01	1.87E-01	1.43E-01	2.07E-01	2.03E-01	1.78E-01	2.39E-01	1.22E-01	1.28E-01	1.33E-01	1.28E-01	1.33E-01	1.31E-01	1.17E-01	1.11E-01	1.19E-01	1.14E-01	1.26E-01	1.13E-01
5	PAH	Polycyclic Aromatic Hydrocarbons	1.61E-02	2.19E-02	2.39E-02	2.14E-02	2.54E-02	2.34E-02	2.30E-02	2.62E-02	2.79E-02	2.72E-02	2.52E-02	2.67E-02	2.55E-02	2.01E-02	2.50E-02	2.51E-02	2.80E-02	3.19E-02	2.79E-02
6	7439-97-6	Mercury	4.78E-05	5.54E-05	5.45E-05	5.70E-05	6.35E-05	5.85E-05	5.97E-05	6.32E-05	6.54E-05	6.43E-05	5.76E-05	5.96E-05	5.79E-05	4.78E-05	5.62E-05	5.67E-05	6.13E-05	6.95E-05	6.18E-05
7	7782-41-4	Fluorine	5.55E-02	6.83E-02	6.86E-02	6.98E-02	7.81E-02	7.00E-02	8.12E-02	6.69E-02	7.08E-02	7.07E-02	6.51E-02	6.90E-02	6.64E-02	5.64E-02	6.33E-02	6.37E-02	6.95E-02	7.85E-02	6.99E-02
8	7440-38-2	Arsenic	1.30E-02	1.10E-02	8.97E-03	1.29E-02	1.26E-02	1.12E-02	1.37E-02	8.32E-03	8.56E-03	8.88E-03	8.06E-03	8.18E-03	8.12E-03	7.60E-03	7.08E-03	7.50E-03	7.28E-03	8.12E-03	7.42E-03
9	7440-43-9	Cadmium	3.25E-03	2.92E-03	2.52E-03	3.34E-03	3.35E-03	2.98E-03	3.58E-03	2.33E-03	2.43E-03	2.50E-03	2.30E-03	2.37E-03	2.32E-03	2.10E-03	2.07E-03	2.17E-03	2.18E-03	2.44E-03	2.20E-03
10	Cr III	Chromium III	2.99E-03	2.59E-03	2.22E-03	3.02E-03	2.97E-03	2.65E-03	3.22E-03	2.04E-03	2.09E-03	2.15E-03	1.95E-03	1.99E-03	1.97E-03	1.84E-03	1.73E-03	1.82E-03	1.78E-03	1.99E-03	1.83E-03
11	Cr IV	Chromium IV	1.66E-04	1.50E-04	1.30E-04	1.70E-04	1.71E-04	1.54E-04	1.79E-04	1.31E-04	1.33E-04	1.35E-04	1.21E-04	1.22E-04	1.21E-04	1.11E-04	1.10E-04	1.14E-04	1.14E-04	1.27E-04	1.17E-04
12	7439-92-1	Lead	2.39E-03	2.04E-03	1.67E-03	2.38E-03	2.33E-03	2.07E-03	2.53E-03	1.55E-03	1.60E-03	1.65E-03	1.50E-03	1.53E-03	1.51E-03	1.41E-03	1.32E-03	1.40E-03	1.36E-03	1.52E-03	1.39E-03
13	DioxFur	Dioxins and Furans	1.29E-02	1.93E-02	1.97E-02	1.80E-02	2.24E-02	2.04E-02	1.96E-02	2.19E-02	2.47E-02	2.41E-02	2.33E-02	2.52E-02	2.37E-02	1.74E-02	2.35E-02	2.35E-02	2.72E-02	3.13E-02	2.63E-02
14	7647-01-0	Hydrogen Chloride	2.76E-02	4.15E-02	3.38E-02	3.79E-02	4.63E-02	4.18E-02	4.17E-02	4.50E-02	5.07E-02	4.96E-02	4.67E-02	5.01E-02	4.71E-02	3.46E-02	4.78E-02	4.74E-02	5.55E-02	6.36E-02	5.29E-02
15	7440-41-7	Beryllium	1.19E-01	1.01E-01	8.08E-02	1.18E-01	1.15E-01	1.02E-01	1.25E-01	7.52E-02	7.73E-02	8.02E-02	7.28E-02	7.38E-02	7.33E-02	6.88E-02	6.38E-02	6.76E-02	6.54E-02	7.30E-02	6.67E-02
16	7440-50-8	Copper	4.28E-02	3.60E-02	2.89E-02	4.23E-02	4.10E-02	3.65E-02	4.47E-02	2.68E-02	2.76E-02	2.86E-02	2.60E-02	2.63E-02	2.62E-02	2.46E-02	2.27E-02	2.41E-02	2.33E-02	2.60E-02	2.38E-02
17	7440-02-0	Nickel	5.97E-06	5.81E-06	4.98E-06	6.37E-06	6.64E-06	5.96E-06	6.73E-06	5.16E-06	5.48E-06	5.52E-06	5.09E-06	5.29E-06	5.14E-06	4.37E-06	4.76E-06	4.91E-06	5.16E-06	5.84E-06	5.14E-06
18	7440-42-8	Boron	2.99E-05	3.99E-05	4.02E-05	3.86E-05	4.61E-05	4.24E-05	4.03E-05	4.66E-05	5.09E-05	4.95E-05	4.66E-05	4.96E-05	4.72E-05	3.58E-05	4.66E-05	4.67E-05	5.29E-05	6.05E-05	5.18E-05
19	7664-41-7	Ammonia	7.03E-07	1.03E-06	1.06E-06	9.65E-07	1.19E-06	1.09E-06	1.03E-06	1.24E-06	1.36E-06	1.32E-06	1.24E-06	1.33E-06	1.26E-06	9.44E-07	1.25E-06	1.25E-06	1.43E-06	1.64E-06	1.40E-06
20	71-43-2	Benzene	3.49E-06	5.07E-06	5.24E-06	4.78E-06	5.85E-06	5.39E-06	5.10E-06	6.10E-06	6.67E-06	6.48E-06	6.08E-06	6.50E-06	6.16E-06	4.65E-06	6.13E-06	6.12E-06	6.99E-06	7.99E-06	6.85E-06
21	98-82-8	Cumene	3.37E-09	4.94E-09	5.10E-09	4.64E-09	5.71E-09	5.26E-09	4.93E-09	5.99E-09	6.55E-09	6.36E-09	5.98E-09	6.39E-09	6.06E-09	4.55E-09	6.04E-09	6.02E-09	6.89E-09	7.89E-09	6.74E-09
22	108-88-3	Toluene	1.59E-07	2.33E-07	2.40E-07	2.19E-07	2.69E-07	2.48E-07	2.32E-07	2.82E-07	3.09E-07	2.99E-07	2.81E-07	3.01E-07	2.85E-07	2.14E-07	2.84E-07	2.83E-07	3.25E-07	3.71E-07	3.17E-07
23	1330-20-7	Xylenes	1.09E-08	1.60E-08	1.65E-08	1.50E-08	1.85E-08	1.70E-08	1.59E-08	1.94E-08	2.12E-08	2.06E-08	1.93E-08	2.07E-08	1.96E-08	1.47E-08	1.95E-08	1.95E-08	2.23E-08	2.55E-08	2.18E-08
24	100-41-4	Ethylbenzene	1.11E-08	1.67E-08	1.73E-08	1.55E-08	1.92E-08	1.77E-08	1.65E-08	2.04E-08	2.24E-08	2.17E-08	2.04E-08	2.18E-08	2.07E-08	1.54E-08	2.07E-08	2.06E-08	2.36E-08	2.70E-08	2.31E-08
		TOTAL	**0.874**	**0.823**	**0.716**	**0.886**	**0.918**	**0.819**	**0.991**	**0.677**	**0.716**	**0.726**	**0.683**	**0.715**	**0.694**	**0.598**	**0.631**	**0.654**	**0.677**	**0.760**	**0.675**

Table B3a: Chronic Hazard Index for each Receptor

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7446-09-5	Sulphur Dioxide	1.16E-01	1.20E-01	1.09E-01	1.10E-01	1.39E-01	1.23E-01	1.75E-01	1.23E-01	1.35E-01	1.43E-01	1.20E-01	1.03E-01	1.06E-01	1.30E-01	9.24E-02	1.85E-01	1.70E-01	1.44E-01	1.05E-01
2	10102-44-0	Nitrogen Dioxide	2.18E-02	2.22E-02	2.13E-02	2.14E-02	2.51E-02	2.40E-02	2.70E-02	2.24E-02	2.38E-02	2.40E-02	2.27E-02	2.11E-02	2.13E-02	2.26E-02	2.20E-02	2.78E-02	2.74E-02	2.48E-02	2.12E-02
3	PM2.5	Particulate Matter < 2.5 µm	7.71E-02	8.00E-02	7.51E-02	7.68E-02	1.59E-01	1.53E-01	1.20E-01	1.28E-01	1.50E-01	1.65E-01	1.31E-01	1.03E-01	1.12E-01	1.75E-01	1.26E-01	1.13E-01	1.23E-01	1.78E-01	1.11E-01
4	PM10	Particulate Matter < 10 µm	1.09E-01	1.13E-01	1.06E-01	1.08E-01	2.34E-01	2.25E-01	1.69E-01	1.88E-01	2.22E-01	2.45E-01	1.93E-01	1.52E-01	1.65E-01	2.63E-01	1.89E-01	1.58E-01	1.74E-01	2.66E-01	1.64E-01
5	PAH	Polycyclic Aromatic Hydrocarbons	1.97E-02	2.04E-02	1.86E-02	1.86E-02	2.34E-02	2.06E-02	2.92E-02	2.06E-02	2.25E-02	2.37E-02	2.01E-02	1.75E-02	1.78E-02	2.16E-02	1.56E-02	3.08E-02	2.86E-02	2.41E-02	1.78E-02
6	7439-97-6	Mercury	4.60E-05	4.72E-05	4.42E-05	4.45E-05	6.22E-05	5.59E-05	6.70E-05	5.20E-05	5.73E-05	6.08E-05	5.15E-05	4.39E-05	4.50E-05	5.83E-05	4.33E-05	6.79E-05	6.74E-05	6.46E-05	4.52E-05
7	7782-41-4	Fluorine	5.41E-02	5.58E-02	5.20E-02	5.44E-02	7.71E-02	7.11E-02	8.08E-02	6.96E-02	7.87E-02	8.52E-02	6.83E-02	5.80E-02	6.07E-02	8.17E-02	5.47E-02	8.23E-02	7.98E-02	8.51E-02	5.98E-02
8	7440-38-2	Arsenic	7.05E-03	7.18E-03	7.06E-03	7.43E-03	1.43E-02	1.36E-02	1.08E-02	1.09E-02	1.26E-02	1.39E-02	1.12E-02	8.76E-03	9.43E-03	1.48E-02	1.06E-02	9.93E-03	1.11E-02	1.58E-02	9.48E-03
9	7440-43-9	Cadmium	1.97E-03	2.02E-03	1.95E-03	2.04E-03	3.69E-03	3.49E-03	3.01E-03	2.88E-03	3.32E-03	3.65E-03	2.93E-03	2.33E-03	2.49E-03	3.80E-03	2.71E-03	2.86E-03	3.06E-03	4.07E-03	2.50E-03
10	Cr III	Chromium III	1.71E-03	1.74E-03	1.70E-03	1.78E-03	3.32E-03	3.16E-03	2.59E-03	2.58E-03	2.97E-03	3.27E-03	2.63E-03	2.08E-03	2.23E-03	3.45E-03	2.46E-03	2.41E-03	2.64E-03	3.69E-03	2.24E-03
11	Cr IV	Chromium IV	1.03E-04	1.05E-04	1.02E-04	1.06E-04	1.87E-04	1.76E-04	1.53E-04	1.46E-04	1.66E-04	1.82E-04	1.48E-04	1.19E-04	1.26E-04	1.89E-04	1.38E-04	1.45E-04	1.58E-04	2.05E-04	1.27E-04
12	7439-92-1	Lead	1.31E-03	1.34E-03	1.31E-03	1.38E-03	2.63E-03	2.51E-03	2.00E-03	2.01E-03	2.32E-03	2.57E-03	2.06E-03	1.62E-03	1.74E-03	2.72E-03	1.95E-03	1.85E-03	2.06E-03	2.91E-03	1.75E-03
13	DioxFur	Dioxins and Furans	1.75E-02	1.84E-02	1.64E-02	1.64E-02	2.03E-02	1.75E-02	2.71E-02	1.74E-02	1.92E-02	2.03E-02	1.71E-02	1.48E-02	1.51E-02	1.81E-02	1.29E-02	2.94E-02	2.65E-02	2.00E-02	1.50E-02
14	7647-01-0	Hydrogen Chloride	3.50E-02	3.67E-02	3.31E-02	3.37E-02	4.34E-02	3.79E-02	5.37E-02	3.63E-02	4.09E-02	4.36E-02	3.61E-02	3.13E-02	3.21E-02	3.97E-02	2.81E-02	5.75E-02	5.44E-02	4.19E-02	3.20E-02
15	7440-41-7	Beryllium	6.37E-02	6.49E-02	6.40E-02	6.73E-02	1.31E-01	1.25E-01	9.74E-02	9.90E-02	1.15E-01	1.27E-01	1.02E-01	7.97E-02	8.59E-02	1.35E-01	9.71E-02	8.96E-02	1.01E-01	1.44E-01	8.63E-02
16	7440-50-8	Copper	2.28E-02	2.32E-02	2.29E-02	2.41E-02	4.68E-02	4.47E-02	3.48E-02	3.54E-02	4.11E-02	4.54E-02	3.64E-02	2.85E-02	3.07E-02	4.84E-02	3.48E-02	3.20E-02	3.59E-02	5.17E-02	3.09E-02
17	7440-02-0	Nickel	4.18E-06	4.30E-06	4.09E-06	4.21E-06	7.08E-06	6.57E-06	6.37E-06	5.51E-06	6.28E-06	6.85E-06	5.60E-06	4.52E-06	4.78E-06	6.98E-06	5.05E-06	6.25E-06	6.47E-06	7.54E-06	4.80E-06
18	7440-42-8	Boron	3.55E-05	3.69E-05	3.35E-05	3.33E-05	4.29E-05	3.73E-05	5.38E-05	3.57E-05	3.91E-05	4.12E-05	3.52E-05	3.02E-05	3.08E-05	3.76E-05	2.79E-05	5.70E-05	5.31E-05	4.24E-05	3.10E-05
19	7664-41-7	Ammonia	9.41E-07	9.79E-07	8.83E-07	8.79E-07	1.07E-06	9.24E-07	1.42E-06	9.22E-07	1.00E-06	1.05E-06	9.01E-07	7.87E-07	7.97E-07	9.38E-07	6.90E-07	1.52E-06	1.40E-06	1.05E-06	7.98E-07
20	71-43-2	Benzene	4.62E-06	4.81E-06	4.34E-06	4.33E-06	5.32E-06	4.58E-06	6.97E-06	4.58E-06	4.99E-06	5.24E-06	4.47E-06	3.90E-06	3.95E-06	4.68E-06	3.43E-06	7.46E-06	6.86E-06	5.24E-06	3.96E-06
21	98-82-8	Cumene	4.53E-09	4.72E-09	4.25E-09	4.23E-09	5.16E-09	4.44E-09	6.84E-09	4.43E-09	4.83E-09	5.07E-09	4.33E-09	3.79E-09	3.83E-09	4.51E-09	3.31E-09	7.33E-09	6.73E-09	5.06E-09	3.84E-09
22	108-88-3	Toluene	2.13E-07	2.22E-07	2.00E-07	1.99E-07	2.43E-07	2.09E-07	3.22E-07	2.09E-07	2.28E-07	2.39E-07	2.04E-07	1.78E-07	1.81E-07	2.12E-07	1.56E-07	3.45E-07	3.17E-07	2.39E-07	1.81E-07
23	1330-20-7	Xylenes	1.47E-08	1.53E-08	1.38E-08	1.37E-08	1.67E-08	1.44E-08	2.21E-08	1.43E-08	1.56E-08	1.64E-08	1.40E-08	1.23E-08	1.24E-08	1.46E-08	1.07E-08	2.37E-08	2.18E-08	1.64E-08	1.24E-08
24	100-41-4	Ethylbenzene	1.54E-08	1.61E-08	1.45E-08	1.44E-08	1.73E-08	1.48E-08	2.33E-08	1.49E-08	1.62E-08	1.70E-08	1.45E-08	1.28E-08	1.29E-08	1.50E-08	1.10E-08	2.50E-08	2.29E-08	1.69E-08	1.29E-08
		TOTAL	**0.549**	**0.567**	**0.531**	**0.544**	**0.924**	**0.865**	**0.832**	**0.759**	**0.868**	**0.946**	**0.765**	**0.625**	**0.662**	**0.961**	**0.691**	**0.823**	**0.839**	**1.007**	**0.660**

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7446-09-5	Sulphur Dioxide	1.08E-01	1.11E-01	1.02E-01	1.03E-01	1.28E-01	1.15E-01	1.57E-01	1.17E-01	1.29E-01	1.36E-01	1.13E-01	9.75E-02	1.00E-01	1.25E-01	8.67E-02	1.52E-01	1.55E-01	1.39E-01	9.97E-02
2	10102-44-0	Nitrogen Dioxide	2.20E-02	2.24E-02	2.14E-02	2.16E-02	2.50E-02	2.40E-02	2.70E-02	2.20E-02	2.35E-02	2.37E-02	2.24E-02	2.08E-02	2.10E-02	2.24E-02	2.15E-02	2.65E-02	2.74E-02	2.49E-02	2.10E-02
3	PM2.5	Particulate Matter < 2.5 µm	1.09E-01	1.13E-01	1.07E-01	1.09E-01	2.34E-01	2.25E-01	1.69E-01	1.89E-01	2.22E-01	2.45E-01	1.94E-01	1.52E-01	1.64E-01	2.63E-01	1.90E-01	1.56E-01	1.75E-01	2.66E-01	1.64E-01
4	PM10	Particulate Matter < 10 µm	1.09E-01	1.13E-01	1.07E-01	1.09E-01	2.34E-01	2.25E-01	1.69E-01	1.89E-01	2.22E-01	2.45E-01	1.94E-01	1.52E-01	1.64E-01	2.63E-01	1.90E-01	1.56E-01	1.75E-01	2.66E-01	1.64E-01
5	PAH	Polycyclic Aromatic Hydrocarbons	2.07E-02	2.14E-02	1.96E-02	1.94E-02	2.32E-02	2.03E-02	2.96E-02	2.08E-02	2.27E-02	2.38E-02	2.03E-02	1.76E-02	1.79E-02	2.13E-02	1.53E-02	2.82E-02	2.97E-02	2.44E-02	1.79E-02
6	7439-97-6	Mercury	4.77E-05	4.90E-05	4.59E-05	4.59E-05	6.18E-05	5.55E-05	6.76E-05	5.22E-05	5.76E-05	6.11E-05	5.18E-05	4.41E-05	4.52E-05	5.79E-05	4.28E-05	6.33E-05	6.93E-05	6.51E-05	4.54E-05
7	7782-41-4	Fluorine	5.58E-02	5.75E-02	5.37E-02	5.57E-02	7.68E-02	7.08E-02	8.14E-02	6.98E-02	7.90E-02	8.55E-02	6.86E-02	5.82E-02	6.09E-02	8.14E-02	5.42E-02	7.79E-02	8.16E-02	8.56E-02	6.00E-02
8	7440-38-2	Arsenic	7.06E-03	7.19E-03	7.07E-03	7.44E-03	1.43E-02	1.36E-02	1.08E-02	1.09E-02	1.26E-02	1.39E-02	1.12E-02	8.77E-03	9.43E-03	1.48E-02	1.06E-02	9.90E-03	1.11E-02	1.58E-02	9.48E-03
9	7440-43-9	Cadmium	1.99E-03	2.04E-03	1.97E-03	2.06E-03	3.69E-03	3.49E-03	3.02E-03	2.88E-03	3.32E-03	3.65E-03	2.94E-03	2.33E-03	2.50E-03	3.80E-03	2.70E-03	2.81E-03	3.08E-03	4.07E-03	2.50E-03
10	Cr III	Chromium III	1.71E-03	1.74E-03	1.70E-03	1.78E-03	3.32E-03	3.16E-03	2.59E-03	2.58E-03	2.97E-03	3.27E-03	2.63E-03	2.08E-03	2.23E-03	3.45E-03	2.46E-03	2.41E-03	2.64E-03	3.69E-03	2.24E-03
11	Cr IV	Chromium IV	1.04E-04	1.06E-04	1.03E-04	1.06E-04	1.87E-04	1.76E-04	1.54E-04	1.46E-04	1.67E-04	1.82E-04	1.49E-04	1.19E-04	1.26E-04	1.89E-04	1.37E-04	1.43E-04	1.58E-04	2.05E-04	1.27E-04
12	7439-92-1	Lead	1.31E-03	1.34E-03	1.32E-03	1.38E-03	2.63E-03	2.51E-03	2.00E-03	2.01E-03	2.32E-03	2.57E-03	2.06E-03	1.62E-03	1.74E-03	2.72E-03	1.95E-03	1.84E-03	2.06E-03	2.91E-03	1.75E-03
13	DioxFur	Dioxins and Furans	1.90E-02	1.98E-02	1.78E-02	1.75E-02	2.01E-02	1.72E-02	2.76E-02	1.76E-02	1.95E-02	2.05E-02	1.73E-02	1.49E-02	1.52E-02	1.78E-02	1.24E-02	2.57E-02	2.80E-02	2.03E-02	1.52E-02
14	7647-01-0	Hydrogen Chloride	3.83E-02	4.00E-02	3.62E-02	3.62E-02	4.28E-02	3.72E-02	5.48E-02	3.67E-02	4.16E-02	4.40E-02	3.68E-02	3.17E-02	3.24E-02	3.90E-02	2.71E-02	4.91E-02	5.78E-02	4.27E-02	3.24E-02
15	7440-41-7	Beryllium	6.38E-02	6.50E-02	6.41E-02	6.74E-02	1.31E-01	1.25E-01	9.74E-02	9.90E-02	1.15E-01	1.27E-01	1.02E-01	7.97E-02	8.59E-02	1.35E-01	9.71E-02	8.94E-02	1.01E-01	1.44E-01	8.63E-02
16	7440-50-8	Copper	2.28E-02	2.32E-02	2.29E-02	2.41E-02	4.68E-02	4.47E-02	3.48E-02	3.54E-02	4.11E-02	4.54E-02	3.64E-02	2.85E-02	3.07E-02	4.84E-02	3.48E-02	3.19E-02	3.59E-02	5.17E-02	3.09E-02
17	7440-02-0	Nickel	4.31E-06	4.43E-06	4.22E-06	4.31E-06	7.05E-06	6.54E-06	6.42E-06	5.52E-06	6.31E-06	6.86E-06	5.62E-06	4.54E-06	4.79E-06	6.95E-06	5.01E-06	5.90E-06	6.62E-06	7.58E-06	4.82E-06
18	7440-42-8	Boron	3.79E-05	3.93E-05	3.58E-05	3.52E-05	4.24E-05	3.68E-05	5.46E-05	3.59E-05	3.96E-05	4.15E-05	3.56E-05	3.05E-05	3.10E-05	3.70E-05	2.72E-05	5.08E-05	5.57E-05	4.30E-05	3.13E-05
19	7664-41-7	Ammonia	1.01E-06	1.05E-06	9.48E-07	9.31E-07	1.06E-06	9.10E-07	1.44E-06	9.29E-07	1.02E-06	1.06E-06	9.14E-07	7.95E-07	8.02E-07	9.23E-07	6.69E-07	1.35E-06	1.47E-06	1.07E-06	8.07E-07
20	71-43-2	Benzene	4.95E-06	5.14E-06	4.65E-06	4.58E-06	5.25E-06	4.51E-06	7.08E-06	4.61E-06	5.06E-06	5.29E-06	4.53E-06	3.94E-06	3.98E-06	4.61E-06	3.33E-06	6.62E-06	7.21E-06	5.33E-06	4.00E-06
21	98-82-8	Cumene	4.86E-09	5.05E-09	4.56E-09	4.48E-09	5.10E-09	4.37E-09	6.95E-09	4.47E-09	4.90E-09	5.11E-09	4.39E-09	3.83E-09	3.86E-09	4.43E-09	3.21E-09	6.48E-09	7.08E-09	5.15E-09	3.88E-09
22	108-88-3	Toluene	2.29E-07	2.38E-07	2.15E-07	2.11E-07	2.40E-07	2.06E-07	3.27E-07	2.11E-07	2.31E-07	2.41E-07	2.07E-07	1.80E-07	1.82E-07	2.09E-07	1.52E-07	3.05E-07	3.33E-07	2.43E-07	1.83E-07
23	1330-20-7	Xylenes	1.57E-08	1.63E-08	1.48E-08	1.45E-08	1.65E-08	1.41E-08	2.25E-08	1.45E-08	1.58E-08	1.65E-08	1.42E-08	1.24E-08	1.25E-08	1.43E-08	1.04E-08	2.10E-08	2.29E-08	1.67E-08	1.26E-08
24	100-41-4	Ethylbenzene	1.66E-08	1.72E-08	1.55E-08	1.52E-08	1.70E-08	1.45E-08	2.37E-08	1.50E-08	1.64E-08	1.71E-08	1.48E-08	1.29E-08	1.30E-08	1.47E-08	1.07E-08	2.21E-08	2.41E-08	1.71E-08	1.30E-08
		TOTAL	**0.581**	**0.600**	**0.563**	**0.575**	**0.986**	**0.927**	**0.866**	**0.814**	**0.936**	**1.019**	**0.824**	**0.669**	**0.709**	**1.041**	**0.748**	**0.810**	**0.884**	**1.092**	**0.708**

Table B3a: Chronic Hazard Index for each Receptor

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7446-09-5	Sulphur Dioxide	1.13E-01	1.35E-01	1.38E-01	1.40E-01	1.60E-01	1.41E-01	1.33E-01	1.25E-01	1.19E-01	1.47E-01	1.00E-01	1.08E-01	1.21E-01	9.78E-02	1.30E-01	1.37E-01	1.41E-01	6.32E-02	9.48E-02
2	10102-44-0	Nitrogen Dioxide	2.20E-02	2.33E-02	2.38E-02	2.42E-02	2.61E-02	2.49E-02	2.45E-02	2.39E-02	2.33E-02	2.56E-02	2.03E-02	2.13E-02	2.22E-02	2.07E-02	2.27E-02	2.43E-02	2.45E-02	1.68E-02	1.94E-02
3	PM2.5	Particulate Matter < 2.5 µm	1.22E-01	1.88E-01	1.88E-01	7.81E-02	1.05E-01	1.08E-01	1.13E-01	1.13E-01	1.23E-01	1.17E-01	6.76E-02	7.72E-02	7.77E-02	8.00E-02	1.37E-01	1.72E-01	1.85E-01	7.79E-02	1.11E-01
4	PM10	Particulate Matter < 10 µm	1.81E-01	2.83E-01	2.81E-01	1.08E-01	1.46E-01	1.54E-01	1.63E-01	1.63E-01	1.79E-01	1.67E-01	9.59E-02	1.10E-01	1.10E-01	1.15E-01	2.02E-01	2.57E-01	2.78E-01	1.15E-01	1.62E-01
5	PAH	Polycyclic Aromatic Hydrocarbons	1.91E-02	2.24E-02	2.29E-02	2.44E-02	2.73E-02	2.42E-02	2.27E-02	2.13E-02	2.03E-02	2.49E-02	1.72E-02	1.82E-02	2.05E-02	1.65E-02	2.17E-02	2.28E-02	2.34E-02	1.07E-02	1.58E-02
6	7439-97-6	Mercury	4.89E-05	6.15E-05	6.27E-05	5.76E-05	6.47E-05	5.94E-05	5.69E-05	5.44E-05	5.34E-05	6.07E-05	4.09E-05	4.41E-05	4.72E-05	3.99E-05	5.47E-05	5.95E-05	6.20E-05	2.90E-05	4.16E-05
7	7782-41-4	Fluorine	6.43E-02	8.45E-02	8.64E-02	6.07E-02	7.27E-02	6.73E-02	6.61E-02	6.34E-02	6.49E-02	7.15E-02	4.85E-02	5.54E-02	5.63E-02	5.04E-02	7.40E-02	8.43E-02	8.81E-02	3.62E-02	5.60E-02
8	7440-38-2	Arsenic	1.05E-02	1.62E-02	1.64E-02	7.29E-03	9.61E-03	9.95E-03	1.04E-02	1.05E-02	1.14E-02	1.06E-02	6.54E-03	7.80E-03	7.12E-03	7.50E-03	1.16E-02	1.43E-02	1.55E-02	6.65E-03	9.78E-03
9	7440-43-9	Cadmium	2.76E-03	4.13E-03	4.19E-03	2.07E-03	2.68E-03	2.69E-03	2.78E-03	2.77E-03	2.98E-03	2.88E-03	1.81E-03	2.12E-03	2.01E-03	2.03E-03	3.07E-03	3.72E-03	4.00E-03	1.71E-03	2.54E-03
10	Cr III	Chromium III	2.47E-03	3.76E-03	3.81E-03	1.79E-03	2.31E-03	2.36E-03	2.46E-03	2.47E-03	2.69E-03	2.53E-03	1.59E-03	1.87E-03	1.74E-03	1.79E-03	2.75E-03	3.35E-03	3.61E-03	1.55E-03	2.29E-03
11	Cr IV	Chromium IV	1.40E-04	2.06E-04	2.09E-04	1.17E-04	1.42E-04	1.42E-04	1.45E-04	1.44E-04	1.53E-04	1.49E-04	9.57E-05	1.09E-04	1.05E-04	1.03E-04	1.55E-04	1.85E-04	1.98E-04	8.73E-05	1.27E-04
12	7439-92-1	Lead	1.94E-03	2.98E-03	3.02E-03	1.36E-03	1.79E-03	1.85E-03	1.93E-03	1.94E-03	2.11E-03	1.97E-03	1.21E-03	1.44E-03	1.32E-03	1.39E-03	2.15E-03	2.63E-03	2.85E-03	1.23E-03	1.80E-03
13	DioxFur	Dioxins and Furans	1.62E-02	1.87E-02	1.91E-02	2.08E-02	2.48E-02	2.14E-02	1.97E-02	1.82E-02	1.68E-02	2.22E-02	1.43E-02	1.59E-02	1.78E-02	1.42E-02	1.84E-02	1.95E-02	2.02E-02	8.82E-03	1.35E-02
14	7647-01-0	Hydrogen Chloride	3.43E-02	4.07E-02	4.14E-02	4.18E-02	5.14E-02	4.47E-02	4.10E-02	3.80E-02	3.52E-02	4.60E-02	2.74E-02	3.30E-02	3.42E-02	2.80E-02	3.84E-02	4.24E-02	4.43E-02	1.88E-02	2.90E-02
15	7440-41-7	Beryllium	9.57E-02	1.48E-01	1.50E-01	6.57E-02	8.71E-02	9.04E-02	9.48E-02	9.55E-02	1.04E-01	9.67E-02	5.91E-02	7.08E-02	6.42E-02	6.81E-02	1.06E-01	1.31E-01	1.41E-01	6.07E-02	8.93E-02
16	7440-50-8	Copper	3.42E-02	5.30E-02	5.37E-02	2.34E-02	3.11E-02	3.23E-02	3.39E-02	3.41E-02	3.74E-02	3.46E-02	2.11E-02	2.53E-02	2.30E-02	2.44E-02	3.79E-02	4.67E-02	5.06E-02	2.17E-02	3.20E-02
17	7440-02-0	Nickel	5.28E-06	7.55E-06	7.66E-06	4.66E-06	5.83E-06	5.64E-06	5.64E-06	5.53E-06	5.73E-06	5.94E-06	3.69E-06	4.29E-06	4.21E-06	4.00E-06	5.86E-06	6.91E-06	7.39E-06	3.24E-06	4.76E-06
18	7440-42-8	Boron	3.34E-05	3.94E-05	4.02E-05	4.37E-05	5.05E-05	4.43E-05	4.12E-05	3.85E-05	3.61E-05	4.55E-05	2.97E-05	3.22E-05	3.61E-05	2.89E-05	3.75E-05	3.96E-05	4.11E-05	1.90E-05	2.79E-05
19	7664-41-7	Ammonia	8.57E-07	9.70E-07	9.90E-07	1.17E-06	1.34E-06	1.16E-06	1.07E-06	9.88E-07	9.12E-07	1.19E-06	7.84E-07	8.48E-07	9.59E-07	7.53E-07	9.69E-07	1.00E-06	1.03E-06	4.75E-07	7.05E-07
20	71-43-2	Benzene	4.25E-06	4.84E-06	4.94E-06	5.73E-06	6.56E-06	5.69E-06	5.25E-06	4.87E-06	4.51E-06	5.85E-06	3.87E-06	4.19E-06	4.72E-06	3.72E-06	4.81E-06	5.01E-06	5.15E-06	2.36E-06	3.50E-06
21	98-82-8	Cumene	4.12E-09	4.66E-09	4.75E-09	5.63E-09	6.44E-09	5.57E-09	5.13E-09	4.75E-09	4.38E-09	5.72E-09	3.77E-09	4.08E-09	4.62E-09	3.62E-09	4.66E-09	4.83E-09	4.97E-09	2.28E-09	3.39E-09
22	108-88-3	Toluene	1.94E-07	2.20E-07	2.24E-07	2.65E-07	3.03E-07	2.63E-07	2.42E-07	2.24E-07	2.07E-07	2.70E-07	1.78E-07	1.92E-07	2.18E-07	1.71E-07	2.20E-07	2.28E-07	2.34E-07	1.08E-07	1.60E-07
23	1330-20-7	Xylenes	1.33E-08	1.51E-08	1.54E-08	1.82E-08	2.09E-08	1.80E-08	1.66E-08	1.54E-08	1.42E-08	1.85E-08	1.22E-08	1.32E-08	1.50E-08	1.17E-08	1.51E-08	1.56E-08	1.61E-08	7.39E-09	1.10E-08
24	100-41-4	Ethylbenzene	1.38E-08	1.54E-08	1.58E-08	1.92E-08	2.19E-08	1.89E-08	1.73E-08	1.60E-08	1.47E-08	1.94E-08	1.28E-08	1.38E-08	1.57E-08	1.22E-08	1.57E-08	1.61E-08	1.65E-08	7.63E-09	1.13E-08
		TOTAL	**0.720**	**1.024**	**1.031**	**0.599**	**0.749**	**0.725**	**0.730**	**0.713**	**0.743**	**0.770**	**0.483**	**0.548**	**0.559**	**0.528**	**0.807**	**0.961**	**1.023**	**0.441**	**0.639**

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7446-09-5	Sulphur Dioxide	1.07E-01	1.31E-01	1.34E-01	1.21E-01	1.36E-01	1.23E-01	1.22E-01	1.15E-01	1.14E-01	1.35E-01	9.76E-02	1.02E-01	1.13E-01	9.51E-02	1.24E-01	1.31E-01	1.34E-01	5.96E-02	8.96E-02
2	10102-44-0	Nitrogen Dioxide	2.17E-02	2.33E-02	2.39E-02	2.34E-02	2.56E-02	2.46E-02	2.47E-02	2.41E-02	2.36E-02	2.57E-02	2.07E-02	2.15E-02	2.24E-02	2.09E-02	2.24E-02	2.40E-02	2.38E-02	1.67E-02	1.93E-02
3	PM2.5	Particulate Matter < 2.5 µm	1.81E-01	2.82E-01	2.81E-01	1.07E-01	1.46E-01	1.53E-01	1.63E-01	1.64E-01	1.80E-01	1.67E-01	9.68E-02	1.10E-01	1.11E-01	1.16E-01	2.02E-01	2.57E-01	2.78E-01	1.15E-01	1.62E-01
4	PM10	Particulate Matter < 10 µm	1.81E-01	2.82E-01	2.81E-01	1.07E-01	1.46E-01	1.53E-01	1.63E-01	1.64E-01	1.80E-01	1.67E-01	9.68E-02	1.10E-01	1.11E-01	1.16E-01	2.02E-01	2.57E-01	2.78E-01	1.15E-01	1.62E-01
5	PAH	Polycyclic Aromatic Hydrocarbons	1.92E-02	2.25E-02	2.30E-02	2.39E-02	2.63E-02	2.35E-02	2.32E-02	2.16E-02	2.09E-02	2.57E-02	1.84E-02	1.90E-02	2.15E-02	1.75E-02	2.20E-02	2.27E-02	2.30E-02	1.07E-02	1.57E-02
6	7439-97-6	Mercury	4.92E-05	6.17E-05	6.29E-05	5.67E-05	6.29E-05	5.83E-05	5.78E-05	5.50E-05	5.44E-05	6.20E-05	4.30E-05	4.55E-05	4.89E-05	4.18E-05	5.53E-05	5.95E-05	6.14E-05	2.89E-05	4.15E-05
7	7782-41-4	Fluorine	6.46E-02	8.46E-02	8.66E-02	5.98E-02	7.10E-02	6.62E-02	6.71E-02	6.39E-02	6.59E-02	7.28E-02	5.06E-02	5.68E-02	5.80E-02	5.22E-02	7.46E-02	8.42E-02	8.75E-02	3.61E-02	5.58E-02
8	7440-38-2	Arsenic	1.05E-02	1.62E-02	1.64E-02	7.28E-03	9.60E-03	9.94E-03	1.04E-02	1.05E-02	1.15E-02	1.06E-02	6.55E-03	7.81E-03	7.13E-03	7.52E-03	1.16E-02	1.43E-02	1.55E-02	6.65E-03	9.78E-03
9	7440-43-9	Cadmium	2.76E-03	4.13E-03	4.19E-03	2.06E-03	2.66E-03	2.68E-03	2.79E-03	2.77E-03	2.99E-03	2.90E-03	1.83E-03	2.14E-03	2.03E-03	2.05E-03	3.08E-03	3.72E-03	3.99E-03	1.71E-03	2.54E-03
10	Cr III	Chromium III	2.47E-03	3.76E-03	3.81E-03	1.79E-03	2.31E-03	2.36E-03	2.46E-03	2.47E-03	2.69E-03	2.53E-03	1.59E-03	1.87E-03	1.74E-03	1.80E-03	2.75E-03	3.35E-03	3.61E-03	1.55E-03	2.29E-03
11	Cr IV	Chromium IV	1.40E-04	2.06E-04	2.09E-04	1.16E-04	1.41E-04	1.41E-04	1.45E-04	1.44E-04	1.54E-04	1.50E-04	9.67E-05	1.10E-04	1.06E-04	1.04E-04	1.55E-04	1.85E-04	1.98E-04	8.73E-05	1.27E-04
12	7439-92-1	Lead	1.94E-03	2.98E-03	3.02E-03	1.36E-03	1.78E-03	1.84E-03	1.93E-03	1.94E-03	2.11E-03	1.97E-03	1.22E-03	1.45E-03	1.33E-03	1.39E-03	2.15E-03	2.63E-03	2.85E-03	1.23E-03	1.80E-03
13	DioxFur	Dioxins and Furans	1.64E-02	1.88E-02	1.92E-02	2.00E-02	2.34E-02	2.05E-02	2.04E-02	1.86E-02	1.76E-02	2.33E-02	1.60E-02	1.70E-02	1.92E-02	1.56E-02	1.88E-02	1.95E-02	1.97E-02	8.76E-03	1.34E-02
14	7647-01-0	Hydrogen Chloride	3.49E-02	4.09E-02	4.18E-02	4.00E-02	4.81E-02	4.27E-02	4.27E-02	3.90E-02	3.71E-02	4.84E-02	3.13E-02	3.56E-02	3.74E-02	3.14E-02	3.94E-02	4.24E-02	4.32E-02	1.87E-02	2.88E-02
15	7440-41-7	Beryllium	9.57E-02	1.48E-01	1.50E-01	6.56E-02	8.70E-02	9.04E-02	9.49E-02	9.55E-02	1.04E-01	9.68E-02	5.92E-02	7.08E-02	6.43E-02	6.82E-02	1.06E-01	1.31E-01	1.41E-01	6.07E-02	8.93E-02
16	7440-50-8	Copper	3.43E-02	5.30E-02	5.37E-02	2.34E-02	3.11E-02	3.23E-02	3.39E-02	3.42E-02	3.74E-02	3.46E-02	2.11E-02	2.53E-02	2.30E-02	2.44E-02	3.79E-02	4.67E-02	5.06E-02	2.17E-02	3.20E-02
17	7440-02-0	Nickel	5.30E-06	7.56E-06	7.67E-06	4.59E-06	5.70E-06	5.55E-06	5.71E-06	5.57E-06	5.81E-06	6.04E-06	3.85E-06	4.40E-06	4.35E-06	4.14E-06	5.90E-06	6.91E-06	7.35E-06	3.23E-06	4.75E-06
18	7440-42-8	Boron	3.39E-05	3.96E-05	4.04E-05	4.24E-05	4.80E-05	4.28E-05	4.25E-05	3.92E-05	3.75E-05	4.74E-05	3.26E-05	3.42E-05	3.85E-05	3.15E-05	3.83E-05	3.96E-05	4.02E-05	1.89E-05	2.77E-05
19	7664-41-7	Ammonia	8.69E-07	9.76E-07	9.98E-07	1.13E-06	1.27E-06	1.12E-06	1.10E-06	1.01E-06	9.51E-07	1.24E-06	8.65E-07	9.03E-07	1.03E-06	8.23E-07	9.90E-07	1.00E-06	1.01E-06	4.73E-07	7.00E-07
20	71-43-2	Benzene	4.31E-06	4.87E-06	4.98E-06	5.56E-06	6.23E-06	5.49E-06	5.42E-06	4.97E-06	4.70E-06	6.09E-06	4.26E-06	4.45E-06	5.04E-06	4.06E-06	4.91E-06	5.00E-06	5.04E-06	2.35E-06	3.48E-06
21	98-82-8	Cumene	4.18E-09	4.69E-09	4.79E-09	5.45E-09	6.11E-09	5.37E-09	5.30E-09	4.85E-09	4.57E-09	5.97E-09	4.17E-09	4.35E-09	4.94E-09	3.96E-09	4.76E-09	4.83E-09	4.86E-09	2.27E-09	3.36E-09
22	108-88-3	Toluene	1.97E-07	2.21E-07	2.26E-07	2.57E-07	2.88E-07	2.53E-07	2.50E-07	2.29E-07	2.16E-07	2.81E-07	1.96E-07	2.05E-07	2.33E-07	1.87E-07	2.24E-07	2.27E-07	2.29E-07	1.07E-07	1.59E-07
23	1330-20-7	Xylenes	1.35E-08	1.52E-08	1.55E-08	1.77E-08	1.98E-08	1.74E-08	1.72E-08	1.57E-08	1.48E-08	1.93E-08	1.35E-08	1.41E-08	1.60E-08	1.28E-08	1.54E-08	1.56E-08	1.57E-08	7.35E-09	1.09E-08
24	100-41-4	Ethylbenzene	1.40E-08	1.55E-08	1.59E-08	1.86E-08	2.08E-08	1.82E-08	1.79E-08	1.64E-08	1.54E-08	2.02E-08	1.42E-08	1.47E-08	1.69E-08	1.34E-08	1.60E-08	1.61E-08	1.62E-08	7.58E-09	1.12E-08
		TOTAL	**0.773**	**1.113**	**1.121**	**0.605**	**0.756**	**0.747**	**0.774**	**0.757**	**0.800**	**0.814**	**0.520**	**0.582**	**0.593**	**0.571**	**0.869**	**1.039**	**1.106**	**0.474**	**0.685**

Table B3a: Chronic Hazard Index for each Receptor

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7446-09-5	Sulphur Dioxide	8.12E-02	1.58E-01	1.20E-01	1.30E-01	1.15E-01	1.05E-01	1.03E-01	9.67E-02	1.46E-01	1.49E-01	1.41E-01	1.18E-01	1.20E-01	1.20E-01
2	10102-44-0	Nitrogen Dioxide	1.87E-02	2.65E-02	2.37E-02	2.47E-02	2.22E-02	2.09E-02	2.11E-02	2.01E-02	2.59E-02	2.60E-02	2.55E-02	2.19E-02	2.22E-02	2.33E-02
3	PM2.5	Particulate Matter < 2.5 µm	8.25E-02	1.20E-01	1.56E-01	1.75E-01	1.32E-01	1.19E-01	1.16E-01	1.06E-01	1.89E-01	2.02E-01	1.97E-01	1.53E-01	1.52E-01	1.50E-01
4	PM10	Particulate Matter < 10 µm	1.19E-01	1.71E-01	2.30E-01	2.59E-01	1.92E-01	1.75E-01	1.69E-01	1.55E-01	2.80E-01	3.00E-01	2.94E-01	2.28E-01	2.26E-01	2.21E-01
5	PAH	Polycyclic Aromatic Hydrocarbons	1.38E-02	2.67E-02	2.01E-02	2.18E-02	1.92E-02	1.76E-02	1.72E-02	1.62E-02	2.44E-02	2.48E-02	2.35E-02	1.97E-02	2.00E-02	2.01E-02
6	7439-97-6	Mercury	3.53E-05	6.39E-05	5.50E-05	6.00E-05	5.01E-05	4.62E-05	4.52E-05	4.25E-05	6.58E-05	6.79E-05	6.51E-05	5.35E-05	5.41E-05	5.43E-05
7	7782-41-4	Fluorine	4.48E-02	7.59E-02	7.04E-02	7.71E-02	6.78E-02	6.18E-02	6.00E-02	5.56E-02	8.67E-02	8.98E-02	8.50E-02	7.26E-02	7.33E-02	7.05E-02
8	7440-38-2	Arsenic	7.18E-03	1.09E-02	1.37E-02	1.53E-02	1.18E-02	1.08E-02	1.05E-02	9.73E-03	1.65E-02	1.76E-02	1.72E-02	1.35E-02	1.35E-02	1.33E-02
9	7440-43-9	Cadmium	1.89E-03	2.99E-03	3.51E-03	3.90E-03	3.06E-03	2.81E-03	2.72E-03	2.53E-03	4.23E-03	4.49E-03	4.37E-03	3.46E-03	3.46E-03	3.41E-03
10	Cr III	Chromium III	1.69E-03	2.60E-03	3.18E-03	3.54E-03	2.76E-03	2.53E-03	2.46E-03	2.28E-03	3.83E-03	4.08E-03	3.97E-03	3.14E-03	3.14E-03	3.09E-03
11	Cr IV	Chromium IV	9.69E-05	1.54E-04	1.76E-04	1.96E-04	1.53E-04	1.40E-04	1.37E-04	1.27E-04	2.12E-04	2.24E-04	2.18E-04	1.73E-04	1.73E-04	1.71E-04
12	7439-92-1	Lead	1.33E-03	2.03E-03	2.52E-03	2.82E-03	2.17E-03	1.99E-03	1.93E-03	1.79E-03	3.04E-03	3.23E-03	3.16E-03	2.48E-03	2.48E-03	2.44E-03
13	DioxFur	Dioxins and Furans	1.16E-02	2.43E-02	1.71E-02	1.84E-02	1.63E-02	1.50E-02	1.45E-02	1.37E-02	2.07E-02	2.08E-02	1.98E-02	1.63E-02	1.67E-02	1.70E-02
14	7647-01-0	Hydrogen Chloride	2.48E-02	5.00E-02	3.70E-02	3.97E-02	3.47E-02	3.19E-02	3.10E-02	2.91E-02	4.39E-02	4.45E-02	4.24E-02	3.53E-02	3.60E-02	3.62E-02
15	7440-41-7	Beryllium	6.54E-02	9.93E-02	1.25E-01	1.40E-01	1.07E-01	9.87E-02	9.58E-02	8.88E-02	1.51E-01	1.61E-01	1.57E-01	1.23E-01	1.23E-01	1.21E-01
16	7440-50-8	Copper	2.34E-02	3.55E-02	4.49E-02	5.01E-02	3.85E-02	3.53E-02	3.43E-02	3.18E-02	5.40E-02	5.76E-02	5.64E-02	4.41E-02	4.41E-02	4.35E-02
17	7440-02-0	Nickel	3.68E-06	6.22E-06	6.55E-06	7.25E-06	5.73E-06	5.27E-06	5.12E-06	4.78E-06	7.86E-06	8.27E-06	8.04E-06	6.36E-06	6.39E-06	6.37E-06
18	7440-42-8	Boron	2.42E-05	4.91E-05	3.64E-05	3.95E-05	3.37E-05	3.11E-05	3.02E-05	2.86E-05	4.37E-05	4.43E-05	4.24E-05	3.45E-05	3.50E-05	3.60E-05
19	7664-41-7	Ammonia	6.24E-07	1.29E-06	8.99E-07	9.68E-07	8.51E-07	7.84E-07	7.63E-07	7.24E-07	1.08E-06	1.09E-06	1.03E-06	8.56E-07	8.72E-07	8.94E-07
20	71-43-2	Benzene	3.09E-06	6.33E-06	4.46E-06	4.81E-06	4.23E-06	3.89E-06	3.79E-06	3.59E-06	5.37E-06	5.41E-06	5.14E-06	4.27E-06	4.35E-06	4.44E-06
21	98-82-8	Cumene	3.00E-09	6.19E-09	4.32E-09	4.65E-09	4.09E-09	3.77E-09	3.67E-09	3.48E-09	5.19E-09	5.22E-09	4.96E-09	4.11E-09	4.19E-09	4.29E-09
22	108-88-3	Toluene	1.41E-07	2.92E-07	2.04E-07	2.19E-07	1.93E-07	1.78E-07	1.73E-07	1.64E-07	2.45E-07	2.46E-07	2.34E-07	1.94E-07	1.98E-07	2.02E-07
23	1330-20-7	Xylenes	9.71E-09	2.01E-08	1.40E-08	1.51E-08	1.32E-08	1.22E-08	1.19E-08	1.13E-08	1.68E-08	1.69E-08	1.61E-08	1.33E-08	1.36E-08	1.39E-08
24	100-41-4	Ethylbenzene	1.01E-08	2.10E-08	1.44E-08	1.54E-08	1.37E-08	1.26E-08	1.23E-08	1.16E-08	1.73E-08	1.73E-08	1.64E-08	1.37E-08	1.39E-08	1.43E-08
		TOTAL	**0.497**	**0.807**	**0.868**	**0.962**	**0.765**	**0.699**	**0.679**	**0.630**	**1.049**	**1.105**	**1.071**	**0.855**	**0.856**	**0.847**

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7446-09-5	Sulphur Dioxide	7.39E-02	1.45E-01	1.16E-01	1.25E-01	1.10E-01	9.98E-02	9.82E-02	9.14E-02	1.40E-01	1.43E-01	1.36E-01	1.14E-01	1.15E-01	1.15E-01
2	10102-44-0	Nitrogen Dioxide	1.82E-02	2.65E-02	2.39E-02	2.47E-02	2.21E-02	2.07E-02	2.11E-02	1.99E-02	2.57E-02	2.60E-02	2.54E-02	2.19E-02	2.22E-02	2.33E-02
3	PM2.5	Particulate Matter < 2.5 µm	1.18E-01	1.72E-01	2.31E-01	2.59E-01	1.92E-01	1.75E-01	1.69E-01	1.55E-01	2.79E-01	3.00E-01	2.94E-01	2.28E-01	2.26E-01	2.21E-01
4	PM10	Particulate Matter < 10 µm	1.18E-01	1.72E-01	2.31E-01	2.59E-01	1.92E-01	1.75E-01	1.69E-01	1.55E-01	2.79E-01	3.00E-01	2.94E-01	2.28E-01	2.26E-01	2.21E-01
5	PAH	Polycyclic Aromatic Hydrocarbons	1.33E-02	2.76E-02	2.07E-02	2.20E-02	1.92E-02	1.75E-02	1.74E-02	1.62E-02	2.44E-02	2.49E-02	2.36E-02	1.97E-02	2.00E-02	2.02E-02
6	7439-97-6	Mercury	3.46E-05	6.56E-05	5.61E-05	6.04E-05	5.02E-05	4.61E-05	4.55E-05	4.25E-05	6.59E-05	6.82E-05	6.53E-05	5.35E-05	5.40E-05	5.44E-05
7	7782-41-4	Fluorine	4.40E-02	7.75E-02	7.15E-02	7.74E-02	6.79E-02	6.17E-02	6.04E-02	5.56E-02	8.68E-02	9.01E-02	8.52E-02	7.27E-02	7.33E-02	7.06E-02
8	7440-38-2	Arsenic	7.17E-03	1.09E-02	1.37E-02	1.53E-02	1.18E-02	1.08E-02	1.05E-02	9.73E-03	1.65E-02	1.76E-02	1.72E-02	1.35E-02	1.35E-02	1.33E-02
9	7440-43-9	Cadmium	1.88E-03	3.01E-03	3.52E-03	3.90E-03	3.06E-03	2.81E-03	2.73E-03	2.53E-03	4.24E-03	4.49E-03	4.37E-03	3.46E-03	3.46E-03	3.41E-03
10	Cr III	Chromium III	1.69E-03	2.60E-03	3.18E-03	3.54E-03	2.76E-03	2.53E-03	2.46E-03	2.28E-03	3.83E-03	4.08E-03	3.97E-03	3.14E-03	3.14E-03	3.09E-03
11	Cr IV	Chromium IV	9.66E-05	1.55E-04	1.77E-04	1.96E-04	1.53E-04	1.40E-04	1.37E-04	1.27E-04	2.12E-04	2.24E-04	2.19E-04	1.73E-04	1.73E-04	1.71E-04
12	7439-92-1	Lead	1.32E-03	2.03E-03	2.53E-03	2.82E-03	2.17E-03	1.99E-03	1.93E-03	1.79E-03	3.04E-03	3.24E-03	3.16E-03	2.48E-03	2.48E-03	2.45E-03
13	DioxFur	Dioxins and Furans	1.10E-02	2.56E-02	1.80E-02	1.87E-02	1.64E-02	1.49E-02	1.48E-02	1.37E-02	2.08E-02	2.11E-02	2.00E-02	1.64E-02	1.66E-02	1.72E-02
14	7647-01-0	Hydrogen Chloride	2.34E-02	5.30E-02	3.90E-02	4.03E-02	3.49E-02	3.18E-02	3.16E-02	2.90E-02	4.40E-02	4.51E-02	4.28E-02	3.54E-02	3.59E-02	3.65E-02
15	7440-41-7	Beryllium	6.53E-02	9.94E-02	1.26E-01	1.40E-01	1.07E-01	9.87E-02	9.58E-02	8.88E-02	1.51E-01	1.61E-01	1.57E-01	1.23E-01	1.23E-01	1.21E-01
16	7440-50-8	Copper	2.34E-02	3.55E-02	4.49E-02	5.01E-02	3.85E-02	3.53E-02	3.43E-02	3.18E-02	5.40E-02	5.76E-02	5.64E-02	4.41E-02	4.41E-02	4.35E-02
17	7440-02-0	Nickel	3.62E-06	6.35E-06	6.64E-06	7.27E-06	5.74E-06	5.26E-06	5.15E-06	4.77E-06	7.87E-06	8.29E-06	8.06E-06	6.37E-06	6.39E-06	6.38E-06
18	7440-42-8	Boron	2.32E-05	5.13E-05	3.80E-05	3.99E-05	3.38E-05	3.09E-05	3.07E-05	2.86E-05	4.38E-05	4.47E-05	4.28E-05	3.46E-05	3.50E-05	3.63E-05
19	7664-41-7	Ammonia	5.96E-07	1.35E-06	9.42E-07	9.81E-07	8.55E-07	7.80E-07	7.76E-07	7.23E-07	1.08E-06	1.10E-06	1.04E-06	8.59E-07	8.71E-07	9.01E-07
20	71-43-2	Benzene	2.95E-06	6.63E-06	4.67E-06	4.87E-06	4.25E-06	3.87E-06	3.85E-06	3.59E-06	5.38E-06	5.46E-06	5.18E-06	4.28E-06	4.34E-06	4.48E-06
21	98-82-8	Cumene	2.86E-09	6.50E-09	4.52E-09	4.71E-09	4.11E-09	3.75E-09	3.73E-09	3.47E-09	5.20E-09	5.27E-09	5.00E-09	4.12E-09	4.18E-09	4.33E-09
22	108-88-3	Toluene	1.35E-07	3.06E-07	2.13E-07	2.22E-07	1.94E-07	1.77E-07	1.76E-07	1.64E-07	2.45E-07	2.49E-07	2.36E-07	1.94E-07	1.97E-07	2.04E-07
23	1330-20-7	Xylenes	9.27E-09	2.10E-08	1.46E-08	1.53E-08	1.33E-08	1.21E-08	1.21E-08	1.12E-08	1.68E-08	1.71E-08	1.62E-08	1.33E-08	1.35E-08	1.40E-08
24	100-41-4	Ethylbenzene	9.62E-09	2.21E-08	1.51E-08	1.57E-08	1.37E-08	1.25E-08	1.25E-08	1.16E-08	1.73E-08	1.75E-08	1.66E-08	1.37E-08	1.39E-08	1.44E-08
		TOTAL	**0.522**	**0.853**	**0.944**	**1.043**	**0.821**	**0.748**	**0.730**	**0.674**	**1.133**	**1.200**	**1.163**	**0.926**	**0.925**	**0.913**

Table B3b: Chronic Hazard Index for each Receptor

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7446-09-5	Sulphur Dioxide	5.63E-02	9.47E-02	1.21E-01	8.52E-02	1.13E-01	9.60E-02	9.70E-02	1.29E-01	1.38E-01	1.41E-01	1.15E-01	1.25E-01	1.18E-01	8.81E-02	1.19E-01	1.18E-01	1.36E-01	1.64E-01	1.39E-01
2	10102-44-0	Nitrogen Dioxide	2.65E-02	2.42E-02	2.62E-02	2.40E-02	2.54E-02	2.42E-02	2.38E-02	2.60E-02	2.66E-02	2.72E-02	2.38E-02	2.49E-02	2.41E-02	2.13E-02	2.34E-02	2.33E-02	2.52E-02	2.87E-02	2.62E-02
3	PM2.5	Particulate Matter < 2.5 µm	2.80E-03	1.44E-02	9.79E-03	7.15E-03	1.13E-02	6.48E-03	1.08E-02	1.09E-02	1.50E-02	1.51E-02	1.61E-02	1.81E-02	1.69E-02	5.77E-03	1.33E-02	1.39E-02	1.45E-02	1.92E-02	1.44E-02
4	PM10	Particulate Matter < 10 µm	1.10E-03	1.56E-02	8.61E-03	6.01E-03	9.57E-03	4.16E-03	1.13E-02	7.32E-03	1.21E-02	1.18E-02	1.63E-02	1.84E-02	1.74E-02	3.58E-03	1.11E-02	1.21E-02	1.10E-02	1.50E-02	1.11E-02
5	PAH	Polycyclic Aromatic Hydrocarbons	1.00E-02	1.63E-02	2.06E-02	1.48E-02	1.94E-02	1.67E-02	1.65E-02	2.29E-02	2.40E-02	2.44E-02	1.98E-02	2.12E-02	2.02E-02	1.54E-02	2.05E-02	2.02E-02	2.32E-02	2.78E-02	2.37E-02
6	7439-97-6	Mercury	2.05E-05	3.17E-05	3.75E-05	2.92E-05	3.70E-05	3.26E-05	3.09E-05	4.71E-05	4.80E-05	4.84E-05	3.82E-05	3.99E-05	3.85E-05	2.99E-05	3.96E-05	3.90E-05	4.39E-05	5.23E-05	4.53E-05
7	7782-41-4	Fluorine	2.61E-02	4.29E-02	5.02E-02	3.99E-02	4.96E-02	4.24E-02	5.02E-02	4.94E-02	5.22E-02	5.34E-02	4.45E-02	4.82E-02	4.58E-02	3.74E-02	4.56E-02	4.49E-02	5.11E-02	6.01E-02	5.22E-02
8	7440-38-2	Arsenic	1.65E-04	2.63E-04	3.69E-04	2.49E-04	3.18E-04	2.79E-04	2.91E-04	3.46E-04	3.63E-04	3.66E-04	3.14E-04	3.40E-04	3.23E-04	2.57E-04	3.17E-04	3.15E-04	3.55E-04	4.18E-04	3.67E-04
9	7440-43-9	Cadmium	2.16E-04	3.69E-04	5.04E-04	3.38E-04	4.47E-04	3.78E-04	4.09E-04	4.61E-04	5.01E-04	5.13E-04	4.37E-04	4.83E-04	4.53E-04	3.45E-04	4.48E-04	4.44E-04	5.14E-04	6.15E-04	5.22E-04
10	Cr III	Chromium III	1.43E-04	2.09E-04	3.15E-04	2.11E-04	2.53E-04	2.34E-04	2.49E-04	2.72E-04	2.73E-04	2.67E-04	2.42E-04	2.56E-04	2.49E-04	2.16E-04	2.36E-04	2.36E-04	2.52E-04	2.84E-04	2.68E-04
11	Cr IV	Chromium IV	1.67E-05	2.42E-05	3.03E-05	2.27E-05	2.82E-05	2.57E-05	2.32E-05	3.85E-05	3.78E-05	3.74E-05	2.96E-05	3.02E-05	2.97E-05	2.44E-05	3.03E-05	2.98E-05	3.26E-05	3.72E-05	3.43E-05
12	7439-92-1	Lead	4.45E-05	7.03E-05	9.60E-05	6.61E-05	8.45E-05	7.43E-05	7.53E-05	9.63E-05	1.00E-04	1.01E-04	8.47E-05	9.10E-05	8.69E-05	6.87E-05	8.62E-05	8.54E-05	9.61E-05	1.13E-04	9.94E-05
13	DioxFur	Dioxins and Furans	7.82E-03	1.45E-02	1.74E-02	1.23E-02	1.73E-02	1.39E-02	1.41E-02	1.95E-02	2.16E-02	2.25E-02	1.78E-02	1.98E-02	1.83E-02	1.27E-02	1.90E-02	1.86E-02	2.24E-02	2.76E-02	2.23E-02
14	7647-01-0	Hydrogen Chloride	1.61E-02	3.04E-02	2.86E-02	2.49E-02	3.47E-02	2.71E-02	2.91E-02	3.93E-02	4.36E-02	4.61E-02	3.43E-02	3.76E-02	3.49E-02	2.38E-02	3.75E-02	3.64E-02	4.44E-02	5.52E-02	4.37E-02
15	7440-41-7	Beryllium	5.61E-04	9.57E-04	1.19E-03	8.42E-04	1.14E-03	9.59E-04	9.26E-04	1.36E-03	1.46E-03	1.49E-03	1.19E-03	1.29E-03	1.22E-03	8.85E-04	1.25E-03	1.23E-03	1.44E-03	1.74E-03	1.45E-03
16	7440-50-8	Copper	1.70E-04	2.75E-04	3.66E-04	2.54E-04	3.29E-04	2.86E-04	2.86E-04	3.81E-04	3.99E-04	4.04E-04	3.34E-04	3.60E-04	3.42E-04	2.64E-04	3.43E-04	3.39E-04	3.86E-04	4.59E-04	3.97E-04
17	7440-02-0	Nickel	7.84E-07	1.40E-06	1.61E-06	1.19E-06	1.65E-06	1.35E-06	1.29E-06	2.00E-06	2.17E-06	2.25E-06	1.74E-06	1.90E-06	1.78E-06	1.24E-06	1.86E-06	1.82E-06	2.17E-06	2.67E-06	2.17E-06
18	7440-42-8	Boron	1.52E-05	2.65E-05	3.23E-05	2.28E-05	3.16E-05	2.62E-05	2.45E-05	3.86E-05	4.16E-05	4.28E-05	3.36E-05	3.66E-05	3.44E-05	2.43E-05	3.56E-05	3.50E-05	4.13E-05	5.06E-05	4.16E-05
19	7664-41-7	Ammonia	4.56E-07	7.91E-07	9.47E-07	6.87E-07	9.39E-07	7.80E-07	7.57E-07	1.12E-06	1.21E-06	1.24E-06	9.78E-07	1.06E-06	1.00E-06	7.17E-07	1.03E-06	1.02E-06	1.20E-06	1.46E-06	1.20E-06
20	71-43-2	Benzene	2.25E-06	3.89E-06	4.67E-06	3.39E-06	4.61E-06	3.84E-06	3.75E-06	5.49E-06	5.90E-06	6.07E-06	4.79E-06	5.20E-06	4.89E-06	3.53E-06	5.06E-06	4.97E-06	5.83E-06	7.10E-06	5.88E-06
21	98-82-8	Cumene	2.20E-09	3.82E-09	4.57E-09	3.32E-09	4.53E-09	3.77E-09	3.66E-09	5.42E-09	5.83E-09	6.00E-09	4.72E-09	5.13E-09	4.83E-09	3.46E-09	4.99E-09	4.91E-09	5.77E-09	7.04E-09	5.81E-09
22	108-88-3	Toluene	1.04E-07	1.80E-07	2.15E-07	1.56E-07	2.13E-07	1.77E-07	1.72E-07	2.55E-07	2.74E-07	2.82E-07	2.22E-07	2.41E-07	2.27E-07	1.63E-07	2.35E-07	2.31E-07	2.72E-07	3.31E-07	2.74E-07
23	1330-20-7	Xylenes	7.13E-09	1.24E-08	1.48E-08	1.07E-08	1.47E-08	1.22E-08	1.18E-08	1.75E-08	1.89E-08	1.94E-08	1.53E-08	1.66E-08	1.56E-08	1.12E-08	1.62E-08	1.59E-08	1.87E-08	2.28E-08	1.88E-08
24	100-41-4	Ethylbenzene	7.66E-09	1.33E-08	1.59E-08	1.15E-08	1.58E-08	1.31E-08	1.27E-08	1.88E-08	2.03E-08	2.09E-08	1.64E-08	1.78E-08	1.68E-08	1.20E-08	1.74E-08	1.71E-08	2.01E-08	2.45E-08	2.02E-08
		TOTAL	**0.148**	**0.255**	**0.285**	**0.216**	**0.283**	**0.233**	**0.255**	**0.307**	**0.336**	**0.345**	**0.290**	**0.316**	**0.298**	**0.210**	**0.292**	**0.290**	**0.331**	**0.402**	**0.335**

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7446-09-5	Sulphur Dioxide	4.84E-02	8.23E-02	1.06E-01	7.64E-02	9.75E-02	9.02E-02	8.71E-02	1.06E-01	1.14E-01	1.10E-01	1.04E-01	1.12E-01	1.07E-01	8.29E-02	1.05E-01	1.04E-01	1.18E-01	1.35E-01	1.19E-01
2	10102-44-0	Nitrogen Dioxide	2.57E-02	2.39E-02	2.49E-02	2.40E-02	2.53E-02	2.46E-02	2.32E-02	2.47E-02	2.56E-02	2.55E-02	2.39E-02	2.51E-02	2.43E-02	2.17E-02	2.35E-02	2.35E-02	2.53E-02	2.80E-02	2.58E-02
3	PM2.5	Particulate Matter < 2.5 µm	3.78E-04	1.53E-02	7.74E-03	6.22E-03	9.24E-03	4.92E-03	9.91E-03	6.86E-03	1.17E-02	1.07E-02	1.74E-02	1.95E-02	1.85E-02	4.32E-03	1.18E-02	1.29E-02	1.18E-02	1.48E-02	1.15E-02
4	PM10	Particulate Matter < 10 µm	3.78E-04	1.53E-02	7.74E-03	6.22E-03	9.24E-03	4.92E-03	9.91E-03	6.86E-03	1.17E-02	1.07E-02	1.74E-02	1.95E-02	1.85E-02	4.32E-03	1.18E-02	1.29E-02	1.18E-02	1.48E-02	1.15E-02
5	PAH	Polycyclic Aromatic Hydrocarbons	9.37E-03	1.62E-02	1.94E-02	1.47E-02	1.89E-02	1.77E-02	1.60E-02	2.20E-02	2.36E-02	2.27E-02	2.11E-02	2.26E-02	2.14E-02	1.63E-02	2.15E-02	2.13E-02	2.44E-02	2.78E-02	2.42E-02
6	7439-97-6	Mercury	1.94E-05	3.16E-05	3.54E-05	2.90E-05	3.63E-05	3.43E-05	3.00E-05	4.56E-05	4.72E-05	4.54E-05	4.05E-05	4.22E-05	4.07E-05	3.16E-05	4.13E-05	4.09E-05	4.60E-05	5.25E-05	4.62E-05
7	7782-41-4	Fluorine	2.50E-02	4.27E-02	4.81E-02	3.97E-02	4.89E-02	4.41E-02	4.93E-02	4.79E-02	5.14E-02	5.05E-02	4.67E-02	5.04E-02	4.79E-02	3.90E-02	4.73E-02	4.67E-02	5.31E-02	6.02E-02	5.32E-02
8	7440-38-2	Arsenic	1.58E-04	2.62E-04	3.56E-04	2.48E-04	3.13E-04	2.90E-04	2.86E-04	3.37E-04	3.58E-04	3.47E-04	3.28E-04	3.54E-04	3.37E-04	2.67E-04	3.28E-04	3.27E-04	3.68E-04	4.19E-04	3.73E-04
9	7440-43-9	Cadmium	2.03E-04	3.67E-04	4.78E-04	3.36E-04	4.38E-04	4.00E-04	3.99E-04	4.43E-04	4.91E-04	4.77E-04	4.65E-04	5.11E-04	4.80E-04	3.65E-04	4.70E-04	4.67E-04	5.39E-04	6.17E-04	5.34E-04
10	Cr III	Chromium III	1.43E-04	2.09E-04	3.14E-04	2.11E-04	2.53E-04	2.34E-04	2.49E-04	2.71E-04	2.72E-04	2.66E-04	2.43E-04	2.57E-04	2.50E-04	2.17E-04	2.36E-04	2.36E-04	2.53E-04	2.84E-04	2.69E-04
11	Cr IV	Chromium IV	1.62E-05	2.41E-05	2.94E-05	2.27E-05	2.79E-05	2.64E-05	2.28E-05	3.78E-05	3.74E-05	3.61E-05	3.06E-05	3.12E-05	3.06E-05	2.51E-05	3.11E-05	3.06E-05	3.35E-05	3.72E-05	3.47E-05
12	7439-92-1	Lead	4.25E-05	7.01E-05	9.22E-05	6.58E-05	8.32E-05	7.74E-05	7.38E-05	9.35E-05	9.87E-05	9.55E-05	8.89E-05	9.52E-05	9.08E-05	7.16E-05	8.93E-05	8.88E-05	9.98E-05	1.14E-04	1.01E-04
13	DioxFur	Dioxins and Furans	6.95E-03	1.43E-02	1.57E-02	1.21E-02	1.67E-02	1.54E-02	1.34E-02	1.82E-02	2.09E-02	2.01E-02	1.97E-02	2.16E-02	2.01E-02	1.40E-02	2.04E-02	2.01E-02	2.41E-02	2.77E-02	2.30E-02
14	7647-01-0	Hydrogen Chloride	1.41E-02	3.01E-02	2.47E-02	2.46E-02	3.34E-02	3.03E-02	2.76E-02	3.65E-02	4.21E-02	4.06E-02	3.85E-02	4.18E-02	3.89E-02	2.68E-02	4.07E-02	3.99E-02	4.83E-02	5.55E-02	4.55E-02
15	7440-41-7	Beryllium	5.14E-04	9.50E-04	1.10E-03	8.35E-04	1.11E-03	1.03E-03	8.90E-04	1.30E-03	1.42E-03	1.37E-03	1.29E-03	1.39E-03	1.31E-03	9.55E-04	1.32E-03	1.31E-03	1.53E-03	1.75E-03	1.49E-03
16	7440-50-8	Copper	1.61E-04	2.74E-04	3.48E-04	2.52E-04	3.23E-04	3.01E-04	2.79E-04	3.68E-04	3.92E-04	3.79E-04	3.54E-04	3.80E-04	3.61E-04	2.78E-04	3.58E-04	3.55E-04	4.04E-04	4.61E-04	4.05E-04
17	7440-02-0	Nickel	7.00E-07	1.38E-06	1.45E-06	1.17E-06	1.60E-06	1.49E-06	1.22E-06	1.89E-06	2.11E-06	2.02E-06	1.92E-06	2.07E-06	1.95E-06	1.37E-06	1.99E-06	1.97E-06	2.33E-06	2.68E-06	2.24E-06
18	7440-42-8	Boron	1.37E-05	2.62E-05	2.94E-05	2.26E-05	3.06E-05	2.86E-05	2.34E-05	3.65E-05	4.05E-05	3.88E-05	3.68E-05	3.97E-05	3.74E-05	2.65E-05	3.80E-05	3.76E-05	4.42E-05	5.08E-05	4.29E-05
19	7664-41-7	Ammonia	4.15E-07	7.86E-07	8.66E-07	6.81E-07	9.11E-07	8.48E-07	7.24E-07	1.06E-06	1.18E-06	1.13E-06	1.07E-06	1.15E-06	1.08E-06	7.80E-07	1.10E-06	1.09E-06	1.28E-06	1.46E-06	1.24E-06
20	71-43-2	Benzene	2.05E-06	3.86E-06	4.28E-06	3.36E-06	4.48E-06	4.17E-06	3.59E-06	5.21E-06	5.75E-06	5.52E-06	5.21E-06	5.62E-06	5.29E-06	3.83E-06	5.38E-06	5.31E-06	6.22E-06	7.13E-06	6.06E-06
21	98-82-8	Cumene	2.00E-09	3.79E-09	4.18E-09	3.29E-09	4.40E-09	4.09E-09	3.50E-09	5.14E-09	5.68E-09	5.45E-09	5.15E-09	5.56E-09	5.23E-09	3.76E-09	5.32E-09	5.25E-09	6.16E-09	7.07E-09	5.99E-09
22	108-88-3	Toluene	9.43E-08	1.79E-07	1.97E-07	1.55E-07	2.07E-07	1.93E-07	1.65E-07	2.42E-07	2.67E-07	2.57E-07	2.43E-07	2.62E-07	2.46E-07	1.77E-07	2.50E-07	2.47E-07	2.90E-07	3.33E-07	2.82E-07
23	1330-20-7	Xylenes	6.48E-09	1.23E-08	1.35E-08	1.06E-08	1.42E-08	1.32E-08	1.13E-08	1.66E-08	1.84E-08	1.76E-08	1.67E-08	1.80E-08	1.69E-08	1.22E-08	1.72E-08	1.70E-08	1.99E-08	2.29E-08	1.94E-08
24	100-41-4	Ethylbenzene	6.96E-09	1.32E-08	1.45E-08	1.14E-08	1.53E-08	1.42E-08	1.22E-08	1.79E-08	1.97E-08	1.89E-08	1.79E-08	1.93E-08	1.82E-08	1.31E-08	1.85E-08	1.83E-08	2.14E-08	2.46E-08	2.08E-08
		TOTAL	**0.131**	**0.242**	**0.257**	**0.206**	**0.262**	**0.234**	**0.239**	**0.272**	**0.304**	**0.294**	**0.292**	**0.316**	**0.299**	**0.212**	**0.285**	**0.284**	**0.320**	**0.368**	**0.317**

Table B3b: Chronic Hazard Index for each Receptor

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7446-09-5	Sulphur Dioxide	9.38E-02	9.77E-02	8.70E-02	8.64E-02	9.32E-02	7.84E-02	1.41E-01	8.79E-02	9.41E-02	9.78E-02	8.36E-02	7.53E-02	7.54E-02	8.19E-02	5.80E-02	1.54E-01	1.35E-01	9.26E-02	7.50E-02
2	10102-44-0	Nitrogen Dioxide	2.18E-02	2.22E-02	2.13E-02	2.14E-02	2.51E-02	2.40E-02	2.70E-02	2.24E-02	2.38E-02	2.40E-02	2.27E-02	2.11E-02	2.13E-02	2.26E-02	2.20E-02	2.78E-02	2.74E-02	2.48E-02	2.12E-02
3	PM2.5	Particulate Matter < 2.5 µm	1.05E-02	1.08E-02	1.01E-02	4.96E-03	1.08E-02	4.26E-03	1.65E-02	9.58E-03	7.66E-03	6.85E-03	4.00E-03	8.09E-03	7.60E-03	3.42E-03	2.65E-03	1.73E-02	1.50E-02	9.76E-03	5.54E-03
4	PM10	Particulate Matter < 10 µm	9.42E-03	9.57E-03	9.42E-03	1.72E-03	1.06E-02	2.13E-03	1.50E-02	1.01E-02	6.75E-03	5.52E-03	1.52E-03	8.27E-03	7.68E-03	1.38E-03	1.07E-03	1.50E-02	1.27E-02	1.04E-02	4.41E-03
5	PAH	Polycyclic Aromatic Hydrocarbons	1.61E-02	1.67E-02	1.50E-02	1.49E-02	1.61E-02	1.35E-02	2.38E-02	1.51E-02	1.60E-02	1.66E-02	1.43E-02	1.30E-02	1.29E-02	1.39E-02	1.02E-02	2.58E-02	2.30E-02	1.59E-02	1.29E-02
6	7439-97-6	Mercury	3.09E-05	3.19E-05	2.91E-05	2.86E-05	3.11E-05	2.63E-05	4.41E-05	2.85E-05	3.00E-05	3.07E-05	2.73E-05	2.50E-05	2.47E-05	2.61E-05	2.02E-05	4.69E-05	4.37E-05	3.03E-05	2.48E-05
7	7782-41-4	Fluorine	3.80E-02	3.94E-02	3.59E-02	3.73E-02	4.39E-02	3.93E-02	5.62E-02	4.45E-02	4.95E-02	5.29E-02	4.24E-02	3.77E-02	3.89E-02	4.72E-02	3.00E-02	5.97E-02	5.43E-02	4.83E-02	3.79E-02
8	7440-38-2	Arsenic	2.60E-04	2.69E-04	2.42E-04	2.43E-04	2.68E-04	2.31E-04	3.86E-04	2.66E-04	2.85E-04	2.99E-04	2.51E-04	2.25E-04	2.27E-04	2.57E-04	1.75E-04	4.17E-04	3.63E-04	2.88E-04	2.24E-04
9	7440-43-9	Cadmium	3.62E-04	3.78E-04	3.36E-04	3.38E-04	3.72E-04	3.19E-04	5.54E-04	3.68E-04	3.99E-04	4.21E-04	3.47E-04	3.09E-04	3.14E-04	3.59E-04	2.35E-04	6.08E-04	5.19E-04	3.92E-04	3.09E-04
10	Cr III	Chromium III	2.04E-04	2.08E-04	1.92E-04	1.95E-04	2.21E-04	1.97E-04	2.92E-04	2.32E-04	2.48E-04	2.61E-04	2.16E-04	1.93E-04	1.97E-04	2.31E-04	1.55E-04	3.06E-04	2.71E-04	2.57E-04	1.93E-04
11	Cr IV	Chromium IV	2.39E-05	2.43E-05	2.26E-05	2.21E-05	2.38E-05	1.99E-05	3.27E-05	2.25E-05	2.30E-05	2.32E-05	2.12E-05	1.95E-05	1.92E-05	1.98E-05	1.60E-05	3.38E-05	3.27E-05	2.40E-05	1.93E-05
12	7439-92-1	Lead	6.97E-05	7.21E-05	6.51E-05	6.48E-05	7.09E-05	6.07E-05	1.02E-04	6.94E-05	7.37E-05	7.67E-05	6.54E-05	5.89E-05	5.91E-05	6.56E-05	4.61E-05	1.10E-04	9.74E-05	7.45E-05	5.86E-05
13	DioxFur	Dioxins and Furans	1.44E-02	1.52E-02	1.32E-02	1.31E-02	1.38E-02	1.13E-02	2.23E-02	1.25E-02	1.35E-02	1.40E-02	1.20E-02	1.08E-02	1.08E-02	1.14E-02	8.04E-03	2.50E-02	2.15E-02	1.28E-02	1.08E-02
14	7647-01-0	Hydrogen Chloride	2.79E-02	2.94E-02	2.59E-02	2.61E-02	2.86E-02	2.37E-02	4.28E-02	2.51E-02	2.79E-02	2.92E-02	2.46E-02	2.23E-02	2.24E-02	2.44E-02	1.71E-02	4.74E-02	4.31E-02	2.55E-02	2.22E-02
15	7440-41-7	Beryllium	9.60E-04	1.00E-03	8.89E-04	8.73E-04	9.25E-04	7.61E-04	1.44E-03	8.42E-04	8.93E-04	9.18E-04	8.05E-04	7.30E-04	7.23E-04	7.53E-04	5.60E-04	1.58E-03	1.40E-03	8.75E-04	7.24E-04
16	7440-50-8	Copper	2.74E-04	2.84E-04	2.55E-04	2.53E-04	2.74E-04	2.32E-04	4.04E-04	2.63E-04	2.79E-04	2.90E-04	2.49E-04	2.24E-04	2.24E-04	2.45E-04	1.75E-04	4.38E-04	3.86E-04	2.80E-04	2.23E-04
17	7440-02-0	Nickel	1.40E-06	1.46E-06	1.29E-06	1.26E-06	1.32E-06	1.07E-06	2.12E-06	1.16E-06	1.23E-06	1.26E-06	1.12E-06	1.02E-06	1.00E-06	1.01E-06	7.72E-07	2.34E-06	2.08E-06	1.18E-06	1.01E-06
18	7440-42-8	Boron	2.69E-05	2.82E-05	2.48E-05	2.42E-05	2.52E-05	2.03E-05	4.07E-05	2.23E-05	2.35E-05	2.40E-05	2.14E-05	1.95E-05	1.91E-05	1.92E-05	1.48E-05	4.50E-05	3.96E-05	2.28E-05	1.93E-05
19	7664-41-7	Ammonia	7.89E-07	8.24E-07	7.30E-07	7.18E-07	7.60E-07	6.23E-07	1.19E-06	6.84E-07	7.28E-07	7.48E-07	6.56E-07	5.95E-07	5.90E-07	6.12E-07	4.56E-07	1.31E-06	1.16E-06	7.06E-07	5.91E-07
20	71-43-2	Benzene	3.86E-06	4.04E-06	3.58E-06	3.52E-06	3.75E-06	3.08E-06	5.81E-06	3.39E-06	3.61E-06	3.72E-06	3.25E-06	2.95E-06	2.92E-06	3.05E-06	2.26E-06	6.39E-06	5.66E-06	3.51E-06	2.92E-06
21	98-82-8	Cumene	3.81E-09	3.98E-09	3.52E-09	3.46E-09	3.67E-09	3.01E-09	5.73E-09	3.30E-09	3.52E-09	3.61E-09	3.17E-09	2.88E-09	2.85E-09	2.96E-09	2.20E-09	6.31E-09	5.59E-09	3.41E-09	2.85E-09
22	108-88-3	Toluene	1.79E-07	1.87E-07	1.66E-07	1.63E-07	1.73E-07	1.42E-07	2.70E-07	1.56E-07	1.66E-07	1.70E-07	1.49E-07	1.35E-07	1.34E-07	1.39E-07	1.04E-07	2.97E-07	2.63E-07	1.61E-07	1.34E-07
23	1330-20-7	Xylenes	1.23E-08	1.29E-08	1.14E-08	1.12E-08	1.19E-08	9.73E-09	1.85E-08	1.07E-08	1.14E-08	1.17E-08	1.02E-08	9.30E-09	9.22E-09	9.55E-09	7.12E-09	2.04E-08	1.81E-08	1.10E-08	9.23E-09
24	100-41-4	Ethylbenzene	1.32E-08	1.38E-08	1.23E-08	1.20E-08	1.28E-08	1.05E-08	1.99E-08	1.15E-08	1.22E-08	1.26E-08	1.10E-08	1.00E-08	9.91E-09	1.03E-08	7.66E-09	2.19E-08	1.94E-08	1.19E-08	9.92E-09
		TOTAL	**0.234**	**0.243**	**0.220**	**0.208**	**0.245**	**0.199**	**0.348**	**0.229**	**0.241**	**0.249**	**0.207**	**0.198**	**0.199**	**0.208**	**0.150**	**0.376**	**0.335**	**0.242**	**0.192**

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7446-09-5	Sulphur Dioxide	8.55E-02	8.86E-02	7.98E-02	7.90E-02	8.23E-02	7.04E-02	1.22E-01	8.17E-02	8.80E-02	9.17E-02	7.75E-02	6.94E-02	6.98E-02	7.69E-02	5.23E-02	1.20E-01	1.19E-01	8.81E-02	6.92E-02
2	10102-44-0	Nitrogen Dioxide	2.20E-02	2.24E-02	2.14E-02	2.16E-02	2.50E-02	2.40E-02	2.70E-02	2.20E-02	2.35E-02	2.37E-02	2.24E-02	2.08E-02	2.10E-02	2.24E-02	2.15E-02	2.65E-02	2.74E-02	2.49E-02	2.10E-02
3	PM2.5	Particulate Matter < 2.5 µm	1.02E-02	1.03E-02	1.02E-02	2.31E-03	1.07E-02	1.96E-03	1.52E-02	1.07E-02	7.05E-03	4.66E-03	2.46E-03	8.68E-03	7.13E-03	1.29E-03	2.49E-03	1.32E-02	1.35E-02	1.05E-02	4.75E-03
4	PM10	Particulate Matter < 10 µm	1.02E-02	1.03E-02	1.02E-02	2.31E-03	1.07E-02	1.96E-03	1.52E-02	1.07E-02	7.05E-03	4.66E-03	2.46E-03	8.68E-03	7.13E-03	1.29E-03	2.49E-03	1.32E-02	1.35E-02	1.05E-02	4.75E-03
5	PAH	Polycyclic Aromatic Hydrocarbons	1.71E-02	1.77E-02	1.60E-02	1.56E-02	1.59E-02	1.33E-02	2.41E-02	1.52E-02	1.62E-02	1.67E-02	1.45E-02	1.31E-02	1.30E-02	1.37E-02	9.85E-03	2.32E-02	2.41E-02	1.62E-02	1.30E-02
6	7439-97-6	Mercury	3.27E-05	3.37E-05	3.08E-05	3.00E-05	3.08E-05	2.59E-05	4.47E-05	2.87E-05	3.04E-05	3.09E-05	2.77E-05	2.52E-05	2.48E-05	2.57E-05	1.97E-05	4.23E-05	4.56E-05	3.08E-05	2.50E-05
7	7782-41-4	Fluorine	3.97E-02	4.11E-02	3.75E-02	3.87E-02	4.35E-02	3.90E-02	5.68E-02	4.47E-02	4.98E-02	5.32E-02	4.27E-02	3.79E-02	3.91E-02	4.69E-02	2.95E-02	5.53E-02	5.62E-02	4.88E-02	3.81E-02
8	7440-38-2	Arsenic	2.71E-04	2.80E-04	2.53E-04	2.51E-04	2.65E-04	2.29E-04	3.90E-04	2.68E-04	2.88E-04	3.01E-04	2.53E-04	2.26E-04	2.28E-04	2.54E-04	1.72E-04	3.88E-04	3.74E-04	2.90E-04	2.25E-04
9	7440-43-9	Cadmium	3.84E-04	4.00E-04	3.56E-04	3.55E-04	3.67E-04	3.15E-04	5.62E-04	3.70E-04	4.04E-04	4.24E-04	3.51E-04	3.12E-04	3.16E-04	3.54E-04	2.28E-04	5.53E-04	5.42E-04	3.98E-04	3.12E-04
10	Cr III	Chromium III	2.05E-04	2.09E-04	1.93E-04	1.95E-04	2.21E-04	1.97E-04	2.92E-04	2.32E-04	2.48E-04	2.61E-04	2.16E-04	1.93E-04	1.97E-04	2.31E-04	1.55E-04	3.04E-04	2.72E-04	2.58E-04	1.93E-04
11	Cr IV	Chromium IV	2.46E-05	2.50E-05	2.34E-05	2.27E-05	2.37E-05	1.97E-05	3.29E-05	2.26E-05	2.31E-05	2.33E-05	2.14E-05	1.96E-05	1.92E-05	1.96E-05	1.58E-05	3.18E-05	3.35E-05	2.42E-05	1.94E-05
12	7439-92-1	Lead	7.29E-05	7.53E-05	6.81E-05	6.72E-05	7.03E-05	6.00E-05	1.04E-04	6.97E-05	7.44E-05	7.72E-05	6.60E-05	5.92E-05	5.94E-05	6.49E-05	4.52E-05	1.02E-04	1.01E-04	7.53E-05	5.90E-05
13	DioxFur	Dioxins and Furans	1.58E-02	1.66E-02	1.46E-02	1.42E-02	1.36E-02	1.10E-02	2.28E-02	1.27E-02	1.38E-02	1.42E-02	1.23E-02	1.10E-02	1.09E-02	1.11E-02	7.61E-03	2.13E-02	2.31E-02	1.32E-02	1.09E-02
14	7647-01-0	Hydrogen Chloride	3.11E-02	3.27E-02	2.90E-02	2.86E-02	2.80E-02	2.31E-02	4.39E-02	2.55E-02	2.86E-02	2.97E-02	2.53E-02	2.27E-02	2.27E-02	2.36E-02	1.61E-02	3.91E-02	4.65E-02	2.64E-02	2.26E-02
15	7440-41-7	Beryllium	1.04E-03	1.08E-03	9.62E-04	9.32E-04	9.10E-04	7.45E-04	1.47E-03	8.51E-04	9.09E-04	9.28E-04	8.19E-04	7.39E-04	7.30E-04	7.36E-04	5.37E-04	1.39E-03	1.48E-03	8.94E-04	7.34E-04
16	7440-50-8	Copper	2.88E-04	2.99E-04	2.69E-04	2.64E-04	2.71E-04	2.29E-04	4.09E-04	2.64E-04	2.82E-04	2.92E-04	2.51E-04	2.26E-04	2.26E-04	2.41E-04	1.70E-04	3.99E-04	4.02E-04	2.84E-04	2.25E-04
17	7440-02-0	Nickel	1.53E-06	1.60E-06	1.42E-06	1.37E-06	1.29E-06	1.04E-06	2.16E-06	1.17E-06	1.26E-06	1.28E-06	1.14E-06	1.03E-06	1.01E-06	9.83E-07	7.31E-07	1.99E-06	2.22E-06	1.21E-06	1.02E-06
18	7440-42-8	Boron	2.93E-05	3.06E-05	2.72E-05	2.61E-05	2.47E-05	1.98E-05	4.15E-05	2.26E-05	2.40E-05	2.43E-05	2.18E-05	1.97E-05	1.93E-05	1.87E-05	1.40E-05	3.88E-05	4.21E-05	2.34E-05	1.96E-05
19	7664-41-7	Ammonia	8.56E-07	8.93E-07	7.95E-07	7.70E-07	7.46E-07	6.09E-07	1.21E-06	6.91E-07	7.42E-07	7.58E-07	6.69E-07	6.04E-07	5.96E-07	5.97E-07	4.35E-07	1.13E-06	1.23E-06	7.23E-07	5.99E-07
20	71-43-2	Benzene	4.19E-06	4.37E-06	3.89E-06	3.78E-06	3.68E-06	3.01E-06	5.92E-06	3.42E-06	3.68E-06	3.76E-06	3.31E-06	2.99E-06	2.95E-06	2.98E-06	2.16E-06	5.56E-06	6.01E-06	3.59E-06	2.96E-06
21	98-82-8	Cumene	4.13E-09	4.31E-09	3.84E-09	3.72E-09	3.60E-09	2.94E-09	5.84E-09	3.34E-09	3.59E-09	3.66E-09	3.23E-09	2.91E-09	2.88E-09	2.88E-09	2.10E-09	5.47E-09	5.94E-09	3.49E-09	2.89E-09
22	108-88-3	Toluene	1.95E-07	2.03E-07	1.81E-07	1.75E-07	1.70E-07	1.38E-07	2.75E-07	1.57E-07	1.69E-07	1.72E-07	1.52E-07	1.37E-07	1.36E-07	1.36E-07	9.90E-08	2.57E-07	2.80E-07	1.64E-07	1.36E-07
23	1330-20-7	Xylenes	1.34E-08	1.39E-08	1.24E-08	1.20E-08	1.17E-08	9.51E-09	1.89E-08	1.08E-08	1.16E-08	1.18E-08	1.04E-08	9.43E-09	9.31E-09	9.32E-09	6.80E-09	1.77E-08	1.92E-08	1.13E-08	9.36E-09
24	100-41-4	Ethylbenzene	1.44E-08	1.50E-08	1.33E-08	1.29E-08	1.25E-08	1.02E-08	2.03E-08	1.16E-08	1.25E-08	1.27E-08	1.12E-08	1.01E-08	1.00E-08	1.00E-08	7.31E-09	1.90E-08	2.06E-08	1.22E-08	1.01E-08
		TOTAL	**0.234**	**0.242**	**0.221**	**0.204**	**0.232**	**0.187**	**0.331**	**0.225**	**0.236**	**0.241**	**0.202**	**0.194**	**0.193**	**0.199**	**0.143**	**0.315**	**0.327**	**0.241**	**0.186**

Table B3b: Chronic Hazard Index for each Receptor

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7446-09-5	Sulphur Dioxide	7.95E-02	8.22E-02	8.44E-02	1.17E-01	1.30E-01	1.10E-01	9.96E-02	9.09E-02	8.22E-02	1.13E-01	7.95E-02	8.27E-02	9.81E-02	7.38E-02	9.22E-02	9.10E-02	9.14E-02	4.17E-02	6.32E-02
2	10102-44-0	Nitrogen Dioxide	2.20E-02	2.33E-02	2.38E-02	2.42E-02	2.61E-02	2.49E-02	2.45E-02	2.39E-02	2.33E-02	2.56E-02	2.03E-02	2.13E-02	2.22E-02	2.07E-02	2.27E-02	2.43E-02	2.45E-02	1.68E-02	1.94E-02
3	PM2.5	Particulate Matter < 2.5 µm	3.98E-03	2.01E-03	4.07E-04	1.32E-02	1.08E-02	7.59E-03	6.52E-03	5.62E-03	4.76E-03	9.00E-03	5.82E-03	3.78E-03	7.03E-03	6.41E-03	6.44E-03	1.37E-02	2.51E-03	2.14E-03	6.07E-04
4	PM10	Particulate Matter < 10 µm	1.68E-03	-6.02E-04	-3.01E-03	1.19E-02	6.80E-03	3.88E-03	3.35E-03	2.84E-03	2.65E-03	5.79E-03	4.31E-03	3.53E-04	4.54E-03	5.18E-03	5.06E-03	1.67E-02	-5.86E-04	1.16E-03	-2.46E-03
5	PAH	Polycyclic Aromatic Hydrocarbons	1.37E-02	1.40E-02	1.44E-02	2.07E-02	2.25E-02	1.91E-02	1.73E-02	1.59E-02	1.44E-02	1.95E-02	1.39E-02	1.42E-02	1.69E-02	1.26E-02	1.58E-02	1.54E-02	1.54E-02	7.29E-03	1.08E-02
6	7439-97-6	Mercury	2.62E-05	2.63E-05	2.70E-05	4.22E-05	4.42E-05	3.81E-05	3.44E-05	3.18E-05	2.86E-05	3.79E-05	2.69E-05	2.73E-05	3.21E-05	2.38E-05	2.97E-05	2.85E-05	2.84E-05	1.45E-05	2.04E-05
7	7782-41-4	Fluorine	4.00E-02	4.67E-02	4.81E-02	4.42E-02	5.07E-02	4.44E-02	4.21E-02	3.91E-02	3.84E-02	4.70E-02	3.36E-02	3.75E-02	4.00E-02	3.31E-02	4.71E-02	5.10E-02	5.20E-02	2.07E-02	3.32E-02
8	7440-38-2	Arsenic	2.38E-04	2.58E-04	2.66E-04	3.18E-04	3.44E-04	2.96E-04	2.77E-04	2.55E-04	2.42E-04	3.10E-04	2.34E-04	2.36E-04	2.81E-04	2.18E-04	2.80E-04	2.80E-04	2.81E-04	1.25E-04	1.91E-04
9	7440-43-9	Cadmium	3.28E-04	3.58E-04	3.69E-04	4.23E-04	4.82E-04	4.08E-04	3.78E-04	3.46E-04	3.25E-04	4.33E-04	3.14E-04	3.29E-04	3.87E-04	3.01E-04	3.89E-04	3.96E-04	4.00E-04	1.67E-04	2.67E-04
10	Cr III	Chromium III	2.05E-04	2.34E-04	2.41E-04	2.52E-04	2.57E-04	2.28E-04	2.21E-04	2.08E-04	2.08E-04	2.41E-04	2.00E-04	1.93E-04	2.29E-04	1.83E-04	2.45E-04	2.47E-04	2.47E-04	1.10E-04	1.65E-04
11	Cr IV	Chromium IV	2.04E-05	2.01E-05	2.07E-05	3.55E-05	3.37E-05	2.91E-05	2.66E-05	2.47E-05	2.26E-05	2.89E-05	2.23E-05	2.14E-05	2.54E-05	1.86E-05	2.32E-05	2.14E-05	2.10E-05	1.13E-05	1.51E-05
12	7439-92-1	Lead	6.21E-05	6.61E-05	6.80E-05	8.82E-05	9.40E-05	8.06E-05	7.48E-05	6.89E-05	6.45E-05	8.34E-05	6.26E-05	6.27E-05	7.48E-05	5.72E-05	7.27E-05	7.17E-05	7.17E-05	3.30E-05	4.93E-05
13	DioxFur	Dioxins and Furans	1.14E-02	1.13E-02	1.16E-02	1.76E-02	2.05E-02	1.69E-02	1.50E-02	1.34E-02	1.16E-02	1.75E-02	1.14E-02	1.24E-02	1.46E-02	1.08E-02	1.31E-02	1.30E-02	1.31E-02	5.80E-03	9.07E-03
14	7647-01-0	Hydrogen Chloride	2.35E-02	2.39E-02	2.44E-02	3.44E-02	4.16E-02	3.45E-02	3.03E-02	2.72E-02	2.34E-02	3.51E-02	2.08E-02	2.50E-02	2.70E-02	2.04E-02	2.64E-02	2.76E-02	2.83E-02	1.20E-02	1.89E-02
15	7440-41-7	Beryllium	7.69E-04	7.57E-04	7.76E-04	1.23E-03	1.36E-03	1.14E-03	1.02E-03	9.24E-04	8.12E-04	1.16E-03	7.96E-04	8.27E-04	9.91E-04	7.26E-04	8.80E-04	8.46E-04	8.47E-04	4.05E-04	6.00E-04
16	7440-50-8	Copper	2.37E-04	2.47E-04	2.54E-04	3.48E-04	3.74E-04	3.18E-04	2.92E-04	2.68E-04	2.47E-04	3.28E-04	2.40E-04	2.43E-04	2.90E-04	2.19E-04	2.75E-04	2.70E-04	2.70E-04	1.25E-04	1.87E-04
17	7440-02-0	Nickel	1.07E-06	1.01E-06	1.04E-06	1.80E-06	2.03E-06	1.68E-06	1.48E-06	1.33E-06	1.13E-06	1.70E-06	1.11E-06	1.18E-06	1.41E-06	1.01E-06	1.21E-06	1.16E-06	1.16E-06	5.59E-07	8.31E-07
18	7440-42-8	Boron	2.05E-05	1.93E-05	1.98E-05	3.49E-05	3.88E-05	3.21E-05	2.84E-05	2.56E-05	2.19E-05	3.25E-05	2.18E-05	2.27E-05	2.75E-05	1.97E-05	2.32E-05	2.19E-05	2.19E-05	1.08E-05	1.58E-05
19	7664-41-7	Ammonia	6.27E-07	6.13E-07	6.28E-07	1.01E-06	1.13E-06	9.42E-07	8.38E-07	7.59E-07	6.60E-07	9.57E-07	6.42E-07	6.78E-07	8.06E-07	5.89E-07	7.14E-07	6.91E-07	6.93E-07	3.29E-07	4.90E-07
20	71-43-2	Benzene	3.10E-06	3.06E-06	3.13E-06	4.95E-06	5.52E-06	4.61E-06	4.11E-06	3.73E-06	3.26E-06	4.69E-06	3.16E-06	3.34E-06	3.96E-06	2.91E-06	3.54E-06	3.44E-06	3.45E-06	1.63E-06	2.43E-06
21	98-82-8	Cumene	3.03E-09	2.96E-09	3.03E-09	4.89E-09	5.46E-09	4.55E-09	4.05E-09	3.66E-09	3.19E-09	4.62E-09	3.10E-09	3.28E-09	3.89E-09	2.85E-09	3.45E-09	3.34E-09	3.35E-09	1.59E-09	2.37E-09
22	108-88-3	Toluene	1.43E-07	1.39E-07	1.43E-07	2.30E-07	2.57E-07	2.14E-07	1.91E-07	1.72E-07	1.50E-07	2.18E-07	1.46E-07	1.54E-07	1.83E-07	1.34E-07	1.62E-07	1.57E-07	1.58E-07	7.48E-08	1.11E-07
23	1330-20-7	Xylenes	9.79E-09	9.57E-09	9.81E-09	1.58E-08	1.77E-08	1.47E-08	1.31E-08	1.18E-08	1.03E-08	1.50E-08	1.00E-08	1.06E-08	1.26E-08	9.20E-09	1.12E-08	1.08E-08	1.08E-08	5.14E-09	7.65E-09
24	100-41-4	Ethylbenzene	1.05E-08	1.03E-08	1.06E-08	1.70E-08	1.90E-08	1.58E-08	1.41E-08	1.27E-08	1.11E-08	1.61E-08	1.08E-08	1.14E-08	1.35E-08	9.90E-09	1.20E-08	1.16E-08	1.16E-08	5.53E-09	8.23E-09
		TOTAL	**0.198**	**0.205**	**0.206**	**0.286**	**0.312**	**0.263**	**0.241**	**0.221**	**0.203**	**0.275**	**0.191**	**0.199**	**0.233**	**0.185**	**0.231**	**0.255**	**0.229**	**0.109**	**0.154**

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7446-09-5	Sulphur Dioxide	7.36E-02	7.85E-02	8.09E-02	9.80E-02	1.05E-01	9.11E-02	8.91E-02	8.11E-02	7.70E-02	1.01E-01	7.68E-02	7.67E-02	9.10E-02	7.11E-02	8.67E-02	8.53E-02	8.42E-02	3.82E-02	5.81E-02
2	10102-44-0	Nitrogen Dioxide	2.17E-02	2.33E-02	2.39E-02	2.34E-02	2.56E-02	2.46E-02	2.47E-02	2.41E-02	2.36E-02	2.57E-02	2.07E-02	2.15E-02	2.24E-02	2.09E-02	2.24E-02	2.40E-02	2.38E-02	1.67E-02	1.93E-02
3	PM2.5	Particulate Matter < 2.5 µm	1.69E-03	-1.62E-03	-3.21E-03	1.16E-02	6.22E-03	3.62E-03	3.87E-03	3.38E-03	3.29E-03	6.29E-03	5.22E-03	9.67E-04	5.31E-03	6.75E-03	5.26E-03	1.63E-02	-3.23E-04	1.01E-03	-2.39E-03
4	PM10	Particulate Matter < 10 µm	1.69E-03	-1.62E-03	-3.21E-03	1.16E-02	6.22E-03	3.62E-03	3.87E-03	3.38E-03	3.29E-03	6.29E-03	5.22E-03	9.67E-04	5.31E-03	6.75E-03	5.26E-03	1.63E-02	-3.23E-04	1.01E-03	-2.39E-03
5	PAH	Polycyclic Aromatic Hydrocarbons	1.39E-02	1.41E-02	1.45E-02	2.02E-02	2.14E-02	1.84E-02	1.79E-02	1.62E-02	1.50E-02	2.02E-02	1.51E-02	1.50E-02	1.79E-02	1.37E-02	1.61E-02	1.54E-02	1.51E-02	7.25E-03	1.07E-02
6	7439-97-6	Mercury	2.65E-05	2.65E-05	2.72E-05	4.12E-05	4.24E-05	3.70E-05	3.54E-05	3.24E-05	2.97E-05	3.92E-05	2.91E-05	2.88E-05	3.38E-05	2.57E-05	3.02E-05	2.84E-05	2.78E-05	1.45E-05	2.02E-05
7	7782-41-4	Fluorine	4.03E-02	4.69E-02	4.83E-02	4.32E-02	4.90E-02	4.33E-02	4.30E-02	3.96E-02	3.94E-02	4.83E-02	3.56E-02	3.89E-02	4.17E-02	3.49E-02	4.77E-02	5.10E-02	5.15E-02	2.06E-02	3.31E-02
8	7440-38-2	Arsenic	2.39E-04	2.59E-04	2.68E-04	3.12E-04	3.33E-04	2.89E-04	2.83E-04	2.59E-04	2.49E-04	3.18E-04	2.48E-04	2.45E-04	2.92E-04	2.29E-04	2.84E-04	2.80E-04	2.77E-04	1.25E-04	1.90E-04
9	7440-43-9	Cadmium	3.32E-04	3.60E-04	3.71E-04	4.11E-04	4.60E-04	3.94E-04	3.90E-04	3.52E-04	3.37E-04	4.49E-04	3.40E-04	3.46E-04	4.08E-04	3.23E-04	3.95E-04	3.96E-04	3.93E-04	1.66E-04	2.65E-04
10	Cr III	Chromium III	2.05E-04	2.34E-04	2.41E-04	2.52E-04	2.56E-04	2.28E-04	2.22E-04	2.08E-04	2.09E-04	2.42E-04	2.01E-04	1.94E-04	2.30E-04	1.84E-04	2.45E-04	2.47E-04	2.46E-04	1.10E-04	1.65E-04
11	Cr IV	Chromium IV	2.06E-05	2.02E-05	2.07E-05	3.51E-05	3.29E-05	2.86E-05	2.71E-05	2.50E-05	2.31E-05	2.95E-05	2.32E-05	2.20E-05	2.61E-05	1.94E-05	2.34E-05	2.14E-05	2.07E-05	1.13E-05	1.51E-05
12	7439-92-1	Lead	6.27E-05	6.63E-05	6.84E-05	8.65E-05	9.07E-05	7.86E-05	7.64E-05	6.99E-05	6.63E-05	8.58E-05	6.64E-05	6.53E-05	7.79E-05	6.05E-05	7.37E-05	7.16E-05	7.06E-05	3.29E-05	4.91E-05
13	DioxFur	Dioxins and Furans	1.17E-02	1.14E-02	1.18E-02	1.68E-02	1.91E-02	1.60E-02	1.58E-02	1.39E-02	1.25E-02	1.85E-02	1.31E-02	1.35E-02	1.60E-02	1.23E-02	1.36E-02	1.30E-02	1.26E-02	5.74E-03	8.96E-03
14	7647-01-0	Hydrogen Chloride	2.40E-02	2.41E-02	2.48E-02	3.27E-02	3.83E-02	3.25E-02	3.20E-02	2.82E-02	2.53E-02	3.75E-02	2.47E-02	2.76E-02	3.02E-02	2.37E-02	2.74E-02	2.76E-02	2.72E-02	1.18E-02	1.87E-02
15	7440-41-7	Beryllium	7.82E-04	7.63E-04	7.84E-04	1.19E-03	1.28E-03	1.09E-03	1.06E-03	9.48E-04	8.57E-04	1.22E-03	8.88E-04	8.88E-04	1.07E-03	8.05E-04	9.03E-04	8.45E-04	8.21E-04	4.02E-04	5.94E-04
16	7440-50-8	Copper	2.39E-04	2.48E-04	2.55E-04	3.40E-04	3.59E-04	3.09E-04	3.00E-04	2.73E-04	2.55E-04	3.39E-04	2.58E-04	2.55E-04	3.05E-04	2.35E-04	2.80E-04	2.69E-04	2.64E-04	1.25E-04	1.86E-04
17	7440-02-0	Nickel	1.09E-06	1.03E-06	1.05E-06	1.73E-06	1.89E-06	1.59E-06	1.55E-06	1.37E-06	1.21E-06	1.80E-06	1.27E-06	1.29E-06	1.54E-06	1.16E-06	1.25E-06	1.16E-06	1.12E-06	5.53E-07	8.20E-07
18	7440-42-8	Boron	2.09E-05	1.95E-05	2.00E-05	3.36E-05	3.63E-05	3.06E-05	2.97E-05	2.63E-05	2.33E-05	3.43E-05	2.47E-05	2.46E-05	2.99E-05	2.23E-05	2.40E-05	2.19E-05	2.10E-05	1.07E-05	1.56E-05
19	7664-41-7	Ammonia	6.39E-07	6.19E-07	6.36E-07	9.76E-07	1.06E-06	8.99E-07	8.75E-07	7.79E-07	7.00E-07	1.01E-06	7.24E-07	7.33E-07	8.73E-07	6.60E-07	7.35E-07	6.90E-07	6.70E-07	3.26E-07	4.85E-07
20	71-43-2	Benzene	3.16E-06	3.08E-06	3.17E-06	4.78E-06	5.19E-06	4.41E-06	4.29E-06	3.83E-06	3.45E-06	4.93E-06	3.55E-06	3.60E-06	4.28E-06	3.24E-06	3.64E-06	3.43E-06	3.34E-06	1.62E-06	2.41E-06
21	98-82-8	Cumene	3.09E-09	2.99E-09	3.07E-09	4.71E-09	5.12E-09	4.34E-09	4.22E-09	3.76E-09	3.38E-09	4.86E-09	3.50E-09	3.54E-09	4.21E-09	3.19E-09	3.55E-09	3.33E-09	3.24E-09	1.58E-09	2.34E-09
22	108-88-3	Toluene	1.45E-07	1.41E-07	1.45E-07	2.22E-07	2.41E-07	2.04E-07	1.99E-07	1.77E-07	1.59E-07	2.29E-07	1.65E-07	1.67E-07	1.98E-07	1.50E-07	1.67E-07	1.57E-07	1.52E-07	7.42E-08	1.10E-07
23	1330-20-7	Xylenes	9.98E-09	9.66E-09	9.93E-09	1.52E-08	1.66E-08	1.40E-08	1.37E-08	1.22E-08	1.09E-08	1.57E-08	1.13E-08	1.15E-08	1.36E-08	1.03E-08	1.15E-08	1.08E-08	1.05E-08	5.09E-09	7.57E-09
24	100-41-4	Ethylbenzene	1.07E-08	1.04E-08	1.07E-08	1.64E-08	1.78E-08	1.51E-08	1.47E-08	1.31E-08	1.18E-08	1.69E-08	1.22E-08	1.23E-08	1.46E-08	1.11E-08	1.24E-08	1.16E-08	1.13E-08	5.48E-09	8.14E-09
		TOTAL	**0.190**	**0.197**	**0.200**	**0.260**	**0.274**	**0.236**	**0.233**	**0.212**	**0.201**	**0.266**	**0.199**	**0.197**	**0.232**	**0.192**	**0.227**	**0.251**	**0.216**	**0.103**	**0.145**

Table B3b: Chronic Hazard Index for each Receptor

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7446-09-5	Sulphur Dioxide	5.81E-02	1.23E-01	7.56E-02	8.06E-02	7.70E-02	7.05E-02	6.86E-02	6.53E-02	9.30E-02	9.16E-02	8.51E-02	7.42E-02	7.61E-02	7.73E-02
2	10102-44-0	Nitrogen Dioxide	1.87E-02	2.65E-02	2.37E-02	2.47E-02	2.22E-02	2.09E-02	2.11E-02	2.01E-02	2.59E-02	2.60E-02	2.55E-02	2.19E-02	2.22E-02	2.33E-02
3	PM2.5	Particulate Matter < 2.5 µm	1.48E-03	1.18E-02	4.26E-03	4.69E-03	2.70E-03	2.84E-03	2.24E-03	2.12E-03	5.88E-03	4.02E-03	4.02E-03	6.87E-04	9.98E-04	4.65E-03
4	PM10	Particulate Matter < 10 µm	-1.23E-03	8.93E-03	2.33E-03	2.90E-03	1.53E-04	4.99E-04	-1.42E-04	-3.21E-04	4.27E-03	1.76E-03	1.89E-03	-2.35E-03	-2.02E-03	2.83E-03
5	PAH	Polycyclic Aromatic Hydrocarbons	1.01E-02	2.11E-02	1.30E-02	1.39E-02	1.31E-02	1.20E-02	1.18E-02	1.12E-02	1.59E-02	1.57E-02	1.46E-02	1.27E-02	1.30E-02	1.33E-02
6	7439-97-6	Mercury	1.98E-05	4.05E-05	2.52E-05	2.67E-05	2.46E-05	2.27E-05	2.24E-05	2.14E-05	3.00E-05	2.96E-05	2.77E-05	2.42E-05	2.48E-05	2.54E-05
7	7782-41-4	Fluorine	2.81E-02	5.08E-02	3.85E-02	4.14E-02	4.05E-02	3.66E-02	3.56E-02	3.30E-02	4.82E-02	4.88E-02	4.48E-02	4.12E-02	4.19E-02	3.95E-02
8	7440-38-2	Arsenic	1.70E-04	3.35E-04	2.25E-04	2.42E-04	2.35E-04	2.13E-04	2.08E-04	1.97E-04	2.84E-04	2.82E-04	2.61E-04	2.32E-04	2.37E-04	2.34E-04
9	7440-43-9	Cadmium	2.32E-04	4.75E-04	3.11E-04	3.34E-04	3.27E-04	2.97E-04	2.87E-04	2.71E-04	3.93E-04	3.90E-04	3.60E-04	3.19E-04	3.26E-04	3.22E-04
10	Cr III	Chromium III	1.45E-04	2.56E-04	1.93E-04	2.10E-04	2.04E-04	1.85E-04	1.81E-04	1.70E-04	2.48E-04	2.50E-04	2.30E-04	2.09E-04	2.12E-04	2.03E-04
11	Cr IV	Chromium IV	1.53E-05	3.07E-05	1.90E-05	2.04E-05	1.84E-05	1.70E-05	1.70E-05	1.62E-05	2.29E-05	2.27E-05	2.12E-05	1.87E-05	1.90E-05	1.93E-05
12	7439-92-1	Lead	4.50E-05	9.01E-05	5.88E-05	6.32E-05	6.04E-05	5.52E-05	5.39E-05	5.11E-05	7.34E-05	7.28E-05	6.75E-05	5.97E-05	6.09E-05	6.08E-05
13	DioxFur	Dioxins and Furans	8.37E-03	1.94E-02	1.09E-02	1.15E-02	1.10E-02	1.01E-02	9.76E-03	9.32E-03	1.32E-02	1.28E-02	1.20E-02	1.02E-02	1.05E-02	1.10E-02
14	7647-01-0	Hydrogen Chloride	1.74E-02	3.88E-02	2.27E-02	2.38E-02	2.25E-02	2.08E-02	2.01E-02	1.90E-02	2.68E-02	2.63E-02	2.45E-02	2.13E-02	2.20E-02	2.24E-02
15	7440-41-7	Beryllium	5.71E-04	1.27E-03	7.30E-04	7.73E-04	7.28E-04	6.70E-04	6.54E-04	6.26E-04	8.82E-04	8.62E-04	8.05E-04	6.90E-04	7.09E-04	7.39E-04
16	7440-50-8	Copper	1.73E-04	3.55E-04	2.24E-04	2.40E-04	2.28E-04	2.09E-04	2.04E-04	1.94E-04	2.77E-04	2.74E-04	2.54E-04	2.23E-04	2.28E-04	2.30E-04
17	7440-02-0	Nickel	8.03E-07	1.87E-06	1.02E-06	1.07E-06	9.99E-07	9.26E-07	9.01E-07	8.66E-07	1.21E-06	1.17E-06	1.10E-06	9.28E-07	9.58E-07	1.02E-06
18	7440-42-8	Boron	1.54E-05	3.57E-05	1.94E-05	2.05E-05	1.91E-05	1.77E-05	1.72E-05	1.66E-05	2.32E-05	2.25E-05	2.11E-05	1.77E-05	1.83E-05	1.95E-05
19	7664-41-7	Ammonia	4.67E-07	1.05E-06	5.96E-07	6.31E-07	5.92E-07	5.46E-07	5.32E-07	5.10E-07	7.17E-07	6.99E-07	6.53E-07	5.59E-07	5.75E-07	6.01E-07
20	71-43-2	Benzene	2.31E-06	5.14E-06	2.95E-06	3.12E-06	2.94E-06	2.71E-06	2.64E-06	2.53E-06	3.55E-06	3.47E-06	3.24E-06	2.78E-06	2.86E-06	2.98E-06
21	98-82-8	Cumene	2.25E-09	5.06E-09	2.88E-09	3.05E-09	2.86E-09	2.64E-09	2.57E-09	2.46E-09	3.46E-09	3.38E-09	3.16E-09	2.70E-09	2.78E-09	2.90E-09
22	108-88-3	Toluene	1.06E-07	2.38E-07	1.36E-07	1.43E-07	1.35E-07	1.24E-07	1.21E-07	1.16E-07	1.63E-07	1.59E-07	1.49E-07	1.27E-07	1.31E-07	1.37E-07
23	1330-20-7	Xylenes	7.29E-09	1.64E-08	9.31E-09	9.85E-09	9.25E-09	8.53E-09	8.31E-09	7.96E-09	1.12E-08	1.09E-08	1.02E-08	8.73E-09	8.98E-09	9.39E-09
24	100-41-4	Ethylbenzene	7.84E-09	1.76E-08	1.00E-08	1.06E-08	9.95E-09	9.18E-09	8.94E-09	8.56E-09	1.20E-08	1.17E-08	1.10E-08	9.39E-09	9.66E-09	1.01E-08
		TOTAL	**0.142**	**0.303**	**0.193**	**0.205**	**0.191**	**0.176**	**0.171**	**0.161**	**0.235**	**0.229**	**0.214**	**0.182**	**0.187**	**0.196**

Chronic HI - Baseline (99.9% 1 hour and 99.5% 24 hour)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7446-09-5	Sulphur Dioxide	5.08E-02	1.10E-01	7.19E-02	7.50E-02	7.17E-02	6.49E-02	6.43E-02	6.00E-02	8.66E-02	8.64E-02	7.99E-02	7.04E-02	7.17E-02	7.19E-02
2	10102-44-0	Nitrogen Dioxide	1.82E-02	2.65E-02	2.39E-02	2.47E-02	2.21E-02	2.07E-02	2.11E-02	1.99E-02	2.57E-02	2.60E-02	2.54E-02	2.19E-02	2.22E-02	2.33E-02
3	PM2.5	Particulate Matter < 2.5 µm	-1.80E-03	9.60E-03	2.71E-03	2.94E-03	1.13E-04	1.47E-04	-1.91E-04	-3.83E-04	3.96E-03	1.70E-03	1.85E-03	-2.84E-03	-1.73E-03	2.75E-03
4	PM10	Particulate Matter < 10 µm	-1.80E-03	9.60E-03	2.71E-03	2.94E-03	1.13E-04	1.47E-04	-1.91E-04	-3.83E-04	3.96E-03	1.70E-03	1.85E-03	-2.84E-03	-1.73E-03	2.75E-03
5	PAH	Polycyclic Aromatic Hydrocarbons	9.66E-03	2.20E-02	1.37E-02	1.41E-02	1.32E-02	1.20E-02	1.19E-02	1.12E-02	1.59E-02	1.58E-02	1.47E-02	1.28E-02	1.30E-02	1.34E-02
6	7439-97-6	Mercury	1.91E-05	4.21E-05	2.63E-05	2.71E-05	2.47E-05	2.26E-05	2.28E-05	2.14E-05	3.00E-05	2.99E-05	2.79E-05	2.42E-05	2.47E-05	2.56E-05
7	7782-41-4	Fluorine	2.74E-02	5.24E-02	3.96E-02	4.17E-02	4.05E-02	3.65E-02	3.60E-02	3.30E-02	4.83E-02	4.91E-02	4.51E-02	4.12E-02	4.19E-02	3.97E-02
8	7440-38-2	Arsenic	1.66E-04	3.45E-04	2.32E-04	2.44E-04	2.35E-04	2.13E-04	2.10E-04	1.96E-04	2.84E-04	2.84E-04	2.62E-04	2.33E-04	2.36E-04	2.35E-04
9	7440-43-9	Cadmium	2.23E-04	4.95E-04	3.24E-04	3.38E-04	3.28E-04	2.96E-04	2.92E-04	2.71E-04	3.94E-04	3.94E-04	3.63E-04	3.20E-04	3.26E-04	3.24E-04
10	Cr III	Chromium III	1.44E-04	2.57E-04	1.94E-04	2.10E-04	2.04E-04	1.85E-04	1.81E-04	1.70E-04	2.48E-04	2.50E-04	2.30E-04	2.09E-04	2.12E-04	2.04E-04
11	Cr IV	Chromium IV	1.49E-05	3.14E-05	1.94E-05	2.05E-05	1.85E-05	1.70E-05	1.71E-05	1.62E-05	2.29E-05	2.28E-05	2.13E-05	1.87E-05	1.90E-05	1.94E-05
12	7439-92-1	Lead	4.37E-05	9.30E-05	6.08E-05	6.38E-05	6.06E-05	5.50E-05	5.45E-05	5.11E-05	7.35E-05	7.33E-05	6.79E-05	5.98E-05	6.09E-05	6.11E-05
13	DioxFur	Dioxins and Furans	7.78E-03	2.07E-02	1.18E-02	1.17E-02	1.11E-02	1.00E-02	1.00E-02	9.30E-03	1.33E-02	1.31E-02	1.22E-02	1.03E-02	1.05E-02	1.11E-02
14	7647-01-0	Hydrogen Chloride	1.60E-02	4.18E-02	2.48E-02	2.45E-02	2.27E-02	2.06E-02	2.08E-02	1.90E-02	2.69E-02	2.68E-02	2.50E-02	2.15E-02	2.19E-02	2.28E-02
15	7440-41-7	Beryllium	5.39E-04	1.34E-03	7.78E-04	7.88E-04	7.32E-04	6.66E-04	6.68E-04	6.25E-04	8.85E-04	8.74E-04	8.15E-04	6.93E-04	7.08E-04	7.48E-04
16	7440-50-8	Copper	1.66E-04	3.69E-04	2.34E-04	2.43E-04	2.29E-04	2.08E-04	2.07E-04	1.94E-04	2.78E-04	2.77E-04	2.56E-04	2.24E-04	2.28E-04	2.32E-04
17	7440-02-0	Nickel	7.47E-07	2.00E-06	1.10E-06	1.10E-06	1.01E-06	9.17E-07	9.27E-07	8.64E-07	1.21E-06	1.19E-06	1.12E-06	9.33E-07	9.55E-07	1.03E-06
18	7440-42-8	Boron	1.44E-05	3.79E-05	2.09E-05	2.09E-05	1.92E-05	1.75E-05	1.77E-05	1.66E-05	2.33E-05	2.29E-05	2.14E-05	1.78E-05	1.83E-05	1.98E-05
19	7664-41-7	Ammonia	4.38E-07	1.11E-06	6.39E-07	6.43E-07	5.96E-07	5.42E-07	5.45E-07	5.09E-07	7.19E-07	7.10E-07	6.63E-07	5.62E-07	5.74E-07	6.09E-07
20	71-43-2	Benzene	2.17E-06	5.44E-06	3.16E-06	3.19E-06	2.96E-06	2.69E-06	2.70E-06	2.52E-06	3.57E-06	3.53E-06	3.29E-06	2.80E-06	2.86E-06	3.02E-06
21	98-82-8	Cumene	2.12E-09	5.37E-09	3.09E-09	3.11E-09	2.88E-09	2.62E-09	2.63E-09	2.46E-09	3.47E-09	3.43E-09	3.20E-09	2.71E-09	2.77E-09	2.94E-09
22	108-88-3	Toluene	9.97E-08	2.53E-07	1.45E-07	1.46E-07	1.36E-07	1.23E-07	1.24E-07	1.16E-07	1.64E-07	1.62E-07	1.51E-07	1.28E-07	1.31E-07	1.38E-07
23	1330-20-7	Xylenes	6.85E-09	1.74E-08	9.99E-09	1.00E-08	9.30E-09	8.47E-09	8.52E-09	7.94E-09	1.12E-08	1.11E-08	1.03E-08	8.77E-09	8.96E-09	9.51E-09
24	100-41-4	Ethylbenzene	7.36E-09	1.87E-08	1.07E-08	1.08E-08	1.00E-08	9.11E-09	9.16E-09	8.54E-09	1.21E-08	1.19E-08	1.11E-08	9.44E-09	9.64E-09	1.02E-08
		TOTAL	**0.128**	**0.295**	**0.193**	**0.200**	**0.183**	**0.167**	**0.165**	**0.153**	**0.227**	**0.223**	**0.208**	**0.174**	**0.180**	**0.190**

Table B4a: Contribution to Chronic Hazard Index for each Receptor (%)

Contribution to Chronic HI - Baseline (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7446-09-5	Sulphur Dioxide	12.1%	16.7%	21.4%	15.3%	17.6%	17.3%	15.2%	23.0%	23.2%	22.9%	21.7%	22.3%	21.9%	20.1%	23.4%	22.6%	24.3%	25.1%	24.5%
2	10102-44-0	Nitrogen Dioxide	3.3%	3.1%	3.7%	2.9%	2.9%	3.2%	2.6%	3.9%	3.7%	3.7%	3.7%	3.7%	3.7%	3.8%	3.9%	3.7%	3.9%	3.8%	4.0%
3	PM2.5	Particulate Matter < 2.5 µm	19.0%	16.5%	14.3%	17.0%	16.0%	16.0%	17.4%	13.1%	13.1%	13.2%	14.0%	13.9%	14.0%	14.6%	13.2%	13.6%	12.8%	12.5%	12.6%
4	PM10	Particulate Matter < 10 µm	28.5%	24.1%	20.5%	25.0%	23.2%	23.3%	25.9%	18.1%	18.1%	18.2%	19.7%	19.5%	19.7%	20.8%	18.2%	18.9%	17.3%	16.7%	17.1%
5	PAH	Polycyclic Aromatic Hydrocarbons	2.1%	2.8%	3.6%	2.6%	3.0%	2.9%	2.5%	4.0%	4.0%	3.9%	3.7%	3.7%	3.7%	3.4%	4.0%	3.8%	4.1%	4.2%	4.1%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	7.0%	8.8%	10.1%	8.4%	9.0%	9.0%	8.8%	10.1%	10.1%	10.0%	9.7%	9.9%	9.8%	9.8%	10.2%	9.9%	10.3%	10.3%	10.4%
8	7440-38-2	Arsenic	1.6%	1.4%	1.3%	1.6%	1.4%	1.5%	1.5%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.4%	1.2%	1.2%	1.1%	1.1%	1.1%
9	7440-43-9	Cadmium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%	0.4%	0.3%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%
10	Cr III	Chromium III	0.4%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
13	DioxFur	Dioxins and Furans	1.7%	2.5%	3.1%	2.2%	2.6%	2.5%	2.2%	3.4%	3.6%	3.6%	3.3%	3.5%	3.3%	2.9%	3.6%	3.5%	3.9%	4.1%	3.9%
14	7647-01-0	Hydrogen Chloride	3.6%	5.4%	5.4%	4.6%	5.5%	5.1%	4.7%	7.1%	7.3%	7.5%	6.6%	6.8%	6.6%	5.6%	7.4%	7.0%	7.9%	8.4%	7.7%
15	7440-41-7	Beryllium	14.7%	12.9%	11.6%	14.2%	13.1%	13.4%	13.5%	11.1%	10.9%	10.9%	11.3%	10.9%	11.2%	12.3%	10.5%	10.8%	10.0%	9.6%	10.1%
16	7440-50-8	Copper	5.3%	4.6%	4.1%	5.1%	4.7%	4.8%	4.8%	4.0%	3.9%	3.9%	4.0%	3.9%	4.0%	4.4%	3.7%	3.9%	3.6%	3.4%	3.6%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Chronic HI - Proposed (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7446-09-5	Sulphur Dioxide	10.4%	14.3%	18.8%	13.3%	15.0%	15.4%	13.3%	19.6%	19.7%	19.1%	19.0%	19.3%	19.0%	17.9%	20.2%	19.5%	20.9%	21.1%	21.0%
2	10102-44-0	Nitrogen Dioxide	2.9%	2.9%	3.5%	2.7%	2.8%	3.0%	2.3%	3.7%	3.6%	3.5%	3.5%	3.5%	3.5%	3.6%	3.7%	3.6%	3.7%	3.7%	3.8%
3	PM2.5	Particulate Matter < 2.5 µm	26.4%	22.8%	19.9%	23.4%	22.1%	21.7%	24.1%	18.0%	17.9%	18.3%	18.8%	18.6%	18.8%	19.6%	17.6%	18.2%	16.9%	16.6%	16.8%
4	PM10	Particulate Matter < 10 µm	26.4%	22.8%	19.9%	23.4%	22.1%	21.7%	24.1%	18.0%	17.9%	18.3%	18.8%	18.6%	18.8%	19.6%	17.6%	18.2%	16.9%	16.6%	16.8%
5	PAH	Polycyclic Aromatic Hydrocarbons	1.8%	2.7%	3.3%	2.4%	2.8%	2.9%	2.3%	3.9%	3.9%	3.7%	3.7%	3.7%	3.7%	3.4%	4.0%	3.8%	4.1%	4.2%	4.1%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	6.4%	8.3%	9.6%	7.9%	8.5%	8.5%	8.2%	9.9%	9.9%	9.7%	9.5%	9.7%	9.6%	9.4%	10.0%	9.7%	10.3%	10.3%	10.4%
8	7440-38-2	Arsenic	1.5%	1.3%	1.3%	1.5%	1.4%	1.4%	1.4%	1.2%	1.2%	1.2%	1.2%	1.1%	1.2%	1.3%	1.1%	1.1%	1.1%	1.1%	1.1%
9	7440-43-9	Cadmium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%
10	Cr III	Chromium III	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
13	DioxFur	Dioxins and Furans	1.5%	2.4%	2.7%	2.0%	2.4%	2.5%	2.0%	3.2%	3.5%	3.3%	3.4%	3.5%	3.4%	2.9%	3.7%	3.6%	4.0%	4.1%	3.9%
14	7647-01-0	Hydrogen Chloride	3.2%	5.0%	4.7%	4.3%	5.0%	5.1%	4.2%	6.6%	7.1%	6.8%	6.8%	7.0%	6.8%	5.8%	7.6%	7.3%	8.2%	8.4%	7.8%
15	7440-41-7	Beryllium	13.7%	12.2%	11.3%	13.3%	12.5%	12.4%	12.6%	11.1%	10.8%	11.1%	10.7%	10.3%	10.6%	11.5%	10.1%	10.3%	9.7%	9.6%	9.9%
16	7440-50-8	Copper	4.9%	4.4%	4.0%	4.8%	4.5%	4.5%	4.5%	4.0%	3.8%	3.9%	3.8%	3.7%	3.8%	4.1%	3.6%	3.7%	3.4%	3.4%	3.5%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B4a: Contribution to Chronic Hazard Index for each Receptor (%)

Contribution to Chronic HI - Baseline (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7446-09-5	Sulphur Dioxide	21.2%	21.2%	20.6%	20.2%	15.1%	14.2%	21.0%	16.2%	15.5%	15.1%	15.6%	16.6%	16.0%	13.5%	13.4%	22.5%	20.3%	14.3%	16.0%
2	10102-44-0	Nitrogen Dioxide	4.0%	3.9%	4.0%	3.9%	2.7%	2.8%	3.2%	3.0%	2.7%	2.5%	3.0%	3.4%	3.2%	2.4%	3.2%	3.4%	3.3%	2.5%	3.2%
3	PM2.5	Particulate Matter < 2.5 µm	14.1%	14.1%	14.1%	14.1%	17.2%	17.7%	14.4%	16.9%	17.3%	17.5%	17.1%	16.6%	16.9%	18.3%	18.3%	13.7%	14.6%	17.7%	16.9%
4	PM10	Particulate Matter < 10 µm	19.8%	19.8%	19.9%	19.9%	25.3%	26.0%	20.3%	24.8%	25.5%	25.9%	25.2%	24.3%	24.9%	27.4%	27.3%	19.2%	20.7%	26.4%	24.9%
5	PAH	Polycyclic Aromatic Hydrocarbons	3.6%	3.6%	3.5%	3.4%	2.5%	2.4%	3.5%	2.7%	2.6%	2.5%	2.6%	2.8%	2.7%	2.2%	2.3%	3.7%	3.4%	2.4%	2.7%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	9.9%	9.8%	9.8%	10.0%	8.3%	8.2%	9.7%	9.2%	9.1%	9.0%	8.9%	9.3%	9.2%	8.5%	7.9%	10.0%	9.5%	8.5%	9.1%
8	7440-38-2	Arsenic	1.3%	1.3%	1.3%	1.4%	1.5%	1.6%	1.3%	1.4%	1.5%	1.5%	1.5%	1.4%	1.4%	1.5%	1.5%	1.2%	1.3%	1.6%	1.4%
9	7440-43-9	Cadmium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%
10	Cr III	Chromium III	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.3%	0.3%	0.4%	0.3%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%
13	DioxFur	Dioxins and Furans	3.2%	3.2%	3.1%	3.0%	2.2%	2.0%	3.3%	2.3%	2.2%	2.1%	2.2%	2.4%	2.3%	1.9%	1.9%	3.6%	3.2%	2.0%	2.3%
14	7647-01-0	Hydrogen Chloride	6.4%	6.5%	6.2%	6.2%	4.7%	4.4%	6.5%	4.8%	4.7%	4.6%	4.7%	5.0%	4.9%	4.1%	4.1%	7.0%	6.5%	4.2%	4.8%
15	7440-41-7	Beryllium	11.6%	11.4%	12.1%	12.4%	14.1%	14.4%	11.7%	13.0%	13.2%	13.4%	13.3%	12.8%	13.0%	14.1%	14.1%	10.9%	12.0%	14.3%	13.1%
16	7440-50-8	Copper	4.1%	4.1%	4.3%	4.4%	5.1%	5.2%	4.2%	4.7%	4.7%	4.8%	4.8%	4.6%	4.6%	5.0%	5.0%	3.9%	4.3%	5.1%	4.7%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Chronic HI - Proposed (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7446-09-5	Sulphur Dioxide	18.6%	18.6%	18.1%	17.8%	13.0%	12.4%	18.1%	14.3%	13.7%	13.4%	13.8%	14.6%	14.1%	12.0%	11.6%	18.7%	17.5%	12.7%	14.1%
2	10102-44-0	Nitrogen Dioxide	3.8%	3.7%	3.8%	3.7%	2.5%	2.6%	3.1%	2.7%	2.5%	2.3%	2.7%	3.1%	3.0%	2.2%	2.9%	3.3%	3.1%	2.3%	3.0%
3	PM2.5	Particulate Matter < 2.5 µm	18.8%	18.9%	18.9%	19.0%	23.7%	24.3%	19.5%	23.2%	23.7%	24.0%	23.5%	22.8%	23.2%	25.2%	25.5%	19.3%	19.8%	24.4%	23.2%
4	PM10	Particulate Matter < 10 µm	18.8%	18.9%	18.9%	19.0%	23.7%	24.3%	19.5%	23.2%	23.7%	24.0%	23.5%	22.8%	23.2%	25.2%	25.5%	19.3%	19.8%	24.4%	23.2%
5	PAH	Polycyclic Aromatic Hydrocarbons	3.6%	3.6%	3.5%	3.4%	2.4%	2.2%	3.4%	2.5%	2.4%	2.3%	2.5%	2.6%	2.5%	2.1%	2.1%	3.5%	3.4%	2.2%	2.5%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	9.6%	9.6%	9.5%	9.7%	7.8%	7.6%	9.4%	8.6%	8.4%	8.4%	8.3%	8.7%	8.6%	7.8%	7.3%	9.6%	9.2%	7.8%	8.5%
8	7440-38-2	Arsenic	1.2%	1.2%	1.3%	1.3%	1.4%	1.5%	1.2%	1.3%	1.3%	1.4%	1.4%	1.3%	1.3%	1.4%	1.4%	1.2%	1.3%	1.4%	1.3%
9	7440-43-9	Cadmium	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.3%	0.3%	0.4%	0.4%
10	Cr III	Chromium III	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%	0.3%	0.2%
13	DioxFur	Dioxins and Furans	3.3%	3.3%	3.2%	3.0%	2.0%	1.9%	3.2%	2.2%	2.1%	2.0%	2.1%	2.2%	2.1%	1.7%	1.7%	3.2%	3.2%	1.9%	2.1%
14	7647-01-0	Hydrogen Chloride	6.6%	6.7%	6.4%	6.3%	4.3%	4.0%	6.3%	4.5%	4.4%	4.3%	4.5%	4.7%	4.6%	3.7%	3.6%	6.1%	6.5%	3.9%	4.6%
15	7440-41-7	Beryllium	11.0%	10.8%	11.4%	11.7%	13.2%	13.5%	11.2%	12.2%	12.3%	12.4%	12.4%	11.9%	12.1%	13.0%	13.0%	11.0%	11.4%	13.2%	12.2%
16	7440-50-8	Copper	3.9%	3.9%	4.1%	4.2%	4.7%	4.8%	4.0%	4.3%	4.4%	4.5%	4.4%	4.3%	4.3%	4.7%	4.6%	3.9%	4.1%	4.7%	4.4%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B4a: Contribution to Chronic Hazard Index for each Receptor (%)

Contribution to Chronic HI - Baseline (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7446-09-5	Sulphur Dioxide	15.7%	13.2%	13.3%	23.3%	21.4%	19.5%	18.2%	17.5%	16.0%	19.1%	20.8%	19.6%	21.6%	18.5%	16.1%	14.3%	13.8%	14.3%	14.8%
2	10102-44-0	Nitrogen Dioxide	3.1%	2.3%	2.3%	4.0%	3.5%	3.4%	3.4%	3.4%	3.1%	3.3%	4.2%	3.9%	4.0%	3.9%	2.8%	2.5%	2.4%	3.8%	3.0%
3	PM2.5	Particulate Matter < 2.5 µm	17.0%	18.4%	18.2%	13.0%	14.0%	14.9%	15.5%	15.8%	16.5%	15.1%	14.0%	14.1%	13.9%	15.2%	17.0%	17.9%	18.1%	17.7%	17.3%
4	PM10	Particulate Matter < 10 µm	25.1%	27.6%	27.2%	17.9%	19.5%	21.2%	22.3%	22.9%	24.1%	21.6%	19.9%	20.0%	19.6%	21.8%	25.0%	26.8%	27.1%	26.1%	25.4%
5	PAH	Polycyclic Aromatic Hydrocarbons	2.6%	2.2%	2.2%	4.1%	3.7%	3.3%	3.1%	3.0%	2.7%	3.2%	3.6%	3.3%	3.7%	3.1%	2.7%	2.4%	2.3%	2.4%	2.5%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	8.9%	8.3%	8.4%	10.1%	9.7%	9.3%	9.1%	8.9%	8.7%	9.3%	10.0%	10.1%	10.1%	9.6%	9.2%	8.8%	8.6%	8.2%	8.8%
8	7440-38-2	Arsenic	1.5%	1.6%	1.6%	1.2%	1.3%	1.4%	1.4%	1.5%	1.5%	1.4%	1.4%	1.4%	1.3%	1.4%	1.4%	1.5%	1.5%	1.5%	1.5%
9	7440-43-9	Cadmium	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
10	Cr III	Chromium III	0.3%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
13	DioxFur	Dioxins and Furans	2.2%	1.8%	1.8%	3.5%	3.3%	2.9%	2.7%	2.5%	2.3%	2.9%	3.0%	2.9%	3.2%	2.7%	2.3%	2.0%	2.0%	2.0%	2.1%
14	7647-01-0	Hydrogen Chloride	4.8%	4.0%	4.0%	7.0%	6.9%	6.2%	5.6%	5.3%	4.7%	6.0%	5.7%	6.0%	6.1%	5.3%	4.8%	4.4%	4.3%	4.3%	4.5%
15	7440-41-7	Beryllium	13.3%	14.5%	14.5%	11.0%	11.6%	12.5%	13.0%	13.4%	14.1%	12.6%	12.2%	12.9%	11.5%	12.9%	13.1%	13.6%	13.8%	13.8%	14.0%
16	7440-50-8	Copper	4.8%	5.2%	5.2%	3.9%	4.2%	4.5%	4.6%	4.8%	5.0%	4.5%	4.4%	4.6%	4.1%	4.6%	4.7%	4.9%	4.9%	4.9%	5.0%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Chronic HI - Proposed (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7446-09-5	Sulphur Dioxide	13.9%	11.8%	11.9%	20.0%	18.0%	16.5%	15.8%	15.2%	14.2%	16.5%	18.8%	17.5%	19.1%	16.6%	14.3%	12.6%	12.1%	12.6%	13.1%
2	10102-44-0	Nitrogen Dioxide	2.8%	2.1%	2.1%	3.9%	3.4%	3.3%	3.2%	3.2%	2.9%	3.2%	4.0%	3.7%	3.8%	3.7%	2.6%	2.3%	2.2%	3.5%	2.8%
3	PM2.5	Particulate Matter < 2.5 µm	23.4%	25.3%	25.0%	17.8%	19.3%	20.5%	21.1%	21.6%	22.5%	20.5%	18.6%	18.9%	18.6%	20.4%	23.3%	24.7%	25.1%	24.2%	23.7%
4	PM10	Particulate Matter < 10 µm	23.4%	25.3%	25.0%	17.8%	19.3%	20.5%	21.1%	21.6%	22.5%	20.5%	18.6%	18.9%	18.6%	20.4%	23.3%	24.7%	25.1%	24.2%	23.7%
5	PAH	Polycyclic Aromatic Hydrocarbons	2.5%	2.0%	2.0%	3.9%	3.5%	3.1%	3.0%	2.9%	2.6%	3.1%	3.5%	3.3%	3.6%	3.1%	2.5%	2.2%	2.1%	2.3%	2.3%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	8.4%	7.6%	7.7%	9.9%	9.4%	8.9%	8.7%	8.4%	8.2%	8.9%	9.7%	9.8%	9.8%	9.1%	8.6%	8.1%	7.9%	7.6%	8.1%
8	7440-38-2	Arsenic	1.4%	1.5%	1.5%	1.2%	1.3%	1.3%	1.3%	1.4%	1.4%	1.3%	1.3%	1.3%	1.2%	1.3%	1.3%	1.4%	1.4%	1.4%	1.4%
9	7440-43-9	Cadmium	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
10	Cr III	Chromium III	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%
13	DioxFur	Dioxins and Furans	2.1%	1.7%	1.7%	3.3%	3.1%	2.7%	2.6%	2.5%	2.2%	2.9%	3.1%	2.9%	3.2%	2.7%	2.2%	1.9%	1.8%	1.8%	2.0%
14	7647-01-0	Hydrogen Chloride	4.5%	3.7%	3.7%	6.6%	6.4%	5.7%	5.5%	5.2%	4.6%	5.9%	6.0%	6.1%	6.3%	5.5%	4.5%	4.1%	3.9%	3.9%	4.2%
15	7440-41-7	Beryllium	12.4%	13.3%	13.4%	10.9%	11.5%	12.1%	12.3%	12.6%	13.1%	11.9%	11.4%	12.2%	10.9%	11.9%	12.2%	12.6%	12.8%	12.8%	13.0%
16	7440-50-8	Copper	4.4%	4.8%	4.8%	3.9%	4.1%	4.3%	4.4%	4.5%	4.7%	4.2%	4.1%	4.4%	3.9%	4.3%	4.4%	4.5%	4.6%	4.6%	4.7%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B4a: Contribution to Chronic Hazard Index for each Receptor (%)

Contribution to Chronic HI - Baseline (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7446-09-5	Sulphur Dioxide	16.3%	19.6%	13.8%	13.5%	15.0%	15.1%	15.1%	15.3%	14.0%	13.4%	13.2%	13.8%	14.0%	14.2%
2	10102-44-0	Nitrogen Dioxide	3.8%	3.3%	2.7%	2.6%	2.9%	3.0%	3.1%	3.2%	2.5%	2.4%	2.4%	2.6%	2.6%	2.8%
3	PM2.5	Particulate Matter < 2.5 µm	16.6%	14.9%	18.0%	18.2%	17.2%	17.1%	17.1%	16.9%	18.0%	18.3%	18.4%	17.9%	17.7%	17.8%
4	PM10	Particulate Matter < 10 µm	23.9%	21.2%	26.5%	26.9%	25.1%	25.0%	24.9%	24.7%	26.7%	27.2%	27.5%	26.7%	26.4%	26.2%
5	PAH	Polycyclic Aromatic Hydrocarbons	2.8%	3.3%	2.3%	2.3%	2.5%	2.5%	2.5%	2.6%	2.3%	2.2%	2.2%	2.3%	2.3%	2.4%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	9.0%	9.4%	8.1%	8.0%	8.9%	8.8%	8.8%	8.8%	8.3%	8.1%	7.9%	8.5%	8.6%	8.3%
8	7440-38-2	Arsenic	1.4%	1.4%	1.6%	1.6%	1.5%	1.5%	1.5%	1.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
9	7440-43-9	Cadmium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
10	Cr III	Chromium III	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
13	DioxFur	Dioxins and Furans	2.3%	3.0%	2.0%	1.9%	2.1%	2.1%	2.1%	2.2%	2.0%	1.9%	1.8%	1.9%	1.9%	2.0%
14	7647-01-0	Hydrogen Chloride	5.0%	6.2%	4.3%	4.1%	4.5%	4.6%	4.6%	4.6%	4.2%	4.0%	4.0%	4.1%	4.2%	4.3%
15	7440-41-7	Beryllium	13.1%	12.3%	14.5%	14.6%	14.0%	14.1%	14.1%	14.1%	14.4%	14.6%	14.7%	14.4%	14.4%	14.3%
16	7440-50-8	Copper	4.7%	4.4%	5.2%	5.2%	5.0%	5.1%	5.0%	5.0%	5.1%	5.2%	5.3%	5.2%	5.2%	5.1%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Chronic HI - Proposed (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7446-09-5	Sulphur Dioxide	14.2%	17.0%	12.3%	12.0%	13.4%	13.3%	13.5%	13.6%	12.3%	12.0%	11.7%	12.3%	12.5%	12.6%
2	10102-44-0	Nitrogen Dioxide	3.5%	3.1%	2.5%	2.4%	2.7%	2.8%	2.9%	3.0%	2.3%	2.2%	2.2%	2.4%	2.4%	2.5%
3	PM2.5	Particulate Matter < 2.5 µm	22.7%	20.2%	24.4%	24.9%	23.4%	23.4%	23.2%	23.1%	24.7%	25.0%	25.3%	24.6%	24.4%	24.3%
4	PM10	Particulate Matter < 10 µm	22.7%	20.2%	24.4%	24.9%	23.4%	23.4%	23.2%	23.1%	24.7%	25.0%	25.3%	24.6%	24.4%	24.3%
5	PAH	Polycyclic Aromatic Hydrocarbons	2.6%	3.2%	2.2%	2.1%	2.3%	2.3%	2.4%	2.4%	2.2%	2.1%	2.0%	2.1%	2.2%	2.2%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	8.4%	9.1%	7.6%	7.4%	8.3%	8.2%	8.3%	8.3%	7.7%	7.5%	7.3%	7.8%	7.9%	7.7%
8	7440-38-2	Arsenic	1.4%	1.3%	1.5%	1.5%	1.4%	1.4%	1.4%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
9	7440-43-9	Cadmium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
10	Cr III	Chromium III	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.3%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
13	DioxFur	Dioxins and Furans	2.1%	3.0%	1.9%	1.8%	2.0%	2.0%	2.0%	2.0%	1.8%	1.8%	1.7%	1.8%	1.8%	1.9%
14	7647-01-0	Hydrogen Chloride	4.5%	6.2%	4.1%	3.9%	4.2%	4.2%	4.3%	4.3%	3.9%	3.8%	3.7%	3.8%	3.9%	4.0%
15	7440-41-7	Beryllium	12.5%	11.7%	13.3%	13.4%	13.1%	13.2%	13.1%	13.2%	13.3%	13.4%	13.5%	13.3%	13.3%	13.3%
16	7440-50-8	Copper	4.5%	4.2%	4.8%	4.8%	4.7%	4.7%	4.7%	4.7%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B4b: Contribution to Chronic Hazard Index for each Receptor (%)

Contribution to Chronic HI - Baseline (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7446-09-5	Sulphur Dioxide	38.0%	37.1%	42.4%	39.4%	40.0%	41.2%	38.0%	42.0%	41.0%	40.9%	39.6%	39.5%	39.5%	41.9%	40.8%	40.6%	41.2%	40.9%	41.3%
2	10102-44-0	Nitrogen Dioxide	17.9%	9.5%	9.2%	11.1%	9.0%	10.4%	9.3%	8.5%	7.9%	7.9%	8.2%	7.9%	8.1%	10.1%	8.0%	8.1%	7.6%	7.1%	7.8%
3	PM2.5	Particulate Matter < 2.5 µm	1.9%	5.7%	3.4%	3.3%	4.0%	2.8%	4.2%	3.6%	4.5%	4.4%	5.6%	5.7%	5.7%	2.7%	4.6%	4.8%	4.4%	4.8%	4.3%
4	PM10	Particulate Matter < 10 µm	0.7%	6.1%	3.0%	2.8%	3.4%	1.8%	4.4%	2.4%	3.6%	3.4%	5.6%	5.8%	5.8%	1.7%	3.8%	4.2%	3.3%	3.7%	3.3%
5	PAH	Polycyclic Aromatic Hydrocarbons	6.8%	6.4%	7.2%	6.8%	6.8%	7.1%	6.5%	7.4%	7.2%	7.1%	6.8%	6.7%	6.8%	7.3%	7.0%	7.0%	7.0%	6.9%	7.1%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	17.6%	16.8%	17.6%	18.4%	17.5%	18.2%	19.7%	16.1%	15.5%	15.5%	15.3%	15.2%	15.3%	17.8%	15.6%	15.5%	15.4%	14.9%	15.6%
8	7440-38-2	Arsenic	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7440-43-9	Cadmium	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
10	Cr III	Chromium III	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	DioxFur	Dioxins and Furans	5.3%	5.7%	6.1%	5.7%	6.1%	6.0%	5.5%	6.3%	6.4%	6.5%	6.1%	6.3%	6.2%	6.1%	6.5%	6.4%	6.8%	6.9%	6.6%
14	7647-01-0	Hydrogen Chloride	10.9%	11.9%	10.0%	11.5%	12.3%	11.6%	11.4%	12.8%	13.0%	13.4%	11.8%	11.9%	11.7%	11.3%	12.8%	12.6%	13.4%	13.7%	13.0%
15	7440-41-7	Beryllium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
16	7440-50-8	Copper	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Chronic HI - Proposed (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19
1	7446-09-5	Sulphur Dioxide	36.8%	34.0%	41.2%	37.1%	37.2%	38.5%	36.5%	39.0%	37.5%	37.5%	35.7%	35.5%	35.6%	39.2%	36.8%	36.6%	36.9%	36.8%	37.5%
2	10102-44-0	Nitrogen Dioxide	19.5%	9.8%	9.7%	11.6%	9.7%	10.5%	9.7%	9.1%	8.4%	8.7%	8.2%	7.9%	8.1%	10.2%	8.2%	8.3%	7.9%	7.6%	8.2%
3	PM2.5	Particulate Matter < 2.5 µm	0.3%	6.3%	3.0%	3.0%	3.5%	2.1%	4.2%	2.5%	3.8%	3.6%	6.0%	6.2%	6.2%	2.0%	4.1%	4.5%	3.7%	4.0%	3.6%
4	PM10	Particulate Matter < 10 µm	0.3%	6.3%	3.0%	3.0%	3.5%	2.1%	4.2%	2.5%	3.8%	3.6%	6.0%	6.2%	6.2%	2.0%	4.1%	4.5%	3.7%	4.0%	3.6%
5	PAH	Polycyclic Aromatic Hydrocarbons	7.1%	6.7%	7.5%	7.1%	7.2%	7.5%	6.7%	8.1%	7.8%	7.7%	7.2%	7.1%	7.2%	7.7%	7.5%	7.5%	7.6%	7.6%	7.6%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	19.0%	17.6%	18.7%	19.3%	18.7%	18.8%	20.7%	17.6%	16.9%	17.2%	16.0%	16.0%	16.0%	18.4%	16.6%	16.4%	16.6%	16.4%	16.8%
8	7440-38-2	Arsenic	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7440-43-9	Cadmium	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
10	Cr III	Chromium III	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	DioxFur	Dioxins and Furans	5.3%	5.9%	6.1%	5.9%	6.4%	6.5%	5.6%	6.7%	6.9%	6.8%	6.7%	6.8%	6.7%	6.6%	7.2%	7.1%	7.5%	7.5%	7.3%
14	7647-01-0	Hydrogen Chloride	10.7%	12.4%	9.6%	11.9%	12.7%	12.9%	11.6%	13.4%	13.8%	13.8%	13.2%	13.2%	13.0%	12.7%	14.3%	14.0%	15.1%	15.1%	14.3%
15	7440-41-7	Beryllium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
16	7440-50-8	Copper	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B4b: Contribution to Chronic Hazard Index for each Receptor (%)

Contribution to Chronic HI - Baseline (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7446-09-5	Sulphur Dioxide	40.1%	40.2%	39.6%	41.5%	38.1%	39.5%	40.5%	38.3%	39.0%	39.2%	40.3%	38.0%	37.9%	39.3%	38.6%	41.0%	40.3%	38.2%	39.1%
2	10102-44-0	Nitrogen Dioxide	9.3%	9.1%	9.7%	10.3%	10.3%	12.1%	7.8%	9.8%	9.8%	9.6%	11.0%	10.6%	10.7%	10.8%	14.6%	7.4%	8.2%	10.2%	11.1%
3	PM2.5	Particulate Matter < 2.5 µm	4.5%	4.5%	4.6%	2.4%	4.4%	2.1%	4.7%	4.2%	3.2%	2.8%	1.9%	4.1%	3.8%	1.6%	1.8%	4.6%	4.5%	4.0%	2.9%
4	PM10	Particulate Matter < 10 µm	4.0%	3.9%	4.3%	0.8%	4.3%	1.1%	4.3%	4.4%	2.8%	2.2%	0.7%	4.2%	3.9%	0.7%	0.7%	4.0%	3.8%	4.3%	2.3%
5	PAH	Polycyclic Aromatic Hydrocarbons	6.9%	6.9%	6.8%	7.1%	6.6%	6.8%	6.8%	6.6%	6.6%	6.6%	6.9%	6.5%	6.5%	6.7%	6.8%	6.9%	6.9%	6.6%	6.7%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	16.2%	16.2%	16.3%	18.0%	17.9%	19.8%	16.2%	19.4%	20.5%	21.2%	20.4%	19.0%	19.6%	22.7%	19.9%	15.9%	16.2%	19.9%	19.8%
8	7440-38-2	Arsenic	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7440-43-9	Cadmium	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
10	Cr III	Chromium III	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	DioxFur	Dioxins and Furans	6.2%	6.2%	6.0%	6.3%	5.7%	5.7%	6.4%	5.5%	5.6%	5.6%	5.8%	5.5%	5.4%	5.5%	5.3%	6.6%	6.4%	5.3%	5.6%
14	7647-01-0	Hydrogen Chloride	11.9%	12.1%	11.8%	12.5%	11.7%	12.0%	12.3%	11.0%	11.6%	11.7%	11.9%	11.2%	11.3%	11.7%	11.4%	12.6%	12.9%	10.5%	11.6%
15	7440-41-7	Beryllium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
16	7440-50-8	Copper	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Chronic HI - Proposed (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 20	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38
1	7446-09-5	Sulphur Dioxide	36.6%	36.6%	36.1%	38.6%	35.5%	37.8%	37.0%	36.3%	37.2%	38.1%	38.5%	35.8%	36.2%	38.6%	36.5%	38.1%	36.5%	36.6%	37.2%
2	10102-44-0	Nitrogen Dioxide	9.4%	9.2%	9.7%	10.6%	10.8%	12.8%	8.2%	9.8%	10.0%	9.9%	11.1%	10.7%	10.9%	11.3%	15.0%	8.4%	8.4%	10.3%	11.3%
3	PM2.5	Particulate Matter < 2.5 µm	4.3%	4.3%	4.6%	1.1%	4.6%	1.1%	4.6%	4.7%	3.0%	1.9%	1.2%	4.5%	3.7%	0.6%	1.7%	4.2%	4.1%	4.3%	2.5%
4	PM10	Particulate Matter < 10 µm	4.3%	4.3%	4.6%	1.1%	4.6%	1.1%	4.6%	4.7%	3.0%	1.9%	1.2%	4.5%	3.7%	0.6%	1.7%	4.2%	4.1%	4.3%	2.5%
5	PAH	Polycyclic Aromatic Hydrocarbons	7.3%	7.3%	7.2%	7.6%	6.8%	7.1%	7.3%	6.7%	6.9%	6.9%	7.2%	6.8%	6.8%	6.9%	6.9%	7.3%	7.4%	6.7%	7.0%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	17.0%	17.0%	17.0%	18.9%	18.8%	20.9%	17.2%	19.8%	21.1%	22.1%	21.2%	19.5%	20.3%	23.5%	20.6%	17.5%	17.2%	20.3%	20.5%
8	7440-38-2	Arsenic	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7440-43-9	Cadmium	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
10	Cr III	Chromium III	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	DioxFur	Dioxins and Furans	6.8%	6.9%	6.6%	6.9%	5.9%	5.9%	6.9%	5.6%	5.8%	5.9%	6.1%	5.7%	5.7%	5.6%	5.3%	6.8%	7.1%	5.5%	5.9%
14	7647-01-0	Hydrogen Chloride	13.3%	13.5%	13.1%	14.0%	12.1%	12.4%	13.3%	11.3%	12.1%	12.3%	12.5%	11.7%	11.8%	11.9%	11.2%	12.4%	14.2%	11.0%	12.1%
15	7440-41-7	Beryllium	0.4%	0.4%	0.4%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.4%	0.4%
16	7440-50-8	Copper	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B4b: Contribution to Chronic Hazard Index for each Receptor (%)

Contribution to Chronic HI - Baseline (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7446-09-5	Sulphur Dioxide	40.2%	40.1%	40.9%	40.9%	41.6%	41.6%	41.3%	41.1%	40.6%	41.1%	41.5%	41.5%	42.1%	39.9%	39.9%	35.7%	39.9%	38.4%	41.0%
2	10102-44-0	Nitrogen Dioxide	11.1%	11.4%	11.6%	8.5%	8.4%	9.4%	10.2%	10.8%	11.5%	9.3%	10.6%	10.7%	9.5%	11.2%	9.8%	9.5%	10.7%	15.5%	12.6%
3	PM2.5	Particulate Matter < 2.5 µm	2.0%	1.0%	0.2%	4.6%	3.5%	2.9%	2.7%	2.5%	2.3%	3.3%	3.0%	1.9%	3.0%	3.5%	2.8%	5.4%	1.1%	2.0%	0.4%
4	PM10	Particulate Matter < 10 µm	0.8%	-0.3%	-1.5%	4.1%	2.2%	1.5%	1.4%	1.3%	1.3%	2.1%	2.3%	0.2%	2.0%	2.8%	2.2%	6.5%	-0.3%	1.1%	-1.6%
5	PAH	Polycyclic Aromatic Hydrocarbons	6.9%	6.8%	7.0%	7.3%	7.2%	7.2%	7.2%	7.2%	7.1%	7.1%	7.2%	7.1%	7.2%	6.8%	6.8%	6.0%	6.7%	6.7%	7.0%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	20.2%	22.8%	23.3%	15.4%	16.3%	16.9%	17.4%	17.7%	18.9%	17.1%	17.5%	18.8%	17.2%	17.9%	20.4%	20.0%	22.7%	19.1%	21.5%
8	7440-38-2	Arsenic	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7440-43-9	Cadmium	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
10	Cr III	Chromium III	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	DioxFur	Dioxins and Furans	5.8%	5.5%	5.6%	6.1%	6.6%	6.4%	6.2%	6.1%	5.7%	6.3%	5.9%	6.2%	6.3%	5.8%	5.7%	5.1%	5.7%	5.3%	5.9%
14	7647-01-0	Hydrogen Chloride	11.9%	11.7%	11.8%	12.0%	13.3%	13.1%	12.6%	12.3%	11.5%	12.8%	10.9%	12.6%	11.6%	11.0%	11.4%	10.8%	12.4%	11.0%	12.3%
15	7440-41-7	Beryllium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%
16	7440-50-8	Copper	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Chronic HI - Proposed (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 39	Receptor 40	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57
1	7446-09-5	Sulphur Dioxide	38.6%	39.8%	40.5%	37.7%	38.4%	38.6%	38.3%	38.2%	38.3%	37.8%	38.7%	38.9%	39.1%	37.0%	38.2%	34.0%	39.0%	36.9%	39.9%
2	10102-44-0	Nitrogen Dioxide	11.4%	11.8%	12.0%	9.0%	9.3%	10.4%	10.6%	11.3%	11.7%	9.6%	10.4%	10.9%	9.7%	10.9%	9.9%	9.6%	11.0%	16.2%	13.3%
3	PM2.5	Particulate Matter < 2.5 µm	0.9%	-0.8%	-1.6%	4.5%	2.3%	1.5%	1.7%	1.6%	1.6%	2.4%	2.6%	0.5%	2.3%	3.5%	2.3%	6.5%	-0.1%	1.0%	-1.6%
4	PM10	Particulate Matter < 10 µm	0.9%	-0.8%	-1.6%	4.5%	2.3%	1.5%	1.7%	1.6%	1.6%	2.4%	2.6%	0.5%	2.3%	3.5%	2.3%	6.5%	-0.1%	1.0%	-1.6%
5	PAH	Polycyclic Aromatic Hydrocarbons	7.3%	7.2%	7.3%	7.8%	7.8%	7.8%	7.7%	7.6%	7.4%	7.6%	7.6%	7.6%	7.7%	7.1%	7.1%	6.1%	7.0%	7.0%	7.4%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	21.1%	23.8%	24.2%	16.6%	17.9%	18.4%	18.5%	18.7%	19.6%	18.1%	18.0%	19.7%	18.0%	18.2%	21.0%	20.3%	23.8%	20.0%	22.7%
8	7440-38-2	Arsenic	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7440-43-9	Cadmium	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
10	Cr III	Chromium III	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	DioxFur	Dioxins and Furans	6.1%	5.8%	5.9%	6.4%	7.0%	6.8%	6.8%	6.5%	6.2%	6.9%	6.6%	6.9%	6.9%	6.4%	6.0%	5.2%	5.9%	5.6%	6.2%
14	7647-01-0	Hydrogen Chloride	12.6%	12.2%	12.4%	12.6%	14.0%	13.8%	13.8%	13.3%	12.5%	14.1%	12.4%	14.0%	13.0%	12.4%	12.1%	11.0%	12.6%	11.4%	12.8%
15	7440-41-7	Beryllium	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.5%	0.4%	0.4%	0.5%	0.4%	0.5%	0.5%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%
16	7440-50-8	Copper	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B4b: Contribution to Chronic Hazard Index for each Receptor (%)

Contribution to Chronic HI - Baseline (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7446-09-5	Sulphur Dioxide	40.8%	40.6%	39.2%	39.2%	40.3%	40.1%	40.2%	40.5%	39.5%	40.0%	39.7%	40.9%	40.8%	39.4%
2	10102-44-0	Nitrogen Dioxide	13.1%	8.7%	12.3%	12.0%	11.6%	11.9%	12.4%	12.5%	11.0%	11.4%	11.9%	12.1%	11.9%	11.9%
3	PM2.5	Particulate Matter < 2.5 µm	1.0%	3.9%	2.2%	2.3%	1.4%	1.6%	1.3%	1.3%	2.5%	1.8%	1.9%	0.4%	0.5%	2.4%
4	PM10	Particulate Matter < 10 µm	-0.9%	2.9%	1.2%	1.4%	0.1%	0.3%	-0.1%	-0.2%	1.8%	0.8%	0.9%	-1.3%	-1.1%	1.4%
5	PAH	Polycyclic Aromatic Hydrocarbons	7.1%	7.0%	6.7%	6.8%	6.9%	6.8%	6.9%	6.9%	6.7%	6.8%	6.8%	7.0%	7.0%	6.8%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	19.8%	16.7%	19.9%	20.1%	21.2%	20.8%	20.9%	20.5%	20.5%	21.3%	20.9%	22.7%	22.5%	20.1%
8	7440-38-2	Arsenic	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7440-43-9	Cadmium	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
10	Cr III	Chromium III	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	DioxFur	Dioxins and Furans	5.9%	6.4%	5.6%	5.6%	5.8%	5.7%	5.7%	5.8%	5.6%	5.6%	5.6%	5.6%	5.6%	5.6%
14	7647-01-0	Hydrogen Chloride	12.2%	12.8%	11.8%	11.6%	11.8%	11.8%	11.8%	11.8%	11.4%	11.5%	11.4%	11.7%	11.8%	11.4%
15	7440-41-7	Beryllium	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
16	7440-50-8	Copper	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Chronic HI - Proposed (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 58	Receptor 59	Receptor 60	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	7446-09-5	Sulphur Dioxide	39.8%	37.1%	37.3%	37.6%	39.1%	38.9%	38.9%	39.2%	38.2%	38.8%	38.4%	40.4%	39.9%	37.9%
2	10102-44-0	Nitrogen Dioxide	14.3%	9.0%	12.4%	12.4%	12.0%	12.4%	12.8%	13.0%	11.3%	11.7%	12.2%	12.6%	12.4%	12.3%
3	PM2.5	Particulate Matter < 2.5 µm	-1.4%	3.3%	1.4%	1.5%	0.1%	0.1%	-0.1%	-0.3%	1.7%	0.8%	0.9%	-1.6%	-1.0%	1.4%
4	PM10	Particulate Matter < 10 µm	-1.4%	3.3%	1.4%	1.5%	0.1%	0.1%	-0.1%	-0.3%	1.7%	0.8%	0.9%	-1.6%	-1.0%	1.4%
5	PAH	Polycyclic Aromatic Hydrocarbons	7.6%	7.5%	7.1%	7.0%	7.2%	7.2%	7.2%	7.3%	7.0%	7.1%	7.1%	7.3%	7.2%	7.1%
6	7439-97-6	Mercury	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7	7782-41-4	Fluorine	21.5%	17.7%	20.5%	20.9%	22.1%	21.9%	21.7%	21.5%	21.3%	22.0%	21.7%	23.7%	23.3%	21.0%
8	7440-38-2	Arsenic	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
9	7440-43-9	Cadmium	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
10	Cr III	Chromium III	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
11	Cr IV	Chromium IV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
12	7439-92-1	Lead	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13	DioxFur	Dioxins and Furans	6.1%	7.0%	6.1%	5.9%	6.0%	6.0%	6.1%	6.1%	5.8%	5.9%	5.8%	5.9%	5.8%	5.9%
14	7647-01-0	Hydrogen Chloride	12.5%	14.2%	12.9%	12.3%	12.4%	12.3%	12.6%	12.4%	11.9%	12.0%	12.0%	12.3%	12.2%	12.0%
15	7440-41-7	Beryllium	0.4%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
16	7440-50-8	Copper	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
17	7440-02-0	Nickel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
18	7440-42-8	Boron	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19	7664-41-7	Ammonia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
20	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
21	98-82-8	Cumene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
22	108-88-3	Toluene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
23	1330-20-7	Xylenes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
24	100-41-4	Ethylbenzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B5a: Incremental Carcinogenic Risk for each Receptor

Incremental Carcinogenic Risk - Baseline

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20
1	PAH	Polycyclic Aromatic Hydrocarbons	4.37E-07	5.73E-07	6.56E-07	5.61E-07	6.74E-07	5.85E-07	6.14E-07	7.07E-07	7.40E-07	7.54E-07	6.22E-07	6.62E-07	6.34E-07	5.01E-07	6.27E-07	6.26E-07	6.99E-07	8.30E-07	7.15E-07	5.14E-07
2	7440-38-2	Arsenic	5.86E-07	4.97E-07	4.04E-07	5.82E-07	5.67E-07	5.04E-07	6.17E-07	3.75E-07	3.85E-07	4.00E-07	3.62E-07	3.68E-07	3.65E-07	3.42E-07	3.18E-07	3.37E-07	3.27E-07	3.65E-07	3.34E-07	3.17E-07
3	7440-43-9	Cadmium	1.17E-07	1.05E-07	9.16E-08	1.20E-07	1.21E-07	1.07E-07	1.29E-07	8.47E-08	8.80E-08	9.12E-08	8.17E-08	8.41E-08	8.27E-08	7.50E-08	7.37E-08	7.71E-08	7.74E-08	8.78E-08	7.89E-08	7.09E-08
4	Cr IV	Chromium IV	6.66E-07	5.99E-07	5.22E-07	6.82E-07	6.85E-07	6.11E-07	7.18E-07	5.26E-07	5.33E-07	5.47E-07	4.79E-07	4.86E-07	4.81E-07	4.39E-07	4.36E-07	4.54E-07	4.52E-07	5.08E-07	4.66E-07	4.12E-07
5	7439-92-1	Lead	1.44E-08	1.22E-08	1.00E-08	1.43E-08	1.40E-08	1.24E-08	1.52E-08	9.34E-09	9.60E-09	9.96E-09	8.99E-09	9.13E-09	9.06E-09	8.46E-09	7.92E-09	8.38E-09	8.15E-09	9.13E-09	8.33E-09	7.86E-09
6	7440-41-7	Beryllium	2.01E-06	1.69E-06	1.36E-06	1.98E-06	1.93E-06	1.71E-06	2.10E-06	1.26E-06	1.30E-06	1.35E-06	1.22E-06	1.24E-06	1.23E-06	1.15E-06	1.07E-06	1.14E-06	1.10E-06	1.23E-06	1.12E-06	1.07E-06
7	7440-02-0	Nickel	1.15E-07	1.11E-07	9.77E-08	1.21E-07	1.27E-07	1.11E-07	1.29E-07	1.00E-07	1.05E-07	1.09E-07	9.34E-08	9.71E-08	9.45E-08	8.07E-08	8.80E-08	9.06E-08	9.51E-08	1.11E-07	9.62E-08	7.94E-08
8	71-43-2	Benzene	2.13E-10	2.94E-10	3.24E-10	2.77E-10	3.45E-10	2.92E-10	3.02E-10	3.68E-10	3.93E-10	4.05E-10	3.26E-10	3.50E-10	3.32E-10	2.50E-10	3.35E-10	3.32E-10	3.81E-10	4.59E-10	3.84E-10	2.66E-10
		TOTAL	**3.94E-06**	**3.59E-06**	**3.14E-06**	**4.07E-06**	**4.12E-06**	**3.64E-06**	**4.32E-06**	**3.07E-06**	**3.16E-06**	**3.26E-06**	**2.87E-06**	**2.94E-06**	**2.90E-06**	**2.60E-06**	**2.62E-06**	**2.73E-06**	**2.76E-06**	**3.14E-06**	**2.82E-06**	**2.47E-06**

Incremental Carcinogenic Risk - Proposed

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20
1	PAH	Polycyclic Aromatic Hydrocarbons	4.21E-07	5.71E-07	6.25E-07	5.58E-07	6.63E-07	6.11E-07	6.01E-07	6.84E-07	7.28E-07	7.10E-07	6.57E-07	6.96E-07	6.67E-07	5.26E-07	6.54E-07	6.54E-07	7.30E-07	8.32E-07	7.29E-07	5.40E-07
2	7440-38-2	Arsenic	5.86E-07	4.97E-07	4.04E-07	5.82E-07	5.67E-07	5.04E-07	6.17E-07	3.75E-07	3.85E-07	3.99E-07	3.63E-07	3.68E-07	3.65E-07	3.42E-07	3.19E-07	3.37E-07	3.27E-07	3.65E-07	3.34E-07	3.18E-07
3	7440-43-9	Cadmium	1.17E-07	1.05E-07	9.07E-08	1.20E-07	1.21E-07	1.07E-07	1.29E-07	8.40E-08	8.76E-08	8.99E-08	8.27E-08	8.52E-08	8.37E-08	7.57E-08	7.45E-08	7.80E-08	7.83E-08	8.79E-08	7.93E-08	7.17E-08
4	Cr IV	Chromium IV	6.64E-07	5.99E-07	5.19E-07	6.82E-07	6.84E-07	6.14E-07	7.17E-07	5.24E-07	5.32E-07	5.42E-07	4.83E-07	4.89E-07	4.85E-07	4.42E-07	4.39E-07	4.57E-07	4.56E-07	5.08E-07	4.67E-07	4.15E-07
5	7439-92-1	Lead	1.44E-08	1.22E-08	1.00E-08	1.43E-08	1.40E-08	1.24E-08	1.52E-08	9.32E-09	9.59E-09	9.93E-09	9.02E-09	9.16E-09	9.08E-09	8.47E-09	7.94E-09	8.40E-09	8.18E-09	9.13E-09	8.34E-09	7.88E-09
6	7440-41-7	Beryllium	2.01E-06	1.69E-06	1.36E-06	1.98E-06	1.93E-06	1.71E-06	2.10E-06	1.26E-06	1.30E-06	1.35E-06	1.22E-06	1.24E-06	1.23E-06	1.16E-06	1.07E-06	1.14E-06	1.10E-06	1.23E-06	1.12E-06	1.07E-06
7	7440-02-0	Nickel	1.13E-07	1.10E-07	9.47E-08	1.21E-07	1.26E-07	1.13E-07	1.28E-07	9.81E-08	1.04E-07	1.05E-07	9.68E-08	1.00E-07	9.76E-08	8.31E-08	9.05E-08	9.33E-08	9.81E-08	1.11E-07	9.76E-08	8.20E-08
8	71-43-2	Benzene	2.01E-10	2.92E-10	3.02E-10	2.75E-10	3.37E-10	3.10E-10	2.94E-10	3.52E-10	3.84E-10	3.73E-10	3.50E-10	3.74E-10	3.55E-10	2.68E-10	3.53E-10	3.52E-10	4.03E-10	4.60E-10	3.94E-10	2.85E-10
		TOTAL	**3.92E-06**	**3.59E-06**	**3.10E-06**	**4.06E-06**	**4.10E-06**	**3.68E-06**	**4.31E-06**	**3.04E-06**	**3.15E-06**	**3.20E-06**	**2.92E-06**	**2.99E-06**	**2.94E-06**	**2.63E-06**	**2.66E-06**	**2.76E-06**	**2.80E-06**	**3.14E-06**	**2.84E-06**	**2.51E-06**

Table B5a: Incremental Carcinogenic Risk for each Receptor

Incremental Carcinogenic Risk - Baseline

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38	Receptor 39	Receptor 40
1	PAH	Polycyclic Aromatic Hydrocarbons	5.31E-07	4.85E-07	4.86E-07	6.11E-07	5.36E-07	7.63E-07	5.39E-07	5.87E-07	6.19E-07	5.24E-07	4.56E-07	4.64E-07	5.63E-07	4.08E-07	8.03E-07	7.47E-07	6.29E-07	4.64E-07	4.98E-07	5.84E-07
2	7440-38-2	Arsenic	3.23E-07	3.18E-07	3.34E-07	6.43E-07	6.14E-07	4.84E-07	4.89E-07	5.67E-07	6.26E-07	5.03E-07	3.94E-07	4.24E-07	6.66E-07	4.77E-07	4.47E-07	4.99E-07	7.11E-07	4.27E-07	4.73E-07	7.28E-07
3	7440-43-9	Cadmium	7.25E-08	7.03E-08	7.34E-08	1.33E-07	1.26E-07	1.08E-07	1.04E-07	1.19E-07	1.31E-07	1.06E-07	8.40E-08	8.98E-08	1.37E-07	9.74E-08	1.03E-07	1.10E-07	1.46E-07	9.01E-08	9.93E-08	1.49E-07
4	Cr IV	Chromium IV	4.19E-07	4.08E-07	4.23E-07	7.49E-07	7.04E-07	6.14E-07	5.84E-07	6.66E-07	7.27E-07	5.94E-07	4.76E-07	5.06E-07	7.57E-07	5.51E-07	5.79E-07	6.30E-07	8.19E-07	5.09E-07	5.60E-07	8.23E-07
5	7439-92-1	Lead	8.01E-09	7.87E-09	8.27E-09	1.58E-08	1.51E-08	1.20E-08	1.21E-08	1.39E-08	1.54E-08	1.24E-08	9.72E-09	1.05E-08	1.63E-08	1.17E-08	1.11E-08	1.23E-08	1.75E-08	1.05E-08	1.16E-08	1.79E-08
6	7440-41-7	Beryllium	1.09E-06	1.07E-06	1.13E-06	2.20E-06	2.10E-06	1.64E-06	1.66E-06	1.93E-06	2.13E-06	1.71E-06	1.34E-06	1.44E-06	2.27E-06	1.63E-06	1.51E-06	1.69E-06	2.42E-06	1.45E-06	1.61E-06	2.49E-06
7	7440-02-0	Nickel	8.17E-08	7.77E-08	8.00E-08	1.34E-07	1.25E-07	1.21E-07	1.05E-07	1.19E-07	1.30E-07	1.06E-07	8.59E-08	9.08E-08	1.33E-07	9.60E-08	1.19E-07	1.23E-07	1.43E-07	9.13E-08	1.00E-07	1.43E-07
8	71-43-2	Benzene	2.77E-10	2.50E-10	2.49E-10	3.06E-10	2.64E-10	4.02E-10	2.64E-10	2.87E-10	3.02E-10	2.57E-10	2.25E-10	2.28E-10	2.70E-10	1.97E-10	4.30E-10	3.95E-10	3.02E-10	2.28E-10	2.45E-10	2.79E-10
		TOTAL	**2.53E-06**	**2.44E-06**	**2.54E-06**	**4.48E-06**	**4.22E-06**	**3.74E-06**	**3.50E-06**	**4.00E-06**	**4.38E-06**	**3.56E-06**	**2.85E-06**	**3.03E-06**	**4.54E-06**	**3.27E-06**	**3.57E-06**	**3.81E-06**	**4.89E-06**	**3.04E-06**	**3.35E-06**	**4.93E-06**

Incremental Carcinogenic Risk - Proposed

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38	Receptor 39	Receptor 40
1	PAH	Polycyclic Aromatic Hydrocarbons	5.58E-07	5.11E-07	5.07E-07	6.06E-07	5.31E-07	7.72E-07	5.42E-07	5.92E-07	6.22E-07	5.29E-07	4.59E-07	4.66E-07	5.57E-07	4.00E-07	7.35E-07	7.75E-07	6.36E-07	4.67E-07	5.02E-07	5.86E-07
2	7440-38-2	Arsenic	3.24E-07	3.18E-07	3.35E-07	6.43E-07	6.14E-07	4.84E-07	4.89E-07	5.67E-07	6.26E-07	5.03E-07	3.94E-07	4.24E-07	6.66E-07	4.77E-07	4.46E-07	4.99E-07	7.11E-07	4.27E-07	4.73E-07	7.29E-07
3	7440-43-9	Cadmium	7.33E-08	7.10E-08	7.40E-08	1.33E-07	1.26E-07	1.09E-07	1.04E-07	1.20E-07	1.31E-07	1.06E-07	8.40E-08	8.99E-08	1.37E-07	9.72E-08	1.01E-07	1.11E-07	1.47E-07	9.02E-08	9.95E-08	1.49E-07
4	Cr IV	Chromium IV	4.22E-07	4.11E-07	4.26E-07	7.48E-07	7.04E-07	6.15E-07	5.85E-07	6.66E-07	7.28E-07	5.94E-07	4.77E-07	5.06E-07	7.56E-07	5.50E-07	5.71E-07	6.34E-07	8.19E-07	5.09E-07	5.61E-07	8.23E-07
5	7439-92-1	Lead	8.03E-09	7.89E-09	8.28E-09	1.58E-08	1.51E-08	1.20E-08	1.21E-08	1.39E-08	1.54E-08	1.24E-08	9.72E-09	1.05E-08	1.63E-08	1.17E-08	1.11E-08	1.24E-08	1.75E-08	1.05E-08	1.16E-08	1.79E-08
6	7440-41-7	Beryllium	1.09E-06	1.08E-06	1.13E-06	2.19E-06	2.10E-06	1.64E-06	1.66E-06	1.93E-06	2.13E-06	1.71E-06	1.34E-06	1.44E-06	2.27E-06	1.63E-06	1.50E-06	1.69E-06	2.42E-06	1.45E-06	1.61E-06	2.49E-06
7	7440-02-0	Nickel	8.43E-08	8.01E-08	8.20E-08	1.34E-07	1.24E-07	1.22E-07	1.05E-07	1.20E-07	1.30E-07	1.07E-07	8.62E-08	9.10E-08	1.32E-07	9.52E-08	1.12E-07	1.26E-07	1.44E-07	9.16E-08	1.01E-07	1.44E-07
8	71-43-2	Benzene	2.96E-10	2.68E-10	2.64E-10	3.02E-10	2.60E-10	4.08E-10	2.66E-10	2.91E-10	3.05E-10	2.61E-10	2.27E-10	2.29E-10	2.65E-10	1.92E-10	3.81E-10	4.15E-10	3.07E-10	2.30E-10	2.48E-10	2.80E-10
		TOTAL	**2.56E-06**	**2.48E-06**	**2.56E-06**	**4.48E-06**	**4.21E-06**	**3.75E-06**	**3.50E-06**	**4.01E-06**	**4.39E-06**	**3.56E-06**	**2.85E-06**	**3.03E-06**	**4.54E-06**	**3.26E-06**	**3.48E-06**	**3.85E-06**	**4.90E-06**	**3.05E-06**	**3.36E-06**	**4.94E-06**

Table B5a: Incremental Carcinogenic Risk for each Receptor

Incremental Carcinogenic Risk - Baseline

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57	Receptor 58	Receptor 59	Receptor 60
1	PAH	Polycyclic Aromatic Hydrocarbons	5.97E-07	6.37E-07	7.14E-07	6.30E-07	5.92E-07	5.55E-07	5.29E-07	6.50E-07	4.48E-07	4.75E-07	5.34E-07	4.30E-07	5.67E-07	5.94E-07	6.11E-07	2.80E-07	4.13E-07	3.59E-07	6.96E-07	5.25E-07
2	7440-38-2	Arsenic	7.38E-07	3.28E-07	4.33E-07	4.48E-07	4.69E-07	4.72E-07	5.15E-07	4.79E-07	2.94E-07	3.51E-07	3.20E-07	3.38E-07	5.23E-07	6.43E-07	6.96E-07	2.99E-07	4.40E-07	3.23E-07	4.92E-07	6.17E-07
3	7440-43-9	Cadmium	1.51E-07	7.47E-08	9.64E-08	9.70E-08	1.00E-07	9.96E-08	1.07E-07	1.04E-07	6.50E-08	7.63E-08	7.22E-08	7.30E-08	1.11E-07	1.34E-07	1.44E-07	6.17E-08	9.14E-08	6.81E-08	1.08E-07	1.26E-07
4	Cr IV	Chromium IV	8.35E-07	4.67E-07	5.67E-07	5.66E-07	5.79E-07	5.75E-07	6.13E-07	5.97E-07	3.83E-07	4.38E-07	4.20E-07	4.14E-07	6.21E-07	7.39E-07	7.92E-07	3.49E-07	5.07E-07	3.88E-07	6.17E-07	7.04E-07
5	7439-92-1	Lead	1.81E-08	8.17E-09	1.07E-08	1.11E-08	1.16E-08	1.16E-08	1.27E-08	1.18E-08	7.29E-09	8.67E-09	7.95E-09	8.33E-09	1.29E-08	1.58E-08	1.71E-08	7.35E-09	1.08E-08	7.96E-09	1.22E-08	1.51E-08
6	7440-41-7	Beryllium	2.52E-06	1.10E-06	1.46E-06	1.52E-06	1.59E-06	1.60E-06	1.75E-06	1.62E-06	9.93E-07	1.19E-06	1.08E-06	1.14E-06	1.78E-06	2.19E-06	2.37E-06	1.02E-06	1.50E-06	1.10E-06	1.67E-06	2.11E-06
7	7440-02-0	Nickel	1.45E-07	8.85E-08	1.11E-07	1.07E-07	1.07E-07	1.05E-07	1.09E-07	1.13E-07	7.01E-08	8.14E-08	8.00E-08	7.61E-08	1.11E-07	1.31E-07	1.40E-07	6.15E-08	9.05E-08	6.99E-08	1.18E-07	1.24E-07
8	71-43-2	Benzene	2.85E-10	3.30E-10	3.78E-10	3.28E-10	3.02E-10	2.81E-10	2.60E-10	3.37E-10	2.23E-10	2.41E-10	2.72E-10	2.14E-10	2.77E-10	2.88E-10	2.97E-10	1.36E-10	2.02E-10	1.78E-10	3.64E-10	2.57E-10
		TOTAL	**5.00E-06**	**2.71E-06**	**3.39E-06**	**3.38E-06**	**3.45E-06**	**3.42E-06**	**3.64E-06**	**3.58E-06**	**2.26E-06**	**2.62E-06**	**2.51E-06**	**2.48E-06**	**3.72E-06**	**4.45E-06**	**4.77E-06**	**2.08E-06**	**3.05E-06**	**2.31E-06**	**3.71E-06**	**4.22E-06**

Incremental Carcinogenic Risk - Proposed

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57	Receptor 58	Receptor 59	Receptor 60
1	PAH	Polycyclic Aromatic Hydrocarbons	6.00E-07	6.23E-07	6.86E-07	6.14E-07	6.06E-07	5.63E-07	5.45E-07	6.70E-07	4.80E-07	4.96E-07	5.60E-07	4.57E-07	5.75E-07	5.94E-07	6.02E-07	2.79E-07	4.11E-07	3.48E-07	7.21E-07	5.41E-07
2	7440-38-2	Arsenic	7.38E-07	3.28E-07	4.32E-07	4.47E-07	4.69E-07	4.72E-07	5.15E-07	4.79E-07	2.95E-07	3.51E-07	3.21E-07	3.38E-07	5.23E-07	6.43E-07	6.96E-07	2.99E-07	4.40E-07	3.23E-07	4.93E-07	6.17E-07
3	7440-43-9	Cadmium	1.51E-07	7.42E-08	9.56E-08	9.65E-08	1.01E-07	9.99E-08	1.08E-07	1.04E-07	6.60E-08	7.69E-08	7.30E-08	7.38E-08	1.11E-07	1.34E-07	1.44E-07	6.16E-08	9.13E-08	6.78E-08	1.08E-07	1.27E-07
4	Cr IV	Chromium IV	8.35E-07	4.65E-07	5.64E-07	5.64E-07	5.81E-07	5.76E-07	6.15E-07	5.99E-07	3.87E-07	4.40E-07	4.23E-07	4.17E-07	6.22E-07	7.39E-07	7.91E-07	3.49E-07	5.07E-07	3.86E-07	6.20E-07	7.06E-07
5	7439-92-1	Lead	1.81E-08	8.16E-09	1.07E-08	1.11E-08	1.16E-08	1.16E-08	1.27E-08	1.18E-08	7.31E-09	8.68E-09	7.97E-09	8.35E-09	1.29E-08	1.58E-08	1.71E-08	7.35E-09	1.08E-08	7.95E-09	1.22E-08	1.52E-08
6	7440-41-7	Beryllium	2.52E-06	1.10E-06	1.46E-06	1.52E-06	1.59E-06	1.60E-06	1.76E-06	1.63E-06	9.94E-07	1.19E-06	1.08E-06	1.15E-06	1.78E-06	2.19E-06	2.37E-06	1.02E-06	1.50E-06	1.10E-06	1.67E-06	2.11E-06
7	7440-02-0	Nickel	1.46E-07	8.71E-08	1.08E-07	1.06E-07	1.09E-07	1.06E-07	1.10E-07	1.15E-07	7.32E-08	8.35E-08	8.26E-08	7.87E-08	1.12E-07	1.31E-07	1.40E-07	6.14E-08	9.03E-08	6.88E-08	1.21E-07	1.26E-07
8	71-43-2	Benzene	2.87E-10	3.20E-10	3.59E-10	3.16E-10	3.12E-10	2.86E-10	2.71E-10	3.51E-10	2.45E-10	2.56E-10	2.91E-10	2.34E-10	2.83E-10	2.88E-10	2.90E-10	1.35E-10	2.00E-10	1.70E-10	3.82E-10	2.69E-10
		TOTAL	**5.01E-06**	**2.69E-06**	**3.36E-06**	**3.36E-06**	**3.47E-06**	**3.43E-06**	**3.66E-06**	**3.60E-06**	**2.30E-06**	**2.65E-06**	**2.55E-06**	**2.52E-06**	**3.73E-06**	**4.45E-06**	**4.76E-06**	**2.08E-06**	**3.05E-06**	**2.30E-06**	**3.74E-06**	**4.24E-06**

Table B5a: Incremental Carcinogenic Risk for each Receptor

Incremental Carcinogenic Risk - Baseline

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	PAH	Polycyclic Aromatic Hydrocarbons	5.69E-07	5.00E-07	4.59E-07	4.48E-07	4.23E-07	6.37E-07	6.46E-07	6.13E-07	5.14E-07	5.22E-07	5.25E-07
2	7440-38-2	Arsenic	6.88E-07	5.30E-07	4.86E-07	4.72E-07	4.38E-07	7.42E-07	7.91E-07	7.74E-07	6.07E-07	6.07E-07	5.97E-07
3	7440-43-9	Cadmium	1.40E-07	1.10E-07	1.01E-07	9.81E-08	9.10E-08	1.52E-07	1.62E-07	1.57E-07	1.24E-07	1.25E-07	1.23E-07
4	Cr IV	Chromium IV	7.83E-07	6.12E-07	5.62E-07	5.47E-07	5.09E-07	8.47E-07	8.97E-07	8.74E-07	6.92E-07	6.94E-07	6.85E-07
5	7439-92-1	Lead	1.69E-08	1.30E-08	1.20E-08	1.16E-08	1.08E-08	1.82E-08	1.94E-08	1.90E-08	1.49E-08	1.49E-08	1.47E-08
6	7440-41-7	Beryllium	2.35E-06	1.81E-06	1.66E-06	1.61E-06	1.49E-06	2.53E-06	2.70E-06	2.64E-06	2.07E-06	2.07E-06	2.04E-06
7	7440-02-0	Nickel	1.38E-07	1.09E-07	1.00E-07	9.73E-08	9.08E-08	1.49E-07	1.57E-07	1.53E-07	1.21E-07	1.21E-07	1.21E-07
8	71-43-2	Benzene	2.77E-10	2.44E-10	2.24E-10	2.18E-10	2.07E-10	3.09E-10	3.12E-10	2.96E-10	2.46E-10	2.50E-10	2.56E-10
		TOTAL	**4.69E-06**	**3.68E-06**	**3.38E-06**	**3.28E-06**	**3.05E-06**	**5.08E-06**	**5.38E-06**	**5.23E-06**	**4.14E-06**	**4.15E-06**	**4.11E-06**

Incremental Carcinogenic Risk - Proposed

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	PAH	Polycyclic Aromatic Hydrocarbons	5.74E-07	5.02E-07	4.57E-07	4.53E-07	4.23E-07	6.38E-07	6.50E-07	6.16E-07	5.15E-07	5.21E-07	5.28E-07
2	7440-38-2	Arsenic	6.89E-07	5.30E-07	4.86E-07	4.72E-07	4.38E-07	7.43E-07	7.91E-07	7.74E-07	6.07E-07	6.07E-07	5.97E-07
3	7440-43-9	Cadmium	1.41E-07	1.10E-07	1.01E-07	9.82E-08	9.10E-08	1.52E-07	1.62E-07	1.57E-07	1.25E-07	1.25E-07	1.23E-07
4	Cr IV	Chromium IV	7.84E-07	6.12E-07	5.62E-07	5.48E-07	5.09E-07	8.47E-07	8.97E-07	8.74E-07	6.93E-07	6.94E-07	6.85E-07
5	7439-92-1	Lead	1.69E-08	1.30E-08	1.20E-08	1.16E-08	1.08E-08	1.82E-08	1.94E-08	1.90E-08	1.49E-08	1.49E-08	1.47E-08
6	7440-41-7	Beryllium	2.35E-06	1.81E-06	1.66E-06	1.61E-06	1.49E-06	2.53E-06	2.70E-06	2.64E-06	2.07E-06	2.07E-06	2.04E-06
7	7440-02-0	Nickel	1.38E-07	1.09E-07	1.00E-07	9.78E-08	9.07E-08	1.49E-07	1.58E-07	1.53E-07	1.21E-07	1.21E-07	1.21E-07
8	71-43-2	Benzene	2.81E-10	2.45E-10	2.23E-10	2.22E-10	2.07E-10	3.10E-10	3.15E-10	2.99E-10	2.47E-10	2.50E-10	2.58E-10
		TOTAL	**4.69E-06**	**3.68E-06**	**3.38E-06**	**3.29E-06**	**3.05E-06**	**5.08E-06**	**5.38E-06**	**5.24E-06**	**4.15E-06**	**4.15E-06**	**4.11E-06**

Table B5b: Incremental Carcinogenic Risk for each Receptor

Incremental Carcinogenic Risk - Baseline

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20
1	PAH	Polycyclic Aromatic Hydrocarbons	2.61E-07	4.25E-07	5.38E-07	3.87E-07	5.06E-07	4.35E-07	4.30E-07	5.97E-07	6.27E-07	6.37E-07	5.16E-07	5.54E-07	5.27E-07	4.01E-07	5.35E-07	5.28E-07	6.04E-07	7.24E-07	6.18E-07	4.21E-07
2	7440-38-2	Arsenic	7.42E-09	1.18E-08	1.66E-08	1.12E-08	1.43E-08	1.26E-08	1.31E-08	1.56E-08	1.64E-08	1.65E-08	1.41E-08	1.53E-08	1.45E-08	1.16E-08	1.43E-08	1.42E-08	1.60E-08	1.88E-08	1.65E-08	1.17E-08
3	7440-43-9	Cadmium	7.78E-09	1.33E-08	1.82E-08	1.22E-08	1.61E-08	1.36E-08	1.47E-08	1.66E-08	1.80E-08	1.85E-08	1.57E-08	1.74E-08	1.63E-08	1.24E-08	1.61E-08	1.60E-08	1.85E-08	2.21E-08	1.88E-08	1.30E-08
4	Cr IV	Chromium IV	6.67E-08	9.67E-08	1.21E-07	9.09E-08	1.13E-07	1.03E-07	9.27E-08	1.54E-07	1.51E-07	1.49E-07	1.19E-07	1.21E-07	1.19E-07	9.76E-08	1.21E-07	1.19E-07	1.30E-07	1.49E-07	1.37E-07	9.54E-08
5	7439-92-1	Lead	2.67E-10	4.22E-10	5.76E-10	3.97E-10	5.07E-10	4.46E-10	4.52E-10	5.78E-10	6.01E-10	6.05E-10	5.08E-10	5.46E-10	5.21E-10	4.12E-10	5.17E-10	5.13E-10	5.77E-10	6.80E-10	5.96E-10	4.18E-10
6	7440-41-7	Beryllium	9.43E-09	1.61E-08	1.99E-08	1.42E-08	1.92E-08	1.61E-08	1.56E-08	2.29E-08	2.45E-08	2.51E-08	2.00E-08	2.17E-08	2.04E-08	1.49E-08	2.10E-08	2.07E-08	2.41E-08	2.93E-08	2.44E-08	1.61E-08
7	7440-02-0	Nickel	1.49E-08	2.65E-08	3.06E-08	2.25E-08	3.14E-08	2.57E-08	2.45E-08	3.81E-08	4.13E-08	4.28E-08	3.31E-08	3.61E-08	3.38E-08	2.36E-08	3.54E-08	3.47E-08	4.12E-08	5.07E-08	4.12E-08	2.65E-08
8	71-43-2	Benzene	1.30E-10	2.24E-10	2.69E-10	1.95E-10	2.66E-10	2.21E-10	2.16E-10	3.16E-10	3.40E-10	3.50E-10	2.76E-10	2.99E-10	2.82E-10	2.03E-10	2.91E-10	2.86E-10	3.36E-10	4.09E-10	3.39E-10	2.23E-10
		TOTAL	**3.68E-07**	**5.90E-07**	**7.46E-07**	**5.38E-07**	**7.00E-07**	**6.06E-07**	**5.91E-07**	**8.45E-07**	**8.80E-07**	**8.91E-07**	**7.18E-07**	**7.66E-07**	**7.32E-07**	**5.61E-07**	**7.44E-07**	**7.33E-07**	**8.35E-07**	**9.95E-07**	**8.57E-07**	**5.84E-07**

Incremental Carcinogenic Risk - Proposed

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20
1	PAH	Polycyclic Aromatic Hydrocarbons	2.45E-07	4.23E-07	5.07E-07	3.84E-07	4.95E-07	4.61E-07	4.17E-07	5.74E-07	6.15E-07	5.93E-07	5.51E-07	5.89E-07	5.60E-07	4.25E-07	5.61E-07	5.56E-07	6.36E-07	7.26E-07	6.32E-07	4.47E-07
2	7440-38-2	Arsenic	7.12E-09	1.18E-08	1.60E-08	1.12E-08	1.41E-08	1.30E-08	1.29E-08	1.52E-08	1.61E-08	1.56E-08	1.48E-08	1.59E-08	1.52E-08	1.20E-08	1.48E-08	1.47E-08	1.65E-08	1.89E-08	1.68E-08	1.22E-08
3	7440-43-9	Cadmium	7.30E-09	1.32E-08	1.72E-08	1.21E-08	1.58E-08	1.44E-08	1.44E-08	1.59E-08	1.77E-08	1.72E-08	1.67E-08	1.84E-08	1.73E-08	1.32E-08	1.69E-08	1.68E-08	1.94E-08	2.22E-08	1.92E-08	1.38E-08
4	Cr IV	Chromium IV	6.48E-08	9.64E-08	1.17E-07	9.06E-08	1.11E-07	1.06E-07	9.13E-08	1.51E-07	1.50E-07	1.44E-07	1.23E-07	1.25E-07	1.22E-07	1.00E-07	1.24E-07	1.23E-07	1.34E-07	1.49E-07	1.39E-07	9.85E-08
5	7439-92-1	Lead	2.55E-10	4.20E-10	5.53E-10	3.95E-10	4.99E-10	4.64E-10	4.43E-10	5.61E-10	5.92E-10	5.73E-10	5.33E-10	5.71E-10	5.45E-10	4.29E-10	5.36E-10	5.33E-10	5.99E-10	6.82E-10	6.06E-10	4.37E-10
6	7440-41-7	Beryllium	8.64E-09	1.60E-08	1.84E-08	1.40E-08	1.86E-08	1.74E-08	1.49E-08	2.18E-08	2.39E-08	2.29E-08	2.17E-08	2.33E-08	2.20E-08	1.60E-08	2.23E-08	2.20E-08	2.56E-08	2.94E-08	2.51E-08	1.74E-08
7	7440-02-0	Nickel	1.33E-08	2.63E-08	2.75E-08	2.23E-08	3.03E-08	2.82E-08	2.32E-08	3.59E-08	4.01E-08	3.84E-08	3.65E-08	3.94E-08	3.70E-08	2.59E-08	3.79E-08	3.74E-08	4.43E-08	5.09E-08	4.27E-08	2.91E-08
8	71-43-2	Benzene	1.18E-10	2.22E-10	2.46E-10	1.94E-10	2.58E-10	2.40E-10	2.07E-10	3.00E-10	3.31E-10	3.18E-10	3.00E-10	3.24E-10	3.05E-10	2.21E-10	3.10E-10	3.06E-10	3.58E-10	4.11E-10	3.49E-10	2.41E-10
		TOTAL	**3.46E-07**	**5.87E-07**	**7.04E-07**	**5.35E-07**	**6.86E-07**	**6.41E-07**	**5.75E-07**	**8.15E-07**	**8.64E-07**	**8.32E-07**	**7.64E-07**	**8.12E-07**	**7.74E-07**	**5.93E-07**	**7.78E-07**	**7.70E-07**	**8.76E-07**	**9.98E-07**	**8.76E-07**	**6.19E-07**

Table B5b: Incremental Carcinogenic Risk for each Receptor

Incremental Carcinogenic Risk - Baseline

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38	Receptor 39	Receptor 40
1	PAH	Polycyclic Aromatic Hydrocarbons	4.36E-07	3.92E-07	3.88E-07	4.19E-07	3.53E-07	6.21E-07	3.93E-07	4.18E-07	4.32E-07	3.74E-07	3.39E-07	3.38E-07	3.64E-07	2.65E-07	6.72E-07	6.00E-07	4.16E-07	3.37E-07	3.57E-07	3.66E-07
2	7440-38-2	Arsenic	1.21E-08	1.09E-08	1.09E-08	1.20E-08	1.04E-08	1.74E-08	1.20E-08	1.28E-08	1.35E-08	1.13E-08	1.01E-08	1.02E-08	1.16E-08	7.87E-09	1.87E-08	1.63E-08	1.29E-08	1.01E-08	1.07E-08	1.16E-08
3	7440-43-9	Cadmium	1.36E-08	1.21E-08	1.22E-08	1.34E-08	1.15E-08	2.00E-08	1.32E-08	1.44E-08	1.52E-08	1.25E-08	1.11E-08	1.13E-08	1.29E-08	8.46E-09	2.19E-08	1.87E-08	1.41E-08	1.11E-08	1.18E-08	1.29E-08
4	Cr IV	Chromium IV	9.71E-08	9.06E-08	8.85E-08	9.53E-08	7.95E-08	1.31E-07	9.01E-08	9.18E-08	9.27E-08	8.50E-08	7.82E-08	7.67E-08	7.90E-08	6.42E-08	1.35E-07	1.31E-07	9.59E-08	7.73E-08	8.17E-08	8.06E-08
5	7439-92-1	Lead	4.33E-10	3.90E-10	3.89E-10	4.25E-10	3.64E-10	6.15E-10	4.16E-10	4.42E-10	4.60E-10	3.92E-10	3.53E-10	3.54E-10	3.93E-10	2.77E-10	6.62E-10	5.84E-10	4.47E-10	3.52E-10	3.73E-10	3.97E-10
6	7440-41-7	Beryllium	1.68E-08	1.49E-08	1.47E-08	1.55E-08	1.28E-08	2.42E-08	1.42E-08	1.50E-08	1.54E-08	1.35E-08	1.23E-08	1.22E-08	1.26E-08	9.41E-09	2.66E-08	2.35E-08	1.47E-08	1.22E-08	1.29E-08	1.27E-08
7	7440-02-0	Nickel	2.78E-08	2.45E-08	2.40E-08	2.51E-08	2.03E-08	4.02E-08	2.20E-08	2.34E-08	2.39E-08	2.12E-08	1.93E-08	1.91E-08	1.93E-08	1.47E-08	4.46E-08	3.94E-08	2.24E-08	1.91E-08	2.03E-08	1.93E-08
8	71-43-2	Benzene	2.33E-10	2.06E-10	2.03E-10	2.16E-10	1.77E-10	3.35E-10	1.95E-10	2.08E-10	2.14E-10	1.87E-10	1.70E-10	1.68E-10	1.76E-10	1.30E-10	3.68E-10	3.26E-10	2.02E-10	1.68E-10	1.79E-10	1.76E-10
		TOTAL	**6.05E-07**	**5.45E-07**	**5.38E-07**	**5.81E-07**	**4.88E-07**	**8.54E-07**	**5.45E-07**	**5.76E-07**	**5.93E-07**	**5.18E-07**	**4.70E-07**	**4.68E-07**	**5.00E-07**	**3.70E-07**	**9.20E-07**	**8.30E-07**	**5.77E-07**	**4.67E-07**	**4.95E-07**	**5.03E-07**

Incremental Carcinogenic Risk - Proposed

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38	Receptor 39	Receptor 40
1	PAH	Polycyclic Aromatic Hydrocarbons	4.63E-07	4.17E-07	4.08E-07	4.14E-07	3.47E-07	6.29E-07	3.96E-07	4.24E-07	4.36E-07	3.79E-07	3.42E-07	3.40E-07	3.58E-07	2.57E-07	6.04E-07	6.28E-07	4.23E-07	3.40E-07	3.62E-07	3.68E-07
2	7440-38-2	Arsenic	1.26E-08	1.14E-08	1.13E-08	1.19E-08	1.03E-08	1.75E-08	1.20E-08	1.29E-08	1.35E-08	1.14E-08	1.02E-08	1.02E-08	1.15E-08	7.72E-09	1.75E-08	1.68E-08	1.31E-08	1.01E-08	1.08E-08	1.17E-08
3	7440-43-9	Cadmium	1.44E-08	1.28E-08	1.28E-08	1.32E-08	1.13E-08	2.02E-08	1.33E-08	1.45E-08	1.53E-08	1.26E-08	1.12E-08	1.14E-08	1.27E-08	8.22E-09	1.99E-08	1.95E-08	1.43E-08	1.12E-08	1.20E-08	1.30E-08
4	Cr IV	Chromium IV	1.00E-07	9.35E-08	9.09E-08	9.46E-08	7.89E-08	1.32E-07	9.04E-08	9.25E-08	9.31E-08	8.55E-08	7.85E-08	7.70E-08	7.84E-08	6.33E-08	1.27E-07	1.34E-07	9.67E-08	7.77E-08	8.23E-08	8.08E-08
5	7439-92-1	Lead	4.52E-10	4.08E-10	4.03E-10	4.22E-10	3.60E-10	6.21E-10	4.18E-10	4.46E-10	4.63E-10	3.96E-10	3.55E-10	3.56E-10	3.89E-10	2.71E-10	6.13E-10	6.05E-10	4.52E-10	3.54E-10	3.76E-10	3.98E-10
6	7440-41-7	Beryllium	1.81E-08	1.62E-08	1.57E-08	1.53E-08	1.25E-08	2.46E-08	1.43E-08	1.53E-08	1.56E-08	1.38E-08	1.24E-08	1.23E-08	1.24E-08	9.02E-09	2.33E-08	2.48E-08	1.50E-08	1.23E-08	1.31E-08	1.28E-08
7	7440-02-0	Nickel	3.04E-08	2.70E-08	2.60E-08	2.46E-08	1.98E-08	4.11E-08	2.23E-08	2.40E-08	2.43E-08	2.17E-08	1.96E-08	1.93E-08	1.87E-08	1.39E-08	3.79E-08	4.22E-08	2.31E-08	1.95E-08	2.08E-08	1.95E-08
8	71-43-2	Benzene	2.52E-10	2.24E-10	2.17E-10	2.12E-10	1.74E-10	3.41E-10	1.97E-10	2.12E-10	2.17E-10	1.91E-10	1.72E-10	1.70E-10	1.72E-10	1.25E-10	3.20E-10	3.46E-10	2.07E-10	1.71E-10	1.82E-10	1.78E-10
		TOTAL	**6.40E-07**	**5.78E-07**	**5.65E-07**	**5.74E-07**	**4.80E-07**	**8.66E-07**	**5.49E-07**	**5.83E-07**	**5.98E-07**	**5.25E-07**	**4.74E-07**	**4.71E-07**	**4.92E-07**	**3.60E-07**	**8.31E-07**	**8.67E-07**	**5.86E-07**	**4.71E-07**	**5.01E-07**	**5.06E-07**

Table B5b: Incremental Carcinogenic Risk for each Receptor

Incremental Carcinogenic Risk - Baseline

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57	Receptor 58	Receptor 59	Receptor 60
1	PAH	Polycyclic Aromatic Hydrocarbons	3.76E-07	5.42E-07	5.86E-07	4.98E-07	4.53E-07	4.15E-07	3.75E-07	5.08E-07	3.62E-07	3.71E-07	4.40E-07	3.30E-07	4.11E-07	4.02E-07	4.02E-07	1.90E-07	2.81E-07	2.63E-07	5.51E-07	3.40E-07
2	7440-38-2	Arsenic	1.20E-08	1.43E-08	1.55E-08	1.33E-08	1.25E-08	1.15E-08	1.09E-08	1.39E-08	1.06E-08	1.06E-08	1.27E-08	9.81E-09	1.26E-08	1.26E-08	1.27E-08	5.63E-09	8.59E-09	7.66E-09	1.51E-08	1.01E-08
3	7440-43-9	Cadmium	1.33E-08	1.52E-08	1.74E-08	1.47E-08	1.36E-08	1.24E-08	1.17E-08	1.56E-08	1.13E-08	1.18E-08	1.39E-08	1.08E-08	1.40E-08	1.43E-08	1.44E-08	6.02E-09	9.60E-09	8.37E-09	1.71E-08	1.12E-08
4	Cr IV	Chromium IV	8.26E-08	1.42E-07	1.35E-07	1.17E-07	1.07E-07	9.90E-08	9.05E-08	1.16E-07	8.93E-08	8.55E-08	1.01E-07	7.44E-08	9.26E-08	8.55E-08	8.38E-08	4.53E-08	6.05E-08	6.11E-08	1.23E-07	7.58E-08
5	7439-92-1	Lead	4.08E-10	5.29E-10	5.64E-10	4.83E-10	4.49E-10	4.14E-10	3.87E-10	5.01E-10	3.75E-10	3.76E-10	4.49E-10	3.43E-10	4.36E-10	4.30E-10	4.30E-10	1.98E-10	2.96E-10	2.70E-10	5.40E-10	3.53E-10
6	7440-41-7	Beryllium	1.30E-08	2.07E-08	2.29E-08	1.91E-08	1.71E-08	1.55E-08	1.36E-08	1.95E-08	1.34E-08	1.39E-08	1.66E-08	1.22E-08	1.48E-08	1.42E-08	1.42E-08	6.80E-09	1.01E-08	9.59E-09	2.13E-08	1.23E-08
7	7440-02-0	Nickel	1.97E-08	3.42E-08	3.86E-08	3.19E-08	2.81E-08	2.53E-08	2.15E-08	3.23E-08	2.10E-08	2.25E-08	2.67E-08	1.93E-08	2.29E-08	2.20E-08	2.21E-08	1.06E-08	1.58E-08	1.53E-08	3.55E-08	1.94E-08
8	71-43-2	Benzene	1.81E-10	2.85E-10	3.18E-10	2.66E-10	2.37E-10	2.15E-10	1.88E-10	2.70E-10	1.82E-10	1.92E-10	2.28E-10	1.67E-10	2.04E-10	1.98E-10	1.99E-10	9.38E-11	1.40E-10	1.33E-10	2.96E-10	1.70E-10
		TOTAL	**5.17E-07**	**7.69E-07**	**8.16E-07**	**6.94E-07**	**6.31E-07**	**5.79E-07**	**5.24E-07**	**7.06E-07**	**5.08E-07**	**5.16E-07**	**6.12E-07**	**4.57E-07**	**5.69E-07**	**5.51E-07**	**5.50E-07**	**2.65E-07**	**3.86E-07**	**3.66E-07**	**7.63E-07**	**4.69E-07**

Incremental Carcinogenic Risk - Proposed

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57	Receptor 58	Receptor 59	Receptor 60
1	PAH	Polycyclic Aromatic Hydrocarbons	3.78E-07	5.27E-07	5.59E-07	4.81E-07	4.67E-07	4.23E-07	3.91E-07	5.28E-07	3.94E-07	3.93E-07	4.66E-07	3.57E-07	4.20E-07	4.01E-07	3.93E-07	1.89E-07	2.79E-07	2.52E-07	5.75E-07	3.56E-07
2	7440-38-2	Arsenic	1.20E-08	1.40E-08	1.50E-08	1.30E-08	1.27E-08	1.16E-08	1.12E-08	1.43E-08	1.11E-08	1.10E-08	1.31E-08	1.03E-08	1.28E-08	1.26E-08	1.25E-08	5.61E-09	8.55E-09	7.46E-09	1.55E-08	1.04E-08
3	7440-43-9	Cadmium	1.34E-08	1.48E-08	1.66E-08	1.42E-08	1.40E-08	1.27E-08	1.21E-08	1.62E-08	1.22E-08	1.25E-08	1.47E-08	1.16E-08	1.42E-08	1.43E-08	1.41E-08	5.99E-09	9.54E-09	8.04E-09	1.78E-08	1.17E-08
4	Cr IV	Chromium IV	8.30E-08	1.40E-07	1.32E-07	1.15E-07	1.08E-07	9.99E-08	9.23E-08	1.18E-07	9.30E-08	8.79E-08	1.04E-07	7.75E-08	9.35E-08	8.55E-08	8.28E-08	4.52E-08	6.03E-08	5.98E-08	1.26E-07	7.77E-08
5	7439-92-1	Lead	4.10E-10	5.19E-10	5.44E-10	4.72E-10	4.59E-10	4.19E-10	3.98E-10	5.15E-10	3.98E-10	3.92E-10	4.68E-10	3.63E-10	4.42E-10	4.30E-10	4.24E-10	1.97E-10	2.95E-10	2.62E-10	5.58E-10	3.65E-10
6	7440-41-7	Beryllium	1.32E-08	2.00E-08	2.16E-08	1.83E-08	1.78E-08	1.59E-08	1.44E-08	2.04E-08	1.49E-08	1.49E-08	1.79E-08	1.35E-08	1.52E-08	1.42E-08	1.38E-08	6.75E-09	9.99E-09	9.05E-09	2.25E-08	1.31E-08
7	7440-02-0	Nickel	2.00E-08	3.28E-08	3.60E-08	3.03E-08	2.95E-08	2.61E-08	2.30E-08	3.42E-08	2.41E-08	2.46E-08	2.93E-08	2.19E-08	2.37E-08	2.20E-08	2.12E-08	1.05E-08	1.56E-08	1.42E-08	3.79E-08	2.10E-08
8	71-43-2	Benzene	1.83E-10	2.75E-10	2.99E-10	2.54E-10	2.47E-10	2.20E-10	1.99E-10	2.84E-10	2.05E-10	2.08E-10	2.46E-10	1.87E-10	2.10E-10	1.98E-10	1.92E-10	9.30E-11	1.39E-10	1.25E-10	3.13E-10	1.82E-10
		TOTAL	**5.21E-07**	**7.50E-07**	**7.81E-07**	**6.72E-07**	**6.50E-07**	**5.90E-07**	**5.45E-07**	**7.32E-07**	**5.50E-07**	**5.44E-07**	**6.47E-07**	**4.93E-07**	**5.80E-07**	**5.50E-07**	**5.38E-07**	**2.64E-07**	**3.83E-07**	**3.51E-07**	**7.95E-07**	**4.91E-07**

Table B5b: Incremental Carcinogenic Risk for each Receptor

Incremental Carcinogenic Risk - Baseline

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	PAH	Polycyclic Aromatic Hydrocarbons	3.62E-07	3.42E-07	3.14E-07	3.07E-07	2.92E-07	4.14E-07	4.09E-07	3.80E-07	3.32E-07	3.40E-07	3.46E-07
2	7440-38-2	Arsenic	1.09E-08	1.06E-08	9.60E-09	9.35E-09	8.85E-09	1.28E-08	1.27E-08	1.17E-08	1.04E-08	1.07E-08	1.05E-08
3	7440-43-9	Cadmium	1.20E-08	1.18E-08	1.07E-08	1.03E-08	9.77E-09	1.42E-08	1.40E-08	1.30E-08	1.15E-08	1.17E-08	1.16E-08
4	Cr IV	Chromium IV	8.14E-08	7.36E-08	6.81E-08	6.79E-08	6.48E-08	9.15E-08	9.08E-08	8.49E-08	7.48E-08	7.62E-08	7.72E-08
5	7439-92-1	Lead	3.79E-10	3.63E-10	3.31E-10	3.23E-10	3.07E-10	4.40E-10	4.37E-10	4.05E-10	3.58E-10	3.66E-10	3.65E-10
6	7440-41-7	Beryllium	1.30E-08	1.22E-08	1.13E-08	1.10E-08	1.05E-08	1.48E-08	1.45E-08	1.35E-08	1.16E-08	1.19E-08	1.24E-08
7	7440-02-0	Nickel	2.04E-08	1.90E-08	1.76E-08	1.71E-08	1.65E-08	2.30E-08	2.23E-08	2.09E-08	1.76E-08	1.82E-08	1.94E-08
8	71-43-2	Benzene	1.80E-10	1.69E-10	1.56E-10	1.52E-10	1.45E-10	2.05E-10	2.00E-10	1.87E-10	1.60E-10	1.65E-10	1.72E-10
		TOTAL	**5.00E-07**	**4.69E-07**	**4.32E-07**	**4.23E-07**	**4.03E-07**	**5.71E-07**	**5.64E-07**	**5.25E-07**	**4.58E-07**	**4.69E-07**	**4.78E-07**

Incremental Carcinogenic Risk - Proposed

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	PAH	Polycyclic Aromatic Hydrocarbons	3.67E-07	3.43E-07	3.12E-07	3.12E-07	2.92E-07	4.16E-07	4.13E-07	3.84E-07	3.33E-07	3.40E-07	3.49E-07
2	7440-38-2	Arsenic	1.10E-08	1.06E-08	9.57E-09	9.45E-09	8.84E-09	1.28E-08	1.28E-08	1.18E-08	1.05E-08	1.06E-08	1.06E-08
3	7440-43-9	Cadmium	1.22E-08	1.18E-08	1.06E-08	1.05E-08	9.75E-09	1.42E-08	1.42E-08	1.31E-08	1.15E-08	1.17E-08	1.17E-08
4	Cr IV	Chromium IV	8.20E-08	7.38E-08	6.80E-08	6.85E-08	6.47E-08	9.16E-08	9.13E-08	8.53E-08	7.49E-08	7.61E-08	7.75E-08
5	7439-92-1	Lead	3.83E-10	3.64E-10	3.30E-10	3.27E-10	3.06E-10	4.41E-10	4.40E-10	4.07E-10	3.59E-10	3.65E-10	3.67E-10
6	7440-41-7	Beryllium	1.32E-08	1.23E-08	1.12E-08	1.12E-08	1.05E-08	1.49E-08	1.47E-08	1.37E-08	1.16E-08	1.19E-08	1.26E-08
7	7440-02-0	Nickel	2.08E-08	1.91E-08	1.74E-08	1.76E-08	1.64E-08	2.31E-08	2.27E-08	2.12E-08	1.77E-08	1.81E-08	1.96E-08
8	71-43-2	Benzene	1.84E-10	1.70E-10	1.55E-10	1.56E-10	1.45E-10	2.06E-10	2.03E-10	1.89E-10	1.61E-10	1.65E-10	1.74E-10
		TOTAL	**5.07E-07**	**4.71E-07**	**4.29E-07**	**4.30E-07**	**4.02E-07**	**5.73E-07**	**5.69E-07**	**5.30E-07**	**4.60E-07**	**4.69E-07**	**4.82E-07**

Table B6a: Contribution to ICR for each Receptor (%)

Contribution to Incremental Carcinogenic Risk - Baseline (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20
1	PAH	Polycyclic Aromatic Hydrocarbons	11.1%	16.0%	20.9%	13.8%	16.4%	16.1%	14.2%	23.1%	23.4%	23.1%	21.7%	22.5%	21.9%	19.3%	23.9%	23.0%	25.4%	26.5%	25.4%	20.8%
2	7440-38-2	Arsenic	14.9%	13.8%	12.9%	14.3%	13.8%	13.8%	14.3%	12.2%	12.2%	12.3%	12.6%	12.5%	12.6%	13.1%	12.1%	12.3%	11.9%	11.6%	11.8%	12.8%
3	7440-43-9	Cadmium	3.0%	2.9%	2.9%	3.0%	2.9%	2.9%	3.0%	2.8%	2.8%	2.8%	2.8%	2.9%	2.9%	2.9%	2.8%	2.8%	2.8%	2.8%	2.8%	2.9%
4	Cr IV	Chromium IV	16.9%	16.7%	16.6%	16.8%	16.6%	16.8%	16.6%	17.2%	16.9%	16.8%	16.7%	16.5%	16.6%	16.9%	16.6%	16.6%	16.4%	16.2%	16.5%	16.7%
5	7439-92-1	Lead	0.4%	0.3%	0.3%	0.4%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
6	7440-41-7	Beryllium	50.9%	47.1%	43.2%	48.8%	46.8%	47.0%	48.6%	41.2%	41.1%	41.4%	42.6%	42.1%	42.5%	44.4%	40.8%	41.6%	39.8%	39.1%	39.7%	43.3%
7	7440-02-0	Nickel	2.9%	3.1%	3.1%	3.0%	3.1%	3.0%	3.0%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.1%	3.4%	3.3%	3.4%	3.5%	3.4%	3.2%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Incremental Carcinogenic Risk - Proposed (%)

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20
1	PAH	Polycyclic Aromatic Hydrocarbons	10.7%	15.9%	20.2%	13.7%	16.2%	16.6%	14.0%	22.5%	23.1%	22.2%	22.5%	23.3%	22.7%	20.0%	24.6%	23.7%	26.1%	26.5%	25.7%	21.5%
2	7440-38-2	Arsenic	14.9%	13.9%	13.0%	14.3%	13.8%	13.7%	14.3%	12.3%	12.2%	12.5%	12.4%	12.3%	12.4%	13.0%	12.0%	12.2%	11.7%	11.6%	11.8%	12.7%
3	7440-43-9	Cadmium	3.0%	2.9%	2.9%	3.0%	2.9%	2.9%	3.0%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.9%	2.8%	2.8%	2.8%	2.8%	2.8%	2.9%
4	Cr IV	Chromium IV	16.9%	16.7%	16.7%	16.8%	16.7%	16.7%	16.6%	17.2%	16.9%	16.9%	16.6%	16.4%	16.5%	16.8%	16.5%	16.5%	16.3%	16.2%	16.5%	16.5%
5	7439-92-1	Lead	0.4%	0.3%	0.3%	0.4%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
6	7440-41-7	Beryllium	51.2%	47.2%	43.8%	48.9%	47.0%	46.6%	48.8%	41.6%	41.3%	42.1%	42.0%	41.5%	41.9%	43.9%	40.3%	41.1%	39.3%	39.0%	39.5%	42.8%
7	7440-02-0	Nickel	2.9%	3.1%	3.1%	3.0%	3.1%	3.1%	3.0%	3.2%	3.3%	3.3%	3.3%	3.4%	3.3%	3.2%	3.4%	3.4%	3.5%	3.5%	3.4%	3.3%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B6a: Contribution to ICR for each Receptor (%)

Contribution to Incremental Carcinogenic Risk - Baselin

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38	Receptor 39	Receptor 40
1	PAH	Polycyclic Aromatic Hydrocarbons	21.0%	19.9%	19.2%	13.6%	12.7%	20.4%	15.4%	14.7%	14.1%	14.7%	16.0%	15.3%	12.4%	12.5%	22.5%	19.6%	12.9%	15.2%	14.9%	11.8%
2	7440-38-2	Arsenic	12.8%	13.0%	13.2%	14.4%	14.6%	12.9%	14.0%	14.2%	14.3%	14.1%	13.9%	14.0%	14.7%	14.6%	12.5%	13.1%	14.5%	14.0%	14.1%	14.8%
3	7440-43-9	Cadmium	2.9%	2.9%	2.9%	3.0%	3.0%	2.9%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	3.0%	3.0%	3.0%	3.0%
4	Cr IV	Chromium IV	16.6%	16.7%	16.7%	16.7%	16.7%	16.4%	16.7%	16.6%	16.6%	16.7%	16.7%	16.7%	16.7%	16.8%	16.2%	16.5%	16.7%	16.7%	16.7%	16.7%
5	7439-92-1	Lead	0.3%	0.3%	0.3%	0.4%	0.4%	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.4%	0.4%	0.3%	0.3%	0.4%	0.3%	0.3%	0.4%
6	7440-41-7	Beryllium	43.2%	44.0%	44.6%	49.0%	49.7%	43.8%	47.6%	48.2%	48.7%	48.1%	47.1%	47.6%	50.0%	49.8%	42.2%	44.3%	49.6%	47.7%	48.0%	50.4%
7	7440-02-0	Nickel	3.2%	3.2%	3.2%	3.0%	3.0%	3.2%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	3.3%	3.2%	2.9%	3.0%	3.0%	2.9%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Incremental Carcinogenic Risk - Propos

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38	Receptor 39	Receptor 40
1	PAH	Polycyclic Aromatic Hydrocarbons	21.8%	20.6%	19.8%	13.5%	12.6%	20.6%	15.5%	14.8%	14.2%	14.9%	16.1%	15.4%	12.3%	12.3%	21.1%	20.1%	13.0%	15.3%	15.0%	11.9%
2	7440-38-2	Arsenic	12.6%	12.9%	13.1%	14.4%	14.6%	12.9%	14.0%	14.1%	14.3%	14.1%	13.8%	14.0%	14.7%	14.6%	12.8%	13.0%	14.5%	14.0%	14.1%	14.8%
3	7440-43-9	Cadmium	2.9%	2.9%	2.9%	3.0%	3.0%	2.9%	3.0%	3.0%	3.0%	3.0%	2.9%	3.0%	3.0%	3.0%	2.9%	2.9%	3.0%	3.0%	3.0%	3.0%
4	Cr IV	Chromium IV	16.5%	16.6%	16.6%	16.7%	16.7%	16.4%	16.7%	16.6%	16.6%	16.7%	16.7%	16.7%	16.7%	16.8%	16.4%	16.5%	16.7%	16.7%	16.7%	16.7%
5	7439-92-1	Lead	0.3%	0.3%	0.3%	0.4%	0.4%	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.3%	0.4%	0.4%	0.3%	0.3%	0.4%	0.3%	0.3%	0.4%
6	7440-41-7	Beryllium	42.6%	43.5%	44.2%	49.0%	49.8%	43.6%	47.5%	48.1%	48.6%	48.0%	47.0%	47.6%	50.1%	50.0%	43.2%	43.9%	49.5%	47.6%	47.9%	50.4%
7	7440-02-0	Nickel	3.3%	3.2%	3.2%	3.0%	3.0%	3.3%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	3.2%	3.3%	2.9%	3.0%	3.0%	2.9%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B6a: Contribution to ICR for each Receptor (%)

Contribution to Incremental Carcinogenic Risk - Baselin

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57	Receptor 58	Receptor 59	Receptor 60
1	PAH	Polycyclic Aromatic Hydrocarbons	11.9%	23.5%	21.0%	18.7%	17.1%	16.2%	14.5%	18.2%	19.8%	18.1%	21.2%	17.3%	15.2%	13.3%	12.8%	13.5%	13.5%	15.5%	18.8%	12.4%
2	7440-38-2	Arsenic	14.7%	12.1%	12.7%	13.2%	13.6%	13.8%	14.1%	13.4%	13.0%	13.4%	12.7%	13.6%	14.0%	14.5%	14.6%	14.4%	14.4%	14.0%	13.3%	14.6%
3	7440-43-9	Cadmium	3.0%	2.8%	2.8%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	3.0%
4	Cr IV	Chromium IV	16.7%	17.2%	16.7%	16.8%	16.8%	16.8%	16.8%	16.7%	16.9%	16.7%	16.7%	16.7%	16.7%	16.6%	16.6%	16.8%	16.6%	16.7%	16.6%	16.7%
5	7439-92-1	Lead	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%	0.4%
6	7440-41-7	Beryllium	50.4%	40.8%	43.1%	45.0%	46.1%	46.9%	48.2%	45.4%	43.9%	45.4%	42.9%	46.1%	47.7%	49.3%	49.7%	49.1%	49.1%	47.5%	45.0%	50.0%
7	7440-02-0	Nickel	2.9%	3.3%	3.3%	3.2%	3.1%	3.1%	3.0%	3.2%	3.1%	3.1%	3.2%	3.1%	3.0%	2.9%	2.9%	3.0%	3.0%	3.0%	3.2%	2.9%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Incremental Carcinogenic Risk - Propos

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57	Receptor 58	Receptor 59	Receptor 60
1	PAH	Polycyclic Aromatic Hydrocarbons	12.0%	23.2%	20.4%	18.3%	17.5%	16.4%	14.9%	18.6%	20.9%	18.7%	22.0%	18.1%	15.4%	13.3%	12.6%	13.4%	13.5%	15.1%	19.2%	12.8%
2	7440-38-2	Arsenic	14.7%	12.2%	12.9%	13.3%	13.5%	13.7%	14.1%	13.3%	12.8%	13.3%	12.6%	13.4%	14.0%	14.5%	14.6%	14.4%	14.4%	14.0%	13.2%	14.6%
3	7440-43-9	Cadmium	3.0%	2.8%	2.8%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	3.0%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	3.0%
4	Cr IV	Chromium IV	16.7%	17.3%	16.8%	16.8%	16.7%	16.8%	16.8%	16.6%	16.8%	16.6%	16.6%	16.6%	16.7%	16.6%	16.6%	16.8%	16.6%	16.8%	16.5%	16.7%
5	7439-92-1	Lead	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%	0.4%
6	7440-41-7	Beryllium	50.3%	41.0%	43.5%	45.2%	45.9%	46.7%	47.9%	45.1%	43.2%	44.9%	42.4%	45.5%	47.6%	49.3%	49.8%	49.1%	49.2%	47.7%	44.6%	49.7%
7	7440-02-0	Nickel	2.9%	3.2%	3.2%	3.1%	3.1%	3.1%	3.0%	3.2%	3.2%	3.2%	3.2%	3.1%	3.0%	2.9%	2.9%	3.0%	3.0%	3.0%	3.2%	3.0%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B6a: Contribution to ICR for each Receptor (%)

Contribution to Incremental Carcinogenic Risk - Baselin

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	PAH	Polycyclic Aromatic Hydrocarbons	12.1%	13.6%	13.6%	13.6%	13.8%	12.5%	12.0%	11.7%	12.4%	12.6%	12.8%
2	7440-38-2	Arsenic	14.7%	14.4%	14.4%	14.4%	14.3%	14.6%	14.7%	14.8%	14.6%	14.6%	14.6%
3	7440-43-9	Cadmium	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4	Cr IV	Chromium IV	16.7%	16.6%	16.6%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
5	7439-92-1	Lead	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
6	7440-41-7	Beryllium	50.2%	49.1%	49.1%	49.0%	48.8%	49.9%	50.3%	50.5%	50.0%	49.8%	49.7%
7	7440-02-0	Nickel	2.9%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Incremental Carcinogenic Risk - Propos

All Modelled Sources

No	CAS # / ID	Compound Name	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	PAH	Polycyclic Aromatic Hydrocarbons	12.2%	13.6%	13.6%	13.8%	13.8%	12.6%	12.1%	11.8%	12.4%	12.6%	12.9%
2	7440-38-2	Arsenic	14.7%	14.4%	14.4%	14.4%	14.3%	14.6%	14.7%	14.8%	14.6%	14.6%	14.5%
3	7440-43-9	Cadmium	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
4	Cr IV	Chromium IV	16.7%	16.6%	16.6%	16.6%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
5	7439-92-1	Lead	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
6	7440-41-7	Beryllium	50.1%	49.0%	49.1%	48.9%	48.8%	49.9%	50.2%	50.5%	50.0%	49.8%	49.6%
7	7440-02-0	Nickel	2.9%	3.0%	3.0%	3.0%	3.0%	2.9%	2.9%	2.9%	2.9%	2.9%	3.0%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B6b: Contribution to ICR for each Receptor (%)

Contribution to Incremental Carcinogenic Risk - Baseline (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20
1	PAH	Polycyclic Aromatic Hydrocarbons	71.0%	72.0%	72.2%	71.8%	72.2%	71.8%	72.7%	70.7%	71.3%	71.6%	71.8%	72.3%	72.0%	71.4%	71.9%	72.0%	72.4%	72.8%	72.1%	72.0%
2	7440-38-2	Arsenic	2.0%	2.0%	2.2%	2.1%	2.0%	2.1%	2.2%	1.8%	1.9%	1.8%	2.0%	2.0%	2.0%	2.1%	1.9%	1.9%	1.9%	1.9%	1.9%	2.0%
3	7440-43-9	Cadmium	2.1%	2.3%	2.4%	2.3%	2.3%	2.2%	2.5%	2.0%	2.1%	2.1%	2.2%	2.3%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
4	Cr IV	Chromium IV	18.2%	16.4%	16.2%	16.9%	16.1%	16.9%	15.7%	18.2%	17.2%	16.8%	16.5%	15.8%	16.2%	17.4%	16.3%	16.3%	15.6%	14.9%	16.0%	16.3%
5	7439-92-1	Lead	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	7440-41-7	Beryllium	2.6%	2.7%	2.7%	2.6%	2.7%	2.7%	2.6%	2.7%	2.8%	2.8%	2.8%	2.8%	2.8%	2.6%	2.8%	2.8%	2.9%	2.9%	2.8%	2.8%
7	7440-02-0	Nickel	4.1%	4.5%	4.1%	4.2%	4.5%	4.2%	4.1%	4.5%	4.7%	4.8%	4.6%	4.7%	4.6%	4.2%	4.8%	4.7%	4.9%	5.1%	4.8%	4.5%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Incremental Carcinogenic Risk - Proposed (%)

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 1	Receptor 2	Receptor 3	Receptor 4	Receptor 5	Receptor 6	Receptor 7	Receptor 8	Receptor 9	Receptor 10	Receptor 11	Receptor 12	Receptor 13	Receptor 14	Receptor 15	Receptor 16	Receptor 17	Receptor 18	Receptor 19	Receptor 20
1	PAH	Polycyclic Aromatic Hydrocarbons	70.7%	72.0%	72.0%	71.8%	72.1%	72.0%	72.6%	70.5%	71.2%	71.2%	72.1%	72.6%	72.3%	71.7%	72.1%	72.2%	72.5%	72.8%	72.2%	72.3%
2	7440-38-2	Arsenic	2.1%	2.0%	2.3%	2.1%	2.1%	2.0%	2.2%	1.9%	1.9%	1.9%	1.9%	2.0%	2.0%	2.0%	1.9%	1.9%	1.9%	1.9%	1.9%	2.0%
3	7440-43-9	Cadmium	2.1%	2.3%	2.4%	2.3%	2.3%	2.2%	2.5%	2.0%	2.0%	2.1%	2.2%	2.3%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
4	Cr IV	Chromium IV	18.7%	16.4%	16.7%	16.9%	16.3%	16.5%	15.9%	18.6%	17.3%	17.3%	16.0%	15.4%	15.8%	16.9%	16.0%	15.9%	15.3%	14.9%	15.8%	15.9%
5	7439-92-1	Lead	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	7440-41-7	Beryllium	2.5%	2.7%	2.6%	2.6%	2.7%	2.7%	2.6%	2.7%	2.8%	2.8%	2.8%	2.9%	2.8%	2.7%	2.9%	2.9%	2.9%	2.9%	2.9%	2.8%
7	7440-02-0	Nickel	3.8%	4.5%	3.9%	4.2%	4.4%	4.4%	4.0%	4.4%	4.6%	4.6%	4.8%	4.9%	4.8%	4.4%	4.9%	4.9%	5.1%	5.1%	4.9%	4.7%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B6b: Contribution to ICR for each Receptor (%)

Contribution to Incremental Carcinogenic Risk - Baselin

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38	Receptor 39	Receptor 40
1	PAH	Polycyclic Aromatic Hydrocarbons	72.2%	71.8%	72.0%	72.1%	72.3%	72.7%	72.1%	72.6%	72.8%	72.2%	72.0%	72.2%	72.8%	71.6%	73.1%	72.3%	72.1%	72.1%	72.1%	72.6%
2	7440-38-2	Arsenic	2.0%	2.0%	2.0%	2.1%	2.1%	2.0%	2.2%	2.2%	2.3%	2.2%	2.1%	2.2%	2.3%	2.1%	2.0%	2.0%	2.2%	2.2%	2.2%	2.3%
3	7440-43-9	Cadmium	2.3%	2.2%	2.3%	2.3%	2.4%	2.3%	2.4%	2.5%	2.6%	2.4%	2.4%	2.4%	2.6%	2.3%	2.4%	2.3%	2.5%	2.4%	2.4%	2.6%
4	Cr IV	Chromium IV	16.1%	16.6%	16.4%	16.4%	16.3%	15.3%	16.5%	15.9%	15.6%	16.4%	16.6%	16.4%	15.8%	17.3%	14.7%	15.8%	16.6%	16.6%	16.5%	16.0%
5	7439-92-1	Lead	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	7440-41-7	Beryllium	2.8%	2.7%	2.7%	2.7%	2.6%	2.8%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.9%	2.8%	2.5%	2.6%	2.6%	2.5%
7	7440-02-0	Nickel	4.6%	4.5%	4.5%	4.3%	4.2%	4.7%	4.0%	4.1%	4.0%	4.1%	4.1%	4.1%	3.9%	4.0%	4.8%	4.8%	3.9%	4.1%	4.1%	3.8%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Incremental Carcinogenic Risk - Propos

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 21	Receptor 22	Receptor 23	Receptor 24	Receptor 25	Receptor 26	Receptor 27	Receptor 28	Receptor 29	Receptor 30	Receptor 31	Receptor 32	Receptor 33	Receptor 34	Receptor 35	Receptor 36	Receptor 37	Receptor 38	Receptor 39	Receptor 40
1	PAH	Polycyclic Aromatic Hydrocarbons	72.4%	72.1%	72.2%	72.1%	72.2%	72.7%	72.1%	72.6%	72.8%	72.3%	72.1%	72.2%	72.7%	71.5%	72.7%	72.5%	72.2%	72.1%	72.2%	72.7%
2	7440-38-2	Arsenic	2.0%	2.0%	2.0%	2.1%	2.1%	2.0%	2.2%	2.2%	2.3%	2.2%	2.1%	2.2%	2.3%	2.1%	2.1%	1.9%	2.2%	2.2%	2.2%	2.3%
3	7440-43-9	Cadmium	2.3%	2.2%	2.3%	2.3%	2.4%	2.3%	2.4%	2.5%	2.6%	2.4%	2.4%	2.4%	2.6%	2.3%	2.4%	2.3%	2.4%	2.4%	2.4%	2.6%
4	Cr IV	Chromium IV	15.7%	16.2%	16.1%	16.5%	16.4%	15.2%	16.5%	15.8%	15.6%	16.3%	16.6%	16.4%	15.9%	17.6%	15.3%	15.5%	16.5%	16.5%	16.4%	16.0%
5	7439-92-1	Lead	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	7440-41-7	Beryllium	2.8%	2.8%	2.8%	2.7%	2.6%	2.8%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.8%	2.9%	2.6%	2.6%	2.6%	2.5%
7	7440-02-0	Nickel	4.8%	4.7%	4.6%	4.3%	4.1%	4.7%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	3.8%	3.9%	4.6%	4.9%	3.9%	4.1%	4.1%	3.8%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B6b: Contribution to ICR for each Receptor (%)

Contribution to Incremental Carcinogenic Risk - Baselin

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57	Receptor 58	Receptor 59	Receptor 60
1	PAH	Polycyclic Aromatic Hydrocarbons	72.7%	70.4%	71.8%	71.7%	71.7%	71.6%	71.6%	72.0%	71.2%	71.9%	71.9%	72.2%	72.3%	72.9%	73.1%	71.8%	72.8%	72.0%	72.2%	72.4%
2	7440-38-2	Arsenic	2.3%	1.9%	1.9%	1.9%	2.0%	2.0%	2.1%	2.0%	2.1%	2.1%	2.1%	2.1%	2.2%	2.3%	2.3%	2.1%	2.2%	2.1%	2.0%	2.2%
3	7440-43-9	Cadmium	2.6%	2.0%	2.1%	2.1%	2.2%	2.1%	2.2%	2.2%	2.2%	2.3%	2.3%	2.4%	2.5%	2.6%	2.6%	2.3%	2.5%	2.3%	2.2%	2.4%
4	Cr IV	Chromium IV	16.0%	18.5%	16.5%	16.8%	16.9%	17.1%	17.3%	16.4%	17.6%	16.6%	16.6%	16.3%	16.3%	15.5%	15.2%	17.1%	15.7%	16.7%	16.1%	16.2%
5	7439-92-1	Lead	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	7440-41-7	Beryllium	2.5%	2.7%	2.8%	2.8%	2.7%	2.7%	2.6%	2.8%	2.6%	2.7%	2.7%	2.7%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.8%	2.6%
7	7440-02-0	Nickel	3.8%	4.5%	4.7%	4.6%	4.5%	4.4%	4.1%	4.6%	4.1%	4.4%	4.4%	4.2%	4.0%	4.0%	4.0%	4.0%	4.1%	4.2%	4.7%	4.1%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Incremental Carcinogenic Risk - Propos

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 41	Receptor 42	Receptor 43	Receptor 44	Receptor 45	Receptor 46	Receptor 47	Receptor 48	Receptor 49	Receptor 50	Receptor 51	Receptor 52	Receptor 53	Receptor 54	Receptor 55	Receptor 56	Receptor 57	Receptor 58	Receptor 59	Receptor 60
1	PAH	Polycyclic Aromatic Hydrocarbons	72.7%	70.3%	71.6%	71.6%	71.8%	71.7%	71.8%	72.1%	71.6%	72.2%	72.1%	72.5%	72.4%	72.9%	73.1%	71.8%	72.8%	71.8%	72.3%	72.6%
2	7440-38-2	Arsenic	2.3%	1.9%	1.9%	1.9%	2.0%	2.0%	2.1%	2.0%	2.0%	2.0%	2.0%	2.1%	2.2%	2.3%	2.3%	2.1%	2.2%	2.1%	2.0%	2.1%
3	7440-43-9	Cadmium	2.6%	2.0%	2.1%	2.1%	2.2%	2.2%	2.2%	2.2%	2.2%	2.3%	2.3%	2.4%	2.5%	2.6%	2.6%	2.3%	2.5%	2.3%	2.2%	2.4%
4	Cr IV	Chromium IV	15.9%	18.7%	16.9%	17.0%	16.6%	16.9%	16.9%	16.1%	16.9%	16.2%	16.2%	15.7%	16.1%	15.5%	15.4%	17.1%	15.7%	17.0%	15.8%	15.8%
5	7439-92-1	Lead	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	7440-41-7	Beryllium	2.5%	2.7%	2.8%	2.7%	2.7%	2.7%	2.6%	2.8%	2.7%	2.7%	2.8%	2.7%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.8%	2.7%
7	7440-02-0	Nickel	3.8%	4.4%	4.6%	4.5%	4.5%	4.4%	4.2%	4.7%	4.4%	4.5%	4.5%	4.5%	4.1%	4.0%	3.9%	4.0%	4.1%	4.0%	4.8%	4.3%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table B6b: Contribution to ICR for each Receptor (%)

Contribution to Incremental Carcinogenic Risk - Baselin

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	PAH	Polycyclic Aromatic Hydrocarbons	72.4%	72.8%	72.7%	72.5%	72.5%	72.5%	72.5%	72.5%	72.4%	72.5%	72.5%
2	7440-38-2	Arsenic	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.3%	2.2%	2.3%	2.3%	2.2%
3	7440-43-9	Cadmium	2.4%	2.5%	2.5%	2.4%	2.4%	2.5%	2.5%	2.5%	2.5%	2.5%	2.4%
4	Cr IV	Chromium IV	16.3%	15.7%	15.8%	16.0%	16.1%	16.0%	16.1%	16.2%	16.3%	16.2%	16.1%
5	7439-92-1	Lead	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	7440-41-7	Beryllium	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.6%
7	7440-02-0	Nickel	4.1%	4.0%	4.1%	4.0%	4.1%	4.0%	3.9%	4.0%	3.8%	3.9%	4.1%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Contribution to Incremental Carcinogenic Risk - Propos

Muja A and B Excluded from Model Results

No	CAS # / ID	Compound Name	Receptor 61	Receptor 62	Receptor 63	Receptor 64	Receptor 65	Receptor 66	Receptor 67	Receptor 68	Receptor 69	Receptor 70	Receptor 71
1	PAH	Polycyclic Aromatic Hydrocarbons	72.4%	72.8%	72.7%	72.6%	72.5%	72.6%	72.6%	72.5%	72.4%	72.5%	72.5%
2	7440-38-2	Arsenic	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.3%	2.3%	2.2%
3	7440-43-9	Cadmium	2.4%	2.5%	2.5%	2.4%	2.4%	2.5%	2.5%	2.5%	2.5%	2.5%	2.4%
4	Cr IV	Chromium IV	16.2%	15.7%	15.8%	15.9%	16.1%	16.0%	16.0%	16.1%	16.3%	16.2%	16.1%
5	7439-92-1	Lead	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
6	7440-41-7	Beryllium	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.6%
7	7440-02-0	Nickel	4.1%	4.1%	4.1%	4.1%	4.1%	4.0%	4.0%	4.0%	3.9%	3.9%	4.1%
8	71-43-2	Benzene	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**