H1

Welcome to the H1 Software

Version 2.01- May 2010

Introduction

This version of the tool accompanies Horizontal Guidnace Note 1 Version 2.0 April 2010 (As Amended)

Important Notes:

This software tool can be used to complete most of the modules within H1. However, further information may need to be provided in the following areas:

- detailed assessment of fate and effects, where required
- decision-making trails for the comparison and ranking of options

This software provides a general structure for assessing costs and environmental impacts. You may need to decide the best way to apply this structure to fit the nature and pattern of your operation, in particular:

- where load is variable, such as seasonal or demand-led operations
- where a number of processes are conducted at the same time, such as integrated operations
- where a number of products are made, with possible differences in unit operations and release points employed
- where fugitive or potential emergency releases are of particular interest

Information in this database will be used to determine your EPR permit, therefore to get the most from this software tool, you should:

- read the introduction to the H1 guidance, to understand the basic principles, module structure and methods

- use the HELP boxes and refer to the H1 guidance as you progress to ensure that the data you input is representative and accurate

- use the comments boxes to clarify assumptions and data sources

Some basic instructions for using the software tool are provided on our web site at www.environment-agency.gov.uk/H1SoftwareGuidance

ENVIRONMENT AGENCY

The application has been optimised for a screen resolution of 800 x 600

Version 2.01 31 May 2010

In conjunction with:

www.ability-software.co.uk

Reference Information

Please complete the following information:

Company Name:	MVV Environment South West Devon Ltd
Location:	Devonport Waste Treatment Facility
Permit Number:	EPR/WP3833FT/A001

module 1

Introduction to Module 1

Module 1: Describe the Scope and Options

The aim of this module is to:

- state the OBJECTIVES of the assessment

- in the case of ENVIRONMENTAL ASSESSMENT of the whole installation, describe the scope of the activities to be included in the assessment;

- in the case of OPTIONS APPRAISALS, identify candidate options for BAT by considering all relevant techniques to prevent and minimise pollution and the scope of activities covered by the techniques.

Depending on the reason for the assessment, you will need to complete different modules of the guidance. The software will automatically select the required modules according to the responses you enter.

NOTE: If you are going to complete more than one assessment or appraisal, make sure that you create a copy of the H1 file for each new assessment BEFORE you begin to input data. This is because Microsoft Access automatically saves changes to the current file you are using, rather than allowing you to save your changes at the end of your work.

TO CONTINUE WITH MODULE 1, PRESS "NEXT".

Describe the Objectives

Depending on the reason for the assessment, you will need to complete different modules of the guidance.

Select the type of assessment:

○ a)	to conduct a costs/benefits OPTIONS APPRAISAL to determine BAT for selected releases from an installation	Do modules 1,2, 3 and 4 and continue with 5 and 6 if necessary
◉ b)	to carry out an ENVIRONMENTAL ASSESSMENT of the emissions resulting from the installation as a whole	Do modules 1, 2 and 3 only

1.1 Briefly summarise the objectives and reason for the assessment in terms of the main environmental impacts or emissions to be controlled:

To complete an environmental assessment of the site operations

Scope of Environmental Assessment

List the activities included in the assessment

This should include all the activities in your permit, broken down into the basic process steps, such as: raw materials storage, handling, processing, emission control, waste treatment etc. as appropriate. See H1 for guidance and use the comments box below to provide any additional information.

Number	Activity
1	Tipping Hall
2	Waste Bunker Hall With Waste Handling Cranes
3	Bale Store and Baling System
4	Turbine Hall With Steam Turbine Generator
5	Boiler House With Grate, Boiler and Ancillary Systems
6	Flue Gas Cleaning System and Chimney
7	Air Cooled Condensers
8	Water Treatment Plant
9	Bottom Ash Handling System
10	Administration Block
11	Workshop and Stores

Comments:

module 2

Introduction to Module 2

Module 2: Emissions Inventory

The aim of this module is to produce an inventory of sources and releases of polluting substances from each option. This is used as the basis for the subsequent evaluation of environmental impacts.

For this module you will require information on:

- release points and sources of emissions to all media

- concentration and mass rate of emitted substances

- frequency and duration of emissions and how these relate to long term and short term effects

IMPORTANT NOTES

- you may need to consider a suitable method for assessment of groups of pollutants, such as VOCs, heavy metals, uncharacterised liquid effluents, etc (see H1 guidance for details).

TO CONTINUE WITH MODULE 2, PRESS "NEXT".

Air Release Points

Please define your Release Points for Releases to Air

Are there any Air emissions? Yes

Number	Description	Location or Grid Reference	Activity or Activities	Effective Height metres	Efflux Velocity m/s	Total Flow m3/hr
1	Chimney	NGR 244789, 57546	EfW Facilities	95	15.64	201060

Comments:

Air Emissions Inventory

Please list all Substances released to Air for each Release Point identified in the previous page.

Number	Substance	Meas'ment Method	Operating Mode (if relevant)	Data relating to Long Term effects			Data relating to Short Term effects			Annual Rate	ELV Conc.
				Conc. mg/m3	Release Rate g/s	Meas'ment Basis	Conc. mg/m3	Release Rate g/s	Meas'ment Basis	tonne/yr	mg/m3
1	Nitrogen Dioxide	Estimated*		200	11.17	Daily Mean	400	22.34	1/2 hr mean	352.26	
2	Nitrogen Dioxide (Ecological - Daily Mean)	Estimated*	100%	200	11.17	Daily Mean	400	22.34	1/2 hr Mean	352.26	
3	Sulphur Dioxide (15 Min Mean)	Estimated*	100%				114	6.3669	Daily Mean Corrected to 15 min	88.06	
4	Sulphur Dioxide (1 Hour Mean)	Estimated*	100%				85	4.74725	Daily Mean Corrected to 1hr	88.06	
5	Sulphur Dioxide (24 Hour Mean)	Estimated*	100%	50	2.7925	Daily Mean	50	2.7925	Daily Mean	88.06	
6	Sulphur Dioxide (Ecological - Sensitive Lichens)	Estimated*	100%	50	2.7925	Daily Mean	50	2.7925	Daily Mean	88.06	
7	Carbon monoxide	Estimated*	100%	50	2.7925	Daily Mean	50	2.7925	Daily Mean	88.06	
8	Ammonia (ecological receptor - Sensitive Lichens)	Estimated*	100%	10	0.5585	Daily Mean	10	0.5585	Daily Mean	17.61	
9	Ammonia (human health receptor)	Estimated*	100%	10	0.5585	Daily Mean	10	0.5585	Daily Mean	17.61	
10	Benzene	Estimated*	100%	10	0.5585	Daily Mean	10	0.5585	Daily Mean	17.61	
11	Particulates (PM10) (24 hr Mean)	Estimated*	100%	10	0.5585	Daily Mean	10	0.5585	Daily Mean	17.61	
12	Particulates (PM2.5)	Estimated*	100%	10	0.5585	Daily Mean	10	0.5585	Daily Mean	17.61	
13	Benzo-a-pyrene	Estimated*	100%	0.001	5.59E-05	Daily Mean	0.001	5.59E-05	Daily Mean	0.00176	
14	Hydrogen chloride	Estimated*	100%	10	0.5585	Daily Mean	10	0.5585	Daily Mean	17.61	
15	Hydrogen fluoride (as F) (Ecological - Daily Mean)	Estimated*	100%	1	0.05585	Daily Mean	4	0.2234	1/2 hr mean	1.76	
16	Hydrogen fluoride (as F) (Monthly Mean)	Estimated*	100%	1	0.05585	Daily Mean				1.76	
17	Cadmium and its compounds (as Cd)	Estimated*	100%	0.05	0.002793	Daily Mean	0.05	0.002793	Daily Mean	0.09	
18	Mercury and compounds, except mercury alkyls, (as	Estimated*	100%	0.05	0.002793	Daily Mean	0.05	0.002793	Daily Mean	0.09	
19	Manganese and compounds (as Mn)	Estimated*	100%	0.5	0.027925	Daily Mean	0.5	0.027925	Daily Mean	0.88	

20	Lead	Estimated*	100%	0.5	0.027925	Daily Mean	0.5	0.027925	Daily Mean	0.88
21	Antimony and compounds (as Sb) except antimony tri	Estimated*	100%	0.5	0.027925	Daily Mean	0.5	0.027925	Daily Mean	0.88
22	Arsenic and compounds (as As)	Estimated*	100%	0.003	0.000168	Daily Mean	0.003	0.000168	Daily Mean	0.01
23	Chromium (VI) compounds (as Cr)	Estimated*	100%	0.000693	3.87E-05	Daily Mean	0.000693	3.87E-05	Daily Mean	0.0012
24	Copper dusts and mists (as CU)	Estimated*	100%	0.5	0.027925	Daily Mean	0.5	0.027925	Daily Mean	0.88
25	Nickel (total Ni compounds in the PM10 fraction)	Estimated*	100%	0.136	0.007596	Daily Mean	0.136	0.007596	Daily Mean	0.24
26	Vanadium	Estimated*	100%	0.5	0.027925	Daily Mean	0.5	0.027925	Daily Mean	0.88
27	Thallium	Estimated*	100%	0.05	0.002793	Daily Mean	0.05	0.002793	Daily Mean	0.09

Measurement method: * provide detail in comments box Comments:

Energy Consumption

Please list all Energy Sources and Annual Consumption

Select energy sources by Clicking on 'Add' and using the pull-down list.

Number	Energy Sources		Delivered MWh/yr	Conversion Factor	Primary MWh/yr	CO2 Factor	CO2 tonne/yr
1	Waste Fuel (MSW)	direct emissions	647276	1.00	647,276	0.35	229,136
2	Electricity from public supply	indirect emissions	350	2.40	840	0.17	139
3	Renewable Electricity (non-fossil fuel)	indirect emissions	19701	1.00	19,701	0.00	0
4	Own Heat Used	direct emissions	103472	1.00	103,472	0.00	0
5	Gas oil	direct emissions	19418	1.00	19,418	0.25	4,855

Comments:

Raw Materials

Please list all Raw Materials Consumed:

Number	Material	Annual Consumption	Units
1	Potable Water	35163	tonnes/year
2	Urea	215	tonnes/year
3	Sodium Bicarbonate	4220	tonnes/year
4	Activated Carbon (PAC)	181	tonnes/year
5	Hydrochloric Acid	28	tonnes/year
6	Sodium Hydroxide	10	tonnes/year

Comments:

Waste Inventory

Please list all Waste Streams emitted:

Are there any Waste emissions? Yes

Number	Waste Stream	Mass tonne/yr	Category of Waste	Disposal/Recovery Option
1	Bottom Ash Landfilled	2,671	other non-hazardous	Landfill (D5)
2	Bottom Ash As Aggregate	50,759	other non-hazardous	Other Recycling (R3:R4:R5:R11 and R12)
3	IBA Ferrous Metals	6,869	other non-hazardous	Other Recycling (R3:R4:R5:R11 and R12)
4	IBA Non-Ferrous Metals	1,956	other non-hazardous	Other Recycling (R3:R4:R5:R11 and R12)
5	APC Residue	8,745	hazardous	Landfill (D5)

Comments:

module 3

Introduction to Module 3

Module 3: Quantify Impacts

The aim of this module is to quantify the effects on the environment of the emissions listed in the inventory in module 2. This guidance provides methods for assessing the ten main environmental considerations of most relevance to the PPC regime. Your emissions may not result in effects to all ten of these considerations, and the module allows you to screen out any that are not relevant.

The emissions you entered in module 2 are automatically brought forward for assessment into each environmental consideration that is relevant for that type of emission (e.g. an emission may have more than one type of effect).

This module allows you to screen out any emissions that are insignificant, and to identify those emissions where further, detailed assessment of the potential environemtnal impact may be required.

IMPORTANT NOTE

This software tool only completes PART of the requirements for module 3, as described above. Depending upon the degree of risk to the environment presented by the emissions, the operator may need to do further, detailed assessment of the potential effects using methodologies that are not provided here. This information should be submitted separately, as indicated within this module.

TO CONTINUE WITH MODULE 3, PRESS "NEXT".

Identify Relevant Impacts

Identify any environmental impacts that are not relevant to this assessment by deselecting from the list below:

Emissions in Module 2?			Justification for omission
Yes	☑	Air	
Yes	☑	Deposition from Air to Land	
No	☐	Water	No point source releases
No	☐	Noise	assessment of this impact carried out via modelling
No	☐	Odour	assessment of this impact should be carried out according to sector guidance
Yes	☑	Waste	
-	☐	Accidents	assessment of this impact should be carried out according to sector guidance
Yes	☑	Visual	
Yes	☑	Ozone Creation	
Yes	☑	Global Warming	

If you have deselected an environmental impact as not relevant to this assessment,
no further assessment of this impact will be carried out
and associated assessment pages will be hidden

Local Environmental Quality

Describe the Quality of the Environment:

Provide a brief description of the main local factors that may influence the importance of the impact of emissions in the surrounding environment

Air Quality

Are there any Environmental Quality Standards relating to substances released from the activities, which may be at risk due to additional contribution from the activity ? (Environmental Quality Standards for air and water are described in IPPC Technical Guidance Notes)	None
Are there any Local Air Quality Management Plans applicable to releases from the activity?	None

Water Quality & Resources

Are there any Environmental Quality Standards relating to substances released from the activities, which may be at risk due to additional contribution from the activity?	None
Are proposals to abstract water satisfactory in order to obtain an abstraction licence?	None
Is the activity located in a groundwater vulnerable zone (for activities with direct releases to land only)?	None

Proximity to Sensitive Receptors

Is public annoyance likely to be an issue for noise, odour or plume visibility ?	None
Are there any wildlife habitats, eg Special Areas of Conservation,or Special Protection Areas, likely to be affected by releases from the activity? (Description of requirements of Habitats Directive is provided in IPPC Technical Guidance Notes)	Yes - refer to Environmental Impact Assessment Report

Air Impacts

Calculate Process Contributions of Emissions to Air

This table estimates the Process Contribution (PC), calculated as the maximum ground level concentration for each emission listed in the inventory, according to the release point parameters input earlier. If you have more accurate data obtained through dispersion modelling, this may be entered as indicated and will be used instead of the estimated PC.

Number	Substance	Long Term EAL µg/m3	Long Term PC µg/m3	Long Term * Modelled PC µg/m3	Short Term EAL µg/m3	Short Term PC µg/m3	Short Term Modelled PC µg/m3
1	Nitrogen Dioxide	40	1.48	1.8	200	220	11.1
2	Nitrogen Dioxide (Ecological - Daily Mean)	30	1.48		75	220	
3	Sulphur Dioxide (15 Min Mean)		-		266	62.7	8.8
4	Sulphur Dioxide (1 Hour Mean)		-		350	46.7	7.7
5	Sulphur Dioxide (24 Hour Mean)		0.368		125	27.5	3.6
6	Sulphur Dioxide (Ecological - Sensitive Lichens)	10	0.368			27.5	
7	Carbon monoxide		0.368		10000	27.5	8
8	Ammonia (ecological receptor - Sensitive Lichens)	1	0.0736			5.50	
9	Ammonia (human health receptor)	180	0.0736	0.1	2500	5.50	3
10	Benzene	5	0.0736	0.13		5.50	
11	Particulates (PM10) (24 hr Mean)	40	0.0736	0.1	50	5.50	0.4
12	Particulates (PM2.5)	25	0.0736	0.1		5.50	
13	Benzo-a-pyrene	0.00025	0.00000735	0.000013		0.000550	
14	Hydrogen chloride		0.0736		750	5.50	2.8
15	Hydrogen fluoride (as F) (Ecological - Daily Mean)		0.00736		4.9	2.20	
16	Hydrogen fluoride (as F) (Monthly Mean)	16	0.00894		160	0.550	0.3
17	Cadmium and its compounds (as Cd)	0.005	0.000368	0.00063		0.0275	
18	Mercury and compounds, except mercury alkyls, (as	0.25	0.000368	0.001	7.5	0.0275	0.014
19	Manganese and compounds (as Mn)	0.15	0.00368	0.006	1500	0.275	
20	Lead	0.5	0.00368			0.275	
21	Antimony and compounds (as Sb) except antimony tri	5	0.00368	0.01	150	0.275	0.14
22	Arsenic and compounds (as As)	0.006	0.00002206			0.00165	
23	Chromium (VI) compounds (as Cr)	0.0002	0.00000510	0.0000088		0.000381	
24	Copper dusts and mists (as CU)	10	0.00368	0.01	200	0.275	0.14
25	Nickel (total Ni compounds in the PM10 fraction)	0.02	0.00101	0.0017		0.0747	

26	Vanadium	5	0.00368	0.01	1	0.275	0.14

Note that the Process Contribution shown for each substance is the sum of the individual process contributions of each point from which the substance is emitted. Process Contributions obtained from modelling data should incorporate all relevant release points and flow conditions.

* State the location of any detailed air dispersion modelling and also the main assumptions:

Comments:

Air Impact Screening

Screen out Insignificant Emissions to Air

This page displays the Process Contribution as a proportion of the EAL or EQS. Emissions with PCs that are less than the criteria indicated may be screened from further assessment as they are likely to have an insignificant impact.

Number	Substance	Long Term EAL	Short Term EAL	Long Term			Short Term		
				PC	% PC of EAL	> 1% of EAL?	PC	% PC of EAL	> 10% of EAL?
		µg/m3	µg/m3	µg/m3	%		µg/m3	%	
1	Nitrogen Dioxide	40.0	200	1.81	4.51	**Yes**	11.2	5.56	**No**
2	Nitrogen Dioxide (Ecological - Daily Mean)	30.0	75.0	1.48	4.91	**Yes**	220	293	**Yes**
3	Sulphur Dioxide (15 Min Mean)	-	266	-	-		8.81	3.31	**No**
4	Sulphur Dioxide (1 Hour Mean)	-	350	-	-		7.71	2.21	**No**
5	Sulphur Dioxide (24 Hour Mean)	-	125	0.368	-		3.61	2.88	**No**
6	Sulphur Dioxide (Ecological - Sensitive Lichens)	10.00	-	0.368	3.68	**Yes**	27.5	-	
7	Carbon monoxide	-	10,000	0.368	-		8.00	0.0801	**No**
8	Ammonia (ecological receptor - Sensitive Lichens)	1.000	-	0.0736	7.36	**Yes**	5.50	-	
9	Ammonia (human health receptor)	180	2,500	0.1001	0.0556	**No**	3.00	0.121	**No**
10	Benzene	5.00	-	0.131	2.61	**Yes**	5.50	-	
11	Particulates (PM10) (24 hr Mean)	40.0	50.0	0.1001	0.251	**No**	0.401	0.801	**No**
12	Particulates (PM2.5)	25.0	-	0.1001	0.401	**No**	5.50	-	
13	Benzo-a-pyrene	0.000251	-	0.00001300	5.20	**Yes**	0.000550	-	
14	Hydrogen chloride	-	750	0.0736	-		2.80	0.374	**No**
15	Hydrogen fluoride (as F) (Ecological - Daily Mean)	-	4.91	0.00736	-		2.20	44.9	**Yes**
16	Hydrogen fluoride (as F) (Monthly Mean)	16.0	160	0.00894	0.0559	**No**	0.301	0.188	**No**

17	Cadmium and its compounds (as Cd)	0.00500	-	0.000631	12.7	**Yes**	0.0275	-	
18	Mercury and compounds, except mercury alkyls, (as	0.251	7.51	0.001000	0.401	**No**	0.0141	0.187	**No**
19	Manganese and compounds (as Mn)	0.151	1,500	0.00601	4.00	**Yes**	0.275	0.0184	**No**
20	Lead	0.501	-	0.00368	0.736	**No**	0.275	-	
21	Antimony and compounds (as Sb) except antimony tri	5.00	150	0.01001	0.201	**No**	0.141	0.0934	**No**
22	Arsenic and compounds (as As)	0.00601	-	0.00002206	0.368	**No**	0.00165	-	
23	Chromium (VI) compounds (as Cr)	0.000201	-	0.00000880	4.41	**Yes**	0.000381	-	
24	Copper dusts and mists (as CU)	10.00	200	0.01001	0.1001	**No**	0.141	0.0701	**No**
25	Nickel (total Ni compounds in the PM10 fraction)	0.0201	-	0.00171	8.50	**Yes**	0.0747	-	
26	Vanadium	5.00	1.000	0.01001	0.201	**No**	0.141	14.0	**Yes**

Air Impact Modelling

Identify need for Detailed Modelling of Emissions to Air

This page displays the Process Contributions in relation to the backgound pollutant levels and the EAL or EQS. You should use this information to decide whether to conduct detailed modelling. Note that releases that are insignificant are not shown as they are screened from further assessment. Also complete this page if you have already done detailed modelling.

			Long Term				Short Term	
Number	Substance	Air Bkgrnd Conc.	PC	% PC of headroom (EAL - Bkgrnd)	PEC	% PEC of EAL	PC	% PC of headroom (EAL - Bkgrnd)
		µg/m3	µg/m3		µg/m3	%	µg/m3	
1	Nitrogen Dioxide	15.3	1.81	7.29	17.2	42.8	11.2	6.56
2	Nitrogen Dioxide (Ecological - Daily Mean)	15.3	1.48	10.0	16.8	56.0	220	495
6	Sulphur Dioxide (Ecological - Sensitive Lichens)	7.1	0.368	12.7	7.47	74.7	27.5	-
8	Ammonia (ecological receptor - Sensitive Lichens)	1	0.0736	0	1.08	107	5.50	-
10	Benzene	0.33	0.131	2.79	0.461	9.20	5.50	-
13	Benzo-a-pyrene	0.000121	0.00001300	10.1	0.000135	53.7	0.000550	-
15	Hydrogen fluoride (as F) (Ecological - Daily Mean)	0.003	0.00736	-	0	-	2.20	44.9
17	Cadmium and its compounds (as Cd)	0.00009	0.000631	12.9	0.000721	14.5	0.0275	-
19	Manganese and compounds (as Mn)	0.00201	0.00601	4.06	0.00801	5.35	0.275	0.0184
23	Chromium (VI) compounds (as Cr)	0.000104	0.00000880	9.17	0.000113	56.4	0.000381	-
25	Nickel (total Ni compounds in the PM10 fraction)	0.00196	0.00171	9.43	0.00367	18.4	0.0747	-
26	Vanadium	0.00068	0.01001	0.201	0	0	0.141	14.0

Air Impact Modelling Assessment

See guidelines in H1 Document

Describe here the justification for whether detailed modelling is, or is not required for any of the releases. Refer to the quidelines in H1 Annex F	Detailed modelling needed for Nox, SO2, NH3, PM10, BaP and Cr(VI)
Describe source of background information:	Local air quality monitoring data undertaken by MVV
Document Reference of detailed modelling work:	See Application Volume 1, Section 4, Environmental Impact Assessment

Deposition to Land from Air

With reference to H1 Guidance, describe assessment of deposition below:

Number	Substance	% PC of EAL	Decision whether to screen as insignificant: Insignificant?	Reason (See section 3.4.1 of H1)
		%		
1	Nitrogen Dioxide	4.51	No	
2	Nitrogen Dioxide (Ecological - Daily Mean)	4.91	No	
3	Sulphur Dioxide (15 Min Mean)	-	No	
4	Sulphur Dioxide (1 Hour Mean)	-	Yes	Below short term %PEC of EAL
5	Sulphur Dioxide (24 Hour Mean)	-	No	
6	Sulphur Dioxide (Ecological - Sensitive Lichens)	3.68	No	
7	Carbon monoxide	-	Yes	Below %PC criteria
8	Ammonia (ecological receptor - Sensitive Lichens)	7.36	No	

Deposition to Land from Air Base Option

9	Ammonia (human health receptor)	0.0556	Yes	Below %PC criteria
10	Benzene	2.61	No	Below the %PEC of EAL
11	Particulates (PM10) (24 hr Mean)	0.251	Yes	Below %PC criteria
12	Particulates (PM2.5)	0.401	Yes	Below %PC criteria
13	Benzo-a-pyrene	5.20	Yes	Below the %PEC of EAL
14	Hydrogen chloride	-	Yes	Below %PC criteria
15	Hydrogen fluoride (as F) (Ecological - Daily Mean)	-	No	
16	Hydrogen fluoride (as F) (Monthly Mean)	0.0559	Yes	Below %PC criteria
17	Cadmium and its compounds (as Cd)	12.7	Yes	Below the %PEC of EAL
18	Mercury and compounds, except mercury alkyls, (as	0.401	Yes	Below %PC criteria

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Deposition to Land from Air Base Option

19	Manganese and compounds (as Mn)	4.00	Yes	Below the %PEC of EAL
20	Lead	0.736	Yes	Below %PC criteria
21	Antimony and compounds (as Sb) except antimony tri	0.201	Yes	Below %PC criteria
22	Arsenic and compounds (as As)	0.368	Yes	Below %PC criteria
23	Chromium (VI) compounds (as Cr)	4.41	Yes	Below the %PEC of EAL
24	Copper dusts and mists (as CU)	0.1001	Yes	Below %PC criteria
25	Nickel (total Ni compounds in the PM10 fraction)	8.50	Yes	Below the %PEC of EAL
26	Vanadium	0.201	Yes	Below %PC criteria
27	Thallium	-	Yes	Below %PC criteria

For those emissions not screened as insignificant, describe the location of any further assessment here:

Environment Agency H1 Database

Visual Impacts

Assess the visual impacts of plumes generated from the release points

Can ANY of the Options generate a visible plume? Yes

Can any of the release points generate a Visible Plume?: Yes

Does the Plume extend beyond the installation boundary for more than 5% of the time?: No

Photochemical Ozone Creation Impacts

Number	Substance	Annual Rate tonne/yr	POCP Value per tonne	POCP
10	Benzene	17.61	21.8	383.90
13	Benzo-a-pyrene	0.00	323	0.57
7	Carbon monoxide	88.06	2.7	237.76
1	Nitrogen Dioxide	352.26	2.8	986.33
2	Nitrogen Dioxide (Ecological - Daily Mean)	352.26	2.8	986.33
3	Sulphur Dioxide (15 Min Mean)	88.06	4.8	422.69
			Total:	3,017.57

Comments:

Global Warming Potential Impacts

Substance	Source	Annual Rate tonne/yr	GWP Value per tonne	Annual GWP
Benzo-a-pyrene Process: direct	Chimney	0.00	232.00	0.41
C02 Energy: direct	direct emissions	770,166.00	1.00	233,990.20
C02 Energy: indirect	indirect emissions	20,051.00	1.00	139.44
			Total:	234,130.05

Comments:

Waste Impact Score Calculation

Number	Waste Stream	Mass	Final treatment or disposal method	(Score)	Waste Type	(Score)	Impact Score
5	APC Residue	8,745	Landfill (D5)	30	hazardous	10	2623500
2	Bottom Ash As Aggregate	50,759	Other Recycling (R3:R4:R5:R11 and R12)	3	other non-hazardous	2	304554
1	Bottom Ash Landfilled	2,671	Landfill (D5)	30	other non-hazardous	2	160260
3	IBA Ferrous Metals	6,869	Other Recycling (R3:R4:R5:R11 and R12)	3	other non-hazardous	2	41214
4	IBA Non-Ferrous Metals	1,956	Other Recycling (R3:R4:R5:R11 and R12)	3	other non-hazardous	2	11736

Comments:

Waste Impact Screening

Number	Waste Stream	Screen Out?	Reason for Screening	Impact Score
5	APC Residue	No		2623500
2	Bottom Ash As Ag	Yes	Material recycled	304554
1	Bottom Ash Landf	No		160260
3	IBA Ferrous Metal	Yes	Material recycled	41214
4	IBA Non-Ferrous	Yes	Material recycled	11736
			Total Impact Score:	**3141264**

Comments:

Summary Tables

Print or Preview summary tables:

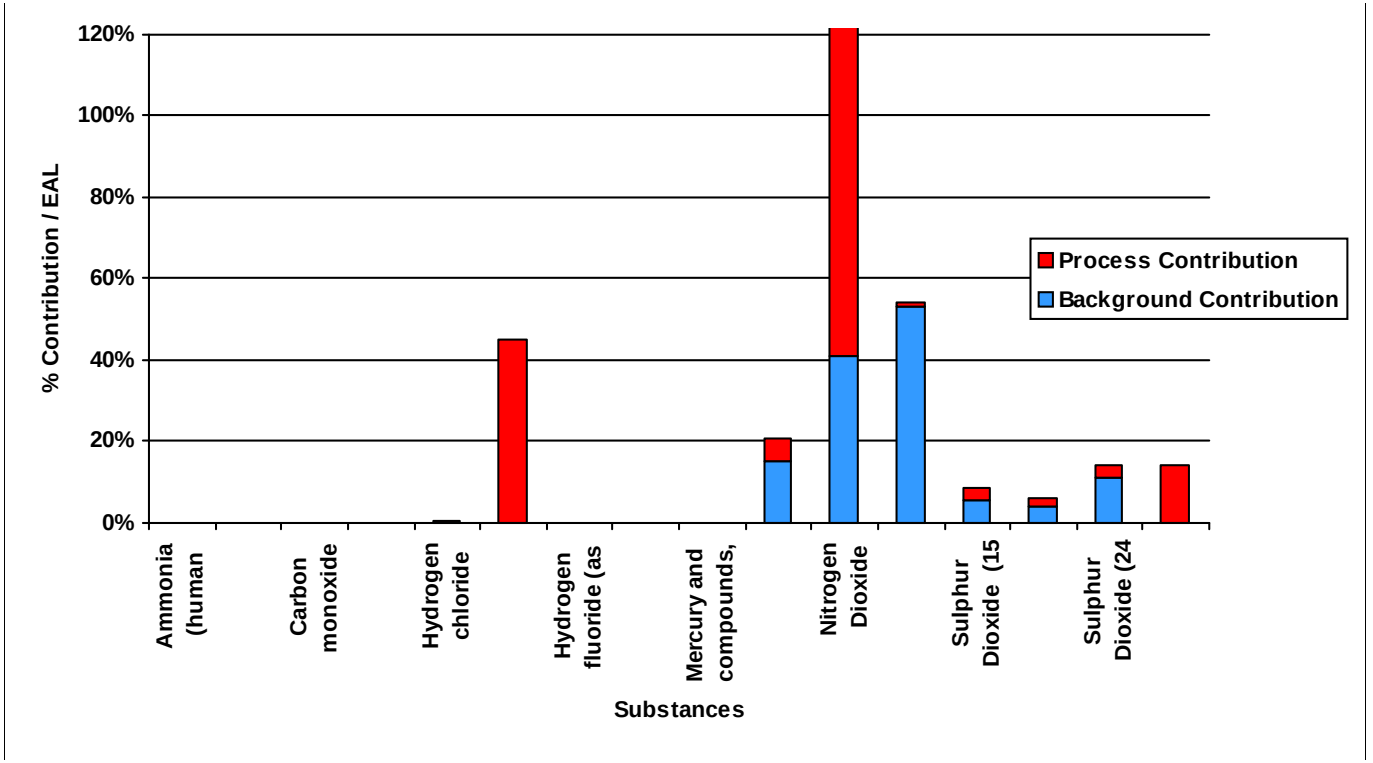
Choose a summary table:

Air
Deposition from Air to Land
Waste
Visual
Ozone Creation
Global Warming

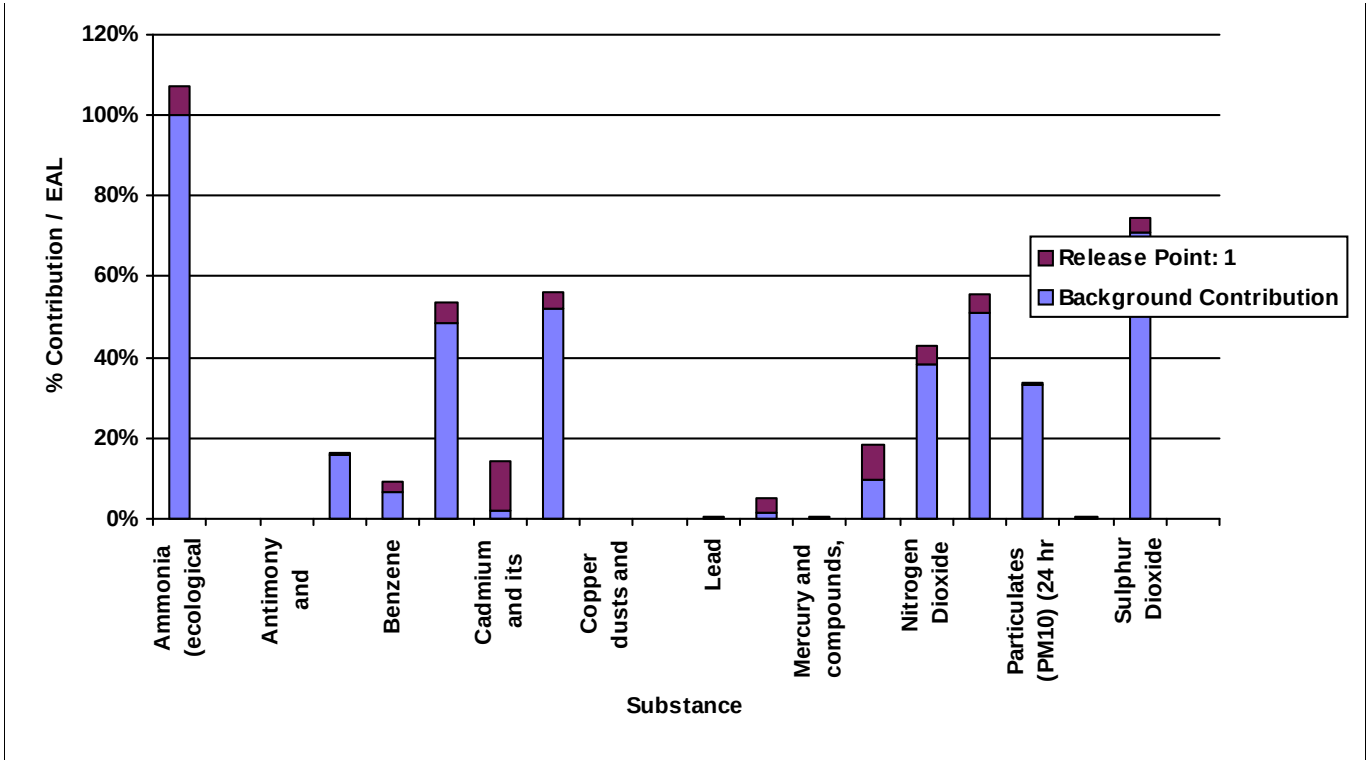
Preview

Print

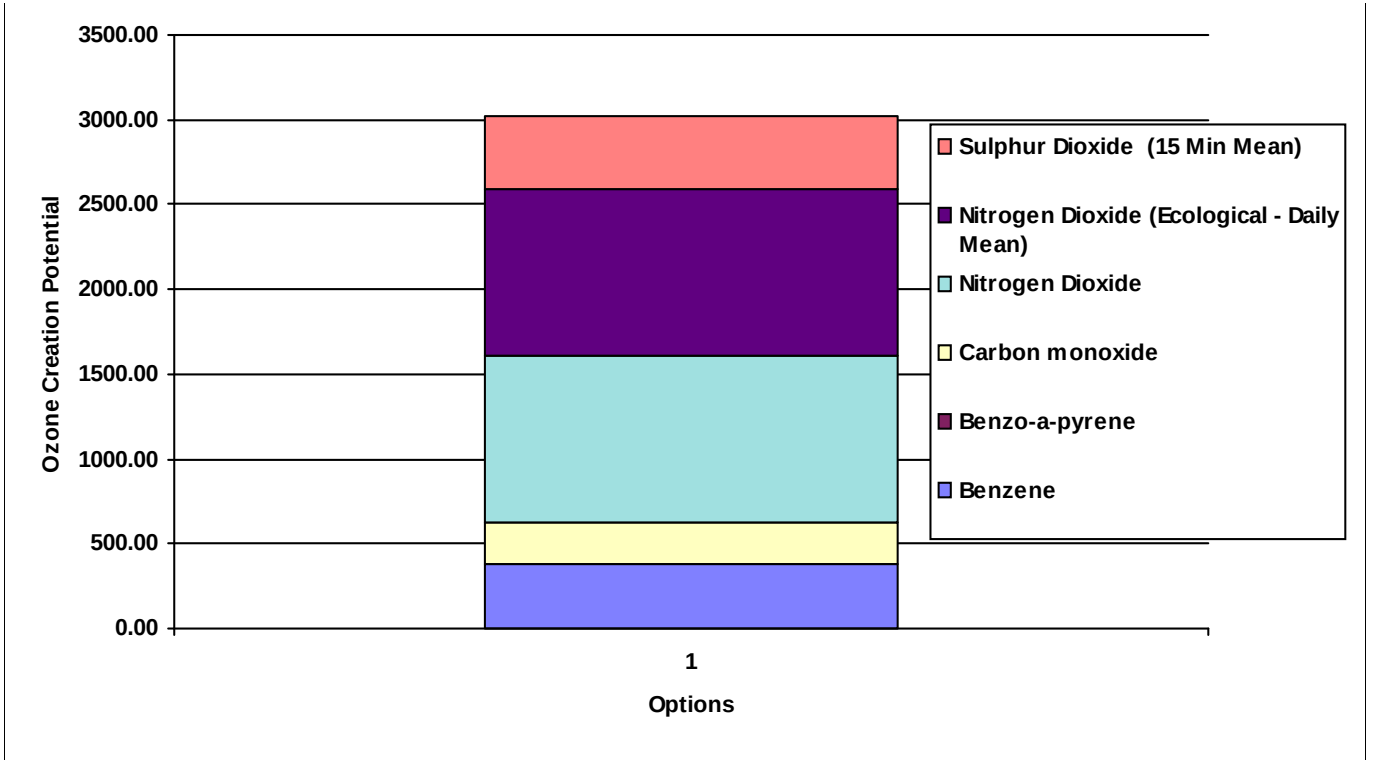
Air Short Term Effects - Comparison by Substance



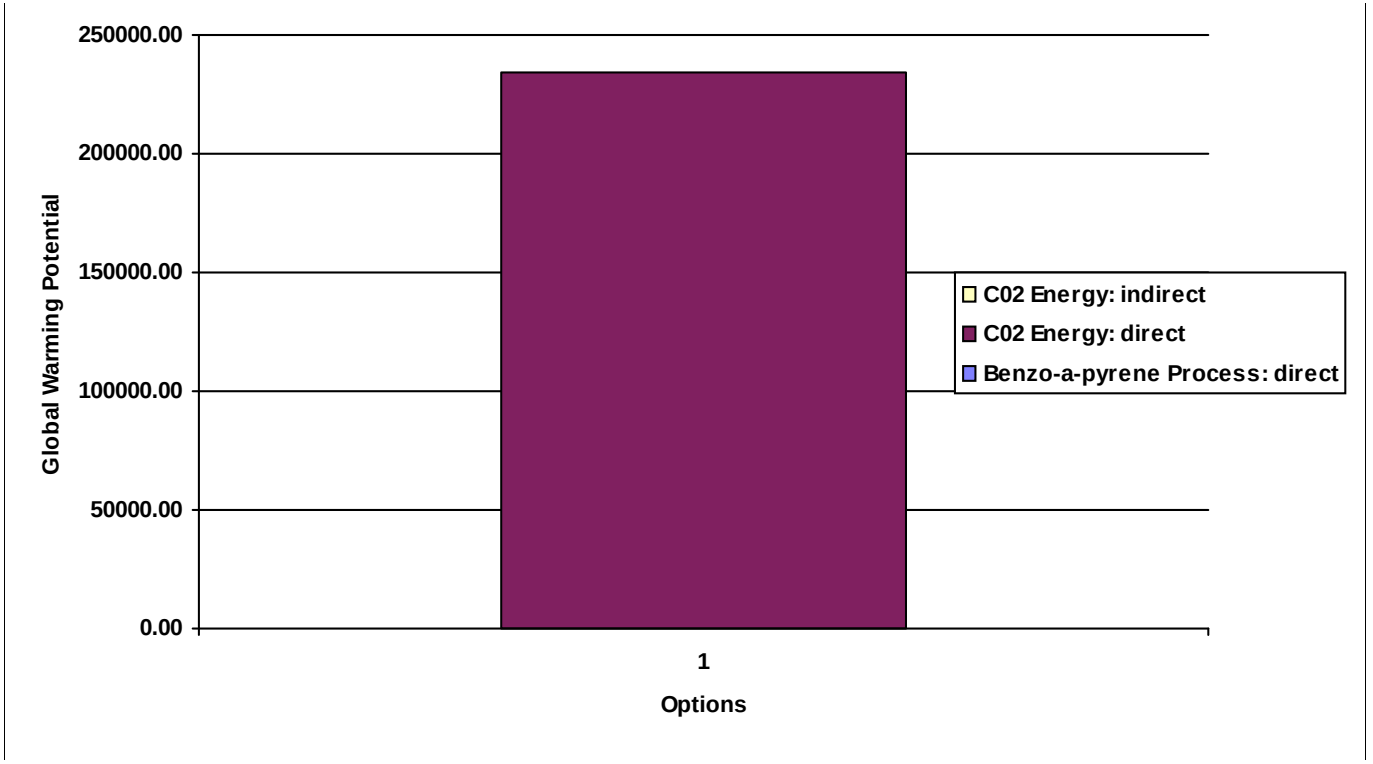
Air Long Term Effects - Comparison by Substance



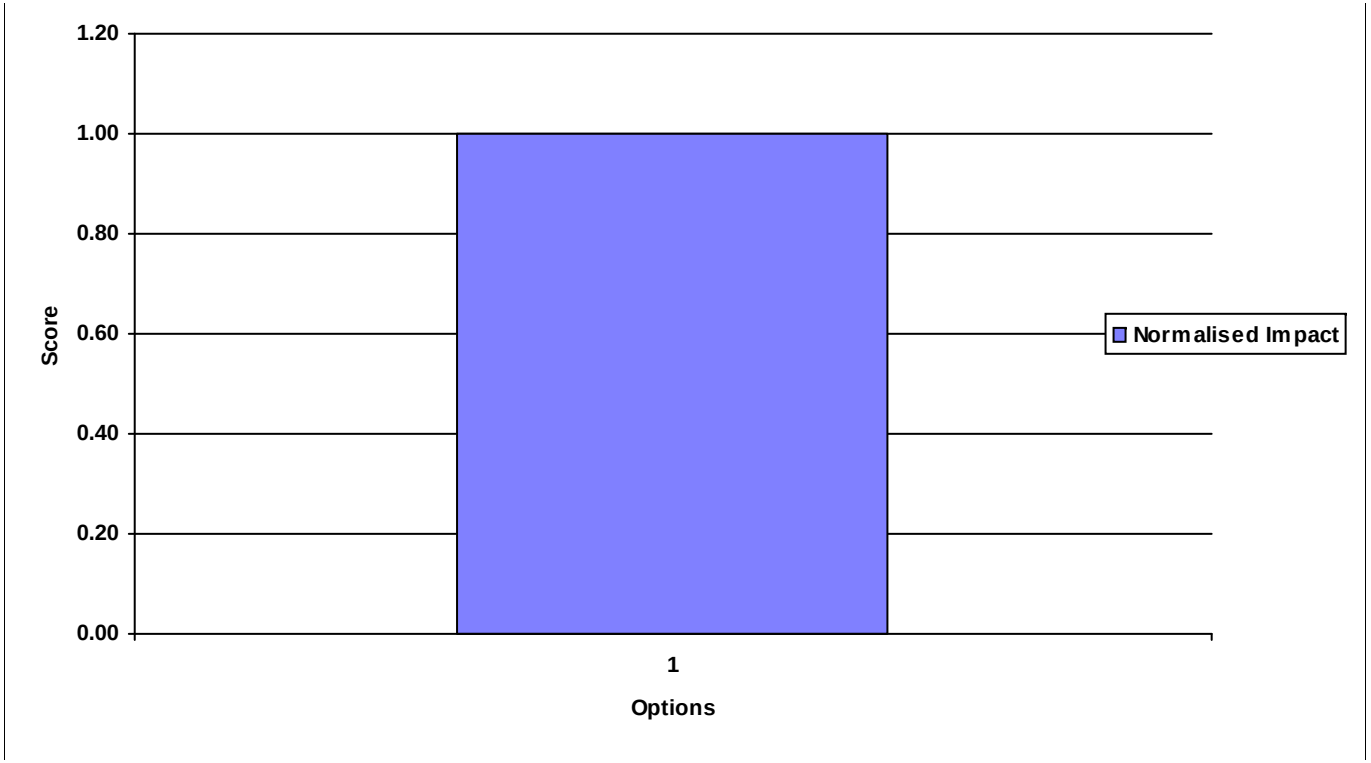
Ozone Creation - Substance Comparison



Global Warming - Substance Comparison



Waste - Option Comparison



Summary of Environmental Assessment

You have now completed all of the steps in this software for the environmental assessment. This will provide you with:

- an inventory of all emissions sources and substances emitted from your activities
- an information trail of how the impacts of these emissions have been assessed
- a summary of the impacts

You now need to use this information to confirm whether the emissions are acceptable, i.e. that they do not cause significant pollution to occur, by responding below:

Do any of the emissions exceed any of the folllowing:

Statutory Emission limit values:	No	If yes, identify the substances concerned and improvements that are needed to at least meet the statutory requirement
Environmental Quality Standards (air and water):	No	If yes, identify the substances concerned, the contribution from the activities and investigate whether further detailed fate and effect modelling and/or pollution controls are needed. Ensure that the relevant EQS reference conditions are applied.
Environmental Assessment Levels:	No	If yes, identify the substances concerned, the contribution from the activities and investigate whether further detailed fate and effect modelling and/or pollution controls are needed.

Use the box below to provide further information on any of the above to which you have responded 'Yes':

Finally, print all of the information and submit with your application. Remember to include any supplementary information and reports that you have had made reference to during the assessment procedure.