Welcome to the H1 software

Introduction

This version of the database tool accompanies the IPPC Guidance version H1v6 July 2003.

This software tool is for use with the IPPC guidance note H1 "Environmental Assessment & BAT Appraisal". The H1 guidance provides a structured methodology to demonstrate that an activity uses the Best Available Techniques, by:

- assessing the the costs and environmental benefits of options for pollution prevention and control techniques; and
- conducting an environmental assessment to demonstrate that no significant pollution is caused.

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 PPC 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 in Appendix I of the H1 Guidance

ENVIRONMENT AGENCY

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

Version 1.6.2 21 October 2003

ability

www.ability-software.co.uk

Reference Information

Please complete the following information:

Company Name:	Envirosol
Location:	Envirosol Environmental Management Facility Brownhills
Permit Number:	

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".

module 1

1.1 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 assess the existing environmental impact of all emissions from all activities within the installation for the production of iron

module 1

1.2 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 section 1.2 of H1 for guidance and use the comments box below to provide any additional information.

Number	Activity
1	Crushing and shredding of drums under negative pressure, with abatement of the exhaust air

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".

module 2

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	A1	Stack		0	15	5000

Comments

module 2

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 effect			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	Toluene	Estimated*		20	0.05556		20	0.05556			

Measurement method: * provide detail in comments box Comments

A range of VOCs are released. Toulene has been selected as representing the lowest EAL of the group.
Emission concentration is the worst case guaranteed by the abatement supplier.

module 2

Water Discharge Locations

Please define the Final Discharge Locations for Releases to Water

Are there any Water emissions? Yes

Use the 'Add' button below to list all final discharge points.
For releases to sewer, this should be the point of discharge from the sewage treatment works.

Number	Description	Final Discharge Category	River Flow (m3/s):
1	no releases	R	

Water pH Base Option

module 2

Odour Inventory

List all emissions of odorous substances below:

Are there any Odour emissions? Yes

Number	Source	Compounds
1	no release	

Comments

module 2

Performance Indicators

Enter consumption data to determine your performance indicators

Which of the following parameters do you use for calculating your performanc: Product

Please describe and justify your choice

Basic Consumption Data

	Name	Annual Quantity	Units
Amount of Product:	power		
Main Raw Material:			

Potable Water:		m3
Non Potable Water:		m3
Energy:		MWh
Waste: Inert:		tonne
Hazardous:		tonne
Non Hazardous:		tonne

Specific Consumption per of power:

Production Efficiency:		/
Potable Water:		m3
Non Potable Water:		m3
Energy:		MWh
Waste: Inert:		tonne
Hazardous:		tonne
Non Hazardous:		tonne

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".

module 3

3.1 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	
Yes	☐	Water	no releases
Yes	☐	Noise	assessment of this impact should be carried out according to sector guidance
Yes	☐	Odour	assessment of this impact should be carried out according to sector guidance
Yes	☐	Waste Hazard	no releases
-	☐	Accidents	assessment of this impact should be carried out according to sector guidance
Yes	☐	Visual	existing
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

module 3

3.2 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)	No
Are there any Local Air Quality Management Plans applicable to releases from the activity?	No

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?	N/A
Are proposals to abstract water satisfactory in order to obtain an abstraction licence?	N/A
Is the activity located in a groundwater vulnerable zone (for activities with direct releases to land only)?	N/A

Proximity to Sensitive Receptors

Is public annoyance likely to be an issue for noise, odour or plume visibility ?	No
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)	No

module 3

3.3.1 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.

		Long Term			Short Term		
Number	Substance	EAL µg/m3	PC µg/m3	* Modelled PC µg/m3	EAL µg/m3	PC µg/m3	Modelled PC µg/m3
1	Toluene	1910	8.23		8000	217	

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

module 3

3.3.2 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	Toluene	1,910	8,000	8.23	0.431	**No**	217	2.71	**No**

module 3

3.3.3 Air Impact Modelling Assessment

See guidelines in H1 section 3.3.3 and respond to the following

Describe here the justification for whether detailed modelling is, or is not required for any of the releases. Refer to the quidelines in H1 section 3.3.3	No significant effect
Describe source of background information:	
Document Reference of detailed modelling work:	

module 3

3.4 Deposition to Land from Air

With reference to H1 Section 3.4, 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	Toluene	0.431	Yes	No significant impact

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

module 3

3.10 Photochemical Ozone Creation Impacts

Number	Substance	Annual Rate tonne/yr	POCP Value per tonne	POCP
1	Toluene		63.7	
			Total:	

Comments

module 3

Summary Tables

Print or Preview summary tables:

Choose a summary table

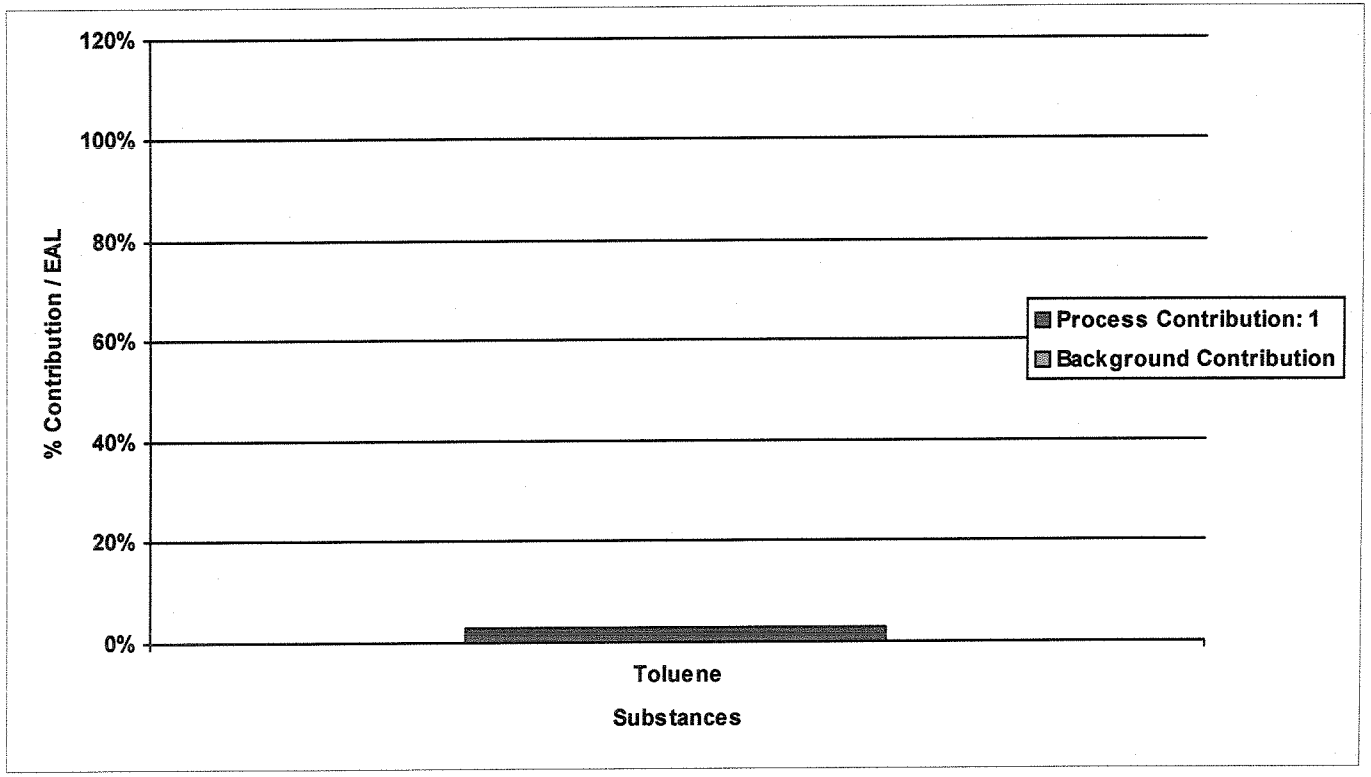
Air
Deposition from Air to Land
Ozone Creation
Global Warming

Preview

Print

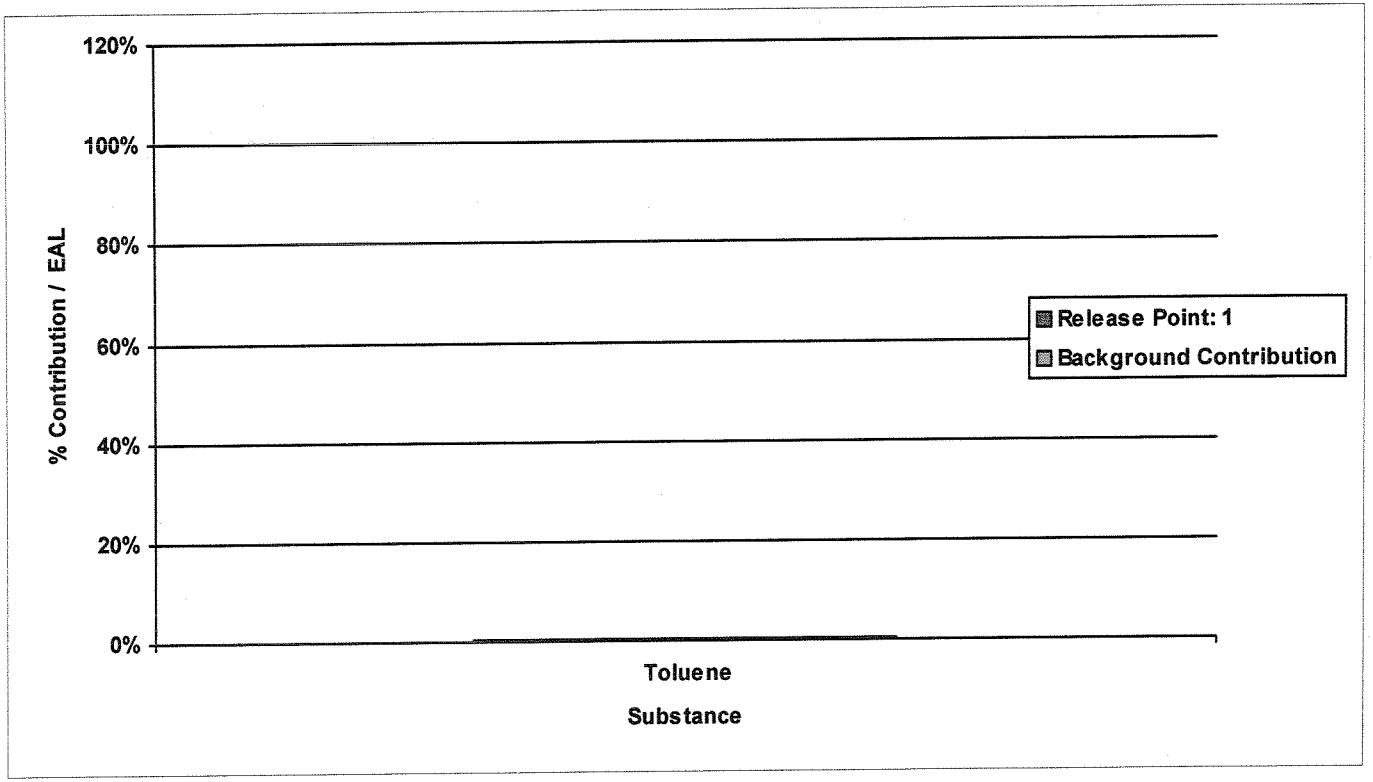
module 3

Air Short Term Effects - Comparison by Substance



module 3

Air Long Term Effects - Comparison by Substance



module 3

Ozone Creation - Substance Comparison

No Data Available

module 3

Global Warming - Substance Comparison

No Data Available

module 3

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.