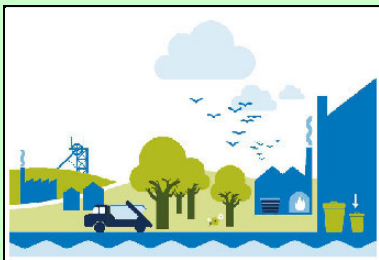


# H1

## Introduction



## Welcome to the H1 Software

Version 2.7.9 - October 2024

If you find the screen fonts in the H1Tool too small to read you can use the Windows zoom feature at any time to magnify the screen by holding down the 'Windows' key and '+' key. To cancel the feature hold down the 'Windows' key and 'Esc' key.

**This version of the tool should only be used for water impact or discharge assessments  
For all other H1 uses please refer to the latest excel version found on the ADMLC website below.**

**[H1 risk assessment tool \(excel version\)](#)**

### Important Notes:

**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 H1 Overview document, 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

This software will also output annual emissions data to an OPRA profile(s), which you can select on the Summary Tables page.

**[For general information about environmental risk assessments \(click here\)](#)**

Welcome



ENVIRONMENT  
AGENCY

In conjunction with:  
[www.ability-software.co.uk](http://www.ability-software.co.uk)

## Facility Reference Information

Please complete the following information:

Company Name:

Location:

Permit Number:

If you have data already stored in a previous version of the H1 software you may import it by pressing the button to the right.

Import Utility

Please note that before the import can take place any data that already exists in this copy of the tool will be removed. Please also note that any 'Operating Mode' information you had entered in your Air and Water inventories will defer to the default of 100% on data import

### NOTE ON MICROSOFT ACCESS SECURITY WARNING

Depending on your security settings, you may get a security notice appearing each time the import routine connects to a table in your source database. You need to click 'Open' on this message for the Import routine to be successful. There are 18 tables to connect to in total but if you place your cursor over the 'Open' button you will be able to repeatedly click your mouse to make this process execute quickly and without too much frustration. We apologise for this inconvenience but it is an aspect of Microsoft Security provisions that are beyond our control.

## Introduction to Step 1

### Step 1: Describe the Scope and Options

The aim of this step is to:

- state the OBJECTIVES of the assessment
- in the case of ENVIRONMENTAL ASSESSMENT of the whole facility, 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 STEP 1, PRESS "NEXT".**

## Describe the Objectives

Depending on the reason for the assessment you will need to complete different parts of the tool.

Select the type of assessment:

- a) to carry out an ENVIRONMENTAL ASSESSMENT of the releases resulting from the facility as a whole Do Steps 1, 2 and 3 only
- b) to conduct a costs/benefits OPTIONS APPRAISAL to determine BAT or support the case for derogation under the Industrial Emission Directive. Do Steps 1,2, 3 and 4 and continue with 5 and 6 if necessary

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

Construction dewatering will abstract groundwater possibly containing specific substances in low concentrations. As part of the discharge application it is necessary to complete this H1 assessment.

## Scope of Environmental Assessment

List the activities included in the assessment

Number      Activity

Use the 'Add' button at the bottom left to create a new activity

1	Construction dewatering and discharge with no intervening use.
---	--

Comments:

------------------

## Describe the Candidate Options

### Identify all reasonably applicable options of techniques

You should include:

- a) a brief description of individual control measures or configurations of control measures selected for each option, and the activities with which they are associated (the existing base-case may conveniently be the first option).
- b) justification why any techniques generally applicable to the regulated facility have not been selected for assessment. (see relevant H1 annex) (This should be based on regulated facility-specific technical, not economic reasons).
- c) for new projects, whether any initial environmental assessment that was done at the project evaluation stage, or any screening of technology or process routes prior to this assessment, particularly where this has a bearing on environmental performance. (see H1)

**In the case of b) or c)**

**please enter your Comments here:**

Option

Number

Title

Description

Option Number	Title	Description
1	Base-Case	Discharge via a v-notch tank to the ditch west of the site flowing north into the Dee Estuary

**Once a series of options have been generated for the proposed project, it is recommended that the Operator discuss these with the local Regulator to check both parties agree that the options are satisfactory. This may save the Operator from spending resources on assessment of options which are unlikely to meet the required environmental performance.**

List the main activity or activities to which the release control options are applicable and any other activities that will be affected by the candidate control option on the main activity:

## Introduction to Step 2

### Step 2: Emissions Inventory

The aim of this Step 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 Step you will require information on:

- release points and sources of emissions to air, water (inc. sewer) or land
- concentration and mass rate of released substances
- frequency and duration of releases 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 "Grouping air emissions" in Annex F).

**TO CONTINUE WITH STEP 2, PRESS "NEXT".**

## Receiving Water Body(s)

**Please define the Final Discharge Locations for Releases to Water**

Are there any discharges to surface waters?

Use the 'Add' button below to list all final discharge points.

For discharges to sewer, this should be the point where the sewage works discharges to a surface water

**N.B. For Riverine discharges (River, Upper Estuary) you only need enter the River description and flow once. Further details of individual releases can be entered on the next page. For discharges to TRaC waters, seperate Discharge Locations must be added for each release point that has a different mixing zone**

Number	Description	Final Discharge Category	Freshwater Q95 flow rate
--------	-------------	--------------------------	--------------------------

<input type="text" value="1"/>	<input type="text" value="Ditch west of Point of Ayr Gas Terminal"/>	<input type="text" value="TR"/>	Flow (m3/s): <input type="text" value="0.01"/>
--------------------------------	--	---------------------------------	--

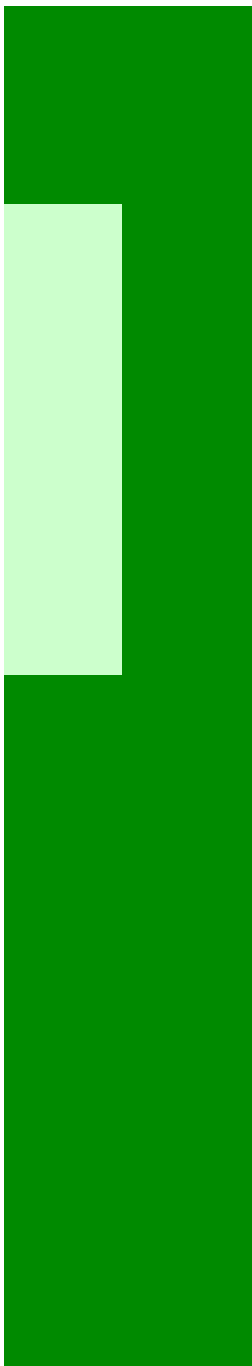
## Water Discharge/Release Details and Flow Data

Please define your Release Points for Releases to Water

Number	Description	Location or Grid Reference	Activity or Activities	Final Discharge Point	Discharge via Sewer?	Mean Effluent Flow Rate* m3/s	Max Effluent Flow Rate* m3/s
1	Ditch west of Point of Ayr Gas Terminal	SJ 11971 83977	Approximate discharge location	1 Ditch west of Point of Ayr Gas Terminal	No	0.0300	0.0300

Comments:

\* When operating



## Release Concentrations of Substances Present in Discharges to Water

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

Which type of assessment method are you using?  
(See help box & H1 Annex D for information)

Method:

Reference:

Number	Substance	Meas'ment Method	Operating Mode (% of)	Average Concentration in the Effluent (AA)		Maximum Concentration in the Effluent (Max)		Annual Rate kg/yr	Significant Load (PHS Only) kg/year
				Conc. µg/l	Meas'ment Basis	Conc. µg/l	Meas'ment Basis		
1	Copper	Spot	100.0%	4.12	Annual Avg	24	Spot Measurement	3897.8496	
2	Lead and it's compounds	Spot	100.0%	1.1	Annual Avg	8.1	Spot Measurement	1040.688	
3	Manganese and compounds (as Mn)	Spot	100.0%	753.73	Annual Avg	4100	Spot Measurement	713088.8784	
4	Nickel and its compounds	Spot	100.0%	4.18	Annual Avg	23	Spot Measurement	3954.6144	
5	Zinc	Spot	100.0%	41.15	Annual Avg	2400	Spot Measurement	38931.192	
6	Iron (dissolved)	Spot	100.0%	132.6757	Annual Avg	2000	Spot Measurement	#####	
7	Trichloromethane	Spot	100.0%	16.46	Annual Avg	61.9	Spot Measurement	15572.4768	
8	Fluoride >50mg/l CaCO3	Spot	100.0%	894.4	Annual Avg	1900	Spot Measurement	846173.952	
9	Naphthalene	Spot	100.0%	2.4	Annual Avg	2.4	Spot Measurement	2270.592	
10	Fluoranthene	Spot	100.0%	0.1	Annual Avg	0.21	Spot Measurement	94.608	
11	Arsenic	Spot	100.0%	8.56	Annual Avg	31.9	Spot Measurement	8098.4448	

Water Emissions Inventory Base Option

12	Cadmium and its compounds (≥ 200 mg/l CaCO <sub>3</sub> )	Spot	100.0%	0.05	Annual Avg	0.13	Spot Measurement	47.304	5
13	Chromium III (95%ile) (dissolved)	Spot	100.0%	0.54	Annual Avg	3	Spot Measurement	510.8832	
14	Boron	Spot	100.0%	1024.62	Annual Avg	1900	Spot Measurement	969372.4896	
15	Perfluoroctane (PFOS)	Spot	100.0%	0.99	Annual Avg	2.9	Spot Measurement	0.9366192	

Comments:

## Water Temperature

Where relevant, please enter temperature of effluent for each release point.

This table is to check that the effluent is acceptable, i.e. within the required temperature range. It is not used to make relative judgement between options.

Discharge Location	Release Point	Measurement Method	High Normal Rate	High Peak Rate	Max Temp. Difference	Benchmarks		
						Max Summer	Max Winter	Max Temp
1 Ditch west of Point of Ayr	1 Ditch west of Point of Ayr	Estimated*	10	10	30.0	21.5	10	2

Comments:

## Water pH

Where relevant, please enter pH of effluent for each release point.

This table is to check that the effluent is acceptable, i.e. within the required pH range. It is not used to make relative judgement between options.

Discharge Location	Release Point	Measurement Method	High Normal Rate	High Peak Rate	Low Normal Rate	Low Peak Rate	pH of Receiving Water	Do artificial variations caused by effluent exceed 0.5pH units?
1 Ditch west of Point of Ayr	1 Ditch west of Point of Ayr	Periodic*	7.72	8.5	7.72	6.1	7.8	No

Comments:

## Raw Materials

Please list all Raw Materials Consumed:

Number	Material	Annual Consumption	Units
1	Non-potable Water	946080	cubic m/year
2	Potable water		tonnes/year

Comments:

## Performance Indicators

Enter consumption data to determine your performance indicators

Which of the following parameters do you use for calculating your performance

Please describe and justify your choice:

Basic Consumption Data:

Specific Consumption per of :

Name	Annual Quantity	Units
Amount of Product:	<input type="text"/>	<input type="text"/>
Main Raw Material:	<input type="text"/>	<input type="text"/>
Potable Water:	<input type="text"/>	m3
Non Potable Water:	<input type="text" value="946,080.00"/>	m3
Energy:	<input type="text"/>	MWh
Waste: Inert:	<input type="text"/>	tonne
Hazardous:	<input type="text"/>	tonne
Stable Non-reactive Hazardous:	<input type="text"/>	tonne
Biodegradable Non-hazardous:	<input type="text"/>	tonne
Other Non-hazardous:	<input type="text"/>	tonne

Production Efficiency:	<input type="text"/>	/
Potable Water:	<input type="text"/>	m3
Non Potable Water:	<input type="text"/>	m3
Energy:	<input type="text"/>	MWh
Waste: Inert:	<input type="text"/>	tonne
Hazardous:	<input type="text"/>	tonne
Stable Non-reactive Hazardous:	<input type="text"/>	tonne
Biodegradable Non-hazardous:	<input type="text"/>	tonne
Other Non-hazardous:	<input type="text"/>	tonne

## Introduction to Step 3

### Step 3: Quantify Impacts

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

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

This part of the tool allows you to screen out any releases that are insignificant, and to identify those releases where further, detailed assessment of the potential environmental impact may be required.

#### IMPORTANT NOTE

**This software tool only completes part of the requirements for Step 3, as described above. Depending upon the degree of risk to the environment presented by the releases, 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 part of the tool.**

**TO CONTINUE WITH STEP 3, PRESS "NEXT".**

## Identify Relevant Impacts

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

Releases in  
Part 2?

Justification for omission

No	<input type="checkbox"/> Air	There will be no significant impact on air from construction dewatering
No	<input type="checkbox"/> Deposition from Air to Land	There will be no significant deposition construction dewatering
Yes	<input checked="" type="checkbox"/> Water	
No	<input type="checkbox"/> Waste	There will be no significant waste from construction dewatering
No	<input type="checkbox"/> Visual	There will be no significant visual impact from construction dewatering
No	<input type="checkbox"/> Ozone Creation	There will be no significant ozone impact from construction dewatering
No	<input type="checkbox"/> Global Warming	There will be no significant impact on global warming from construction dewatering

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

## 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 EPR Technical Guidance Notes)

Are there any Local Air Quality Management Plans applicable to releases from the activity?

#### 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?

EQS are available for receiving waters

Are proposals to abstract water satisfactory in order to obtain an abstraction licence?

An application for an abstraction licence has been made.

Is the activity located in a groundwater vulnerable zone (for activities with direct releases to land only)?

#### Proximity to Sensitive Receptors

Is public annoyance likely to be an issue for noise, odour or plume visibility ?

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 EPR Technical Guidance Notes)

## Water Impacts - TRaC Water Releases

### Apply Test 1 (See Guidance) and Calculate Process Contributions of Emissions to Water

This table applies Test 1 and also estimates the Process Contribution for releases in to saline waters, this is calculated after dilution into the relevant surface water type for each emission to water listed in the inventory, according to the release point parameters input earlier. If you have more accurate data obtained through dilution modelling, this may be entered as indicated and will be used instead of the estimated PC. Any releases which 'Pass' Test 1 are screened out at this point.

Substance	Annual Avg EQS			MAC EQS		
	Release µg/l	EQS	Release conc < 100% EQS Test 1	Release µg/l	EQS	Release conc < 100% EQS Test 1
[Ditch west of Point of Ayr Gas Terminal] Arsenic (Ditch west of Point of Ayr Gas Terminal)	8.56	25	Pass	31.9		N/A
[Ditch west of Point of Ayr Gas Terminal] Boron (Ditch west of Point of Ayr Gas Terminal)	1024.62	7000	Pass	1900		N/A
[Ditch west of Point of Ayr Gas Terminal] Cadmium and its compounds (≥ 200 mg/l CaCO <sub>3</sub> ) (Ditch west of Point of Ayr Gas Terminal)	0.05	0.2	Pass	0.13		N/A
[Ditch west of Point of Ayr Gas Terminal] Chromium III (95%ile) (dissolved) (Ditch west of Point of Ayr Gas Terminal)	0.54		N/A	3		N/A
[Ditch west of Point of Ayr Gas Terminal] Copper (Ditch west of Point of Ayr Gas Terminal)	4.12	3.76	Fail	24		N/A
[Ditch west of Point of Ayr Gas Terminal] Fluoranthene (Ditch west of Point of Ayr Gas Terminal)	0.1	0.0063	Fail	0.21	0.12	Fail
[Ditch west of Point of Ayr Gas Terminal] Fluoride >50mg/l CaCO <sub>3</sub> (Ditch west of Point of Ayr Gas Terminal)	894.4	5000	Pass	1900	15000	Pass
[Ditch west of Point of Ayr Gas Terminal] Iron (dissolved) (Ditch west of Point of Ayr Gas Terminal)	132.6757	1000	Pass	2000		N/A
[Ditch west of Point of Ayr Gas Terminal] Lead and it's compounds (Ditch west of Point of Ayr Gas Terminal)	1.1	1.3	Pass	8.1	14	Pass
[Ditch west of Point of Ayr Gas Terminal] Manganese and compounds (as Mn) (Ditch west of Point of Ayr Gas Terminal)	753.73		N/A	4100		N/A
[Ditch west of Point of Ayr Gas Terminal] Naphthalene (Ditch west of Point of Ayr Gas Terminal)	2.4	2	Fail	2.4	130	Pass
[Ditch west of Point of Ayr Gas Terminal] Nickel and its compounds (Ditch west of Point of Ayr Gas Terminal)	4.18	8.6	Pass	23	34	Pass
[Ditch west of Point of Ayr Gas Terminal] Perfluorooctane (PFOS) (Ditch west of Point of Ayr Gas Terminal)	0.99	0.00013	Fail	2.9	7.2	Pass
[Ditch west of Point of Ayr Gas Terminal] Trichloromethane (Ditch west of Point of Ayr Gas Terminal)	16.46	2.5	Fail	61.9		N/A
[Ditch west of Point of Ayr Gas Terminal] Zinc (Ditch west of Point of Ayr Gas Terminal)	41.15	6.8	Fail	2400		N/A

Gas Terminal)

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.

\* If you have valid dispersion modelling data available - please enter it here

Comments:

## Water Impact Screening - Riverine TRaC Water Releases

### Apply Test 2

This page applies Test 2 and displays the Process Contribution as a proportion of the EQS. Emissions with PCs that are less than 4% of the EQS can be screened from further assessment as they are likely to have an insignificant impact.

Substance	Annual Avg EQS				MAC EQS			
	Annual Avg EQS	PC	% PC of EQS	PC < 4% of EQS?	MAC EQS	PC	% PC of MAC	PC < 4% of MAC?
				<b>Test 2</b>				<b>Test 2</b>
Arsenic (Ditch west of Point of Ayr Gas Terminal)	25	6.4200	25.68	Fail		23.9250	-	Pass
Boron (Ditch west of Point of Ayr Gas Terminal)	7000	768.4650	10.98	Fail		1,425.0000	-	Pass
Cadmium and its compounds (≥ 200 mg/l CaCO <sub>3</sub> ) (Ditch west of Point of Ayr Gas Terminal)	0.2	0.0375	18.75	Fail		0.0975	-	Pass
Copper (Ditch west of Point of Ayr Gas Terminal)	3.76	3.0900	82.18	Fail		18.0000	-	Pass
Fluoranthene (Ditch west of Point of Ayr Gas Terminal)	0.0063	0.0750	1,190.48	Fail	0.12	0.1575	131	Fail
Fluoride >50mg/l CaCO <sub>3</sub> (Ditch west of Point of Ayr Gas Terminal)	5000	670.8000	13.42	Fail	15000	1,425.0000	9.51	Fail
Iron (dissolved) (Ditch west of Point of Ayr Gas Terminal)	1000	99.5068	9.95	Fail		1,500.0000	-	Pass
Lead and it's compounds (Ditch west of Point of Ayr Gas Terminal)	1.3	0.8250	63.46	Fail	14	6.0750	43.4	Fail
Naphthalene (Ditch west of Point of Ayr Gas Terminal)	2	1.8000	90.00	Fail	130	1.8000	1.39	Pass
Nickel and its compounds (Ditch west of Point of Ayr Gas Terminal)	8.6	3.1350	36.45	Fail	34	17.2500	50.8	Fail
Perfluoroctane (PFOS) (Ditch west of Point of Ayr Gas Terminal)	0.00013	0.7425	571,153.85	Fail	7.2	2.1750	30.3	Fail
Trichloromethane (Ditch west of Point of Ayr Gas Terminal)	2.5	12.3450	493.80	Fail		46.4250	-	Pass
Zinc (Ditch west of Point of Ayr Gas Terminal)	6.8	30.8625	453.86	Fail		1,800.0000	-	Pass

Comments:

## Water Impact Screening (Predicted Environmental Concentration) - Reverine TRaC Releases

**Apply Tests 3 and 4 and identify which releases may need more Detailed Modelling of Emissions to Water**

This page applies Tests 3, 4a and 4b and displays the Predicted Environmental Concentrations in relation to the background pollutant levels and the AA or MAC EQS. Any substances that pass all 3 of these tests can be screened out. Substances failing any of the tests must be modelled. Note that releases that have passed Tests 1 and 2 are insignificant and are not shown as they are already screened out.

Number	Substance	Bkgrnd Conc.	Annual Avg EQS			MAC* EQS						
			PC	PEC	(PEC - BC)/ EQS	PEC -BC >10% AA EQS	% PEC of EQS	PEC >100% AA EQS	PC	PEC	% PEC of MAC	PEC >100% MAC
						Test 3		Test 4a				Test 4b
11	Arsenic (Ditch west of Point of Ayr Gas Terminal)	7.02	6.43	13.5	25.7%	Fail	53.8	Pass	24.0	0	-	Pass
14	Boron (Ditch west of Point of Ayr Gas Terminal)	295.22	768	1,064	11.0%	Fail	15.2	Pass	1,425	0	-	Pass
12	Cadmium and its compounds (≥ 200 mg/l CaCO <sub>3</sub> ) (Ditch west of Point of Ayr Gas Terminal)	0.04	0.0376	0.0776	18.8%	Fail	38.8	Pass	0.0975	0	-	Pass
1	Copper (Ditch west of Point of Ayr Gas Terminal)	2.57	3.09	5.67	82.2%	Fail	151	Fail	18.0	0	-	Pass
10	Fluoranthene (Ditch west of Point of Ayr Gas Terminal)	0.21	0.0751	0.286	1190.5%	Fail	4,524	Fail	0.158	0.368	306	Fail
8	Fluoride >50mg/l CaCO <sub>3</sub> (Ditch west of Point of Ayr Gas Terminal)	273.75	671	945	13.4%	Fail	18.9	Pass	1,425	1,699	11.4	Pass
6	Iron (dissolved) (Ditch west of Point of Ayr Gas Terminal)	0.07	99.6	99.6	10.0%	Pass	9.96	Pass	1,500	0	-	Pass
2	Lead and its compounds (Ditch west of Point of Ayr Gas Terminal)	0.43	0.826	1.26	63.5%	Fail	96.6	Pass	6.08	6.51	46.5	Pass
9	Naphthalene (Ditch west of Point of Ayr Gas Terminal)	0.01	1.80	1.81	90.0%	Fail	90.5	Pass	1.80	1.81	1.40	Pass
4	Nickel and its compounds (Ditch west of Point of Ayr Gas Terminal)	1.77	3.14	4.91	36.5%	Fail	57.0	Pass	17.3	19.0	56.0	Pass
15	Perfluorooctane (PFOS) (Ditch west of Point of Ayr Gas Terminal)	1.77	0.743	2.52	#####	Fail	#####	Fail	2.18	3.95	54.8	Pass
7	Trichloromethane (Ditch west of Point of Ayr Gas Terminal)	3	12.4	15.4	493.8%	Fail	614	Fail	46.5	0	-	Pass
5	Zinc (Ditch west of Point of Ayr Gas Terminal)	29.71	30.9	60.6	453.9%	Fail	891	Fail	1,800	0	-	Pass

\* MAC = Maximum Allowable Concentration

Describe source of background information or reference to relevant documentation here:

## Water Impact - Significant Loads

### Identify any releases which constitute a Significant Load.

This page displays any priority substances and calculates whether or not the total annual release constitutes a Significant Load. The annual mass release is calculated by multiplying the mean flow by the mean release concentration. The calculation takes into account your 'Operating Mode' (percentage of the year that the substance/effluent is discharged), if not continuous and also includes your sewage treatment reduction factor for any discharges via sewer. To see the detail, look at the 'Annual Rate(s)' shown on the Water Inventory screen for each each Release Point but note that the figure(s) shown there is before any relevant Sewage Treatment Reduction factor has been applied

Discharge Proportion:	Substance:	Annual Load: Kg	Significant Load for Substance: Kg	Part B Significant Load Test:
Ditch west of Point of Ayr Gas Terminal	Cadmium and its compounds ( $\geq 200$ mg/l CaCO <sub>3</sub> )	47.304	5	Fail

## Water Impact Modelling Assessment

See guidelines in H1 Annex D 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 guidelines in H1 Annex D.

The concentration of the following specific substances cannot be screened out as insignificant based on the groundwater monitoring data without any groundwater treatment. Arsenic, Boron, Cadmium, Chromium, Copper, Fluoranthene, Fluoride, Iron, Lead, Manganese, Naphthalene, Nickel, Trichloromethane (chloroform), Zinc and PFOS.

Describe source of background information:

Water samples taken from the receiving water.

Describe location of detailed modelling work:

# Water Summary Tables

(Substances screened as insignificant are not shown)

## Option 1 - Base-Case

### Release Points

Number	Description	Location	Sewer	Effluent Flow Rate	Final Discharge Category
				m3/s	
1	Ditch west of Point of Ayr Gas Te	SJ 11971 83977	No	0.03	TR 0

## Option Summary

### Long Term Option Summary

Substance Assessed	Option	% PC of EAL	% PEC of EAL	EQ
Arsenic	1			0.26
Boron	1			0.11
Cadmium and its compounds ( $\geq 200$ mg/l CaCO <sub>3</sub> )	1			0.19
Chromium III (95%ile) (dissolved)	1			
Copper	1			0.82
Fluoranthene	1			11.90
Fluoride >50mg/l CaCO <sub>3</sub>	1			0.13
Iron (dissolved)	1			0.10
Lead and it's compounds	1			0.63
Manganese and compounds (as Mn)	1			
Naphthalene	1			0.90
Nickel and its compounds	1			0.36
Perfluoroctane (PFOS)	1			5,711.54
Trichloromethane	1			4.94
Zinc	1			4.54