Air Release Points Base Option

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Air Release Points

Please define your Release Points for Releases to Air

Are there any Air emissions? Yes Click the Add button below

Number	Description	Location or Grid Reference	Activity or Activities	Effective Height (metres)	Efflux Velocity (m/s)	Total Flow (m3/hr)
e.g.	A1	North stack		150	25	5,000
1	A1	Scrubber	Ammonia Storage	6.4	0.1	19.2
2	A2	Wet Scrubber	Hydrochloric Acid Storage	5.5	0.5	28.8
3	A3	Boiler	Boiler	15	14.2	19426
4	A4	Carbon Filter 1	Acetic Acid Tank 1	0.9	3.5	25
5	A5	Carbon Filter 2	Acetic Acid Tank 2	0.9	3.5	25
6	A6	Carbon Filter 3	Acetic Acid Tank 3	0.9	3.5	25
7	A7	Carbon Filter 4	Acetic Acid Tank 4	0.9	3.5	25
8	A8	Carbon Filter 5	Acetic Acid Tank 5	0.9	3.5	25
9	A9	Carbon Filter 6	Acetic Acid Tank 6	0.9	3.5	25
10	A10	Carbon Filter 7	Acetic Acid Tank 7	0.9	3.5	25
11	A11	Bag Filter	Calciner	3.5	12.8	232
12	A12	Basic Metal Salt EP	Basic Metal Salt Production	1	15	255.7

Air Emissions Inventory Base Option, Release Point: 1 'A1'

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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 (% of Year)	Data relating to Long Term effects: Conc. (mg/m3)	Release Rate (g/s)	Meas'ment Basis	Data relating to Short Term effects: Conc. (mg/m3)	Release Rate (g/s)	Meas'ment Basis	Annual Rate (tonne/yr)	ELV Conc. (mg/m3)
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55.000	2000
1	Ammonia (ecological receptor - Ser	Estimate	0.1%	1.2	0.000006	Annual avera	1.2	0.000006	Hourly averag	0.0000	1.20
2	Ammonia (human health receptor)	Estimate	0.1%	1.2	0.000006	Annual avera	1.2	0.000006	Hourly averag	0.0000	1.20

Air Emissions Inventory Base Option, Release Point: 2 'A2'

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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 (% of Year)	Data relating to Long Term effects: Conc. (mg/m3)	Release Rate (g/s)	Meas'ment Basis	Data relating to Short Term effects: Conc. (mg/m3)	Release Rate (g/s)	Meas'ment Basis	Annual Rate (tonne/yr)	ELV Conc. (mg/m3)
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55.000	2000
1	Hydrogen chloride	Estimate	100.0%	10.0	0.000080	Annual avera	10.0	0.000080	Hourly averag	0.0025	10.00

Air Emissions Inventory Base Option, Release Point: 3 'A3'

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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 (% of Year)	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
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55.000	2000
1	Nitrogen Dioxide	Estimate	57.0%	108.0	0.582780	Annual avera	54.0	0.291390	Hourly averag	10.4758	200.00
2	Nitrogen Dioxide (Ecological - Daily	Estimate	57.0%	108.0	0.582780	Daily mean	54.0	0.291390	Daily Mean	10.4758	200.00

Air Emissions Inventory Base Option, Release Point: 4 'A4'

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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 (% of Year)	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
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55.000	2000
1	Acetic acid	Estimate	0.1%	80.0	0.000556	Annual avera	80.0	0.000556	Hourly averag	0.0000	80.00

Air Emissions Inventory Base Option, Release Point: 5 'A5'

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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 (% of Year)	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
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55.000	2000
1	Acetic acid	Estimate	0.1%	80.0	0.000556	Annual avera	80.0	0.000556	Hourly averag	0.0000	80.00

Air Emissions Inventory Base Option, Release Point: 6 'A6'

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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 (% of Year)	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
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55.000	2000
1	Acetic acid	Estimate	0.1%	80.0	0.000556	Annual avera	80.0	0.000556	Hourly averag	0.0000	80.00

Air Emissions Inventory Base Option, Release Point: 7 'A7'

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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 (% of Year)	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
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55,000	2000
1	Acetic acid	Estimate	0.1%	80.0	0.000556	Annual avera	80.0	0.000556	Hourly averag	0.0000	80.00

Air Emissions Inventory Base Option, Release Point: 8 'A8'

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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 (% of Year)	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
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55,000	2000
1	Acetic acid	Estimate	0.1%	80.0	0.000556	Annual avera	80.0	0.000556	Hourly averag	0.0000	80.00

Air Emissions Inventory Base Option, Release Point: 9 'A9'

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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 (% of Year)	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
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55,000	2000
1	Acetic acid	Estimate	0.1%	80.0	0.000556	Annual avera	80.0	0.000556	Hourly averag	0.0000	80.00

Air Emissions Inventory Base Option, Release Point: 10 'A10'

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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 (% of Year)	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
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55,000	2000
1	Acetic acid	Estimate	0.1%	80.0	0.000556	Annual avera	80.0	0.000556	Hourly averag	0.0000	80.00

Air Emissions Inventory Base Option, Release Point: 11 'A11'

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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 (% of Year)	Data relating to Long Term effects: Conc. mg/m3	Release Rate g/s	Meas'ment Basis	Data relating to Short Term effects: Conc. mg/m3	Release Rate g/s	Meas'ment Basis	Annual Rate tonne/yr	ELV Conc. mg/m3
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55.000	2000
1	Particulates (PM10) (24 hr Mean)	Estimate	40.0%	10.0	0.000644	Annual avera	10.0	0.000644	24 hr Mean	0.0081	10.00
2	Particulates (PM10) (Annual Mean)	Estimate	40.0%	10.0	0.000644	Annual avera	10.0	0.000644	24 hr Mean	0.0081	10.00

Air Emissions Inventory Base Option, Release Point: 12 'A12'

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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 (% of Year)	Data relating to Long Term effects: Conc. mg/m3	Release Rate g/s	Meas'ment Basis	Data relating to Short Term effects: Conc. mg/m3	Release Rate g/s	Meas'ment Basis	Annual Rate tonne/yr	ELV Conc. mg/m3
e.g.	sulphur dioxide	Estimated*	70% load	1510	3000	annual avg	1510	3000	hourly avg	55.000	2000
1	Hydrogen fluoride (as F) (Ecologica	Estimate	100.0%	0.0	0.000000	Daily average	0.0	0.000000	Daily Average	0.0000	
2	Hydrogen fluoride (as F) (Ecologica	Estimate	100.0%	0.0	0.000000	Weekly avera	0.0	0.000000	Weekly Avera	0.0000	
3	Hydrogen fluoride (as F) (Monthly M	Estimate	100.0%	0.0	0.000000	Monthly Aver	0.0	0.000000	Monthly avera	0.0000	
4	Carbon dioxide	Estimate	100.0%	1.1	0.000078	Annual avera	1.1	0.000078	Annual avera	0.0025	

Air Impacts Base Option

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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	PC µg/m3	* Modelled PC µg/m3	Short Term: EAL µg/m3	PC µg/m3	* Modelled PC µg/m3
1	Particulates (PM10) (24 hr Mean)		0.0277		50	1.77	
1	Nitrogen Dioxide	40	6.08		200	108	
1	Hydrogen fluoride (as F) (Ecological - Daily Mean)		0.00000002		4.9	0.00000051	
1	Hydrogen chloride		0.00674		750	0.166	
1	Ammonia (ecological receptor - Sensitive Lichens)	1	0.00000066			0.0114	
1	Acetic acid	250	0.000268		3700	14.0	
2	Particulates (PM10) (Annual Mean)	40	0.0277			1.77	
2	Nitrogen Dioxide (Ecological - Daily Mean)	30	6.08		75	108	
2	Hydrogen fluoride (as F) (Ecological - Weekly Mean)		0.00000002		0.49	0.00000051	
2	Ammonia (human health receptor)	180	0.00000066		2500	0.0114	
3	Hydrogen fluoride (as F) (Monthly Mean)	16	0.00000007		160	0.00000051	

Air Impact Screening Base Option

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Air Impact Screening Stage One

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 µg/m3	Short Term EAL µg/m3	Long Term PC µg/m3	Long Term % PC of EAL %	Long Term > 1% of EAL?	Short Term PC µg/m3	Short Term % PC of EAL %	Short Term > 10% of EAL?
1	Particulates (PM10) (;	-	50.0	0.0277	-		1.77	3.53	No
1	Nitrogen Dioxide	40.0	200	6.08	15.2	Yes	108	54.0	Yes
1	Hydrogen fluoride (as	-	4.91	0.00000002	-		0.00000051	0.00001034	No
1	Hydrogen chloride	-	750	0.00674	-		0.166	0.0222	No
1	Ammonia (ecological	1.000	-	0.00000066	0.00006609	No	0.0114	-	
1	Acetic acid	250	3,700	0.000268	0.000107	No	14.0	0.379	No
2	Particulates (PM10) (;	40.0	-	0.0277	0.0693	No	1.77	-	
2	Nitrogen Dioxide (Ecc	30.0	75.0	6.08	20.3	Yes	108	144	Yes
2	Hydrogen fluoride (as	-	0.491	0.00000002	-		0.00000051	0.000104	No
2	Ammonia (human he;	180	2,500	0.00000066	0.00000037	No	0.0114	0.000455	No
3	Hydrogen fluoride (as	16.0	160	0.00000007	0.00000043	No	0.00000051	0.00000032	No

Air Impact Modelling Base Option

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Air Impact Modelling Stage Two Screening

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.

Number	Substance	Air Bkgrnd Conc. µg/m3	Long Term PC µg/m3	Long Term % PC of headroom (EAL - Bkgrnd)	Long Term PEC mg/m3	Long Term % PEC of EAL %	Long Term % PEC of EAL >=70?	Short Term PC µg/m3	Short Term % PC of headroom (EAL - Bkgrnd)	Short Term % PC of headroom >=20?
	e.g.	12								
1	Nitrogen Dioxide	9.54	6.08	20.0	15.7	39.0	No	108	59.7	Yes
2	Nitrogen Dioxide (Ecological - Daily Mean)	9.54	6.08	29.8	15.7	52.1	No	108	193	Yes

Air Impact Modelling Assessment

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Air Impact Modelling Assessment

See guidelines in H1 Annex F section entitled "Decide if you need detailed air modelling.

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: Further modelling is required as Short-term percentage PC of headroom fro Nitrogen Dioxide is greater than 20%.

Describe source of background information: Defra background maps

Document Reference of detailed modelling work: EPR-A05_AQIA_Report_v1.0

Deposition to Land from Air Base Option

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Deposition to Land from Air

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

Number	Substance	% PC of EAL %	Insignificant?	Decision whether to screen as insignificant — Reason (See section "Deposition of air emissions onto land/Screen out insignificant emissions" of Annex F in H1).
1	Particulates (PM10) (24 hr Mean)	-	Yes	PC percentage of EAL is less than 10% of short-term EAL.
1	Nitrogen Dioxide	15.2	No	Short-term percentage PC of headroom is greater than 20%.
1	Hydrogen fluoride (as F) (Ecological - Daily Mean)	-	Yes	PC percentage of EAL is less than 10% of short-term EAL and less than 1% of long-term EAL.
1	Hydrogen chloride	-	Yes	PC percentage of EAL is less than 10% of short-term EAL.
1	Ammonia (ecological receptor - Sensitive Lichens)	0.00006609	Yes	PC percentage of EAL is less than 1% of long-term EAL.
1	Acetic acid	0.000107	Yes	PC percentage of EAL is less than 10% of short-term EAL and less than 1% of long-term EAL.
2	Particulates (PM10) (Annual Mean)	0.0693	Yes	PC percentage of EAL is less than 1% of long-term EAL.
2	Nitrogen Dioxide (Ecological - Daily Mean)	20.3	No	Short-term percentage PC of headroom is greater than 20%.
2	Hydrogen fluoride (as F) (Ecological - Weekly Mean)	-	Yes	N/A
2	Ammonia (human health receptor)	0.00000037	Yes	PC percentage of EAL is less than 10% of short-term EAL and less than 1% of long-term EAL.
3	Hydrogen fluoride (as F) (Monthly Mean)	0.00000043	Yes	PC percentage of EAL is less than 10% of short-term EAL and less than 1% of long-term EAL.
4	Carbon dioxide	-	Yes	N/A

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

EPR-A05_AQIA_Report_v1.0