

## Atmospheric Guidance Notes

### General Guidance

These return sheets are to be used to report Atmospheric Emissions from offshore oil and gas installations and also from onshore oil and gas Terminals.

Operators should report 100% of emissions from emitting installations and terminals including emissions resulting from Production of oil and gas from offshore reservoirs including offshore tanker loading, emissions from exploration, appraisal and development drilling rigs; and emissions from onshore oil and gas terminals engaged in processing/storing and loading.

**Emissions from support vessels, tankers on-route, helicopters and seismic vessels are NOT TO BE INCLUDED as these emissions are recorded elsewhere in the National Inventory.**

The information contained in these returns is used by the UK Government to monitor performance against permits where applicable and also to make reports, for example to OSPAR.

The returns sheets are split into a number of separate activities, which are inter-related. It therefore requires data to be submitted in a number of sheets in order for a full data set to be obtained. All returns, including nil returns, must be submitted on an annual basis by no later than 1 March of the year following the reporting year.

Underpinning the Atmospheric Emissions suite are standard default emission calculations that will generate relevant outputs. These factors, which have been developed by independent experts, can be found at the following link. (add link to doc) . There are essentially two main options open to Operators.

1). Total Use figures can be entered without any further gas component breakdown by the Operator (although in a small number of areas this option is not allowed). EEMS will then use the standard default factors, depending upon the relevant emission category to calculate the relevant output.

2) Total Use and individual component data can be entered into EEMS. In such cases the Operator will have post combustion gas mass data from an in-house system, previously approved by DECC, and is therefore aware of the exact emission factor specific to their own equipment or process. This prevents EEMS making any calculations based on the standard emission default factors. It is noted that a small minority of cases require a full breakdown to be entered in all cases, e.g. Direct Process Emissions. This is covered in more detail in the relevant Guidance.

It is possible to submit data that is a combination of options 1 and 2 above. For example, an Operator may submit Total Use and specific verified CH<sub>4</sub> and CO<sub>2</sub> data. EEMS will then calculate the other outputs but will retain this CH<sub>4</sub> and CO<sub>2</sub> data.

The return forms are briefly described below, however, full individual guidance is available separately for each return form.

## Environmental Emissions Monitoring System

### Atmospheric Emissions - Consumption (Installation) Guidance Notes

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This form, Atmospheric Emissions - Consumption (Installation), is a summary of the atmospheric emissions resulting from the consumption of fuel including:

- Gas consumption from plant operations (turbines, engines and heaters)
- Diesel consumption from plant operations (turbines, engines and heaters)
- Fuel oil consumption from plant operations (turbines, engines and heaters)
- Gas flaring activities (routine operations, maintenance, upsets/other or gross)

Where post-combustion gas emission masses are available from an in-house system, previously approved by the Department of Energy and Climate Change (DECC), they should be reported.

In relation to NO<sub>x</sub> emissions from Gas and Oil turbines there is a potential relationship between this form and the Gas Turbines and Oil Turbines return forms. Essentially, those return forms can be used to calculate the relevant NO<sub>x</sub> emissions from the turbines, although alternatively it is possible to enter the relevant NO<sub>x</sub> data directly into this form if NO<sub>x</sub> emission mass from fuel gas consumption by all turbines on the installation is available from an in-house system, previously approved by DECC. If both returns are entered the data in this form will take precedence.

For fuel gas the conversion of a pre-combustion fuel mass to post-combustion gas mass is based on emission factors which are calculated from the mole percentage composition and average molecular weight of the fuel gas (these are reported on the Atmospheric Emission - Export submission). For diesel and fuel oil the conversion of a pre-combustion fuel mass to post-combustion gas mass is based on published default factors.

It is not necessary to report a complete set of gas emission masses from a verified system e.g. CO<sub>2</sub>, NO<sub>x</sub>, N<sub>2</sub>O, SO<sub>2</sub>, CO, CH<sub>4</sub> and VOC. EEMS will accept a partial set and calculate any missing emission masses. For full details of recommended atmospheric calculations please refer to the [EEMS Atmospheric Emission Calculations](#) document

A complete set of atmospheric submissions, including this form, should be prepared annually for all installations by 1 March of the year following the reporting year. Where a field is producing from more than one installation a complete set of submissions is required for each installation.

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### Operational Details

<b>Operator</b>	The unique name of the operating company responsible for activity.	Mandatory
<b>Installation</b>	The unique name of the Installation from which atmospheric emissions were generated.	Mandatory
<b>PPC Permit</b>	Enter the relevant PPC permit number for the installation. Only applicable if the installation has a PPC permit issued by DECC. If the installation does not have a permit then 'N/A' or similar should be entered.	Discretionary
<b>EU-ETS Permit</b>	Enter the relevant EUETS permit for the installation. Only applicable if the installation has an EUETS permit. If the installation does not have a permit then	Mandatory

	'N/A' or similar should be entered.	
<b>Year</b>	Reported year of annual submission.	Mandatory

### Gas Consumption

<b>Turbines</b>	The total pre-combustion fuel gas mass for all turbines on the installation must be reported (total use). If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If NOx figures are not available from such an in house system, an Atmospheric Emission - Gas Turbine report must be submitted. If NOx data is entered here and is also calculated using the Atmospheric Emission – Gas Turbine form then the data submitted in this form will take precedence. For consistency the total pre-combustion fuel gas mass from this submission, Atmospheric Emission - Consumption (Installation), should match the total from the Atmospheric Emission - Gas Turbine submission (if that form is submitted).	Mandatory
<b>Engines</b>	The total pre-combustion fuel mass for all engines on the installation must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors	Mandatory
<b>Heaters</b>	The total pre-combustion fuel mass for all heaters on the installation must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors.	Mandatory
<b>Others</b>	There may be other equipment consuming fuel gas and emitting post-combustion gases from the installation. A brief description along with a total pre-combustion fuel mass must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered.	Optional

### Diesel Consumption

<b>Turbines</b>	The total pre-combustion fuel gas mass for all turbines on the installation must be reported (total use). If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If NOx figures are not available from such an in house system, an Atmospheric Emission - Oil Turbine report must be submitted, covering both diesel and fuel oil consumption. If NOx data is entered here and is also calculated using the Atmospheric Emission – Oil Turbine form then the data submitted in this form will take precedence. For consistency the total pre-combustion fuel gas mass from this submission, Atmospheric Emission - Consumption (Installation), should match the total in the Atmospheric Emission – Oil Turbine submission (if that form is submitted).	Mandatory
<b>Engines</b>	The total pre-combustion diesel mass for all engines on the installation must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors	Mandatory
<b>Heaters</b>	The total pre-combustion diesel mass for all heaters on the installation must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors	Mandatory
<b>Sulphur (%)</b>	If no post-combustion SO2 emission mass is available from an in-house system, previously approved by DECC, the sulphur content will be used in its calculation. A default value is supplied but may be overwritten.  Unit of measure=percent; No. decimal places=2; Minimum=0.00; Maximum=99.99; Format=##0.00	Mandatory

## Fuel Oil Consumption

<b>Turbines</b>	The total pre-combustion fuel gas mass for all turbines on the installation must be reported (total use). If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If NOx figures are not available from such an in house system, an Atmospheric Emission – Oil Turbine report must be submitted., covering both diesel and fuel oil consumption. If NOx data is entered here and is also calculated using the Atmospheric Emission – Oil Turbine form then the data submitted in this form will take precedence. For consistency the total pre-combustion fuel gas mass from this submission, Atmospheric Emission - Consumption (Installation), should match the total from the Atmospheric Emission – Oil Turbine submission (if that form is submitted).	Mandatory
<b>Engines</b>	The total pre-combustion fuel oil mass for all engines on the installation must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors	Mandatory
<b>Heaters</b>	The total pre-combustion fuel oil mass for all heaters on the installation must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors	Mandatory
<b>Sulphur Content</b>	If no post-combustion SO2 emission mass is available from an in-house system, previously approved by DECC, the sulphur content will be used in its calculation. A default value is supplied but may be overwritten Unit of measure=percent; No. decimal places=2; Minimum=0.00; Maximum=99.99; Format=##0.00	Mandatory

## Gas Flaring

<b>Routine</b>	The total pre-combustion flare gas mass for routine operations must be reported. . If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors	Discretionary
<b>Maintenance</b>	The total pre-combustion flare gas mass during maintenance must be reported. If . If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors	Discretionary
<b>Upsets/Other</b>	The total pre-combustion flare gas mass during upsets (or other) must be reported. . If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors	Discretionary
<b>Gross</b>	If a breakdown between routine, maintenance and upsets is not available a gross pre-combustion mass can be reported. . If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. Either a full breakdown of all 3 activities, routine, maintenance and upsets, is entered or gross figures, but not both.	Discretionary

## Emissions (Fuel Gas, Diesel, Fuel Oil and Gas Flaring)

<b>Total Use</b>	The total annual pre-combustion mass of fuel used by the equipment type (turbine, engine, heater) or the gas flaring activity (routine operations, maintenance, upsets or gross) on the facility.  Unit of measure=tonnes; No. decimal places=2; Minimum=0.00;	Mandatory
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	Maximum=30,000,000.00; Format=##,###,##0.00	
<b>Carbon Dioxide (CO2)</b>	<p>The total annual post-combustion mass of CO2 emitted by the equipment type (turbine, engine, heater) or the gas flaring activity (routine operations, maintenance, upsets or gross) on the facility. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If no values are reported EEMS will calculate the CO2 post-combustion mass using the appropriate compositional analysis and CO2 molecular weight reported on the Atmospherics Export submission in combination with published defaults.</p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=###,##0.00</p>	Optional
<b>Nitrogen Oxides (NOx)</b>	<p>The total annual post-combustion mass of NOx emitted by the equipment type (turbine, engine, heater) or the gas flaring activity (routine operations, maintenance, upsets or gross) on the facility. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If no values are reported EEMS will calculate the NOx post-combustion mass using the appropriate compositional analysis and N2 molecular weight reported on the Atmospherics Export submission in combination with published defaults.</p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=###,##0.00</p>	Optional
<b>Nitrous Oxide (N2O)</b>	<p>The total annual post-combustion mass of N2O emitted by the equipment type (turbine, engine, heater) or the gas flaring activity (routine operations, maintenance, upsets or gross) on the facility. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If no values are reported EEMS will calculate the N2O post-combustion mass using the appropriate compositional analysis and N2 molecular weight reported on the Atmospherics Export submission in combination with published defaults.</p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=###,##0.00</p>	Optional
<b>Sulphur Dioxide (SO2)</b>	<p>The total annual post-combustion mass of SO2 emitted by the equipment type (turbine, engine, heater) or the gas flaring activity (routine operations, maintenance, upsets or gross) on the facility. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If no values are reported EEMS will calculate the SO2 post-combustion mass using the appropriate compositional analysis and H2S molecular weight reported on the Atmospherics Export submission in combination with published defaults.</p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=###,##0.00</p>	Optional
<b>Carbon Monoxide(CO)</b>	<p>The total annual post-combustion mass of CO emitted by the equipment type (turbine, engine, heater) or the gas flaring activity (routine operations, maintenance, upsets or gross) on the facility. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If no values are reported EEMS will calculate the CO post-combustion mass using the appropriate compositional analysis and CO2 molecular weight reported on the Atmospherics Export submission in combination with published defaults.</p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=###,##0.00</p>	Optional
<b>Methane (CH4)</b>	<p>The total annual post-combustion mass of CH4 emitted by the equipment type (turbine, engine, heater) or the gas flaring activity (routine operations, maintenance, upsets or gross) on the facility. . If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If no values are reported EEMS will calculate the CH4 post-combustion mass using the appropriate compositional analysis and CH4 molecular weight reported on the Atmospherics Export submission in combination with published defaults.</p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=###,##0.00</p>	Optional
<b>VOC</b>	The total annual post-combustion mass of VOC emitted by the equipment type	Optional

(turbine, engine, heater) or the gas flaring activity (routine operations, maintenance, upsets or gross) on the facility. . If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If no values are reported EEMS will calculate the VOC post-combustion mass using the appropriate compositional analysis and VOC molecular weight reported on the Atmospherics Export submission in combination with published defaults.

Unit of measure=tonnes; No. decimal places=2; Minimum=0.00;  
Maximum=999,999.99; Format=###,##0.00

### Notes

- The format for measured fields indicates the maximum number of digits before and after the decimal point. 0s are used to show the minimum digits to enter and #s to show optional digits before the decimal point.
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## Environmental Emissions Monitoring System

### Atmospheric Emissions - Export (Installation) Guidance Notes

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This form, Atmospheric Emissions - Export (Installation) is a brief summary of the installation for atmospheric reporting purposes including:

- Contact details
- Source of submitted atmospheric data (calculated, estimated or measured)
- Gas, condensate and oil export masses
- Condensate and oil export densities
- Compositional analysis of fuel gas, flare gas and vent gas

A complete set of atmospheric submissions, including this form, should be prepared annually for all installations by 1 March of the year following the reporting year. Where a field is producing from more than one installation a complete set of submissions is required for each installation.

Reference is made to the [EEMS Atmospheric Emission Calculations](#) document.

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### Operational Details

<b>Operator</b>	The unique name of the operating company responsible for activity.	Mandatory
<b>Installation</b>	The unique name of the Installation from which atmospheric emissions were generated.	Mandatory
<b>PPC Permit</b>	Enter the relevant PPC permit number for the installation. Only applicable if the installation has a PPC permit issued by DECC. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory
<b>EU- ETS Permit</b>	Enter the relevant EUETS permit for the installation. Only applicable if the installation has an EUETS permit. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory
<b>Year</b>	Reported year of annual submission.	Mandatory

### Data Source

<b>Carbon Dioxide (CO<sub>2</sub>)</b>	The source of CO <sub>2</sub> data submitted on related atmospheric submissions e.g. consumption, direct, drilling etc.	Mandatory
<b>Carbon Monoxide (CO)</b>	The source of CO data submitted on related atmospheric submissions e.g. consumption, direct, drilling etc.	Mandatory
<b>Nitrogen Oxides (NO<sub>x</sub>)</b>	The source of NO <sub>x</sub> data submitted on related atmospheric submissions e.g. consumption, direct, drilling etc.	Mandatory
<b>Sulphur Oxides (SO<sub>x</sub>)</b>	The source of SO <sub>x</sub> data submitted on related atmospheric submissions e.g. consumption, direct, drilling etc.	Mandatory

<b>Methane (CH4)</b>	The source of CH4 data submitted on related atmospheric submissions e.g. consumption, direct, drilling etc.	Mandatory
<b>VOC</b>	The source of VOC data submitted on related atmospheric submissions e.g. consumption, direct, drilling etc.	Mandatory

### Export Data

<b>Gas</b>	The total mass of gas exported from the installation during the reporting period.  Unit of measure=tonnes; No. decimal places=0; Minimum=0; Maximum=999,999.99; Format=#####0	Mandatory
<b>Condensate</b>	The total mass of condensate exported from the installation during the reporting period.  Unit of measure=tonnes; No. decimal places=0; Minimum=0; Maximum=999,999.99; Format=#####0	Mandatory
<b>Condensate Density</b>	The average density of condensate exported from the installation during the reporting period.  Unit of measure=kilogrammes per standard cubic metre; No. decimal places=3; Minimum=0.000; Maximum=999.999; Format=##0.000	Mandatory
<b>Oil</b>	The total mass of oil exported from the installation during the reporting period.  Unit of measure=tonnes; No. decimal places=0; Minimum=0; Maximum=999,999.99; Format=#####0	Mandatory
<b>Oil Density</b>	The average density of oil exported from the installation during the reporting period.  Unit of measure=kilogrammes per standard cubic metre; No. decimal places=3; Minimum=0.000; Maximum=999.999; Format=##0.000	Mandatory
<b>Gas</b>	The total mass of gas exported from the installation during the reporting period.  Unit of measure=tonnes; No. decimal places=0; Minimum=0; Maximum=999,999.99; Format=#####0	Mandatory

### Gas Composition Types

<b>Fuel Gas</b>	A normalised weighted average gas composition for the fuel gas used on the installation during the reported year. This composition must be supplied if gas is used for fuel on the installation. For full details of atmospheric calculations please refer to the <a href="#">EEMS Atmospheric Emission Calculations</a> document	Optional
<b>Flare Gas</b>	A normalised weighted average gas composition for the flare gas used on the installation during the reported year. If not available the fuel gas compositional analysis will be used in atmospheric calculations. For full details of atmospheric calculations please refer to the <a href="#">EEMS Atmospheric Emission Calculations</a> document	Optional
<b>Vent Gas</b>	A normalised weighted average gas composition for the vent gas used on the installation during the reported year. If not available the fuel gas compositional analysis will be used in atmospheric calculations. For full details of atmospheric calculations please refer to the <a href="#">EEMS Atmospheric Emission Calculations</a> document	Optional

### Gas Composition Data

<b>Data</b>	For each of the gas composition types submitted a full set of component mole percentages must be provided.	Mandatory
<b>CH4 (mole %)</b>	Component mole percentage of methane (CH4) in dry gas sample.  Unit of measure=mole %; No. decimal places=3; Minimum=0.000; Maximum=99.999; Format=#0.000	Mandatory
<b>VOC (mole %)</b>	Component mole percentage of volatile organic compounds (VOC) in dry gas sample.  Unit of measure=mole %; No. decimal places=3; Minimum=0.000; Maximum=99.999; Format=#0.000	Mandatory
<b>CO2 mole (%)</b>	Component mole percentage of carbon dioxide (CO2) in dry gas sample.  Unit of measure=mole %; No. decimal places=3; Minimum=0.000; Maximum=99.999; Format=#0.000	Mandatory
<b>N2 (mole %)</b>	Component mole percentage of nitrogen (N2) in dry gas sample.  Unit of measure=mole %; No. decimal places=3; Minimum=0.000; Maximum=99.999; Format=#0.000	Mandatory
<b>H2S (mole %)</b>	Component mole percentage of hydrogen sulphide (H2S) in dry gas sample.  Unit of measure=mole %; No. decimal places=3; Minimum=0.000; Maximum=99.999; Format=#0.000	Mandatory
<b>Total (mole %)</b>	Total component mole percentage of dry gas sample. For a dry gas sample this should always be between 98% and 102%. Until the total lies between these limits all component mole percentages for a compositional analysis will be considered invalid.  Unit of measure=tonnes; Calculation=CH4 (%) + VOC (%) + CO2 (%) + N2 (%) + H2S (%)	Mandatory

### Notes

- The format for measured fields indicates the maximum number of digits before and after the decimal point. 0s are used to show the minimum digits to enter and #s to show optional digits before the decimal point.

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## Environmental Emissions Monitoring System

### Atmospheric Emissions - Gas Turbines Guidance Notes

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This form, Atmospheric Emissions - Gas Turbines, is a summary of the total fuel gas consumed by all turbines on an offshore installation. It is not required for onshore terminals.

Its purpose is to support calculation of NO<sub>x</sub> emission masses from fuel gas consumption by turbines on the installation. **If an NO<sub>x</sub> emission mass from fuel gas consumption by all turbines on the installation is unavailable from an in-house system, previously approved by DECC, then this report must be submitted.**

If an NO<sub>x</sub> emission mass from fuel gas consumption by all turbines on the installation is available from such an in-house system it should be reported on the appropriate section of the Atmospheric Emissions - Consumption report and this report is **NOT** required.

If, in error, both this report and turbine NO<sub>x</sub> emission masses from fuel gas consumption on the Atmospheric Emissions - Consumption are submitted, the consumption report will take precedence and this report will be ignored.

The details for each turbine should be submitted on a separate line. If the same turbine has also consumed diesel/fuel oil it must be reported separately on the Atmospheric Emissions - Oil Turbine report.

**Care should be taken to ensure the total fuel gas reported in this report is consistent with the total fuel gas consumed by turbines reported on the Atmospheric Emissions - Consumption report.** The total fuel gas consumed from this report will be used in NO<sub>x</sub> calculations, and the total from the Atmospheric Emissions - Consumption submission will be used for other green house gas emission calculations.

The following data must be submitted:

- Unique reference name for the turbine
- The make and model of the turbine
- The UKOOA reference corresponding to the make and model of the turbine (it is noted that UKOOA are now known as Oil and Gas UK)
- Total fuel gas consumed during reporting period
- Total operating hours when fuel gas was being consumed during the reporting period
- Average fuel gas calorific value

This data is used by the EEMS Atmospheric Calculations to calculate an NO<sub>x</sub> emission factor and an NO<sub>x</sub> emission mass for each turbine. The fuel gas consumed and operating hours are combined with the average calorific value of the fuel gas to calculate the thermal rating in megawatts for the reporting period. The thermal rating is then substituted into the UKOG second order polynomial corresponding to the UKOOA turbine reference to calculate the NO<sub>x</sub> emission factor. The emission factor is then multiplied by the original total fuel gas consumed to calculate the NO<sub>x</sub> emission mass from the turbine for the reporting period. For full details, including the UKOOA polynomial coefficients, please refer to the EEMS Atmospheric Calculations document available from the EEMS Communications portal .

Turbine Emission factors can be changed or new turbines added. If this is required you should approach DECC regarding the reasons for the change, and thereafter Collabro to make the system updates.

A complete set of atmospheric submissions, including this form, should be prepared annually for all installations by 1 March of the year following the reporting year. Where a field is producing from more than one installation a complete set of submissions is required for each installation.

### Operational Details

<b>Operator</b>	The unique name of the operating company responsible for activity.	Mandatory
<b>Installation</b>	The unique name of the Installation with turbines consuming fuel gas during the reporting period.	Mandatory
<b>PPC Permit Number</b>	Enter the relevant PPC permit number for the installation. Only applicable if the installation has a PPC permit issued by DECC. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory
<b>EUETS Permit</b>	Enter the relevant EUETS permit for the installation. Only applicable if the installation has an EUETS permit. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory
<b>Reporting Year</b>	Reported year of annual submission.	Mandatory

### Gas Turbines Emissions

<b>Turbine Ref</b>	Unique operator reference for the turbine. All turbines on the installation consuming, or capable of consuming, fuel gas must be identified in the online EEMS Repository. A separate line for each active turbine in the online EEMS Repository must be submitted on this report.	Mandatory
<b>Make and Model</b>	The official make and model of the reported turbine. This must be selected from the drop down list	Mandatory
<b>UKOOA Reference</b>	The UKOOA reference corresponding to the make and model for the reported turbine. This reference will be used by the EEMS Atmospheric Calculations to identify the correct UKOOA second order polynomial for calculating the NOx emission factor from the average thermal rating during the reporting period.	Mandatory
<b>Fuel Gas</b>	The total mass of fuel gas consumed by the turbine.  Unit of measure=tonnes; No. decimal places=0; Minimum=0; Maximum=999,999; Format=###, ##0	Mandatory
<b>Operating Hours</b>	The number of operating hours during the reporting period the turbine was consuming fuel gas. This will not be the same as the total number of operating hours if the turbine was also consuming diesel/fuel oil during the reporting period. Diesel/fuel oil consumption must be reported separately on the Atmospheric Emissions - Oil Turbine submission.  Unit of measure=hours; No. decimal places=0; Minimum=0; Maximum=8,782; Format=#,##0	Mandatory
<b>Fuel Rate</b>	The rate of consumption of fuel gas.  Unit of measure=tonnes per hour; Calculation=Liquid Fuel Consumed / Operating Hours	Calculated
<b>Calorific Value</b>	The average calorific value of the fuel gas. A default value is calculated based on	Mandatory

Thermal Rating	Export Gas Composition data but may be overwritten with a more accurate value.	ory
	Unit of measure=megajoules per tonne; No. decimal places=0; Minimum=0; Maximum=99,999; Format=##,##0	
	The average thermal rating of the turbine during the reporting period..	Calculated
	Unit of measure=megawatts; Calculation=Fuel Rate * Calorific Value / 3,600	

### Notes

- The format for measured fields indicates the maximum number of digits before and after the decimal point. 0s are used to show the minimum digits to enter and #s to show optional digits before the decimal point.
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## Environmental Emissions Monitoring System

### Atmospheric Emissions - Oil Turbines Guidance Notes

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This form, Atmospheric Emissions - Oil Turbines, is a summary of the total diesel and/or fuel oil consumed by all turbines on an offshore installation. It is not required for onshore terminals

Its purpose is to support calculation of NO<sub>x</sub> emission masses from diesel and fuel oil consumption by turbines on the installation. **If an NO<sub>x</sub> emission mass from diesel/fuel oil consumption by all turbines on the installation is unavailable from an in-house system, previously approved by DECC, then this report must be submitted.**

diesel/fuel oil consumption by all turbines on the installation is available from such an in-house system it should be reported on the appropriate section of the Atmospheric Emissions - Consumption report and this report is **NOT** required.

If, in error, both this report and turbine NO<sub>x</sub> emission masses from diesel and/or fuel oil consumption on the Atmospheric Emissions - Consumption are submitted, the consumption report will take precedence and this report will be ignored.

If a turbine has consumed both diesel and fuel oil during the reporting period the total combined mass should be reported on a single line. A separate line for diesel and a separate line for fuel oil is not required, nor permitted. Separate lines are unnecessary because the UKOOA second order polynomials for calculating the turbine thermal ratings are identical for diesel and fuel oil consumption. If the same turbine has also consumed fuel gas it must be reported separately on the Atmospheric Emissions - Gas Turbine report.

Care should be taken to ensure the total diesel/fuel oil reported in this report is consistent with the total diesel and total fuel oil consumed by turbines reported on the Atmospheric Emissions - Consumption report i.e. the total diesel/fuel oil from all turbines on this report should equal the sum of the total diesel and fuel oil consumed by turbines on the Atmospheric Emissions - Consumption report. The total from this report will be used in NO<sub>x</sub> calculations and the total from the Atmospheric Emissions - Consumption submission will be used for other green house gas emission calculations.

The following data must be submitted:

- Unique reference name for the turbine
- The make and model of the turbine
- The UKOOA reference corresponding to the make and model of the turbine
- Total diesel/fuel oil consumed during reporting period
- Total operating hours when diesel/fuel oil were being consumed during the reporting period
- Average diesel/fuel oil calorific value

This data is used by the EEMS Atmospheric Calculations to calculate an NO<sub>x</sub> emission factor and an NO<sub>x</sub> emission mass for each turbine. The diesel/fuel oil consumed and operating hours are combined with the average calorific value of the diesel/fuel oil to calculate the thermal rating in megawatts for the reporting period. If both diesel and fuel oil have been used the reported calorific value should be a weighted average of the calorific values of the diesel and fuel oil. The thermal rating is then substituted into the UKOOA second order polynomial corresponding to the UKOOA turbine reference to calculate the NO<sub>x</sub> emission factor. The emission factor is then multiplied by the original total diesel/fuel oil consumed to calculate the NO<sub>x</sub> emission mass from the turbine for the reporting period. For full details,

including the UKOOA polynomial coefficients, please refer to the EEMS Atmospheric Calculations document available from the EEMS Communications portal.

Turbine Emission factors can be changed or new turbines added. If this is required you should approach DECC regarding the reasons for the change, and thereafter Collabro to make the system updates.

A complete set of atmospheric submissions, including this form, should be prepared annually for all installations by 1 March of the year following the reporting year. Where a field is producing from more than one installation a complete set of submissions is required for each installation.

### Operational Details

<b>Operator</b>	The unique name of the operating company responsible for activity.	Mandatory
<b>Installation</b>	The unique name of the Installation with turbines consuming diesel/fuel oil during the reporting period.	Mandatory
<b>PPC Permit Number</b>	Enter the relevant PPC permit number for the installation. Only applicable if the installation has a PPC permit issued by DECC. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory
<b>EUETS Permit</b>	Enter the relevant EUETS permit for the installation. Only applicable if the installation has an EUETS permit. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory
<b>Reporting Year</b>	Reported year of annual submission.	Mandatory

### Oil Turbines Emissions

<b>Turbine Ref</b>	Unique operator reference for the turbine. All turbines on the installation consuming, or capable of consuming, diesel or fuel oil must be identified in the online EEMS Repository. A separate line for each active turbine in the online EEMS Repository must be submitted on this report.	Mandatory
<b>Make and Model</b>	The official make and model of the reported turbine. This must be selected from a recognised list.	Mandatory
<b>UKOOA Reference</b>	The UKOOA reference corresponding to the make and model for the reported turbine. This reference will be used by the EEMS Atmospheric Calculations to identify the correct UKOOA second order polynomial for calculating the NOx emission factor from the average thermal rating during the reporting period.	Mandatory
<b>Fuel Oil</b>	The total mass of diesel and/or fuel oil consumed by the turbine.  Unit of measure=tonnes; No. decimal places=0; Minimum=0; Maximum=999,999; Format=###, ##0	Mandatory
<b>Operating Hours</b>	The number of operating hours during the reporting period the turbine was consuming diesel and/or fuel oil. This will not be the same as the total number of operating hours if the turbine was also consuming fuel gas during the reporting period. Fuel gas consumption must be reported separately on the Atmospherics Emissions - Gas Turbine submission.  Unit of measure=hours; No. decimal places=0; Minimum=0; Maximum=8,782; Format=#,##0	Mandatory

<b>Fuel Rate</b>	The rate of consumption of diesel and/or fuel oil.  Unit of measure=tonnes per hour; Calculation=Liquid Fuel Consumed / Operating Hours	Calculated
<b>Calorific Value</b>	The average calorific value of the diesel or fuel oil. If both diesel and fuel oil have been consumed this should be a weighted average of the diesel and fuel oil average calorific values. A default value is supplied.  Unit of measure=megajoules per tonne; No. decimal places=0; Minimum=0; Maximum=99,999; Format=##,##0	Mandatory
<b>Thermal Rating</b>	The average thermal rating of the turbine during the reporting period..  Unit of measure=megawatts; Calculation=Fuel Rate * Calorific Value / 3,600	Calculated

### Notes

- The format for measured fields indicates the maximum number of digits before and after the decimal point. 0s are used to show the minimum digits to enter and #s to show optional digits before the decimal point.
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## Environmental Emissions Monitoring System

### Atmospheric Emissions - Direct (Installation) Guidance Notes

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This form, Atmospheric Emissions - Direct (Installation), is a summary of the atmospheric emissions directly to the atmosphere including:

- Gas venting (operational, maintenance, emergency or gross)
- Direct process emission e.g. acid gas removal
- Oil loading
- Fugitive emissions (connections, valves, open ended pipes, pumps and other)

Where post-combustion gas emission masses are available from an in-house system, previously approved by the Department of Energy and Climate Change (DECC), they should be reported.

For vent gas and loading, it is not necessary to report a complete set of individual gas direct emission masses from such an in-house system e.g. CO<sub>2</sub>, NO<sub>x</sub>, N<sub>2</sub>O, SO<sub>2</sub>, CO, CH<sub>4</sub> and VOC. EEMS will accept a partial set and calculate any missing post combustion gas direct emission masses using the DECC recommended calculation method. For full details of recommended atmospheric calculations please refer to the [EEMS Atmospheric Emission Calculations](#) document.

For vent gas the conversion of a total vent gas mass to individual gas direct emission masses is based on emission factors calculated from the mole percentage composition and average molecular weight of the vent gas (reported on the Atmospheric Emission - Export submission) and published defaults.

Direct process emissions must also be reported e.g. acid gas removal. **Due to the diverse nature of the reported processes there are no generic defaults that can be meaningfully used. Therefore, individual gas direct emission masses must be reported along with the total mass emitted.** For oil loading the conversion of the total emission mass to individual gas direct emission masses is based on published default factors.

Fugitive emissions are non-design losses from many minor leaks from connections, valves etc. Where direct emission masses of CO<sub>2</sub>, CH<sub>4</sub> and VOC fugitive emissions are available from an in-house system these can be reported. If unavailable, fugitive emissions will be calculated based on the numbers of connections, valves, open ended pipes, pumps and other components, the age of the installation and published default factors. If component counts are unavailable, defaults component counts for generic platform types are available and may be submitted.

A complete set of atmospheric submissions, including this form, should be prepared annually for all installations by 1 March of the year following the reporting year. Where a field is producing from more than one installation a complete set of submissions is required for each installation.

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### Operational Details

<b>Operator</b>	The unique name of the operating company responsible for activity.	Mandatory
<b>Installation</b>	The unique name of the Installation from which direct atmospheric emissions originated.	Mandatory

<b>PPC Permit Number</b>	Enter the relevant PPC permit number for the installation. Only applicable if the installation has a PPC permit issued by DECC. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory
<b>EUETS Permit</b>	Enter the relevant EUETS permit for the installation. Only applicable if the installation has an EUETS permit. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory
<b>Reporting Year</b>	Reported year of annual submission.	Mandatory

### Gas Venting

<b>Operational</b>	Gas venting during normal operations must be reported. The total mass emitted must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors.	Discretionary
<b>Maintenance</b>	Gas venting as part of installation maintenance must be reported. The total mass emitted must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors.	Discretionary
<b>Emergency</b>	Emergency gas venting must be reported. The total mass emitted must be reported. If available from an in-house system, previously approved by DECC, then post-combustion gas emission masses can also be entered. If these are left un-entered EEMS will calculate using the standard emission default factors.	Discretionary
<b>Gross</b>	If a breakdown between operational, maintenance and emergency venting is not available, by agreement with DECC a gross vent mass can be reported. The total mass emitted must be reported. If available from an in-house system, previously approved by DECC, a partial or full set of individual gas emission masses can also be entered. Either a full breakdown of all 3 activities, operational, maintenance and emergency, is entered, or gross figures, but not both.	Discretionary

### Direct Process Emissions

<b>Process</b>	In addition to conventional combustion, flaring and venting, installations may have specific process emissions e.g, vent from nitrogen or acid gas removal plant. All plant on the installation resulting in direct emissions should be identified in the online EEMS Repository. A separate line for each active plant selected from the online EEMS Repository should be submitted. The total mass emitted must be entered. <b>Unlike venting and loading, a full set of individual gas emission masses from must be entered.</b>	Discretionary
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### Oil Loading Emissions

<b>Ship</b>	Emissions will arise from loading operations to ships. These emissions are made up of organic vapours generated in the tank as the product is being loaded. Loading losses are the major source of evaporative emissions from transport vessels and need to be reported in the emissions inventory. The total mass emitted must be entered. If available from an in-house system, previously approved by DECC, a partial or full set of individual gas emission masses can also be entered.	Mandatory
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### Fugitive Emissions

<b>Connections</b>	The total number of connections on the facility. If unavailable default component counts for generic installation types should be used.  Unit of measure=n/a; No. decimal places=0; Minimum=0; Maximum=25,000; Format=##,##0	Mandatory
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<b>Valves</b>	The total number of valves on the facility. If unavailable default component counts for generic installation types should be used.	Mandatory
	Unit of measure=n/a; No. decimal places=0; Minimum=0; Maximum=10,000; Format=##,##0	
<b>Open Ended Pipes</b>	The total number of open ended pipes on the facility. If unavailable default component counts for generic installation types should be used.	Mandatory
	Unit of measure=n/a; No. decimal places=0; Minimum=0; Maximum=5,000; Format=#,##0	
<b>Pumps</b>	The total number of pumps on the facility. If unavailable default component counts for generic installation types should be used.	Mandatory
	Unit of measure=n/a; No. decimal places=0; Minimum=0; Maximum=5,000; Format=#,##0	
<b>Other</b>	The total number of other types of components on the facility. If unavailable default component counts for generic installation types should be used.	Mandatory
	Unit of measure=tonnes; No. decimal places=0; Minimum=0; Maximum=5,000; Format=#,##0	
<b>Carbon Dioxide (CO2)</b>	Mass of total fugitive CO2 emissions from the installation in the reporting period. This should be entered where fugitive emissions measurements have been made. If not available EEMS will estimate based on the component counts, the age of the installation and published default factors.	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=30,000,000.00; Format=##,###,##0.00	
<b>Methane (CH4)</b>	Mass of total fugitive CH4 emissions from the installation in the reporting period. This should be entered where fugitive emissions measurements have been made. If not available EEMS will estimate based on the component counts, the age of the installation and published default factors.	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=30,000,000.00; Format=##,###,##0.00	
<b>Volatile Organic Compounds (VOC)</b>	Mass of total fugitive VOC emissions from the installation in the reporting period. This should be entered where fugitive emissions measurements have been made. If not available EEMS will estimate based on the component counts, the age of the installation and published default factors.	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=30,000,000.00; Format=##,###,##0.00	

### Emissions (Gas Venting, Direct Process, Oil Loading)

<b>Total Use</b>	The total annual direct emission mass by the activity from the facility.	Mandatory
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=30,000,000.00; Format=##,###,##0.00	
<b>Carbon Dioxide (CO2)</b>	The total annual direct emission mass of CO2 emitted by the activity from the facility. If a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the direct emission mass using the appropriate compositional analysis and CO2 molecular weight reported on the Atmospherics Export submission (venting) or published defaults (loading and fugitives). <b>This value must be reported for direct process emissions.</b>	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00;	

	Maximum=999,999.99; Format=,###,##0.00
<b>Nitrogen Oxides (NOx)</b>	<p>The total annual direct emission mass of NOx emitted by the activity from the facility. If Optional a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the direct emission mass using the appropriate compositional analysis and N2 molecular weight reported on the Atmospherics Export submission (venting) or published defaults (loading and fugitives). <b>This value must be reported for direct process emissions.</b></p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=,###,##0.00</p>
<b>Nitrous Oxide (N2O)</b>	<p>The total annual direct emission mass of N2O emitted by the activity from the facility. If Optional a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the direct emission mass using the appropriate compositional analysis and N2 molecular weight reported on the Atmospherics Export submission (venting) or published defaults (loading and fugitives). <b>This value must be reported for direct process emissions.</b></p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=,###,##0.00</p>
<b>Sulphur Dioxide (SO2)</b>	<p>The total annual direct emission mass of SO2 emitted by the activity from the facility. If Optional a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the direct emission mass using the appropriate compositional analysis and H2S molecular weight reported on the Atmospherics Export submission (venting) or published defaults (loading and fugitives). <b>This value must be reported for direct process emissions.</b></p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=,###,##0.00</p>
<b>Carbon Monoxide(CO)</b>	<p>The total annual direct emission mass of CO emitted by the activity from the facility. If a Optional value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the direct emission mass using the appropriate compositional analysis and CO2 molecular weight reported on the Atmospherics Export submission (venting) or published defaults (loading and fugitives). <b>This value must be reported for direct process emissions.</b></p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=,###,##0.00</p>
<b>Methane (CH4)</b>	<p>The total annual direct emission mass of CH4 emitted by the activity from the facility. If Optional a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the direct emission mass using the appropriate compositional analysis and CH4 molecular weight reported on the Atmospherics Export submission (venting) or published defaults (loading and fugitives). <b>This value must be reported for direct process emissions.</b></p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=,###,##0.00</p>
<b>VOC</b>	<p>The total annual direct emission mass of VOC emitted by the activity from the facility. If Optional a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the direct emission mass using the appropriate compositional analysis and VOC molecular weight reported on the Atmospherics Export submission (venting) or published defaults (loading and fugitives). <b>This value must be reported for direct process emissions.</b></p> <p>Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=,###,##0.00</p>

## Notes

- The format for measured fields indicates the maximum number of digits before and after the decimal point. 0s are used to show the minimum digits to enter and #s to show optional digits before the decimal point.

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## Environmental Emissions Monitoring System

### Atmospheric Emissions - Drilling Guidance Notes

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This form, Atmospheric Emissions - Drilling, is a summary of gas flaring and diesel consumption during drilling activities on mobile installations. **For fixed installations gas flaring and diesel consumption during drilling operations are included on the Atmospheric Emissions - Consumption (Installation) report.**

A submission must be made for all mobile installations from which drilling activity took place on behalf of the operator as covered by the relevant PON15 Chemical Drilling permit. Each well drilled must be identified along with the hydrocarbon type and the total amount of gas flared during drilling activity for that well. The total diesel consumed during drilling of the reported wells must also be submitted.

Where post-combustion gas emission masses are available from an in-house system, previously approved by the Department of Energy and Climate Change (DECC), they should be reported.

For diesel, the conversion of a pre-combustion fuel mass to a post-combustion gas mass is based on published default factors.

It is not necessary to report a complete set of gas emission masses from such an in-house system e.g. CO<sub>2</sub>, NO<sub>x</sub>, N<sub>2</sub>O, SO<sub>2</sub>, CO, CH<sub>4</sub> and VOC. EEMS will accept a partial set and calculate any missing emission masses using the DECC recommended calculation method. For full details of recommended atmospheric calculations please refer to the [EEMS Atmospheric Emission Calculations](#) document.

A separate return should be submitted for each separate PON15 Chemical Drilling Permit. This form should be prepared by no later than 28 days after the expiry of the PON15 Drilling Chemical.

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### Operational Details

<b>Operator</b>	The unique name of the operating company responsible for drilling activity.	Mandatory
<b>Installation</b>	The unique name of the mobile installation from which the drilling activity took place..	Mandatory
<b>Chemical Permit</b>	The PON15B chemical permit reference number under which the work authorised.	Mandatory
<b>Operations Started</b>	The date the Operations Started.	Mandatory
<b>Operations Completed</b>	The date the Operations Completed	

### Well Testing

<b>Well No.</b>	Unique DECC registration number of the well.	Discretionary
<b>Hydrocarbon (HC) Type</b>	The hydrocarbon type of the produced fluids from the well (Oil or Gas).	Mandatory
<b>Flare Mass</b>	The total flare gas mass during the drilling activity for the specified well.	Mandatory
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=50,000.00; Format=##, ##0.00	

## Diesel Consumption

<b>Total Use</b>	The total annual pre-combustion mass of diesel used during drilling of the specified wells on the facility.	Mandatory
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=30,000,000.00; Format=###,###,##0.00	
<b>Carbon Dioxide (CO2)</b>	The total annual post-combustion mass of CO2 emitted by diesel consumption during drilling of the specified wells on the mobile installation. If a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the CO2 post-combustion mass using the appropriate published defaults.	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=#,###,##0.00	
<b>Nitrogen Oxides (NOx)</b>	The total annual post-combustion mass of NOx emitted by diesel consumption during drilling of the specified wells on the mobile installation. If a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the NOx post-combustion mass using the appropriate published defaults.	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=#,###,##0.00	
<b>Nitrous Oxide (N2O)</b>	The total annual post-combustion mass of N2O emitted by diesel consumption during drilling of the specified wells on the mobile installation. If a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the N2O post-combustion mass using the appropriate published defaults.	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=#,###,##0.00	
<b>Sulphur Dioxide (SO2)</b>	The total annual post-combustion mass of SO2 emitted by diesel consumption during drilling of the specified wells on the mobile installation. If a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the SO2 post-combustion mass using the appropriate published defaults.	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=#,###,##0.00	
<b>Carbon Monoxide(CO)</b>	The total annual post-combustion mass of CO emitted by diesel consumption during drilling of the specified wells on the mobile installation. If a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the CO post-combustion mass using the appropriate published defaults.	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=#,###,##0.00	
<b>Methane (CH4)</b>	The total annual post-combustion mass of CH4 emitted by diesel consumption during drilling of the specified wells on the mobile installation. If a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the CH4 post-combustion mass using the appropriate published defaults.	Optional
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=#,###,##0.00	
<b>VOC</b>	The total annual post-combustion mass of VOC emitted by diesel consumption during drilling of the specified wells on the mobile installation. If a value is submitted, it must originate from an in-house system, previously approved by DECC. If no value is reported EEMS will calculate the VOC post-combustion mass using the appropriate	Optional

<b>Sulphur Content</b>	published defaults.	
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=999,999.99; Format=#,###,##0.00	
	The sulphur content of the diesel. If no post-combustion SO2 emission mass is available from an in-house system the sulphur content will be used in its calculation.	Mandatory
	Unit of measure=tonnes; No. decimal places=2; Minimum=0.00; Maximum=99.99; Format=#0.00	

**Notes**

- The format for measured fields indicates the maximum number of digits before and after the decimal point. 0s are used to show the minimum digits to enter and #s to show optional digits before the decimal point.



## Environmental Emissions Monitoring System

### Atmospheric Emissions - Halogens (Installation) Guidance Notes

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This form is to be used to report the quantity and emission of halogenated compounds on the facility on an annual basis. The quantities of Hydrofluorocarbon compounds, perfluorocarbon compounds and sulphur hexafluoride on the facility at the end of the reporting period and used during the reporting period must be reported.

Each halogenated compound belonging to these groups has a specific CO2 equivalent factor. Each halogenated compound in these groups must therefore be recorded individually and its CO2 equivalent will be automatically calculated.

A total of 6 types of compounds must be reported:

- Chlorofluorocarbons (CFC)
- Hydrochlorofluorocarbons (HCFC)
- Halons
- Hydrofluorocarbons (HFC)
- Perfluorocarbons
- Sulphurhexafluoride (SF6)

All masses must be in kilogrammes. In the case of the last 3 groups the CO2 equivalent of the used mass will be calculated.

All fields are mandatory. If no compound was on the facility at the end of the reporting period or emitted from the facility during the reporting period then a zero value is required. This form should be submitted annually for all operated facilities by 1 March of the year following the reporting year.

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### Operational Details

<b>Operator</b>	The unique name of the operating company responsible for activity.	Mandatory
<b>Installation</b>	The unique name of the Installation from which atmospheric emissions were generated.	Mandatory
<b>Year</b>	Reported year of annual submission.	Mandatory
<b>PPC Permit</b>	Enter the relevant PPC permit number for the installation. Only applicable if the installation has a PPC permit issued by DECC. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory
<b>EU-ETS Permit</b>	Enter the relevant EUETS permit for the installation. Only applicable if the installation has an EUETS permit. If the installation does not have a permit then 'N/A' or similar should be entered.	Mandatory

### Compound Groups

<b>Chlorofluorocarbons (CFC)</b>	For CFCs the total amount on the facility at the end of the reporting period and emitted during the reporting period must be reported. In this case no	Mandatory
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	CO2 equivalent calculation is performed.	
<b>Hydrochlorofluorocarbons (HCFC)</b>	For HCFCs the total amount on the facility at the end of the reporting period and emitted during the reporting period must be reported. In this case no CO2 equivalent calculation is performed.	Mandatory
<b>Halons</b>	For Halons the total amount on the facility at the end of the reporting period and emitted during the reporting period must be reported. In this case no CO2 equivalent calculation is performed.	Mandatory
<b>Hydrofluorocarbons (HFC)</b>	For HFCs the amount on the facility at the end of the reporting period and emitted during the reporting period must be reported for a total of 13 different species of HFC. For each species a CO2 equivalent calculation is performed.	Mandatory
<b>Perfluorocarbons</b>	For PFCs the amount on the facility at the end of the reporting period and emitted during the reporting period must be reported for a total of 7 different species of HFC. For each species a CO2 equivalent calculation is performed.	Mandatory
<b>Sulphurhexafluoride (SF6)</b>	For SF6 the total amount on the facility at the end of the reporting period and emitted during the reporting period must be reported. A CO2 equivalent calculation is performed.	Mandatory

## Data

<b>On Facility</b>	The amount of the compound on the facility at the end of the reporting year.  Unit of measure=kilogrammes; No. decimal places=2; Minimum=0.00; Maximum=100,000.00; Format=#####0.00	Mandatory
<b>Emitted</b>	The amount of the compound emitted during the reporting year.  Unit of measure=kilogrammes; No. decimal places=2; Minimum=0.00; Maximum=100,000.00; Format=#####0.00	Mandatory
<b>CO2 Equivalent Factor</b>	The CO2 equivalent factor for the compound.  Unit of measure=kilogrammes per kilogrammes; No. decimal places=0; Minimum=0; Maximum=10,000,000.00; Format=#####0.00	Mandatory
<b>CO2 Equivalent</b>	The CO2 equivalent for the amount of the compound emitted.  Unit of measure=tonnes; Calculation= Emitted * CO2 Equivalent Factor / 1000	Calculated
<b>Totals</b>	For HFCs, PFCs and SF6 the total on the facility, the total emitted and the total CO2 equivalent for the whole chemical group are calculated. In addition an average CO2 Equivalent factor for the group is also calculated.	Calculated

## Notes

- The format for measured fields indicates the maximum number of digits before and after the decimal point. 0s are used to show the minimum digits to enter and #s to show optional digits before the decimal point.