



Partial Surrender of Permit with introductory note

Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (LN 10 of 2013).

**Marsa Power Station
Enemalta plc,
Church Wharf,
Marsa
MRS 1000**

Permit number
IP 0003/07/B

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Introductory note

This introductory note does not form part of the Permit

The following Permit is issued under Regulation 7 of the Industrial Emissions (Framework) Regulations, 2013 (LN9 of 2013) ("the Industrial Emissions (Framework) Regulations to operate an installation carrying out activities covered by the description in Section 1.1 in Schedule 1 of the Industrial Emissions (IPPC) Regulations (LN 10 of 2013) ("the Industrial Emissions (IPPC) Regulations"),, to the extent authorised by the Permit, i.e.

"Combustion installations with a rated thermal input exceeding 50 MW".

Aspects of the operation of the installation which are not specifically regulated by conditions in the Permit may also be subject to the condition implied by Regulation 8 of the Industrial Emissions (IPPC) Regulations, which require the Operator to use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, managed, operated and decommissioned.

In some sections, the Permit conditions require the Operator to use Best Available Techniques (BAT), in each of the aspects of the management of the installation, to prevent and where that is not practicable to reduce emissions. These conditions do not explain what is BAT.

A non-technical description of the installation is given in the application, but the main activity of the installation is as follows:

- **Decommissioning of certain plant, and**
- **Generation of electrical energy through the combustion of gasoil.**

Note that the Permit requires the submission of certain information to the Competent Authority. In addition, the Competent Authority has the power to seek further information at any time under regulation 11 of the Industrial Emissions (Framework) Regulations, provided that it acts reasonably

To also note that the Permit addresses the partial surrender of the IPPC permit, more specifically the decommissioning demolition and dismantling of HFO tanks 1, 2 and 6, Chimneys 1 and 3 and 2 degassing towers up to slab level.

Other IPPC Permits relating to this installation

| Operator | Permit Number | Date of Issue |
|-----------------------|---------------|---------------|
| <i>Not applicable</i> | | |

Superseded Licences/Authorisations/Consents relating to this installation

| Operator | Reference Number | Date of Issue |
|---------------------|------------------|---------------|
| <i>Enemalta Plc</i> | IP 0003/07/A | 29/03/10 |

Public Registers

This IPPC Permit and application is available to the public through the Competent Authority in accordance with the requirements of the Industrial Emissions (IPPC) Regulations. The applicant has made a request for certain information of a commercial nature to be withheld from the public. MEPA has been supplied with all this information and has accepted the request of the applicant, because it was deemed to be commercially confidential. Alternative text which provides relevant information but does not include the confidential information, has however been included in the application.

Variations to the Permit

This Permit may be varied at any time in the future (by the Authority serving a Variation Notice on the Operator). If the Operator himself wants any of the Conditions of the Permit to be changed, a formal application must be submitted to the Competent Authority. The Status Log within the Introductory Note to any such Variation Notice will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Surrender of the Permit

Before this Permit can be wholly or partially surrendered, an Application to surrender the Permit has to be made to the Competent Authority by the Operator. For the application to be successful, the Operator must be able to demonstrate to the Competent Authority that there is no pollution risk and that, for complete surrender, no further steps are required to return the site to a satisfactory state.

Transfer of the Permit or part of the Permit

Before the Permit can be wholly or partially transferred to another person, an Application to transfer the Permit has to be made to the Director of Environment Protection, by the existing and proposed operators jointly. A transfer will be allowed unless the Authority considers that the proposed Operator will not be the person who will have control over the operation of the installation or will not comply with the conditions of the transferred Permit. If, however, the Permit authorises the carrying out of a specified waste management activity, the transfer will only be allowed if the proposed operator is also considered to be a technically competent person.

Status Log

| Detail | Date | | | Comment |
|--|----------------------|-------------------|-------------------------------|--|
| <i>Application IP 0003/07</i> | <i>Received</i> | <i>02</i> | <i>February</i> | <i>Not 'duly made'</i> |
| | <i>2007</i> | | | |
| <i>Response to request for information</i> | <i>Request dated</i> | <i>13 March</i> | <i>2007 and 23 March 2007</i> | <i>Response dated 11 April 2007 and 25 June 2007</i> |
| <i>Response to request for information</i> | <i>Request dated</i> | <i>24 October</i> | <i>2007</i> | <i>Partial response dated 25 July 2008</i> |
| <i>Application 'duly made'</i> | <i>24 October</i> | <i>2007</i> | | |
| <i>Consolidated version</i> | <i>Received on</i> | <i>21 January</i> | <i>2009</i> | |
| <i>Public consultation</i> | <i>Commenced</i> | <i>on</i> | <i>22 January 2009</i> | <i>Concluded on 21 February 2009</i> |
| <i>Permit determined</i> | <i>26 March</i> | <i>2009</i> | | <i>Reconsideration: 13 August 2009</i> |
| <i>Permit issued</i> | <i>29 March</i> | <i>2010</i> | | |
| <i>Request for minor variation</i> | <i>Received on</i> | <i>21 April</i> | <i>2014</i> | <i>To amend site boundary</i> |

| | | | | | |
|-----------------------------------|-------------|---------------------|---|------------------|--|
| Permit determined | Amendment | 26 May 2014 | | | |
| Permit Amendment Issued | | 26 May 2014 | | | |
| Application for partial surrender | Received | 10 November 2014 | Demolition of Tanks 1, 2 and 6, Chimneys 1 (MPS1) and 3 ('A' Station) and the dismantling of 2 degassing tower structures. | | |
| Consolidated version | Received on | 24 February 2015 | | | |
| Public Consultation | Commenced | on 28 February 2015 | Concluded | on 29 March 2015 | |
| Permit Determined | | 14 May 2015 | | | |
| Permit Issued | | 11 June, 2015 | | | |

End of Introductory Note

Permit

Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (LN 10 of 2013)

Permit number
IP 0003/07/B


The Malta Environment and Planning Authority (hereinafter the Authority; the Competent Authority or MEPA) in exercise of its powers under Regulation 7 of the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations 2013 (LN 9 of 2013) ("the industrial Emissions (framework) Regulations"), hereby authorises:

Enemalta plc. (Hereinafter "the Operator")
Of / Whose Registered Office (or principal place of business) is at
Church Wharf, Marsa MRS 1000
(Company registration number: **C 65836**)

to carry out decommissioning of specified plant and to operate OCGT 9 hereafter referred to as "MPS 5" at

**Marsa Power Station,
Church Wharf,
Marsa MRS 1000**

to the extent authorised by and subject to the conditions of this Permit.

| | |
|--|--|
| <p>Malta Environment & Planning Authority</p> <p style="text-align: center;">APPROVAL</p> <p>Board No. <u>104-13/14</u> Held on <u>21/5/2015</u></p> <p>Chairman <u></u></p> | |
|--|--|

Conditions

1 General

These permit conditions shall be read in conjunction with the IPPC Application received on 02 February 2007 and the application for partial surrender received on 10th November 2014, as subsequently clarified and recorded in the status log above, which forms an integral part of these permit conditions.

1.1 Permitted Activities

1.1.1 The Operator is authorised to carry out the activities and the associated activities specified in Table 1.1.1.

| Table 1.1.1 | | |
|--|---|--|
| Activity listed in Schedule 1 of the Industrial Emissions (IPPC) Regulations / Associated Activity | Description of specified activity | Limits of specified activity |
| Section 1.1: Combustion installations with a rated thermal input exceeding 50 MW | Generation of electrical energy through the combustion of gasoil. | From receipt of fuel to delivery of utility. |
| Associated activity of fuel handling and storage | Handling and storage of heavy fuel oil and gas oil. | From receipt of the fuel (heavy fuel oil and gasoil) to storage in tanks (heavy fuel oil and gasoil) and combustion in the combustion plant (gasoil only). |
| Associated activity of utilities | Sea water pre-treatment plant. | From intake of sea water to delivery of utility. |
| Associated activity of storage, treatment and disposal/recycling of waste materials | Handling, storage, treatment and disposal/recovery of wastes from installation. | From generation of waste to disposal or recycling onsite or offsite. |
| Associated activity of maintenance | Maintenance carried out in any workshop in the installation. | From maintenance activity to appropriate recovery/disposal of any wastes created. |
| Other | Decommissioning and Demolition of Tanks 1, 2 and 6, Chimneys 1 (MPS1) and 3 ('A' Station) and the dismantling of 2 degassing tower structures | From the decommissioning and demolition as per approved method statements to the appropriate disposal of all resulting wastes |

1.2 Site

1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, as outlined in yellow on the Site Plan in Schedule 11 to this Permit.

1.3 Information to the public

- 1.3.1 The operator shall make emission data (most recent hourly, daily, diurnal and monthly average values and results of the most recent discontinuous measurement) publicly available via the Internet not later than two months after the production of such data.
- 1.3.2 The Local Councils most affected by emissions from the Marsa Power Station including Floriana, Valletta, Hamrun, Marsa, Paola and Fgura may jointly and in agreement with both the Authority and the operator, establish independent ambient air monitoring systems to monitor for levels of particulate matter, nitrogen oxides, sulphur dioxide, carbon monoxide, as well as any other parameters that may be agreed with the Authority at the expense of the Operator.
- 1.3.3 The Local Councils most affected by emissions from the Marsa Power Station including Floriana, Valletta, Hamrun, Marsa, Paola and Fgura may jointly and in agreement with the Authority, appoint an independent expert to assist in the interpretation of the emission data made publicly available pursuant to condition 1.3.1.

1.4 Overarching Management Condition

- 1.4.1 Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain the approved Environmental Management System (EMS), and an organisational structure, and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit. The EMS can take the form of a standardised system (e.g. EN ISO 14001:1996 or EMAS) or a non-standardised ("customised") system, provided that is properly designed and implemented. The EMS shall give information on the person responsible for environmental management on site, and standard operating procedures on environmentally relevant matters including contingency plan.
- 1.4.2 As part of the EMS submitted to the Authority, the Operator shall submit the following reports annually as part of the AER of the site, according to the timeframe specified in Condition 4.1.2:
- 1.4.2.1 Environmental Policy containing the installation's environmental objectives and targets;
 - 1.4.2.2 Environmental Management Programme report (for the reporting year);
 - 1.4.2.3 Environmental Management Programme proposal (for the following year).
- 1.4.3 The Operator shall submit an AER of the previous year to the Competent Authority by the end of March of each year (starting March 2010). The AER shall contain all the information listed in Schedule 2 of this permit, subject to the other conditions of this permit.
- 1.4.4 The Permitted Installation shall, subject to the conditions of this Permit, be managed, controlled and operated as described in the application and subsequent responses to requests for information submitted as per the Status Log above, or as otherwise agreed in writing by the Authority.
- 1.4.5 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in good operating condition.

- 1.4.6 The Permitted Installation shall be managed, controlled and operated by staff suitably trained and fully conversant with the requirements of this Permit.

1.5 Improvement Programme

- 1.5.1 The Operator shall complete the improvements specified in Table 1.5.1 by the date specified in that table, and shall send written notification of the date of completion of each requirement to the Authority within 10 working days of the completion of each such requirement.

| Table 1.5.1: Improvement programme | | |
|------------------------------------|---|--|
| Reference | Requirement | Date |
| 8 | To submit the information requested as per condition 3.6.1.15. | To be submitted within 3 months of issue of the IPPC permit. |
| 11 | For each waste stream identified in the decontamination and dismantling of tanks 1, 2 and 6, compilation of the form in Schedule 9 for MEPA's approval | To be submitted within 2 weeks of issue of the permit and prior to the commencement of any decontamination/ dismantling works on tanks 1, 2, and 6 To be updated and submitted to MEPA within 2 months of completion of works |
| 12 | In relation to Chimneys 1 and 3 – Submission of a sampling plan in line with EN 14899-2005 as proposed in the RA chimneys. This shall include details on how samples are to be analyzed by laboratories that have proven experience in waste testing and preferably ISO17025 certified. The sand samples shall be analyzed according to EN13137, EN13657 (or EN13656) and EN12506 and provide information on both the organic and inorganic constituents in the samples. Classification of the nature of the waste is to be carried out according to SL504.37, the waste regulations and commission decision 2000/532/EC and not according to decision 2003/33/EC as indicated in section 1.4.5 of the RA tanks. This shall also address any C&D waste generated by the partial dismantling of the bund walls to provide access to tanks 1, 2 and 6 | To be submitted for MEPA's approval within 2 months of issue of the IPPC permit. |
| 13 | For each waste stream arising from the dismantling and demolition of the chimneys, compilation of the form in Schedule 9 for MEPA's vetting and approval. | To be submitted within 2 months of approval of item 12 To be updated and submitted to MEPA within 2 months of completion of works |
| 14 | In relation to the 2 degassing towers – | To be submitted within 2 months of issue of the |

| | | |
|----|--|--|
| | Submission of a sampling plan in line with EN 14899-2005 as proposed in the RA chimneys. This shall include details on how samples are to be analyzed by laboratories that have proven experience in waste testing and preferably ISO17025 certified. The sand samples shall be analyzed according to EN13137, EN13657 (or EN13656) and EN12506 and provide information on both the organic and inorganic constituents in the samples. Classification of the nature of the waste is to be carried out according to SL504.37, the waste regulations and commission decision 2000/532/EC and not according to decision 2003/33/EC as indicated in section 1.4.5 of the RA tanks. | IPPC permit. |
| 15 | For each waste stream arising from the dismantling and demolition of the degassing towers, compilation of the form in Schedule 9 for MEPA's vetting and approval. | To be submitted within 2 months of approval of item 14 To be updated and submitted to MEPA within 2 months of completion of works |
| 16 | Submission of timeframes for implementation of recommendations arising from the outline decommissioning plan submitted as part of IP 0003/07/A | To be submitted within 3 months of issue of the permit |
| 17 | Submission of timeframes for the submission of a full review of the outline decommissioning plan as required by condition 2.16.7 of IP 0003/07/A | To be submitted within 6 months of issue of the permit |
| 18 | Submission of a plan indicating how Enemalta will comply with certain emission ceilings by 2019 and 2029 | By 31 st December 2016 |
| 19 | Location of storage of C&D waste generated from the parts of bund walls to be demolished to provide access to tanks 1, 2, and 6. This shall include information on containment against dispersion of any particulates to the air or transport of material through runoff. | Prior to commencement of decontamination, dismantling and demolition works. |
| 20 | In relation to emission points to sea listed in table 3.6.1.2, Submission of information on operational and non operational emission points. | Within 3 months of issue of the permit |

1.6 Operational Changes

- 1.6.1 The Operator shall seek the Authority's written agreement to any operational change as defined by LN 10 of 2013, by sending to the Authority: written notice of the details of the proposed change, including an assessment of its possible effects (including changes in emissions and waste production) on risks to the environment from the Permitted Installation; any relevant supporting assessments and drawings; and the proposed implementation date.
- 1.6.2 Any such change shall not be implemented until agreed to in writing by the Authority. As from the agreed implementation date, the Operator shall operate

the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.

1.6.3 In order to ensure compliance with LN 478 of 2010, as amended, the Authority reserves the right to impose any additional conditions it deems necessary on the Operator.

1.6.4 The Director of Environment Protection and any officials to whom this role is delegated are hereby authorised to make decisions on variations to this permit, with the exception of the following cases:

- (a) variations which could lead to significant impact on human health or the environment;
- (b) any change in the nature or functioning or an extension of an installation where the change or extension in itself reaches the capacity thresholds set out in Schedule 1 of the Industrial Emissions (IPPC) Regulations;
- (c) variations covered by the Environmental Impact Assessment Regulations;
- (d) aspects of the operations specifically prohibited by this permit;
- (e) changes to emission limit values;
- (f) changes to fees;
- (g) renewal of the validity of this permit.

1.7 Pre Operational Conditions

1.7.1 There are no pre-operational conditions

2. Closure and Decommissioning

2.1 Permitted Dismantling/ Demolition works

2.1.1 This permit addresses the decommissioning, dismantling, demolition and removal of the following structures up to slab level as indicated in Schedule 11:

- 2.1.1.1** Chimney 1 (associated with boilers 3 & 4)
- 2.1.1.2** Chimney 3 (associated with the A station decommissioned in the 1990s)
- 2.1.1.3** HFO tank 1
- 2.1.1.4** HFO tank 2
- 2.1.1.5** HFO tank 6
- 2.1.1.6** 2 degassing tower structures unused since 1989

- 2.1.2 No decontamination/ dismantling of tanks shall be carried out prior to the satisfaction of improvement programme item 11 in table 1.5.1.
- 2.1.3 Upon issue of the permit only decommissioning and dismantling of HFO tanks 1, 2, and 6 shall be permitted subject to condition 2.2.2. Demolition of chimneys 1 and 3 and of the 2 tower structures shall only be permitted upon satisfaction of improvement programme items 12, 13, 14 and 15 in table 1.5.1
- 2.1.4 Within 2 months of issue of the permit and prior to the commencement of any dismantling/ demolition works on chimneys 1 and 6 and the two degassing tower structures, the operator shall submit a sampling plan in line with EN 14899-2005 for review. This will lead to a request for the compositional analysis of the fabric of masonry/ concrete structures. A sampling plan (at various heights of the structures where necessary) shall be submitted to MEPA for review and approval prior to the commencement of any works. This shall be in line with the provisions of Council Decision 2000/ 532/EC and Decision 2003/33/EC – 1.1.2 of the annex, so as to determine the nature of such material.
- 2.1.5 No decontamination/ dismantling of chimneys and degassing tower structures shall be carried out prior to the satisfaction of improvement programme items 12, 13, 14 and 15 in table 1.5.1
- 2.1.6 Demolition and dismantling works shall strictly adhere with the conditions stipulated in DN 1655/14
- 2.1.7 Recommendations stipulated in the risk assessment for the facility shall be implemented at all times and works shall be supervised by competent persons at all times to ensure a high level of safety according to current OHS legislation and applicable standards.
- 2.1.8 All works shall be in line with the final approved method statements unless otherwise stipulated in writing by the Competent Authority.
- 2.1.9 Dismantling of Asbestos shall follow OHSA regulations and should be carried out by persons having the appropriate training and equipment. Asbestos should be disposed of at authorised waste management facilities permitted under LN 184 of 2011 waste regulations 2011 as amended, and should be handled by authorised waste brokers as per provisions of L.N 106 of 2007 Waste management (registration) , Regulations 2007. The transport & disposal of hazardous waste locally shall be subject to a permit from MEPA and shall follow the hazardous waste consignment note procedure while transport & disposal of hazardous waste abroad shall follow the requirements of LN 285/2011.
- 2.1.10 The operator shall be responsible for ensuring that containment measures through best available techniques are applied to ensure that any proposed works result in the least possible damage and disturbance to the surrounding land, coastal zone and sea
- 2.1.11 All stockpiles of construction/ demolition material are to be positioned in such a way as to avoid contamination of air or water through wind, runoff or accidental spillages respectively. Dust suppression equipment shall be installed and used in stockpiling areas.
- 2.1.12 The applicant shall ensure that provision is made to ensure that dust or mud does not contaminate areas adjacent to the site.
- 2.1.13 Runoff shall be diverted and /or intercepted through the use of adequately sized settling pits and/or oil water interceptors so as to avoid contamination to land and the coastal zone by mud, dust, debris, oils and fuels.

- 2.1.14 Wheel washing facilities shall be made available and used for vehicles leaving the site and adequate sheeting of trucks carrying materials off site must be ensured to prevent dispersal of dusts during transport. Dispersal of mud onto local roads must be avoided through effective dirty water collection in sumps provided with silt traps
- 2.1.15 Dust control measures shall be deployed during all demolition works to avoid effects on local residents and workers in areas adjacent to the site
- 2.1.16 Dismantling / demolition works shall only be carried out up to slab level. No excavation of rock, removal of foundations or removal of fill material shall be carried out unless specifically approved through a new development permit and a separate variation of this IPPC permit.
- 2.1.17 Dismantling, demolition and transport of demolition materials shall not be carried out during sensitive times of the day (night).
- 2.1.18 Following the removal of structures listed in condition 2.1.1 The Authority may request the temporary sealing of exposed substrate so as to ensure that there is no percolation into the underlying ground of any substances deemed hazardous by the Authority.
- 2.1.19 Applicable waste management considerations detailed in section 3.9 shall be applied at all times. This shall also address the temporary storage of any wastes generated from demolition and dismantling on site pending removal during the full decommissioning of the site..
- 2.1.20 Upon completion of all dismantling and demolition works the operator shall provide an update of the table provided in schedule 9. This shall include any additions unforeseen wastes which may have been identified during the decontamination/ dismantling and demolition process.
- 2.1.21 Where certain wastes shall be retained on site until the full surrender of the IPPC permit, these shall also be disclosed. A site plan of the facility with these temporary storage locations together with an accompanying document detailing methods of storage and containment shall also be submitted.

2.2 Full Decommissioning

- 2.2.1 The full decommissioning of the facility shall be subject to a separate variation of the IPPC permit addressing the full surrender of the permit
- 2.2.2 The provisions of this permit shall apply to the site until such time that the site is deemed fit for after use by the Malta Environment and Planning Authority through the conditions and provisions of a variation of this permit issued to address the full decommissioning and surrender.
- 2.2.3 Updates to the report already submitted by the operator may be requested by the Authority as part of the variation for full surrender for areas where sampling was not viable due to the presence of operational structures. In this regard the operator shall submit an updated monitoring plan to the authority for vetting and approval
- 2.2.4 This updated monitoring programme shall amongst other things include the location of the additional points for the sampling of land, information on the sampling methods, the handling of the samples, the pre-treatment/ extraction of the analytes (where applicable) and the methods used in order to analyse the samples.

2.2.5 The variation of the IPPC permit addressing the full surrender of the permit full decommissioning of the facility will address:

2.2.5.2 The levels to which the site and any affected land will have to be decontaminated.

2.2.5.3 The methods which will be used in order to decontaminate the land. Such methods may also include isolation.

2.2.5.4 A waste management plan which shall include:

2.2.5.4.1 The identification and characterisation of sources, types and quantities of waste (including equipment, fuels, by-products such as ash, etc.);

2.2.5.4.2 Criteria for segregation of wastes;

2.2.5.4.3 Proposed treatment, conditioning, transport, storage and disposal/recovery methods;

2.2.5.4.4 Potential reuse/recycling of such wastes.

2.2.5.5 The identification of potential sources of emissions to the atmosphere, land and water (both seawater and groundwater) pollution which might arise from the decontamination process and corresponding mitigation measures to minimise the likelihood of such emissions.

2.3 Other considerations

2.3.1 The Operator shall maintain and operate the Permitted Installation so as to prevent or minimise any pollution risk, including the generation of waste, on closure and decommissioning in particular by:-

2.3.1.1 Attention to the design of new plant or equipment;

2.3.1.2 The maintenance of a record of any events which have, or might have, impacted on the condition of the site along with any further investigation or remediation work carried out; and

2.3.1.3 The maintenance of a decommissioning plan to demonstrate that the installation can be decommissioned avoiding any pollution risk and returning the site of operation to a satisfactory state.

2.3.2 Notwithstanding condition 2.2.5.4 of this Permit, the Operator shall carry out a full review of the outline Decommissioning Plan within the timeline of this permit. Timeframes for the implementation of such an update shall be submitted as detailed in table 1.5.1,

2.3.3 The Operator shall notify the Authority immediately upon a decision being taken to decommission the site.

2.3.4 A finalised version of the Site Closure Plan shall be submitted to the Authority for approval not later than 10 days after the Authority is notified of the intention to decommission the site.

2.3.5 The approved Decommissioning Plan shall be implemented within 12 months of final cessation or decommissioning of the Permitted activities or part thereof.

3 Residual Operating Conditions

3.1 In-Process Controls

- 3.1.1 The Permitted Installation shall, subject to the conditions of this Permit, shall be operated using the techniques and in the manner described in the IPPC application, or as otherwise agreed in writing by the Authority in accordance with conditions 1.6.1 and 1.6.2 of this Permit.

3.2 Emergency provisions to ensure security of energy supply

- 3.2.1 This section (3.2) refers to point sources MPS 1, MPS2, MPS3 and MPS 4 as listed in table 2.2.1 of IP 0003/07/A
- 3.2.2 Plant MPS1 shall not be operated under any circumstance.
- 3.2.3 MPS2, MPS3 and MPS4 shall only be operated In the event of emergencies associated with security of energy supply,
- 3.2.4 The Director of Environment Protection shall be notified about the operation of one or more of the plant in table 2.2.1 of IP 0003/07/A within 24 hours as per Condition 6.1.5 of this permit.
- 3.2.5 Further to condition 3.2.3, Should the operation of MPS2, MPS3, and MPS4 be deemed essential, all provisions in IP 0003/07/A including but not limited to mitigation of environmental impacts, reference to emission limit values, monitoring, waste management, fuel use and quality, and reporting shall apply.
- 3.2.6 All automated measuring systems installed in MPS2, MPS3, and MPS4 shall be maintained as per condition 3.3.6

3.3 Emissions to Air for MPS 5 (OCGT 9)

3.3.1 Emissions to Air (excluding Odour, Noise or Vibration) from Specified Points – General Considerations.

- 3.3.1.1 This Part of the Permit (3.3.1) shall not apply to releases of odour, noise or vibration.
- 3.3.1.2 A release from the Authorised Process into the atmosphere shall arise only from a release point specified in Table 3.3.1.2, which shall arise only from the source for that release specified in that Table.

Table 3.3.1.2 - Permitted Emission points to air

| Release Point | Source and Total Thermal Rating | UTM Co-ordinates ¹ | |
|---------------|---|-------------------------------|---------------|
| | | x-coordinates | y-coordinates |
| OCGT9 | MPS5 (Gas turbine 9) – 121 MW _{TH} | 454,891 | 3,971,238 |

See Application submitted in February 2007, p.48, Drawing number EMC/XZ/16

¹ Zone 33s, datum ED 50, ellipsoid – Hayford International.

- 3.3.1.3 At the end of every year, the operator shall forward to the Authority a copy of all the certificates of analysis for every representative composite sample throughout the year together with Schedule S2.5. Gas Turbine MPS5 shall fire only gasoil, in the Authorised Process in accordance with the Application. The gasoil used shall comply with the standards laid down by the Reductions of the Sulphur Content of Certain Liquid Fuels Regulations (L.N. 159 of 2002 as amended by L.N. 163 of 2004 and as may be subsequently amended from time to time), i.e. the sulphur content of the gas oil fired by gas turbines MPS5 shall in no case exceed 1 kg for every tonne of gas oil.
- 3.3.1.4 The operator shall determine the mass of fuel fired in the Authorised Process for each Reporting Year and report this as per Section S2.3.2 of the AER.
- 3.3.1.5 Waste gases from the Gas Turbine MPS 5 shall be discharged in a controlled manner by means of a stack.
- 3.3.1.6 The Authority shall be notified by the Operator of substantial changes in the type of fuel used or in the mode of operation of the installation. The Authority shall then determine whether the monitoring requirements laid down in conditions 3.3.5 and 3.3.6 are still adequate or require adaptation
- 3.3.1.7 The operator shall ensure that all operations on-site shall be carried out in a manner such that air emissions do not result in significant impairment of, or significant interference with amenities or the environment beyond the site boundary.
- 3.3.1.8 The operator shall monitor continuously the speed and the direction of the wind at the site. The results of this monitoring shall be presented in the form of a wind rose part of the AER as per Section s2.6. In addition, any meteorological data collected by the operator shall be made available to the Authority upon request.

3.3.2 Emissions to Air (excluding Odour, Noise or Vibration) from Specified Points – Emission limits and Monitoring of Gas turbine Emissions (MPS5).

- 3.3.2.1 The calendar monthly mean concentration of Nitrogen Oxides in the waste gases of MPS5 shall not exceed $400 \text{ mg} \cdot \text{Nm}^{-3}$ (concentrations corrected to 273 K, 101.3 kPa, dry gas volume and to an oxygen content Oxygen (O_2) content of 15%).
- 3.3.2.2 The 95% of all 48 hourly mean values of Nitrogen oxides shall not exceed $440 \text{ mg} \cdot \text{Nm}^{-3}$ (concentrations corrected to 273 K, 101.3 kPa, dry gas volume and to an oxygen content Oxygen (O_2) content of 15%).
- 3.3.2.3 The calendar monthly mean concentration of carbon monoxide (CO) in the waste gases of MPS5 shall not exceed $100 \text{ mg} \cdot \text{Nm}^{-3}$ (concentrations corrected to 273 K, 101.3 kPa, dry gas volume and to an oxygen content Oxygen (O_2) content of 15%).
- 3.3.2.4 The operator shall keep records of the operating hours of MPS5 and report to the Authority the operating time of MPS5 as part of the AER of the installation and in the format specified therein (Section S2.3.4). This report shall be accompanied by copies of the relevant operational records which should be approved by an independent auditor, which should be certified by the Authority.
- 3.3.2.5 Emissions from gas turbine MPS5 must be monitored according to ISO 11042-2:1996 (Gas turbines -- Exhaust gas emission -- Part 2: Automated emission monitoring) or the equivalent EN standard.

- 3.3.2.6 The operator shall measure the concentration of dust (TSP), sulphur dioxide (SO₂), nitrogen oxides (NO_x) and carbon monoxide (CO) in the exhaust gases of gas turbines MPS5. The annual load of dust (TSP), sulphur dioxide (SO₂) and nitrogen oxides (NO_x) shall be reported separately using the schedules in s2.4.2.2. Load shall be calculated on the basis of the waste gas flow rate.
- 3.3.2.7 The continuous measurement carried out in compliance with Conditions 3.3.2.1 and 3.3.2.3 shall include the relevant process operation parameters of oxygen content, temperature, pressure and water vapour content, velocity and flue gas volume.
- 3.3.2.8 Provided that the sampled exhaust gas is dried prior to emission analyses, the Operator shall not be required to measure the water vapour content of the exhaust gas.
- 3.3.2.9 The Operator must keep record of:
- 3.3.2.9.1 the validated hourly concentration of nitrogen oxides (NO_x), sulphur dioxide (SO₂), dust (TSP) and carbon monoxide (CO) values for each combustion plant per day in the format specified in s3.2.1.
 - 3.3.2.9.2 24-hourly mean values for the concentrations of carbon monoxide (CO) in the format specified in s3.2.2.
 - 3.3.2.9.3 48-hourly mean values for the concentration of nitrogen oxides (NO_x), sulphur dioxide (SO₂) and dust (TSP) in the format specified in s3.2.2.
 - 3.3.2.9.4 Calendar monthly mean values for the concentration of nitrogen oxides (NO_x), sulphur dioxide (SO₂), dust (TSP) and carbon monoxide in the format specified in s2.4.2.2.
 - 3.3.2.9.5 The total annual load of nitrogen oxides (NO_x), sulphur dioxide (SO₂) and dust (TSP) which shall be calculated by adding the total mass of pollutant emitted per year, on the basis of the volumetric flow rates of waste gases. This shall be included in the AER for this installation in the format specified in s2.4.3.1.
- 3.3.2.10 In order to validate the hourly readings, the operator shall subtract a factor determined according to the procedure established by the relevant part of EN14181 and which shall in no case exceed 10% of the measured valid hourly average value for CO, 20% of the measured valid hourly average value for SO₂, NO_x and 30% of the measured valid hourly average value for dust.
- 3.3.2.11 95% of the validated hourly averages for nitrogen oxides (NO_x) shall not exceed 132 mg.Nm⁻³.
- 3.3.2.12 For 3.3.2.9.2, 3.3.2.9.3, 3.3.2.9.4 the Operator must clearly indicate any exceedances of the concentrations of nitrogen oxides (NO_x) and carbon monoxide (CO) indicated in conditions 3.3.2 in the format specified in S3.2.2 and s2.4.2.1.
- 3.3.2.13 The records specified by 3.3.2.9.1, 3.3.2.9.2, 3.3.2.9.3 must be forwarded by email to the Authority in electronic format. Unless otherwise communicated in writing the reporting frequencies to the Authority shall be as established in table 3.3.2.13. Furthermore the said records must be made available for inspection upon request.

Table 3.3.2.13 Frequency of Record Submission

| Condition | Frequency |
|-----------|-----------|
| 3.3.2.9.1 | quarterly |
| 3.3.2.9.2 | quarterly |
| 3.3.2.9.3 | annually |

3.3.2.14 The data for 1 day shall be invalidated if on that day 3 or more hourly average concentration of dust (TSP), sulphur dioxide (SO₂), nitrogen oxides (NO_x) and carbon monoxide (CO) values are invalid due to malfunction or maintenance of the continuous monitoring system.

3.3.2.15 If more than 10 days in a year are invalidated for such situations, the Operator must take adequate measures to improve the continuous monitoring system.

3.3.2.16 All limit values specified in Condition 3.3.2 shall not apply if MPS5 does not operate more than 700 hours annually. Reporting obligations are however still applicable.

3.3.3 Emissions to Air (excluding Odour, Noise or Vibration) from Specified Points – Additional Monitoring Requirements.

3.3.3.1 In addition to the monitoring requirements for MPS5 listed in Conditions 3.3.2, the operator shall monitor continuously for the parameters listed in table 3.3.3.1 using the methods listed in the same table.

Table 3.3.3.1 Monitoring of Additional Parameters

| Parameter | Standard Number /Instrument | Title |
|---|-----------------------------|---|
| Oxygen | ISO 12039:2001 | Stationary Source Emissions - - Determination of carbon monoxide, carbon dioxide and oxygen - - Performance characteristics of automated measuring systems. |
| Water Content | EN 147920:2005 | Determination of moisture content in stack gases. |
| Velocity | ISO 10780:1994 | Stationary source emissions -- Measurement of velocity and volume flow rate of gas streams in ducts. |
| Flue gas volume | ISO 14164:1999 | Stationary Source Emissions - - Determination of the volume flow rate of gas streams in ducts - - automated method. |
| Flue gas temperature (prior to discharge into the atmosphere) | Temperature Sensor | N/A |
| Flue gas pressure (prior to discharge into the atmosphere) | Pressure Sensor | N/A |

3.3.4 Compliance with Total Emission Ceilings for Sulphur Dioxide (SO₂) and Oxides of Nitrogen (NO_x).

3.3.4.1 The total annual loads of sulphur dioxide (SO₂), nitrogen oxides (NO_x), ammonia (NH₃) and PM_{2,5} from both the Marsa Power Station and Delimara Power Station together shall not exceed the ceilings specified in Table 3.3.4.1 by the stated deadline or any other annual ceilings as may be amended by the Authority from time to time.

| Table 3.3.4.1 Emission Ceiling for Marsa Power Station and Delimara Power Station together. | | | |
|--|-------------|-------------------------------------|-------------------------------------|
| Pollutant | | Total Annual Load | |
| | | 31 December 2019² | 31 December 2029² |
| Sulphur Dioxide (SO ₂) | 8000 tonnes | - | - |
| Nitrogen Oxides (NO _x) | 4500 tonnes | - | - |
| MaAmmonia (NH ₃) | N/A | - | - |
| Dust (PM _{2,5}) | N/A | - | - |

3.3.4.2 The ceilings specified in table 3.3.4.1 shall apply until such time that the Authority updates these ceilings after the revised National Emissions Ceilings Directive is issued.

3.3.4.3 The operator is to forward to the Authority:

3.3.4.2.1 By not later than end of September of each year, a detailed plan indicating how the installation will be operated in the following year in order to comply with the ceilings for sulphur dioxide and nitrogen oxides indicated in table 3.3.4. The measures communicated in this plan shall be to the satisfaction of the Authority.

3.3.4.2.2 By not later than end of September of each year the projected quarterly loads (Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec) of SO₂ and NO_x from Marsa Power Station covering the following calendar year.

3.3.4.2.3 By not later than 2 weeks after the end of each quarter, a report in the format specified in Section S3.2.2 of Schedule 3 on the actual loads of SO₂ and NO_x emitted from Marsa Power Station during the previous quarter, and shall additionally submit revised projections of SO₂ and NO_x from Marsa Power Station for the remaining quarters of that calendar year.

3.3.4.4 The measures to be included in the plan as per Condition 3.3.4.2 shall also take into account that the Operator currently operates another power plant which is located on a separate site and which is also covered by the requirements of the Industrial emissions (IPPC) Regulations.

3.3.4.5 The Competent Authority reserves the right to reduce these ceilings further particularly but not solely:

² Value to be provided by MEPA as per condition 3.3.4.2

- 3.3.4.4.1 in the event of there being a new entrant on the power production market in Malta;
- 3.3.4.4.2 if it transpires that due to unforeseen circumstances the contributions of other sectors to the National Ceilings as per Secondary Legislation transposing the amended National Emissions Ceilings Directive have been underestimated or if it transpires that sectors which also contribute to the total annual loads of these pollutants have been ignored;
- 3.3.4.4.3 if it is decided that such a decision is in the national interest.
- 3.3.4.5 The operator shall be responsible for compliance with the limits in Table 3.3.4.1 for sulphur dioxide (SO₂) as per Malta's commitments with the European Commission.
- 3.3.4.6 The operator shall be responsible for compliance with the limits in Table 3.3.4.1 for nitrogen oxide (NO_x), as per Malta's commitments with the European Commission
- 3.3.4.7 The ceilings listed in table 3.3.4.1 shall expire on the dates shown in the table

3.3.5 Emissions to Air (excluding Odour, Noise or Vibration) from Specified Points – Total Annual Emissions.

- 3.3.5.1 The Operator shall keep an inventory of the total annual emissions of SO₂, NO_x and dust (as total suspended particles) from all combustion plants at the Marsa Power Station with a rated thermal input of 50 MW_{th} or more, including the gas turbine. This inventory shall be submitted as part of the AER of the installation in the format specified in s2.4.3.1.
- 3.3.5.2 In addition to the total annual emissions of the pollutants listed in 3.3.5.1, the inventories shall also include the total fuel burn per plant, the fuel type and the average heat value of the fuel fired.
- 3.3.5.3 The above records must also be made available for inspection upon request.

3.3.6 Emissions to Air (excluding Odour, Noise or Vibration) from Specified Points – Performance and Calibration of Automated Measuring Systems.

- 3.3.6.1 The commissioning and operation of all automated measuring systems at the Marsa Power station shall follow EN 14181:2004 – Stationary Source Emissions – Quality Assurance of automated measurement systems.
- 3.3.6.2 Measuring systems shall be subject to control by means of parallel measurements with the reference methods listed in table 3.3.6.2, at least every year. The calibrations shall be performed by a lab accredited (or in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta) or equivalent) to at least EN ISO 17025:2005/Cor 1:2006 and preferably accredited for each and every calibration.

| Table 3.3.6.2 Calibration of Automated Measuring Systems | |
|---|---|
| Standard Number | Title |
| EN 14791:2005 | Stationary source emissions - Determination of mass concentration of sulphur dioxide - Reference method. |
| EN 14792 :2005 | Stationary source emissions - Determination of mass concentration of nitrogen oxides (NOx) - Reference method: Chemiluminescence. |
| EN 13284-1:2001 | Stationary source emissions - Determination of low range mass concentration of dust - Part 1: Manual gravimetric method. |

- 3.3.6.3 For the parameters measured continuously, the data for 1 day shall be invalidated if on that day 3 or more hourly average concentration of dust (TSP), sulphur dioxide (SO₂), nitrogen oxides (NO_x) and Carbon Monoxide (CO) values are invalid due to malfunction or maintenance of the continuous monitoring system.
- 3.3.6.4 If more than 10 days in a year are invalidated for such situations, the operator must take adequate measures to improve the continuous monitoring system.

3.4 Discharges to sewers

- 3.4.1 The operator shall also abide by the provisions of the Sewer Discharge Control Regulations (LN139 of 2002 as amended by LN378 of 2005 and as may be amended from time to time).
- 3.4.2 Rainwater shall be segregated from all process areas that are potentially contaminated with raw materials, intermediates and/or products.
- 3.4.3 Rainwater shall not be discharged into the sewer.
- 3.4.4 With the exception of sanitary waters, the Operator shall not discharge any waste waters into the sewers.

3.5 Discharges to groundwater

- 3.5.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List I and List II (as defined in the Regulations for The Protection of Groundwater against Pollution caused by Certain Dangerous Substances, 2002 (LN 203 of 2002)).
- 3.5.2 For substances other than those in List I or II (as defined in LN 203 of 2002), the Operator shall not allow any discharges to groundwater.
- 3.5.3 The operations of the installation shall not hinder the achievement of good chemical and quantitative status of groundwater as prescribed under the Water Policy Framework Regulations, LN194 of 2004 as may be amended from time to time.

3.6 Emissions to Marine Water

3.6.1 Emissions to Marine Water (from Specified Points) – General Considerations.

3.6.1.1 This part of the Permit (3.6) shall not apply to discharges to groundwater or sewers.

3.6.1.2 Waste waters shall not be discharged into marine water unless from the sources specified in table 3.6.1.2, and only from the sources for those release points specified by the table in question.

| Outlet Number | Details | UTM Co-ordinates ³ | |
|---------------|---|-------------------------------|--------------|
| | | x-coordinate | y-coordinate |
| 1 | surface drains | 454,691 | 3,971,053 |
| 2 | condenser | 454,717 | 3,971,067 |
| 4 | condenser | 454,752 | 3,971,086 |
| 5 | surface drains | 454,762 | 3,971,090 |
| 6 | condenser | 454,777 | 3,971,094 |
| 8 | boiler blow-down | 454,807 | 3,971,101 |
| 11 | acid trench | 454,858 | 3,971,104 |
| 12 | Boiler 7 ; demineralisation plant and evaporators | 454,877 | 3,971,102 |
| 13 | turbine 8 condenser | 454,892 | 3,971,098 |
| 14 | boiler 8 interceptor | 454,902 | 3,971,094 |
| 17 | mechanics interceptor | 454,938 | 3,971,074 |
| 18 | light distillate fuel tank bund | 455,007 | 3,971,160 |
| 19 | bolier 8 surface drain interceptor | 454,990 | 3,971,187 |
| 20 | road rainwater | 454,960 | 3,971,227 |

See Application submitted in February 2007, p.48, Drawing number EMC/XZ/16

3.6.1.3 All monitoring points including those associated with the operations of MPS1, MPS2, MPS3, MPS4 shall be subject to daily visual inspections so as to ensure that points which are not operational are not releasing any substances into the marine environment. A visual inspection shall also be carried out after instances of substantial rainfall.

3.6.1.4 Subject to condition 3.6.1.3, where the daily inspections show discharges from outlets associated with the operation of MPS1, MPS2, MPS3, MPS4, the operator shall immediately notify the Authority through the form in schedule 1 . The Authority reserves the right to request monitoring of the discharge for any of the parameters listed in Schedule 5.

3.6.1.5 Following the submission of the information requested in item 21 of the improvement programme in table 1.5.1, the Authority may exempt the operator from carrying out sampling and monitoring of specified emission points. Such an exemption may be repealed or revoked following notifications from the operator pertaining to condition 3.6.1.4

³ Zone 33s, datum ED 50, ellipsoid – Hayford International.

- 3.6.1.6 Dry outlets and release points whose sources are unidentified shall be securely and permanently disconnected from the discharge pipe-work. Furthermore the operator shall not discharge any waste waters through these outlets.
- 3.6.1.7 Waste water discharged through any of the outlets listed in table 3.6.1.2 above shall not contain the following substances and substance groups:
- 3.6.1.5.1 Organic complexing agents (except for phosphonates and polycarboxylates) that do not attain an 80% degree of DOC degradation after 28 days, as per EN ISO 9888: 1999 (Water quality - Evaluation of ultimate aerobic biodegradability of organic compounds in aqueous medium - Static test (Zahn-Wellens method))
 - 3.6.1.5.2 Nitrite; analysis for nitrate III to be carried out as per EN 26777: 1993 - (Water quality - Determination of nitrite - Molecular absorption spectrometric method (ISO 6777:1984).
 - 3.6.1.5.3 Those substances listed in Schedule 7 of this permit
- 3.6.1.8 Any operating or auxiliary substances used by the operator shall not contain:
- 3.6.1.6.1 chromium and chromium compounds;
 - 3.6.1.6.2 mercury and mercury compounds;
 - 3.6.1.6.3 zinc and zinc compounds.
- 3.6.1.9 Waste waters may contain microbiological agents only after having undergone shock treatment with microbiocides. This shall not apply to the use of hydrogen peroxide or ozone.
- 3.6.1.10 No specified emission to water shall exceed the emission limit values set out in Schedule 5. There shall be no other emissions to water of environmental significance.
- 3.6.1.11 Monitoring and analyses of each substance shall be carried out according to the standards specified in Schedule 6 or equivalent. Should an alternative standard be used by the operator the Authority is to be duly notified before sampling and analysis is carried out. All Limits of Detection (LOD) and Limits of Quantification (LOQ) per standard method used must be listed in s2.7.
- 3.6.1.12 No substance shall be discharged in a manner, or at a concentration which following initial dilution, causes tainting of fish or shellfish.
- 3.6.1.13 The operator is to maintain an operating journal in which the operating and auxiliary substances are listed down. The operator shall also attach information supplied by the manufacturers in order to prove that the operating and auxiliary substances do not contain any of the pollutants listed in 3.6.1.5 and 3.6.1.6 above.
- 3.6.1.14 An annual report summarising emissions to water from the installation shall be submitted to the Authority as part of the AER. The information contained in this report shall be prepared in accordance with format specified in s2.7.
- 3.6.1.15 The operator shall make sure all methods of analysis, including laboratory, and field methods anyused for the purposes of chemical monitoring is carried out by an

accredited laboratory accredited (or in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta) or equivalent) to at least EN ISO 17025: 2005/Cor 1: 2006 and preferably for each and every test listed in Schedule 6. The operator shall include a copy of the laboratory's accreditation certification in the AER.

- 3.6.1.16 The Operator shall also ensure that the minimum performance criteria for all methods of analysis is in line with the minimum performance criteria for methods of analysis stipulated in Article 4 of the Quality Assurance and Quality Control Directive 2009/90/EC
- 3.6.1.17 The operations of the installation shall not hinder the achievement of good status for surface as required under the Water Policy Framework Regulations, LN 194 of 2004 as amended.
- 3.6.1.18 The operator shall send written confirmation to the Authority that the priority substances in the field of water policy listed in schedule 7 are not in use at the site covered by this permit.

3.6.2 Discharges to Marine Water – General Sampling Standards.

- 3.6.2.1 All sampling carried out by the operator with the scope of monitoring compliance with the conditions listed in this permit shall be carried out according to the standards listed in table 3.6.2.1 or equivalent.

| Table 3.6.2.1 Sampling | |
|-------------------------------|--|
| Standard | Description |
| ISO 5667-1: 2006 | Water quality – Sampling – Part 1: Guidance on the design of sampling programmes and sampling techniques |
| ISO 5667-3: 2012 | Water quality – Sampling – Part 3: Guidance on the preservation and handling of water samples |
| ISO 5667-7: 1993 | Water quality – Sampling – Part 7: Guidance on sampling of water and steam in boiler plants |
| ISO 5667-10: 1992 | Water quality – Sampling – Part 10: Guidance on sampling of waste waters |
| ISO 5667-14: 2014 | Water quality – Sampling – Part 14: Guidance on quality assurance of environmental water sampling and handling |

3.6.3 Discharges to Marine Water – Requirements for Waste Water arising from Water Treatment points, from steam generation point and from boiler washdown point.

- 3.6.3.1 These requirements apply to waste water treatment discharges from outlets 11 and 12. ; outlet 12 concerning steam generation and outlets 8 and 12 concerning boiler wash down points.
- 3.6.3.2 The following requirements shall apply to the waste water at the point of discharge into the sea.
- 3.6.3.3 The operator must make sure that emission limit values listed in Schedule 5 are not exceeded by the effluents discharging waste water arising from water treatment.
- 3.6.3.4 The operator shall monitor once on a quarterly basis for parameters 1 and 2 in Schedule 5
- 3.6.3.5 In order to monitor for parameters 3, 4, 5, 6, 7 and 8 in Schedule 5 the operator shall collect a random sample of the effluents arising from water treatment on a quarterly basis, and analyse for the relevant chemical parameters according to the standards listed in Schedule 8 or equivalent.

3.6.3.6 In order to monitor for parameters 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22 and 23 in Schedule 5 the operator shall also collect a qualified random sample or a 2-hr qualified sample of the effluents arising from water treatment on a quarterly basis, and analyse for the relevant chemical parameters according to the standards listed in Schedule 6 or equivalent.

3.6.3.7 The mass concentration of total suspended solids (parameter 23) shall not exceed a value of 35 g.dm^{-3} in either the qualified random sample or in the 2 hour composite sample.

3.6.3.8 The operator shall report the results of these analyses of the parameters listed in Schedule 5 in the format specified in s3.3.1, s3.3.2 and s3.3.3 respectively on a quarterly basis. The Limits of Quantification and Limits of Detection for each standard should also be listed. The operator shall also include a summary of these analyses in the AER. This shall be in the format specified in s2.7.

3.6.4 Discharges to Marine Water – Requirements for Waste Water arising from Cooling System points.

3.6.4.1 These requirements apply to discharges from outlets 2, 4, 6 and 13.

3.6.4.2 The following requirements shall apply to the waste water at the point of discharge into the sea.

3.6.4.3 The operator must make sure that emission limit values listed in Schedule 5 are not exceeded by the effluents discharging waste water arising from cooling systems.

3.6.4.4 The operator shall monitor discontinuously on a quarterly basis for parameters 1 and 2 in Schedule 5.

3.6.4.5 In order to monitor for parameters 3, 4, 5, 6, 7 and 8 in Schedule 5 the operator shall collect a random sample of the effluents arising from cooling systems on a quarterly basis, and analyse for the relevant chemical parameters according to the standards listed in Schedule 6.

3.6.4.6 In order to monitor for parameters 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22 and 23 in Schedule 1 the operator shall also collect a qualified random or a 2-hr qualified sample of the effluents arising from cooling systems on a quarterly basis, and analyse for the relevant chemical parameters according to the standards listed in Schedule 8 or equivalent.

3.6.4.7 The operator shall make sure that the concentration of zinc in the effluent from cooling systems does not exceed 4 mg.dm^{-3} . In order to do this the operator shall collect a qualified random sample or a 2-hr qualified composite sample of the effluents arising from cooling systems on a quarterly basis and analyse for zinc according to the standard listed in Schedule 6 or equivalent.

3.6.4.8 The operator shall report the results of these analyses of the parameters listed in Schedule 5 in the format specified in s3.3.2 on a quarterly basis. The operator shall also include a summary of these analyses in the AER. This shall be in the format specified in s2.7.

3.6.5 Discharges to Marine Water – Requirements for Waste Water arising from Non-process Water points (Surface Drainage, Road Rainwater Drainage, Fuel Bunds Drainage and from the Mechanics Interceptor).

- 3.6.5.1 These requirements apply to discharges from points 1, 5, 14, 17, 18, 19 and 20.
- 3.6.5.2 The operator shall carry out a visual examination of the surface water discharge daily and shall maintain a log of such inspections. The operator shall ensure that no visible oil layer is present in surface water prior to discharge. Surface water that appears contaminated shall be treated prior to discharge to seawater.
- 3.6.5.3 Surface run-off (rainwater) that might be contaminated by any spillage of fuel from fuel storage and handling shall be collected and treated prior to discharge.
- 3.6.5.4 Rainwater shall be segregated from all areas (including areas for fuel storage and raw materials) that are potentially contaminated.
- 3.6.5.5 Rainwater shall not be discharged into the sewer or onto a public place or thoroughfare.
- 3.6.5.6 The operator shall ensure that the concentrations of the chemical parameters (parameters 3 to 22) listed in Schedule 5 are below the limit values listed in the same Schedule.
- 3.6.5.7 In order to monitor for parameters 3, 4, 5, 6, 7 and 8 in Schedule 5 the operator shall collect a random sample of the effluents arising from non sources waters on a quarterly basis, and analyse for the relevant chemical parameters according to the standards listed in Schedule 6 or equivalent.
- 3.6.5.8 In order to monitor for parameters 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21,22 and 23 in Schedule 5 the operator shall also collect a qualified random sample or a 2-hr qualified composite sample of the effluents arising from non process sources on a quarterly basis, and analyse for the relevant chemical parameters according to the standards listed in Schedule 6 or equivalent.
- 3.6.5.9 The operator shall report the results of these analyses of the parameters listed in Schedule 5 in the format specified in s3.3.5 on a quarterly basis. The operator shall also include a summary of these analyses in the AER. This shall be in the format specified in s2.7.
- 3.6.5.10 In the event that any analyses or observations made on the quality or appearance of waste water from surface runoff should indicate that a contamination has taken place, the operator shall:
- 3.6.5.10.1 Carry out an immediate investigation to identify and isolate the source of the contamination;
 - 3.6.5.10.2 Put in place measures to prevent further contamination and to minimise the effects of any contamination on the environment;
 - and
 - 3.6.5.10.3 notify the Authority as soon as is possible as per Condition 6 of this permit.

3.6.6 Discharges to Marine Water – Other Conditions.

- 3.6.6.1 All HFO and gasoil storage areas shall be rendered impervious to the minerals stored therein. In addition, the tank area shall be bunded, either locally or remotely, to a volume not less than the greater of the following.
 - 3.6.6.1.1 110% of the capacity of the largest tank or drum within the bunded area.
 - 3.6.6.1.2 25% of the total volume of substance which could be stored within the bunded area.
- 3.6.6.2 Drainage from bunded areas shall be diverted for collection and safe disposal. All bunds shall be tested for integrity at least once every three years.
- 3.6.6.3 The integrity testing of bunds must be carried out according to CIRIA 163, Construction Industry Research and Information Association Report 163 – Construction of Bunds for Oil Storage Tanks. The test must be carried out by an approved auditor and the inspection report and any ensuing certification must be included in the AER in the format specifies in s2.10.
- 3.6.6.4 The unloading of HFO and gasoil shall be supervised at all times and shall be undertaken in accordance with the standard operating procedure or as amended.
- 3.6.6.5 The pipes, pumps, valves and flanges forming part of the system which transfers fuel from the delivery ship to the tanks in the tank farm shall be certified to be leak-proof by an approved auditor at least once every three years. The inspection report and any ensuing certification must be included in the AER in the format specified in s2.10.
- 3.6.6.6 All oil transfers shall be undertaken in accordance with the oil spillage response plan submitted as part of the IPPC permit application.
- 3.6.6.7 All personnel involved in the transfer of HFO and gasoil from ships to storage or from storage to the generating stations shall be trained in the oil spillage response plan. Records of such training shall be maintained and made available for inspection by Authority personnel.
- 3.6.6.8 The loading and unloading of other materials shall be carried out in designated areas protected against spillage and leachate run-off.
- 3.6.6.9 All pump sumps or other treatment plant chambers from which spillage of environmentally significant materials might occur in such quantities as are likely to breach local or remote containment interceptors, shall be fitted with high liquid level alarms within 12 months from the grant of this permit, and followed by immediate notification to the Authority.
- 3.6.6.10 All flanges and valves on over-ground pipes used to transport materials other than uncontaminated water, where no permanent provision for containment of leaks is provided, shall be subject to weekly visual inspection or otherwise monitored for leaks to the satisfaction of the Authority. All such inspections shall be recorded in a log which shall be available for inspection by the Authority.
- 3.6.6.11 All the flanges, valves and over-ground pipes listed in 3.6..6.10 shall be certified by an accredited auditor to be completely leak-proof at least once every three years. Any ensuing inspection report shall be included in the AER in the format specified in 2.10.
- 3.6.6.12 The operator shall have in storage an adequate supply of containment booms and suitable absorbent material to absorb any spillage.

3.6.6.13 Valves on bunds shall be maintained in closed position except during bund drainage. Drainage of water collecting in bunds shall be carried out under constant supervision. No discharges shall be undertaken from bunds where there is a visible film of oil on the bund water.

3.6.6.14 All the oil interceptors shall be monitored on a monthly basis and maintained to ensure efficient operation. A log of monitoring and interceptor waste removal shall be maintained on site for inspection.

3.6.6.15 All the oil interceptors shall be inspected by an accredited auditor at least once every three years. The accredited auditor shall amongst other things inspect the interceptor for efficiency of operation. Any ensuing certification shall be included in the AER.

3.7 Fugitive emissions of substances to air

3.7.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to air from the Permitted Installation, in particular from the:

- process areas
- storage areas, including solvent storage, raw materials storage and waste storage
- buildings
- pipes, valves and other transfer systems
- open surfaces

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

3.7.2 The Operator shall use BAT so as to prevent or where that is not practicable to reduce emissions of litter from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

3.8 Fugitive emissions of substances to water and sewer

3.8.1 Subject to condition 3.8.2, the Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to water (other than groundwater) and sewer from the Permitted Installation, in particular from:

- All structures under or over ground
- Surfacing
- Storage areas
- Bunded areas.

3.8.2 There shall be no release to water that would cause a breach of an EQS (Environmental Quality Standard) transposed as LN 24 of 2011, as amended.) established to implement the Dangerous Substances Directive 76/464/EEC (LN 213 of 2001).

3.8.3 The Operator shall undertake all necessary measures and precautions to prevent spillage of raw materials, intermediates, products, waste and any other materials.

3.8.4 All process and storage areas must be appropriately contained. Any accidental release of substances shall be duly treated prior to discharge or disposed/recovered appropriately. Records shall be kept of such discharges, including the volume discharged.

- 3.8.5 The operations of the installation shall not hinder the achievement of good ecological status for surface waters as prescribed under the Water Policy Framework Regulations, LN 194 of 2004 as amended.

3.9 Waste

3.9.1 Waste storage and handling during operations of MPS5

- 3.9.1.1 The Operator shall use BAT in the design, maintenance and operation of all facilities for the storage and handling of waste on site such that there are no releases to water or land during normal operation and that emissions to air and risk of accidental release to water or land are minimised.

3.9.2 Waste recovery or disposal during operations and decommissioning

General

- 3.9.2.1 All operations concerning the management of waste are subject to the Waste Management Regulations (Legal Notice 184 of 2011, as amended) and the Waste Management (Activity Registration) Regulations (Legal Notice 106 of 2007).
- 3.9.2.2 The Operator shall be committed to reduce waste generation where possible
- 3.9.2.3 The operator is to prevent litter or other wastes escaping from the site boundaries, particularly during loading/unloading. Any such escape of waste shall be collected immediately upon detection.
- 3.9.2.4 End-of-waste criteria must be met for any waste to be classified as a product. In such cases, the operator shall comply with relevant criteria set by legislation. In the absence of any relevant legislation, the operator shall follow the procedure laid down in Regulation 6 of Legal Notice 184 of 2011 as amended.
- 3.9.2.5 Packaging and containers containing significant residual quantities of chemicals shall be regarded as hazardous waste and stored in dedicated waste management areas.
- 3.9.2.6 Any packaging waste and separately collected non-hazardous waste including but not limited to glass, plastic, metal, wood, cardboard and paper shall not be disposed of in a landfill.
- 3.9.2.7 On-site disposal of wastes by any means including burning, disposal to drain or surface water, burying or deposition on land is prohibited, unless specifically approved by a permit from the Authority or the Water Services Corporation (WSC).

Storage

- 3.9.2.8 All wastes shall be stored within (a) designated and controlled storage area(s) prior to ultimate disposal; wastes to be recycled should be stored in a designated labelled container or area and not mixed with other wastes. The operator shall ensure adequate protection and containment of all wastes.
- 3.9.2.9 Wastes to be recycled shall be stored in a designated container or area and shall not be mixed with other wastes.

- 3.9.2.10 Waste produced at the Permitted Installation shall be recycled, reused or recovered unless technically and/or economically impossible. When practical recyclable wastes should be segregated to facilitate recycling.
- 3.9.2.11 Unless approved in writing by the Authority, the Operator is prohibited from mixing a hazardous waste of one Category with a hazardous waste of another category or with any other non-hazardous waste.
- 3.9.2.12 No storage of waste, equipment or materials is permitted on property outside the site premises.
- 3.9.2.13 Non-hazardous waste awaiting collection may be placed outside the site premises for a period not exceeding 12 hours.
- 3.9.2.14 Any liquid or hazardous wastes shall be stored in a labelled, closed container(s) within a designated and controlled storage area(s) prior to ultimate disposal. Wastes of different natures shall not be mixed in the same container.
- 3.9.2.15 Drums and containers of chemicals/oils shall be stored in designated and secure storage areas. Storage areas shall be bunded or otherwise designed so that surface and ground waters cannot be contaminated by spillages.
- 3.9.2.16 Liquid and hazardous wastes shall be stored in (a) labelled, closed container(s) within a designated and controlled storage area(s) prior to ultimate disposal which shall be appropriately contained to ensure no contamination of the environment in case of spillage. Wastes of different natures should not be mixed in the same container.
- 3.9.2.17 Waste oils must be stored in a secure leakproof container and may only be disposed of through a company authorised for the collection of waste oils or at an authorised site. A record must be maintained of the quantities, nature, manner and date of dispatch of the oil.
- 3.9.2.18 All storage of materials or waste shall take place only in locations where thorough clean-up and site reinstatement can be readily undertaken.
- 3.9.2.19 All wastes leaving the site after storage and/or processing must only be sent to facilities licensed to accept the individual waste stream, either locally or abroad.
- 3.9.2.20 No storage of waste is permitted for a period exceeding 12 months.
- 3.9.2.21 No storage of waste is permitted on property outside the site premises. However, non-hazardous waste awaiting collection may be placed outside the site premises for a period not exceeding 6 hours.
- 3.9.2.22 The Operator shall ensure that waste transferred to another person is packaged and labelled in accordance with national, European and any other standards which are in force in relation to such labelling. While awaiting collection, recovery or disposal all waste shall be stored in designated areas protected, as may be appropriate, against spillage, leachate run-off and accidental damage. The waste is to be clearly labelled and appropriately segregated.

Transport

3.9.2.23 Transboundary movement of waste shall be carried out in accordance with the following regulations, as amended from time to time:

- 3.9.2.23.1 Regulation (EC) N° 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste
- 3.9.2.23.2 Commission Regulation (EC) N° 1379/2007 of 26 November 2007 amending Annexes IA, IB VII and VIII of Regulation (EC) N° 1013/2006 of the European Parliament and of the Council of Shipments of waste, for the purposes of taking account of technical progress and changes agreed under the Basel Convention; and
- 3.9.2.23.3 Commission Regulation (EC) N° 1418/2007 of 29 November 2007 concerning the export for recovery of certain waste listed in Annex III or IIIA to Regulation (EC) N° 1013/2006 of the European Parliament and of the Council to certain countries to which the OECD Decision on the control of transboundary movements of waste does not apply.

3.9.2.24 Waste sent off-site for recovery or disposal shall be conveyed only by an authorised waste carrier as per Activity 38 of Schedule 1 of Legal Notice 106 of 2007 as may be amended from time to time. The waste shall be transported only from the site of the activity to the site of recovery/disposal in a manner which shall not adversely affect the environment and in accordance with all relevant National and European legislation.

3.9.2.25 None of the waste streams listed in Annexes 3, 4 and 5 of the EU Transfrontier Shipment of Wastes Regulations Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (as may be amended from time to time) shall be consigned for recovery/disposal without the prior agreement of the Authority.

3.9.2.26 Transport of hazardous waste within the Maltese Islands shall be accompanied by the necessary waste transfer permits issued by the Authority. Applications for such permits are made through the hazardous waste consignment note procedure available from the Authority's Offices.

3.9.2.27 Each movement of hazardous waste to authorised facilities shall be covered by a valid consignment permit obtainable from the Authority. Each movement shall also be covered by a consignment note obtainable from the Authority.

3.9.2.28 Independent of any Environment Management System, the Operator shall be responsible for making use of the services of an ADR (The European Agreement concerning the International Carriage of Dangerous Goods by Road) certified carrier for transport of chemicals and hazardous wastes on land.

Records

3.9.2.29 Records shall be maintained for the disposal of all hazardous waste, including quantities, dates, contractor name and manner of disposal. The records should be maintained for a period of 5 years and be made available for inspection by the Authority upon request.

3.9.2.30 The Operator shall ensure to keep records for every consignment of wastes removed from the Site indicating the EWC Code, description, quantities, date of removal,

contractor name (including for transport), consignment note number (where applicable) and manner and place of final disposal/recovery.

3.9.2.31 A full record which shall be open to inspection by authorised persons of the Authority at all times, shall be kept by the Operator on matters relating to the waste management operations and practices at this site. This record shall as a minimum contain details of the following:

- 3.9.2.31.1 The tonnages and EWC Codes for the waste materials removed off site as per Schedule 1 of Legal Notice 184 of 2011 as amended.
- 3.9.2.31.2 The names of the Company and carrier of the waste and their Permit details (either waste registration or waste management permit).
- 3.9.2.31.3 Details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its Waste Management Permit details and number.
- 3.9.2.31.4 Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site.
- 3.9.2.31.5 Details of all wastes consigned abroad for disposal or recovery and classified as Green, Amber or Red in accordance with the EU Transfrontier Shipment of waste regulations (Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste, as may be amended from time to time.) The rationale for the classification must form part of the record.
- 3.9.2.31.6 Details of any approved waste mixing as per condition 2.8.2.6.

3.9.2.32 Disposal certificates shall be kept on record and made available for inspection for a period of at least 3 years from date of their issue

3.9.2.33 Disposal certificates shall be kept on record and made available for inspection for a period of at least 5 years from date of their issue.

3.9.2.34 As part of the AER, the operator shall submit the name of each carrier used in the transport of the substances specified in Conditions 3.9.2.24 and 3.2.9.28, in the format specified in s2.13, by end of March after the end of each reporting year.

3.9.2.35 For any decommissioned equipment, the operator shall submit to the Authority a proposal for the screening of the intended equipment to be discarded which should include the details of any hazardous materials in the equipment (including but not limited to radioactive sources, hazardous chemicals, etc.), decontamination procedures and the procedures for final disposal.

3.9.2.36 Within three (3) months of issue of this permit the operator shall provide to the authority all information requested in Schedule 4.

3.9.2.37 A summary record of the waste quantities removed from the site shall be made for each quarter of the reporting year (January-March, April-June, July-September and October-December) and shall be submitted to the Authority in the format specified in s3.1 of this Permit within 1 month following the end of the quarter.

- 3.9.2.38 As part of the Annual Environmental Report for the installation, the Operator shall produce a report on the off-site transfers of waste from the Permitted Installation over the previous calendar year, by end of March of each year, providing the information listed in the format specified in s2.10.

3.10 Odour

- 3.10.1 During operations and decommissioning processes The Operator shall use applicable BAT so as to prevent or where that is not practicable to reduce odorous emissions from the Permitted Installation, in particular by:
- 3.10.1.1 limiting the use of odorous materials;
 - 3.10.1.2 restricting odorous activities;
 - 3.10.1.3 controlling the storage conditions of odorous materials;
 - 3.10.1.4 controlling processing parameters to minimise the generation of odour;
 - 3.10.1.5 optimising the performance of abatement systems;
 - 3.10.1.6 timely monitoring, inspection and maintenance;
 - 3.10.1.7 employing, where appropriate, an approved odour management plan; provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.
- 3.10.2 There shall be no significant offensive odour, as perceived by an Authorised Officer of the Competent Authority, at sensitive locations.
- 3.10.3 In case of complaints from sensitive receptors regarding odours generated from either operations and/ or decommissioning processes the operator shall take all measures necessary so as to address such complaints
- 3.10.4 Where the operator has disclosed odour abatement measures to be employed during dismantling, demolition and decontamination processes, these shall be applied as per approved method statements.

3.11 Emissions to Land

- 3.11.1 This Part of the Permit (3.11) shall not apply to emissions to groundwater.
- 3.11.2 The operator shall take all precautions to ensure that no emission from the Permitted Installation shall be made to land.
- 3.11.3 In the event of accidental contamination of land, the operator shall notify the Authority immediately, forward a decontamination plan and execute it within 1 week of the event.

3.12 Noise and Vibration

- 3.12.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce emissions of noise and vibration from the Permitted Installation, in particular by:

- 3.12.1.1 equipment maintenance, e.g. circulating pumps, extraction fans, compressors, silencers.
- 3.12.1.2 use and maintenance of appropriate attenuation, eg. silencers, barriers, enclosures;
- 3.12.1.3 appropriate timing and location of noisy activities and vehicle movements;
- 3.12.1.4 periodic checking of noise emissions, either qualitatively or quantitatively; and
- 3.12.1.5 maintenance of building fabric

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

- 3.12.2 Emergency generators/alarms/sirens/release valves shall only be tested between the hours of 7.00 and 19.00 Monday to Friday and not on any Public Holiday.
- 3.12.3 Should the noise levels during operation of the installation exceed the recommended level of marginal significance in BS4142:1997 and its subsequent amendments and the WHO guideline values for community noise in specific environments, the Authority reserves the right to request further remedial actions and monitoring.
- 3.12.4 Noise monitoring is to be carried annually, to ensure that the above limits are not exceeded. The locations shall be chosen and the measurements and assessment made according to BS 4142:1997, all the series of ISO 1996 and any other standard methodology stipulated by the Authority. This shall be subject to the submission of a method statement and subsequent approval by the authority prior to the commencement of any monitoring.
- 3.12.5 During Decommissioning, dismantling and demolition works, Measures to decrease nuisance (including noise, vibration, odours and runoff) and other hazards must be determined and deployed during demolition and transport of demolition waste. Noise generated must comply, to the satisfaction of EPD, with the requirements of BS5228: Part 1: 1984: Noise Control on construction and Open sites – code of Practice for Basic Information and Procedure for Noise control or its equivalent.
- 3.12.6 As part of the AER, records of noise monitoring of the previous year shall be submitted to the Competent Authority by not later than end of March after the end of each reporting year, in the format specified in s2.8 of this permit. A detailed report shall also accompany such results.

3.13 Management and Technically Competent Person

- 3.13.1 A copy of this Permit and those parts of the application referred to in this Permit shall be available at the place of work, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

Training

- 3.13.2 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.

- 3.13.3 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to effectively carry out their duties.
- 3.13.4 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training.

Maintenance

- 3.13.5 All plant and equipment used in operating the Permitted Installation shall be maintained in good operating condition. This shall include equipment detailed in 3.2.6.1
- 3.13.6 The Operator shall maintain a record of plant and equipment covered by condition 3.13.5, and for such plant and equipment:
- 3,13.6.1 a written or electronic maintenance programme; and
 - 3,13.6.2 records of its maintenance.

Incidents and Complaints

- 3.13.7 The Operator shall maintain and implement written procedures for:
- 3.13.7.1 taking prompt remedial action, investigating and reporting to the Competent Authority actual or potential non-compliance with operating procedures or emission limits and if such events occur;
 - 3.13.7.2 investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques, down time, any short-term and long-term remedial measures and near-misses) and prompt implementation of appropriate actions; and
 - 3.13.7.3 ensuring that detailed records are made of all such actions and investigations.
- 3.13.8 The Operator shall record and investigate complaints concerning the Permitted Installation's effects or alleged effects on the environment. The record shall give the date and nature of complaint, time of complaint, name of complainant (if given), a summary of any investigation and the results of such investigation and any actions taken.
- 3.13.9 As part of the AER of the Permitted Installation, the Operator shall provide the information specified in Sections s2.12.1 and s2.12.2 by not later than end of March after the end of each reporting year.

Attendance of Technically Competent Person(s)

- 3.13.10 Attendance of the technically competent person(s) at the Site shall be recorded in the Site diary on arrival and departure.
- 3.13.11 For the whole operational hours permitted for the Site under this Permit, the Technically Competent Person/s shall be physically in attendance at the Site. The

Technically competent Person/s has to be permanently present on site during generation of electrical energy. The Operator is to provide details as to how he intends to provide this coverage in order to take into account unavoidable absences due to continuous operation, vacation or sick leave.

- 3.13.12 Where the Site has been notified to the Authority as being either non-operational or closed, the Technically Competent Person shall be capable of attending the Site within one hour.

Changes in Technically competent Persons

- 3.13.13 Any changes in technically competent management (Person/s) and the name of any incoming person together with evidence that such person has the required technical competence shall be submitted to the Authority in writing within 5 working days of the change in management.

- 3.13.14 In the event of the death, dismissal, resignation, leave, or of extended sick leave of the Technically Competent Management of the Site, the Operator shall immediately inform the Authority, and prove to the Authority that the Operator is actively seeking a replacement.

3.14 Energy Efficiency

- 3.14.1 As part of the AER, the Operator shall produce a report on the energy consumed at the Permitted Installation over the previous calendar year, by the end of March of each year, providing the information listed in Tables s2.3.1 and s2.3.2 in the format specified therein.

- 3.14.2 The Operator shall maintain and operate the Permitted Installation so as to secure energy efficiency, in particular by:

- 3.14.2.1 ensuring that the appropriate operating and maintenance systems are in place;
- 3.14.2.2 ensuring that all installation is adequately insulated to minimise energy loss or gain;
- 3.14.2.3 ensuring that the type of lighting used is energy-efficient;
- 3.14.2.4 ensuring that all appropriate containment methods (e.g. seals) are employed and maintained to minimise energy loss;
- 3.14.2.5 maintaining and implementing an energy efficiency plan which identifies energy-saving techniques that are applicable to the activities and their associated environmental benefit, and prioritises them.

3.15 Accident prevention and control

- 3.15.1 In the case of an accident, the Operator shall follow the Emergency Plan submitted as part of the IPPC application and updated according to the improvement programme of the installation.

- 3.15.2 The plan shall be reviewed at least every 2 years or as soon as practicable after an accident, whichever is the earlier, and the Authority notified of the results of the review within 2 months of its completion.

- 3.15.3 The Operator shall maintain and implement all health and safety measures in compliance with Act XXVII of 2000; Occupational Health and Safety Authority Chapter 424 and all relevant subsidiary legislation.
- 3.15.4 The Operator shall have sufficient employees trained to deal with any emergency that may arise, e.g. fire-fighting and first aid.
- 3.15.5 The Operator is to keep the Authority updated on any major changes in operations that may impact on the health and safety of the employees.
- 3.15.6 The Operator is to make available Health and Safety documentation freely available.
- 3.15.7 During decommissioning, dismantling and demolition processes the Civil Protection Department shall be formally informed 24 hrs prior to the commencement of any high risk works.
- 3.15.8 Decommissioning, Dismantling and demolition works are to be coordinated in such a way so as to ensure that access to fire trucks is not impaired.

3.16 Multiple Operator installations

- 3.16.1 This is not a multi-Operator installation.
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4 Records

- 4.1 The Operator shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the Permitted Installation shall:-
 - 4.1.1 be made available for inspection by the Authority at any reasonable time;
 - 4.1.2 be supplied to the Authority on demand and without charge and in the format requested;
 - 4.1.3 be legible;
 - 4.1.4 be made as soon as reasonably practicable;
 - 4.1.5 indicate any amendments which have been made and shall include the original record wherever possible; and
 - 4.1.6 be retained at the Permitted Installation, or other location agreed by the Authority in writing, for a minimum period of 5 years from the date when the records were made, unless otherwise agreed in writing with the Authority.
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5 Reporting

- 5.1 All reports and written and/or oral notifications required by this Permit and notifications required by Regulation 7 of the Industrial Emissions (IPPC) Regulations shall be made and sent to the Authority using the contact details notified in writing to the Operator by the Authority.
 - 5.2 The Operator shall submit to the Authority an AER of the previous year by not later than end of March of each year, providing the information listed in Schedule 2 of this Permit and in the format specified therein.
 - 5.3 The operator shall submit to the Authority the information listed in Schedule 3 Quarterly Reporting and in the format specified therein within two months after the end of each quarter.
 - 5.4 The European Pollutant Release and Transfer Register (E-PRTR) report for the installation shall be submitted as part of the Annual Environment Report, by end of March of each year, or as required by Legislation. All quantities shall be reported, even when these do not exceed the thresholds mentioned in EC Regulation 166/2006. The format used for reporting shall be that established by Legislation, notably Legal Notice 152 of 2007, as may be amended from time to time.
 - 5.5 The Operator shall, within 6 months of receipt of written notice from the Authority, submit to the Authority a report assessing whether all appropriate preventive measures continue to be taken against pollution, in particular through the application of the best available techniques, at the installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Operator, that may provide environmental improvement.
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6 Notifications

This section is without prejudice to any other notification requirement in this permit and shall also apply to the demolition and dismantling works permitted through this permit and in the event of the restarting of MPS 2, MPS3 and MPS4 due to emergencies associated with security of supply.

- 6.1 The Operator shall notify the Authority without delay of:-
 - 6.1.1 the detection of an emission of any substance which exceeds any limit or criterion in this Permit specified in relation to the substance;
 - 6.1.2 the detection of any fugitive emission which has caused, is causing or may cause significant pollution unless the quantity emitted is so trivial that it would be incapable of causing significant pollution or incapable of being detected;
 - 6.1.3 the detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution; and

- 6.1.4 any accident which has caused, is causing or has the potential to cause significant pollution.
- 6.1.5 the restarting of one or more of plant MPS2, MPS3 and/or MPS4.
- 6.2 The Operator shall submit written confirmation to the Authority of any notification under condition 6.1, by sending:-
 - 6.2.1 the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
 - 6.2.2 the more detailed information listed in Part B of Schedule 1 as soon as practicable thereafter;
 - 6.2.3 the information listed in S2.12.1 according to the timeframe specified in Condition 5.2;
 - 6.2.4 for notifications related to condition 6.1.5 the notification must also include information requested in table S 2.3.3and such information shall be in accordance with that Schedule.
- 6.3 The Operator shall give written notification as soon as practicable prior to any of the following:-
 - 6.3.1 permanent cessation of the operation of part or all of the Permitted Installation;
 - 6.3.2 cessation of operation of part or all of the Permitted Installation for a period likely to exceed 1 year; and
 - 6.3.3 resumption of the operation of part or all of the Permitted Installation after a cessation notified under condition 6.3.2.
- 6.4 The Operator shall notify the Authority, as soon as practicable, of any information concerning the state of the site which affects or updates that provided to the Authority as part of the Site Report submitted with the application for this Permit.
- 6.5 The Operator shall notify the following matters to the Authority in writing within 10 working days of their occurrence:-
 - 6.5.1 Where the Operator is a registered company:-
 - 6.5.1.1 any change in the Operator's trading name, registered name or registered office address;
 - 6.5.1.2 any change to particulars of the Operator's ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary); and
 - 6.5.1.3 any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.
 - 6.5.2 Where the Operator is a corporate body other than a registered company:

- 6.5.2.1 any change in the Operator's name or address; and
- 6.5.2.2 any steps taken with a view to the dissolution of the Operator.

6.5.3 In any other case: -

- 6.5.3.1 the death of any of the named Operators (where the Operator consists of more than one named individual);
 - 6.5.3.2 any change in the Operator's name(s) or address(es);
 - 6.5.3.3 any steps taken with a view to the Operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership.
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7. Greenhouse gas emissions permit

- 7.1 The conditions in this permit are without prejudice to any condition in the Greenhouse gas Emissions Permit pursuant to LN 140 of 2005 - European Community Emissions Trading Scheme Regulations, 2005.
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8. Interpretation

- 8.1 In this Permit, the following expressions shall have the following meanings assigned to them, except where the context otherwise requires. All other terms shall have the same meaning as that assigned to them in the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (LN 10 of 2013), or any statutory provisions or regulations amending or replacing them:
- 8.2 In this Permit, the following expressions shall have the following meanings:-
 - 8.2.1 "AER" means the Annual Environmental Report;
 - 8.2.2 "Application" means the application for this Permit, together with any response to a notice served under Regulation 5 to the Industrial Emissions (IPPC) Regulations and any operational change agreed under the conditions of this Permit;
 - 8.2.3 "Authorised Officer" means any officer of the Authority authorised in writing pursuant to Part X of the Environment Protection Act 2001 to exercise any of the powers specified in Part X of that Act;
 - 8.2.4 "Background concentration" means such concentration of that substance as is present in:

- 8.2.4.1 water supplied to the site; or
 - 8.2.4.2 where more than 50% of the water used at the site is directly abstracted from ground or surface water on site, the abstracted water; or
 - 8.2.4.3 where the Permitted Installation uses no significant amount of supplied or abstracted water, the precipitation onto the site.
- 8.2.5 “BAT” means best available techniques, which means the most effective and advanced stage of development of activities and their methods of operation which indicates the practical suitability of particular techniques to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. For these purposes: “available techniques” means “those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced in Malta, as long as they are reasonably accessible to the operator”; “best” means “in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole” and “techniques” “includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.”;
- 8.2.6 “BREF” means the latest version of the BAT reference document available from the website of the European Integrated Pollution Prevention and Control Bureau (<http://eippcb.jrc.es/pages/Factivities.htm>);
- 8.2.7 “Combustion plant” or “plant” means any technical apparatus in which fuels are oxidised in order to use the heat thus generated. Where two or more separate plants are installed in such a way that their waste gases are *de facto* discharged through a common stack, the combination formed by such plants shall be regarded as a single unit;
- 8.2.8 “Composite sample” shall refer to a sample which is taken continuously over a given period, or a sample consisting of several samples taken either continuously or discontinuously over a given period;
- 8.2.9 “Direct discharge” shall refer to the introduction into marine waters and internal coastal water of any effluent;
- 8.2.10 “Effluent” shall refer to any discharge of water or waste water that can no longer be used as it is for the application it was originally intended;
- 8.2.11 “Emission limit value”
- 8.2.11.1 for discharges to air: means the permissible quantity of a substance contained in the waste gases from the

combustion plant which may be discharged into the air during a given period; it shall be calculated in terms of mass per volume of the waste gases expressed in mg/Nm^3 , assuming an oxygen content by volume in the waste gas of 3 % in the case of liquid fuels used in boilers and 15 % in the case of gas turbines;

8.2.11.2 for discharges to marine waters: shall refer to the limit value given in Schedule I to these permit conditions;

- 8.2.12 "Fuel" means any solid, liquid or gaseous combustible material used to fire the combustion plant with the exception of waste;
- 8.2.13 "Fugitive emission" means an emission to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under conditions 3.2 and 3.5 of this Permit;
- 8.2.14 "Gas oil" means any petroleum-derived liquid fuel falling within CN code 2710 00 67 or 2710 00 68, or any petroleum-derived liquid fuel which, by reason of its distillation limits, falls within the category of middle distillates intended for use as fuel and of which at least 85 % by volume (including losses) distills at 350°C by the ASTM D86 method;
- 8.2.15 "Gas turbine" means any rotating machine which converts thermal energy into mechanical work, consisting mainly of a compressor, a thermal device in which fuel is oxidised in order to heat the working fluid, and a turbine;
- 8.2.16 "Groundwater" means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil;
- 8.2.17 "GJ . Mg^{-1} " means gigajoule per megagramme;
- 8.2.18 "Installation" means the stationary technical unit (composed of one or more plants) where combustion of fuels (the main activity) is taking place, and any other directly associated activities on the same site which have a technical connection with the main activity and which could have an effect on emissions and pollution;
- 8.2.19 "Industrial Emissions (IPPC) Regulations" means the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (LN 10 of 2013) and words and expressions defined in the Industrial Emissions (IPPC) Regulations shall have the same meanings when used in this Permit save to the extent they are specifically defined in this Permit. It shall include any future amendments or superseding legislation.;

- 8.2.20 "Land" means the upper layer of the earth's crust and shall include all the various components of the lithosphere to the rock-water and rock-air boundary, where the topmost 200 cm which is made up of inorganic and organic components and which serves as a habitat for micro- and macro - organisms is defined as soil;
- 8.2.21 "Malta" means the Island of Malta, the Island of Gozo and the other islands of the Maltese Archipelago, including the territorial waters thereof;
- 8.2.22 "Marine waters" shall refer to the waters which are outside the limit defined by coastal waters up to the limit delineated by the limit of territorial waters;
- 8.2.23 "mg . Nm-3" means milligramme per normal metre cubed;
- 8.2.24 "Mg . month-1" means megagramme per month;
- 8.2.25 "Monitoring" includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys;
- 8.2.26 "Permitted Installation" means the activities and the limits to those activities described in Table 1.1.1 of this Permit;
- 8.2.27 "Qualified random sample" shall refer to a composite sample of at least five random samples taken over a maximum period of two hours at intervals of no less than two minutes and blended;
- 8.2.28 "Random sample" shall refer to a single sample from a waste water flow;
- 8.2.29 "Sewer" means sewer within the meaning of section 219(1) of the Water Industry Act 1991;
- 8.2.30 "Staff" includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors;
- 8.2.31 "Technically Competent Person" means a person possessing the qualifications, experience and technical competence to abide by the conditions of the Permit;
- 8.2.32 "Technically Competent Management" means the Technically Competent Person or Persons in control of the day-to-day activities authorised by the Permit and carried on at the Site;

- 8.2.33 *"The Authority" or "the Competent Authority" or "MEPA"* means the Malta Environment and Planning Authority or such other body or person as the Minister responsible for the environment may by order in the Gazette prescribe;
- 8.2.34 *"The Operator"* means a natural or legal person who is in occupation of the Site and has responsibility for carrying out day to day activities at the Site and to whom the Permit has been issued and / or transferred;
- 8.2.35 *"The Regulations"* means the Industrial Emissions (Framework Regulations, 2013 (LN9 of 2013) ("the Industrial Emissions (Framework) Regulations and the Industrial Emissions (IPPC) Regulations (LN 10 of 2013) ("the Industrial Emissions (IPPC) Regulations");
- 8.2.36 *"The Site"* means the land, structures, combustion plants and equipment to which this Permit relates;
- 8.2.37 *"Total nitrogen"* shall refer to the sum of total Kjeldahl nitrogen (organic N + NH₃), nitrate V (NO₃-) – nitrogen and nitrate III (NO₂-) – nitrogen;
- 8.2.38 *"TSP"* means Total Suspended Particulates;
- 8.2.39 *"Waste gases"* means gaseous discharges containing solid, liquid or gaseous emissions; their volumetric flow rates shall be expressed in cubic metres per hour at standard temperature (273 K) and pressure (101,3 kPa) after correction for the water vapour content, hereinafter referred to as (Nm³/h);
- 8.2.40 *"Year" or "reporting year"* means calendar year ending on the 31 December.
- 8.2.41 *"% w/w"* means percentage weight by weight;
- 8.3 Where a minimum limit is set for an emission parameter such as pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.
- 8.4 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means:-
- 8.4.1 in relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- 8.4.2 in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

- 8.5 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.
-

Schedule 1

Notification of abnormal emissions

This page outlines the information that the Operator must provide to satisfy conditions 5.1.1 and 5.1.2 of this Permit.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the Industrial emissions (IPPC) Regulations.

Part A

| | |
|-------------------------------|--|
| Permit Number | |
| Name of Operator | |
| Location of Installation | |
| Location of the emission | |
| Time and date of the emission | |

| Substance(s) emitted | Media (e.g. air, groundwater) | Best estimate of the quantity or the rate of emission (include units) | Time between which the emission took place |
|----------------------|-------------------------------------|---|---|
| | | | |
| | | | |
| | | | |

| | |
|---|--|
| Measures taken, or intended to be taken, to stop the emission | |
|---|--|

Part B

| | |
|---|--|
| Any more accurate information on the matters for notification under Part A. | |
| Measures taken, or intended to be taken, to prevent a recurrence of the incident. | |
| Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission. | |
| The dates of any unauthorised emissions from the installation in the preceding 24 months. | |

| | |
|----------------------------|--|
| Name ⁴ | |
| I.D. Card No./Passport No. | |
| Post | |
| Signature | |
| Date | |

⁴ authorised to sign on behalf of Operator

Schedule 2

Annual Environmental Report

Important note

By this submission, you confirm that you give your explicit consent for the entire contents of this Annual Environment Report to be made available on the Authority's public website.

S2.1 Introduction

| | |
|---|--|
| IPPC Permit Number | |
| Reporting Year | |
| Name and location of Site | |
| Brief description of activities at the site | |

S2.2 Environment Management System & Reporting

Please attach a supporting document with the following:

1. Environmental Policy containing the installation's environmental objectives and targets;
2. Environmental Management Programme report (for the reporting year);
3. Environmental Management Programme proposal (for the following year);
4. European Pollutant Release and Transfer Register Report (as per Condition 4.1.3) ⁵.

Tick (✓)

| |
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| |
| |
| |

S2.3 Process Data**S2.3.1 Annual Summary**

| | Units | Previous reporting year ⁶ | Current reporting year |
|--|-------------------------------|--------------------------------------|------------------------|
| Quantity of energy produced | MWh | | |
| Total Annual Energy Consumption (from electricity and other sources) | MWh | | |
| Energy consumption per unit product | MWh consumed/ MWh produced | | |
| Annual water consumption | m ³ | | |
| Water consumption per unit product | m ³ /MWh | | |
| Annual quantity of waste produced | tonnes | | |
| Waste produced per unit product | tonne waste/ MWh | | |

S2.3.2 Fuel consumption

| | Units | Sulphur Content ⁷ | Consumption | |
|---------|----------------|------------------------------|---------------|--------------|
| | | | Previous Year | Current Year |
| Gas Oil | m ³ | | | |

⁵ The format used for reporting shall be that published in the Government Gazette (<http://www.doi.gov.mt/EN/gazetteonline/2007/07/gazts/GG%2013.7.pdf>)

⁶ "Previous reporting year" is not applicable for the first reporting year (2008)

⁷ Specify units (e.g. as percentage, or mg/kg)

S2.3.3 Operating Time Data for Steam Cycle in the event of emergencies associated with security of supply

Operator: Enemalta Corporation Ltd. From: 01/01/_____
 Location: Marsa. To: 31/12/_____

MPS2 (boilers 5 & 6)

Total hours during which any part of the plant was operating throughout the past year.

Total hrs

MPS3 (boilers 7)

Total hours during which any part of the plant was operating throughout the past year.

Total hrs

MPS4 (boiler 8)

Total hours during which any part of the plant was operating throughout the past year.

Total hrs

Additional documentation to be submitted:

Operational records

Approval of operational records by independent auditor

Tick
(✓)

| |
|--|
| |
| |

S2.3.4 Operating Time Data for Gas Turbine

Operator: Enemalta Corporation Ltd. From: 01/01/_____
 Location: Marsa. To: 31/12/_____

Total operating hours of the plant MPS 5 during reporting year

Additional documentation to be submitted:

Operational records

Approval of operational records by independent auditor

Tick (✓)

| |
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| |
| |

S2.4 Monitoring Data

S2.4.1 Summary of emissions to air

S2.4.1.1 Emissions of Dust (TSP), Nitrogen Oxides (NO_x) and Sulphur Dioxide (SO₂).

| Parameter | Emission point reference | Standard methodology used | Annual average pollutant concentration mg.Nm ⁻³ | Mean Monthly Limit Value mg.Nm ⁻³ | Total annual number of exceedances of monthly mean value after validation | | 48 hourly Mean Limit Value mg.Nm ⁻³ | Percentage of exceedances of 48 hourly mean limit value after validation | |
|------------------------------|--------------------------|---------------------------|---|---|---|--------------|---|--|--------------|
| | | | | | Previous year | Present year | | Previous year | Present year |
| Total Suspended Particulates | MPS5 | ISO 1142-2 | | - | - | - | - | - | - |
| Oxides of Nitrogen | MPS5 | ISO 1142-2 | | 400 | | | 440 (95%) | | |
| Sulphur Dioxide | MPS5 | ISO 1142-2 | | - | - | - | - | - | - |

Additional documentation to be submitted:

Tick (✓)

Accreditation certificate(s) of laboratory

S2.4.1.2 Emissions of Carbon monoxide (CO)

| Emission point reference | Standard methodology used | Annual average pollutant concentration mg.Nm ⁻³ | Monthly Limit Value mg.Nm ⁻³ | Total annual number of exceedances of monthly mean value after validation | |
|--------------------------|---------------------------|---|--|---|--------------|
| | | | | Previous year | Present year |
| MPS5 | ISO 1142-2 | | 100 | | |

S2.4.2 Monthly Statistical Analysis of Continuous Monitoring

S2.4.2.1 Monthly Concentration Data for Particulates, SO₂ and NO_x

ONE PAGE PER MONTH TO BE SUBMITTED

| | |
|----------------|-------|
| Reporting year | |
| Month | |
| Plant | MPS 5 |

| | Particulates | NO _x | SO ₂ | CO |
|---|--------------|-----------------|-----------------|----|
| Monthly average concentration for the period (mg . Nm ⁻³) | | | | |
| No of exceedances of 24 hr limit in period | | | | |
| Highest individual 24 hr average in period (mg . Nm ⁻³) | | | | |
| Mean daily average, in period (mg . Nm ⁻³) | | | | |
| No of exceedances of 1 hr average in period | | | | |
| Highest individual 1 hr average in period (mg . Nm ⁻³) | | | | |
| Mean 1 hr average in period (mg . Nm ⁻³) | | | | |
| Percentage of boiler operating time that continuous monitors available during reporting period. | | | | |

S2.4.2.2 Monthly Loads of Particulates, SO₂ and NO_x*ONE PAGE PER PLANT TO BE SUBMITTED*

| | |
|--|--|
| Operator: Enemalta Corporation Ltd. Location: Marsa. Reporting year: _____ | Plant no. MPS 5 Heat Value of Fuel fired: _____ GJ.Mg ⁻¹ |
|--|--|

| Month | Fuel Burn During this period Mg . month ⁻¹ | Monthly NO _x Load Mg | Monthly NO _x Load Mg | Monthly NO _x Load Mg |
|-----------|---|---|---|---|
| January | | | | |
| February | | | | |
| March | | | | |
| April | | | | |
| May | | | | |
| June | | | | |
| July | | | | |
| August | | | | |
| September | | | | |
| October | | | | |
| November | | | | |
| December | | | | |
| TOTAL | | | | |

Pollutant Load (Mg) = Pollutant concentration ($\mu\text{g.Nm}^{-3}$) $\times 1 \times 10^{-9} \times \text{WGF (m}^3\text{.month}^{-1}\text{)}$
 (WGF = waste gas flow rate).

S2.4.3 Annual Data
S2.4.3.1 Annual Load of NO_x

| Marsa Power Station | | | | | | | | |
|---|---------------------|-------------|--------|---------------------|---------------------|----------------------------------|----------------------------------|-----------------------|
| Units | Rated Thermal Input | Type | Fuel | Fuel Burn | Heat Value | Annual Emissions SO ₂ | Annual Emissions NO _x | Annual Emissions dust |
| | MW _{TH} | | | Mg.yr ⁻¹ | GJ.Mg ⁻¹ | Mg.yr ⁻¹ | Mg.yr ⁻¹ | Mg.yr ⁻¹ |
| "Existing" plants – 50-300 MW _{TH} | | | | | | | | |
| Marsa 5 | 121 | Gas Turbine | Gasoil | | | | | |

* Sum of the total emissions during normal operations + total emissions during start-up/shut down periods.

S2.5: Certificates of Analysis for physical and chemical parameters of fuels

Documentation to be submitted:

Certificates of analysis for physical and chemical parameters of fuels
for reporting year (indicate number of certificates submitted)
Accreditation certificate(s) of laboratory

Tick (✓)

| |
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| |
| |

S2.6: Wind Rose

Documentation to be submitted:

Wind rose for the reporting year showing wind speed and direction at the site

Tick (✓)

| |
|--|
| |
|--|

S2.7 Emissions to Marine Water
ONE REPORT PER OUTLET TO BE SUBMITTED

| Parameter | Emission Limit Value | LOD | LOQ | Standard methodology used ¹ | Total annual number of exceedances ² | | Concentration (Annual Average) | | | Total Annual Mass Emissions | | |
|---|-----------------------------|-----|-----|--|---|--------------|--------------------------------|---------------|--------------|-----------------------------|---------------|--------------|
| | | | | | Previous year | Present year | Units | Previous year | Present year | Units | Previous Year | Present Year |
| pH | 6-10 | | | n/a | | | | | | | | |
| Temperature | 15°C above marine | | | n/a | | | | | | | | |
| BOD5 | 25 mg.dm ⁻³ | | | EN 1899 | | | | | | | | |
| Total Nitrogen | 10 mg.dm ⁻³ | | | EN 12260 | | | | | | | | |
| Total Phosphorous | 1 mg.dm ⁻³ | | | EN ISO 15681 | | | | | | | | |
| Chlorine dioxide and oxidants (given as chlorine) | 0.3 mg.dm ⁻³ | | | DIN 38408-5 or equiv. | | | | | | | | |
| Arsenic | 0.1 mg.dm ⁻³ | | | ISO 17294-2 | | | | | | | | |
| Cadmium and its compounds | 0.0002 mg.dm ⁻³ | | | ISO 17294 | | | | | | | | |
| Chromium (total) | 0.5 mg.dm ⁻³ | | | ISO 17294 | | | | | | | | |
| Copper | 0.5 mg.dm ⁻³ | | | ISO 17294 | | | | | | | | |
| Lead | 0.0072 mg.dm ⁻³ | | | ISO 17294 | | | | | | | | |
| Mercury | 0.00005 mg.dm ⁻³ | | | ISO 17294 | | | | | | | | |
| Nickel | 0.0086 mg.dm ⁻³ | | | ISO 17294 | | | | | | | | |

¹ If an equivalent methodology is used, kindly indicate this instead of the quoted standard.

² If the total number of exceedances exceeds 0, the value of each of these exceedances (for the reporting year) must be submitted in a separate report, together with action taken to regularise the situation.

| Parameter | Emission Limit Value | LOD | LOQ | Standard methodology used ¹ | Total annual number of exceedances ² | | Concentration (Annual Average) | | | Total Annual Mass Emissions | | |
|---|--------------------------|-----|-----|--|---|--------------|--------------------------------|---------------|--------------|-----------------------------|---------------|--------------|
| | | | | | Previous year | Present year | Units | Previous year | Present year | Units | Previous Year | Present Year |
| Tin | 1 mg.dm ⁻³ | | | ISO 17294 | | | | | | | | |
| Vanadium | 4 mg.dm ⁻³ | | | ISO 17294 | | | | | | | | |
| Zinc | 0.04 mg.dm ⁻³ | | | ISO 17294 | | | | | | | | |
| PCBs | 0.5 mg.dm ⁻³ | | | EN ISO 6469 | | | | | | | | |
| Petroleum hydrocarbons | 0.03 mg.dm ⁻³ | | | ISO 9377-2 | | | | | | | | |
| Polyaromatic hydrocarbons | 0.03 µg.dm ⁻³ | | | EN ISO 17993 | | | | | | | | |
| Benzo(a)pyrene (as a marker for all PAHs) | | | | | | | | | | | | |
| Tributyl tin compounds | 5 µg.dm ⁻³ | | | EN ISO 17353 | | | | | | | | |
| Total Suspended Solid | 35 mg.dm ⁻³ | | | EN 872 | | | | | | | | |

| | |
|--|--|
| Name of laboratory where tests in this section have been carried out | |
| Is this laboratory accredited (certified) for the above tests? | Yes <input type="checkbox"/> No <input type="checkbox"/> |

Additional documentation to be submitted:

Tick (✓) ☐

Accreditation certificate(s) of laboratory

¹ If an equivalent methodology is used, kindly indicate this instead of the quoted standard.

² If the total number of exceedances exceeds 0, the value of each of these exceedances (for the reporting year) must be submitted in a separate report, together with action taken to regularise the situation.

S2.8 Noise monitoring¹

| Monitoring point ⁱⁱ | Date sampled | Time sampled | Operating conditions | Noise measurement | Units | Other comments (if any) |
|--------------------------------|--------------|--------------|----------------------|-------------------|-------|-------------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Additional documentation to be submitted:

Tick (✓)

Map showing monitoring points

Detailed noise report ⁱⁱⁱ

| |
|--|
| |
| |

¹ Noise monitoring shall be carried out according to BS 4142:1997.ⁱⁱ Monitoring points should be labelled using a unique code, and should be suitably sited. A corresponding labelled map showing the location of each monitoring points shall be submitted.ⁱⁱⁱ The detailed noise report should include information about the various monitoring points chosen, an analysis of the results and suggestions for improvement (if applicable).

S2.9 Off-site transfers of waste

[illegible]¹ European Waste Catalogue Code (Reference: Schedule 1 of LN 337 of 2001)

¹⁴ For hazardous waste only. If waste is not hazardous, please write "n/a".

S2.10 Testing of bunds, pipes, pumps, valves, flanges and over-ground pipes

| | |
|---|--|
| Number of bunds on site | |
| Number of oil interceptors on site | |
| Date of last test for bunds | |
| Testing for bunds due on (date) | |
| Date of last test for pipes, pumps, valves and flanges for fuel delivery from delivery ship to tank farm | |
| Testing of pipes, pumps, valves and flanges for fuel delivery from delivery ship to tank farm due on (date) | |
| Date of last test for other flanges, valves and over-ground pipes on site | |
| Testing of other flanges, valves and over-ground pipes on site due on (date) | |
| Date of last test for oil interceptors | |
| Testing for oil interceptors due on (date) | |

Additional documentation to be submitted if test was carried out during previous reporting year:

Inspection report and certification by approved auditor for bunds on site
 Inspection report and certification by approved auditor for pipes, pumps, valves and flanges for fuel delivery from delivery ship to tank farm
 Inspection report and certification by approved auditor for other flanges, valves and over-ground pipes on site
 Inspection report and certification by approved auditor for oil interceptors

Tick (✓)

| |
|--|
| |
| |
| |
| |

S2.11 Incidents and Complaints

S2.11.1 Non-Compliance Incidents during Reporting Year

| Date of incident | Brief description of Incident | Cause | Corrective action |
|------------------|-------------------------------|-------|-------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Total number of non-compliance incidents for previous year:¹⁷

Total number of non-compliance incidents for current reporting year:

| |
|--|
| |
| |

S2.11.2 Complaints made by the public

| Date of complaint | Description of complaint | Actions taken |
|-------------------|--------------------------|---------------|
| | | |
| | | |
| | | |
| | | |
| | | |

Total number of complaints for previous year:¹

Total number of complaints for current reporting year:

| |
|--|
| |
| |

¹⁷ "Previous year" data is not required in the first reporting year (2008).

S2.12 Transport

| Name of ADR certified carrier used during reporting year | Material(s) transported |
|---|--------------------------------|
| | |
| | |
| | |
| | |

| Name of registered waste carrier used during reporting year | Waste type(s) transported |
|--|----------------------------------|
| | |
| | |
| | |
| | |

Schedule 3

Quarterly Reporting

Important note

By this submission, you confirm that you give your explicit consent for the entire contents of this Quarterly Report to be made available on the Authority's public website.

S3.1 Waste

Period covered by this report: _____

| Waste | Quantity | Units |
|-------------------------|----------|-------|
| Waste removed from site | | |

S3.2 Air Emissions

S3.2.1 – Daily Statistical analysis of continuous monitoring

S3.2.1.1 Data for Particulates

ONE PAGE PER DAY TO BE SUBMITTED FOR MPS 5

| | |
|-------------------------------------|---------------------------|
| Operator: Enemalta Corporation Ltd. | Emission Limit Value: n/a |
| Location: Marsa. | |
| Date: / / | Plant no. MPS5 |

| Time | Hourly average (mg . Nm ⁻³) | Validated Hourly average (mg . Nm ⁻³) | Validity of Data* |
|----------|--|---|-------------------|
| 0000 hrs | | | |
| 0100 hrs | | | |
| 0200 hrs | | | |
| 0300 hrs | | | |
| 0400 hrs | | | |
| 0500 hrs | | | |
| 0600 hrs | | | |
| 0700 hrs | | | |
| 0800 hrs | | | |
| 0900 hrs | | | |
| 1000 hrs | | | |
| 1100 hrs | | | |
| 1200 hrs | | | |
| 1300 hrs | | | |
| 1400 hrs | | | |
| 1500 hrs | | | |
| 1600 hrs | | | |
| 1700 hrs | | | |
| 1800 hrs | | | |
| 1900 hrs | | | |
| 2000 hrs | | | |
| 2100 hrs | | | |
| 2200 hrs | | | |
| 2300 hrs | | | |

Validated mean daily
concentration of
particulates

mg . Nm⁻³

Note:

- (a) The validated hourly average is calculated by subtracting a factor determined according to the procedure established by the relevant part of EN14181 and which shall in no case exceed 30% from the hourly average.
- (b) Validated mean daily concentration average is calculated from the validated hourly averages

*In this column mark valid data entries with a ✓ and invalid data entries with a ×.

S3.2.1.2 Data for Sulphur Dioxide**ONE PAGE PER DAY TO BE SUBMITTED FOR MPS5**

Operator: Enemalta Corporation Ltd.

Emission Limit Value: n/a

Location: Marsa.

Date: / /

Plant no. MPS5

| Time | Hourly average (mg . Nm ⁻³) | Validated Hourly average (mg . Nm ⁻³) | Validity of Data* |
|----------|--|---|-------------------|
| 0000 hrs | | | |
| 0100 hrs | | | |
| 0200 hrs | | | |
| 0300 hrs | | | |
| 0400 hrs | | | |
| 0500 hrs | | | |
| 0600 hrs | | | |
| 0700 hrs | | | |
| 0800 hrs | | | |
| 0900 hrs | | | |
| 1000 hrs | | | |
| 1100 hrs | | | |
| 1200 hrs | | | |
| 1300 hrs | | | |
| 1400 hrs | | | |
| 1500 hrs | | | |
| 1600 hrs | | | |
| 1700 hrs | | | |
| 1800 hrs | | | |
| 1900 hrs | | | |
| 2000 hrs | | | |
| 2100 hrs | | | |
| 2200 hrs | | | |
| 2300 hrs | | | |

**Validated mean daily
concentration of sulphur
dioxide**

mg . Nm⁻³

Note:

- (a) The validated hourly average is calculated by subtracting a factor determined according to the procedure established by the relevant part of EN14181 and which shall in no case exceed 20% from the hourly average.
- (b) Validated mean daily concentration average is calculated from the validated hourly averages

*In this column mark valid data entries with a ✓ and invalid data entries with a ×.

S3.2.1.3 Data for Nitrogen Oxides*ONE PAGE PER DAY TO BE SUBMITTED FOR MPS5*

| | |
|-------------------------------------|---|
| Operator: Enemalta Corporation Ltd. | Emission Limit Value: 400 mg . Nm ⁻³ |
| Location: Marsa. | |
| Date: / / | Plant no. MPS5 |

| Time | Hourly average (mg . Nm ⁻³) | Validated Hourly average (mg . Nm ⁻³) | Validity of Data* |
|----------|--|---|-------------------|
| 0000 hrs | | | |
| 0100 hrs | | | |
| 0200 hrs | | | |
| 0300 hrs | | | |
| 0400 hrs | | | |
| 0500 hrs | | | |
| 0600 hrs | | | |
| 0700 hrs | | | |
| 0800 hrs | | | |
| 0900 hrs | | | |
| 1000 hrs | | | |
| 1100 hrs | | | |
| 1200 hrs | | | |
| 1300 hrs | | | |
| 1400 hrs | | | |
| 1500 hrs | | | |
| 1600 hrs | | | |
| 1700 hrs | | | |
| 1800 hrs | | | |
| 1900 hrs | | | |
| 2000 hrs | | | |
| 2100 hrs | | | |
| 2200 hrs | | | |
| 2300 hrs | | | |

| |
|---|
| Validated mean daily concentration of nitrogen oxides |
|---|

mg . Nm⁻³

Note:

- (a) The validated hourly average is calculated by subtracting a factor determined according to the procedure established by the relevant part of EN14181 and which shall in no case exceed 20% from the hourly average.
- (b) In the table above underline the **validated** hourly averages which exceed the emission limit value of 400 mg . Nm⁻³.
- (c) Validated mean daily concentration average is calculated from the validated hourly averages

*In this column mark valid data entries with a ✓ and invalid data entries with a ✗.

S3.2.1.4 Data for Carbon Monoxide

ONE PAGE PER DAY TO BE SUBMITTED FOR MPS5

| | |
|-------------------------------------|---|
| Operator: Enemalta Corporation Ltd. | Emission Limit Value: 100 mg . Nm ⁻³ |
| Location: Marsa. | |
| Date: / / | Plant no. MPS5 |

| Time | Hourly average (mg . Nm ⁻³) | Validated Hourly average (mg . Nm ⁻³) | Validity of Data* |
|----------|--|---|-------------------|
| 0000 hrs | | | |
| 0100 hrs | | | |
| 0200 hrs | | | |
| 0300 hrs | | | |
| 0400 hrs | | | |
| 0500 hrs | | | |
| 0600 hrs | | | |
| 0700 hrs | | | |
| 0800 hrs | | | |
| 0900 hrs | | | |
| 1000 hrs | | | |
| 1100 hrs | | | |
| 1200 hrs | | | |
| 1300 hrs | | | |
| 1400 hrs | | | |
| 1500 hrs | | | |
| 1600 hrs | | | |
| 1700 hrs | | | |
| 1800 hrs | | | |
| 1900 hrs | | | |
| 2000 hrs | | | |
| 2100 hrs | | | |
| 2200 hrs | | | |
| 2300 hrs | | | |

| | |
|---|-----------------------|
| Validated mean daily concentration of carbon monoxide | mg . Nm ⁻³ |
|---|-----------------------|

Note:

- (a) The validated hourly average is calculated by subtracting a factor determined according to the procedure established by the relevant part of EN14181 and which shall in no case exceed 10% from the hourly average.
- (b) In the table above underline the **validated** hourly averages which exceed the emission limit value of 100 mg . Nm⁻³
- (c) Validated mean daily concentration average is calculated from the validated hourly averages.

*In this column mark valid data entries with a ✓ and invalid data entries with a ×.

S3.2.2.2 Diurnal Data for Sulphur Dioxide*ONE PAGE PER MONTH TO BE SUBMITTED FOR MPS5*

Operator: Enemalta Corporation Ltd.

Emission Limit Value: n/a

Location: Marsa.

Plant no. MPS5

Date: / /

| Period | 48 Hourly average (validated) (mg . Nm ⁻³) |
|-----------------------|---|
| Starts on: / / at hrs | |
| Ends on: / / at hrs | |
| Starts on: / / at hrs | |
| Ends on: / / at hrs | |
| Starts on: / / at hrs | |
| Ends on: / / at hrs | |
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| Ends on: / / at hrs | |
| Starts on: / / at hrs | |
| Ends on: / / at hrs | |
| Starts on: / / at hrs | |
| Ends on: / / at hrs | |

S3.2.2.4 Daily Data for Carbon Monoxide

TWO PAGES PER MONTH TO BE SUBMITTED FOR MPS5

| | |
|-------------------------------------|---|
| Operator: Enemalta Corporation Ltd. | Emission Limit Value: 100 mg . Nm ⁻³ |
| Location: Marsa. | Daily average not to exceed 100 mg . Nm ⁻³ |
| Date: / / | Plant no. MPS5 |

| Period | 24 Hourly average (validated) (mg . Nm ⁻³) |
|-------------------------------|---|
| Starts on: / / at hrs | |
| Ends on: / / at hrs | |
| Starts on: / / at hrs | |
| Ends on: / / at hrs | |
| Starts on: / / at hrs | |
| Ends on: / / at hrs | |
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| Starts on: / / at hrs | |
| Ends on: / / at hrs | |
| Starts on: / / at hrs | |
| Ends on: / / at hrs | |

[illegible]

Note

In the table above underline 48 hourly averages which exceed 100 mg . Nm⁻³.

S3.2.2 Quarterly reporting of SO₂ and NO_x loads

ONE PAGE PER QUARTER TO BE SUBMITTED FOR MPS5

S3.2.2.1 SO₂ load

| Period | Projected load ¹⁸ | Actual load | Revised projected load |
|--------------------------|------------------------------|-------------|------------------------|
| | tonnes | tonnes | tonnes |
| January – March | | | |
| April – June | | | |
| July – September | | | |
| October - December | | | |
| Total annual load | | | |

S3.2.2.2 NO_x load

| Period | Projected load ¹⁸ | Actual load | Revised projected load |
|--------------------------|------------------------------|-------------|------------------------|
| | tonnes | tonnes | tonnes |
| January – March | | | |
| April – June | | | |
| July – September | | | |
| October - December | | | |
| Total annual load | | | |

¹⁸ As submitted to the Authority in September of previous year

S3.3 Emissions to Marine Water**S3.3.1 Quarterly Report Sheet for Waste Water arising from Water Treatment**

ONE PAGE PER QUARTER TO BE SUBMITTED FOR EACH OUTLET
(11 & 12)

| | |
|---|----------------------------|
| Operator: Enemalta Corporation Ltd. | Water Treatment |
| Location: Marsa. | |
| Month sample was taken _____ | Outlet no. _____ |
| Total volume of water discharged _____ | m³ _____ |

| Parameter | Emission Limit Value | Value in Effluent |
|---|---|--|
| pH | 6-10 | |
| temperature | 15°C above marine | |
| Parameter | Emission Limit Value mg.dm ⁻³ (except where otherwise specified) | Concentration in Effluent mg.dm ⁻³ |
| Biological oxygen demand (BOD5) | 25 | |
| Total Nitrogen | 10 | |
| Phosphorous compounds as total phosphorous | 1 | |
| Chlorine dioxide and oxidants (given as chlorine) | 0.3 | |
| Arsenic | 0.1 | |
| Cadmium and its compounds | 0.0002 | |
| Chromium (Total) | 0.5 | |
| Copper | 0.5 | |
| Lead | 0.0072 | |
| Mercury | 0.00005 | |
| Nickel | 0.0086 | |
| Tin | 1.0 | |
| Vanadium | 4 | |
| Zinc | 0,04 | |
| PCBs | 0.5 | |
| Petroleum hydrocarbons | 0.003 | |
| Polyaromatic hydrocarbons | 0.03 µg.dm ⁻³ | |
| Benzo(a)pyrene (as a marker for all PAHs) | | |
| Tributyl tin compounds | 5 µg.dm ⁻³ | |
| Total Suspended Solid | 35 mg.dm ⁻³ | |

S3.3.2 Quarterly Report Sheet for Waste Water arising from Cooling Systems

ONE PAGE PER QUARTER TO BE SUBMITTED FOR EACH OUTLET
(12)

| | |
|---|-------------------------|
| Operator: Enemalta Corporation Ltd. | Cooling Systems |
| Location: Marsa. | |
| Month sample was taken _____ | Outlet no. _____ |
| Total volume of water discharged _____ | m³ |

| Parameter | Emission Limit Value | Value in Effluent |
|---|---|---------------------------|
| pH | 6-10 | |
| temperature | 15°C above marine | |
| Parameter | Emission Limit Value | Concentration in Effluent |
| | mg.dm ⁻³ (except where otherwise specified) | mg.dm ⁻³ |
| Biological oxygen demand (BOD5) | 25 | |
| Total Nitrogen | 10 | |
| Phosphorous compounds as total phosphorous | 1 | |
| Chlorine dioxide and oxidants (given as chlorine) | 0.3 | |
| Arsenic | 0.1 | |
| Cadmium and its compounds | 0.0002 | |
| Chromium (Total) | 0.5 | |
| Copper | 0.5 | |
| Lead | 0.0072 | |
| Mercury | 0.00005 | |
| Nickel | 0.0086 | |
| Tin | 1.0 | |
| Vanadium | 4 | |
| Zinc | 0.04 | |
| PCBs | 0.5 | |
| Petroleum hydrocarbons | 0.003 | |
| Polyaromatic hydrocarbons | 0.03 µg.dm ⁻³ | |
| Benzo(a)pyrene (as a marker for all PAHs) | | |
| Tributyl tin compounds | 5 µg.dm ⁻³ | |
| Total Suspended Solid | 35 mg.dm ⁻³ | |

S3.3.3 Quarterly Report Sheet for Waste Water arising from Steam Generation

ONE PAGE PER QUARTER TO BE SUBMITTED FOR EACH OUTLET
(8 & 12)

| | |
|---|-------------------------|
| Operator: Enemalta Corporation Ltd. | Steam Generation |
| Location: Marsa. | |
| Month sample was taken _____ | Outlet no. _____ |
| Total volume of water discharged _____ | m³ |

| Parameter | Emission Limit Value | Value in Effluent |
|---|--|--|
| pH | 6-10 | |
| temperature | 15°C above marine | |
| Parameter | Emission Limit Value mg.dm ⁻³ except where otherwise specified) | Concentration in Effluent mg.dm ⁻³ |
| Biological oxygen demand (BOD5) | 25 | |
| Total Nitrogen | 10 | |
| Phosphorous compounds as total phosphorous | 1 | |
| Chlorine dioxide and oxidants (given as chlorine) | 0.3 | |
| Arsenic | 0.1 | |
| Cadmium and its compounds | 0.0002 | |
| Chromium (Total) | 0.5 | |
| Copper | 0.5 | |
| Lead | 0.0072 | |
| Mercury | 0.00005 | |
| Nickel | 0.0086 | |
| Tin | 1.0 | |
| Vanadium | 4 | |
| Zinc | 0.04 | |
| PCBs | 0.5 | |
| Petroleum hydrocarbons | 0.003 | |
| Polyaromatic hydrocarbons | 0.03 µg.dm ⁻³ | |
| Benzo(a)pyrene (as a marker for all PAHs) | | |
| Tributyl tin compounds | 5 µg.dm ⁻³ | |
| Total Suspended Solid | 35 mg.dm ⁻³ | |

S3.3.4 Quarterly Report Sheet for Waste Water arising from Boiler Washdown

ONE PAGE PER QUARTER TO BE SUBMITTED FOR EACH OUTLET
(2, 4, 6, & 13)

| | |
|---|-------------------------|
| Operator: Enemalta Corporation Ltd. | Boiler Washdown |
| Location: Marsa. | |
| Month sample was taken _____ | Outlet no. _____ |
| Total volume of water discharged _____ | m³ |

| Parameter | Emission Limit Value | Value in Effluent |
|--|---|---------------------------|
| pH | 6-10 | |
| temperature | 15°C above marine | |
| Parameter | Emission Limit Value | Concentration in Effluent |
| | mg.dm ⁻³ (except where otherwise specified) | mg.dm ⁻³ |
| Biological oxygen demand (BOD5) | 25 | |
| Total Nitrogen | 10 | |
| Phosphorous compounds as total phosphorous | 1 | |
| Chlorine dioxide and oxidants (given as chlorine) | 0.3 | |
| Arsenic | 0.1 | |
| Cadmium and its compounds | 0.0002 | |
| Chromium (Total) | 0.5 | |
| Copper | 0.5 | |
| Lead | 0.0072 | |
| Mercury | 0.00005 | |
| Nickel | 0.0086 | |
| Tin | 1.0 | |
| Vanadium | 4 | |
| Zinc | 1 | |
| PCBs | 0.5 | |
| Petroleum hydrocarbons | 0.003 | |
| Polyaromatic hydrocarbons Benzo(a)pyrene (as a marker for all PAHs) | 0.03 µg.dm ⁻³ | |
| Tributyl tin compounds | 5 µg.dm ⁻³ | |
| Total Suspended Solid | 35 mg.dm ⁻³ | |

S3.3.5 Quarterly Report Sheet for Waste Water arising from Other Sources

ONE PAGE PER QUARTER TO BE SUBMITTED FOR EACH OUTLET
(1, 5, 14, 17, 18, 19 & 20)

Operator: Enemalta Corporation Ltd. Other Discharges: Source: _____
 Location: Marsa. Outlet no. _____
 Month sample was taken _____

| Parameter | Emission Limit Value | Value in Effluent |
|--|---|--|
| pH | 6-10 | |
| temperature | 15°C above marine | |
| Parameter | Emission Limit Value mg.dm ⁻³ (except where otherwise specified) | Concentration in Effluent mg.dm ⁻³ |
| Biological oxygen demand (BOD5) | 25 | |
| Total Nitrogen | 10 | |
| Phosphorous compounds as total phosphorous | 1 | |
| Chlorine dioxide and oxidants (given as chlorine) | 0.3 | |
| Arsenic | 0.1 | |
| Cadmium and its compounds | 0.0002 | |
| Chromium (Total) | 0.5 | |
| Copper | 0.5 | |
| Lead | 0.0072 | |
| Mercury | 0.00005 | |
| Nickel | 0.0086 | |
| Tin | 1.0 | |
| Vanadium | 4 | |
| Zinc | 1 | |
| PCBs | 0.5 | |
| Petroleum hydrocarbons | 0.003 | |
| Polyaromatic hydrocarbons Benzo(a)pyrene (as a marker for all PAHs) | 0.03 µg.dm ⁻³ | |
| Tributyl tin compounds | 5 µg.dm ⁻³ | |
| Total Suspended Solid | 35 mg.dm ⁻³ | |

Additional documentation to be submitted for Schedule S3.3:

Tick (✓)

☐

Accreditation certificate(s) of laboratory

Schedule 4

Equivalence Factors

The concentrations of the following dioxins and furans determined in the waste gas shall be multiplied by the given equivalence factors and summed up in order to assess compliance with condition 2.2.7.8.

| Substance | Equivalence factor |
|---|--------------------|
| 2,3,7,8-Tetrachlordibenzodioxin (TCDD) | 1 |
| 1,2,3,7,8-Pentachlordibenzodioxin (PeCDD) | 0.5 |
| 1,2,3,4,7,8-Hexachlordibenzodioxin (HxCDD) | 0.1 |
| 1,2,3,7,8,9-Hexachlordibenzodioxin (HxCDD) | 0.1 |
| 1,2,3,6,7,8-Hexachlordibenzodioxin (HxCDD) | 0.1 |
| 1,2,3,4,6,7,8-Heptachlordibenzodioxin (HpCDD) | 0.01 |
| Octachlordibenzodioxin (OCDD) | 0.001 |
| 2,3,7,8-Tetrachlordibenzofuran (TCDF) | 0.1 |
| 2,3,4,7,8-Pentachlordibenzofuran (PeCDF) | 0.5 |
| 1,2,3,7,8-Pentachlordibenzofuran (PeCDF) | 0.05 |
| 1,2,3,4,7,8-Hexachlordibenzofuran (HxCDF) | 0.1 |
| 1,2,3,7,8,9-Hexachlordibenzofuran (HxCDF) | 0.1 |
| 1,2,3,6,7,8-Hexachlordibenzofuran (HxCDF) | 0.1 |
| 2,3,4,6,7,8-Hexachlordibenzofuran (HxCDF) | 0.1 |
| 1,2,3,4,6,7,8-Heptachlordibenzofuran (HpCDF) | 0.01 |
| 1,2,3,4,7,8,9-Heptachlordibenzofuran (HpCDF) | 0.01 |
| Octachlordibenzofuran (OCDF) | 0.001 |

Schedule 5

Emission Limit Values for discharges to Marine Waters

PHYSICAL PARAMETERS

| Number | Parameter | value |
|--------|-------------|---|
| 1 | pH | 6-10 |
| 2 | Temperature | 15°C above marine water and 12°C (98 th percentile of hourly values over a year) |

CHEMICAL PARAMETERS

| Number | Parameter | mg.dm ⁻³ (except where otherwise specified) |
|--------|---|---|
| 3 | Biological oxygen demand (BOD5) | 25 |
| 4 | Chemical oxygen demand (COD) | 30 |
| 5 | Total Nitrogen | 10 |
| 6 | Phosphorous compounds as total phosphorous, as per EN ISO 15681 | 1 |
| 7 | Adsorbable organically bound halogens (AOX) | 0.15 |
| 8 | Chlorine dioxide and oxidants (given as chlorine) | 0.3 |
| 9 | Arsenic | 0.1 |
| 10 | Cadmium | 0.0002 |
| 11 | Chromium (Total) | 0.5 |
| 12 | Copper | 0.5 |
| 13 | Lead | 0.0072 |
| 14 | Mercury | 0.03 |
| 15 | Nickel | 0.0086 |
| 16 | Tin | 1.0 |
| 17 | Vanadium | 4 |
| 18 | Zinc | 0.04 (4 for cooling waters) |
| 19 | PCBs | 0.003 |
| 20 | Petroleum hydrocarbons | 0.003 |
| 21 | Polyaromatic hydrocarbons Benzo(a)pyrene as a marker for all PAHs) | 0.03 µg.dm ⁻³ |
| 22 | Tributyl tin compounds | 5µg.dm ⁻³ |
| 22 | Total Suspended Solids | 35 |

Schedule 6

Standards for the analysis of discharges to Marine Waters

| Number | Parameter | Reference Number | Description |
|--------|---|---------------------|--|
| 1 | pH | NA | pH metre with data-logger. |
| 2 | temperature | NA | Digital thermometer with data-logger. |
| 3 | Biological oxygen demand (BOD5) | EN 1899: 1998 | Water quality - Determination of biochemical oxygen demand after n days (BODn). |
| 4 | Chemical oxygen demand (COD) | ISO 6060: 1989 | Water quality – Determination of the chemical oxygen demand. |
| 5 | Total Nitrogen | EN 12260:2003 | Water quality - Determination of bound nitrogen (TN _b), following oxidation to nitrogen oxides. |
| 6 | Total phosphorous | EN ISO 15681: 2004 | Water quality – Determination of orthophosphate and total phosphorus contents by flow analysis (FIA and CFA). |
| 7 | Adsorbable organically bound halogens (AOX) | EN ISO 9562: 2004 | Water quality - Determination of adsorbable organically bound halogens (AOX). |
| 8 | Chlorine dioxide and oxidants (given as chlorine) | DIN 38408-5 | German standard methods for the examination of water, waste water and sludge; gaseous components (group G); determination of chlorine dioxide (G 5). |
| 9 | Arsenic | EN ISO 17294-2:2004 | Water quality -- Application of inductively coupled plasma mass spectrometry (ICP-MS). Determination of 62 elements. |
| 10 | Cadmium | EN ISO 17294-2:2004 | Water quality -- Application of inductively coupled plasma mass spectrometry (ICP-MS). Determination of 62 elements. |
| 11 | Chromium (Total) | EN ISO 17294-2:2004 | Water quality -- Application of inductively coupled plasma mass spectrometry (ICP-MS). Determination of 62 elements. |
| 12 | Copper | EN ISO 17294-2:2004 | Water quality -- Application of inductively coupled plasma mass spectrometry (ICP-MS). Determination of 62 elements. |
| 13 | Lead | EN ISO 17294-2:2004 | Water quality -- Application of inductively coupled plasma mass spectrometry (ICP-MS). Determination of 62 elements. |
| 14 | Mercury | EN ISO 17852: 2008 | Water quality -- Determination of mercury -- Method using a combined preservation and digestion step followed by atomic fluorescence spectrometry. |
| 15 | Nickel | EN ISO 17294-2:2004 | Water quality -- Application of inductively coupled plasma mass spectrometry (ICP-MS). Determination of 62 elements. |
| 16 | Tin | EN ISO 17294-2:2004 | Water quality -- Application of inductively coupled plasma mass spectrometry (ICP-MS). Determination of 62 elements. |
| 17 | Vanadium | EN ISO 17294-2:2004 | Water quality -- Application of inductively coupled plasma mass spectrometry (ICP-MS). Determination of 62 elements. |

| | | | |
|----|--|--------------------|---|
| 18 | PCBs | EN ISO 6469: 1996 | Water quality – Determination of certain organochlorine insecticides, polychlorinated biphenyls and chlorobenzenes – Gas chromatographic method after liquid-liquid extraction. |
| 19 | Petroleum hydrocarbons | ISO 9377-2: 2000 | Water quality - Determination of hydrocarbon oil index – Part 2: Method using solvent extraction and gas chromatography. |
| 20 | Total Suspended Solids | EN 872:2005 | Water quality - Determination of suspended solids - Method by filtration through glass fibre filters |
| 21 | Tributyl tin compounds | EN ISO 17353: 2005 | Water quality - Determination of selected organotin compounds - Gas chromatographic method. |
| 22 | Polyaromatic hydrocarbons: Benzo(a) pyrene | EN ISO 17993: 2002 | Water quality - Determination of 15 polycyclic aromatic hydrocarbons (PAH) in water by HPLC with fluorescence detection after liquid-liquid extraction. |

Schedule 7
List of Priority Substances in the field of Water Quality

| | |
|----------------------------|---|
| Alachlor | Hexachloro-cyclohexane |
| Anthracene | Isoproturon |
| Atrazine | Naphtalene |
| Benzene | Nonylphenol |
| Brominated diphenylether | Octylphenol |
| Carbon tetrachloride | Pentachloro-benzne |
| C10-13 Chloroalkanes | Pentachloro-phenol |
| Chlorfenvinphos | Simazine |
| Chlorpyrifos | Tetrachloroeythlene |
| Aldrin | Trichloro-benzenes |
| Dieldrin | Trichloro-methane |
| Endrin | Trifluralin |
| Isodrin | Dicofol |
| DDT and para-para-DDT | Perfluorooctane sulfonic acid and its derivatives (PFOS) |
| 1,2-Dichloroethane | Quinoxifen |
| Dichloromethane | Dioxins and dioxin-like compounds (including PCDDs, PCDFs and PCBs) |
| Di(2-ethylhexyl)-phthalate | Aclonifen |
| Diuron | Bifenox |
| Endosulfan | Cypermethrin |
| Fluoranthene | Dichlorvos |
| Hexachloro-benzene | Hexabromocyclododecane (HBCDD) |
| Hexachloro-butadiene | Heptachlor and heptachlor epoxide |
| | Terbutryn |

Schedule 9

List of wastes estimated and generated

| No | Type of Waste | EW C code (from Commission decision 2000/532/EC establishing a list of wastes) | Quantity projected | Quantity generated | Waste carrier reg. No. Waste broker reg. No | Permitted disposal facility Permit number or details of disposal site (including overseas consignment note/ TFS permit Number [if applicable]). | Method of storage and containment for wastes retained on site |
|----------------------|---------------|--|--------------------|--------------------|---|---|---|
| W 1 | | | | | | | |
| W 2 | | | | | | | |
| W 3 | | | | | | | |
| W 4 | | | | | | | |
| W 5 | | | | | | | |
| | | | | | | | |
| Continue as required | | | | | | | |

[illegible]

Fig. S11.1: Site of installation, showing extent of area authorised for activity (outlined in red).

Schedule 11

Site Plan -

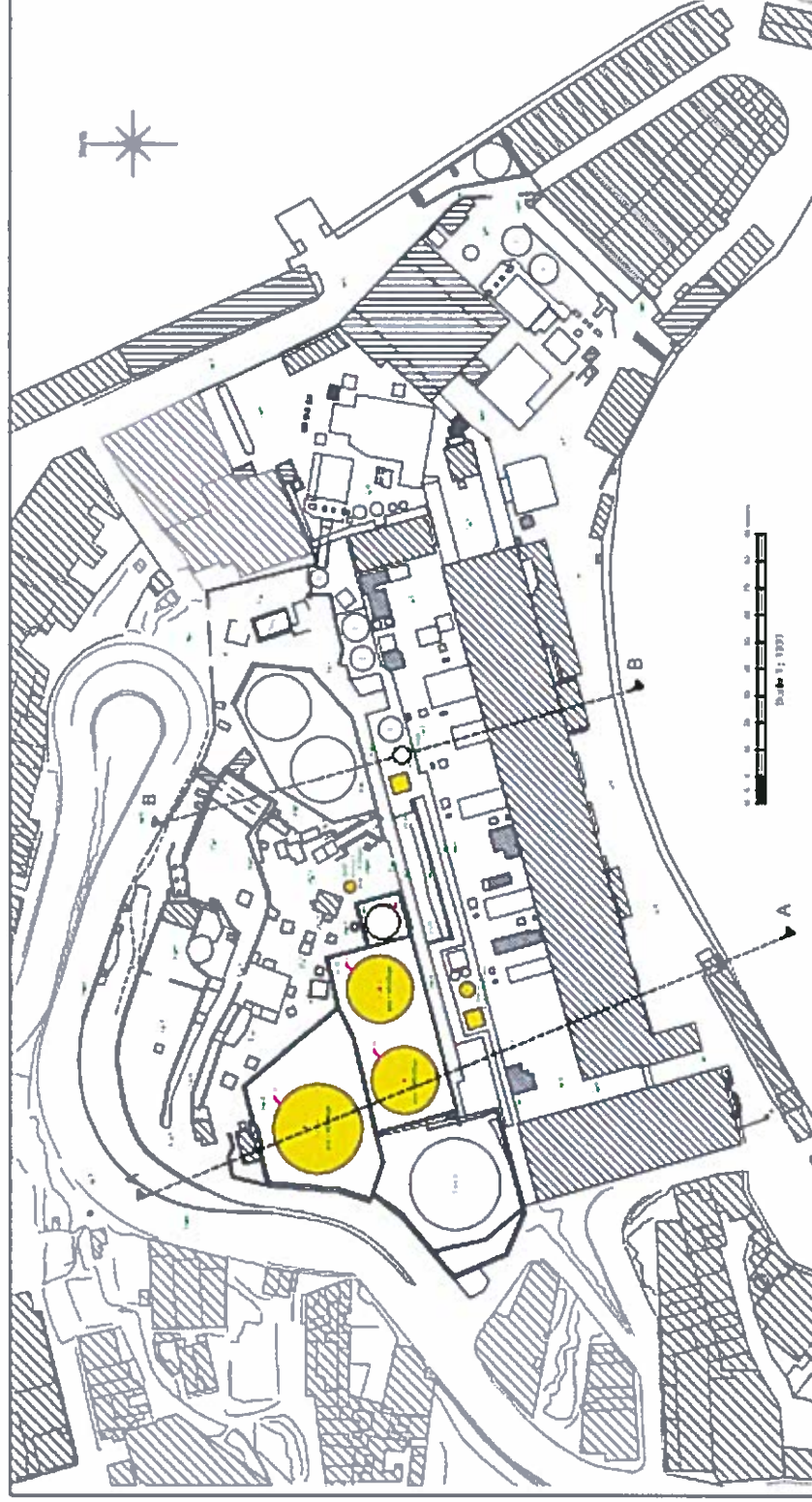


Fig. S12: structures permitted for decommissioning, demolition dismantling and removal

END OF PERMIT

