DEPARTMENT'S REQUIREMENTS

RICHMOND HILL INCINERATOR

(CONFORMED COPY SHOWING DOCUMENT STATUS AS AT JULY 2016)

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INTRODUCTORY NOTE TO THE 2016 CONFORMED COPY

The original Project Agreement (the "PA") was signed on 27 October, 2000. Since then:

- the functions of the Department of Local Government and the Environment have transferred to the Department of Infrastructure (the Department)
- ProjectCo changed its name from United Waste (Isle of Man) Limited to SITA Waste (Isle of Man) Limited on 5 February 2002 and then changed its name to SUEZ RECYCLING AND RECOVERY ISLE OF MAN LTD on 2 April 2016
- there have been several changes to the text of the PA as a result of variations and service changes.

This conformed copy shows the Variations and Services Changes which are current at 1 July 2016. These Variations have been embodied in the variation orders ("VO") of two Deeds of Variation, namely Deed of Variation 1 ("DofV1"), dated 1 February 2003 and Deed of Variation 2 ("DofV2"), dated 1 October 2014.

The effective dates for the changes to the PA which were recorded in DofV2 are given in DofV 2 clause 8 and the Appendices to DofV 2. Where a change has been made, a footnote to the principal definition and/or to the text affected shows which variation order and/or appendix number of DofV1 or DofV2 gave rise to the change.

While care has been taken in producing this document to capture all available information relating to changes to the original Project Agreement, the accuracy of this conformed copy is not warranted.

This document has been compiled for reference and administration purposes only and is not a substitute for the original documentation which records the agreement between the counterparties.

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2. Conforming Waste
3. The Architectural Concept Scheme
4. Geotechnical Investigations
5. The Planning Scheme Order
6. Memo on waste arisings
7. Planning Inspector's Report

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1 General

1.1 Introduction and Interpretation

This Document is the Department's Requirements for the purposes of the Project Agreement and shall be read construed and take effect accordingly.

The Project Agreement definitions and interpretation rules shall apply. For the purposes of the construction of these Department's Requirements no specific requirement shall limit the generality of any other.

Any discrepancy between the Department's Requirements and any other document forming part of the Project Agreement shall be dealt with in accordance with Clause 2.6 of the Project Agreement. For the avoidance of doubt, in the event of any inconsistency between the Department's Requirements and ProjectCo's Proposal, the Department's Requirements shall take precedence.

The Department accepts no liability for the accuracy of any information in accordance with Clause 12.11 of the Project Agreement.

No approval or acceptance or lack thereof by the Department, its staff, agents or advisors of ProjectCo's designs and/or specifications shall be deemed to vary the Department's Requirements unless expressly incorporated herein - or to limit or otherwise derogate from ProjectCo's obligations to comply therewith.

1.2 Definitions

Term	Definition
Animal Waste	Means waste, which has originated from: 1. Knackers yard 2. Veterinary practices 3. Whole Carcasses and which has been treated prior to delivery at the Facility to render it fit for incineration having been chopped or minced so that the maximum particle size of the waste will be 30-40 mm. Knackers yard waste will consist of: • Slaughterhouse waste, including blood products. • Meat cutting plant waste • Fallen stock sources, including cattle slaughtered under the Over Thirty Months Scheme

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Term	Definition
	Waste from veterinary practices consisting of • dead pet animals • waste with characteristics similar to that of human clinical waste, i.e. Group A waste, see Clinical Waste definition.
Architectural Concept Scheme	Means the architectural solution as developed by Savage & Chadwick Architects Ltd as described in section 3.3.1 of the Department's Requirements and as set out in Appendix 3 to the Department's Requirements
Bottom Ash	Means the following fractions: • The solid remains of the Primary and Secondary Waste as extracted at bottom outlet of the incinerators • Boiler ashes, i.e. any ash collected from cleaning the boiler systems
Civil Works	Means the Facility except the Mechanical and Electrical equipment installed for the purpose of receiving, handling and treating waste in accordance with the Project Agreement, including but not limited to enabling demolition and site preparation works, landfill monitoring, remediation works, buildings including mechanical and electrical services, structure, site infrastructure, landscaping, architectural works.
Clinical Waste	Clinical Waste comprises groups A-E as described below: • Group A: Human tissue, including blood (whether infected or not), and all related swabs and dressings; material other than linen from cases of infectious diseases; soiled surgical dresses, swabs and other soiled waste from treatment areas. • Group B: Discarded syringe needles, cartridges, broken glass and any other contaminated disposable sharp instruments or items. • Group C: Microbiological cultures and potentially infected waste from pathology departments (laboratory and post mortem rooms) and other clinical or research laboratories. • Group D: Certain pharmaceutical products and chemical wastes. Certain high-risk pharmaceutical waste (cytotoxic and antineoplastic) will be taken out and will not be considered Conforming Waste. General pharmaceutical waste is Conforming Waste.

Term	Definition
	• Group E: Used disposable bedpan liners, urine containers, incontinence pads and stoma bags.
Environmental Assessment	Means the Environmental Assessment document prepared for the public inquiry into the draft Planning Scheme Order at Richmond Hill.
EU Waste Incineration Directive	Means the Common position (EC) adopted by the Council with a view to the adoption of a Directive of the European Parliament and of the Council on the incineration of waste, dated 25 November 1999, Number ENV 313, CODEC 524, Ref. 11472/1/99.
ID fan	Means the Induced draught fan
IPC Guidance Note	Means Chief Inspector's Process Guidance Note - Techniques for Integrated Pollution Control Issues Series 2(S2) December 1995.
Municipal Solid Waste or MSW	Municipal Solid Waste or MSW means waste collected from households in the Isle of Man as well as similar waste delivered to the Facility either from industry or from the four or any future civic amenity sites on the Island.
MCC	Means Motor Control Centres
Non-Conforming Waste	Means waste, which is not Conforming Waste.
O&M System	Means a computer-based system for management of operation and maintenance of the Facility
Onerous Licence Conditions[1]	means the following conditions in the [Licence][2]: Additional analysis/sampling requirements: **6.1.3:** PAH and dioxin-like PCBS emissions – each twice per year **2.6.6**: metals, dioxins and PCBS in Bottom Ash and APCR - each four times per year

[1] This definition was inserted pursuant to Variation Order No. 17, Appendix 14 of DofV 2.
[2] This term is not defined in the PA and was not defined in Variation Order No. 17. It is assumed that the parties intended to refer to the "Regulator's Licence" as defined in clause 1 (Definitions) of the PA. This refers to "any licence issued or to be issued by DOLGE pursuant to Part IV of the Public Health Act 1990...". Section 57 of the Public Health Act 1990 requires a licence for the use of any plant or equipment for the purpose of disposing of controlled waste or of dealing in a prescribed manner with controlled waste.

Term	Definition
	2.3.8b: systematic oil sampling and PCBS in oil – once per month additional requirements before take over: **1.1.3k**: justification of gas oil for space heating **1.1.3j**: report on the potential use of natural gas **1.1.3n**: Plume visibility Management Plan **1.1.3p**: HF monitoring **9.8**: size distribution of particles additional analysis before Take Over: **6.1.3**: PAH and dioxin-like PCBS emissions **2.6.6:** metals, dioxins and PCBS in bottom ash and APCR additional analysis first year of operation: PAH and dioxin-like PCBS emissions – two times
Planning Inspector	means the person to be appointed by the Governor in Council to conduct and report on the inquiry into the submission of particulars of reserved matters and restoration listed in the Planning Scheme Order
Planning Inquiry	means the inquiry to be conducted by the Planning Inspector into the submission of particulars of reserved matters and restoration listed in the Planning Scheme Order
Planning Scheme Order	Means the statutory document no. 537/98 titled 'THE BRADDAN (MIDDLE FARM) PLANNING SCHEME ORDER 1998' and signed 16 September 1998 by R K Corkhill MHK. The document is enclosed as Appendix 5.
Potentially Onerous	means the following conditions in the Waste Disposal Licence[4]:

[4] See footnote 2 above as to meaning of "Waste Disposal Licence".

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Term	Definition
Conditions[3]	**2.2.6**:it is a condition that low sulphur gas is used for the incineration process **2.10.8**: it may become a condition that calibration of emission measurement equipment shall be in accordance with stricter CEN standards.
Primary Waste	Means the following waste fractions: • Municipal Solid Waste • Shredded tyres • Sewage Sludge Screenings and bio-pellets derived from sewage sludge[5]
Rejects	Non-Conforming Waste
Residues	Means the following fractions: • Bottom Ash • Grate riddlings • Flue gas treatment reaction products as precipitated in the flue gas treatment systems for Primary and Secondary Waste • Scrap Metal
Requirements	Means the requirements, performance specifications or other criteria referred to as such in the Department's Requirements.
Secondary Waste	Means the following waste fractions: • Sewage Screenings • Animal Waste • Clinical Waste, group A-E • Waste Oil
Sewage Screenings	Means screenings as generated and collected from a waste water treatment plant on the Isle of Man. This wastewater treatment plant receives and treats normal municipal wastewater as generated by the community and received at the wastewater treatment plant.
Spot-Check	Discharge of Primary Waste at a designated discharge point for

[3] This definition was inserted pursuant to Variation Order No. 17, Appendix 14 of DofV 2.
[5] This definition was amended by Appendix 9, paragraph 1.1 of DofV2 dated 1 October 2014.

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Term	Definition
Inspection	spot-checking including the registration of inspection results
Whole Carcasses	Cattle suspected or diagnosed by veterinary authorities to suffer from diseases, which necessitate direct transport to and whole incineration at the Facility.

1.3 Department's Requirement Document Structure

The Department's Requirement comprises 8 sections and 7 appendices.

Section 1 contains General Information

Section 2 contains the Department's Requirements for Mechanical and Electrical (M&E) equipment

Section 3 contains the Department's Requirements for Civil Works.

Section 4 contains the Department's Requirements common for M&E equipment and Civil Works.

Section 5 contains the Requirements in relation to the Emergency Plan.

Section 6 contains the Health, Safety and Welfare Statement.

Section 7 contains the Facility Handback arrangements.

Section 8 deals with Public Relations.

The Appendices are:

1. Capacity Diagram
2. Conforming Waste
3. Architectural Concept Scheme
4. Geotechnical Investigations
5. The Planning Scheme Order
6. Memo on waste arisings
7. Planning Inspectors' Report

1.4 Scope of Supply

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The Facility shall throughout the Trial and Operating Periods safely and reliably receive and incinerate Conforming Waste in accordance with the Requirements of the Project Agreement and in compliance with Approvals.

To meet this Requirement the Facility shall be equipped with facilities for:

- Reception, intermediate storage and incineration of the Primary Waste.
- Reception, intermediate storage and incineration of the Secondary Waste.
- Treatment and handling of Rejects, Residues and consumables
- Flue gas treatment
- Energy recovery, energy production, energy dissipation etc.

The scope of supply includes complete management, design, construction, testing, commissioning, operation, maintenance and handback of the Facility.

The scope of supply includes Mechanical and Electrical (M&E) equipment enabling the Facility to receive, handle and incinerate Conforming Waste and to safely handle Residues, emissions, energy production etc.

The scope of supply includes the management, design, construction, testing and commissioning of all Civil Works necessary for appropriately housing the incineration plant, including site clearance, enabling works, remediation of Site contamination, demolition, landscaping, roadworks, buildings and excavations, drainage, concrete structures, steel structures, interior and exterior finishes, mechanical, electrical and sanitary services, lifts, furnishing etc., in a manner which will reflect the Departments' aspiration to achieve a landmark development.

1.4.1 Design and Build

Mechanical and Electrical (M&E) Equipment

The Mechanical and Electrical equipment shall include:

An incinerator system with all auxiliary equipment for treatment of Primary Waste according to section 2.1, including:

- Reception and storage facilities
- Size reduction equipment and crane facilities
- Encapsulation facilities
- Incinerator unit and steam boiler with energy recovery
- Flue gas treatment
- Steam turbine/generator set for conversion of the energy content in the steam production into power.

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- Condensate system
- Handling of Residues

An incineration system with all auxiliary equipment for treatment of Secondary Wastes according to section 2.2, including:

- Reception and storage facilities
- 300 Wheelie Bins
- Waste feeding systems
- Incinerator unit(s)
- Energy recovery and dissipation
- Flue gas treatment
- Handling of Residues

Common systems according to section 2.3, including:

- Weighing facilities
- Washing/vacuum facilities
- Laboratory facilities
- Electrical Equipment
- CMS System

All Mechanical & Electrical equipment and all auxiliary equipment as set out in section 4.

Civil Works

The Civil Works shall include the following items.

- All civil engineering and building works associated with the Facility including accommodation buildings, supporting structures, foundations, pipeline and other service utilities, demolition of the existing pulverisation plant and removal of existing services to pulverisation plant.
- Site roads, roadway lighting and pedestrian access to all parts of the Facility including access stairways.
- Landscaping of the Site.
- All drains, manholes and/or soakaways to deal with surface water run-off and internal building drainage and foul sewage.
- Security fencing including access gates.
- Site painting of the complete Works.
- Site remediation as agreed following the Execution Date.
- Sufficient car park for 25 visitors' cars and a single coach shall be provided. There shall be adequate areas to safely enable a coach to turn and park.

Documentation

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- Reporting
- Construction Documents

Management

- Project Management
- Meetings with and presentations for the Department's Representatives

1.4.2 Take Over and Final Take Over

Take Over and Final Take Over of the Facility according to the obligations as set out in the Project Agreement.

1.4.3 Operation and Maintenance of the Facility

The operation and maintenance shall include:

- Operation and maintenance of the Facility until the Expiry Date.
- The provision of all consumables, Wear Parts and Strategic Spare Parts.
- Facilities for maintenance, including workshops and replacements due to corrosion, wear, tear and obsolescence so that the Facility is at all times Available.
- Reporting
-
- Appropriately qualified Staff for management, maintenance and operation.
- Meetings with the Department's Representatives

ProjectCo shall comply with all conditions of the Licence, including for the avoidance of doubt the Onerous Licence Conditions and the Potentially Onerous Conditions[6].

1.4.4 Handback of the Facility

At the Expiry Date the Facility shall be handed back to the Department.

The Facility handback shall be regulated by the Handback Obligations, ref. Schedule 17 of the Project Agreement. The Requirements in relation to handback are further defined in section 7 of the Department's Requirements.

1.4.5 Supply Boundaries

[6] This provision was inserted pursuant to Variation Order No. 17, Appendix 14 of DofV 2. Note that "Licence" is not defined in the PA and was not defined in Variation Order No.17. See footnote 2 above in relation to meaning of "Licence".

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The supply boundaries are described below. Utilities and services connections to the Facility are to be included in the Works unless otherwise specified.

Waste

Conforming Waste is the responsibility and property of ProjectCo when it passes through the Delivery Point.

Rejects

- If ProjectCo receives Rejects the Department will notify ProjectCo of an alternative disposal i.e. an inert landfill or transfer station (mixed waste) on the Isle of Man.
- The cost of alternative disposal shall be paid by the Department on the condition that ProjectCo has identified the Reject deliverer.
- The cost of alternative disposal shall be paid by ProjectCo if the Reject deliverer is unknown.

Energy Production

- ProjectCo shall deliver electricity produced to the Manx Electricity Authority, MEA in accordance with the MEA Agreement as attached in draft to the Project Agreement, Schedule 6.
- ProjectCo shall dissipate heat to the ambient air via air-cooled condensers as specified in these Department's Requirements.

Residues and waste water

- Waste water and any liquid effluent from the Primary and Secondary Waste incineration plant shall be utilised in the process where possible.
- Any surplus waste water and any surplus liquid effluent from the Primary and Secondary Waste incineration plant shall be collected, treated and disposed of subject to agreement by ProjectCo with the Department of Transport and the relevant local drainage authority.
- Foul sewage and surface water roof and pavement runoff from the Facility and the Site shall be collected, treated and disposed of subject to agreement by ProjectCo with the Department of Transport and the relevant local drainage authority.
- ProjectCo shall deliver Bottom Ash to a final deposit at a designated landfill on the Isle of Man. This will be at Turkeyland near the airport.
- Separated Scrap Metal shall be disposed of or sold by ProjectCo.
- Reaction products from flue gas treatment shall be delivered by ProjectCo to a final deposit, outside the Isle of Man.
- Flue gas shall only be emitted from the stack.

Public Utilities and other Services

- Electricity sales and purchase as agreed between ProjectCo and the MEA on the basis of Schedule 6 to the Project Agreement.

ProjectCo shall arrange, accommodate and pay the installation of all required services to the Site including gas, water, electricity (subject to the agreement with the MEA) and communication.

ProjectCo shall negotiate and have included the cost of the provision of all other services to the Site with the relevant authorities.

ProjectCo shall provide all necessary reasonable access to the Site and across the area available for construction purposes for the representatives of the public utilities to execute the work where required and shall permit and co-ordinate such work to proceed without unreasonable obstruction or delay.

ProjectCo shall inform the Department's Representative in writing of all arrangements with representatives of the public utilities in relation to the services required and the costs associated with the same.

Prior to commencing any Works on the Site ProjectCo shall appraise the public utilities / statutory authorities of the proposed layout and construction of the Works and clarify with them the existence or not of any services or plant which they might have on Site and make arrangements, at ProjectCo's cost, for suitable diversion etc. as required prior to commencement of any Works on site.

1.4.6 Preparation for District Heating Plant and Plume Visibility

As part of the proposal the Tenderer shall price certain defined optional proposals as set out below.

1.4.6.1 Preparations for District Heating Production

Preparation for district heating production does not include design, building, operation and maintenance, but includes the preparations that are necessary to make any later supply of equipment for district heating production practicable.

- Preparations in the M&E equipment include e.g. establishment of one blanked turbine bleed and sizing of the steam turbine pass out branch feeding the deaerator allowing extra steam to be extracted from the turbine as well as necessary preparations of the CMS System.

- Preparations in the Civil Works include space provision for a layout for two district heating heat exchangers and all necessary piping and auxiliary equipment.

- Preparations of the process optimisation includes optimisation of the energy recovery programme by supplying relevant heat balances for the turbine/generator set including future district heating heat exchangers.

1.4.6.2 ~~Plume visibility~~Dioxin Monitoring

~~The Tenderer shall include in his Proposal the Works and Services of complying with the following BATNEEC interpretation of condition 5(11) of the Planning Scheme Order:~~

~~In the daytime, the plume from the stack must not be visible unless the humidity of the ambient air at the actual ambient air temperature is higher than indicated by the relative humidities of the following table.~~

~~Daytime is defined as the time interval from half an hour before sunrise to half an hour after sunset.~~

~~Temperature, °C~~	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~	~~7~~	~~8~~	~~9~~	~~10~~	~~11~~	~~12~~	~~13~~	~~14~~
~~Relative humidity, %RH~~	~~29~~	~~42~~	~~53~~	~~63~~	~~71~~	~~78~~	~~84~~	~~88~~	~~92~~	~~95~~	~~97~~	~~98~~	~~99~~	~~100~~

~~For temperatures between the listed values, relative humidity limits are obtained by linear interpolation between adjacent points.~~

~~No visible plume is allowed at ambient temperatures higher than 14°C.~~
~~A visible plume is allowed at ambient temperatures lower than 1°C.~~

~~A meteorological station for measurement of ambient temperature and relative humidity, including data logging and reporting facilities shall be included in the supply. This station shall be installed at the top of the chimneystack and the measurement of ambient temperature and relative humidity shall be continuously and easily accessible on the CMS System.~~

~~The Facility should be designed and equipped so that, at any time, the operator can make the temperature and humidity of the flue gas leaving the stack fulfil the following condition,~~

~~Temperature (°C) > 10 * water content (vol. %) – 5~~

~~In the daytime, whenever the plume is visible or there is a risk of the plume being visible, the Facility should be operated so that the condition is fulfilled (for the temperature and water content of the flue gas leaving the stack).~~

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~~The instrumentation and software needed to verify the fulfilment of the condition should be included in the supply.~~

Complete supply of equipment, strategic spare parts, two spare probes, installation, commissioning, operation and maintenance related with continuous dioxin monitoring on both Primary and Secondary Waste streams is included in the Scope of Supply. The equipment shall be installed at the base of the stack and be fully integrated with the remaining plant parts (e.g. CMS and cooling water systems).[7]

1.5 Key Technical Requirements and Standards

1.5.1 Key Performance Criteria

ProjectCo shall ensure that the Facility complies with the following for the Agreement Period:

- ProjectCo must comply with the conditions contained in the Planning Scheme Order.
- ProjectCo must comply with all Approvals and Applicable Laws.

ProjectCo is responsible for the safe and reliable disposal of the waste delivered to the Facility. The Mechanical and Electrical equipment shall be designed to treat Conforming Waste and be flexible towards handling variations in calorific value and waste composition and quantity.

ProjectCo shall take into account the importance of both distant and immediate views of the Site. ProjectCo shall adopt an environmentally friendly approach to it's design and his selection and use of materials.

ProjectCo shall include for all aspects of the temporary and permanent design and construction of the Civil Works. The permanent design and layout of the buildings and site infrastructure shall be such that all operation and maintenance activities can be carried out safely in compliance with all relevant regulations as described in the Project Agreement.

[7] Variation pursuant to clause 7.1 of DofV2 and VO 12 (Appendix 10 of DofV2).

1.5.2 Operational Availability of the Facility

In relation to the operational availability of the Facility the following shall apply:

The Facility shall at all times during the Operating Period be able to receive and treat the Primary and Secondary Waste as delivered and dispose of the Residues and Rejects.

1.5.3 Compliance with standards

ProjectCo shall comply with clause 4.8 of Schedule 2 of the Project Agreement.

ProjectCo shall also comply with Directive 91/368/EEC (The Machinery Directive), the 89/368/EEC EMC Directive, EMAS Validation, Requisite Consents and IPC Guidance Note.

The Facility shall be designed and constructed in accordance with the following:

M&E Equipment: Recognized and generally accepted European national standards. In advance of procurement of M&E Equipment ProjectCo shall advise the Department's Representative of the proposed standards which they propose to use.
Civil Works: British Standards and Codes of Practice

1.5.4 Standardisation of Components

Component selection shall be standardised where practicable and at justifiable cost, consistent with D&B Subcontractors guarantees.

To ensure consistency in the design and appearance of the M&E equipment and the Civil Works ProjectCo shall comply with the common Requirements in section 4.

1.5.5 Environmental Standards

1.5.5.1 Odour

Notwithstanding any other applicable requirement (e.g. planning/Approvals) odour shall only be acceptable where it cannot be avoided by applying Prudent Engineering and Operating Practices.

ProjectCo shall ensure that exposure that Facility Staff and any other people at the Facility are not exposed to odours violating Approvals.

1.5.5.2 Acoustic Noise

Noise shall be reduced by applying Prudent Engineering and Operating Practices.

All Health and Safety Obligations in the Project Agreement shall be complied with.

Internal Noise

Noise within buildings shall meet all relevant Health and Safety Obligations with regard to noise levels, audible tone components, impulse character and employee exposure levels.

External Noise

Noise emissions from the building and civil construction works shall be controlled. Noise emissions from the Site or from the Facility shall at any time in the Agreement Period meet the requirements specified in the Approvals.

1.5.5.3 Dust

Notwithstanding any other applicable requirement (e.g. planning/Approvals) dust and any other airborne particulates shall only be acceptable where it can not be avoided by applying Prudent Engineering and Operating Practices.

1.5.6 Quality Assurance

ProjectCo shall comply with EMAS conditions and obtain an EMAS Validation which shall be maintained until Expiry Date

ProjectCo shall operate an independently accredited Quality Assurance System which shall be in accordance with IS EN ISO 9000 or equivalent. The system procedures shall be demonstrated to control and record an audit of the production of all documents, designs, drawings, specifications, records, test certificates and other Construction Documents prepared by ProjectCo.

The Quality Assurance System shall be designed to control the activities at all stages of the design and build work as well as operation and maintenance of the Facility, to prevent quality problems and ensure compliance with the Department's Requirements, which shall include: planning and performance monitoring; maintenance of programme and targets; and the timely management of reports and procurement procedures.

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1.6 Waste Arisings

Reference is made to Appendix 6 and to the definitions of Primary Waste and Secondary Waste.

1.6.1 Municipal Solid Waste

The annual Municipal Solid Waste arisings and associated average Net Calorific Values are estimated to be:

Time	Annual MSW arisings	Net Calorific Value
Take Over	55.000 tonnes	9,5 MJ/kg
Maximum in the Operating Period	65.000 tonnes	10,7 MJ/kg

The Local Authorities and its contractors shall deliver Municipal Solid Waste to the Facility.

The Facility shall be designed to receive, handle, incinerate and dispose of all Municipal Solid Waste arisings for the duration of the Operating Period.

1.6.2 Clinical Waste

The annual amount of Clinical Waste delivered to the Facility is expected to be approximately 250 tonnes.

No data is available to the further breakdown of this amount of waste into the defined waste groups A-E as defined below. The monthly amounts vary by a factor of 2.

Delivery of Clinical Waste will take place on a continuous basis as generated at the Isle of Man. The producers of Clinical Waste do not have cold store facilities for their waste.

Delivery of all Clinical Waste will take place in Wheelie Bins.

Clinical Waste is part of the Secondary Waste stream.

Clinical Waste will be collected and delivered to the Facility by or on behalf of the Department.

A colour- and bar-coding scheme shall be designed and agreed between ProjectCo and the Department during the Design Period in order to identify the Wheelie Bins for the various waste groups.

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1.6.3 Animal Waste

~~The annual Animal Waste arisings delivered to the Facility is estimated to be 4,000 – 4,500 tonnes, ref. C.E.Ashworth's report.~~Animal Waste generated on the Island amounts to 4,000-4,500 tonnes per annum, ref. C.E.Ashworth's report. Under normal circumstances, Animal Waste will be treated on the adjacent facility, the AWPP (Animal Waste Processing Plant). During Unplanned Outages at the AWPP, the Facility shall be readily (48-72 hours from notification) available to receive and treat Animal Waste. ProjectCo shall inform the Department's Representative of agreements made between the operator of the AWPP and ProjectCo so that the Department's Representative always will know in advance, when the Facility will be receiving Animal Waste[8].

The estimated peak weekly value is 120 tonnes.

The estimated number of Whole Carcasses to be incinerated is one per month on average.

Delivery of the Animal Waste will take place in Wheelie Bins, however, Whole Carcasses will be delivered in "body bags" or similar packaging.

The Net Calorific Value of the Animal Waste fraction could vary. However, the data currently available indicate that the raw animal remains will contain typically 60-80 % water, 12-15 % fats (CV 38-40 MJ/kg) and 22-30 % bone/proteins (CV 20-25 MJ/kg). The expected density of the minced Animal Waste fraction is expected to be in the interval from 850 to 1050 kg/m^3.

A typical Net Calorific Value of a Whole Carcass could be 11 MJ/kg.

Wheelie Bins should be colour- and bar-coded so as to identify the bins for this particular waste fraction only.

Animal Waste will be collected and delivered to the Facility by or on behalf of the Department.

ProjectCo shall supply, maintain and replace all Wheelie Bins for Animal Waste for the Trial and Operating Period.

ProjectCo shall be entitled to payment for receiving and treating Animal Waste and disposing of any related process residues at the rate per tonne used to calculate the Operating Fee, as varied under the Project Agreement[9].

1.6.4 Sewage Screenings

[8] this clause has been amended by clause 2.6.1 of DofV2 dated 1 October 2014
[9] This paragraph is added pursuant to clause 10 of DofV2 dated 1 October 2014

The presently expected amount of Sewage Screenings is 0.75 m^3/day with a dry matter content of 40% during periods of dry weather flows. This dry weather flow figure is expected to increase to 1.15 m^3/day within the Agreement Period. The amount of Sewage Screenings can increase to up to five times the dry weather flow amounts during periods with storm flow conditions.

Wheelie Bins should be colour coded and bar code labelled to facilitate identification of the contents of any Wheelie Bin.
Sewage Screenings will be collected and delivered to the Facility by or on behalf of the Department.

ProjectCo shall supply, maintain and replace all Wheelie Bins for Sewage Screenings for the Trial and Operating Period.

1.6.5 Waste Oil[10]

The present expected amounts of mineral oils are 200,000-250,000 litres /year. This figure may increase within the Agreement Period.

Included in the above figure is approximately 100 tonnes per annum of vegetable oils. The figure may increase within the Agreement Period. Delivery of ~~the Waste Oil~~vegetable oil shall take place in Wheelie Bins with the vegetable oil mixed with animal waste.

Delivery of the mineral oil will take place in ~~drums, tankers or~~ containers specifically designed and marked for that purpose. Waste Oil will be collected and delivered to the Facility by or on behalf of the Department~~.~~; and

~~Drums, tankers or containers~~Containers for ~~Waste~~Mineral Oil shall be supplied, maintained and replaced by the Department throughout the Trial and Operating Period. The containers shall be as described in SITA's email 'SITA.KV346.email' of 16 September 2002 or of materially identical specification.

Waste Oil shall be considered as part of the Secondary Waste.

Waste Oil shall form an additional support fuel for the Secondary Waste Incinerator[11].

1.6.5A Waste Oil Gate Fee[12]

[10] This clause has been amended by Appendix 11, clause 1 of DofV2 dated 1 October 2014. It has effect from and including 30 September 2013. The D&B Contract price, Availability Fee, Operating Costs or the Programme described in clauses 3.22-3.24 of the Project Agreement shall not be affected by this variation.
[11] Variation Order 16, Appendix 13 of DofV 2
[12] This clause has been added by Variation Order 16, Appendix 13 of DofV 2. This variation shall have effect from and including 11 August 2004. The D&B Contract Price shall not be affected by this variation. The Availability Fee shall not be affected by this variation. The Programme described in clauses 3.22-3.24 of the Project Agreement shall not be affected by this Variation.

(a) All Waste Oils shall be sampled before incineration in accordance with the agreement reached under the Waste Disposal Licence[13].

(b) Should ProjectCo be required by a relevant authority to undertake additional tests and/or analysis of Waste Oil, any additional cost incurred shall be payable by the Department in accordance with the Project Agreement.

(c) Requests for reimbursement under paragraph 1.6.5A(b) above shall be presented by ProjectCo at the end of the relevant Operating Year as part of the Price Review.

(d) The Operating Cost for waste oil shall be £0.00 per ton.

(e) ProjectCo shall implement the Waste Oil Sampling Safe Working Procedure attached to Appendix 13 of the DofV 2 (and also included as Appendix 8 of the Project Agreement).

1.6.6 Tyres

There is no available data on the actual quantity of this waste.

Shredded tyres from the islands' vehicles including those generated during the various motor sport activities held regularly in the Isle of Man will be delivered by the Department to the Facility.

Shredded tyres shall form part of the Primary Waste stream.

ProjectCo shall estimate the quantity of this waste on the basis of an appropriate lesser mileage per vehicle than that of the United Kingdom.

ProjectCo shall liase with the Department and agree a specification for the extent and type of shredding.

1.7 The Site

[13] NOTE: Waste Disposal Licence is not defined, either in the Project Agreement, the Department's Requirements or in the DoV2 which introduced this clause. See footnote 2 above as to meaning of "Waste Disposal Licence".

1.7.1 Geotechnical Investigations

As part of the Environmental Assessment, the Department arranged for a geotechnical investigation of the Site including boreholes and laboratory tests. The location of the boreholes and results of the investigation are presented in the geotechnical interpretative report no NH20033/D2/2, December 1997 by Hyder Consulting, contained in Appendix 4 of these documents. This information is supplemented by ground investigation reports no. 97/1202 and 97/1287 prepared by Geotechnics ltd. In addition, borehole monitoring data produced by the Isle of Man Government analysts Laboratory for boreholes BH201 to BH 211 inclusive, BH213 and BH215 is available.

While the information contained in the above documentation is believed to have been recorded with all reasonable care and diligence, ProjectCo's attention is drawn to

1. Clause 12 of the Project Agreement
2. Schedule 4
3. The D&B Obligations contained in Schedule 2 of the Project Agreement.

ProjectCo's attention is drawn to these Project Agreement conditions since the Department is not in a position to warrant that the information contained in the documentation listed above is accurate or will satisfy the full requirements of the specific designs of ProjectCo. The information mentioned above and any associated drawings is intended to supplement the information to be obtained by ProjectCo as required below and does not in any way relieve ProjectCo of it's obligation to obtain his own information regarding details of the Site.

ProjectCo shall examine the ground investigation Interpretative report no NH20033/D2/2 and other data, make it's own interpretation of the results and carry out any additional investigations that may or may not be necessary to obtain design parameters for geotechnical calculations and design of the foundations to all structures, buildings, roadways, footpaths and hard-standing areas. Calculations shall take into consideration the worst conditions which may occur during the construction and the life of the Works. Design calculations shall be made in accordance with the following British Standards and relevant Codes of Practice or equivalent:

- BS 5930 Site Investigations
- BS 1377 Methods of Tests for Soils for Civil Engineering Purposes
- BS 8004 Foundations

ProjectCo shall note the requirement for specialised foundations / Temporary Works for construction of the bunker sub-structure and for measures (permanent and temporary) to control groundwater and possible landfill gases generated in the landfill adjoining the Site.

1.7.2 Site Possession and Contamination responsibility

1.7.2.1 Site possession

Refer to the Project Agreement for the definition of Site. The Site plan is attached to Schedule 4, part 1 of the Project Agreement.

In relation to site possession the following procedure shall apply:

1. At the Execution Date ProjectCo shall arrange for a Site survey to be carried out in conjunction with the Department in order to determine the boundary of the Site with the existing adjacent Middlefarm landfill.
2. Once the boundary of the landfill has been established, ProjectCo shall erect a temporary demarcation.
3. The Remediation Works will be carried out.
4. When the Remediation Works are completed and before the Effective Date a fence shall be erected.
5. The area delineated by this fence and the other relevant Site boundaries will be the area available for the development of the Facility.
6. ProjectCo shall, to the extent they feel necessary, arrange for a topographical survey of the area defined above related to ordinance datum. This survey plan shall be used for the design and layout of the Facility.

1.7.2.2 Contamination responsibility

1. The Department shall be responsible for environmental contamination including pollution of the Middle River by pre-existing waste in the adjacent landfill for the Agreement period. ProjectCo shall be responsible for any environmental contamination caused by its negligence in carrying out the Works and the Services.
2. Refer to Department's Requirements Clause 3.1.7in relation to contamination of the site and/or Facility by the adjacent landfill site.

1.8 Planning

The Planning Scheme Order is attached to Appendix 5 of the Department's Requirements.

Article 2(2) of the Planning Scheme Order grants the Department planning approval for the Facility subject to the conditions in Schedule 2 of the order, which include a condition (3) requiring approval of reserved matters by the Governor in Council.

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All of the conditions set out in schedule 2 of the Planning Scheme Order shall be satisfied and complied with by ProjectCo. The permitted development is described in Schedule 1 of the Planning Scheme Order.

The permitted development shall not be commenced unless the Department has submitted particulars of the Reserved Matters listed in Condition 3 of Schedule 2 of the Planning Scheme Order and such particulars have been approved by the Governor in Council.

ProjectCo shall prepare the particulars of all the Reserved Matters, (the PSO Application) as set out in Condition 3 in such a way that they can be directly submitted to the Governor in Council by the Department. As part of the PSO Application ProjectCo shall prepare a submission of particulars of restoration as set out in condition 8 (1) of the Planning Scheme Order in such a way that they can be directly submitted to the Governor in Council by the Department.

ProjectCo shall liase with the Department and establish a detailed programme of work for the preparation and submission of the PSO Application. This shall include the following.

1. Establish and follow the procedure for the application. This is likely to be the normal procedure for applications – refer to the 1982 Development Plan Order Schedule 1 para 8 applied by article 2(3) of the Planning Scheme Order.

2. Establish the form and content of the application including how the particulars of the reserved matters are to be presented and submitted. This shall probably be a combination of letters, drawings, statements of case and expert proofs of evidence. ProjectCo shall prepare the draft and final PSO Application. ProjectCo shall appraise the Department and its Representatives on the progress and content of the application at formal meetings held once every 3 weeks for the period of the PSO Application preparation.

3. Establish the nature of any special presentational requirements, which the Department may have including models and photomontage presentation and prepare them accordingly.

4. The Governor in Council will appoint an Inspector to hold an Inquiry into the PSO Application and consider evidence offered. As a result of this Inquiry the Inspector will prepare a report recommending that the PSO Application be approved or rejected. The Inspector will not recommend a conditional approval. ProjectCo shall establish and carry out all requirements for their attendance at the Inquiry including all expert witnesses, presentation of their PSO Application and the answering of all questions and clarifications as may be sought by the Inspector or others.

5. ProjectCo shall liase with the Department and agree a timescale for the preparation of the PSO Application in draft format. This draft application shall be prepared by ProjectCo in close consultation with the Department. As part of this process the

Department may wish to consult interested parties such as Braddan Commissioners and other Government Department's such as the Department of Transport. ProjectCo shall participate fully in this process with the Department and its representatives and finalise the PSO Application accordingly.

6. ProjectCo shall note the anticipated timescale as set out in the Project Agreement Clause 4.2.

It shall be ProjectCo's responsibility as agent for the Department and at ProjectCo's cost to determine what is required to satisfy each of the reserved matters and to gain approval thereof by the Inspector.

2 Department's Requirements for M&E Equipment

The Department's Requirements for M&E equipment are divided into the following sub-sections:

- Equipment for Primary Waste (2.1).
- Equipment for Secondary Waste (2.2).
- Common systems for the Facility (2.3).

2.1 Equipment for Primary Waste

2.1.1 Capacity

The capacity of the equipment for treatment of Primary Waste shall be defined by the constraints in the Capacity Diagram.

The Nominal Load Point is defined as follows:

- 8.25 metric tonnes per hour
- Net Calorific Value of 10.7 MJ/kg.

The annual capacity of the equipment for treatment and incineration of Primary Waste shall be no less than 65,000 tonnes.

2.1.2 Reception and Storage Facilities

ProjectCo shall design and construct the reception and storage facilities so as to execute all operations necessary for receiving and transferring the waste with the maximum reasonable speed and the minimum inconvenience and delay to the Department and its contractors and any other authorised users of the Facility.

In accordance with the Project Agreement, ProjectCo shall regulate from the entrance to the Delivery Points the arrival and departure of all authorised Vehicles.

The Vehicle Turnaround Time, ref. Abatement no. 10 as set out in the Project Agreements' Schedule 1, shall be calculated for all Vehicles delivering Primary Waste to the Facility as the time difference from Vehicle entry to exit measured from the confirmation slips issued at the weighbridge. This shall be automatically registered by the CMS system.

ProjectCo shall ensure that the storage facilities can accommodate the entire amount of Primary Waste delivered during operation as well as during any Planned Outage throughout the Operating Period.

No waste sorting other than size reduction shall be performed and any manual handling of the waste shall be avoided.

2.1.2.1 Waste Delivery and Discharge

ProjectCo shall at all times provide and maintain a waste discharge point or points where Vehicles can efficiently and safely discharge their loads.

During operation (including Planned Outage) the Municipal Solid Waste fraction of the Primary waste shall be directly discharged from the Vehicles into the bunker.

2.1.2.2 Reception Hall Arrangements

During operation of the incinerator (including Planned Outage) the waste shall be stored in the bunker, and Conforming Waste shall not be discharged on the reception hall floor except for Spot-Check Inspection.

The reception hall shall contain a designated and adequate area for Spot-Check Inspection of the Municipal Solid Waste fraction. An adequate area shall be designated for handling of Rejects.

The height of the reception hall shall enable the Vehicles to safely and conveniently unload waste and the area shall be sufficient for the Vehicles to make a U-turn.

The reception hall floor shall be designed for the load of Vehicles throughout the Agreement Period.

The reception hall shall be designed in such a way that efficient cleaning and washing of the entire floor as well as each discharge point can take place.

The number of unloading bays shall be adequate to ensure a minimum of queuing outside the reception hall.

The reception hall shall have a means of reception, intermediate storage and transfer to the bunker of shredded tyres. This will be sized by ProjectCo to account for the ability of their installation to process the shredded tyres.

2.1.2.3 Bunker

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During operation (including Planned Outages) the Municipal Solid Waste shall at all times be safely stored in the bunker without causing any nuisances, which could potentially conflict with the Planning Scheme Order or Approvals.

The bunker volume shall, as a minimum, be designed to contain all Municipal Solid Waste as delivered, i.e. not encapsulated, during any Planned Outage throughout the Operating Period.

The bunker shall be designed so that effective mixing of the waste can easily be performed

2.1.2.4 Encapsulation Facility

Requirements

During Unplanned Outages of the Facility the Municipal Solid Waste fraction of the Primary Waste shall be stored off Site for up to six months at a designated emergency landfill on the Isle of Man as identified by the Department.

An encapsulation facility shall be readily available at the Facility and be of a sufficient capacity to enable ongoing and continuous delivery of Conforming Waste to the Facility.

All waste redirected to the off Site landfill shall be safely compacted and plastic sealed by the encapsulation device.

2.1.2.5 Size Reduction Equipment

Any fraction of the Primary Waste, which cannot be fed directly into the hopper due to its size, shall be reduced in size with suitable size reduction equipment.

2.1.3 Crane Facilities

Crane facilities shall be installed above the bunker and shall be designed for the handling of waste as well as the handling of Rejects if identified in the bunker.

Handling of waste includes primarily but not exclusively:

- effective mixing and moving of the waste in the bunker
- feeding of waste to the waste hopper
- feeding of waste to the size reduction equipment.
- weighing of waste

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The speed (cross travel, longitudinal travel and hoisting/lowering speeds) of the crane shall throughout the Operating Period ensure adequate capacity for handling of the waste.

Spilling of waste on the crane and hopper deck shall be minimised.

The waste crane shall be equipped with an accurate weighing device, which can register and record the amount of waste fed into the waste hopper on a continuous basis. This device shall be linked to the CMS System and its principal purpose is to provide data for calculation of the efficiency of the Primary Waste Incinerator.

2.1.4 Incinerator/Boiler Unit

The incinerator shall be designed for mass burning on a grate and it shall be specially designed for incineration of the Primary Waste.

The incinerator/boiler unit shall be able to perform throughout the Operating Period a continuous operation within the limits of Zone I of the Capacity Diagram attached in Appendix 1.

Zone II of the Capacity Diagram represents the mechanical overload of the grate. It shall be possible to operate the incinerator/boiler unit in Zone II but it is not a requirement that continuous operation in this zone shall be possible.

Zone III of the Capacity Diagram represents the thermal overload of the grate It shall be possible to operate the incinerator/boiler unit in Zone III but it is not a requirement that continuous operation in this zone shall be possible.

Incineration of tyres as part of the Primary Waste must not affect the continuous operation within the Capacity Diagram.

The energy from the incinerator shall be recovered with a steam boiler.

2.1.4.1 Feeding System

The chute shall be designed in such a way that the waste in the chute forms an airtight seal in order to avoid backfire and hence the risk of igniting the waste in the bunker.

It shall be possible to continuously control the feeding process and to ensure an even and controlled supply of the waste across the total width of the grate.

2.1.4.2 Grate

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The grate shall be designed with an appropriate grate width and an appropriate grate length. The various thermal load parameters shall be in accordance with the grate manufacturers experience.

The grate shall allow for a satisfactory thermal treatment of the waste and ensure the required Bottom Ash quality.

The grate shall be designed and dimensioned with a view to smooth operation in accordance with the quantity, characteristics and varying calorific value of the waste, and in such a way that requirements for waste capacity as specified in the Capacity Diagram, Appendix 1 can be fulfilled.

The grate shall be able to transport the waste fully automatically from the point of feeding to the Bottom Ash extraction zone without any obstruction or clogging.

The grate shall be divided into individually adjustable grate zones.

The grate geometry and the pattern of the grate movement shall ensure optimum performance in relation to e.g. transportation, agitation and distribution/levelling of the waste on the grate surface.

2.1.4.3 Combustion Air System

The combustion air system shall ensure adequate primary and secondary air to the combustion process.

The combustion air system shall be designed to enable the necessary cooling of e.g. the grate and allow for an optimal mixing, combustion and after-burning of the flue gasses.

2.1.4.4 Furnace Chamber and After Burning Chamber

The combustion process shall be continuously controlled in order to enable the operator/the CMS System to control the steam production.

Even under the most adverse conditions, the flue gas temperature in the after burning chamber shall comply with the EU Waste Incineration Directive.

Auxiliary burner capacity shall be provided to ensure compliance with the above mentioned temperature requirement during start-up as well as during continuous operation.

2.1.4.5 Refractory/Ceramic Lining

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Materials used for refractory lining shall be chosen with due consideration to the flue gas compositions and velocities.

The refractory/ceramic lining shall be able to withstand the expected range and variations of combustion temperatures during operation.

The refractory/ceramic lining shall be able to withstand heating and cooling at start up and shut down.

2.1.4.6 Boiler - The Radiation Part

The boiler shall be designed to ensure even and homogeneous flue gas flow and temperature profiles.

The membrane tube walls shall be designed with suitable tube pitchings.

For the purpose of controlling critical temperatures it shall be possible to measure critical flue gas temperatures and steam temperatures in the boiler.

2.1.4.7 Boiler - The Convection Part

The live steam temperature from the outlet of the boiler shall not exceed 400 °C ± 5 °C within the Capacity Diagram.

The pressure in the boiler drum shall not exceed 50 bar(a) during operation in the Nominal Load Point.

The pressure in the boiler drum shall not exceed 55 bar(a) within the Capacity Diagram.

In the design of the boiler, the evaporator and particularly the superheater sections shall be connected in such a way that tube wall/surface temperatures are maintained at as low a level as possible.

The superheater, evaporator and economiser sections shall be designed with suitable tube pitchings.

2.1.4.8 Make-up Water System

The make-up water system shall be designed to meet the demands of the boiler for treated water.

The volume of the make-up water tank shall be adequate to ensure safe shut down of the incinerator/boiler unit.

2.1.4.9 Feed Pump System

The feed pump system shall be designed to meet the demands of the boiler for feed water in every situation. Emergency feed pump capacity shall be provided.

2.1.4.10 Bottom Ash Handling System

The Bottom Ash handling system shall be designed to minimise the release of steam and odour.

2.1.5 Flue Gas Treatment

The flue gas treatment system shall be designed to comply with the conditions of the Planning Scheme Order and the EU Waste Incineration Directive..

The physical and chemical properties of the flue gas treatment reaction products are to be carefully considered in order to ensure the safe design of the flue gas treatment system including handling systems and transport methods.

2.1.5.1 Induced Draught Fan (ID fan)

The ID fan and its main motor shall be designed for the flue gas volumes generated when operating within the Capacity Diagram.

The ID fan and its main motor shall be designed with spare capacity. The ID fan and its main motor shall be designed for a minimum of 130 % capacity, as compared to the flue gas flow in the Nominal Load Point.

Special precaution shall be made by ProjectCo to reduce the vibrations and the noise level generated by the ID fan.

In the event of motor failure the ID fan shall be designed to enable a safe and reliable shutdown of the incinerator for Primary Waste.

2.1.5.2 Emission Monitoring Station

The emission monitoring station shall enable the monitoring of air pollutants as required in the Planning Scheme Order and EU Waste Incineration Directive.

The emission monitoring station shall be connected to the CMS System in order to enable proper documentation and reporting of emissions.

2.1.5.3 Flue Gas Ducts and Stack Pipe

ProjectCo shall ensure and demonstrate, e.g. by air dispersion modelling, that the flue gas discharge conditions are such that the air pollution concentrations at ground level are not higher than those predicted in the Environmental Assessment. Refer to volume 3 (3) of the Technical Appendices to the Environmental Assessment. It shall be noted that it is unlikely that a stack height greater than 75 meters above ground level will be permitted.

2.1.5.4 Storage Facilities for Chemicals

Adequate quantities of consumables shall be stored on site and appropriate bunding shall be provided around the tanks.

The storage facilities and stored quantities shall reflect the Isle of Man geographical location and the fact that the consumables may have to be shipped during periods of poor weather conditions resulting in possible delays.

2.1.6 Energy Recovery, i.e. Steam Turbine/Generator

The energy content in the steam produced in the boiler shall be converted to power by means of a steam turbine/generator set.

The turbine/generator set shall be designed for the special duty conditions expected in connection with this particular Facility.

The power production of the turbine/generator set shall cover the internal power demand of the entire Facility, and any surplus produced power shall be transferred to the power grid for purchasing and distribution by Manx Electricity Authority, ref. Schedule 6.
The turbine/generator set shall be able to operate under the following conditions:

- In isolated operation ("island mode") providing the necessary internal power for continuous operation of the Facility only

and

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- in parallel operation with the public network, providing the internal power for the Facility and exporting the excess of produced electricity into the public network, Manx Electricity Authority (MEA).

Thus, it shall be possible for the turbine/generator set to run steadily in the range from minimum load in isolated operation ("island mode"), to full load operation in the Capacity Diagram.

Special precaution shall be made by ProjectCo to reduce the vibrations and the noise level generated by the turbine/generator set.

2.1.6.1 Steam Turbine

The turbine shall be operated in condensation mode.

The back pressure at the turbine outlet shall be no more than 0.7 bar(a).

The energy content of the steam shall be converted to electricity with a conversion efficiency of no less than 20% when operating within the Capacity Diagram and shall be computed as follows:

$$P / (Q * (h_{exit} - h_{feed}) * Oh) \geq 0.2$$

Q is the steam flow (kg/sec.) passed from the boiler to the inlet of the steam turbine, which shall be continuously monitored by ProjectCo.

Oh is the weekly turbine operation time measured in hours.

$(h_{exit} - h_{feed})$ is the difference between steam enthalpy (kJ/kg) at the boiler outlet (exit) and the enthalpy (kJ/kg) of the feed water in the feed water tank.

The values of h_{exit} and h_{feed} shall be based on ProjectCo's monitoring of steam pressure and temperature at boiler outlet and the feed water temperature and pressure in the feed water tank.

P is the weekly electricity production delivered to Manx Electricity Authority measured in kWh.

This Requirement for conversion efficiency shall apply at all times during the Operating Period and shall at the Department's Representative's request be calculated on a weekly basis.

2.1.6.2 Bypass System

The system must be capable of handling bypass operation of the turbine without tripping the boiler.

Bypass of the turbine shall only be used:

- during start-up and shut-down,
- in connection with trip of the turbine plant caused by failures detected in the turbine plant,
- when live steam parameters are outside the specified operating interval detected by instrumentation.

2.1.6.3 Condensate System

A system for condensation of the turbine exhaust steam shall be provided.

The condenser shall be designed for appropriate ambient air temperature. The condenser shall have a cooling capacity sufficient for the incinerator to be operated within the entire load range of the Capacity Diagram whilst the turbine is being by-passed.

Special precautions shall be taken by ProjectCo to reduce the noise level generated by the air-cooled condenser in compliance with the conditions of the Planning Scheme Order.

If ProjectCo's condensations system is Air Cooled Condensors then ProjectCo shall take into consideration any risk of occurrence of air circulation around the condensors.

A make-up water facility and de-aeration system shall be provided.

2.1.6.4 Synchronous Generator

ProjectCo is responsible for the co-ordination of the interconnection to the MEA network and shall comply with all MEA and arrangement requirements, e.g. the quality of electricity to be exported, operating conditions, design requirements for the interconnection to the network and all as further specified in the Project Agreement, Schedule 6 "Electricity Agreements".

2.1.7 Residues and waste water

2.1.7.1 Bottom Ashes

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The content of unburned matter in the Bottom Ashes shall be less than 3% (weight % of Bottom Ashes).

The Bottom Ashes shall have a total organic content (TOC) of less than 2%.

The Bottom Ashes shall be of a quality suitable for landfilling and in accordance with Applicable Laws and Approvals.

Separation of Scrap Metal from the Bottom Ashes shall be performed on the Site.

2.1.7.2 Grate Riddling

The content of grate riddling shall be minimised.

The grate riddling can be mixed with the Bottom Ashes.

The incinerator shall be prepared for subsequent alterations, which will enable ProjectCo to feed the grate riddling back to the furnace.

2.1.7.3 Boiler Ash

The content of unburned matter in the boiler ash shall be less than 3 %.

2.1.7.4 Flue Gas Treatment Reaction Products

The content of unburned matter in the flue gas treatment reaction products shall be minimised.

2.2 Equipment for Secondary Waste

The Secondary Waste System shall be designed to comply with the conditions contained in the EU Waste Incineration Directive and the IPC Guidance Note.

2.2.1 Capacity

The capacity of the equipment for treatment of Secondary Waste shall be designed to incinerate waste arisings as specified in section 1.6.

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The equipment for incineration of Secondary Waste shall be designed with sufficient flexibility to absorb the seasonal variations in the Secondary Waste stream without jeopardising the requirement for the Facility to be Available

The equipment for Secondary Waste shall operate independently of the equipment for Primary Waste.

2.2.2 Reception and Storage Facilities

ProjectCo shall execute all operations necessary for receiving and transferring the waste with optimum speed and with minimum inconvenience and delay to the Department and its contractors.

In accordance with the provisions in the Project Agreement, ProjectCo shall regulate from the entrance to the Delivery Point the arrival and departure of all authorised Vehicles.

ProjectCo shall ensure that the Storage Facilities can accommodate, with suitable cooling equipment, the entire amount of Secondary Waste delivered during operation as well as during any Planned Outage throughout the Trial and Operating Period.

No waste sorting shall be performed and any manual handling of the waste shall be avoided.

The reception and storage facilities and any other handling areas for the Secondary Waste shall be separate from the Primary Waste reception and storage facilities.

2.2.2.1 Waste Delivery and Discharge

ProjectCo shall at all times provide and maintain a waste discharge point or points where Vehicles can efficiently and safely discharge their loads.

Secondary Waste except Waste Oil shall be delivered to the Facility in Wheelie Bins. ProjectCo shall supply 300 Wheelie Bins. The Wheelie Bins shall be fitted with bar coding and tagging devices, which are compatible with the CMS System.

ProjectCo are solely responsible for the Wheelie Bins whilst they are at the Facility. This includes ensuring that they are securely stored and cleaned prior to collection by the Department or its contractors. Loss of or damage to Wheelie Bins (other than by fair wear and tear) will be a Department risk.

2.2.2.2 Storage room

The waste shall be stored in the Secondary Waste storage room in the bins in which it is delivered to the Facility.

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The storage room shall provide facilities to perform this operation.

The Facility shall provide storage capacity for the Waste Oil in the form of safe stationary tanks at the premises. Precautions to mitigate spills shall be taken.

Whole Carcasses will be delivered to the Site in sealed body bags. The bag and its contents will be lifted from the delivery Vehicle and shall be placed directly into the incinerator.

The Facility shall be capable in an Unplanned Outage or an Emergency of storing 75 tonnes of Secondary Waste until such time as ProjectCo has made arrangement for its disposal in accordance with the Emergency Plan.

2.2.3 Handling and Hoisting Facilities

The waste shall be fed into the incinerator without manual handling.

Facilities shall be available for the witnessing of the incineration of human tissues, drugs and similar selected Secondary Waste fractions. Witnessing of the incineration means witnessing to a point from which there is no possibility of return of the waste.

The feeding process shall be interlocked with the combustion conditions in the incinerators.

An accurate weighing device for registering and recording to the CMS System the weight of Secondary Waste received and fed to the feed hopper shall be provided. The Wheelie Bins shall be electronically coded (bars or chips) so that the weighing facility will be capable of identifying the originator and the weight of the contents of every Wheelie Bin. This shall be the basis for calculating the Secondary Waste element of the Operating Fee.

2.2.4 Incinerator/Boiler Unit

The incinerator units shall be designed for mass burning and it shall be specially designed for incineration of the Secondary Waste.

2.2.4.1 Incinerator unit

The incinerator shall be designed with appropriate dimensions and with suitable thermal loads in accordance with the manufacturer's experience.

The incinerator shall allow for a satisfactory thermal treatment of the waste and ensure the required Bottom Ash quality.

The incinerator shall be designed and dimensioned with a view to smooth operation in accordance with the quantity, characteristics and varying calorific value of the waste.

2.2.4.2 Combustion Air System

The combustion air system shall ensure an adequate supply of combustion air to the process.

2.2.4.3 Furnace Chamber and After Burning Chamber

The combustion process shall be continuously controlled.

Even under the most adverse conditions, the flue gas temperature in the after burning chamber shall comply with the relevant EU-directives.

Auxiliary burner capacity shall be provided to ensure compliance with the above mentioned temperature requirement during start-up as well as during continuous operation.

The after burning chamber (if applicable) shall be designed to promote turbulence and mixing of the gases with the secondary combustion air (if applicable).

2.2.4.4 Refractory/Ceramic Lining

Materials used for refractory/ceramic lining shall be chosen with due consideration to the flue gas compositions and velocities.

The refractory/ceramic lining shall be able to withstand the expected range and variations of combustion temperatures during operation.

The refractory shall be able to withstand heating and cooling at start up and shut down.

2.2.4.5 Boiler

The boiler shall be designed to ensure even and homogeneous flue gas flow and temperature profiles.

For the purpose of controlling critical temperatures it shall be possible to measure any critical flue gas temperatures and hot water or steam temperatures in the boiler.

2.2.4.6 Make-up Water System

The make-up water system shall be designed to meet the demands of the boiler for treated water.

The volume of the make-up water tank shall be adequate to ensure safe shut down of the incinerator/boiler unit.

2.2.4.7 Feed Pump System

The Feed Pump System shall be designed to meet the demands of the boiler for feed water in every situation. Emergency feed pump capacity shall be provided.

2.2.4.8 Bottom Ash Handling System

The Bottom Ash handling system shall be designed to minimise the release of steam and odour.

2.2.5 Flue gas treatment

The flue gas treatment system shall be designed to comply with the conditions contained in the Planning Scheme Order and the EU Waste Incineration Directive.

The physical and chemical properties of the flue gas treatment reaction products are to be carefully considered as part of the safe design of the flue gas treatment system including handling systems and transport methods.

The flue gas treatment system for the Secondary Waste shall operate independently of the flue gas treatment system for the Primary Waste.

2.2.5.1 Induced Draught Fan (ID fan)

A separate ID fan shall be established for the flue gas from the Secondary Waste.

The ID fan and its main motor shall be designed for the flue gas volumes generated by the Secondary Waste incinerator.

The ID fan and its main motor shall be designed with spare capacity to allow for future changes/adjustments in the flue gas system.

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Special precaution shall be made by ProjectCo to reduce the vibrations and the noise level generated by the ID fan.

In the event of motor failure the ID fan shall be designed to enable a safe and reliable shutdown of the incinerator for Secondary Waste.

2.2.5.2 Emission Monitoring Station

The emission monitoring station shall enable the monitoring of air pollutants as required in the Planning Scheme Order.

A separate emission monitoring station shall be established for the flue gas from the Secondary Waste.

The emission monitoring station shall be connected to the CMS System in order to enable proper documentation and reporting of emissions.

2.2.5.3 Flue Gas Ducts and Stack Pipe

There shall be only one chimneystack. However, a separate pipe for the flue gas from the Secondary Waste shall be installed in the chimneystack.

ProjectCo shall ensure and demonstrate, e.g. by air dispersion modelling, that the flue gas discharge conditions are such that the air pollution concentrations at ground level are not higher than those predicted in the Environmental Assessment.

2.2.5.4 Storage Facilities for Chemicals

Adequate quantities of consumables shall be stored on site and appropriate bunding shall be provided around the tanks.

The storage facilities and stored quantities shall reflect the Isle of Man geographical location and the fact that the consumables may have to be shipped during periods of poor weather conditions resulting in possible delays.

2.2.6 Energy Dissipation

Separate cooling equipment shall be provided for dissipation of the excess energy recovered from the boiler.

The cooling equipment shall be designed for an appropriate ambient air temperature.

Special precaution shall be made by ProjectCo to reduce the noise level generated by the cooling equipment.

A de-aeration system shall be provided.

2.2.7 Residues and waste water

2.2.7.1 Bottom Ashes

The content of unburned matter in the Bottom Ashes shall be less than 3% (weight % of Bottom Ashes).

The Bottom Ashes shall have a total organic content (TOC) of less than 2%.

The Bottom Ashes shall be of a quality suitable for landfilling and in accordance with Applicable Laws and Approvals.

2.2.7.2 Boiler Ash

The content of unburned matter in the boiler ash shall less than 3 %.

2.2.7.3 Flue Gas Treatment Reaction Products

The content of unburned matter in the flue gas treatment reaction products shall be minimised.

2.3 Common Systems

The common systems service both the Primary and the Secondary Waste incinerator lines.

Common systems include that M&E equipment which is used for the treatment of both the Primary and the Secondary Waste.

2.3.1 Weighing Facilities

The Operating Fee for Primary Waste will be calculated and paid on the basis of the data recorded at the weighbridge.

The Operating Fee for Secondary Waste will not be calculated and paid on the basis of data collected at the weighbridge, refer to section 2.2 for further details.

ProjectCo shall have an electronic waste recording system at the weighbridge(s) capable of providing accurate data on actual Vehicle payloads, which are linked to Vehicle and driver identification codes in order to keep full and comprehensive records of waste received.

ProjectCo shall install weighbridge facilities and suitable computerised equipment to ensure that all Vehicles delivering Primary Waste are identified and weighed in and out. Contents shall be identified and recorded and computerised weights shall be recorded.

Queuing of Vehicles for weighing shall be minimised. The weighbridge facilities shall be positioned in order to prevent Vehicles queuing in the public highway at any time during the Operating Period.

The weighbridge facilities shall be visible from the control room and video surveillance of Vehicles entering and leaving the Facility shall be established. The video record shall be available to the Department on request any time for the previous two months.

2.3.1.1 Weighing Bridges

The weighbridge(s) shall be of adequate length and width to accommodate the various types of Vehicles.

The weighbridge(s) and computerised equipment must be tested and passed as fit for use by a Trading Standards Officer before use. ProjectCo shall provide a certificate of compliance to the Department at the time of such tests, and any subsequent tests or calibrations.

2.3.1.2 Service Stand for Drivers

A service stand for each weighbridge shall be operated by the drivers without the drivers having to leave the vehicle.

The service stands shall include the following facilities:

- Hardware and software for reading of the data on the drivers ID cards
- Keyboard for entering of data by drivers
- Printing of a receipt to the drivers. The receipt shall include the weighing record.
- Automatic display of weights on a easily readable digital weight indicator
- 2-way electronic communication system from the weighing bridge to the control room and/or administrations office including voice transmission

The display shall state the specific destination of the Conforming Waste load such as the reception hall discharge bay number, Spot-Check Inspection area or the Secondary Waste storage room etc.

ProjectCo shall supply sufficient ID cards for the drivers. The ID cards shall contain information about customer name, customer address, Vehicle number etc.

2.3.1.3 Handling of Weighing Records

The weighing record shall be automatically generated by the weighbridge computer system and include the following information:

- Serial number
- Date
- Time in and time out, i.e. vehicle turn-around time
- Vehicle registration number
- Driver information
- Waste categorisation with reference to the Consignment Note System (subject to Specific Legislative Change)
- Gross, tare and net weights

ProjectCo shall install a PC with suitable software. The software shall meet the following demands:

- Contain a database
- Register all weighing records
- Be able to transfer weighing data to relevant authorities
- Be able to transfer weighing data to the CMS System

2.3.1.4 Operation and maintenance

In the event of weighbridge or computer failure, ProjectCo shall inform the Department's Representative within 24 hours.

In the event of weighbridge or computer systems failure, ProjectCo shall immediately commence manual recording in a purpose made logbook.

Each driver will be provided with a record for signature, which confirms unloading of the Conforming Waste at the Delivery Point. The information to be provided on the record shall be as that for a computerised record with the exception of gross, tare and net weights.

A duplicate copy of the ticket should be issued to the driver of the Vehicle when it has been completed and signed.

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All Vehicles delivering Conforming Waste shall be weighed upon approval at the Facility and weighed again after discharge of their loads. Vehicles shall have the same complement of personnel, equipment etc. when weighing in and out, so as to ensure the correct net weight of the Conforming Waste discharged is recorded.

2.3.2 Auxiliary Facilities

2.3.2.1 Cleansing Equipment and Disinfection Facilities

Cleansing equipment shall be provided on the Site at appropriate locations.

The cleansing equipment shall enable external washing of Vehicles, containers/Wheelie Bins etc.

Wastewater shall be collected separately and dealt with in accordance with Approvals.

2.3.2.2 Laboratory Facilities

Laboratory facilities shall be provided for the Facility. The laboratory shall contain equipment that enables ProjectCo to carry out measurements and testing for the following purposes:

- Spot check of Waste Oil and testing of conformity/suitability for incineration
- Testing of liquid effluents to confirm compliance with treatment standards in Approvals
- Measurement and testing of Residues' compliance with Approvals

ProjectCo shall be able to identify Waste Oil, which is unsuitable for incineration.

The equipment shall enable ProjectCo to demonstrate compliance with Approvals, the Department's Requirements as to contents of unburned materials and TOC in the Bottom Ashes.

2.3.3 Electrical Equipment

The concept of the electrical system shall meet the following demands:

- Permanent and reliable service of the Facility without power failures
- Minimum of equipment faults
- Full operation of the Facility in absence of connection to the public network
- Maximum power supply to the public network
- Comply with the requirements of the Manx Electricity Authority, MEA. Refer to the Project Agreement, Schedule 6.

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The following operational scenarios shall be possible:

- Isolated operation "island mode" where the turbine/generator set is providing the necessary internal power for continuous operation of the Facility
- Parallel operation with the public network, where the turbine/generator set is providing the internal power for the Facility and the excess of produced electricity is exported into the public network, Manx Electricity Authority (MEA)
- The turbine/generator set is not in operation e.g. during overhaul, and the power required for the Facility is supplied from the network.

2.3.3.1 Electrical Equipment and Materials

Electrical equipment shall be industrial standard type equipment suitable for a waste incineration facility installation.

2.3.4 CMS System

The Facility shall be provided with a computer based Control and Monitoring System (CMS System), fully configured, with all necessary hardware and software.

The CMS System shall enable the correct and optimal operation and maintenance of the Facility by control, monitoring, data logging and report generation.

The CMS System shall include an Operation and Maintenance System (O&M System).

2.3.4.1 System Configuration

The CMS System shall include

- Operator stations (and accompanying peripheral equipment such as printers, etc.) in the control room for the operators' control and monitoring of the Facility
- A number of distributed process stations in the Facility for the dedicated control and monitoring tasks of specific parts of the process
- An optical fibre based communication network system interconnecting the operator stations and the process stations

Each operator station shall include at least two full graphic colour CRTs with one accompanying keyboard as well as one mouse/track-ball. Operations shall mainly be via mouse/track-ball. The size of the colour CRTs shall at least be 20".

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All equipment for the operator stations, including peripheral equipment and equipment for data communication to the process stations, shall be connected to emergency supplied UPS (230 VAC).

The process stations shall be autonomous PLC-based units, which independently of the communication network and the operator stations perform the dedicated control and monitoring tasks of the equipment connected.

The dedicated control and monitoring tasks shall be grouped according to process sections of the Facility and shall be allocated to the different process stations.

Redundancy of machinery in the process shall be accompanied by redundancy in the CMS System accordingly.

The process stations shall be equipped with redundant power supply (24 VDC no-break).

The communication network shall include redundant connection at each node, i.e. each process station and the operator stations shall all be redundantly connected to the communication network.

The communication network shall allow for direct datacommunication between the operator stations and the process stations and for direct datacommunication between the process stations.

2.3.4.2 Data Logging and Report Generation

The CMS System shall be provided with facilities for automatic logging and storage of process data and for report generation. These facilities shall be adequate for the evaluation of the operation and the environmental impact of the Facility and for administrative functions related to the operation and maintenance of the Facility.

2.3.4.3 Operation & Maintenance System (O&M system)

The CMS System shall include a computer based O&M system, ready to use and fully configured with data. The O&M system shall manage the maintenance of the Facility.

2.3.4.4 Remote Access to Information by Other Parties

The CMS System shall provide the public and the Department of Trade and Industry (DTI) on-line access to pertinent information concerning the Facility.

The CMS System shall comprise an Internet server with a fully configured homepage providing the public with information on the Facility and its operation. The homepage shall be on-line connected to the CMS System so that the public can read a limited selection of relevant operational and environmental data, both on-line data (e.g. the actual current production in MW) and historical data.

3 Civil Works

3.1 Civil Works' Design and Construction

3.1.1 The Facility

3.1.1.1 General

The Civil Works, e.g. buildings, structures and associated roads and drainage infrastructure, which form part of the infrastructure must be designed and constructed in accordance the Planning Scheme Order, Approvals, Applicable Laws, the Building Control Act 1991, The Building Regulations 1993, The Building Control (Approval Documents) Order 1993 and the Building (Fees) Regulations 1993. The shape, plan and form of all buildings and the site layout shall satisfy the conditions attached to the Planning Scheme Order.

All cladding, facings, textures and colours shall be complimentary to the building shapes and the Site. The performance of cladding plus window and door elements shall be such as to suit severe exposure rating in relation to air and rain percolation.

The choice of all exposed materials and finishes shall take account of the exposure of the Site and any structures on it to the sea and saline wind conditions and the possible effects of pollutants.

ProjectCo shall allow in their design and layout of the building for flexibility and extendability to suit future requirements, i.e., a possible additional incinerator line, changes to emissions standards, etc.

ProjectCo shall consult with the Isle of Man Fire Service and incorporate their requirements.

3.1.1.2 Specific

Schedules of Accommodation

The following Requirements shall be met:

a) Reception Hall.

The reception hall shall be an integral part of the building.

b) Reception hall and waste storage facilities

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In the design of the reception hall and storage facilities for Primary and Secondary Waste ProjectCo shall take into consideration the risk of dust and odour nuisances as well as the risk of fire in the Primary Waste bunker.

The facilities for the Secondary Waste including the reception and handling areas shall be separate from the main reception hall for Primary Waste.

c) Control Room / Crane Operator's Room.

The control room and crane operator's position shall have a clear view of the bunker and crane(s) and shall also be capable of directly viewing and communicating with the weighbridge facilities at the Delivery Point.

d) Access around and within the Facility.

The layout of the Facility shall be such that all operation and maintenance activities can be carried out safely and that provision is made for appropriate Vehicle access and parking where this may be required.

Access within the building shall only be by staircases and landings and walkways which give safe access to the Facility at all required levels for maintenance purposes and also provides for walk around "non hot touch" access to all areas of the Facility. Refer to Section 4.2 of the Department's Requirements for further Requirements in relation to Access.

3.1.2 Drainage

There is no available drainage connection to a public sewer adjacent to the Site for the disposal of foul sewage, process waters and surface water run-off from pavements and roofs.

ProjectCo shall design a scheme for disposal of all drainage effluents arising from the Facility which complies with and satisfies the conditions attached to the Planning Scheme Order. Refer to section 1.8 of the Department's Requirements.

ProjectCo shall in the design and construction of the drainage infrastructure to the Facility ensure that any flows to a potential future public sewer adjacent to the Site, i.e. the IRIS master plan scheme, will be minimised (surface water not included).

3.1.3 Fencing and Signage

ProjectCo shall erect permanent security fencing and gates to the full perimeter of the development site as described in section 1.7 of the Department's Requirements. The

security fencing shall be appropriate to the hostile marine environment and integral with the overall landscape management plan referred to in Section 3.1.11.

At the time of erection of the permanent fence the temporary demarcation fence described in section 1.7 shall be removed.

ProjectCo shall install a comprehensive package of site signage conveying a co-ordinated corporate image within and approaching the Site.

The Department's Representative shall approve such site signage prior to ProjectCo's fabrication.

3.1.4 Public Utilities and Other Services

Reference is made to Clause 1.4.5

3.1.5 Site Entrance and Access

ProjectCo shall consult with the Department of Transport in relation to the design of the Site main entrance road junction with the public road system. ProjectCo shall only be responsible for works up to the site boundary. Access from the public highway network to the site main entrance shall be improved by a scheme of works to be designed and constructed by other organisations under the direction of the Department of Transport and the Department. This scheme will most likely involve roundabouts on the A5 and A6 roads. ProjectCo are referred to the Environmental Assessment and the Inspector's Report attached as Appendix 7. ProjectCo shall liase fully with all relevant organisations and agencies during the course of the Works and the preparation and submission of particulars of Reserved Matters and restoration to the Governor in Council for approval so that the interface is properly managed in terms of design and construction. Also, reference to Hyder drawing NE70257-028 revision C shall be made.

3.1.6 Site Roads, Car Parks and Pavements

The Facility shall be serviced by a comprehensive system of drained roads, car parks and hard standings that fully enables the safe and efficient access, circulation and egress of all vehicles using the Site including Vehicles, bulk tankers, coaches, private vehicles, etc., for the duration of the Agreement Period.

The type and quality of pavements and associated kerbings, footpaths and features shall be sympathetic to the Department's desire for a landmark development.

All required access routes for fire fighting purposes shall be provided following ProjectCo's consultation with the Isle of Man Fire Service.

A system of footpaths shall be incorporated which enables safe pedestrian access from car parks within the Site and the public road to all buildings and external structures and equipment.

3.1.7 Adjacent Landfill Site

Refer to clause 1.7.2.2

ProjectCo and the Department shall conduct appropriate surveys and Site investigations following the Execution Date and shall agree with the Department a scheme of works which will be required to remediate the Site from any existing contamination and prevent any future contamination of the Facility from the adjacent land-fill site.

The Department shall bare the cost of such works. A provisional sum has been included in the Pricing Schedule for the Works to cover such costs.

Once such works are completed the Department shall have no continuing liability in respect of contamination of the Site and/or the Facility by the adjacent land-fill site.

3.1.8 Fire Fighting

The Facility shall comply with the Requirement of the Isle of Man Fire Service.

3.1.9 Demolition and Site Clearance

It shall be ProjectCo's responsibility for clearing and preparing the Site for the construction of the Facility.

Notwithstanding ProjectCo's responsibility to determine all Works, the following shall be carried out.

Apply for and gain statutory approval for the demolition and disposal off site of all existing buildings and structures including the redundant pulverisation plant, sheds, access roads, etc. The demolition works shall include the removal and disposal off site of all sub-structures, foundations, drains, services, fencing, gates, contaminated material including asbestos, etc. A provisional sum is included in the Pricing Schedule for the Works to cover the costs of asbestos and underground services removal. All demolition

and site clearance works shall be carried out in such a manner that existing landfilled materials are not disturbed.

1) ProjectCo shall liase with and facilitate the Department during the Department's removal of the existing glass recycling plant, components and crushed glass/bottles. . ProjectCo shall demolish and remove off site any structures bases etc. associated with the glass recycling plant.

3.1.10 Monitoring of Landfill

The Department has been and shall continue to be responsible for environmental contamination and pollution resulting from pre-existing hazardous waste on the landfill. On this basis they have been and will continue to carry out environmental monitoring and testing.

ProjectCo shall only be responsible for any contamination of the Site and its surrounding environment including the Middle River due to any negligent activities by ProjectCo during the Works and the Services. To this end ProjectCo shall ensure that when implementing any works adjacent to the existing land-fill site they properly record and monitor such works to show that they have not disturbed the landfill and caused contamination.

3.1.11 Landscaping

Project Co shall prepare and implement a landscape design and management plan for the Site for the Agreement Period. This landscape design and management plan shall comply with and satisfy the conditions attached to the Planning Scheme Order.

The landscaping works adjacent to the Kewaigue Road as marked on the Site Plan (attached to Schedule 4, Part 1 of the Project Agreement) will be undertaken by the Department as part of the off-site roadwork development.

3.2 Building and Site Services

3.2.1 Services to be Provided

The services to be provided shall comprise:-

1. Distribution boards, conduit and wiring providing a complete and adequate electrical services installation for the Facility.

2. Building services for all buildings incorporated in the Works including:

Interior lighting for all plant and associated buildings.
Small power socket outlet and heating services.
External lighting for building structures.
Ventilation installations for the buildings.

3. Site services including:

Site roadway lighting
Area lighting
Access lighting
Fire fighting main and hydrants

4. Portable extra low voltage equipment

5. Intruder alarm(s)

6. Site surveillance CCTV

7. Security access system

8. Fire detection, suppression and alarm system

9. Gas and explosive atmosphere detection and purging system

10. Telephone system.

11. Any other services considered necessary by ProjectCo

3.2.2 Building Services Electrical Power Supplies

The power supplies for all building and site services shall be provided from the building services switchboards or otherwise shall be derived from distribution boards which, as far as practicable, shall form an integral part of the building main LV distribution and plant control switchboards.

3.2.3 Lighting, Fittings and Socket outlets

Lighting fittings and socket outlets shall be in accordance with the Department's Requirements and all relevant British Standards and Codes of Practice.

Lighting fittings and socket outlets, 220V and earthed, shall be provided throughout the Facility as required by ProjectCo for operation and maintenance.

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3.2.4 Building Heating

Visitor reception areas, offices, control rooms, canteens, toilets, meeting rooms, common areas, etc., in the administration and control areas shall have appropriate heating systems. The equipment shall be of a rating suitable to maintain the temperature in these rooms at 20°C with an outside of 0°C.

The system shall be capable of being controlled room by room

3.2.5 Building Lighting Design

A suitable building lighting installation shall be designed and incorporated in the Works.

The building lighting design and installation shall take into consideration:

- the operating environment;
- the type and style of architectural finish;
- the activities to be performed in the areas concerned;
- access for maintenance;
- operating life.

In no case shall the illumination be below that necessary to safely perform work in compliance with all health and safety Requirements in any particular location.

3.2.6 Standby Generator Lighting and Small Power Installation.

The installation to be provided under this Section shall include the following items, together with conduit and wiring connecting all fittings to their respective distribution boards:

- Distribution
- Essential internal lighting.
- Emergency lighting
- UPS for the CMS System
- Power supplies for fire protection equipment
- Power supplies battery charger
- Any other equipment necessary during mains power supply failure

3.2.7 Buildings' Emergency Lighting

An emergency lighting installation shall be provided for all areas and shall comprise exit and escape route luminaries to facilitate the safe evacuation of personnel from all buildings and structures in the event of power failure. Requirements of the Isle of Man Fire Service shall be incorporated in the installation.

Emergency lighting shall also be provided in any area where work may be required during such a power failure, e.g. starting of standby generators or other essential plant control operations.

3.2.8 Site Entrance and Site Road Lighting

Road lighting systems shall be provided to illuminate all site roadways and pavements within the Facility as well as the junction with the A6 road. The lighting systems shall be capable of being controlled during hours outside of waste delivery in compliance with the conditions of Approvals. All lanterns shall be of a hooded type to minimise light pollution. The road lighting scheme shall also comply with requirements of the statutory road lighting authority.

3.2.9 Site Area Lighting

Site area lighting installations shall provide an overall suitable and safe service illuminance at all locations around building entrances and doors, where plant operation and emergency escape and maintenance can occur, car parking areas, pedestrian access routes to and around buildings and the weighbridge facility.

The lighting systems shall be capable of being controlled during hours outside of waste delivery and lanterns shall be of a hooded type to minimise light pollution. The lighting system shall comply with the conditions of the Planning Scheme Order.

3.2.10 Flue Lighting

The flue stack shall be lighted in full compliance with the requirement of the Isle of Man Government Department of Transport and the UK Civil Aviation Authority.

3.2.11 Fire Detection, Suppression and Alarm System

Fire protection, suppression and automatic detection and alarm systems shall be provided in all areas of the buildings throughout the Works in accordance with BS 5839 or equivalent.

The system shall be to the approval of the Isle of Man fire service and shall comply with Approvals and Applicable Laws.

3.2.12 Dust and Gas Detection and Purging System

Dust and gas detection and purging systems shall be incorporated into those areas of the Works where explosive and toxic atmospheres can occur.

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3.2.13 Telephone System

ProjectCo shall supply a telephone system for the Facility. Telephone handsets shall be provided within all areas of the Facility.

3.2.14 Lightning Protection Installation

A complete lightning protection system to BS 6651, or other approved standard, shall be provided for every building and structure with a height exceeding 4 m.

3.2.15 Earthing System

The Facility shall have an earthing system in compliance with the relevant British Standards and Codes of Practice.

3.3 Architecture

Section 1.8 of the Department Requirement deals separately with Planning.

3.3.1 Development of an Architectural Concept Scheme

3.3.1.1 Background

As an accompanying document to the Integrated Incinerator Facility Final Summary and Report submitted to the Department by McCarthy Ramboll jv. in April 1998 – the Department commissioned an Architectural Study which attempted to define an acceptable architectural vocabulary for the proposed building envelope and site layout. A copy of this study is attached as Appendix 3.

To define terms of reference for any architectural solution representatives from the Department and Savage & Chadwick Chartered Architects visited a number of similar facilities within the UK and Europe, which were considered to have some architectural merit.

This study and research was made in response to the Department's requirement, and the Planning Departments view, that the proposed building should be a 'landmark' building, with particular reference to the significance and context of its siting.

Following the above a concept scheme was produced by Savage & Chadwick. This scheme was conceived not for the purposes of prescribing an architectural solution but to;

a) determine a frame of reference that would be acceptable to the Planning Department.
b) to make all parties aware of the likely measures necessary to arrive at satisfactory architectural solution.

Subsequent discussions with both the Department and the Planning Department indicated that the concept scheme satisfied both the above criteria. It then became the Architectural Concept Scheme.

3.3.1.2 Description of the Architectural Concept Scheme

The Architectural Concept Scheme was developed in conjunction with McCarthy Ramboll in order that the engineering requirements and architectural aesthetics be fully integrated.

Part of the brief for this building concept was to create a landmark design reflecting both the importance of the site and the requirement of the Planning Department.

In achieving this objective the ascending and descending order of the functional volumes allows the design to 'flow' through a series of curves and overlapping planes – rising from the waste reception hall and bunker to a high point over the incinerator / boiler and dropping again over the flue gas treatment area to the flue itself.

The orientation of these volumes within the site is also very important in that it is possible for the design to flow with the existing contours – the low point of the building being at the higher end of the site and the high point of the building (the flue) being at the lower end of the site – and thus lessen considerably the visual impact.

In terms of visual impact the most dominant part of the building, by far, is the flue. The Architectural Concept Scheme takes the functional flue and shrouds it in cladding which then echoes the curved form of the main building. In this way the flue becomes the focal point of the design and is consequently placed on the site i.e. directly facing the main road junction.

The disposition of accommodation of the building makes some scale reduction preferable on the elevation of approach (North East elevation). It is possible over the maintenance and Residue areas to reduce the building volume although significant height may still be required for some of the equipment associated with flue gas treatment. This scale reduction is achieved by a series of overlapping planes at a lower level than the main roof.

The 'building' of scale within the design and stepping down the form at the ends of the plan shape also lessens the visual impact.

The Architectural Concept Scheme takes the view, that no colour should be used at all with all surfaces being finished in natural aluminium. In this way the building adopts a

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'neutral' stance and allows light to play off its surfaces. The natural aluminium finish also has the advantage of being a low maintenance solution – which in walls of this height is a significant consideration.

During the design process of the Architectural Concept Scheme several meetings were held with the Director of Planning and the points raised and discussed at such meetings incorporated, where possible, in to the design.

Partly at the request of the Planning Department a working model was commissioned.

Subsequent discussions with the Planning Department upon completion of the Architectural Concept Scheme indicated that they are generally satisfied with it and the architectural approach it has taken.

An appropriate copyright licence will be granted to ProjectCo by Savage & Chadwick Architects Ltd.

The services of Savage & Chadwick Architects Ltd shall be utilised by ProjectCo for the purposes of preparation submission and representation of an application for particulars of Reserved Matters as described in this section. A provisional sum for this purpose is included in the Pricing Schedule for the Works. The further employment of the services of Savage & Chadwick for the purposes of a Building Regulations Application and Detailed Scheme drawings and site inspection / liaison work are entirely at the discretion of ProjectCo.

3.3.2 Architectural Treatment and Design

The Architectural Concept Scheme shall be adopted.

The services of Savage & Chadwick shall be utilised for the purpose of the preparation submission and representation of a submission for particulars of reserved matters in accordance with the following criteria.

The aforementioned services shall incorporate the following duties:

- Discussion with ProjectCo as to the integration of their particular engineering process to the proposed architectural solution and development of this solution accordingly.
- Discussion with ProjectCo's structural engineers, M&E advisors and cost consultants as to the detailed construction methods for the purposes of representation by the PSO Application and development of the architectural solution accordingly.
- Further discussion and liaison with the Planning Department and incorporation, where possible, of their requirements.

- Discussion with relevant third parties to the application and the Client Department.
- The production of all drawings necessary for the purposes of a reserved matters submission along with all copying charges.
- The submission of the application as required by the Planning Office.
- The preparation of a Proof of Evidence for the Planning Inquiry including liaison with other contributors and ProjectCo's Legal Representation.
- Input to Statement of Case
- Representation of ProjectCo at the Planning Inquiry

The services shall specifically exclude the following duties:

- The production of a scheme model and/or three dimensional computer graphics or photo montages
- The contribution of any planning fees.
- The provision of the services of any other consultant.
- The design of any landscaping works.

The terms and conditions for appointment of Savage & Chadwick Architects Ltd is a matter which shall be resolved between ProjectCo and Savage and Chadwick Architects Ltd.

3.3.3 Detailed Design

3.3.3.1 External

The specification for external materials and maintenance of such materials shall be in accordance with the National Building Specification.

Particular attention shall be given to all clauses, which apply to quality of workmanship and relevant British Standards for performance requirement of materials.

ProjectCo shall produce with their ProjectCo's Proposal a performance schedule for the external materials intended to be used and satisfy the Department that such materials are fit for their intended purposes, location and context, and such materials can be fully and

properly maintained with current Health, Safety and Welfare guidelines and conform with the minimum standards required by the National Building Specification.

3.3.3.2 Internal

ProjectCo shall produce a building envelope that is suitable for the housing of, and maintenance and access to, all necessary plant and equipment, and in addition produce a building envelope that is suitable to house all ancillary and control facilities associated with the operation of the Facility.

ProjectCo shall produce facilities for the hosting of education visits to the Facility including a lecture room suitable for a minimum of 35 people and a suitable reception area. Part of the design process for the Facility shall include provision of a safe route for a group, or groups, of visitors around the operational plant.

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4 Common Requirements

4.1 General

The following sections describe the common Requirements. Their purpose is to ensure a uniform standard of design, Materials and workmanship throughout the Facility.

The common requirements apply to all Works including all M&E equipment and Civil Works.

The international SI-system shall be used throughout the Facility including all documentation and reporting - with the following exceptions:

- Temperatures to be stated in °C
- Electric power to be stated in kW and kWh
- Revolutions to be stated in revolutions per minute (rpm).

4.1.1 Materials and Workmanship

All Materials and workmanship executed as part of the Works shall comply with the Project Agreement.

All parts and Materials incorporated in the Works shall be suitable for a waste incineration facility installation.

The requirement for easy and convenient dismantling of equipment and plant for inspection and repair purposes shall be taken into consideration.

4.2 Galleries, Staircases and Stays

The Facility shall have all necessary galleries, staircases, stays etc. to ensure easy and safe operation and maintenance access to all parts of the Works as well as proper and safe escape routes.

ProjectCo shall ensure consistency in the design and appearance of galleries, staircases, stays etc. and their supports.

Galleries, staircases and stays etc. shall be of robust design and manufacture.

Vibration nuisances arising from construction, operation and maintenance shall be minimised.

4.2.1 Staircases

Staircases shall be used in preference of any other arrangements where practically possible.

4.2.2 Stays

The use of stays shall be minimised.

4.3 Corrosion Protection of Surfaces

All steel surfaces shall be corrosion protected.

4.3.1 Quality of Protective Coatings

All steelwork shall be protected using systems, which are appropriate for the degree of exposure to prevailing conditions whether indoor or outdoor. These coatings should have a minimum time to first maintenance of 15 years.

4.3.2 Maintenance and Repair of Corrosion Protection

ProjectCo shall carry out inspection and maintenance at regular intervals and any damage to the painting or to the hot dip galvanisation shall be repaired. Prior to Take Over all damage to painting shall have been rectified.

The Department may also request repair at regular intervals of damage observed.

4.4 Thermal Insulation

Appropriate thermal insulation of all building fabric, plant and equipment etc, which could be accidentally touched by users or visitors and cause injury shall be incorporated in compliance with Health and Safety Regulations and obligations.

4.5 Vibrations

Vibrations caused by the Facility construction an operation shall not cause any inconvenience to people living in nearby houses or using industrial buildings.

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Precaution shall be taken by ProjectCo to reduce the effect of vibrations generated by operating the Facility for the Agreement Period.

4.6 Ventilation

A ventilation system shall be provided for the Facility in order to ensure suitable air quality and temperature conditions in the Facility for the Trial and Operating Period.

The ventilation system shall be designed and operated to provide a working environment in compliance with section 6 of the Department's Requirements

4.7 Electrical Works

High voltage switchboards shall be equipped with SF_6 type circuit breakers.

Low voltage switchboards and MCCs up to 37 kW shall be of the fuse less type with withdrawable units for incoming breakers and motor feeders, and shall be installed with a minimum of 30 % extra available space.

Main low voltage switchboards and distribution transformers shall be installed for the actual load plus 20 %.

All power cable installations shall be designed for a current capacity of max. 75 % of the current capacity of the conductor.

Cabling and wiring systems for ventilation equipment shall be in conduit/trunking and shall to the extent practicable be integral with the building electrical services system.

All power cable installations shall be properly bundled and ProjectCo shall ensure consistency in the design and appearance of cable trays, cable suspensions etc. throughout the Facility.

4.8 Instrumentation

All instrumentation, including measuring equipment, shall be appropriately designed and installed for precise operation in the actual environment, which could have a high level of dust and humidity.

The licensing authority shall be satisfied by ProjectCo that the accuracy of all measurements equipment complies with the license.

The extent and quality of instrumentation and the location of the measuring points/sampling points shall be determined in such a way that the actual state of operation can always be determined with sufficient accuracy, i.e. mass- and energy balances for the Facility shall be readily available on a continuous basis.

4.9 Labelling

All the components in the Facility, including motors, pumps, pipes, fittings, valves, filters, measuring points/sampling ports, transmitters, switchboards, cables etc. shall be properly labelled throughout the Trial and Operating Period.

4.9.1 Labelling of Switchboards

All switchboards, MCCs etc. shall be provided with labels with identification, ratings and other technical information of the switchboard. Further, labels on each incoming/outgoing feeder unit, instrument etc. shall be labelled with the identification of the unit.

4.9.2 Labelling of Cables, Terminal Blocks and Pipes

All cables connected to distribution boards, sub-distributors, terminal boxes, components etc. shall be labelled with a cable number.

All terminal blocks shall be labelled.

All pipes for steam, water, air, flue gas, ammonia etc. shall be labelled.

All labelling shall have been completed prior to Take Over

4.10 Consumables, Wear Parts and Strategic Spare Parts

All necessary types and quantities of consumables, Wear Parts and Strategic Spare Parts shall be available at the Facility in order to minimise the length of any Unplanned Outages occurring during the Trial and Operating Period.

The stocks of Wear Parts and Strategic Spare Parts shall be available for audit by the Department. Wear Parts and Strategic Spare Parts shall be listed in the component database. Reference is made to section 4.10.

The stocks of Wear Parts and Strategic Spare Parts shall always be maintained and kept up to date taking into consideration that change of manufacture, technical obsolescence etc. may necessitate a change in stock policy.

4.11 Documentation

ProjectCo shall provide all necessary documentation for the Facility. All documentation shall be kept up to date during the entire Agreement Period.

All Construction Documents shall have proper headings identifying the originator, ProjectCo, the date, the degree of completeness (Ready for Construction), the drawing number and its revision number.

Programme

ProjectCo shall provide a Programme according to the Project Agreement, Schedule 2, Clause 3.22.

Correspondence with Authorities

Copies of all correspondence with authorities shall be sent at the same time to the Department's Representative.

4.11.1 Principal Construction Documents

The Principal Construction Documents (and any samples to be submitted in accordance with Clause 4.9 of the Project Agreement) shall progressively during the D&B Phase be submitted and presented to the Department's Representative for review.

The Principal Construction Documents shall be sufficiently detailed to enable the Department's Representatives to appropriately conduct a review of design, function, space requirements and quality.

The Principal Construction Documents shall include details of the walking areas, emergency exits, safety and fire fighting facilities, ventilation facilities, working and repair areas, workshops, laboratories, consumables and stock facilities, staff facilities, control room, administrative facilities, waste streams and Residue storage and treatment facilities.

The Principal Construction Documents shall consist of, but may not be limited to the following:

Plant layouts, Floor Plans, Architectural drawings, Civil general arrangement drawings.

Drawings shall make reference to the plant datum gridlines with dimensions in millimeters.

- Drawings for each floor level and drawings showing sectional views throughout the Facility.

- Building framing drawings and cladding details.

- M, E & I Equipment location drawings, Process drawings including:

  General arrangements of M, E & I equipment

  - Piping general arrangements
  - Piping specifications
  - E & I room layouts
  - Cable routing drawings
  - Control room layout
  - Hazardous area classification drawing
  - Plant item list

    ProjectCo shall submit a plant item list. The plant item list lists all major plant item which are installed within the Facility. Each item will be listed by title and unique plant item reference number.

    The plant item list shall be continuously updated during the Trial and Operating Period.

  Process drawings

  Included in the process drawings shall be:

  - Single line power distribution diagram

    Circuit diagrams shall be submitted in A3 and A4.
  - Panel general arrangements
  - Overall system block diagrams
  - CFD modelling calculations for primary and secondary incinerator
  - Process flow diagrams (PFD's)
  - Process Control Description and Philosophy (CDP).

    The CDP shall in plain language (i.e. which can be understood by competent people without technical background) explain to the Department's Representative how the Facility will be operated. The CDP shall contain the overall control philosophy of the Facility, including description of the start/stop procedures as well as description of interactions between the subsystems during operation. Further, the CDP shall contain the control philosophy of each process section of the Facility and descriptions of the general and specific operational modes and automatic functions throughout the Facility. The CDP shall contain references to the process and instrumentation diagrams, ref. above, and

could in the form of appendixes include tables and schemes summarising the content, if such presentation is found appropriate to support the descriptions. The CDP shall serve as basis for ProjectCo's detailed design of amongst others the CMS System and preparation of the detailed functional descriptions of all dedicated software. The CDP shall also serve as ProjectCo's own introduction to their IT-software staff.

The CDP shall be separately presented to the Department to explain how the Facility will be operated. The presentation shall be part of the Design Period meetings.

The CDP is anticipated to comprise approximately 30-40 pages of text, not counting appendixes.

- Piping and instrument drawings (P & ID's)
- ProjectCo shall submit to the Department's Representative piping and instrumentation diagrams (P & ID). The process diagrams shall be submitted in A3 format.
- Power Consumers list, i.e. the power consumption shall be clearly defined and stated in kW at Nominal Load Point during outages and during operation in the extreme perimeter of the Capacity Diagram (including Secondary Waste incinerator)
- CMS functional design specification
- Draft O & M manuals
- Draft commissioning Manuals
- Testing programme
- Terminal point schedule

- Project QA manual
  - Drawing register (updated and submitted with each D&B Progress Report).

4.11.2 Construction Documents

The Construction Documents shall include the necessary details to build, maintain, operate, repair, extend or replace parts of the equipment and they shall consist of, but may not be limited to:

- Principal Construction Documents
- Detailed drawings of Mechanicla, Electrical and Instrument Equipment
- Valve Schedule
- Reinforcement schedules / detail drawings
- Holding down bolt schedule
- Architectural finishes schedules

- Motor data sheets
- I/O Lists
- Electrical/Instrumentat Termination Schedule
- Cable Schedule
- Instrument Schedule
- Instrument Data Sheets
- Loop Diagrams
- Valve Data Sheets
- Instrument hook-up Diagrams
- Wiring Diagrams
- Circuit Diagrams
- Hardware configuration / Rack layouts
- Operation and Maintenance Manuals (O&M Manuals)
- Operational Plan
- Annual Maintenance Plan
- Other information of a similar nature

All Construction Documents shall be in accordance with the Project Agreement, Schedule 2, D&B Obligations, Clause 4, ProjectCo's Proposal as enclosed to the Project Agreement and as specified in the Department's Requirements.

4.11.2.1 Operation and Maintenance Manuals (O&M Manuals)

The O&M Manuals shall contain:

- Maintenance Procedures
- Assembly/subassembly drawings to support maintenance procedures
- Safety requirements
- List of lubricants
- List of spares/consumables
- Detail drawings
- Catalogue information
- Operating procedures
- Isolation procedures
- Erection procedures, method statements and risk
- Assessment
- Maintenance schedules for Planned Outage
- Guidelines for Unplanned Outages (in order to minimise)
- Safety guidelines and instructions
- Environmental guidelines

ProjectCo shall provide operation and maintenance manuals in accordance with the D&B Obligations stated in the Project Agreement Schedule 2, Clause 4.13 and as specified in the Department's Requirements.

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The draft O&M Manual, which shall be submitted for review prior to commencement of the Trial Period will be exclusive of Catalogue information, erection procedure, method statements and risk assessment.

4.11.2.2 Operational Plan

The Operational Plan to be prepared and submitted by ProjectCo shall describe in detail all standard procedures for operation of the Facility. This includes production of (heat and) electricity, management of repair and storage facilities, stocks of consumables and Strategic Spare Parts and Wear Parts, acceptance and disposal of waste streams, Residues and effluents, and measurement of environmental data.

ProjectCo shall provide the Operational Plan in accordance with the O&M Obligations stated in Schedule 3, Clause 2 of the Project Agreement.

4.11.2.3 Annual Maintenance Plan

ProjectCo shall submit a running and detailed maintenance plan covering a continuous period of a minimum of one year, which shall be continuously updated (at least monthly), in order to regularly maintain and repair the Facility with the objective to minimise Unplanned Outages. The Annual Maintenance Plan shall describe all Planned Outages to the Facility during the given year, including not only maintenance requiring Planned Outages, but also Facility maintenance to be carried out during operation.

4.11.3 As-Built Documentation

As-Built Documentation shall be in submitted and be in accordance with Clause 4, Schedule 2 in the Project Agreement and shall include but may not be limited to:

- Construction Documents
- Final as built drawing register
- Final as built O&M Manuals
- Data dossiers
- Valve schedule
- Reinforcement detail drawings
- Holding down bolt schedule
- Architectural finishes schedule
- Motor data sheets
- I/O list
- Termination schedule
- Cable schedule

- Instrument schedule
- Instrument data sheets
- Loop diagrams
- Valve data sheets
- Hook-up diagrams
- Wiring diagrams
- Circuit diagrams
- As-built software
- Hardware configuration/rack layouts

4.11.3.1 Data Dossiers

ProjectCo shall provide quality assurance documents, test results and certificates of materials in accordance with section 1.5.6.

Test results and certificates shall contain the following items:

; Quality plans including pressure tests, weld control, material certificates and factory Acceptance Test (FAT) of the CMS System
; Reports of inspections and Works test
; Specific calibration certificates
; Certificates of conformity according to the Machinery Directive, cf. section 1.5.3

4.11.4 Conditions for Design Completion

Design Completion as referred to in Schedule 1, Stage Payment no. 2, is achieved, when the following Construction Documents have been issued for review to the Department's Representative:

1. P&IDs and PFDs

   Preliminary Piping and Instrumentation diagrams (P&IDs) and Process flow diagrams (PFDs).

   Preliminary Power consumers list, i.e. the anticipated power consumption shall be clearly defined and stated in kW at Nominal Load Point, during outages and during operation in the extreme perimeter of the Capacity Diagram (including Secondary Waste incinerator).

2. Topographic Survey complete and site datum gridline system established.

3. Preliminary Plant Layouts including:

Plans for each floor area from basement to roof showing both the Civil Works and the Equipment for incineration of Primary and Secondary Waste.

4. Preliminary Civil Works' specification for materials and workmanship excluding structural steelwork and cladding.

   This will be supported with notes of all meetings and discussions held by ProjectCo with all relevant authorities including the Isle of Man fire service and a programme for the Building Regulations Application having been agreed.

5. Control Description and Philosophy (CDP)

6. The following preferred contractors shall be identified to obtain vendor design information consistent with process, plant, civil, structural and electrical design.

   - Primary incinerator
   - Secondary incinerator
   - Steam turbine/generator
   - Air condenser
   - Gas cleaning plant
   - Wheelie Bin handling system

7. SHEP 3 (Hazop to raise documentation to be approved for design status) shall have commenced.

4.12 Reporting Requirements

The reporting obligations to be fulfilled by ProjectCo shall consist of:

a) Reporting requirements from ProjectCo to the Department, comprising of:

; 'External' Reports, of public or confidential nature, consisting of quinquennial, annual, monthly, daily, and other required reports i.e. environmental reports.

- 'Internal Reports', which ProjectCo is obliged to maintain and keep at the Facility and which the Department has unrestricted access to.

b) Reporting obligations by the Department to ProjectCo, comprising in general of:

- A Department obligation to inform ProjectCo on new waste management initiatives, plans, legislative changes and other plans of which the Department becomes aware and which could be of vital interest for ProjectCo to know about at an early stage.

4.12.1 Reporting Requirements from ProjectCo to the Department

ProjectCo shall fulfil the following requirements for reporting:

4.12.1.1 Reporting on Licence Conditions

All reporting requirements and obligations as stated in Approvals, including the ~~license~~licence to operate the Facility, shall be timely fulfilled.

4.12.1.2 Quinquennial Review

ProjectCo shall report as described in Clause 2 of Schedule 3 of the Project Agreement in relation to the Quinquennial Review.

4.12.1.3 Annual Reporting[14]

"The Annual ~~Reporting~~Report shall comprise the following 3 separate reports:

~~1)~~ **1) The annual detailed and confidential report**~~.~~

The annual detailed and confidential report shall describe ~~in detail~~ the previous year's events and activities ~~including all events that have affected ProjectCo's fulfilment of it's obligations.~~

~~Furthermore this report shall include a detailed plan for the next year describing~~and include a description of the planned events and activities~~, including a plan for treating expected waste streams and a detailed schedule with predefined dates and hours for Planned Outages. A maintenance program for each Planned Outage shall be included in this report~~ for the following year.

The annual detailed and confidential report shall as a minimum contain the following information:

- General description of events, including
  - Services Changes

[14] This clause has been amended by 2.6.2 of DofV2 dated 1 October 2014.

- Events of public interest
- New waste initiatives

- Business plan for the next period
- Activities for the next period
- Organisation
  - Key Personnel
  - Other Staff
  - Changes in organisation
- Operational Report for the previous period
  - Operational data, record of the Primary and Secondary Waste streams
  - Description of waste streams
  - Record of energy recovery
  - Details of any events or circumstances including but not limited to Abatements in which, or as a result of which, Project Co shall not have complied with any of its obligations under this Project Agreement (as amended from time to time)
- Maintenance report
  - Problems encountered & solutions
  - Problems remaining unresolved
  - A report reconciling planned and actual maintenance expenditure in such detail as the Department shall reasonably require

- Environmental report
  - Environmental tests and verifications
  - EMAS audit reports
  - Emissions records including description of excursions
  - Residues - categories, amounts, quality
  - Consumables
  - Waste water and liquid effluents treatment and disposal
- Health and Safety
  - Health and safety report

2) The annual detailed financial report

The annual detailed financial report shall be prepared in accordance with legislative requirements.

~~2) The annual detailed financial report and analysis.~~

The financial year will be from 1 April to 31 March.

~~3)~~ **3) The annual public report**~~.~~

The annual public report will be based on 1) and 2). The report shall be in condensed form and in accordance with requirements as set out in the EMAS Validation. The content of the annual public report shall ~~contain a brief plant description in order to make the annual report~~be suitable for providing general information to visitors~~. This report shall be made in A4 format on recycled paper~~. Furthermore, the public annual report shall be made available to the public on the Internet web site.

ProjectCo shall ensure that the annual public report will be available in sufficient copies to be handed out to visitors at the Facility and to the Department.

The annual detailed and confidential report and the annual detailed financial report shall be handed over to the Department in 5 copies of each.

All annual reports shall be issued no later than three months after expiry of the Operating Year.

ProjectCo has an obligation to ensure that the annual public report will be handed out to all visitors to the Facility and furthermore, 500 copies shall be sent to the Department.

The annual detailed and confidential report and the annual detailed financial report and analysis shall be duly signed by ProjectCo and delivered by registered mail or personal hand-over to the Department in 10 copies of each.

All annual reports shall be issued no later than three months after expiry of the financial year.

Contents of the Annual Detailed and Confidential Report

The annual detailed and confidential report shall at a minimum contain the following information:

General description of events, including

Services Change
Events of public interest

Special events (events that have influence on ProjectCo's obligations), i.e.

New waste initiatives
Failures of the Department or other parties, e.g. late payments, insufficient waste due to labour disputes, etc.
ProjectCo's failures including listing of Abatements imposed in the previous period.

Business plan for the next period

Activities for the next period
Operational Report on the next years plans including a detailed schedule with dates for planned outages and stating detailed activities.
A description of waste streams and amounts expected to be treated.

Organisation

Key Personnel
Other Staff

Changes in organisation

Operational Report for the previous period

Operational data, availability of the Facility, Planned and Unplanned Outages
A monthly record of the Primary and Secondary waste streams – each waste stream fraction shall be described: waste categories including Rejects, amounts and calorific values
Destination of Rejects and Residues
Source of Rejects
Monthly scheme of energy recovery in terms of production, cooling, dissipation and sales of (if relevant: heat and) electricity.
Management of storage facilities, use of allocated and non allocated space
Consumables, month by month, component by component.
Stocks of Strategic Spare Parts and Wear Parts

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Maintenance report

Problems encountered & solutions

Environmental report

Environmental tests and verifications carried out by ProjectCo
Environmental tests and verifications carried out by independent companies
EMAS audit reports
Emissions records
Residues- categories, amounts, quality
Waste water and liquid effluents treatment and disposal
Licence condition compliance confirmation including restrictions and warnings imposed by the licensing authority.

Health and Safety

Health and safety report

Contents of the Annual Detailed Financial Report and Analysis

According to legislative requirement. Also refer to clause 21 of the Project Agreement.

Contents of the Annual Public Report

Based on 1) and 2) however in a condensed form and in accordance with requirements as set out in the EMAS conditions.

4.12.1.4 Monthly Report

Monthly reporting prior to Take Over

Project Co shall prepare and submit monthly D&B Progress Reports in accordance with Schedule 2, Clause 3.25 of the Project Agreement.

Monthly reporting after Take Over

The monthly reports after Take Over shall cover one month, i.e. start on the 1st day of the month.

The monthly report shall contain detailed reporting on registration and administration of incoming waste streams and consumables, outgoing streams of Rejects, Residues, energy production and heat dissipation as well as emissions.

The monthly report shall include a detailed performance report on the Facility including detailed reports on activities including Planned and Unplanned Outages. The report shall, if relevant, include an update on the operational report as stated in the annual reporting together with an update on maintenance procedures.

The monthly report will be attached to the Monthly Invoice, ref. part 2.3 Schedule 1 to the Project Agreement.

Monthly reports shall be handed over to the Department in 5 hard-copies and one copy in electronic form.

4.12.1.5 Daily Reports

Daily reports shall be given in the event of Unplanned Outages or other events that affect the obligations of ProjectCo or the Department.

Daily reports shall also be given in the event that the duration of the Planned Outage exceeds the advised Planned Outage and hence calls for a need to either temporarily store waste outside the bunker or execute the Emergency Plan. All the contents of the daily report cannot be foreseen at this stage but the purpose of the report is to keep the Department fully updated and informed of all activities and actions.

Daily reports shall be handed over in five copies as well as in one electronic copy to the Department no later than noon the following day.

4.12.1.6 Environmental Report

ProjectCo shall prepare a report on the Facility's environmental performance according to the guidelines set out in the Approvals.

The Department shall always receive five copies of this separate environmental report.

4.12.1.7 Internal Reports

Internal reports, O&M maintenance schedules, logged data, logbooks etc. shall be kept available at the Facility for access and unhindered inspection by the Department or the Department's Representative. A logbook shall be available at the control room and kept up to date on recent events by the operating staff.

ProjectCo is obliged to keep any such internal reporting readily available at the Facility for a period of 10 years.

4.12.2 Obligation of the Department to Report to ProjectCo

The Department shall prepare an annual Department report and submit it to ProjectCo.

This report shall timely advise ProjectCo of expected/known waste management initiatives, legislative changes and other plans that The Department is aware of and which could influence ProjectCo's Operating Plan or have vital interest for the execution of ProjectCo's obligations under the Project Agreement. The Department's report will be issued on the same date as the annual reports prepared by ProjectCo.

4.13 Requirements for Tests

4.13.1 Tests on Take Over

During the Trial Period ProjectCo shall provide evidence to the Department's Representative that the Facility can in fact operate continuously and in accordance with the specifications and conditions as stated in the Project Agreement and the Department's Requirements.

The Department's Representatives approval of the test will be a condition for Take Over.

A Commission Note Book shall be present in the control room at all times in the Testing Period. The Commission Note Book shall contain information about the operational irregularities in relation to the operation of the plant in the testing period. By irregularities shall be meant unexpected events, unusual temperatures, emissions or other measurements, component faults. A resume of the Commission Note Book shall be presented by ProjectCo at the Testing Period Meetings, ref. clause 4.14.1.3. The Commission Note Book shall be maintained and updated by the staff testing and operating the Facility.

The Tests on Take Over shall be performed to demonstrate acceptability and adequate performance as a condition for Take Over. The tests shall comprise:

a) Proving trials.
b) Functional tests.
c) Continuous automatic operation test.
d) Minimum performance tests.
e) Mechanical inspections.

4.13.1.1 Proving Trials and Functional Tests

Primary Waste Incinerator

The three months Trial Period consists of three periods each of a 1 month duration:

1. During the first month the Primary Waste incinerator shall operate for at least 50 % of the time.

2. During the second month the Primary Waste incinerator shall operate for at least 540 hours.

3. During the third month the Primary Waste incinerator shall be permitted to be out of operation – due to faults and their rectification – no more than 5 times each with a maximum duration of 24 hours. The total downtime of the third month shall not exceed 30 hours. The time for closing down and restarting shall not be included in the 30 hours. In case one or more of these operational stops exceeds 24 hours, or in the case that more than 5 operational stops occur or in case the total downtime exceeds 30 hours, the Trial Period shall be prolonged by one week (7 days) plus the duration of the downtime.

Secondary Waste incinerator

The tests on the Secondary Waste incinerator shall be undertaken using a similar philosophy to that used for the Primary Waste incinerator, i.e. in a progressive manner bring the incinerator up to operational state subject to the availability of Secondary Waste.

4.13.1.2 Continuous Automatic Operation Test

During the third month of the Trial Period, the Facility shall be operated continuously on full automatic control at Nominal Load Point for a period of seven (7) days (168 hours) without significant malfunctions.

Malfunctions are considered significant:

- If the normal operation of the incinerator or of the electricity production has to be interrupted for more than 2 hours or

- if interruptions occur more than 3 times because of the same malfunction, or

- if the added duration of all interruptions exceeds 6 hours during the 168 hours period.

4.13.1.3 Minimum Performance Test

At the end or near to the end of the Trial Period a minimum test programme shall be performed to demonstrate that the Plant meets the minimum performance standards.

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A third party testing agency shall witness the operating test progress and verify emission levels achieved, this includes calibration of the emission levels measured for the continuous monitoring equipment and measurement of those emissions which are not continuously monitored, i.e. dioxin measurements and heavy metal emissions (Cd, Tl, Hg, Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V).

In addition the minimum performance test shall demonstrate the following:

i) Throughput and thermal load as indicated on the Capacity Diagram.
ii) Power production at the Nominal Load Point.

A tolerance of 10% for the throughput, Thermal Load and power production will be allowed.

During the minimum performance test for a period of at least 8 hours, while the plant is at Nominal Load Point and operating at stable conditions the following shall be measured:

- Throughput of waste.
- Boiler flue gas exhaust temperature.
- Steam production and steam conditions.
- Electricity produced and electricity exported.
- Chimney exhaust flue gas main flow rate and composition.

The measurements shall be made using installed equipment. The methodology described in annex 1, Schedule 1 of the Project Agreement shall apply in order to determine the Net Calorific Value.

The following shall also be verified:

- In the incinerator 2 seconds residence time above 850°C in the presence of 6% v/v O_2 (wet).
- The loss on ignition of the ash and fly ash is less than 3% w/w and the total organic carbon is less than 2% w/w.
- The emissions limits comply with the design basis, the Planning Scheme Order, Approvals and Applicable Laws.

The consumption rates shall be checked during the minimum performance tests to ensure the Plant is performing acceptably.

4.13.1.4 Mechanical Inspection

The Tests on Take Over shall be completed by a mechanical inspection of the Facility. If major shortcomings are found, necessitating extensive repairs (eg refractory) or indicating

a recurring problem (eg excessive fouling), ProjectCo shall undertake remedial action(s) and demonstrate that the Defect(s) is (are) removed by a test programme to be presented to and approved by the Department's Representative.

4.13.2 Tests after Take Over

After Take Over of the Facility a series of tests shall be performed in order to perform a detailed comparison with the guaranteed values.

The tests shall be performed by ProjectCo. A third party testing agency shall assist and witness in the progressing of the tests.

A detailed test programme for the Primary Waste incinerator, Secondary Waste incinerator and for the combined operation will be developed during the contract.

There shall be 3 tests for the Primary Waste incinerator of 6-8 hours on consecutive days, 3 tests for Secondary Waste incinerator of 6-8 hours on consecutive days. There shall be a two day test for the whole Facility.

For two periods for each incinerator, the capacity setpoint (heat input and boiler steam production) shall be set at a value expected to yield a measured nominal condition and for one period it shall be set at a value expected to yield the maximum condition.

The steam turbine generator and steam circuit shall be measured following IEC 953-2.

The waste incinerated during the tests will be Conforming Waste. Preliminary measurements may indicate that the Net Calorific Value of the Conforming Waste is too far away from the nominal value to allow operation at Nominal Load Point within the Capacity Diagram. In this case the waste shall be mixed with other acceptable waste, in an effort to bring the Net Calorific Value of the Conforming Waste closer to the nominal value.

Incidents due only to the measuring itself may invalidate some intermediate results during a test period. The tests will be considered valid if, after agreement with the Department's Representatives to exclude doubtful data, sufficient dat remain with sufficient confidence to ensure that the calculated averages are representative within acceptable and agreed error margins. In general, at least two different measurements or calculation approaches will be attempted for every main parameter to increase confidence in the results.

4.13.2.1 Performance and Consumption Measurements

The tests shall be set up to measure hourly average values of the parameters, listed below:

- The hourly waste throughput in continuous operation.

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- The content of combustible material in bottom ash and fly ash.
- The Total Organic Content (TOC) in the bottom ash.
- The steam production, the steam pressure and the temperature.
- The electricity production at the generator terminals and at the export meter.
- The gaseous emission values (half hourly) and on request by the Department the emission values of the flue gas in the stack, including dioxin and relevant metals.

- The consumption of:
  - ; Electricity
  - ; Steam
  - ; Towns water
  - ; Lime
  - ; Activated carbon
  - ; Ammonia
  - ; Auxiliary fuel
  - ; Other chemical reagents

- The process related discharges:
  - Bottom ash
  - Boiler fly ash
  - Residue from flue gas cleaning

- The noise measurements

- Parameters, relevant to complete or verify the heat balance and consumption or useful for evaluation of the data, e.g.:

  ; Ambient temperature, hygrometry, atmospheric pressure
  ; Boiler exhaust flue gas temperature
  ; Boiler feedwater temperature
  ; HCl and SO_2 content of the flue gas at the flue gas cleaning inlet
  ; Flue gas cleaning reactor exhaust temperature

The heat balance in accordance with annex 1, Schedule 1 of the Project Agreement shall be used. It will determine the effective Net Calorific Value of the waste which, together with measured throughput, is required to compare the measured throughput value to the guaranteed performance on the Capacity Diagram.

The measured nominal (maximum) throughput is to be compared with the largest nominal (maximum) throughput found on the line drawn for the measured Net Calorific Value in the Capacity Diagram.

All measured consumption rates, except for the consumption of fuel oil, lime and ammonia and the quantity of the discharge residues will be corrected as follows, before comparison to the guaranteed consumption rates:-

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Corrected consumption = (measured consumption x(multiplied by) nominal waste heat input (within the capacity diagram))/calculated waste heat input. This calculation shall use the calculated waste heat input = measured waste throughput x (multiplied by) calculated Net Calorific Value

The electricity consumption shall be determined by either direct measurement or by the deduction of the exported power from the produced power as measured at the terminals of the generator. In addition, the total measured electricity consumption shall be corrected for the power consumption that is not related to the nominal operation and small power and lighting of the facility.

The consumption of lime and the quality of discharge residues shall be corrected using formulas or curves based on the mass of pollutant at the inlet of the flue gas cleaning systems.

The consumption of fuel oil during cold and short start-up and shutdown shall be verified by a simple test at a convenient time.

The internal noise, the noise in the vicinity of the equipment and the noise outside of the buildings will be measured with standard and calibrated equipment in accordance with appropriate British Standards, e.g. BS 5969.

4.13.3 Tests Prior to Final Take Over

Before Final Take Over, a series of tests to verify the performance, Approvals, Applicable Law, the Project Agreement and consumptions of the Plant may be requested by the Department. Depending upon the operation of the Plant during the Guarantee Period the tests may be prolonged, simplified or omitted.

4.14 Meetings

4.14.1 D&B Requirement for Meetings

During the Design, Construction, Testing and Guarantee Periods prior to Final Take Over, regular meetings shall be held between ProjectCo and the Department and/or it's Representative.

In the event that either party requires a meeting further to the regular meetings described in the following, notice shall normally be given with 2 weeks warning.

4.14.1.1 Design Period meetings

A monthly Design Period Meeting shall be held in order to follow up on progress in accordance with the D&B Progress Reports and Programme, cf. Clause 3 of Schedule 2 of the Project Agreement
The meetings shall be held one week after submission of the above documents. As part of these meetings any outstanding design issues will be discussed.

Any design issues which cannot be resolved via correspondence will form the agenda for ad-hoc design meeting.

ProjectCo or the Department's Representative shall call the meetings with 2 weeks notice. ProjectCo shall host the meetings at an agreed location.

4.14.1.2 Construction Period meetings

During the Construction Period meetings shall be held approximately once a month in order to inspect and review the Works and to follow up on progress in accordance with the D&B Progress Reports and programme. The meetings shall be held with 2 weeks notice from either party or at an agreed fixed date.

ProjectCo shall host the meetings in appropriate accommodations at the Site.

4.14.1.3 Testing Period meetings

During the Testing Period, meetings shall be held appropriately and approximately on a weekly basis in order to review the cold and hot commissioning as well as the Tests on Take Over and the certified testing reports, and to follow up on progress in accordance with the D&B Progress Reports and programme.
ProjectCo shall host the meetings in appropriate accommodations at the construction site.

Prior to Take Over the Department's Representative shall review and forward any comments on the As-Built Drawings, warranties, required permissions from authorities, recorded results and tests of the Tests on Take Over, as stated in the Project Agreement as conditions for Take Over.

Prior to Take Over and supplementary to the certified results of the Tests on Take Over, ProjectCo shall submit a document with a list of all deficiencies and defects 2 weeks prior to Take Over, including a time table for rectification of the defects prior to Take Over. The Department's Representative shall review the list and inspect the Facility together with ProjectCo's representative prior to Take Over and supplement/diminish the list of deficiencies. The Departments' Representative shall hereafter confirm that the outstanding deficiencies and defects are of minor/acceptable nature as stated in the Agreement. The Department's Representative will revise the list of deficiencies.

When the Department's Representative shall have confirmed that all the conditions for Take Over are fulfilled as stated in the Project Agreement he shall issue the Take Over Certificate in accordance with the Project Agreement. The list of deficiencies and timetable for rectification shall be attached to the Take-Over Certificate.

4.14.1.4 Guarantee Period meetings

During the Guarantee Period meetings shall be held approximately once every two months unless otherwise agreed in order to inspect and review issues in relation to Facility operation.

The meetings shall be held with 2 weeks notice from either party or at an agreed fixed date. ProjectCo shall host the Guarantee Period meetings at the Facility.

ProjectCo shall host the meetings in appropriate accommodations at the Facility.

If Tests after Take Over are required by the Department, separate meetings shall be held with ProjectCo to determine the extent and timing of such tests, the potential involvement and payment of independent bodies to carry out the tests, and the provision of the facilities needed to carry out the tests.

After Tests after Take Over, ProjectCo shall submit a timetable for rectification of the defects found. The Departments Representative shall hereafter review the test results and confirm that the outstanding deficiencies and defects are of minor nature as stated in the Project Agreement. Meetings as deemed necessary shall be held as to discuss the results of the tests.

The Departments Representative shall approve that all the conditions for Final Take Over are fulfilled as stated in the Project Agreement and subsequently issue the Final Take Over Certificate in accordance with the Project Agreement. The list of defects and timetable for rectification shall be enclosed to the Final Take Over Certificate.

In addition, annual meetings as set out in clause 4.14.2.2 shall be held in the Guarantee Period.

4.14.2 Meetings after Final Take Over

4.14.2.1 Quenquennial Review

Meetings shall be held as described in Clause 2.19, Quenquennial Review, Schedule 3 of the Project Agreement.

4.14.2.2 Annual Meetings

Annual meetings shall be held in conjunction with the issue of the annual report.

The purpose of the annual meeting is to discuss the next years' operation, events that may influence waste amounts or composition and the contents of the annual report as well as selected issues in the relationship between ProjectCo and the Department. Selected issues could be Legislative Changes, Services Changes, problems relating to the Facility and Public Relations.

Activities before the Annual Meeting

One month before the annual meeting, ProjectCo shall issue to the Department a draft of the annual report in 3 copies. The draft report shall include in detail all the topics described in the reporting requirements as stated in the Department's Requirements except for topics in relation to special events and future plans that may require information from the Department, or the Departments participation. ProjectCo shall also issue a document describing in detail the selected issues, which they wish to discuss at the meeting.

One month before the meeting the Department shall inform ProjectCo of any events that are likely to influence waste amounts or composition and of any Legislative Changes that the Department is knowing of that may have influence on ProjectCo's plans for the next year. The Department shall also issue a document describing in detail the selected issues, which it desires to be taken up at the meeting.

Two weeks before the meeting the Department or his Representative shall submit an agenda for the meetings based on the exchanged documents.

The Annual Meeting

The annual meeting will be held at the Facility and ProjectCo shall host the meeting. The Department shall chair the meeting in accordance with the agenda issued.

ProjectCo shall present the contents of the annual report. The documents describing the selected issues shall be discussed.

The Department will issue minutes of the meeting no later than two weeks after the meeting.

ProjectCo shall submit the annual report at the date stipulated in the reporting requirements.

4.14.2.3 Other Meetings

In the event of Services Change or in the case of events occurring that may have influence on the operation of the Facility or on any of ProjectCo's obligations, and which may require action on the Departments or ProjectCo's side, a meeting may be called with 2 weeks notice.

A document describing in detail the issues for discussion shall be issued by the requesting party two weeks prior to the meeting.

The meeting will be held at the Facility and ProjectCo shall host the meeting. The Department will chair the meeting.

The Department will issue minutes of the meeting no later than 2 weeks after the meeting.

Events leading to such a meeting could be Force Majeure, Unplanned Outages, public complaints, breach of Approvals or Relief Events.

Meetings in relation to Handback are described in section 7.

4.14.3 Use of Site

ProjectCo shall ensure that construction activities are carried out in such a manner as to protect the environment. Reference shall be made to the Environmental Assessment. Construction activities shall be carried out so as to minimise the risk of pollution incidents. Where a pollution incident occurs, ProjectCo shall notify the Department's Representative as soon as possible.

ProjectCo shall not use the Site for any purpose other than carrying out the work required under the Project Agreement.

ProjectCo shall ensure that all workmen leave the Site on conclusion of their duties each day.

ProjectCo shall minimise the emission of malodours during construction. ProjectCo shall minimise noise during construction, i.e. during the Construction and Testing Period.

4.14.4 Site Working Area Limits

ProjectCo shall confine itself to the working areas and access ways designated within these documents.

4.14.5 General Facilities, Temporary Buildings and ProjectCo's Equipment

ProjectCo shall provide suitable workshops, storage, messing, washing and toilet accommodation and all general facilities necessary for the Works and in accordance with the Approvals and Applicable Laws.

4.14.6 Sanitary Conveniences

ProjectCo shall provide, maintain and cleanse the required sanitary conveniences for the use of it's Staff until Take Over when the Facility's permanent sanitary conveniences shall be available.

4.14.7 Constructional Plant and Equipment

ProjectCo shall be solely responsible for making it's own arrangements for all necessary construction plant and equipment including supply and storage. All items are to be in full working order and conform to all relevant Health and Safety Obligations.

4.14.8 Safety of Constructional Plant, Equipment and Temporary Works

ProjectCo shall be solely responsible for the safety, adequacy and maintenance of all constructional, plant, equipment and temporary works.

4.14.9 Safety, Health and Welfare Requirement

General

ProjectCo's attention is drawn to the obligations arising under the relevant Clauses of the D&B Obligations consequent upon the CDM Regulations.

ProjectCo shall comply at all times during the Design and Construction Periods with all Applicable Laws. This legislation includes, but is not restricted to:

- Factories and Workshops Act 1909
- White Phosphorous Matches Prohibition Act 1909
- Dangerous Goods Act 1928
- Employment of Women, Young Persons and Children Act 1930
- Factories and Workshops (Amendment) Act 1931
- Boiler Act 1934
- Factories and Workshops Amendment Act 1936
- Factories and Workshops Amendment Act 1939
- Mines and Quarries Regulations Act 1950
- Isle of Man Metalliferrous Mines General Regulations 1951

- Isle of Man Quarries General Regulations 1951
- Isle of Man Quarries General Regulations (Electricity) 1951
- Isle of Man Quarries General Regulations (Use of Explosives) 1951
- Dangerous Goods Act 1954
- Ionising Radiations (Protection of Workers) Act 1968
- Health and Safety at Work Act 1994 as applied to the Isle of Man and all subordinate Legislation and Regulations
- Health and Safety (Improvement and Prohibition Notices and Licences Appeals to Industrial Tribunal) Regulations 1981
- Quarries General (Electricity) (Amendment) Regulations 1981
- Construction (Health and Safety) Regulations 1985
- Dangerous Goods (Enforcing Authority) Regulations 1992
- Dangerous Goods (Fees) Order 1992
- Health and Safety (Reporting of Injuries etc.)Order 1992
- Freight Containers (Safety Convention)(Application) Order 1994
- Gas Safety (Application) Order 1995
- Gas Safety (Service Pipes and Fittings) Regulations 1996
- Health and Safety at Work Order 1998

A complete list of Isle of Man health and safety legislation and guidelines is available from the Department's Health and Safety Inspectorate.

ProjectCo's attention is drawn to the Section 6 of the Department's Requirement titled "Health Safety and Welfare Statement".

On signing of the Project Agreement ProjectCo will assume the role of Client as defined by the CDM Regulations 1994. These Regulations are not yet a statutory requirement but are expected to be introduced imminently and shall be adopted by ProjectCo as best practice.

Planning Supervision

As part of the obligation in respect of the CDM Regulations, ProjectCo shall appoint a Planning Supervisor to carry out the duties and responsibilities specified therein.

4.14.10Safety Responsibility

ProjectCo shall be solely responsible for the safe conduct of the Works. It shall ensure that all operations are carried out safely and that any person made responsible for the safe conduct of any part of the operations carries out their duties in a proper manner.

ProjectCo shall be responsible for the safety and awareness training of both it's personnel and the Department's Representative staff and the induction of the Department's Representative staff prior to entry to the site and any other visitors.

ProjectCo shall ensure that the duties of those who design, manufacture, import or supply articles for use in the Works, as defined in the CDM Regulations, are fulfilled. ProjectCo shall secure inspection and test certificates relating to all work and lifting equipment assembled and installed as part of the project in accordance with the following UK Regulations as if they were in force in the Isle of Man:

- Provisional Use of Workplace Equipment Regulations 1998
- Lifting Operations and Lifting Equipment Regulations 1998
- Verification of conformity with Health and Safety Requirement under the Supply of Machinery (Safety) Regulations 1992
- The CE Marking with regard to the Construction Products Regulations 1992

All inspection and test certificates, certificates of conformity and CE Marking evidence shall be retained and incorporated into the Health and Safety File for the retention and the use of the Department.

Unless otherwise stated in writing by the Department's Representative, any information issued by the Department's Representative shall not be assumed by ProjectCo to be a design within the meaning of the CDM Regulations or to relieve ProjectCo of his duties and responsibilities as defined in the CDM Regulations.

4.14.11 Safety in Sewers and at the Works.

ProjectCo shall comply with the relevant provisions of "Safe Working in Sewers and Sewage Works" published by the National Joint Health and Safety Committee for the Water Service, UK.

4.14.12 Accident Reporting.

In the event of any accident ProjectCo shall comply with all Approvals and Applicable Laws. In addition all accidents shall be notified to the Department as soon as practicable.

4.14.13 Noise Constraints.

ProjectCo shall employ the best practicable means to minimise noise produced by his execution of the Works, and shall comply with all relevant legislation and standards including the Requirement of BS:5228 'Noise and Vibration Control on Construction and Open Sites'. All vehicles and mechanical supplier's equipment used in the execution of Works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient working order for the duration of the Construction and Testing Period. Machines in intermittent use shall be shut down when not being used or throttled down to a

minimum. ProjectCo shall remove from the Site any item of equipment, which, in the opinion of the Department's Representative is ineffectively silenced. ProjectCo shall organise it's execution of the Works with regard to the positioning of equipment, construction of noise attenuating barriers and the location of haul routes, etc. so as to minimise construction noise to adjacent properties.

4.14.14 Use of Explosives

The use of explosives by ProjectCo shall not be permitted except with the sanction of the Department's Representative and the express written permission of the responsible authorities. ProjectCo shall comply with all relevant regulations relating to the storage and use thereof in particular the provision of screens for the protection of the public and adjacent property. Dilapidation surveys will be required for all properties within 200m of the site. ProjectCo will be deemed to have allowed for all extra costs and charges arising from any delays occurring due to implementation of regulations arising from his decision to use explosives or the decision by the Department's Representative to forbid the use of explosives and the Department will not accept any responsibility for such delays.

4.14.15 Advertising

ProjectCo shall not, without the approval of the Department's Representative, exhibit or permit to be exhibited any advertisement on the Site, ProjectCo's equipment or the Temporary Works. All notices at the Site shall be subject to the approval of the Department's Representative before they are put up.

4.14.16 Plant Delivery

ProjectCo shall be responsible for the safe and satisfactory off-loading and erection of all elements of Plant at the Site.

4.14.17 Erection and Lifting Tackle

ProjectCo shall include for all skilled and unskilled labour for unloading on the Site, storage erection, setting to work, testing of the equipment, together with all lifting gear, scaffolding and any other Staff's equipment necessary for the satisfactory and safe erection of the complete installation.

4.14.18 Protection against Damage

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ProjectCo shall take all necessary precautions to avoid causing any unwarranted damage to roads, lands, properties, trees and other features during the Agreement Period, and shall deal promptly with any complaints by owners or occupiers.

Where any portion of the Works is close to, across or under any existing apparatus of public utilities or other parties, ProjectCo shall temporarily support and work round, under or adjacent to all apparatus in a manner designed to avoid damage, leakage or danger and to ensure uninterrupted operation.

Should any leakages or damage be discovered, ProjectCo shall at once notify the Department's Representative and the statutory authority or owner concerned, and ProjectCo shall afford every facility for the repair or replacement of the apparatus affected.

4.14.19Laboratory Facilities

ProjectCo shall be responsible for providing or sourcing certified laboratory facilities capable of testing of materials. Results of all tests shall be supplied to the Department's Representative when reasonably requested and the laboratory, its equipment, all samples and records shall be open to inspection by the Department's Representative during normal working hours.

4.14.20Clearing of the Site and Site Cleanliness

ProjectCo shall ensure as far as is reasonably practicable for the Agreement Period that all aspects of its operations are conducted with a standard of cleanliness and tidiness appropriate to the work involved and the equipment used.

ProjectCo shall, at it's own expense during the Agreement Period, clear up it's own arisings and rubbish to the reasonable satisfaction of the Department's Representative.

ProjectCo shall implement a programme of planned maintenance for the Operating Period, which shall provide for regular cleaning and repainting of the Facility. Such maintenance shall also include regular cleaning (not less than once every two months) of all glazed surfaces to buildings. Grassed surfaces and planting shall be maintained in a neat condition in compliance with the landscape management plan referred to in Section 3.1.11 of the Department's Requirements.

The Facility shall at all times throughout the Operation Period be well maintained, structurally sound, safe, clean and free of litter, rubbish and unsightly storage of materials, consumables, Wheelie Bins, etc.

If in the Department's view the Facility is not being kept in such a condition as described above, then the following one calendar month's written notice Abatement No. 8 in Clause

2.4 of Schedule 1 will be applied until such time the Department is satisfied that the appropriate corrective actions has been carried out by ProjectCo at their expense.

4.14.21 Topographic and Site Surveys

ProjectCo is required to verify all drawings provided as part of the tender documents for their accuracy. Where deemed necessary ProjectCo shall carry out additional topographic and level surveys of the site and the existing works prior to the work commencing and shall supply the results complete with drawings to the Department's Representative prior to work commencing.

4.14.22 Setting Out

ProjectCo shall set out the Works and the Facility in accordance with the dimensions, lines and levels shown on ProjectCo's own drawings.

4.14.23 Facilities for Inspection by the Department's Representative

ProjectCo shall at all times provide the Department's Representative with adequate and necessary assistance in the execution of his duties in checking measurements, carrying out tests and other duties. To this end experienced personnel including Key Personnel shall be available on request to assist the Department's Representative. ProjectCo shall also provide the Department's Representative with safe access to any location requiring checking measurements or inspection. On a reasonable basis and if deemed necessary, the Department's Representative may require Work in relevant areas to be suspended and Plant, Materials and ProjectCo's equipment moved as required to facilitate checking by Department's Representative. Providing that ProjectCo demonstrate that the Department's Representatives was given adequate notice that the Work was available for the Department's Representatives to check and that the Department's Representatives has failed to perform relevant checks within a reasonable period, then ProjectCo shall be entitled to claim additional time - as a Variation - in pursuant to the Department's Representatives request for Work to be suspended and equipment uncovered or moved.

4.14.24 Protection Against Inclement Weather

ProjectCo shall protect the whole of the Works from damage by inclement or cold weather.

4.14.25 Storage of Plant and Materials

ProjectCo shall provide adequate and suitable storage for Plant and Materials to be incorporated into the Works and proper protection for the same against the weather.

ProjectCo shall be responsible for the proper accounting, store keeping, care and control of all Plant and Materials including Directly Procured Items and for ensuring that the recommendations of Plant and Materials manufacturers as to storage and use are complied with.

Proper records of receipts and issues of Plant and Materials shall be kept and shall be available for the inspection by the Department's Representative at any time.

4.14.26Photographs

ProjectCo shall arrange for such progress photographs to be taken at the Works as the Department's Representative may from time to time require. All such arrangements shall be to the reasonable approval of the Department's Representative.

ProjectCo shall at the Departments' Representative's request prepare and submit by designated e-mail addresses photos in electronic format.

ProjectCo shall include relevant photographs in the D&B Progress Report.

4.14.27Fire Precautions

All work performed by ProjectCo that is likely to give rise to fire hazards, such as the use of naked flames in enclosed or restricted areas shall be carried out in such a way as to ensure the safety and protection of the Works and of all personnel and property.

Where it is necessary to use any naked flames or welding equipment and while combustible materials are being used adequate protection shall be provided to all other adjacent materials and personnel. Suitable fire extinguishers shall be readily available at the positions where such work is proceeding.

4.14.28Roads and Traffic

Work in Public Roads

ProjectCo shall obtain permission from the Department of Transport before commencing work in public roads and pay all statutory fees required. ProjectCo shall provide such traffic control warning notices, lighting and fencing as may be required by the Police or Department of Transport. In all cases, unless the road is closed by special order, free passage for all vehicular traffic and pedestrians along such roads shall be maintained

together with vehicular and pedestrian access to all properties fronting such roads along with any other demands made by the relevant authorities.

Damage to Roads

ProjectCo shall be responsible for repair of all damage to existing public roads caused by it's Staff's transport to and from the Site.

Cleanliness on Site and on Haulage Routes

ProjectCo shall take every precaution to prevent dirt and mud or other material being dropped or spread by traffic from or associated with the Works on public roads. Particular attention shall be paid to the loading of lorries carrying bulk materials to the Site or spoil/materials from the Site to ensure that these are not overloaded, nor loaded in such a way that spillage occurs. Any dirt or mud adhering to the tyres or chassis of any vehicle shall be thoroughly cleaned off before the vehicle is permitted to leave the Site. In the case of delivery to the Site, vehicles shall be thoroughly cleaned before they leave the point of collection. ProjectCo shall also be responsible for the vehicle of it's Staff.

While the intent of this section is to prevent the spilling and spreading of dirt and mud and other materials on roadways, nevertheless ProjectCo shall also clean the roadways of any such dirt, mud and other materials as may be spilled or spread by traffic travelling to or from the Site in connection with the execution of the Works whether such traffic is ProjectCo's or it's Staff's.

Any cleaning work, which may be ordered by the Department's Representative, shall be carried out during hours which will reduce interference with public traffic to a minimum. ProjectCo shall be required to maintain a high standard of cleanliness on the haulage routes notwithstanding the normal road cleaning operations of the Department or his agents.

If in the opinion of the Department's Representative ProjectCo fails to keep roads clean the Department's Representative may arrange for such cleaning to be carried out by the Department and the cost shall be deducted from monies due to ProjectCo.

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5 Emergency Plan

In every event during the Operating Period and regardless of the liability for any incident which has caused the execution of the Emergency Plan ProjectCo shall always be responsible for executing the Emergency Plan as described in Schedule 19 of the Project Agreement.

In the event that the liability for executing the Emergency Plan does not rest with ProjectCo then the Department shall compensate ProjectCo for Costs associated with execution the Emergency Plan as described in the Project Agreement.

5.1 Emergency Plan for Municipal Solid Waste

ProjectCo shall throughout the Operating Period ensure that the Facility is at all times prepared for the implementation and execution of the Emergency Plan.

ProjectCo's responsibilities are defined in the Emergency Plan. The Operational Plan shall contain detailed instructions for ProjectCo's Staff in order to enable them to promptly and effectively execute the Emergency Plan.

5.2 Emergency Plan for Secondary Waste

It is the intention of the Department to put in place relevant approvals which will enable the export of Secondary Waste during an Unplanned Outage or Emergency affecting the Secondary Waste incinerator. It shall be ProjectCo's responsibility to arrange for the Secondary Waste to be collected transported and disposed of in accordance with these approvals until the Secondary Waste incinerator is Available again. In order to allow sufficient time for ProjectCo to mobilise the collection export and disposal of the secondary Waste the Facility shall be capable of appropriately storing Secondary Waste or fractions thereof as may be the case for up to three days. The approximate tonnage of three days storage of these wastes shall be taken as 75 tonnes.

If the incinerator for Secondary Waste is not Available it is anticipated that the Sewage Screenings and Waste Oil fractions of the Secondary Waste fraction can be retained at it's originator for longer periods. However, the remaining fractions of the Secondary Waste stream cannot be retained at source. Therefore these remaining fractions shall continue to be delivered to the Facility for transportation to point of disposal or alternatively delivered direct from their source to the point of disposal. The exact arrangements shall be agreed between the Department and ProjectCo in each individual case.

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6 Health, Safety and Welfare Statement

6.1 General

ProjectCo will be required to demonstrate how Health, Safety and Welfare will be addressed and managed in the Design, Construction, Testing and Operation Period of the scheme in order to achieve suitable and sufficient standards of performance that comply fully with Applicable Laws.

6.2 Execution in the Design Period

The health, safety and welfare requirements in the Design Period shall be achieved inter alia by the application of:

- The Health and Safety at Work Act 1974 as applied to the Isle of Man and all subordinate legislation and regulations.
- The CDM Regulations 1994 UK: (ProjectCo shall comply fully with the Regulations as best practice prior to their incorporation as statute).
- ProjectCo will be required to conduct a Hazard & Operability Study (Hazop) for the operation and the maintenance of the structure, plant and machinery. The purpose of the exercise is to allow hazards and operating procedures to be understood in advance and leading to appropriate responses. The Department require to be advised of the findings of the Hazop.

6.3 Execution in the Construction, Testing and Guarantee Period

The requirements of Health, Safety and Welfare in the Construction, Testing and Guarantee Period shall be achieved inter alia by the application of:

- The Health and Safety at Work Act 1974 as applied to the Isle of Man and all subordinate legislation and regulations.
- The CDM Regulations 1994: (ProjectCo shall comply fully with the Regulations as best practice prior to their incorporation as statute).
- The Construction (Health and Safety) Regulations 1985.
- Health and Safety (Reporting of Injuries) Order 1992.

6.4 Execution in the Operating Period

The operation of the plant in the Operating Period with regard to Health, Safety and Welfare shall be achieved inter alia in accordance with:

- The Health and Safety at Work Act 1974 as applied to the Isle of Man and all subordinate Legislation and Regulations.
- The Control of Substances Hazardous to Health Regulations 1992
- Health and Safety (Reporting of Injuries) Order 1992.
- Maintenance work in addition can be managed safely by reference to:
- The Construction (Health and Safety) Regulations 1985
- The Health and Safety (Improvement and Prohibition Notices and Licenses Appeal to Industrial Tribunal) Regulations 1981.

Please note that the UK CDM Regulations 1994 will be introduced in the Isle of Man. To that end, the Isle of Man Government has included within its legislative programme the introduction of the Construction (Design and Management) Regulations 1994 as enacted in the United Kingdom. ProjectCo shall comply fully with the regulations as best practice prior to their incorporation as a statute.

7 Facility Handback

Unless otherwise agreed, the Facility shall be handed back to the Department at the Expiry Date.

The Handback Obligations shall be as follows:

1. The Plant must be *'fully functional and Project Agreement compliant'* at the Expiry Date.
2. All documentation must be complete, updated, indexed and available.
3. The CMS System must be fully updated and upgraded.
4. Strategic Spare Parts and Wear Parts must be in place and registered in the CMS System.
5. Arrangements must have been made to ensure that staff can be transferred to the Department under the same terms, which they have been employed under in the last year of operation. The Department will have the right to decline applications from any staff member.
6. Final handback procedure shall be followed.

Common for all six elements is that the Department will maintain it's right to participate in the daily operation of the Facility and will request a series of meetings with selected and qualified staff. It is expected that the majority of these activities will take place at the Facility. ProjectCo is obliged to unconditionally co-operate with the Department in their effort to verify compliant plant handback and ProjectCo is obliged to participate at all meetings called for by the Department in relation to handback.

The price for Facility handback is zero, i.e. £ 0.

This price will include Wear Parts for two full years of operation and Strategic Spare Parts.

Further details of the six conditions for Facility handback are presented below.

1) Facility 'Fully functional and Project Agreement Compliant'

Planned Outage

The Department's Representatives will participate in the last Planned Outage in the sense that they will conduct their own analyses of selected key components, e.g. refractory, boiler wall or tube thicknesses. A separate report will derive from the Department's Representative's analyses.

The last Planned Outage, which allows access to the grate and the boiler shall be completed five months before the Expiry Date.

Two years from the Expiry Date

Two years before the Expiry Date the Department and ProjectCo shall initiate a 'Project Agreement Expiry Review'. The contents of this review will be at the discretion of the Department but it is currently intended that it will imply obligations on ProjectCo similar to the obligations imposed for the Quenquennial Review.

The purpose of the Project Agreement Expiry Review will be to initiate the process towards handback.

12 Months before Expiry Date

The Department shall notify ProjectCo twelve Months before Expiry Date of a one-month period during which the Department will bring in it's experts to verify that the Facility is in fact 'fully functional and Project Agreement compliant'.

The one-month period shall expire no more than five months in advance of the Expiry Date. ProjectCo is obliged to unconditionally allow the Departments' experts to participate in any part of the daily operation of the plant and to invigilate the CMS System. ProjectCo is also obliged to participate in any meetings called by the Department's Representatives and he is obliged to participate with suitably qualified staff, i.e. the plant manager and any other Key Personnel will always participate on request.

The extent of the Facility testing and verification procedure will in its nature be similar to the Tests on Take Over and the Tests after Take Over.

The Department will invite ProjectCo for a meeting to discuss and agree in detail the activities in the last year of the Operating Period. The meeting will be held no later than 11 months before the Expiry Date.

The agenda for this meeting will contain:

- Agreement on ProjectCo's Facility compliance verification report
- Agreement on the Departments' conduction of his verification procedure by external experts'
- Confirmation of Planned Outages in the last year of operation.
- Agreement on procedure for handback including documentation reporting

It is expected that two meetings will be required to finally agree the activities for the last year of plant operation.

Nine Months before Expiry Date

ProjectCo will submit ProjectCo's Facility compliance verification report.

The Facility compliance report will contain evidence that the Facility can meet all requirements as set out in all Approvals as well as all requirements in the Department's Requirements and Schedule 17 of the Project Agreement. ProjectCo must bear all costs related to providing such evidence. Independent testing of Bottom Ash and Residues at ProjectCo's expense will be requested.

The Facility compliance report will also contain a list of all key components and for each key component the report will provide a 'statement of component condition'.

The report will separately contain a list of components (exclusive of Wear Parts), which are likely to require overhaul or replacement 1) within two years after the Expiry Date and 2) within five years after the Expiry Date.

Six Months before the Expiry Date

The Department's Representative shall conduct their supplementary investigations at the Facility. The Department's Representatives will participate in the daily plant operation a period of approximately one month. The Department's Representatives will have read ProjectCo's Facility compliance report in advance and they will have prepared and forwarded their comments and queries on the report.

ProjectCo is obliged to respond in writing to the comments and queries forwarded by the Department's Representatives.

Three Months before Expiry Date

The Department will submit it's report summarising the input from ProjectCo's Facility compliance verification report, the Department's Representatives reporting and the reporting as a result of the participation in the last Planned Outage.

The Department will call ProjectCo in for a meeting to discuss the implications and agree the detailed terms of conditions for handback.

The overall criteria for the handback arrangements will be that the Facility must be 'fully functional and Project Agreement compliant' and that no component (exclusive of Wear Parts) is likely to undergo overhaul in the two year period following the Expiry Date.

2) Complete Documentation

Documentation, i.e. updated As-Built Documentation and any other relevant Construction Documents, which are necessary to continue operating the Facility in accordance with Approvals and Department's Requirements, shall be made available and handed over in an organised manner to the Department.

ProjectCo shall provide the Department with three copies of this documentation. The documentation shall also be made available to the Department on electronic format.

The Department intends to employ external experts to go through the documentation and the reporting related to documentation.

Six Months before Expiry Date

Six Months before the Expiry Date ProjectCo will submit it's documentation report summarising what documentation will be made available to the Department at Facility handback.

The documentation report will identify where physically the documentation will be available and on what format.

Three Months before Expiry Date

Three Months before Expiry Date the Department's Representative will conduct their documentation verification spot check exercise to verify that the documentation as specified in documentation report is in fact available and present as described in the documentation report.

Any missing or inadequate documentation identified will be listed and ProjectCo is obliged to find such documentation and make it available to the Department. Failure by ProjectCo to make such documentation available to the Department is ProjectCo's responsibility and they bear all cost associated with recreating any such documentation.

3) The CMS System must be fully updated and upgraded.

The CMS System will most likely have undergone several upgradings and renewals during the Operating Period.

At handback the Department's overall requirements will be:

- That the system is fully functional
- That the system generates the reports requested in order to comply with Approvals, licenses etc.
- That documentation including a full print of the software code with written and easily accessible guidance for the system is available at the Facility.
- Availability of two year service contract at a reasonable cost for the CMS System
- That ProjectCo grants the Department a royalty free license to use the CMS System in such terms as the Department may reasonably require together with appropriate training in the use of the CMS System.

Three Months before Expiry Date

Three Months before Expiry Date the Department's Representative will visit the Facility and they will be tasked to confirm that the Department's requirements as listed above have been met.

4) Strategic Spare Parts and Wear Parts

Strategic Spare Parts and Wear Parts as listed in Schedule 8 under the Project Agreement or as subsequently agreed between ProjectCo and the Department must be present, original and duly registered in the CMS System at handback.

Nine Months before Expiry Date

ProjectCo will submit a report separately listing and pricing all Strategic Spare Parts and all Wear Parts. The report will identify and name with contact information of all spare part suppliers in order to enable the Department to take over the Facility.

Three Months before Expiry Date

The Department's Representative will verify by inspection on Site that the Strategic Spare Parts and Wear Parts as listed in the report are in fact available, registered and properly incorporated in the CMS System at the Facility.

5) Staff transfer Obligations

The transfer obligations must be consistent with all relevant employment legislation at the Expiry Date.

In addition, the following obligations shall prevail:

12 Months before Expiry Date

One year before Expiry Date the Department shall receive a separate staff report from ProjectCo. The report shall list names and qualifications of all staff employed at the Facility at this time together with a copy of their terms of employment including salaries, pensions and other financial obligations.

Six Months before Expiry Date

The Department will invite the employees to interviews to discuss the options of transferring the staff at unchanged conditions. The terms of employment shall allow the Department to transfer employees as wished by the Department, i.e. ProjectCo will accept

all claims and payment obligations made from existing staff should the Department decide not to transfer some or all staff members.

The Department is obliged to accept unchanged employment conditions should the Department wish to transfer staff.

The Department will notify ProjectCo and each individual employee of whether they will accept a transfer as outlined above no later than five months prior to Expiry Date.

6) Final handback procedure

On completion of conditions 1-5 as listed above a comprehensive package of reporting will be available for the Department and ProjectCo.

A series of meetings will be arranged in the last three months in order to ensure timely and compliant handback. The Department will invite ProjectCo to the first meeting three Months in advance of handback.

The purpose of those meetings will be to determine the detailed and practical handback conditions including ProjectCo's rectification procedure for any list of defects.

8 Public Relations

ProjectCo shall plan and implement a successful and effective Public Relations strategy for the Facility throughout the Agreement Period.

In developing this Public Relations strategy ProjectCo shall liase closely with the Department and its Public Relations advisors in order to co-ordinate and incorporate their requirements and views.

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