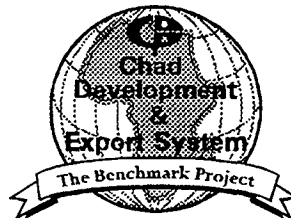


ESSO EXPLORATION & PRODUCTION CHAD INC.



CHAD DEVELOPMENT PROJECT



GENERAL PROJECT SPECIFICATION FOR WASTE INCINERATOR (TEMPORARY)

GPS-006

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**GENERAL PROJECT SPECIFICATION FOR
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1.0 SCOPE

- 1.1 This specification covers the functional requirements for a temporary Waste Incinerator system to be used by Contractor on the Work Site during the Work and removed upon completion of the Work.
- 1.2 The system will be located outdoors near an active Work Site. The system shall be capable of safely incinerating industrial waste, medical waste and municipal waste. The system shall provide (with proper maintenance) reliable operation on a periodic or continuous basis, as necessary.
- 1.3 The system shall be a complete package of the supplier's standard design suitable for the application as described in this specification. This package may include, but not necessarily be limited to, the following items:
- Primary and secondary combustion chambers
 - Blowers, drivers, coupling, guards, ducts and equipment shelter
 - Rotary kiln, shakers, trays or containers for solids or sludges
 - Built-in stack
 - Refractory lining
 - Fuel handling equipment
 - Ash removal equipment
 - Burner management controls system
 - Pollution control equipment, as required
 - Waste loading system
 - Start-up and commissioning of the system

2.0 DOCUMENTATION

Contractor shall supply drawings and data in sufficient detail to describe all systems (including accessories), as well as operating and safety procedures and practices. This information shall be included in Contractor's Waste Management Plan required by Coordination Procedure Section 30 - Environmental Management.



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3.0 DESIGN/CONSTRUCTION FEATURES

3.1 Waste Classification

The classification of potential wastes to be incinerated shall be as per the following table.

**Table 1
Waste Classification**

Waste Type	Description	Typical Analysis	Moisture wt. %	Density kg/m ³	Heat Content kJ/kg
0	Dry industrial & commercial rubbish	Cardboard, dry paper, wooden pallets, floor sweepings, plastic bags	10	5	8500
1	General industrial commercial & domestic rubbish	Cardboard, paper, floor sweepings, up to 20% kitchen waste	25	10	6500
2	Refuse	Kitchen & domestic wastes, wet paper, floor sweepings, garden waste	50	15	4300
3	Pathological materials	Hospital dressing, disposable bedding, gowns, etc.	10 to 30	5 to 15	4500 to 8000
4	Pathological remains	Dead animals, human tissue, etc.	85	25 to 75	1000
5	Industrial wastes/oil sludge	Industrial process wastes	-	850 to 960	40,000
6	Semi-solid and solid wastes	Combustibles requiring hearth, retort, or grate burning equipment	-	Variable according to waste survey	Variable according to waste survey

Note: Waste classification based on Handbook of Industrial Waste Disposal, Tables 9-1 & 9-3.

3.2 Design Basis

The design basis, waste production rate, required incinerator capacity, and fuels supplied shall be specified by the Contractor to satisfy its needs.



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3.3 Refractories

- a. All refractory design and material shall be suitable for this service.
- b. The calculated cold face temperature of the exterior surface of the casing shall not be more than 82°C (180°F) based on a design maximum ambient temperature of 42°C (108 °F).

3.4 Waste Loading and Ash Removal Facilities

Contractor shall provide a system with related facilities to ensure the operation can be carried out efficiently and safely.

3.5 Burner and Ignition System

- a. Contractor shall provide only proven designs.
- b. Blowers and motors shall be provided with external lubrication.

3.6 Instrumentation and Controls

- a. Contractor shall have the incinerator supplier provide the control system completely coordinated, constructed, wired and checked out at the factory.
- b. All control devices and instruments and associated junction boxes shall be rated for IP66.

3.7 Noise Requirements

The incinerator contribution to sound level shall not exceed 85 dBA at 1 meter.

3.8 Emission Requirements

The air quality standards of the Environmental Impact Mitigation Specification shall be met.



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4.0 MATERIALS

The materials and components shall be the supplier's standards provided that those standards are consistent with industry practice, that they are suitable for the process and use in tropical and outdoor environments and have been proven successful in similar services.

5.0 INSPECTION AND TESTING

Contractor shall furnish ESSO with copies of all inspection and quality control documents.

6.0 INSTALLATION

Once approved by ESSO, Contractor shall install the incinerator system described in Section 4, above to meet waste management needs as approved, in Contractor's Waste Management Plan. After conclusion of the Work, Contractor shall remove the system.

7.0 PERFORMANCE

7.1 Contractor's system shall meet the requirements stated in this specification. It shall be the Contractor's responsibility to correct any deficiencies at a time agreeable to ESSO.

7.2 Contractor shall operate the incinerator system as needed until construction activities have been completed. Contractor shall incinerate its domestic, industrial and construction wastes as specified in Contractor's approved Waste Management Plan.