PMD 79-3109

Industrial Fuel Gas Demonstration Plant Program

DOE/ET/163046--T63

MATERIALS AND LICENSE REPORT

DELIVERABLE NO. 32

MASTER

Prepared For
The Department of Energy
Under Contract ET-77-C-01-2582

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MEMPHIS INDUSTRIAL FUEL GAS
DEMONSTRATION PLANT PROJECT

MATERIALS AND LICENSES REPORT
(Deliverable #32)

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PREPARED FOR THE
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(FORMERLY CONTRACT ET-77-C-01-2582)

MLGW/DOE INDUSTRIAL FUEL GAS
DEMONSTRATION PLANT PROGRAM

FOSTER WHEELER

MATERIALS AND LICENSE REPORT
DELIVERABLE NO. 32

MATERIALS AND LICENSE REPORT

DELIVERABLE NO. 32

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**MLGW/DOE INDUSTRIAL FUEL GAS
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Section 1.0

INTRODUCTION

The United States Department of Energy (DOE) awarded a contract to Memphis Light, Gas and Water Division (MLGW) which requires MLGW to perform process analysis, design, procurement, construction, testing, operation, and evaluation of a plant which will demonstrate the feasibility of converting high sulfur bituminous coal to industrial fuel gas with a heating value of 300 +30 Btu per standard cubic foot (SCF). The demonstration plant is to be based on the U-Gas process, with its product gas to be used in commercial applications in Memphis, Tennessee.

In order to perform this work, MLGW has established an industrial team, which includes:

- MLGW - Memphis Light, Gas and Water Division, Memphis Tenn.
The prime contractor and distributor of the industrial fuel gas.
- FWEC - Foster Wheeler Energy Corporation, Livingston, N.J.
The engineer-construction manager.
- IGT - Institute of Gas Technology, Chicago, Illinois.
The process developer.
- DRC - Delta Refining Company, Memphis, Tenn.
To provide operating experience.

The contract specifies that the work is to be conducted in three phases. The phases are:

- Phase I - Program Development and Conceptual Design
- Phase II - Demonstration Plant Final Design, Procurement
and Construction
- Phase III - Demonstration Plant Operation

Included within Task VI (Materials, Agreements, and Licenses for the Demonstration Plant), Phase I activities is the preparation of a Materials and License Report. This document describes the pertinent information and identifies the deliverables which provide such data.

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Section 2.0

TASK VI ACTIVITIES

Efforts of Task VI - Materials, Agreements, and Licenses for the Demonstration Plant, Phase I involved the following activities:

1. Plan for Obtaining Coal, Water, Power, Chemicals - Development of detailed plans for obtaining power, water, coal, and all raw materials and major supplies required for the Demonstration Plant.
2. Plan for Use and Disposition of Products and Waste - Development of plans for marketing all usable products and by products from the Demonstration Plant.
3. Proprietary Process Licenses - Identification and negotiation of license agreements covering the use of proprietary processes necessary in the Demonstration Plant.
4. Local Construction Codes and Ordinances - Investigation of Federal, State and local codes and ordinances pertaining to the construction and operation of the Demonstration Plant in the area under consideration.
5. Acquiring Permits and Licenses - Development of a plan for obtaining all Federal, State and local approval of all drawings and specifications as they are developed and for obtaining all easements, permits and licenses from Federal, State and local governing bodies.

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Section 3.0

MATERIALS, AGREEMENTS, AND LICENSES DATA

Below are listed the various Deliverables which contain the required data developed under Task VI activities. For each deliverable, a brief description of document contents is provided. Reference to the associated Deliverable should provide the necessary information.

<u>Deliverable No.</u>	<u>Title</u>	<u>Content</u>
25	Draft Site Agreement	Under this draft amendment to the original lease agreement, TVA relinquishes its ash disposal easements for the extent necessary to permit construction and operation of the IFG Demonstration Plant, an access road to the site, the utility service to the plant, and a gas distribution line from the plant. Draft Site Agreement has been approved by the Council of the City of Memphis.
-	Plan for Obtaining Coal, Water, Power and Chemicals	Summarizes efforts in formulating plans for obtaining feedstocks and utilities. Investigation of suppliers, obtaining competition prices and subcontract requirements. Letter Quotes from coal suppliers.
29	Plan for Use and Disposition of Industrial Fuel Gas	Marketing plan addressing the business, technical, socio-economic, and environmental problems associated with coal gasification and distribution sales of the product gas. Letters of Intent from prospective customers.
	Plan for Use and Disposition of By-Products.	Preliminary investigation to define the marketing parameters and potential revenue available from the sale of plant by-products. The three generic by-products identified are: recovered liquid sulfur, ash agglomerates, and industrial gases.

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<u>Deliverable No.</u>	<u>Title</u>	<u>Content</u>
30	License Agreements for Proprietary Processes	Draft license agreements, submitted by licensors, covering the use of proprie- tary processes necessary in the Demon- stration Plant.
31	Plan for Obtaining Approval, Permits, and Licenses from Agencies	
	Environmental Com- pliance Plan	Lists permits required for installation and/or operation of gaseous, liquid and solid waste sources and disposal areas. Plan describes procedures for obtaining each permit and necessary information. The plan also presents a schedule to obtain these permits to maintain program time table.
	Construction Compli- ance Man	As above, pertaining to construction related permits.