

TECHNICAL SCOPE DOCUMENT

Presented To:

EDC

For

FT8-3 SwiftPac 150 MW La Raisa Power Plant

By

DERWICK
DERWICK ASSOCIATES CORP.



Proposal T-9018
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Section 1.0 Introduction

Derwick Associates Corp. (Contractor) is pleased to provide this Technical Proposal to furnish and install a nominal 180 MW Gas Turbine Simple Cycle Power Plant for the LaRaisa Power Plant.

This turnkey proposal includes installing the following Owner supplied equipment:

- Three (3) Pratt Whitney FT8-3 Swiftpac gas turbine generator packages
- Three (3) ARIEL Model JGH/2 (TOROMONT Package) Fuel Gas Compressors
- One (1) Demin Water Treatment System (3 Trains)
- One (1) Liquid Fuel Treatment Equipment (3 Trains)
- One (1) 350 KW Black Start Generator

Contractor will furnish all engineering, remaining balance of plant equipment, contract locally for the required subcontractors to accomplish the site construction, construction tools, equipment rental, project management, commissioning, start-up, and performance testing. It is our intention to manage the project schedule to assure the results per the mutually agreed upon terms of the EPC Contract. This Technical Scope Document will become an exhibit to the EPC Contract.

It is our understanding that the Pratt & Whitney FT8-3 Swiftpac gas turbine generator packages are new and unused.

THIS DOCUMENT IS CONFIDENTIAL. IT IS DESIGNED AND INTENDED FOR EDC'S USE. THIS DOCUMENT IS FOR THE SOLE PURPOSE OF EVALUATING THE CONTRACTOR'S PROPOSAL FOR THE FT8-3 SWIFTPAC POWER PROJECT.

Section 2.0 Scope of Work and Supply

The Scope of Work and Supply is comprised of the following outlined items:

Major Generation Equipment

Installation of three (3) Owner Supplied Pratt & Whitney FT8 -3 SwiftPac gas turbine generator packages complete with auxiliary skids, modular control rooms, inlet filters and exhaust stacks.

Pratt & Whitney interface points are as follows:

Equipment System	P&W FT8-3
<ul style="list-style-type: none"> All supply piping, including Fuel Gas, Liquid Fuel, Demineralized Water, Lube Oil, Compressed Air, Instrument Air, Hydraulic Start Oil 	<ul style="list-style-type: none"> Flanged or threaded connection on SwiftPac base plates.
<ul style="list-style-type: none"> Inlet Air-to-Filter 	<ul style="list-style-type: none"> Atmosphere
<ul style="list-style-type: none"> Turbine/Generator Ventilation Air 	<ul style="list-style-type: none"> Atmosphere
<ul style="list-style-type: none"> Turbine Exhaust 	<ul style="list-style-type: none"> Flange & Expansion Joint for connection to Exhaust Stack
<ul style="list-style-type: none"> Instruments on SwiftPac Base plate 	<ul style="list-style-type: none"> Terminal box on base plate
<ul style="list-style-type: none"> Instrument wiring in Turbine Control Panel 	<ul style="list-style-type: none"> Terminal in Turbine Control Panel
<ul style="list-style-type: none"> High Voltage Connections 	<ul style="list-style-type: none"> Bus bar in SwiftPac generator line side cubicle
<ul style="list-style-type: none"> Generator Ground Connections 	<ul style="list-style-type: none"> SwiftPac Neutral cubicle
<ul style="list-style-type: none"> Electric Motors 	<ul style="list-style-type: none"> With cables & conduits from Control Module
<ul style="list-style-type: none"> Ladders and Platforms for Air Filter 	<ul style="list-style-type: none"> Ladders and Platforms for Inlet Air Filter and Vent Fans

2.0 Balance of Plant

The contractor will design and install the facility as described in the following sections of this document and as clarified in the associated Clarification Document included in Section 12. The design will include the necessary Structural, Mechanical, Electrical, Instrumentation, and Control System to install the above Major Equipment.

The Balance of Plant scope of supply will be comprised of the following:

- Contractor will provide complete design of the facility including civil, structural, buildings, mechanical, electrical, instrumentation and control.
- Contractor will provide concrete foundations, plant gravel, and access roads
- Owner is providing a reasonably level site which Contractor has visited and based its plant layout on.
- Owner is providing an entrance road to the site which Contractor has visited.
- Owner will provide (3) 13.8 KV to 230 KV, 90 MVA GSU Transformers.
- Contractor will procure from a Venezuelan supplier, oil for the (3) GSU Transformers.
- Contractor will provide Installation of the complete Power Plant with the inter-ties as described later in this document and including:
 - Mechanical installation of the various items of equipment with the associated inter-ties of, gas fuel, liquid fuel, sanitary sewer, and waste water.
 - Electrical installation of the plant including the 13.8Kv interconnect cable, plant electrical for BOP equipment, area lighting, grounding, lightning protection, and cathodic protection.
 - Installation of Instrumentation and Control System including plant instrumentation, metering, and Plant remote DCS PLC.

2.1 BOP Major Mechanical Systems

2.1.1 Simple Cycle Exhaust Stack

The Contractor will install the P&W supplied 30 ft. exhaust stacks in accordance with the standards set out by Pratt & Whitney for each SwiftPac machine.

2.1.2 Plant Fuel Gas System

The Contractor will install the plant fuel gas system outlined as follows:

- Interconnect to PDVSA gas metering station above ground at the Plant boundary as described on the Plot Plan.
- Install three (3) redundant coalescing filter separators on a common skid including redundant pressure regulators.
- Install the Owner Provided fuel gas compression plant with three (3) ea. 100% Arriel Gas Compressors to raise the available supply pressure to the required 500 psi. supply pressure to the gas turbines.

- Install all plant fuel gas carbon steel piping, valves and fittings from plant inlet fuel gas interconnect to the fuel gas regulator filter.
- Install stainless steel piping from the fuel gas filter to the gas turbine generator.

2.1.3 Plant Liquid Fuel System

The Contractor will design and install the plant liquid fuel system outlined as follows:

- Install a pipeline of Carbon Steel from the Contractor supplied and constructed Liquid Fuel truck offloading station to the Raw Fuel Storage Tanks.
- Provide and Install two (2) each 675,000 gallon Carbon Steel raw fuel storage tanks.
- Provide and install two (2) each 400,000 gallon Stainless Steel clean fuel storage tanks
- Install the Owner furnished Liquid Fuel Treatment System.
- Install three (3) 50% capacity liquid fuel forwarding pumps.
- Install three (3) 100% capacity liquid fuel filter/regulator skids.
- Provide and install all plant liquid fuel Stainless Steel piping, valves and fittings from the plant treated liquid fuel day storage tanks to the liquid fuel filter regulator skids.
- Install liquid fuel injection pump skids.
- Provide and install Stainless Steel piping, valves and fittings from the liquid fuel filter regulator skids to the Gas Turbine Generator package fuel connection.

2.1.4 Water and Demineralized Water System

Contractor will install the plant Water Treatment System outlined as follows:

Owner Supplied Equipment

- Install the (3) Owner provided Multi- Media filter and R.O. systems.

Contractor Supplied Equipment

- Provide and install an underground pipeline from the raw water connection point within 100 meters outside the plant boundary to the Raw Water Storage Tank.
- Provide a 2,400 m³ (675,000 gal.) Carbon Steel Raw Water Storage Tank
- Provide and Install an underground pipeline from the Demin Water Treatment facilities at the Site to Contractor provided one (1) each 1,000 m³ or 275,000 gallon approximately Stainless Steel Demin Water storage tank.
- Provide and install GE EDI Demineralized system as required to meet engine specification
- Provide and Install three (3) 50% capacity Demin water forwarding pumps.
- Provide and Install three 100% capacity Demin Water filter/regulator skids.
- Provide and install all plant Demin water Stainless steel piping, valves and fittings from the plant Demin Water storage tanks, to the Demin injection pumps and to the (3) Demin water injection connections at each of the GTG's.

2.1.5 Oily Water Drain System

The Contractor will furnish and install the oily water drain system as follows:

- Furnish and install below ground two (2) oily water separators with associated pumps and ancillaries.
- Furnish and install PVC or HDPE below ground piping and fittings from concrete oil containment units located at:
 - 1) All Transformers
 - 2) Gas Turbine Generator Auxiliary Skids
 - 3) Liquid Fuel Treatment system

Piping is to be routed to the oily water separator and then to the waste oil storage tank. Provisions are to be made to pump out the waste oil to a truck for disposal, which will be provided by the Owner.

2.1.6 Plant Fire Water System

The Contractor will furnish and install the Firewater System that includes:

- A combination Raw Water and Firewater storage tank (Included above in the Raw Water System)
- A Dooley Tackleberry (or equal) Firewater pump designed system with electric, diesel and jockey pumps designed at 840 GPM at 100 PSI or higher
- Install HDPE 10" diameter pipeline from Fire Water Pump shed.
- Headers routed throughout the plant in accordance with NFPA Codes sized as 10" pipe. Above ground pipe will be Carbon Steel.
- Monitors and Hydrants installed in accordance with NFPA Codes. (Above ground pipe at these locations will be Carbon Steel.)
- Foam Extinguishing System for the Liquid Fuel Offloading Station and Storage Tanks
- Portable fire extinguishers

2.1.7 Instrument and Service Air Systems

The instrument and service air systems will be as follows:

- Furnish and install one (1) set of two (2) instrument and service air screw compressors with associated dryer and air storage tanks.
- Furnish and install Stainless Steel tubing, valves, fittings and instruments for instrument and service air systems from the air compressors to various required areas throughout plant for instrument air and service air. Furnish the appropriate quick connect connectors.

2.2 BOP Electrical Systems

2.2.1 13.8 KV System

The Contractor will perform the following work on the 13.8 KV system:

- Install three (3) Owner furnished 13.8 KV 4,000 amp generator circuit breakers with PT's and CT's.
- Furnish and install all 13.8 KV cabling, bus work, cable tray etc. from the generators to the generator circuit breakers.

2.2.2 13.8/4.16 KV System

The Contractor to provide the following:

- Furnish and install three (3) 13.8 KV NEMA 3R fused disconnects
- Furnish and install one (1) 13.8KV / 4160V auxiliary power transformer for the fuel gas compressors.
- Furnish and install three (3) 13.8KV / 480 volt auxiliary power transformer.
- Furnish and install three (3) 4160 V MCC's for Gas Compressors

2.2.3 480V System

The Contractor will provide the 480V system as follows:

- Furnish and install one (1) 480 V distribution switchboard
- Furnish and install one (1) BOP 480V MCC
- Furnish and install cable tray / conduit with cabling from transformers to MCCs and from MCCs to plant 480V equipment and motors.
- Furnish and install underground conduit, duct banks, or overhead cable tray mounted on the pipe racks.

2.2.4 120/208 System

The Contractor will provide the 120/208 system as follows:

- Furnish and install 480V/120/208V transformers, distribution panels and lighting panels as required with associated conduits, fittings and wire.

2.2.5 Plant Area Lighting

The Contractor will provide the plant area lighting as follows:

- Furnish and install area lighting consisting of twenty (20) 25 ft galvanized metal poles with three (3) 400 watt metal halide floodlights on each pole sufficient to illuminate both GTG's and common areas to 50 lux.

2.2.6 Ground Grid

The Contractor will provide the ground grid for the plant as follows:

- Furnish and install plant ground grid with associated ground rods and connections to plant equipment, buildings and fence in accordance with Paragraph 12.2.21 of the EDC specification.

2.2.7 Plant Electrical Cable Tray

The Contractor will provide the plant electrical cable tray work as follows:

- Furnish and install galvanized steel cable trays throughout plant. Cable trays to be mounted on pipe racks, cable trenches or within buildings for routing plant cabling. A separate cable tray will be installed for each of the 15/5KV systems, 480V system, and instrumentation system cables.

2.2.8 Underground Conduit and Cable Systems

The Contractor will provide the plant underground conduit and cable system as follows:

- Furnish and install rigid galvanized conduit or PVC encased in concrete for all underground power, control and instrumentation systems.

2.2.9 Lightning Protection

The Contractor will provide lightning protection as follows:

- Furnish and install lightning protection on each gas turbine exhaust stack.

2.2.10 Batteries / Chargers / UPS Systems

The Contractor will perform the following work on the batteries / chargers / UPS systems:

- Furnish and install BOP UPS system for remote DCS PLC and associated equipment.
- Furnish and install one (1) 125V DC battery and charger for 13.8KV plant switchgear.

Note: 24 VDC and 125VDC batteries and chargers are to be supplied as part of the Pratt & Whitney packaged control house.

2.3 Plant Instrument and Control Systems

2.3.1 BOP Control System

The Contractor will furnish and install a BOP control system consisting of:

- One (1) DCS PLC system and HMI's to be located in the main control room
- Provide and install remote PLC panels as required in certain areas of the site and interfaced back to the main control room DCS
- Three (3) Pratt & Whitney supplied HMI's to interface with DCS System
- Contractor will transfer software licenses to the Owner at the completion of the project. This will include the license documentation passwords and keys. It will be the responsibility of the owner to maintain these licensing articles for the time when the software needs to be reinstalled.
- The Contractor supplied DCS shall allow for system expansion through the addition of controllers, operator stations in the control panels, process I/O systems and / or process controllers while the equipment associated with the controller/computer are in manual mode. Modifications can be preformed while the Power Plant is operational and the equipment in question is in manual mode. Proper safety precautions must be adhered to. "Tag out" procedures may be required.
- Operator stations in the control room can be expanded while in remote mode and the Power Plant is operational.
- Various vendor supplied PLCs for the major equipment will use either function block or ladder logic programming. The Balance of Plant PLC will use ladder logic programming.

2.3.2 Plant Instrumentation Devices

- Gas Turbine Control Panel is supplied with each FT8-3 gas turbine mounted in Control Module supplied by Pratt & Whitney.
- Contractor to furnish and install instrument devices, both pneumatic and electric, consisting of meters, pressure, flow, temperature and level where required.

2.3.3 Electronic Wiring and Pneumatic Piping

- Contractor to furnish and install necessary instrument wiring and pneumatic piping with associated Swagelok fittings, etc.

2.4 230 KV Substation

2.4.1 Generator Step-up Transformers (GSU's)

- Contractor to install three (3) Owner Supplied generator step-up transformers with 13.8KV delta to 230 KV wye windings.

2.4.2 Protective Relaying

- Contractor to supply and install protective relaying for the GSU transformers and provide interface points for other substation protective relay equipment provided by Owner

2.4.3 Site Work

- Contractor to prepare the site and provide the following:
 - Foundations for the GTGs, fuel and water tank area, GSU transformers, buildings, truck off-load and gas compressor.
 - Driveways and roads
 - Gravel

2.5 Plant Communication System

- Contractor to provide communication and public address system for the new plant in accordance with 16.10 & 17 of the terminos de referencia.
- Contractor to furnish temporary telephones and email capability for construction communication purposes.
- Permanent telephone lines for operation of the plant will be provided by Owner.

2.6 Plant Civil and Structural

- Site preparation, rough grading, and finished grading to be furnished by Contractor based on an existing site requiring minimal cut and fill.
- Contractor to furnish and install all plant reinforced concrete foundations designed to IBC 2003. GSU foundation shall have 9" freeboard.
- Contractor to furnish and install concrete containment curbs and equipment foundations, including liquid fuel offloading area.
- Contractor to furnish and install plant gravel and asphalt paving as shown on the Plot Plans.
- Contractor to provide structural steel pipe racks to support overhead piping and cable trays. Pipe racks to be located as shown on Plot Plan drawings.

2.7 Plant Buildings

Contractor to furnish and install:

- Demin Water Treatment Building
- Diesel Unloading Rack Shed
- Diesel Treatment Shed
- Firewater Pump building
- Gas Compressor Shed
- Office, Control Room,
- Maintenance and warehouse building.

2.8 Plant Equipment Erection

- Contractor to unload all Plant equipment delivered to site.
- Contractor will provide all cranes and support equipment and manpower as required to erect the gas turbine generators.
- Contractor to provide for erection of all BOP equipment.

2.9 Cranes, Equipment and Tools

Contractor to furnish or provide for all plant construction required cranes, fork lifts, back hoes, hydraulic lifts, welding machines, air compressors, generators, temporary lights, trucks, pick-ups, etc.

2.10 Transportation

Contractor will provide Owner with a proposal for the transportation of equipment to site.

2.11 Lubricants and Chemicals

- Contractor will supply and install all lubricants, lube oils and chemicals for furnished equipment.
- Contractor to supply and install non-PCB oil for GSU transformers.

2.12 Spares

- Contractor will make provision to supply, receive and store all commissioning spare parts furnished for equipment during start-up and commissioning.
- Contractor to provide Owner with recommended list of spare parts for the BOP equipment supplied by Contractor.
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2.13 Construction Offices and Storage Facilities

- Contractor to provide construction offices for Contractor, Technical Representatives (3), and Owner.
- Owner is providing the site which has sufficient lay down area and site for construction offices and construction utilities (electrical and potable water)
- Contractor to provide fenced storage and a lay down area and around the construction site during construction.
- Contractor to provide sanitation facilities for Contractor, & Owner personnel during construction.
- Contractor to provide communication facilities for construction.

2.14 Engineering and Project Management

- Contractor to provide detailed engineering and specifications for all disciplines involved for the power plant including civil and concrete foundations.
- Contractor to provide project management complete with construction management, quality control / quality assurance, scheduling, administration, warehousing, and expediting including regular monthly reporting of all disciplines.
- Contractor to arrange for and provide fully qualified technical representatives during erection, testing, start-up, commissioning for the gas turbine generator units and Chillers.
- Contractor to provide startup, commissioning and testing of BOP associated systems.
- Contractor to provide operator and maintenance training for Power Plant on the Gas Turbine Generator Packages and Balance of Plant.
- Contractor to provide one (3) electronic and two (3) hard copies in English and Spanish of the O&M manuals, training manuals, engineering calculations, commissioning and start-up manuals, test manuals, as-built drawings, design specifications and warranty manuals for plant equipment.

2.15 Cathodic Protection

Cathodic Protection will be provided for all steel underground piping.

Section 3.0 Equipment List - Detailed Division of Responsibility

Material/Responsibility	Qty	Description
Owner	1 Lot	Removal of all unused building foundations, underground piping, etc. on the proposed project site
	1 Lot	Natural Gas Pipeline and supply metered at inter-tie point within 50' of Plant Boundary
	3	100 % Fuel Gas Compressors
	1 Lot	Fuel Gas and Liquid Fuel for Commissioning / Start-up that meets P&W Fuel Specifications
	1 Lot	Liquid Fuel Treatment System
	1 Lot	Raw Water Supply to site boundary
	1 Lot	Raw Water for Commissioning and Startup
	1 Lot	Waste Water and Waste Oil Truck Removal
	1 Lot	Permits for Environmental, Importation, Transportation, Building, Operations, etc. to allow plant construction and commercial operations
	1 Lot	Construction Commissioning 480V three phase power
	1 Lot	Access Roads to site
	1 Lot	Any required Electric Utility 230 KV Tie-In interconnect to the Utility
	1 Lot	Import Duties and Taxes
	1 Lot	Construction lay down area as available on the existing site
	1 lot	Right of Way, easements, etc. to allow proposed interconnects as required
		Gas Turbine Generator
	3	Pratt & Whitney FT8-3 SwiftPac (60Hz) Dual Fueled Gas Turbine Generator packages
	6	Exhaust Stacks with Silencers
	3	Modular Control Buildings with:
		- Turbine Control Panel
		- Generator Control Panel and Protection Panel
		- 24 VDC Batteries and Chargers
		- 125 VDC Batteries and Chargers
		- 125 VDC Rundown motor starter
		- 13.8 KV Generator Breaker Nema 3R
		- GTG 480 V MCC
Contractor – Responsibility Civil / Structural	1	350 KW Black Start Generator
	3	13.8 KV to 230 KV GSU Transformers , 90MVA
	1	Water Treatment consisting of Multi-Media filters and R.O. System
	1 Lot	Site Soil Borings & Studies to design Foundations
	1 Lot	Site Preparation, Rough Grading, Excavation, final grading and fencing
	1 Lot	Temporary Power Distribution
	1 Lot	Plant Concrete Foundations
	1 Lot	Plant Paving, Gravel and Pads for the GTG Turbines and Generators
	1 Lot	Structural piping supports, platforms, ladders, and Misc structural steel supports. (Note: Platforms and ladders for the exhaust stacks to be furnished by Owner)
	1 Lot	Erection of the (3) Owner Furnished FT8 SwiftPac Gas Turbine Generators, Exhaust Stacks, Control Modules and associated accessories.

Material/Responsibility	Qty	Description
Contractor (continued)		
Buildings		
	1	Demin Water Treatment & Forwarding Pump & Firewater pump Building
	1	Gas Compressor shed
	1	Liquid Fuel Treatment, Diesel Pump Shed.
	1	Control Room and, Office Building.
	1	Warehouse and Maintenance building
	1	Water Treatment Building
	1	Liquid Fuel Treatment Unloading Rack and Shed
Mechanical		
	1	Fuel Gas Plant ESD Valve
	1	Fire Water System including pumps, controls, Loop, Monitors and Hydrants
	1	675,00 gallon raw water/firewater Carbon Steel Storage Tank
	1	275,000 stainless steel Demin Water Storage Tank
	3	GTG Duplex Demin Water Filter Skids
	1	Demineralized Water Treatment system (EDI)
	3	Demin Water forwarding Pumps
	2	Oily Water Separator
	1	Waste Oil Tank 15,000 Gallon w/waste oil pump to Truck for disposal
	1	Waste Water Tank 15,000 Gallon w/waste water pump to Truck for disposal
	2	675,000 gallon Carbon Steel raw liquid fuel storage tanks
	2	400,000 gallon Stainless Steel clean liquid fuel storage tanks
	2	100% capacity Liquid Fuel forwarding pumps
	3 sets	Duplex Liquid Fuel Filters
	1 Lot	Pipe, Valves and Fittings with Insulation as required
	1 Lot	Mechanical Labor
Electrical		
	2	13.8 KV Fused Disconnects (Station Service) NEMA 3R
	1	13.8 KV/4160 V 2000 KVA Fuel Gas Compressor
	2	13.8 KV/480 V 750 KVA Transformers
	1	4160 V MCC for Fuel Gas Compressor
	1	480 V Distribution Switch board
	1	480 V BOP MCC
	1 Lot	BOP 480/220 V Transformers, Lights, Panels etc
	1	120 V UPS System for Control Room
	1	Plant Grounding Grid
	1 Lot	Lightning Protection 50 lux
	1 Lot	Cathodic Protection for underground steel piping
	1 Lot	Area Lighting
	1 Lot	480 V Welding Receptacles
	1 Lot	Electrical Labor
	1 Lot	Local Subcontractor(s) Civil, Electrical & Mechanical Craft Labor

Material/Responsibility	Qty	Description
Contractor (continued)		
Instrumentation & Control		
	1 Lot	Plant Instrumentation
	1	Remote DCS PLC
	1 Lot	I&C Installation and Construction
Construction		
	1 Lot	Major Equipment Erection
	1 Lot	Mechanical Installation and Construction
	1 Lot	Construction Tools, Rental Equipment & Rental Cranes
	1 Lot	Lubricants, Chemicals, Filters, etc. for Plant Commissioning and Start up
	1 Lot	Balance of Plant Start up and Commissioning Spare Parts
	1 Lot	Transportation of all BOP Equipment to site
	1 Lot	Plant Commissioning and Performance Testing
	1 Lot	Overall Plant Training
Engineering		
	1 Lot	Conceptual and Detail Design engineering (Total Plant)
	1 Lot	Project Manuals including O&M, Warranty, and Engineering Calculations
	1 Lot	As Built Drawings
	1 Lot	Recommended Vendor Spare Parts List
Project Management		
	1 Lot	Project Management with QA/QC, Safety, and Training
	1 Lot	Construction Permits
	1 Lot	Local Business Taxes
	1 Lot	Project manuals including project procedures, Systems Turnover Manuals, project implementation, QA/QC, safety and training
	1 lot	Training of Operators for the FT8 Generators and BOP

Section 4.0 Design Basis and Interconnection Points

4.1 Design Conditions

Design Conditions

Site Elevation (Meters above Mean Sea Level)	283.6
Multi-year median temperature:	27.5°C (81.5°F)
Maximum dry bulb temperature:	35°C (95°F)
Maximum wet bulb temperature:	28.3°C (82.94°F)
Multi-year median relative humidity:	85%
Median annual precipitation: (Majority during the months of October and November)	813mm (32 in)
Predominant wind direction:	Northeast
Maximum average multiannual wind velocity:	80.3km/h (48 mph)
Seismic Zone	4
Fuel Gas Supply Pressure	250 psig minimum
Plant Gas Fuel Consumption Rate (3) FT8 SwiftPac	42.66 mmscfd *
Liquid Fuel Consumption Rate(3) FT* SwiftPac	219 gpm
High Voltage Interconnect @ GSU Bushings	230KV Substation (By Owner)
Instrument Air System	185 scfm by Contractor
Demin Water required	211 gpm
Demin Water Storage	1,000 m ³ (275,000 gal)
Raw Water Storage (Includes Fire water)	2,400 m ³ (675,000 gal)
Raw Diesel Fuel Storage	5,000 m ³ (2 x 675,000 gal)
Clean Diesel Fuel Storage (2)	3,000 m ³ (2 x 275,000 gal)

* assumes 900 - 1050 Btu/SCF natural gas quality

4.2 Interconnect Points

Interconnect Points

Fuel Gas	250 psig at PDVSA Metering & Regulating Station within Site
Liquid Fuel	Diesel Fuel Offloading Station (By Contractor)
Plant Waste Water	At waste water tank discharge pump
Plant Waste Oil	At waste oil tank discharge pump
230 KV	At GSU High Side Bushings
Raw Water Supply	At Plant battery limits from Water Utility (Not purified for drinking)

Section 5.0 Expected Performance Using Natural Gas and Diesel Fuel (Not Guaranteed)

The expected performance for the plant is presented in the performance calculations included in this section. Calculations were performed for operation on both Natural Gas and #2 Diesel for the FT8 TwinPac, with and without water injection, at the design conditions listed. A performance summary is attached on the following pages.

Site Conditions: 27.5°C (81.5°F); 85% RH; 165 meters (547 ft.)

		Total (3) Units		Total (3) Units		Total (3) Units		Total (3) Units
	Natural Gas				Diesel			
	FT8 TwinPac		FT8 TwinPac Water Inject		FT8 TwinPac		FT8 TwinPac Water Inject	
Gross GT Power ea. (kW)	48624	145871	54489	163467	46993	140979	53044	159132
Net LHV HR (BTU/kWh)	9394	9390	9682	9678	9503	9499	9820	9816
Net Power (kW)	47730	143253	53400	160265	46248	138802	52139	156479
Auxiliaries (kW)	894	2618	1089	3201	745	2177	905	2653
Fuel usage (pph)	22530	67600	25980	77950	24020	72060	27980	83950
Fuel usage (MMSCFD)	11.6	34.7	13.3	40.0	N/A	N/A	N/A	N/A
Fuel usage (gpm)	N/A	N/A	N/A	N/A	55.5	166.5	64.7	194.0
Fuel Chemical HHV/LHV ratio	1.107	1.107	1.107	1.107	1.065	1.065	1.065	1.065
Water Injection (pph)	N/A	N/A	25980	77950	N/A	N/A	27980	83950
Water Injection (gpm)	N/A	N/A	52.0	155.9	N/A	N/A	56.0	167.9

Section 6.0 Plant and Equipment Warranties

Balance of Plant Warranties – Contractor will obtain from all equipment vendors their warranty on the material and equipment provided. These warranties will be for a term of 12 months from commercial operation (full power) date and if a replacement is required, for a term of 12 months following such replacement. The warranty for each component will include replacement of the item as well as the Contract labor cost to replace and install.

This vendor warranty information will be assembled and packaged into a Warranty Manual. The Warranty Manual will provide vendor name and contact information, component description, and model number. The warranty Manual will be provided to the Owner.

Section 7.0 Project Management and Organization

7.1 Project Management Execution

7.1.1 Project Management Team (Typical)

The Contractor will assemble a well qualified and experienced team of individuals who have worked together on many previous projects.

The team will be comprised of:

- Project Manager
- Administration Manager
- Project Technical Consultants
- Construction Manager
- Purchasing / Expediter
- Scheduling
- QA/QC
- Project Engineering Manager
- Site Erection
- Commissioning / Start up Managers
 - Mechanical
 - Electrical
- Mechanical Construction Superintendent
- Electrical Construction Superintendent
- Training

The team as outlined above has worked together on many gas turbine generator power plants within the US as well as internationally. They have successfully completed a number of “Fast Track” projects internationally.

7.1.2 Project Manuals

One of the first tasks to be initiated is the preparation of the project specific project manuals. These manuals are listed:

- Project Procedures
- Project Implementation
- Project Engineering Calculations
- Project Warranties
- QA/QC
- Safety
- Training
- Operation and Maintenance
- Commissioning, Start Up, and Turnover
- Project Performance Tests

7.1.3 Project Schedule

Along with the commencement of preparation of the project manuals, the detailed project schedule will be started. This detailed schedule will be developed utilizing Microsoft Project. The project schedule will be a living document which will be continually updated by a full time assigned scheduler for the life of the project. The proposed project schedule is included in Section 8.0.

7.1.4 Project Engineering

Preliminary conceptual engineering has been developed during the proposal phase which consists of:

- General Arrangement Plot Plan
- Process Flow Diagram
- One Line Diagrams

The conceptual drawings listed above are immediately completed after project Notice to Proceed. This entails updating the various drawings based on final agreed upon items with the Owner and/or Owner's Engineer. The Process Flow Diagram is completed with the latest heat and material balance. The One Line Diagrams are further developed to reflect loads, breaker / fuse sizing, DL power, etc. The Control System Drawing is likewise further completed reflecting agreed upon HMI's, printers, Balance of Plant Equipment PLC's, etc.

The conceptual engineering is completed utilizing the project technical consultants (responsible for proposal preparation) and the detailed engineering team to guarantee a smooth hand over to the detailed engineering phase.

During the conceptual engineering phase, specifications are finalized for all engineered equipment to be purchased. On a "Fast Track" project most of the engineered equipment has been preliminarily specified with only final checks and agreed upon modifications made.

Detailed engineering will be completed utilizing the conceptual drawings previously described and with Owner approval. This detailed engineering will include: engineering protocol for drawings and specification.

As-built drawings will be completed upon completion of the installation phase of the project.

7.1.5 Owner Approval

It is proposed that three approval steps be in place for the engineering phase of the project. These steps would be 30%, 60%, and 90%. The Owner or Owner's Representative could travel to the Contractor or vice versa at the Owner's request.

7.1.6 Project Procurement

Major engineered equipment which has been specified during the proposal and configuration phases of the project are submitted on the agreed upon approval process and when approved will be purchased.

The Balance of Plant Equipment and materials (normally short delivery) will be itemized and listed during detailed engineering. A decision will be made as to who will furnish (Contractor or Subcontractor) based on job conditions, locations, etc.

7.1.7 Construction Phase On Site

The project management team will move to the site for the construction phase of the project. This phase is further described as follows:

1. Mobilization

A mobilization and construction lay down plan will have been prepared as part of the Project Implementation Manual. This would include setting up the normal required items.

- Construction offices
- Site utilities
- Secure and non-secure lay down areas
- Communications
- Project management housing, transportation, food, etc.
- Arrangements for major equipment rental
- Surveys, soil tests, etc.

2. Project Construction

Project construction will be carried out utilizing local subcontractors and materials where feasible. Contractor will furnish construction management and detailed supervision of all disciplines.

3. Commissioning and Turnover

Commissioning and Turnover Manuals will be prepared for each discrete system making up the power plant. An experienced and knowledgeable commissioning and turnover team will be assigned under the supervision of a well qualified start-up manager. This team will commission on a "priority system" basis the various systems to provide for plant start up. It is desired that plant operation and maintenance personnel be involved to provide valuable hands on experience.

4. Training

Operation and maintenance training will be conducted in two phases:

- General Electric LM 6000 GTG equipment classroom at the site subject to plant operator preference.
- On site balance of plant operation and maintenance.

Formal training manuals will be prepared with formal on site training to be conducted.

5. Plant and Performance Testing

Plant and performance test documents will be prepared and submitted for approval. The formal tests will be conducted on an agreed time with the necessary Owner's Representatives attending.

Section 8.0 PROJECT SCHEDULE

Please find on the following pages ProEnergy EPC Services' Typical Project Schedule for the installation of a FT8-3 SwiftPac 150 MW unit.

EDC Project FT-8 TwinPac Simple Cycle Project Project Executive Schedule																																								
ID	Task Name	Duration	Start	Finish	September 2009	October 2009	November 2009	December 2009	2010	January 2010	February 2010	March 2010	April 2010	May 2010																										
					Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	Week 32	Week 33	Week 34	Week 35	Week 36
1	EDC Project - 3 Unit FT-8 TwinPac Site	248 days	Mon 9/14/09	Wed 5/19/10																																				
2	Initial Date	1 day	Mon 9/14/09	Mon 9/14/09																																				
3	Milestone Dates (Key Dates)	31 days	Mon 9/14/09	Wed 10/14/09																																				
4	Initial Date	1 day	Mon 9/14/09	Mon 9/14/09																																				
5	Backfeed Power Available	1 day	Mon 10/12/09	Mon 10/12/09																																				
6	Natural Gas Available	1 day	Tue 10/13/09	Tue 10/13/09																																				
7	Raw Water Available	1 day	Wed 10/14/09	Wed 10/14/09																																				
8	Telephone & Internet Service Available	1 day	Mon 10/12/09	Mon 10/12/09																																				
9	Construction Power Connection Available	1 day	Mon 10/12/09	Mon 10/12/09																																				
10	Construction Permit	1 day	Mon 10/12/09	Mon 10/12/09																																				
11	Engineering	55 days	Tue 9/15/09	Sun 11/8/09																																				
12	Conceptual & Major Equipment Specs	10 days	Tue 9/15/09	Thu 9/24/09																																				
13	Site Survey	10 days	Tue 9/15/09	Thu 9/24/09																																				
14	Bore Test / Soils report	20 days	Mon 9/28/09	Sat 10/17/09																																				
15	Issue Foundation for Construction Drawings	5 days	Sun 10/18/09	Thu 10/22/09																																				
16	Bulk Material Specs and PO's	20 days	Fri 9/25/09	Wed 10/14/09																																				
17	Issue for Construction Drawings	45 days	Fri 9/25/09	Sun 11/8/09																																				
18	Procurement	60 days	Fri 9/25/09	Mon 11/23/09																																				
19	Buildings	12 wks	Fri 9/25/09	Mon 11/23/09																																				
20	BOP Mechanical	2 mons	Thu 10/15/09	Mon 11/23/09																																				
21	BOP Electrical	2 mons	Thu 10/15/09	Mon 11/23/09																																				
22	Transportation	60 days	Tue 9/15/09	Fri 11/13/09																																				
23	GTG Package 100	30 days	Tue 9/15/09	Wed 10/14/09																																				
24	GTG Package 200	30 days	Tue 9/15/09	Wed 10/14/09																																				
25	GTG Package 300	30 days	Tue 9/15/09	Wed 10/14/09																																				
26	GSU's	60 days	Tue 9/15/09	Fri 11/13/09																																				
27	Construction	209 days	Fri 10/23/09	Wed 5/19/10																																				
28	Mobilize to Site	14 days	Fri 10/23/09	Thu 11/5/09																																				
29	Civil Work	25 days	Mon 11/16/09	Thu 12/10/09																																				
30	Site Preparation	10 days	Mon 11/16/09	Wed 11/25/09																																				
31	Excavation & Grading	15 days	Thu 11/26/09	Thu 12/10/09																																				
32	Power Island Foundations	45 days	Thu 11/26/09	Sat 1/9/10																																				
33	GTG 100	10 days	Thu 11/26/09	Sat 12/5/09																																				
34	GTG 200	10 days	Thu 11/26/09	Sat 12/5/09																																				
35	GTG 300	30 days	Sun 12/6/09	Mon 1/4/10																																				
36	GSU 100	4 days	Sun 12/6/09	Wed 12/9/09																																				
37	GSU 200	5 days	Sun 12/6/09	Thu 12/10/09																																				
38	GSU 300	5 days	Tue 1/5/10	Sat 1/9/10																																				
39	BOP Foundations	20 days	Sun 12/6/09	Fri 12/25/09																																				
40	Unit Building	10 days	Fri 12/11/09	Sun 12/20/09																																				

Project: EDC La Rains FT-8 TwinPac P

Date: Wed 9/19/09

Task

Split

Progress

Milestone

Summary

Project Summary

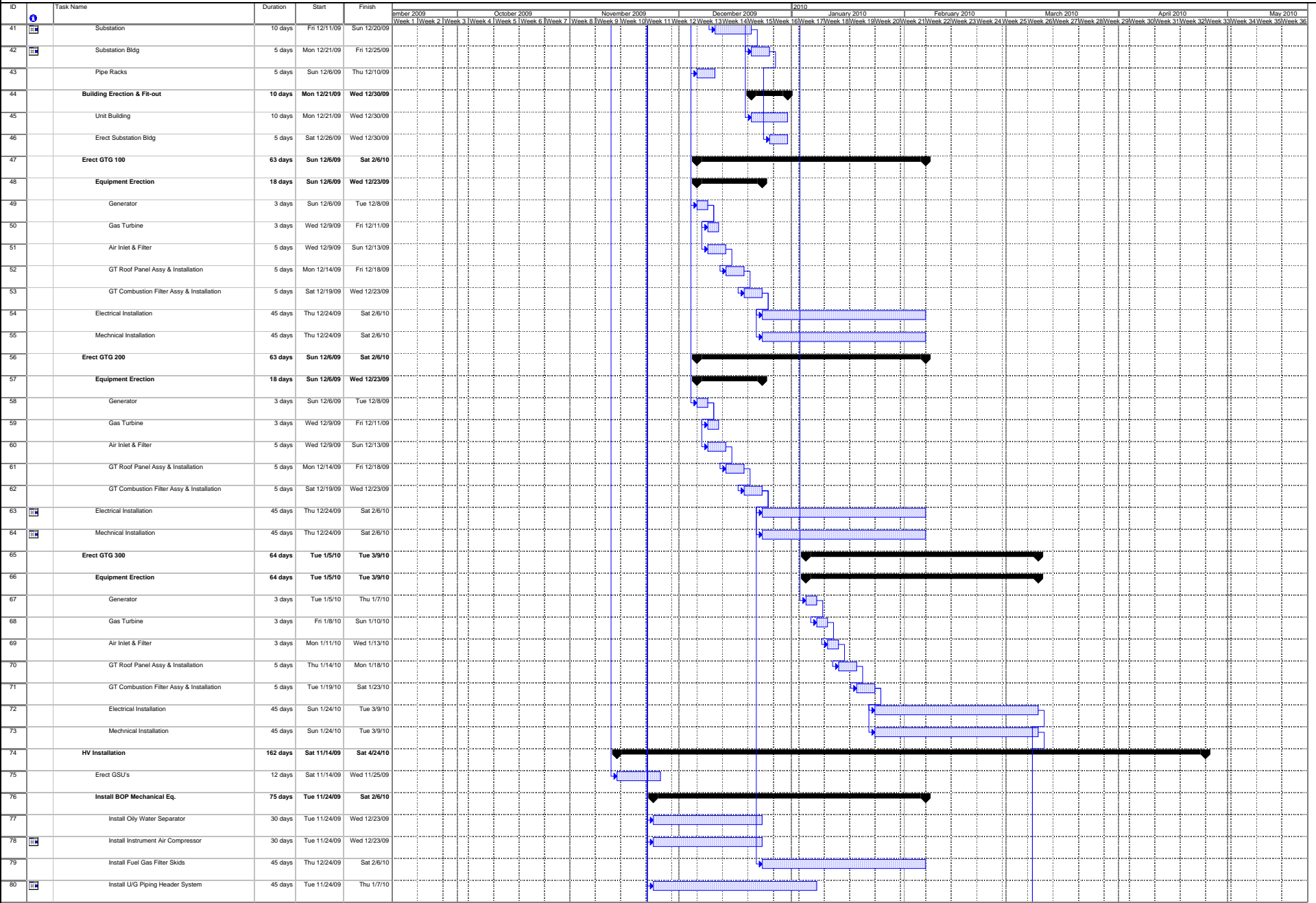
External Tasks

External Milestone

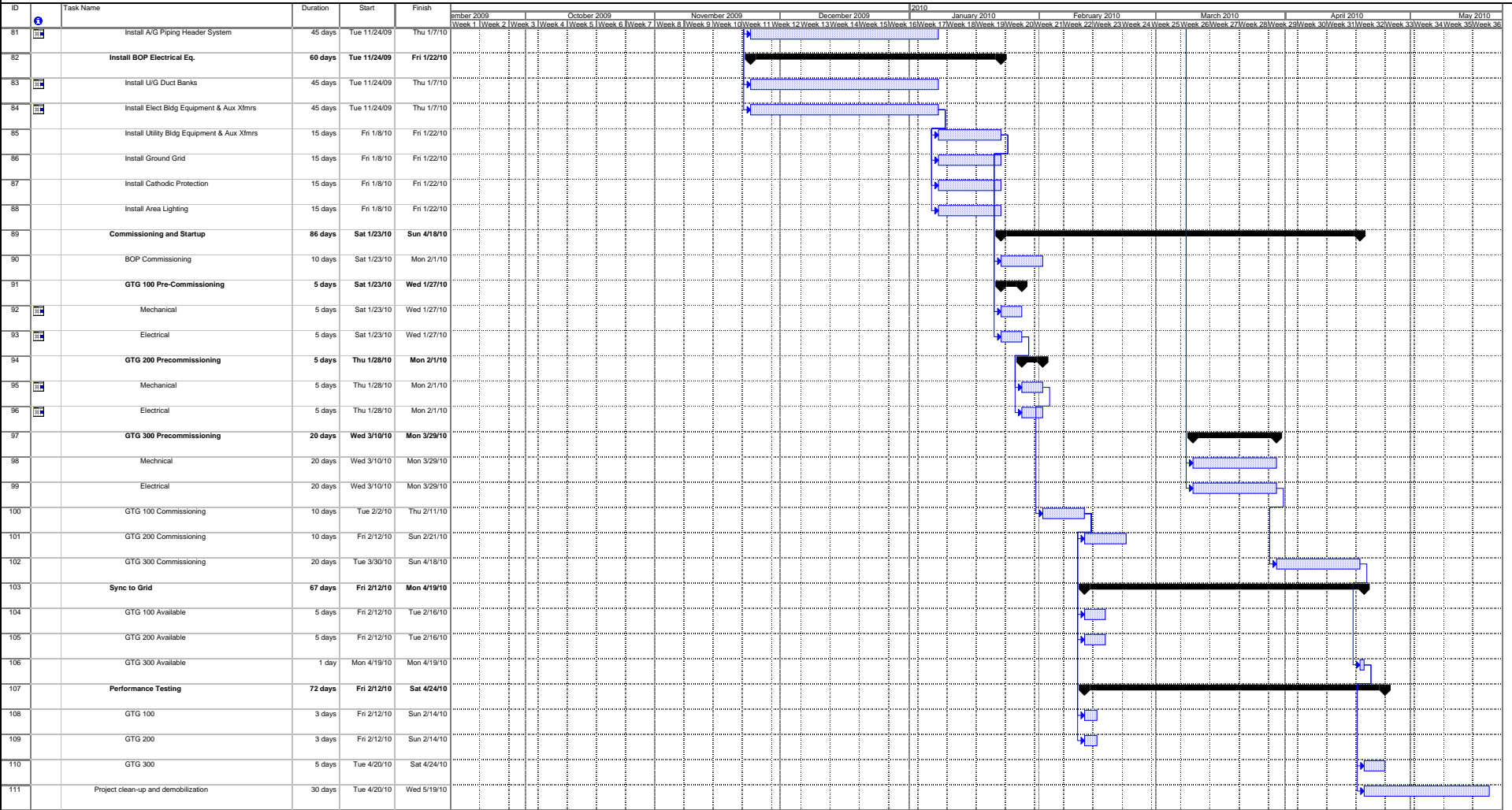
Deadline

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EDC Project
FT-8 TwinPac Simple Cycle Project
Project Executive Schedule



EDC Project
FT-8 TwinPac Simple Cycle Project
Project Executive Schedule



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PART 1 PROJECT QA/QC PLAN

I. INTRODUCTION

Our employees have over 40 years of history with EPC projects for the Power Generation industry. As a turnkey engineering and construction contractor, we have followed stringent quality guidelines throughout its history. The QA/QC Controls in place have been developed and fine tuned over these multiple and varied project experiences. The QA/QC plan that exists today is based upon experience in interpretation and application of codes and standards as well as practical knowledge learned in expeditiously bringing a project to successful completion.

The following sections will provide a detailed description of the Corporate Policy regarding Quality Assurance/Quality Control and a Project Specific Plan for the Quality Assurance/Quality Control management of the Power Project.

II. ORGANIZATION

The Quality Assurance Manager acts as the point-of-contact for any non-conformance reports and initiates corrective action as required. He/she ensures that required inspections, tests, evaluations, reviews, audits and all other quality control measures are performed as necessary to strictly adhere to the corporate-approved Quality Control and Assurance program plan. The Quality Assurance Manager is assisted by a team of inspectors who conduct all manners of inspections and tests required, ensuring that the installed system conforms to the approved drawings and specifications.

An organization chart is furnished which shows the organization of the Quality Control and Assurance Team by position, title and name. All quality control team personnel will be assigned based upon individual and collective expertise as related to the specific areas of quality control necessary to support the contract work effort.

III. PLAN TASKS AND PROCEDURES

A. Construction Design

1. Design Documentation Review - Drawings

Project Engineers are responsible for conceptualizing and engineering the project. To ensure that the design meets all requirements, inspections will be conducted throughout the design process. Prior to issuance of "Issue For Construction" package, all drawings will have the following signatures and dates.

Draftsman	Signature and Date in Drawn By Block
Checker	Signature and Date in Check Block
Project Engineer	Signature and Date in Design Block
Project Manager	Signature and Date in Project Manager Block
QA Manager	Signature and Date in QA Block

The Project Engineer responsible for the drawing design will initial his approval on all completed drawings. Fundamental configuration drawings (i.e., PFD, P&ID, Electrical One-lines, and Control Configuration drawings) will undergo peer review. Selection of the peer reviewer will be made jointly by the Senior Engineering Manager and the QA/QC Manager. The Quality Assurance Manager will check the drawing for all necessary signatures and initials and will then sign his name and date. The Drawing Review Sheet will be filed by the Quality Assurance Manager as a permanent project record.

Changes to approved drawings require the same review process. Changed drawings will be issued as revisions and will be labeled as such.

2. Design Documentation Review - Specifications

A specification will be generated for each major piece of equipment to be purchased for this project. The Project Engineer responsible for the generation of each specification will initial the completed specification. Prior to each specification's attachment to a Request for Bid or a Purchase Requisition, this specification will undergo peer review by the Project Manager and the Engineering Manager. The Specification will then be passed to the QA/QC Manager for his review and will become a permanent part of the project record.

3. Drawing Control

A Master Drawing Index of all drawings will be maintained. The index will be updated as drawing changes occur and will reflect the current status of each drawing. Only the latest applicable drawings, specifications, instructions and authorized changes thereto, will be issued for manufacturing, construction, inspection and testing. Reproducible copies or computer disk files of final revision levels of a drawing will be maintained for record.

B. Subcontracted Design

The same approval and quality assurance procedures to which own design work is subjected will also be applied to all design work subcontracted to an outside source. Drawings and other design documents will be reviewed and examined for compliance with both the technical and format requirements of the contract specifications.

C. Material Procurement

Responsibility for procurement of various equipment and supplies will be clearly defined prior to the initiation of any procurement. Purchasing Manager and staff will directly monitor all procurement efforts of major equipment under their immediate control.

Balance of Plant purchasing, i.e., Buildings, Mechanical, Electrical (conduit, fittings and wire), and Area Lighting will be the primary responsibility of the various subcontractors. Some of the project tasks will be purchased as a sub-system or system from different vendors or subcontractors. In order to ensure adherence to the project schedule, will direct scheduling and expediting of materials and equipment purchased by subcontractors.

1. Procurement Procedures

Procurement Procedures are published in the Corporate Project Procedures Manual. The following sections detail Procurement Procedures for this project. We implements these controls for every large project to ensure that the client receives the best value in materials and equipment as well as a quality installation effort.

1.1 Prequalification of Manufacturers / Vendors / Construction Contractors

Select Manufacturers / Vendors / Construction Contractors based on our own Qualified Vendors List (QVL). The stated purpose of the QVL is to ensure the best value and the highest quality in workmanship, materials and equipment for and our clients. Each manufacturer / vendor / contractor listed on the QVL has been evaluated based on past performance using the following criteria:

- Proper documentation of and compliance with inspection/test requirements
- Quality of workmanship
- Efficient handling of Purchase Orders
- Adherence to shipping schedules
- Prompt resolution of non-conforming material problems
- Compliance in manufacture and supply with specifications
- Warranty Work
- Product or Product Lines
- QA/QC audit (if necessary)
- Price

New vendors / contractors with no previous history are evaluated based upon the following:

- Product Lines

- Project Histories for similar projects
- Discussion with former Client Contacts
- Financial Stability
- Staff Qualifications
- Capability to complete the project
- Financial Stability
- QA/QC Audit (Manufacturers / fabricators if necessary)
- Client List

1.2 Material / Equipment / Parts / Services Selection

This section provides an overview of methodology in selecting materials, equipment, parts and services. Expediting procedures are included to ensure that the project schedule is not impacted by shipping delays.

The established twelve main stages in the procurement of materials, equipment, parts and services:

- Preparation of the Specifications for equipment and materials
- Identification of each item and preparation of purchase requisitions
- Issuing the Request for Quotation
- Quotation Review, Negotiations and selection of vendor or contractor
- Preparation and Placement of the Purchase Order
- Scheduling delivery of the Purchase Order
- Expediting the Purchase Order
- Receipt of Materials/Equipment/Parts and Inspection of same
- Inspection of Contracted Services and Approval of Same
- Resolution of any Non Conforming Material problems as well as any Corrective Action Items
- Field Purchase Orders

2. Equipment / Material Specification Preparation

Procurement specifications originate in the Engineering Department. The Engineering Manager will task staff engineers with the generation of specifications. The Engineering Manager and the Project Manager will review the equipment specification for compliance with applicable codes/standards and contract specifications. If Client approval is required, the Project Manager will forward specification to Client, obtain approval signatures, and then return the approved specifications to the Engineering Manager.

Standard Specifications are divided into two (2) classes, "short form" and "book type." Short form specifications are used whenever good engineering practice and contractual arrangements permit. They are simple and flexible. "Book type" specifications are more formal, more expensive, and may be used on major engineered items of equipment, usually at the request of the Client.

2.1 Purchase Requisitions

Purchase Requisitions will originate with engineering. The Purchase Requisition will be approved by the Project Manager or Engineering Manager prior to submittal to the Purchasing Department. The Requisition will be checked by either the Engineering Manager or the QA/QC Manager for compliance to specifications. The Purchase Requisition will then be forwarded to the Purchasing Manager. The Purchasing Manager will direct that the Request for Quotation (RFQ) be developed and sent to approved suppliers on QVL. The specifications developed by Engineering will be attached to the RFQ.

The vendor or subcontractor shall be given sufficient time to prepare their bid for equipment or services. The time frame for bidder response shall be so stated on the RFQ.

2.2 Quotation Reviews

Each quotation will be reviewed prior to the issue of a Purchase Order. Major Equipment, Material, and Contracted Services purchases will be reviewed by a representative from the applicable engineering discipline and project management.

2.3 Purchase Order

Following evaluation of quotations and completion of negotiations, an award will be made. The Purchasing Manager will generate the Purchase Order.

Purchase Orders include the following:

- Detailed description of products and services
- Required delivery date
- Test and Inspection requirements, if applicable
- Terms of payment
- Shipping information and point of contact
- Required documentation

A Purchase Order Log will be maintained at all times. Purchase Progress Reports will be updated weekly.

2.3.1 Expediting the Purchase Order

Purchasing Manager will delegate an expeditor to track delivery of major equipment and materials for the project. The expeditor will closely monitor the progress in fabricating or gathering of materials from each vendor of equipment and materials which could impact the project schedule.

2.3.2 Closing out of Purchase Orders

Documented receipt of equipment / materials in good order will be forwarded to the Administrative Manager and the Purchasing Manager. Contracted services will be inspected and signed off upon satisfactory completion. At this time, the Administrative Manager will sign these documents and direct the Purchasing Manager to forward same to Accounting for payment. Payment will be by terms agreed to on Purchase Order.

2.3.3 Field Purchase Orders

Field Purchase Orders will require approval from Purchasing Manager. Field Purchase Orders will be documented, and a written Field Purchase Order Log will be maintained.

2.4 Material / Equipment Receiving Inspection

Receiving Inspections will be performed on all major equipment / material for the project. QA/QC project staff will perform the inspection. Methodology is discussed in detail in the project QA/QC Section of this document.

All materials requiring Material Certifications and/or Material Test Reports (MTRs) will be checked for compliance to project specifications. Materials received without the proper certifications will be tagged and segregated until such required documentation is received.

2.4.1 Hazardous Materials Storage

All coating materials, lubricants, flammable solvents, and other items identified by the Project Manager or the Owner as falling under Hazardous Material designation will be segregated from other project materials and equipment. These items will be stored in a secure location. All MSDS sheets will be posted in this area concerning each type Hazardous Material. An inventory will be maintained detailing receipt and issuance of any said material to installation staff and/or subcontractor.

If a subcontractor will directly receive or bring upon jobsite any materials in this category, they will be directed to comply with the established HAZMAT storage materials plan. This plan will be issued as a separate document and will be available at site for all personnel to review.

2.5 Corrective Action / Non-Conforming Equipment / Materials

All equipment / materials which do not reflect compliance to project specifications, shipped without MTRs, damaged in shipment, etc. will be tagged and segregated until such time as vendors resolve the problem. Methodology for these processes is discussed in detail in the QA/QC section of this document.

D. Test Plans

Test plans will be developed for testing each segment of the project both independently and collectively. Test plans will explain the purpose of the tests, define inputs, specify procedures, and acceptance criteria.

1. Measurement and Test Equipment

Measurement and test equipment used for inspection and acceptance testing shall be calibrated at established intervals against certified standards. All subcontractor and vendor test equipment used for vendor acceptance testing in connection with this contract shall meet the same calibration requirements.

2. Documentation

Inspection and testing documentation will be prepared in clear language. Test procedures will define all conditions and materials required for the test, specify test equipment and provide pass/fail criteria.

Reports will be prepared to document the results of each inspection and test performed. The records will identify the test equipment used, the observations made, the deficiencies found and the corrective actions taken.

3. Definition of Test Types

- a. Factory Tests are defined as tests performed at the location where the item is produced, fabricated, manufactured or assembled prior to shipment to the site.
- b. Field Verification Tests or Pre-Operational Tests are tests performed after installation. These tests verify that components and subsystems are installed and perform correctly.
- c. The Operational Systems Test is a comprehensive test of the installed system. The results of this test determine acceptance or rejection of the system.
- d. Performance tests are a series of tests to verify project-mandated performance guarantees.

E. Corrective Action

When problems or deficiencies are discovered in workmanship and/or materials during the inspection process, they will be documented. The inspector will prepare a Corrective Action Request (CAR) detailing the problem and submit it for resolution. The QA Inspector will forward the CAR to the QA Manager and the Project Manager. Corporate

Project Management will investigate the problem and direct the proper course of action. All Corrective Action Requests shall be maintained for future reference or analysis as may be required.

IV. INSPECTION REQUIREMENTS

A. Responsibilities

Perform the inspections and/or tests required to substantiate that the materials and services conform to requirements. The Client may witness any of the inspections or tests. All errors and/or defects discovered during inspections and/or tests shall be documented.

B. Classification of Test

Test Classifications include factory testing of components and major subsystems, field testing, and on-site final acceptance testing of the complete system. Some of the individual component and subsystem testing may be performed concurrently with the Operational Test. Construction Inspections will be performed during the installation work.

1. Factory Testing

Factory testing will be accomplished as required to ensure compliance with the contract specifications. Prior to shipment from the factory, some components and/or subsystems may be tested to demonstrate their compliance with the specifications. These items shall be identified and noted on the purchase order.

2. Operational System Test (OST)

A test of the entire System in full operational mode will be conducted to verify correct operation of all subsystems and system components. All functional capabilities of the system will be demonstrated. Following completion of the test, we will prepare and submit a test report.

These test procedures will be developed during the project construction phase and will be delivered to the client for approval prior to Operational Testing efforts being undertaken.

C. Test Documentation

The Quality Assurance Manager will ensure that test procedures and test reports are prepared as outlined herein. Test documentation will be issued to the client. Test procedures will be developed for testing components, subsystems and the overall system. Testing shall demonstrate that the system design meets the requirements and that materials and workmanship are as specified. Test results shall be recorded and bound with the test procedures to form a permanent record.

V. PROJECT SPECIFIC INSPECTIONS AND TESTS

The project warrants a wide variety of inspections and tests. The following sections briefly describe the project inspection and test requirements by function and/or discipline.

A. Site Preparation

- Confirmation of site dimensions.
- Confirmation of topographical elevations on completion of final grading. Assumes existing elevation is within two (2) feet of final grading level.
- Confirmation of Water Run Off Control after Final Grading is achieved
- Review of complete soil compaction and associated tests.

B. Ground Grid

- Confirm grid installed at correct depth and dimension with correct materials.
- Observe and confirm that junctions, splices, and taps are made with the correct Thermic weld type molds or pressure connectors and tools.
- Observe and confirm that correct wire and size are used with regard to ground rods.
- Perform ground grid resistance test.

C. Concrete Foundations, Walls and Slabs

- Confirmation of correct locations and dimensions of concrete foundation and wall forms.
- Confirmation of correct size and spacing of rebar in concrete foundations.
- Confirmation of proper anchor bolt sizes and location.
- Verify procurement of correct concrete strength.
- Witness the taking of necessary concrete samples for "slump" and "strength tests."
- Obtain qualified testing lab for concrete strength tests.
- Confirm proper correct elevations and slope of all slabs, walls, etc.
- Document above items on concrete pour card.

D. Electrical

- Confirm the receipt of each major item of electrical equipment. Verify specification compliance and inspect for transit damage.
- Confirm that receipt of all equipment and miscellaneous materials - conduits, cabling, etc., adhere to procurement requirements.
- After wiring is pulled and prior to connection, the wire will be Megger tested and all test results will be recorded on a Megger / Hi-Pot Test Record Form.
- Observe all conduits routing to ensure adequate turning radius for cable pulling.

- Perform detailed point-to-point wiring checks to verify power, control, and instrument wiring.
- Perform pre-operational tests on all electrical equipment and systems.
- Confirm tagging and labeling, verify and document as-built drawings.

E. Structural Steel

- Confirm correct size and type of structural steel.
- Confirm proper installation of anchor bolts, washers, and nuts installed, as required.
- Verify that qualified welders perform welding in accordance with applicable codes.
- Visually inspect all field welds to confirm they are complete and adequate.
- Verify paint and corrosion protection.

F. Piping and Welding

- Confirm correct size, rating, etc., of each piping system as applicable.
- Verify that qualified welders are utilized. Inspect piping fit up to ensure proper workmanship is utilized.
- Obtain qualified testing lab for welding radiography.
- Set up welding inspection and test procedures in accordance with applicable codes and standards.
- Set up a detailed welding documentation system to address individual pipe code, each weld, x-ray, welder, welding map, date, and inspector review.
- Establish a pipe cleaning procedure.
- Witness hydrostatic testing and test procedures, as required by various codes for each piping system.

G. Instrumentation

- Confirm all instrumentation and control equipment adheres to procurement requirements.
- Confirm instrumentation specification compliance, and inspect for transit damage.
- Observe individual calibration of each instrument, confirming range, accuracy, etc. in accordance with specifications and applicable codes.
- Perform functional loop checks and document same.

H. Documentation

Test and Inspection Documentation will be maintained on site throughout the project construction, commissioning and startup phase. The client will be allowed access to this data at any time.

Following Completion of Startup and Commissioning, the full battery of project Testing and Inspection Documentation will be delivered to the Client.

VI. SHIPPING AND HANDLING

Procedures for shipping and handling of materials will ensure that all shipments meet the requirements for identification, packing, packaging and data submittal. Contractor will be responsible for packing, shipping, receiving and installing the component parts and subsystems that comprise the complete system. The degree of protection and method of handling will be consistent with the anticipated hazards.

Contractor will ensure that the appropriate shipping and handling procedures will be followed. Should damage occur in transit, it will be repaired or replaced as appropriate.

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PART 2 PROJECT SPECIFIC TEST AND INSPECTION PROCEDURES**I. SCOPE**

The following civil, mechanical and electrical test and inspection requirements have been developed for the project.

The civil, mechanical and electrical tasks on this project shall comply with the standards set forth in this document to ensure both the safety and quality of the installation. This document stipulates the inspections and tests that will be performed on the project.

II. STANDARDS AND CODES

The following organization's standards and codes are applicable to design and construction practices for the project.

ANSI B31.3	Plant Piping
ASME IX	Welder Qualifications
AWS A3/0	Definitions of Welding Terminology
AWS B2.1-84	Standard for Welding Procedure and Performance Qualification
AWS D1.1	AWS Code for Structural Welding
AISC	American Institute of Steel Construction – Various sections
ASTM	American Society for Testing Materials – Various Sections
ASME	American Society for Mechanical Engineers – Various Sections
ISA S5.1	Instrumentation Symbols and Identification
NACE RP018890	Standard Recommended Practice: Discontinuity (Holiday) Testing of Protective Coatings
NEMA AB1	Molded Case Circuit Breakers
NEMA ICS1	General Standards for Industrial Control and Systems
NEMA ICS2	Industrial Control Devices, Control and Systems
NEMA ICS4	Terminal Blocks for Industrial Use
NEMA ICS6	Enclosures for Industrial Controls and Systems
MG1	Motors and Generators
PE5	Constant-Potential-Type Electric Utility (Semi-Conductor Static Converter) Battery Chargers
SG2	High Voltage Fuses
WC2	Rubber Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy
NFPA70	National Electric Code
NFPA No. 1	Carbon Dioxide Extinguishing Systems
NFPA No. 37	Stationary Combustion Engines and Gas Turbines
OSHA CFR Title 29	Occupational Safety and Health Administration

(Note: Codes and Standards may also include Codes and Standards issued by other organizations as directed by Owner.)

III. TESTS / INSPECTIONS - CIVIL

Inspections will be undertaken throughout the civil portion of the project. The site dimensions will be confirmed. Topographical elevations will be confirmed following grading. All concrete slab and wall dimensions will be confirmed prior to concrete pouring. All concrete will be confirmed to be compliant with design specifications. A qualified third party inspection agency will be retained to conduct slump tests prior to and during concrete pours. All concrete will be strength-tested intervals per ASTM standards. Grouting of mechanical equipment skids will be performed per the developed specifications.

IV. TESTS / INSPECTIONS - GROUND GRID

The ground grid will be inspected throughout installation to ensure that materials used are per design specifications and that installation splices, junctions, and taps are made properly. Depth and dimensional boundaries will be measured and recorded. At the conclusion of installation, the grounding grid will be tested using a test instrument specifically for the task to confirm acceptable impedance levels.

V. TESTS / INSPECTIONS - MECHANICAL

Several elements of the project will require welding during fabrication and installation. These elements include:

- Structural Steel
- Fuel System - Natural Gas Fuel System Piping
- Fuel System - Liquid Fuel System Storage Tank and Piping
- Process Water Systems
 - Raw Water System Storage Tank and Piping
 - Waste Water System Piping
 - Firewater System Piping (HDPE piping Thermal Welding Inspections)
- Oily Waste System
- Lube Oil System

The welding inspection criteria for each of these tasks will be based upon the applicable codes and standards. The following paragraphs briefly describe each task and stipulate the specific code and/or standard(s) that apply.

A. Structural Steel

The structural steel aspects of the project will consist of the building related structural steel and various supports of racks. Design and erection of these assemblies shall be in accordance with the latest edition of the AISC. All welding will be visually inspected per AWS applicable codes and standards.

B. Welding Inspections/Tests

All welders are required to have current certification of their qualifications. Current certifications should indicate the welder has been tested to the project welding procedures within one year prior to welding on project piping.

All visual-welding inspections will be performed by persons who have current certification from AWS or ASNT-TC-1A. All NDE will be performed and approved by persons holding current ASNT-TC-1A Level II certification for the specific test processes implemented. All visual welding inspections will be performed based on the criteria established in ANSI B31.1 and AWS D1.1.

Radiographic Testing (RT) where necessary will be performed in accordance with standards established by ASME Boiler and Pressure Vessel Code, Article 2, Section V, except as stipulated in the applicable code, ANSI B31.3 (Pipe welding inside Plant Battery Limits).

All radiographs of full penetration welds must be accepted by a certified Level II inspector with current certification under ASNT-TC-1A. Accept/Reject criteria for all welds shall be in accordance with criteria established as well as applicable codes. Any rejections will require two (2) weld penalty shots on that welder. If in the judgment of the Site QA/QC Manager that a welder or welders have excessive rejections; may demand the welder be removed from the project or certified to weld on only non critical piping.

C. Natural Gas Piping

Piping from the supply source to the Fuel Filter/Separators will be Carbon Steel. The piping on the downstream side of the filter/separators to the will change to Stainless Steel piping. All Natural Gas piping will be designed and constructed to ANSI B31.3.

A total of 100% of the pipeline welds (100% of each weld) will be subjected to Radiographic Testing (RT).

All radiographs of full penetration welds must be approved and accepted per criteria established in Section B above.

D. Liquid Fuel System

All piping systems will be visually inspected by Craft Inspectors qualified to visually inspect these systems. 10% carbon steel piping welds will undergo RT, 100% of the weld. RTs will be examined and approved by a Level II or III ANSTC-1A qualified technician.

PE or RTR lines will undergo hydro or pneumatic testing. If Hydrotest is used, water as the test medium hydro will be 1.5 times design pressure up to a maximum of 150 PSI. If a pneumatic test is decided upon, the test pressure will be 1.2 times design pressure.

E. Lube Oil System

The Lube Oil system consists of a skid and interconnecting stainless steel piping to the Gas Turbine Package. All interconnecting pipe welds shall be in accordance with ANSI B31.3. All Lube Oil system welds will undergo visual inspection or testing in accordance with ANSI B31.3. Ten percent (10%) of these welds will undergo RT testing (100% of the weld)

F. Hydraulic System

The Hydraulic System consists of a skid and interconnecting stainless steel piping to the Gas Turbine Package. All interconnecting pipe welds shall be in accordance with ANSI B31.3. All Hydraulic system welds will undergo visual inspection or testing in accordance with ANSI B31.3. Ten percent (10%) of these welds will undergo RT testing (100% of the weld)

All radiographs of full penetration welds must be approved and accepted per criteria established in Section B above.

G. Raw Water System

The Raw Water System consists of Carbon Steel Piping.

Raw Water System piping welds will be visually inspected.

H. Process Water Systems

All welded steel piping will be visually inspected as welds are completed. All PVC piping joints will be inspected as they are made up. The Process water systems will be inspected prior to startup. All pumps will be balanced. Remaining components will be inspected and confirmed that they are supplied and installed per specifications.

J. Pump Testing

All pumps supplied will be balanced and confirmed as fully operational prior to startup.

VI. WELDER QUALIFICATIONS

Welders qualified according to the appropriate codes shall make all welds on the project:

- | | |
|-----------------------------------|---------------|
| • Structural Steel | AWS CODE D1.1 |
| • Fuel System Piping | ANSI B31.3 |
| • Lube Oil System Piping | ANSI B31.3 |
| • Hydraulic Startup System Piping | ANSI B31.3 |

All welders will be required to provide certification of their qualification to the appropriate standard. Each welder's certified qualifications will be reviewed and approved by the welding inspector prior to the welder's beginning work on the project. Applicable welding procedure specifications (WPS) and Procedure Qualification Reports (PQRs) will be required. All reports and certifications will be in accordance with ASME Section IX Article II.

VII. AREA DESIGNATION

Areas where combustible fluids, gases or vapors might be present shall be classified as hazardous areas or hot areas. Guidelines for welding in these areas will be drawn from ANSI Z49.1. Areas designated as safe areas will be those areas on site remote from hazardous areas and where no contact with combustible fluids, gases and vapors are present. Welding in these safe areas, as well as on-site welding fabrication, will be subject to the same standards and codes listed in the previous paragraphs. The welding inspector shall designate an area classification for the project.

IX. SUB-SYSTEMS MECHANICAL TESTS

The test requirements for the various tasks on the project are defined in the following paragraphs. Tests are defined in this case to be "system" centered, i.e., hydrostatic tests, vacuum tests, etc., versus inspections which are "component" centered. All tests shall be performed in the presence of a QA/QC inspector or his designate. All tests shall be documented with a written test report. The test report shall include a description of the test, the item or items tested, the procedure used, the date and time of the test and the test results. All test documentation shall be signed by the inspector.

A. Fuel System Tests

All fuel system piping shall be subjected to hydrostatic leak testing to 1.5 times the design pressure. Non-pipe components of the system shall be isolated from the test. The hydrostatic leak test pressure shall be held for a minimum of 1 Hour and then reduced in accordance with ANSI B31.3 to conduct examination for leakage. Pneumatic tests on the PE or RTR may be substituted at 1.2 times design pressure.

B. Lube Oil System Tests

All Lube Oil System piping shall be subjected to hydrostatic leak testing to 1.5 times the design pressure. Non-pipe components of the system shall be isolated from the test. The hydrostatic leak test pressure shall be held for a minimum of 1 Hour and then reduced in accordance with ANSI B31.3.

C. Hydraulic Starter System Tests

All Hydraulic Starter System piping will be subjected to hydrostatic leak testing to 1.5 time the design pressure. Non-Pipe components of the system shall be isolated from the test. The hydrostatic leak test pressure shall be held for a minimum of 1 Hour and then reduced in accordance with ANSI B31.3.

D. Process Water System Tests

All metallic process water system piping will be leak service tested prior to commissioning. The piping systems under test will be brought up to Normal Operating Pressure and this pressure will be held for 10 minutes or as long as it takes to check each joint or fitting on the line under test. Test shall be conducted in accordance with ANSI B31.3 to conduct examination for leakage. Piping Systems which will be tested in this manner are the following:

- Cooling Water Systems (New Piping)
- Oily Water Piping

E. Instrument Air System Leak Tests

Instrument air piping systems will be subjected to a Pneumatic leak test following installation. Pressures will be raised to Normal Operating Pressures levels for each system and held for a minimum of 10 minutes.

X. SPECIFIC TESTS – ELECTRICAL

A. Ground Grid Integrity Test

The new installed grounding cables/rods will be attached to the existing system. Installed Ground Grid will be tested using a suitable multimeter to measure integrity prior to startup. Continuity and resistance will be confirmed for the new installed cables/rods. The readings will be recorded for record.

B. Cable Insulation Testing - Megger

All 600 Volt and above wire and cable to be used on this project will undergo an insulation test or tests to ensure cable is suitable for intended usage and has structural integrity for installation. All low voltage cables, below 600 volts, will be tested for continuity prior to being energized.

All medium and high voltage cable and wire will undergo Megger testing. Cables will be tested to levels established not to exceed the rated voltage of the cables. Megger testing will be performed with a calibrated test instrument certified to national standards.

The results will be recorded and maintained for record. A cable failing a Megger test will be tagged, segregated and removed from the job site.

C. Cable Insulation Testing - Hi Potential Test

Medium and high voltage cables will undergo Hi-Potential testing to detect any insulation breakdown in these cables.

Testing will be accomplished with a calibrated instrument certified to national standards. Results will be recorded and maintained for record.

D. Cable and Conduit Installation - Inspections

All cable, conduit and associated fittings will be checked to ensure compliance to specifications developed for this project. Conduit, fittings and cable installation will be monitored during construction to ensure compliance to NEC codes.

E. Point to Point Testing

All installed cables shall be point-to-point tested prior to being energized. The point-to-point test shall confirm cables are installed as designed and phased properly.

F. Switchgear, Motor Control Centers, Breakers, and other Electrical Components, Instrumentation

All switchgear, motor control centers, breakers and other electrical components, will be inspected and tested prior to and following installation. Specific test procedures will be developed for each major piece of equipment to be installed. Electrical components will be inspected prior to installation and, in most cases, will be tested as part of a larger sub-system. Instrumentation will be inspected prior to installation and calibrated following installation. Instrumentation will be tested as part of a larger sub-system.

XI. FACTORY ACCEPTANCE TESTS / INSPECTIONS

The Client has the right to request the contractor an inspection of the equipment and witness all factory tests prior to shipment to the Project site if schedule allows. Tests will be undertaken at the manufacturer or fabricator's facility prior to being shipped to site.

XII. STARTUP TESTING AND COMMISSIONING

Startup testing and commissioning will involve integration of all sub-systems into a complete system-wide test of operation. Testing will involve operation of all sub-systems listed below:

- Process Water Systems – Raw Water Supply System and Firewater System
- Fuel Gas Delivery System
- Gas Turbine Startup
- Gas Turbine Electrical Transmission
- Breaker Operation
- Protective Relays, Breaker Testing

XIII. REPORTS

A copy of all inspection and test reports shall be maintained in a file at the project site. These reports shall be made available for review and reference as may be required throughout the project. The original copies of all inspection and test reports shall be forwarded periodically to the Quality Assurance Manager for review and safekeeping. Quality related problems that cannot be readily corrected at the project site will be immediately referred to the Quality Assurance Manager for resolution.

Section 10.0 Exceptions and Clarifications

For clarification of the project the following exceptions and assumptions are stated:

10.1 The Scope of Supply of this document does not include the following items:

- Real estate property on which the Power Project is to be sited.
- Local, state, and/or government taxes associated with the Owner Furnished equipment.
- Any site environmental cleanup or modifications to site as a result of the possible existence of Hazardous Waste materials such as Asbestos or PCB's.
- Environmental permits. (Note: Contractor will assist in obtaining permits where applicable.)
- Fuel gas for blow down, flushing, commissioning, start-up, and operation.
- Liquid fuel for flushing, commissioning, start-up and operation.
- Pratt and Whitney Technical Services during start-up for the FT-8 units
- Supply of Owner furnished items as outlined in Sections 2 & 3 of this TSD.
- Transportation of Owner provided equipment to Puerto Cabello
- Performance guarantees and warranty on Owner supplied equipment.
- Operating spares. (Contractor will submit a list of recommended spare Parts for the Contractor supplied BOP equipment (2) years of operation.)

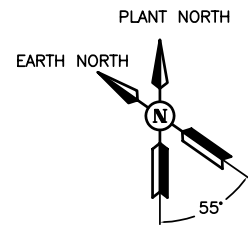
10.2 This proposal is also based on the following assumptions:

- Owner will provide complete site and access road for use as described in the TSD and associated drawings.
- Owner will supply the Major Equipment and Balance of Plant Equipment as described the Owner's Responsibility in Sections 2 & 3 of this TSD.
- Owner to supply Raw Water within 100 meters of the plant boundary as described in Section 2 of this TSD and the associated drawings.
- Owner to provide the Gas Fuel Supply at the PDVSA gas fuel metering station at the plant boundary as laid out in the associated drawings.
- Owner is responsible for supplying all gas and liquid fuel for the commissioning of the gas turbines and related balance of plant equipment.
- Contractor to obtain local, county or state construction permits. (Owner will assist in obtaining.)
- Contractor will provide soil borings to be utilized for site design.
- Contractor to provide site survey as necessary
- Contractor to furnish and install "first fill" lubricants and chemicals for the plant (excluding the liquid fuel).
- Contractor will provide warranty and performance guarantees on all Contractor furnished equipment and services.

Section 11.0 Drawings

Please find on the following pages the following preliminary project drawings.

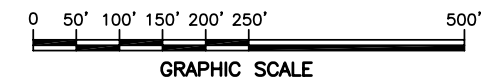
Overview Site Plan	10-001 Sh 1
General Arrangement Plot Plan	10-002 Sh 1
Process Flow Diagram	50-001 Sh 1
Process Flow Diagram	50-001 Sh 2
Process Flow Diagram	50-001 Sh 3
Process Flow Diagram	50-001 Sh 4
Generator One Line Diagram	60-001 Sh 1
Generator One Line Diagram	60-001 Sh 2
One Line Diagram	60-003 Sh 1
One Line Diagram	60-004 Sh 1
One Line Diagram	60-004 Sh 2
One Line Diagram	60-004 Sh 3
One Line Diagram	60-004 Sh 4



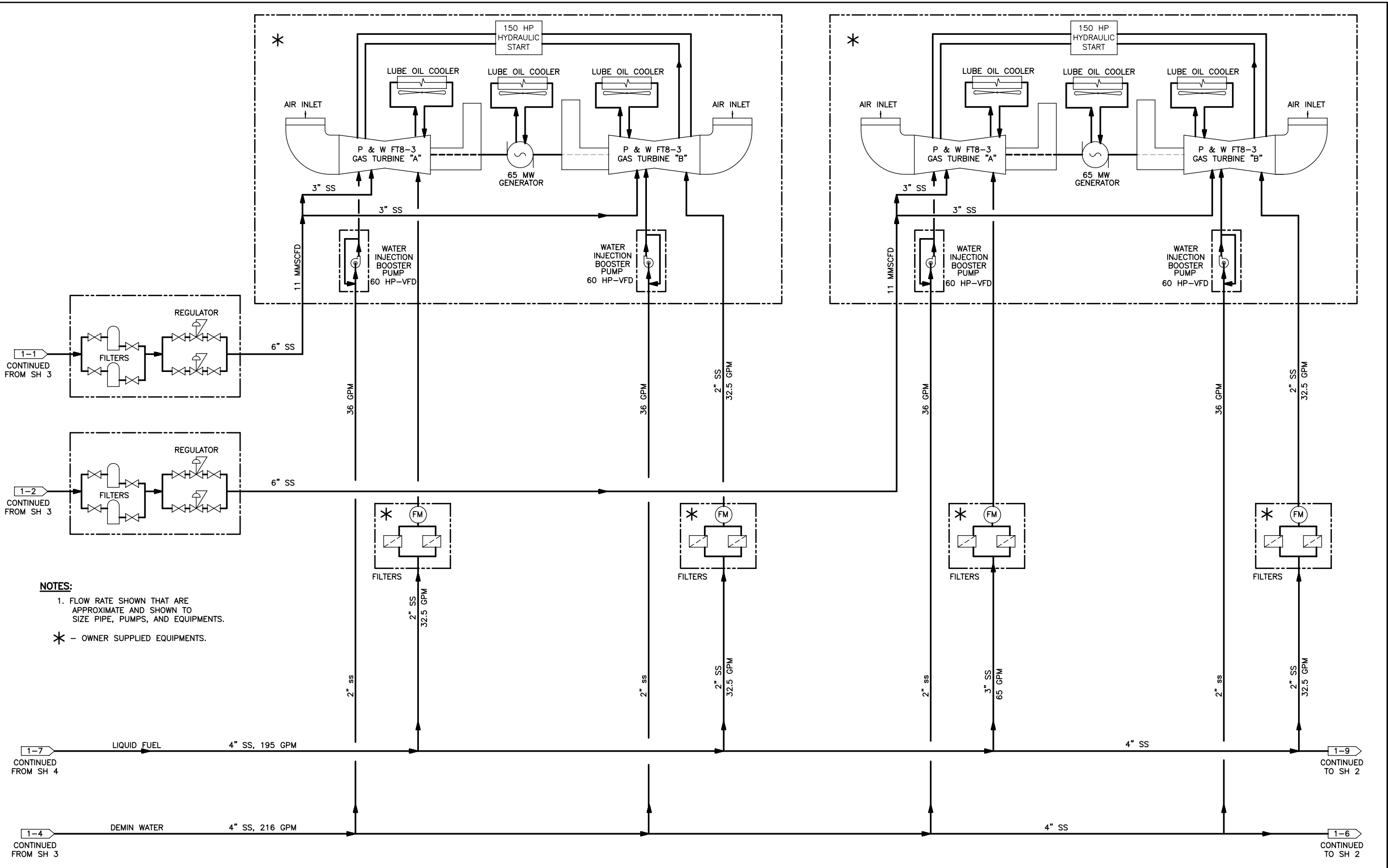
LEGEND:

- 1 OILY WATER SEPARATOR.
- 2 GAS FUEL FILTER/REGULATOR.
- 3 AUXILIARY TRANSFORMER (480 V).
- 4 DEMIN WATER TANK (265,000 GALS).
- 5 OILY WASTE TANK.
- 6 OILY WASTE OFF-LOAD PUMP.
- 7 DEMIN FORWARDING PUMPS.
- 8 NEW ROAD.
- 9 PARKING AREA.
- 10 PLANT FENCE.
- 11 LIGHTING POLE.
- 12 RAW/FIRE WATER TANK (650,000 GALS).
- 13 RAW/FIRE WATER FORWARDING PUMP.
- 14 SHED.
- 15 GAS COMPRESSOR BUILDING AND SHED.
- 16 MCC ROOM.
- 17 GAS COMPRESSOR.
- 18 GAS COMPRESSOR FIN FAN.
- 19 CENTRIFUGE PACKAGE.
- 20 AUXILIARY TRANSFORMER (4160 V)
- 21 WATER TREATMENT BUILDING.
- 22 FIRE WATER SKID.
- 23 RAW LIQUID FUEL TANK (650,000 GALS).
- 24 CLEAN LIQUID FUEL TANK (250,000 GALS).
- 25 CLEAN LIQUID FUEL FORWARDING PUMP.
- 26 RAW LIQUID FUEL FORWARDING PUMP.
- 27 DUAL TRUCK LIQUID FUEL OFF LOAD AREA.
- 28 LIQUID FUEL TRANSFER PUMP.
- 29 LIQUID FUEL OFF LOAD PUMP.
- 30 LIQUID FUEL TANK DIKE.
- 31 STORM WATCH SETTLING BASIN.
- 32 UTILITY BUILDING.
- 33 BLACK START GENERATOR.
- 34 OFFICE/CONTROL BUILDING.
- 35 WAREHOUSE/MAINTENANCE BUILDING.
- 36 15 TON OVERHEAD CRANE.

- THE GRID IS A 100' SQUARE.

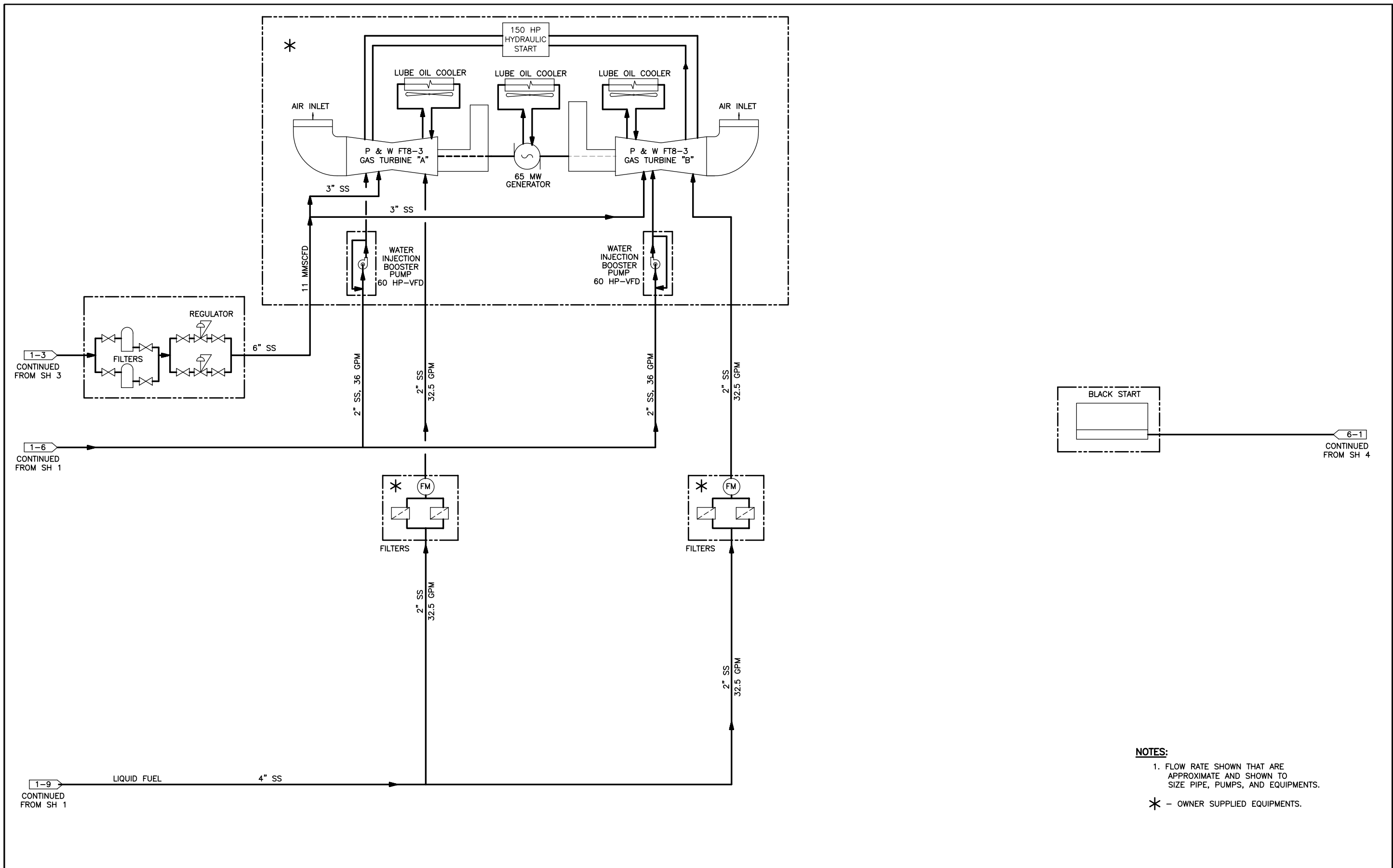


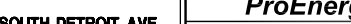
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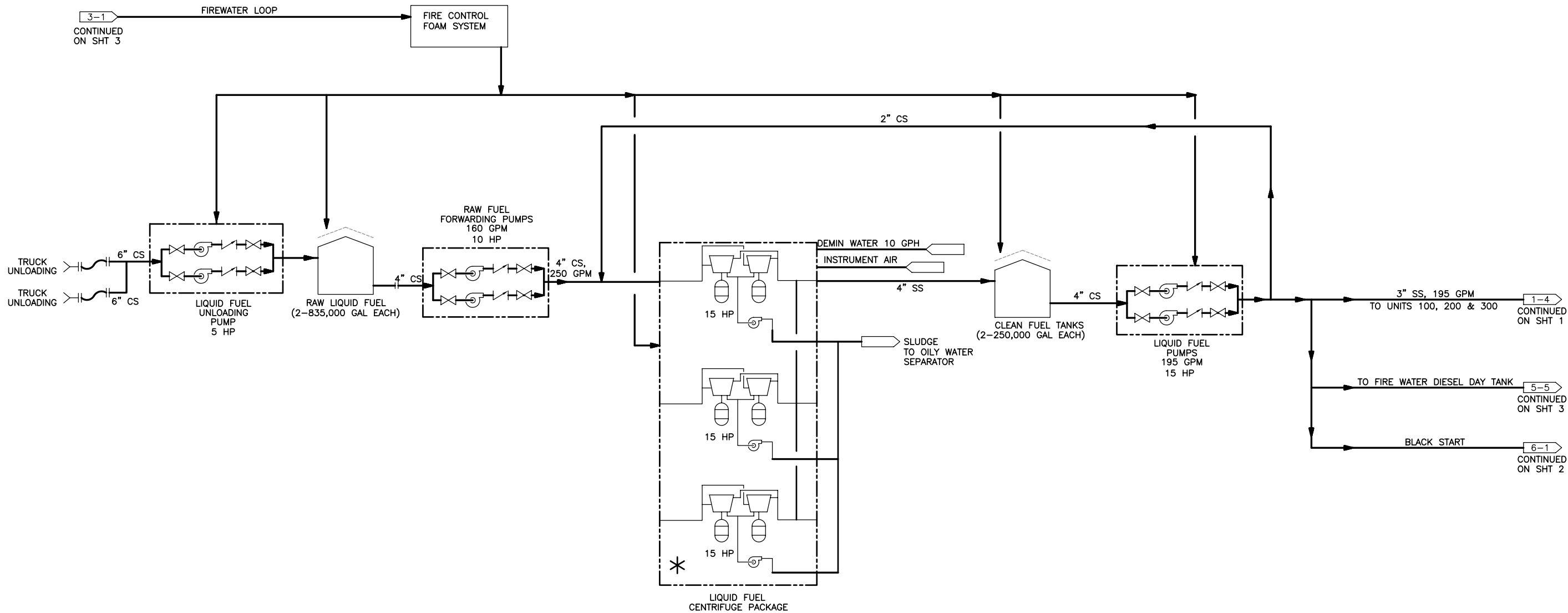


NOTES:
1. FLOW RATE SHOWN THAT ARE APPROXIMATE AND SHOWN TO SIZE PIPE, PUMPS, AND EQUIPMENTS.
* - OWNER SUPPLIED EQUIPMENTS.

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Section 12.0 Appendix (Later)

- 12.1 Aclaratorias Oferta IPC**
- 12.2 Site Meteorological Data (By Owner)**
- 12.3 Site Location Map (By Owner)**
- 12.4 Raw Water Analysis (By Owner)**
- 12.5 Parasitic Loads (Later)**
- 12.6 Fuel Gas Specification (By Owner) Later**
- 12.7 Demin Water Specifications (Later)**
- 12.8 Soils Study (By Contractor) Later**
- 12.9 Major Equipment Specifications (Later)**
 - 12.9.1 P&W FT8 SwiftPac Gas Turbine Generator**
 - 12.9.2 Fuel Gas Compressors**
 - 12.9.3 Water Treatment System**
 - 12.9.4 Liquid Fuel Centrifuge**
 - 12.9.5 Oily Water Separator**
 - 12.9.6 Instrument Air Compressor**
 - 12.9.7 Plant DCS System (By ProEnergy EPC)**

Comentarios a la Oferta de Servicios IPC													
Nro.	Sección	Pg	Sección	Propuesta técnica IPC La Raisa Pro Energy Derwick	Comentario EDC	Respuesta Pro Energy-Derwick 14-05-09	Respuesta Pro Energy-Derwick 14-05-09 Traducción al español	Status 14-05-09	Revisión Interna de EDC del 12-06-09.	Revisión con Derwick 16-06-09	Estatus 16-06-09	Revisión Interna de EDC del 18-06-09.	Estatus 28-07-09
1			1.0	Introducción	El proyecto consiste en un contrato EPC y no Turn Key Job. La EDC se reserva el derecho de aprobar la ingeniería antes de proceder a la construcción. Así mismo supervisará la ejecución de los trabajos y mantendrá en sitio un personal de inspección de obra.	We have corrected the wording in Section1.	Hemos corregido la redacción en la Sección 1	Ok.					
2			1.0	Introducción	El sistema de tratamiento de agua consiste en tres (3) equipos de tratamiento de agua cruda, tipo osmosis inversa.	The Introduction is meant to be very general with the details on the various components located in Sections 2 & 3.	La introducción está siendo muy general con los detalles el los diferentes componentes establecidos en las Secciones 2 & 3	Ok.					
3			1.0	Introducción	El sistema de tratamiento de combustible liquido consiste en tres (3) equipos de tratamiento y filtrado.			Ok.					
4			1.0	Introducción	El contratista debe incluir la instalación del motogenerador para arranque en negro (black start)			Ok.					
5			2.0	Balance of Plant	El terreno se entrega como está. Será responsabilidad del contratista adecuar el terreno a las condiciones necesarias para las ejecución de los trabajos.	We Understand	Entendemos	Ok.					
6			2.0	Balance of Plant	Los transformadores son de 90 MVA. El contratista suministrará el aceite comprado localmente, según especificaciones EDC que serán suministradas oportunamente.	We have not included this in our pricing. The Specifications were silent on the GSU transformers and nothing was said about this in the meetings during the week of April 27. We will quote this once EDC has provided us the specifications of the 90MVA transformers they plan to provide.	No hemos incluido esto en nuestro precio. Las especificaciones fueron silenciosas en los transformadores GSU y nada de esto fue dicho en las reuniones durante la semana del 27 de Abril. Cotizaremos esto una vez que la EDC nos provea con las especificaciones de los transformadores de 90 MVA que planifican proveer.	Ok.	El aceite aislante será suministrado con los transformadores. Sin embargo el contratista del IPC indicó que podrá suministrar el aceite en caso de ser requerido como un Cost Plus.				
7			2.0	Balance of Plant	Solamente se poroveeran los accesos existentes. Serán por cuenta del contratista el resto de los accesos.	We Understand	Entendemos	Ok.					
8			2.1.1	Simple Cycle Exhaust Stack	Las chimeneas de escape de las turbinas son de 30'.	We understand that the Exhaust Stacks are the standard ones that are included with the P&W FT8 SwiftPacs.	Entendemos que las chimeneas son los estandares de P&W que están incluidos con las P&W FT8 SwiftPacs.	Ok.					
9			2.1.2	Plant Fuel Gas System	El contratista estará encargado de la Ingeniería básica y de detalle de todo el sistema de combustible gaseoso, así como el suministro de todos los materiales y equipos necesarios para garantizar la operación del sistema.	We have included all engineering, material and workmanship to install the gas fuel system starting at the PDVSA metering station to the fuel gas flange on the gas turbine skids. The PDVSA metering station is provided by others.	Hemos incluido toda la ingeniería, materiales y fabricación para instalar el sistema de gas combustible comenzando en la estación de medición de PDVSA hasta la brida de gas combustible en el módulo de la turbina de gas. La estación de medición de PDVSA es provista por otros.	Ok.					
10	Portada		2.1.3	Plant Liquid Fuel System	El contratista estara encargado de la ingenieria basica y de detalle de todo el sistema de combustible liquido, así como el suministro de todos los materiales y equipos necesarios para garantizar la operación del sistema. Se debe considerar acero inoxidable para la conexión entre el tanque de combustible limpio y el skid regulador, para ser coherentes con el resto del sistema. El contratista deberá considerar la estación de bombeo de recepción de combustible desde los camiones hasta los tanques de almacenamiento. La tubería debe ser de acero al carbono. No está permitido el uso de tubería de HDPE en el sistema de combustible.	We have already planned to install stainless steel piping between the fuel treatment and the Clean Fuel Tank and between the Clean Fuel Tank and the FT8 fuel inlet.	Nosotros ya hemos planeado instalar tubería de acero inoxidable entre el tratamiento de combustible y el tanque de combustible líquido y entre el tanque de combustible líquido y la entrada de combustible de la FT8.	Ok.					
11			2.1.3	Plant Liquid Fuel System		Carbon Steel piping wittl be used for the raw fuel system.	Tubería de acero al carbono será usada para el sistema de combustible crudo.	Ok.					
12	1	2	2.1.3	Plant Liquid Fuel System	Confirmar que el volumen de los tanques de combustible, se refieren a volumen útil.	The usable capacity of the liquid fuel storage tanks is 94% of the actual tank capacity. Se rediseñará para un volumen del 100%	La capacidad usable de los tanques de almacenamiento de combustible líquido es 94% de la capacidad actual de los tanques. Se rediseñará para un volumen del 100%	Ok.					
13			2.1.3	Plant Liquid Fuel System	El contratista deberá suministrar e instalar las bombas de alimentación y los patines de filtros/reguladores de combustible líquido, en el caso de que sean requeridos, según el diseño que se haga en la Ingeniería Básica. Deben tambien considerar el sistema de retorno de combustible limpio al tanque diario. El contratista debe diseñar, suministrar e instalar todos los componentes requeridos para garantizar el apropiado funcionamiento del sistema de inyección de agua en los turbogrupos, desde el tie in de agua cruda en las instalaciones, exceptuando el suministro de los equipos de producción de agua desmineralizada (GE). Son 3 equipos que componen el sistema DEMIN.	We Understand	Entendemos	Ok.					
14			2.1.4	Water and Demineralized Water System		We Understand	Entendemos	Ok.					
15			2.1.5	Oilty Water Drain System	El contratista se encargará del diseño e instalación de todo el sistema de recolección de efluentes, así como los sistemas para tratamiento o previsiones para disposición final, según corresponda. Se debe presentar el Balance de Agua de toda la Planta, así como garantizar el cumplimiento de la normativa venezolana para vertido de aguas, decreto 883: " Normas para la Clasificación y control de la Calidad para los cuerpos de agua y vertidos o efluentes líquidos. Ley de aguas." Gaceta Oficial 38595 del 02ENE07	We understand and our system will be in compliance.	Entendemos y nuestro sistema estará en conformidad.	Ok.					
16			2.1.6	Plant Fire Water System	Tiene que cumplir la sección 26.2 SISTEMA DE PROTECCIÓN CONTRA INCENDIOS del Pliego. Considerar Cámaras de Espuma para los tanques de almacenamiento y sistema de diluvio para estacion de recepción de combustible	We Understand	Entendemos	Ok.					
17	1	2	2.1.7	Instrument and Service Air Systems	Tiene que ser seco y sin aceite	Our instrument air compressor is oil free	Nuestro compresor de aire de instrumentos es libre de aceite.	Ok.					
18	1	7	2.1.7	Instrument and Service Air Systems	El aire de instrumentación tiene que ser seco y sin aceite. El "tubing" debe ser de acero inoxidable; el resto de tubería, válvulas y accesorios deben ser de hierro galvanizado.	We understand	Entendemos	Ok.					
19	1	9	2.2.1	13.8 kV System	Los interruptores de los generadores son de 4.000 Amp	We have corrected the wording in Section 2.	Hemos corregido la redacción en la Sección 2	Ok.					
20	1	9	2.2.2	13.8/4.16 kV System	Favor suministrar el diagrama unifilar correspondiente	We will have these to you later this week.	Tendremos esto para ustedes más tarde esta semana	Pendiente.		Será suministrado el 19-06-09	Pendiente		Entregado el diagrama unifilar 60-001 (1). Pendiente para discutirlo a nivel tecnico
21	4	10	2.2.3	480 V System	Favor suministrar el diagrama unifilar correspondiente	We will have these to you later this week.	Tendremos esto para ustedes más tarde esta semana	Pendiente.		Será suministrado el 19-06-09	Pendiente		Entregado el diagrama unifilar 60-001 (2 y 3). Pendiente para discutirlo a nivel tecnico
22		10	2.2.4	120/208 V System	Favor suministrar el diagrama unifilar correspondiente	We will have these to you later this week.	Tendremos esto para ustedes más tarde esta semana	Pendiente.		Será suministrado el 19-06-09	Pendiente		Entregado el diagrama unifilar 60-001 (2 y 3). Pendiente para discutirlo a nivel tecnico
23			2.2.5	Plant Area Lighting	El sistema de iluminación exterior deberá cumplir con el punto 12.5: "Sistema de iluminación exterior" de los términos de referencia. El nivel de iluminación exterior debe ser de la menos 50 lux.	We Understand. Our system will comply.	Entendemos. Nuestro sistema estará en conformidad.	Ok.					
24	1	12	2.2.6	Ground Grid	El sistema de malla de tierra debe cumplir con el punto 12.2.21:"Malla de Tierra" de los treminos de referencia.	We Understand. Our system will comply.	Entendemos. Nuestro sistema estará en conformidad.	Ok.					
25			2.2.7	Plant Electrical Cable Tray	Las bandejas porta cables deberán ser de acero galvanizado	We Understand. Our system will comply.	Entendemos. Nuestro sistema estará en conformidad.	Ok.					
26			2.2.8	Underground Conduit and cable systems	Favor referirse a la página 67 de los términos de referencia renglón tuberías y ductos para su cumplimiento	We Understand.	Entendemos	Ok.					
27			2.2.9	Lightning Protection	Favor referirse a la página 83 apartado 15-12 de los términos de referencia del sistema de protección contra descargas atmosféricas	We Understand.	Entendemos	Ok.					
28			2.2.10	Batteries / Chargers / UPS Systems	Favor suministrar el diagrama unifilar correspondiente y el criterio de autonomía del sistema	We will have these to you later this week.	Tendremos esto para ustedes más tarde esta semana	Pendiente.	EDC solicita una autonomía de 4 horas para el UPS del DCS	Será suministrado el 19-06-09.	Pendiente	EDC rectifica el criterio y solicita una autonomía de 8 horas para las baterías.	Pendiente diagrama unifilar

29	2.4.2	Protective Relaying	Favor suministrar el esquema de protección correspondiente	We will have these to you later this week.	Tendremos esto para ustedes más tarde esta semana	Pendiente.	EDC solicita el suministro e instalación de un Panel de Control, Sincronización y Protección, que incluya los siguientes aspectos: Protección diferencial del transformador (87T), sobrecorriente direccional (67/67N), equipo de sincronización y control, y apertura y cierre del interruptor de despacho de 230 KV. ProEnergy debe tomar en cuenta los planos de protección y control de P&W.	Será suministrado el 26-06-09.	Pendiente	En el diagrama unifilar 60-001 (1) se observa el panel de sincronización y la protección diferencial del transformador (87T), más no el de sobrecorriente direccional (67/67N)
30	2.4.3	Site Work				Ok.				
31	2.5	Plant Communication System	El sistema de comunicaciones deberá cumplir con el punto 16.10 al 17 de los términos de referencia. El diseño y construcción de las fundacionesde concreto deberá cumplir con las siguientes normas Covenin: - 1756 Normas antisísmicas - 3621 Normas para edificaciones Industriales - ACI 318 ó Covenin 1753 Normas para diseño de concreto y acero de refuerzo	We Understand.	Entendemos	Ok.				
32	2.6	Plant Civil and Structural		We understand and we will comply with these standards.	Entendemos	Ok.				
33	2.6	Plant Civil and Structural	Favor aclarar a que corresponde el área de llenado de camiones de amoniaco.	We have corrected Section 2 to read the Liquid Fuel offloading area.	Hemos corregido la Sección 2 para corregir el área de descarga de combustible	Ok.				
34	2.7	Plant Buildings	Favor indicar áreas y distribución preliminar del edificio principal. Debe cumplir con lo contemplado en los términos de referencia. El contratista deberá incluir en su oferta el transporte de todos los equipos suministrados por él hasta la planta. Los equipos suministrados por la EDC deberán ser transportados desde puerto venezolano hasta el sitio de la obra, y ambas porciones deberán ser cotizadas por separado, tal como se indicó en las reuniones aclaratorias de la oferta. Los trámites de nacionalización de los equipos suministrados por el contratista deberán ser realizados por él. EDC pagará los costos asociados a estos trámites. El contratista deberá suministrar un listado detallado de estos materiales y equiposa la brevedad, para que la EDC solicite los permisos y/o exoneraciones de importación correspondientes.	We will provide EDC a proposed layout for their review and comments.	Proveeremos a la EDC un trazado propuesto para su revisión y comentarios.	Pendiente.	EDC indica que los requerimientos establecidos en los Terminos de Referencia son de 1900 M2 de Area Total.	La distribución será desarrollada y presentada a aprobación de la EDC durante la ingeniería de detalle	OK.	Se desarrollará durante la elaboración de la ingeniería de detalle
35	2.10	Transportation		Transportation was not included in our pricing. We will have to get quotations for this as well as the route study.	El transporte no fue incluido en nuestro precio. Tendremos que obtener cotizaciones para esto, así como también el estudio de ruta.	ok.	El Contratista indicó que el costo del Transporte bajo términos INCOTERM hasta el sitio de la obra, será manejado como un Cost Plus bajo una orden de compra separada de este contrato, una vez aclarados todos los detalles y Trabajos requeridos por el estudio de Ruta.			
36	2.11	Lubricants and Chemicals	Los aceites y lubricantes deberán ser comprados localmente bajo especificaciones de la EDC.	We will try to source all lubricants in Venezuela as long as products are available that meet the Original Manufacturers Specifications.	Trataremos de suministrar todos los lubricantes en Venezuela siempre que los productos que están disponibles cumplan con las especificaciones mínimas de los fabricantes	Ok.				
37	2.12	Spares	El contratista deberá suministrar un listado detallado de estos materiales y equiposa la brevedad, para que la EDC solicite los permisos y/o exoneraciones de importación correspondientes.	ProEnergy will provide detailed recommended spare parts list for the BOP equipment only and for 2 yrs. Operation.	ProEnergy proveerá lista detallada de repuestos recomendados para el BOP solo y por 2 años de operación.	Pendiente.	El contratista debe suministrar este listado antes de la firma del contrato.	La fecha de suministro será dada el 30-06-09	Pendiente	Pendiente
38	2.13	Construction Offices and Storage Facilities	El área disponible para oficinas y almacenaje dependerá de la disposición de la planta (Plot Plan)	We understand	Entendemos	Ok.				
39	2.14	Engineering and Project Management	El contratista deberá proveer tres (3) copias en electrónico y tres (3) copias duras de los manuales propuestos en este punto.	We understand and we will comply.	Entendemos y cumplimos	Ok.				
40	2.15	Cathodic Protection	Se deberá contemplar protección catódica para las tuberías de acero y las estructuras metálicas enterradas, así como para los tanques de acero, de acuerdo con lo establecido en el punto 15.13 de los términos de referencia La EDC removerá los materiales y equipos almacenados en el área de construcción. El contratista deberá remover restos de fundaciones existentes y tuberías enterradas en caso de que existiesen. No se espera que existan pasos relevantes de servicios como gas y agua, solo existen servicios de aducción de agua y distribución interna de electricidad. Porque mencionan GE specifications? El gas natural y combustible líquido deberá cumplir con las especificaciones del fabricante (P&W). El Tie In del agua cruda estará ubicado a menos de 100 metros del límite de la planta. El contratista deberá contemplar la conexión desde este punto. El contratista deberá diseñar y construir la planta de efluentes para el manejo y procesamiento de los efluentes industriales a producirse en la planta de acuerdo a lo indicado en el punto 10, página 34: "Planta de Efluentes" de los términos de referencia. El contratista deberá suministrar las provisiones para comunicaciones telefónicas en el sitio durante la construcción. La EDC será responsable de la tramitación de los permisos ambientales, el permiso de operación y los tramites arancelarios esq; Solamente se proveerán los accesos existentes. Serán por cuenta de El estudio de suelos es alcance del contratista según lo contemplado; El área disponible para oficinas y almacenaje dependerá de la disposición. Los transformadores son de 90 MVA. El sistema de tratamiento de agua consiste en tres (3) equipos de tra	We understand and we will comply.	Entendemos y cumplimos	Ok.				
41	3.0	Detailed Division of Responsibility Owner		We understand and agree with the removal of foundations. Please explain what you mean about Tuberías enterradas. GE Fuel Specifications was an error. We have changed to P&W. We understand where the Raw Water Tie-in is located and will comply. We understand the requirement for treatment of efluentes and will comply. We will supply our own Telephone during construction. We understand the division of responsibility for Permits and will comply. We understand that we will bring our cabling to the 13.8KV bushings of the EDC supplied 90MVA transformers. The substation contractor for EDC will provide the 230KV tie from the transformers to the substation. We understand that we will be performing the soil studies according to the EDC specifications. We understand that EDC is supplying a water treatment system that includes a multi-media filter and RO system. WE will be supplying a GE EDI system to finish the treatment of the demineralized water in order to comply with the P&W water specifications. All underground Raw Water and Fire Water piping will be HDPE which is our standard and	Entendemos y estamos de acuerdo con la remoción de fundaciones. Por favor expliquen que quieren decir acerca de tuberías enterradas. Las especificaciones de combustible de GE fueron un error. Hemos cambiado a P&W. Entendemos donde está localizado el punto de conexión de agua cruda y cumplimos. Entendemos el requerimiento para tratamiento de efluentes y cumplimos. Nosotros supliremos nuestros propios teléfonos durante la construcción. Entendemos la división de responsabilidades para permisos y cumplimos. Entendemos que nosotros traeremos nuestro cableado a los aisladores de 13.8 kV de los transformadores de 90 MVA suministrados por la EDC. El contratista de la subestación de la EDC proveerá el punto de conexión de 230 kV de los transformadores a la subestación. Entendemos que realizaremos el estudio de suelos de acuerdo a las especificaciones de la EDC. Entendemos que la EDC suministra un sistema de tratamiento de agua que incluye un filtro multimedia y un sistema de RO. Nosotros supliremos un sistema GE EDI para finalizar el tratamiento del agua desmineralizada con	Ok.	EDC no acepta el uso de tubería HDPE para el sitema contra incendio. Consideramos que la tubería del sistema contra incendio (SCI) debe ser de acero al carbono y en un diámetro no menor a 6" en las tuberías principales, tal como lo establece la norma PDVSA IR-M-03: "Sistema de Agua Contra Incendio" anexa. (Ver punto 6.4.2 Requerimientos Generales).	Derwick acepta y aclara que puede tener impacto económico en el proyecto. Este impacto será evaluado y se responderá el 19-06-09	Pendiente	Pendiente
42	3.0	Detailed Division of Responsibility EPC Contractor Civil/Structural/Mechanical/Electrical/Instrumentation & Control/Construction/Engineering/Project Management	El suministro de las 6 chimeneas es responsabilidad de la EDC. El alcance será de acuerdo a lo indicado en el punto 12.1.3 "Alcance General de Obras Civiles" y 12.2 "Actividades de Obras Civiles". El Carramiento perimetral y portón de acceso será de acuerdo a lo indicado en el apartado 12.2.9 de los terminos de referencia. El sistema contraincendio debe incluir tambien el sistema de descarga de espuma para los tanques de combustible y el sistema de diluvio para la estacion de descarga de combustible desde las gandolas. El tanque de agua cruda/contraincendio debe ser de una capacidad util no menor a 660.000 galones. La capacidad util del tanque de acero inoxidable para agua demin debera ser no menor a 250.000 galones. Explicar en que consiste el sistema "EDI". El sistema de tratamiento de efluentes debe incluir ademas un tanque de neutralizacion para aguas quimicamente contaminadas y un tanque de igualacion; ademas de una planta de tratamiento de efluentes previo a la descarga a la red municipal segun lo indicado en el plegio Igual se solicita la presentacion del diagram unifilar correspondiente La malla de tierra debe cumplir con lo indicada en el punto 12.2.21(r) El sistema de iluminacion debe cumplir con lo indicado en los puntos El Contarlista es responsable del desarrollo de toda la ingeniería bas	We understand that the Exhaust Stacks are the standard ones that are included with the P&W FT8 SwiftPacs. These are mounted on top of the gas turbine packages. WE understand that we will build the perimeter fence and entry gate according to the the EDC specifications. We have included a foam system for the liquid fuel tanks and off loading station. We agree with the capacities of the storage tanks. El tanque de agua cruda y SCI serán de 675.000 galones y el de agua desmineralizada será de 275.000 galones. Los tanques de combustible líquido sin tratar serán de 675.000 galones y los de combustible líquido tratado serán de 400.000 galones de SS. De acuerdo con sistema de tratamiento de efluentes basado en punto 10 de terminos de referencia. De acuerdo con lo solicitado de la malla de tierra, protección catódica, iluminación y sistema de control. De acuerdo con el resto de los puntos. EDC tendrá 5 días hábiles para la aprobación de planos y documentos.	Entendemos que las chimeneas son los estandares de P&W que están incluidos con las P&W FT8 SwiftPacs. Estas están montadas en el tope de los paquetes de las turbinas de gas. Entendemos que construiremos la cerca perimetral y el portón de acceso de acuerdo con las especificaciones de la EDC. Hemos incluido un sistema de espuma para los tanques de combustible líquido y las estaciones de descarga. Estamos de acuerdo con las capacidades de los tanques. El tanque de agua cruda y SCI serán de 675.000 galones y el de agua desmineralizada será de 275.000 galones. Los tanques de combustible líquido sin tratar serán de 675.000 galones y los de combustible líquido tratado serán de 400.000 galones de SS. De acuerdo con sistema de tratamiento de efluentes basado en punto 10 de terminos de referencia. De acuerdo con lo solicitado de la malla de tierra, protección catódica, iluminación y sistema de control. De acuerdo con el resto de los puntos. EDC tendrá 5 días hábiles para la aprobación de planos y documentos.	Ok.				
43	4.0	Design Conditions	Elevacion del sitio: 283,6 msnm Direccion del viento predominante: NE durante el 1er. Semestre del año y SE durante el 2do. Semestre. Consumo de combustible liquido (diesel) para tres unidades Swiftpack es de 219 galones/minuto Consumo maximo de agua desmineralizada, calculado por La EDC, es de 211 galones/minuto. El poder calorifico del gas puede variar ebtre 900 y 1050 BTU/pie3	We understand and have updated the site conditions.	Entendemos y hemos actualizado las condiciones del sitio.	Ok.				
44	4.2	Interconnect Points	El punto de interconexion del sistema de tartamineto de efluentes sera en la descarga hacia la red municipal de aguas servidas. La localizacion de aguas será definida posteriormente.	We understand and agree.	Entendemos y estamos de acuerdo.	Ok.				

45	6.0	Plant and Equipment Warranties	El Contratista debera garantizar, ademas de los equipos por el suministrado, el buen diseño y la correcta operacion de toda la planta.	We understand and agree.	Entendemos y estamos de acuerdo.	Ok.			
46	7.1.1	Project Managment Team	El contratista deberá incorporar la organización de Seguridad, Higiene y Ambiente (SHA) para el proyecto.	We understand and agree.	Entendemos y estamos de acuerdo.	Ok.			
47	7.1.2	Project Manuals	El contratista deberá proveer tres (3) copias en electrónico y tres (3) copias duras de los manuales propuestos en este punto.	We understand and agree.	Entendemos y estamos de acuerdo.	Ok.			
48	7.1.4	Project Engineering	Favor suministrar listado de productos: documentos y planos a ser entregados. La ingeniería deberá ser realizada de acuerdo a lo indocado en el punto 25 de los términos de referencia.	The list of drawings and data will be provided later this week or early next week.	La lista de planos y la fecha será provista posteriormente esta semana o a principios de la que viene.	Pendiente.	El contratista debe suministrar este listado antes de la firma del contrato.	Será suministrado el 19-06-09.	Pendiente
49	7.1.5	Owner Approval	Favor aclarar este punto.	Owner has the right to approve drawings and designs within 5 working days from our submittal.	El propietario tiene el derecho a aprobar planos y diseños dentro de 5 dias laborables desde nuestra entrega.	Ok.			
50	7.1.7	Training	El entrenamiento estará basado en las unidades P&W FT8-3 modelo Swift Pack Favor suministrar la planificación en electrónico en Project. Para la ejecución de los trabajos deberá desagregarse el programa de ejecución a niveles más bajos (WBS). Favor aclarar como se van a ejecutar las fundaciones en el tiempo previsto en el cronograma. Favor aclarar el tiempo de sincronización a la red y las pruebas de funcionamiento y la relación entre ellas.	We Understand and will comply.	Entendemos y cumplimos	Ok.			
51	8.0	Project Schedule	Las fechas de entrega de los transformadores (finales de Octubre) y turbinas (mediados de Agosto 2009) no corresponden a las suministradas por la EDC. Favor suministrar las premisas de programación, particularmente la duración de la jornada laboral, el número de turnos de trabajo y dias laborables en la semana. No se indican las actividades de construcción de los sistemas del Balance de Planta, i.e., sistema de combustible líquido, gas, agua desmineralizada, sistema contra incendio, edificios, vialidad, etc. Se solicita el programa detallado de construcción con Esquema de Medición y Curva "S" Se requiere el Plan de Calidad específico para el Proyecto. Incluir el Plan de Inspección y ensayo. En el documento de QA / QC, utilizar una sola tabla de contenido para las dos secciones.	We agree but these are part of the initial engineering and project management plan which will be supplied once the we receive the notice to proceed on the project.	Estamos de acuerdo pero estos son parte de la ingeniería inicial y plan de gerencia del proyecto, el cual será suplido una vez que recibamos la notificación para proceder en el proyecto.	Ok.	OK.		
52	9.0	Plan de Calidad	Favor aclarar el punto D página 17 relacionado a tubería doble pared para Combustible Líquido Sección I, Fire Water, página 18: la tubería debe ser Acero al Carbono Se debe hacer mención específica al Cumplimiento de Normas indicadas en el Pliego de Licitación y particularmente a la normativa y legislación venezolana El contratista pagará todos los impuesto asociados a la actividad contratada Favor explicar el punto: <i>Any site environmental cleanup or modifications to site</i> . Supply of Owner furnished items as outlined in Section 2.0 of this Proposal: Favor remitirse al punto 6 y 7 de este documento Transportation: remitirse a comentarios en el punto 35 Operating Spares: se solicitan spare parts para 2 años de operación de los equipos suministrados por el Contratista	The QA/QC section which was included in our TSD was incorrect for this job. We will be providing an updated version which meets the requirement of this project and complies with the EDC specifications.	La sección QA/QC que fue incluida en nuestro TSD estaba incorrecta para este trabajo. Estaremos suministrando y actualizando la versión que cubra los requerimientos de este proyecto y cumpla con las especificaciones de la EDC.	Pendiente.		Será suministrado el 26-06-09.	Pendiente
53	10.0	Exceptions and Clarifications	Sección I, Fire Water, página 18: la tubería debe ser Acero al Carbono Se debe hacer mención específica al Cumplimiento de Normas indicadas en el Pliego de Licitación y particularmente a la normativa y legislación venezolana El contratista pagará todos los impuesto asociados a la actividad contratada Favor explicar el punto: <i>Any site environmental cleanup or modifications to site</i> . Supply of Owner furnished items as outlined in Section 2.0 of this Proposal: Favor remitirse al punto 6 y 7 de este documento Transportation: remitirse a comentarios en el punto 35 Operating Spares: se solicitan spare parts para 2 años de operación de los equipos suministrados por el Contratista	We will pay the local taxes associated with our work. With regards to environmental clean-up, if there exists hazardous materials such as asbestos, PCB's etc on the site, we have not included any funds in our proposal for the cleanup of these or other hazardous materials. We guarantee that we will not bring any hazardous materials onto the site or contaminate the site with hazardous materials during contruction. We understand that we will be providing you a quotation for transportation as discussed earlier. We understand that we will providing a Recommended List of Spares for (2) years operation. The parts are not included in our supply now and these would be purchased by EDC as a change order. We understand what EDC will be providing as a water treatment system as discussed above.	Nosotros pagaremos los impuestos locales asociados con nuestro trabajo. Con respecto a la limpieza ambiental, si existen materiales peligrosos tales como asbestos, PCB's etc en el sitio, no hemos incluido fondos en nuestra propuesta para la limpieza de estos u otros materiales peligrosos. Garantizamos que no traeremos ningún material peligroso para el sitio o contaminaremos el sitio con materiales peligrosos durante la construcción. Entendemos que suministraremos a ustedes una cotización para el transporte como se discutió antes. Entendemos que suministraremos una lista de repuestos recomendados para 2 años de operación. Las partes no están incluidas en nuestro suministro ahora y estas serán adquiridas por la EDC como una orden de compra adicional. Entendemos que la EDC proveerá un sistema de tratamiento de agua como se discutió arriba.	Pendiente.	La EDC emitirá una Orden de Compra por separado, pero es necesario que el contratista suministre la lista de repuestos recomendados con sus precios unitarios.	Referirse al punto 37 arriba.	OK.
54	11.0	Drawings: Overview Site Plan	Favor suministrar este plano en formato Autocad. Favor revisar la construcción de la rampa de acceso nueva por la alta pendiente de la vía. Se deben colocar dos bahías de llenado de diesel con las bombas y equipos asociados para poder cumplir con los caudales de operación. Se deben reubicar los compresores de gas dentro de la misma área para cumplir con las distancias minimas de separación entre equipos e instalaciones de PDVSA. En el área de los tanques de diesel deben separarse con diques de contención lo más posible entre ellos. Verificar el distanciamiento de los tanques de combustible con las normas de separación entre equipos e instalaciones. Corregir el número 30 en el área de las turbinas. Favor explicar el uso del edificio 32 (utility building).			Pendiente.	OK.	Será suministrado el 26-06-09.	Pendiente
55	11.0	Drawings: Process Flow Diagrams	Favor incluir las tuberías de retorno de gas y diesel desde las turbinas hacia el tanque separador en le caso del gas y al tanque diario en el caso del diesel. Se recomienda colocar válvulas en las tuberías de salida del tanque limpio para retornar el combustible hacia las centrifugadoras. Favor corregir tubería de retorno de diesel en los planos. Las tuberías de retorno al tanque limpio deben ser SS. Favor analizar si es necesaria la colocación de un venteo con tanque (knock out drum) y mecurio en caso de una parada de emergencia. El PFD no muestra el drenaje de condensado del gas. En el plano de diagrama unifilar (60-001) se debe corregir la barra de alimentación en 13.8 kV de los equipos del BOP para las 3 unidades y el interruptor del generador 52G debe ser de 4.000 amp y 100 MVA.			Pendiente.		Será suministrado el 19-06-09.	Pendiente
56	12.0	Appendix	El estudio de suelos es por El Contratista			Ok.			
57	N/A		Las obras adicionales que puedan originarse como consecuencia del estudio de suelos del terreno deberán someterse a discusión sobre la base de un listado de partidas mayores y equipos de construcción, por lo tanto se solicita al contratista el suministro del mencionado listado de partidas con precios unitarios.			Pendiente.	Pendiente	Será suministrado el 26-06-09.	Pendiente
58	N/A		Para solicitud de permisos de construcción ante la alcaldía del Municipio Cristobal Rojas se requiere: 1- Nominación del ingeniero residente y solvencia ante el CIV 2- Cantidad y tratamiento de los efluentes líquidos y sólidos durante la construcción 3- Proyecto del SCI para los bomberos			Pendiente.	Pendiente	Será suministrado el 30-06-09.	Pendiente