Department of Environmental Protection

Lawton Chiles
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Virginia B. Wetherell
Secretary

October 20, 1994

MAILED
10/20/94

Mr. A. Thomas Felter, Supervisor
Tangible Personal Property
Duval County Property Appraisers Office
231 East Forsyth Street, Suite 270
Jacksonville, Florida 32202

Re: U.S. Generating Company, Cedar Bay Cogeneration Project

Dear Mr. Felter:

I have reviewed the information attached to Mr. Robert F. Gambon, P.E.'s letter dated October 11, 1994, concerning the U.S. Generating Company, Cedar Bay Cogeneration Project in Jacksonville. Included in the letter is a list of various components of the Cedar Bay Cogeneration facility showing costs. After reviewing the material submitted, it is my opinion that the listed equipment is eligible for assessment at salvage value pursuant to ss 193.621(4), F.S., with the exception of the chimney portion of the combustion gas cleaning & exhaust category. The chimney does not reduce, control or eliminate air pollution. A portion of the chimney costs to avoid aerodynamic downwash and costs of facilities to provide for stack gas sampling and analysis would be eligible. I would recommend that no more than 25% of the chimney costs be assigned to air pollution control. Twenty-five percent (25%) of $2,290,000 being $572,500 with a corresponding salvage value being $57,250.

If you have any questions on this matter, please contact me at (904) 487-0472.

Sincerely,

Hamilton S. Oven

Hamilton S. Oven, P.E.
Administrator, Siting
Coordination Section

OCT 1 0 1994

OFFICE OF THE PROPERTY APPRAISER
DUVAL COUNTY, FLORIDA

ERNIE MASTROIANNI
PROPERTY APPRAISER

SUITE 270
231 EAST FORSYTH STREET
JACKSONVILLE, FLORIDA 32202

October 13, 1994

Hamilton S. Oven, P.E.
Department of Environmental Protection
Marjory Stoneman Douglas Building
3900 commonwealth Boulevard
Tallahassee, Florida 32399-3000

Re: Dept. of Environmental Protection letter dtd. August 15,1994

Dear Mr. Oven:

Per our telephone conversation on October 14, 1994, I am submitting for your analysis new information furnished by U.S. Generating Company (Cedar Bay). The information submitted is in support of their desire to qualify for a reduced assessment of Ad Valorem Taxation under FS 193.621 (Pollution Control Equipment).

Again, please certify and identify to the Duval County Property Appraiser, that in your opinion, all or part of the attached list of various components would qualify for the reduced assessment.

This information is of an urgent and time sensitive nature. Your expeditious attention to this matter would be greatly appreciated.

Please feel free to contact me for any further question or concerns at (904) 630-1963.

Sincerely,

A. Thomas Felter

A. Thomas Felter, Supervisor
Tangible Personal Property

US GENERATING COMPANY
1994 PERSONAL PROPERTY
DUVAL COUNTY, FLORIDA

U.S. GENERATING COMPANY									
CEDAR BAY COGENERATOR									
DUVAL COUNTY FLORIDA									
1994 PERSONAL PROPERTY									
RETURN RECONCILIATION									
LINE 21 POLLUTION CONTROL									
				DATE	PERCENT	LIFE	PERCENT	DEPRECIATED	
SYSTEMS DESCRIPTION	Asset Descriptions	ORIGINAL COST	PRIMARY CLASS	AQUIRED	COMPLETE	ASSIGNED	GOOD	VALUE	
Sampling and Analysis	combustion gassess equip.	$740,000	personal property	1993	100%	salvage	0.1	$74,000	as designated by Sandwell Inc.
	sampling and equipment	$339,000	personal property	1993	100%	salvage	0.1	$33,900	as designated by Sandwell Inc.
Zero discharge	treat wastewater before releas	$16,741,000	personal property	1993	100%	salvage	0.1	$1,674,100	as designated by Sandwell Inc.
Waste Collection and treatment	chem waste drainage treat.	$259,000	personal property	1993	100%	salvage	0.1	$25,900	as designated by Sandwell Inc.
	wastewater collection treat.	$278,000	personal property	1993	100%	salvage	0.1	$27,800	as designated by Sandwell Inc.
Ash handling	ash handling and storage	$5,987,000	personal property	1993	100%	salvage	0.1	$598,700	as designated by Sandwell Inc.
	ash pelletizing	$450,000	personal property	1993	90%	salvage	0.1	$45,000	as designated by Sandwell Inc.
Bulk Material	lime receiving,storage,reclaim	$1,580,000	personal property	1993	100%	salvage	0.1	$158,000	as designated by Sandwell Inc.
	limestone preparation	$4,212,000	personal property	1993	100%	salvage	0.1	$421,200	as designated by Sandwell Inc.
	cured pellet storage reclaim	$58,000	personal property	1993	100%	salvage	0.1	$5,800	as designated by Sandwell Inc.
Steam Generating	NOx control nozzles	$25,000	personal property	1993	100%	salvage	0.1	$2,500	as designated by Sandwell Inc.
	aqueous thermal denox ct sys	$1,700,000	personal property	1993	100%	salvage	0.1	$170,000	as designated by Sandwell Inc.
Auxiliary Steam	auxiliary steam supply	$60,000	personal property	1993	100%	salvage	0.1	$6,000	as designated by Sandwell Inc.
Coal Handling	coal receiving and stockout	$120,000	personal property	1993	100%	salvage	0.1	$12,000	as designated by Sandwell Inc.
	coal storage and reclaimation	$535,000	personal property	1993	100%	salvage	0.1	$53,500	as designated by Sandwell Inc.
	coal crushing and silo fill	$626,300	personal property	1993	100%	salvage	0.1	$62,630	as designated by Sandwell Inc.
Compressed Air	central air	$432,300	personal property	1993	100%	salvage	0.1	$43,230	as designated by Sandwell Inc.
Fuel Oil	fuel oil supply and storage	$36,000	personal property	1993	100%	salvage	0.1	$3,600	as designated by Sandwell Inc.
Control	distributed control system	$722,850	personal property	1993	100%	salvage	0.1	$72,285	as designated by Sandwell Inc.
Combustion gas cleaning&exhaust	chimney	$2,290,000	personal property	1993	100%	salvage	0.1	$229,000	as designated by Sandwell Inc.
	fabric filter	$16,716,000	personal property	1993	100%	salvage	0.1	$1,671,600	as designated by Sandwell Inc.
	induced draft	$93,000	personal property	1993	100%	salvage	0.1	$9,300	as designated by Sandwell Inc.
Pollution control for CFB		$25,524,600	personal property	1993	100%	salvage	0.1	$2,552,460	as designated by Sandwell Inc.
	TOTALS	$78,525,050						$7,852,505	

Sandwell

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Engineering and Construction
Services Group
The Sandwell Building
6621 Southpoint Drive North
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U.S.A.

Telephone: (904) 296-2288
Fax: (904) 281-2233

11 October,1994

Cedar Bay Generating Company
7500 Old Georgetown Rd.
Bethesda Maryland 20814

Attention: Mr. Kent McCarger

Subject: Cedar Bay Cogeneration Project
Jacksonville, Florida
Review of Pollution Control Assets
To Support Property Tax Filing
Sandwell Project No. 262223

Dear Mr. McCarger:

On 6 October, 1994 Sandwell Engineers met with Tom McKee of U.S. Generating at the Cedar Bay Plant to begin review of a Duval County property tax submittal prepared by USG and Arthur Anderson Inc.. The purpose of our review was to verify, to the degree possible in the time available, the completeness and accuracy of the list of plant pollution abatement equipment. Our report, consisting of short descriptions of the pollution control equipment and a draft summary of the Line 21 Pollution Control costs as we interpret them, is attached. We understand Arthur Anderson Inc. will be submitting this information as part of a revised tax filing.

We have prepared descriptions of the equipment,more detailed than in the 3 October draft letter, and have made some modifications to the contents of the list based on our interpretation of Florida Administrative Code (FAC) section 193.621. Since Sandwell is providing professional engineering consulting services and does not presume to be qualified as either lawyers or accountants, our interpretation of the FAC is itself subject to interpretation. The costs on the list are based on the project cost breakdowns provided by USG from Multipower Associates, Bechtel and AES. Since detailed cost accounts of the various subsystems were not always available some professional judgement was employed to establish appropriate percentages of systems supporting pollution control. Costs other than those attributable to the USG lists should not be considered exact.

We have included in our descriptions some questionable items like ash pelletizing, and cured ash pellet storage and reclaim. These systems allow for the disposal of waste products which can be air and water pollutants if not handled properly in a manner such as described for Cedar Bay. These same systems are subject to argument that they

are not "primarily for the control or abatement of pollution" but rather provide some handling and storage benefits as their primary function. We have not included these system costs in the total, but recognize that through negotiation they may be added by agreement with the county and state.

Reviewing the line 21 Pollution Control list provided by USG, a number of items were deleted or revised. The following is a list of changed items and the reason behind the change.

Chemical waste drainage treatment was reduced to $259,000 from $280,000 based on an apparent addition error on the original MPA cost summary.

Sanitary drainage was deleted because it is specifically excluded by the FSC.

Water Treatment (for Seminole Kraft Well water) in the form of service water filtration and cycle makeup treatment was deleted,because it is primarily used for boiler water treatment and not related to waste water.

Ash pelletizing, and cured pellet storage and reclaim were deleted because they are not primarily for air or water emission control. The associated baghouses systems and pile liners, however were included.

Petroleum Cleanup was deleted because it was identified by USG as having been an AES expenditure for cleanup of oil contaminated soil and not an equipment item.

The Fiber Waste Burning System was deleted because it is primarily an auxiliary fuel supply and not an air or water pollution control component.

Auxiliary Steam was reduced because it included as its basis both the process line to Seminole Kraft and the plant auxiliary steam system. Using only an estimate of the steam system additions made to support the Zero Discharge System and the Ammonia Injection System the value became $60,000.

Coal Handling was reduced in each category by discussing with Midwest Conveyor the cost of the dust collector systems, conveyor covers, and wet dust suppression. These values replaced the rougher 10% and 20% of subsystem capital costs used in the 3 October draft letter.

Compressed Air was increased by adding the station air system to the basis cost because the size of the air compressors, air receivers, and air dryers were

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increased to support the fabric filters, Zero Discharge System and other pollution control equipment.

Drift eliminators were deleted because their primary function is water conservation rather than air pollution control.

The Fuel Oil storage was recalculated with a slight change.

The Distributed Control System cost basis was revised upward to include unit protection and control and multi-panel costs and the applicable cost was based on approximately 15% of the control points being related to pollution control.

The Fabric Filter cost was increased to incorporate the filter support structure.

The induced draft system cost was reduced significantly because the system is primarily present for boiler operation. Because the fan size is larger to accommodate the fabric filter we have claimed the cost premium paid for the larger fan.

Pollution Control for the CFB's was increased significantly, because the approach to establishing the cost was revised to compare the premium paid by CBGC for the three CFB's with sulfur dioxide and nitrogen oxide removal capability against the cost of a pulverized coal boiler of the same size.

I look forward to discussing the report with you at your convenience.

Very truly yours,

SANDWELL INC.

Robert F. Gambon P.E.
Project Manager

cc: J. Franklin Stallwood USG-Jax
Barret Parker USG-MD
John Paparelli

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General Plant Description - The Cedar Bay Generating Company, Limited Partnership (CBGC) Cogeneration Plant is a nominal 250 megawatt cogeneration plant. The plant burns coal in three (3) circulating fluidized bed (CFB) boilers which produce superheated steam. The steam is delivered to a single steam turbine generator for the production of 250 megawatts of electricity. A portion of the steam used to rotate the steam turbine is piped to the neighboring Seminole Kraft Paper Mill for use in its various processes. The CFB combustion system burns coal in the presence of limestone to reduce sulfur oxide emissions from the combustion of coal. The temperatures of the burning mixture are lower than in a conventional pulverized coal fired boiler thereby reducing nitrogen oxide production. The flue gas leaving the boiler passes through a thermal De-NOx system for further control of nitrogen oxides and fabric filters for the control of particulate emissions and opacity.

While the primary purpose of the plant is to generate electricity for sale to Florida Power and Light Company and process steam for Seminole Kraft's use, much of the installed equipment is provided to eliminate or reduce air and water pollutants. The following are brief descriptions of the installed systems or parts of systems that eliminate or reduce air and water pollutants at the Cedar Bay Generating Company, Limited Partnership Cogeneration Plant.

Sampling and Analysis System - The CBGC Sampling and Analysis System, also called the Continuous Emissions Monitoring System (CEMS), collects, processes and stores data relative to the emissions leaving the boiler and combustion cleanup system (fabric filter). This data, which includes sulfur dioxide, nitrogen oxide, carbon monoxide, opacity, oxygen and carbon dioxide, is used to monitor and improve combustion system and fabric filter performance in compliance with regulatory requirements. The CEMS displays and reports calculated averages for each constituent. The system evaluates the calculated quantities in regard to the requirements of the various regulatory agencies and maintains historical records. The system was provided by ENVIROPLAN and consists of probes to extract and dilute gas samples, analyzers, pumps, filters, piping, valves, control panels, computer, printer, CRT and communication links.

Probes and analyzers are provided to monitor the oxygen content of the flue gas at the outlet of each of the three boiler economizers. This information is transmitted to the plant Distributed Control and Information System (DCIS) for use in boiler oxygen trim control. This allows operators to optimize combustion system functions for efficiency and emissions control. Probes and analyzers are also provided to monitor sulfur dioxide, nitrogen oxides, carbon monoxide, opacity and oxygen and carbon dioxide gas concentrations exiting each fabric filter. This information is transmitted to the Sampling and Analysis System computer and is used to determine compliance with state and federal emissions requirements and is also used to adjust system operation to optimize emission performance.

The capital cost for the Sampling and Analysis System is $1,079,000. Since all of the equipment supplied and installed as part of this system is utilized strictly to control and monitor air pollution, the depreciated value of $107,900 is based on 100% of the equipment capital cost.

Zero Discharge System - The CBGC Zero Discharge System collects, treats and recycles plant floor and equipment drains, boiler blowdown, coal and limestone pile runoff, Seminole Kraft Paper Mill wastewater, demineralizer and condensate polisher regenerant wastewater, and neutralized chemical wastewater. The system consists of tanks, pumps, a 5,000 gpm pretreatment solids contact clarifier with sludge thickener and sludge dewatering equipment, a 1200 gpm cooling tower blowdown clarifier, four 300 gpm sand filters, two 300 gpm reverse osmosis units, two 150 gpm vapor recompression evaporators, a 45 gpm steam driven crystallizer, lime and soda ash storage silos, chemical feed tanks and pumps centrifuge, piping, valves, instrumentation and controls, and control and power wiring.

The wastewater, with the exception of boiler blowdown, is collected and piped to the pretreatment clarifier to remove hardness and suspended solids. The clarified water is then piped to the cooling tower to makeup the water lost due to evaporation and drift. In addition, boiler blowdown is also piped to the cooling tower. The amount of solids in the cooling tower water are controlled by continuous removal of

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approximately 800 gpm of water, which must be treated. This water is piped to the cooling tower blowdown clarifier. Water from the cooling tower blowdown clarifier is piped to sand filters to reduce suspended solids and turbidity. Approximately 40% of the water leaving the sand filters is returned to the cooling tower. The remainder of the water is piped to the reverse osmosis units. The clean water from the reverse osmosis units is piped back to the cooling tower. The reject water is piped to the evaporator/crystallizer system, which produces solids free water. This water is also returned to the cooling tower.

The capital cost for the Zero Discharge System, excluding the cooling tower, is $ 16,278,000. All of the equipment described above, with the exception of the cooling tower, is considered water pollution control and elimination equipment, since it prevents the discharge of wastewater to the river and to local wastewater treatment facilities. The cooling tower is not considered a pollution control device, because its primary function is power cycle heat rejection and not water treatment. Therefore, the depreciated value of $1,627,800 is based on 100% of the system capital cost.

Ash Handling System - The CBGC Ash Handling System is comprised of the Ash Handling and Storage System and the Ash Pelletizing System. Ash is a normal byproduct of burning fossil fuels like coal. The "ash" handled is a mixture of residual limestone and the ash present in the coal as it comes from the mine and is released by combustion in the boiler.

The ash handling system equipment is an extension of the fabric filter dust collection system, in that, it reduces particulate emissions by collecting and containing the ash captured by the fabric filters and other parts of the boiler that would otherwise flow along with the flue gas out the stack. The system also filters and collects ash dust from the air used to transport the ash through the system.

The eleven local dust collector systems included as part of the Ash Pelletizing System are considered pollution control equipment. The main purpose of the remaining system equipment seems to be transportation and handling improvement. The system does provide dust suppression for transportation and provides a stable product which can be stored on the ground. Classification of the entire Ash Pelletizing System as pollution control equipment under the Florida Administrative Code would require a favorable ruling from Duval County. At this time it has not been included except as noted above.

The Ash Handling and Storage System collects ash from each of the boiler's air heater ash hoppers, each boiler's bed ash coolers, and the eight ash hoppers from each fabric filter and transports the ash to the ash silos. From the ash silos it is transported to the Ash Pelletizing System. The Ash Handling and Storage System also reinjects a portion of the fly ash into the boilers for improved combustion efficiency, reduced sulfur dioxide emissions and to reduce the quantity of ash for disposal. The system was supplied by United Conveyor Corporation and consists of hoppers, conveyors, pneumatic transport piping systems, ash collectors, storage silos, feeders, ash conditioners, exhausters, power actuated valves, dust collectors, air blowers, heaters, flyash reinjection blowers and pressure feeders, piping, valves, instrumentation and controls, and control and power wiring.

The Ash Pelletizing System conditions and pelletizes the ash for reduced bulk and dusting prior to transport and disposal back at the coal mine. The system was supplied by TRANSBULK and consists of hoppers, conveyors, feeders, two 56 ton per hour ash pelletizers, two 1120 ton capacity pellet curing silos, exhausters, power actuated valves, dust collectors, dust collector blowers, a telescoping discharge chute, tanks, pumps, piping, valves, instrumentation and controls, and control and power wiring. Since the primary purpose of the Ash Pelletizing System is to improve ash transportation and handling, only the dust collectors, dust collector blowers and associated ductwork, instrumentation and controls and control and power wiring are considered pollution control equipment.

The Ash Handling System capital cost is $5,987,000. Since all of the system components of the Ash Handling and Storage System are associated with the elimination and reduction of industrial air and/or water pollution the depreciated valve of $598,700 is based on 100% of the system capital cost. The Ash

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Pelletizing System capital cost is $15,745,000. The portion of this system that is directly associated with air pollution control is valued at $450,000, which equates to a depreciated value of $45,000.

Bulk Material System - The CBGC Bulk Material System comprises the Limestone Receiving, Storage and Reclaim System, the Limestone Preparation System, and the Cured Pellet Storage and Reclaim System. The limestone is used in the fluidized bed to control sulfur oxide production.

The Limestone Receiving, Storage and Reclaim System transfers limestone delivered by truck from the limestone storage pile area to the limestone pulverizers. The limestone storage capacity is 10,800 tons or 30 days of limestone use. The system was supplied by Midwest Conveyor Company, Inc. and consists of mobile equipment to create the storage pile and to move the limestone to the two reclaim hoppers, weigh belt feeders each rated at 40 tons per hour, chutework, instrumentation and controls, and control and power wiring.

The Limestone Preparation System reduces the limestone to the size required by the fluidized bed boilers and pneumatically supplies it to the limestone hoppers that supply each boiler. The system was supplied by Midwest Conveyor Company, Inc. and consists of two 40 ton per hour pulverizers with air heaters, two vibratory feeders, two limestone circulating fans, two cyclones, two limestone fabric filters, two exhaust fans, valves, limestone conveying blower, pneumatic conveying piping, instrumentation and controls, and control and power wiring.

The Cured Pellet Storage and Reclaim System stores and reclaims cured pellets produced by the Ash Pelletizing System. The system consists of a lined pellet storage pile, mobile equipment to move and reclaim from the pile, hoppers, ash pellet feeders, conveyors, flow gates and instrumentation and controls, and control and power wiring. Only the liner under the cured pile storage area and swales to the runoff pond are included in the pollution control system cost.

The Limestone Receiving, Storage and Reclaim System capital cost is $1,580,000, excluding the mobile equipment. The Limestone Preparation System capital cost is $4,212,000, excluding the Limestone Pulverizer Building. Since all of this equipment is associated with air and/or water pollution control, the depreciated values of $158,000 and $421,200 are based on 100% of the system's capital cost. The Cured Pellet Storage and Reclaim System capital cost is $110,000. The value of the liner and swales associated with this system is estimated to be $58,000, which results in a depreciated value of $5,800.

Steam Generating System - The CBGC Steam Generating System transfers heat released during combustion of the fuel to the incoming feedwater and to saturated steam to produce superheated steam for use by Seminole Kraft Corporation and to rotate the steam turbine generator for the production of electricity. The three reheat type circulating fluidized bed steam generators (boilers), each have a maximum continuous rating (MCR) of 1,241,892 lb/hr of main steam and reheat steam flow. At MCR the main steam pressure is 1,972 psig, the main steam temperature is 1005 F, the reheat steam pressure is 422 psig and the reheat steam temperature is 1005 F. Each steam generator was supplied by Ahlstrom Pyropower and consists of a combustion chamber, cyclone separators, superheaters, economizer, reheater, flue gas ductwork and dampers, insulation and lagging, and instrumentation and controls. Limestone and coal are fed independently into the combustion chamber. The limestone reacts with the products of combustion to control sulfur dioxide emissions from the steam generators.

A portion of the Steam Generating System qualifies as air pollution control equipment because combustion with limestone controls sulfur oxide emissions and eliminates the need to have separate flue gas desulfurization systems, which would typically be installed downstream of coal fired boilers. It is difficult to assess the true value of the sulfur dioxide removal portion of the steam generator since a fluidized bed boiler is one component much different in design from a typical pulverized coal fired boiler with a downstream flue gas scrubber. A reasonable assumption is that the portion of the steam generating system that is related to sulfur dioxide removal is equal to the cost of the premium paid by CBGC to use three CFB boilers rather than one pulverized coal fired boiler. (At the time of purchase CFB boiler

technology had not progressed to the point where a single boiler could be supplied to produce the amount of steam required for this plant). Based on the cost of a pulverized coal boiler of $65,000,000 and the CBGC boiler cost of $90,524,600, it has been determined that a reasonable value is $25,524,600 for the pollution control portion of the system. Therefore, the depreciated value is $2,552,460.

The Steam Generating System includes a Thermal De-NOx System comprised of an aqueous ammonia preparation and injection system. The system is used to inject ammonia vapor through nozzles into the boiler where the vapor reacts with nitrogen oxides in the flue gas to form nitrogen and water. This reduces nitrogen oxide emissions to the atmosphere.

The system includes special nozzles on the boiler, an aqueous ammonia storage tank with a 40' x 24' x 4' concrete containment area, two feed pumps, a heat exchanger to heat the solution, an ammonia stripping column which uses steam to separate the ammonia from the solution, an ammonia vapor reservoir for ammonia collection and an injection manifold to control the flow of ammonia through the nozzles into the boiler. The system includes interconnecting piping, valves, controls and wiring.

The capital cost of the nozzles is $25,000 and the capital cost of the Thermal De-NOx System is $1,700,000. The nozzles and the Thermal De-NOx System reduce air pollution and therefore, the depreciated values of the equipment of $2,500 and $170,000, respectively, are based on 100% of the equipment capital cost.

Auxiliary Steam System - The CBGC Auxiliary Steam System provides steam to the boiler air preheat coils, the deaerator during startup and shutdown, the condenser air ejectors, steam turbine seals, the Zero Discharge System, and the Aqueous Ammonia System. The system consists of piping, valves, instrumentation and controls and control and power wiring.

The capital cost of the Auxiliary Steam System is $102,000. The portion of the Auxiliary Steam System related to air and/or water pollution includes the steam supply to the Zero Discharge System and the steam supply to the Aqueous Ammonia System. This equipment is estimated to represent $60,000 of the system total capital cost, which equates to a depreciated value of $6,000.

Coal Handling System - The CBGC Coal Handling System is comprised of the Coal Receiving and Stockout System, the Coal Storage and Reclamation System, and the Coal Crushing and Silo Fill System. All three systems were supplied by Mid-West Conveyor Company, Inc. The pollution control components of these systems include the coal pile liners and runoff collection system, wet spray dust suppression system and multiple dust collection baghouses with blowers.

The Coal Receiving and Stockout System receives coal from a unit train, unloads the coal into a bottom dump hopper and transports the coal to the coal storage area. The system consists of a 415 ton coal unloading hopper, two 2,000 ton per hour belt conveyors with dust control hood, coal belt scale, a 10' diameter x 70' high concrete coal lowering well, isolation gates, six 600 ton per hour belt feeders, wet dust suppression equipment, and two railcar shakers. Coal dust emissions are contained by the wet dust suppression equipment.

The Coal Storage and Reclaimation System consists of a coal storage pile with liner, coal conveyor with dust control hood, chutework, magnetic separator, belt scale, belt feeder, and aboveground coal reclaim hopper. The system reclaims coal from the storage pile and transfers the coal to Coal Crushing and Silo Fill System. The coal pile synthetic liner is provided to prevent contamination of the soil and groundwater by rain water passing through the coal pile and leaching into the soil and groundwater. The liner directs storm water and leachate to swales which direct it to the lined storage area runoff pond. The pond water is then directed to the Zero Discharge System for treatment.

The Coal Crushing and Silo Fill System removes tramp iron in the coal, crushes the coal to the required size for burning and transfers the coal to the boiler coal storage silos. The system consists of a 400 ton per

hour coal conveyor with dust control hood, two totally enclosed 400 ton per hour silo feed conveyors, two 450 ton per hour coal feeders, magnetic separator, tramp iron chute, coal diverter gates, two 400 ton per hour coal crushers, a sample crusher, sample collectors, sample reject conveyor, isolation gates, two coal dust collectors and two dust collector fans. The two dust collection systems collect coal dust at all loading and discharge transfer points in the coal crusher building and the coal silo fill area.

The capital cost of the Coal Receiving and Stockout System is $2,535,000. The equipment supplied for the purpose of reducing or eliminating air and/or water pollution includes the coal conveyor hood and the wet dust suppression equipment. This equipment is estimated to represent $120,000 of the $2,535,000 system total capital cost, which equates to a depreciated value of $12,000.

The capital cost of the Coal Storage and Reclamation System is $3,802,000. The equipment supplied for the purpose of reducing or eliminating air and/or water pollution includes the coal pile synthetic liner, coal pile runoff ditch and the coal conveyor hood. This equipment is estimated to represent $535,000 of the $3,802,000 system total capital cost, which equates to a depreciated value of 53,500.

The capital cost of the Coal Crushing and Silo Fill System is $6,337,000. The equipment supplied for the purpose of reducing or eliminating air and/or water pollution includes the conveyor hoods and enclosures and the dust collection equipment. This equipment is estimated to represent $626,300 of the $6,337,000 system total capital cost, which equates to a depreciated value of 62,630.

Compressed Air System - The CBGC Compressed Air System supplies oil free compressed air at the required capacity, pressure and dryness to various plant equipment and to hose stations to facilitate maintenance. The system consists of three 2,300 standard cubic feet per minute air compressors, two 142 cubic foot air receivers, two desiccant air dryers, two 53 cubic foot water treatment building air receivers, 53 cubic foot Services Building air receiver, a 53 cubic foot coal crusher building air receiver, three 89 cubic foot Fabric Filter air receivers, a 53 cubic foot ash handling air receiver, an 89 cubic foot ash pelletizer air receiver, piping, valves, instrumentation and controls and control and power wiring. Compressed air is necessary for the operation of various devices included in the Sampling and Analysis System, the Zero Discharge System, the Ash Handling System, the Bulk Material System, the Steam Generating System, the Auxiliary Steam System, the Coal Handling System, the Fuel Oil System, and the Combustion Gas Cleaning and Exhaust System. The supply of compressed air to these systems not only requires the addition of local air receivers, piping and valves, but also significantly increases the size of the three air compressors, main air receivers and instrument air dryers.

The capital cost of the Compressed Air System is $1,441,000. The portion of the system associated with the elimination and reduction of air and/or water pollution is estimated to be $432,300, which equates to a depreciated value of $43,230.

Fuel Oil System - The CBGC Fuel Oil System receives, stores and delivers No. 2 fuel oil. The No. 2 fuel oil is used for startup of the fluidized bed boilers and in the limestone preparation air heaters. The system consists of a truck unloading station with curbed apron, fuel oil transfer pump, fuel oil storage tank with concrete containment and slab, interconnecting piping, valves, instrumentation and controls, and control and power wiring. The truck unloading station curbed apron is designed to contain an oil spill during truck unloading and the fuel oil storage tank concrete containment is designed to hold the entire contents of the fuel oil storage tank.

The Fuel Oil System capital cost is $148,000. The system equipment associated with the containment and abatement of water pollution includes the truck unloading station curbed apron, the fuel oil storage tank concrete containment, and the fuel oil interconnecting piping, valves, instrumentation and controls, and control and power wiring associated with the limestone pulverizer air heater system. These installations are estimated to amount to $36,000 of the $148,000 system capital cost, which equates to a depreciated value of $3,600.

Control System - The CBGC Control System provides control, monitoring, and alarm functions for the boilers, steam turbine generator, balance of plant equipment, sampling and analysis system, induced draft fans, and coal and limestone handling equipment, excluding the coal stockout and limestone preparation equipment. It also provides operator interface for the ash handling system and fabric filter system.

The system consists of processing units, input/output hardware, CRT based operator stations with keyboards and printers, CRT based engineer/programmer station with keyboard and printer, magnetic tape units, data highway, recorders, remote input/output cabinets and software.

The capital cost of the Control System is $4,819,000. The portion of the Control System associated with elimination and reduction of air and/or water pollution is valued at $722,850, which results in a depreciated value of $72,285.

Combustion Gas Cleaning and Exhaust System - The CBGC Combustion Gas Cleaning and Exhaust System is comprised of the Chimney System, the Fabric Filter System, and the Induced Draft System.

The Chimney System discharges flue gas from the boiler/fabric filter to the atmosphere. The chimney was supplied by Custodis-Cottrell, Inc. and consists of a concrete outer shell, a steel inner liner, foundation, platforms for CEMS and emissions testing and aviation lighting. The chimney is 425' tall to meet air quality regulations.

The Fabric Filter System removes fly ash from the flue gas to satisfy air quality regulations regarding particulate matter and opacity. One 297,700 acfm fabric filter is provided for each boiler. Each Fabric Filter System was supplied by FLAKT, Inc. and consists of fabric filter casings, structural steel, ductwork, fly ash hoppers, fabric filter bags, reverse gas fans, insulation and lagging, piping and valves, instrumentation and controls, and control and power wiring.

The Induced Draft System provides the static pressure required to induce the flow of combustion gases from each combustion chamber to the chimney and to maintain furnace draft. The Induced Draft System was supplied by ABB FLAKT Garden City and consists of three induced draft fans (one per boiler) each rated at 373,000 acfm at 36" of water, dampers, ductwork, silencers, insulation and lagging, instrumentation and controls, and control and power wiring.

The Chimney System capital cost is $2,290,000 and the Fabric Filter System capital cost is $16,716,000. Since these systems are provided strictly for air pollution control the depreciated values of $229,000 and $1,671,600 are based on 100% of the equipment capital cost. The Induced Draft System capital cost is $2,366,000. This system is required primarily to balance the boiler air flow, but is more costly because of the added system pressure loss due to the installation of the fabric filters and the stack. Therefore, the value of the system associated with air pollution control is the premium paid by CBGC for the larger equipment. This value is estimated by ABB Garden City to be $93,000, which equates to a depreciated value of $9,300.

Prepared by

SANDWELL INC.

Robert F. Gambon, P.E.
Florida PE Number 34237

John Paparelli, P.E.
Florida PE Number 33715

Department of
Environmental Protection

Lawton Chiles
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Virginia B. Wetherell
Secretary

COPY

August 15, 1994

Mr. A. Thomas Felter, Supervisor
Tangible Personal Property
Duval County Property Appraisers Office
231 East Forsyth Street, Suite 270
Jacksonville, Florida 32202

Re: Cedar Bay Cogeneration Company

Dear Mr. Felter:

I have reviewed the information attached to Mr. Barret Parker's certificate dated July 22, 1994, concerning the Cedar Bay Cogeneration Facility. Attached to the certificate is a table that lists various components of the Cedar Bay facility showing costs. After reviwing the material submitted, it is my opinion that the some of the listed equipment is eligible for assessment at salvage value pursuant to ss 193.621(4), F.S., however there is insufficient detail describing the actual equipment and the equipment's function. A second, technical difficulty is that the certificate was not provided by an engineer registered in the State of Florida as required by Chapter 62-8, F.A.C., (formerly 17-8).

If you have any questions on this matter, please contact me at (904) 487-0472.

Sincerely,

Hamilton S. Oven

Hamilton S. Oven, P.E.
Administrator, Siting
Coordination Section

cc: Mr. Barret Parker

Cedar Bay Generating Company,
Limited Partnership

July 22, 1994

RECEIVED
JUL 26 1994

Mr. Ernie Mastroianni
Duval County Property Appraiser
231 E. Forsyth Street
Suite 270
Jacksonville, FL 32202

Dear Sir:

I hereby attest that the attached property listing is a true and accurate accounting for pollution control equipment owned and operated by the Cedar Bay Generating Co.

Barnett M Parker, P.E.
Signature

VA. Engineer # 2203
Title

RECEIVED
AUG 0 1 1994
ERNIE MASTROIANNI
PROPERTY APPRAISER

7500 Old Georgetown Road • Bethesda, Maryland 20814-6161 • 301-718-6800 • Fax 301-718-6900
An affiliate of U.S. Generating Company

US GENERATING COMPANY
1994 PERSONAL PROPERTY
DUVAL COUNTY, FLORIDA

CEDAR BAY COGENERATOR							
DUVAL COUNTY FLORIDA							
1994 PERSONAL PROPERTY							
RETURN RECONCILIATION							
LINE 21 POLLUTION CONTROL							
			DATE	**PERCENT**	**LIFE**	**PERCENT**	**DEPRECIATED**
SYSTEMS DESCRIPTION	**ORIGINAL COST**	**PRIMARY CLASS**	**AQUIRED**	**COMPLETE**	**ASSIGNED**	**GOOD**	**VALUE**
Sampling and Analysis	**$1,079,000**	personal property	1993	100%	salvage	0.1	$107,900
Zero discharge	**$15,741,000**	personal property	1993	100%	salvage	0.1	$1,574,100
Waste Collection and treatment	**$929,000**	personal property	1993	100%	salvage	0.1	$92,900
Water Treatment	**$5,297,000**	personal property	1993	100%	salvage	0.1	$529,700
Ash handling	**$21,732,000**	personal property	1993	100%	salvage	0.1	$2,173,200
Bulk Material	**$5,902,000**	personal property	1993	100%	salvage	0.1	$590,200
Petroleum Cleanup	**$33,000**	personal property	1993	100%	salvage	0.1	$3,300
Steam Generating	**$5,225,000**	personal property	1993	100%	salvage	0.1	$522,500
Auxiliary Steam	**$86,700**	personal property	1993	100%	salvage	0.1	$8,670
Coal Handling	**$1,901,100**	personal property	1993	100%	salvage	0.1	$190,110
Compressed Air	**$38,400**	personal property	1993	100%	salvage	0.1	$3,840
Cycle Heat Rejection	**$68,000**	personal property	1993	100%	salvage	0.1	$6,800
Fuel Oil	**$37,000**	personal property	1993	100%	salvage	0.1	$3,700
Control	**$381,900**	personal property	1993	100%	salvage	0.1	$38,190
Combustion gas cleaning&exhaust	**$20,262,000**	personal property	1993	100%	salvage	0.1	$2,026,200
	$78,713,100						**$7,871,310**