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INDEPENDENT ENVIRONMENTAL ENGINEERS, SCIENTISTS & CONSULTANTS

February 4, 2003

Hamilton S. Oven, P.E.
Administrator, Office of Siting Coordination
Department of Environmental Protection
2600 Blair Stone Road, MS: 48
Tallahassee, Florida 32399

Re: Lee County Solid Waste Energy Recovery Facility (PA 90-30);
Responses to FDEP's Sufficiency Comments

Dear Mr. Oven:

On behalf of Lee County, we are submitting these responses to the sufficiency comments and questions that were provided to us by letter dated December 24, 2002, from the Florida Department of Environmental Protection ("Department" or "DEP"). The Department's comments concern the Supplemental Application ("Application") filed by Lee County for the construction and operation of Unit No. 3 at the Lee County Solid Waste Energy Recovery Facility ("Facility"). The following responses were prepared through a collaborative effort by Lee County's Project Team, which includes representatives from the County's staff, Malcolm Pirnie, Inc., RTP Environmental Associates, Inc., Landers and Parsons, P.A., Covanta of Lee, Inc., as well as Mr. William Vatavuk, the President of Vatavuk Engineering. [1]

DEP Division of Air Resources Management Sufficiency Comments:

1. The application states, "...regardless of the emission limit set in the permits, there will be no difference in the design or operation of the facility, unless SCR is required. Permit limits more stringent than the NSPS merely increase the risk of spurious 'exceedances' of an overly-restrictive standard". However, these statements directly contradict the premise for establishing Best Available Control Technology (BACT). The following is provided for informational purposes.

According to EPA guidance, the BACT requirement is defined as: "an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Clean Air Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs,

[1] Mr. Vatavuk was formerly employed by the U.S. Environmental Protection Agency ("EPA") and intimately involved in EPA's New Source Review ("NSR") programs. A copy of Mr. Vatavuk's resume is provided as Attachment 1.

determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results."
During each BACT analysis, which is done on a case-by-case basis, the reviewing authority evaluates the energy, environmental, economic and other costs associated with each alternative technology, and the benefit of reduced emissions that the technology would bring. The reviewing authority then specifies an emissions limitation for the source that reflects the maximum degree of reduction achievable for each pollutant regulated under the Act. The NSPS represent the absolute minimum requirement, as well as the starting point for the development of a BACT Determination. The design and operation of the facility is intended to be consistent with the Department's BACT Determination, not vice-versa. The applicant should not assume that the NSPS emission requirements represent appropriate BACT settings.

Response: In general, Lee County agrees with the Department's statements. However, the NSPS (40 CFR 60 Subpart Eb) at issue in this case is also a Maximum Achievable Control Technology ("MACT") standard. Thus, the NSP/MACT standard in Subpart Eb represents substantially more than the "minimum standards for which a facility must comply in order to be permitted for operation." Section 129 of the 1990 Clean Air Act Amendments ("CAAA") states:

> *Standards applicable to solid waste incineration units promulgated under section 111 and this section shall reflect the maximum degree of reduction in emissions of air pollutants listed under section (a)(4) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing units in each category. The Administrator may distinguish among classes, types (including mass-burn, refuse-derived fuel, modular and other types of units), and sizes of units within a category in establishing such standards. The degree of reduction in emissions that is deemed achievable for new units in a category shall not be less stringent than the emissions control that is achieved in practice by the best controlled similar unit, as determined by the Administrator.*[2]

These concepts were reiterated by EPA when EPA published notice in the Federal Register concerning the promulgation of 40 CFR 60 Subpart Eb (60 FR 65387; December 19, 1995), as follows:

[2] Any underlining in this document has been added for emphasis, unless otherwise noted.

Under sections 111 and 129 of the Clean Air Act, the EPA is required to develop and adopt performance standards and guidelines for MWC's. Congress specifically added section 129 to the Clean Air Act to address public concerns about MWC's and other solid waste combustion units. Under section 111, performance standards and guidelines must be developed for new and existing stationary sources that may contribute to air pollution and that may reasonably be anticipated to endanger public health or welfare. Under section 129 of the Clean Air Act, the standards and guidelines adopted for MWC's must be based on MACT. (60 FR 65390; December 19, 1995)

Section 129(a)(2) of the Clean Air Act requires the revised standards for new MWC's and revised guidelines for existing MWC's to reflect the maximum degree of reduction in emissions of designated air pollutants, taking into consideration the cost of achieving such emission reduction, and any non-air-quality health and environmental impacts and energy requirements that the Administrator determines are achievable for a particular category of sources. (This control level is commonly referred to as the maximum achievable control technology, or "MACT".) Section 129 also provides that standards for new sources may not be less stringent than the emissions control achieved in practice by the best controlled similar units. (60 FR 65391)

Today's notice promulgates revised standards and guidelines that are fully consistent with sections 111 and 129 of the Clean Air Act and extend coverage of the revised standards and guidelines to MWC units located at MWC plants with aggregate plant capacity above 35 Mg/day. (60 FR 65390)

A given control technology and emission limit (e.g., the NSPS/MACT limit for NOx in Subpart Eb) can represent BACT for a considerable time period (e.g., 10 years or more). Indeed, on December 31, 2002, EPA published its latest rules for improving the NSR program, and those rules create a 10-year exemption from NSR permitting requirements for "clean units".

It is also important to note that the Section 129 MACT standards cover not only hazardous air pollutants, but also address "particulate matter (total and fine), opacity (as appropriate), sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, cadmium, mercury, and dioxins and dibenzo furans." (§ 129 CAAA, 1990). EPA expended considerable effort to establish standards that address the entire array of potential emissions from municipal waste combustors ("MWC").

Thus, it is apparent that 40 CFR 60 Subpart Eb is more than a typical NSPS, and represents what USEPA considers the maximum achievable control technology for the MWC source category. We are not aware of any ruling or decision from USEPA, following the promulgation of 40 CFR 60 Subpart Eb, to suggest that EPA has changed its opinion about this issue.

2. *The application states "The permit limits must be set to accommodate the full range of variability that may occur in the waste stream over this time and should be independent of the Materials Separation Plan." The requirement for a Materials Separation Plan is embodied*

within 40CFR60 Subpart Eb. This regulation (New Source Performance Standard) represents the minimum standards, for which a facility must comply in order to be permitted for operation. Please explain why the Department should not consider this plan in the establishment of a permit limit.

Response: The New Source Performance Standard applicable to the proposed Lee County Facility (40 CFR 60 Subpart Eb) state that a Materials Separation Plan must be prepared as part of the siting study, and must be submitted with the initial application for a construction permit, to demonstrate that the MWC is properly sited. It is not USEPA's intent to use materials separation programs as the basis for establishing emission limits in air permits. EPA's intent is indicated in the preamble to the proposed rule (59 FR 48198; September 20, 1994) and is repeated in EPA's response to the public comments concerning Subpart Eb (EPA document EPA-453/R-95-0136; October 1995), as follows.

1) 59 FR 48202; September 20, 1994:
Today's proposed standards would establish ***siting requirements*** *for all new MWC's at plants with aggregate capacities above 35 Mg/day. These* ***siting requirements would include three components.*** *First, an analysis of the impact of the facility on ambient air quality, visibility, soils and vegetation would be required. Second, the* ***siting requirements*** *would include submittal of a Materials Separation Plan for the area served by the affected facility. Third, the MWC owner or operator would be required to make both the siting analysis and the materials separation plan available to the public, ...* [emphasis ours]

2) EPA-453/R-95-0136, Section 4.2.1, Page 4-17:
The materials separation plan provisions are a ***one-time procedural requirement and do not contain any enforcement provisions.*** *The materials separation plan provisions are intended to ensure that new MWC's are sized appropriately for the amount of MSW generated in a service area after all appropriate source reduction and recycling measures of public interest have been implemented. The materials separation plan provisions only require the owner or operator of a proposed MWC to consider the effect of current and projected material separation and recycling programs in the service area of the MWC on the quantity of character of MSW that will be brought to the MWC. The NSPS also requires the owner or operator to solicit and consider public input on the effect of these recycling and separation programs on the projected size of the MWC.* ***The NSPS does not require the owner or operator to implement the activities specified in the plan after the plan has been finalized.*** [emphasis ours]

3) EPA-453/R-95-0136, Section 4.2.1, Pages 4-18 and 4-19:
An applicant for a new MWC would not be left open to legal challenges on the basis of the material separation plan as long as the applicant fulfilled the procedural requirements in the NSPS for public review and comment on the materials separation plan. The public review and comment process is intended to result in a materials separation plan that reflects local public input, including input from those attending public meetings, and is tailored to the particular needs

of the service area of the MWC. ***For these reasons, the materials separation plan requirements do not specify performance levels, separation system elements, or the materials to be separated.*** [emphasis ours]

The materials separation plan provisions require the MWC applicant to consider current and projected MSW generation rates and the impact of source reduction and recycling on the quantity and character of the MSW that serves as the MWC feedstock. These are important factors in determining the size of the MWC and, therefore, are appropriate siting considerations within the scope of this rulemaking. ***The materials separation plan provisions are not intended to directly address or reduce MWC air emissions of specific pollutants.*** *However, the materials separation plan requirements may indirectly encourage recycling in some cases.* [emphasis ours]

4) EPA-453/R-95-0136, Section 4.2.3, Pages 4-29 and 4-30:
The materials separation plan provisions in the NSPS are procedural and are not prescriptive. ***The provisions do not require the owner or operator to undertake any specific material separation or recycling activities; merely to consider the effect of current [Lee County Materials Separation Plan] or future programs on the quantity and character of MSW in selecting the size of the MWC.*** *The materials separation plan developed according to the procedures in the NSPS could use existing programs as a starting point.* [emphasis ours]

5) EPA-453/R-95-0136, Section 4.2.5, Page 4-34:
The Administrator concludes that separating materials before combustion will result in fewer materials containing pollutants being combusted, which means there will be a decrease in pollutants emitted, since no emission control system has demonstrated the capability of removing 100% of the HAP's contained in materials that are burned in MWC's. Moreover, recycling of materials conserves natural resources. For example, the more aluminum cans that are recycled, the less bauxite (a mineral from which aluminum is made) is needed, thereby providing a positive environmental impact. Therefore, the Administrator decided to retain the materials separation requirement in essentially the same format proposed. ***As part of the siting analysis for new units, owners and operators must submit a materials separation plan for public review and comment prior to obtaining a construction permit. The materials separation requirement is procedural in nature only; no specific performance levels, specification of separation system design, or designation of materials to be separated are required in the final rule.*** [emphasis ours]

Based on the above references, it is clear that the statement made in the County's Application on page 3-2 is accurate. Also, as stated in Sections 3 and 4 of the Application, effects of material separation on MWC emissions are not quantifiable. The Administrator of the USEPA has made this determination on several occasions. Accordingly, the Department should not consider the County's materials separation plan when establishing permit limits for the Facility.

It is also important to point out that materials separation is included in the permit conditions through the restriction contained in the fuel slate which defines acceptable materials for fuel for the Energy Recovery Facility. However, as stated previously in Section 4 of the County's permit application, the effect of material "separation" on pollutant emissions cannot be quantified. EPA has addressed this issue in the past. As noted in the preamble to the proposed 40 CFR 60 Subpart Ea:

> *The Administrator has recently denied two appeals involving (in part) the issue of whether materials separation is part of BACT in PSD permits issued to MWC's. Spokane Regional Waste-to-Energy Project, PSD Appeal No. 88-12 (June 9, 1989) and Huntington Mass-Burn Incinerator, PSD Appeal No. 89-2 (August 2, 1989). The EPA denied both appeals, concluding that the petitioners had failed to show that materials separation was part of BACT for the facilities at issue.* (54 FR 52251)
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> *The Administrator further stated that in denying these appeals that petitioners had failed to show that materials separation technologies were "available" (within the meaning of the definition of BACT contained in Section 169(3) of the CAA) for MWC's because petitioners had failed to show that use of materials separation in combination with other air pollution control technology would lead to a demonstrable reduction in emissions of regulated pollutants.* (54 FR 52251)

Additionally, pursuant to 40 CFR 60.51b Definitions, the Materials Separation Plan means a plan that identifies both a goal and an approach to separate certain components of municipal solid waste for a given service area in order to make the separated materials available for recycling. Pursuant to 40 CFR 60.57b Siting Requirements, the owner or operator of the facility,..., shall prepare a materials separation plan as defined in 40 CFR 60.51b. Lee County's Materials Separation Plan complies with the requirements of 40 CFR 60.57b, and addresses Lee County's solid waste management programs related to the separation of materials from municipal solid waste for recycling and/or re-use. Since the Lee County Materials Separation Plan does not and could not be used to quantify the effect of Lee County's materials separation programs on stack emissions, it should not be considered in the establishment of permit limits for specific pollutants.

3. Please confirm that no additional fuels (such as natural gas or propane) beyond MSW are required for the operation of this incinerator. The application solely lists MSW within the "Segment Information" portion of the application. Also, please address whether a fuel slate, which is identical to that of the existing incinerators, is being proposed.

Response: The proposed Unit 3 MWC at the Lee County Energy Recovery Facility will also fire natural or propane gas in auxiliary burners. We have revised the air permit application forms to include additional segments for the operation of natural and propane gas in these auxiliary burners. Please see the attached revised forms provided as Attachment 2.

Lee County proposes that the language contained in condition A.10.1 (Allowable Fuels) of their current Title V operating permit be used to establish the fuel slate for operation of the proposed

MWC Unit 3. We have attached the text from the current Title V permit for your reference. (See Attachment 2).

4. Please provide the estimated time frames required, estimated number of annual start-ups and the estimated emission levels of each criteria pollutant for hot and cold start-up periods.

Response: As discussed in Section 7.4 of the air permit application, recent facility operations for the existing Lee County Municipal Waste Combustors (MWCs) average 14 start-ups per 12-month period per unit, of which about four (4) start-ups per 12-month period per unit included a warm-up period. As the new MWC unit ages, the frequency of start-ups will increase due to unscheduled outages caused by tube failures and mechanical breakdowns.

MWC "start-up" periods are defined by USEPA in 40 CFR 60.58b(a) to commence "when the affected facility begins the continuous burning of municipal solid waste (MSW) and does not include any warm-up period when the affected facility is combusting fossil fuel...and no MSW is being fed to the combustor." The proposed Lee County MWC will use natural or propane gas auxiliary burners to preheat the boiler to proper temperatures prior to the introduction of MSW. The MWC "start-up" and "warm-up" periods as defined by USEPA could be considered to be the "hot start-up" and "cold start-up" periods, respectively, FDEP refers to. MWC start-up periods are generally less than three hours, the limit in 40 CFR 60.58b(a) for excess emissions. MWC warm-up periods typically take less than eight (8) hours.

During combustion of natural or propane gas only, criteria pollutant emissions would be very much less than the proposed permit limits for normal unit operations (i.e., when combusting MSW either with, or without, natural or propane gas) due to the clean nature of these fuels and the significantly smaller size of the auxiliary burners (two burners, each at 50 MMBtu/hour gross heat input) as compared to the maximum capacity of MWC Unit 3 (275 MMBtu/hr). Maximum criteria pollutant emission estimates, based on AP-42 natural gas emission factors and Lee County Annual Operating Report propane emission factors for the existing MWCs, are compared below to the proposed Unit 3 permit limits under normal operations when combusting MSW:

Pollutant Name	Natural Gas (1020 Btu/scf)		Propane (91500 Btu/gal)		MWC Unit 3 Proposed Limits (lb/hr)
	lb/10^6 scf	lb/hour[3]	lb/10^3 gal	lb/hour[4]	
CO	84	8.24	3.1	3.39	28.73
NO_x	100	9.80	12.4	13.55	70.79
SO_2	0.6	0.06	0.95	1.04	65.72
PM_{10}	7.6	0.75	0.26	0.28	5.08
VOC	5.5	0.54	0.25	0.27	4.94

As can be seen in this table, criteria pollutant emissions during warm-up periods when only natural or propane gas are combusted will be very much less than emissions when combusting

[3] lb/hour = $[lb/10^6 scf]_{AP-42}$ x 10^6 Btu/MMBtu x 100 MMBtu/hour / 1020 Btu/scf
[4] lb/hour = $[lb/10^3 gal]_{AOR}$ x 100 MMBtu/hour / 91.5 MMBtu/10^3 gal

MSW. Emissions during start-up periods when a combination of auxiliary fuel and MSW is combusted would be similar to conditions of reduced operating load during combustion of MSW. Emissions and impacts during reduced load conditions were shown to be less than emissions and impacts under maximum operating conditions in Section 6 of the air permit application as part of the screening modeling analyses.

5. *The Department requires as a submittal, a minimum of two project specific, written cost estimates for a wet scrubbing system from separate vendors. The system should be designed to remove acid gases at a minimum of 96%. A corresponding cost-effectiveness should be computed using standard EPA guidelines. In addition to capital cost requirements, the submittal should include vendor estimates for use in determining any applicable annualized operating and maintenance costs as well as recommended spare parts.*

Response: First, we are at a loss to understand the Department's request for a wet scrubbing system cost estimate, especially since "the Municipal Waste Combustors New Source Performance Standard (MWC NSPS: 40 CFR Part 60, Subpart Eb) specifies dry scrubbing plus fabric filtration as the demonstrated technology for controlling emissions of sulfur dioxide and particulate matter (See *Municipal Waste Combustors—Background Information for Proposed Standards: Post-Combustion Technology Performance* (EPA-450/3-89-27c). Second, equipment manufacturers, equipment operators rarely take the time to provide comprehensive "O&M" costs, as their primary objective is to give the firm (and prospective customer) an equipment cost estimate competitive enough that the firm will be persuaded to begin discussions or negotiations to purchase the unit. For the same reason, equipment operators often refuse to provide estimates of installation costs, as they (rightly) assert that these costs are site-specific. Moreover on those rare occasions when an equipment manufacturer does provide O&M cost estimates, these costs tend to be lower than representative numbers. After all, it is easier for an equipment manufacturers to make a sale if he can downplay the unit's annual costs. This is especially true of such difficult to estimate costs as maintenance labor and materials. Other O&M expenditures, such as utilities, are more difficult to "low ball," as they can be more directly estimated from the control device volumetric flow rate, pressure drop, and other hard parameters." [5]

Furthermore, the spray dryer absorber-fabric filter combination has been demonstrated to be the technology of choice, providing superior benefits compared to a wet scrubber based system. USEPA, after review of substantial additional facility data in support of the waste combustor NSPS promulgation in 1995, restated their determination that "SDA/FF is the most effective APCD combination for controlling acid gases, PM and metals."[6] We determined not to investigate the wet scrubber option in detail due to the following reasons:

- A particulate removal system must be added preceding the wet scrubber – an electrostatic precipitator or fabric filter baghouse would be needed.

[5] Communication of Mr. William Vatavuk dated January 17, 2003.

[6] Economic Impact Analysis for Proposed Emission Standards and Guidelines for Municipal Waste Combustors. U.S. Environmental Protection Agency, Research Triangle Park, NC. EPA-450/3-91-029. March 1994. pp.3-7 and 3-8.

- The carbon injection system would loose effectiveness in controlling mercury when compared to its use with a spray dryer absorber-fabric filter combination.
- Obtaining guarantees would be problematic for dioxins, mercury and sulfur trioxide (SO_3). Removal of elemental mercury and fine aerosol mist containing SO_3, are particularly the issues.

Another disadvantage of utilizing a wet scrubber is its high use of scrubbing water. High water consumption is problematic and of particular concern in the Southwest Florida region due to the region's rapid growth and water quality issues. The wet scrubber discharge water is a high volume contaminated stream of wastewater that must be properly treated prior to discharge or re-use. Our preliminary calculations for the scrubber water shows this to be approximately 5000 gallons per minute. This is a relatively large volume, even if partial stream treatment is considered. It is estimated that the consumptive water use increase, even with utilizing recycled scrubber water, will be between 70,000 to 100,000 gallons per day. It is also uncertain whether the water treatment system can be effective in permanently sequestering or destroying the pollutants collected, or simply transferring them to another media.

Other salient information relative to the wet scrubber is provided for your consideration:

The emission limits established by the USEPA for new MWCs were based on modern MWCs that had been retrofitted with a spray dryer absorber-fabric filter. Because the emission limits are based on existing and demonstrated technology on the same emission source, there is a direct indication of how a new and well-maintained MWC should perform. There is no need for an extrapolation or estimate of how a different technology could process the same flue gas. A wet scrubber system is the opposite situation due to the absence of any operating data on a large MWC in the United States. While a wet scrubber has the potential to provide a slight increase in the removal of hydrogen chloride and sulfur dioxide when compared to the spray dryer absorber-fabric filter, we do not have process data that would identify how the wet scrubber process would effect other emissions such as particulate, fine particulate (PM-10), heavy metals and organics (most notably dioxins and furans). This perspective is based on the substitution of a wet scrubber system for a spray dryer absorber-fabric filter.

The absence of wet scrubber process information makes complete analysis a difficult task because other environmental impacts of the process must be understood for a complete and accurate BACT analysis. At a minimum, we would identify the following negative impacts as being sufficient reason to reject a wet scrubber system as BACT:

1. The wet scrubber is assumed to remove a fraction of flue gas contaminants including mercury, lead, cadmium, dioxins and furans, particulate and others. The wet scrubber system must discharge used water to avoid a re-release of the pollutants into the flue gas, with the discharge rate being based on the pollutant that achieves equilibrium first. Consequently, new "uncontaminated" water must be introduced as make-up water. The wastewater must be treated before it can be discharged, with the scope of the wastewater treatment facility being a site specific design based on local conditions.

2. Wet scrubbers have been theorized to increase the toxicity of dioxin/furan emissions by stripping chlorides from high chlorinated dioxins/furans (octa's and hepta's) and creating lower chlorinated species with higher toxicity. Consequently, there is the potential for the mass emission rate to be reduced but the toxicity would increase.

3. The flue gas effluent from a wet scrubber has been cooled to the adiabatic saturation temperature. Consequently, the saturated flue gas would create a continuous steam plume from the stack flue of the third unit. While this may be acceptable from a regulatory perspective, we understand this situation to be undesirable from a local perspective. Please note that the additional gas reheat system that can reheat the flue gas is expensive to install and operate and has its own environmental impacts due to the use of auxilliary fuel to reheat the flue gas.

4. The uncertain performance of the wet scrubber with certain pollutants (specifically mercury and dioxins/furans) would create the need for additional air pollution control equipment to be installed "after" the wet scrubber system. This additional equipment would have additional capital cost, land, and operating utilities and would create additional residue.

If the Department is suggesting a wet scrubber system in series (i.e., after) with a spray dryer absorber-fabric filter, the incremental cost ($/ton) would be exorbitant.

In either situation, a wet scrubber system operating alone or in series, the flue gas from the third unit would be at the saturation temperature. As noted above, this condition would generate a continuous steam plume unless a costly reheat system is installed.

While the Department has asked for two cost estimates, we respectfully cannot meet that request for two additional reasons: 1) air pollution control manufacturers are reluctant to spend time on cost estimates for projects that do not have a reasonable chance to occur; and 2) the capital cost of the air pollution control system is only a part of the total cost, with the waste water treatment system adding significantly to the cost of the air pollution equipment. The County does not wish to spend the time, energy, and money necessary to develop specifications for a wet scrubber system and a waste water process system, both of which are complicated systems, and both of which should not be used in this case.

We believe a vendor's quote is unnecessary, and direct the Department to the cost estimate (based on a per ton of SO_2 removed) that is provided on page 4-21 of the County's PSD application, where the estimated cost removal values are:

SDA/FF	$1,750-$2000/ton SO_2 removed
Wet Scrubber/ESP	$3,500-$4,300/ton SO_2 removed

These costs do not include (1) waste treatment and disposal, (2) integration of the systems with existing Units 1 and 2 at the Facility, and (3) additional problems with water use and disposal, all of which are expected to be significantly costlier for the wet scrubber/ESP than the SDA/FF.

This cost estimate for a wet scrubber system is based on the Mercer County PSD application filed in 1992 and was based on a cost estimate provided by Joy Niro.

6. The application appears to indicate that the annual emissions of NO_X are 310.1 TPY based upon an emission rate of 150 ppmvd @ 7%O_2. The application additionally requests that the first year NO_X emissions be limited to a higher standard of 180 ppmvd @ 7% O_2. Please provide a PTE for the first year of operation.

Response: The MWC New Source Performance Standards (NSPS) at 40 CFR 60 Subpart Eb establish a NO_X emission limit of 180 ppmdv corrected to 7% O_2 for the first year of operation and a NO_X emission limit of 150 ppmdv corrected to 7% O_2 thereafter.
Maximum proposed NO_2 emissions during the first year of operation would be calculated as:

$$\frac{180\ \text{ppmdv @ 7\% O}_2}{10^6} \times \frac{46.01\ \text{lb - NO}_2}{\text{lb - mole}} \times \frac{65{,}868\ \text{dscf @ 7\% O}_2}{\text{minute}} \times \frac{60\ \text{minutes}}{\text{hour}} \times$$

$$\frac{\text{mole}}{385.3\ \text{dscf}} = \frac{84.95\ \text{lbs NOx}}{\text{hour}}$$

and

$$\frac{84.95\ \text{lbs NOx}}{\text{hour}} \times \frac{8{,}760\ \text{hours}}{\text{year}} \times \frac{\text{ton}}{2{,}000\ \text{lbs}} = \frac{372.1\ \text{tons NOx}}{\text{year}}$$

Maximum proposed emissions following the first year of operation are shown in the permit application forms as:

$$\frac{150\ \text{ppmdv @ 7\% O}_2}{10^6} \times \frac{46.01\ \text{lb - NO}_2}{\text{lb - mole}} \times \frac{65{,}868\ \text{dscf @ 7\% O}_2}{\text{minute}} \times \frac{60\ \text{minutes}}{\text{hour}} \times$$

$$\frac{\text{mole}}{385.3\ \text{dscf}} = \frac{70.79\ \text{lbs NOx}}{\text{hour}}$$

and

$$\frac{70.79\ \text{lbs NOx}}{\text{hour}} \times \frac{8{,}760\ \text{hours}}{\text{year}} \times \frac{\text{ton}}{2{,}000\ \text{lbs}} = \frac{310.1\ \text{tons NOx}}{\text{year}}$$

7. Please confirm that a notice of the filing of the application has been published in a newspaper of general circulation in the area where the facility will be located.

Response: The PPSA notice, and proof of publication, was mailed to Buck Oven and Al Linero on December 23, 2002. The notice for the PPSA includes the PSD notice, and this fact is mentioned in the transmittal letter. A copy of this is provided as Attachment 3.

8. The following questions are related to the proposed rejection of an SCR for the control of NO_X emissions from the new unit. The cost effectiveness calculations seem to be based upon the proposals from BBP and Seghers, and the Department questions the following line items:

General Response: The Department recently determined that NOx control utilizing selective catalytic reduction (SCR) was not BACT for three gas turbine projects proposed in Florida. These projects were:

1. DeSoto Project
2. Deerfield Beach Energy Center, LLC
3. Pompano Beach Energy, LLC

In each case, the Department states that SCR was technically feasible and has been installed at numerous gas turbine installations in the U.S. However, the proposed cost effectiveness for the projects ($20,700 per ton NOx removed for the Pompano Beach and Deerfield Beach projects and $11,350 per ton NOx removed for the DeSoto project) were determined not to be cost effective, as stated in the Department's Best Available Control Technology (BACT) determinations for these draft permits. The Department specifically states in the extensive analyses presented in both the Deerfield Beach and Pompano Beach BACT reviews:

> *Hot SCR is not commonly required as BACT on simple cycle combustion turbines. Although it was required on the fuel oil-fired [Puerto Rico Electric Power Authority] PREPA project (to achieve 10 ppmvd), the requirement has been removed from the permit. It is noted that the specification of the fuel oil was 0.15 percent sulfur. The Department still considers Hot SCR to be technically feasible.*
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> *Golder [Associates] previously estimated the levelized costs of NOx removal by Hot SCR for the similar DeSoto project at $11,350 per ton assuming 3,390 hours of operation on natural gas and a reduction to 3.6 ppmvd on gas and 17 ppmvd on fuel oil. The estimates are based on an ammonia slip of 9 ppmvd for gas and 12 ppmvd for oil.*
>
> *The Department does not accept the precise hot SCR cost calculations presented by [Deerfield Beach Energy] DBE and considers them on the high end. The costs calculated by Golder [Associates] for the DeSoto project are probably more accurate. With the actual performance of the GE 7FA at TECO, JEA, and FPL with no add-on control (5-8 ppmvd @ 15% O2), it is easy to see that hot SCR would not be cost-effective. Hot SCR is rejected as BACT.*

It should be noted that the cost-effectiveness calculations for all three projects were based on a single vendor quote provided by Englehard Corp. to Golder Associates for the DeSoto project. ENSR International, who prepared the SCR cost effectiveness calculations for Deerfield Beach and Pompano Beach, utilized an interest rate of 7% and an amortization period of 10 years to estimate annual costs of capital investment. Golder Associates, who prepared the SCR cost-effectiveness calculations for the DeSoto project, utilized an interest rate of 7% and an amortization period of 15 years to estimate annual costs of capital investment. In addition, the total tons of NOx removed utilizing SCR in all three projects were determined based on the assumption that SCR would achieve 61% efficiency in NOx conversion. All of these assumptions were accepted by the Department for application of SCR technology to a source category that has significant application experience in the U.S.

In another determination by the Department, a May 7, 1999 letter from Clair Fancy to Mr. R. Douglas Neeley, USEPA Region 4, explains the Department's reasoning for establishing Dry LowNOx (DLN) technology as BACT for the Duke Energy New Smyrna Beach Project, a proposed 500 megawatt combined cycle gas turbine project, rather than SCR. This determination was made despite the cost-effectiveness of SCR for this project ranging from $7,366 to $9,698 per ton of NOx removed. Also in this letter, Mr. Fancy notes that, "In contrast, SCR technology encourages formation of the pollutant [NOx] (by high flame temperatures and power augmentation) with concomitant increases in PM, CO, and VOC. The add-on SCR equipment deals with the NOx and results in greater overall pollution, including another pollutant-namely ammonia." Based on the capital recovery factor used in supporting calculations of SCR cost-effectiveness provided in a March 25, 1999 letter from Environmental Consulting and Technology (ECT) to Mr. A.A. Linero, P.E., it appears that an interest rate of 7% and an amortization period of 15 years were used.

It should also be noted that USEPA has determined that SCR is not BACT on oil fired combined cycle turbines as represented in changes made to the permit for the Puerto Rico Electric Power Authority (PREPA) repowering project in San Juan, Puerto Rico. In the March 1999 draft permit, USEPA required SCR. However, USEPA later determined, based on new data, that SCR cannot consistently achieve the expected reductions in NOx emissions. As a result, USEPA removed the SCR requirement from PREPA's air permit. See Attachment 4.

A. Freight charges appear to be included in the BBP proposal and again in the cost-effectiveness calculations.

Response: The original quotes received by BBP were unclear concerning freight charges. We have re-contacted BBP and revised the calculations accordingly.

B. The SCR building enclosure (and accompanying firewater booster pump and fire protection additions) appears to be a Lee County requirement, rather than State or Federal; please confirm and provide the County documentation supporting the requirement. It appears to add at least $1,000,000 to the overall project cost.

Response: Lee County must enclose the energy recovery facility, including the air pollution control systems, to satisfy the requirements of the County's zoning ordinance and the requirements of the site approvals issued under the Florida Electrical Power Plant Siting Act ("PPSA").

The County had to rezone the site before the site could be used for a resource recovery facility. Section 900.02.C.2.a of the Lee County Zoning Ordinance provided that no site could be rezoned unless the proposed project would be compatible with surrounding land uses. To satisfy this requirement in the zoning code, the County took a number of steps to ensure that the facility would be compatible. Most importantly, the County agreed that it would enclose the facility, thus reducing aesthetic impacts, and the potential for noise, dust and odor impacts. The County also prepared a conceptual design (i.e., the "Master Concept Plan"), which depicted the fully enclosed resource recovery facility at a maximum capacity of 2400 tpd. (See Attachment 5)

During the rezoning process, the site plan was submitted to the Hearing Examiner as part of the County's proposal. In the Hearing Examiner's Recommendation to the County Commission, he notes: "Of the considerations specified under Section 900.02.C.2.a of the Lee County Zoning Ordinance as being applicable to rezoning request review, only compatibility with existing or planned uses and possible detrimental impacts to persons or property appear to the undersigned Hearing Examiner to be significant issues." However, the Hearing Examiner found that: "Aesthetic compatibility with surrounding existing and anticipated uses has been addressed in the project's Master Concept Plan through . . . structural placements, and architectural design so that the facility appears as pleasing as practicable." Further, he recognized that the "structurally enclosed mode of operation would seem to preclude adverse impacts" related to noise, dust, and odor. Ultimately, the Hearing Examiner recommended approval of the rezoning, subject to various conditions. In the "Conditions of Recommended Approval by the Hearing Examiner", Condition No. 1 states: "The development of this site shall be in accordance with the one page Master Concept Plan entitled 'Lee County Energy Recovery Facility Site Layout' prepared by Camp, Dresser, McKee, Inc." (See attached Hearing Examiner Recommendation, Case 90-8-14-DCI-4 dated August 14, 1990; Attachment 6).

On September 24, 1990, the Lee County Board of County Commissioners approved the rezoning of the site, subject to conditions and limitations recommended by the Hearing Examiner. (See attached minutes dated September 24, 1990; Attachment 6).

Pursuant to Section 403.508(2), Florida Statutes, a land use hearing was conducted under the PPSA to determine whether the proposed resource recovery facility would be consistent and in compliance with existing land use plans and zoning ordinances. During the hearing before the Hearing Officer from the Division of Administrative Hearings, the County again presented its Master Concept Plan to demonstrate that the facility would be compatible with surrounding land uses. The Hearing Officer found that the facility "has been designed to be aesthetically pleasing" and "all of [the County's] activities will take place within the confines of a fully enclosed building." Accordingly, the Hearing Officer found that the project "is consistent and in compliance with the Lee County Zoning Ordinance" and other local regulations. In turn, the

Hearing Officer's findings and conclusions were adopted by the Governor and Cabinet, sitting as the PPSA Siting Board.

On June 17, 1992, the Siting Board issued its "Final Order Approving Certification" of the County's facility. The final order states that the County's application is "APPROVED for an ultimate site capacity of 1800 tons per day of solid waste and approximately 60 MW of generating capacity, subject to the conditions of certification. . . ." The conditions of certification (Section XIII) state that the "facility shall be constructed pursuant to the design standards presented in the application. . . ." Thus, the Siting Board's approval of the project is based on the design in the application, which has consistently shown a fully enclosed facility for the entire project.

As indicated above, the County has represented to the public, the Hearing Examiner, the Hearing Officer, and the Siting Board that the facility would be fully enclosed at its ultimate design capacity. The local rezoning approval, and the State of Florida's approval under the PPSA, are based on the County's plan to enclose the facility. Those approvals require the County to live up to its commitment.

The Lee County Facility is located in a semi-rural area of Lee County. Prior to the construction of the existing Facility, the Board of County Commissioners was adamant that the Facility would not be intrusive to the surrounding residents. Then and now, the Board did not want the Facility to appear to be an "industrial" operation. DEP personnel that have visited the site have all complimented Lee County regarding the 'park-like' setting of the entrance and the aesthetically pleasing appearance of the building. The County believes, and we assume that the Department concurs, that the appearance of the County's waste to energy facility is important to the public. For these reasons, it is not only reasonable but also necessary and appropriate to include a building enclosure for the air pollution control equipment.

Regarding the fire protection system, Mr. Butch Desjurdin, the Lee County Fire Marshal, indicated that fire protection requirements would be based on the specific detailed design of the NOx removal system. Mr. Desjurdin stated that, most importantly, the equipment had to be installed in accordance to the manufacturer's specifications and that all natural gas (or propane) systems associated with the system would have to meet the NFPA 54, National Fuel Gas Code. He also stated that, if the system were installed inside a building, the system would have to conform to NFPA 13 and meet the Industrial Sprinkler Code.

Accordingly, the fire protection requirements for the proposed SCR system are governed by NFPA 13 (Installation of Sprinkler Systems). In light of the requirements in NFPA 13, the County's cost estimate dated October 31, 2002, is very conservative. The requirement of an additional fire booster pump is determined by the number of standpipes in the building and its impact to the overall fire protection design of the existing buildings, the expanded boiler, and APC building. The fire protection system design is a complicated process, either requiring a detailed design to integrate with the existing facility or a new installation based on the expanded unit alone. The pumping and storage requirement is based on the square footage and height of all new buildings. The cost would be allocated to the SCR based on actual square foot comparison. At this time a detailed design of the SCR system is not available, so a cost estimate

was developed for a stand-alone system. The cost estimate dated October 31, 2002, has been revised, based on a stand-alone system. The two significant items added to the revised estimate are the firewater storage tank and the firewater pump, as follows:

- Firewater storage tank – A requirement due to the lack of the required quantity of potable water for the design of the system. A 100,000 gallon tank, foundation, and piping are estimated at $150,000.

- Firewater pump – The estimate provided was for a conventional electric pump, whereas the facility utilizes diesel driven units. A diesel driven pump, complete with enclosure, fuel tank, and fire protection system is estimated at $200,000.

Internal piping and sprinklers are included in the County's estimate. Please note, however, that the County's latest cost estimates (Attachment 7) were not adjusted to reflect these additional costs.

C. Please explain the requirement for an additional $25,000 for a building to house a process CEM.

Response: A sum of $25,000 has been allocated for adding an expansion to the CEMS building to provide housing for PLC, I/O cabinet and motor controls associated with the SCR equipment. The relevant data inputs are transmitted to the appropriate CEMS hardware. "Besides, the estimated building cost ($25,000) is small relative to the total capital investment of the entire unit."[7]

D. According to the EPA Cost Guidance Manual, "in general, SCR does not require buildings, site preparation, offsite facilities, land, and working capital". Please provide documentation supporting the additional $530,000 estimate for an SCR enclosure (complete with wind load design), and show how this estimate is affected by the elimination of the requirement for the SCR building enclosure.

Response: Please refer to the response to item 8B regarding the SCR building/enclosure. Also, "both the SCR and SNCR chapters in the EPA Air Pollution Control Cost Manual (Sixth Edition, January 2002) are seriously deficient in quality, especially when compared to the Manual chapters that cover other control devices. Both chapters contain too many technical and editorial errors and omissions to mention. Moreover, both chapters were based on cost data and procedures developed for hot-side SCR installations on coal-fired utility boilers. Hence, their applicability to other combustion emission sources (not to say non-combustion sources) is questionable. Finally, neither chapter is thoroughly consistent with the other Manual chapters regarding estimating procedures, cost factors, assumptions, and other areas. For these reasons, neither the SCR nor the SNCR chapter should be given credence - at least until each has been thoroughly improved.

[7] Communication of Mr. William Vatavuk dated January 17, 2003.

Consider the comment that the SCR chapter in the manual does not "require buildings, site preparation, offsite facilities, land, and working capital." That is certainly true, sad to say. However, no such blanket dismissal of these expenditures appears in the Cost Manual chapters for: thermal and catalytic incinerators, carbon adsorbers, fabric filters, electrostatic precipitators, flares, refrigerated condensers, and gas absorbers. In these chapters, beside each of the entries for "site preparation" and "buildings" in the capital cost factors table are the words "As Required". As these words indicate, costs for these items should be included if they are necessary to the installation. This is only right and proper, as the cost data and cost-estimating procedures in a Manual chapter should be general enough to apply to a wide range of installation scenarios. It is inappropriate (and inaccurate) to assume that expenditures for these items would never be incurred. Including such restrictive statements severely limits the application of the Manual chapter."[8]

Additionally, the BBP proposal states that the price for "system enclosures/buildings" is not included in their prices. Consequently, we included this expense as a line item. The amount of $530,000 was estimated, as follows:

Budget Estimate for SCR System Enclosure

Based on the Babcock Borsig Power ("BBP") proposal, the SCR footprint can be 23 ft. x 23 ft. (note that it is not 23 square feet) with a gas-to-gas heat exchanger on top of SCR (total 50 feet equipment height); or 23 ft. x 43 ft. with a gas-to-gas heat exchanger to the side, with equipment height reduced to 40 feet.

Based on the need for height limitation, a footprint of 23 ft. x 43 ft. was considered. A preliminary building floor need of 45 ft. x 65 ft. with a 50 ft. height was considered to provide sufficient access space around the equipment.

Item	Estimated Cost
Wall/structure (11,000 ft^2 @ $20/$ft^2$)	$220,000
Roof (2925 ft^2 @ $25/$ft^2$)	$73,000
Floor (2925 ft^2 @ $30/$ft^2$)	$88,000
Piling, 10" concrete filled (qty. 36, 50 ft ea @ $21.50/ft)	$39,000
Normal Design Total	***$420,000***
Add 25% for hurricane load design	$105,000
Hurricane Load Design	***$525,000***
Rounded to Total	**$530,000**

[8] Communication of Mr. William Vatavuk dated January 17, 2003.

Revised Budget Estimate

As discussed during our January 22, 2003 meeting with the Department, we reevaluated the SCR building criteria to integrate one side of the SCR enclosure with the existing Facility back-end enclosure, and reduced the floor area to 40 feet by 65 feet, resulting in a revised budget estimate of $440,000. Revised cost estimates are provided as Attachment 7.

[The elimination of the SCR building enclosure will necessitate support structures for the SCR reactor equipment, gas-to-gas heat exchanger and ductwork to be designed for hurricane wind loading. Cost of the additional structural steel for hurricane wind loading is not included in the BBP proposal.]

E. Please provide supporting documentation for the $29,000 expenditure for "Site Preparation" for an SCR with a 23 sq ft footprint

Response: Site preparation associated with the installation of the SCR equipment will include providing roadway access, including demolishing any existing obstacles, and preparation of the site for placement of the SCR equipment. Note that the footprint is not 23 square feet, but it is 23 feet square minimum (with gas-to-gas heat exchanger piggybacking on the reactor housing). As explained in the response to 8D above, we considered an equipment footprint of 23 ft. x 43 ft. to reduce the equipment height to 40 feet and thereby reduce the hurricane wind loading consequences. The $29,000 cost estimate is broken down as follows:

Item		Estimated Cost
Roadway		$8,000
Clearing and Excavation		$10,000
Disposal		$3,000
Temporary Utilities		$3,000
Demolition and Miscellaneous		$5,000
	Total	**$29,000**

F. Please explain the basis of the expenditure for "ID Fan Increase" shown as a Direct Installation Cost, which is in addition to the expenditure for the increased fan size. Describe the additional work to be required as a result of the size increase (that work which is beyond the cost of the fan).

Response: The increased ID fan size for SCR application amounts to an equipment cost increase, established at $50,000 based on the manufacturer's estimate. We have considered installed equipment cost at two (2) times the "equipment only" cost based on our extensive experience and engineering judgment with waste-to-energy projects. The $50,000 cost estimate is the increased direct installation cost and covers: unloading, unpacking, inspecting, preparing the foundation, installing, aligning, mechanical checking, integrating with other relevant

equipment/components, instrumentation installation, final balancing and placing the ID fan into operation.

G. Please explain the Indirect Cost estimates of "Vendor Engineering and Related Costs" as well as "Vendor Fees". What type of vendor is being referred to and for what work?

Response: For preparation of our estimates, we considered a design-build-operate (DBO) approach, where the "vendor" is synonymous to the DBO contractor in the waste-to-energy industry. The DBO contractor will perform calculations and establish design criteria, prepare engineering specifications and layouts and other technical documentation as a part of procurement and engineering to integrate the SCR system into the Facility. The 8% cost estimate is allocated for the DBO's engineering and construction phase coordination (including QA/QC verification) services. The vendor fee is the DBO contractors profit or mark-up. Note that ultimately the County will pay the DBO contractor's invoice, which will include cost plus profit.

H. Please explain the basis of the 10% contingency given BBP's statement that "These estimates are conservative and with additional data and the scope further defined, BBP expects these estimates to be reduced".

Response: From our extensive experience, we believe that a contingency must be considered. In their proposal, BBP has attempted to emphasize that they have not "low-balled" the price of the SCR equipment. Based on our engineering judgment we believe that for the scope specifically described, BBP will be either on budget or one or two percent lower than their proposed estimates. However, note that contingency is not growth of equipment cost only. Contingency is mostly targeted at myriads of items not specifically taken into account at this stage of the project, although these items will be needed for complete installation of the SCR system. Based on our experience with waste-to-energy projects, an overall contingency of 10 to 15 percent is usually applied at this stage of the project (i.e. for the concept design/study phase) for the budget to be considered realistic. We have maintained a 10 percent contingency in our cost effectiveness calculations.

In addition, we would point out that "while the Cost Manual lists 3% as the default contingency factor for other control devices, this 3% default is intended for use with a well-developed process that is straightforward to install and, more importantly, does not provide or require performance guarantees. Because an SCR is more complex than, for example, a catalytic incinerator (to which it is analogous) and must achieve (by regulation) a specified outlet concentration level, use of the higher 10% contingency factor is justified. Finally, while much of the information in the Cost Manual SCR chapter is of questionable validity, it is worth noting that the chapter suggests the use of a process contingency of 5% plus a project contingency of 15% (section 4.2, chapter 2, page 2-44, Table 2.5)."[9]

[9] Communication of Mr. William Vatavuk dated January 17, 2003.

I. Please provide the estimated HP requirements for the ID Fan, assuming that the incinerator is fitted with and without SCR.

Response: Based on information provided by BBP, flue gas side pressure drop for combustors fitted with SCR, compared to that without SCR, require an additional drop of 11 inches of water (which includes pressure drop through the SCR reactor and gas-to-gas and steam coil heat exchangers). Our estimated ID fan HP requirement is provided below:

	Without SCR	With SCR
Fan Design [(1)]	600 HP	1048 HP
Fan Operating (assumed at 80% of design)	480 HP	838 HP
Difference	Base	358HP (267 kW)

[(1)] Based on data provided by TLT-Babcock, manufacturer of the existing ID fan.

J. Please explain the reason for the Indirect Annual Costs of "Miscellaneous Painting" and Miscellaneous Equipment Rebuild" which are in addition to the Direct Annual "Operations and Maintenance Labor" costs.

Response: Our experience with waste-to-energy facilities' operations and maintenance indicates that periodically (not necessarily every year) cleaning and repainting of surfaces of equipment and ductwork is necessary to achieve the desired life (or to avoid premature failure due to corrosion) of the facility. Moreover, periodic major overhaul/repair or rebuild of equipment (again, these are not annual events) is also required for proper life expectancy of the facility components. We have annualized these costs for our estimates. Note that the above two items are in addition to the line items included in Direct Annual Costs Category.

K. According to the EPA Cost Guidance Manual, "the cost of overhead for an SCR system is also considered to be zero. An SCR system is not viewed as risk-increasing hardware (e.g., a high energy device such as a boiler or a turbine). Consequently, insurance on an SCR system is on the order of a few pennies per thousand dollars annually". Please provide the annual property insurance costs for the existing facility. Additionally, provide the estimated property insurance costs for the complete 3rd unit addition, based upon current Lee County estimates.

Response: "The SCR chapter is wholly inconsistent with the other Cost Manual chapters and, in particular, the cost estimating methodology (section 1, chapter 2). As page 2-34 of that chapter indicates, insurance should be calculated at a fixed 1% of the total capital investment (TCI), not at a 'few pennies per thousand dollars'." [10]

Lee County's actual cost for insurance premiums for the Waste To Energy Facility (2003) is $818,517.00. The insurance premiums for 2002 and 2001 were $601,917.00 and $369,201.00

[10] Communication of Mr. William Vatavuk dated January 17, 2003.

respectively. It is apparent that the cost of insurance has escalated dramatically and is expected to continue to outpace overall inflation. Lee County's estimated additional cost for insurance coverage for the third combustion unit only, configured without SCR, and including all associated facilities, is $361,000.00 using the same coverage ratios as the existing facility and stated in 2002 dollars. The cost estimate methodology was not revised.

The County believes that the addition of SCR equipment will increase the premium for insurance for several reasons. The value of the SCR equipment is substantial, increasing the project capital cost by 18-24%. This additional capital cost will increase the covered amount and increase the premium cost. Risk underwriters will view the equipment as unproven technology since it has never been used for this type and size of a waste combustor unit in this country. The equipment's performance and reliability on a long-term basis in this country has not been documented and over-all operation of the combustion unit would be dependent on this equipment. Therefore, if the SCR equipment should catch on fire, be damaged or otherwise fail, the combustion unit and turbine-generator would not operate. This would negatively impact the County's revenues for electricity and increase the County's cost for disposal. Additionally, the risk involved in handling, transporting, and recycling/disposing of contaminated/spent catalyst is significant. This additional responsibility would also add to the cost of insurance premiums.

L. The Indirect Annual Cost "Lost Power From Reheat" should not be based upon lost opportunity sales of KW ($0.05 per KWH), but rather the actual steam production costs. Please provide the estimated cost (fuel plus O&M) of generating the 7600-lb/hr steam demand required for reheating. On the quotes based upon gas reheating, please provide the rationale for natural gas prices at $5.00 per 1000 cf. Also, please provide actual Lee County natural gas costs ($ per 1000 cf) for each of the prior 24 months.

Response: For the County's fiscal year 2002 (10-1-01 to 9-30-02) the Facility produced 2,431 million pounds of steam at a cost to Lee County of $11,029,752.01. Therefore the production cost of steam was $0.00454 per pound. The Indirect Annual Cost for SCR with steam reheat has been recalculated using this cost factor. (See Attachment 7).

The Annual Energy Cost for SCR with natural gas reheat calculated at $5.00 per 1000 cu. ft. of natural gas was an engineering estimate based on national natural gas prices. The Lee County Facility does not have natural gas at the site but uses propane (LP gas). Actual propane costs and consumption for the previous 24 months was: Fiscal Year 2001 - $166,627.60 for 205, 081 gallons and Fiscal Year 2002 - $111,652.33 for 185,523 gallons. Using a heat content for propane of 90,510 BTU/gallon equates to average annual unit costs of $0.0099 per 1000 BTU and $0.0077 per 1000 BTU respectively. Converting these cost factors to a natural gas equivalent, based on 1100 BTU per cu. ft., yields an average cost factor of $8.80 per 1000 cu. ft. of natural gas (prior 24 months averaging period). . The cost estimate has been recalculated using this cost factor. (See Attachment 7).

Mr. Richard Suchant, Commercial Customer Representative for TECO Peoples Gas, stated on January 8, 2003, that if natural gas were be delivered to the Facility on this date (assuming the Facility's average consumption), the cost would be $0.73 per therm (100,000 BTU). This

equates to $7.40 per 1000 cu. ft. The customer's natural gas unit price changes from month to month based on market variances.

The County has recalculated the Annual Energy Cost for SCR using natural gas reheat with the prior 24 month average propane cost as received at the Facility. This factor is converted to a natural gas cost equivalent of $8.80 per 1000 cu. ft.

M. According to EPA's cost guidance manual, for that portion of the catalyst, which is replaced every few years the "annual catalyst cost... is a function of the future worth of the catalyst". Please use this methodology and an assumed 7% interest rate.

Response: As stated in the SCR control cost sheets provided in Attachment F of the application, it was assumed that the catalyst life is three years and 1/3 of the catalyst would be replaced each year. Please note that the preferred vendors (Babcock Borsig Power and Seghers) provided different performance guarantees with their budgetary estimates. Babcock Borsig Power guaranteed their catalyst for 3 years (24,000 hours) where Seghers guaranteed only 2 years (16,000 hours). As noted in the cost control manual:

"A catalyst layer is typically guaranteed for 16,000 to 24,000 operating hours. This cost methodology assumes a guaranteed catalyst life of 24,000 hours or 3 years."

While the cost control manual instructs one to determine annual catalyst replacement costs by calculating a "future worth" of the catalyst, the end result does not justify the effort, given the short time period (3 years) to calculate the " future worth". It is much simpler for budgetary estimates to divide the total catalyst cost by the guaranteed operating life (3 years), as Lee County did, to derive an annual cost. In addition, the spent catalyst has no "future worth"; it has a negative "future worth" because the owner must typically pay to have it recycled or disposed. These conclusions are demonstrated if one actually performs the calculations presented in the EPA Cost Guidance Manual.

1) Catalyst Replacement Cost = $N_{SCR}\ Vol_{catalyst}\ \frac{CC_{replace}}{R_{layer}}$

Where: R_{layer} is a capital replacement factor (i.e., R_{layer} = 1 for full replacement)
$N_{SCR} = R_{layer}$ for replacing 1 "layer" per year
$CC_{replace}$ = Cost of catalyst in dollars per cubic foot
$Vol_{catalyst}$ = Catalyst volume in cubic feet

The budgetary estimates provided by the vendors did not provide catalyst volumes. It was assumed that 1/3 of the volume was replaced each year if the catalyst had a 3 year lifetime guarantee. Therefore, it is assumed that the $Vol_{catalyst} \bullet CC_{replace}$ = 1/3 the cost of the full catalyst volume, or:

$$= 1/3\ (\$270{,}000) = \$90{,}000.00$$

Thus, using the equation, Catalyst Replacement Costs $= \frac{(1/3)\ (\$90{,}000)}{(1/3)} = \$90{,}000.00$

2) Annual Catalyst Replacement Cost = $\left[\text{Catalyst Replacement Cost}\right]$ FWF

Where: FWF = Future Worth Factor

$$FWF = i\left[\frac{1}{(1+i)^y - 1}\right]$$

Where: i = interest rate = 7%
y = years

$$y \text{ is defined as: } \frac{\text{Catalyst operating life (hours)}}{\text{hours SCR operates}} = \frac{24{,}000}{8760 \bullet 3} = \frac{24{,}000}{26{,}280} = 0.913$$

$$FWF = 0.07\left[\frac{1}{(1.07)^{0.913} - 1}\right] = 0.7\left[\frac{1}{1.064 - 1}\right] = 1.094$$

3) Catalyst Replacement Cost
= (90,000) (1.094)
= $98,460.00

As can be seen, this result is equivalent to one's intuitive expectation of the annual cost of catalyst replacement. However, using this calculation, it appears the County under-estimated catalyst replacement costs by approximately 10%.

In addition, this is another example of the problems inherent with the SCR section contained in the cost control manual, as noted by Mr. William Vatavuk, the document's author. He has observed that the "SCR and SNCR" chapters in the EPA Air Pollution Control Cost Manual (Sixth Edition, January 2002) are seriously deficient in quality. . . . Both chapters contain too many technical and editorial errors and omissions to mention." See also the response to comment 8D above.

N. The BBP quote was based upon a controlled outlet of 50 ppm NO_X. The cost-effectiveness calculations appear to be incorrectly based upon a controlled outlet of 100 ppm NO_X.

Response: The cost effectiveness calculations were prepared appropriately, based on the County's recognition that there are different levels of responsibility and accountability in achieving compliance with a permit limit. An equipment supplier is not responsible for the long-term performance and variability in its equipment, nor can the supplier be held accountable, because it is not on-site operating the equipment. The facility operator and owner are the accountable parties and they must ensure that the permit limit is continuously achievable. They must also know how it will be achieved.

The BBP proposal states the controlled outlet emission as 50 ppm NOx. It is appropriate that the SCR equipment is designed for this level of performance when attempting to meet an enforceable emission limit of 100 ppm. A design condition or guarantee from an equipment supplier should never, however, by itself be the basis of a permit limit or BACT analysis. As mentioned above, the supplier's responsibility is limited and typically ends when the vendor has completed compliance with the performance guarantees. Please note that this occurs at the initial startup of the facility, when everything is in a "new and clean" condition, and the supplier has its startup staff on site. This initial test is not a guarantee of how the equipment will perform over time, especially when one considers: 1) the variability in equipment performance; 2) the variability in flue gas conditions and uncontrolled NOX concentrations; and 3) unforeseen events that may occur due to the new nature of this technology and the complete absence of operating experience in the United States.

Based on our experience with various plant equipment components and associated guarantees, we believe that a one-time equipment guarantee from a vendor cannot be automatically translated into long-term performance guarantee for the entire useful life of the equipment. This is particularly true for a waste-to-energy facility using SCR, since there is not a full-scale unit operating continuously in the United States. Although SCR technology has been demonstrated in other combustion oriented industries, there are significant differences that need to be considered including:

1. MSW is heterogeneous by nature, as opposed to the homogeneous nature of oil, natural gas and even coal. Variations in the higher heating value and fuel components of MSW can yield different concentrations of uncontrolled NOx, with typical values ranging from 200 to 350 ppmdv at 7 % O2 as a daily average.

2. The furnace region of the combustion system and all downstream heat exchanger components are subject to the formation of buildup that adversely effects heat transfer. As the buildup developes, the transfer of heat to steam goes down and, consequently, the flue gas temperature goes up. The changing isotherms in the furnace contribute to a variable formation of thermal NOX.

We consider the 100 ppmdv at 7 % O2 standard to be stringent and aggressive, given the cited variables and unknowns and the simple fact that the applicant is accountable for compliance, not the equipment manufacturer.

From a regulatory perspective, the Department should not establish an emission limit unless the Department has data demonstrating that a standard is continuously achievable. Statements and budgetary proposals from salesmen do not provide sufficient proof that a proposed emission limit (e.g., 50 ppmdv at 7 % O2) is continuously achievable.

O. The Seghers quote was based upon a controlled outlet of 100 ppm NOX, yet Seghers indicates, "The emission limit of 100 ppmvd (147 mg/Nm3) is very high; an SCR system can reach an emission level of 70 mg/Nm3. The higher limit suggested by Covanta does not reduce the investment cost of the system and does not allow the advantages of SCR to come out. Basically, it means that you pay for a state of the art technology and then use it only at 50% of its abilities. As a matter of fact, Seghers has built a WTE facility where we meet 150 mg/NM3 as daily average with a simple SNCR (i.e. non-catalytic) and flue gas recirculation". Please provide a revised Seghers cost effectiveness calculation utilizing 50 ppm outlet and 20-year depreciation at 7% Capital Recovery.

Response: Seghers alludes that their design "can reach an emission level of 70 mg/Nm^3." Please note that our consideration of Seghers proposal is based on the same factors as for BBP's proposal. Please refer to our response to comment 8N above.

Also note that "a 20-year life for an SCR is too long. Consider catalytic incinerators, an analogous control technology to SCR's. The equipment life cited in the EPA Cost Manual for catalytic incinerators is 10 years. And compared to catalytic incinerators, SCR systems are much more complex, incorporating additional ancillary equipment and support systems that not only must be installed, but must be routinely inspected and maintained by properly trained operations staff. Equipment required for the SCR includes the NH_3 injection grid, NO_x and NH_3 mixing zone, transition ducts, catalyst housing and bed, CEMS, programmable logic controller, NH_3 flow control skid, NH_3 storage tank, and miscellaneous instrumentation. By contrast, equipment for the catalytic incinerator includes only the transition ducts, catalyst housing and bed, and miscellaneous instrumentation."[11]

Additionally, while flue gas recirculation may work with a two stage combustion system such as the reciprocating grate design used by Seghers, we are concerned that this process would have a negative effect on the advanced combustion control system used in the proposed third unit. There are generally two components of Nox: 1) fuel NOx from nitrogen in the fuel; and 2) thermal NOx from nitrogen in the combustion air. The general idea behind flue gas recirculation is to reduce the amount of thermal NOx by recycling combustion air with less nitrogen. The existing two units and the proposed third unit would each have a combustion control system that maintains a furnace condition that promotes high thermal destruction efficiency to yield low

[11] Communication of Mr. William Vatavuk dated January 17, 2003.

carbon monoxide levels. These same temperatures also promote relatively high NOx concentrations.

Recirculation of flue gas from after the scrubber-baghouse system could have a negative effect on combustion and therefore combustion related pollutants. Lee County does not believe that the speculative potential for NOx reduction is warranted, given the very possible negative side effects on the combustion process.

In addition to the general process concepts stated previously, we believe that the flue gas recirculation statement by Seghers must be considered in the context that the flue gas recirculation system performs this way when Seghers installs the system as a component of a MWC unit designed and operated by Seghers. It is our understanding that the cited combustion technology is a modular design that uses staged combustion with a reciprocating grate. There are two apparent issues here:

1. This type of combustion system is different from the mass burn waterwall combustion system used in Units 1 and 2 and proposed for Unit 3 of the Facility.

2. To our knowledge, Seghers does not market flue gas recirculation systems as a technology for MWC units other than their own.

P. The Department appreciates the 15 versions of SCR cost effectiveness calculations which were provided, but only two are based upon 20-year depreciation and none are based upon the Haldor-Topsoe quotation, which appears to be the most cost effective. Please provide a cost-effectiveness calculation based upon the Haldor-Topsoe quote and 20-year depreciation at 7% Capital Recovery.

Response: The Haldor-Topsoe quotation is not adequate for providing a cost-effectiveness calculation based on the following conclusions. After reviewing the three proposals and cost information received (BBP, Seghers and Haldor-Topsoe), we concluded that a high degree of uncertainty existed relative to the other two suppliers (i.e. Seghers and Haldor-Topsoe) and was not considered for economic impact analysis. As explained in the County's PSD Application (pages 4-40 and 4-41), in a personal communication with a representative of Haldor Topsoe, Inc. it was conceded that their estimate could be 25-30% low relative to actual costs. Upon request for references to the application of a Haldor Topsoe catalyst system to a municipal waste combustor, Haldor Topsoe has managed to provide one reference to a municipal solid waste combustion facility in Italy. Additional information about the facility regarding achieved outlet concentrations of NOx, operational history and installation and operational costs were not made available by Haldor Topsoe. Another facility identified as a MSW combustion facility in Spain is actually a liquid waste incinerator for a fine chemicals factory. One problem with the Haldor Topsoe provided system, as communicated by the facility in Spain, is a particulate settling problem that requires shutdown and cleaning of the catalyst every 300 hours of operation. As noted, Haldor Topsoe's estimate was the least complete and contained only one reference. Haldor Topsoe is primarily a catalyst supplier that does not specialize in supplying a total control system. Further, they provided two quotes, one with outlet NOx emissions as 100 ppmdv and

one at 150 ppmdv. The more stringent control option, 100 ppmdv outlet NOx, was quoted at a lower price than the 150 ppmdv outlet. Therefore, a high degree of uncertainty exists relative to the accuracy of the Haldor Topsoe quote versus the other two suppliers. Consequently, we only used the Babcock-Borsig and Seghers cost estimates in the economic impact analysis.

As stated above and "as the previous response explains, a 20-year life is excessive for an SCR. Moreover the Haldor-Topsoe quotation is considerably lower than the BBP and Seghers quotes, which makes one question its representativeness. Thus, there is no reason to provide another cost-effectiveness calculation based on the Haldor-Topsoe quote and a 20-year SCR life." [12]

Q. Please provide the Department with the range of interest rates for which Lee County anticipates to acquire financing for this project (or the equivalent yield rate for Revenue Bonds).

Response: According to the Lee County Financial Advisor, Public Financial Management (PFM), the County can expect to pay a total equivalent average interest rate of 5.5 percent to 7.5 percent for funds required for the expansion project. A copy of the PFM letter is provided as Attachment 8.

It is also important to note that PFM has suggested that the County should consider a 15-year finance period in order to avoid the additional interest costs associated with a 20-year financing period. Although the debt service payments would be more, the overall savings to the County would be less.

9. The Department requires as a submittal, a minimum of two project specific, written cost estimates for an SNCR with flue gas recirculation, at a controlled NO_X outlet of 100-ppmvd as a daily average. Seghers should be one of the vendors to supply a quote, based upon their representation, which is noted above. A corresponding cost-effectiveness should be computed using standard EPA guidelines. In addition to capital cost requirements, the submittal should include vendor estimates for use in determining any applicable annualized operating and maintenance costs as well as recommended spare parts.

Response: An SNCR system combined with flue gas recirculation (FGR) has not been considered due to its questionable reliability on a long-term basis. As stated in the PSD Application, page 4-28, there are no MWC facilities in the United States utilizing a combination of SNCR and FGR. In fact, there are potential long-term operating problems associated with a FGR system. For instance, the FGR system installed at the Long Beach, California MWC facility was discontinued due to operational problems.

Additional information has been received from Seghers regarding their claims of a facility operating with SNCR and flue gas recirculation (FGR). Seghers provided information about a facilities in Antwerp, Belgium and Orebro, Sweden. The Antwerp facility consists of two 350

[12] Communication of Mr. William Vatavuk dated January 17, 2003.

tons per day (tpd) MWCs built in 1996 with no NOx control provisions. A third MWC with a capacity of 587 tpd was built in 2000 and is equipped with FGR only. All three units operate at NOx levels higher than that proposed for the Lee County Unit 3 combustor. Seghers states SNCR will be added to the third combustor at Antwerp sometime in the future. Please note that the Antwerp combustors co-fire sludge from a municipal wastewater treatment plant.

The Orebro, Sweden facility consists of two 330 tpd MWCs. NOx emission levels are met through a combination of FGR, SNCR and multi-stage secondary air injection. Seghers also notes that the Orebro facility utilizes the Seghers multi-staged grate, where 60% of the grate surface is water cooled. This grate cooling system most likely contributes to lower NOx emissions from the combustor.

Based on the information provided, Seghers has no data available demonstrating, or supporting, their claim that they have constructed a MWC facility that is directly comparable to the proposed Lee County Unit 3 utilizing FGR and SNCR, and achieving low NOx emissions. This is another example of the problems the County's Project Team has faced with SCR vendors making claims about their systems with little or no data or project experience to support their claims. (See Attachment 9).

Also, please reference the response to comment 8O above for support information on flue gas recirculation.

10. Please provide the Department with the modeling files for the Class I and Class II analyses performed for the application.

Response: The modeling files were provided to the Department on CD-ROMs (one original and one duplicate) that were attached to a letter dated December 13, 2002 from Donald Elias of RTP Environmental Associates to Cleve Holladay of the FDEP. We understand that FDEP has received the CD-ROMs and were able to read the files contained on them. A copy of the transmittal letter is provided as Attachment 10.

DEP Division of Waste Management, Bureau of Solid and Hazardous Waste Sufficiency Comments:

1. Section 3, 3.3.2, Page 3-9: 2nd line. Please correct to "...approximately 3 days of storage capacity..."

Response: Comment noted.

2. Section 3, 3.4.1, Page 3-9: 3rd line, 2nd paragraph. Please correct to "....Additional fuel...."

Response: Please note that Section 3, 3.4.1, Page 3-9, 3rd line, 2nd paragraph is describing the space that is available for the new flue in the existing stack. Therefore the sentence should remain unchanged and read: "Space is available for an additional flue in the existing stack,....".

3. Section 5, 5.4.2, Page 5-8:

A. Please clarify whether each load is inspected after unloading on the tipping floor.

Response: The Facility is under 24 hour video monitoring. Monitors are located in the Facility Control Room that enables the plant staff to monitor the front plant entrance, scale house, tipping floor ramp, and the tipping building. Each camera is equipped with pan, tilt, and zoom operations. Approximately 50% of the waste is dumped directly into the refuse storage pit. That waste, as well as the remaining 50% that is pushed into the pit by the front end loader operator, is picked up, fluffed, and stored by the crane operator. The front end loader operator and crane operator observe the contents of the waste to the extent that unusual or suspicious items can be separated for closer examination. For example, examinations are usually of large bulky items such as oil drums, gas tanks, propane tanks, Freon bottles etc. Rule 62-701.500(6), F.A.C.

B. Please elaborate on "Random inspection" and describe number of random inspections each day or each week. Please refer to the exact Section subsection of Florida Administrative Code (F.A.C.) Rule 62-701 for each of the above inspection plans.

Response: There are at least three (3) formal random truck inspections a week conducted on the tipping floor. The recorded information includes the date, time, vehicle number (and vehicle license plate number if not already on file), vehicle collection route (or other source of waste), vehicle driver's name, Facility operator employee name conducting the inspection and the contents of the truck. The inspection information is retained at the Facility for at least three years. Rule 62-701.500(6)(a)1, F.A.C., and Rule 62-701.500(6)(c), F.A.C.

C. Please add, "If hazardous waste is detected before or after unloading waste FDEP shall be immediately contacted and instructions from FDEP shall be followed, before moving, reloading, rejecting or redirecting the waste vehicle." F.A.C. Rule 62-701.500(6)(b) for landfills is applicable. Please note that Volume II Appendix 3.1, Materials Separation Plan addresses only the household hazardous waste. Please include the telephone numbers for FDEP, (239) 332-6975 (during normal business hours), (850) 413-9911 and toll free (800) 320-0519 (during other hours) in this section and in the list of emergency telephone numbers posted in the office at the facility.

Response: Section 5.4.2 of the Application will be amended to incorporate the language of Rule 62-701.500(6)(b)(1), F.A.C., substituting the word "Facility" for the word "landfill" where applicable, as follows: "If any regulated hazardous wastes are identified by random load

checking, or otherwise discovered to be improperly deposited at the Facility, the Facility operator shall promptly notify the Department, the person responsible for shipping the wastes to the Facility, and the generator of the wastes, if known. The area where the wastes are deposited shall immediately be cordoned off from public access. If the generator or hauler cannot be identified, the Facility operator shall assure the cleanup, transportation, and disposal of the wastes at a permitted hazardous waste management facility."

Pursuant to 40 CFR 60.51b Definitions, the Materials Separation Plan means a plan that identifies both a goal and an approach to separate certain components of municipal solid waste for a given service area in order to make the separated materials available for recycling. As such, the Materials Separation Plan addresses municipal solid waste and does not address hazardous waste.

The Department's telephone numbers will be posted with the emergency telephone numbers in the office at the Facility.

D. Please address "Operator Training" and Spotter Training" requirements in accordance with F.A.C. Rule 62-701.320(15).

Response: The operator of the Facility utilizes trained operators and spotters in accordance with the Facility's training protocols. Attachment 11 provides the Facility's training courses. Prior to the operation of the Facility's third combustion unit, the Facility operator will comply with the requirements of Rule 62-701.320(15), F.A.C., to the extent it is applicable to waste-to-energy facilities governed under the Power Plant Siting Act.

If you should have any questions or require additional information please do not hesitate to contact us.

Very truly yours,

MALCOLM PIRNIE, INC.

Sam M. Rosania, R.E.M.
Associate, Project Manager

MALCOLM PIRNIE, INC.

Amit Chattopadhyay, P. E.
Registration Number: 52826

enclosures

c: Distribution (Exhibit 1)

EXHIBIT 1

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ATTACHMENT 1

William M. Vatavuk, P.E.

(Updated *January 2003*)

I. RESUME OVERVIEW

*** General:**

-- Address: 3512 Angus Rd., Durham, NC 27705
-- Phone: (919)-489-8810
-- E-fax: (413)-638-1336
-- E-mail: w*illiam.vatavuk@verizon.net*

-- Date of birth: 1/30/47
-- Birthplace: Sharon, PA
-- Marital status: married, one child

*** Education:** B.E., Youngstown State University, 1969

*** Experience:**

-- January 1999-present: President, Vatavuk Engineering
-- 1970-December 1999: U.S. Environmental Protection Agency (Rockville, MD and Research Triangle Park, NC)
-- 1969-70: DuPont, Inc. (Wilmington, DE; Richmond, VA)

*** Professional activities and accomplishments:**

-- Creator of "Vatavuk Air Pollution Control Cost Indexes" (updates published in *Chemical Engineering* magazine)
-- Professional engineer (North Carolina)
-- Environmental journals peer reviewer
-- Twice past president of North Carolina Branch, U.S. Public Health Service Commisioned Officers Association

*** Publications:** Two books, two book chapters, and over 50 journal articles and book reviews. Books--*Estimating Costs of Air Pollution Control* (CRC Press/Lewis Publishers) and *Marketing Yourself With Technical Writing* (CRC Press/Lewis Publishers). (Complete list of publications is attached.)

*** Awards and Activities:**

-- Listed in Marquis': *Who's Who in America, Who's Who in the World, Who's Who in Science and Engineering, Who's Who in the South and Southwest, Who's Who in Finance and Industry.*
-- PHS Commendation Medal
-- EPA Bronze Medals (2)
-- Commendation Letters from EPA and U.S. Public Health Service Surgeon General
-- EPA "Special Achievement Award"
-- Nominated for 1990 Pulitzer Prize for American History
-- Nominated for 1990 North Carolina Mayflower Award
-- Board of Directors, Bennett Place State (NC) Historic Site
-- Licensed real estate broker (North Carolina)

II. DETAILED RESUME

General:

* Address: 3512 Angus Road, Durham, North Carolina 27705
* Phone: (919)-489-8810
* Fax: (413)-638-1336
* E-mail: *william.vatavuk@verizon.net*

* Date of birth: January 30, 1947
* Birthplace: Sharon, Pennsylvania
* Marital status: married (one child)

Education: Bachelor of Engineering in Chemical Engineering (First in class; Magna Cum Laude); Youngstown State University, Youngstown, Ohio (1969)

Experience:

January 1999 to present: President, Vatavuk Engineering, an engineering consulting firm providing services in air pollution control technology and cost analysis. Satisfied clients include:

- Air Sciences, Inc.
- *Chemical Engineering* magazine
- The McIlvaine Company
- Parsons, Behle & Latimer, LLP
- Pitney, Hardin, Kipp & Szuch, LLP
- RTP Environmental Associates

In addition, Vatavuk Engineering is presently under retainer to two other environmental law firms. However, confidentiality agreements preclude revealing the names of these firms.

May 1970 to December 1999: U.S. Public Health Service (USPHS) officer permanently detailed to U.S. Environmental Protection Agency from USEPA's creation (December 1970) through retirement (December 1999). From May 1970 to December 1970, assigned to USPHS, National Air Pollution Control Administration.

* September 1974 to December 1999: Senior chemical engineer, USEPA, Office of Air Quality Planning and Standards (OAQPS), Innovative Strategies and Economics Group, Research Triangle Park, North Carolina. Duties included:

  - Preparing guidance documents and acting as *the* consultant for OAQPS and EPA regional offices on the development, collection, review, and usage of cost data and cost-estimating methodologies, to provide uniformity of cost analyses. An example guidance document is the *OAQPS Control Cost Manual*, which provides data and procedures for sizing and costing air pollution control systems
  - Developing and presenting seminars and courses on control cost estimating to EPA personnel.
  - Providing air pollution control cost analysis support to national emissions and air quality standards development and preparation of guideline documents for State/local air pollution control agencies.

* October 1971 to September 1974: Chemical engineer, USEPA, OAQPS, National Air Data Branch. Duties included:

- Development and maintenance of computerized air pollution source test data system.
- Preparation of new and revised sections for *Compilation of Air Pollutant Emission Factors* ("AP-42")

* May 1970 to October 1971: Staff engineer, USEPA, Office of Regional Activities, Rockville, Maryland. Duties included:

- Preparation of reports for consultations to designate Federal air quality control regions (AQCR's)
- Representation of USEPA at AQCR consultations.

* June 1969 to May 1970: Chemical engineer, E.I. duPont de Nemours, Inc., Engineering Service Division (Wilmington, DE and Richmond, VA). Duties included:

- Participation in experimentation designed to improve Tyvek® product quality.
- Development of mathematical models for application to Tyvek® development problems.
- Participation in experimentation designed to improve quality of other textile fibers products.

* June to September 1968: USPHS COSTEP assignee. Assigned to USEPA, Office of Solid Waste, Cincinnati, Ohio. Duties included research for, and writing of, a report on oil waste disposal methods.

* June to September 1967: USPHS COSTEP assignee. Assigned to USEPA, Office of Air Programs, Cincinnati, Ohio. Duties included assisting in laboratory evaluation of sulfur dioxide monitoring instruments.

Professional Activities:

* USPHS Commissioned Officers Association, North Carolina Branch, past president (1975-76; 1984-85).

* Registered Professional Engineer (North Carolina, 1975 to present)

* Peer reviewer for two environmental journals (1984 to present)

* Listed in *Marquis' Who's Who in the World*

* Listed in *Marquis' Who's Who in Science and Engineering*

* Listed in *Marquis' Who's Who in the South and Southwest*

* Listed in *Marquis' Who's Who in Finance and Industry*

* Listed in *Who's Who Environmental Registry*

* Listed in *Dictionary of International Biography*

Publications: Two books, one book chapter, and approximately fifty journal articles and book reviews. (See publications list, below.)

Professional Awards (year awarded):

* PHS Commendation Medal (1996)

* OAQPS Human Resources Mini-Council Plaque (1990)

* Surgeon General's Commendation Letter (1988)

* EPA Bronze Medals (two: 1988 and 1989)

* EPA "Special Achievement Award" (1986)

* *Chemical Engineering* magazine "Certificates of Achievement" (1980-83; 1983; 1986)

* EPA Commendation Letter (1970)

*American Institute of Chemists Award (1969)

* DuPont academic scholarship (1968)

Other Activities and Awards:

* Author of *Dawn of Peace*, book nominated for 1990 Pulitzer Prize for History and North Carolina Mayflower Award

* Board of Directors, Bennett Place State (NC) Historic Site

* Licensed real estate broker (North Carolina)

LIST OF PUBLICATIONS

Books and Book Chapters:

* Vatavuk, William M. "Cost Engineering," in: *Handbook of Chemical Engineering Calculations* (Third Edition) Nicholas Chopey (ed). New York: McGraw-Hill (to be published late 2003/early 2004).

* Vatavuk, William M. *Marketing Yourself with Technical Writing.* Boca Raton, Florida: Lewis Publishers/CRC Press, 1992.

* Vatavuk, William M. *Estimating Costs of Air Pollution Control.* Boca Raton, Florida: Lewis Publishers/CRC Press, 1990.

* Vatavuk, William M. "Chapter 14, Control Costs," in: *Handbook of Air Pollution Control Technology*, Harold Englund and Seymour Calvert (eds.). New York: John Wiley and Sons, 1984.

* Problem and solution contributed to: Grant, Eugene L., Grant W. Ireson, and Richard S. Leavenworth. *Principles of Engineering Economy*, Seventh Edition. New York: John Wiley and Sons, 1982.

Journal Articles:

* Vatavuk, William M. "Updating the *CE* Plant Cost Index," *Chemical Engineering*, January 2002.[1]

* Vatavuk, William M. "The *OAQPS Control Cost Manual* vs. Levelized Cost Method," *Environmental Progress*, Winter 2000-2001.

* Vatavuk, William M. "Leveling the Air Pollution Control Cost Playing Field," *Environmental Protection*, March 2000.

* Vatavuk, William M. "Escalating Air Pollution Control Equipment Costs," *Environmental Progress*, Summer 1997.

* Vatavuk, William M. "Escalation Indexes for Air Pollution Control Costs," *Chemical*

[1] This article documents my revision of the Chemical Engineering Plant Cost Index (CEPCI) in 2001. The CEPCI has been a key element in the design of chemical process industry plants for since 1963. This revision of the CEPCI was the first made in 20 years.

Engineering, December 1995.[2]

* Vatavuk, William M., "Air Pollution Control: Escalate Equipment Costs," *Environmental Engineering World*, November-December 1995.

* Vatavuk, William M., "A Potpourri of Equipment Prices," *Chemical Engineering*, August 1995.

* Vatavuk, William M., "Get Yourself Published," *Chemical Engineering*, June 1992.

* Stone, D.K., S.K. Lynch, R.F. Pandullo, L.B. Evans, and W.M. Vatavuk, "Flares," *Journal of the Air and Waste Management Association.*

Part I. "Flaring Technologies for Controlling VOC-Containing Waste Streams," March 1992.
Part II. "Capital and Annual Costs," April 1992.

* Van der Vaart, D.R., William M. Vatavuk, and Albert H. Wehe. "Thermal and Catalytic Incinerators for the Control of VOCs," *Journal of the Air and Waste Management Association.*

Part I: January 1991
Part II: April 1991.

* Vatavuk, William M. "Pricing Equipment for Air-Pollution Control," *Chemical Engineering*, May 1990.

* Turner, James H., Philip A. Lawless, T. Yamamoto, David W. Coy, Gary P. Greiner, John D. McKenna, and William M. Vatavuk. "Sizing and Costing of Electrostatic Precipitators," *Journal of the Air Pollution Control Association*:

Part I. "Sizing Considerations," April 1988.
Part II. "Costing Considerations," May 1988.

* Turner, James H., Andrew S. Viner, Richard E. Jenkins, William M. Vatavuk, and John D. McKenna. "Sizing and Costing of Fabric Filters," *Journal of the Air Pollution Control Association:*

Part I. "Sizing Considerations," June 1987.
Part II. "Costing Considerations," September 1987.

* Katari, Vishnu S., William M. Vatavuk, and Albert H. Wehe. "Incineration Techniques for Control of Volatile Organic Compound Emissions," *Journal of the Air Pollution Control Association:*

Part I. "Fundamentals and Process Design Considerations," January 1987.

---

[2] Updates of these escalation indexes (the "Vatavuk Air Pollution Control Cost Indexes") are published in every issue of Chemical Engineering.

Part II. "Capital and Annual Operating Costs," February 1987.

* Vatavuk, William M. "How Significant Are *Your* Figures?" *Chemical Engineering,* August 18, 1986.

* Vatavuk, William M. "IRAs: How Good Are They Really?" *Chemical Engineering*, August 8, 1983.

* Vatavuk, William M. "Interpolating on Logarithmic Coordinates," *Chemical Engineering*, March 9, 1981.

* Vatavuk, William M. and Robert B. Neveril. "Estimating Costs of Air-Pollution Control Systems," *Chemical Engineering.*

This is a series of articles consisting of *eighteen* parts:

Part I. "Parameters for Sizing Systems," October 6, 1980.
Part II. "Factors for Estimating Capital and Operating Costs," November 3, 1980.
Part III. "Sizing and Cost-Estimating Capture Hoods," December 1, 1980.
Part IV. "Estimating the Size and Cost of Ductwork," December 29, 1980.
Part V. "Estimating the Size and Cost of Gas Conditioners," January 26, 1981.
Part VI. "Estimating the Costs of Dust-Removal and Water-Handling Equipment," March 23, 1981.
Part VII. "Estimating the Costs of Fans and Accessories," May 18, 1981.
Part VIII. "Estimating Costs of Exhaust Stacks," June 15, 1981.
Part IX. "Costs of Electrostatic Precipitators," September 7, 1981.
Part X. "Estimating the Size and Cost of Venturi Scrubbers," November 30, 1981.
Part XI. "Estimating the Size and Cost of Baghouses," March 22, 1982.
Part XII. "Estimate the Size and Cost of Incinerators," July 12, 1982.
Part XIII. "Costs of Gas Absorbers," October 4, 1982.
Part XIV. "Costs of Carbon Adsorbers," January 24, 1983.
Part XV. "Costs of Flares," February 21, 1983.
Part XVI. "Costs of Refrigeration Systems," May 16, 1983.
Part XVII. "Particle Emissions Control," April 2, 1984.
Part XVIII. "Gaseous Emissions Control," April 30, 1984.

(**Note:** Most of these 18 articles have been reprinted in the *Encyclopedia of Chemical Processing and Design* [John J. McKetta, ed.] and/or *Modern Cost Engineering: Methods and Data, Volume II* [Jay Matley, ed.].)

* Vatavuk, William M. "Levelized Interest Payments," *Chemical Engineering*, June 2, 1980.

Technical Paper:

* Vatavuk, William M., and Louis Theodore. "A Comprehensive Technique for Calculating Particulate Control Device Efficiencies Utilizing Particle Size Distributions," *Proceedings of the Second National Conference on Energy and the Environment*, November 13-15, 1974.

Book Reviews:

* Review of (Que Hee, Shane S. *Hazardous Waste Analysis.* Rockville, MD: Government Institutes Division, ABS Group, 1999). *Chemical Engineering*, March 2001.

* Review of (Chou, Jack. *Hazardous Gas Monitors: A Practical Guide to Selection, Operation, and Application.* Mendham, NJ: Scitech Publishing, 1999). Chemical Engineering, August 2000.

* Review of (Jones, Byron W. *Inflation in Engineering Economic Analysis.* New York: John Wiley and Sons, 1982). *Chemical Engineering*, December 13, 1982.

* Review of (Humphreys, Kenneth K. and Sidney Katell. *Basic Cost Engineering.* New York: Marcel Dekker, 1980). *Chemical Engineering*, October 5, 1981.

* Review of (Peters, Max S., and Klaus D. Timmerhaus. *Plant Design and Economics for Chemical Engineers.* New York: McGraw-Hill, 1980.) *The Engineering Economist*, Fall 1981.

* Review of (Chauvel, Alain et al. of the Institut Francais du Petrole. *Manual of Economic Analysis of Chemical Processes.* New York: McGraw-Hill, 1980). *Chemical Engineering*, May 18, 1981.

* Review of (Levenspiel, Octave. *The Chemical Reactor Omnibook* and *The Chemical Reactor Minibook.* Corvallis, Oregon: Oregon State University, 1979). *Chemical Engineering*, February 11, 1980.

ATTACHMENT 2

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 3 .

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Municipal solid waste (MSW) generated in the Lee County area is combusted by the facility to generate thermal energy and heat water producing steam. This steam is used to power an electrical generator and produce electricity that is sold to the power grid. The MSW is rated at 5,000 Btu/pound under the PPSA Conditions of Certification Case Number PA90-30.		
2. Source Classification Code (SCC): 50100105	3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 27.5	5. Maximum Annual Rate: 240,900	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 10
10. Segment Comment (limit to 200 characters): Lee County proposes that the language under Condition A.10.1 (Allowable Fuels) of their current Title V operating permit be used for Unit 3 to establish the fuel slate for operation of the proposed MWC Unit 3. Please see attached language from the current Title V air permit for reference.		

Segment Description and Rate: Segment 2 of 3 .

1. Segment Description (Process/Fuel Type) (limit to 500 characters): The combustion of natural gas in auxiliary burners during periods of boiler start-up, shutdown, or malfunction. During periods of start-up, the auxiliary burners are utilized to preheat the boiler prior to the combustion of MSW. During shutdown, the auxiliary heaters are used to ensure proper combustion of the last remaining MSW in the grate after the MSW feed has been cut-off and aid in the reduction of CO and VOCs. (continued below)		
2. Source Classification Code (SCC): 50190006	3. SCC Units: Million Cubic Feet Burned	
4. Maximum Hourly Rate: 0.09804	5. Maximum Annual Rate: 236	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1020
10. Segment Comment (limit to 200 characters): (Continued from above) During periods of malfunction, the burners are used to ensure proper boiler operation and aid in reducing CO and VOC emissions. Data in Fields 2 through 9 above relate to natural gas combustion.		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 3 of 3.

1. Segment Description (Process/Fuel Type) (limit to 500 characters): The combustion of propane gas in auxiliary burners during periods of boiler start-up, shutdown, or malfunction. During periods of start-up, the auxiliary burners are utilized to preheat the boiler prior to the combustion of MSW. During shutdown, the auxiliary heaters are used to ensure proper combustion of the last remaining MSW in the grate after the MSW feed has been cut-off and aid in the reduction of CO and VOCs. (continued below)		
2. Source Classification Code (SCC): 50190010	3. SCC Units: Thousand Gallons Burned	
4. Maximum Hourly Rate: 1.0929	5. Maximum Annual Rate: 2633	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 91.5
10. Segment Comment (limit to 200 characters): (Continued from above) During periods of malfunction, the burners are used to ensure proper boiler operation and aid in reducing CO and VOC emissions. Data in Fields 2 through 9 above relate to propane gas combustion.		

Segment Description and Rate: Segment ____ of ____.

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Language of Allowable Fuels ("Fuel Slate") from Lee County Energy Recovery Facility Title V Permit (Permit Number 0710119-001-AV), Condition A.10.1.

Allowable Fuels. The only fuels allowed to be burned in the MWC units are solid wastes allowed by this permit, and natural gas and propane as auxiliary fuels. Other wastes shall not be burned without written prior approval from the Department. Lee County shall minimize emissions of mercury through a battery collection program. Chromium compounds shall not be used as an additive in the cooling tower water.

The primary fuel for the facility is municipal solid waste (MSW), including the items and materials that fit within the definition of MSW contained in either 40 CFR 60.51b or Section 403.706(5), Florida Statutes (1995).

Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW which are described below. However, the facility shall not burn:

(a) those materials that are prohibited by state or federal law;
(b) those materials that are prohibited by this permit;
(c) lead acid batteries;
(d) hazardous waste;
(e) nuclear waste;
(f) radioactive waste;
(g) sewage sludge;
(h) explosives;
(i) beryllium-containing waste, as defined in 40 CFR 61, Subpart C.

Further, the facility shall not knowingly burn:

(j) nickel-cadmium batteries pursuant to Section 403.7192(3);
(k) mercury containing devices and lamps pursuant to Sections 403.7186(2) & (3);
(l) untreated biomedical waste from biomedical waste generators regulated pursuant to Chapter 64E-16, F.A.C., and from other similar generators (or sources); and
(m) segregated loads of biological waste.

{Permitting Note: See Appendix BW (of Title V Permit), Biomedical Waste Definitions, for definitions of what constitutes biomedical waste.}

The fuel may be received either as a mixture or as a single-item stream (segregated load) of discarded materials. If the facility intends to use an authorized fuel that is segregated non-MSW material, the fuel shall be either:

(a) well mixed with MSW in the refuse pit; or
(b) alternately charged with MSW in the hopper.

The facility operator shall prepare and maintain records concerning the description and quantities of all segregated loads of non-MSW material which are received and used as fuel at the facility,

and subject to percentage weight limitations, below. For the purposes of this permit, a segregated load is defined to mean a container or truck that is almost completely or exclusively filled with a single item or homogeneous composition of waste material, as determined by visual observation.

To ensure that the facility's fuel does not adversely affect the facility's combustion process or emissions, the facility operator shall:

(a) comply with good combustion operating practices in accordance with 40 CFR 60.53b;
(b) install, operate and maintain continuous emissions monitors (CEMS) for oxygen, carbon monoxide, sulfur dioxide, oxides of nitrogen and temperature in accordance with 40 CFR 60.58b; and
(c) record and maintain the CEMS data in accordance with 40 CFR 60.59b.

These steps shall be used to ensure and verify continuous compliance with the emissions limitations in this permit.

Natural gas or propane may be used as fuel during warm-up, startup, shutdown, and malfunction periods, and at other times when necessary and consistent with good combustion practices.

Subject to the conditions and limitations contained in this permit, the following other solid waste may be used as fuel at the facility:

(a) Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons and microfilm);
(b) Contraband which is being destroyed at the request of appropriately authorized local, state or federal governmental agencies, provided that such material is not an explosive, a propellant, a hazardous waste, or otherwise prohibited at the facility. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;
(c) Wood pallets, clean wood, and land clearing debris;
(d) Packaging materials and containers;
(e) Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves;
(f) Rugs, carpets, and floor coverings, but not asbestos-containing materials or polyethylene or polyurethane vinyl floor coverings; or
(g) The predominantly combustible fraction of sorted construction and demolition debris. Sorting of mixed construction and demolition debris at the facility shall occur on the tipping floor or at another location approved by the Department.

Subject to the conditions and limitations contained in this permit, waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel, except as provided in the following sentence. Subsequent to an initial test burn scheduled to allow Department

representatives to observe, while firing 5% (by weight) tires at each of the combustion units while operating each unit at capacity that demonstrates via the CEMS that each unit can comply with the emission limits for pollutants monitored by the CEMS while firing 5% (by weight) tires, this quantity limitation shall rise from 3% to 5%. Compliance with this limitation shall be determined on a calendar monthly basis.

Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e. the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined on a calendar monthly basis.

(a) Unsorted mixtures of construction and demolition debris, or that fraction of sorted construction and demolition debris that is predominantly non-combustible. Non-combustible construction and demolition debris shall include concrete, metals, gypsum products, plaster, rock, brick, and masonry.
(b) Oil spill debris from aquatic, coastal, estuarine or river environments. Such items or materials include but are not limited to rags, wipes, and absorbents.
(c) Items suitable for human, plant or domesticated animal use, consumption or application where the item's shelf-life has expired or the generator wishes to remove the items from the market. Such items or materials include but are not limited to off-specification or expired consumer products, pharmaceuticals, medications, health and personal care products, cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.
(d) Consumer-packaged products intended for human or domesticated animal use or application but not consumption. Such items or materials include but are not limited to carpet cleaners, household or bathroom cleaners, polishes, waxes and detergents.
(e) Waste materials that:
    (i) are generated in the manufacture of items in categories (c) or (d), above and are functionally or commercially useless (expired, rejected or spent); or
    (ii) are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.
(f) Waste materials that contain oil from:
    (i) the routine cleanup of industrial or commercial establishments and machinery; or
    (ii) spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.
(g) Used oil and used oil filters. Used oil containing a PCB concentration equal or greater than 50 ppm shall not be burned, pursuant to the limitations of 40 CFR 761.20(e).

{Permitting Note: Waste materials specifically authorized in paragraphs (a) – (g), above, do not require Department approval.}

(h) Waste materials generated by manufacturing, industrial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW, subject to prior approval of the Department.

ATTACHMENT 3

LANDERS & PARSONS, P.A.
ATTORNEYS AT LAW

DAVID S. DEE
DIANE K. KIESLING
JOSEPH W. LANDERS, JR.
JOHN T. LaVIA, III
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December 23, 2002

Mr. Hamilton S. Oven, Jr.
Administrator
Siting Coordination Office
Department of Environmental Protection
2600 Blair Stone Road
Twin Towers Office Building
Tallahassee, Florida 32399

Re: Notice of Filing Lee County's Supplemental Application for Unit 3; DEP File No. 90-30SA1; PSD-FL-151 and 0710119-001-AP

Dear Mr. Oven:

Enclosed for your file is an "Affidavit of Publication" and a copy of a notice that was published in the Ft. Myers News-Press concerning the supplemental application for Unit 3 of the Lee County Solid Waste Energy Recovery Facility. This PPSA notice also constitutes the County's notice of filing an application for a Prevention Significant Deterioration permit for Unit 3.

Please call me if you have any questions.

Sincerely,

David S. Dee

Enclosure

cc: A. A. Linero (w/attachments)
Lindsey Sampson
Sam Rosania

NEWS-PRESS

Published every morning – Daily and Sunday
Fort Myers, Florida

Affidavit of Publication

STATE OF FLORIDA
COUNTY OF LEE

Before the undersigned authority, personally appeared
Kieanna Henry
who on oath says that he/she is the
Asst. Legal Clerk of the News-Press, a daily newspaper, published at Fort Myers, in Lee County, Florida; that the attached copy of advertisement, being a
Display
In the matter of **Power Plant Facility**
in the _____ Court
was published in said newspaper in the issues of
December 16, 2002

Affiant further says that the said News-Press is a paper of general circulation daily in Lee, Charlotte, Collier, Glades and Hendry Counties and published at Fort Myers, in said Lee County, Florida and that said newspaper has heretofore been continuously published in said Lee County; Florida, each day, and has been entered as a second class mail matter at the post office in Fort Myers in said Lee County, Florida, for a period of one year next preceding the first publication of the attached copy of the advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Kieanna Henry

Sworn to and subscribed before me this

16th day of December 2002 by

Kieanna Henry
personally known to me or who has produced

_____

as identification, and who did or did not take an oath.

Notary Public Brenda Leighton

Print Name _____

My commission Expires:

Brenda Leighton
MY COMMISSION # CC808905 EXPIRES
February 14, 2003
BONDED THRU TROY FAIN INSURANCE, INC

LEE COUNTY
SOUTHWEST FLORIDA

NOTICE OF APPLICATION FOR CONSTRUCTION AND O
TO A POWER PLANT FACILITY LOCATED NEAR FORT MYE

A supplemental application (numbered 90-30SA1) has been filed by Lee County, for c and operation of an addition to an existing electrical power plant, known as the Lee Co Facility (Facility). The supplemental application is now pending before the Division of A No. 02-4573EPP), prior to action by the Governor and Cabinet, pursuant to the Florid Chapter 403, Part II, Florida Statutes (F.S.). The Facility currently consists of two municipal Units 1 and 2). Each unit burns approximately 600 tons per day (tpd) of municipal approximately 20 megawatts (nominal) of electricity. The proposed addition to the Fac (nominal) MWO unit (i.e., Unit 3), which will generate another 20 megawatts (nominal) of el includes associated facilities, structures and appurtenances. The Facility is locate approximately 2.5 miles east of the intersection of Interstate 75 and State Road 82 on the

The County's supplemental application is available for public inspection during norm locations:

Department of Environmental Protection
Siting Coordination Office
2600 Blair Stone Road, Suite 649
Twin Towers Office Building
Tallahassee, Florida 32399

Department of Environmental Protection
Ft. Myers Office
2295 Victoria Avenue, Suite 364
Ft. Myers, Florida 33901

Public Works Department
1500 Monroe Street, 4th Floor
Ft. Myers, Florida 33901

Ft. Myers/Lee County Public Library
2050 Central Avenue
Ft. Myers, Florida 33901

Cape Coral Library
921 S.W. 39th Terrace
Cape Coral, Florida 33914

East County Regional Library
881 Gunnery Road
Lehigh Acres, Florida 33917

South County Regional Library
21100 Three Oaks Parkway
Estero, Florida 33928

State agencies and local governments will be studying the supplemental applica recommendations on the proposed facility for the certification hearing. Interested individua application and bring matters of concern to the appropriate agency's attention as soon as p appropriate contact persons in the agencies may be obtained from Mr. Hamilton Oven, Jr., P Protection's Siting Coordination Office, Suite 649, 2600 Blair Stone Road, Tallahassee, Florid

A public hearing on the effects of the construction and operation of Unit 3 on the prev be held within 150 days. Any person wishing to participate in the proceedings, either as a follow either Section 403.508(4) or (5), F.S. Under Section 403.508(4)(a), F.S., the parties to t

1. The applicant, Lee County.
2. The Florida Public Service Commission.
3. The Florida Department of Community Affairs.
4. The Florida Fish and Wildlife Conservation Commission.
5. The South Florida Water Management District.
6. The Florida Department of Environmental Protection.
7. The Southwest Florida Regional Planning Council.

The remainder of Section 403.508(4), F.S., states:

(b) Any party listed in paragraph (a) [Section 403.508(4)(a)] other than the Departme right to participate in these proceedings. If such listed party fails to file a notice before the 90th day prior to the certification hearing, such party shall be deemed party.

(c) Upon the filing with the administrative law judge of a notice of intent to be a party of the land use hearing, the following shall also be parties to the proceeding:

1. Any agency not listed in paragraph (a) [Section 403.508(4)(a)] as to matters with
2. Any domestic nonprofit corporation or association formed, in whole or in p natural beauty, to protect the environment, personal health, or other biological valu promote consumer interests, to represent labor, commercial or industrial groups planning or orderly development of the area in which the proposed electrical power

(d) Notwithstanding paragraph (e) [Section 403.508(4)(e)], failure of an agency describe 403.508(4)(c)1., to file a notice of intent to be a party within the time provided here right of that agency to participate as a party in the proceeding.

(e) Other parties may include any person, including those persons enumerated in par who have failed to timely file a notice of intent to be a party, whose substantial determined by the proceeding and who timely file a motion to intervene pursuan rules. Intervention pursuant to this paragraph may be granted at the discretion of t judge and upon such conditions as he or she may prescribe any time prior to 30 da the certification hearing.

(f) Any agency, including those whose properties or works are being affected pursuan made a party upon the request of the department or the applicant.

Failure to follow the requirements and meet the timetables set forth in Section 403.508(4), any right a person may have to participate as a party to this proceeding.

Section 403.508(5), F.S., states:

When appropriate, any person may be given an opportunity to present oral or designated administrative law judge. If the designated administrative law judge proposes to then all parties shall be given an opportunity to cross-examine or challenge or rebut such com

Any notice of intent to be a party or motion to intervene must be sent to:

J. Lawrence Johnston
Administrative Law Judge
Division of Administrative Hearings
The Desoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-3060

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LEE COUNTY

NOTICE OF APPLICATION FOR CONSTRUCTION AND OPERATION OF AN ADDITION TO A POWER PLANT FACILITY LOCATED NEAR FORT MYERS, IN LEE COUNTY, FLORIDA

A supplemental application (numbered 90-30SA1) has been filed by Lee County for certification to authorize construction and operation of an addition to an existing electrical power plant, known as the Lee County Solid Waste Energy Recovery Facility (Facility). The supplemental application is now pending before the Division of Administrative Hearings (DOAH Case No. 02-4570EPP), prior to action by the Governor and Cabinet, pursuant to the Florida Electrical Power Plant Siting Act, Chapter 403, Part II, Florida Statutes (F.S.). The Facility currently consists of two municipal waste combustor (MWC) units (i.e., Units 1 and 2). Each unit burns approximately 600 tons per day (tpd) of municipal solid waste (MSW) and generates approximately 20 megawatts (nominal) of electricity. The proposed addition to the Facility will consist of another 600 tpd (nominal) MWC unit (i.e., Unit 3) which will generate another 20 megawatts (nominal) of electricity. The proposed project also includes associated facilities, structures, and appurtenances. The Facility is located in unincorporated Lee County approximately 2.5 miles east of the intersection of Interstate 75 and State Road 82 on the north side of [illegible]

The County's supplemental application is available for public inspection during normal business hours at the following locations:

Department of Environmental Protection
Siting Coordination Office
2600 Blair Stone Road, Suite 649
Twin Towers Office Building
Tallahassee, Florida 32399
[illegible]

[illegible] state agencies and local governments will be studying the supplemental application and preparing recommendations on the proposed facility for the certification hearing. Interested individuals should review the supplemental application and bring matters of concern to the appropriate agency's attention as soon as possible. Information regarding the appropriate contact persons in the agencies may be obtained from Mr. Hamilton Oven, Jr., at the Department of Environmental Protection, Siting Coordination Office, Suite 649, 2600 Blair Stone Road, Tallahassee, Florida 32399, at (850) [illegible]

A public hearing on the effects of the construction and operation of Unit 3 on the previously certified site is expected to be held within 150 days. Any person wishing to participate in the proceedings, either as a party or without party status, must follow Section 403.508(4) or (5), F.S. Under Section 403.508(4)(a), F.S., the parties to the proceeding shall include:

1. The applicant, Lee County.
2. The Florida Public Service Commission.
3. The Florida Department of Community Affairs.
4. The Florida Fish and Wildlife Conservation Commission.
5. The South Florida Water Management District.
6. The Florida Department of Environmental Protection.
7. The Southwest Florida Regional Planning Council.

The remainder of Section 403.508(4), F.S., states:

(b) Any party listed in paragraph (a) [Section 403.508(4)(a)] other than the Department or the applicant may waive its right to participate in these proceedings. If such listed party fails to file a notice of its intent to be a party on or before the 90th day prior to the certification hearing, such party shall be deemed to have waived its right to be a party.

(c) Upon the filing with the administrative law judge of a notice of intent to be a party at least 15 days prior to the date of the land use hearing, the following shall also be parties to the proceeding:

1. Any agency not listed in paragraph (a) [Section 403.508(4)(a)] as to matters within its jurisdiction.

2. Any domestic nonprofit corporation or association formed, in whole or in part, to promote conservation or natural beauty; to protect the environment, personal health, or other biological values; to preserve historical sites; to promote consumer interests; to represent labor, commercial or industrial groups; or to promote comprehensive planning or orderly development of the area in which the proposed electrical power plant is to be located.

(d) Notwithstanding paragraph (e) [Section 403.508(4)(e)], failure of an agency described in subparagraph (c)(1) [Section 403.508(4)(c)1.] to file a notice of intent to be a party within the time provided herein shall constitute a waiver of the right of that agency to participate as a party in the proceeding.

(e) Other parties may include any person, including those persons enumerated in paragraph (c)[Section 403.508(4)(c)] who have failed to timely file a notice of intent to be a party, whose substantial interests are affected and being determined by the proceeding and who timely file a motion to intervene pursuant to chapter 120 and applicable rules. Intervention pursuant to this paragraph may be granted at the discretion of the designated administrative law judge and upon such conditions as he or she may prescribe any time prior to 30 days before the commencement of the certification hearing.

(f) Any agency, including those whose properties or works are being affected pursuant to Section 403.509(4), shall be made a party upon the request of the department or the applicant.

Failure to follow the requirements and meet the timetables set forth in Section 403.508(4), F.S., shall constitute a waiver of any right a person may have to participate as a party to this proceeding.

Section 403.508(5), F.S., states:

When appropriate, any person may be given an opportunity to present oral or written communications to the designated administrative law judge. If the designated administrative law judge proposes to consider such communications, then all parties shall be given an opportunity to cross-examine or challenge or rebut such communications.

Any notice of intent to be a party or motion to intervene must be sent to:

J. Lawrence Johnston
Administrative Law Judge
Division of Administrative Hearings
The Desoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-3060

The Desoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-3060

and must contain the following: reference to the application number; the case number of the Division of Administrative Hearings; the name, address, and telephone number of the agency or person wishing to intervene; and allegations sufficient to demonstrate the agency or person is entitled to participate in the proceeding. The notice or motion must be sent by mail to the applicant and to all parties. (A list of parties may be obtained from the Department's Office of Siting Coordination at the address above.) Those wishing to intervene in these proceedings, unless appearing on their own behalf, must be represented by an attorney or other person who can be determined to be qualified to appear in administrative proceedings pursuant to Chapter 120, F.S., or Rule 28-106.106, F.A.C.

In regard to variances or other relief, Section 403.511(2), F.S., requires that each party shall notify the applicant and other parties at least 60 days prior to the certification hearing of any nonprocedural requirements not specifically listed in the application from which a variance, exemption, exception, or other relief is necessary in order for the Board to certify any electrical power plant proposed for certification. Rule 62-17.133(2), F.A.C. similarly requires that agencies identify in their reports any such needed variances or other relief. Failure to provide such notice shall be treated as a waiver from nonprocedural requirements of the Department or any other agency. However, no variance shall be granted from standards or regulations of the Department applicable under any federally delegated or approved permit program, except as expressly allowed in such program.

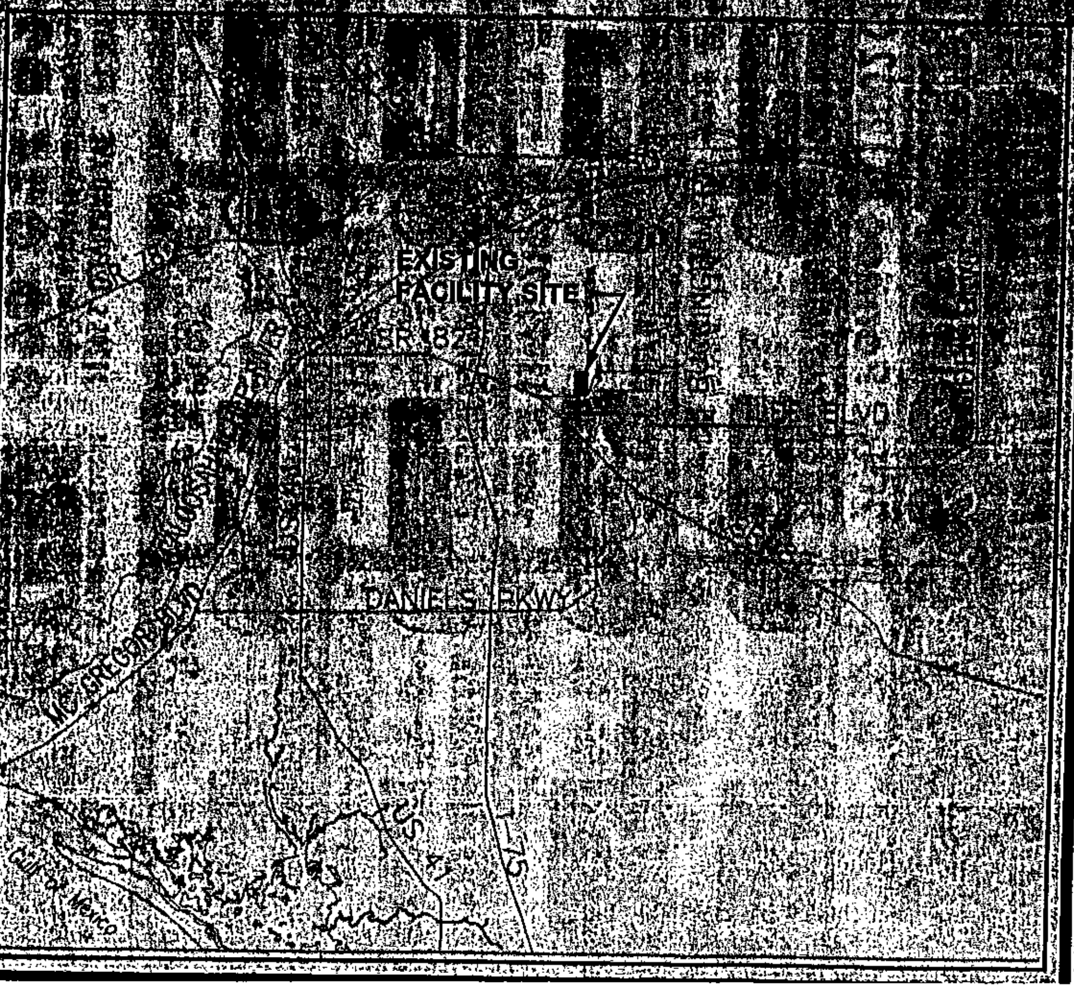
Sections 403.511(1) and (2), F.S., state:

> (1) Subject to the conditions set forth therein, any certification signed by the Governor shall constitute the sole license of the state and any agency as to the approval of the site and the construction and operation of the proposed electrical power plant, except for the issuance of department licenses required under any federally delegated or approved permit program and except as otherwise provided in subsection (4) [403.511(4)].
>
> (2)(a) The certification shall authorize the applicant named therein to construct and operate the proposed electrical power plant, subject only to the conditions of certification set forth in such certification, and except for the issuance of department licenses or permits required under any federally delegated or approved permit program.
>
> (b) Except as provided in subsection (4) [403.511(4)], the certification may include conditions which constitute variances, exemptions, or exceptions from nonprocedural requirements of the department or any agency which were expressly considered during the proceeding unless waived by the agency as provided below and which otherwise would be applicable to the construction and operation of the proposed electrical power plant. No variance, exemption, exception, or other relief shall be granted from a state statute or rule for the protection of endangered or threatened species, aquatic preserves, Outstanding National Resource Waters, or Outstanding Florida Waters or for the disposal of hazardous waste, except to the extent authorized by the applicable statute or rule or except upon a finding by the siting board that the public interests set forth in Section 403.502 in certifying the electrical power plant at the site proposed by the applicant overrides the public interest protected by the statute or rule from which relief is sought. Each party shall notify the applicant and other parties at least 60 days prior to the certification hearing of any nonprocedural requirements not specifically listed in the application from which a variance, exemption, exception, or other relief is necessary in order for the board to certify any electrical power plant proposed for certification. Failure of such notification by an agency shall be treated as a waiver from nonprocedural requirements of the department or any other agency. However, no variance shall be granted from standards or regulations of the department applicable under any federally delegated or approved permit program, except as expressly allowed in such program.

Issues relating to [illegible] addressed in the certification proceeding. These issues may involve Lee County, the [illegible] Water Management District [illegible]

[illegible]

This public notice [illegible] Coastal Zone Management [illegible] Consistency Coordinator, Department of Community Affairs [illegible]



EPA REGION 2 United States Environmental Protection Agency
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EPA INTENDS TO MAKE CHANGES TO DRAFT PREPA RE-POWERING PERMIT

FOR RELEASE: Thursday, January 20, 2000

(#00015) San Juan, Puerto Rico – In response to public concerns and new information about the best way to control nitrogen oxide emissions from oil-fired power plants, the **U.S. Environmental Protection Agency (EPA) intends to make changes to a proposed permit for the Puerto Rico Electric Power Authority's (PREPA) re-powering project in San Juan. The draft permit, released in March 1999**, would allow PREPA to increase the electric generating capacity at its San Juan Power Plant and lower total emissions by replacing two, decades-old, 44 megawatt boilers with two 232-megawatt combined cycle turbines. **The intended changes to the draft permit will require PREPA to replace one of the two nitrogen control technologies proposed for installation on the new turbines with special burners to be installed on four old boilers that will remain in service.** While this change will increase nitrogen oxide emissions over the levels under the original draft permit, the emissions will still be at lower levels than those from the old plant.

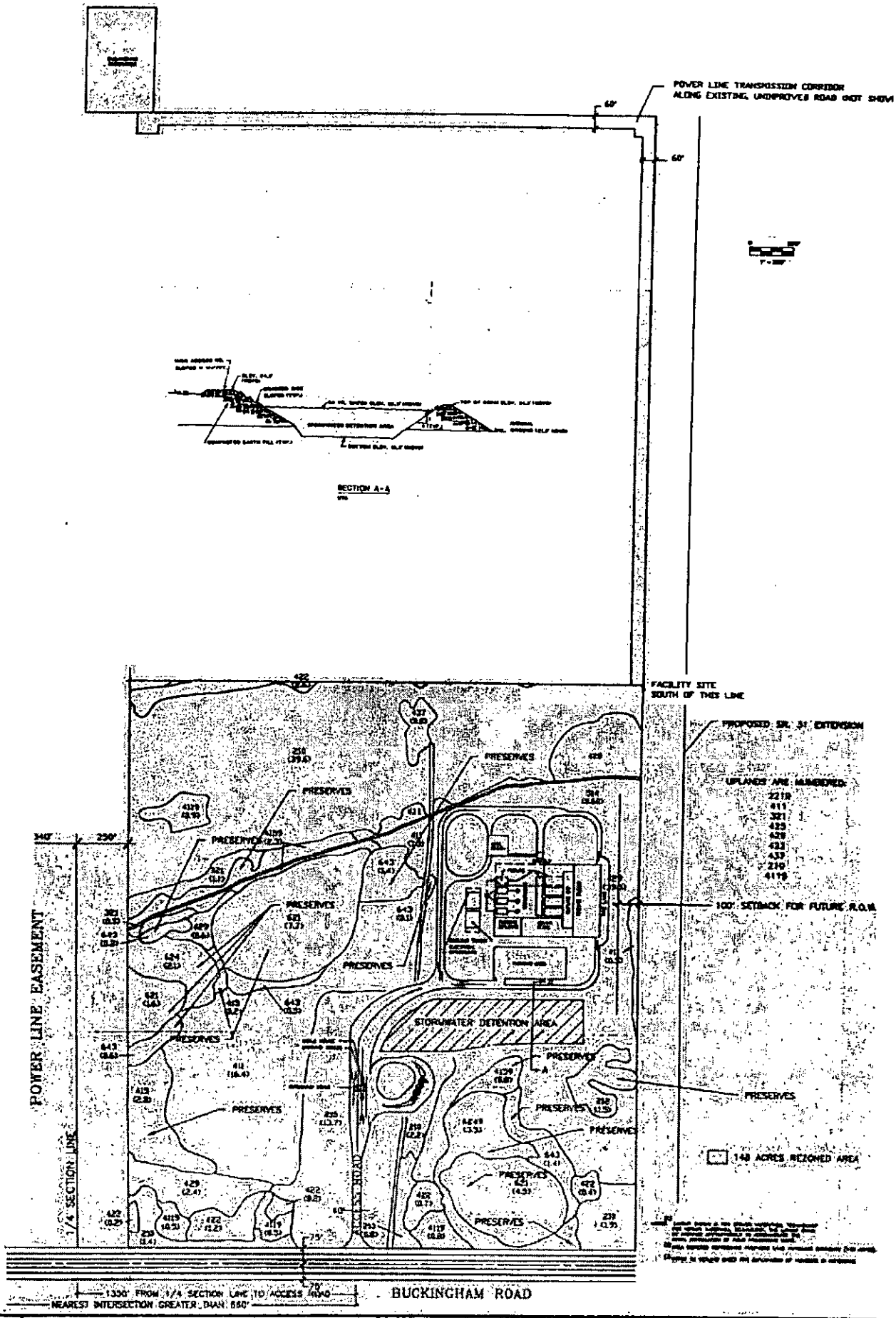
"An additional benefit of making this change in the control technology requirement is that there will be a decrease, from the original proposed permit, in two pollutants of particular concern in the San Juan area – sulfuric acid mist and fine particles," said Jeanne M. Fox, EPA Region 2 Administrator.

In its draft permit, proposed in March 1999, EPA included Selective Catalytic Reduction (SCR), which uses an ammonia injection system to reduce nitrogen oxide emissions, and steam injection. However, new data indicate that, on oil-fired turbines, SCR cannot consistently achieve the expected reductions in nitrogen oxide emissions. As a result, EPA is removing the SCR requirement and will instead require PREPA to install special burners, called "low NOx burners," on the four old boilers at its facility. PREPA would still use steam injection on its turbines.

"After carefully considering the feasibility of using SCR on an oil-fired plant and reviewing public comments, the choice was clear," said Jeanne M. Fox, EPA Regional Administrator. "We want to ensure that PREPA uses the most reliable pollution controls. Steam injection systems and low NOx burners are both tried and true nitrogen oxide controls."

For more information contact:

Carl Soderberg
EPA Caribbean Environmental Protection Division
1492 Ponce De Leon Avenue



LEE COUNTY ENERGY RECOVERY FACILITY SITE LAYOUT MASTER CONCEPT PLAN

CAMP DRESSER & McKEE INC.

CDM

OFFICE OF THE HEARING EXAMINER, LEE COUNTY, FLORIDA

HEARING EXAMINER RECOMMENDATION

REZONING: CASE 90-8-14-DCI-4
APPLICANT: LEE COUNTY BOARD OF COUNTY COMMISSIONERS, represented by the DEPARTMENT OF UTILITIES, in reference to LEE COUNTY ENERGY RECOVERY FACILITY
HEARING DATE: August 14, 1990

I. APPLICATION:

This matter came before the Lee County Hearing Examiner as an Application for Rezoning including a Development of County Impact (DCI) pursuant to Lee County Ordinance #88-30.

Filed by LEE COUNTY BOARD OF COUNTY COMMISSIONERS, c/o GEORGE E. REILLY, P.E., Administrative Director, DEPARTMENT OF LEE COUNTY UTILITIES, P.O. Box 398, Ft. Myers, FL 33902-0398 (Applicant/Agent).

Request is for a rezoning from AG-2 to Industrial Planned Development to permit the development of an energy recovery facility with buildings not to exceed 4 stories and 380 feet in height above average grade, on 148 total acres of land. The applicant proposes to develop an energy recovery process plant in the IPD district.

The subject property is located at 10500 Buckingham Road (from I-75, Exit 23, go east on Immokalee Road/SR 82 for 1-1/2 miles to Buckingham Road, go east approximately one [1] mile to the site), Tice, in Section 24, Township 44 South, Range 25 East, Lee County, Florida. (District #5)

II. STAFF REPORT AND RECOMMENDATION: APPROVE WITH CONDITIONS

The Department of Community Development Staff Report was presented at the hearing by Alvin "Chip" Block. The staff report is incorporated herein by this reference.

III. RECOMMENDATION OF HEARING EXAMINER: APPROVE WITH CONDITIONS

HEARING EXAMINER DISCUSSION: This rezoning application is for the Lee County Resource Recovery Facility, which is proposed for location on an AG-2 zoned, approximately 148 acre parcel along Buckingham Road. The parcel is not presently owned by Lee County, but is proposed for acquisition either by purchase or through condemnation proceedings if this rezoning application is ultimately approved.

The site selection process for this particular project was quite extensive and encompassed the entire county. From a detailed examination of the back-up materials supplied, and from the testimony received during the hearing of this application, the undersigned Hearing Examiner is satisfied that, given the selection criteria applied, this site is the most desirable location for the proposed facility, from a standpoint of economics and practicability.

The scope of the undersigned Hearing Examiner's review of this application was limited to factors and criteria specifically related to the proposed use on the particular parcel as related to rezoning. The desirability of the specific type of facility proposed as compared to alternatives that may be available for the accomplishment of the generalized goal of solid waste treatment or disposal are not addressed herein, as this is a policy matter not properly subject to this review.

Of the considerations specified under Section 900.02.C.2.a of the Lee County Zoning Ordinance as being applicable to rezoning request review, only compatibility with existing or planned uses and possible detrimental impacts to persons or property appear to the undersigned Hearing Examiner to be significant issues. A number of persons appeared in opposition to this application, and their expressed concerns seemed to center primarily on these two factors.

With regard to the compatibility issue, The Lee Plan allows uses such as are proposed in this application in all land use categories. The subject parcel is designated Rural and Resource Protection/Transition Area on the Future Land Use Map, and presently zoned AG-2. The zoning ordinance does not allow the specific use proposed in the AG-2 district by right, special exception or special permit, and, thus, rezoning is necessary to permit this particular use on the subject parcel.

Aesthetic compatibility with surrounding existing and anticipated uses has been addressed in the project's Master Concept Plan through the retention of significant areas of screening and buffering vegetation, structural placements, and architectural design so that the facility appears as pleasing as practicable (See rendering in Exhibit #30; copy attached). Additionally, the presence of relatively large areas of essentially vacant lands abutting the facility site serves to provide a very adequate perimeter use-buffer. These abutting lands are anticipated to remain essentially undeveloped over the long term. The only visually-impacting factor associated with the proposed project would be the 380 foot high stack, which will certainly be apparent for quite some distance in all directions. This, in itself is not considered an overriding negative consideration.

Assuming that the proposed facility will be operated in the manner described by the Applicant, nuisance factors related to noise, dust, and odor will be negligible to non-existant. The structurally enclosed mode of operation would seem to preclude adverse impacts in these respects.

The most vocal objections raised against the proposed project related to concerns about pollutant emissions resulting from the combustion of the waste in the facility. Specifically noted were strong objections to the additional heavy metal particulate emissions from the facility's stack. The Applicant has freely admitted that this facility will certainly add to the existing ambient air levels of a number of organic and metallic pollutants. Modeling studies indicate that this proposed facility will release approximately .006 lbs. of lead, .008 lbs. of mercury and .000000016 lbs. of Dioxin per ton of refuse processed.

The air pollution concern issue narrows to the question of whether the additional pollutants released into the air by this proposed facility reach a level where they can be considered a significant hazard or detriment to persons or property. The only objective criteria available to assess such pollutant levels have been generated by the various regulatory agencies of state and federal government. The primary sources of standards related to air pollution hazard levels are the U.S. Environmental Protection Agency (EPA) and the Florida Department of Environmental Regulation (DER). In most cases, DER limits track those of the EPA.

Assuming that the emission levels generated by computer modeling studies conducted by the Applicant are accurate, and that the data cited in the Applicant's back-up material showing measured emission levels from similar, existing facilities is factual, it is apparent the the proposed facility will emit pollutants to the atmosphere at levels well below those allowed by appropriate regulatory bodies. Thus, from a purely objective stand, this proposed facility will not pose a significant or unacceptable hazard, nuisance or other detriment to persons or property, in the opinion of the undersigned Hearing Examiner.

Those opposed to this application have advanced arguments that appear not to accept any further degradation of existing, ambient air pollution levels at all. This, in effect, rejects the risk analysis philosophy underlying the objective pollution level standards adopted by the noted governmental agencies. The embrace of such an argument is, of course, a policy determination beyond the scope of this review.

The undersigned Lee County Hearing Examiner recommends that the Lee County Board of County Commissioners APPROVE the Applicant's request for the real estate described in SECTION VII. LEGAL DESCRIPTION but that the approval be conditioned upon compliance with the conditions set out below in this document at SECTION IX. CONDITIONS OF RECOMMENDED APPROVAL BY HEARING EXAMINER and that the approval extends only to the Deviations approved by the Hearing Examiner at SECTION X. RECOMMENDATION OF HEARING EXAMINER CONCERNING DEVIATIONS.

IV. PUBLIC PARTICIPATION: The following persons appeared at the hearing or became "parties of record" in this case by submitting written materials:

ADDITIONAL APPLICANT'S REPRESENTATIVES:

1. Mike EINET (sp?), Camp Dresser & McKee, no address provided

2. David S. DEE, Attorney at Law, Carlton, Fields, Ward, Emmanuel, Smith & Cutler, P.A., P.O. Drawer 190, Tallahassee, FL 32302

3. Dan STROBRIDGE (sp?), Camp Dresser & McKee, no address provided

4. Nanette HALL, President, Florida Transportation Engineering, no address provided

5. Bill COX, Kevin Erwin Consulting Ecologists, no address provided

6. David OWEN, Assistant County Attorney, Lee County, P.O. Box 398, Ft. Myers, FL 33902-0398

FOR:

1. Edwin B. HUTZLER, 1429 Thistledown Way, Ft. Myers, FL 33901
Comment Card: Care must be taken that no toxic materials are consumed, and that sufficient periodic analysis of emissions are made to maintain originally programmed quality of them or increase purity as technology improves. I recommend approval of this facility if these safeguards can be maintained.

Testimony: Questioned Mr. Strobridge with regard to what safeguards would be put into effect to make sure that toxic items such as batteries were not put into the facility. And what would be the frequency of the tests for the emissions from the stack for purity, etc. He realizes there are real and potential hazards with the operation of this facility, but also realizes that we desperately need such a facility. We can't go on using the landfill or we will be a "county dump." Landfills depress the value of real estate. If safeguards can be instituted and maintained, in view of the necessity of this facility, he urges that the County put it into effect.

AGAINST:

1. Linda PARNELL, 1125 S.E. 23rd Terrace, Cape Coral, FL 33990
Comment Card: I am very concerned about the proposed "resource waste recovery" plant in specified agricultural zones, and disagree they are compatible. This rezoning will result in a short damaging term environmental impact as well as long term disastrous accumulation of heavy toxic metals that are non-recoverable from the water table.

Testimony: Concurs with the other speakers because of their scientific data and because they are well educated in environmental [illegible] the bottom line is that ultimately the recovery of resources begins with recycling. It makes sense. The recovery of toxins from the environment is absolutely impossible.

2. Lyle R. DANIELSON, 4930 S.W. 2nd Place, Cape Coral, FL 33914
Comment Card: Representing Caluse Group of Sierra Club. We are against incineration as a way of handling solid waste until such time that it can be guaranteed that no toxins will be allowed to escape. We are also concerned that no wetlands be destroyed or degraded. Recycling is the way to go. 380' height could just disperse any fallout in someone else's community. It could also be a danger to airports because of its height. Would we be required to have a certain amount of waste for this facility? We keep losing more & more habitat for wildlife. No negative impact on water or air?

Testimony: They are against incineration as a way to handle solid waste until such time that it can be guaranteed that no toxins will be allowed to escape. They are also concerned that no wetlands be destroyed or degraded. Recycling is the way to go. The 380 foot height could also disburse fallout to other communities. It will also be a danger to the airports. Questioned whether a certain amount of waste would be required for this facility. Some require a minimum amount and must get it from the old landfill or buy from other counties. Also questioned statements that this would not have a negative impact on water or air.

3. Kenneth CASE, 1620 Silverwood Ct., N. Ft. Myers, FL 33903
Comment Card: In an 4/16/90 letter to George Reilly, Director Lee County Utilities, Mr. Daniel Strobridge of Camp Dresser & McKee stated that among the gaseous "non-regulated pollutants" emitted by the proposed mass burn facility, would be 1.68 tons of lead and 1.68 tons of mercury per year. In public statements to the local media, Mr. Reilly said emissions standards are tighter than average power plants. The Daily Breeze (5/9/90) states this is mis-information. Florida is presently in a crisis situation in lead and mercury pollution. You and we are morally obligated to resist this additional pollution load on our water, agriculture and cattle resources.

Testimony: Interested citizen and pilot. The Buckingham Airport, where Mosquito Control is based, has its runways just off the edge of this site. A building with a height of 380' could be a hazard and should be addressed by the FAA. He pointed out the location of the airports. Anyone can fly into the Buckingham Airport.

This operation has a very large, deep pit in the ground where the trash is dumped. The water table in Florida is very close to the surface. When negative pressure is applied to this pit, it will cause suction. If there are any flaws in the system it will pull water into the pit. There are also ground level ebbs and tides during the different seasons. They are taking a chance on pushing these pollutants into the water table. Water in Florida is very critical.

With regard to the ash that is produced, statements have been made that it is harmless. He stated that he had an entire folder of material regarding this ash and the formation of trace toxic metal emissions resulting from the incineration. It includes a report from EPA (10/5/87) regarding the "export" of ash from Philadelphia to Panama for use as a sub base for roads. There were concerns over the potential endangerment to the public's health and the environment.

Lead is one of the problems in the water supply. He mentioned the recent case at the White House with the President's dog and lead poisoning. It has been mentioned that there will be an impact from the construction, but he felt this impact wouldn't be very much. Most of the impact would come from the mercury and the lead getting in the [illegible], and the foodchain.

He submitted a Tampa Tribune article from 7/3/89 with regard to burning fossil fuels, garbage with batters, paint, etc. and the release of mercury. This is an agricultural area nearby. He also submitted a release from the Dept. of Health and Rehabilitative Services with regard to limiting consumption of large mouth bass in Florida because of high accumulations of mercury. Another article submitted referred to the dwindling Florida Panther population due to mercury (Orlando Sentinel, 11/2/89)

He referred to the plant built in Hillsborough County. He has visited it and it is a wonderful looking facility. The garbage goes in, you don't smell it, you don't see it, etc. There is a small amount of ash leftover. It however distributes approximately 1300 tons of emissions through the stacks. They produce energy, but they also produce mercury, lead, etc. It will produce dioxin, about .009 pounds per year. In Sweden they only allow 10 grams per year. It is very toxic. It gets into the grass, and ultimately the milk supply. Mr. Case reviewed other areas of the country and the disposal of hazardous waste, the endangerment to food supplies, the toxic waste produced, etc. He reviewed other documents which he submitted.

He read from a letter that George Reilly sent to Mr. Strobridge regarding the 1.68 tons of lead and the 1.68 tons of mercury that this plant would produce. Another document from Camp Dresser & McKee, a paper presented at the 6/87 Air Pollution Control Association in New York talks about the heavy metal vaporization and condensation. It talks about the heavy metals like mercury and lead getting out of the stacks and that this may have been underestimated.

EPA is trying to encourage more recycling and less incineration of waste. Burning will contribute to the carbon dioxide on earth and to the destruction of the rain forests in South America. Everyone says we have to put it in a landfill or burn it. No one mentions recycling. He stated that our youth are the ones who will make a difference. He described a pilot program at Cape Coral High for xeriscaping. They are also getting into conservation, recycling, etc. Every class, economics, history, social studies, language, match, etc. will try to have something relevant to the trash problems in the United States.

We need to change the way we purchase, package, recycle, dispose of items, etc. We need to be concerned with the disposal of batteries, etc. They are trying to find sources to take of these items. People need to buy recycled items.

He feels that within 20 years EPA will say we can't burn. Then what do you do with this facility. You have agreements to furnish certain amounts of trash, etc. Mr. Case submitted and described more articles regarding these problems.

He believes that the rezoning request should be denied. We must save our natural resources and we must reduce our trash flow - without damaging the environment.

Questioned statements regarding the fact that this facility would add only 1% of lead to the air. Over the 20 year life of this facility - 33.6 tons of lead and 33.6 tons of mercury will be released. And reports have said this could be wrong - it could be more. It will be the cumulative effect of all these emissions that would cause problems. Mr. Case reiterated some of his previous points.

4. Bernie DeWOLFE, Broker, DeWolfe & Johnson Realty, Inc., Wildwood Hammock Professional Park, 6140 Winkler Rd, Unit C, Ft. Myers, FL 33919 Letter 8/14/90: Re: Abdalla Property/Agent for Abdalla Land Trust. Today I received by fax a copy of the County's rezoning application regarding my clients' property on Buckingham Road. It was forwarded to me by our attorneys who received in on 8/13/90. I reviewing the documents I note that you are actually attempting to rezone property which you do not own. This seems presumptuous, at best. Furthermore, we note that the rezoning is to an industrial planned development which would permit the "development of an energy recovery facility with buildings not to exceed four stories and 380 feet in height above average grade."

This rezoning would not only be contrary to the master land use plan; but would also be contrary to the residential development plans which our clients had for this property. We have, for some time, through our attorneys, asked you to either acquire our property expeditiously, or leave us alone. You have chosen to do neither. By refusal to acquire our property for your garbage incinerator, and by your simultaneous

attempt to rezone our property to a designation which would destroy our residential use on the 600 acre remainder, you are in the process of working a severe economic hardship on my clients, and what must be an unconstitutional taking.

We therefore object to the rezoning application, until such time as you guarantee the protection of our property interest.

Testimony: Represents Michael Abdalla, the property owner. They wish to express their objections and concerns as to the rezoning of this property at this time. Mr. DeWolfe read into the record his letter of 8/14/90 (see above).

5. Kristine PRICE, 753 Nerita St. Sanibel, FL 33957
Comment Card: The "resource recovery" facility is not consistent with the Lee County Comprehensive Plan. Once opened, this facility will not leave more than 25% of the waste stream to be recycled. Recycling is more protective of the community's safety, health and welfare. I believe a comprehensive recycling/composting program (without incineration) has not even been considered or researched as an option for Lee County.

Testimony: Concerned citizen and education student at USF. It has been said that a resource recovery facility would be the most cost effective, most environmentally sound, and the most economically feasible method of handling our waste. This is comparing resource recovery to landfilling. It is not comparing it to a comprehensive recycling program. Resource recovery does not reduce the waste stream. It allows us to continue to consume as much as we do now. It does not reduce the amount of waste going to the landfills. It does not conserve petroleum products. They would be burned and produce toxic ash rather than recycled into usable products. It does not conserve energy as compared to recycling. Recycling is 35% cheaper than incineration.

Questioned the technology of the stacks for taking toxins out of the air emissions. The traffic reports were from between 2 and 3 p.m. What about the schools buses? They say the noise level will be minimal. What about the trucks coming in and out? The nearest residence is about 1500 feet away. This should be taken into consideration. A plant in Austin, Texas was cancelled, even after it was built, because they determined they could save $150 million over the next 20 years by not using it. She submitted a report "Fairytale Incinerator, a Costly Reality" with regard to the Lake County Plan, which is also an Ogden Martin Plant. They are having trouble paying for the plant and taxes have increased dramatically. There are may economic considerations to be taken into account.

She has heard reports that there is a lawsuit regarding where we will be putting this ash. According to the facility proposal no ash is permitted to be stored on the site. This should be taken into consideration.

It has been said that this facility would burn what was left after recycling but she understands that these facilities leave about 80% of the trash unavailable for recycling. You have to feed the trash to continue the plant's operation.

The study done for the County regarding solid waste management options was apparently done by the same company that will construct this facility. She questioned how much research was done with regard to recycling.

6. Rod McDONNELL, 9025 Ponelo, W., Ft. Myers, FL 33912
Comment Card: The 380'+ height variance is too tall for the location near the airports. The surrounding AG-2 zoning consists of many wetland areas that will be adversely affected by the emissions of the incinerator, and rain-out from the smoke/emissions will enter the aquifers that are the source of my family's drinking water. The ash produced by incinerators is extremely toxic and will diffuse out of

the proposed landfills. The 3 tons of gaseous mercury that will be released per year will surely enter the state/national foodchain to end up on our dining room tables. I feel there are still too many problems with incineration to give the Lee County project complete approval at this time. My primary concern is with the mercury, lead & cadmium in the gaseous emissions, and the toxicity of the ash that is produced. I believe the County should place more emphasis on recycling and the passage of ordinances requiring that all beverage containers by returnable/recyclable.

7. Cindy BEAR, 1619 SW 33rd Terrace, Cape Coral, FL 33914
Comment: The "resource recovery" facility is not consistent with adjoining land uses and rezoning of the parcel should be denied. My testimony will reflect the inconsistencies.

Testimony: She is an environmental education teacher. Served, by County Commissioner appointment, on the Lee County Bald Eagle Technical Advisory Council. Currently on Board of Audubon Society of S.W. Fla. and was president for 2 years. Served 2 years on Florida Audubon Society. Recently appointed by Governor to the State's non-game wildlife advisory council.

She is concerned with the future of Lee County. She understands we have an incredible solid waste level in this community but feels that the information presented at this hearing and given out the public has been glossed over. Yes the Lee Plan does say resource facilities can be in any land use category, including a change from AG-2 to IPD. However, within that plan there are also goals which specifically state the ag land uses must be protected. She believes that having ag lands nearby is incompatible based on the minimal knowledge regarding emissions, etc.

Goal 40 refers to the health, safety and general welfare of the citizens by protecting the quality of the environment through property management and disposal of solid waste. Some people feel that resource recovery is one way. However, there are many other alternatives. She mentioned recycling of paper, glass, aluminum, and plastic. The figures reflect that 1800 tons will go to this facility whereas we currently sent 1200 to 1400 tons to the landfill. This is an inconsistency in terms of promoting an ethic of reducing, reusing and recycling.

Goal 7 sets out that well planned industrial developments will occur at suitable locations and will avoid negative impact of surrounding land uses and protect natural resources. There will be emissions that have potentially devastating effects. There is mercury, lead, mercurial chloride (caused by mercury burned in the presence of chlorine). She explained the contents of many of the items that would be burned. These items will not be sorted at the curbside or at the facility. There is no technically feasible way to sort them or avoid this problem.

The goal should be to reduce these items in the waste stream, but until they do this, it is not appropriate to send them to be burned. They mention conserving water by sending 1.5 million gallons of reclaimed water to this facility. What about sending it to golf courses which are still using potable water for irrigation.

GENERAL:

1. Brenda ADAMS, no address provided
Testimony: Shares the concerns of the other speakers. With regard to the traffic and the buses she is concerned. She works at Riverdale and Buckingham Exceptional Schools. They have mentioned that most of the traffic would be from S.R. 82, but she is concerned with traffic coming from S.R. 80, especially during school opening and closing times. She is concerned about the welfare of the students and the employees. Buckingham is already a dangerous road. One child was killed last year and another seriously injured.

2. Denise FAIR, c/o Humphrey & Knott, P.A., 1625 Hendry St., Ft. Myers, FL 33901

V. STAFF/APPLICANT PRESENTATION:

THIS IS A COUNTY-INITIATED REZONING AND AS SUCH THE STAFF AND APPLICANT PRESENTATIONS BOTH APPEAR IN SECTION V.

Chip Block, representing the Division of Zoning, stated that this is a request on behalf of the Board of County Commissioners for the rezoning of an AG-2 parcel to Industrial Planned Development (IPD) in reference to the Lee County Resource Recovery Facility. The purpose is to permit the development of an energy recovery facility with buildings not to exceed four stories or 380 feet in height above grade on 148 acres of land. The submitted Master Concept Plan indicates that the development of this property will be for one use -- the energy recovery facility. The access will be off Buckingham Road. Buildings and structures within this project are planned to have a maximum height of 4 stories and 380 feet. All adjacent properties surrounding this site are currently zoned AG-2 and are either currently vacant or wooded tracts. Immediately west of the site is the FP&L power line easement, and further west is vacant property. Single family homes do exist about a quarter to a half mile from the site along Neal Road. The subject property fronts on Buckingham Road, which is currently a 150 foot wide, 2 lane collector road. Trafficways maps indicate that this road will be a 150 foot wide 4 lane arterial in the future. Trafficways maps also indicate that a 200 foot wide 4 lane arterial road is planned along the eastern perimeter boundary line of this site, running north-south. That, in actuality, is an extension of State Route 31 in the northern part of Lee County.

Environmentally, the subject property contains several areas of Cypress wetlands totalling approximately 25.2 acres which are not planned for development and are noted as preserves on the Master Concept Plan. The Environmental Sciences Division staff has inspected the site and they did not observe any listed species at the site during their inspection. The Lee Plan designates the property as Rural and Resource Protection/Transition Zone. Lee Plan Policies concerning industrial use indicates that such uses will primarily be located in urban areas. Policy 2.1.3 of the Lee Plan indicates that all land use categories permit consideration of resource recovery facilities. So, in the Rural land use category, resource recovery facilities can be considered as one of the permissible uses in that category.

The application proposes construction of a facility which is designed to reduce the amount of solid waste, and the Staff has noted consistency with Policies 40.1.2 and 40.1.3 of the Lee Plan in this regard. The Staff recommendation on this request is a finding of consistency with the Lee Plan, and recommends approval of this rezoning with 4 conditions, as found in the Staff Report.

Condition number 1 is the condition that outlines the Master Concept Plan titled Lee County Energy Recovery Facility site layout plan, prepared by Camp, Dresser, & McKee, and the date of that plan was date-stamped so that we can identify exactly which plan it is and include it as part of any approval of this rezoning to IPD. We have also indicated that the site would be solely used for the Lee County Energy Recovery Facility and ancillary uses. No other use of the facility would be permitted on this site without further review by the BOCC under new public hearings.

Condition number 2 specifically identifies the schedule of uses within this IPD and limits it to these uses only. We would like to add another use, Excavation, water retention, which we and the zoning staff failed to include in the preparation of the Staff Report. The Applicant will be constructing lakes and excavations on the site, and will not be deviating from any other county regulations regarding these excavations. We have no problem with this, and it is necessary for water retention and detention on the site. We recommend addition of this additional use.

Condition number 3 is where we have indicated that the project's traffic impacts have not been mitigated, and that additional conditions addressing these may be required at the time of development.

Condition number 4 addresses the only deviation related to this request. The requested deviation is from the zoning district regulations limiting structures to 3 habitable stories and a maximum height of 45 feet above grade. The request is for 4 stories and a maximum of 380 feet above grade. We have looked at and revieved this proposal and we have no objections, provided that the Lee County Port Authority Staff approves the height at this location prior to the approval of building permits on the site in the form of a letter from the Port Authority stating that they have revieved the project and have determined it has no adverse impacts. This is in order to address the concerns because of the height limitations and the fact that we have 2 airports in the county that could be directly affected by this, they being Page Field and the Southwest Regional Airport. We wanted to make sure that the Port Authority has had a chance to review and comply. We would note that the Applicant will have to obtain FAA approval for this because of the height, and the Port Authority staff would be part of that review process.

George Reilly, Director of Lee County Utilities then spoke and requested the rezoning on behalf of the BOCC. He indicated that he was basically charged with the whole project to see that all necessary permits and approvals were obtained, and spoke as follows: The BOCC has been working on a solid waste management plan for almost 7 years now, and this is part of that plan. During that process there has been a lot of public presentation. During the siting analysis in public we even requested citizen's input in developing criteria for preparing the sites. Later we actually had recommendations as to actual implementation of our solid waste master plan. We had an all-day open public workshop where people were allowed to come and sit and listen to the plan. The Board adopted that solid waste master plan, and it is a 40 year plan that we have developed, or that our consultants have developed for us, and I would like to state that the BOCC, in my opinion, is very responsible in trying to implement a 40 year plan. Waste energy facilities are an integral part of that plan, but not the only part. The county is also going to be expediting re-cycling. We have a mandate from the State of Florida to develop a re-cycling program to take care of approximately 30% of our waste stream, and we will be completing implementation of that plan in approximately one year.. Along with that we still have to have a landfill. This facility will actually substantially reduce our waste stream, therefore reducing the need for landfill space in the future. I believe that volume-wise we will actually only put into the landfill about 10% of what would have gone into it otherwise.

In the site selection process I mentioned earlier, there have been public hearings and the community has been full a part of the process in site selection. A lot of various considerations were addressed in the process; environmental issues, traffic impacts, and so on. And this site was then ultimately proposed. One thing you look for when trying to locate this sort of facility is a central location. One of the problems we have with concurrency is traffic impacts. When you narrow it down, you find that there are actually only a limited number of sites within the county where you could actually locate one of these facilities. Trucks are already using this corridor, State Road 82, to go to the existing landfill, so even though we are re-routing traffic, we are only re-routing it along Buckingham Road. There is not a major change in the impact of the area. We have met with the community in Buckingham to discuss the project, and we received overall large support from that community. There will be traffic flow enhancements proposed for the area that would prove helpful. As far as the property itself, the county is either going to purchase the land or use its eminent domain powers to condemn the property.

In response to questions by the Hearing Examiner, Mr. Reilly outlined, in general terms, the operation of the facility and stated that others from the consultant's staff would cover the detailed presentation of the facility operations.

Mr David Dee, from the law firm of Carlton, Fields, Ward, Emmanuel, Smith & Cutler, P.A. then outlined the scope of the presentations prepared for the hearing, noted the various speakers who would address particular matters, and presented the back-up material copies associated with the project.

Mr. Mike Einet of the consultant firm of Camp, Dresser & McKee then addressed the facility site selection process, and stated: I am a registered engineer in the State of Florida, I live in Lee County, and I work out of the local offices of Camp, Dresser & McKee here in Ft. Myers. The site selection process began in mid-1987 when we conducted a search of the entire county for a site that was suitable for both energy recovery and landfill facilities. As the county moved forward with that analysis, it eventually moved together with Hendry County, and came through with an inter-local agreement whereby they were able to site the landfill facility out in Hendry County. Once that site selection was made, the county continued forward with siting analysis for an energy recovery facility in Lee County. The evaluation was conducted under a comprehensive set of evaluation criteria that included transportation and access issues, haul costs, proximity to electrical interconnection, air quality issues, floodplain issues, wildlife impacts, soils and geology of the site, zoning and land use issues, and the availability of water & sewer facilities. In consideration of all those criteria, it was determined that the site that we are discussing today was the most favorable site in the county, and that is evidenced by the selection of this site by the BOCC in March, 1990 for their energy recovery facility. The site is centrally located, referencing I-75 and State Road 82, the City of Ft. Myers is approximately 5 miles to the west. The Caloosahatchee and North Ft. Myers several miles to the north. Southwest Regional Airport several miles to the south, and the facility located adjacent to Buckingham Road.

The traffic to this new facility will take the same route that traffic to the existing landfill is now taking -- State Road 82 -- so there really isn't any major impact to the traffic routes. The difference is that the traffic will veer off on Buckingham Road to access the facility.

Looking specifically at the site itself, it is located adjacent to the FP&L power line corridor, and more importantly, the FP&L substation, which provides the location for the electrical interconnect to the power grid. Being that the site is pretty large, 150 acres, we have been able to work with the facility footprint and have been able to minimize environmental impacts. There have not been any critical habitat for wildlife identified on site, and there are no impacts to wetlands. It has suitable geology for the support of the structures through proper foundation design, and there are no sink-hole problems that have been identified on the site. The site is also pretty well buffered. The proposed Buckingham Park is located adjacent to the site to the east, and the power transmission line of several hundred feet in width is to the west. The undeveloped land to the north has some environmentally sensitive areas that will probably remain undeveloped and will continue to be a buffer for some time. And to the south, again undeveloped property.

There is a significant cypress head located so that it is a natural buffer for anyone located along Buckingham Road that would be looking towards the facility. The site contains a large amount of natural vegetation in terms of pine trees and oak trees which will be maintained.

In addition, in terms of buffering, there are the existing two old landfills adjacent to Buckingham Road. One is the City of Ft. Myers old, abandoned landfill, and the other is the Buckingham abandoned landfill. They will remain a buffer over time.

With the old landfills and with the existing county landfill to the south, it is in a area where solid waste activities are occurring. It is in a compatible area. In summary, and in looking at the facility location in a central area, it proved to be the most cost-effective, economically because of the hauling costs that are associated with bringing the garbage trucks to the facility and the fact that it is located directly adjacent to a power line interconnection, which is very important.

In response to questions by the Hearing Examiner, Mr. Einat indicated that after the existing county landfill is closed, the traffic would continue to use State Road 82 to the new landfill site in Hendry County, so the routing would be the same, but the distance to the new landfill facility would increase.

Mr. Dan Strobridge, a principal in the firm of Camp, Dresser & McKee, then outlined his personal qualifications and associations with 6 energy facilities, including the Hillsborough County facility and the Pasco County facility. Mr. Strobridge addressed the specific characteristics, environmental impacts, and benefits that the Lee County facility will provide, stating: The mass burn technology which is proposed for this facility is the most commercially proven and reliably demonstrated resource recovery technology in the world. It has been used in many plants throughout Japan, Europe, and the United States. There are currently 4 facilities in Florida that utilize the mass burn technology, with the oldest being in Hillsborough County in the City of Tampa. Three other facilities are presently under construction in Florida, in Pasco, Lake, and Broward Counties.

How the technology works is really quite simple. Following source separation re-cycling at the curb, the remaining non-recyclable waste is picked up in ordinary route trucks, enters the facility and is weighed-in. It then enters an enclosed structure where its contents are tipped into a refuse pit. From there an overhead crane removes waste from the refuse pit and deposits it in the charging hopper. By gravity it falls down a feed chute and enters onto a stoker grate where ignition and combustion commences. Around the stoker grate are water wall boilers. Water tube walls throughout. The hot gasses from the combustion pass through the boiler which in turn generates steam which is put to a traditional steam turbine generator to generate electricity. The combustion gasses, once they pass through the boiler, then enter an acid gas control facility -- in this case a dry lime scrubber where the acid gasses -- SO2HCL are removed. From that point they enter a fabric filter or bag house, which functions much like a vacuum cleaner, filtering out about 99.9% of the particles, and then that gas is exhausted through the stack. It has virtually no visible emission as a result of the pollution control equipment.

The residue from the solid waste after it has been combusted drops into a waterquench bath where any burning embers are put out. This also prevents any dusting. It is then extracted onto an enclosed conveyor where it is conveyed out of the facility to an ash handling building. There it is loaded into watertight and covered trucks and delivered to the landfill.

Lee County's facility is designed to accommodate and process 1800 tons of solid waste a day. It is also designed to be expandable through the addition of a 4th processing unit. Each unit will process 600 tons per day. We have sized the facility assuming that the county will implement and achieve the state goal of 30% re-cycling on the first day that the facility comes into operation.

Mr. Strobridge then displayed slides and an artist's rendering of the proposed facility, pointing out several features and details of the project, and indicating that the rendering was actually a part of the contract and that the facility has to be built to look like the picture. He went on to describe and point out the natural visual barriers provided by the cypress head and tree clumpings on the site, stating that there would be little adverse visual impact because of the facility structures.

Mr. Strobridge then stated: This facility is equipped with state-of-the-art emission control systems. It not only has a scrubber and a bag house, it also has thermal denox for NOX removal. There is no other facility either in operation or proposed that has this level of air emission control on it. It meets best available control technology. We have done an extensive amount of air emissions modeling and the results indicate that we do not even approach any regulated pollutant level, in terms of ambient air quality standards. We have perhaps a 2% impact of the total amount of pollutant for any of the regulated pollutants. Air emissions from the facility are extremely minimal.

With respect to water pollution, this facility will have no ground water discharges. It will use reclaimed water from the waste water treatment plant as its source of cooling water. Potable water will only be necessary for boiler feed water and some other in-plant sanitary uses. So we are not only helping to solve the problem of solid waste, we are also helping to get rid of treated waste water effluent. We will no longer have to discharge 1 1/2 million gallons into the river each day. We will evaporate in this facility. All effluence from the facility will be transmitted back to the waste water treatment plant via sewer. There will be no ash emissions on site because the ash handling building is totally enclosed. There will be no ash disposal on site; that will be trucked to the Hendry County Landfill which features a state-of-the-art double-lined and double leachate collection systems. We will achieve approximately a 90% reduction in volume of the incoming waste through combustion.

We will also be recovering a significant amount of energy from the solid waste. For each ton of solid waste processed, we are guaranteed an energy production of 630 kilowatt hours. That amounts to some 642 billion kilowatt hours over the 20 year contract period, and represents some 7 or 8 million dollars per year in revenues to help offset the owning and operating costs of the plant. It also represents a saving of approximately 11 million barrels of oil over the 20 year period, which is significant in light of current events.

I would also like to point out that these operations are fully enclosed, and that means that we have no dust and no odors. The tipping floor area where the refuse is actually tipped into the pit is kept under a negative pressure. The combustion air is drawn from grates, ports, and ductwork in this area, and consequently the air stream is actually pulled in from outside and odors do not escape.

Also, the facilities are quiet. We do not anticipate that this facility will emit any noise level at the fence line higher than ambient noise levels now present. In Hillsborough County, where that facility was only about 40 acres as opposed to the 150 acres here, there was no discernible noise levels above ambient levels after some very sophisticated noise level testing was done. This facility is enclosed, it is quiet, it is odor free and dust free and has no visible emissions from the stack. We are not going to have any impact on the service levels of the existing roadways, and the facility does comply with the growth management policies.

In response to questioning by the Hearing Examiner, Mr. Strobridge responded that there was no discharge from the quenching process, since the ash absorbs and bonds with that water. He also indicated that while the ash certainly contains heavy metals, but such are tightly bound by the ash, and that recent studies have shown that when the equivalent of rain water percolates through such ash, the resultant leachate quality resembles drinking water standards.

Responding to further questions by the Hearing Examiner, Mr. Strobridge clarified that the proposed ponds were strictly for storm water management purposes and not related to cooling use. The cooling would be accomplished with recycled waste water. He also stated that Lee County presently disposes between 1200 to 1400 tons of refuse per day, and that the facility was designed so that it would not reach capacity until 8 to 10 years after initial operations are commenced. He reiterated that the plant was of a design that is well proven and was not a prototype or pioneering sort of facility.

Mr. Bill Cox of Erwin Consulting Ecologists then outlined his qualifications and detailed the site examination conducted under his direction for the vegetation, wetlands, and wildlife determinations and studies. In summary he stated: During our analysis of the site, there were no endangered species, threatened species, or species of special concern encountered, and that no wetland areas were going to be impacted by the facility construction. In response to questions by the Hearing Examiner, Mr. Cox indicated that the site has been severely impacted by past agricultural practices. It has been heavily drained and grazed by cattle. It has been logged and is invaded by Melaleuca and Brazilian Pepper.

Ms. Nanette Hall of Florida Transportation Engineering, a traffic engineering consulting firm, then outlined her qualifications and detailed the analysis undertaken with respect to this projects possible impacts on transportation. The results of that analysis were stated as being no adverse impacts on the surrounding transportation network. The only improvements required would be site access improvements to meet Lee County acceleration/deceleration and turn lane requirements on Buckingham Road.

Following further clarifications of several minor points raised by the Hearing Examiner, which Mr. David Dee addressed, Mr. David Owen, an Assistant County Attorney spoke. Mr. Owen outlined his 4 year association with this project, the amount of work effort and study that the project has consumed to this point in time, and then presented a detailed history of the project. Mr. Owen addressed the Lee Plan Objectives, Goals, and Policies which he considered relevant, stating: The project has been authorized by the BOCC and the Lee Plan. In Plan Policy 2.1.3 it is specifically set out that all land use categories permit the consideration of public uses, buildings, public utilities and resource recovery facilities, when consistent with the Goals, Objectives, and Policies as well as applicable zoning and development regulations. This is important, because the BOCC took into consideration the need for a facility such as this one a considerable amount of time ago, and incorporated this into the Lee Plan. This is also consistent with the Future Land Use Element of the Plan.

What we are doing here is looking at the most cost-effective placement of a facility that is necessary for the disposal of solid waste, but also required to comply with the reduction of such waste by 1/3 that was addressed earlier. It has been determined that it is more efficient, more environmentally sound, and more cost effective to use a waste-energy facility than it would be to continue land filling over the next 40 years. Under Plan Policy 40.1.3, it is the county's desire to reduce the amount of materials that are being landfilled. By using this facility we can reduce the landfilling bulk by approximately 90%.

We have tried to make the facility as aesthetically pleasing as possible. We are not talking about a facility that looks like a steel mill in Pittsburgh in the 1950's. It looks more like an office complex with a smokestack off to the side. The buffering is extensive. In summary, Mr. Owen reiterated that the County has an obligation to the public under its own plan, rules, and regulations to dispose of solid waste in the most environmentally practicable and cost effective manner. To do that we have to site the facility in the most cost-effective manner that we can, so as to reduce haul distances, and minimize environmental impacts as well as disruptions to any existing uses. No matter where the plant goes in this county it's going to have an impact. What we have attempted to do is find a location where that impact has been minimized as best as possible, based on existing conditions.

Following comments from the public, Mr. Reilly, Mr. Strobridge, and Mr. Dee spoke to specific points raised by the individual concerned members of the public.

Mr. Reilly noted, as to the expressed concern of related to the site being close to the Buckingham airstrip, that there is an application now before the FAA for site approval. As to the county re-cycling efforts, he noted that there would be a separating-out process conducted at the facility site, but that relies on voluntary citizen participation. He also mentioned on-going hazardous waste collection efforts in the county which are conducted in specific areas and periodically.

Mr. Strobridge addressed some of the air quality issues mentioned by several members of the public, and stated: With respect to lead and mercury, lead is a regulated pollutant. He displayed a graph and stated that the existing ambient lead concentration in the atmosphere in Lee County shows that we have consumed 7% of the increment as an existing condition today. The facility will contribute an additional

A. That the requested rezoning is consistent with the Goals, Objectives, Policies, and intent of the Lee Plan. The Plan clearly contemplates the proposed use and allows siting in the subject area. The proposed rezoning will act to further specific Lee Plan Goals and Policies, as noted in the Staff Report.

B. That the requested use meets or exceeds all performance and locational standards set forth for the proposed use in appropriate Lee County ordinances.

C. That the request is consistent with the densities, intensities and general uses set forth in the Lee Plan.

D. That the proposed use, as conditioned, will not adversely affect and will affirmatively act to protect, conserve or preserve environmentally critical areas and natural resources.

E. That the requested use will not place an undue burden upon existing transportation or other services and facilities, and will be served by roadways with adequate capacity to carry traffic anticipated from the development.

F. That the requested use, as conditioned, will be in compliance with all applicable general zoning provisions and supplemental regulations pertaining to the use, as set forth in the zoning ordinance.

G. That the proposed use, as conditioned, will be compatible with existing or planned uses, and not cause damage, hazard, nuisance or other significant detriment to persons or property.

IX. CONDITIONS OF RECOMMENDED APPROVAL BY HEARING EXAMINER:

The Hearing Examiner recommends approval of this request if and only if the following conditions are imposed on the Applicant in connection with the use of the real estate which is the subject of this application and hearing:

CONDITIONS:

1. The development of this site shall be in accordance with the one-page Master Concept Plan entitled "Lee County Energy Recovery Facility Site Layout," prepared by Camp Dresser & McKee, Inc. (dated June, 1990, stamped received July 6, 1990), except as may be modified by the conditions herein. This approval does not relieve the development from compliance with all other applicable federal, state, or local regulations, except for those specifically approved as part of this application.

This site shall be used solely for the Lee County Energy Recovery Facility and the ancillary uses associated with that principal use. No other facility or user shall be permitted on this site. Any additional use or change in use inconsistent with this condition shall be considered as a substantial change requiring new public hearings.

2. The approved schedule of uses for this Industrial Planned Development is as follows:

- Salvage and Disposal of Materials, limited to refuse disposal and processing plant, incinerators and materials recovery and recycling facilities (Section 515)
- Administrative Offices (df)
- Entrance Gate and Gatehouse (Section 202.14)
- Essential Services
- Essential Service Facilities, All Groups (Section 1001.13)
- Excavation, Water Retention
- Signs, in conformance with the Lee County Sign Ordinance

3. This zoning approval does not indicate that this project's traffic impacts have been mitigated. Additional conditions may be required at the time of issuance of a local development order.

X. RECOMMENDATION OF HEARING EXAMINER CONCERNING DEVIATIONS:

DEVIATIONS:

DEVIATION (1) is a request to deviate from the requirement that the height of buildings in an Industrial Planned Development cannot exceed 3 habitable stories and 45' above minimum flood elevation (Section 471.E.4.), to 4 habitable stories and 380' above average grade. Staff has indicated that the current zoning regulations permit a maximum height of 45'; that the development proposes a maximum height of 380'; and that the height does not pose an immediate concern to any adjacent property, but may cause a navigational safety concern to air traffic at Page Field and/or to Southwest Florida Regional Airport. For this reason, staff recommends that the staff of the Lee County Port Authority should review and approve this height at this location.

DEVIATION (1) IS HEREBY RECOMMENDED BY APPROVAL BY THE HEARING EXAMINER, WITH THE CONDITION THAT THE LEE COUNTY PORT AUTHORITY STAFF APPROVE THIS HEIGHT AT THIS LOCATION, PRIOR TO APPROVAL OF BUILDING PERMITS ON THIS SITE. This shall take the form of a letter from the Port Authority staff indicating that they have reviewed this project and have determined that it will have no adverse impacts on the air traffic in this area OR provision(s) have been made to offset any potential negative impacts.

XI. HEARING BEFORE LEE COUNTY BOARD OF COUNTY COMMISSIONERS:

A. This recommendation is made this 31st day August, 1990. A copy will be forwarded to the offices of:

Commissioner John E. Manning
Commissioner Douglas St. Cerny
Commissioner Ray Judah
Commissioner Bill Fussell
Commissioner Donald Slisher

B. THE ORIGINAL FILE AND THE ORIGINAL DOCUMENTS USED AT THE HEARING WILL REMAIN IN THE CARE AND CUSTODY OF THE DEPARTMENT OF COMMUNITY DEVELOPMENT. THE DOCUMENTS ARE AVAILABLE FOR EXAMINATION AND COPYING BY ALL INTERESTED PARTIES DURING NORMAL BUSINESS HOURS.

C. The BOARD OF COUNTY COMMISSIONERS OF LEE COUNTY will hold a hearing at which they will consider the record made before the Hearing Examiner and will receive comments about the record from those who have become "parties of record" by participating in the proceedings before the Hearing Examiner. The Department of Community Development will send written notice of the date of the final hearing before the Board of County Commissioners to persons who participated in the proceedings before the Hearing Examiner along with a request to speak and which must be returned to the Board of County Commissioners five days before the scheduled hearing date.

D. The original file containing the original documents used in the hearing before the Hearing Examiner will be brought by the Staff to the hearing before the Board of County Commissioners. Any or all of the documents in the file are available on request at any time to any County Commissioner.

XII. COPIES OF TESTIMONY AND TRANSCRIPTS:

A verbatim transcript of the testimony presented at the hearing can be purchased from the Official Court Reporter, 20th Judicial Circuit, Lee County Justice Ctr., Ft. Myers, FL. The original documents & original file in connection with this matter are located at the Lee County Dept. of Community Development Office, 1831 Hendry St., Ft. Myers, FL.

ROBERT F. SPLITT
LEE COUNTY HEARING EXAMINER
2115 Main St., P.O. Box 398
Fort Myers, FL 33902-0398
Telephone: 813/335-2241

1.1% to that. With respect to mercury, it is a non-regulated pollutant at this point in time, simply because there are a lot of agencies that can't determine at what level it should be a concern. Florida is now considering some air toxic regulations that are in the proposal stage. The concentration levels being considered are very conservative, and, in effect, say that even though we don't know a lot about it, we want a level low enough so as to be no threat to human health or the environment. The emission concentration from the facility is predicted to be nearly an order of magnitude below what is being proposed as the minimum, no-threat level for mercury

One in one million has been accepted by the EPA and most other regulatory agencies as an acceptable level of health risk. We are talking about one who lives at the point of maximum concentration for 70 years having one additional chance in a million of contracting a cancer. It's not a zero. Under health risk impact methodology you cannot come up with a zero answer. Mr. Strobridge went on to address an issue related to groundwater impacts, and reiterated that the facility will have no water discharges other than to the wastewater treatment plant. He also spoke to a noted concern that related to the toxicity of the ash residue, and stated that, literature and articles earlier than last year are probably not very reliable. He noted that DER is currently approving some pilot programs to use incinerator ash for road sub-grade to document whether or not it really has an adverse impact through metal leach-out.

Mr. Dee then summarized the presentation and generally addressed the health and environmental impact concerns raised by the public participants. He noted that the emissions from these types of facilities have been studied exhaustively by both the State of Florida and the US EPA over many years. In 1987 EPA submitted a multi-volume report to the Congress, and the bottom-line was that these facilities do not pose any unacceptable level of health risk. He went on to address and discuss the siting criteria and the criteria of review under the zoning ordinance. Speaking specifically to the concern raised that the county should concentrate on re-cycling rather than incineration, he noted that, according to DER, The best Florida counties at re-cycling are Pinellas and Hillsborough, who re-cycle in the range of 17 - 19% of their refuse, and both have resource recovery facilities to complement their re-cycling programs.

VI. APPLICANT PRESENTATION:

THIS IS A COUNTY-INITIATED REZONING AND AS SUCH THE STAFF AND APPLICANT PRESENTATIONS BOTH APPEAR IN SECTION V.

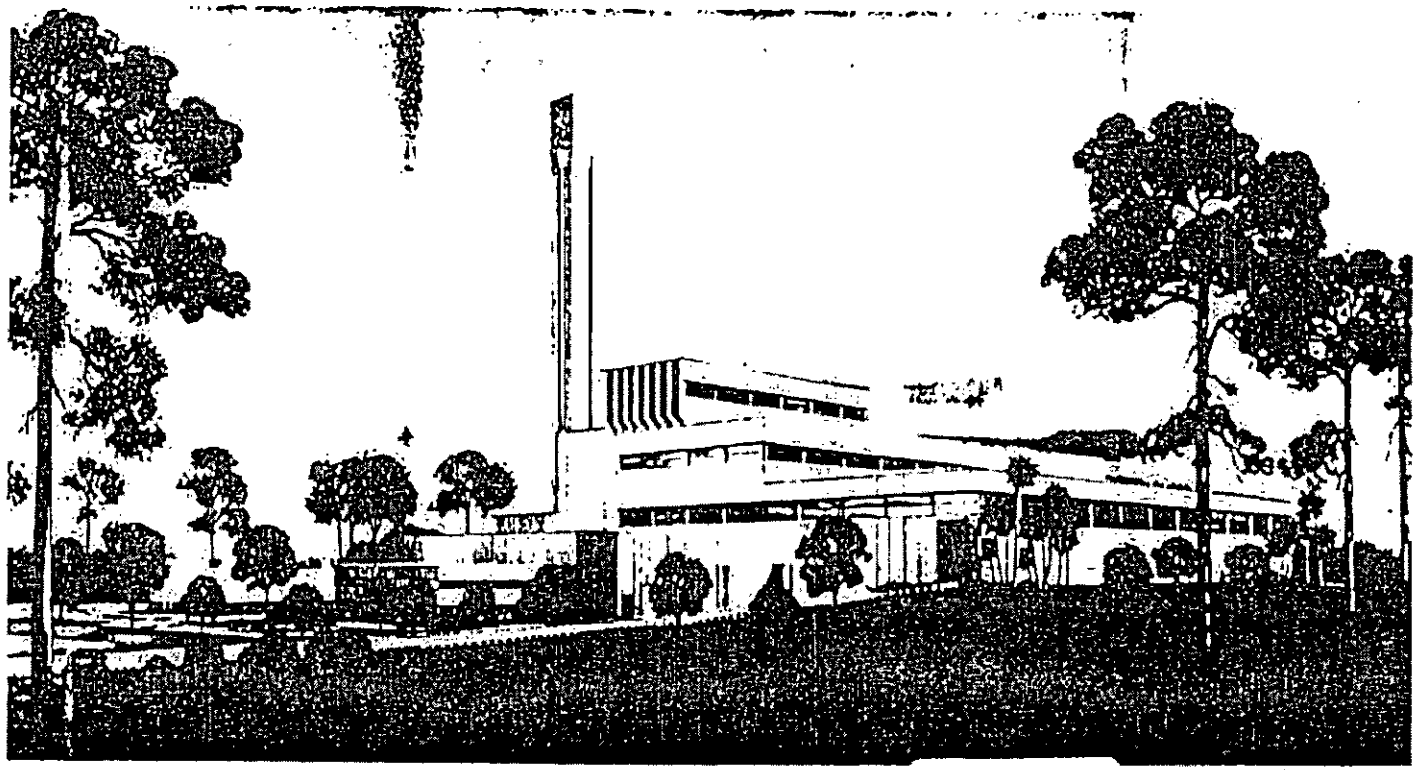
VII. LEGAL DESCRIPTION:

A tract or parcel of land lying in Sections 24 and 25, Township 44 South, Range 25 East, Lee County, Florida which tract or parcel is described as follows:

BEGINNING AT the East Quarter (E1/4) corner of said Section 24;
THENCE run S00°41'53"E along said East line for 2,641.21 feet to the Southeast corner of said Section 24;
THENCE run S01°10'57"E along the East line of said Section 25 for 51.14 feet to an intersection with the North line of Buckingham Road (150 feet wide);
THENCE run S88°45'25"W along said North line for 2,389.3 feet;
THENCE run N00°47'09"W along a line parallel with and 250.00 feet East of the quarter section line of the East Half (E1/2) of said Section 24 to an intersection with the North Quarter (N1/4) section line of the Southeast Quarter (SE1/4) section of said Section 24;
THENCE run East along the North Quarter (N1/4) section line to the POINT OF BEGINNING.

VIII. FINDINGS AND CONCLUSIONS:

Based upon the staff report, the testimony and exhibits presented in connection with this matter and personal inspection of the site, the undersigned Hearing Examiner makes the following findings and conclusions:



LEE COUNTY RESOURCE RECOVERY FACILITY
LEE COUNTY, FLORIDA

LEE COUNTY
EXHIBIT
NO. 30

FOSTER WHEELER
POWER SYSTEM, INC

LEE COUNTY ENERGY RECOVERY FACILITY - REZONING

PUBLIC HEARING BEFORE HEARING EXAMINER

TUESDAY, AUGUST 14, 1990 1:30 p.m.

Index of Exhibits

Exhibit 1 - Rezoning Applications (Including Traffic Impact Statement) Submitted By Department of Lee County Utilities to Division of Zoning Dated May 29, 1990

Exhibit 2 - Memorandum Dated June 7, 1990 From Department of Lee County Utilities to Division of Zoning, Rezoning Application Supplement: Blue Sheet, Signed Page 3 of Application

Exhibit 3 - Letter From Division of Zoning to the Department of Lee County Utilities Dated June 11, 1990 TIS Not Received By DOT & E

Exhibit 4 - Letter Dated June 12, 1990 From CDM to Division of Zoning, Rezoning Application Supplement: Revised Page 1 and 2 of DCI Form Indicating Resource Protection Areas and Transition Zones

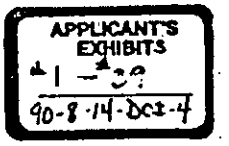
Exhibit 5 - Letter Dated June 20, 1990 From Division of Zoning to Department of Lee County Utilities, Request for Additional Information: Covenant of Unified Control; Maximum sq. Footage, Cross-Section of Water Retention Area, Location of Planned Access Point

Exhibit 6 - Letter Dated June 21, 1990 From Division of Zoning to CDM, Requesting Additional Information For Division of Code and Building Services: Water Main Revision, Fire Department Access

Exhibit 7 - Letter Dated June 25, 1990 From Division of Zoning to CDM, Requesting Additional Information for Division of Environmental Services: Survey, Soils and Topography Maps

Exhibit 8 - Memorandum Dated July 6, 1990 From Department of Lee County Utilities to Community Development, Rezoning Application Supplement: Protective Species Report, Fire Department Access Lane, Schedule for Construction Agreement, Revised Page 8 of Application, Soils and Topographical Map, Letter - Transmission Main Size Adequate

Exhibit 9 - Letter From CDM To DOT & E Dated July 17, 1990 Submittal of TIS



Index of Exhibits
(Continued)

Exhibit 10 - Letter Dated July 19, 1990 From Division of Zoning to CDM, Application Deemed Sufficient From Division of Code and Building Services

Exhibit 11 - Letter From Division of Zoning to The Department of Lee County Utilities Dated July 23, 1990 Schedule For Rezoning Hearing Before The Hearing Examiner

Exhibit 12 - Transmittal Letter Dated July 25, 1990 From CDM to Division of Zoning, Rezoning Application Supplement: Revised Master Concept Plan Showing 6:1 Slide Slopes

Exhibit 13 - Letter From CDM to Division of Zoning Dated July 25, 1990 Confirming Sufficiency From the Division of Codes and Building Services

Exhibit 14 - Memorandum Dated July 26, 1990 From Department of Transportation and Engineering to Division of Zoning, Application Deemed Sufficient From DOT & E Request Additional Information Passenger Car Equivalence

Exhibit 15 - Letter Dated July 27, 1990 From Division of Zoning to Department of Lee County Utilities, Confirmation Rezoning Application Sufficient

Exhibit 16 - Memorandum Dated July 27, 1990 From Division of Solid Waste Management to Division of Zoning, Affidavit of Posting Notice

Exhibit 17 - Public Hearing Before Hearing Examiner Advertisement Published July 30, 1990 News Press

Exhibit 18 - Notice to Adjacent Property Owner

Exhibit 19 - Lee County Solid Waste Master Plan Prepared by Camp Dresser & McKee Dated August, 1989.

Exhibit 20 - Solid Waste Disposal System Policy Issues Memorandum including Sizing Analysis Alternative Cases as Attachement A Dated December 14, 1989

Exhibit 21 - Alternative Energy Site Analysis Prepared By CDM Submitted To Lee County Dated February 6, 1990

Exhibit 22 - Surrounding Vicinity Aerial Map Showing Access Roads prepared by CDM

Exhibit 23 - Site Location Aerial Map 1:1000 Scale Prepared by CDM Photographed February 4, 1990

Exhibit 24 - Site Location Aerial Map 1:200 Prepared by CDM

Index of Exhibits
(Continued)

Exhibit 25 - Typical Facility Cross-Section Diagram Prepared by CDM

Exhibit 26 - Hillsborough County Facility Construction Photograph Dated June 30, 1986

Exhibit 27 - Hillsborough County Facility Photograph Front View

Exhibit 28 - Hillsborough County Facility Photograph Side View

Exhibit 29 - Ogden Martin Architectural Rendering Photograph

Exhibit 30 - Foster Wheeler Architectural Rendering Photograph

Exhibit 31 - Ogden Martin System, Inc. Site Plan and Utilities Dated June 4, 1990

Exhibit 32 - Foster Wheeler Power Systems, Inc. Facility Site Plan

Exhibit 33 - Ogden Martin Systems, Inc. Technical Specification Summary From Proposal No. B-90-17 Dated July 16, 1990

Exhibit 34 - Foster Wheeler Power Systems, Inc. Technical Specification Summary From Proposal 11-36982 Dated July 11, 1990

Exhibit 35 - Site Layout Master Concept Plan Prepared by CDM Dated June 1990

Exhibit 36 - Facility Characteristics Summary Prepared by CDM

Exhibit 37 - Power Plant Siting Act (PPSA) Permit Application Volumes I, II and III Submitted by Lee County to FDER Dated June, 1990

Exhibit 38 - Power Plant Siting Act Permit Application Executive Summary

Exhibit 39 - PPSA Permit Application Timetable Dated August 11, 1990

(LCLA/56)

LEE COUNTY BOARD OF COUNTY COMMISSIONERS,
represented by DEPARTMENT OF UTILITIES,
in reference to LEE COUNTY ENERGY RESOURCE FACILITY

CASE 90-8-14-DCI-4

LIST OF EXHIBITS

KENNETH CASE/Composite Exhibit #1

Letter from David Feldman, Chairman, Florida Alliance for a Clean Environment (F.A.C.E.), dated May, 1989, to Trustee of Florida Foundations concerned with the Environment

Letter & Application for Grant, from David Feldman, Chairman, F.A.C.E. dated September 13, 1989, Application includes numerous appendices

"Waste Not", the Weekly Reporter for rational resource management, 2/1/90, with article entitled "Fairy Tale Incinerator a Costly Reality"

article "Savings of Incinerator go up in Smoke, "San Jose Mercury News 3/6/90

Appendix A "Incinerator Problems," from "Solid Waste Incineration: The Rush to Burn," Citizens' Clearinghouse for Solid Wastes, Inc., 11/88

Article "Dwindling Florida Panthers Face New Enemy - Mercury," The Orlando Sentinel, 11/2/89

Article "California: Ogden Martin wants Ash from 800 TPD Mass-Burn Incinerator in Stanislaus County Declared Non-Toxic," Modesto Bee, 2/28/89

Article "EPA wants more Recycling, Less Incineration of Waste," San Francisco Chronicle, 11/24/89

Letter from Clyde Butcher, to BOCC

Letter from CDM to George Reilly, re: Clyde Butcher letter, 4/16/90

Paper presented at the June 1987 Air Pollution Control Association meeting in New York "The Formation of Trace Toxic Metal Emissions Resulting from Incineration"

Press Release from State of Florida HRS, 2/1/90, re: limiting consumption of largemouth bass due to high accumulations of mercury

Article entitled "Mercury in Florida Fish and Wildlife," by Homer Royals & Ted Lange

Flash Report - Philadelphia Incinerator Ash Exports for Panamanian Road Project - Potential Environmental Damage in the Making, U.S. EPA, by John C. Martin, October 1987

Article "Human Exposure to Dioxin from Municipal Solid Waste Incineration," by Curtis C. Travis/Holly A. Hattemer-Frey, Office of Risk Analysis, Health & Safety Research Division, Oak Ridge National Laboratory (operated by Martin Marietta Energy Systems, Inc., for the U.S. Dept. of Energy)

Article "Pasco Incinerator May Send Mercury into Air by the Ton," The Tampa Tribune, 1/16/90

Articles "The Poison from our Skies" and "Scientists Trace Causes, Effects of Contamination," The Tampa Tribune, 7/3/89

A Zoning Meeting of the Lee County Board of County Commissioners was held this date at 9:30 a.m. with the following Commissioners present:

John Manning, Chairman
Ray Judah, Vice-Chairman
Bill Fussell (Arrived at 9:40 a.m.)
Doug St. Cerny
Donald Slisher

HEARING NUMBER: 90-7-3-Z-2

NAME: LINDER INDUSTRIAL MACHINERY COMPANY

REQUEST: A rezoning from the C-1A district to CG

LOCATION: The subject property is located at 15740 South Tamiami Trail (on the west side of US 41 approximately 1/8 mile south of Briarcliff Road), in S36, T45S, R24E, Lee County, Florida. (District #3)

STRAP NUMBER: The applicant indicates the strap number is: 36-45-24-00-00025.0040

SIZE OF PROPERTY: 3.97 acres +/-

STAFF RECOMMENDATION: DENY CG, APPROVE CC

HEARING EXAMINER'S RECOMMENDATION: APPROVE CG (Copy of Staff Report is on file in the Clerk's Office, Minutes Department).

Mr. Charlie Gauthier, Principal Planner, Zoning Division, Department of Community Development, reviewed the request and noted the property is located in the Suburban Land Use Category. He stated the land has been used since 1972 for an industrial machinery sales and service facility, a non-conforming use under the current zoning, and the request is to make the zoning consistent with the use. He stated Staff is opposed to the requested CG rezoning due to the broad range of uses it permits, and recommends CC zoning because it permits less intensive uses and would still legitimize the current use. There were no listed parties of record. Commissioner Slisher moved approval of the Hearing Examiner's recommendation, seconded by Commissioner St. Cerny. Attorney Matt Uhle, representing the Applicant, stated they agree with the Hearing Examiner's recommendations. With the use of a map, he reviewed the location of other similar uses in the area. He stated the intent of the request is not for expansion purposes at this time, but to make the use conforming. COMMISSIONER FUSSELL ENTERED THE MEETING AT THIS TIME. Commissioner Judah stated the CG zoning uses would be inconsistent with the Comp Plan because the land use category is Suburban and advocated rezoning this parcel to CC. The motion was called and carried with Commissioner Judah voting nay.

HEARING NUMBER: 90-6-12-DCI-1

NAME: BOARD OF COUNTY COMMISSIONERS, represented by DEPARTMENT OF TRANSPORTATION & ENGINEERING, in reference to SOUTH FLORIDA BANK CENTER

REQUEST: A rezoning from AG-2, CC and IL to Commercial Planned Development, to permit a maximum of six buildings and 195,000 square feet of commercial uses not to exceed 75 feet above average grade, on 11.3 total acres of land.

NOTE: If approved, the Master Concept Plan (available for inspection at 1831 Hendry Street in Fort Myers) will deviate from the following Lee County standards:

(1) Minimum required intersection separation along arterial roadways of 660 feet (DSO Section C.3.h.) to allow a centerline separation of 420 feet between Daniels Road and the southernmost access point, a centerline separation of 325 feet between the project access points, and a centerline separation of 420 feet between the northernmost access point and an existing driveway accessing property to the north; and

(2) Minimum parking requirement of one (1) space per 300 square feet of office space (Section 202.16.J.2.j.) to allow a 20-percent reduction in total spaces

required, after the first 200 spaces are provided in accordance with the ordinance. This deviation is not intended to apply to Tract II.

(3) The requirement that all subdivisions have a plat of the parcel of land containing the subdivision approved by the County Commission and recorded in the Official Records of Lee County (DSO Section B.1.a.), to allow subdivision of parcels shown on the Master Concept Plan without platting.

LOCATION: The subject property is located on Metro Parkway at the northeast intersection of Daniels Road and Metro Parkway, in S19, T45S, R25E, Lee County, Florida. (District #5)

STRAP NUMBER: The applicant indicates the strap number is: 19-45-25-00-00002.0010

SIZE OF PROPERTY: 11.31 acres+/-

STAFF RECOMMENDATIONS: APPROVE with conditions.

HEARING EXAMINER'S RECOMMENDATIONS: APPROVE with conditions. (Copy of Staff Report is on file in the Clerk's Office, Minutes Department).

Mr. Charlie Gauthier, Principal Planner, Zoning Division, Department of Community Development, presented the request and stated the property is located in the Central Urban Land Use Category. He noted the development plans include prohibition of certain commercial uses, i.e., fast food and convenience stores along Daniels Road. Commissioner Judah questioned the allowable uses listed on pages 19 and 20 of the Staff Report. Mr. Gauthier stated the Resolution that will approve this project divides the project into two tracts - Tract I is located along Daniels Road, and Tract II fronts Metro. Fast food and convenience stores are not included in the allowable uses for Tract I and have been deleted for this Planned Development request. He also discussed the waiving of the Application fee in consideration of the financial cooperation from the Applicant in retaining a drainageway along the parcel's northern boundary. Mr. Gauthier stated the following issues needed to be addressed:

Condition No. 15, page 5 of the Resolution, reflects there is an appraised value of $6.50 per sq. ft. on the acquisition area for both right-of-way and easement for that drainageway, but it should apply only to the right-of-way and not to the easement. Mr. Gauthier suggested that as part of any motion, the Board delete any reference to a dollar amount per sq. ft. and indicate that the Applicant would accept the County's figure.

DOT&E expressed concern regarding Condition 5-A-1 which would allow a right-in, right-out access point onto Metro Parkway, and they feel it should be right-in only. The Hearing Examiner feels this is a function of Development Review to so stipulate.

Attorney James T. Humphrey, representing the Applicant, stated they accept the Hearing Examiner's recommendations and request the Board approve his recommendations and the Staff's comments. He discussed their donation of a drainage easement, and providing the right-of-way land at a reduced cost. He added that for the Bank portion of the project (the easterly parcel), it is critical there be a right-in/right-out at the southerly access point, but stated they agree that the other piece have a right-in only. Copies of photos showing the design of the proposed bank were shown. Mr. Gauthier concurred that the right-in only applies to the next Case (Case No. 90-6-12-DCI-2). Commissioner Judah moved to approve including the one recommendation by Staff regarding elimination of the dollar amount on page 5 of 7, seconded by Commissioner St. Cerny, called and carried.

HEARING NUMBER: 90-6-12-DCI-2

NAME: BOARD OF COUNTY COMMISSIONERS, represented by DEPARTMENT OF TRANSPORTATION & ENGINEERING, in reference to SOUTH FLORIDA BANK CENTER WEST

REQUEST: A rezoning from AG-2, CC and IL to Commercial Planned Development, to permit a maximum of 88,000 square feet of retail space not to exceed 35 feet above average grade, on 7.6 total acres of land.

NOTE: If approved, the Master Concept Plan (available for inspection at 1831 Hendry Street in Fort Myers) will deviate from the following Lee County standards:

(1) Minimum required intersection separation along arterial roadways of 660 feet (DSO Section C.3.h.) to allow a centerline separation of 420 feet between Daniels Road and the southernmost access point, a centerline separation of 325 feet between the project access points, and a centerline separation of 420 feet between the northernmost access point and an existing driveway accessing property to the north; and

(2) Minimum required setback for parking and internal drives of 25 feet to the development perimeter (DSO Section 461.C.2.a.2.), to allow a setback of 20 feet to the north property line.

LOCATION: The subject property is located on Metro Parkway at the northwest intersection of Metro Parkway and Daniels Road, in S19, T45S, R25E, Lee County, Florida. (District #3)

STRAP NUMBER: The applicant indicates the strap number is: 19-45-25-00-00002.0010

SIZE OF PROPERTY: 7.63 acres +/-

STAFF RECOMMENDATION: APPROVE with conditions.

HEARING EXAMINER'S RECOMMENDATION: APPROVE with conditions. (Copy of Staff Report is on file in the Clerk's Office, Minutes Department).

Mr. Charlie Gauthier, Principal Planner, Zoning Division, Department of Community Development, reviewed the request and stated the property is located in the Central Urban Land Use Category. He stated this case has also been subject to a waiver of Application fee due to the financial arrangements regarding the drainageway. He added many of the development plans for the previous project (Case No. 90-6-12-DCI-1) carry forward to this parcel including landscaping, architecture, signage and extra buffering. Mr. Gauthier stated Staff is concerned, however, with the list of permitted uses. Commissioner Judah moved to eliminate convenience stores and fast food restaurants along Daniels Road to be consistent with the Charette recommendations, seconded by Commissioner Manning, called and carried. Mr. Gauthier stated that as per the Hearing Examiner's recommendation, the right-in access for this Application will be addressed at the Development Review stage. Attorney James T. Humphrey, representing the Applicant, stated this request is for the westerly parcel located across Metro. He then referred to the access issue for this parcel and stated the Applicant agrees with Staff's recommendation for a right-in only. He explained his Client's need for the convenience store use to remain in the list of permitted uses and discussed how these development plans have accommodated the County via design, etc. Commissioner Judah stated the motion applies to elimination of those uses just along Daniels Road. Attorney Humphrey requested this action be limited to the area south of the southerly access point (between Daniels Road and that southerly access point). The Master Concept Plan map was reviewed regarding the southerly access point area. Attorney Humphrey stated with that limitation, they request the Board go forward. Commissioner Manning stated the amended motion is to preclude fast food and convenience uses south of the first access point, the most southerly access point (420 +/- feet) as per the plan under review, which would include all of Daniels Road. Commissioner Judah moved to approve with that proposed change, seconded by Commissioner Fussell. Commissioner Manning noted the Resolution will be changed to reflect the removal of those uses as stated in the amended motion. The motion was called and carried.

HEARING NUMBER: 90-8-14-DCI-4

NAME: BOARD OF COUNTY COMMISSIONERS, represented by DEPARTMENT OF UTILITIES, in reference to LEE COUNTY RESOURCE RECOVERY FACILITY - CONTINUED FROM SEPTEMBER 10, 1990 BCC

REQUEST: A rezoning from AG-2 to Industrial Planned Development to permit the development of an energy recovery facility with buildings not to exceed 4 stories and 380 feet in height above average grade, on 148 total acres of land.

NOTE: If approved, the Master Concept Plan (available for inspection at 1831 Hendry Street in Fort Myers) will deviate from the following Lee County standard:

(1) Requirement that the height of buildings in an Industrial Planned Development cannot exceed 3

habitable stories and 45 feet above minimum flood elevation (Section 471.E.4.), to 4 habitable stories and 380 feet above average grade.

LOCATION: The subject property is located at 10500 Buckingham Road (from I-75, Exit 23, go east on Immokalee Road/SR 82 for 1 1/2 miles to Buckingham Road, go east approximately one [1] mile to the site), Tice, in S24, T44S, R25E, Lee County, Florida. (District #5)

STRAP NUMBER: The applicant indicates the strap number is: 24-44-25-00-00001.0000

SIZE OF PROPERTY: 148 acres +/-

STAFF RECOMMENDATIONS: APPROVE with conditions.

HEARING EXAMINER'S RECOMMENDATIONS: APPROVE with conditions. (Copy is on file in the Clerk's Office, Minutes Department).

Mr. Charlie Gauthier, Principal Planner, Zoning Division, Department of Community Development, stated Staff finds the proposal meets compatibility standards due to the large site, the setbacks, the buffering, screening, architectural plans, and controls on odor and noise. He added there are approximately 25 acres of wetlands on this site which have been identified as Preserve Area on the Master Concept Plan. There are four listed parties of interest. Commissioner Manning noted this hearing is regarding rezoning and that input regarding the technical aspect of the case can be submitted at a Public Forum soon to be scheduled. Mr. George Reilly, Administrative Director, Department of Lee County Utilities, discussed previous Board action regarding approval of a Resolution of Necessity to condemn the land north of what's proposed here for a total of 320 acres. He stated that via the Parks & Recreation Department, the balance of the 320 acres will remain as a buffer, if it isn't developed as a park. He stated the results of a site analysis study found that Site "F" was the most economical and the most centrally located for traffic access and infrastructure availability. He also gave a brief overview of the design and operation plans for the project and verified that the owner of the property, via a Trust, was notified of this rezoning Hearing. Commissioner Slisher discussed concern with the amount of acreage being acquired versus the amount actually needed, whether this is the most economical site, if major improvements are being proposed to go along with this proposal for SR31, and of truck impact to Buckingham Road. Mr. Reilly gave a brief review of proposed improvements planned for SR31. He stated there has been a traffic impact analysis made which has been presented to DOT&E as part of this process, and at the Development Order stage, the traffic plan will be brought back to the community for their input. Assistant County Attorney Marianne Kantor advised the Board regarding the requested rezoning category, Industrial Planned Development (IPD), and stated it is the only category in which resource recovery is permitted in the Zoning Regulations. The Chairman called for public input and the following listed interested parties spoke:

Mr. Kenneth Case, North Fort Myers, spoke in opposition to the incinerator. He referred to reports regarding findings of how those emissions from the smokestack containing lead and mercury pollute waters, agriculture as well as cattle resources. (Copies are on file in the Clerk's Office, Minutes Department).

Mr. Lyle Danielson, Cape Coral, representing the Sierra Club, Caloosa Group, stated their opposition based on toxic contamination concerns and financial concerns. He advocated recycling, conservation and education programs, as well as a vote on the issue in the next election. Information regarding these issues was submitted to the Board, which was not received by the Clerk's Office, Minutes Department.

Attorney James T. Humphrey, in behalf of Denise Fair, a listed party of interest, c/o Humphrey & Knott, P.A., Fort Myers, for the Buckingham Preservation Community Assoc., stated they will work with the County on this Project and support the purchase of additional lands for buffering. If, however, the zoning includes commitment for the extension of SR31 through Buckingham, they cannot support it.

Mr. Edwin Hutzler, Fort Myers, stated he previously supported the incinerator, but has changed his opinion because of the toxic substances which will come from the plant's emissions, and expressed his support for recycling.

Commissioner Manning requested that Staff schedule a Public Forum to be held

within the next thirty days. He then discussed how the financial interests of the County's residents will be protected if they go to a Bond Issue and the Plant is subsequently not built. Commissioner Judah discussed the County's new recycling programs, and plans for improving the processing equipment at Goodwill Industries recycling facility. He also discussed how these programs along with a resource recovery facility will be able to handle the County's waste disposal needs. Commissioner Judah moved to approve the rezoning application, seconded by Commissioner Fussell. Commissioner Slisher discussed opposition to the acquisition of additional lands and his concern with the contamination from toxic emissions to the surrounding area. Commissioner Fussell agreed with Commissioner Judah and stated support for educational programs regarding conservation and recycling. Commissioner St. Cerny discussed the need for the Public Forum and agreed with Commissioner Judah's comments regarding the need for recycling efforts to be combined with an incinerator facility. The motion was called and carried with Commissioner Slisher voting no.

Following a brief recess, the Chairman called the meeting back to order with all Commissioners present except Commissioner Slisher.

HEARING NUMBER: 90-8-14-DRI-5

NAME: BOARD OF COUNTY COMMISSIONERS, represented by DEPARTMENT OF COMMUNITY SERVICES/DIVISION OF PLANNING AND CONSTRUCTION, in reference to LEE COUNTY SPORTS COMPLEX - CONTINUED FROM SEPTEMBER 10, 1990 BCC

REQUEST: Consideration of the proposed project under Florida Statutes, Chapter 380.061 as a Florida Quality Development, which is subject to review under the regulations of this statute, and also includes issuance of a Development Order approving, approving with conditions, or denying the development.

LOCATION: The subject property is located at 14140 Six Mile Cypress Parkway (approximately 1/2 mile south of Daniels Road on the west side of Six Mile Cypress Parkway), in S30, T45S, R25E, Lee County, Florida. (District #5)

STRAP NUMBER: The applicant indicates the strap number is: 30-45-25-00-00004.0010

SIZE OF PROPERTY: 80 acres +/-

STAFF RECOMMENDATIONS: APPROVE

HEARING EXAMINER'S RECOMMENDATIONS: APPROVE (Copy of Staff Report is on file in the Clerk's Office, Minutes Department).

Mr. Charlie Gauthier, Principal Planner, Zoning Division, Department of Community Development, stated the Board has been provided copies of his September 21, 1990 memorandum entitled ""Suggested Language Addition to Sports Complex D.O.". (Copy is on file in the Clerk's Office, Minutes Department). Mr. Gauthier stated this is a request to designate the Sports Complex as a Florida Quality Development, FQD. He stated Staff concurs that it should be so designated, and that this will be one of the final steps to fully authorize the Project. He also stated that last summer the County had entered into a preliminary development agreement and had approved the zoning, and that construction now is well under way. The decision to designate this as a FQD would allow the Florida Department of Community Affairs the ability to adopt the final Development Order (draft copy is included in the Staff Report package on file in the Clerk's Office, Minutes Department). Mr. Gauthier stated Staff has worked with the State on this document, however, Staff is suggesting one addition which is stated in his 9/21/90 memorandum. The purpose of the addition is to clarify that this Project is complying with the Lee Plan, with the Local Concurrency Ordinance and with the State Concurrency Regulations. He then gave an overview of the complete review process which this Project has completed. He stated that future phases of the Project, beyond 7,500 seats, would require a traffic reanalysis. The Regional Planning Council had also voted to designate this a FQD. None of the listed parties of interest were present. Commissioner Judah moved to approve the amended language as designated by the 9/21/90 memorandum, seconded by Commissioner Fussell, called and carried with Commissioner Slisher absent.

The meeting was adjourned at 11:15 a.m.

Lee County Energy Recovery Facility
Comparison of NOx Cost Removal Estimates
Amortized Over Two Percentage-Year Options

Vendor-System-Reheat Budgetary Estimate Scenario	NOx Outlet Concentration[a]	Tons NOx Removed[b]	7% Over 15 Years	7% Over 20 Years
Babcock-SCR-Steam	100	301	$9,463	$8,605
Babcock-SCR-Gas	100	301	$15,883	$15,038
SEGHERS-SCR-Gas	100	301	$9,767	$9,121

[a] Outlet NOx concentration corrected to ppmdv at 7% oxygen.

[b] All cases include NOx inlet concentration of 260 ppmdv at 7% oxygen.

Note: The above SCR System Costs do not include the calculated penalty for SCR system shutdown from lost tipping fee revenue and lost revenue from power (steam) production.

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Steam Diverted from Header

Cost Component	Costs	Basis of Cost Component
Direct Capital Costs		
SCR Associated Equipment	$6,424,110	Supplier Est. w/ 1% for Steam System, Adjusted for Temp
Ammonia Storage Tanks	Included	Ammonia Storage
Flue Gas Ductwork	$100,000	Engineering Estimate
Instrumentation	Included	In-situ NOx Analyzer
Freight	**$0**	Included in Supplier Quote for Capital Costs of SCR System
System Integration	$100,000	Engineering Estimate
Firewater Booster Pump	$23,000	Supplier Neutral Estimate
Increase ID Fan Size	$50,000	Supplier Neutral Estimate; Increased size due to pressure drop across SCR System
Total Direct Capital Costs (TDCC)	$6,697,110	
Direct Installation Costs		
Installation	$5,686,750	Supplier Est. w/ 1% for Steam System, Adjusted for Temp
Foundation and Supports	Included	Included in Supplier Quote for Installation of SCR System
Handling and Erection	Included	Included in Supplier Quote for Installation of SCR System
Electrical	Included	Included in Supplier Quote for Installation of SCR System
Piping	Included	Included in Supplier Quote for Installation of SCR System
Insulation for Ductwork	Included	Included in Supplier Quote for Installation of SCR System
Painting	$30,000	SCR Structural Steel, Piping and Exposed Metals
Site Preparation	$29,000	Existing Roads, Demolition & Restoration, SCR Footprint
Buildings (Process CEM)	$25,000	Engineering Estimate
Concrete	$40,000	Aqueous Ammonia Spill Containment
Miscellaneous Steel	Included	Platforms, Ladders, etc.
SCR Building Enclosure/Struct. Steel	**$440,000**	Supplier Neutral Estimate; Windload Req. for Hurricanes
Electrical Systems	$56,000	Grounding, Lightning Protection, Lighting, etc.
Instrumentation Systems	$8,000	Systems Monitoring and Control
Insulation Systems	$29,000	Insulating Steam Line to SCR Building
ID Fan Increase	$50,000	Engineering Estimate; Installation with Dampers
Piping Systems	$216,000	Fire Protection Standpipe/Sprinklers, Steam, Service Air, Relocate Propane, Potable Water, Ammonia, Steam, Condensate Return
Total Direct Installation Costs (TDIC)	$6,609,750	
Total Capital Costs (TCC)	$13,306,860	Sum of TDCC and TDIC
Indirect Costs		
Vendor Engineering and Related Costs	$1,064,549	8% of TCC
Construction and Field Expenses	Included	Included in Supplier Quote for SCR System
Vendor Fees	$665,343	5% of TCC
Project Management & Oversight	Included	Included in Vendor Engineering and Related Costs
Start-Up	$266,137	2% of TCC; OAQPS Control Cost Manual, Chapter 3
Performance Tests	$133,069	1% of TCC; OAQPS Control Cost Manual, Chapter 3
Contingencies	$1,330,686	10% of TCC;
Total Indirect Capital Costs (TInCC)	$3,459,784	
Total Direct, Indirect and Capital Costs (TDICC)	$16,766,644	

Note: **Bolded** Cost revised since October 31, 2002 version in final PSD Application

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Steam Diverted from Header

Cost Component	Costs	Basis of Cost Component
Direct Annual Costs		
Operations and Maintenance Labor	$56,160	24 hours/week at $45/hour
Ammonia to control 260 ppm inlet NOx	$53,700	$300 per ton for Ammonia*
Catalyst Disposal Costs	$15,000	Engineering Estimate
Catalyst Cost	$90,000	1/3 Catalyst-3 year catalyst life
Regulatory Compliance Costs	$25,000	Engineering Estimate
Spare Parts Inventory Replacement	$96,362	1.5% of SCR Associated Equipment
Total Direct Annual Costs (TDAC)	$336,222	
Annual Energy Costs		
Annual Electrical Needs	$2,847	6.5 kW X 8,760 hours per year at $0.05 per kWh
Annual Additional ID Fan Power	$116,946	267 kW X 8,760 hours per year at $0.05 per kWh
Total Energy Costs (TEC)	$119,793	
Indirect Annual Costs		
Management/Overhead	$33,696	60% of Operations and Maintenance Labor
Insurance	$133,069	1% of Total Capital Costs
Miscellaneous Painting	$10,000	Supplier Neutral Estimate
Miscellaneous Equipment Rebuild	$72,271	Supplier Neutral Estimate; 75% of Spare Parts Above
Cost of Steam for Reheat	**$302,255**	$0.00454/lb steam x 7600 lb steam/hour x 8760 hour/year
Annualized Total Direct Capital	$1,840,977	0.1098 Capital Recovery Factor of 7% over 15 years multiplied by sum of TDICC
Total Indirect Annual Costs (TIAC)	$2,392,268	
Total Annualized Costs	$2,848,283	Sum of TDAC, TEC and TIAC (for 260 ppm)
Cost Effectiveness of SCR System		Cost Per Ton NOx Removed
	$9,463	301 Tons NOx Removed (260 ppm inlet; 100 ppm outlet; 62% Removal)

Note: 'Included' denotes item is assumed to be included in supplier budgetary estimate for SCR Associated Equipment and Installation. [See letter from Dennis Malone (Babcock Borsig Power) to Michael Hober (RTP Environmental) dated October 19, 2001, October 29, 2001, and December 4, 2001]

The above cost does not include revenue lost due to additional or unscheduled system shutdown. Based on a cost of $56 per ton of waste at 600 tons of waste per day and over an annual shutdown of 10 days, this cost is estimated to be approximately $336,000 due to lost tipping fees. In addition to this, the amount of revenue lost due to not producing steam during these 10 days is estimated to be approximately $177,000; bringing the Total Annualized costs and cost effectiveness (respectively) to:

Total Annualized Costs $3,295,481 Cost per ton NOx removed $10,948

This cost does not include costs for the electrical needs of the system (1008.5kW over 240 hours at $0.05/kWh) and ammonia usage because system will not operate.

* Note: Ammonia usage is based on information provided by Covanta and ratioed based on 100% availability of Unit 3.

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for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Steam Diverted from Header

Cost Component	Costs	Basis of Cost Component
Direct Annual Costs		
Operations and Maintenance Labor	$56,160	24 hours/week at $45/hour
Ammonia to control 260 ppm inlet NOx	$53,700	$300 per ton for Ammonia*
Catalyst Disposal Costs	$15,000	Engineering Estimate
Catalyst Cost	$90,000	1/3 Catalyst-3 year catalyst life
Regulatory Compliance Costs	$25,000	Engineering Estimate
Spare Parts Inventory Replacement	$96,362	1.5% of SCR Associated Equipment
Total Direct Annual Costs (TDAC)	$336,222	
Annual Energy Costs		
Annual Electrical Needs	$2,847	6.5 kW X 8,760 hours per year at $0.05 per kWh
Annual Additional ID Fan Power	$116,946	267 kW X 8,760 hours per year at $0.05 per kWh
Total Energy Costs (TEC)	$119,793	
Indirect Annual Costs		
Management/Overhead	$33,696	60% of Operations and Maintenance Labor
Insurance	$133,069	1% of Total Capital Costs
Miscellaneous Painting	$10,000	Supplier Neutral Estimate
Miscellaneous Equipment Rebuild	$72,271	Supplier Neutral Estimate; 75% of Spare Parts Above
Cost of Steam for Reheat	**$302,255**	$0.00454/lb steam x 7600 lb steam/hour x 8760 hour/year
Annualized Total Direct Capital	$1,582,771	0.0944 Capital Recovery Factor of 7% over 20 years multiplied by sum of TDICC
Total Indirect Annual Costs (TIAC)	$2,134,062	
Total Annualized Costs	$2,590,077	Sum of TDAC, TEC and TIAC (for 260 ppm)
Cost Effectiveness of SCR System		Cost Per Ton NOx Removed
	$8,605	301 Tons NOx Removed (260 ppm inlet; 100 ppm outlet; 62% Removal)

Note: 'Included' denotes item is assumed to be included in supplier budgetary estimate for SCR Associated Equipment and Installation. [See letter from Dennis Malone (Babcock Borsig Power) to Michael Hober (RTP Environmental) dated October 19, 2001, October 29, 2001, and December 4, 2001]

The above cost does not include revenue lost due to additional or unscheduled system shutdown. Based on a cost of $56 per ton of waste at 600 tons of waste per day and over an annual shutdown of 10 days, this cost is estimated to be approximately $336,000 due to lost tipping fees. In addition to this, the amount of revenue lost due to not producing steam during these 10 days is estimated to be approximately $177,000; bringing the Total Annualized costs and cost effectiveness (respectively) to:

Total Annualized Costs $3,037,275 Cost per ton NOx removed $10,091

This cost does not include costs for the electrical needs of the system (1008.5kW over 240 hours at $0.05/kWh) and ammonia usage because system will not operate.

* Note: Ammonia usage is based on information provided by Covanta and ratioed based on 100% availability of Unit 3.

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Natural Gas Combustion

Cost Component	Costs	Basis of Cost Component
Direct Capital Costs		
SCR Associated Equipment	$6,300,000	Supplier Estimate
Ammonia Storage Tanks	Included	Ammonia Storage
Flue Gas Ductwork	$100,000	Engineering Estimate
Instrumentation	Included	In-situ NOx Analyzer
Freight	**$0**	Included in Supplier Quote for Capital Costs of SCR System
System Integration	$100,000	Engineering Estimate
Firewater Booster Pump	$23,000	Supplier Neutral Estimate
Increase ID Fan Size	$60,000	Supplier Neutral Estimate; Increased size due to pressure drop across SCR System
Total Direct Capital Costs (TDCC)	$6,583,000	
Direct Installation Costs		
Installation	$5,675,000	Supplier Estimate
Foundation and Supports	Included	Included in Supplier Quote for Installation of SCR System
Handling and Erection	Included	Included in Supplier Quote for Installation of SCR System
Electrical	Included	Included in Supplier Quote for Installation of SCR System
Piping	Included	Included in Supplier Quote for Installation of SCR System
Insulation for Ductwork	Included	Included in Supplier Quote for Installation of SCR System
Painting	$30,000	SCR Structural Steel, Piping and Exposed Metals
Site Preparation	$29,000	Existing Roads, Demolition & Restoration, SCR Footprint
Buildings (Process CEM)	$25,000	Engineering Estimate
Concrete	$40,000	Aqueous Ammonia Spill Containment
Miscellaneous Steel	Included	Platforms, Ladders, etc.
SCR Building Enclosure/Struct. Steel	**$440,000**	Supplier Neutral Estimate; Windload Req. for Hurricanes
Electrical Systems	$56,000	Grounding, Lightning Protection, Lighting, etc.
Instrumentation Systems	$8,000	Systems Monitoring and Control
ID Fan Increase	$60,000	Engineering Estimate; Installation with Dampers
Piping Systems	$166,000	Fire Protection Standpipe/Sprinklers, Service Air, Potable Water, Ammonia, Gas Piping
Total Direct Installation Costs (TDIC)	$6,529,000	
Total Capital Costs (TCC)	$13,112,000	Sum of TDCC and TDIC
Indirect Costs		
Vendor Engineering and Related Costs	$1,048,960	8% of TCC
Construction and Field Expenses	Included	Included in Supplier Quote for SCR System
Vendor Fees	$655,600	5% of TCC
Project Management & Oversight	Included	Included in Vendor Engineering and Related Costs
Start-Up	$262,240	2% of TCC; OAQPS Control Cost Manual, Chapter 3
Performance Tests	$131,120	1% of TCC; OAQPS Control Cost Manual, Chapter 3
Contingencies	$1,311,200	10% of TCC;
Total Indirect Capital Costs (TInCC)	$3,409,120	
Total Direct, Indirect and Capital Costs (TDICC)	$16,521,120	

Note: **Bolded** Cost revised since October 31, 2002 version in final PSD Application

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Natural Gas Combustion

Cost Component	Costs	Basis of Cost Component
Direct Annual Costs		
Operations and Maintenance Labor	$56,160	24 hours/week at $45/hour
Ammonia to control 260 ppm inlet NOx	$53,700	$300 per ton for Ammonia*
Catalyst Disposal Costs	$15,000	Engineering Estimate
Catalyst Cost	$90,000	1/3 Catalyst-3 year catalyst life
Regulatory Compliance Costs	$25,000	Engineering Estimate
Spare Parts Inventory Replacement	$94,500	1.5% of SCR Associated Equipment
Total Direct Annual Costs (TDAC)	$334,360	
Annual Energy Costs		
Annual Electrical Energy Usage	$2,847	6.5 kW X 8,760 hours per year at $0.05 per kWh
Annual Additional ID Fan Power	$130,962	299 kW X 8,760 hours per year at $0.05 per kWh
Annual Natural Gas Usage	**$2,252,941**	256,016 Mcf at $8.80 per 1000 cf of Natural Gas Based on Supplier Est.; Adjusted for Temp
Total Energy Costs (TEC)	$2,386,750	
Indirect Annual Costs		
Management/Overhead	$33,696	60% of Operations and Maintenance Labor
Insurance	$131,120	1% of Total Capital Costs
Miscellaneous Painting	$10,000	Supplier Neutral Estimate
Miscellaneous Equipment Rebuild	$70,875	Supplier Neutral Estimate; 75% of Spare Parts Above
Annualized Total Direct Capital	$1,814,019	0.1098 Capital Recovery Factor of 7% over 15 years multiplied by sum of TDICC
Total Indirect Annual Costs (TIAC)	$2,059,710	
Total Annualized Costs	$4,780,820	Sum of TDAC, TEC and TIAC (for 260 ppm)
Cost Effectiveness of SCR System		Cost Per Ton NOx Removed
	$15,883	301 Tons NOx Removed (260 ppm inlet; 100 ppm outlet; 62% Removal)

Note: 'Included' denotes item is assumed to be included in supplier budgetary estimate for SCR Associated Equipment and Installation. [See letter from Dennis Malone (Babcock Borsig Power) to Michael Hober (RTP Environmental) dated October 19, 2001, October 29, 2001, and December 4, 2001]

The above cost does not include revenue lost due to additional or unscheduled system shutdown. Based on a cost of $56 per ton of waste at 600 tons of waste per day and over an annual shutdown of 10 days, this cost is estimated to be approximately $336,000 due to lost tipping fees. In addition to this, the amount of revenue lost due to not producing steam during these 10 days is estimated to be approximately $177,000; bringing the Total Annualized costs and cost effectiveness (respectively) to:

Total Annualized Costs $5,236,454 Cost per ton NOx removed $17,397

This cost does not include costs for the electrical needs of the system (305.5kW over 240 hours at $0.05/kWh) and ammonia usage because system will not operate.

* Note: Ammonia usage is based on information provided by Covanta and ratioed based on 100% availability of Unit 3.

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Natural Gas Combustion

Cost Component	Costs	Basis of Cost Component
Direct Capital Costs		
SCR Associated Equipment	$6,300,000	Supplier Estimate
Ammonia Storage Tanks	Included	Ammonia Storage
Flue Gas Ductwork	$100,000	Engineering Estimate
Instrumentation	Included	In-situ NOx Analyzer
Freight	**$0**	Included in Supplier Quote for Capital Costs of SCR System
System Integration	$100,000	Engineering Estimate
Firewater Booster Pump	$23,000	Supplier Neutral Estimate
Increase ID Fan Size	$60,000	Supplier Neutral Estimate; Increased size due to pressure drop across SCR System
Total Direct Capital Costs (TDCC)	$6,583,000	
Direct Installation Costs		
Installation	$5,675,000	Supplier Estimate
Foundation and Supports	Included	Included in Supplier Quote for Installation of SCR System
Handling and Erection	Included	Included in Supplier Quote for Installation of SCR System
Electrical	Included	Included in Supplier Quote for Installation of SCR System
Piping	Included	Included in Supplier Quote for Installation of SCR System
Insulation for Ductwork	Included	Included in Supplier Quote for Installation of SCR System
Painting	$30,000	SCR Structural Steel, Piping and Exposed Metals
Site Preparation	$29,000	Existing Roads, Demolition & Restoration, SCR Footprint
Buildings (Process CEM)	$25,000	Engineering Estimate
Concrete	$40,000	Aqueous Ammonia Spill Containment
Miscellaneous Steel	Included	Platforms, Ladders, etc.
SCR Building Enclosure/Struct. Steel	**$440,000**	Supplier Neutral Estimate; Windload Req. for Hurricanes
Electrical Systems	$56,000	Grounding, Lightning Protection, Lighting, etc.
Instrumentation Systems	$8,000	Systems Monitoring and Control
ID Fan Increase	$60,000	Engineering Estimate; Installation with Dampers
Piping Systems	$166,000	Fire Protection Standpipe/Sprinklers, Service Air, Potable Water, Ammonia, Gas Piping
Total Direct Installation Costs (TDIC)	$6,529,000	
Total Capital Costs (TCC)	$13,112,000	Sum of TDCC and TDIC
Indirect Costs		
Vendor Engineering and Related Costs	$1,048,960	8% of TCC
Construction and Field Expenses	Included	Included in Supplier Quote for SCR System
Vendor Fees	$655,600	5% of TCC
Project Management & Oversight	Included	Included in Vendor Engineering and Related Costs
Start-Up	$262,240	2% of TCC; OAQPS Control Cost Manual, Chapter 3
Performance Tests	$131,120	1% of TCC; OAQPS Control Cost Manual, Chapter 3
Contingencies	$1,311,200	10% of TCC;
Total Indirect Capital Costs (TInCC)	$3,409,120	
Total Direct, Indirect and Capital Costs (TDICC)	$16,521,120	

Note: **Bolded** Cost revised since October 31, 2002 version in final PSD Application

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Natural Gas Combustion

Cost Component	Costs	Basis of Cost Component
Direct Annual Costs		
Operations and Maintenance Labor	$56,160	24 hours/week at $45/hour
Ammonia to control 260 ppm inlet NOx	$53,700	$300 per ton for Ammonia*
Catalyst Disposal Costs	$15,000	Engineering Estimate
Catalyst Cost	$90,000	1/3 Catalyst-3 year catalyst life
Regulatory Compliance Costs	$25,000	Engineering Estimate
Spare Parts Inventory Replacement	$94,500	1.5% of SCR Associated Equipment
Total Direct Annual Costs (TDAC)	$334,360	
Annual Energy Costs		
Annual Electrical Energy Usage	$2,847	6.5 kW X 8,760 hours per year at $0.05 per kWh
Annual Additional ID Fan Power	$130,962	299 kW X 8,760 hours per year at $0.05 per kWh
Annual Natural Gas Usage	**$2,252,941**	256,016 Mcf at $8.80 per 1000 cf of Natural Gas Based on Supplier Est.; Adjusted for Temp
Total Energy Costs (TEC)	$2,386,750	
Indirect Annual Costs		
Management/Overhead	$33,696	60% of Operations and Maintenance Labor
Insurance	$131,120	1% of Total Capital Costs
Miscellaneous Painting	$10,000	Supplier Neutral Estimate
Miscellaneous Equipment Rebuild	$70,875	Supplier Neutral Estimate; 75% of Spare Parts Above
Annualized Total Direct Capital	$1,559,594	0.0944 Capital Recovery Factor of 7% over 20 years multiplied by sum of TDICC
Total Indirect Annual Costs (TIAC)	$1,805,285	
Total Annualized Costs	$4,526,395	Sum of TDAC, TEC and TIAC (for 260 ppm)
Cost Effectiveness of SCR System		Cost Per Ton NOx Removed
	$15,038	301 Tons NOx Removed (260 ppm inlet; 100 ppm outlet; 62% Removal)

Note: 'Included' denotes item is assumed to be included in supplier budgetary estimate for SCR Associated Equipment and Installation. [See letter from Dennis Malone (Babcock Borsig Power) to Michael Hober (RTP Environmental) dated October 19, 2001, October 29, 2001, and December 4, 2001]

The above cost does not include revenue lost due to additional or unscheduled system shutdown. Based on a cost of $56 per ton of waste at 600 tons of waste per day and over an annual shutdown of 10 days, this cost is estimated to be approximately $336,000 due to lost tipping fees. In addition to this, the amount of revenue lost due to not producing steam during these 10 days is estimated to be approximately $177,000; bringing the Total Annualized costs and cost effectiveness (respectively) to:

Total Annualized Costs $4,982,029 Cost per ton NOx removed $16,552

This cost does not include costs for the electrical needs of the system (305.5kW over 240 hours at $0.05/kWh) and ammonia usage because system will not operate.

* Note: Ammonia usage is based on information provided by Covanta and ratioed based on 100% availability of Unit 3.

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Natural Gas Combustion

Cost Component	Costs	Basis of Cost Component
Direct Capital Costs		
SCR Associated Equipment	$8,800,000	Supplier Estimate
Ammonia Storage Tanks	Included	Ammonia Storage
Import Duty	$110,000	5% of Estimated 25% Import Value
Flue Gas Ductwork	$100,000	Engineering Estimate
Instrumentation	Included	In-situ NOx Analyzer
Freight	Included	Included in Supplier Quote for Capital Equipment
System Integration	$100,000	Engineering Estimate
Firewater Booster Pump	$23,000	Supplier Neutral Estimate
Increase ID Fan Size	$60,000	Supplier Neutral Estimate; Increased size due to pressure drop across SCR System
Total Direct Capital Costs (TDCC)	$9,193,000	
Direct Installation Costs		
Installation	Included	Included in Supplier Quote for Installation of SCR System
Foundation and Supports	Included	Included in Supplier Quote for Installation of SCR System
Handling and Erection	Included	Included in Supplier Quote for Installation of SCR System
Electrical	Included	Included in Supplier Quote for Installation of SCR System
Piping	Included	Included in Supplier Quote for Installation of SCR System
Insulation for Ductwork	Included	Included in Supplier Quote for Installation of SCR System
Painting	Included	Included in Supplier Quote for Installation of SCR System
Site Preparation	$29,000	Existing Roads, Demolition & Restoration, SCR Footprint
Buildings (Process CEM)	$25,000	Engineering Estimate
Concrete	$40,000	Aqueous Ammonia Spill Containment
Miscellaneous Steel	$11,000	Platforms, Ladders, etc.
SCR Building Enclosure/Struct. Steel	**$440,000**	Supplier Neutral Estimate; Windload Req. for Hurricanes
Electrical Systems	$56,000	Grounding, Lightning Protection, Lighting, etc.
Instrumentation Systems	$8,000	Systems Monitoring and Control
ID Fan Increase	$60,000	Engineering Estimate; Installation with Dampers
Piping Systems	$166,000	Fire Protection Standpipe/Sprinklers, Service Air, Potable Water, Ammonia, Gas Piping
Total Direct Installation Costs (TDIC)	$835,000	
Total Capital Costs (TCC)	$10,028,000	Sum of TDCC and TDIC
Indirect Costs		
Vendor Engineering and Related Costs	$802,240	8% of TCC
Construction and Field Expenses	Included	Included in Supplier Quote for SCR System
Vendor Fees	$501,400	5% of TCC
Project Management & Oversight	Included	Included in Vendor Engineering and Related Costs
Start-Up	$200,560	2% of TCC; OAQPS Control Cost Manual, Chapter 3
Performance Tests	$100,280	1% of TCC; OAQPS Control Cost Manual, Chapter 3
Contingencies	$1,002,800	10% of TCC;
Total Indirect Capital Costs (TInCC)	$2,607,280	
Total Direct, Indirect and Capital Costs (TDICC)	$12,635,280	

Note: **Bolded** Cost revised since October 31, 2002 version in final PSD Application

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Natural Gas Combustion

Cost Component	Costs	Basis of Cost Component
Direct Annual Costs		
Operations and Maintenance Labor	$56,160	24 hours/week at $45/hour
Ammonia to control 260 ppm inlet NOx	$53,700	$300 per ton for Ammonia*
Catalyst Disposal Costs	$15,000	Engineering Estimate
Catalyst Cost	$350,000	1/2 Catalyst-2 year catalyst life
Regulatory Compliance Costs	$25,000	Engineering Estimate
Spare Parts Inventory Replacement	$132,000	1.5% of SCR Associated Equipment
Total Direct Annual Costs (TDAC)	$631,860	
Annual Energy Costs		
Annual Electrical Energy Usage (Including 250 kW for ID Fan)	$140,160	320 kW X 8,760 hours per year at $0.05 per kWh
Annual Natural Gas Usage	**$537,518**	Based on Supplier Estimate (Based on 8,760 hr/yr & $8.80/1000 scf gas)
Total Energy Costs (TEC)	$677,678	
Indirect Annual Costs		
Management/Overhead	$33,696	60% of Operations and Maintenance Labor
Insurance	$100,280	1% of Total Capital Costs
Miscellaneous Painting	$10,000	Supplier Neutral Estimate
Miscellaneous Equipment Rebuild	$99,000	Supplier Neutral Estimate; 75% of Spare Parts Above
Annualized Total Direct Capital	$1,387,354	0.1098 Capital Recovery Factor of 7% over 15 years multiplied by sum of TDICC
Total Indirect Annual Costs (TIAC)	$1,630,330	
Total Annualized Costs	$2,939,868	Sum of TDAC, TEC and TIAC (for 260 ppm)
Cost Effectiveness of SCR System		Cost Per Ton NOx Removed
	$9,767	301 Tons NOx Removed (260 ppm inlet; 100 ppm outlet; 62% Removal)

Note: 'Included' denotes item is assumed to be included in supplier budgetary estimate for SCR Associated Equipment and Installation. [See email from Dirk Eeraerts (SEGHER's Better Technology) to Scott Heath (RTP Environmental) dated December 21, 2001]

The above cost does not include revenue lost due to additional or unscheduled system shutdown. Based on a cost of $56 per ton of waste at 600 tons of waste per day and over an annual shutdown of 10 days, this cost is estimated to be approximately $336,000 due to lost tipping fees. In addition to this, the amount of revenue lost due to not producing steam during these 10 days is estimated to be approximately $177,000; bringing the Total Annualized costs and cost effectiveness (respectively) to:

Total Annualized Costs $3,395,250 Cost per ton NOx removed $11,280

This cost does not include costs for the electrical needs of the system (326.5kW over 240 hours at $0.05/kWh) and ammonia usage because system will not operate.

* Note: Ammonia usage is based on information provided by Covanta and ratioed based on 100% availability of Unit 3.

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Natural Gas Combustion

Cost Component	Costs	Basis of Cost Component
Direct Capital Costs		
SCR Associated Equipment	$8,800,000	Supplier Estimate
Ammonia Storage Tanks	Included	Ammonia Storage
Import Duty	$110,000	5% of Estimated 25% Import Value
Flue Gas Ductwork	$100,000	Engineering Estimate
Instrumentation	Included	In-situ NOx Analyzer
Freight	Included	Included in Supplier Quote for Capital Equipment
System Integration	$100,000	Engineering Estimate
Firewater Booster Pump	$23,000	Supplier Neutral Estimate
Increase ID Fan Size	$60,000	Supplier Neutral Estimate; Increased size due to pressure drop across SCR System
Total Direct Capital Costs (TDCC)	$9,193,000	
Direct Installation Costs		
Installation	Included	Included in Supplier Quote for Installation of SCR System
Foundation and Supports	Included	Included in Supplier Quote for Installation of SCR System
Handling and Erection	Included	Included in Supplier Quote for Installation of SCR System
Electrical	Included	Included in Supplier Quote for Installation of SCR System
Piping	Included	Included in Supplier Quote for Installation of SCR System
Insulation for Ductwork	Included	Included in Supplier Quote for Installation of SCR System
Painting	Included	Included in Supplier Quote for Installation of SCR System
Site Preparation	$29,000	Existing Roads, Demolition & Restoration, SCR Footprint
Buildings (Process CEM)	$25,000	Engineering Estimate
Concrete	$40,000	Aqueous Ammonia Spill Containment
Miscellaneous Steel	$11,000	Platforms, Ladders, etc.
SCR Building Enclosure/Struct. Steel	**$440,000**	Supplier Neutral Estimate; Windload Req. for Hurricanes
Electrical Systems	$56,000	Grounding, Lightning Protection, Lighting, etc.
Instrumentation Systems	$8,000	Systems Monitoring and Control
ID Fan Increase	$60,000	Engineering Estimate; Installation with Dampers
Piping Systems	$166,000	Fire Protection Standpipe/Sprinklers, Service Air, Potable Water, Ammonia, Gas Piping
Total Direct Installation Costs (TDIC)	$835,000	
Total Capital Costs (TCC)	$10,028,000	Sum of TDCC and TDIC
Indirect Costs		
Vendor Engineering and Related Costs	$802,240	8% of TCC
Construction and Field Expenses	Included	Included in Supplier Quote for SCR System
Vendor Fees	$501,400	5% of TCC
Project Management & Oversight	Included	Included in Vendor Engineering and Related Costs
Start-Up	$200,560	2% of TCC; OAQPS Control Cost Manual, Chapter 3
Performance Tests	$100,280	1% of TCC; OAQPS Control Cost Manual, Chapter 3
Contingencies	$1,002,800	10% of TCC;
Total Indirect Capital Costs (TInCC)	$2,607,280	
Total Direct, Indirect and Capital Costs (TDICC)	$12,635,280	

Note: **Bolded** Cost revised since October 31, 2002 version in final PSD Application

Estimate of Selective Catalytic Reduction Costs
for Lee County Energy Recovery Facility
With Flue Gas Reheat Using Natural Gas Combustion

Cost Component	Costs	Basis of Cost Component
Direct Annual Costs		
Operations and Maintenance Labor	$56,160	24 hours/week at $45/hour
Ammonia to control 260 ppm inlet NOx	$53,700	$300 per ton for Ammonia*
Catalyst Disposal Costs	$15,000	Engineering Estimate
Catalyst Cost	$350,000	1/2 Catalyst-2 year catalyst life
Regulatory Compliance Costs	$25,000	Engineering Estimate
Spare Parts Inventory Replacement	$132,000	1.5% of SCR Associated Equipment
Total Direct Annual Costs (TDAC)	$631,860	
Annual Energy Costs		
Annual Electrical Energy Usage (Including 250 kW for ID Fan)	$140,160	320 kW X 8,760 hours per year at $0.05 per kWh
Annual Natural Gas Usage	**$537,518**	Based on Supplier Estimate and 8,760 hr/yr & $8.80/1000 scf gas)
Total Energy Costs (TEC)	$677,678	
Indirect Annual Costs		
Management/Overhead	$33,696	60% of Operations and Maintenance Labor
Insurance	$100,280	1% of Total Capital Costs
Miscellaneous Painting	$10,000	Supplier Neutral Estimate
Miscellaneous Equipment Rebuild	$99,000	Supplier Neutral Estimate; 75% of Spare Parts Above
Annualized Total Direct Capital	$1,192,770	0.0944 Capital Recovery Factor of 7% over 20 years multiplied by sum of TDICC
Total Indirect Annual Costs (TIAC)	$1,435,746	
Total Annualized Costs	$2,745,284	Sum of TDAC, TEC and TIAC (for 260 ppm)
Cost Effectiveness of SCR System		Cost Per Ton NOx Removed
	$9,121	301 Tons NOx Removed (260 ppm inlet; 100 ppm outlet; 62% Removal)

Note: 'Included' denotes item is assumed to be included in supplier budgetary estimate for SCR Associated Equipment and Installation. [See email from Dirk Eeraerts (SEGHER's Better Technology) to Scott Heath (RTP Environmental) dated December 21, 2001]

The above cost does not include revenue lost due to additional or unscheduled system shutdown. Based on a cost of $56 per ton of waste at 600 tons of waste per day and over an annual shutdown of 10 days, this cost is estimated to be approximately $336,000 due to lost tipping fees. In addition to this, the amount of revenue lost due to not producing steam during these 10 days is estimated to be approximately $177,000; bringing the Total Annualized costs and cost effectiveness (respectively) to:

Total Annualized Costs $3,200,666 Cost per ton NOx removed $10,633

This cost does not include costs for the electrical needs of the system (326.5kW over 240 hours at $0.05/kWh) and ammonia usage because system will not operate.

* Note: Ammonia usage is based on information provided by Covanta and ratioed based on 100% availability of Unit 3.

THE FOLLOWING INCREMENTAL ANALYSIS TABLES REFLECT THE REVISED COST ESTIMATE CALCULATIONS

Table A - Unit 3 Incremental NOx Removal Cost Analysis

Case No.	Controlled NOx ppmdv @ 7% O2	NOx Removed tons per year	Incremental NOx Removal, tpy	Annualized Cost of NOx Removal	Cost of NOx Removal dollars per ton ($/t)	Incremental Cost of NOx Removal, $/t
	Note (1)			Note (2)	Note (2)	Notes (2) (3)
SNCR	150	206	Base	$441,775	$2,145	Base
SCR (BBP)	100	301	95	$2,848,283	$9,463	$25,332

Note 1: Controlled NOx performance level is estimated for long term sustained operation
Note 2: Based on 7% annual interest rate and 15 years amortization
Note 3: This column includes incremental cost of removing NOx using SCR over the cost of removing NOx using SNCR

Table B - Unit 3 Incremental NOx Removal Cost Analysis

Case No.	Controlled NOx ppmdv @ 7% O2	NOx Removed tons per year	Incremental NOx Removal, tpy	Annualized Cost of NOx Removal	Cost of NOx Removal dollars per ton ($/t)	Incremental Cost of NOx Removal, $/t
	Note (1)			Note (2)	Note (2)	Notes (2) (3)
SNCR	150	206	Base	$415,308	$2,016	Base
SCR (BBP)	100	301	95	$2,590,077	$8,605	$22,892

Note 1: Controlled NOx performance level is estimated for long term sustained operation
Note 2: Based on 7% annual interest rate and 20 years amortization
Note 3: This column includes incremental cost of removing NOx using SCR over the cost of removing NOx using SNCR

Suites 201 & 202
10100 Deer Run Farm Road
Ft. Myers, FL
33912-1045

941 939-3009
941 939-1220 fax
www.pfm.com

Public Financial Management
Financial and Investment Advisors

January 16, 2003

RECEIVED
JAN 22 2003
BY:

Mr. Lindsey J. Sampson, Director
Lee County Solid Waste Division
10500 Buckingham Rd.
Ft. Myers, Fl. 33905

Subject: Interest Rate for Solid Waste Revenue Bonds

Dear Mr. Sampson:

PFM has served as the County's Financial Advisor for several bond issues during the last several years. We understand that the Florida Department of Environmental Protection has requested Lee County to provide a range of interest rates applicable for financing the waste to energy expansion project.

As you know, Lee County has established its Solid Waste System as an Enterprise Fund. The Solid Waste System currently has two outstanding revenue bond issues. Funds for the expansion project will be provided by the issuance of additional revenue bonds. Such a bond issuance will have to be structured in such a manner that the Enterprise Fund and the existing debt structure are not adversely impacted.

At this time the County can expect to pay a total equivalent average interest rate of 5.5% to 7.5% for funds required for this project. This interest rate range is based on our evaluation of current market conditions for tax-free municipal revenue bonds. There are many factors that will influence the average interest rate that the County will actually receive at the time of the bond issuance and therefore the rate could be higher or lower than this range.

PFM is very familiar with the Lee County Solid Waste System and will be pleased to work with the County in structuring this financing. The County will experience a higher interest rate if the financing is structured for a 20-year period. We believe the County should consider financing this project for a 15-year period in order to avoid the additional interest cost. Although the annual debt service would be more, the over-all cost for the County would be less.

Sincerely,
PUBLIC FINANCIAL MANAGEMENT

Hal W. Canary, CPA
Senior Managing Consultant

Cc: Jim Lewin, Lee County Sr. Budget Analyst

Rosania, Sam M.

From: Scott Heath [heath@rtpenv.com]
Sent: Monday, February 03, 2003 5:32 PM
To: Rosania, Sam M.
Subject: Fwd: Re: Additional Information

Sakab bustion_diagram.P

Reference data for Lee County....

Sam,
Here is the first email from Segher's.

Scott

>From: Dirk_Eeraerts@seghersgroup.com
>To: Scott Heath <heath@rtpenv.com>
>Cc: William E Corbin <corbin@rtpenv.com>, Donald F Elias <elias@rtpenv.com>,
> Michael J Hober <hober@rtpenv.com>,
> "Chattopadhyay, Amit" <achattopadhyay@PIRNIE.COM>
>X-Mailer: Lotus Notes Release 5.0.6a January 17, 2001
>Date: Sat, 18 Jan 2003 12:23:05 -0500
>Subject: Re: Additional Information
>X-MIMETrack: Serialize by Router on ldbel03.hudee.com/huDEE(Release
>5.0.11 |July 24, 2002) at
> 01/18/2003 06:25:40 PM
>
>
>Scott,

>There are two Seghers facilities that could be of interest to you and your
>client:
>
>A) the INDAVER facility in Antwerp, Belgium.
>
>INDAVER is a facility with 3 trains in total. 2 trains were built by
>Seghers in 1996 with each a capacity of 350 TPD. A third train was built in
>2000 with a capacity of
>587 TPD . The total plant capacity is 1287 TPD. The first two trains have
>no NOx abatement system ; the NOx emission is 240 ppm @ 7%O2, 24-hour
>average (see conversion to ppm at 7% O2 in attached table "Reference data
>for Lee County").
>The new train is equipped with a flue gas recirculation system. The 24-hour
>average for NOx is 170 ppm @ 7%O2. They don't use SNCR in this new train as
>the current emission standard can be met with the flue gas recirculation
>system only. In the future, the emission standard for NOx will be 150
>mg/Nm3 dry, 11%O2, 24-hour average (102 ppm, dry @ 7% O2). This new
>standard will be met with an SNCR system that is currently under
>construction.
>
>The 3 trains in Indaver use the Seghers Multistage Grate (see
>http://www.seghersgroup.com/seghers/environment.nsf/vID/7143AB0D9C9B6875C1256BD8003DB04A?
opendocument)
> and have an integrated horizontal steam boiler. Indaver burns Municipal
>Solid Waste. Sludge from a municipal wastewater treatment plant is also
>burnt (maximum 10% of total waste input).
>CO and VOC emissions are given in the attached table "Reference data for
>Lee County"

>
>
>B) SAKAB WtE facility, Orebro, Sweden

>
>The Sakab Facility consists of 2 trains each 330 TPD at 5000 BTU/Lb (see
>attached Combustion diagram in metric units). The guaranteed NOx emission
>for this plant is 150 mg/Nm3 dry, 11%O2, 24-hour average (102 ppm, dry @ 7%
O2). This NOx level is reached by means of the following provisions:
>- flue gas recirculation
>- multi stage secondary air injection
>- 4 level SNCR system
>- The grate is the Seghers Multistage Grate but in this case, 60% of the
>grate surface is water cooled. Water cooling results in a lower furnace
>temperature and therefore also contributes to lower NOx emissions.
>
>
>Scott, we have been talking about this a long time. I really believe it
>would be very beneficial for you and your client if you could take the time
>to visit these plants and meet with our engineers and the facility owners.
>If there is no time/budget for this visit I would ask you to accept a
>meeting/presentation by our engineers who are working on the design of
>these and other facilities.
>
>Thanks & Best Regards,
>Dirk Eeraerts
>Business Development Manager
>SEGHERS Keppel Technology Inc
>1235 F Kennestone Circle, Marietta, Georgia 30066, USA
>Tel: 770 421 1181 (ext 234), Fax: 770 421 8611
>
>
>(See attached file: Sakab combustion_diagram.PDF)(See attached file:
>Reference data for Lee County.PDF)
>
>
>
>
>
>   Scott
> Heath
>
>   <heath@rtpenv.com   To:
> Dirk_Eeraerts@seghersgroup.com
>   >   cc: Donald F Elias
> <elias@rtpenv.com>, Michael J Hober <hober@rtpenv.com>,
>   William E Corbin
> <corbin@rtpenv.com>
>   01/06/03 05:48 PM   Subject: Additional
> Information
>
>
>
>
>
>
>
>
>Dirk,
>How was your Holiday Season? I hope the Holidays found you well and
>healthy. The Lee County Energy Recovery Facility submitted the PSD
>application to the Florida Department of Environmental Protection and has
>received comments on this initial application. Several comments were
>raised regarding the facility referenced in your December 21, 2001 email
>transmitting the revised budgetary estimate for a SCR system at the Lee
County Energy Recovery Facility. The following is from the December 21,
2001 email.
>
>As a matter of fact, Seghers has built a WtE facility where we meet 150
>mg/Nm3 as daily average with a simple SNCR (i.e. non-catalytic) and
>flue gas recirculation.

>
>
>In an October 28, 2002 email to Amit Chattopadhyay of Malcolm Pirnie, you
>provided the following response regarding the facility:

>3) The plant Seghers has built where we meet 150 mg/Nm3 as daily average
>with a SNCR (i.e. non-catalytic) and flue gas recirculation is the INDAVER
>plant in Antwerp, Belgium. It is an additional WtE train with a capacity of
>587 TPD built in 2000.
>
>
>Please provide the following information at your earliest convenience.
>
>Is the INDAVER facility 587 TPD per unit or total facility?
>Type of combustor unit (e.g., mass burn/waterwall, mass burn, waterwall,
>modular, etc.)
>Does the facility fire municipal solid waste exclusively? Are other wastes
>fired in the combustor?
>Please provide a listing of all control equipment on the combustor(s) at
>this Antwerp facility.
>Please provide the following data for concurrent emissions in ppm @ 7% O2:
>   NOx (based on a 24-hour average, if available)
>   CO (based on a 4-hour average, if available)
>   VOC
>
>Thank you for your assistance with this matter.
>
>Yours truly,
>Scott Heath
>
>
>
>

>**********
>
>Scott P. Heath
>Environmental Scientist
>Email: heath@rtpenv.com
>
>RTP Environmental Associates, Inc.
>239 US Highway 22 East
>Green Brook, New Jersey 08812 USA
>
>Main Number: (732) 968-9600
>Fax Number: (732) 968-9603
>Direct Number: (732) 968-2569 ext. 311
>Web Site: http://www.rtpenv.com
>

>
>
>

>Please visit our site at http://www.seghersgroup.com.
>
>

****

Scott P. Heath
Environmental Scientist
Email: heath@rtpenv.com

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Green Brook, New Jersey 08812 USA

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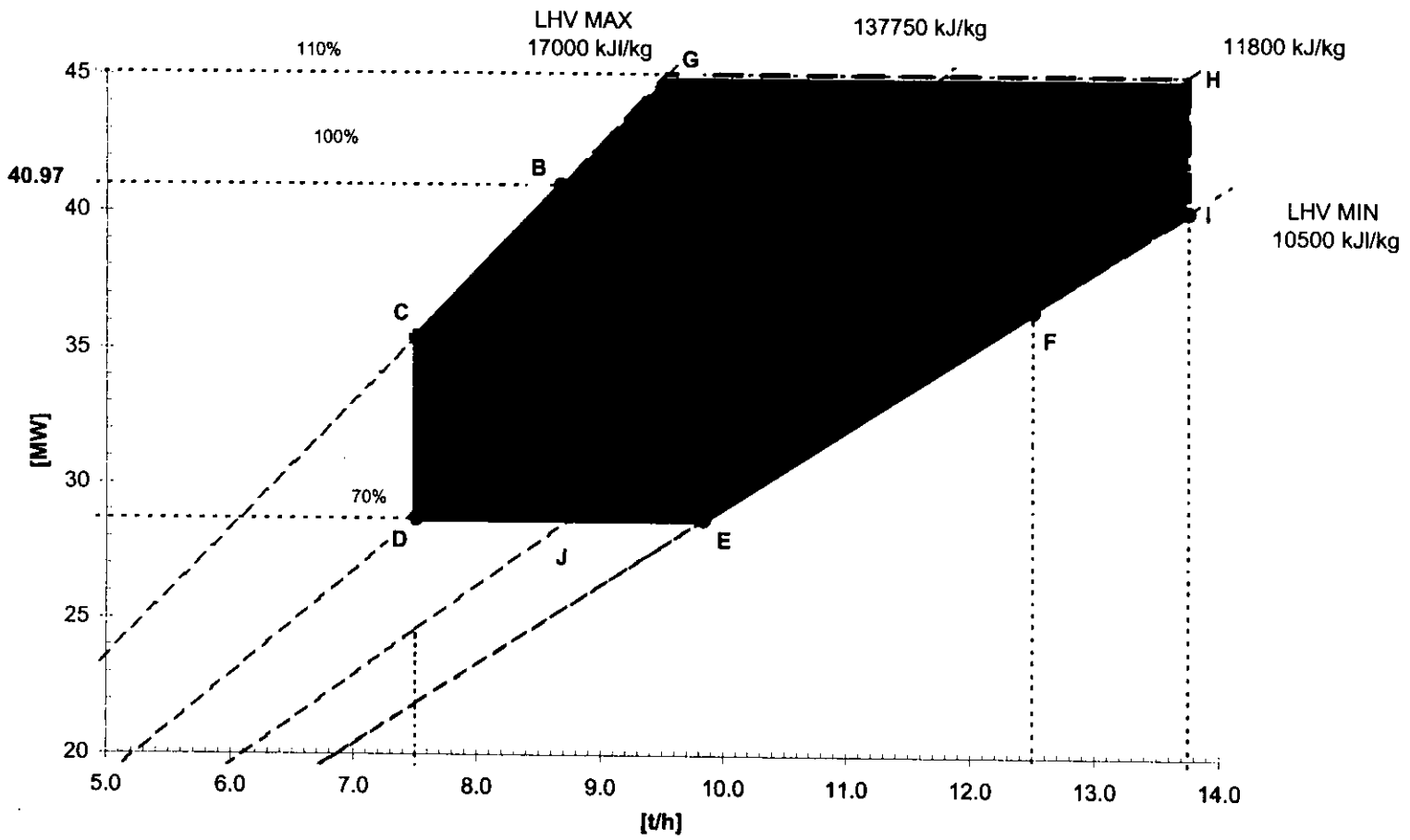
Direct Number: (732) 968-2569 ext. 311
Web Site: http://www.rtpenv.com

Seghers Keppel

Indaver	mg/Nm3 , dry, 11% O2	mg/Nm3 , dry, 7% O2	ppm , dry, 7% O2
Train 1&2			
NOx	350	490	239
Train 3			
NOx	250	350	170
CO	20	28	22
VOC	5	7	
Sakab			
NOx	150	210	102
CO	20	28	22
VOC	5	7	

Combustion Diagram SAKAB -3348



ATTACHMENT 10

RTP ENVIRONMENTAL ASSOCIATES INC.®

AIR · WATER · SOLID WASTE CONSULTANTS

239 U.S. Highway 22 East
Green Brook, New Jersey 08812-1909
(www.rtpenv.com)

(732) 968-9600
Fax: (732) 968-9603

December 13, 2002

Mr. Cleve Holladay
Florida Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Suite 4
Tallahassee, FL 32301

Dear Cleve:

Attached please find a CD of the air quality modeling files for the air quality permit and PPSA application for a third unit at the Lee County Resource Recovery Facility. This CD was inadvertently left out of the original submittal. A "read-me" file on the CD contains a list and description of the CD contents.

Should you have any questions or require additional information, please feel free to call either Bill Corbin at 570-619-7682 or myself at 732-968-9600.

Sincerely,

RTP ENVIRONMENTAL ASSOCIATES, INC.®

Donald F. Elias
Principal

DFE/WEC/wec

CD Attachment

cc (w/o attachment): H.Oven/D.Galbraith/S.Rosania/L.Sampson/D.Dee/Proj.File-MPLC

ATTACHMENT 11

LEE

RESOURCE RECOVERY FACILITY

AN OGDEN COMPANY

ENVIRONMENTAL COMPLIANCE

OPERATING MANUAL

"*OPERATIONS TRAINING*"

OGDEN MARTIN SYSTEMS OF LEE, INC.
FORT MYERS, FLORIDA

Covanta Lee, Inc.

Clean Air Act Annual Required Training

Schedule 2002

01/06/02-1/12/02 Covanta Lee Systems Descriptions System #01 - Main Power System #02 - Auxiliary Power	**01/13/02-1/19/02** Covanta Lee Systems Descriptions System #03 - Combustion Air and Flue Gas	**01/20/02-1/26/02** Covanta Lee Systems Descriptions System #04 - Martin Stoker Flue Gas	**01/27/02-2/02/02** Covanta Lee Systems Descriptions System #06 - Boiler
02/03/02-02/09/02 Covanta Lee Systems Descriptions System #06 - Feedwater System #07 - Condensate	**02/10/02-02/16/02** Covanta Lee Systems Descriptions System #08 - Main Turbine System #07 - Condensate	**02/17/02-02/23/02** Covanta Lee Systems Descriptions System #09 - Potable Water and Sanitary Drains System #10 - Service Water and Waste Water	**02/26/02-03/02/02** Covanta Lee Systems Descriptions System #11 - Circulating Water System #12 - Closed Cooling Water
03/03/02-03/09/02 Covanta Lee Systems Descriptions System #13 - Distributed Control System	**03/10/02-03/16/02** Covanta Lee Systems Descriptions System #14 - Fire Protection	**03/17/02-03/23/02** Covanta Lee Systems Descriptions System #15 - Demineralizer System #16 - Chemical Feed	**03/26/02-03/30/02** Covanta Lee Systems Descriptions System #17 - Plant and Instrument Air
03/31/02-04/06/02 Covanta Lee Systems Descriptions System #18 - Steam Distribution	**04/07/02-04/13/02** Covanta Lee Systems Descriptions System #19 - Scrubber System #20 - Baghouse	**04/14/02-04/20/02** Covanta Lee Systems Descriptions System #21 - Flyash Handling System #22 - Residue Handling	**04/21/02-04/27/02** Covanta Lee Systems Descriptions System #23 - Refuse Crane
04/2802-05/04/02 Covanta Lee Systems Descriptions System #24 - Propane System #25 - Continuous Emissions Monitoring	**05/05/02-05/11/02** Covanta Lee Systems Descriptions System #26 - Heating, Ventilation, and Air Conditioning	**05/14/02-05/18/02** Covanta Lee Systems Descriptions System #27 - Thermal Denox	**05/19/02-05/25/02** Covanta Lee Systems Descriptions System #28 - Circulating Water Waste Water Treatment

05/26/02-06/01/02 Covanta Environmental Compliance Operating Manual Section 1 - Summary of the Applicable Standards Under 40 CFR 60 Subpart Ea & 60.56a	06/02/02-06/08/02 Covanta Environmental Compliance Operating Manual Section 2 - Description of Basic Combustion Theory Applicable to a MWC Unit	06/09/02-06/15/02 Covanta Environmental Compliance Operating Manual Section 3 - Procedures for Receiving, Handling, and Feeding MSW	06/16/02-06/22/02 Covanta Environmental Compliance Operating Manual Section 4 - MWC Unit Startup, Shutdown, and Malfunction Procedures
06/23/02-06/29/02 Covanta Environmental Compliance Operating Manual Section 5 - Procedures for Maintaining Proper Combustion Air Supply Levels	06/30/02-07/06/02 Covanta Environmental Compliance Operating Manual Section 6 - Procedures for Operating the MWC Unit Within the Standards Established Under 40 CFR 60 Subpart Ea & 60.56a	07/07/02-07/13/02 Covanta Environmental Compliance Operating Manual Section 7 - Procedures for Responding to Periodic Upset or Off-Specification Conditions	07/14/02-07/20/02 Covanta Environmental Compliance Operating Manual Section 8 - Procedures for Minimizing Particulate Matter Carryover Section 9 - Procedures for Monitoring the Degree of MSW Burnout
07/21/02-07/27/02 Covanta Environmental Compliance Operating Manual Section 10 - Procedures for Handling Ash Section 11-Procedures for Monitoring MWC Unit Emissions	07/28/02-08/03/02 Covanta Environmental Compliance Operating Manual Section 12 - Reporting and Record-keeping Procedures		