Golder Associates Inc.

6241 NW 23rd Street, Suite 500 Gainesville, FL 32653-1500 Telephone (352) 336-5600 Fax (352) 336-6603



December 13, 1999

9939558

Florida Department of Environmental Protection New Source Review Section; Bureau of Air Regulation Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Fl 32399-2400

Attention: A.A. Linero, P.E. Administrator

RE: IPS-VANDOLAH POWER PROJECT

DEP FILE NO. 0490043-0010AC (PSD-FL-275)

COMMENTS TO EPA LETTER

Dear Al:

This correspondence is submitted on behalf of IPS Avon Park Corporation to address comments submitted by the Environmental Protection Agency Region IV in a letter dated November 19, 1999 concerning the above referenced facility. The information is provided in the same order as indicated in the EPA correspondence.

Preliminary Determination and Draft Permit

1. Annualized Total Direct Recurring Costs: This annualized cost is based on only the annualized cost of the "Hot" SCR catalyst (i.e., 0.3811 times the \$2.458 million catalyst cost for an annualized cost of \$936,700). Since the catalyst is a significant cost associated with the SCR system and has a shorter life than the other equipment (i.e., 3 years), the annualized cost is based on the 3 year catalyst life and a 7 percent capital recovery factor (CRF). The Annualized Total Direct Capital Cost, which is based on 15 years, does not include the catalyst. Also, the Direct Annual Costs do not include the cost of the catalyst replacement. This is directly handled by the Recurring Capital Costs and associated annualized cost calculation. There is a cost to account for carrying chargers for one-third of a catalyst, but this cost is relatively minor. It should be noted that the traditional method included in the OAQPS Cost Control Manual is to annualize the capital costs associated with the pollution control equipment and include a separate cost for replacement parts (e.g., catalyst). If this approach is used, the annualized cost of the catalyst and the direct annual cost of catalyst replacement together is about \$1,107,870 (i.e., 0.1174 times \$2.458 million plus 1/3 of \$2.458 million).

The MW Loss Penalty reflects the cost for the catalyst replacement outside of normal maintenance. Moreover, the regularly scheduled maintenance typically occurs at about 5,000 hours of turbine operation, which may not coincide with the requirements to replace catalyst modules. T his cost is especially valid for simple cycle turbines where

"hot" SCR has not been demonstrated of cycling turbines, let alone "F" Class sized turbines. It should be noted that the annual cost for MW Loss Penalty is low relative to the other costs (i.e., less than 5 percent) and would not affect the conclusions.

- 2. NO, Emission Limit Averaging Time: The 24-hour block average proposed by the Department for the NO, emission limit when firing natural gas of 9 ppmvd corrected to 15 percent oxygen is appropriate for the proposed project. The benefits of NO, control through the use of pollution prevention technology, such as the dry low-NO_x (DLN) combustor proposed for the project, suggests that a longer averaging time is warranted. All combustion processes have some variability and while the GE DLN combustor is designed to meet the 9 ppmvd limit at 6 standard deviations, a block average will account for any individual combustor variability and any associated degradation over time. Moreover, there is no environmental benefit from a shorter averaging time, since the block emission limit will assure low NO, emissions during daily periods (e.g., periods of ozone formation). It should also be apparent that the 24-block average will be applicable even if a turbine does not operate over a single 24-hour period. In such cases, the 24-hour block limit would apply to valid operating hours that are accumulated with further operation as indicated in Condition 19. This would exclude valid excess emissions from startup, shut down, or malfunction. However, the periods of excess emissions are expected to be shorter than 2 hours given that the GE DLN combustor can meet the emission limit starting at 50-percent load and the units are designed to supply electric in short time periods.
- 3. Excess Emissions: Conditions 25, 26, and 27 are appropriate and valid excess emission limitations provided for in Rule 62-210.700 Florida Administrative Code. Indeed, Condition 26 requires the applicant to operate the system properly to reasonably prevent excess emissions. Also, as indicated in the Department's BACT evaluation, the operation of the GE DLN combustion technology is fully automated to assure that excess emissions will be minimized.
- 4. VOC Emissions from Tanks: As provided for in the instructions to DEP Form 62-210.900(1), the emissions for the tanks were not included since the emissions of VOC would be less than 5 tons per year, and there are no applicable emission limits. The maximum potential VOC emission for these tanks will be less than 1 ton per year. Adding these emissions would not change the PSD applicability for the project.

Air Impact Assessment

1. Operational Configuration Worst Case: Golder Associates agrees with EPA's observation that modeling performed at three different loads and turbine inlet temperatures are not realistic. However, based on hundreds of modeling studies, this approach produces unrealistically high (i.e., conservative) impacts relative to normal operation and meteorological conditions. For the IPS Vandolah Project where there are identical sources located relatively close together and where downwash is not a significant factor, a modeling approach suggested by EPA would not produce the highest impacts (e.g., two turbines at 100-percent load and two turbines at 50-percent load).

- 2. ISCST Model Version: The EPA comment is acknowledged. It should be noted that Version 99155 was made available about the time the modeling was performed and for the proposed project the changes made to the new version would not have produced different impacts than the use of Version 98356.
- 3. Modeling Error: The EPA comment is acknowledged. A transcription error was made in the exhaust gas velocity for the 95 °F turbine inlet temperature. However, the maximum impacts were for oil firing.

Please call if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky, P.E.

Principal

KFK/jkk

Enclosures

cc: Richard Zwolak

John Ellis, IPS Avon Park Corporation

\\GATORBAIT\DP\Projects\\\939\\939558a\\\\03\\#\\\31tr.doc



Department of INTEROFFICE MEMORANDUM Environmental Protection

Jeb Bush Governor Marjory Stonerpan Douglas Building Cen
3900 Commonwealth Boulevard GCOLDER.com
Tallahassee, Florida 32399-3000
Dept:

David B. Struhs Secretary

Tel No:

To: alvaro.linero

CC: jellis

(alvaro.linero@dep.state.fl.us)
(jellis@IntNet.net)

Subject: Comments to EPA Region IV Letter

Al: Attached please find information related to the items brought up in the EPA Region IV letter. We believe EPA's comments were minor and would not effect the draft permit conditions. Let me know if you have any questions. Regards, Ken

December 8, 1999

Project No. 9939558

Florida Department of Environmental Protection New Source Review Section; Bureau of Air Regulation Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Fl 32399-2400

Attention: A.A. Linero, P.E. Administrator

RE: IPS-Vandolah Power Project

DEP File No. 0490043-0010AC (PSD-FL-275)

Comments to EPA Letter

Dear Al:

This correspondence is submitted on behalf of IPS Avon Park Corporation to address comments submitted by the Environmental Protection Agency Region IV in a letter dated November 19, 1999 concerning the above referenced facility. The information is provided in the same order as indicated in the EPA correspondence.

Preliminary Determination and Draft Permit

1. Annualized Total Direct Recurring Costs: This annualized cost is based on only the annualized cost of the "Hot" SCR catalyst (i.e., 0.3811 times the \$2.458 million catalyst cost for an annualized cost of \$936,700). Since the catalyst is a significant cost associated with the SCR system and has a shorter life than the other equipment (i.e., 3 years), the annualized cost is based on the 3 year catalyst life and a 7 percent capital recovery factor (CRF). The Annualized Total Direct Capital Cost, which is based on 15 years, does not include the catalyst. Also, the Direct Annual Costs do not include the cost of the catalyst replacement. This is directly handled by the Recurring Capital Costs and associated annualized cost calculation. There is a cost to account for carrying chargers for one-third of a catalyst, but this cost is relatively minor. It should be noted that the traditional method included in the OAQPS Cost Control Manual is to annualize the capital costs associated with the pollution control equipment and include a separate cost for replacement parts (e.g., catalyst). If this approach is used, the annualized cost of the catalyst and the direct annual cost of catalyst replacement together is about \$1,107,870 (i.e., 0.1174 times \$2.458 million plus 1/3 of \$2.458 million).

The MW Loss Penalty reflects the cost for the catalyst replacement outside of normal maintenance. Moreover, the regularly scheduled maintenance typically occurs at about 5,000 hours of turbine operation, which may not coincide with the requirements to replace catalyst modules. This cost is especially valid for simple cycle turbines where "hot" SCR has not been demonstrated of cycling turbines, let alone "F" Class sized turbines. It should be noted that the annual cost for MW Loss Penalty is low relative to the other costs (i.e., less than 5 percent) and would not affect the conclusions.

- 2. NOx Emission Limit Averaging Time: The 24-hour block average proposed by the Department for the NOx emission limit when firing natural gas of 9 ppmvd corrected to 15 percent oxygen is appropriate for the proposed project. The benefits of NOx control through the use of pollution prevention technology, such as the dry low-NOx (DLN) combustor proposed for the project, suggests that a longer averaging time is warranted. All combustion processes have some variability and while the GE DLN combustor is designed to meet the 9 ppmvd limit at 6 standard deviations, a block average will account for any individual combustor variability and any associated degradation over time. Moreover, there is no environmental benefit from a shorter averaging time, since the block emission limit will assure low NOx emissions during daily periods (e.g., periods of ozone formation). It should also be apparent that the 24-block average will be applicable even if a turbine does not operate over a single 24-hour period. In such cases, the 24-hour block limit would apply to valid operating hours that are accumulated with further operation as indicated in Condition 19. This would exclude valid excess emissions from startup, shut down or malfunction. However, the periods of excess emissions are expected to be shorter than 2hours given that the GE DLN combustor can meet the emission limit starting at 50 percent load and the units are designed to supply electric in short time periods.
- 3. Excess Emissions: Conditions 25, 26 and 27 are appropriate and valid excess emission limitations provided for in Rule 62-210.700 Florida Administrative Code. Indeed, Condition 26 requires the applicant to operate the system properly to reasonably prevent excess emissions. Also, as indicated in the Department's BACT evaluation, the operation of the GE DLN combustion technology is fully automated to assure that excess emissions will be minimized.
- 4. VOC Emissions from Tanks: As provided for in the instructions to DEP Form 62-210.900(1), the emissions for the tanks were not included since the emissions of VOC would be less than 5 tons/year and there are no applicable emission limits. The maximum potential VOC emission for these tanks will be less than 1 ton/year. Adding these emissions would not change the PSD applicability for the project.

Air Impact Assessment

- 1. Operational Configuration Worst Case: Golder Associates agrees with EPA's observation that modeling performed at three different loads and turbine inlet temperatures are not realistic. However, based on hundreds of modeling studies, this approach produces unrealistically high (i.e., conservative) impacts relative to normal operation and meteorological conditions. For the IPS Vandolah Project where there are identical sources located relatively close together and where downwash is not a significant factor, a modeling approach suggested by EPA would not produce the highest impacts (e.g., two turbines at 100 percent load and two turbines at 50 percent load).
- ISCST Model Version: The EPA comment is acknowledged. It should be noted that Version 99155 was made available about the time the modeling was performed and for the proposed project the changes made to the new version would not have produced different impacts than the use of Version 98356.
- 3. Modeling Error: The EPA comment is acknowledged. A transcription error was made in the exhaust gas velocity for the 95 °F turbine inlet temperature. The maximum impacts were, however, for oil firing.

Please call if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky, P.E. Principal

KFK/

Enclosures

cc: Richard Zwolak
John Ellis, IPS Avon Park Corporation

December 8, 1999 Project No. 9939558



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MOV 1 9 1999

RECEIVED

4APT-ARB

NOV 24 1999

BUREAU OF AIR REGULATION

Mr. A. A. Linero, P.E. Administrator New Source Review Section Florida Department of Environmental Protection 2600 Blair Stone Road Tallahassee, Florida 32399-2400

SUBJECT:

Custom Fuel Monitoring Schedule Proposed for IPS Vandolah Power Project

located in Hardee County, Florida

Dear Mr. Linero:

This letter is in response to your October 18, 1999, request for approval of a custom fuel monitoring schedule for IPS Vandolah Power. IPS Vandolah will operate four natural gas-fired simple cycle combustion turbines subject to 40 C.F.R. Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines. As requested, Specific Conditions 40, 41, 42, 44 and 45 have been reviewed. The Environmental Protection Agency (EPA) Region 4 has concluded that the use of acid rain nitrogen oxides (NO_X) continuous emission monitoring system (CEMS) for demonstrating compliance, as described in Specific Conditions 40, 41 and 42, is acceptable. Region 4 has also concluded that the natural gas custom fuel monitoring schedule proposed in Specific Condition 45 and the fuel oil monitoring schedule described in Specific Condition 44 are both acceptable.

According to 40 C.F.R. 60.334(b)(2), owners and operators of stationary gas turbines subject to Subpart GG are required to monitor fuel nitrogen and sulfur content on a daily basis if a company does not have intermediate bulk storage for its fuel. 40 C.F.R. 60.334(b)(2) also contains provisions allowing owners and operators of turbines that do not have intermediate bulk storage for their fuel to request approval of custom fuel monitoring schedules that require less frequent monitoring of fuel nitrogen and sulfur content.

Region 4 reviewed Specific Condition 44 which allows SO₂ emissions to be quantified using procedures in 40 C.F.R. 75 Appendix D in lieu of daily sampling as required by 40 C.F.R. 60.334(b). Since the specific limitations listed in the permit condition are consistent with previous determinations, we have concluded that the use of this custom fuel monitoring schedule is acceptable.

Specific Conditions 40, 41 and 42 involve the method used to monitor NO_X excess emissions. Under the provisions for 40 C.F.R. 60.334(c)(1), the operating parameters used to identify NO_X excess emissions for Subpart GG turbines are water-to-fuel injection rates and fuel nitrogen content. As an alternative to monitoring NO_X excess emissions using these parameters, IPS Vandolah is proposing to use a NO_X CEMS that is certified for measuring NO_X emissions under 40 C.F.R. Part 75. Based upon a determination issued by EPA on March 12, 1993, NO_X CEMS can be used to monitor excess emissions from Subpart GG turbines if a number of conditions specified in the determination are met and included in the permit condition.

Specific Condition 40 addresses the potential for correcting results to ISO standard day conditions. The basis for this requirement is that, under the provisions of 40 C.F.R. 60.335(c), NO_x results from performance tests must be converted to ISO standard day conditions. As an alternative to continuously correcting results to ISO standard day conditions, IPS Vandolah plans to keep records of the data needed to make this conversion, so that NO_x results could be calculated on an ISO standard day condition basis anytime at the request of EPA or the Florida DEP. This approach is acceptable, since the construction permit contains NO_x limits that are more stringent than those in Subpart GG, and compliance with Subpart GG for these units would be a concern only in cases when a turbine is in violation of the NO_x limits in its permit.

Finally, Specific Condition 45 addresses the monitoring schedule for fuel oil. According to 40 C.F.R. 60.334(b)(1), the nitrogen and sulfur content of the fuel oil must be monitored each time a new shipment of fuel oil is transferred to bulk storage. IPS Vandolah is proposing to use the fuel analysis provided by the fuel vendor instead of sampling each shipment directly. Provided that all the oil received at the plant complies with the applicable sulfur content limit of 0.8 weight percent, this approach is acceptable, since the specific condition states that the fuel vendor's analyses will comply with the test method requirements of 40 C.F.R. 60.335(d).

If you have any questions about the determination provided in this letter, please contact Ms. Katy R. Forney of the EPA Region 4 staff at (404) 562-9130.

Sincerely,

Douglas Neeley

Chief

Air and Radiation Technology Branch

Air, Pesticides and Toxics Management Division

\$EPA	United States of America Environmental Protection Agency			
A FAX FROM				
TO: Al Linero FDEP	FAX NO: (850) 922-6979			
SUBJECT: IPS Vandolah Power Pr	roject			
FROM: Katy Forney	PHONE NO: (404) 562-9130			
OFFICE: EPA Region 4	FAX NO. FOR: (404) 562-9095			
COMMENTS:				
DATE and TIME: 11/19/99 EPA FAX FORM (E~Forms 4.3)	NO. OF PAGES 4 (inc. cover)			



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

NOV 1 9 1999

RECEIVED

4APT-ARB

NOV 24 1999

Mr. A. A. Linero, P.E. Florida Department of Environmental Protection Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Florida 32399-2400

BUREAU OF AIR REGULATION

SUBJ: Preliminary Determination and Draft Permit for IPS Avon Park Corp. - IPS Vandolah Power Project (PSD-FL-275) located in Hardee County, Florida

Dear Mr. Linero:

Thank you for sending the preliminary determination and draft permit dated October 18, 1999, for the above referenced facility. The preliminary determination is for the proposed construction and operation of four simple cycle combustion turbines (CTs) with a total nominal generating capacity of 680 MW to be located near Wauchula, FL. The combustion turbines proposed for the facility are General Electric (GE), frame 7FA units. The CTs will primarily combust pipeline quality natural gas with No. 2 fuel oil combusted as backup fuel. As proposed, the CTs will be allowed to fire natural gas up to 3,390 hours per year and fire No. 2 fuel oil a maximum of 1,000 hours per year. Total emissions from the proposed project are above the thresholds requiring Prevention of Significant Deterioration (PSD) review for nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter (PM/PM₁₀) and sulfuric acid mist (SAM).

Based on our review of the preliminary determination and draft permit, we have the following comments on topics other than the air impact assessment. Air impact comments are provided at the end of this letter.

The SCR Cost analysis provided by the applicant in the PSD permit application lists an
"Annualized Total Direct Recurring" cost that is factored into the indirect annual cost figure.
This recurring cost seems to be double counting the "Total Direct Annual Costs" which
already incorporate the recurring cost of SCR catalyst and its disposal. This recurring cost
should be omitted from the cost analysis unless a detailed explanation for its purpose can be
provided.

Additionally, the "MW lost penalty" figure seems to be accounting for the lost revenue during catalyst replacement. Although it is appropriate to calculate the cost of using additional natural gas to compensate for the power consumption resulting from pressure drops across the catalyst bed, lost revenue from catalyst replacement should not be included in the cost

analysis. The replacement of catalyst can be accomplished during a regularly scheduled shutdown for routine maintenance and repair. The lost revenue figure should be omitted from the cost analysis.

- 2. In Section III, Condition 19 of the draft permit, the emission rate for NO_x is set as 9 ppmvd on a 24-hour block average as measured by CEMS. The averaging period for these emission limits should be much shorter, consistent with the 3-hour rolling averages proposed for fuel oil combustion in Condition 19. In previous recent correspondence from the Florida Department of Environmental Protection (FDEP) regarding similar sources, the main reason for the inconsistency in averaging times is credited to the fluctuations in emissions resulting from load changes. Elevated emissions from intermittently operated combustion turbines are most likely to occur during startup and shutdown periods, which FDEP has already taken into account in their excess emissions language. Although we take exception to the excess emissions provision (see our next comment below), a compliance averaging period less than 24 hours is reasonable if the excess emission provision is retained. Furthermore, the planned intermittent operation of the facility means that the combustion turbines will seldom operate for 24 consecutive hours.
- 3. As indicated in Condition 25 and 26 of the draft permit, FDEP is proposing to allow excess emissions due to startup, shutdown or malfunction for up to 2 hours in any 24-hour period. It is the Environmental Protection Agency's policy that BACT applies during all normal operations and that automatic exemptions should not be granted for excess emissions. Startup and shutdown of process equipment are part of the normal operation of a source and should be accounted for in the planning, design, and implementation of operating procedures for the process and control equipment. Accordingly, it is reasonable to expect that careful and prudent planning and design will eliminate violations of emission limitations during such periods.
- 4. The new CTs, which will fire No. 2 fuel oil as backup fuel, have the potential to emit VOCs from the two 2.8 million gallon fuel oil storage tanks. Any VOC emissions from the storage tanks should be taken into account when calculating the potential to emit (PTE) for VOC emissions. We realize the VOC emissions from these tanks will be small; however, as a matter of completeness, this increase in emissions should be included in all PTE calculations.

In terms of our review of the air impact assessment for the IPS Vandolah Power Project, we have the following comments:

Operational Configuration Worst Case - Although the air impact assessment was performed
for various loads and ambient temperatures, all four combustion turbines were assumed to
operate simultaneously at the same load. This is not a realistic assumption and may not
provide the operating scenario producing the worst case ambient impacts. However, it is
recognized that because of the very low maximum concentrations reported, it is unlikely that
operations with variable loads per turbine will alter the impact conclusions in the preliminary
determination.

- 2. ISCST3 Model Version The ISCST3 version used was indicated to be 98356. This is an older version. Future modeling should use the most recent version 99155.
- 3. Modeling Error Appendix C of the PSD permit application provides a listing of the input files used in the impact modeling. There appears to be an error in the exit velocity used in the modeling for base load natural gas operation at 95 °F ambient temperature. A stack exit velocity of 38.86 meters per second (m/s) was used when Table 2-1 indicates it should be 33.8 m/s.

Thank you for the opportunity to comment on the IPS Vandolah Power Project preliminary determination and draft permit. If you have any questions regarding these comments, please direct them to either Katy Forney at (404) 562-9130 or Jim Little at (404) 562-9118.

Sincerely,

R. Douglas Neeley

Chief

Air and Radiation Technology Branch

Air, Pesticides and Toxics
Management Division

Golder Associates Inc.

6241 NW 23rd Street, Suite 500 Gainesville, FL 32653-1500 Telephone (352) 336-5600 Fax (352) 336-6603



October 22, 1999

9939558A/2

Florida Department of Environmental Protection New Source Review Section; Bureau of Air Regulation Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Fl 32399-2400 RECEIVED

OCT 25 1999

BUREAU OF AIR REGULATION

Attention: Kim Tober

RE: IPS-Vandolah Power Project

Draft Permit-DEP File: No. 0490043-001-AC (PSD-FL-275)

Dear Kim:

Attached is the Proof of Publication for the above referenced draft permit. Please call if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky, P.E.

Principal

KFK/arz

Enclosures

cc: Richard Zwolak w/o enclosures

John Ellis, IPS Avon Park Corporation

P:\Projects\99\9939\9939558a\02\#02-ltr.doc

AFFIDAVIT OF PUBLICATION

The Herald-Advocate

Published Weekly at Wauchula, Florida

STATE OF FLORIDA, COUNTY OF HARDEE Before the undersigned authority personally appeared who on oath says he is the of The Heruld-Advocate, a news
paper published at Wauchula, in Hardee County, Florida, that the attached copy of
advertisement, being a willing to the state of the state
in the matter of Antont To village Of an Construction Formis
the issues of 1/2 3 1999
Affiant further says that the said Herald-Advocate is a newspaper published at Wauchula, in said Hardee County, Florida, and that the said newspaper has hereto fore been continuously published in said Hardee County, Florida, each week and ha been entered as second class mail matter at the post office in Wauchula, in said Hardee County, Florida, for a period of one year next preceding the publication of the attached copy of advertisement; and affiant further says that he has neither paid no promised any person, firm or corporation any discount, rebate, commission or refunder the purpose of securing this advertisement for publication in the said newspaper
Sworp to and subscribed before me this 31 day of Destruction A. D. 1999. Livery W. Carragians
My Commission Expires Unit 15 18 2002

Commission # CC 739052
Expires June 15, 2002
BONDED THRU
ATLANTIC BONDING CO., INC.

हें हेंद्र

ι,

CC: Jule EPA NPS SWD

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0490043-001-AC (PSD-FL-275)

Vandolah Power Project - Units 1-6 Hardee County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit under the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality to IPS Avon Park Corporation. The permit is to construct four nominal 170 megawatt (MW) natural gas and distillate fuel oil-fired combustion turbine-electrical generators with 60-foot stacks and two 2.8 million gallon fuel oil storage tanks for the proposed Vandolah Power Project at 2394 Vandolah Road, near Wauchula, Hardee County. A Best Available Control Technology (BACT) determination was required for sulfur dioxide (SO₂), particulate matter (PM/PM₁₀), nitrogen oxides (NO₂), sulfuric acid mist (SAM), and carbon monoxide (CO) pursuant to Rule 62-212.400, F.A.C. The applicant's name and address are IPS Avon Park Corporation, 1560 Gulf Boulevard, # 701, Clearwater, Florida 33767.

The new units will be General Electric nominal 170 MW PG7241FA combustion turbines electrical generators. The units will operate in simple cycle mode and intermittent duty. The units will operate primarily on natural gas and will be permitted to operate 3,390 hours per year of which no more than 1000 hours per year will be using 0.05 percent sulfur distillate fuel oil.

 NO_X emissions will be controlled by Dry Low NO_X (DLN-2.6) combustors. The units must meet a continuous emission limit of 9 parts per million by volume at 15 percent oxygen (ppm). NO_X will be controlled to 42 ppm by wet injection when firing fuel oil. Sulfuric acid mist, SO_2 , and PM/PM_{10} will be limited by use of clean fuels. Emissions of VOC and CO will be controlled by good combustion practices.

The maximum emissions in tons per year based on the original application are summarized below. All emissions will be somewhat lower as a result of the Department's proposed BACT determination.

Pollutant	Maximum Potential Emissions	PSD Significant Emission Rate
PM/PM ₁₀	- 82	25/15
CO	346	100
NOX	1008	40
voc ,	46	40
SO ₂	221	40
Sulfuric Acid Mist	. 34	7

Air quality and regional haze impact analyses were conducted. Maximum predicted impacts due to proposed emissions from the project are less than the applicable PSD Class I and Class II significant impact levels. There will be insignificant impacts on visibility in the Class I Chassahowitzka National Wildlife Area. Based on the required analyses, the Department has reasonable assurance that the proposed project will not cause or significantly contribute to a violation of any AAQS or PSD increment.

The Department will issue the FINAL Permit, in accordance with the conditions of the DRAFT Permit, unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S.; before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection

Department Environmental Protection

Bureau of Air Regulation

Southwest District Office

111 S. Magnolia Drive, Suite 4

3804 Coconut Palm Drive

Tallahassee, Florida 32301

Tampa, Florida 33619-8218

Telephone: 850/488-0114

Telephone: 813/744-6100

Fax: 850/922-6979

Fax: 813/744-6084

The complete project file includes the application, technical evaluations, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.



Department of Environmental Protection

jeb Bush Governor Twin Towers Office Building 2600 Blair Stone Road Tallahassee, Florida 32399-2400 October 18, 1999

David B. Struhs Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Gregg Worley, Chief Preconstruction/HAP Section Air, Radiation Technology Branch US EPA Region IV 61 Forsyth Street Atlanta, GA 30303

Re: PSD Review and Custom Fuel Monitoring Schedule IPSAPC Vandolah Power Project PSD-FL-275

Dear Mr. Worley:

Enclosed are two copies of the Department's Intent to Issue package for the IPSAPC Vandolah Power Project in Hardee County. It will be a natural gas and oil-fired simple cycle facility consisting of four nominal 170-megawatt (MW) simple cycle combustion turbine-electrical generators.

Please provide your comments on the Draft BACT determination and Draft Permit. The project is not subject to the Florida's Power Plant Siting procedure because it will generate no electricity from steam.

Please send your written comments on or approval of the applicant's proposed custom fuel monitoring schedule. The plan is based on the letter dated January 16, 1996 from Region V to Dayton Power and Light. The Subpart GG limit on SO₂ emissions is 150 ppmvd @ 15% O₂ or a fuel sulfur limit of 0.8% sulfur. Neither of these limits could conceivably be violated by the use of pipeline quality natural gas which has a maximum SO₂ emission rate of 0.0006 lb/MMBtu (40 CFR 75 Appendix D Section 2.3.1.4). The sulfur content of pipeline quality natural gas in Florida has been estimated at a maximum of 0.003 % sulfur. Fuel oil with a 0.05% sulfur content will be used as a backup. The requirements have been incorporated into the enclosed draft permit as Specific Conditions 44 and 45 and read as follows:

- 44. <u>Natural Gas Monitoring Schedule</u>: A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following requirements are met:
 - The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.

- The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to using a primary fuel of pipeline supplied natural gas (sulfur content less than 20 gr/100 scf pursuant to 40 CFR 75.11(d)(2)).
- Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.
- This custom fuel monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO₂ emissions must be accounted for as required pursuant to 40 CFR 75.11(d).
- 45. Fuel Oil Monitoring Schedule: The following monitoring schedule for No. 2 or superior grade fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at this facility an analysis which reports the sulfur content and nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).

Please comment on Specific Conditions 40 and 41 which allow the use of the acid rain NO_x CEMS for demonstrating compliance as well as reporting excess emissions, as well as Specific Condition 42 which allows the use of CEMS in lieu of measuring the water to fuel ratio. Typically NO_x emissions will be less than 9 ppmvd @15% O₂ (natural gas) which is less than one-tenth of the applicable Subpart GG limit based on the efficiency of the unit. A CEMS requirement is stricter and more accurate than any Subpart GG requirement for determining excess emissions.

The Department recommends your approval of the custom fuel monitoring schedule and these NO_{X} monitoring provisions. We also request your comments on the Intent to Issue. If you have any questions on these matters please contact me at 850/921-9523.

Sincerely,

A. A. Linero, P.E. Administrator

New Source Review Section

AAL/al

Enclosures