LAKELAND
ELECTRIC & WATER

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(813) 499-6603

Farzie Shelton
ENVIRONMENTAL COORDINATOR, Ch E.

June 17, 1997

Via Hand Delivery

Scott Sheplak, P.E.
Administrator of Title V Program
Bureau of Air Regulation
Florida Department of Environmental Protection
Magnolia Park Courtyard
Tallahassee, FL 32301

RE: Charles Larsen Memorial Power Plant
Revised Draft Title V Permit No. 1050003-004-AV
Facility ID No. 105003; Polk County
Supplemental Information

Dear Scott:

On behalf of Lakeland Electric and Water Utilities, I would like to thank you and your staff again for meeting with us yesterday. We believe that the meeting was successful, and we appreciate of all of your and your staff's efforts in helping resolve our concerns. As we discussed yesterday, we would like to provide some additional information, as follows:

- The initial compliance testing on Unit No. 8 was performed August 3-7, 1992.
- The correct "Frequency Base Date" for Unit Nos. 6 and 7 is July 1 (see attached Notice of Permit Amendment" dated April 19, 1996).
- Condition C.1. for the three smaller combustion turbines should reflect an inlet temperature of 20 degrees F while firing oil and 25 degrees F while firing natural gas (as shown on the attached curves). In addition, the heat input rates should indicate that the basis is "lower heating value" fuel.
- Condition D.1. for Unit No. 8 should reflect a temperature of 25 degrees F for both oil and natural gas (as shown on the attached curves).

We hope that this information is helpful. Thank you again for your continued cooperation, and we look forward to receiving a revised package tomorrow. If you or your staff have any questions, please contact me at 941-499-6603.

Sincerely,

Farzie Shelton/arm

Farzie Shelton
Environmental Coordinator

cc: Clair Fancy, DEP
Pat Comer, DEP OGC
Edward Svec, DEP
Ronald Tomlin, Lakeland
Angela Morrison, HGSS

93634.02A

Department of Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

Virginia B. Wetherell
Secretary

APR 19 1996

NOTICE OF PERMIT AMENDMENT

CERTIFIED MAIL

Ms. Farzie Shelton, Environmental Coordinator
City of Lakeland
Department of Electric & Water Utilities
Charles Larsen Power Plant
2002 East U.S. Highway 92
Lakeland, Florida 33801

Dear Ms. Shelton:

Re: Request for Change in Annual Compliance Test Dates for Larsen Unit Nos. 6 and 7

Unit Nos.	Reference Permit Nos.	ARMS Processing Nos.
6	AO53-175871	1050003-003-AO
7	AO53-175870	1050003-003-AO

On March 18, 1996 the Department received the above referenced request. The request included several other units at the McIntosh and Larsen power plants. However, only the permits for Larsen Unit Nos. 6 and 7 required amending to ensure the proposed test dates fell within the permitted time frame. The Department hereby changes the test dates of the above listed permits as follows:

Permit No. AO53-175871 (Unit No. 6)

Change Specific Condition No. 8 from:

...at intervals of 12 months from the date of November 1, 1989...

Change Specific Condition No. 8 to:

...annually within 60 days of July 1...

Permit No. AO53-175870 (Unit No. 7)

Change Specific Condition No. 8 from:

...at intervals of 12 months from the date of December 6, 1989...

Change Specific Condition No. 8 to:

...annually within 60 days of July 1...

A person whose substantial interests are affected by this permit amendment may petition for an administrative proceeding (hearing) in accordance with Section 120.57, 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 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this permit amendment. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit amendment. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit amendment is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit amendment will not be effective until further Order of the Department.

When the Order (Permit Amendment) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

This letter must be attached to and becomes a part of Permit Nos. AO53-175871 and AO53-175870. If you have any questions, please call Mr. Eric Peterson of my staff at (813)744-6100 extension 112.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

W.C. Thomas, P.E.
District Air Administrator
Southwest District

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT AMENDMENT and all copies were mailed by certified mail before the close of business on APR 19 1996 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGEMENT FILED,
on this date, pursuant to Section
120.52(11), Florida Statutes, with
the designated Department Clerk,
receipt of which is hereby acknowledge.

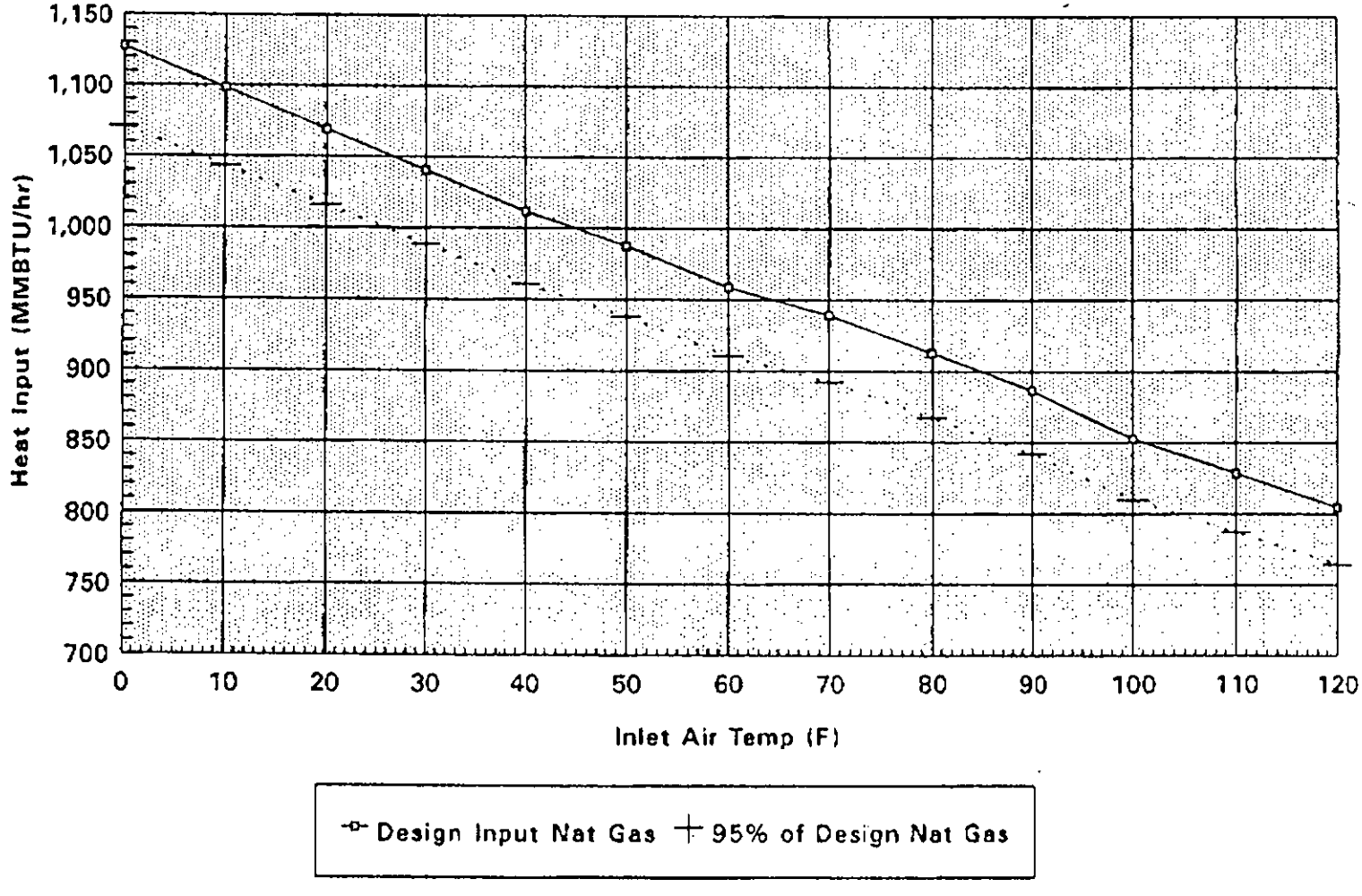
(Clerk) APR 19 1996 (Date)

ATTACHMENT LR-EU3-C5
OPERATING CAPACITY COMMENT

Maximum heat input based on LHV for natural gas at 25˚F compressor inlet temperature. Heat input for residual oil heat input is 1,040 MMBtu/hr (LHV) at 25˚F. Heat input as a function of compressor inlet temperature is attached as part of LR-EU3-C5.

Unit 8

Heat Input vs Compressor Inlet Temperature



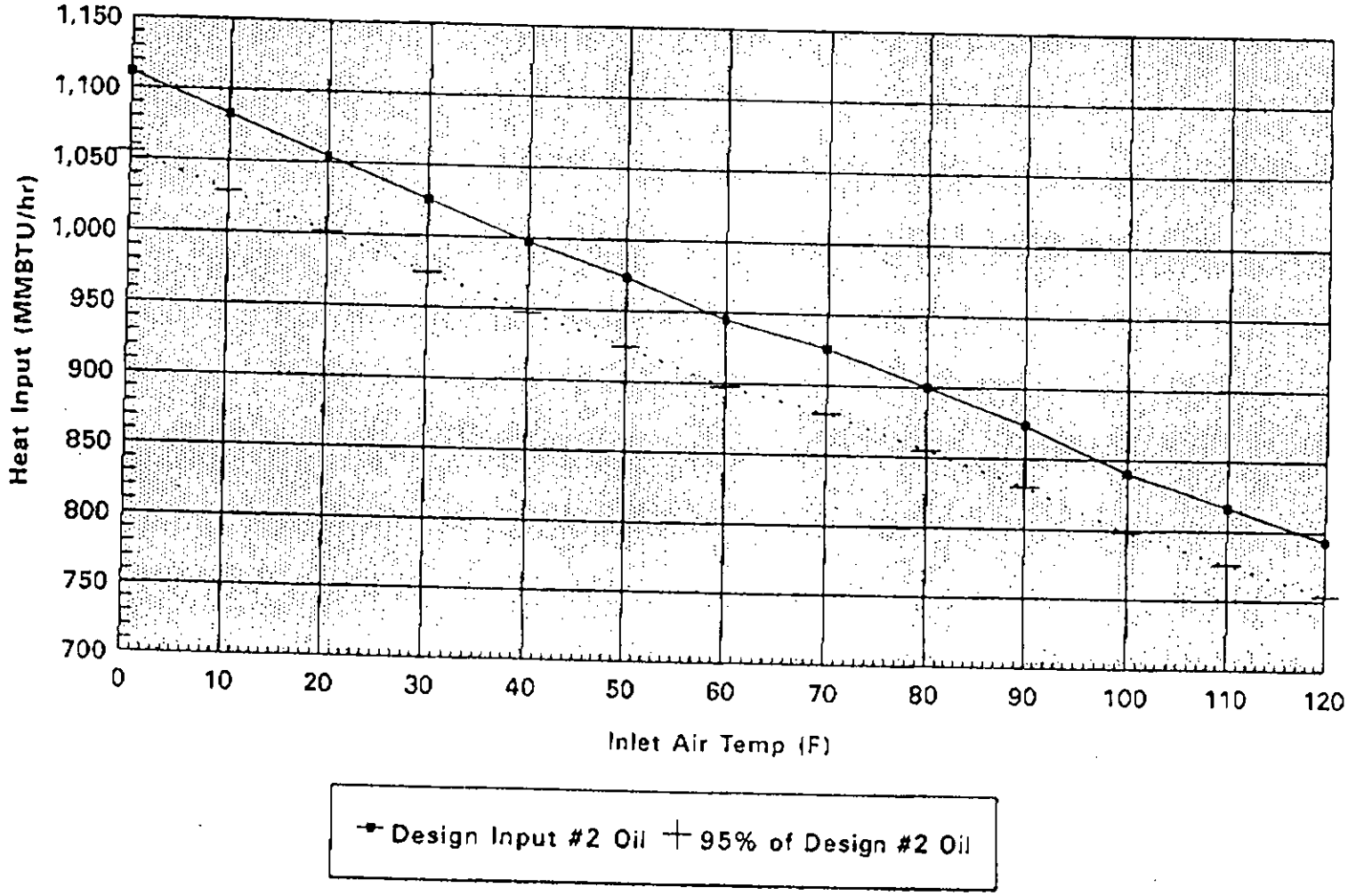
Peak Mode

Using LHV of Nat Gas

2/4/97

Unit 8

Heat Input vs Compressor Inlet Temperature



Peak Mode

Using LHV of #2 Oil

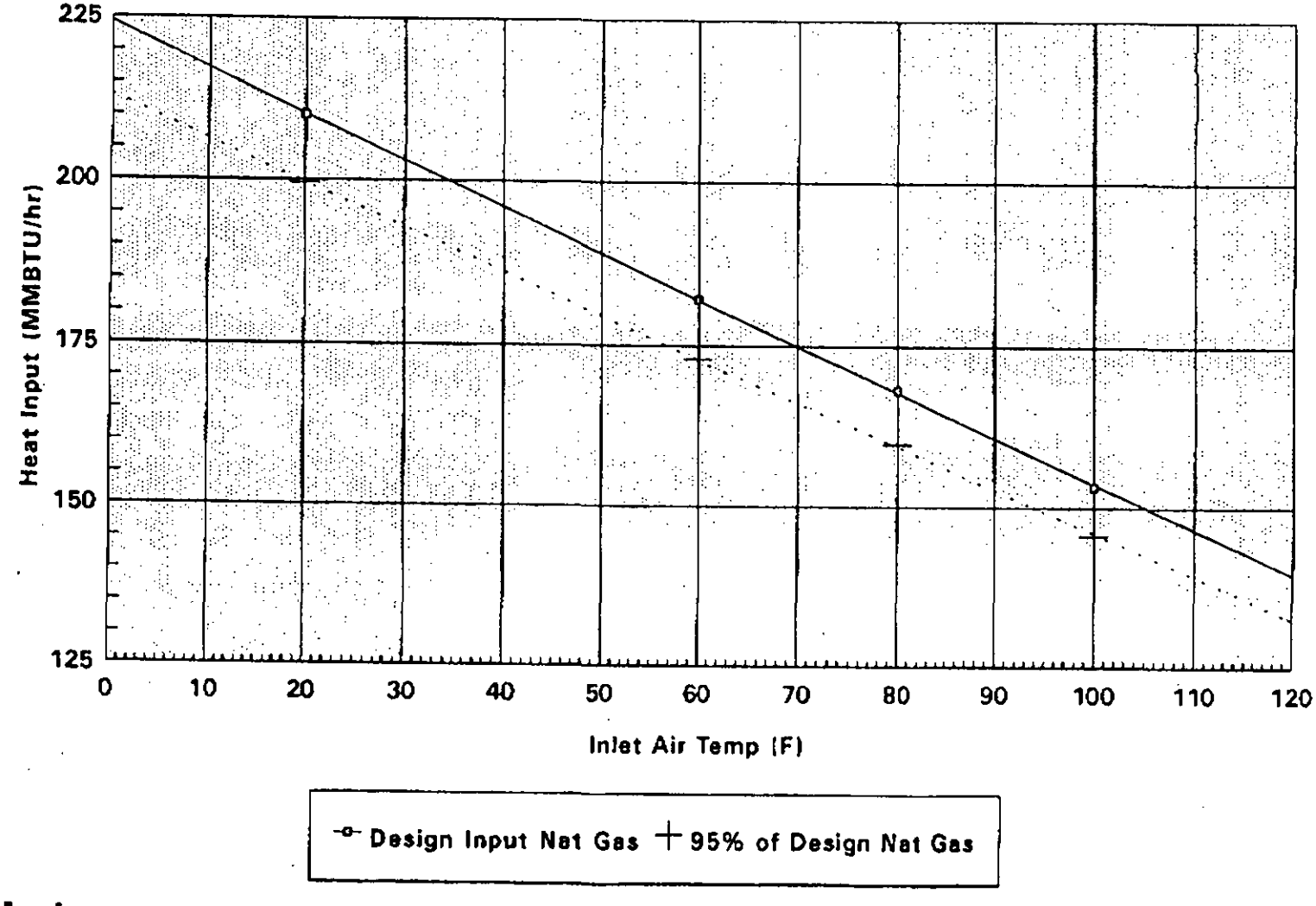
2/4/97

ATTACHMENT LR-EU4-C5
OPERATING CAPACITY COMMENT

MW rating is 34.5 MW for 3 turbines (11.5 MW each). Maximum heat input [low heating value (LHV)] shown for both distillate oil and natural gas for each gas turbine at 30°F compressor inlet temperature. Heat input as a function of compressor inlet temperature is attached as part of LR-EU4-C5.

Larsen Gas Turbine 1,2,& 3

Heat Input vs Compressor Inlet Temperature

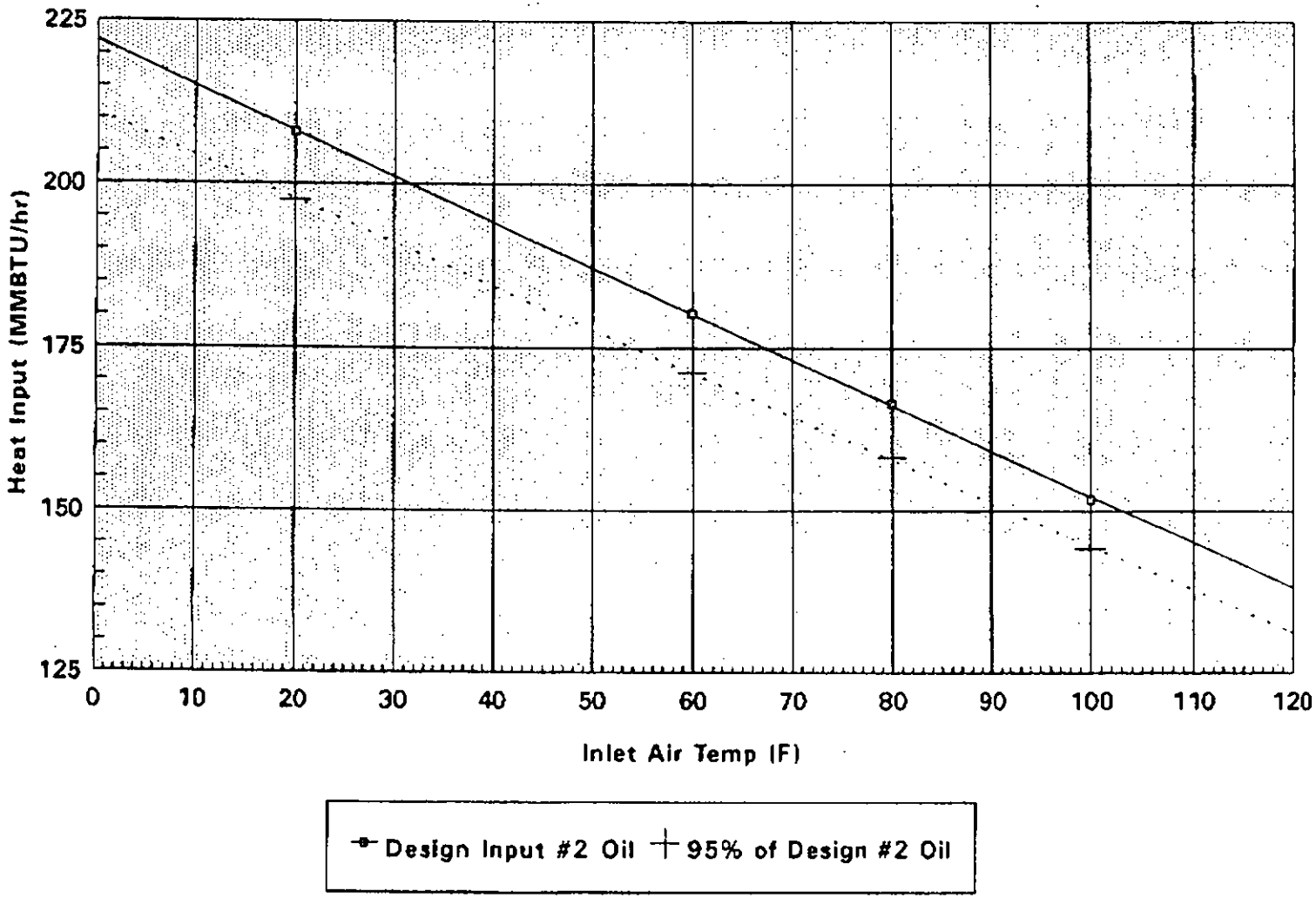


Peak Mode

Using LHV of Nat Gas

Larsen Gas Turbine 1,2,& 3

Heat Input vs Compressor Inlet Temperature



Peak Mode

Using LHV of #2 Oil

To:

Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5505
Tallahassee, FL 32301

From: Farzie Shelton

LAKELAND
ELECTRIC & WATER

(813) 499-6603

Excellence Is Our Goal, Service Is Our Job

Farzie Shelton
ENVIRONMENTAL COORDINATOR, Ch E.

February 7, 1997

Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5505
Tallahassee, FL 32301

RE: Lakeland Electric and Water Utilities
Charles Larsen Memorial Power Plant
Draft Title V Permit No. 1050003-004-AV
Facility ID No. 105003; Polk County
Supplemental Comments

Dear Clair:

As you may know, representatives from the Department of Environmental Protection and from Lakeland Electric and Water Utilities met together on January 9, 1997, to discuss Lakeland's comments on the draft Title V air operation permit for the Charles Larsen Memorial Power Plant. You may recall that Lakeland's comments were submitted by letter dated December 2, 1996. The January 9 meeting was very productive, and we were able to resolve a majority of the concerns that had been identified in the December 2 letter. We understand that you were under the weather on January 9 and therefore unable to attend this meeting. We hope that you are feeling much better now. In your absence, we were unable to resolve a few of the issues, but Lakeland understands that several of those issues were resolved at a subsequent meeting between the Department and the Florida Electric Power Coordinating Group, Inc. (FCG).

As an attachment to this letter, Lakeland has identified those issues that remain unresolved, issues that were tentatively resolved at the meeting (or at the subsequent meeting between the Department and representatives from the FCG and that we would like to confirm in writing, and issues that were resolved based on the Department's draft response and representations made by the Department at the two meetings. While several concerns have yet to be resolved, most of the issues are relatively minor but important to Lakeland. We would like to continue to work with the Department in an attempt to resolve all of Lakeland's remaining concerns prior to issuance of the revised draft permit, and would therefore like to schedule a conference call with you and your staff within the next few weeks to continue our discussions and potentially come to a resolution of the remaining issues.

The draft Title V permit that Lakeland received for the Charles Larsen Memorial Power Plant was a very good product, especially as the *first* draft Title V permit for the State, and we sincerely appreciate the Department's efforts in the development of such a comprehensive document. While Lakeland submitted a number of comments in its letter of December 2, most of the comments were quite minor in nature, and again, most of those issues were quickly resolved. We appreciate the responsiveness of the Department to the suggestions made by Lakeland and look forward to the Department's continued cooperation in resolving the few remaining issues.

As suggested by Department representatives at the January 9 meeting, we have enclosed revisions to the Title V permit application for the Charles Larsen Memorial Power Plant regarding startup fuels and volatile organic compound fugitive emission controls. Specifically, please find enclosed an original and three copies of (1) new "segment" pages for Emission Units 1 and 2 (Emission Units 003 and 004 in the draft permit), (2) new pages 29's for Emission Units 1 and 2, addressing a sulfur content limit on fuel oil, (3) new pages 20's for Emission Units 3 and 4 (Emission Units 005, 006, 007, and 008 in the draft permit) addressing heat input curves based on ambient conditions; and (4) a new Attachment LR-FE-5 "Emissions Unit Identification" to replace the corresponding pages in the current application, along with the professional engineer's certification by Ken Kosky of Golder Associates, Inc. A certification as to the custom fuel monitoring schedule for Emission Unit 008 is also included, as requested during the January 9 meeting. These supplements to the permit application are included as Attachment B to this letter.

As also suggested by Department representatives at that meeting, Lakeland will soon be submitting a separate request to revise the construction permit for Emission Unit 008 (PSD-FL-166; AC53-190437) to address issues that arose during the issuance of the Title V permit for this unit.

Because of the need to resolve these outstanding issues relatively quickly, we would like to schedule a conference call to discuss Lakeland's remaining concerns sometime during the week of February 17. We continue to remain optimistic that all of our remaining concerns will be resolved without the need for a hearing; Lakeland has requested an additional extension of time within which to file for a formal administrative proceeding. If you or your staff have questions prior to our conference call, please contact me at 941-499-6603. Thank you again for your continued cooperation and assistance.

Sincerely,

Farzie Shelton
Environmental Coordinator

Enclosures

cc: Howard L. Rhodes, DEP
John Brown, DEP
Pat Comer, DEP OGC
Scott M. Sheplak, DEP
Edward Svec, DEP
Ronald Tomlin, Lakeland
Angela Morrison, HGSS

88589

ATTACHMENT A

Lakeland Electric & Water Utilities
Charles Larsen Memorial Power Plant

Follow-Up Comments on Draft Title V Permit
(February 7, 1997)

(NOTE: The paragraph numbering is consistent with original comments submitted by Lakeland Electric & Water Utilities on December 2, 1996, and with the Department of Environmental Protection's draft response received on January 9, 1997)

Issues Not Yet Resolved

6. ***Fugitive VOC Emissions***--While Lakeland provided information in the permit application regarding the identification of non-particulate matter fugitive emissions and indicated how such fugitive emissions were controlled, Lakeland did *not* request that such control measures be included as conditions of the Title V permit. Lakeland again requests that the language of Condition 10 be revised to delete any reference to the condition being requested by the applicant. Such control requirements are appropriate to include in the permit *only* to the extent that the Department makes a finding that vapor controls are necessary or justified.

25. ***Fuel Quantity Limitations***--As discussed in Lakeland's December 2 submittal and at the January 9 meeting, Lakeland requests deletion of the limitations on the total quantities of fuel oil that may be fired in Emission Unit 008 under paragraph (b) of Condition D.2. Because the total heat input for this unit is limited (on both an hourly and annual basis), and the quantity of fuel oil that may be fired annually is effectively restricted by the capacity factor limitation in paragraph (c), it is unnecessary to also specifically limit the total gallons of fuel oil that may be used. The quantity limitations for fuel oil in paragraph (b) are based on the average heating value of distillate oil, and the actual fuel oil used in this unit would likely vary from the average. To limit not only the annual capacity and the maximum hourly and annual heat input rates but also the quantity of fuel oil that may be fired per hour and annually is duplicative, unnecessary, and should be deleted. Lakeland will soon be making a request to delete the identical requirement from the construction permit for Emission Unit 008. Please consider the request to change this condition in the Title V permit to be ongoing, pending the outcome of the construction permit revision request.

33. ***NOx Emission Limit***--The citation to 40 CFR **60.330** in Condition D.20. should be changed to "**60.332**," which includes the limitation on nitrogen oxide emissions for units subject to New Source Performance Standard (NSPS) Subpart GG. Further, the phrase "permitted NOx standard" in the fourth line of that condition should be changed to the "NSPS NOx standard" or the "NOx standard under 40 CFR 60.332" to help prevent the potential for confusion with the NOx limit established in the permit based on Best Available Control Technology. While the changes suggested by the Department in its draft response along with the suggestions being included in this comment

should help clarify that this condition applies only to determinations of compliance with the NSPS NOx limit, it may be helpful to reiterate this in the last sentence regarding correction to ISO. Because correction to ISO is only required for determining compliance with the NSPS NOx limit, additional clarification in the last sentence should help eliminate any potential confusion regarding this point.

34. ***Four Load Testing for NOx Emissions***--In Condition D.21., the requirement to determine compliance "at each load" should be deleted. As stated in Lakeland's December 2 submittal, the Department's November 22, 1995 guidance on compliance testing for combustion turbines provides that compliance at four different loads is required only during the *initial* performance testing under NSPS. This change was recently made to both the construction and operation permits for this unit. Because the initial compliance testing for this unit has already been completed, the Title V permit should include no reference to testing at multiple loads. Further, the Department's guidance clearly states that only if the NOx limit has been exceeded is additional testing at four different loads required. Lakeland requests that this condition be deleted, or, at a minimum, revised consistent with the November 22, 1995 guidance.

37. ***Test Methods***--As stated in Lakeland's earlier submittal, the construction and operation permits for Emission Unit 008 allow for the use of other compliance test methods approved by the Department. Lakeland again requests that language be added to the permit clarifying that other test methods can be used if approved by DEP. Lakeland further requests that this language be included for Emission Units 003, 004, 005, 006, and 007, in addition to Emission Unit 008. Consistent with our discussions at the meeting, a full permit revision should not be necessary when another test method not previously identified in the permit is approved. This language should help clarify that other test methods approved by the Department may be used by the permittee. The Department's approval should simply be included in the next permit renewal cycle. Lakeland understands that the Department has confirmed this approach with the U.S. Environmental Protection Agency Region IV.

40. ***Florida Ambient Reference Concentration Emission Limits***--Department representatives indicated at the meeting that the emission limits in Condition D.34. based on the draft Florida Ambient Reference Concentrations would be deleted from the Title V permit once the limits were deleted from the construction permit. A request to delete such limits in the construction permit is being sent to the Department simultaneously with this submittal. Please consider the request to delete the limits in Condition D.34. to be ongoing, pending the outcome of the construction permit revision request.

49. ***Frequency Base Dates for Compliance Testing***--At the meeting, Department representatives indicated that in Table 2-1 they intend either to omit the frequency base date column or, if included, to change the dates to be consistent with the most current permits for the Larsen units, i.e., May 30 for Emission Unit 003, June 30 for Emission Unit 004, and December 30 for Emission Unit 008. Department representatives also very clearly stated that the frequency base date information was *not* an enforceable permit condition. Because there is no regulatory basis for this

column or inclusion of a "frequency base date," Lakeland again requests that this column be deleted from Table 2-1. At a minimum, the "frequency base date" information should be explained. Lakeland understands from its current permits that testing is to be conducted within 60 days prior to the date, but this is not explained in the Table.

56. ***PM Testing on Emission Unit 008***--The construction and operation permits for Emission Unit 008 allow a visible emissions test, confirming that the opacity remains at or below 10 percent opacity, to be used *in lieu of* a particulate matter compliance test. Table 2-1 summarizing the compliance test requirements for Emission Unit 008 should therefore be revised to delete any indication that particulate matter *stack* tests are required at least once prior to permit renewal. Lakeland also requests the testing provisions included in Section D of the draft permit be revised to clarify the applicable particulate matter testing requirements for this unit consistent with the current operation and construction permits.

59. ***Trivial Activities***--In its Title V application, Lakeland stated that the Charles Larsen Memorial Power Plant included certain activities that were included on a proposed trivial emission unit list provided to the Department by the Florida Electric Power Coordinating Group, Inc. (FCG). In the December 2 submittal, Lakeland requested confirmation from the Department that the activities on that list were indeed "trivial" and could be omitted from the permit application and permit. At the January 9 meeting, Department representatives indicated an unwillingness to make a determination as to whether any activities on that list were "trivial" or should be included in the permit application. Lakeland has again reviewed the list of activities proposed by the FCG as trivial and has determined that the emissions from these activities are so insubstantial that the activities should be considered "trivial." If the Department disagrees with this determination, please contact Lakeland immediately.

68. ***Consultation***--Condition 4 from Appendix TV-1, Title V Conditions, regarding consultation with Department personnel prior to submitting a permit application does not impose any enforceable requirements on the permittee and should not be included as a permit condition. The Department's draft response indicates that it is appropriate to include in the permit because the language is quoted from the Department's rules. Because this condition does not establish any enforceable requirements, however, Lakeland again requests that this condition be deleted and asks that the Department clarify that this condition does not impose any enforceable requirements on the permittee.

86. ***Circumvention***--Lakeland would like to again request that Condition 26 of Appendix TV-1, Title V Conditions, be identified as applying *only* to Emission Unit 008, since that unit is the only one with pollution control equipment. If the permit condition language is not revised, Lakeland requests that the Department confirm that the condition applies only to Emissions Unit 008 in separate correspondence. Because the other emission units at the Larsen facility do not include pollution control equipment, this condition should not apply to those units.

98. ***CFC Requirements***--Because Lakeland does not service motor vehicle air conditions at the Charles Larsen Memorial Power Plant, the requirements under Chapter 62-281, F.A.C., should be deleted from the permit. The references to the requirements for non-motor vehicle air conditioners under 40 CFR 82 Subpart F should be limited to only 40 CFR § 82.154(a) and 82.166(k) and (m).

Confirmation on Suggested Resolution

Based on the Department's draft response and based on discussions at the January 9 meeting, Lakeland would like to confirm its understanding of how several of its comments are to be resolved. If Lakeland's understanding of how any of the following comments are to be resolved is inconsistent with how the Department intends to issue the revised draft permit, please contact us immediately.

2. ***Federal Enforceability***--Lakeland understands that the Department has developed a new guidance document to replace DARM-PER/V-18 issued on September 13, 1996, regarding the federal enforceability of permit conditions. We understand that the new guidance document indicates that conditions that have no federally enforceable basis will be designated as such in the permit. We also understand that the Department does not intend to include Condition 1 regarding the federal enforceability of all permit terms and conditions. We agree that Condition 1 should be deleted and that conditions with no federally enforceable basis should be so designated consistent with 40 CFR § 70.6(b), and we would like to confirm the Department's approach on this issue.

4. ***Fugitive VOC Emissions***--Department representatives indicated at the meeting that the provision in draft Condition 8 regarding volatile organic compound (VOC) emission controls requiring storage of paint solvents and thinners in "weather-tight buildings" would be deleted from the permit if Lakeland revised the second page of "Attachment LR-FE-5 Fugitive Emissions Identification" in the Title V permit application. Accordingly, Lakeland hereby submits a revised "Attachment LR-FE-5 Fugitive Emissions Identification" for the Title V permit application with the understanding that the requirement to store solvents and thinners in "weather-tight buildings" will be deleted from the permit conditions. (Revised pages included as part of Attachment B to the cover letter.)

7. ***Startup Fuels***--Department representatives stated at the meeting that propane and distillate fuel oil would be added as startup fuels for Emission Units 003 and 004 (in Conditions A.1. and B.1.) if Lakeland submitted segment information for such fuels and stated that there would be no net emissions increase as a result of using these fuels. Because these fuels have a lower sulfur content than the residual oil that these units are permitted to burn, no emission increases are expected from the use of these fuels. Based on the Department's request for additional information, Lakeland submits as an attachment to this submittal additional segment information pages for both propane and distillate oil for Emission Units 003 and 004, with the understanding that the revised draft permit will include these fuels in Conditions A.1. and B.1. as allowable fuels. (Supplemental pages included as part of Attachment B to the cover letter.)

10., 51., and 52. ***PM testing on Gas/Oil***--Lakeland again requests that Conditions A.12. and B.12., along with Table 2-1 for Emission Units 003 and 004, be revised to clarify that compliance testing for particulate matter is not required while firing natural gas. Lakeland also requests that these conditions and the Table be revised to clarify that no particulate matter compliance testing is required when oil is fired for less than 400 hours per year. The Department has not historically required particulate matter compliance testing while firing natural gas, it is not required under the current permits for these units, and it should not be necessary since natural gas is such a clean fuel. Typically only *de minimis* amounts of particulate matter would be expected from the firing of natural gas, so compliance testing would not provide meaningful information to the Department, and the expense to conduct such tests is not justified. As explained in the letter from Environmental Science & Engineering, Inc., dated January 17, 1997, attached hereto as Attachment 1, stack testing for particulate matter while firing natural gas requires a much greater sampling time because the detection is so low due to the relatively insignificant emissions. Because of the longer sampling time, the costs for such tests are even more expensive than for testing on oil. As also stated in that letter, typical natural gas particulate matter emission rates can vary from approximately 0.001 to 0.01 lb/mmBtu, and are generally around 0.004 lb/mmBtu. Because emissions from natural gas are so far below the standard of 0.1 lb/mmBtu, annual compliance testing should not be required.

At the January 9, 1997, meeting, Department representatives indicated that particulate matter testing while firing natural gas was required under the Department's rules and they were therefore unwilling to change the permit condition language as requested by Lakeland. Department representatives suggested that Lakeland could instead pursue an alternative test procedure under Rule 62-297.620, F.A.C., to allow a visible emissions test to be used in lieu of a stack test for determining compliance with the particulate matter limit. While certainly a visible emissions test would be preferable over a stack test, neither of these tests should be needed to demonstrate compliance with the particulate matter limit of 0.1 lb/mmBtu while burning natural gas. Lakeland understands, based on the meeting between the Department and the FCG, that the Department agrees that compliance testing for particulate matter from natural gas firing is inappropriate, but feels bound by its current rules. We further understand that the Department may be willing to waive *annual* testing and to instead include a permit condition stating that testing must be conducted at least once prior to permit renewal until its rules can be revised to clarify that compliance testing for particulate matter while firing natural gas is not required. We understand that this rule change would be made with the next year or so. It is apparently the Department's intention to revise Title V permits issued prior to adoption of the rule to effectively negate the actual requirement to conduct particulate matter tests for natural gas. This approach is acceptable to Lakeland, and we request that Conditions A.12. and B.12. along with Table 2-1 be revised accordingly.

12. ***Fuel Sampling Requirements***--At the meeting, Department representatives indicated that in lieu of as-fired fuel sampling and analysis requirements, Lakeland could accept a 2.5 percent sulfur content limit on the fuel used in Units 003 and 004 along with a requirement to maintain vendor or other data indicating the sulfur content of fuel shipments received. Lakeland will agree to a 2.5 percent sulfur content limit on the residual oil used in Units 003 and 004 with the

understanding that compliance with such a sulfur content limit will be used in lieu of demonstrating compliance with an emissions limit of 2.75 pounds per million Btu of sulfur dioxide *and* that compliance with the sulfur content limit may be demonstrated based on vendor data for shipments received by Lakeland. Revised page 29's regarding sulfur dioxide emissions for Emission Units 003 and 004 are included with this submittal to request the sulfur content limit and to indicate the method of demonstrating compliance. (Revised pages included as part of Attachment B of the cover letter.) (This approach was suggested by Department representatives even though the draft response states otherwise.)

13. ***Transmissometer***--At the meeting, Department representatives confirmed that even though the permit language was not being changed in Conditions A.15. and B.15., it was the permittee's option as to whether to use a transmissometer to determine opacity for compliance purposes.

17. ***Quarterly Excess Emissions Reports***--Conditions A.21. and B.20. require quarterly excess emissions reporting. Based on discussions between the Department and FCG representatives, we understand that quarterly excess emissions reporting under Rule 62-296.405(1)(g) is required *only* for monitoring used to determine compliance with limits established under Rule 62-296.405(1), F.A.C. Lakeland therefore requests that Conditions A.21. and B.20. be revised to clarify that the only monitoring results that must be submitted in these quarterly excess emissions reports are from the fuel sampling and analysis required for Emission Units 003 and 004. Lakeland also wants to confirm its understanding that quarterly reports must *only* be submitted to the Department for quarters where monitoring data indicates that an exceedance of an emissions limit has occurred. If the monitoring data does not indicate such an exceedance, no report will be filed. If Lakeland's understanding of how Rule 62-296.405(1)(g) is to be implemented is incorrect, please let us know immediately.

18. ***Vendor Data***--At the meeting, Department representatives indicated that vendor data would be accepted and that Condition C.7. would be revised to not require as-fired fuel sampling and analysis but instead allow vendor data to be used to demonstrate compliance with the sulfur content limit. Even though the draft response states otherwise, the Department apparently intends to revise this condition based on our discussions at the meeting.

19. ***VE Testing Requirements***--While the language in Condition C.9. is not being changed, Department representatives confirmed at the meeting that the only emissions test required for Emission Units 005, 006, and 007 is a visible emissions test. The representatives further confirmed that a visible emissions test on a unit is not required during years when the unit operates less than 400 hours per year, although a test must be conducted at least once every five years prior to permit renewal. While this language is included along with several other testing provisions, Lakeland believes it would be much easier to understand the applicable testing requirements if the rule was rewritten as suggested to eliminate the *inapplicable* provisions.

20. ***Compliance Testing on Peaking Units***--While the current permit for Emission Units 005, 006, and 007 requires that compliance testing be conducted while the units operate at 90 to 100 percent of the maximum permitted heat input rate and does not mention the use of heat input curves based on ambient conditions, Lakeland has considered the Department's suggested language in the draft permit and agrees that it would be appropriate to use heat input curves. The permit application form is being revised with a new page 20 for these emissions units to address heat input and the use of heat input curves (included as part of Attachment B to the cover letter).

29. ***Water-to-Fuel Ratio***--As discussed during the meeting, water-to-fuel injection equipment has already been installed and is being operated for Emission Unit 008. Lakeland would like to confirm that this equipment has already been approved by the Administrator as required under Condition D.16. Lakeland understands that if the equipment is modified or replaced, additional approval may be required.

30. ***Daily Sampling of Gas***--Consistent with discussions during the meeting, EPA and the Department have approved a customized fuel monitoring schedule for natural gas for Emission Unit 008 and therefore the daily fuel sampling and analysis under paragraph (2) of Condition D.17. is *not* required. Lakeland would like to again state that this clarification would be helpful to include in the actual permit language.

32. ***Custom Fuel Monitoring Schedule***--Department representatives stated at the meeting that the custom fuel monitoring schedule that was approved in December of 1995 for Emission Unit 008 (which is subject to New Source Performance Standard Subpart GG) would be updated as requested if the Responsible Official certified that the monitoring that was conducted twice monthly for six months beginning in December of 1995 showed little variability in the sulfur content and indicated compliance with 40 CFR § 60.333. Such a certification from the Responsible Official regarding the initial monitoring results is included as part of Attachment B to the cover letter. Lakeland understands that the schedule included in Condition D.18. will therefore be updated as requested in the revised draft permit.

36. ***Compliance Testing on Emission Unit 008***--While the current permit for Emission Unit 008 requires that compliance testing be conducted while the unit operates at 90 to 100 percent of the maximum permitted heat input rate and does not mention the use of heat input curves based on ambient conditions, Lakeland has considered the Department's suggested language in the draft permit and agrees that it would be appropriate to use heat input curves. The permit application form is being revised with a new page 20 for

this emissions unit to address heat input and the use of heat input curves, and the new page is included as part of Attachment B to the cover letter.

38. ***Semi-Annual Reporting***--At the meeting, Department representatives confirmed that only semi-annual excess emissions reports regarding water-to-fuel injection rates are required to be submitted under Conditions D.30. and D.31.; quarterly reports are not required. Lakeland would like to again request that this clarification be made in the actual permit language.

39. ***Summary Report "Formats"***--As confirmed by Department representatives at the meeting, no other "formats" for the summary reports are currently required under Condition D.32.

47. ***Equivalent Emissions***--Department representatives confirmed at the meeting that the "equivalent emissions" in Table 1-1 are not intended as enforceable emission limits and are provided for informational purposes only. Lakeland again requests that this information be deleted as unnecessary and potentially confusing. If the information is included in the revised draft permit, Department representatives indicated that the footnote stating that the information was listed for "annual fee purposes" would be revised to indicate that the information was being provided for "informational purposes only," omitting any reference to fee purposes.

50. ***VE Testing on Gas***--At the meeting, Department representatives agreed to revise the fuels column for visible emissions testing in Table 2-1 to indicate that the testing should be conducted while firing oil, unless oil is not fired that year. If oil is not fired during a particular year, the visible emissions testing should be conducted while firing natural gas. Testing is not required on both fuels during a particular year. Table 2-1 is to be revised to reflect this.

69. and 77. ***Permit Shield***--Department representatives agreed at the meeting to include additional language in Conditions 5 and 20 of Appendix TV-1, Title V Conditions, to clarify that these conditions apply "except as provided under Section 403.0872(15), Florida Statutes, and Rule 62-213.460, F.A.C." Lakeland believes that it would be better to omit these conditions in their entirety. To the extent that such conditions are included, the exception language referencing both the statute and rule provisions regarding the permit shield should be included.

71. and 76. ***APA Revisions***--Department representatives indicated that Conditions 13 and 18 of Appendix TV-1, Title V Conditions, would be revised to be consistent with the recent revisions to Florida's Administrative Procedures Act (APA) under Chapter 120, Florida Statutes. These changes should be made prior to issuance of the final permit, regardless of the status of the rules implementing the APA.

74., 75., 78., and 81. ***Construction Permit Requirements***--Department representatives confirmed that the construction permit and new source requirements in Conditions 15, 16, 20 and 23 of Appendix TV-1, Title V Conditions, do not currently apply to the Charles Larsen Memorial Power Plant. It is only because these requirements could apply in the future if a "modification" is triggered at the facility that the permit conditions are being included in the Title V permit as applicable requirements.

92. ***Monitoring Reports***--Lakeland requests that the Department confirm that the actual monitoring reports that are required for the facility are specified at the emissions unit level and that no other reports are required based on Condition 45 of Appendix TV-1, Title V Conditions. The Department's draft response states only that the "type of required monitoring reports are specified at the Emissions Unit level." Lakeland would simply like to confirm that this condition does not impose any additional reporting requirements.

(No Prior Number) Concern Regarding EPA Comments on Excess Emissions--By letter dated December 5, 1996, the U.S. Environmental Protection Agency (EPA) submitted a letter commenting on the draft Title V permit issued for Lakeland's Charles Larsen Memorial Power Plant. In Comment No. A.2., EPA indicates some concern regarding the excess emission provisions in Conditions A.7.-A.10, B.8.-B.10., C.5.-C.6., and D.13.-D.14. Because the permit conditions cited simply quote the applicable provisions of the Departments rules (Rule 62-210.700, F.A.C.) and because these rules have been approved as part of Florida's State Implementation Plan, the permit conditions are appropriate to be included in the permit. Lakeland concurs with the Department's position that the provisions of Rule 62-210.700, F.A.C., should be included in the permit as applicable requirements. If further comments are submitted by EPA, please let us know.

Issues Resolved or No Further Comments

Based on the Department's "draft" response and discussions at the January 9 meeting between representatives of the Department and Lakeland, Lakeland has no further comments regarding paragraphs 1, 3, 5, 8, 9, 11, 14, 15, 16, 21, 22, 23, 24, 26, 27, 28, 31, 35, 41, 42, 43, 44, 45, 46, 48, 53, 54, 55, 57, 58, 60, 61, 62, 63, 64, 65, 66, 67, 70, 72, 73, 79, 80, 82, 83, 84, 85, 87, 88, 89, 90, 91, 93, 94, 95, 96, 97, or 99 of the December 2 submittal.

88531

ATTACHMENT A-1

Lakeland Electric & Water Utilities
Charles Larsen Memorial Power Plant

Environmental
Science &
Engineering, Inc.

January 17, 1997

Mr. John Guisseppi
City of Lakeland Utilities
McIntosh Power Plant
3030 E. Lake Parker Dr.
Lakeland, FL 33801
PH: (941) 499-6666
FAX: (941) 499-6683

RE: Particulate Matter Testing from Natural Gas Firing in Boilers

Dear John:

Pursuant to our discussion yesterday, I am providing the following information regarding testing Boilers #1, #2, and #7 while firing natural gas.

The first issue to consider is what the data will be used for. For example, is it necessary to demonstrate compliance with the emissions standard or is precise quantitation of the actual emission rate required. In order to demonstrate compliance, we would conservatively estimate the detection limits of the method and then compare this to the standard in the appropriate units. We would target a sample volume (and therefore sampling time) based on achieving a detection limit at least ten times lower than the emissions standard (more is better). For exact quantitation of the emissions rate, we would estimate the actual emissions rate based on previous experience and emissions factors and target the detection limits to be at least ten times lower than this value. Generally, this approach requires much greater sampling time, and, providing the emissions are sufficiently low, has a diminishing point of returns. My understanding is that the data from these tests will primarily be used for demonstration of compliance. Based on a typical oxygen concentration of 8%, a one hour test run will have practical detection limits of approximately 0.0008 lb/MMBtu. Each additional hour of sampling will decrease this margin proportionally, for example a two hour run would have detection limits of 0.0004 lb/MMBtu, a three hour run of 0.00027 lb/MMBtu, etc. As the detection limit decreases, the variablilty of the results will also decrease and the reliability of the test values will increase.

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I would generally recommend a test duration of at least two hours for natural gas testing. For more accurate quantitation, longer tests could be conducted, but may not be economically justifiable.

Typical natural gas particulate matter emission rates can vary from approximately 0.001 to 0.01 lb/MMBtu, and are generally around 0.004 lb/MMBtu.

Either Method 17 or Method 5 could be used for the testing. Both techniques have advantages and disadvantages. In Method 17, the sample exposed surfaces are generally stainless steel, which in some cases can corrode and leave a slight residue. The Method 5 sample surfaces are primarily glass, but require more acetone rinse and consequently can be biased more due to acetone rinse blank problems. We generally are able to avoid both of these problems by using the highest purity acetone available (HPLC grade) and by carefully choosing the filter holders we use for the Method 17 sampling. Unless it were a very high temperature environment, I think the techniques are both acceptable if properly performed. In the interest of minimizing contamination, I think Method 5 is a slightly better choice. We would not charge additional to substitute Method 5 for Method 17.

The cost of performing three natural gas particulate tests at two hours each, is the same as conducting six runs on oil at 1 hour each (ie 3 soot and 3 non-soot). The price for conducting six two hour test runs (which adds a day to the testing) is an additional $1,200 from the normal particulate matter test price (ie Unit #1 compliance).

If you have any additional questions regarding the testing, please do not hesitate to call me at (352)-333-6606.

Sincerely,

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

Bill

Bill Mayhew
Chemical Engineer
Manager, Source Testing

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ATTACHMENT B

Lakeland Electric & Water Utilities
Charles Larsen Memorial Power Plant

Certification Regarding Sulfur Content of Natural Gas

On December 18, 1995, the Florida Department of Environmental Protection issued a revised PSD permit (PSD-FL-166) for the Charles Larsen Memorial Power Plant Unit No. 8 (Emission Unit 008 in the draft Title V permit). In that revised PSD permit, a customized fuel monitoring program, previously approved by the U.S. Environmental Protection Agency, was authorized in lieu of the daily fuel monitoring requirements under 40 CFR ′ 60.334(a)(2). That revised PSD permit stated that once the customized fuel monitoring schedule was approved, sulfur content monitoring of the natural gas used in Unit No. 8 must be conducted twice monthly for six months. If that monitoring showed little variability in the sulfur content and indicated consistent compliance with 40 CFR 60.333, then sulfur monitoring was to be conducted once per quarter for six quarters. Consistent with the revised permit condition, beginning on 12/15/95, the sulfur content of the natural gas was monitored twice monthly for six months and ranged from 0.3 to 6.2 grains per 1000 cubic feet of gas. Because there was such little variability in the sulfur content of the gas and because the sulfur levels were so far below the New Source Performance Standard under Subpart GG, limiting the sulfur content to 0.8 percent by weight, monitoring has been conducted once per quarter since July of 1996. Consistent with the customized fuel monitoring schedule, Lakeland intends to continue monitoring quarterly for six quarters. Lakeland has requested that the Department simply update the customized fuel monitoring schedule included in the Title V permit to include the current monitoring status.

Ronald W. Tomlin

Date: Feb. 07, 1997

Ronald W. Tomlin
Assistant Managing Director
Lakeland Electric & Water Utilities

88642

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

Ronald W. Tomlin, Assistant Managing Director

2. Owner/Authorized Representative or Responsible Official Mailing Address:

Organization/Firm: **Lakeland Electric & Water Utilities**
Street Address: **501 East Lemon Street**
City: **Lakeland** State: **FL** Zip Code: **33801-5079**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

Telephone: **(941) 499-6300** Fax: **(941) 499-6344**

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Ronald W. Tomlin — Signature

Feb. 07, 1997 — Date

* Attach letter of authorization if not currently on file.

4. Professional Engineer's Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [X] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature (seal)

Date: 1/17/97

*Attach any exception to certification statement.

Benzene - Present in unleaded gasoline. The facility maintains a storage tank for unleaded gasoline. These emissions have been calculated to be significantly less than 1 TPY.

Chlorine - Used for water treatment at the facility.

Hydrazine - Hydrazine solution may be used for the treatment of boiler water.

Hydrochloric Acid - The facility may utilize hydrochloric acid in cleaning filter beds in the water treatment facility at the chemistry laboratory for use in analytical procedures.

Mercury Compounds - The facility uses mercury-containing compounds in the chemistry laboratory for use in analytical procedures and flow-measuring equipment.

Methyl Ethyl Ketone, Toluene, Xylene - The facility uses paint thinners and solvents (which may contain MEK, toluene, or xylene) for use in plant maintenance activities. These containers are kept closed.

<u>Regulated Toxic or Flammable Substances</u>

The following regulated toxic or flammable substances are or may be present at the facility:

- ammonia (aqueous, concentration 20% or greater)
- chlorine
- hydrazine
- hydrochloric acid
- nitric acid
- acetylene
- methane (natural gas)

Ammonia - Used for boiler water treatment.

Chlorine, Hydrazine, Hydrochloric Acid - Considered on the preceding page.

Nitric Acid - Nitric acid may be used in the chemistry laboratory for use in analytical procedures.

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Residual Oil**	
2. Source Classification Code (SCC): **1-01-004-01**	
3. SCC Units: **1000 gallons**	
4. Maximum Hourly Rate: **2.04**	5. Maximum Annual Rate: **17,866**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **2.5**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **150**	
10. Segment Comment (limit to 200 characters): **Based on maximum heat input for residual oil firing. Distillate oil used for ignition (SCC 1-01-005-01).**	

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural gas**	
2. Source Classification Code (SCC): **1-01-006-01**	
3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **0.279**	5. Maximum Annual Rate: **2,451**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **1,024**	
10. Segment Comment (limit to 200 characters): **Maximum hourly rate based on maximum heat input for natural gas firing. Propane used for ignition (SCC 1-01-010-02)**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

   Distillate Oil

2. Source Classification Code (SCC):

   1-01-005-01

3. SCC Units:

   1000 gallons

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
2.27	**19,850**

6. Estimated Annual Activity Factor:

7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
0.5	

9. Million Btu per SCC Unit:

   135

10. Segment Comment (limit to 200 characters):

    Based on maximum heat input (HHV) for oil firing. Fuel does not increase emissions of any pollutant.

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Propane**	
2. Source Classification Code (SCC): **1-01-010-02**	
3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate: **3.17**	5. Maximum Annual Rate: **27,732**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **91**	
10. Segment Comment (limit to 200 characters): **Million Btu per SCC Unit = 90.5 (rounded to 91). Maximum Annual Rate = 968.3. Maximum hourly rate based on maximum heat input of 286.5 MMBtu/hr. Fuel does not increase emissions of any pollutant.**	

Emissions Unit Information Section 1 of 5
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **Rule**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **2.75 lb/MMBtu/ 2.5%S**	
4. Equivalent Allowable Emissions:	**841** lb/hour **3,685** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel analysis; ASTM Methods PARR 1760; D-240**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on FDEP Rule 62-296.405(1)(c)1 oil firing. Compliance based on fuel sampling and analysis for each shipment to ensure oil sulfur content 2.5% or less (vendor or on-site data).**	

B.

1. Basis for Allowable Emissions Code:	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:	
4. Equivalent Allowable Emissions:	lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):	

Attachment LR-EU1-L2

Fuel Analysis

Propane Analysis

Parameter	Typical Value
heat content	90,500 Btu/gal
% sulfur	negligible
% nitrogen	0.8% by volume
% ash	negligible

Emissions Unit Information Section 2 **of** 5

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: **Rule**	
2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: **2.75 lb/MMBtu /2.5%S**	
4. Equivalent Allowable Emissions:	**1,643** lb/hour **7,198** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel analysis; ASTM Methods PARR 1760; D-240**	
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Oil firing: Based on FDEP Rule 62-296.405(1)(c)1. Compliance based on fuel sampling analysis for each shipment to ensure oil sulfur content 2.5% or less (vendor or on-site data).**	

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

   Residual oil

2. Source Classification Code (SCC):

   1-01-004-01

3. SCC Units:

   1000 gallons

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
3.98	**34,901**

6. Estimated Annual Activity Factor:

7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
2.5	

9. Million Btu per SCC Unit:

   150

10. Segment Comment (limit to 200 characters):

    Based on maximum heat input for residual oil firing. Distillate oil used for ignition (SCC 1-01-005-01).

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural gas**	
2. Source Classification Code (SCC): **1-01-006-01**	
3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **0.601**	5. Maximum Annual Rate: **5,267**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **1,024**	
10. Segment Comment (limit to 200 characters): **Maximum hourly rate based on maximum heat input for natural gas firing. Propane used for ignition (SCC 1-01-010-02).**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Distillate Oil**	
2. Source Classification Code (SCC): **1-01-005-01**	
3. SCC Units: **1000 gallons**	
4. Maximum Hourly Rate: **4.43**	5. Maximum Annual Rate: **38,778**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.5**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **135**	
10. Segment Comment (limit to 200 characters): **Based on maximum heat input (HHV) for residual oil firing. Fuel does not increase emissions of any pollutant.**	

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Propane**	
2. Source Classification Code (SCC): **1-01-010-02**	
3. SCC Units: **1,000 gallons**	
4. Maximum Hourly Rate: **6.81**	5. Maximum Annual Rate: **59,626**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **91**	
10. Segment Comment (limit to 200 characters): **Million Btu per SCC Unit = 90.5 (rounded to 91). Maximum hourly rate based on maximum heat input of 616 MMBtu/hr. Fuel does not increase emissions of any pollutant.**	

Attachment LR-EU2-L2

Fuel Analysis

Propane Analysis

Parameter	Typical Value
heat content	90,500 Btu/gal
% sulfur	negligible
% nitrogen	0.8% by volume
% ash	negligible

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	7 Jul 1992
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer:	General Electric Model Number: Frame 7EA
4. Generator Nameplate Rating:	88 MW
5. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		1,055	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			
5. Operating Capacity Comment (limit to 200 characters):			

See Attachment LR-EU3-C5.

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/yr	8,760	hours/yr

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Distillate oil**	
2. Source Classification Code (SCC): **2-01-001-01**	
3. SCC Units: **1000 gallons**	
4. Maximum Hourly Rate: **8.17**	5. Maximum Annual Rate: **23,915**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.2**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **127**	
10. Segment Comment (limit to 200 characters): **Million Btu per SCC Unit = 127.3 (rounded to 127). Maximum hourly rate based on maximum heat input for oil firing (LHV); annual rate based on construction permit limit.**	

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural gas**	
2. Source Classification Code (SCC): **2-01-002-01**	
3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **1.14**	5. Maximum Annual Rate: **10,013**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **923**	
10. Segment Comment (limit to 200 characters): **Maximum Percent Sulfur: 0.003. Maximum hourly rate based on maximum heat input (LHV).**	

ATTACHMENT LR-EU3-C5

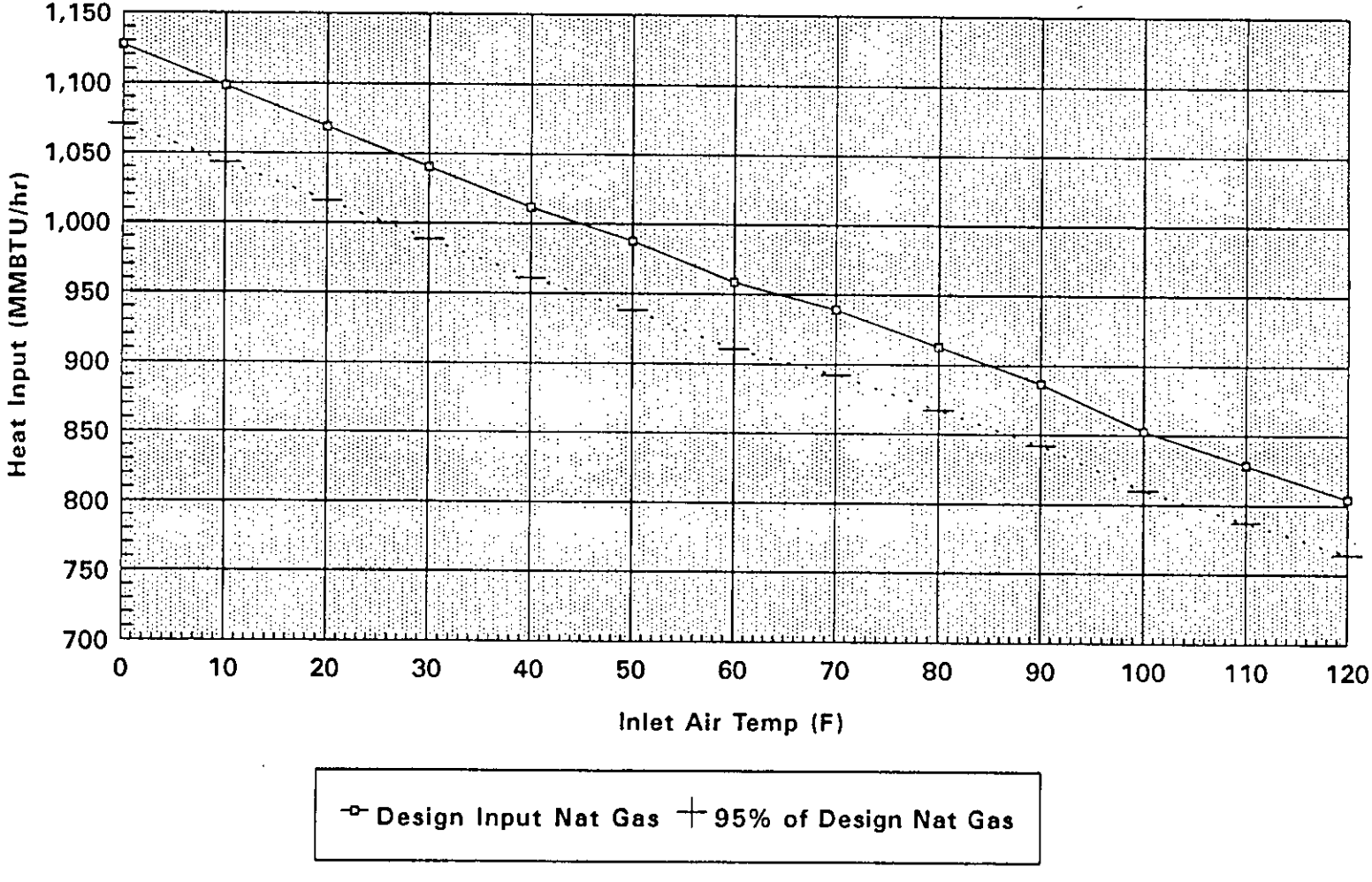
OPERATING CAPACITY COMMENT

ATTACHMENT LR-EU3-C5
OPERATING CAPACITY COMMENT

Maximum heat input based on LHV for natural gas at 25˚F compressor inlet temperature. Heat input for residual oil heat input is 1,040 MMBtu/hr (LHV) at 25˚F. Heat input as a function of compressor inlet temperature is attached as part of LR-EU3-C5.

Unit 8

Heat Input vs Compressor Inlet Temperature



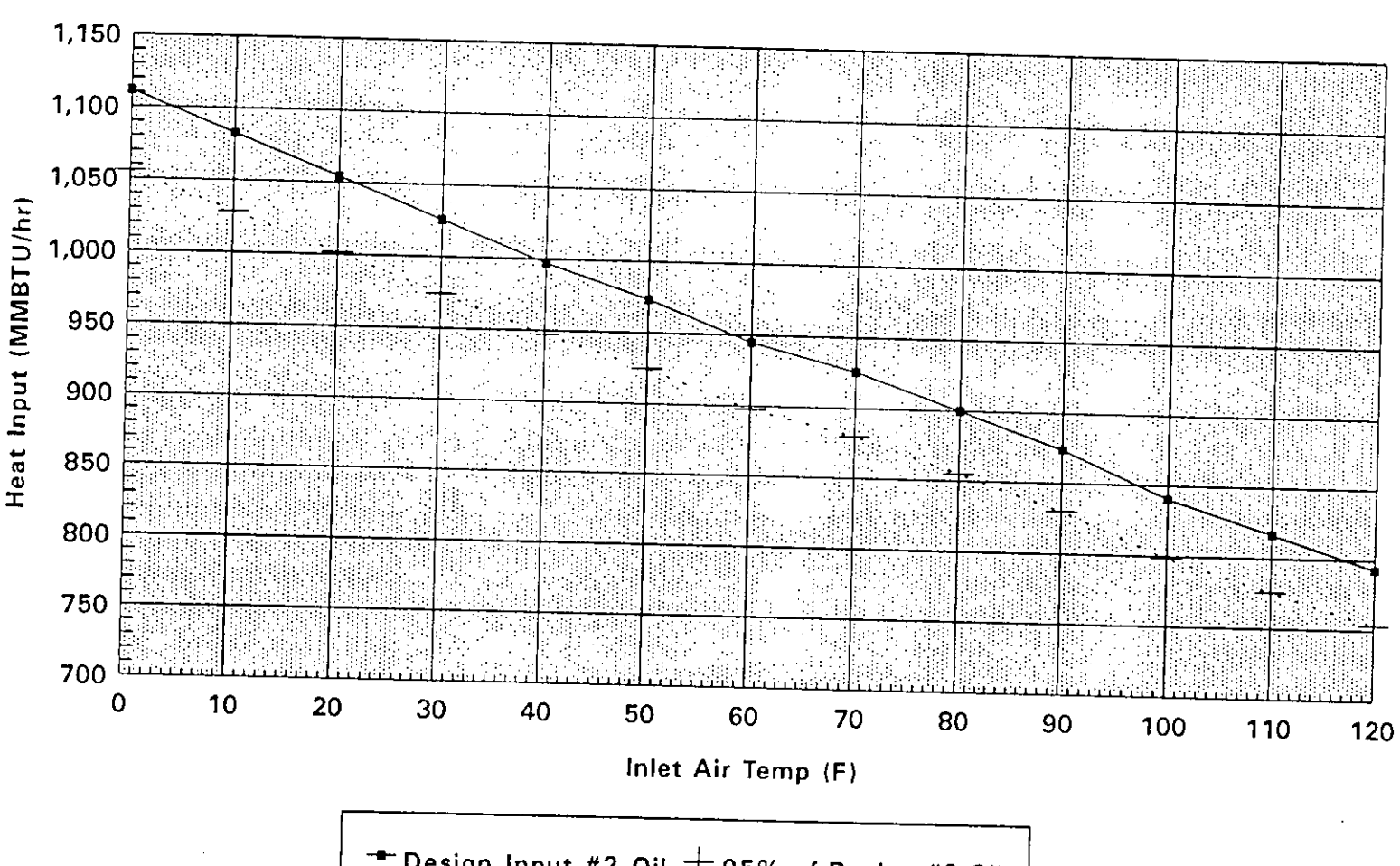
Peak Mode

Using LHV of Nat Gas

2/4/97

Unit 8

Heat Input vs Compressor Inlet Temperature



Peak Mode

Using LHV of #2 Oil

2/4/97

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **1 Jan 1973**	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer:	Model Number:
4. Generator Nameplate Rating: **34** MW	
5. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:	 °F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:	**209**	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters): **See Attachment LR-EU4-C5.**		

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/yr	**8,760**	hours/yr

ATTACHMENT LR-EU4-C5

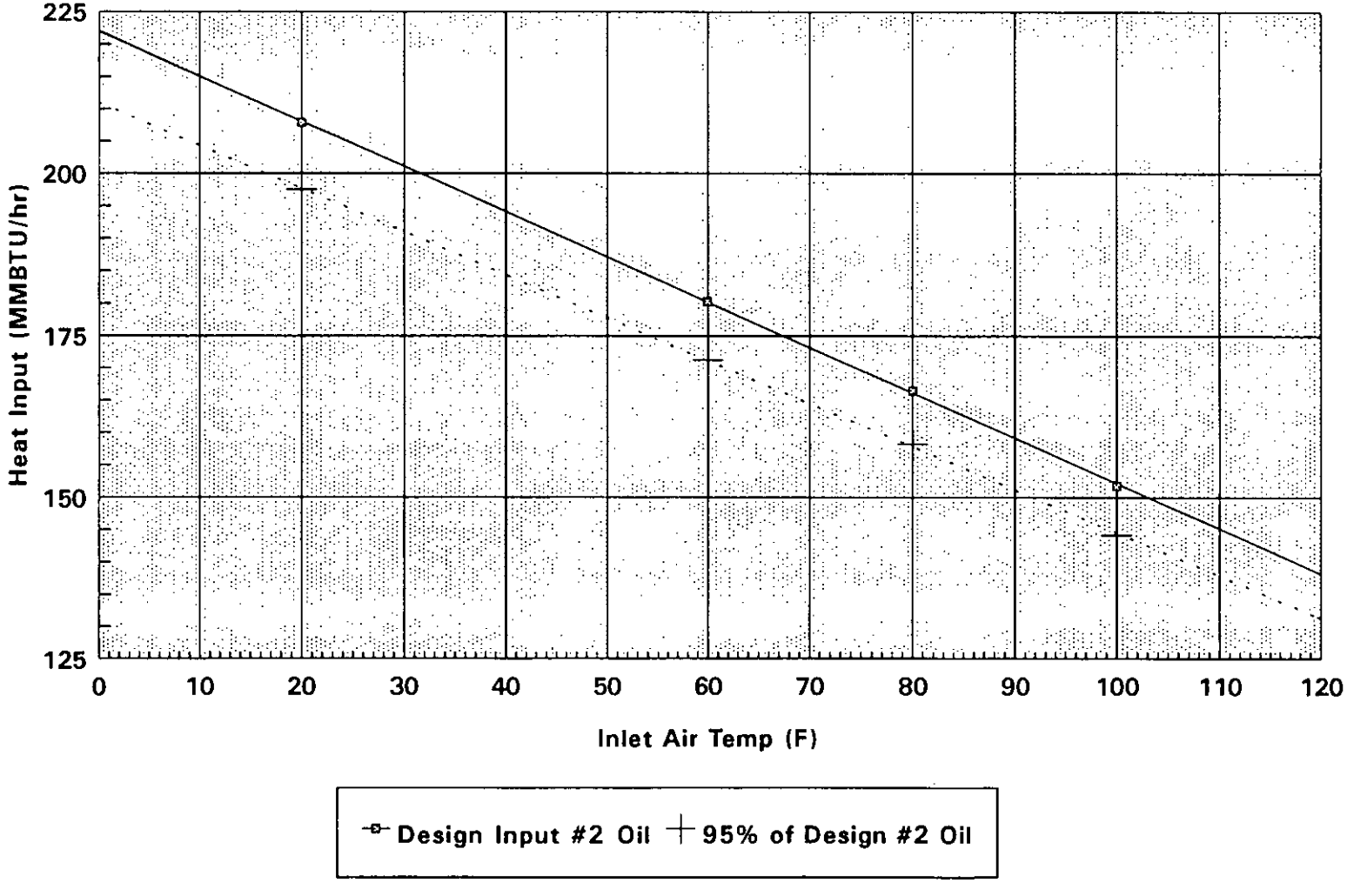
OPERATING CAPACITY COMMENT

ATTACHMENT LR-EU4-C5
OPERATING CAPACITY COMMENT

MW rating is 34.5 MW for 3 turbines (11.5 MW each). Maximum heat input [low heating value (LHV)] shown for both distillate oil and natural gas for each gas turbine at 30°F compressor inlet temperature. Heat input as a function of compressor inlet temperature is attached as part of LR-EU4-C5.

Larsen Gas Turbine 1,2,& 3

Heat Input vs Compressor Inlet Temperature

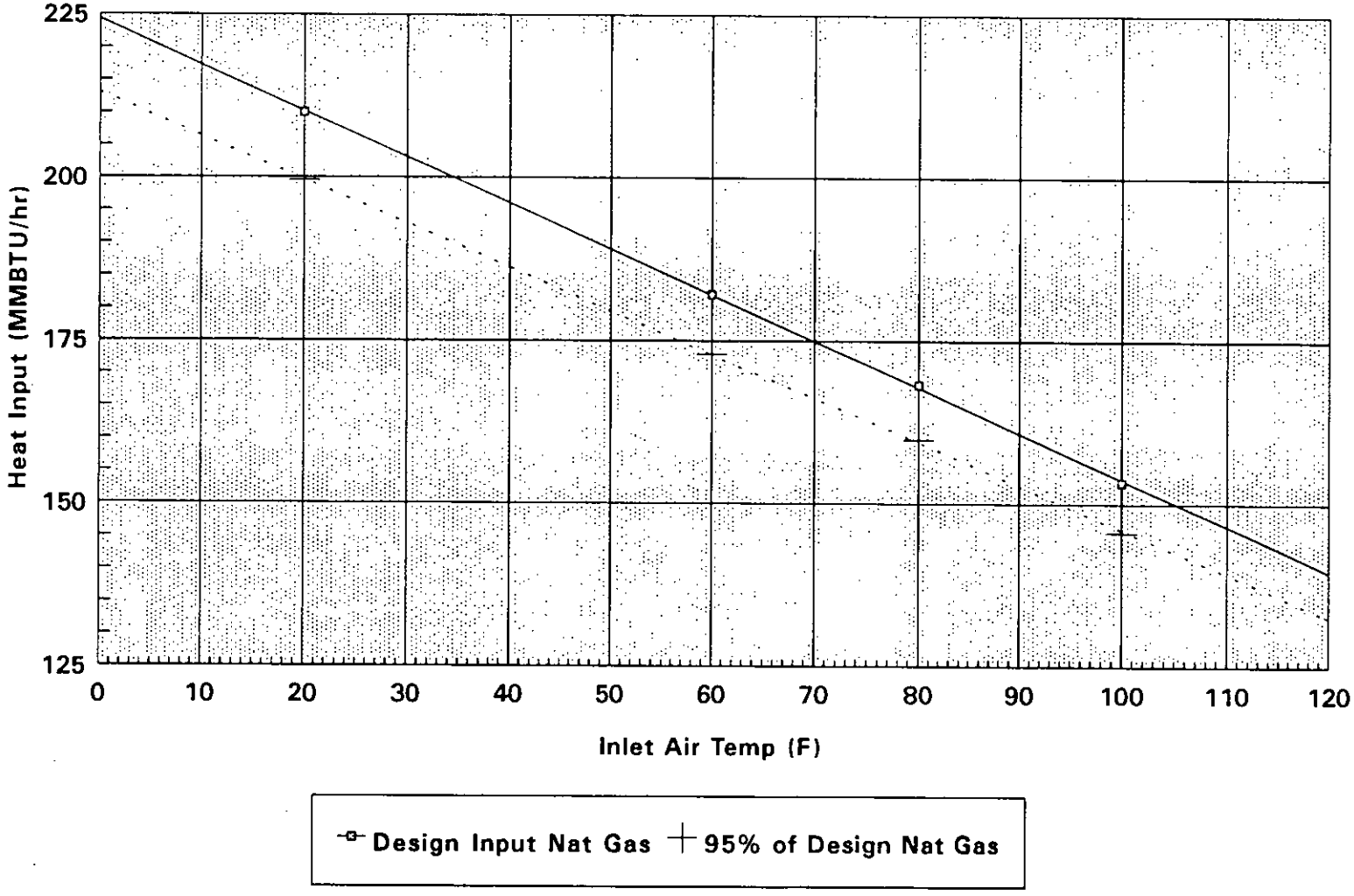


Peak Mode

Using LHV of #2 Oil

Larsen Gas Turbine 1,2,& 3

Heat Input vs Compressor Inlet Temperature



Peak Mode

Using LHV of Nat Gas