

One Energy Place
Pensacola, Florida 32520

Tel 850.444.6000



November 12, 1997

Mr. Scott M. Sheplak, P.E.
Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Dear Mr. Sheplak:

RE: PLANT SCHOLZ TITLE V RESPONSIBLE OFFICIAL CHANGE:
DRAFT PERMIT No: 0630014-001-AV

Attached, please find Gulf Power's request change for "Responsible Official" regarding the Draft Title V Permit (0630014-001-AV) issued on September 30, 1997 for the Scholz Electric Generating Plant.

If you have any questions or need further information regarding this request, please call me at (850) 444.6527.

Sincerely,

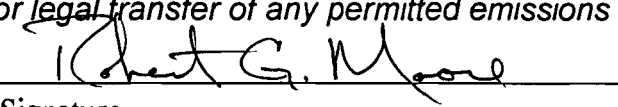
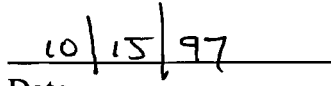
A handwritten signature in black ink that reads "Dwain Waters".

G. Dwain Waters, QEP
Air Quality Programs Coordinator,

cc: Robert G. Moore., Gulf Power Company
James O Vick, Gulf Power Company
L. A. Jeffers, Gulf Power Company
Kenny Peacock, Gulf Power Company
Danny Herrin, Southern Company Services

11/18/97 cc: Jonathan Holton

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official : Name : Robert G. Moore. Title : V.P. Power Generation/Transmission
2. Owner or Authorized Representative or Responsible Official Mailing Address : Organization/Firm : Gulf Power Company Street Address : One Energy Place City : Pensacola State : FL Zip Code : 32520-0100
3. Owner/Authorized Representative or Responsible Official Telephone Numbers : Telephone : (850)444-6383 Fax : (850)444-6744
4. Owner/Authorized Representative or Responsible Official Statement : <i>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 units.</i>  Signature  Date

* Attach letter of authorization if not currently on file.

One Energy Place
Pensacola, Florida 32520

Tel 850.444.6000



October 28, 1997

Mr. Scott M. Sheplak, P.E.
Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301

Dear Mr. Sheplak:

RE: **PLANT SCHOLZ TITLE V PERMIT COMMENTS:**
DRAFT PERMIT No: 0630014-001-AV

Attached, please find Gulf Power's comments regarding the Draft Title V Permit (0630014-001-AV) issued on September 30, 1997 for the Scholz Electric Generating Plant.

Please note that there has been an address change for Gulf Power Corporate Office to "One Energy Place, Pensacola, Fl 32520-0328" and the area code for all of Gulf Power locations has changed to (850). In addition to the area code change, Plant Scholz has had a telephone change to 850.593.6421. Please made these changes to your telephone directory for Gulf Power.

If you have any questions or need further information regarding our draft Title V permit comments, please call me at (850) 444.6527.

Sincerely,

A handwritten signature in black ink, appearing to read "Dwain Waters".

G. Dwain Waters
Air Quality Programs Coordinator, QEP

cc: Robert G. Moore., Gulf Power Company
James O Vick, Gulf Power Company
L. A. Jeffers, Gulf Power Company
Kenny Peacock, Gulf Power Company
Danny Herrin, Southern Company Services

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OCT 29 1997

BUREAU OF
AIR REGULATION

**PLANT SCHOLZ TITLE V DRAFT PERMIT COMMENTS:
10/24/97**

SECTION I

Subsection A:

Page 2 Facility Description. In the third paragraph, it should be added that the permitting notes are not "enforceable" permit conditions to help clarify that not only is the purpose informational only, but that the notes are not intended to be enforced.

SECTION II

Facility-wide Conditions

Page 4 Condition 8. Reasonable Precautions to Prevent Unconfined Particulate Matter.

General Comment: At a meeting with the FCG, Department representatives agreed to add a permitting note to conditions such as this one stating that this more specific condition implements and effectively supersedes Condition 57 under Attachment TV-1 (the general, canned conditions) which is basically a quote from Rule 62-296.320(4)(c), F.A.C.

SECTION III

Subsection A:

Page 8 A 1. Permitted Capacity Lists permitted capacities of emissions unit numbers 001 and 002.

Comment: Add notation that permitted capacity can not be accurately monitored or determined by use of continuous emission monitoring systems installed or operated pursuant to 40 CFR Part 75.

Page 9 A.4. Hours of Operation Requires Units 1 & 2 to maintain an operations log available for Department inspection that documents the total hours of annual operation, including a detailed account of hours operated on each of the allowable fuels. 62-213.440 and 62-210.200(PTE).

Comment: Unit(s) should not be required to have a continuous log of operations. Requirement does not note if this is a daily, hourly, monthly or annual log. These units demonstrate compliance to SO₂ standards through CEMS. The current reporting under the AOR is all that should be required.

Page 10 A.9. Sulfur Dioxide - Solid Fuel Limits Unit 1 & 2 to sulfur dioxide emissions at 4.75 lbs/mmbtu.

Comments: Southern Company modeling established an SO₂ emissions rate of 6.17 lbs/mmbtu at Scholz 1 & 2. Attached to these comments are the detailed results of the model.

Page 11 A.16. Determination of Process Variables (a) Required Equipment Requires unit to install, operate and maintain equipment or instruments necessary to determine process variables as heat input when such data is needed in conjunction with emissions data to determine compliance with applicable emission limiting standards. Rule 62-297.310(5)

Comment: It is unclear if this requirement applies only to the demonstration period of compliance which for particulate matter is an annual 3 run hourly test and SO₂ is a 24 hour daily average using CEMS data. It should be noted that heat input for capacity purposes should only be determined by fuel sampling and analysis methods during annual particulate compliance testing. The annual particulate emission rate (lbs/mbtu) can be determined by the F-factor method as outlined in A.20 during this test. Daily (24 hour) SO₂ emission rates shall be determined by CEM monitors on a real time basis as outlined in A.22.

Page 11 A.16. Determination of Process Variables (b) Accuracy of Equipment. Requires equipment and instruments noted in (a) above to be operated, calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. Rule 62-297.310(5)

Comment: Does not specify how often this equipment should be checked or calibrated. Equipment used for SO₂ compliance have QA/QC procedures associated with the acid rain program and meet QC provisions of A.22. Equipment associated with determination of capacity and/or heat input during particulate emissions particulate testing will be maintained within the designated accuracy range during the testing period. This requirement applies to equipment used during compliance testing.

Page 11 A.18. Visible Emissions Notes permittee has elected to utilize a transmissometer (opacity meter) for demonstrating compliance with the visible emissions limit.

Comment: Gulf Power's continuous emission monitors for opacity only records and reports opacity in block 6 minute intervals.

Page 12 A.22. Continuous SO₂ Emission Monitoring. Requires continuous SO₂ emission monitoring using 24 hour averages with standards of the Department (Specific Condition 4)

Comment: Specific Condition 4 is Hours of Operation. The correct reference should be Specific Condition B.9 Sulfur Dioxide - Solid Fuel and B.10 Sulfur Dioxide - Liquid Fuel. Also, Delete "immediately initiate as-fired fuel sampling" to language outlined in the existing permit, i.e. In the event that valid data capture is not available, the permittee shall initiate as-fired fuel sampling to demonstrate compliance with the SO₂ emission standard. The as-fired fuel sampling shall be initiated no later than 36 hours after the permittee has verified the problem or no later than 36 hours after the end of the affected calendar day.

Page 13 A.24. Fuel Sampling and Analysis. Outlines various ASTM procedures to demonstrate compliance with the sulfur dioxide standard in the event that the SO₂ CEM is not able to capture valid data.

Comment: Section (a) and (c) should be deleted and replaced with the provision that the source has accepted a sulfur percent limit for fuel oil and that limit will be verified with a fuel analysis provided by the vendor upon each fuel delivery. Additionally, references to the density of the fuel oil in Section (e) should be deleted. Add to Section (f), a note that if fuel oil is consumed during a day when these procedures are used that the latest fuel oil analysis will be used to calculate the SO₂ emission rate.

Page 18 A.30. Determination of Process Variables (a) Required Equipment. Requires unit to install, operate and maintain equipment or instruments necessary to determine process variables as heat input when such data is needed in conjunction with emissions data to determine compliance with applicable emission limiting standards. Rule 62-297.310(5)

Comment: It is unclear if this requirement applies only to the demonstration period of compliance which for particulate matter is an annual 3 run hourly test and SO₂ is a 24 hour daily average using CEMS data. It should be noted that heat input for capacity purposes should only be determined by fuel sampling and

analysis methods during annual particulate compliance testing. The annual particulate emission rate (lbs/mbtu) can be determined by the F-factor method as outlined in A.20 during this test. Daily (24 hour) SO₂ emission rates shall be determined by CEM monitors on a real time basis as outlined in A.22. **Same comments noted under A.16 above. Delete Condition A. 30(a) Required Equipment .**

Page 18 A.30. Determination of Process Variables (b) Accuracy of Equipment. Requires equipment and instruments noted in (a) above to be operated , calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. Rule 62-297.310(5)

Comment: Does not specify how often this equipment should be checked or calibrated. Equipment used for SO₂ compliance have QA/QC procedures associated with the acid rain program and meet QC provisions of A.22. Equipment associated with determination of capacity and/or heat input during particulate emissions particulate testing will be maintained within the designated accuracy range during the testing period. This requirement applies to equipment used during compliance testing. **Same comments noted under A. 16 above. Delete Condition A. 30 (b) Accuracy of Equipment.**

Page 18 A.31. Recordkeeping and Reporting Requirements. Requires owner or operator to maintain continuous records of fuel consumption and each analysis that provides the heating value and sulfur content for all fuels fired. Rule 62-214.440 and 62-4.070(3) F.A.C.

Comment: Unit(s) should not be required to maintain continuous records of fuel consumption if the unit accepts continuous emission monitoring as the SO₂ compliance method and accepts a percent sulfur restriction for sulfur dioxide for liquid fuels. Liquid fuel sulfur content is monitored by as-received vendor fuel analysis. See condition A.10. Only annual reporting under the Annual Operating Report should be required.

Page 18 A.32. Recordkeeping and Reporting Outline notification and reporting requirements in case of excess emissions resulting from malfunctions.

Comment: It should be noted that notification to the Department is required after the two hour daily exemption has occurred and not from any malfunction.

Page 20 A.36. e. Testing Requirements: Outline testing requirements for used oil.

Comment: Used oil for which the operator has generator knowledge having no possibility of contamination by PCB should not be required to test for PCBs.

Page 20 A.36. f. RecordKeeping Requirements: The general condition pertaining to the use of a used oil form for record keeping purposes, although not a specific regulatory requirement, should nonetheless be implemented as it is to be considered a BMP (Best Management Practices). (1): Condition requires the source to maintain records of quantities of used oil generated that is transferred into the approved AST (above ground storage tank) at the source.

Comments: Current procedures allow the AST to be batch-tested once it is filled and that quantity burned. It is overly burdensome to maintain records of each volume of oil added to the AST during any period. Additionally, there is no regulatory requirement for records to be completed by any specified date, particularly arbitrarily derived dates.

Page 20 A.36. f. RecordKeeping Requirements. The general condition pertaining to the use of a used oil form for record keeping purposes, although not a specific regulatory requirement, should nonetheless be implemented as it is to be considered a BMP (Best Management Practices). (2): Requires records of used oil management to completed by no later than the fifteenth day of the succeeding month.

Comment: There is no regulatory requirement for any specified date for record keeping completion purposes. The Department's language in this part of the proposed condition regarding consecutive 12 month periods is not consistent with earlier provisions which talk about a calendar year limitation on the total quantity of used oil that can be burned. Delete this requirement.

Page 20 A.36. g. Reporting Requirements. Requires the source to report to the Northwest District office within thirty days of the end of each calendar quarter, the analytical results and the total amount of on-specification used oil generated and burned during the quarter.

Comment: There is no current regulatory requirement for quarterly reporting of used oil activities to the District. Current reporting through the Annual Operating Reporting should be adequate to meet monitoring of on-specification used oil activities.

NOTE: Cite [40 CFR 761.20(e)] is not applicable to these conditions; this cite addresses marking requirements for PCB containers.

SECTION IV ACID RAIN PART:

Page 23 A.4 Comments, notes and justifications. Notes Designated Representative history.

Comments: Add most recent change from G. Edison Holland, Jr. to Robert G. Moore. Additionally, it should be noted that this specific condition should be changed to an unenforceable "permitting note" since this information can and will change frequently with appropriate notice.

APPENDIX E-1

General Comment: Many of the list of trivial or insignificant activities noted under the facility section and the applicant's "Emissions Unit 4" outlined in the Scholz Title V Application were not included in the final permit. Gulf Power assumes that these activities and units not listed in the permit were determined to be either exempt or unregulated as "Trivial" by the Department's guidance memorandum dated March 15, 1996 or agreed to by the Department as case by case trivial activities requiring no permitting action.

APPENDIX U-1

General Comment: Fugitive PM emissions from Sandblasting are not listed as a unregulated emissions as outlined in the Scholz Title V Application under Emissions Unit 4. Addition of this activity is requested.

TABLE 1-1

Comment: See attached Table 1-1 for corrections.

TABLE 2-1

Comment: See attached Table 2-1 for corrections.

Table 1-1, Summary of Air Pollutant Standards and Terms

Gulf Power Company
 Scholz Generating Plant

DRAFT Permit No.: 0630014-001-AV
 Facility ID No.: 0630014

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of the permit.

E. U. ID No.	Brief Description	Pollutant Name	Fuel(s)	Hours/Year	Allowable Emissions			Equivalent Emissions*		Regulatory Citation(s)	See Permit Condition(s)
					Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
-001	Boiler #1 (645.7 MMBtu/hour - Coal) (12.4 MMBtu/hour - Oil)	VE	Coal	8760	40%			N/A	N/A	62-296.405(1)(a)	A.5.
			No. 2 Fuel Oil	8760	40%			N/A	N/A	62-296.405(1)(a)	A.5.
	PM	Coal	8760	0.1 lb/MMBtu	N/A	N/A	64.6	282.9	62-296.405(1)(b)	A.7.	
		No. 2 Fuel Oil	8760	0.1 lb/MMBtu	N/A	N/A	1.2	5.4	62-296.405(1)(b)	A.7.	
	PM - SB	Coal	3 hr/day	0.3 lb/MMBtu	N/A	N/A	193.7	353.5 106.5	62-210.700(3)	A.8.	
		No. 2 Fuel Oil	3 hr/day	0.3 lb/MMBtu	N/A	N/A	3.7	6.8 2.0	62-210.700(3)	A.8.	
-Acid Rain Phase I Unit -Acid Rain Phase II Unit	SO ₂	Coal	8760	4.75 4.75 lb/MMBtu	N/A	N/A	3,067.1 3384.6	13,433.8 17,449.8	62-2204.240(1)	A.9.	
		No. 2 Fuel Oil	8760	0.5% Sulfur	N/A	N/A	6.1	26.3	Applicant Request	A.10.	
-002	Boiler #2 (645.7 MMBtu/hour - Coal) (12.4 MMBtu/hour - Oil)	VE	Coal	8760	40%			N/A	N/A	62-296.405(1)(a)	A.5.
			No. 2 Fuel Oil	8760	40%			N/A	N/A	62-296.405(1)(a)	A.5.
	PM	Coal	8760	0.1 lb/MMBtu	N/A	N/A	64.6	282.9	62-296.405(1)(b)	A.7.	
		No. 2 Fuel Oil	8760	0.1 lb/MMBtu	N/A	N/A	1.2	5.4	62-296.405(1)(b)	A.7.	
	PM - SB	Coal	3 hr/day	0.3 lb/MMBtu	N/A	N/A	193.7	353.5 106.5	62-210.700(3)	A.8.	
		No. 2 Fuel Oil	3 hr/day	0.3 lb/MMBtu	N/A	N/A	3.7	6.8 2.0	62-210.700(3)	A.8.	
-Acid Rain Phase I Unit -Acid Rain Phase II Unit	SO ₂	Coal	8760	4.75 4.75 lb/MMBtu	N/A	N/A	3,067.1 3384.6	13,433.8 17,449.8	62-2204.240(1)	A.9.	
		No. 2 Fuel Oil	8760	0.5% Sulfur	N/A	N/A	6.1	26.3	Applicant Request	A.10.	

Notes:
 * The "Equivalent Emissions" listed are for informational purposes.
 ** PM - SB refers to "soot blowing" and "load change".

Table 2-1, Summary of Compliance Requirements

Gulf Power Company
Scholz Generating Plant

DRAFT Permit No.: 0630014-001-AV
Facility ID No.: 0630014

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

E. U. ID No.	Brief Description	Pollutant Name or Parameter	Fuel(s)	Compliance Method	Testing Time	Frequency	Min. Compliance Test Duration	CMS ¹	See Permit Condition(s)
					Frequency	Base Date ²	Test Duration		
-001	Boiler #1 (645.7 MMBtu/hour - Coal) (12.4 MMBtu/hour -Oil)	VE	Coal	DEP method 9 CEM	Annually 6-min ³	Sept. 30	60 Minutes	Yes	A.14., 17., 18., 22., 24, 27.-29., 31.-34.
			No. 2 Fuel Oil	DEP method 9 CEM	Annually 6-min ³	Sept. 30	60 Minutes	Yes	
	PM	Coal	17, 5, 5B or 5F	Annually ³	Sept. 30	1 Hour	No	A.19., A.24. - 29., 31., 32., 34.	
		No. 2 Fuel Oil	17, 5, 5B or 5F	Annually ³	Sept. 30	1 Hour	No		
	-Acid Rain Phase I Unit	SO ₂	Coal	6, 6A, 6B or 6C CEMS	Annually 24-Hour	Sept. 30	24 Hour	Yes	
-Acid Rain Phase II Unit	No. 2 Fuel Oil	Fuel Sampling & Analysis Provided by Vendor				Yes			
-002	Boiler #2 (645.7 MMBtu/hour - Coal) (12.4 MMBtu/hr - Oil)	VE	Coal	DEP method 9 CEM	Annually 6-min ³	Sept. 30	60 Minutes	Yes	A.14., 17., 18., 22., 24, 27.-29., 31.-34.
			No. 2 Fuel Oil	DEP method 9 CEM	Annually 6-min ³	Sept. 30	60 Minutes	Yes	
	PM	Coal	17, 5, 5B or 5F	Annually ³	Sept. 30	1 Hour	No	A.19., A.24. - 29., 31., 32., 34.	
		No. 2 Fuel Oil	17, 5, 5B or 5F	Annually ³	Sept. 30	1 Hour	No		
	-Acid Rain Phase I Unit	SO ₂	Coal	6, 6A, 6B or 6C CEMS	Annually 24-Hour	Sept. 30	24 Hour	Yes	
-Acid Rain Phase II Unit	No. 2 Fuel Oil	Fuel Sampling & Analysis Provided by Vendor				Yes			

Notes:

¹ CMS [=] continuous monitoring system used for monitoring requirement in lieu of fuel sampling and analysis if marked 'yes'.

(Acceptable as long as CMS is maintained and calibrated as required.)

² Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.

³ Test not required in years that liquid and/or solid fuel fired less than 400 hours. *other than startup/shutdown.*

Air Quality Modeling Analyses for Plant Scholz

On behalf of Gulf Power Company, Southern Company Services (SCS) has reviewed the air quality modeling analysis conducted by FDEP to estimate SO₂ impacts due to the operation of Plant Scholz. This letter summarizes the results of that review and recommends 1) the use of corrections to the stack input data and 2) that the use of a more technically superior downwash model be considered for estimating the SO₂ impacts due to Plant Scholz in accordance with the case-by-case basis provisions outlined in the Federal Register notice of March 1980 (45 FR 20157). Our comments and the results of our re-analyses follow:

- 1) The stack exit velocity used in the FDEP analysis does not represent the total actual volumetric flow rate from both boilers. Recent stack test data indicate an average flow rate of 252,030 ACFM for Unit 1 and 296,287 ACFM for Unit 2, for a total stack flow rate of 548,317 ACFM (see Attachment 1). This flow rate corresponds to an exit velocity of 19.46 m/sec for the stack diameter of 4.11 m.

Since these stack tests were conducted when each boiler was operating at 50 MW, this exit velocity must be adjusted to account for the additional volume of air flow for operation at 55 MW (55 MW correspond to operation with a heat input of 645.7 MBtu/hr with coal as the fuel for each boiler). The linearly adjusted exit velocity thus obtained is 21.41 m/sec.

- 2) The exit temperature used in the FDEP modeling was found to be appropriate for operations at 55 MW.
- 3) Adjustment to the stack exit velocity was incorporated and the ISC model was re-run for the five-year meteorology. A finer receptor grid closer to the stack with a grid spacing of 50m was also used; the purpose of this grid is to improve the capture of near wake effects due to the building. The model results indicate that the highest of the second-high impacts for each year are within the State's Ambient Air Quality Standards for all averaging times.

	ANNUAL		3-HR. HSH		24-HR. HSH	
	ISCST3	ISCPRIME	ISCST3	ISCPRIME	ISCST3	ISCPRIME
1985	9	9	806	736	101	144
1986	13	14	468	516	132	142
1987	25	25	463	599	179	182
1988	21	22	497	544	143	149
1989	11	12	466	584	150	173

Table 1

Additional comments

Although we are aware that the above analysis indicates that current emission limitations for Plant Scholz are protective of Florida's ambient air quality standards, we believe that the current version of ISCST3 with building wake effects does not reflect the state-of-the-art modeling technique for downwash and includes deficiencies in the treatment of the stack location, streamline deflection, wind angle, plume rise, atmospheric stability, etc. To quote Electric Power Research Institute (EPRI), "Plume downwash (stack-tip and building-induced) was incorporated in some EPA regulatory air quality models in 1979. Prior to adoption of the Industrial Source Complex (ISC) model, building downwash was either ignored or handled on a case-by-case basis. Little additional work has been devoted to this topic - - due more to the lack of good quality data from which to derive improvements, than from satisfaction with the scientific basis of the treatment, or with the overall accuracy."

Having identified these problems, EPRI, with the participation of EPA embarked on an elaborate field and wind tunnel study to improve the understanding of the building downwash phenomenon. The outcome of this multi-year study is a model known as Plume Rise Model Enhancements (PRIME) that went through various stages of beta-testing and has just completed an independent evaluation. The results of the evaluation indicate that the model-predicted concentrations are closer to those observed in the field and wind tunnel studies. EPRI will make a presentation of this model at the EPA Region IV State/Local Modelers Workshop on Nov. 18 in Atlanta. You may visit www.epri.com/eg/PRIME for further information about the model.

A presentation of this model was made at the last EPA Regional Meteorologists' meeting and the model was received with enthusiasm. At this meeting, since Golden Valley Electric Association had approached EPA Region X expressing the desire to use the new model for a permit application, Rob Wilson, the regional meteorologist for EPA Region X, asked Mr. Joseph Tikvart of OAQPS about the model's acceptability. Mr. Tikvart, having been informed about the progress of this model development since the beginning, responded that he will be willing to consider the application of PRIME on a case-by-case basis. Recently, Golden Valley Electric Association submitted an application to EPA Region for a permit based on use of the PRIME model.

Gulf Power Company, through SCS, is one of the sponsors of the Plume Rise/Downwash project, and is pleased with the new model's ability to incorporate the latest developments in the little known science of building downwash effects. SCS has applied this model to plant Scholz by developing the building dimension inputs afresh, running through the specially-designed BPIP program, and then running ISCPRIME (the ISC version of PRIME). The results are presented along with those predicted with corrected stack velocity using ISCST3 in the following table. Attachment 2 contains the drawings and maps used to develop the 3-tired plant Scholz building dimensions for the BPIP/PRIME model.

Even though the ISCPRIME predictions are higher than ISCST3 in almost all cases, we are more comfortable with the former since they are based on a model which incorporates better science.



The inputs and outputs of the ISCST3 and ISCPRIME runs conducted at SCS are provided on the enclosed diskettes.

Stanley S. Vasa
Southern Company Services
10/24/97



ATTACHMENT 1

**TABLE I. SUMMARY OF PARTICULATE TEST RESULTS
GULF POWER COMPANY
PLANT SCHOLZ, UNIT 2, SOOT BLOWING
SNEADS, FLORIDA**

Title of Run		<u>RUN 1</u>	<u>RUN 2</u>	<u>RUN 3</u>
Date of Test	Month/Day/Year	7/15/97	7/15/97	7/15/97
Sampling Time -Start	Military	0831	1003	1200
Sampling Time -Stop	Military	0940	1110	1308
Oxygen F Factor	SDCF/MMBTU	9780	9780	9780
Plant Load	Megawatts	50	50	50
Stack Static Pressure	Inches Water	0.40	0.40	0.40
Barometric Pressure	Inches Mercury	30.16	30.16	30.16
Average Orifice Pressure (dH)	Inches Water	1.3	1.0	1.1
Meter Correction Factor		1.066	1.066	1.066
Average Meter Temperature	Degrees F	81.0	78.5	80.7
Oxygen Concentration	Percent O2	8.9	8.7	8.6
Carbon Dioxide Concentration	Percent CO2	10.0	10.0	10.0
Volume of Gas Metered	Cubic Feet	39.100	35.500	36.171
Volume of Water Collected	Milliliters	82.5	73.9	81.0
Sampling Time	Minutes	60	60	60
Nozzle Diameter	Inches	0.239	0.233	0.235
Average Stack Temperature	Deg. F	307.3	305.3	306.7
Area of Stack	Square Feet	89.3330	89.3330	89.3330
Weight of Solids Collected	Milligrams	14.3	15.1	14.5
Number of Points Sampled		30	30	30
Avg. Sqr. Root Velocity Press.	Inches Water	0.8393	0.8024	0.8223

RESULTS OF COMPUTATIONS

		<u>RUN 1</u>	<u>RUN 2</u>	<u>RUN 3</u>	<u>Average</u>
Volume of Gas Sampled	Standard Dry Cubic Feet	41.117	37.481	38.044	
Molecular Wt. of Stack Gas	LB/LB-MOLE	28.924	28.933	28.856	28.905
Water vapor in Stack Gas	Percent	8.6	8.5	9.1	8.7
Average Stack Gas Velocity	Feet per second	56.5	53.9	55.4	55.3
Stack Gas Flow Rate	Standard Dry Cubic Feet Per Minute	192.125	184.162	187.535	187.940
Stack Gas Flow Rate	Standard Wet Cubic Feet Per Minute	210.270	201.253	206.329	205.951
Stack Gas Flow Rate	Actual Cubic Feet Per Minute	302.828	289.112	296.920	296.287
Stack Gas Flow Rate	Pounds Dry Air per Hour	866.858	830.930	846.148	847.979
Particulate Concentration	Grains per Standard Dry Cubic Foot	0.005	0.006	0.006	0.006
Particulate Concentration	Grains per Actual Cubic Foot	0.003	0.004	0.004	0.004
Particulate Emission Rate	Pounds per Hour	8.8	9.8	9.4	9.3
Particulate Emission Rate	Pounds per Million Btu (O2 F Factor)	0.013	0.015	0.014	0.014
Heat Input (O2 F Factor)	Million Btu per Hour	676.75	659.52	677.10	671.12
Isokinetic Rate	Percent	102.3	102.4	100.3	

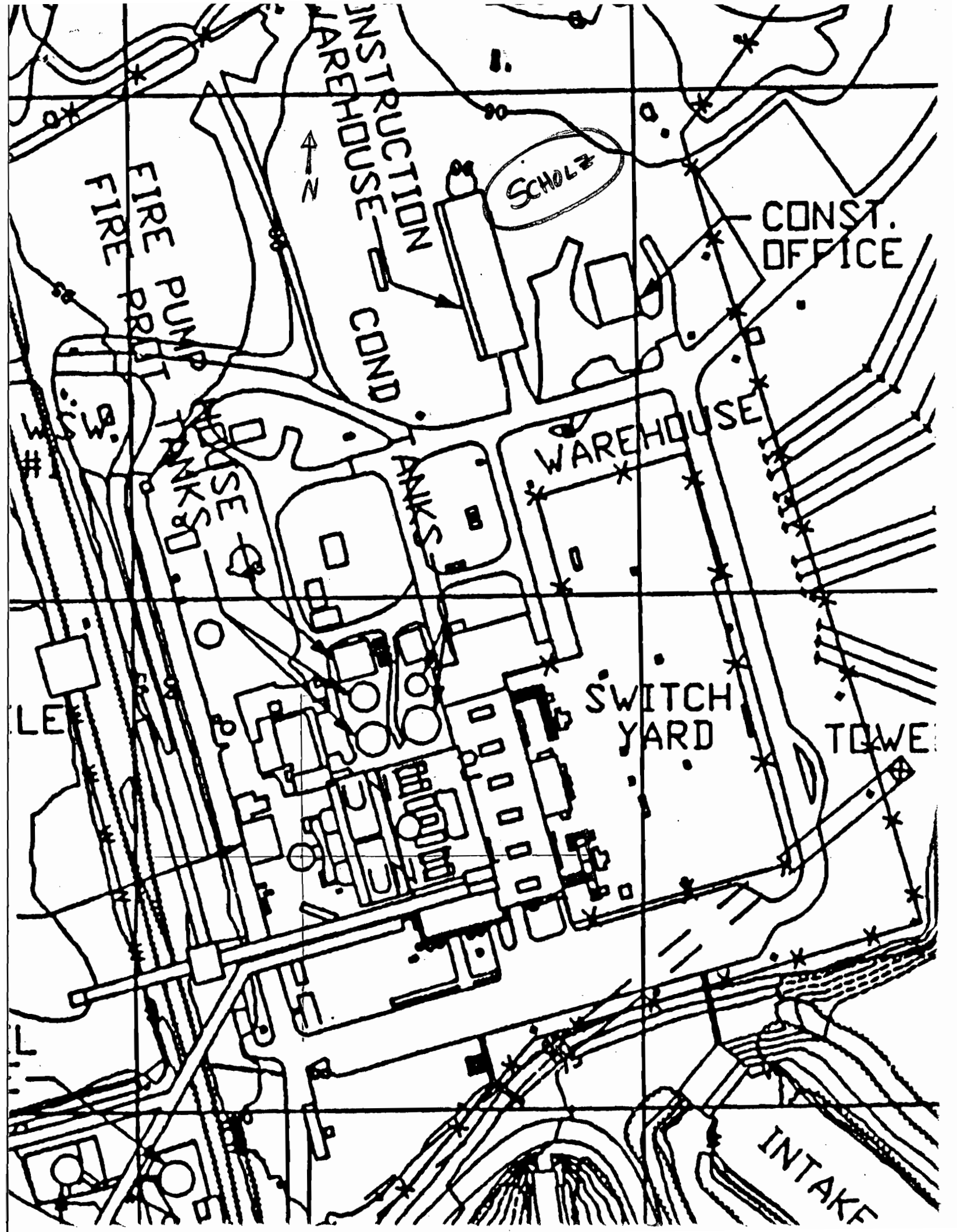
**TABLE I. SUMMARY OF PARTICULATE TEST RESULTS
GULF POWER COMPANY
PLANT SCHOLZ, UNIT 1, STEADY STATE
SNEADS, FLORIDA**

Title of Run		<u>RUN 1</u>	<u>RUN 2</u>	<u>RUN 3</u>
Date of Test	Month/Day/Year	7/9/97	7/9/97	7/9/97
Sampling Time -Start	Military	0657	0823	0947
Sampling Time -Stop	Military	0800	0925	1050
Oxygen F Factor	SDCF/MMBTU	9780	9780	9780
Stack Static Pressure	Inches Water	0.12	0.12	0.12
Barometric Pressure	Inches Mercury	30.18	30.18	30.18
Average Orifice Pressure (dH)	Inches Water	1.2	1.0	1.2
Meter Correction Factor		1.066	1.066	1.066
Average Meter Temperature	Degrees F	78.2	82.3	84.7
Oxygen Concentration	Percent O2	9.2	8.7	8.4
Carbon Dioxide Concentration	Percent CO2	10.5	11.0	11.5
Volume of Gas Metered	Cubic Feet	38.300	34.950	36.350
Volume of Water Collected	Milliliters	74.0	69.0	74.0
Sampling Time	Minutes	60	60	60
Nozzle Diameter	Inches	0.254	0.240	0.254
Average Stack Temperature	Deg. F	287.6	293.5	295.8
Area of Stack	Square Feet	89.3330	89.3330	89.3330
Weight of Solids Collected	Milligrams	25.7	22.7	26.4
Number of Points Sampled		30	30	30
Avg. Sqr. Root Velocity Press.	Inches Water	0.7042	0.7155	0.7038
load (mw)		50	50	50

RESULTS OF COMPUTATIONS

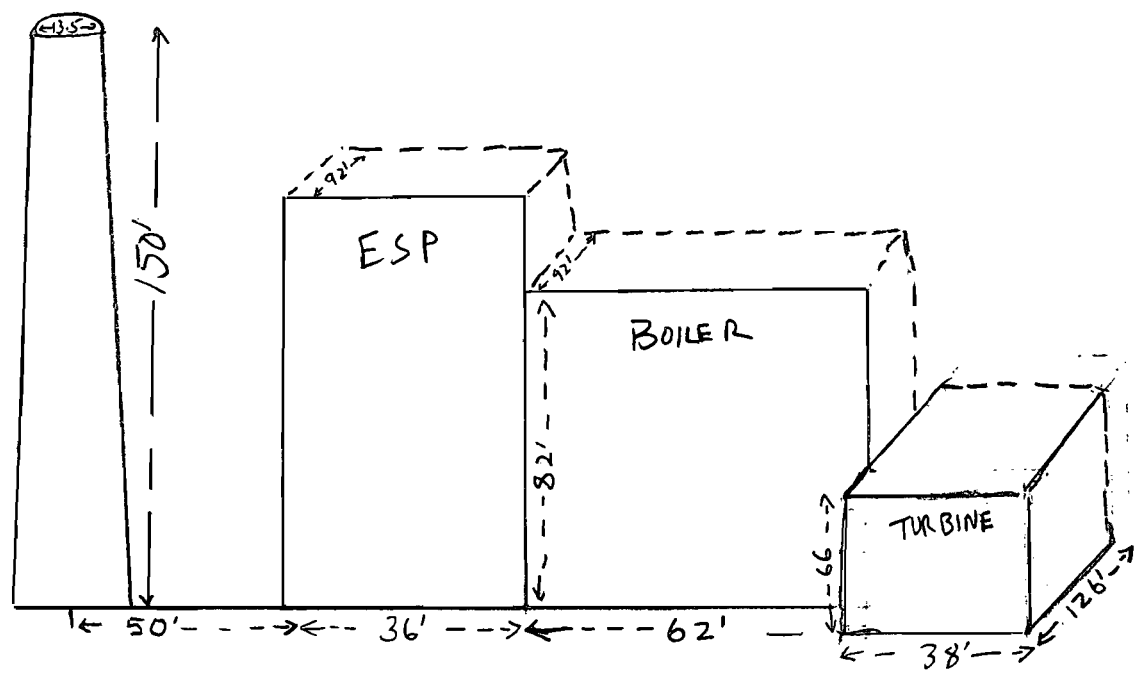
		<u>RUN 1</u>	<u>RUN 2</u>	<u>RUN 3</u>	<u>Average</u>
Volume of Gas Sampled	Standard Dry Cubic Feet	40.504	36.661	37.979	
Molecular Wt. of Stack Gas	LB/LB-MOLE	29.094	29.123	29.153	29.123
Water vapor in Stack Gas	Percent	7.9	8.1	8.4	8.2
Average Stack Gas Velocity	Feet per second	46.7	47.6	46.8	47.0
Stack Gas Flow Rate	Standard Dry Cubic Feet Per Minute	164.086	165.592	162.090	163.923
Stack Gas Flow Rate	Standard Wet Cubic Feet Per Minute	178.197	180.262	176.956	178.472
Stack Gas Flow Rate	Actual Cubic Feet Per Minute	250.075	254.970	251.046	252.030
Stack Gas Flow Rate	Pounds Dry Air per Hour	740.350	747.146	731.342	739.612
Particulate Concentration	Grains per Standard Dry Cubic Foot	0.010	0.010	0.011	0.010
Particulate Concentration	Grains per Actual Cubic Foot	0.006	0.006	0.007	0.007
Particulate Emission Rate	Pounds per Hour	13.7	13.5	14.9	14.1
Particulate Emission Rate	Pounds per Million Btu (O2 F Factor)	0.024	0.023	0.025	0.024
Heat Input (O2 F Factor)	Million Btu per Hour	563.54	593.02	594.75	583.77
Isokinetic Rate	Percent	104.5	105.0	99.2	

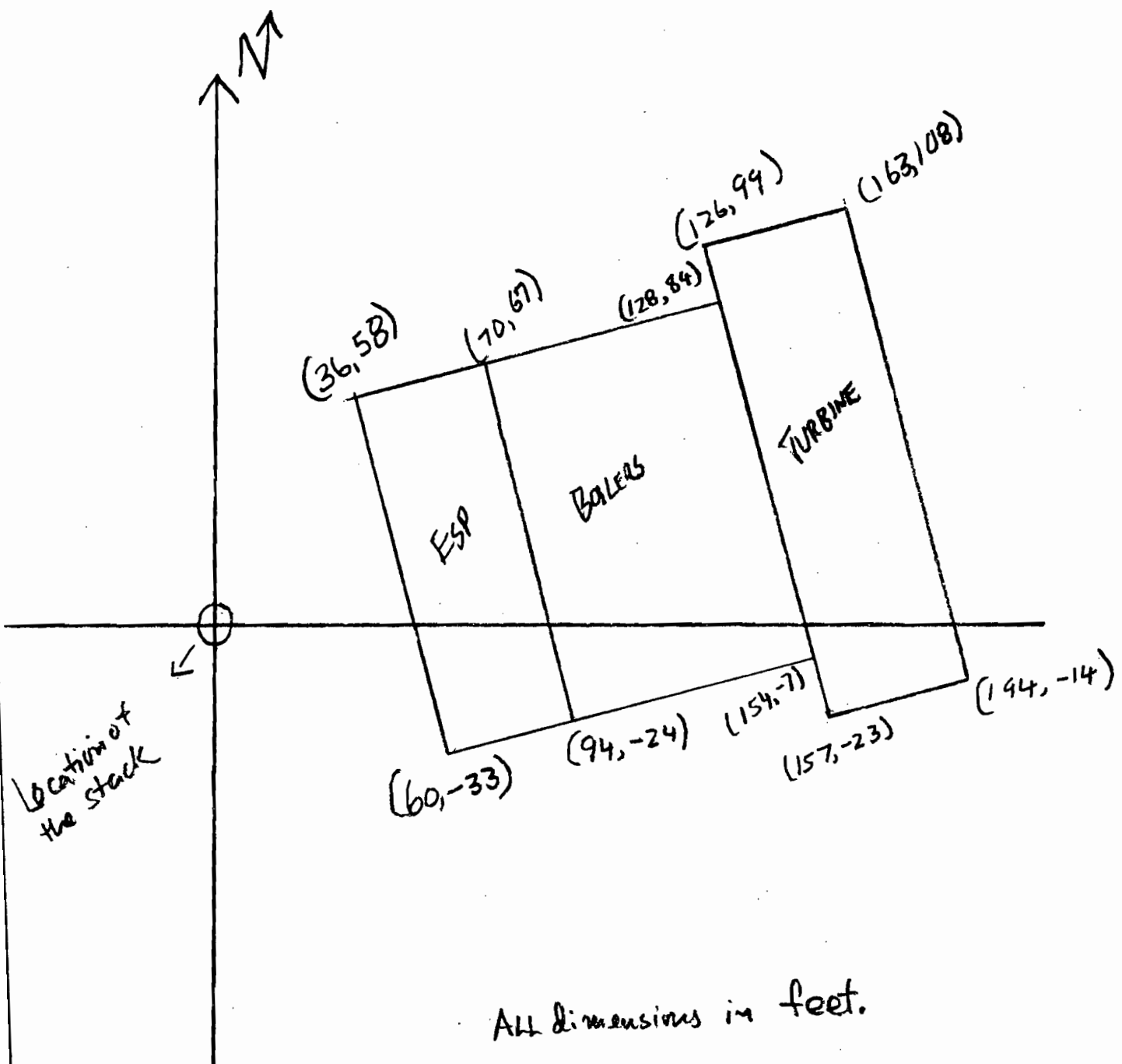
ATTACHMENT 2





PLANT SCHOLZ UNITS 1A2





All dimensions in feet.