STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

June 27, 1984

Mr. Peter F. Burnete, Manager
Source Testing Department
Environmental Science and Engineering (ESE)
Post Office Box ESE
Gainesville, Florida 32602

Dear Sir:

This is in response to your letter of June 7, 1984. The acceptability of the test port location modification described in your letter has been approved by Ed Palagyi, Bill Thomas, Teresa Heron of my staff and Jim Manning of EPA. Therefore, you may proceed with the required compliance test as outlined in your letter.

Please notify the Orlando Office prior to the scheduled test, so that a witness can be present.

We will be waiting for the compliance test report. In the event these results are not representative of this operation, Kissimmee Utilities may be required to retest by EPA Method 20 as specified in 40 CFR, Appendix A.

If you have any questions regarding this matter, please call Ed Palagyi or Teresa M. Heron or write to me to the above address.

Sincerely

for C. H. Fancy
Deputy Chief
Bureau of Air Quality
Management

TH/agh

cc: Bill Blommel, DER
John Turner, SJR
Jim Manning, EPA

ESE

ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.

June 7, 1984

Mr. Ed Palagyi
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Mr. Palagyi:

Enclosed please find a Test Protocol for NSPS testing at Kissimmee Utilities on their gas fired turbine/combined cycle boiler system. Also, please find a stack schematic showing sample port locations.

Please contact us as soon as possible regarding the acceptability of the protocol. We will then establish a test date mutually acceptable to all parties.

Sincerely,

Peter F. Burnette
Department Manager
Source Testing Department

cc: David A. Buff, ESE
Glen Massiongale, Kissimmee Utilities

MEMO
From: Ed Palagyi
To: TERESA

THIS LOOK OK TO YOU?

Ed

KISSIMMEE UTILITIES TEST PROTOCOL

Permit No. AC 49-74856
Expires August 1, 1984

Gas Turbine/Combined Cycle Boiler

Performance tests shall be conducted while the unit is burning natural gas and is operating at ± 10% of capacity.

The only possible test location, without major alterations of the duct/stack system, is the outlet stack of the combined cycle boiler. The proposed location is four feet above the duct conveying flue gas to the stack. The stack is twelve feet in diameter. Two sample ports 90 apart will be cut into the stack such as the inlet duct may be used as a sampling platform. Since only gaseous pollutant sampling will be performed (no particulate sampling will be performed since the test is on natural gas), the effects on the test results of the close proximity of the sample ports to the inlet duct will be minimal.

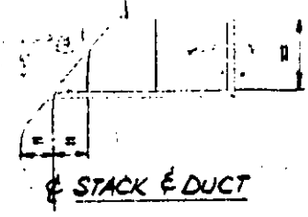
Oxygen will be monitored at a point between the turbine and the boiler (as close to the turbine outlet as possible) and also at the boiler outlet. This will demonstrate any in-leakage to the system between the turbine and the boiler stack. No dilution is expected since the exhaust system is under positive pressure and any leakage should be out of the system. Should in-leakage occur appropriate corrections will be made to sample concentrations as per EPA Methods.

EPA Methods 1-4 will be used to determine stack velocity, flow rate, temperature, moisture content, and flue gas analysis.

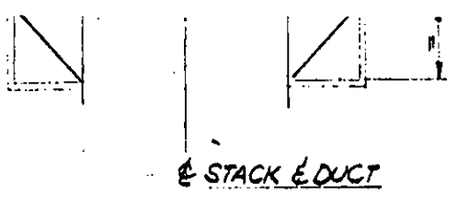
Opacity will be determined using EPA Method 9.

EPA Methods 10 and 20 shall be used to measure CO and NO_x, respectively.

Water injection rates will be recorded manually at least hourly during the testing period by plant personnel.



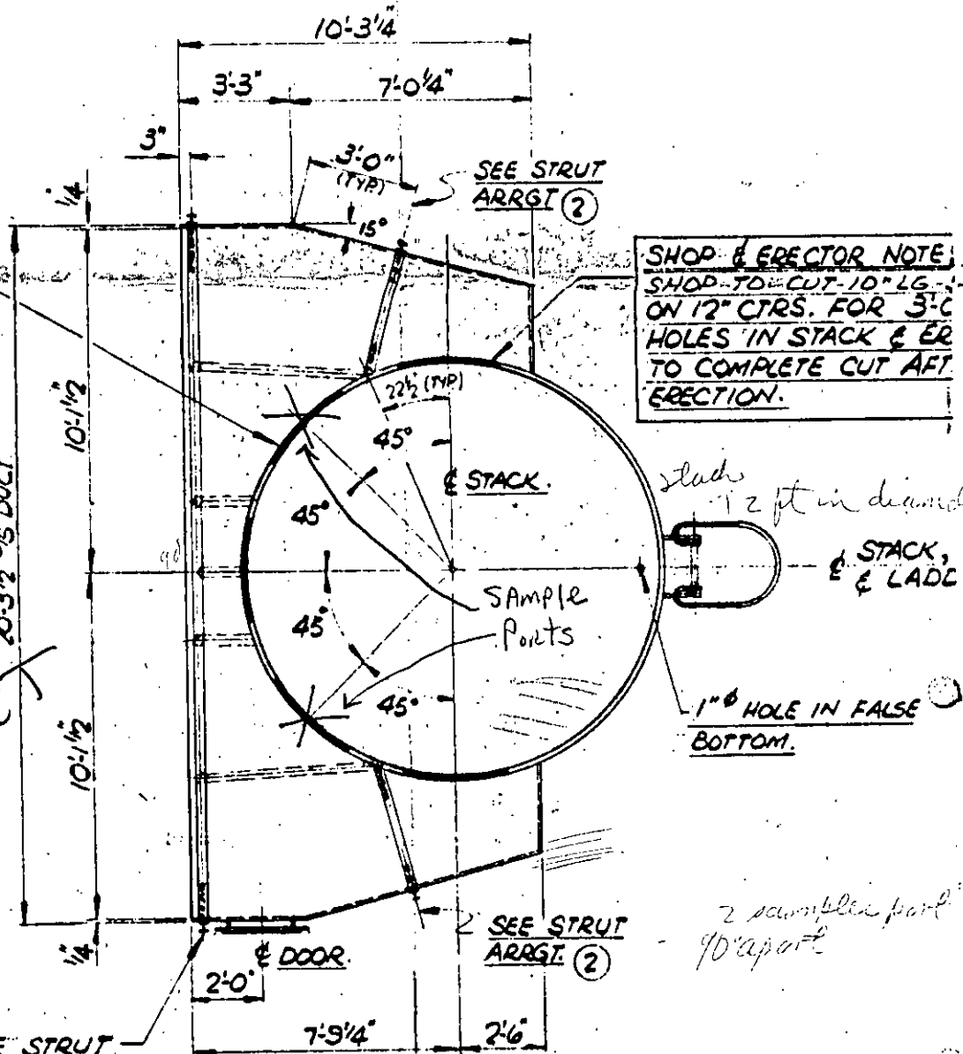
STRUT ARRGT. (1)



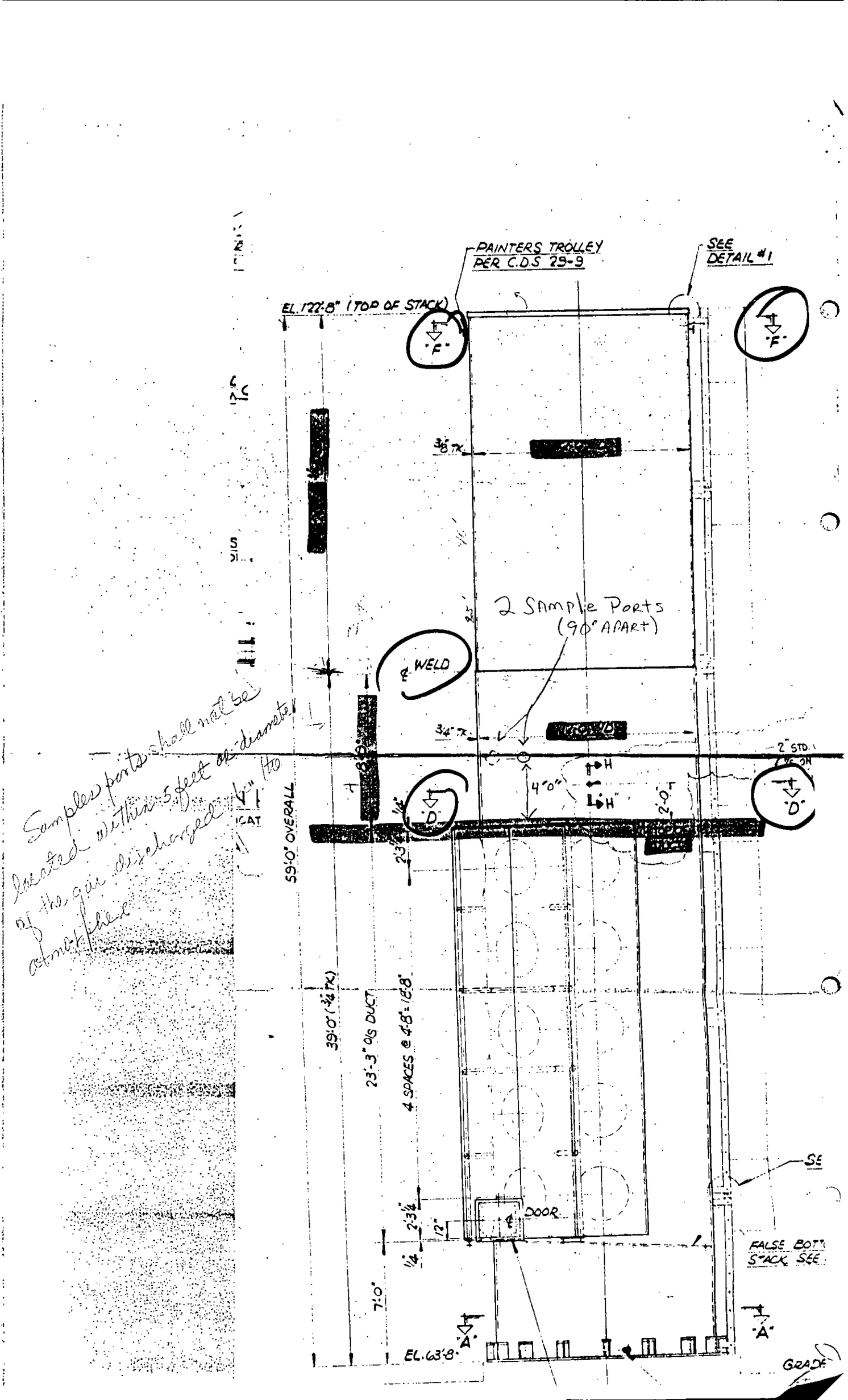
STRUT ARRGT. (2)

4.1.1
Sampling site as close as practical to the discharge of the turbine.
Sampling site shall be located upstream DIA. N. STACK of the point of introduction of dilution air into the duct.
Sample ports may be located before or after the upturn elbow. Sampler ports shall not be located within 5 feet of DW 2 diameter of the gas discharge to the atm.
Minimum diameter of the sample ports shall be 3 inch nominal pipe size

DUCT



SECTION "D-D"


PAINTERS TROLLEY PER C.D.S 29-9
SEE DETAIL #1
EL. 122'-8" (TOP OF STACK)
"F"
"F"
3/8" TK.
2 Sample Ports (90° APART)
WELD
3/4" TK.
2" STD.
4'-0"
H
H
2'-0"
"D"
"D"
59'-0" OVERALL
39'-0" (3/4" TK.)
23'-3" O/S DUCT
4 SPACES @ 4'-8" = 18'-8"
DOOR
FALSE BOTT
STACK SEE
"A"
"A"
EL. 63'-8"
GRADE
Samples ports shall not be located within 5 feet of discharge of the gas discharged to atmosphere