Check Sheet

ompany Name: Reedy Creek Utilities
ermit Number: AC48-73369, -73370
PSD Number:
Permit Engineer:

Application:
- ☑ Initial Application 7/29/83
- ☑ Incompleteness Letters
- ☐ Responses
- ☐ Waiver of Department Action
- ☐ Department Response
- ☑ Other Withdrawn 6/7/85

Cross References:
- ☐
- ☐
- ☐

Intent:
- ☐ Intent to Issue
- ☐ Notice of Intent to Issue
- ☐ Technical Evaluation
- ☐ BACT or LAER Determination
- ☒ Unsigned Permit
- ☐ Correspondence with:
  - ☐ EPA
  - ☐ Park Services
  - ☐ Other
- ☐ Proof of Publication
- ☐ Petitions - (Related to extensions, hearings, etc.)
- ☐ Waiver of Department Action
- ☐ Other

Final Determination:
- ☐ Final Determination
- ☐ Signed Permit
- ☒ BACT or LAER Determination
- ☐ Other

Post Permit Correspondence:
- ☐ Extensions/Amendments/Modifications
- ☐ Other

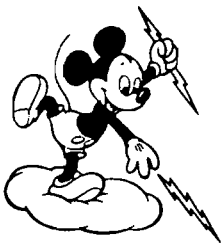
Revision #5

DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD

FILE#0000000073370 COE# DER PROCESSOR:C M COLLINS DER OFFICE:ORL
FILE NAME:REEDY CREEK UTILITIES INCDATE FIRST REC: 07/29/83 APPLICATION TYPE:AC
APPL NAME:EPCOT CNTR/GENERATOR #2 APPL PHONE:(305)824-4026 PROJECT COUNTY:48
ADDR:P. O. BOX 40 CITY:LAKE BUENA VISTA ST:FLZIP:32830
AGNT NAME: AGNT PHONE:( ) -
ADDR: CITY: ST: ZIP:

ADDITIONAL INFO REQ: / / / / / / REC: / / / / / /
APPL COMPLETE DATE: / / COMMENTS NEC:Y DATE REQ: / / DATE REC: / /
LETTER OF INTENT NEC:Y DATE WHEN INTENT ISSUED: / / WAIVER DATE: / /

HEARING REQUEST DATES: / / / / / /
HEARING WITHDRAWN/DENIED/ORDER -- DATES: / / / / / /
HEARING ORDER OR FINAL ACTION DUE DATE: / / MANUAL TRACKING DESIRED:N
THIS RECORD HAS BEEN SUCESSFULLY ADDED 08/02/83 10:09:53
FEE PD DATE#1: / / $ RECEIPT# REFUND DATE: / / REFUND $
FEE PD DATE#2: / / $ RECEIPT# REFUND DATE: / / REFUND $
APPL:ACTIVE/INACTIVE/DENIED/WITHDRAWN/TRANSFERRED/EXEMPT/ISSUED:AC DATE:07/29/83
REMARKS:



REEDY CREEK UTILITIES CO., INC.

P.O. BOX 40 • LAKE BUENA VISTA, FLORIDA 32830
(305) 824-4024

July 27, 1983

TO WHOM IT MAY CONCERN:

This is to certify that H. Robert Kohl, Director of Operations, Reedy Creek Utilities Co., Inc., is authorized to sign all necessary paperwork in connection with an Air Pollution Source on behalf of the company for a large bore diesel power generator located at 751 Backstage Lane, Lake Buena Vista, Florida 32830.

If you have any questions in this matter, please do not hesitate to contact me at 828-1737.

Sincerely,

Robert H. Penn

Robert H. Penn
Assistant Secretary

RHP:jrs

STATE OF FLORIDA

AC 48-73370

DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER DISTRICT
3319 MAGUIRE BOULEVARD
SUITE 232
ORLANDO, FLORIDA 32803

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ALEX SENKEVICH
DISTRICT MANAGER

DER

AUG 10 1983

BAOM

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Large Bore Diesel Powered Generator [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: Reedy Creek Utilities Co., Inc. COUNTY: Orange

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) EPCOT Center Emergency Generator #2

SOURCE LOCATION: Street 751 Back Stage Lane City Lake Buena Vista

UTM: East 446167 North 3138609

Latitude 28 ° 22 ' 30 "N Longitude 81 ° 32 ' 30 "W

APPLICANT NAME AND TITLE: Reedy Creek Utilities Co., Inc.

APPLICANT ADDRESS: Post Office Box 40, Lake Buena Vista, Florida 32830

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Reedy Creek Utilities Co.

I certify that the statements made in this application for a Construction (installation) permit are true, correct and complete to the best of my knowledge and belief. Further I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: _____

H. Robert Kohl, Director
Name and Title (Please Type)

Date: _____ Telephone No. (305) 824-4026

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed Willard Smith

Willard Smith
Name (Please Type)

Reedy Creek Utilities Co., Inc.
Company Name (Please Type)

P.O. Box 40, Lake Buena Vista, Fl. 32830
Mailing Address (Please Type)

Florida Registration No. 14141 Date: 7/26/83 Telephone No. (305) 824-4950

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Installation of a Stewart and Stevenson large bore diesel powered emergency generator of 2.5 MWH output to provide emergency standby power and peak demand reduction to the EPCOT Center Project.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction on permit issuance Completion of Construction 30 days thereafter

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Not Applicable

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

NONE

E. Requested permitted equipment operating time: hrs/day ; days/wk ; wks/yr ; if power plant, hrs/yr ; if seasonal, describe: Emergency generators to be routinely run for peak demand reduction, emergency and bad weather standby, and maintenance and preparedness tests for a total of - see attachment #7.

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? yes

   a. If yes, has "offset" been applied? no

   b. If yes, has "Lowest Achievable Emission Rate" been applied? no

   c. If yes, list non-attainment pollutants. Ozone (VOC)

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. yes

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. no

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? no

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this scurce? no

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? no

   a. If yes, for what pollutants?

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

*Average based on 40-hour week.

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): Not Applicable

2. Product Weight (lbs/hr): Not Applicable

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Nitrogen Oxides	100	66.8			133,605	66.8	
Carbon Monoxide	2.6	1.74			3,474	1.74	
VOC	2.8	1.87			3,741	1.87	
Sulfur Dioxide	30	20.0			40,082	20.0	

*See description of operation schedule in attachment 7

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4) None

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
No. 2 fuel oil	180	200	27.9

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: 0.29 Percent Ash: trace

Density: 7.22± lbs/gal Typical Percent Nitrogen: Unknown

Heat Capacity: 19,321 BTU/lb 139,500 (typical) BTU/gal

Other Fuel Contaminants (which may cause air pollution): Not Applicable

F. If applicable, indicate the percent of fuel used for space heating. Not Applicable

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

Waste oil spillings, drippings, etc., and diesel fuel diverted to 500 gallon underground storage tank for resale to oil reclaimer.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 17.0 ft. Stack Diameter: 1.83 ft.

Gas Flow Rate: 22,100 ACFM _____ DSCFM Gas Exit Temperature: 650 °F.

Water Vapor Content: ambient % Velocity: 140 FPS

SECTION IV: INCINERATOR INFORMATION Not Applicable

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [X] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [X] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
Nitrogen Oxides (NOx)	600 ppm corrected to 15% O_2 as determined by EPA Method 20.

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration
Nitrogen Oxides (NOx)	600ppm corrected to 15% O_2 as determined by EPA Method 20.

10. Stack Parameters

a. Height: 17.0 ft.

b. Diameter: 1.83 ft.

c. Flow Rate: 22,100 ACFM

d. Temperature: 650 °F.

e. Velocity: 140 FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

Not Applicable

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^{2}* _____ Wind spd/dir

Period of Monitoring ____/____/____ to ____/____/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

Fig 1 PIOT PLAN

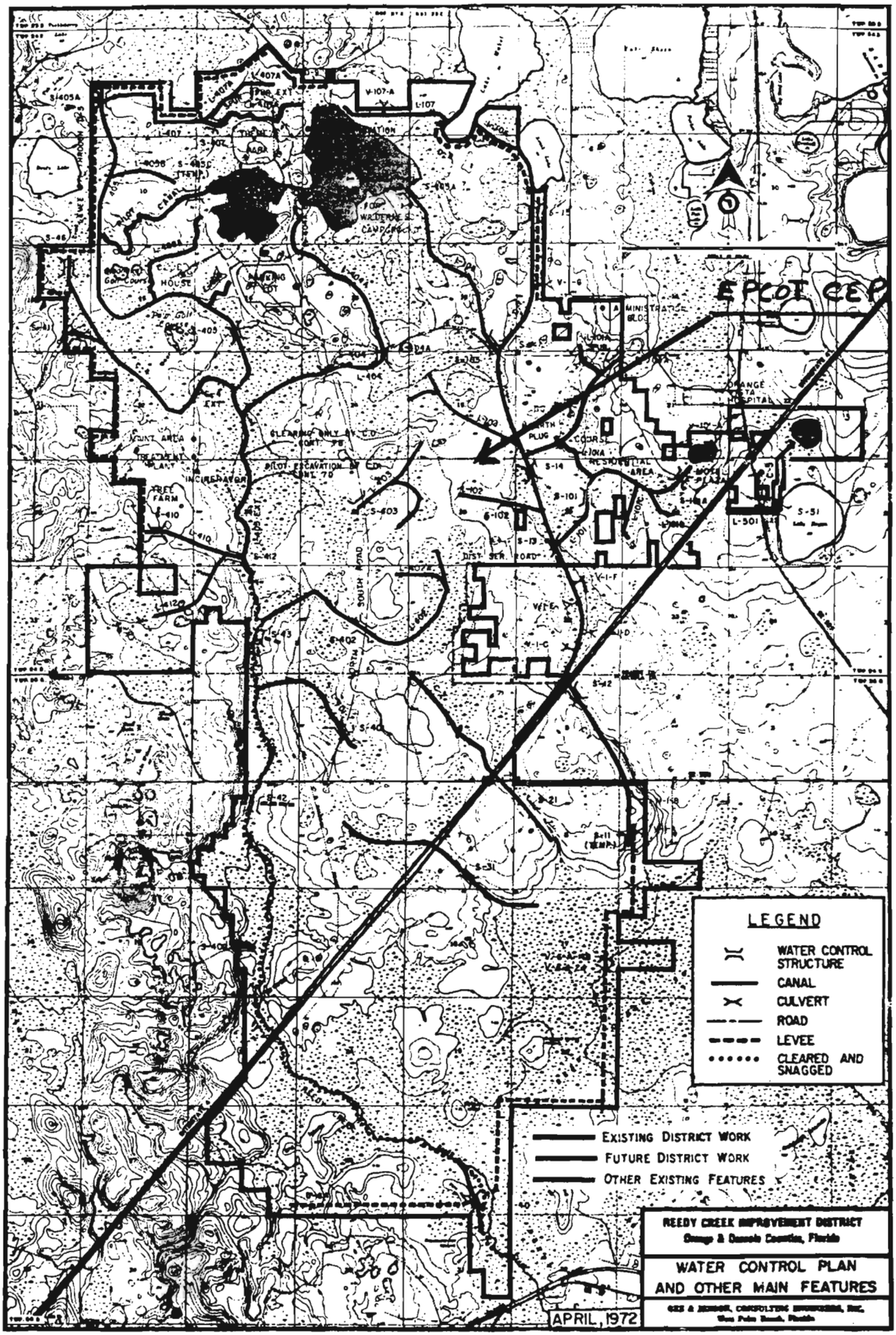


Fig 2 PLOT PLAN

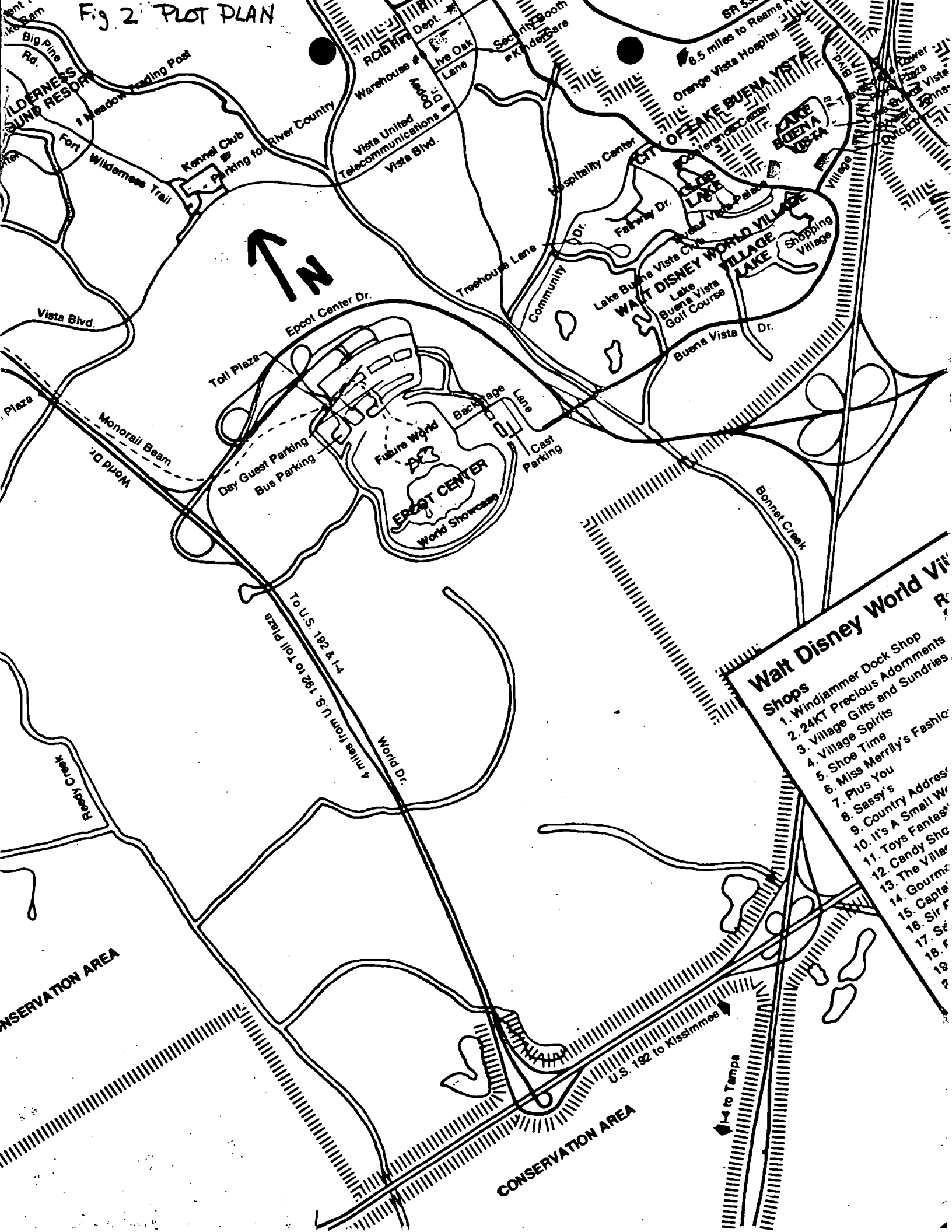


Fig 3. - Site Diagram

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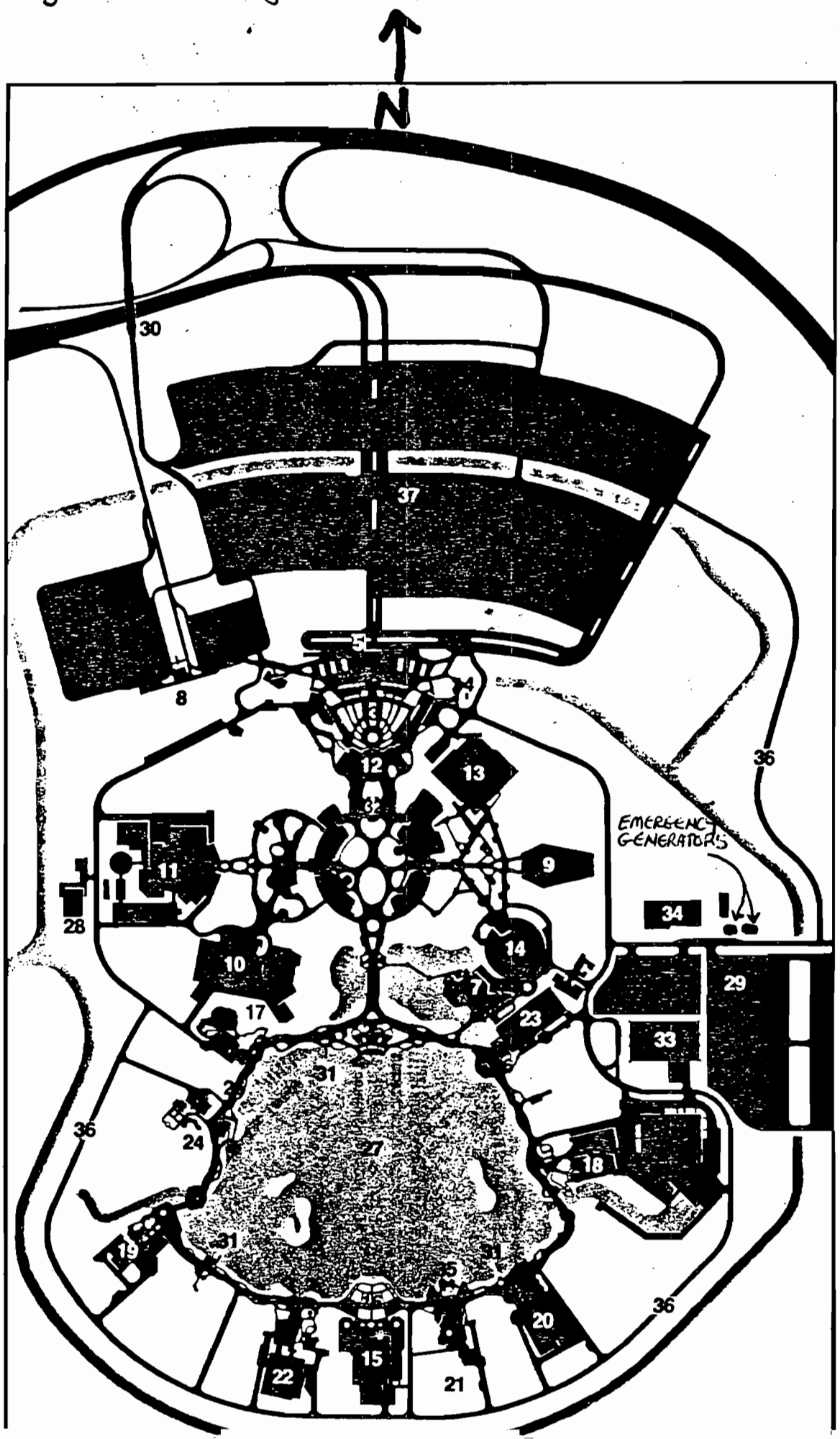
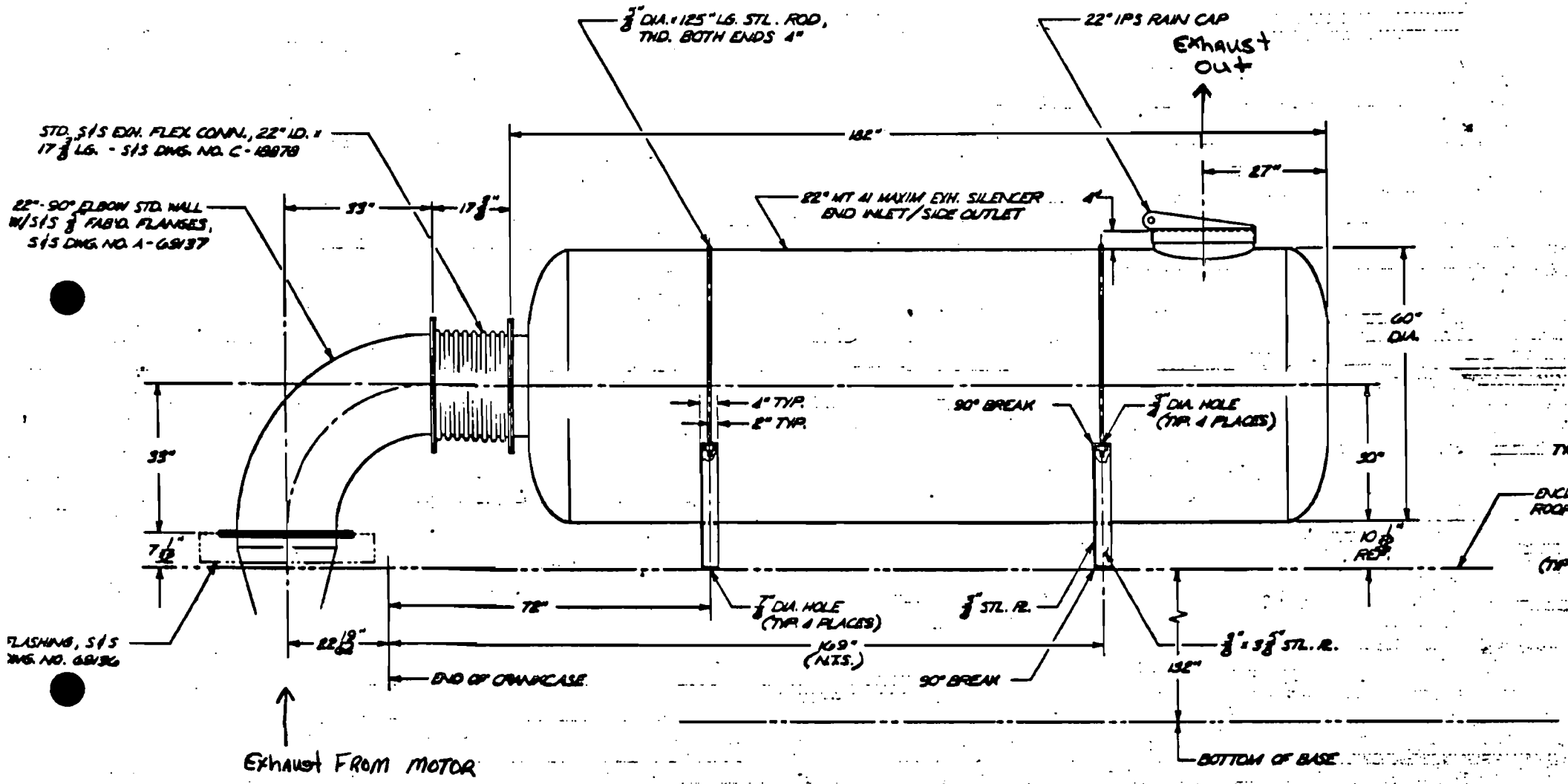


Walt Disney World

EPCOT CENTER

1. CommuniCore (East)
2. CommuniCore (West)
3. Entrance Plaza
4. Kennel Club
5. Monorail Station
6. Epcot Center Information & Tickets
7. Odyssey
8. Bus Transportation
9. Horizons
10. Journey Into Imagination
11. The Land
12. Spaceship Earth
13. Universe of Energy
14. World of Motion
15. The American Adventure
16. American Gardens/Theater by the Shore
17. Canada
18. China
19. France
20. Germany
21. Italy
22. Japan
23. Mexico
24. United Kingdom
25. Showcase Plaza
26. World Showcase Promenade
27. World Showcase Lagoon
28. Green House
29. Cast Parking
30. Epcot Center Parking Entrance
31. Friendship Landing
32. Earth Station
33. Epcot Cast Services
34. Epcot Energy Services
35. Isola dey Lago
36. Perimeter Road
37. Guest Parking

Fig 4 Exhaust Silencer Details



ENGINE EXHAUST SYSTEM

Attachment 1 SPECIFICATIONS

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#1

STEWART & STEVENSON

UNIT #1

INSTALLATION CHECK LIST

A. CUSTOMER REEDY CREEK UTILITIES CO.,INC.

ULTIMATE CUSTOMER WALT DISNEY WORLD

LOCATION WALT DISNEY WORLD/EPCOT CENTER

LAKE BUENA VISTA, FLORIDA 32830

STEWART & STEVENSON ORDER NO. 86378

BRANCH WORK ORDER NO. C 42043

ENGINE SERIAL NO. 80-L1-1087 ENGINE MODEL NO. S20-645E4B

GENERATOR SERIAL NO. 504 815 R2 GENERATOR MODEL NO. TBGZHJ

ISC WORK ORDER NO. SO # 102981

TURBO CHARGER SERIAL NO. 80-L1-1194

TURBO CHARGER MODEL NO. 9500420

INSTALLATION COMPLETED

DATE 6-15-85 BY John Latham [signature]
Customer Representative

S&S TECHNICAL REPRESENTATIVE R. A. Harris, F. J. Lindsey
Randall Ashurst LEE

Attachment 2 SPECIFICATIONS

#2

UNIT #2

INSTALLATION CHECK LIST

A. CUSTOMER REEDY CREEK UTILITIES CO., INC.

ULTIMATE CUSTOMER WALT DISNEY WORLD CO.

LOCATION WALT DISNEY WORLD/EPCOT CENTER

LAKE BUENA VISTA, FLORIDA 32830

STEWART & STEVENSON ORDER NO. 86378

BRANCH WORK ORDER NO. C 42043

ENGINE SERIAL NO. 80-L1-1133 ENGINE MODEL NO. S20-645-E4B

GENERATOR SERIAL NO. 504815R1 GENERATOR MODEL NO. TBGZHJ

ISC WORK ORDER NO. SO # 102981

TURBO CHARGER SERIAL NO. 80-L1-1205

TURBO CHARGER MODEL NO. 9500420

INSTALLATION COMPLETED

DATE 6-15-83 BY John Lothian
Customer Representative

S&S TECHNICAL REPRESENTATIVE [illegible]

Randall A. LEE

Attachment 3 SPECIFICATIONS

Additional information on Engine Model S-20-645-E4B and Generator Model TBGZHJ

Engine H.P.	3,600
Displacement	12,900 Cu. inch total 645 Cu. inch each cylinder 20 cylinder in each engine
Generator Capacity	2,500 KWH
Fuel flow at 100% load	approx. 180 gal/hr
Exhaust Outlet	17 ft. off the ground 22 inches in diameter approx. 650 F exhaust gas temp. 22,100 CFM exhaust gas flow

Breaker Control in MANUAL position;

Generator Breaker Synchronizing Switch in OFF positoin;

Voltage Control Switch in OFF position.

g. Cubicle 7 (Generator Unit No. 1 Feeder):

Breaker in tripped OPEN position;

Breaker Control in MANUAL position;

Feeder Breaker Synchronizing switch in OFF position;

Voltage Control Switch in OFF position.

4-13. Starting Procedure.

a. Place Emergency Stop Switch in PULL TO START position.

b. ENGINE READY TO START Switch illuminates.

c. Rotate Engine Switch right to the TURN TO START position and hold until engine starts.

d. HOURMETER operator.

e. Engine accelerates to rated speed, 9 hundreds RPM.

f. Lower speed if engine is to be operated with generator unloaded.

CAUTION

Avoid prolonged operation with generator underloaded. Operation at less than 50 percent load increases turbocharger gear train wear and increases maintenance requirements.

4-14. Normal Shutdown Procedure.

a. Press Engine Switch into PUSH TO STOP position. Engine runs at idle speed, 4.0 hundreds RPM for ___ minutes.

4-15. Emergency Shutdown Procedure.

a. Place Emergency Stop Switch in PUSH TO STOP position.

4-16. After Engine Start Inspection.

As soon as engine starts, it is recommended that the equipment be inspected as outlined. Such inspection, carefully made, will prevent unnecessary problems and loss of operating time.

a. As soon as engine starts, check immediately to see that lube oil and fuel oil pressure registers on the control cabinet gages.

b. Ensure external water cooling system is in operation.

c. No alarm indicator lights should be on.

d. Observe for fuel, water, air, or lube oil leakage.

e. Be aware of any unusual noises or sounds.

4-17. ENGINE PRINCIPLES OF OPERATION.

4-18. The diesel engine is an internal combustion power unit, in which the heat of fuel is converted into work in the cylinder of the engine.

4-19. In the diesel engine, air alone is compressed in the cylinder; then, after the air has been compressed, a charge of fuel is sprayed into the cylinder and ignition is accomplished by the residue heat of compression.

4-20. Turbocharged diesel engines of these generator units "V" type two-cycle engines incorporating the advantages of low weight per horsepower, position scavenging air system, solid unit injection, and high compression.

4-21. In the two-cycle engine, intake and exhaust take place during part of the compression and power strokes respectively. In contrast, a four-cycle engine requires four piston strokes to complete an operating cycle; thus, during one half of its operation the four-cycle engine functions merely as an air pump.

4-22. In a two-cycle engine each cylinder completes a power cycle in one revolution of the crankshaft. The piston does not function as an air pump during one crankshaft revolutin as in the case in a four-cycle engine which requires two revolutions of the crankshaft to complete one power stroke in each cylinder. A separate means is provided in a two-cycle engine to supply the needed air and to purge the combustion gases from the cylinder.

4-23. The engine is equipped with a turbocharger, shown schematically in Figure 4-0, to efficiently provide the air needed for combustion and scavenging. The turbocharger provides an air supply greater than that provided by the positive displacement blowers used on other model engines.

4-24. During engine operation the turbocharger utilizes heat energy in the exhaust from the engine as well as power from the camshaft gear train to drive the turbine. However, when exhaust heat energy is sufficient to drive the turbine alone, the gear drive is disengaged by an overrunning clutch. The turbine then drives a centrifugal blower which furnishes air to the engine.

4-25. The air from the centrifugal blower is raised to a higher pressure and likewise to a higher temperature. It is desirable to reduce the air temperature to increase its density before it enters the air box surrounding the cylinders. The air temperature is reduced by passing the output air from the centrifugal blower pass through the aftercoolers as shown in Figure 4-0. Thus, cooled air having greater comparable weight and having more oxygen is available to the engine.

4-26. Referring to Figure 4-0, and assuming that the piston is at the bottom of its stroke and just starting up, the air intake ports and the exhaust valves will be open. Air under pressure enters the cylinder through the liner ports. The air then pushes the exhaust gases, remaining from the previous power stroke, out through the exhaust valves and fills the cylinder with a fresh supply of air. When the piston is 45° after reaching bottom dead center, the air intake ports will be closed by the piston as indicated on the timing diagram. Shortly after the air intake ports are closed, the exhaust valves will also be closed, and the fresh air will be trapped in the cylinder. Closing the exhaust valves after the intake air ports close provides for the greatest efficiency in cylinder scavenging of combustion gases.

4-27. As the piston continues upward, it compresses the trapped air into a very small volume. Just before the piston reaches top dead center, the fuel injector sprays fuel into the cylinder. Ignition of the fuel is practically instantaneous, due to the temperature of the compressed air trapped in the top of the cylinder. The fuel burns rapidly as the piston is forced down on the power stroke of the piston. As shown in the timing diagram, the piston continues downward in the power stroke until the exhaust valves open.

4-28. The exhaust valves are opened ahead of the air intake ports to permit most of the combustion gases to escape and reduce the pressure in the cylinder. When the air intake ports are uncovered by the piston at 45° B.B.D.C. as it continues downward, air from the air box under pressure can immediately enter the cylinder. scavenging the remaining combustion gases from the cylinder and providing fresh air for combustion. The piston is again at the original starting point of the description, and the cycle of events is repeated.

4-29. This entire combustion cycle is completed in each cylinder for each revolution of the crankshaft, or, in other words, in two strokes; hence, it is a "two-stroke cycle".

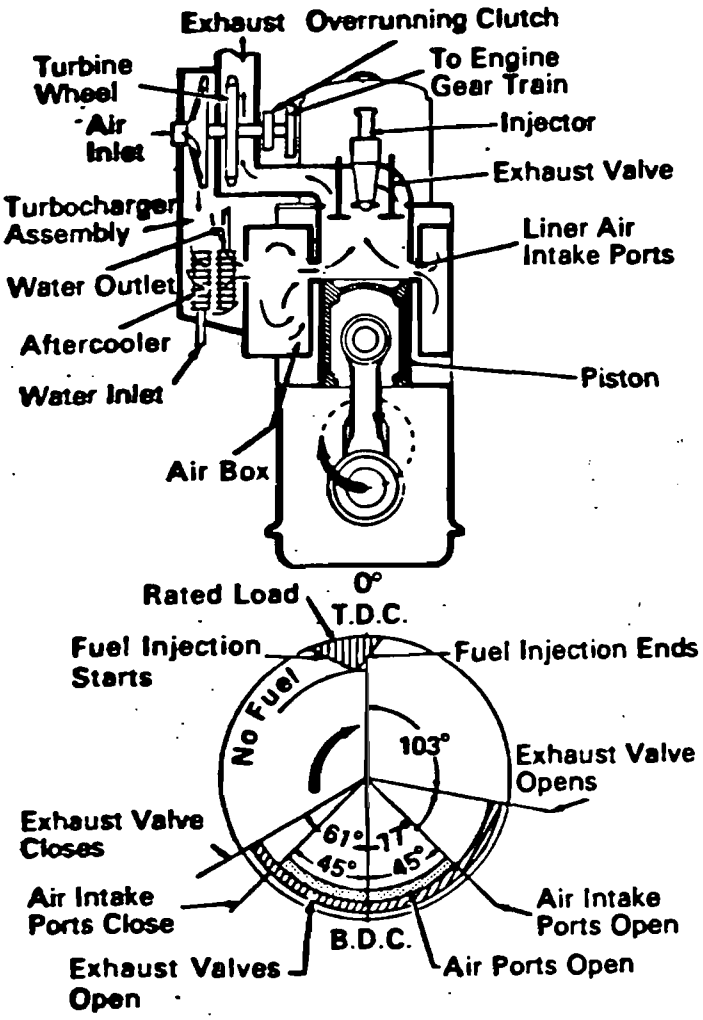


Figure 4-0. - Schematic Illustration of Engine Operation

4-30. AIR INTAKE AND EXHAUST SYSTEM.

4-31. General. In a two cycle engine each cylinder completes a power cycle in one revolution of the crankshaft. The piston does not function as an air pump during one crankshaft revolution, as is the case in a four cycle engine which requires two revolutions of the crankshaft to complete one power stroke in each cylinder. A separate means is provided in a two cycle engine to supply the needed air and to purge the combustion gases from the cylinder.
To efficiently provide the air needed for combustion and scavenging, the E4B type engine is equipped with a turbocharger.

4-32. Incoming air is drawn through a filter, Figure 4-1. The filtered air enters the turbocharger compressor and is raised to a higher temperature. It is desirable to reduce the air temperature to increase its density before it enters the air box surrounding the cylinders. The air temperature is reduced by passing it through the aftercoolers. Thus cooled air of greater density and more oxygen is available to the engine.

4-33. Turbocharger action pressurizes air entering the air box. The incoming air pushes the exhaust gases left from the previous power stroke out through the exhaust valves.

4-34. As the piston moves upward, it compresses the trapped air into a very small volume. Just before the piston reaches top dead center, fuel is sprayed into the cylinder. The fuel ignites instantaneously and is burned rapidly, forcing the piston down.

4-35. After completion of the power stroke, the piston continues downward, and pressurized air from the air box enters the cylinder and pushes the exhaust gases left from the previous power stroke through the exhaust valves, and the piston is again at original starting point. The exhaust gases from the cylinder flow through exhaust elbows into the exhaust manifold. The exhaust gases pass through the manifold to the rear of the turbocharger.

4-36. The turbocharger utilizes heat energy in the exhaust from the engine as well as power from the camshaft gear train to drive its centrifugal blower. However, when exhaust heat energy is sufficient to drive the turbine alone, the gear drive is disengaged by an overrunning clutch. The turbine then drives the centrifugal blower which furnishes air to the engine.

Attachment 5 - typical fuel analysis

BEST AVAILABLE COPY

SGS Control Services Inc.

Redwood Petroleum and Petrochemical division

825 Wynkoop Road
PO Box 5351
Tampa, Florida 33675
Tel (813) 247-3984
TWX (810) 876-2927

March 8, 1983

TO WHOM IT MAY CONCERN

Emergency Generators

FILE

to accompany Certificate No

Analysis Certificate

Vessel: Shore Tank No. 1
Receiver: Belcher Oil Company, Port Canaveral, Florida
Cargo: No. 2 Fuel Oil File No. 57292

Sample Marked: Shore Tank No. 1 (Top and Bottom Composite) Monthly Sample
Lab Reference No.: LP-326-83
Sample Description: No. 2 Fuel Oil
Submitted By: SGS Control Services Inc.

In accordance with your instructions, per Mr. Jim Wood, we proceeded to Belcher Oil Company, Port Canaveral, Florida on March 3, 1983 for the purpose of drawing a top and bottom sample from Shore Tank No. 1. A portion of this sample was submitted to our Tampa laboratory for analytical findings. We now report to you as follows:

TEST	METHOD		RESULT	
GRAVITY, A.P.I. @ 60°F	ASTM D-287		31.5	
FLASH, °F (PMCC)	ASTM D-93		176	150 min
SEDIMENT & WATER, VOL. %	ASTM D-96		Trace	
S.U.S. VISCOSITY, @ 100°F	ASTM D-445		39.7	32-45
POUR POINT, °F	ASTM D-97		Below 0°	10° over
SULFUR, WT. %	ASTM D-1552		0.29	.50 max
RAMSBOTTOM CARBON RES., WT. %	ASTM D-524	(10% Bottom)	0.01	
CETANE INDEX	ASTM D-976		41.5	40 min
DISTILLATION, °F	ASTM D-86	I.B.P.	304	
		5%	386	
		10%	413	
		50%	512	
		90%	610	
		95%	634	
		END PT.	646	650 max
		% REC.	98%	99 % min
TRACE METALS	A.A.	CALCIUM, ppm	0.1	
		LEAD, ppm	0.1	
		POTASSIUM, ppm	None Detected	
		SODIUM, ppm	0.2	
		VANADIUM, ppm	0.3	

SGS CONTROL SERVICES INC.

R.S. Sohngen
Operations Manager

RSS/11

Attachment 6 Calculation of Emissions

AP-42 EMISSION FACTORS FOR STATIONARY LARGE BORE DIESEL ENGINES

Pollutant	lbs Pollutant/1000 gal #2 Fuel Oild
Nitrogen Oxides	500
Carbon Monoxide	13
VOC	14
Sulfur Dioxide	150

Hourly Emissions at 100% Load
Fuel Flow at 100% Load = 180 gal/hr

Pollutant	lbs/hr emitted at 100% Load
Nitrogen Oxides	90
Carbon Monoxide	2.3
VOC	2.5
Sulfur Dioxide	27

Maximum Hourly Emissions
Maximum Fuel Flow = 200 gal/hr

Pollutant	lbs/hr emitted at maximum full flow
Nitrogen Oxides	100
Carbon Monoxide	2.6
VOC	2.8
Sulfur Dioxide	30

Total Yearly Emissions:
Based on total yearly operating hours of 1484.5
(See Attachment 7)

Pollutant	Tons/yr at 100% Load
Nitrogen Oxides	66.8
Carbon Monoxide	1.74
VOC	1.87
Sulfur Dioxide	20.0

Attachment #7

The schedule of operations for this generator is divided into three parts, Routine Demand Reduction, Maintenance and Warm-Up, and Emergency Back-Up and Bad Weather Ride Through. Each of these parts and the rationale for the estimate are discussed below:

(A) Routine Demand Reduction - Routine generation for the purpose of reducing demand for outside power supplies during periods of peak pwer demand. Based on data for last years power demand rates, it was determined that this type of demand reduction is worthwhile only during the 35 week period from May - December in a given year. Power demand profiles are such that demand reduction is unprofitable during the 17 week period between January and April.

Demand reduction, average based on historical power consumption data will require approximately 5.5 hours per day 7 days per week for the 35 week period between May and December
5.5hr/day X 7day/wk X 35 weeks + 1347.5 hours

(B) Maintenance and Warm-Up - standby warm-up during the 17 week period between January and April when no demand reduction is occurring.
This scheduled maintenance amounts to 1hr/week for the 17 week period.
1hr/week X 17 weeks + 17 hours

(C) Emergency Back-up and Bad Weather Ride Through - generation to provide critical life support type needs at the EPCOT Center Project when there is a potential to lose outside power sources due to bad weather or other emergency conditions.
This contribution is estimated to be approximately 5hr/week for the typical thunder storm season in the 17 week period from June - September and 1 hour per week during the 35 week period between October - May when severe weather is less common.
5hr/week X 17 weeks = 85 hours
1hr/week X 35 weeks = 35 hours Total Contribution = 120 hours

Summing the three components yields the total yearly operating hours estimated for the generator:

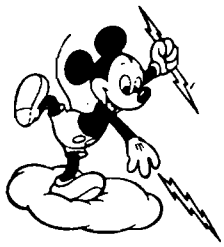
DEMAND REDUCTION	1347.5 hours
MAINTENANCE & WARM-UP	17.0 hours
EMERGENCY BACK-UP	120.0 hours
	1484.5 total yearly operating hours

DER PERMIT APPLICATION TRACKING SYSTEM MASTER RECORD

FILE#00000007336 9 COE# DER PROCESSOR:C M COLLINS DER OFFICE:ORL
FILE NAME:REEDY CREEK UTILITIES INCDATE FIRST REC: 07/29/83 APPLICATION TYPE:AC
APPL NAME:EPCOT CNTR/GENERATOR #1 APPL PHONE:(305)824-4026 PROJECT COUNTY:48
ADDR:P. O. BOX 40 CITY:LAKE BUENA VISTA ST:FLZIP:32830
AGNT NAME: AGNT PHONE:( ) -
ADDR: CITY: ST: ZIP:

ADDITIONAL INFO REQ: / / / / / / REC: / / / / / /
APPL COMPLETE DATE: / / COMMENTS NEC:Y DATE REQ: / / DATE REC: / /
LETTER OF INTENT NEC:Y DATE WHEN INTENT ISSUED: / / WAIVER DATE: / /

HEARING REQUEST DATES: / / / / / /
HEARING WITHDRAWN/DENIED/ORDER -- DATES: / / / / / /
HEARING ORDER OR FINAL ACTION DUE DATE: / / MANUAL TRACKING DESIRED:N
THIS RECORD HAS BEEN SUCESSFULLY ADDED 08/02/83 10:08:18
FEE PD DATE#1: / / $ RECEIPT# REFUND DATE: / / REFUND $
FEE PD DATE#2: / / $ RECEIPT# REFUND DATE: / / REFUND $
APPL:ACTIVE/INACTIVE/DENIED/WITHDRAWN/TRANSFERRED/EXEMPT/ISSUED:AC DATE:07/29/83
REMARKS:



REEDY CREEK UTILITIES CO., INC.

P.O. BOX 40 • LAKE BUENA VISTA, FLORIDA 32830
(305) 824-4024

July 27, 1983

TO WHOM IT MAY CONCERN:

This is to certify that H. Robert Kohl, Director of Operations, Reedy Creek Utilities Co., Inc., is authorized to sign all necessary paperwork in connection with an Air Pollution Source on behalf of the company for a large bore diesel power generator located at 751 Backstage Lane, Lake Buena Vista, Florida 32830.

If you have any questions in this matter, please do not hesitate to contact me at 828-1737.

Sincerely,

Robert H. Penn

Robert H. Penn
Assistant Secretary

RHP:jrs

AC 48 - 73369

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER DISTRICT
3319 MAGUIRE BOULEVARD
SUITE 232
ORLANDO, FLORIDA 32803

DER
AUG 10 1983
BAQM

RECEIVED
JUL 1983
Saint Johns River District

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Large Bore Diesel Powered Generator [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: Reedy Creek Utilities Co., Inc. COUNTY: Orange

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) EPCOT Center Emergency Generator #1

SOURCE LOCATION: Street 751 Back Stage Lane City Lake Buena Vista

UTM: East 446170 North 3138609

Latitude 28 ° 22 ' 30 "N Longitude 81 ° 32 ' 30 "W

APPLICANT NAME AND TITLE: Reedy Creek Utilities Co., Inc.

APPLICANT ADDRESS: Post Office Box 40, Lake Buena Vista, Florida 32830

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Reedy Creek Utilities Co.

I certify that the statements made in this application for a Construction (installation) permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: H. Robert Kohl

H. Robert Kohl, Director
Name and Title (Please Type)

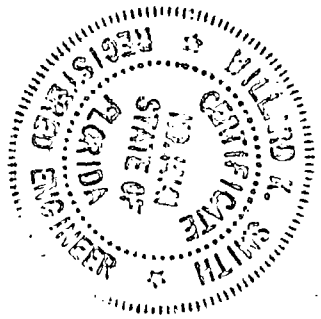
Date: 7/26/83 Telephone No. (305) 824-4026

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.



Signed Willard Smith

Willard Smith
Name (Please Type)

Reedy Creek Utilities Co., Inc.
Company Name (Please Type)

P.O. Box 40, Lake Buena Vista, Fl. 32830
Mailing Address (Please Type)

Florida Registration No. 14141 Date: 7/26/83 Telephone No. (305) 824-4950

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Installation of a Stewart and Stevenson large bore diesel powered emergency generator of 2.5 MWH output to provide emergency standby power and peak demand reduction to the EPCOT Center Project.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction on permit issuance Completion of Construction 30 days thereafter

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Not Applicable

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

NONE

E. Requested permitted equipment operating time: hrs/day ; days/wk ; wks/yr ; if power plant, hrs/yr ; if seasonal, describe: Emergency generators to be routinely run for peak demand reduction, emergency and bad weather standby, and maintenance and preparedness tests for a total of - see attachment #7.

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? yes

   a. If yes, has "offset" been applied? no

   b. If yes, has "Lowest Achievable Emission Rate" been applied? no

   c. If yes, list non-attainment pollutants. Ozone (VOC)

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. yes

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. no

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? no

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? no

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? no

   a. If yes, for what pollutants?

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
	---	--		

*Average based on 40-hour week.

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): Not Applicable

2. Product Weight (lbs/hr): Not Applicable

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Nitrogen Oxides	100	66.8			133,605	66.8	
Carbon Monoxide	2.6	1.74			3,474	1.74	
VOC	2.8	1.87			3,741	1.87	
Sulfur Dioxide	30	20.0			40,082	20.0	

*See description of operation schedule in attachment 7

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4) None

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
No. 2 fuel oil	180	200	27.9

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: 0.29 Percent Ash: trace

Density: 7.22± lbs/gal Typical Percent Nitrogen: unknown

Heat Capacity: 19,321 BTU/lb 139,500 (typical) BTU/gal

Other Fuel Contaminants (which may cause air pollution): Not Applicable

F. If applicable, indicate the percent of fuel used for space heating. Not Applicable

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

Waste oil spillings, drippings, etc., and diesel fuel diverted to 500 gallon underground storage tank for resale to oil reclaimer.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 17.0 ft. Stack Diameter: 1.83 ft.

Gas Flow Rate: 22,100 ACFM _____ DSCFM Gas Exit Temperature: 650 °F.

Water Vapor Content: ambient % Velocity: 140 FPS

SECTION IV: INCINERATOR INFORMATION Not Applicable

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [X] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [X] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
Nitrogen Oxides (NOx)	600 ppm corrected to 15% O_2 as determined by
	EPA Method 20.

D. Describe the existing control and treatment technology (if any). None

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration
Nitrogen Oxides (NOx)	600 ppm corrected to 15% O_2 as determined by EPA Method 20.

10. Stack Parameters

a. Height: 17.0 ft.

b. Diameter: 1.83 ft.

c. Flow Rate: 22,100 ACFM

d. Temperature: 650 °F.

e. Velocity: 140 FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

Not Applicable

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ ( ) SO^{2}* _____ Wind spd/dir

Period of Monitoring ___/___/___ to ___/___/___
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

Fig 1 PIOT PLAN

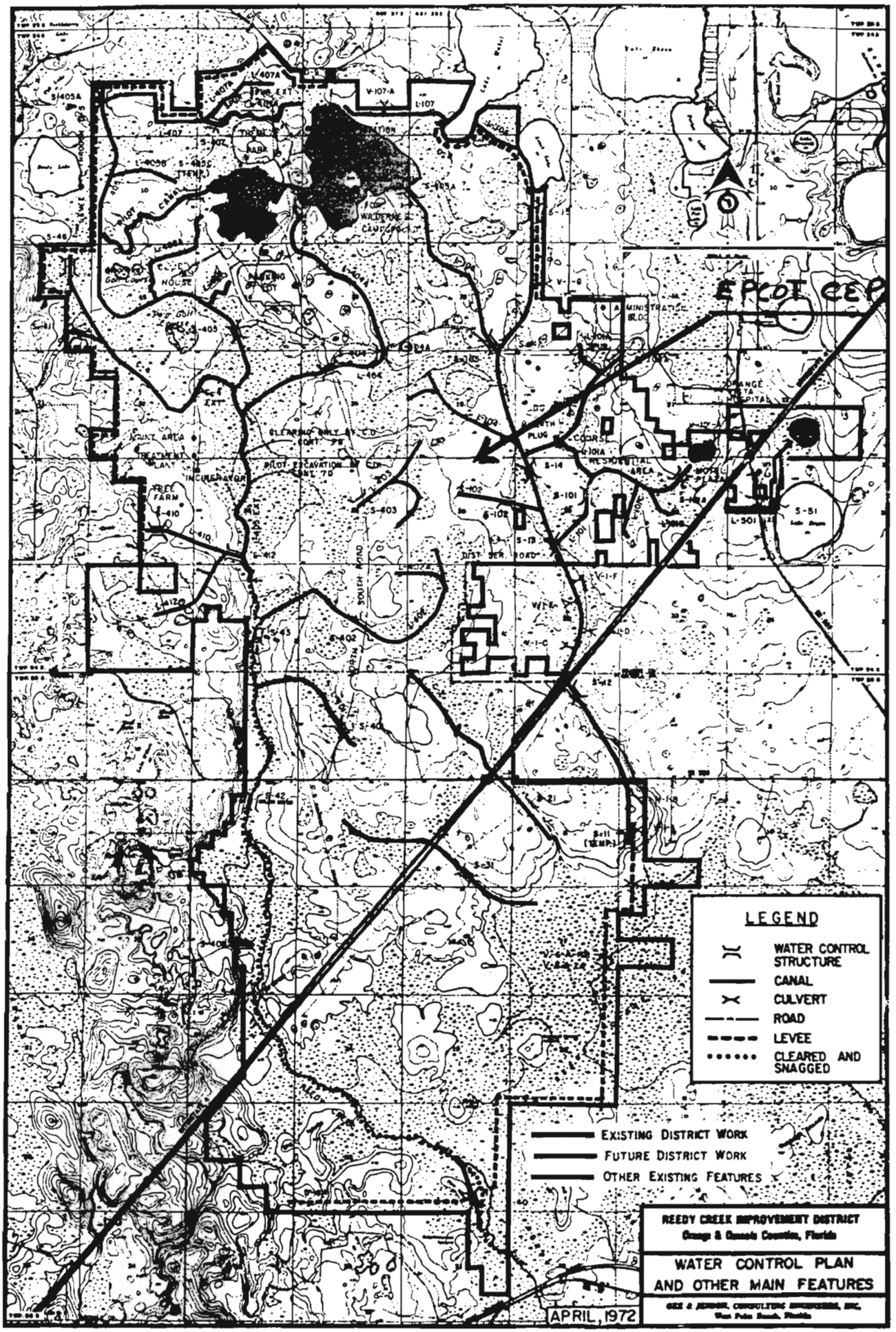


Fig 2 PLOT PLAN

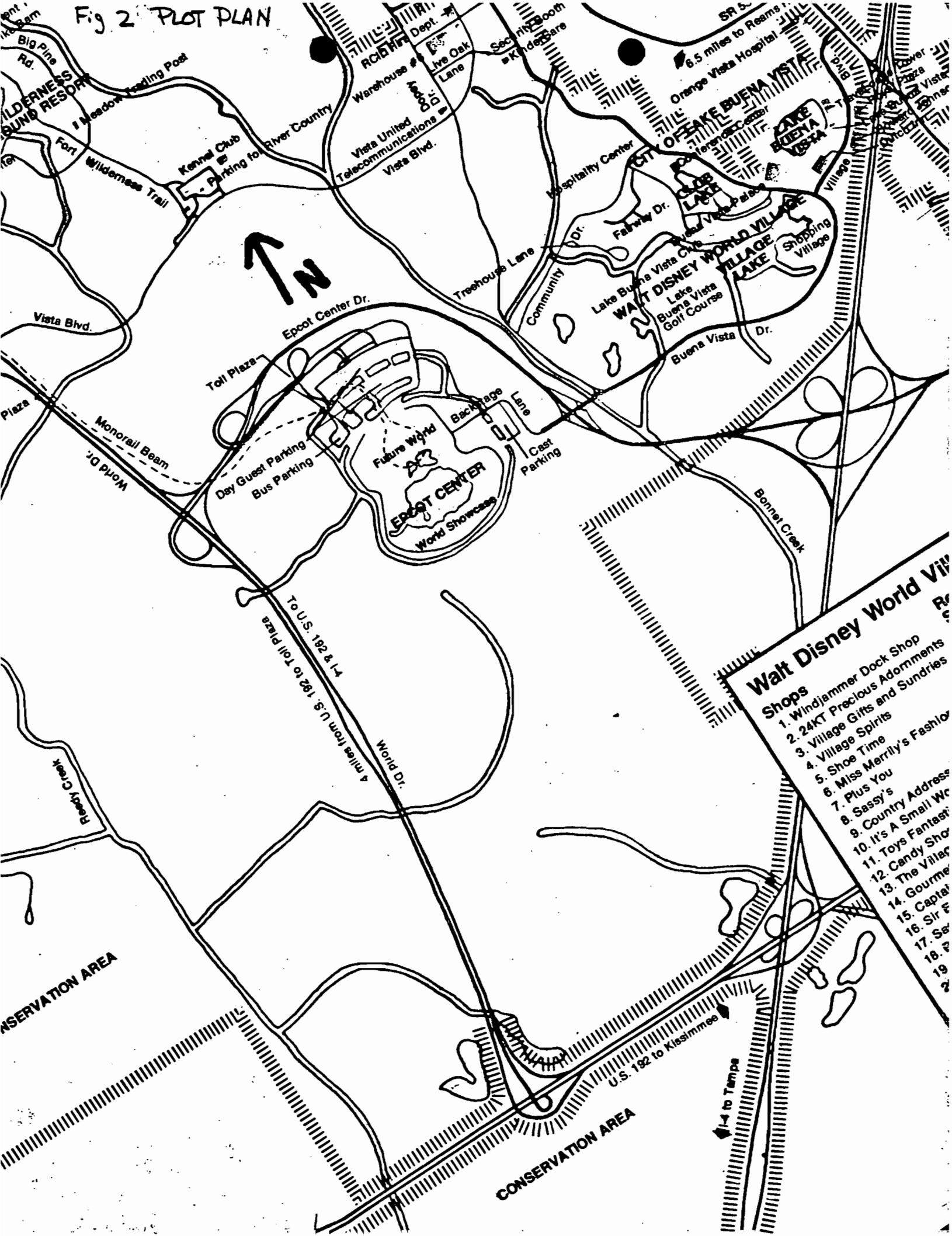
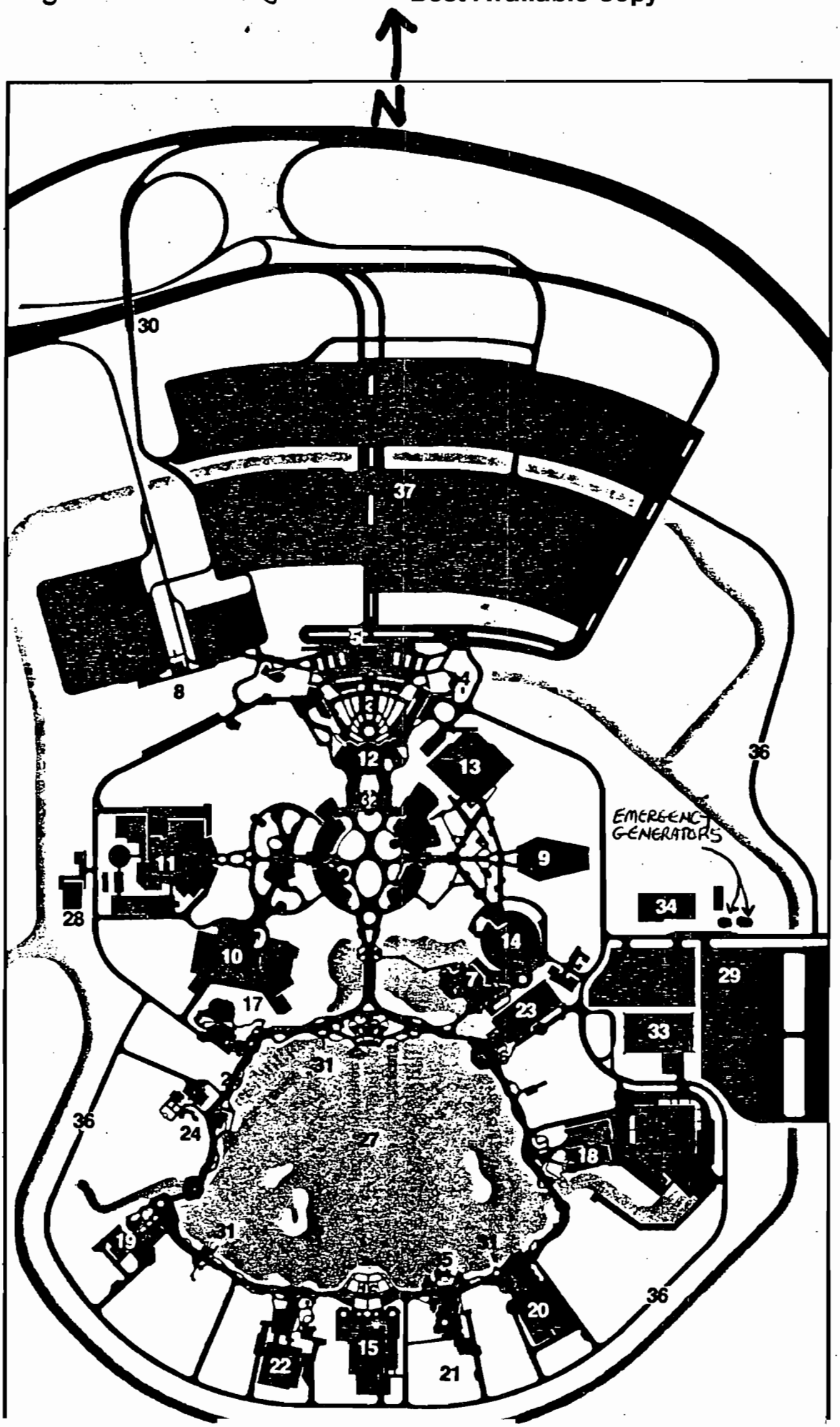


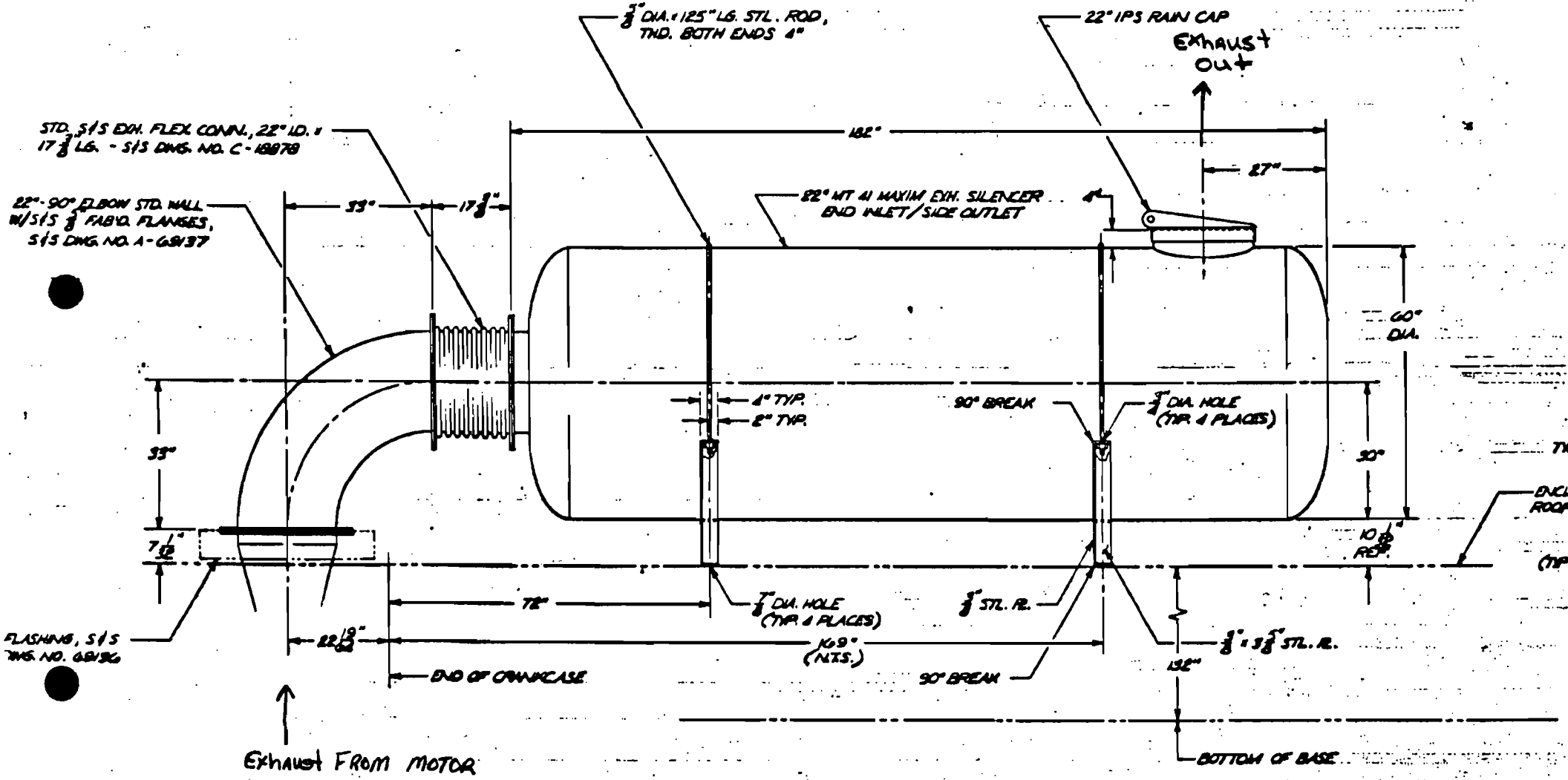
Fig 3. - Site Diagram



Walt Disney World
EPCOT CENTER

1. CommuniCore (East)
2. CommuniCore (West)
3. Entrance Plaza
4. Kennel Club
5. Monorail Station
6. Epcot Center Information & Tickets
7. Odyssey
8. Bus Transportation
9. Horizons
10. Journey Into Imagination
11. The Land
12. Spaceship Earth
13. Universe of Energy
14. World of Motion
15. The American Adventure
16. American Gardens/Theater by the Shore
17. Canada
18. China
19. France
20. Germany
21. Italy
22. Japan
23. Mexico
24. United Kingdom
25. Showcase Plaza
26. World Showcase Promenade
27. World Showcase Lagoon
28. Green House
29. Cast Parking
30. Epcot Center Parking Entrance
31. Friendship Landing
32. Earth Station
33. Epcot Cast Services
34. Epcot Energy Services
35. Isola dey Lago
36. Perimeter Road
37. Guest Parking

Fig 4 Exhaust Silencer Details



ENGINE EXHAUST SYSTEM

Attachment 1 SPECIFICATIONS

Best Available Copy

#1

STEWART & STEVENSON

UNIT #1

INSTALLATION CHECK LIST

A. CUSTOMER REEDY CREEK UTILITIES CO.,INC.

ULTIMATE CUSTOMER WALT DISNEY WORLD

LOCATION WALT DISNEY WORLD/EPCOT CENTER

LAKE BUENA VISTA, FLORIDA 32830

STEWART & STEVENSON ORDER NO. 86378

BRANCH WORK ORDER NO. C 42043

ENGINE SERIAL NO. 80-L1-1087 ENGINE MODEL NO. S20-645E4B

GENERATOR SERIAL NO. 504 815 R2 GENERATOR MODEL NO. TBGZHJ

ISC WORK ORDER NO. SO # 102981

TURBO CHARGER SERIAL NO. 80-L1-1194

TURBO CHARGER MODEL NO. 9500420

INSTALLATION COMPLETED

DATE 6-15-85 BY John Latham
Customer Representative

S&S TECHNICAL REPRESENTATIVE R. A. Hamit, D. J. Lumney

Randall ... LEE

Attachment 2 SPECIFICATIONS

Best Available Copy

#2

UNIT #2

INSTALLATION CHECK LIST

A. CUSTOMER REEDY CREEK UTILITIES CO., INC.

ULTIMATE CUSTOMER WALT DISNEY WORLD CO.

LOCATION WALT DISNEY WORLD/EPCOT CENTER

LAKE BUENA VISTA, FLORIDA 32830

STEWART & STEVENSON ORDER NO. 86378

BRANCH WORK ORDER NO. C 42043

ENGINE SERIAL NO. 80-L1-1133 ENGINE MODEL NO. S20-645-E4B

GENERATOR SERIAL NO. 504815R1 GENERATOR MODEL NO. TBGZHJ

ISC WORK ORDER NO. SO # 102981

TURBO CHARGER SERIAL NO. 80-L1-1205

TURBO CHARGER MODEL NO. 9500420

INSTALLATION COMPLETED

DATE 6-15-83 BY John Lathan
Customer Representative

S&S TECHNICAL REPRESENTATIVE [illegible]

Randall A LEE

Attachment 3 SPECIFICATIONS

Additional information on Engine Model S-20-645-E4B and Generator Model TBGZHJ

Engine H.P.	3,600
Displacement	12,900 Cu. inch total 645 Cu. inch each cylinder 20 cylinder in each engine
Generator Capacity	2,500 KWH
Fuel flow at 100% load	approx. 180 gal/hr
Exhaust Outlet	17 ft. off the ground 22 inches in diameter approx. 650 F exhaust gas temp. 22,100 CFM exhaust gas flow

Breaker Control in MANUAL position;

Generator Breaker Synchronizing Switch in OFF positoin;

Voltage Control Switch in OFF position.

g. Cubicle 7 (Generator Unit No. 1 Feeder):

Breaker in tripped OPEN position;

Breaker Control in MANUAL position;

Feeder Breaker Synchronizing switch in OFF position;

Voltage Control Switch in OFF position.

4-13. Starting Procedure.

a. Place Emergency Stop Switch in PULL TO START position.

b. ENGINE READY TO START Switch illuminates.

c. Rotate Engine Switch right to the TURN TO START position and hold until engine starts.

d. HOURMETER operator.

e. Engine accelerates to rated speed, 9 hundreds RPM.

f. Lower speed if engine is to be operated with generator unloaded.

CAUTION

Avoid prolonged operation with generator underloaded. Operation at less than 50 percent load increases turbocharger gear train wear and increases maintenance requirements.

4-14. Normal Shutdown Procedure.

a. Press Engine Switch into PUSH TO STOP position. Engine runs at idle speed, 4.0 hundreds RPM for ___ minutes.

4-15. Emergency Shutdown Procedure.

a. Place Emergency Stop Switch in PUSH TO STOP position.

4-16. After Engine Start Inspection.

As soon as engine starts, it is recommended that the equipment be inspected as outlined. Such inspection, carefully made, will prevent unnecessary problems and loss of operating time.

a. As soon as engine starts, check immediately to see that lube oil and fuel oil pressure registers on the control cabinet gages.

b. Ensure external water cooling system is in operation.

c. No alarm indicator lights should be on.

d. Observe for fuel, water, air, or lube oil leakage.

e. Be aware of any unusual noises or sounds.

4-17. ENGINE PRINCIPLES OF OPERATION.

4-18. The diesel engine is an internal combustion power unit, in which the heat of fuel is converted into work in the cylinder of the engine.

4-19. In the diesel engine, air alone is compressed in the cylinder; then, after the air has been compressed, a charge of fuel is sprayed into the cylinder and ignition is accomplished by the residue heat of compression.

4-20. Turbocharged diesel engines of these generator units "V" type two-cycle engines incorporating the advantages of low weight per horsepower, position scavenging air system, solid unit injection, and high compression.

4-21. In the two-cycle engine, intake and exhaust take place during part of the compression and power strokes respectively. In contrast, a four-cycle engine requires four piston strokes to complete an operating cycle; thus, during one half of its operation the four-cycle engine functions merely as an air pump.

4-22. In a two-cycle engine each cylinder completes a power cycle in one revolution of the crankshaft. The piston does not function as an air pump during one crankshaft revolutin as in the case in a four-cycle engine which requires two revolutions of the crankshaft to complete one power stroke in each cylinder. A separate means is provided in a two-cycle engine to supply the needed air and to purge the combustion gases from the cylinder.

4-23. The engine is equipped with a turbocharger, shown schematically in Figure 4-0, to efficiently provide the air needed for combustion and scavenging. The turbocharger provides an air supply greater than that provided by the positive displacement blowers used on other model engines.

4-24. During engine operation the turbocharger utilizes heat energy in the exhaust from the engine as well as power from the camshaft gear train to drive the turbine. However, when exhaust heat energy is sufficient to drive the turbine alone, the gear drive is disengaged by an overrunning clutch. The turbine then drives a centrifugal blower which furnishes air to the engine.

4-25. The air from the centrifugal blower is raised to a higher pressure and likewise to a higher temperature. It is desirable to reduce the air temperature to increase its density before it enters the air box surrounding the cylinders. The air temperature is reduced by passing the output air from the centrifugal blower pass through the aftercoolers as shown in Figure 4-0. Thus, cooled air having greater comparable weight and having more oxygen is available to the engine.

4-26. Referring to Figure 4-0, and assuming that the piston is at the bottom of its stroke and just starting up, the air intake ports and the exhaust valves will be open. Air under pressure enters the cylinder through the liner ports. The air then pushes the exhaust gases, remaining from the previous power stroke, out through the exhaust valves and fills the cylinder with a fresh supply of air. When the piston is 45° after reaching bottom dead center, the air intake ports will be closed by the piston as indicated on the timing diagram. Shortly after the air intake ports are closed, the exhaust valves will also be closed, and the fresh air will be trapped in the cylinder. Closing the exhaust valves after the intake air ports close provides for the greatest efficiency in cylinder scavenging of combustion gases.

4-27. As the piston continues upward, it compresses the trapped air into a very small volume. Just before the piston reaches top dead center, the fuel injector sprays fuel into the cylinder. Ignition of the fuel is practically instantaneous, due to the temperature of the compressed air trapped in the top of the cylinder. The fuel burns rapidly as the piston is forced down on the power stroke of the piston. As shown in the timing diagram, the piston continues downward in the power stroke until the exhaust valves open.

4-28. The exhaust valves are opened ahead of the air intake ports to permit most of the combustion gases to escape and reduce the pressure in the cylinder. When the air intake ports are uncovered by the piston at 45° B.B.D.C. as it continues downward, air from the air box under pressure can immediately enter the cylinder. scavenging the remaining combustion gases from the cylinder and providing fresh air for combustion. The piston is again at the original starting point of the description, and the cycle of events is repeated.

4-29. This entire combustion cycle is completed in each cylinder for each revolution of the crankshaft, or, in other words, in two strokes; hence, it is a "two-stroke cycle".

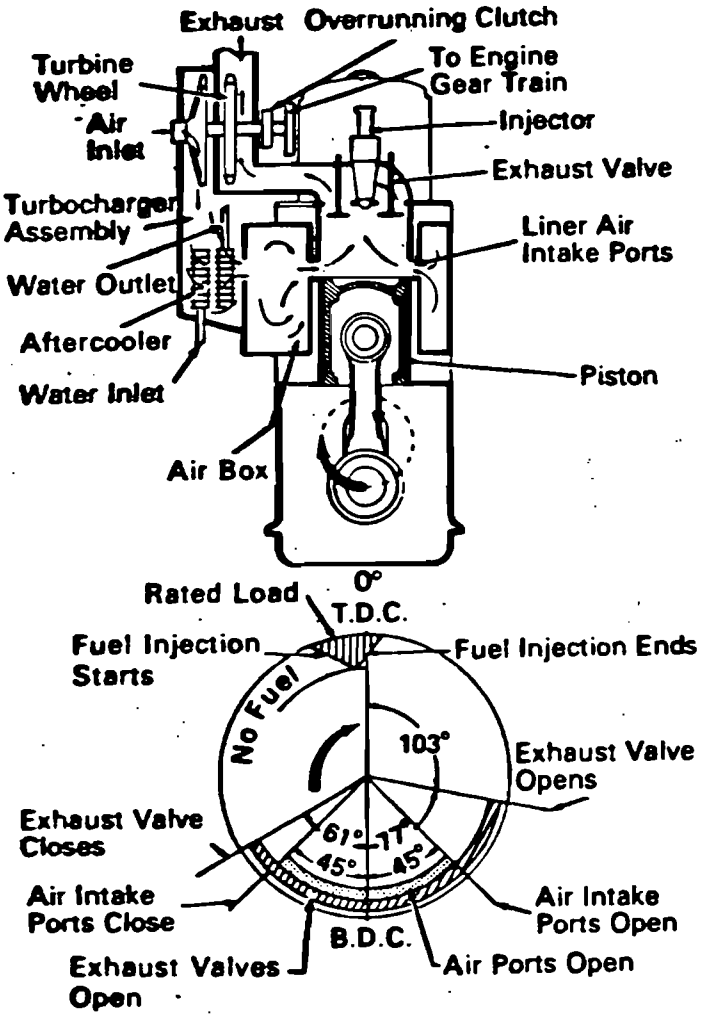


Figure 4-0. - Schematic Illustration of Engine Operation

4-30. AIR INTAKE AND EXHAUST SYSTEM.

4-31. General. In a two cycle engine each cylinder completes a power cycle in one revolution of the crankshaft. The piston does not function as an air pump during one crankshaft revolution, as is the case in a four cycle engine which requires two revolutions of the crankshaft to complete one power stroke in each cylinder. A separate means is provided in a two cycle engine to supply the needed air and to purge the combustion gases from the cylinder.
To efficiently provide the air needed for combustion and scavenging, the E4B type engine is equipped with a turbocharger.

4-32. Incoming air is drawn through a filter, Figure 4-1. The filtered air enters the turbocharger compressor and is raised to a higher temperature. It is desirable to reduce the air temperature to increase its density before it enters the air box surrounding the cylinders. The air temperature is reduced by passing it through the aftercoolers. Thus cooled air of greater density and more oxygen is available to the engine.

4-33. Turbocharger action pressurizes air entering the air box. The incoming air pushes the exhaust gases left from the previous power stroke out through the exhaust valves.

4-34. As the piston moves upward, it compresses the trapped air into a very small volume. Just before the piston reaches top dead center, fuel is sprayed into the cylinder. The fuel ignites instantaneously and is burned rapidly, forcing the piston down.

4-35. After completion of the power stroke, the piston continues downward, and pressurized air from the air box enters the cylinder and pushes the exhaust gases left from the previous power stroke through the exhaust valves, and the piston is again at original starting point. The exhaust gases from the cylinder flow through exhaust elbows into the exhaust manifold. The exhaust gases pass through the manifold to the rear of the turbocharger.

4-36. The turbocharger utilizes heat energy in the exhaust from the engine as well as power from the camshaft gear train to drive its centrifugal blower. However, when exhaust heat energy is sufficient to drive the turbine alone, the gear drive is disengaged by an overrunning clutch. The turbine then drives the centrifugal blower which furnishes air to the engine.

Attachment 5 - typical fuel analysis

SGS Control Services Inc.

Redwood Petroleum and Petrochemical division

825 Wynkoop Road
P O Box 5351
Tampa, Florida 33675
Tel (813) 247-3984
TWX (810) 876-2927

March 8, 1983

TO WHOM IT MAY CONCERN

Emergency Generators

FILE

to accompany Certificate No.

Analysis Certificate

Vessel: Shore Tank No. 1
Receiver: Belcher Oil Company, Port Canaveral, Florida
Cargo: No. 2 Fuel Oil File No. 57292

Sample Marked: Shore Tank No. 1 (Top and Bottom Composite) Monthly Sample
Lab Reference No.: LP-326-83
Sample Description: No. 2 Fuel Oil
Submitted By: SGS Control Services Inc.

In accordance with your instructions, per Mr. Jim Wood, we proceeded to Belcher Oil Company, Port Canaveral, Florida on March 3, 1983 for the purpose of drawing a top and bottom sample from Shore Tank No. 1. A portion of this sample was submitted to our Tampa laboratory for analytical findings. We now report to you as follows:

TEST	METHOD		RESULT	
GRAVITY, A.P.I. @ 60°F	ASTM D-287		31.5	
FLASH, °F (PMCC)	ASTM D-93		176	150 min
SEDIMENT & WATER, VOL. %	ASTM D-96		Trace	
S.U.S. VISCOSITY, @ 100°F	ASTM D-445		39.7	32-45
POUR POINT, °F	ASTM D-97		Below 0°	10° above
SULFUR, WT. %	ASTM D-1552		0.29	.50 MAX
RAMSBOTTOM CARBON RES., WT. %	ASTM D-524	(10% Bottom)	0.01	
CETANE INDEX	ASTM D-976		41.5	40 min
DISTILLATION, °F	ASTM D-86	I.B.P.	304	
		5%	386	
		10%	413	
		50%	512	
		90%	610	
		95%	634	
		END PT.	646	650 MAX
		% REC.	98%	99 % min
TRACE METALS	A.A.	CALCIUM, ppm	0.1	
		LEAD, ppm	0.1	
		POTASSIUM, ppm	None Detected	
		SODIUM, ppm	0.2	
		VANADIUM, ppm	0.3	

SGS CONTROL SERVICES INC.

R.S. Sohngen
Operations Manager

RSS/11

Attachment 6 Calculation of Emissions

AP-42 EMISSION FACTORS FOR STATIONARY LARGE BORE DIESEL ENGINES

Pollutant	lbs Pollutant/1000 gal #2 Fuel Oild
Nitrogen Oxides	500
Carbon Monoxide	13
VOC	14
Sulfur Dioxide	150

Hourly Emissions at 100% Load
Fuel Flow at 100% Load = 180 gal/hr

Pollutant	lbs/hr emitted at 100% Load
Nitrogen Oxides	90
Carbon Monoxide	2.3
VOC	2.5
Sulfur Dioxide	27

Maximum Hourly Emissions
Maximum Fuel Flow = 200 gal/hr

Pollutant	lbs/hr emitted at maximum full flow
Nitrogen Oxides	100
Carbon Monoxide	2.6
VOC	2.8
Sulfur Dioxide	30

Total Yearly Emissions:
Based on total yearly operating hours of 1484.5
(See Attachment 7)

Pollutant	Tons/yr at 100% Load
Nitrogen Oxides	66.8
Carbon Monoxide	1.74
VOC	1.87
Sulfur Dioxide	20.0

Attachment #7

The schedule of operations for this generator is divided into three parts, Routine Demand Reduction, Maintenance and Warm-Up, and Emergency Back-Up and Bad Weather Ride Through. Each of these parts and the rationale for the estimate are discussed below:

(A) Routine Demand Reduction - Routine generation for the purpose of reducing demand for outside power supplies during periods of peak pwer demand. Based on data for last years power demand rates, it was determined that this type of demand reduction is worthwhile only during the 35 week period from May - December in a given year. Power demand profiles are such that demand reduction is unprofitable during the 17 week period between January and April.

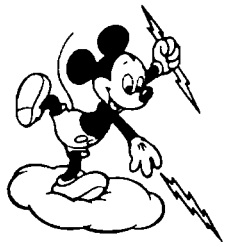
Demand reduction, average based on historical power consumption data will require approximately 5.5 hours per day 7 days per week for the 35 week period between May and December
5.5hr/day X 7day/wk X 35 weeks + 1347.5 hours

(B) Maintenance and Warm-Up - standby warm-up during the 17 week period between January and April when no demand reduction is occurring.
This scheduled maintenance amounts to 1hr/week for the 17 week period.
1hr/week X 17 weeks + 17 hours

(C) Emergency Back-up and Bad Weather Ride Through - generation to provide critical life support type needs at the EPCOT Center Project when there is a potential to lose outside power sources due to bad weather or other emergency conditions.
This contribution is estimated to be approximately 5hr/week for the typical thunder storm season in the 17 week period from June - September and 1 hour per week during the 35 week period between October - May when severe weather is less common.
5hr/week X 17 weeks = 85 hours
1hr/week X 35 weeks = 35 hours Total Contribution = 120 hours

Summing the three components yields the total yearly operating hours estimated for the generator:

DEMAND REDUCTION	1347.5 hours
MAINTENANCE & WARM-UP	17.0 hours
EMERGENCY BACK-UP	120.0 hours
	1484.5 total yearly operating hours



REEDY CREEK UTILITIES CO., INC.

P.O. BOX 40 • LAKE BUENA VISTA, FLORIDA 32830
(305) 824-4024

DER

AUG 10 1983

BAQM

July 27, 1983

TO WHOM IT MAY CONCERN:

This is to certify that H. Robert Kohl, Director of Operations, Reedy Creek Utilities Co., Inc., is authorized to sign all necessary paperwork in connection with an Air Pollution Source on behalf of the company for a large bore diesel power generator located at 751 Backstage Lane, Lake Buena Vista, Florida 32830.

If you have any questions in this matter, please do not hesitate to contact me at 828-1737.

Sincerely,

Robert H. Penn

Robert H. Penn
Assistant Secretary

RHP:jrs

Best Available Control Technology (BACT) Determination
Reedy Creek Utilities Co., Inc.
Orange County

Two 27.9 million Btu per hour heat input internal combustion engines are on a standy-by status to provide electrical power to the EPCOT Center Project. The engines are located in Lake Buena Vista and are used to provide emergency electrical power and peak demand reduction. The 3600 horsepower engines will fire No. 2 distillate oil having a sulfur content by weight, not to exceed 0.5 percent. Each engine will operate approximately 1900 hours per year.

This installation is a modification to a major facility. The resulting increase in emissions of the air pollutant NO_x is above the significant emission rate listed in Table 500-2, Regulated Air Pollutants-Significant Emission Rates. A BACT determination, therefore, is required for the air pollutant nitrogen oxides.

BACT Determination Requested by the Applicant:

Nitrogen oxide emissions will not exceed 600 ppm corrected to 15 percent oxygen.

Date of Receipt of a BACT application:

May 31, 1984.

Date of Publication in the Florida Administrative Weekly:

June 22, 1984

Review Determined by DER:

Pollutant	Emission Limit Per Engine
Nitrogen Oxides (NO_x)	600 parts per million volume, per million volume, corrected to 15 percent oxygen on a dry basis.
Visible Emissions	Not to exceed 5 percent opacity.

Compliance with the NO_x emission limit will be in accordance with 40 CFR 60, Appendix A; Method 20 as prescribed in subsection 60.324 of the proposed NSPS, Subpart FF, as printed on page 43172 of the Federal Register dated July 23, 1979.

DER Method 9 (17-2.700(6)(a)9, FAC) will be used to determine compliance with the opacity standard.

BACT Determination Rationale:

The applicant has proposed that the standard for nitrogen oxides be equal to the proposed NSPS, Subpart FF, that is, from any diesel or dual-fired engine with a brake-specific fuel consumption at peak load more than or equal to 10.2 kilojoules/watt-hour any gases which contain NO_x in excess of 600 ppmv, corrected to 15 percent oxygen on a dry basis. This level of control is judged to be BACT.

Catalytic reduction is currently not a demonstrated NO_x emission control technique for sources of this size. In this case fuel injection retard is the most effective NO_x control technique to meet the emission limit determined as BACT. The plumes from an engine of this type are not visible, therefore, visible emissions (plume opacity) is not considered a control technique.

Details of the Analysis May be Obtained by Contacting:

Edward Palagyi, BACT Coordinator
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Recommended By:

_____
C. H. Fancy, Deputy Bureau Chief

Date: _____

Approved:

_____
Victoria J. Tschinkel, Secretary

Date: _____

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices
And/Or To Other Than The Addressee

To: _____ Loctn.: _____
To: _____ Loctn.: _____
To: _____ Loctn.: _____
From: _____ Date: _____

Reply Optional [ ] Reply Required [ ] Info. Only [ ]
Date Due: _____ Date Due: _____

TO: Dan Thompson, OGC

THROUGHT: Clair Fancy
Bill Thomas

FROM: Bob King BK

DATE: October 4, 1984

SUBJECT: Construction of two Diesel Powered Generators without permits

On August 10, 1983, the Bureau of Air Quality Management recieved two applications to construct two large bore diesel powered generators (each unit has 27.9 million Btu heat input) from Reedy Creek Utilities Co., Inc. The construction site is EPCOT Center, Orange County, Florida.

After a preliminary review of the applications, I found the fact that the two diesel generators had already been installed at EPCOT Center by June 15, 1983. Copies of these installation check lists are attached for your reference.

Currently, the applications are still at incompleteness condition, because the applicant has not responded to our latest letter of incompleteness dated on June 19, 1984.

Please advise us on how we should handle this situation.

BK/agh
Enclosure

cc: Alex Alexander, SJRD
Steve Smallwood, Chief

No. 0156520

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Mr. H. Robert Kohl

STREET AND NO.

P.O., STATE AND ZIP CODE

POSTAGE		$
CONSULT POSTMASTER FOR FEES — CERTIFIED FEE		¢
OPTIONAL SERVICES — SPECIAL DELIVERY		¢
OPTIONAL SERVICES — RESTRICTED DELIVERY		¢
OPTIONAL SERVICES — RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
OPTIONAL SERVICES — RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
OPTIONAL SERVICES — RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
OPTIONAL SERVICES — RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		$

POSTMARK OR DATE

6/19/84

PS Form 3800, Apr. 1976

PS Form 3811, Jan. 1979

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Add your address in the "RETURN TO" space on reverse.

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   - ☑ Show to whom and date delivered..... ¢
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     Show to whom, date, and address of delivery.$____

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Mr. H. Robert Kohl
P. O. Box 40
Lake Buena Vista, FL 32830

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	0156520	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐Addressee ☐Authorized agent

4. DATE OF DELIVERY — POSTMARK
ORLANDO FL JUN 21 1984

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: — CLERK'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

☆GPO : 1979-300-469

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

Mr. H. Robert Kohl
Reedy Creek Utilities Co., Inc.
P. O. Box 40
Lake Buena Vista, Florida 32830

Dear Mr. Kohl:

RE: EPCOT Center Emergency Generators Numbers 1 and 2

The energy plants at the EPCOT center including the Central Energy Plant (CEP) and the EPCOT Center Energy Plant (ECEP) constitute a major facility as defined in chapter 17-2 of the Florida Administrative Code (FAC). Further, the emergency generators proposed to be run will result in a significant net emissions increase of nitrogen oxides and sulfur dioxide. Therefore, the rules pertaining to a prevention of significant deterioration (PSD) review apply to this modification for these pollutants.

A listing of the general requirements of a PSD review are enclosed. More specific information can be found in rule 17-2.500, FAC or by calling the Bureau of Air Quality Management. Most of the information required has not been submitted to the department, thus, review of your application cannot continue until this information is received.

Sincerely,

C.H. Fancy, P.E.
Deputy Bureau Chief
Bureau of Air Quality
Management

CF/TR/agh

Enclosure

PSD Preconstruction Review Requirements

I. Technology Review
   a.) Comply with emission limitations contained in Rule 17-2 Part VI and 40 CFR 60 and 61

II. Best Available Control Technology (BACT)
   a.) Apply BACT for each pollutant subject to review
      1.) Analysis of possible control technology alternative

III. Ambient Impact Analysis
   a.) Demonstrate compliance with FAAQS
      1.) Use EPA-approved air quality models
      2.) Use five years of meteorological data
   b.) Demonstrate compliance with PSD increment
      1.) Use EPA-approved air quality models
      2.) Use five years of meteorological data
      3.) For particulate matter and SO_2 only
      4.) Address class I and class II areas

IV. Additional Impact Analysis
   a.) Analysis of impairment to visibility, soils, and vegetation
      1.) In class I and other sensitive areas
      2.) Visibility modeling
   b.) Analysis of impact due to growth

V. Preconstruction Air Quality Monitoring and Analysis
   a.) At least four months of continuous monitoring
   b.) Modeling may be used in lieu of monitoring for noncriteria pollutants

VI. Postconstruction Monitoring
   a.) As deemed necessary by the department

VII. Permit Application Information Required
   a.) Description of site and project
   b.) Detailed schedule of construction
   c.) Detailed description of controls and emissions
   d.) Meteorological and geographical data
   e.) Information on growth in the area since 8/7/77

VIII. Good Engineering Practice (GEP) Stack Height Determination
   a.) Calculate GEP stack height

REEDY CREEK UTILITIES CO., INC.

P.O. BOX 40 • LAKE BUENA VISTA, FLORIDA 32830
(305) 824-4024

May 14, 1984

DER

MAY 21 1984

BAQM

Ed S —
How do these emission figures check with info you have

Mr. C. H. Fancy, P.E.
Department Chief, Bureau of Air Quality Management
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
2600 Blair Stone Road
Tallahassee, FL 32301-8241

RE: EPCOT Center Emergency Generators
AC48-73369 and AC48-73370

Dear Mr. Fancy:

In response to our previous correspondence requiring a tabulation of maximum emissions for all air pollution sources site wide, we have prepared the following comments and proposals:

The maximum emission rates, as reflected in permit applications or actual permits for all sources, other than the boilers and turbines located at the Central Energy Plant (CEP) and the boilers located at the EPCOT Center Energy Plant (ECEP), appear in Table 1 in the attachments to this letter. The figures were calculated using estimated utilization rates and AP-42 emission factors, etc., as presented in the permit applications.

The maximum emission rates for the Solid Waste Energy Conversion (SWEC) Facility were calculated using actual stack test data gathered during compliance testing and appear in Table 2 in the attachments. It should be noted that this facility has not been in operation since January 1983.

For the sources located at the CEP and ECEP, using the total permitted operating hours and maximum heat inputs to calculate maximum permitted emissions would result in numbers that are erroneously high. While these sources (two turbines and three boilers at CEP, and three boilers at ECEP) are permitted to operate 24 hours a day, seven days a week, 52 weeks a year, it would be impossible to run all of these sources simultaneously on this schedule due to limitations in the ability to utilize the hot water generated. It is, therefore, proposed that maximum operating schedules (and, hence, maximum emissions) be limited, based on total maximum heat demands placed on the system as described as follows:

(1) Maximum heat demands, based on data from the five-year period beginning in 1979, indicate that sources at the CEP

require a maximum of 1.70×10^{12} btu/year to satisfy current and projected heat input demands. Records show that the proportion of this total burned in the boilers has never exceeded 30% during the five years surveyed. Therefore, the heat demands results are:

1.19×10^{12} btu/year in turbines at CEP (burning natural gas)

5.10×10^{11} btu/year in boilers at CEP (burning #2 diesel)

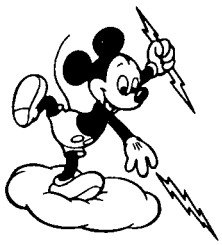
Records for the boilers located at the ECEP indicate a maximum heat demand of 1.35×10^{11} btu/year to satisfy current and projected demands.

It should be noted that all of these sources typically burn natural gas, but emissions for the boilers were calculated assuming #2 diesel oil as the fuel, since the boilers are permitted to use fuel oil as an alternate fuel.

(2) It is difficult to predict the maximum operating hours for each particular source, since a variety of factors affect how long each machine runs, including downtime due to malfunctions or maintenance. However, total heat demands remain relatively constant at the values previously noted. We would, therefore, like to propose a limitation based on these total heat demands that will take into account the unpredictable operation schedules for individual sources:

The sum of yearly heat inputs for Turbines T-1 and T-2 located at the CEP (A048-6902 and A048-6903) shall not exceed 1.19×10^{12} btu/year or 1.16×10^{9} SCF of natural gas.

The sum of yearly heat inputs for Boilers B-1, B-2 and B-3 located at the CEP (A048-6904, A048-6905 and A048-18430) shall not exceed 5.10×10^{11} btu/year or 3.60×10^{6} gallons of #2 diesel oil.



REEDY CREEK UTILITIES CO., INC.

The sum of yearly heat inputs for Boilers B-1, B-2 and B-3 located at the ECEP (A048-61620, A048-61621 and A048-61622) shall not exceed 1.35×10^{11} btu/year or 9.50×10^{4} gallons of #2 diesel oil.

(3) Emissions based on the proposed operation rates were calculated using AP-42 Supplement 13, Table 1.4-1, and AP-42 Supplement 13, Table 1.3-1. All boilers are classified as industrial boilers (10 - 100 Mbtu/hour), and the turbine emissions were calculated using emission factors for utility boilers (100 Mbtu/hour). The emissions from these sources appear in Table 3 of the attachments to this letter.

Reevaluation of operational requirements for the Emergency Generators (AC48-73369 and AC48-73370) has revealed that 1,900-hours/year operation time will be sufficient to satisfy all current and projected demands for each generator. Revised emission estimates reflecting 1,900-hours/year for each generator appear in Table 4 of the attachments to this letter. All calculations were performed as detailed in Attachment 6 to the original permit application.

If you need any additional information, please contact Fred Harden at 305/828-1883.

Sincerely,

H. Robert Kohl
Director of Operations

HRK:CK/mo'g

Attachments

cc: Chuck Collins, FDER
Ted Crowell
Fred Harden
Frank Jones
Bill Mack
Tom Moses

COPY OF ORIGINAL C NOTES

TABLE 1

MAXIMUM EMISSION ESTIMATES FOR SPRAY BOOTHS, BAGHOUSES, ETC.

Source	Estimated Max VOC Emissions (T/yr)	Estimated Max Particulate Emissions (T/yr)
Paint Shop Booth #1 AC48-75833	2.8 2.82	0.19 .19
Paint Shop Booth #2 AC48-75834	5.6 5.65	0.38 .38
Paint Shop Booth #3 AC48-75835	5.6 5.68	0.38 .38
Staff Shop Booth #1 AC48-75836	0.08 .08	0.02 .02
Staff Shop Booth #2 AC48-75837	0.63 .63	0.16 .16
Vinyl Plastisol Booth #1 AC48-80038	0.52 .51	0.08 .07
Regency Park Booth Ac48-80042	4.26	0.66
Sawdust Collector Baghouse AC80044	----	0.72
Sandblast Chamber Baghouse AC48-75832	----	0.004
WDW Laundry AC48--74144	61.6	----
Gasoline Stations	~~20.3~~	----
Nat Gas Dry Oven Plastisol Booth #1	.02	.09
	81.22	2.67
Non Booth Spraying	34.40	?
	115.62	

TABLE 1

MAXIMUM EMISSION ESTIMATES FOR SPRAY BOOTHS, BAGHOUSES, ETC.

Source	Estimated Max VOC Emissions (T/yr)	Estimated Max Particulate Emissions (T/yr)
Paint Shop Booth #1 AC48-75833	2.8	0.19
Paint Shop Booth #2 AC48-75834	5.6	0.38
Paint Shop Booth #3 AC48-75835	5.6	0.38
Staff Shop Booth #1 AC48-75836	0.08	0.02
Staff Shop Booth #2 AC48-75837	0.63	0.16
Vinyl Plastisol Booth #1 AC48-80038	0.52	0.08
Regency Park Booth Ac48-80042	4.26	0.66
Sawdust Collector Baghouse AC80044	----	0.72
Sandblast Chamber Baghouse AC48-75832	----	0.004
WDW Laundry AC48--74144	61.6	----
Gasoline Stations	20.3	----

TABLE 2

MAXIMUM EMISSIONS FROM SWEC FACILITY
(AC48-61619)

Pollutant	Emissions from SWEC (T/yr)	
Particulate	0.61	*
Carbon Monoxide	225	**
Hydrocarbons (VOC)	1.53	*
Nitrogen Oxides	94.5	*
Sulfur Dioxides	102.3	*

* Calculated using AP-42 Emission Factors

** Calculated using Permitted Maximum of 51.4 lbs/hr

TABLE 3

EMISSIONS FROM BOILERS AND TURBINES
BASED ON PROPOSED MAXIMUM HEAT INPUT VALVES

Pollutant	Emissions From CEP Turbines (T/yr)	Emissions From CEP Boilers (T/yr)	Emissions From ECEP Boilers (T/yr)
Particulate	1.74	3.6	0.09
Sulfur Dioxide	0.35	127.8	3.36
Sulfur Trioxide	----	1.8	0.05
Carbon Monoxide	23.2	9	0.24
Nitrogen Oxides	319	36	0.95
Non-Methane VOC	0.81	0.36	0.01
Methane VOC	0.17	0.09	0.002

TABLE 4

TOTAL YEARLY EMISSIONS FROM EMERGENCY GENERATORS
AT 100% LOAD AND 1900 HRS/YR OPERATION EACH

Pollutant	Emissions From Generator #1 (tons/yr)	Emissions From Generator #1 (tons/yr)	TOTAL (Tons/yr)
Nitrogen Oxides	85.5	85.5	171
Carbon Monoxide	22.4	22.3	44.6
Volatile Organic Carbon	2.4	2.4	4.8
Sulfur Dioxide	25.6	25.6	51.2

REEDY CREEK
IMPROVEMENT DISTRICT

P.O. BOX 36 LAKE BUENA VISTA, FLORIDA 32830 TELEPHONE (305) 828-2034

December 13, 1983

Mr. C. H. Fancy, P.E., Deputy Chief
Bureau of Air Quality Management
FLORIDA DEPARTMENT OF ENVIRONMENTAL
REGULATION
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Mr. Fancy:

Enclosed please find our check in the amount of $300.00 which inadvertently was not included with Mr. Harden's correspondence of December 6, 1983. I apologize for any confusion or inconvenience the oversight might have caused.

Sincerely,

Leigh Pharr

LEIGH PHARR, Secretary
Planning and Environmental
Permitting

lp

enc

PS Form 3811, Jan. 1979

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2. ARTICLE ADDRESSED TO:
H. Robert Kohl, Dir. of Operations
Reedy Creek Utilities
P.O. Box 40
Lake Buena Vista, FL 32830

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	0157016	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐Addressee ☐Authorized agent

F K Wellman

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☆GPO : 1979-300-459

1 file

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

November 4, 1983

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. H. Robert Kohl, Director
of Operations
Reedy Creek Utilities Company, Inc.
P. O. Box 40
Lake Buena Vista, Florida 32830

Dear Mr. Kohl:

Re: Air Construction Permit for Large Bore Diesel Power Generators, AC 48-73369 and AC 48-73370

The Bureau of Air Quality Management has received the $1000 application fee and your response of September 27, 1983. After reviewing the response, we believe that it appears to be complete with the exception of the response to item 2.

The information listed as Estimated Emissions in item 2 is based on the 1982 operating report. Your estimated emissions may represent the actual emissions from your facility in 1982, but they are not necessarily representative of actual emissions in the future unless limited by a permit. For the maximum potential emissions that could occur in your facility, please furnish emission limits from all existing permits. If such information is not available, then submit the information of the design potential emissions for each source. The design potential emissions can be easily calculated by the maximum fuel consumption for each source and the related emission factors listed in AP-42.

Please be aware of the fact that the applications may be subject to federal and State PSD reviews if your facility is a major facility in an attainment area. If so, additional information will be needed for any required PSD reviews.

When the requested additional information is received, we will resume processing your applications. If you have any questions on these matters, please call Bob King , review engineer, at (904)488-1344 or write to me at the above address.

Sincerely,

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

CHF/BK/s
cc: Roger Caldwell, (District)
Orange Company Pollution Control Dept.

REEDY CREEK UTILITIES CO., INC.
P.O. BOX 40 • LAKE BUENA VISTA, FLORIDA 32830
(305) 824-4024

October 20, 1983

DER
OCT 26 1983
BAQM

State of Florida
Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301

Re: Construction of Large Bore Diesel Power Generators AC48-73369 and AC48-73370

Dear Mr. King:

The number of yearly operating hours submitted as attachment #7 to the above referenced construction permits represents an estimate based on last years power demands but may not allow sufficient flexibility for eventualities which may arise in the future.

In order to compensate for this inflexibility, we believe an upward adjustment of maximum operating hours is in order to allow more leeway should unforeseen circumstances arise.

A maximum of 2,700 hours per year should be sufficient to serve this purpose. The adjusted yearly emission rates based on 2,700 hours per year of operation are tabulated below:

Pollutant	Hourly Emissions at 100% Load	Yearly Emissions at 100% Load
Nitrogen Oxides	90 lbs/hr.	121.5 T/yr.
Carbon Monoxide	23.4	31.6
VOC	2.5	3.4
Sulfur Dioxide	27	36.5

Please modify the above referenced permit applications to reflect 2,700 maximum operating hours per year and the adjusted emission rates as tabulated above.

If you have any further questions, please call me at (305) 824-4026.

Sincerely,

H. Robert Kohl

H. Robert Kohl, P. E.
Director

HRK:CSK:sk

cc: Chris Kohl, Ted McKim

REEDY CREEK UTILITIES CO., INC.
P.O. BOX 40 • LAKE BUENA VISTA, FLORIDA 32830
(305) 824-4024

September 27, 1983

DER
OCT 10 1983
BAQM

State of Florida
Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301

Attn: C. H. Fancy, P. E.

Re: Construction of Large Bore Diesel Power Generators, AC 48-73369 and AC 48-73370

Dear Mr. Fancy:

In response to your letter of August 26, 1983, we have assembled the following information for point by point reply to your requests:

1) A check in the amount of $1,000 is enclosed
2) The list of all existing air emission sources appears below:

Estimated Emissions (Tons/year)

Source	VOC	NOX	SO_2	CO	Particulate
Reedy Creek Improvement District* Pyrolysis Incinerator #1 (No longer operating, emissions for cy 1982)	0.16	26.3	9.10	15.1	0.18
Reedy Creek Utilities Co., Inc.* Turbine Unit T-1	0.18	10.7	0.037	1.0	0.61
Reedy Creek Utilities Co., Inc.* Turbine Unit T-2	1.17	68.1	0.23	6.6	3.89
Reedy Creek Utilities Co., Inc.* Boiler B-1	0.074	4.3	0.016	0.42	0.25
Reedy Creek Utilities Inc.* Boiler B-2	0.11	6.5	0.22	0.63	0.37

REEDY CREEK UTILITIES CO., INC.

Pollutant	Lbs./yr. emitted at 100% load
CO	23.4

Maximum hourly emissions
Maximum fuel flow = 200 gal./hr.

Pollutant	Lbs./hr. emitted at max. fuel flow
CO	26

Total yearly emissions:
based on total yearly operating hours of 1484.5
(see attachment #7)

Pollutant	Tons/year at 100% load
CO	17.4

4) These generators are large portable units which were fabricated off-site and transported to their present site in complete form. The installation referred to consisted of the necessary fuel and electrical hook-ups, but the actual construction of the generator units was accomplished at the Stewart and Stevenson Facility in Houston.

Please let me know if you require additional information on this project in the future.

Sincerely,

H. Robert Kohl

H. Robert Kohl
Director, Reedy Creek Utilities Co., Inc.

HRK:CSK:sk

cc: Ted Crowell
Gary Gornto
Chris Kohl

REEDY CREEK UTILITIES CO., INC.

Estimated Emissions (Tons/year)

Source	VOC	NOX	SO_2	CO	Particulate
Reedy Creek Utilities Inc.* Boiler B-3	0.22	12.8	0.044	1.24	0.73
EPCOT Central Energy Plant** Boiler #1 (west)	0.042	2.43	0.009	0.24	1.4
EPCOT Central Energy Plant** Boiler #2	0.093	5.3	0.02	0.5	0.60
EPCOT Central Energy Plant** Boiler #3	0.030	1.7	0.006	0.16	0.09
Gasoline Service Stations*	20.33	---	---	---	---
Walt Disney World Laundry Dry Cleaning Facility (with controls)	1.5	---	---	---	---
Five Spray Booths at Central Shops (total)	124.5	---	---	---	5.0
Sanblast Chamber Baghouse	---	---	---	---	0.004
Waterwash Spray Booth and Curing Oven	0.05				0.07
Totals (T/yr)	148.5	138.1	9.7	25.9	13.2

*Based on cy 1982 annual operating report
**Based on cy 1982 annual operating report but projected to full year since sources only operated 4 months during cy 1982.

3) The corrected emission rates for CO should appear as follows:

Hourly emissions at 100% load
Fuel flow at 100% load = 180 gal/yr.

P 408 530 351

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Robert H. Kohl	
Street and No. P. O. Box 40	
P.O., State and ZIP Code Lake Buena Vista, FL	
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Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
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TOTAL Postage and Fees	$
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PS Form 3800, Feb. 1982

PS Form 3811, Jan. 1979

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2. ARTICLE ADDRESSED TO:
Mr. H. Robert Kohl
Reedy Creek Utilities
P. O. Box 40
Lake Buene Vista, FL 32830

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	P408530351	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐Addressee ☐Authorized agent

4. DATE OF DELIVERY: AUG 29 1983

POSTMARK: AUG 29 1983

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

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☆GPO : 1979-300-499

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

August 26, 1983

Mr. H. Robert Kohl, Director
of Operations
Reedy Creek Utilities Co., Inc.
Post Office Box 40
Lake Buena Vista, Florida 32830

Dear Mr. Kohl:

Re: Construction of Large Bore Diesel Power Generators, AC 48-73369 and AC 48-73370

The department has received your applications on July 29, 1983, for construction permits of two diesel power generators at Lake Buena Vista, in Orange County, Florida. Based on the initial review of your applications, we determined that application fee and additional information are needed before we can process your applications. The application fee and information required to complete the applications are listed below:

(1) Total application fee is $1,000; $500 for each application.

(2) List all existing air emission sources at the site which should include the quantities of all major pollutants emitted from each source.

(3) We believe that the CO emission factor, listed in AP-42, for stationary diesel engines should be 130. A factor of 13 was used in your application for calculation; please correct it.

(4) The installation check lists included with your application indicate that installation may have been completed without having obtained a construction permit as required by Rule 17-2.210. Please explain.

When the required application fee and information are received, we will resume processing your applications.

If you have any questions on the fee and information requested, please call Bob King at (904) 488-1344.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/BK/s

cc: Willard Smith
St. Johns River District
Orange County Pollution Control Dept.