One Energy Place
Pensacola, Florida 32520

Tel 850.444.6111

GULF POWER
A SOUTHERN COMPANY

January 26, 2003

Mr. Allen Hubbard, P.E.
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Renewal Application for NPDES Permit No. FL0002283
Gulf Power Company- Scholz Electric Generating Plant

Dear Mr. Hubbard:

Enclosed are two copies of the Operation and Maintenance Performance Report of the Gulf Power Domestic Wastewater Treatment Plant at the Scholz Electric Generating Plant. This report is submitted in reference to the Department's November 7, 2003 letter requesting that Gulf Power provide an operation and maintenance performance report for the domestic wastewater treatment plant as part of the NPDES permit renewal for the Scholz electric generating plant.

Please feel free to contact me at (850) 444-6144 if you have any questions or need any additional information.

Sincerely,

Michael L. Kyhos
Environmental Affairs

cc: Gulf Power Company
Mike Markey
Joe Neese
Jim Vick

FDEP Pensacola
Bill Armstrong

OPERATION AND MAINTENANCE
PERFORMANCE REPORT

GULF POWER WASTEWATER TREATMENT PLANT
SCHOLZ ELECTRIC GENERATING STATION

GULF POWER COMPANY
SNEADS, FLORIDA
JACKSON COUNTY, FLORIDA

HMM Project No. 210982AA01

FDEP Permit No. FL0002283-001-IW1S
Expiration Date: April 12, 2004

Submitted by:

Date: 1/15/04

Jim Vick
Manager Environmental Affairs
Gulf Power Company
Pensacola, Florida

Prepared by:

Date: 1/15/04

Amir Zafar, P.E.
Hatch Mott MacDonald
Panama City, Florida

FIELD VISITS
December 2, 2003

HATCH MOTT MACDONALD
11-C West 11th Street
Panama City, Florida 32505

CERTIFICATIONS

Permittee is fully aware and intends to comply with the recommendations and schedules in the Operations and Maintenance Performance Report.

Signature of Permittee

Jim Vick, Manager, Environmental Affairs
Name and Title

Scholz Electric Generating Station
Sneads, Florida Facility

One Energy Place
Pensacola, Florida
Pensacola, Florida 32520

Date: 1/26/04

Telephone No.: (850) 444-6311

I have assisted in the preparation of this report and have reviewed and am fully aware of the recommendations and schedules included in this report.

Signature

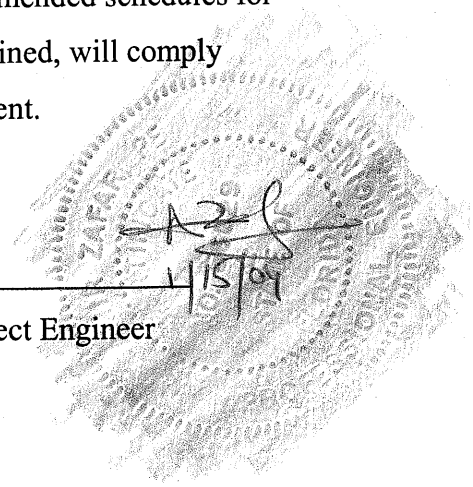
Joe H. Neese, Environmental Affairs Spec.
Name and Title

One Energy Place
Pensacola, Florida 32520

Date: 1/26/04

Telephone No.: (850) 444-6429

The information contained in this report is true and correct to the best of my knowledge and was prepared in accordance with sound engineering principles. Recommendations and schedules have been discussed with the permittee and the lead operator. If the recommended schedules for corrective action are met, the facilities, when properly operated and maintained, will comply with all applicable statutes of the State of Florida and rules of the Department.



Signature of Engineer

PE # 56829 4/15/04

Amir Zafar, P.E., Project Engineer

Hatch Mott MacDonald

Company Name

11-C West 23rd Street, Panama City, FL 32405

Address

Date: 1/15/04

Telephone No.: (850) 522-1031

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LIST OF ATTACHMENTS

CHAPTER 1 –INTRODUCTION

The Gulf Power Wastewater Treatment Facility (WWTF) at the Scholz Electric Generating Station (SEGS) consists of a surge tank, aeration basin, settling basins, aerobic sludge holding tank, chlorination basins, and dechlorination basin. The plant has a design capacity of 2,500 gallons per day (gpd). The effluent limitations are tabulated below:

		Discharge Limitation	Sampling Frequency
Flow	=	Report Only	1/Week
Biochemical Oxygen Demand (BOD)	=	60 mg/L (max daily average) 30 mg/L (max monthly average)	1/Quarter 1/Quarter
Total Suspended Solids (TSS)	=	60 mg/L (max daily average) 30 mg/L (max monthly average)	1/Quarter 1/Quarter

The facility was placed in operation in 1993. A copy of a flow diagram is attached as Figure 1. Details on each process unit are shown in Attachment 1.

CHAPTER 2 – PHYSICAL CONDITION

The evaluation of the physical condition of each component, system, and process was based on the following criteria:

1. Is there evidence of hydraulic or organic overloading?
2. Is the general condition good, considering rust, degree of corrosion, wear, etc.?
3. Do facilities meet applicable requirements of Rules 62-600.400(1)(b), (2)(b), (4)(a), and (4)(b) Florida Administrative Code?
4. Are there physical signs that the treatment units and associated equipment are operating properly and are expected to continue to operate properly for the permit period?
5. Do treatment units have adequate safety features and are they operated properly?

The following table includes the results of this evaluation:

Plant Components/ Treatment Units	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5
Pump Station	No	Yes	N/A	Yes	Yes
Comminutor	No	Yes	Yes	Yes	Yes
Flow Meter [1]	No	Yes	Yes	No	Yes
Surge Tank	No	Yes	Yes	Yes	Yes
Aeration Basin	No	Yes	Yes	Yes	Yes
Final Clarifiers	No	Yes	Yes	Yes	Yes
Chlorine Contact Tanks	No	Yes	Yes	Yes	Yes
Dechlorination	No	Yes	Yes	Yes	Yes
Aerobic Sludge Holding Tank	No	Yes	Yes	Yes	Yes
Plant Air Supply	No	Yes	Yes	Yes	Yes
Effluent Pump Station	No	Yes	N/A	Yes	Yes

CHAPTER 3 – TREATMENT EFFICIENCY

3.1 Treatment Units

The Gulf Power WWTP consists of the following components, systems, and processes:

1. Preliminary treatment: comminutor and bar screen
2. Flow equalization: surge tank
3. Biological treatment: one extended air type treatment unit
4. Final sedimentation basin: one final clarifier
5. Disinfection: one chlorine contact tank and one dechlorination chamber
6. Residual treatment: one aerobic sludge holding tank

3.1.1 Preliminary Treatment Facility

Preliminary treatment consists of a comminutor and a manual bar screen (one-inch opening). The comminutor is designed to pass a maximum flow of 164 gallons per minute (gpm) and capable of reducing solids to 0.25 inches in size. Overall the bar screen and comminutor were in good condition.

3.1.2 Surge Tank

To provide relief from hydraulic and organic shock loading, a 1,000-gallon aerated surge tank (equipped with one blower) is provided. To transfer influent from surge tank to aeration basin, two pumps capable of pumping 90 gallons per minute (gpm) at 15 feet of head are provided. Overall, the surge tank was in good condition. No influent or effluent data of the surge tank is available; therefore, no actual performance can be evaluated.

3.1.3 Biological Treatment

Biological treatment consists of one aeration tank with an approximate volume of 2,500 gallons at 5 feet side water depth. The detention time is approximately 24 hours with aeration tank loading of 14.81 lb. BOD_5 /per day per 1000 ft^3, below the recommended design standard of 15 lb BOD_5 / per

day per 1000 ft^3. To provide air, two positive displacement type blowers are installed: one for service and one for backup. Each blower is capable of delivering 24 $ft.^3$/min of air at 4.0 psi. Overall, the aeration tank was in good condition.

3.1.4 Final Clarifier

To separate biomass (sludge) from effluent, one clarifier is provided with an approximately 417-gallon volume at 5-foot site water depth. The total detention time for the clarifier is 4 hours at design flow. For return, the clarifier is equipped with one airlift pump capable of returning up to 100 percent of treatment unit designed influent flow. Overall, the clarifier was in good condition.

3.1.5 Chlorine Contact Tanks

Disinfection is provided in a 52-gallon chlorine contact tanks utilizing pelletized chlorine. Tank has a liquid depth of 9 inches, which provides 30-minute detention time at design flow of 2,500 gallons per day. Overall, the unit was in fair-to-good condition.

3.1.6 De-Chlorination

Dechlorination of chlorine is being accomplished utilizing sodium sulfite. Overall, the 52-gallon dechlorination tank was in fair-to-good condition.

3.1.7 Aerobic Sludge Holding Tank

Residual treatment is accomplished in a 448-gallon aerobic sludge holding tank with approximately 5 feet of liquid depth. For final disposal the partially stabilized bio-solids are periodically hauled off site by a sludge-hauling contractor. Overall, the process unit was in good condition and the solids inventory was low.

3.2 Overall Plant

Overall the WWTF was in good condition and should be able to operate at the current design capacity of 2,500 gpd for the next five (5) years at the current effluent parameters.

CHAPTER 4 – PERFORMANCE TRENDS

4.1 Influent

Influent flow and nutrients data monitoring is not required by the permit.

4.2 Effluent

The Gulf Power WWTF is only required to report weekly effluent flow. The only parameters that require quarterly monitoring are BOD and TSS. From January 1999 until October 2003, all measured effluent BOD and TSS values were below the permitted effluent discharge limits and are tabulated in table 1. The values are shown graphically in figure 2, and figure 3.

4.3 Three-Month Average Daily Flow

The Gulf Power WWTF is only required to report flow from the facility; as such there is no effluent discharge limit form the facility.

4.4 Groundwater Quality

Groundwater quality data monitoring for the Gulf Power WWTF is not required by permit.

4.5 Surface Water Quality

Surface water quality monitoring for the Gulf Power WWTF is not required by permit.

4.6 General

According to Gulf Power staff there has been no untreated bypass, overflow, or discharge under the most recent permit.

Table 1
Scholz Electric Generating Station
WWTF Flow and Effleuent Date

Month	Monthly Average Flow Gallons	BOD mg/l	TSS mg/l
Jan-99	460		
Feb-99	510		
Mar-99	400	15	17
Apr-99		27	16
May-99			
Jun-99	500		
Jul-99	3900	7.2	12
Aug-99	820		
Sep-99	1070		
Oct-99		15	<5.0
Nov-99	290		
Dec-99	270		
Jan-00			
Jan-00	430	16	5
Feb-00	470		
Mar-00	510		
Apr-00	420	5.5	<5.0
May-00	460		
Jun-00			
Jul-00	380	16	10
Aug-00	510		
Sep-00	460		
Oct-00	480	13	14
Nov-00	320		
Dec-00	550		
Jan-00			
Jan-01	350	12	20
Feb-01	460		
Mar-01	460		
Apr-01	210	2	7.5
May-01	260		
Jun-01	310		
Jul-01	240	5.6	18
Aug-01	320		
Sep-01	300		
Oct-01	210	2	8
Nov-01	370		
Dec-01	370		
Jan-02	350	20	23
Feb-02	280		
Mar-02	340		
Apr-02	320	16	7
May-02	310		
Jun-02	310	7.3	<5

Table 1
Scholz Electric Generating Station
WWTF Flow and Effleuent Date

Month	Monthly Average Flow Gallons	BOD mg/l	TSS mg/l
Jul-02	290		
Aug-02	350		
Sep-02	340		
Oct-02	430	3.5	6.5
Nov-02	470		
Dec-02	420		
Jan-03	430	7.3	<5
Feb-03	490		
Mar-03	470		
Apr-03	400	2.2	<5
May-03	490		
Jun-03	550		
Jul-03	680	7	<5
Aug-03	600		
Sep-03	520		
Oct-03	690	25	12
Maximum	**3900**	**27**	**23**
Minimum	**210**	**2**	**5**
Average	**493**	**11**	**13**

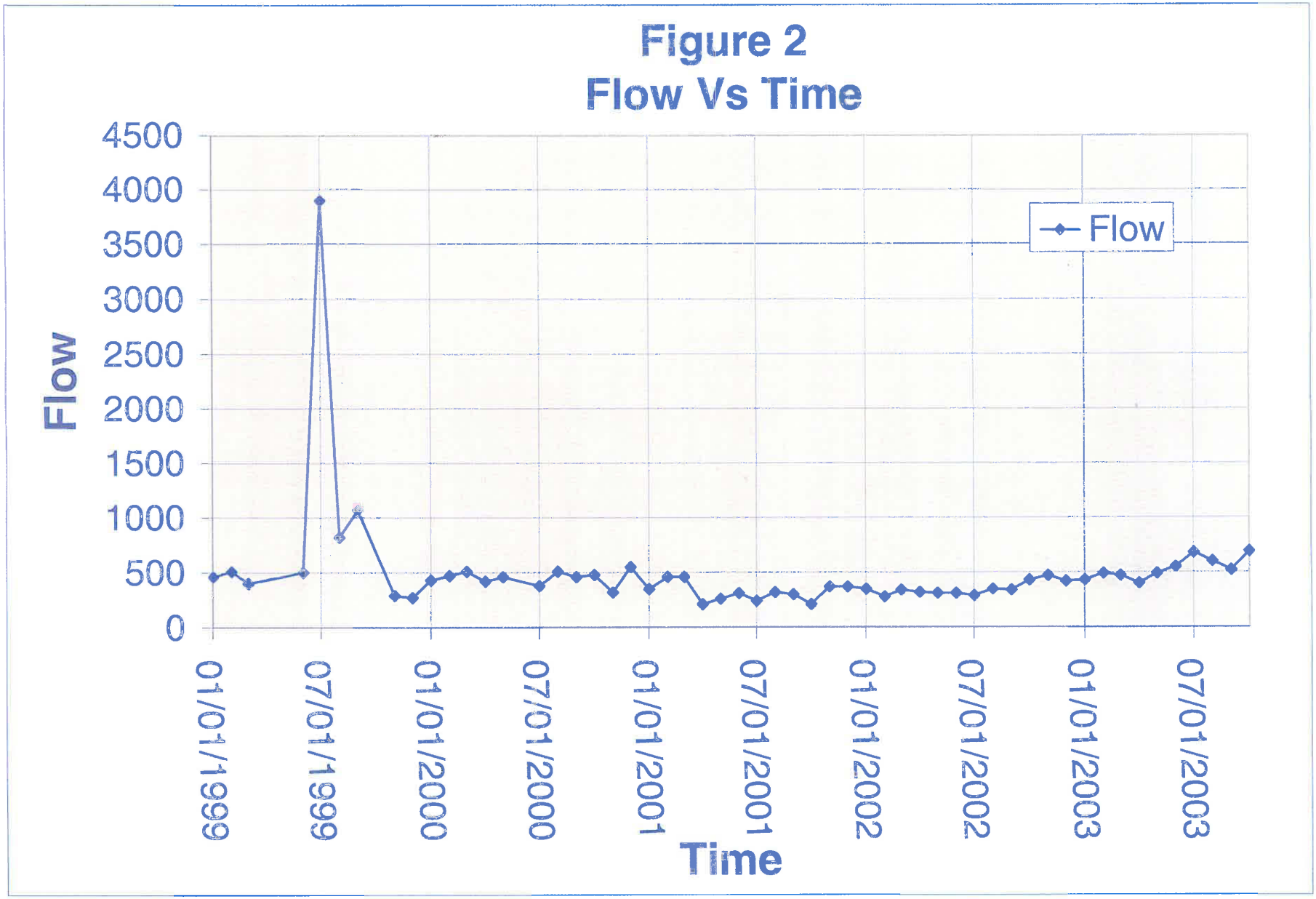
Figure 2
Flow Vs Time
Flow
4500
4000
3500
3000
2500
2000
1500
1000
500
0
01/01/1999
07/01/1999
01/01/2000
07/01/2000
01/01/2001
07/01/2001
01/01/2002
07/01/2002
01/01/2003
07/01/2003
Time
Flow

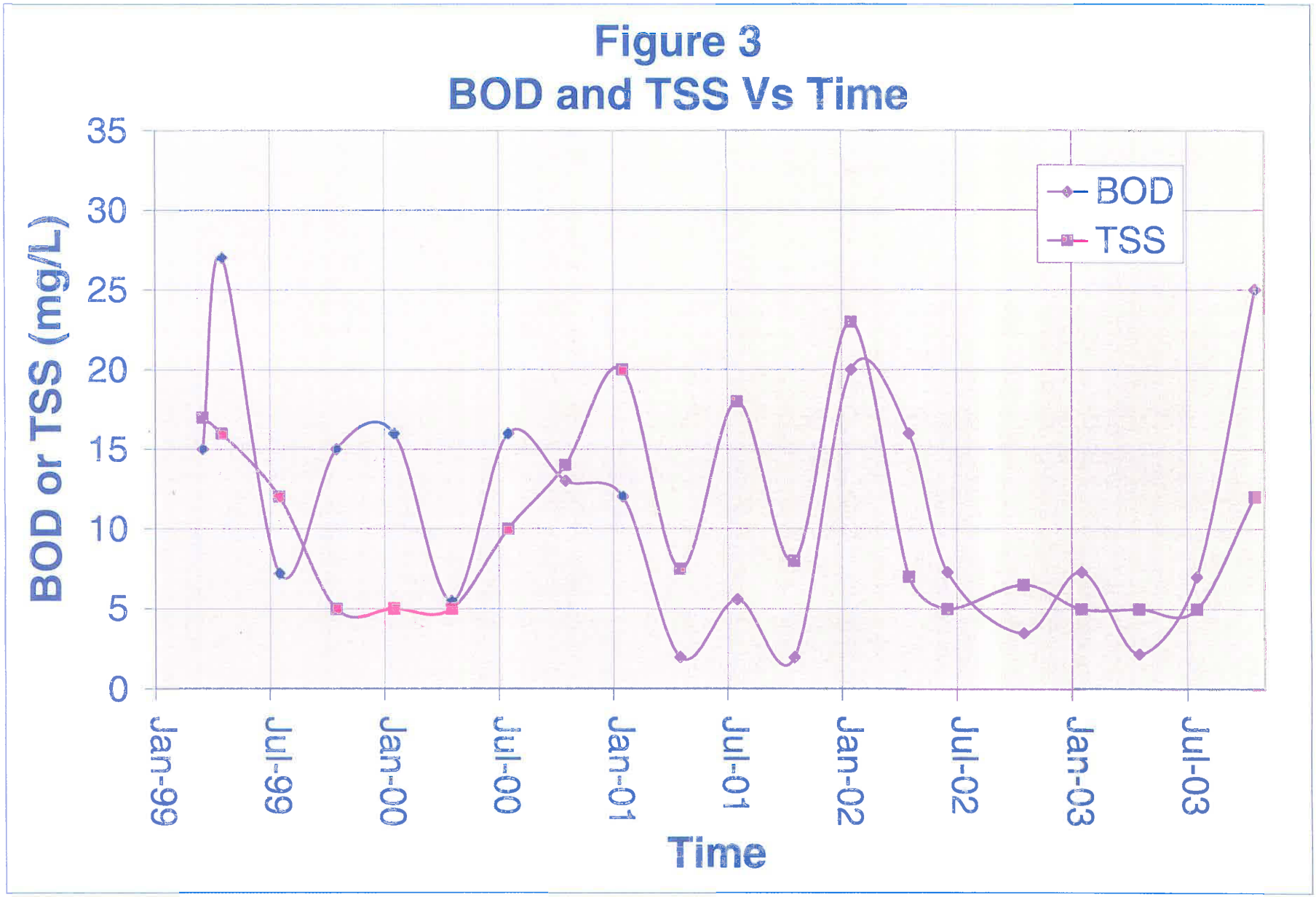
Figure 3
BOD and TSS Vs Time
BOD or TSS (mg/L)
35
30
25
20
15
10
5
0
BOD
TSS
Jan-99
Jul-99
Jan-00
Jul-00
Jan-01
Jul-01
Jan-02
Jul-02
Jan-03
Jul-03
Time

CHAPTER 5 – OPERATION AND MAINTENANCE PROGRAM

5.1 Record Drawings

A set of up-to-date drawings is available to the operator(s). These drawings are stored in the SEGS Environmental Department Office.

5.2 Operations and Maintenance Manual

An up-to-date Operation and Maintenance (O&M) manual, supported by manufacturer catalogs is available to the operator(s). The manual is stored with record drawings.

5.3 Operations and Maintenance Log

The WWTP uses an electronic log to document O & M.

5.4 General

The WWTP is not required by FDEP to be manned by a certified WWTP operator. Currently, the facility is operated, maintained, and monitored by the in-house SEGS technical staff.

Record keeping and effluent sampling and testing programs are adequate. Lab tests are performed by Severn Trent Laboratories.

CHAPTER 6 - PROBLEMS, DEFICIENCIES, AND CORRECTIVE ACTIONS

Overall, the Gulf Power WWTP is in good condition and will be able to operate at its design capacity of 2,500 gpd for the next five (5) years after the following corrective actions have been taken.

6.1 Flow Meter

To measure flow, an ultrasonic flow meter is being utilized which has not been calibrated for several years. It is recommended that the calibration of the flow meter be accomplished as soon as possible.

6.2 Overall

The plant is in good condition. Effluent pumps need painting. New safety signage requires installation.

ATTACHMENT 1

DETAILS IN PROCESS UNITS

GENERAL

There shall be furnished and installed one complete PURESTREAM factory-built extended aeration type sewage treatment plant with all needed equipment for the efficient operation of the plant, as manufactured by PURESTREAM, INC. The plant shall be a welded steel rectangular tank structure divided into two major sections, an aeration compartment and settling basin. The principal items of equipment in each unit shall include: air diffusers, return sludge air lift or air lifts, rotary blower(s) complete with necessary motors and controls, blower and motor housing, all necessary internal piping and accessory equipment as herein specified. The treatment plant structure shall be reinforced to withstand normal pressures from the soil and from the interior hydrostatic load.

OPERATING CONDITIONS

The plant shall be capable of treating 2,500 gallons per day of raw sanitary sewage or waste with a 5-day BOD not to exceed 240 ppm.

CONSTRUCTION

The treatment plant proper shall consist of an aeration tank and a final settling tank in one rectangular structure with all necessary baffles and partitions, factory installed. All side walls, bottom and partitions shall be of structural grade steel plate. All structural shapes used for reinforcing and bracing shall have minimum thickness of one fourth inch.

The blower assembly shall be enclosed with a FIBERGLASS housing hinged on one side with a locking device. The complete assembly shall be shipped unmounted and shall be bolted in place on the PURESTREAM plant by the purchaser. All necessary pipe, fittings and flexible connectors to connect the blower to the DIFFUSER shall be furnished. A complete air diffusion system consisting of BLOWERS, and air diffuser drop-pipe assemblies shall be furnished.

The Comminutor shall be a motor driven unit designed for continuous operation and capable of reducing sewage solids to 1/4 inch size or smaller. The Comminutor shall be a Purestream Model A-5 as manufacturered by PURESTREAM INDUSTRIES, INC. and designed to pass a maximum flow of 164 gallons per minute.

The Comminutor shall be fabricated of cast aluminum and shall consist of a gear motor assembly, vertical revolving sewage screen with adjustable cutter teeth, shell with drive shaft and bearings, a stationary cutter bar mounted on the shell and an open top inlet trough with standard 6" ASA pipe flange for mounting.

The drive unit shall be a AGMA Class No. 3 single reduction worm gear speed reducer. The gear material shall comply with all mechanical ratings allowed by AGMA Rating Standard. The size shall be 1/2 HP for operation on 230 Volts, 3 phase service. All equipment shall be designed for outdoor service.

The Comminutor control circuitry shall include starter, selector switches, automatic motor overload protection, and automatic reversing relays with time delay to prevent damage caused by jamming of drive unit or clogging of the revolving screen.

purestream inc.
P.O. Box 68 Florence, KY 41022-0068 Phone (606) 371-9898 Fax (606) 371-3577

SURGE TANK

A surge tank shall be provided as specified and shown on the plans. It shall be an integral part of the plant and shall have a design capacity of 1000 gallons.

The tank shall be constructed of 1/4" structural steel and shall be filleted on each side to allow proper mixing of the tank contents.

Diffused air shall be supplied by surge blower(s).

Non-clog plastic diffusers shall be so spaced to ensure proper mixing of the tank contents and located parallel to and near the bottom of the chamber. All piping and valves within the tank shall be factory installed. The tank shall have the same protective coating as specified for the sewage treatment plant.

Duplex pumps shall be supplied to pump the sewage into the aeration tank at a controlled rate. Each pump shall have a capacity of 90 GPM against a total dynamic head of 15 ft. The pumps shall be GOULDS, Model No. 3887.

Any exterior piping required shall be supplied and installed by the contractor.

A bar screen shall be provided, within the SURGE TANK at the influent port, to remove any unusually large solids from the incoming raw sewage. The bar screen shall be fabricated from one half inch diameter bars spaced one inch apart and arranged as shown on the drawings. The bars shall be sloped to permit easy cleaning of accumulating debris. A drying deck shall be furnished for drying this debris.

WasteWater Treatment Systems

DESIGN DATA

PROJECT GULF SHORES POWER PLT. SNEADS, FL.

I. Estimated Flow and Runoff Period

(a) Design basis = 25 gallons per day (GPD) per PERSON.
(This information can be obtained from Purestream Guide for Estimating Sewage Flows)

(b) Estimated Daily Flow
25 gpd per PERSON x 100 PEOPLE ~~units~~ = 2500 gpd

(c) Runoff period = 24 hours
(Runoff period is the number of hours per day in which total flow is received)

II. Estimated Biochemical Oxygen Demand (BOD)

Design standard - BOD is a measure of the strength of the waste, domestic sewage has approximately 1.98 pounds of 5-day BOD per thousand gallons of waste - based on 240 parts per million sewage strength.

(a) Total pounds of BOD =

Estimated Daily Flow x 1.98 lbs. BOD/1,000 gallons

2500 gals/day x 1.98 lbs. BOD/1,000 gals = 4.95 lbs. BOD/day.

(b) If sewage strength is estimated to be other than 240 ppm, parts per million can be converted to pounds:

$$\frac{\text{pounds of BOD}}{\text{Estimated daily flow} \times 8.34 \text{ lbs/gal}} = \frac{\text{ppm BOD}}{1{,}000{,}000 \text{ lbs of water}}$$

$$\text{Total pounds of BOD} = \frac{\text{ppm BOD} \times \text{Estimated daily flow} \times 8.34 \text{ lbs/gal}}{1{,}000{,}000 \text{ lbs. of water}}$$

$$\text{Total pounds} = \frac{\text{\_\_\_\_ ppm} \times \text{\_\_\_\_ gpd} \times 8.34 \text{ lb/gal.}}{1{,}000{,}000 \text{ lbs. of water}} = \text{\_\_\_\_ lbs. BOD/day.}$$

III. Air Requirements

Design standard - common air supply design is 2,100 cu.ft. of air per pound of BOD to be treated.

(a) Total air required = 2,100 cu.ft. x 4.95 lbs BOD/day = 10395 cu.ft./day.

10395 cu.ft./day ÷ 1,440 minutes/day = 7.2 cu.ft./min. (CFM)

(b) Air Supplied

Air supplied by each blower

= ROOTS positive displacement blower operating @ 4 psi working pressure and a speed of 1900 rpm.

= 24 CFM per blower.

(Air supplied is generally higher than air required - this is done to allow for intermittent operation of the sewage treatment plant during lower periods of flow)

purestream inc.
WASTEWATER TREATMENT EQUIPMENT
P.O. Box 6115 Florence, KY 41042 Phone (606) 371-9898

IV. Aeration Chamber Des

Design standard - common aeration chamber loading is 15 lbs. ... BOD per day per 1,000 cu.ft. of aeration chamber.

(a) Required volume = $\frac{\text{Total pounds BOD}}{15}$ x 1,000 cu.ft. x 7.5 gal/cu.ft.

= $\frac{4.95 \text{ lb BOD}}{15}$ x 1,000 x 7.5 = 2475 gallons

(b) Supplied volume

2500 gallons

V. Settling Chamber Design

Design standard - common settling chamber design is to allow for 4 hour retention of the daily flow if the runoff period (see section I) is 24 hours. If the runoff period is less than 24 hours, allow for 2 1/2 hour minimum retention time during the runoff period.

(a) Required volume = Est. daily flow x $\frac{\text{Settling retention time}}{\text{24 hours/day}}$ x $\frac{\text{24 hrs/day}}{\text{Total runoff time}}$

= 2500 gpd x $\frac{4 \text{ hrs}}{24}$ x $\frac{24}{4 \text{ hrs.}}$ = 417 gals

(b) Supplied volume

417 gallons.

VI. Chlorine Contact Chamber Design (BOTH CL_2 + DE-CHLOR. CHAMBERS ARE SIZED THIS WAY)

Design standard - common chlorine contact chamber design is to allow for 30 minute retention of the daily flow. As high as 2 - 3 hours retention time may be required based on the local requirements.

(a) Required volume = Est. daily flow x $\frac{\text{Retention time (in minutes)}}{\text{1,440 minutes/day}}$

= 2500 gpd x $\frac{30 \text{ minutes}}{1,440}$ = ~~208~~ 52 gallons

(b) Supplied volume

~~208~~ 52 gallons.

VII. Sludge Holding Chamber Design ~~N/A~~ 448 gallon is supplied.

Design standard - common sludge holding chamber design is to allow for 2 cu.ft. of holding chamber volume per 100 gallons of daily flow. From 1 - 4 cu.ft. may be required based on local requirements.

(a) Required volume = Chamber loading rate (in cu.ft./100 gal) x 7.5 gal/cu.ft. x Est. daily flow.

= $\frac{\text{cu.ft. x 7.5 x}}{100}$ gpd = _____ gallons.

(b) Supplied volume

_____ gallons _____ Aerated _____ Non Aerated

VIII. Additional Design Data

_____

_____

_____

ATTACHMENT 2

FIELD EVALUATIONS

FIELD EVALUATION FORM FOR
OPERATION AND MAINTENANCE PERFORMANCE REPORTS FOR
DOMESTIC WASTEWATER FACILITIES

Table of Contents

PHYSICAL CONDITION

Hydraulic and Organic Overloading

1. Is there evidence of past spills at the plant or through nearby (upstream) manholes? (Discoloration of the ground or a strong smell may indicate past spills at the plant.) ( ) yes (✓) no

2. Are raw sewage pumping stations, influent lines, overflow weirs, or other structures surcharged? ( ) yes (✓) no

3. Is there flow through bypass channels? ( ) yes (✓) no

4. Are there old high water lines or are the weirs on the clarifier flooded? ( ) yes (✓) no

5. Are there overflows at alternative discharge points, channels, or other areas? ( ) yes (✓) no

6. Are there any open-ended pipes that appear to originate in a process or storage area and periodically contain flows to the ground or to surface water? (Although these pipes have been disconnected from a closed system or otherwise removed from service, they can still be connected to a discharge source.) ( ) yes (✓) no

7. Is the facility receiving excessive septage dumping from septic tanks? ( ) yes ( ) no N/A

8. Are checks for overflows performed routinely? (✓) yes ( ) no Daily (shown) keeplog.

General Condition

1. Is there evidence of corrosion problems at the treatment plant and in the collection system? ( ) yes (✓) no

2. Do any of the units or associated equipment show signs of excessive wear? ( ) yes (✓) no

Rule Requirements

1. Does each component, system, or process meet the applicable reliability standards required by Rule 17-600.400(1)(b), F.A.C.? (✓) yes ( ) no

2. Does the facility have adequate alarm systems for power or equipment failures as recommended by standard design references? (✓) yes ( ) no the plant has two power generator.

   Are they working properly? (✓) yes ( ) no

3. Is standby power or other equivalent provisions provided for all components, systems, and processes as recommended by standard design references? (✓) yes ( ) no See note 2.

No Alarm @ WWTF but plant staff do a daily check for proper operation

4. Are there adverse effects resulting from odors, noise, aerosol drift, and lighting at the facility? ( ) yes (✓) no

5. Are there piles of collected screenings, slurries, residuals, or by-products of treatment? (Their disposal, including run-off of any water, must be such that none enters surface waters or their tributaries.) ( ) yes (✓) no

Operating Problems

1. Are all components, systems, or processes (including associated equipment such as pumps, blowers, air compressors, oxygen systems, scum collection systems, residuals collection systems, diffusers, mechanical aerators, mechanical drives, mechanical mixers, motors, residuals heater, feed systems, backwash systems, control systems, flow measurement devices, automatic valves, ventilation fans, and other miscellaneous equipment) operating properly? (✓) yes ( ) no

   If no, explain.

   _____
   _____
   _____
   _____
   _____

2. Are any components, systems, or processes out of service? ( ) yes (✓) no

   If yes, complete the following table for each component, system, or process that is not operating.

Name	Date Out of Service	Type of Failure	Expected Date to Return to Service

3. Are there excessive noises associated with any component, system, or process? ( ) yes (✓) no

4. Is there any unusual equipment intended to correct operational problems (e.g. special pumps, floating aerators in diffused air systems, chemical feeders, temporary construction or structures, or any improvised systems)? ( ) yes (✓) no

5. Are all components, systems, and processes expected to continue to operate properly for the permit period? (✓) yes ( ) no

If no, explain._____

Safety Features

1. Are proper safety precautions used for each component, system, and process? (✓) yes ( ) no

If no, explain._____

2. Is a written set of safety rules available to all employees? (✓) yes ( ) no

3. Is the plant generally clean and free from open trash areas? (✓) yes ( ) no

4. Is the plant site enclosed with a fence or otherwise designed with appropriate features that discourage the entry of animals or unauthorized persons? (✓) yes ( ) no

5. Are wastewater pipes clearly distinguished from product pipes? (✓) yes ( ) no

6. Are there any cross connections between a potable water supply and non-potable source? ( ) yes (✓) no

7. Does the plant have the following recommended safety equipment?

   a. Portable air blower (gas motor or electric motor operated) (✓) yes ( ) no Have all Compressed

→ b. Electric explosion-proof lantern (✓) yes ( ) no

   c. Safety harness (✓) yes ( ) no

   d. Hose mask with hand blower and 50-foot hose (✓) yes ( ) no

   e. Self-contained breathing apparatus for plants using chlorine (✓) yes ( ) no ( ) not applicable

   f. Explosion and oxygen meters (✓) yes ( ) no

8. Is personal protective clothing provided (safety helmets, ear protectors, goggles, gloves, rubber boots with steel toes, etc.)? (✓) yes ( ) no

9. Are portable hoists available for equipment removal? (✓) yes ( ) no

10. Are ladders provided to enter manholes of wetwells (fiberglass or wooden for electrical work)? (✓) yes ( ) no

11. Are life preservers and throwlines provided adjacent to all basins, ponds, and lagoons? ( ) yes ( ) no N/A

12. Are handrails provided and in-place around all basins and openings? (✓) yes ( ) no

13. Are all stairs, walkways, and platforms free of grease, oil, and debris and are nonskid surfaces used when needed? (✓) yes ( ) no

14. Is adequate lighting provided? (✓) yes ( ) no

15. Are all components, systems, and processes adequately ventilated? (✓) yes ( ) no

16. Are protective guards provided and in-place on all rotating machinery? (✓) yes ( ) no

17. Is all electrical circuitry enclosed and identified? (✓) yes ( ) no

18. Are appropriate warning signs posted (no smoking, high voltage, non-potable water, chlorine hazard, toxic and flammable gases, etc.)? ( ) yes (✓) no Has been ordered

19. Are emergency shower and eye wash facilities provided where needed? ( ) yes ( ) no N/A

20. Are appropriate fire extinguishers provided where needed? ( ) yes (✓) no Recommend One

21. Is instrumentation provided and operational for the detection of toxic and flammable gases and low oxygen levels? (✓) yes ( ) no

22. Do pressure vessels operate within their design rating and have a functional pressure relief? ( ) yes ( ) no (✓) not applicable

23. Are chemicals stored properly? (✓) yes ( ) no

24. Are undiked oil/chemical storage tanks used at the facility? ( ) yes ( ) no (✓) not applicable

25. Are chemical storage tanks designed to handle the particular chemical? ( ) yes ( ) no (✓) not applicable

26. Are storage bins provided with dust collectors and vents? ( ) yes ( ) no (✓) not applicable

27. Are storage bins large enough to avoid continuous filling which requires the presence of an operator all the time? ( ) yes ( ) no (✓) not applicable

28. Are access points for sampling dry points which can be reached safely? (✓) yes ( ) no

OPERATION AND MAINTENANCE PROGRAM

Staffing

1. Is the facility adequately staffed with certified operators in accordance with the requirements of Rule 17-602, F.A.C.? ( ) yes ( ) no Not Applicable

Maintenance Management

1. Is there an identification system to locate and identify all items of equipment? (✓) yes ( ) no

2. Does the facility maintain a records system which includes the following?

   a. Preventive and corrective maintenance work performed (✓) yes ( )no

   b. Maintenance man-hours (✓) yes ( ) no

   c. Spare parts used in the repair (✓) yes ( ) no

   d. Name of the person performing the work (✓) yes ( ) no

   e. Maintenance related costs (✓) yes ( ) no

3. Is routine and preventive maintenance scheduled and performed on time? (✓) yes ( ) no By Visual Inspection.

4. Are adequate spare parts and supply inventories maintained for each component, system, and process? (✓) yes ( ) no

5. Is the maintenance program adequate? (✓) yes ( ) no

   If no, explain. The plant staff do a visual Inspection. For future use, the WWTF Mechanical Equipment have been placed on Condition Based Maintenance program.

Records Keeping

1. Are records required by the permit maintained for a period of five years? (✓) yes ( ) no

2. Is the information required by the permit available, complete, and current? (✓) yes ( ) no

3. Are analytical results consistent with the data reported in the following?

   a. Monthly operating report (✓) yes ( ) no

   b. Limited wet weather discharge report ( ) yes ( ) no N/A

c. Ground water monitoring report ( ) yes ( ) no Not Applicable

d. Reclaimed water or effluent analysis report ( ) yes ( ) no Not Applicable

4. Do sampling and analyses data include the following?

a. Dates, times, and location of the sampling (✓) yes ( ) no

b. The name of the individual performing the sampling (✓) yes ( ) no

c. The analytical methods and techniques used (✓) yes ( ) no

d. The results of the analyses and calibration (✓) yes ( ) no

e. The dates of the analyses (✓) yes ( ) no

f. The name of the person performing the analyses ( ) yes (✓) no

g. The instantaneous flow at the grab sample station ( ) yes (✓) no

5. Do monitoring records include records for all parameters that must be monitored in accordance with the permit? (✓) yes ( ) no

6. Are flow meter calibration records available? ( ) yes (✓) no The facility will start Calibration of a flowmeter.

7. Are laboratory equipment calibration and maintenance records adequate? ( ) yes ( ) no Out side lab

8. Are plant records adequate and do they include the following?

a. A copy of the Department permit (✓) yes ( ) no

b. An up-to-date operation and maintenance manual (✓) yes ( ) no

c. Record drawings (✓) yes ( ) no

d. Schedules and dates of equipment maintenance repairs ( ) yes (✓) no

e. Equipment suppliers manual (✓) yes ( ) no

f. Equipment data cards or equal (✓) yes ( ) no

9. Are operating records adequate? (✓) yes ( ) no

10. Have all untreated bypasses and discharges or overflows been reported to the Department? ( ) yes (✓) no None

If no, explain. _____

_____

_____

_____

Sampling

1. Are samples taken at the sites specified in the permit? (✓) yes ( ) no

2. Is sampling and analysis completed for each parameter specified by the permit? (✓) yes ( ) no

3. Is the frequency of sampling in accordance with the permit? (✓) yes ( ) no

4. Is the method of sample collection (grab or composite) in accordance with the permit? (✓) yes ( ) no

5. Are sample collection procedures in accordance with the approved test procedures referenced in Rule 17-601.400(1)(a), F.A.C.? (✓) yes ( ) no

6. For flows of 100,000 gallons per day or greater, are recording flow meters and totalizers used? ( ) yes ( ) no (✓) not applicable

7. Are flow recording devices calibrated at least annually? ( ) yes (✓) no Not at present - but has been Scheduled.

Laboratory Analysis

1. Are all laboratory tests required by Department rules performed by a laboratory that has been certified by HRS, or, for on-site tests for dissolved oxygen, pH, and total chlorine residual, are all tests performed by a certified laboratory or under the direction of an operator certified in accordance with Chapter 17-602, F.A.C.? ( ) yes ( ) no Outside lab.

INDIVIDUAL COMPONENTS, SYSTEMS, AND PROCESSES

PUMPING (some type of pneumatic pump)

Raw Wastewater

1. What is the location of the pump station? Inside the facility

2. What are the design flows to the pump station? Unknown gpm average
   _____ gpm peak

3. What are the actual flows to the pump station? Unknown gpm average
   _____ gpm peak

4. What type of pump control system is used?
   ( ) variable speed ( ) constant speed Air pressure

5. If the control system is variable speed, what type of controller is used?
   _____ (✓ not applicable

6. If multiple pumps are used, how is each unit operated?
   ( ) about 15-20% apart ( ) equally ( ) not alternated
   ( ) not applicable Single pump

   Is the system remotely monitored? ( ) yes (✓ no ( ) not applicable

7. Does the pump station have a bypass? ( ) yes (✓ no

   If yes, can the bypass flow be disinfected?
   ( ) yes ( ) no ( ) not applicable

8. Can the wet well be isolated into a minimum of two separate basins for maintenance? ( ) yes ( ) no No wet well

9. If one wet well basin is down for maintenance, how many pumps are operable?
   _____ Unknown

10. Does the wet well design provide for equal division of flow to each of the pumps? ( ) yes ( ) no Unknown

11. What is the condition of the sump pump?
    (✓ good ( ) fair ( ) poor ( ) not applicable

12. What is the condition of the water seal systems?
    ( ) good ( ) fair ( ) poor (✓ not applicable

13. How often is the pump station checked? (✓ daily ( ) other
    _____

14. What is the downtime of the pumps? None

15. What is the frequency of maintenance inspections by plant personnel?
    365 /year Visual

16. If the pump station is constant speed, do sudden surges affect the operation of the treatment facility when each pump is activated?
( ) yes (✓) no ( ) not applicable

17. What is the general condition of the raw wastewater pump station?
(✓) good ( ) fair ( ) poor

18. What are the most common problems that the operator has had with the pump station? If there are problems with the screens, use the section on screens.

None.

PUMPING

Effluent
~~Raw Wastewater~~

1. What is the location of the pump station? Effluent PS

2. What are the design flows to the pump station? 500 gpm average
   N/A gpm peak

3. What are the actual flows to the pump station? 532 ~~gpm~~ average
   4230 gpm peak

4. What type of pump control system is used?
   ( ) variable speed (✓) constant speed

5. If the control system is variable speed, what type of controller is used?
   _____ (✓) not applicable

6. If multiple pumps are used, how is each unit operated?
   ( ) about 15-20% apart (✓) equally ( ) not alternated
   ( ) not applicable

   Is the system remotely monitored? ( ) yes (✓) no ( ) not applicable

7. Does the pump station have a bypass? ( ) yes (✓) no

   If yes, can the bypass flow be disinfected?
   ( ) yes ( ) no ( ) not applicable

8. Can the wet well be isolated into a minimum of two separate basins for maintenance? ( ) yes (✓) no

9. If one wet well basin is down for maintenance, how many pumps are operable?
   _____ N/A

10. Does the wet well design provide for equal division of flow to each of the pumps? (✓) yes ( ) no

11. What is the condition of the sump pump?
    ( ) good (✓) fair ( ) poor ( ) not applicable

12. What is the condition of the water seal systems?
    ( ) good ( ) fair ( ) poor (✓) not applicable

13. How often is the pump station checked? (✓) daily ( ) other
    _____

14. What is the downtime of the pumps? None

15. What ~~is~~ the frequency of maintenance inspections by plant personnel?
    365 /year Visual

16. If the pump station is constant speed, do sudden surges affect the operation of the treatment facility when each pump is activated?
( ) yes ( ) no (✓) not applicable

17. What is the general condition of the raw wastewater pump station?
( ) good (✓) fair ( ) poor

18. What are the most common problems that the operator has had with the pump station? If there are problems with the screens, use the section on screens.

Need painting

PUMPING

Raw Wastewater

1. What is the location of the pump station? Surge tank

2. What are the design flows to the pump station? 90 gpm average
   N/A gpm peak

3. What are the actual flows to the pump station? _____ gpm average
   _____ gpm peak Unknown

4. What type of pump control system is used?
   ( ) variable speed (✓) constant speed

5. If the control system is variable speed, what type of controller is used?
   _____ (✓) not applicable

6. If multiple pumps are used, how is each unit operated?
   ( ) about 15-20% apart (✓) equally ( ) not alternated
   ( ) not applicable

   Is the system remotely monitored? ( ) yes (✓) no ( ) not applicable

7. Does the pump station have a bypass? ( ) yes (✓) no

   If yes, can the bypass flow be disinfected?
   ( ) yes ( ) no (✓) not applicable

8. Can the wet well be isolated into a minimum of two separate basins for maintenance? ( ) yes (✓) no

9. If one wet well basin is down for maintenance, how many pumps are operable?
   _____ N/A

10. Does the wet well design provide for equal division of flow to each of the pumps? (✓) yes ( ) no

11. What is the condition of the sump pump?
    (✓) good ( ) fair ( ) poor ( ) not applicable

12. What is the condition of the water seal systems?
    ( ) good ( ) fair ( ) poor (✓) not applicable

13. How often is the pump station checked? (✓) daily ( ) other
    _____

14. What is the downtime of the pumps? none

15. What is the frequency of maintenance inspections by plant personnel?
    365 /year Visual

16. If the pump station is constant speed, do sudden surges affect the operation of the treatment facility when each pump is activated?
( ) yes (√) no ( ) not applicable

17. What is the general condition of the raw wastewater pump station?
( ) good (√) fair ( ) poor

18. What are the most common problems that the operator has had with the pump station? If there are problems with the screens, use the section on screens.

None

PUMPING

Residuals Air lift

1. What is the design residuals pumping rate? 2500 gallons/day

2. What is the actual residuals pumping rate? _____ gallons/day Unknown

3. What types of residuals are pumped? ( ) primary
(✓) return activated sludge (✓) waste activated sludge
( ) other _____

4. How are residuals pumped? ( ) manually ( ) automatically Timed

5. How often do the residuals pumps run? Variable

6. What is the frequency of maintenance inspections by plant personnel?
365 /year Visual

7. What is the general condition of the residuals pump station?
( ) good (✓) fair ( ) poor

8. What are the most common problems that the operator has had with the pump station? None

FLOW MEASUREMENT

1. What type of flow meter is used? ( ) propeller meter
   ( ) magnetic meter ( ) venturi tube ( ) flow tube
   ( ) positive displacement ( ) diaphragm meter ( ) weir
   ( ) Parshall flume ( ) rotameter (✓) other Ultrasonic

2. What is the design capacity of the flow measurement device?
   _____ mgd Unknown

3. What is the present wastewater flow measured? Unknown mgd

4. Where is the flow meter located? Chlorine Contact Chamber.

5. Are the flow measurement device and associated instruments (totalizers, recorders, etc.) properly installed? (✓) yes ( ) no

6. Is there adequate straight length of pipe or channel before and after the flowmeter? ( ) yes ( ) no N/A

7. Is the flow entering the flume reasonably well-distributed across the channel and free of turbulence, boils, or other disturbances?
   ( ) yes ( ) no (✓) not applicable

8. Is the flow measurement system capable of measuring the entire range of wastewater flow? (✓) yes ( ) no

9. Are flow measurements being properly made by plant personnel?
   (✓) yes ( ) no

10. Are flow records properly kept? (✓) yes ( ) no

11. Are sharp drops or increases in flow records accounted for?
    (✓) yes ( ) no

12. Does the flow chart exhibit uniform flow? ( ) yes (✓) no

13. Do any plant return flows discharge upstream from the meter?
    ( ) yes (✓) no

14. Are float and bubble wells clean and free of grease and debris?
    ( ) yes ( ) no (✓) not applicable

15. Are weirs free of debris? ( ) yes ( ) no (✓) not applicable

16. Are weirs or flumes broken or cracked?
    ( ) yes ( ) no (✓) not applicable

17. Are weir plates corroded or damaged, not sharp edged (≤ 1/8"), or not level? ( ) yes ( ) no (✓) not applicable

18. Are stilling wells clogged or broken?
    ( ) yes ( ) no (✓) not applicable

Difference is by analog meter.

19. What is the frequency of calibration of the flow meter?
_____/month Not Calibrated

20. What date was the flow meter last calibrated? Unknown.

21. Who performed the calibration? Unknown

22. What is the frequency of routine inspections for proper operation?
365 /day Visual

23. What is the frequency of maintenance inspections by plant personnel?
365 /year

24. What is the general condition of the flow measurement facilities?
( ) good (✓) fair ( ) poor Need Calibration

25. What are the most common problems that the operator has had with the flow meter? Digital Meter is not working, Need Calibration

PRELIMINARY TREATMENT

Screens

1. What is the design flows of the screens? 164 gpm ~~mgd average~~
   _____ mgd peak

2. What is the actual plant flow? 0.00053 mgd average
   0.00423 mgd peak

3. What type of screens are used? (✓) manual ( ) mechanical

4. How many screens are there? 1

5. What is the capacity of each screen? _____ mgd N/A

6. How large are the screen openings? _____ ~~millimeters~~ 1-inch

7. What are the dimensions of the channels? N/A

8. What is the total daily volume of screenings? Unknown cubic feet

9. What is the unit volume of screenings?
   Unknown cubic feet/million gallons

10. Is there excessive screen clogging or build-up of debris against the screens? ( ) yes (✓) no

11. Is there a bypass channel? ( ) yes (✓) no

    Does the bypass channel have a screen?
    ( ) yes ( ) no ( ) not applicable

12. Does the influent channel design provide equal division of flow to each screen? (✓) yes ( ) no

13. How are screenings disposed? if any hauled offsite

14. What is the frequency of routine inspections for proper operation?
    365 /day

15. What is the frequency of maintenance inspections by plant personnel?
    ~~NS~~ /year Manual

16. What is the downtime of the screens? None

17. What is the general condition of the screening facilities?
    (✓) good ( ) fair ( ) poor

18. What are the most common problems that the operator has had with the screening facilities? None

PRELIMINARY TREATMENT

Shredding and Grinding (Comminution)

1. How many shredding and grinding units are there? 1

2. What is the design capacity of each unit? 164 ~~mgd~~ gpm

3. What is the actual flow to each unit? 0.000532 mgd average
0.00423 mgd peak

4. If multiple units are used, is the flow evenly distributed?
( ) yes ( ) no N/A

5. What are the dimensions of the channels? N/A

6. Is there a bypass channel? ( ) yes (✓) no

7. What is the general condition of the shredding and grinding facilities? (✓) good ( ) fair ( ) poor

8. What is the frequency of routine inspections for proper operation?
365 /day

9. What is the frequency of maintenance inspections by plant personnel?
365 /year Visual

10. What is the downtime of the shredding and grinding facilities?
None

11. What are the most common problems that the operator has had with the shredding and grinding facilities? None

BIOLOGICAL TREATMENT

Activated Sludge

1. How many aeration basins are there? 1

2. What is the design capacity of each basin? 2500 gallons ~~mgd~~

3. What is the actual flow to each basin? 0.000532 mgd average
   0.00423 mgd peak

4. What is the flow regime? ( ) conventional ( ) step aeration
   ( ) complete mix ( ) pure oxygen (✓) other Extended Air

5. What type of aeration equipment is used?
   (✓) diffused air ( ) mechanical aerators ( ) other _____

6. What are the dimensions of each aeration basin? 6'W X 11'W X 5' SWD

7. What is the color of the activated sludge? ( ) black (✓) dark brown
   ( ) light brown ( ) other _____

8. What is the odor of the activated sludge? ( ) septic ( ) earthy
   (✓) none ( ) other _____

9. What characteristics most accurately describe the foam?
   ( ) light, crisp ( ) thick, dark ( ) heavy, white ( ) other _____ None

10. Are the tank contents mixed thoroughly? (✓) yes ( ) no

11. Are there excessive air leaks in the compressed air piping?
    ( ) yes (✓) no ( ) not applicable

12. Is the dissolved oxygen level in the aeration tank low (<1.0 mg/l)?
    ( ) yes ( ) no Unknown

13. Does mixing appear excessive? ( ) yes (✓) no

14. Does air rise in clumps? ( ) yes (✓) no

15. Do there appear to be dead spots in the aeration basin?
    ( ) yes (✓) no

    If yes, at what location? _____

16. What is the depth of the sand and grit layer? Unknown feet

17. What is the active capacity of the aeration basin?
    2500 gallons ~~cubic feet~~

18. Is the process operating in its design mode? (✓) yes ( ) no

    If no, explain. _____

19. Are the return activated sludge pumps operating? (✓) yes ( ) no

If no, what is the reason? _____

20. Are there flow measurement devices for the return activated sludge and waste activated sludge systems? ( ) yes (✓) no

21. Does the aeration basin have a foam control system? ( ) yes (✓) no

22. If multiple basins are operating, is the flow distributed equally? ( ) yes ( ) no (✓) not applicable

How is it distributed? _____

23. Are the characteristics of the basin contents different in the various units? ( ) yes ( ) no (✓) not applicable

24. How is the system operated? ( ) manually ( ) semi-automatically ( ) automatically ( ) computer-controlled ( ) other Timers

25. What is the frequency of routine inspections for proper operation? 365 /day Visual

26. What is the frequency of maintenance inspections by plant personnel? 365 /year Visual

27. What is the general condition of the activated sludge facilities? (✓) good ( ) fair ( ) poor

28. What are the most common problems that the operator has had with the activated sludge system? None

SEDIMENTATION

Final

1. How many final sedimentation basins are there? 1

2. What is the design capacity of each basin? 2500 gpd ~~mgd average~~ 2750 mgd peak

3. What is the actual flow to each basin? 0.000532 mgd average 0.00423 mgd peak

4. What are the dimensions of the basins? 6'W x 7'L (sloped) x 5' SWD

5. Is chemical addition used to improve settling? ( ) yes (✓) no

   If yes, what chemical(s) are added? _____

6. Is there an excessive accumulation of scum, grease foam, or floating residuals in the clarifier? ( ) yes (✓) no

7. Are there excessive gas bubbles on the surface of the clarifier? ( ) yes (✓) no

8. Is there scum overflow, lack of adequate scum disposal, or is the scum pit full? ( ) yes (✓) no

9. Does the tank surface indicate improper residuals withdrawal (i.e., excessive floating solids, gas, etc.)? ( ) yes (✓) no

10. What volume of residuals is pumped? _____ gpd total Unknown _____ gpd RAS _____ gpd WAS

11. What is the solids concentration of the residuals? Unknown %

12. Are there settleable solids in the effluent? ( ) yes (✓) no

13. How are residuals pumped? ( ) manually ( ) automatically Timer, every 2 hr

14. How often do residuals pumps run? 12 number of times each day

    How long do residuals pumps run? 15 min number of minutes each time

15. Does the residuals collection system show any signs of mechanical failure? ( ) yes (✓) no

16. Is there excessive residuals on the bottom of the basin (i.e., inadequate residuals removal)? ( ) yes (✓) no

17. Is there excessive solids build-up in the center well of the clarifier? ( ) yes ( ) no N/A

18. What is the depth of the sand and grit layer? Unknown feet

19. Are residuals withdrawal ports clogged? ( ) yes (✓) no

20. Is the residuals blanket too high? ( ) yes (✓) no

21. Is there deflocculation in the clarifier? ( ) yes (✓) no

22. Is there pin floc in the overflow? ( ) yes (✓) no

23. Is there billowing sludge in the clarifier? ( ) yes (✓) no

24. Does the influent baffle system accomplish its purpose?
( ) yes ( ) no None

25. Does the effluent baffle system accomplish its purpose?
(✓) yes ( ) no

26. Does the unit show signs of short circuiting and/or overloads?
( ) yes (✓) no

27. Are the effluent weirs level? (✓) yes ( ) no

28. Are the effluent weirs clean? (✓) yes ( ) no

29. If multiple units are used, is the flow distributed evenly?
( ) yes ( ) no (✓) not applicable

30. What is the frequency of routine inspections for proper operation?
365 /day Visual

31. What is the frequency of maintenance inspections by plant personnel?
365 /year Visual

32. What is the general condition of the final sedimentation facilities?
(✓) good ( ) fair ( ) poor

33. What are the most common problems that the operator has had with the final sedimentation facilities? None

DISINFECTION

Chlorination

1. How many chlorine contact basins are there? 1

2. What is the design capacity of each basin? 2500 gpd ~~mgd average~~
   2750 ~~mgd~~ gpd peak hourly flow

3. What is the actual flow to each basin? 0.000532 mgd average
   @ 0.00423 mgd peak hourly flow

4. What are the dimensions of the basins? 1'-8" W x 6' L x 9" SWD

5. What is the detention time of each contact basin at peak hourly flow?
   27 minutes

6. What chlorine dosage is applied? Unknown mg/l min 0.5 mg/l

7. What is the normal level of chlorine residual in the basin effluent?
   0.5 mg/l

8. Are disinfection standards being met? (✓) yes ( ) no

9. What type of chlorination system is being used? ( ) chlorine cylinders ( ) on-site sodium hypochlorite generation ( ) sodium hypochlorite solution ( ) calcium hypochlorite solution Chlorine Tablets

10. What is the design capacity of the chlorination system?
    _____ lbs/day Unknown

    What is the maximum capacity of the chlorination system?
    _____ lbs/day Unknown

11. What ~~is~~ the configuration of the chlorine contact basin? ( ) round (✓) rectangular ( ) other _____

12. Is the contact basin adequately baffled to minimize short-circuiting?
    (✓) yes ( ) no

13. How is chlorine introduced into the wastewater entering the contact basin? ( ) perforated diffusers ( ) injector with single entry point (✓) other Continuous

14. Are mechanical mixing provisions incorporated in the chlorine contact basins design? ( ) yes (✓) no

15. Is there an adequate reserve supply of chlorine? (✓) yes ( ) no

    How many days of supply is maintained? _____

16. Are there high temperatures in the chlorination rooms?
    ( ) yes ( ) no N/A

17. Is there a build-up of residuals in the basin? ( ) yes (✓) no

18. Are there gas bubbles in the basin? ( ) yes (✓) no

19. Is there floating scum and/or solids in the basin? ( ) yes (✓) no

20. Is there excessive foaming downstream? ( ) yes (✓) no

21. Is there evidence of toxicity (dead fish, other dead organisms) downstream? ( ) yes (✓) no

22. What is the frequency of routine inspections for proper operation?
365 /day visual

23. What is the frequency of maintenance inspections by plant personnel?
365 /year visual

24. What is the general condition of the chlorination facilities?
(✓) good ( ) fair ( ) poor

25. What are the most common problems that the operator has had with the chlorination process? None

RESIDUALS TREATMENT

Aerobic Stabilization & Aerated Sludge Holding Tank

1. How many aerobic digesters are there? 1
2. What is the design influent flow to each digester?
   _____ gallons/day average Unknown
3. What is the actual influent flow to each digester?
   _____ gallons/day average Unknown
4. What are the dimensions of each unit? 2' L x 6' Wd x 5' SWD
5. How many units are presently operating? 1
6. What type of residuals are treated in the aerobic digester?
   ( ) waste activated ( ) primary (✓) primary and waste activated
   ( ) other _____
7. How often are residuals applied to the digester? 12 Times/day
8. What is the total duration of influent pumping? 3 hours/day
9. How are influent residuals pumped? ( ) manually ( ) automatically Timer
10. What is the solids concentration in the influent residuals? Unknown %
11. What is the solids concentration in the aerobic digesters? Unknown %
12. What type of aeration equipment is used? (✓) diffused air
    ( ) mechanical mixers ( ) combination ( ) other _____
13. If diffused aeration is used, do air diffusers require frequent cleaning? ( ) yes (✓) no ( ) not applicable
14. What type of aerobic digesters are used? (✓) open ( ) closed
15. What type of aeration is provided? (✓) conventional ( ) pure oxygen
16. What is the residuals retention time? Unknown days
17. What is the volatile suspend solids (VSS) loading?
    _____ lb VSS/cu ft/day Unknown
18. What type of feed system is used? ( ) continuous (✓) batch
19. What is the solids concentration of the residuals following settling?
    _____ % Unknown
20. How much waste residuals are pumped? Unknown gallons/day
21. How often do waste residuals pumps run? 15 minutes/hour

22. How are residuals wasted? ( ) manually ( ) automatically Timed

23. What volume of residuals are recycled back to the aerobic digester?
_____ gallons/day average Unknown

24. What percentage of the influent residuals flow is the recycle residuals flow? _____ % Unknown

25. Are the contents of the tanks well mixed and relatively free of odors?
(✓) yes ( ) no

26. Is there a foaming problem? ( ) yes (✓) no

27. What is the dissolved oxygen (DO) concentration in the aerobic digestion units? _____ mg/l Unknown

28. Are there provisions for pH adjustment by the addition of lime, sodium hydroxide, or sodium bicarbonate? ( ) yes (✓) no

29. What is the volume of supernatant flow? Unknown gallons/day average

30. What is the BOD of the supernatant flow? Unknown mg/l

31. What is the suspended solids concentration of the supernatant?
_____ mg/l Unknown

32. What is the nitrate nitrogen concentration of supernatant?
_____ mg/l Unknown

33. What is the ammonia nitrogen concentration of the supernatant?
_____ mg/l Unknown

34. Is there excessive foaming in the tank? ( ) yes (✓) no

35. Are there objectionable odors in the aerobically digested residuals?
( ) yes (✓) no

36. Is the digester overloaded? ( ) yes (✓) no

37. Is there clogging of diffusers in the digester?
( ) yes (✓) no ( ) not applicable

38. What is the depth of the sand and grit layer? Unknown feet

39. What is the active capacity of the digester? 448 ~~cubic feet~~ gallons

40. Is there adequate supernatant removal? (✓) yes ( ) no

41. If multiple units are used, is the flow distributed evenly?
( ) yes ( ) no (✓) not applicable

42. Does the unit show signs of short circuiting and/or overloads?
( ) yes (✓) no

43. Does the method of stabilization comply with either the Process to Further Reduce Pathogens (PFRP) or the Process to Significantly Reduce Pathogens (PSRP) as described in Title 40 Code of Federal Regulation's Part 257? ( ) yes (✓) no

If yes, which one? ( ) PFRP ( ) PSRP

If no, explain. Solids are hauled offsite for disposal

44. What is the frequency of routine inspections for proper operation?
365 /day visual

45. What is the frequency of maintenance inspections by plant personnel?
365 /year visual.

46. What is the general condition of the aerobic digesters?
( ) good (✓) fair ( ) poor

47. What are the most common problems that the operator has had with the aerobic digesters? None

DISPOSAL SYSTEMS

Going to the ash pond via Pumpstation

Outfalls

1. How many outfalls are there? 1

2. What type of receiving waters does the outfall(s) discharge to?
( ) ocean ( ) estuary ( ) lake (✓) river ( ) other _____

3. What is the design capacity of each outfall?
_____ mgd average _____ mgd peak Unknown

4. What is the present discharge at each outfall? Unknown
_____ mgd average _____ mgd peak

5. What are the diameter and length of each outfall? N/A

6. Are the outfall diffusers functioning properly?
( ) yes ( ) no (✓) not applicable

7. Is the outfall(s) operating so that the discharge limitations specified in the permit are consistently met? (✓) yes ( ) no

8. How does the effluent flow in the outfall? ( ) gravity (✓) pressure to the ash pond.

If the flow is by gravity and if the outfall(s) extends into the receiving waters, is a manhole provided at the shore end of the outfall? ( ) yes ( ) no ( ) not applicable

9. Is adequate corrosion control provided (i.e., pipe coatings, cathodic protection, etc.)? (✓) yes ( ) no

10. For outfalls subject to tidal or high water backup, are flap valves or automatically closing gates functioning properly?
( ) yes ( ) no ( ) not applicable Not evaluated

11. Does the outfall(s) exhibit signs of scour or undercutting?
( ) yes ( ) no Not Evaluated

12. Is the outfall(s) adequately protected from floodwaters, tides, and other hazards so as to reasonably ensure structural stability and prevent stoppage? ( ) yes ( ) no Not Evaluated

13. Can effluent samples be obtained at a point after the final treatment process and before discharge to or mixing with the receiving waters?
(✓) yes ( ) no

14. Are outfall and diffuser pipes routinely inspected for breakage and corrosion? ( ) yes ( ) no Not Evaluated

15. What is the frequency of maintenance inspections by plant personnel?
_____ /year
Not Evaluated

16. What is the general condition of the outfall facilities?
( ) good ( ) fair ( ) poor Not Evaluated

17. What are the most common problems that the operator has had with the plant outfall(s)? Not Evaluated.