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COMMISSION
CLERK

February 5, 2009

Ms. Ann Cole, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

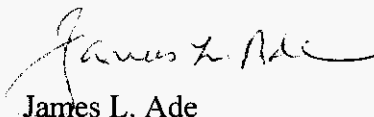
Dear Ms. Cole:

In connection with the Application of Southlake Utilities, Inc. ("Applicant") for Increased Water Rates in Lake County ("Application"), Docket No. 080597-WS, enclosed please find the original and 15 copies of a Memorandum of Responses To Letter of Deficiencies together with the original and 15 copies of the attachments required to respond to each of the deficiencies listed in the letter dated January 7, 2009, to me from Ms. Beth Salak. Also enclosed please find Instructions For Inserting Responses Into The Minimum Filing Requirements.

I trust that the enclosed Memorandum of Response To Letter of Deficiencies, copies of the Responses and the Instructions For Inserting The Responses Into The Minimum Filing Requirements will completely address each of the Deficiencies and allow you to insert the Responses into the previously filed Minimum Filing Requirements. If, however, you have any questions or need any additional information concerning this matter please do not hesitate to contact me.

COM
ECR
GCL
OPC
RCP
SSC
SGA
ADM
CLK

Sincerely,



James L. Ade

JLA/lefr

Enclosures

cc: Ms. Beth Salak w/out enc.
William J. Deas, Esq. w/ copy of enclosure
Mr. John Guastella w/ copy of enclosure
Mr. Gary White w/ copy of enclosure
Mr. Randy Corbin w/ copy of enclosure

DOCUMENT NUMBER - DATE

00986 FEB-9 08

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93-11-01-0100

11/11/09

APPLICATION OF SOUTHLAKE UTILITIES, INC.
FOR INCREASED WATER RATES IN LAKE COUNTY

DOCKET NO. 080597-WS

**INSTRUCTIONS FOR INSERTING RESPONSES INTO THE MINIMUM
FILING REQUIREMENTS**

VOLUME 1

Response to Deficiency #	Location of Insert	Description of Insert
3	Prior to page 139	Insert Schedule F-6, Pages 2 of 3 and 3 of 3 Revised
7	Prior to page 21	Insert Schedule A-9, Page 2 of 3 Revised
8	Prior to page 24	Insert Schedule A-10, Page 2 of 3 Revised
9	Prior to page 29	Insert Schedule A-12, Page 3 of 3 Revised
10	Prior to page 32	Insert Schedule A-14, Pages 2 of 3 and 3 of 3 Revised
13	Prior to page 54	Insert Schedules B-7 and B-8 Revised
14	Prior to page 86	Insert Response to Deficiency #14
15	Prior to page 147	Insert Schedule G1W Revised
16	Prior to page 136	Insert Response to Deficiency #16

VOLUME 2

No Changes Required.

VOLUME 3A

Response to Deficiency #	Location of Insert	Description of Insert
1	Prior to page 1	Insert Response to Deficiency #1

VOLUME 3F

Response to Deficiency #	Location of Insert	Description of Insert
2	Prior to Tab 3G	Insert Response to Deficiency #2

VOLUME 3G

Response to Deficiency #	Location of Insert	Description of Insert
5	Prior to Tab 3H	Insert Response to Deficiency #5

VOLUME 4

No Changes Required.

APPLICATION OF SOUTHLAKE UTILITIES, INC.
FOR INCREASED WATER RATES IN LAKE COUNTY
DOCKET NO. 080597-WS

MEMORANDUM OF RESPONSES TO LETTER OF DEFICIENCIES

- Deficiency #1 A copy of the Contract and Service Agreement between Southlake Utilities, Inc. ("Southlake Utilities") and Cagan Management, Inc. is attached.
- Deficiency #2 A copy of the Southlake Utilities Wastewater Treatment Plant Updated Capacity Analysis Report and Operations and Maintenance Performance Report dated April 2006 prepared by Kiera S. Fitzgerald, P.E., TSG Technologies, Inc. is attached.
- Deficiency #3 The Company has recalculated the Wastewater Treatment Plant used and useful percentage reflecting the DEP Permit Capacity based on the annual average daily flow. Revised Schedule F-6, pages 1 of 2 and 2 of 2 and the requested wastewater "Estimate of Inflow and Infiltration" calculations are attached.
- Deficiency #4 The detailed System Maps are being revised by the professional engineer to provide all of the information required by Deficiency #4. They should be available to file with the Commission within the next several days.
- Deficiency #5 A copy of the Department of Environmental Protection Notice of Permit Issuance for the Southlake Utilities Water Treatment Plant Modifications and a copy of the Department of Environmental Protection Permit Authorizing the Construction of the wastewater facilities expansion dated June 9, 2004 are enclosed.
- Deficiency #6 Construction work in progress relates entirely to the development costs associated with Well "F", which will not be in service when the rates set in this rate case become effective.
- Deficiency #7 Revised Schedule A-9, page 2, is attached.
- Deficiency #8 Revised Schedule A-10, page 2, is attached.
- Deficiency #9 Revised Schedule A-12, page 3, is attached.

- Deficiency #10 Revised Schedule A-14, pages 2 and 3, are attached.
- Deficiency #11 This deficiency appears to be the same deficiency as is stated in Deficiency #10 above.
- Deficiency #12 Order No. 24564, entered in Docket No. 900738-WS, does not provide detailed, line-item O&M expenses from the Company's initial rate filing. Expenses stated in the initial filing would be forecasted future estimates, not actual cost-based expenses. As such, they would not provide a sound basis for measuring benchmark expense increases.
- Deficiency #13 Revised Schedules B-7 and B-8 are attached. They utilize the 2002 expenses, the expenses experienced five-years prior to the 2007 historical test year expenses, for the benchmark calculation.
- Deficiency #14 A copy of the Company's 2007 Federal Income Tax Return (Form 1120S) is attached.
- Deficiency #15 Revised Schedule G-1W showing fire protection rates is attached.
- Deficiency #16 The fire demand is based on a fire flow of 1,500 gallons per minute for a 4 hour duration ($1,500 \times 4 \times 60 = 360,000$). The Company serves several commercial buildings, some attached or in close proximity to each other, and also two commercial customers with areas of approximately 200,000 square feet each. The Lake County Needed Fire Flow for Commercial Buildings, copy attached, shows fire flow requirements greater than 1,500 gpm for commercial buildings that size and for a 4 hour duration. Although, for rate setting and used and useful purposes, we did not increase the 1,500 gpm fire flow, we did use the required 4 hour duration. A copy of Lake County Needed Fire Flow For Commercial Buildings is attached.
- Deficiency #17 Schedule F-5 indicates the well yield capacity stated in gallons per day ("GPD") (2,510,000). The gallons per minute ("GPM") is calculated by dividing the GPD (2,510,000) by 1,440 minutes per day ($2,510,000 \div 1,440 = 1,743.06$ GPM). The Supply Capacity for 16 hours of pumping is calculated by dividing the GPD (2,510,000) by twenty-four (24) hours and multiplying the result by 16 hours ($2,510,000 \div 24 = 104,583.33 \times 16 = 1,673,333$ Supply Capacity for 16 hours).
- Deficiency #18 The wastewater gallons treated, as stated on Schedule F-2, should not be equal to, or greater than, wastewater gallons billed, as stated on Schedule E-2. The exception would be a system serving a large

number of sewer-only customers, which is not the case at Southlake. Gallons of wastewater treated reflect the actual wastewater flowing back to, and through, the wastewater treatment plant and measured through a meter located at the treatment facility. Wastewater billed is not metered and does not reflect actual wastewater flow, but rather is based on metered water used by the wastewater customers. Outdoor water use, irrigation and pool filling are examples of water use that will impact sewer bills, as metered water used by sewer customers, but will not be returned as sewage to the wastewater treatment plant. The system-wide amount of water returned and treated as wastewater will not equal or exceed the amount of system-wide water usage.

**APPLICATION OF SOUTHLAKE UTILITIES, INC.
FOR INCREASED WATER RATES IN LAKE COUNTY**

DOCKET NO. 080597-WS

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00986 FEB -98

FPSC-COMMISSION CLERK

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Deficiency #1

DOCUMENT NUMBER - DATE

00986 FEB -98

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CONTRACT AND SERVICE AGREEMENT BETWEEN

Southlake Utilities, INC.
16554 Crossings BLVD. Clermont FL. 34714

AND

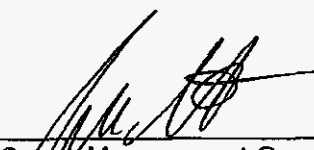
Cagan Management Group, Inc.
3856 Oakton Street, Skokie, IL. 60076

This Agreement is made as of April 1, 2002, between Southlake Utilities, INC. a Florida corporation, with offices at Clermont, Florida, hereafter referred to as "SLU", and Cagan Management Group, Inc., an Illinois corporation with offices in Skokie, IL. hereafter referred to as "CMG":

Agreement

NOW, THEREFORE, in consideration of the premises, the covenants, and agreements set out below, CMG and SLU agree as follows:

1. ENGAGEMENT. SLU hereby engages and retains CMG, who agrees to serve as consultant in connection with overseeing day to day operational activities of SLU including but not limited to daily, quarterly and yearly accounting, review and consultation of ongoing projects, assist in preparation or required reports, and assist SLU staff and employees on an ongoing basis.
2. TERM, The term of the Agreement shall be from the date of execution of the Agreement until cancelled with 60 days written notice by either party.
3. FEES/COMPENSATION: CMG shall receive \$5,000.00 (five thousand dollars) per month. No employees, officers or board of directors of CMG shall receive any compensation from SLU during the term of this contract.


Cagan Management Group, INC.
by: Joseph Gottesman, Controller

4/1/02
(date)


Southlake Utilities, INC.
by: Jeffrey Cagan, President

4-2-2002
(date)

DOCUMENT NUMBER - DATE

00986 FEB-98

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Deficiency #2

Southlake Utilities Wastewater Treatment Plant

Updated Capacity Analysis Report and Operations and Maintenance Performance Report

Facility Number &
Permit Number: FLA010634
Lake County, Florida

Prepared by
Kiera S. Fitzgerald, P.E.

TSG Technologies, Inc.
COA #9026
1855 N.E. 12th Ave., Suite C
Gainesville, Florida 32641
(352) 371-6925

April 2006



Capacity Analysis Report Certifications

Permittee

I have reviewed this report and am fully aware of its contents and intend to comply with the Engineer's recommendations and schedules included in the report.

Signed _____

Jeffery Cagan, President
Southlake Utilities, Inc.
6554 Crossing Boulevard
Clermont, FL 34711
(352) 394-8898

Engineer

The information presented in this report is true and accurate to the best of my knowledge. I have employed sound engineering practices in reviewing the capacity of the referenced facility. I have reviewed my findings and recommendations with representatives of the permittee. They concur with the recommendations. The referenced facility, when properly operated and maintained has adequate capacity to treat the anticipated wastewater and will discharge effluent in compliance with the permitted limits.

Signed _____

Kiera S. Fitzgerald, P.E.
Florida P. E. 38625
1855 N.E. 12th Ave. Suite C
Gainesville, Florida 32641
(353) 371-6925x305

Operation and Maintenance Performance Report Certifications

Permittee

I have reviewed this report and am fully aware of its contents and intend to comply with the Engineer's recommendations and schedules included in the report.

Signed _____

Jeffery Cagan, President
Southlake Utilities, Inc.
6554 Crossing Boulevard
Clermont, FL 34711
(352) 394-8898

Lead Operator

I have reviewed this report and am fully aware of its contents and intend to comply with the Engineer's recommendations and schedules included in the report.

Signed _____

Southlake Utilities, Inc.
6554 Crossing Boulevard
Clermont, FL 34711
(352) 394-8898

Engineer

The information presented in this report is true and accurate to the best of my knowledge. I have employed sound engineering practices in reviewing the operation and maintenance of the referenced facility. I have reviewed my findings and recommendations with representatives of the permittee and the lead operator. They concur with the recommendations. The referenced facility, when properly operated and maintained, will discharge effluent in compliance with the permitted limits.

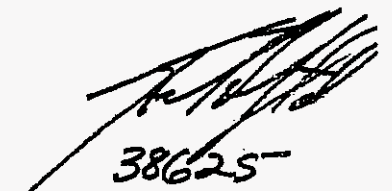
Signed _____

~~FL 38625~~ 4/24/06

Kiera S. Fitzgerald, P.E.
Florida P. E. 38625
1855 N.E. 12th Ave. Suite C
Gainesville, Florida 32641
(353) 371-6925x305

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38625
4/24/06

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Appendix A - Existing Permit

Appendix B - Population and Flow Projections

Appendix C - Unit Process Summary and Calculations

Appendix D - Wastewater Residual Disposal Agreement

Appendix E - Drawings

Facility Background

Site Location and Permitting History

The Southlake Utilities WWTF is an activated sludge wastewater treatment facility consisting of influent screening, anoxic, aeration, secondary clarification, chlorination, and aerobic digestion of residuals. Reuse of treated effluent is applied to a rapid infiltration facility that consists of two percolation ponds with a total wetted area of 206,000 sf. Residuals are transported off-site for treatment and disposal by SYNAGRO. A copy of the agreement for disposal is provided in Appendix D.

Southlake Utilities, Inc., currently operates the facility under Florida Department of Environmental Protection (FDEP) Operating Permit No. FLA010634, which expires November 1, 2006. This permit was most recently modified in June 2004 to increase the capacity to 1.15 mgd AADF. The major modifications to the plant were completed in November 2005 and the final phase of rehabilitating the existing plant will be completed shortly. The most recent update of the capacity analysis report was submitted to the FDEP in October 2006 by Jason Riegler, P.E. of CH2M Hill, 225 East Robinson Street, Suite 505, Orlando, FL 32801.

This document is intended to satisfy the reporting requirements set out in Chapter 62-600 for the Florida Administrative Code (FAC) for renewing a Wastewater Facility operating permit. Specifically, this report addresses the requirements set out in Chapter 62-600.405(5) (a) of the FAC for a Capacity Analysis Report (CAR) and Chapter 62-600.735 of the FAC for an Operations and Maintenance Performance Report (O&MPR). Since the majority of the treatment plant is new or recently retrofit, the O&MPR is very limited.

Treatment Facilities

The Southlake WWTF site layout is illustrated in the attached drawings C-3 and M-1. The treatment plant was recently upgraded to provide additional treatment capacity and the following the upgrades were achieved:

1. Bringing an out of service circular plant into service,
2. Converting the plant disinfection system from gaseous to liquid chlorination,
3. Adding a new headworks structure with dual fine screening and a flow splitter,
4. Adding additional anoxic, aerobic and digestion capacity,
5. Adding a new chlorine contact chamber,
6. Increasing the size of the existing percolation ponds,
7. Adding an operations building, and
8. Adding an emergency generator.

The construction of the new facilities was completed in November 2005. At that time, the mixed liquor was transferred to the "new" plant, T-5, and existing plant, T-4, was taken out of service for maintenance. The maintenance will be completed shortly once the contractor completes some minor punch list items. However, if needed, the plant is ready to be put back into service.

With these upgrades, the plant permit capacity was increased from 0.6 Annual Average Daily Flow (AADF) to 1.15 MGD Annual Average Daily Flow (AADF) or 1.5 Maximum Monthly Average Daily Flow (MMADF).

The upgraded plant consists of the following major facilities:

- Influent Screens
- Influent and Effluent Flow Meters
- Influent Splitter
- Two Circular Steel Plants with zones for:
 - Anoxic
 - Aeration
 - Sludge Digestion
- Process Aeration
- Separate Blowers for Aerobic Digestion
- Sludge Transfer Pump
- Secondary Clarifiers
- Effluent Disinfection
- Effluent Disposal (Rapid Infiltration Basins)
- Emergency Power

Presented below is a brief description for each unit process, organized by facility location. The overall treatment process is schematically illustrated in G-8. The discussion is presented sequentially, where possible.

Screening: The raw sewage is received at the plant through several forcemains, which join into one common 16-inch forcemain. A flow meter is located in a vertical run of this forcemain prior to the influent screens. The forcemain splits into two 10-inch mains that provide flow to 2-72" Vulcan fine screens. These screens are self-cleaning wedgewire screens with 0.1 inch openings. The screens are elevated to allow gravity flow through the splitter box and into the circular treatment plants. The influent lines to the screens have 10" plug valves to allow either of the screens to be taken out of service. The screens have 12" discharge pipes that allow screen sewage to flow to the splitter box.

Chutes are provided to allow screenings to drop from the screens into dumpsters below. The headworks platform has been designed to allow two more screens to be added if the plant expands.

Flow Splitter: Flow from the screens enters a flow splitter box that is designed with two v-notch weirs to evenly distribute flow to the two circular steel treatment plants. The package plants, identified as T-4 and T-5, include the anoxic, aerobic and digestion zones as well as

the secondary clarifiers. The splitters have isolation weirs to allow either plant to be taken out of service.

Anoxic: Flow leaving the splitter enters each anoxic zone. Each plant has a 75,000 gallon anoxic zone. Each zone includes one 4 hp submersible mixer. Mixed liquor from the clarifier is also introduced into the anoxic zone and then, after mixing, flow exits the anoxic zone by gravity into the aeration basin.

Aeration basins: The raw sewage is treated biologically in the aeration zones. These zones are each sized at 495,000 gallons to allow a 50:50 flow split between the plants. The basins can provide a 9-day MCRT at the 1.5 mgd design flow with a MLSS of 2,680 mg/L

Process Aeration: Air is supplied to the aeration basins by two new 125 hp centrifugal blowers. Three 50 hp blowers from the original plant were moved to provide digester aeration and these have been piped into the process aeration header to provide a fully redundant aeration system. Room has been provided in the new blower area to add a third 125 hp blower. This could provide air for a future aeration basin or for redundancy, if the existing blowers are permanently taken out of service.

The new aeration blowers also supply air for the return and waste sludge air-lift pumps. The process calculations in Appendix C provide a listing of the aeration demands and the capacities provided by the blowers.

Secondary Clarification: Each steel plant has a secondary clarifier. T-4 is approximately 44 ft. diameter with an internal weir and T-5 is approximately 46 ft. diameter with an external weir. There is no way to make these two clarifiers operate exactly the same, however, with an average loading rate of 472 gpd/sf at the Maximum Month flow of 1.5 mgd, neither should be overloaded.

Clarified water is collected in launders and conveyed by gravity to the chlorine contact basin. Settled sludge is airlifted and returned to the anoxic zone. Waste sludge from T-4 is pumped by one of the original surge tank pumps to the digester in T-5 or to the digester in T-4. Waste sludge in T-5 is airlifted to the T-5 digester.

Sludge Digestion: The renovations at the plant means that there are now two digesters, one large one in T-5 and the original, smaller one in T-4. The intent is to operate the two digesters in series thus allowing the plant to provide Class B stabilized solids. First sludge is wasted to T-5 and then it is transferred to T-4.

T-4 is connected to a sludge loading station that allows digested sludge to be removed from the plant. Currently the sludge hauler utilizes a mobile dewatering system to reduce the volume of sludge hauled. Filtrate from the dewatering process is drained to the plant drain pump station and returned to the anoxic zone in T-4.

Normally, all sludge is wasted to the T-5 digester, though if T-5 is out of service, T-4's sludge can go directly to the T-4 digester. To achieve this flexibility, the original surge tank pumps were repiped to allow them to be used for sludge transfer. One pump takes waste sludge from the RAS line in T-4 and pumps it to the T-5 digester. An airlift is used in T-5 to waste sludge to the T-5 digester.

After digestion, sludge is transferred from T-5 to T-4. The other pump was relocated to a new pad next to T-5 to achieve this sludge transfer. From T-4, sludge can be wasted by gravity to a sludge loading station.

Effluent Disinfection: The plant effluent is chlorinated in two common wall chlorine contact basins with a combined volume of 75,676 gal. The chlorine contact basins are located after clarification and prior to the rapid infiltration basins. A chlorine solution is injected into the 16-inch effluent line prior to discharging clarified water to the chlorine contact basin. The chlorine solution is pumped to the injector from one of two 1,100 gal. sodium hypochlorite tanks using one of two feed pumps.

Effluent Disposal (Rapid Infiltration Basins): The treated effluent is discharged into one of two (2) rapid infiltration basins, whose approximate wetted areas are as follows:

Basin 1	67,500 square feet
Basin 2	138,500 square feet

The approximate total basin wetted area is 206,000 square feet. Water flows by gravity from the chlorine contact basin to the rapid infiltration basins. The basins are physically separated from each other by an earthen berm. The physical separation allows for resting and rotation of the basins in compliance with Chapter 62-610 FAC

Emergency Power: As part of the upgrades, the plant reliability was upgraded with the addition of an emergency power generator. The generator was sized to handle at least the following loads at <70% capacity:

- o 1-Large Blower 125 hp
- o 1-Small Blower 50 hp
- o 2-Clarifiers 1.5 hp (0.75 hp each)
- o 2-Anoxic Mixers 8 hp (4hp each)
- o Miscellaneous Load (22.5 kVA)

The generator is equipped with an automatic transfer switch

Facility Modifications

The treatment process has been changed since the Department issued the current operating permit. As noted on a letter from the Department issued June 9, 2004:

“The Department is in receipt of your request to revise the conditions of the permit referenced above. The conditions are changed as follows:

This permit authorizes the construction of a plant expansion. The permitted capacity of the system, once the Notification of Completion of Construction for Domestic Wastewater Facilities, DEP Form 62-620.910(12), has been submitted will be 1.15 MGD Annual Average Daily Flow (AADF) and 1.5 Maximum Monthly Average Daily Flow (MMADF). Components of the expansion include two new self-cleaning wedgewire screens each with influent isolation valves to allow the shut down of one screen, and a splitter box. The expanded activated sludge biological treatment will consist of two circular steel tanks each with an anoxic zone followed by the aerobic zone. Each anoxic zone will be equipped with paddle mixers and the aeration zone will utilize diffused air. The existing chlorine contact chamber will be removed from service and replaced with a 75,676-gallon dual train chlorine contact chamber. An additional 71,000 square foot percolation pond will be constructed adjacent to the existing percolation ponds.”

The above noted modifications have been made. In addition, an emergency power generator and an operations building have been added to the treatment plant. Record drawings of the modifications are attached. The construction of the new facilities is complete, the new headworks, T-5, the new chlorine contact basins, the chemical feed system and the new ponds are in operation. The rehabilitation of the T-4 tank walkways and metallurgy will be completed shortly.

Permitted Capacities

Under the existing operating permit, the Southlake WWTF is authorized to treat a maximum Annual Average Daily Flow (AADF) of 1.15 mgd and a Maximum Monthly Average Daily Flow (MMADF) of 1.5 mgd.

The WWTP disposes of the treated effluent in the rapid infiltration basin(s). The permitted effluent limits for the WWTF are as listed below.

Table 1-1
Permitted Effluent Limits-Reuse and Land Application Systems (R001)

Parameter	Max/Min	Annual Average	Monthly Average	Single Sample	Frequency of Analysis	Sample Type
Flow		1.15	1.5		5 days/week	Flow meters & Totalizers
CBOD ₅ (mg/L)	Maximum	20.0	30.0	60.0	Weekly	8-hour FPC
TSS (mg/L)	Maximum	20.0	30.0	60.0	Weekly	8-hour FPC
pH	Range	6.0 to 8.5	--	--	5 days/week	Grab
Coliform, Fecal #/100ML	Maximum	200	400 (90%)	800	Weekly	Grab
Chlorine Residual (mg/L)	Minimum	--	--	0.5	5 days/week	Grab
Nitrate, Nitrogen, Total (as N) (mg/l)	Maximum	--	--	12.0	Weekly	8-hour FPC

Report Organization

In compliance with FDEP guidelines, this report contains the following information relating to operation of the Southlake WWTF:

- Existing performance trends both influent and effluent. Trends will include influent flow and loading information, and treated effluent water quality. (Chapter 2)
- Population and flow projections (Chapter 3)
- Condition assessment of process equipment (Chapter 4)
- Unit process treatment efficiency assessment. (Chapter 5)
- Operation and Maintenance program assessment. (Chapter 6)
- Summary and recommendations (Chapter 7)

Existing Process Conditions

Current and Historical Flows

The Southlake Utilities Service area is in a growth mode. Therefore, when reviewing the plant flows, only the last two years of data was used, as previous years would not be relevant. Table 2-1 provides a summary of the Monthly Average and Maximum Day flow data from January 2004 through February 2006 along with ratios for the Maximum Month and Peak Day flows to the Average Flow.

Table 2-1
Influent Flow Characteristics

Month	Average Flow mgd	Max. Day Flow mgd
Jan-04	0.504	0.661
Feb-04	0.530	0.788
Mar-04	0.558	0.76
Apr-04	0.534	0.99
May-04	0.555	0.74
Jun-04	0.595	0.916
Jul-04	0.642	0.876
Aug-04	0.674	1.052
Sep-04	0.548	0.897
Oct-04	0.636	1.033
Nov-04	0.594	0.886
Dec-04	0.654	1.058
Jan-05	0.660	0.872
Feb-05	0.679	0.904
Mar-05	0.680	0.762
Apr-05	0.694	0.853
May-05	0.650	0.999
Jun-05	0.757	1.100
Jul-05	0.550	1.400
Aug-05	0.600	0.600
Sep-05	0.493	1.100
Oct-05	0.600	0.600
Nov-05	0.600	0.600
Dec-05	0.630	0.963
Jan-06	0.620	0.755
Feb-06	0.640	1.000
Average	0.611	
Maximum	0.757	1.400
Ratio Max. Day/Annual Ave.		2.29
Ratio Max. Month/Annual Ave.	1.24	
Design Value MMADF/AADF & PDF/AADF	1.30	2.0
Capacity Remaining Based on MMADF	50%	

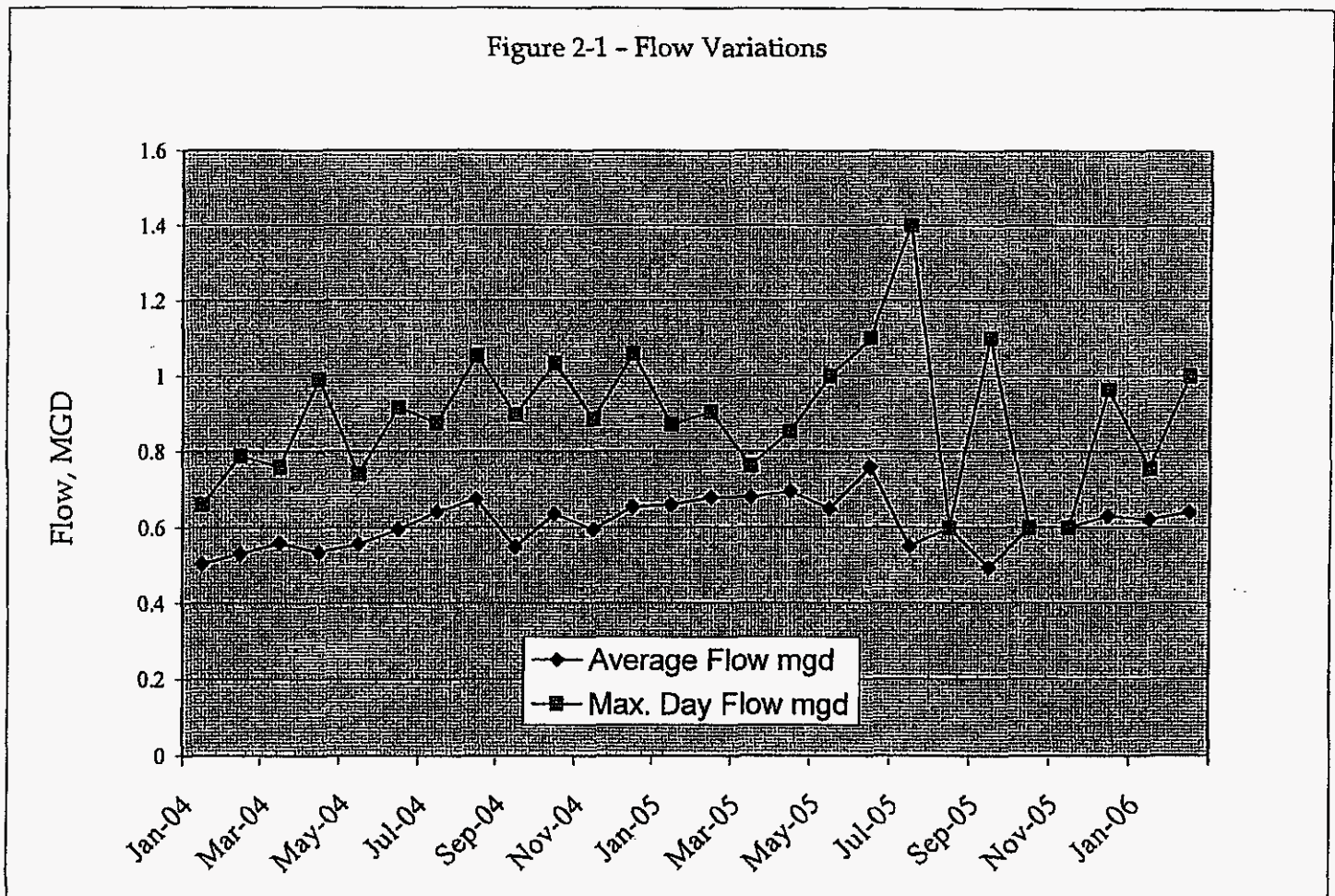
As noted, the treatment plant is operating at a flow slightly higher than the previously permitted capacity of 0.6 mgd. However, it is well below the revised MMADF capacity of 1.5 mgd per the permit modification dated June 2004, with approximately 50% capacity remaining.

Seasonal Flow Variations

Further review of the Monthly and Peak Day Flows (illustrated as Figures 2-1) revealed no obvious seasonal variations in flow. However, hurricanes in September 2004 likely increased the flows in this period, masking what would typically be a low occupancy period for Central Florida.

Comparing the January - February flows indicates a significant upward trend in the flow data with an increase of 0.515 to 0.630 mgd.

Figure 2-1 - Flow Variations



Influent Loading

The WWTF influent is sampled and tested weekly to establish influent CBOD₅ and TSS values and the values reported for the period, January 2004 through February 2006 are presented as Table 2-2. The design criteria values that were utilized in the engineering report submitted with recent plant modification application are also included in the table for comparison. These values are within the typical ranges for domestic wastewater as presented in *Design of Municipal Wastewater Treatment Plants, Manual of Practice No. 8* (Water Environment Federation [WEF], 1992) and *Manual and Report on Engineering, No. 76* (American Society of Civil Engineers [ASCE] 1992).

Table 2-2
Influent Loading Characteristics

Month	Influent cBOD ₅ mg/L	Influent TSS mg/L	Influent cBOD ₅ lb/d	Influent TSS lb/d
Jan-04	146	280	614	1175
Feb-04	147	304	652	1344
Mar-04	182	255	847	1187
Apr-04	236	232	1051	1033
May-04	280	163	1296	754
Jun-04	255	178	1265	883
Jul-04	248	112	1328	600
Aug-04	149	232	838	1304
Sep-04	176	88	804	402
Oct-04	273	200	1448	1061
Nov-04	285	72	1412	357
Dec-04	303	123	1653	671
Jan-05	158	210	872	1156
Feb-05	150	204	849	1155
Mar-05	155	132	878	749
Apr-05	159	147	920	851
May-05	157	101	848	545
Jun-05	153	94	966	595
Jul-05	142	99	649	452
Aug-05	203	307	1014	1536
Sep-05	167	151	685	621
Oct-05	174	142	872	708
Nov-05	219	108	1096	538
Dec-05	230	84	1208	439
Jan-06	211	101	1091	522
Feb-06	207	87	1105	464
Average	199	162	1010	812
Maximum	303	307	1653	1536
Ratio Max. Month/Annual Ave.	1.53	1.90		
Design Values mg/L & lb/d	200	200	2502	2502
Remaining Capacity, lb/d			849	966
Remaining Capacity, %			34%	39%

Based on the design loadings, the plant has between 24 and 39% capacity remaining. However, the calculations submitted with the most recent permit modification showed that the plant would be operating at a 9 day MCRT with this loading. If the MCRT were reduced, the capacity could match the 50% capacity remaining based on flow.

Effluent Quality

The WWTF effluent is sampled and tested weekly for CBOD₅, TSS, Nitrate Nitrogen, and Fecal Coliforms and is tested daily for pH and chlorine residual. With the exception of Fecal Coliforms, all values reported were in compliance.

During the period of October through December 2004, there were six Fecal Coliform excursions. During this period, the plant was under construction and the chlorine contact chamber was taken out of service and replaced. We suspect these problems were due to the construction interruptions and have been resolved, as no excursions were reported in the last year.

Untreated Waste Discharges or Spills

The Engineer is unaware of any discharges or spills of untreated waste from the Southlake WWTF.

FDEP Notices and Orders

Southlake Utilities was requested to provide the Engineer with any FDEP Notices or Administrative Orders that were issued since the last permit renewal (August 9, 2002.) Two letters responding to FDEP notices dated 7/23/03 and 2/10/05 were provided. A review of these documents indicates that the items noted by the Department were satisfied with the treatment plant upgrade.

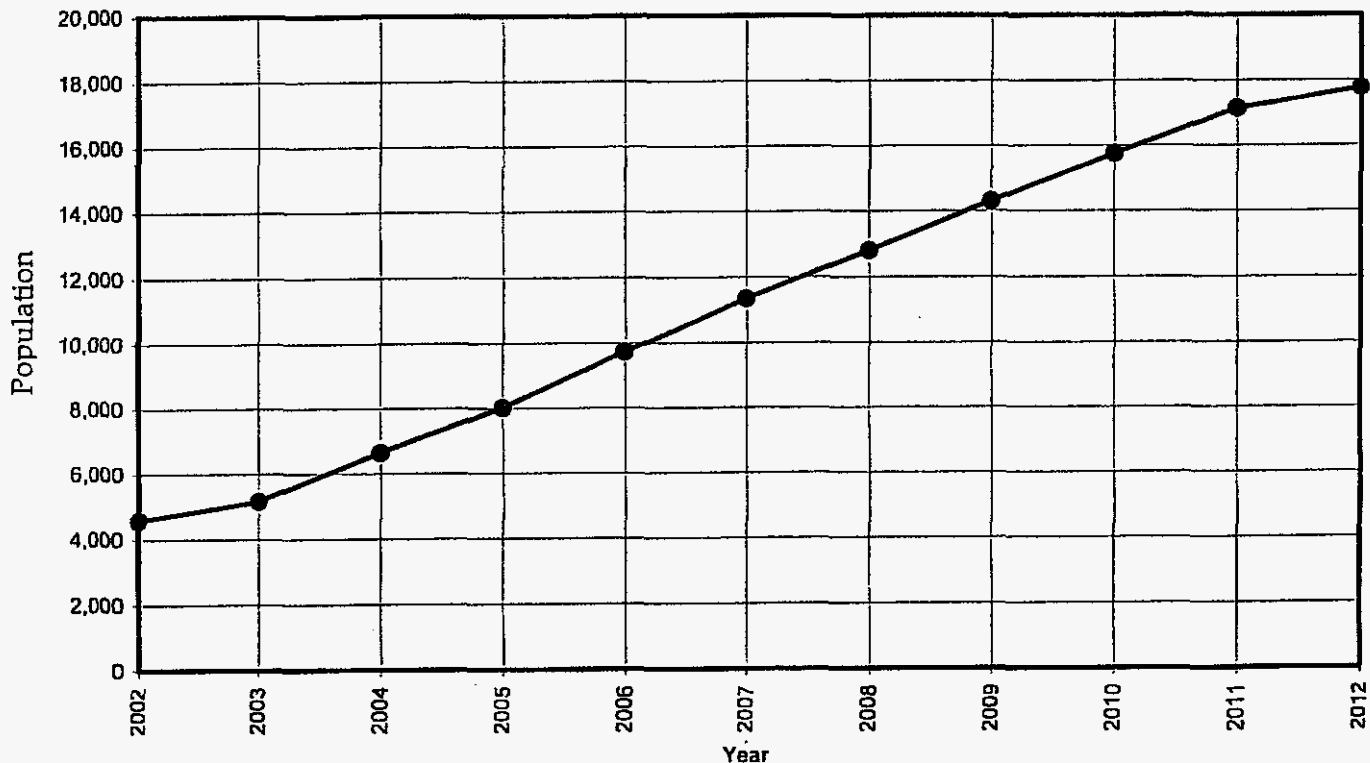
With the completion of the modifications, the Engineer is not aware of any outstanding issues with the Department.

Population, Flow and Load Projections

Population Growth

Southlake utilities prepared a list of Residential, Multifamily, Commercial and Vacant properties within its service district and used this to estimate the population growth from 2002 to 2012. The population projections are provided in Appendix B and these were used to create the population projections in Figure 3-1 below.

Figure 3-1
Population Projections



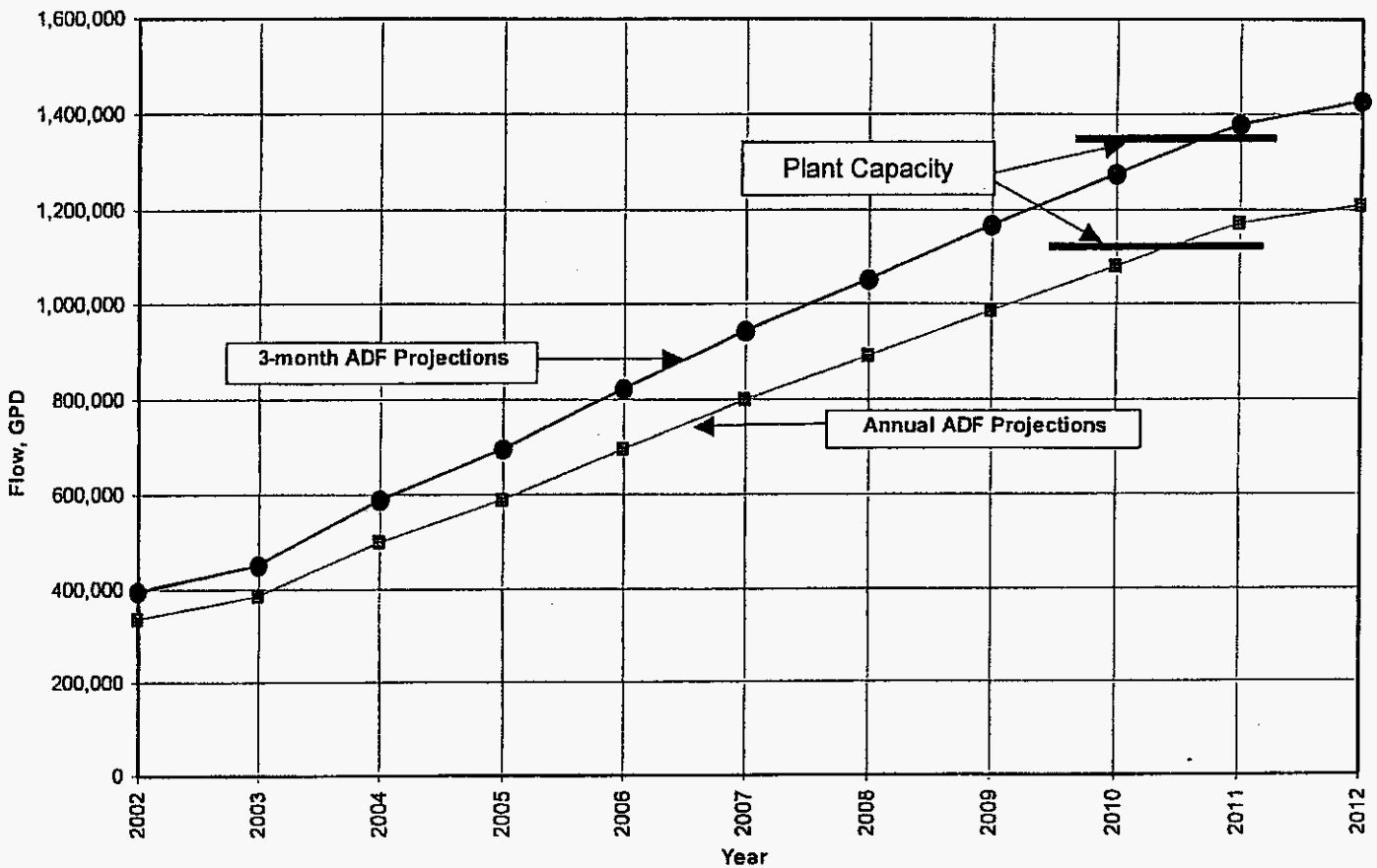
Wastewater Flow and Load Projections

Using the population projections, and the unit flows provided in Table 3-1, the projected wastewater flows were developed by Southlake Utilities. The estimated flows based on these unit flows are presented graphically in Figure 3-2 in tabular form in Appendix B.

Table 3-1 Unit Flows Used to Estimate WWTP Flows

Single Family Unit flow = 150	gpd
Multi-family Unit Flow = 94	gpd
Multi-family Unit Flow = 75	gpd (Cagan multi-family units)
Commercial ERC = 200	gpd
3-month ADF to AADF ratio = 1.18	

Figure 3-2
Southlake Utilities
Wastewater Projections (3-month & Annual ADF)



The flows projected for 2005 was compared to the actual flows in Table 3-2. Based on this analysis, the flow projections are within 10% of the actual flow.

Therefore, the WWTP capacity is believed to be adequate for until at least 2010. If these trends hold true, plans for expansion should begin within the next year.

Table 3-2 Comparison of Estimate and Actual WWTP Flows

	Actual	Projected	Delta, mgd	Delta, %
AADF 2005	0.674	0.633	-0.041	-6.1%
Max 3 mo. ADF 2005	0.700	0.695	-0.005	-0.8%

Condition Assessment of Process Equipment

Survey of Process Equipment

The Engineer inventoried the process equipment currently installed at the Southlake WWTF. The objectives of the survey were as follows:

1. Identify all process equipment currently in use at the WWTF and assess its condition.
2. Identify any changes made in process equipment from the original construction documents.
3. Identify any deficiencies in the process equipment or any process.

A summary of the survey results is provided below, organized by treatment facilities.

Tank volumes, major equipment components and design criteria are listed in the summary table provided in Appendix C. This information was originally provided in the application to modify the plant to increase the capacity to 1.5 mgd MMADF.

Headworks

A new headworks structure was constructed with the recent expansion. This structure includes two 72-inch diameter screens and an influent splitter on an elevated concrete slab. The slab is designed to allow two more screens to be added in the future.

The structure, screens and splitter are new and in good working order. However, the isolation weir gate in the splitter leaks. The contractor will be installing a seal to eliminate this leak when they are ready to place T-4 back in service.

Package Plants

The main treatment process occurs in two circular steel package plants identified as T-4 and T-5. These tanks include the anoxic, aerobic, secondary clarification and digestion processes.

In 2004, T-4 was in operation but T-5 was out of service. T-5 had a circular clarifier in it to provide a redundant clarifier, but the clarifier was not in service. This plant was fully retrofit with aeration piping, diffusers, a new hydrostatic wall to provide a separate zone for digestion, new walkways, an anoxic mixer, a new clarifier motor, and new airlifts. The plant was water tested, leaks were welded and the plant was sandblasted and painted. T-5 is now in full operation and is in good working order. The only process modification remaining is to add a scum airlift. Currently scum is directed to the plant drain pumpstation and pumped into T-4. To avoid overloading the liftstation, scum needs to be manually wasted. The airlift will eliminate this problem.

Once T-5 was in service, T-4 was taken out of service to allow it to be maintained. The plant servicing included, replacing diffusers, adding new RAS/WAS piping, removing an out of

service inset clarifier that was obstructing flow in the aeration basin, providing a new walkway, repairing failed metalwork, spot blasting and painting the tank. Minor items, mostly additional repairs to the handrails and walkways, need to be completed on this retrofit and it is anticipated to be back on line shortly.

The plant is in working order and, if necessary, could be called into service immediately. The two plants are adequately sized to treat the 1.5 mgd MMADF flows. Each plant is hydraulically capable of handling the peak flow associated with this design flow.

With completion of the repairs on T-4, both tanks will be in good working order both mechanically and structurally.

Effluent Disinfection

Chlorine Contact Basins: One of the major items addressed with the recent upgrades was the replacement of undersized precast tanks that were used as chlorine contact chambers with new, poured in place, tanks with proper baffling. The chlorine contact chambers are sized to provide over 30 minutes at peak hour flow, providing a fully redundant system.

The tanks are in good working order. However, the effluent v-notch weir is leaking, making flow measurement inaccurate. This is scheduled for replacement by the end of April. Once this is replaced the flow meter can be re-installed and calibrated.

In addition to fixing the weir, when T-4 is placed back in service, it is recommended that these tanks be pumped down and cleaned to remove algae buildup.

Chlorination Feed System: The chlorination feed system consists of a two pumps that convey hypochlorite solution from two storage tanks to an injector placed in the 16-inch effluent line. Flow is distributed to each basin over weirs placed in a channel, assuring adequate mixing prior to entering the serpentine tanks.

Bulk hypochlorite storage is provided in the two feed tank, which are 1,100 gallon double walled tanks. These tanks and the chlorine feed pumps are located in a curbed area below the headworks. Shortly after startup, the chlorine pumps developed leaks. The cause of these leaks is still be investigated by the pump manufacturer. There is one pump in good working order after the pump seals were replaced. Additional rebuild kits and a replacement pump were ordered and should be onsite before this report is submitted.

The effluent disinfection system is oversized for the 1.5 mgd plant and will be able to provide the contact times and redundancy necessary for high level disinfection if reuse is initiated in the future.

Effluent Disposal

Rapid Infiltration Basins: The treated effluent is discharged into one of two (2) rapid infiltration basins. The ponds are man-made, earthen basins with a total wet area of approximately 206,000-square feet. An accounting of approximate wetted areas for each basin is as follows:

Basin 1	67,500 square feet
Basin 2	138,500 square feet

Treated effluent flows by gravity from the chlorine contact basin to the rapid infiltration basins. The yard piping outside of the chlorine contact basins is configured to deliver treated effluent to the basins individually. Diversion valves are present and operational facilitating the basin isolation.

The percolation/evaporation ponds do not display evidence of overflow or seepage around their edges. The western pond was in service during the most recent site visit and it was holding only a minimal amount of water. The eastern-most pond was been in service for most of the treatment plant construction and was recently taken out of service to dry.

Continued service of the rapid infiltration basins through the permit period is anticipated.

Sludge Digestion & Holding

Currently, only T-5's digester is in operation while T-4 is being rehabilitated and the sludge lines repiped. T-5's digester is significantly larger than the T-4 digester, which has made it much easier for the operators to properly manage the solids inventory. During the recent visit, the digester was only $\frac{1}{4}$ full as sludge was recently removed from the plant.

The contract sludge hauler has been scheduled to routinely remove solids from the plant and will continue to do so.

Continued service of the sludge digestion and off-site disposal system is anticipated to be adequate through the permit period is anticipated.

Standby Power Generation

The new emergency generator is on-site, has been tested and certified as fully operational. During a recent site visit the generator was in service for its weekly test and, when the switch was made back to utility power, the automatic transfer and startup sequence functioned properly. The O&M Manuals for the Emergency Generator need to be obtained and included in the plant operations manual.

Unit Process Treatment Efficiency Assessment

Assessment Procedure

The Engineer chose to use the following design criteria for assessing the WWTF operating performance. The criterion source is included in the listing.

- ✓ Influent Flows -For the treatment plant design flows, the values utilized in the most recent construction permit application were utilized. These limits are listed below and assumed a peak hour factor of 3 on the AADF of 1.15 mgd and a peak day factor of 2, as noted below.

- Average Daily Flow (AADF) 1.15 mgd
- Maximum Month AADF (MMAADF) 1.50 mgd MM/AA = 1.3
- Maximum Day Flow (MDF) 2.31 mgd MD/AA = 2.0
- Peak Hour Flow (PHF) 3.45 mgd PH/AA = 3.0

Review of the most recent flows to the plant indicate that the ratios are fairly close to what the plant has been experiencing. Given that the service are is in growth mode, deviations of peaks to average are not unexpected. In all cases, the maximum daily flow recorded is well within the design capacity of the renovated plant facilities.

- ✓ Influent Loading.

- cBOD₅ 200 mg/l
- TSS 200 mg/l

As noted on the existing plant data in Table 2-2, the average cBOD₅ and TSS are typically below 200 mg/L. However, the infrequent data collection (weekly 8-hr. samples) lends itself to skewed data. Therefore, the plant capacity will be reviewed based on the permit values of 200 mg/L.

- ✓ Unit Process Design Standards for Conventional Activated Sludge Process - *Recommended Standards for Wastewater Facilities* (Great Lakes-Upper Mississippi River Board of Stand and Provincial Public Health and Environmental Managers 1997) and *Wastewater Engineering Treatment and Reuse*, Metcalf & Eddy, 4th Edition, 2003.

- Biological Treatment
 - Loading < 40 lbs BOD₅/d/1000 cf
 - Hydraulic Ret. Time 12-24 hrs.
 - Solids Retention Time 3-15 days
 - MLSS 1,500-4,000 mg/L
- Clarification
 - Surface Loading 400-700 gpd/sf (ave.)/1,000-1,600 gpd/sf (peak)
 - Solids Loading <40 lb/d/sf

- Disinfection
 - Detention Time >30 min (design)/>15 min (peak)
- ✓ Chapter 62-610 *Reuse of Reclaimed Water and Land Application*, Florida Department of Environmental Protection Rules. Based on a site specific pond analysis prepared by Devo Seereeram, Consulting Geotechnical Engineer, dated July 2001, the effluent disposal system was rated at an elevated loading rate as noted below.
 - Effluent Disposal
 - Hydraulic Loading < 5.6 gpd/sf (design)

Process Assessment

A summary of the Engineer's assessment for each unit process is provided in Appendix C. Based upon the submitted criteria, the plant is capable of treating the permitted 1.15 mgd annual average daily flow and the associated peak flow of up to 3.46 mgd.

Operation and Maintenance Program Assessment

Record Drawings

Southlake WWTF just recently completed construction and record drawings have been prepared. The record drawing information is provided in drawings C-3, M-1 and E-1, attached to this application.

Operation & Maintenance Manuals

An O&M Manual for the Southlake WWTF is located onsite and an electronic version was also provided to the Owner to facilitate future updates. As noted, the O&M Manual for the Emergency Generator needs to be added to this manual.

WRF Operation and Maintenance

Operation Logs: The Southlake WWTP operators maintain an operation and maintenance log for the WWTP. The log is stored in the new operations building. Entries are hand written daily.

WRF Operators: Based on the requirements stipulated in Chapter 62-699 of the FAC, the staffing reported at Southlake WWTF appears adequate. Currently, Southlake has two certified operators on staff and an operator spends a minimum of 6 hours each day, 5 days per week plus one hour is spent per each weekend day. Listed below are the names, responsibility, certification level and number. Listed below are the names, responsibility, certification level and number for each operator:

Table 6-1
WWTF Operators

Name	Certification Level	Number	Expiration Date
Angel DeLeon	Class C	0013887	4/30/07
Joseph F. Gratson	Class B	0007116	4/30/07
Eduardo R. Garcia	Class C	0014360	4/30/09

Laboratory Testing Program: Southlake WWTF currently utilizes Tri-Tech Analytical Laboratories, Inc. to perform the laboratory analyses as required by Chapter 62-601 of the FAC. Tri-Tech Analytical Laboratories, Inc., is certified by Health and Human Resources Service (HRS).

Permit Reporting and Data Collection: In a review of the monthly and daily sampling reports, several data entry errors were noted (ex. 17.4 mg/L influent cBOD₅ on the monthly report when the average was 174 mg/L.) None represented any permit compliance deviation, however, the operators should set up spreadsheets linking the daily reports to the monthly reports to avoid these errors.

Summary and Recommendations

Engineer's Assessment

In the Engineer's opinion the WWTP capacity of 1.5 mgd MMADF appears appropriate and the current operations permit should be renewed. If growth continues as predicted, the critical unit processes appear to have sufficient capacity to adequately treat the MMADF through 2010. As this is <5 years away, expansion planning should begin shortly. If the flows continue to increase at the current rate, the following implementation schedule has been recommended.

Implementation Schedule:

Prepare Feasibility Report to Address Expansion Options	January 2007
Prepare Preliminary Engineering Report	March 2007
Submit Permit Application to FDEP	June 2007
Submit Site Plan Modification Application to Lake County	August 2007
Begin Construction	June 2008
Start-up Expanded Plant	January 2010

As noted below, there are several items that have not yet been completed as part of the upgrade or are warrentee items from the construction. These items are on the Contactor's punch list and should be complete within the next two months.

Headworks:

- ✓ Install a seal to eliminate the leak in the isolation gate.

Aeration Basins & Digesters:

- ✓ Complete the T-4 painting and metalwork and place back in service.

Clarification:

- ✓ Add scum airlift in T-5.

Disinfection:

- ✓ Replace failed seals on spare chlorine pump.
- ✓ Clean Chlorine Contact Chambers.

Flow Measurement:

- ✓ Fix the effluent weir and calibrate the effluent flow meter.
- ✓ When the effluent flow meter is operational, return the influent flow meter to manufacturer for replacement of battery backup.

Effluent Disposal:

- ✓ No repairs noted other than routine pond maintenance.

Sludge Digestion:

- ✓ Complete T-4 and place back in service.

Once these repairs are made, the unit processes and process equipment should perform satisfactorily through the permit period.

Capacity Assessment Summary

Based on the assessment documented herein the Engineer has concluded the following:

- The WWTP has adequate hydraulic capacity to accept and adequately treat the wastewater flow anticipated for the next 4-5 years.
- The standard WWTP design criteria for domestic wastewater treatment are still valid.

Operation and Maintenance Performance Summary

Condition Assessment of Unit Process Equipment: In the Engineer's opinion, once the maintenance on T-4 is completed and the items noted above are corrected, the key elements of the treatment plant will be in near new condition and will not need any additional repair, replacement or maintenance.

Unit Process Treatment Efficiency: In the Engineer's opinion, the critical unit processes appear adequate to treat the expected influent flows and loads associated with the 1.15 mgd AADF capacity.

Operation and Maintenance: In the Engineer's opinion, operation and maintenance of the WWTP is adequate to assure continued acceptable operation. The Engineer recommends that once the operators take full occupancy of the operations building that they load the appropriate software to allow the record drawings and the O&M Manual to be readily accessible at the plant.

In addition, the FDEP operations reports should be kept electronically to avoid some of the errors observed in transferring daily data to the monthly report.

APPENDIX A
Existing Permit



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Colleen Castille
Secretary

Sent via e-mail: jeff@cagan.com

SOUTHLAKE UTILITIES INC
6554 CROSSINGS BOULEVARD
CLERMONT FL 34711

ATTENTION JEFFREY CAGAN
PRESIDENT

Lake County - DW
Southlake Utilities WWTF
File Number: FLA010634-005-DW1P

Dear Mr. Cagan:

The Department is in receipt of your request to revise the conditions of the permit referenced above. The conditions are changed as follows:

This permit authorizes the construction of a plant expansion. The permitted capacity of the system, once the Notification of Completion of Construction for Domestic Wastewater Facilities, DEP Form 62-620.910(12), has been submitted will be 1.15 MGD Annual Average Daily Flow (AADF) and 1.5 Maximum Monthly Average Daily Flow (MMADF). Components of the expansion include two new self-cleaning wedgewire screens each with influent isolation valves to allow the shut down of one screen, and a splitter box. The expanded activated sludge biological treatment will consist of two circular steel tanks each with an anoxic zone followed by the aerobic zone. Each anoxic zone will be equipped with paddle mixers and the aeration zone will utilize diffused air. The existing chlorine contact chamber will be removed from service and replaced with a 75,676-gallon dual train chlorine contact chamber. An additional 71,000 square foot percolation pond will be constructed adjacent to the existing percolation ponds. The existing clarifiers were built with adequate capacity to accommodate this expansion. Monitoring requirements under this permit are effective on the first day of the second month following submission to the Department DEP Form 62-620.910(12), Notification of Completion of Construction for Domestic Wastewater Facilities. [62-620.630(2)] In accordance with Specific Condition 7 of this permit. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements.

1. The permittee shall give at least 72-hours notice to the Department's Central District Ground Water Section, prior to the installation of the two new monitoring wells detailed below. [62-4.070]
2. Prior to construction of new ground water monitoring wells, a soil boring shall be made at each new monitoring well location in order to establish the well depth and screen interval. [62-522.900(3)]
3. Within 30 days after installation of a new monitoring well, the permittee shall submit to the Department's Central District Ground Water Section detailed information on the well's location and construction on the attached DEP Form(s) 62-522.900(3), Monitor Well Completion Report. [62-522.600]

The following Operation Requirements shall replace III. 4. and III. 5. in the permit.

4. The following monitoring wells shall be sampled in accordance with the monitoring frequencies specified in Permit Condition III.5. for Reuse System R-001. Quarterly sampling must be reasonably spaced to be representative of potentially changing conditions.

Facility Well Name	Permit Bundle Well ID	WAFR#	GMS#	Depth (feet)	Aquifer Monitored	New or Existing
Pond Site						
MW-1	MWC-1	4213	3035A16750	23	Surficial	existing
MW-2	MWC-2	4212	3035A16751	23	Surficial	existing
MW-3	MWC-3	4211	3035A16752	23	Surficial	existing
MW-4	MWC-4	4210	3035A17263	23	Surficial	existing
MW-5	MWB-5	4209	3035A17264	13	Surficial	existing
MW-6	MWC-6	56158	--	--	Surficial	New
MW-7	MWC-7	56159	--	--	Surficial	New
PZ-1	MWP-1	4208	3035A17265	18.9	Surficial	existing
PZ-2	MWP-2	4207	3035A17266	18.9	Surficial	existing
PZ-3*	MWP-3	4206	3035A17267	18.9	Surficial	existing
PZ-4	MWP-4	4205	3035A17268	18.9	Surficial	existing

MWB = Background; MWI = Intermediate; MWC = Compliance, MWP-Piezometer
 If the location of PZ-3 interferes with the pond construction please contact the Program Manager of the Ground Water Section, Anil Desai at (407) 893-3305 to discuss replacement of the piezometer or the reconfiguration of the pond.

[62-522.600, 12-9-96][62-610.513,8-8-99]

5. The piezometers identified in Permit Condition III. 4 shall be sampled quarterly for water level only. The monitoring wells identified in Permit Condition III. 4 shall be sampled for the following parameters:

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	feet	In-situ	Quarterly
Nitrogen, Nitrate, Total (as N)	10	mg/l	Grab	Quarterly
Solids, Total Dissolved (TDS)	500	mg/l	Grab	Quarterly
Chloride (as Cl)	250	mg/l	Grab	Quarterly
Coliform, Fecal	4	#/100ml	Grab	Quarterly
pH	6.0 to 8.5	s.u.	In-situ	Quarterly
Turbidity	Report	ntu	Grab	Quarterly

[62-522.600(11)(b), 12-9-96] [62-601.300(3), 62-601.700, and Figure 3 of 62-601, 12-24-96][62-601.300(6), 12-24-96] [62-601.300(7), 12-24-96][62-520.300(9), 12-9-96]

6. Prior to placing the new facilities into operation or any individual unit processes into operation, for any purpose other than testing for leaks and equipment operation, the permittee shall complete and submit to the Department DEP Form 62-620.910(12), Notification of Completion of Construction for Domestic Wastewater Facilities. [62-620.630(2)]
7. Within six months after a facility is placed in operation, the permittee shall provide written certification to the Department on Form 62-620.910(13) that record drawings pursuant to Chapter 62-600, F.A.C., and that an operation and maintenance manual pursuant to Chapters 62-600 and 62-610, F.A.C., as applicable, are available at the location specified on the form. [62-620.630(7)]. Please be advised that the Department will review the operations and maintenance manual upon its availability.
8. This permit does not cover any of the structural engineering aspects of this project.

This letter must be attached to Wastewater Permit No. FLA010634 and becomes a part of and subject to all conditions of that permit.

The Department's proposed agency action shall become final unless a timely petition for an administrative hearing is filed under sections 120.569 and 120.57 of the Florida Statutes before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Petitions by the applicant or any of the parties listed below must be filed within fourteen days of receipt of this written notice. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the notice or within fourteen days of receipt of the written notice, whichever occurs first.

Under section 120.60(3) of the Florida Statutes, however, any person who has asked the Department for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

- (a) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any; the Department permit identification number and the county in which the subject matter or activity is located;
- (b) A statement of how and when each petitioner received notice of the Department action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department action;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A statement of facts that the petitioner contends warrant reversal or modification of the Department action;
- (f) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation under section 120.573 of the Florida Statutes is not available for this proceeding.

This action is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above. Upon the timely filing of a petition this order will not be effective until further order of the Department.



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

David B. Struhs
Secretary

STATE OF FLORIDA DOMESTIC WASTEWATER FACILITY PERMIT

PERMITTEE:

Southlake Utilities, Inc

PERMIT NUMBER: FLA010634
PA FILE NUMBER: FLA010634-004-DW1
ISSUANCE DATE: August 9, 2002
EXPIRATION DATE: November 1, 2006

RESPONSIBLE AUTHORITY:

Mr. Jeffrey Cagan
President
6554 Crossing Boulevard
Clermont, FL 34711

(352) 394-8898

FACILITY:

Southlake Utilities WWTF
U.S. Highway 27 South
Clermont, FL
Lake County
Latitude: 28° 21' 07" N Longitude: 81° 40' 42" W

This permit is issued under the provisions of Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code. The above named permittee is hereby authorized to operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

TREATMENT FACILITIES:

An existing 0.300 mgd annual average daily flow (AADF) permitted capacity extended aeration activated sludge domestic wastewater treatment plant to be re-rated to 0.600 MGD AADF consisting of flow equalization, influent screening, aeration, secondary clarification, chlorination and aerobic digestion of residuals.

REUSE:

Land Application: An existing 0.755 mgd AADF permitted capacity rapid infiltration basin system (R-001). R-001 consists of two percolation ponds with a total wetted area of 3.088 acres having a capacity of 0.755 mgd located approximately at latitude 28° 21' 07" N, longitude 81° 40' 42" W. Flows to the reuse system are limited to 0.600 MGD, the permitted capacity of the treatment plant.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions set forth in Pages 1 through 17 of this permit.

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 PERMITTEE: Southlake Utilities, Inc
 6554 Crossing Boulevard
 Clermont, FL 34711

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I. RECLAIMED WATER AND EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Reuse and Land Application Systems

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to direct reclaimed water to Reuse System R-001. Such reclaimed water shall be limited and monitored by the permittee as specified below:

Parameter	Units	Max/Min	Reclaimed Water Limitations				Monitoring Requirements				
			Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes	
Flow	mgd	Maximum	0.600	-	-	-	5 Days/Week	Recording flow meters and totalizers	EFF-1	See Cond. I.A.3.	
BOD, Carbonaceous 5 day, 20C	mg/l	Maximum	20.0	30.0	45.0	60.0	Weekly	8-hour flow proportioned composite	EFA-1		
Solids, Total Suspended	mg/l	Maximum	20.0	30.0	45.0	60.0	Weekly	8-hour flow proportioned composite	EFA-1		
pH	s.u.	Range	-	-	-	6.0 to 8.5	5 Days/Week	Grab	EFA-1		
Coliform, Fecal	#/100ml	Maximum	See Permit Condition I.A.4.					Weekly	Grab	EFA-1	
Total Residual Chlorine (For Disinfection)	mg/l	Minimum	-	-	-	0.5	5 Days/Week	Grab	EFA-1	See Cond. I.A.5.	
Nitrogen, Nitrate, Total (as N)	mg/l	Maximum	-	-	-	12.0	Weekly	8-hour flow proportioned composite	EFA-1	See Cond. I.A.6.	

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2. Reclaimed water samples shall be taken at the monitoring site locations listed in Permit Condition I. A. 1. and as described below:

Monitoring Location Site Number	Description of Monitoring Location
EFA-1	Chlorine contact chamber effluent
EFF-1	Effluent flow meter

3. Recording flow meters and totalizers shall be utilized to measure flow and calibrated at least annually. [62-601.200(17) and .500(6), 12-24-96]
4. The arithmetic mean of the monthly fecal coliform values collected during an annual period shall not exceed 200 per 100 mL of reclaimed water sample. The geometric mean of the fecal coliform values for a minimum of 10 samples of reclaimed water, each collected on a separate day during a period of 30 consecutive days (monthly), shall not exceed 200 per 100 mL of sample. No more than 10 percent of the samples collected (the 90th percentile value) during a period of 30 consecutive days shall exceed 400 fecal coliform values per 100 mL of sample. Any one sample shall not exceed 800 fecal coliform values per 100 mL of sample. Note: To report the 90th percentile value, list the fecal coliform values obtained during the month in ascending order. Report the value of the sample that corresponds to the 90th percentile (multiply the number of samples by 0.9). For example, for 30 samples, report the corresponding fecal coliform number for the 27th value of ascending order. [62-610.510, 8-8-99 and 62-600.440(4)(c), 12-24-96]
5. A minimum of 0.5 mg/L total residual chlorine must be maintained for a minimum contact time of 15 minutes based on peak hourly flow. [62-610.510, 8-8-99 and 62-600.440(4)(b), 12-24-96]
6. Nitrate nitrogen (NO₃) concentration in the water discharged to the land application system shall not exceed 12.0 mg/L, or as required to comply with Rule 62-610.510, F.A.C. [62-610.510, 8-8-99]

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I. RECLAIMED WATER AND EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont.)

B. Other Limitations and Monitoring and Reporting Requirements

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the treatment facility shall be limited and monitored by the permittee as specified below:

Parameter	Units	Max/Min	Limitations				Monitoring Requirements				Notes
			Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number		
BOD, Carbonaceous 5 day, 20C	mg/l	Maximum	-	Report	-	-	Weekly	8-hour flow proportioned composite	INF-1	See Cond. I.B.3.	
Solids, Total Suspended	mg/l	Maximum	-	Report	-	-	Weekly	8-hour flow proportioned composite	INF-1	See Cond. I.B.3.	
Percent Capacity, (TMADF/Permitted Capacity) x 100	%	Maximum	-	Report (Mo.Total)	-	-	Monthly	Calculated	EFF-1		

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2. Samples shall be taken at the monitoring site locations listed in Permit Condition I. B. 1 and as described below:

Monitoring Location Site Number	Description of Monitoring Location
EFF-1	Effluent flow meter
INF-1	Raw influent to surge tank

3. Influent samples shall be collected so that they do not contain digester supernatant or return activated sludge, or any other plant process recycled waters. [62-601.500(4), 12-24-96]
4. Parameters which must be monitored as a result of a surface water discharge shall be analyzed using a sufficiently sensitive method in accordance with 40 CFR Part 136. Parameters which must be monitored as a result of a ground water discharge (i.e., underground injection or land application system) shall be analyzed in accordance with Chapter 62-601, F.A.C. [62-620.610(18), 3-2-00]
5. The permittee shall provide safe access points for obtaining representative influent, reclaimed water, and effluent samples which are required by this permit. [62-601.500(5), 12-24-96]
6. Monitoring requirements under this permit are effective on the first day of the second month following permit issuance. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any. During the period of operation authorized by this permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e., monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below.

REPORT Type	Monitoring Period	Due Date
Monthly or Toxicity	first day of month – last day of month	28 th day of following month
Quarterly	January 1 - March 30	April 28
	April 1 – June 30	July 28
	July 1 – September 30	October 28
	October 1 – December 31	January 28
Semiannual	January 1 – June 30	July 28
	July 1 – December 31	January 28
Annual	January 1 – December 31	January 28

DMRs shall be submitted for each required monitoring period including months of no discharge. The permittee shall make copies of the attached DMR form(s) and shall submit the completed DMR form(s) to the Department at the address specified in Permit Condition I.B. 9 by the twenty-eighth (28th) of the month following the month of operation.

[62-620.610(18), 3-2-00][62-601.300(1), (2), and (3), 12-24-96]

7. During the period of operation authorized by this permit, reclaimed water or effluent shall be monitored annually for the primary and secondary drinking water standards contained in Chapter 62-550, F.A.C., (except for turbidity, total coliforms, color, and corrosivity). Twenty-four hour composite samples shall be used to analyze reclaimed water or effluent for the primary and secondary drinking water standards. These monitoring results shall be reported to the Department annually on the Reclaimed Water or Effluent Analysis Report, Form 62-620.910(15), or in another format if requested by the permittee and if approved by the Department as being compatible with data entry into the Department's computer system. During years when a permit is not renewed, a certification stating that no new non-domestic wastewater dischargers have been added to the collection system since the last reclaimed water or effluent analysis was conducted may be submitted in lieu of the report. The annual reclaimed water or effluent analysis report or the certification shall be completed and submitted in a timely manner so as to be received by the Department by November 1 of each year. [62-601.300(4), 12-24-96][62-601.500(3), 12-24-96]

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8. The permittee shall submit an Annual Reuse Report using DEP Form 62-610.300(4)(a)2. on or before January 1 of each year. [62-610.870(3), 8-8-99]
9. Unless specified otherwise in this permit, all reports and other information required by this permit, including 24-hour notifications, shall be submitted to or reported to, as appropriate, Lake County Water Resource Management and the Department's Central District Office at the address specified below:

Central District Office
3319 Maguire Boulevard Suite 232
Orlando, Florida 32803-3767

Phone Number - (407) 894-7555

FAX Number - (407) 897-2966

All FAX copies shall be followed by original copies. All reports and other information shall be signed in accordance with the requirements of Rule 62-620.305, F.A.C. [62-620.305, 10-23-00]

II. RESIDUALS MANAGEMENT REQUIREMENTS

1. The method of residuals use or disposal by this facility is transport to Shelley's Septic Tanks Residuals Management Facility or disposal in a Class I or II solid waste landfill.
2. The permittee shall be responsible for proper treatment, management, use, and land application or disposal of its residuals. [62-640.300(5), 3-30-98]
3. The permittee shall not be held responsible for treatment, management, use, or land application violations that occur after its residuals have been accepted by a permitted residuals management facility with which the source facility has an agreement in accordance with Rule 62-640.880(1)(c), F.A.C., for further treatment, management, use or land application. [62-640.300(5), 3-30-98]
4. Disposal of residuals, septage, and other solids in a solid waste landfill, or disposal by placement on land for purposes other than soil conditioning or fertilization, such as at a monofill, surface impoundment, waste pile, or dedicated site, shall be in accordance with Chapter 62-701, F.A.C. [62-640.100(6)(k)3 & 4, 3-30-98]
5. If the permittee intends to accept residuals from other facilities, a permit revision is required pursuant to Rule 62-640.880(2)(d), F.A.C. [62-640.880(2)(d), 3-30-98]
6. The permittee shall keep hauling records to track the transport of residuals between facilities. The hauling records shall contain the following information:

Source Facility

1. Date and Time Shipped
2. Amount of Residuals Shipped
3. Degree of Treatment (if applicable)
4. Name and ID Number of Residuals Management Facility or Treatment Facility
5. Signature of Responsible Party at Source Facility
6. Signature of Hauler and Name of Hauling Firm

Residuals Management Facility or Treatment Facility

1. Date and Time Received
2. Amount of Residuals Received
3. Name and ID Number of Source Facility
4. Signature of Hauler
5. Signature of Responsible Party at Residuals Management Facility or Treatment Facility

These records shall be kept for five years and shall be made available for inspection upon request by the Department. A copy of the hauling records information maintained by the source facility shall be provided upon delivery of the residuals to the residuals management facility or treatment facility. The permittee shall report to the Department within 24 hours of discovery any discrepancy in the quantity of residuals leaving the source facility and arriving at the residuals management facility or treatment facility. [62-640.880(4), 3-30-98]

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- Storage of residuals or other solids at the permitted facility shall require prior written notification to the Department. [62-640.300(4), 3-30-98]

III. GROUND WATER REQUIREMENTS

Construction Requirements

- This section is not applicable to this facility.

Operational Requirements

- For the Part II and Part IV land application system(s), all ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge for this project shall extend horizontally 100 feet from the application site or to the facility's property line, whichever is less, and vertically to the base of the surficial aquifer. [62-520.200(23), 12-9-96][62-522.400 and 62-522.410, 12-9-96]
- The ground water minimum criteria specified in Rule 62-520.400 F.A.C., shall be met within the zone of discharge. [62-520.400 and 62-520.420(4), 12-9-96]
- During the period of operation authorized by this permit, the permittee shall sample ground water in accordance with this permit and the approved ground water monitoring plan prepared in accordance with Rule 62-522.600, F.A.C. [62-522.600, 12-9-96][62-610.510, 8-8-99]
- The following monitoring wells shall be sampled in accordance with the monitoring frequencies specified in Permit Condition III.5. for Reuse System R-001. Quarterly sampling must be reasonably spaced to be representative of potentially changing conditions.

Well Name	Monitoring Well ID	WACR #	GMS #	Depth (Feet)	Aquifer Monitored	New or Existing
Pond Site						
MW-1	MWC-1	4213	3035A16750	23	Surficial	existing
MW-2	MWC-2	4212	3035A16751	23	Surficial	existing
MW-3	MWC-3	4211	3035A16752	23	Surficial	existing
MW-4	MWC-4	4210	3035A17263	23	Surficial	existing
MW-5	MWB-5	4209	3035A17264	13	Surficial	existing
PZ-1	PZ-1	4208	3035A17265	18.9	Surficial	existing
PZ-2	PZ-2	4207	3035A17266	18.9	Surficial	existing
PZ-3	PZ-3	4206	3035A17267	18.9	Surficial	existing
PZ-4	PZ-4	4205	3035A17268	18.9	Surficial	existing

MWB = Background; MWI = Intermediate; MWC = Compliance, PZ-Piezometer

[62-522.600, 12-9-96][62-610.513, 8-8-99]

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5. The piezometers identified in Permit Condition III. 4 shall be sampled quarterly for water level only. The monitoring wells identified in Permit Condition III. 4 shall be sampled for the following parameters:

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	feet	In-situ	Quarterly
Nitrogen, Nitrate, Total (as N)	10	mg/l	Grab	Quarterly
Solids, Total Dissolved (TDS)	500	mg/l	Grab	Quarterly
Chloride (as Cl)	250	mg/l	Grab	Quarterly
Coliform, Fecal	4	#/100ml	Grab	Quarterly
pH	6.0 to 8.5	s.u.	In-situ	Quarterly
Turbidity	Report	ntu	Grab	Quarterly

[62-522.600(11)(b), 12-9-96] [62-601.300(3), 62-601.700, and Figure 3 of 62-601, 12-24-96][62-601.300(6), 12-24-96] [62-601.300(7), 12-24-96][62-520.300(9), 12-9-96]

6. If the concentration for any constituent listed in Permit Condition III. 5. in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative natural background quality shall be the prevailing standard. *[62-520.420(2), 12-9-96]*
7. In accordance with Part D of Form 62-620.910(10), water levels shall be recorded before evacuating wells for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NGVD allowable) at a precision of plus or minus 0.1 foot. *[62-610.513(2), 8-8-99]*
8. Ground water monitoring wells shall be purged prior to sampling to obtain representative samples. *[62-601.700(5), 12-24-96]*
9. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Department's Central District's Ground Water Section as being more representative of ground water conditions. *[62-520.300(9), 12-9-96]*
10. Ground water monitoring parameters shall be analyzed in accordance with Chapter 62-601, F.A.C. *[62-620.610(18), 10-23-00]*
11. Ground water monitoring test results shall be submitted on Part D of Form 62-620.910(10). For reuse or land application projects, results shall be submitted with the DMR for each month listed in the following schedule. The submitted results shall be for each year during the period of operation allowed by this permit in accordance with Permit Condition I.B.6. A completed Certification Page shall accompany each quarter of monitoring data. *[62-4.070(3), 10-22-00] [62-522.600(10) and (11)(b), 12-9-96] [62-601.300(3), 62.601.700, and Figure 3 of 62-601, 12-24-96] [62-620.610(18), 10-23-00]*

SAMPLE PERIOD	REPORT DUE DATE
January - March	April 28
April - June	July 28
July - September	October 28
October - December	January 28

12. If any monitoring well becomes damaged or cannot be sampled for some reason, the permittee shall notify the Department's Central District's Ground Water Section immediately and a written report shall follow within seven days detailing the circumstances and remedial measures taken or proposed. Repair or replacement of monitoring wells shall be approved in advance by the Department's Central District's Ground Water Section. *[62-522.600, 12-9-96][62-4.070(3), 10-22-00]*

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13. The Permittee shall provide verbal notice to the Department's Central District's Ground Water Section as soon as practical after discovery of a sinkhole within an area for the management or application of wastewater, wastewater residuals (sludges), or reclaimed water. The Permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department's Central District's Ground Water Section in a written report within 7 days of the sinkhole discovery. [62-4.070(3), 10-22-00]

IV. ADDITIONAL REUSE AND LAND APPLICATION REQUIREMENTS

Part IV Rapid Infiltration Basins (R-001)

1. Advisory signs shall be posted around the site boundaries to designate the nature of the project area. [62-610.518, 8-8-99]
2. The annual average hydraulic loading rate to the two percolation ponds with a total wetted area of 3.088 acres shall be limited to a maximum of 9 inches per day (as applied to the entire bottom area). [62-610.523(3), 8-8-99]
3. The two percolation ponds with a total wetted area of 3.088 acres normally shall be loaded for 7 days and shall be rested for 7 days. Infiltration ponds, basins, or trenches shall be allowed to dry during the resting portion of the cycle. [62-610.523(4), 8-8-99]
4. Rapid infiltration basins shall be routinely maintained to control vegetation growth and to maintain percolation capability by scarification or removal of deposited solids. Basin bottoms shall be maintained to be level. [62-610.523(6) and (7), 8-8-99]
5. Routine aquatic weed control and regular maintenance of storage pond embankments and access areas are required. [62-610.514 and 62-610.414, 8-8-99]
6. Overflows from emergency discharge facilities on storage ponds or on infiltration ponds, basins, or trenches shall be reported as an abnormal event to the Department's Central District Office within 24 hours of an occurrence. The provisions of Rule 62-610.800(9), F.A.C., shall be met. [62-610.800(9), 8-8-99]

V. OPERATION AND MAINTENANCE REQUIREMENTS

1. During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of a(n) operator(s) certified in accordance with Chapter 62-602, F.A.C. In accordance with Chapter 62-699, F.A.C., this facility is a Category III, Class C facility and, at a minimum, operators with appropriate certification must be on the site as follows:

Until the maximum day flows reach 0.500 MGD: A Class C or higher operator 3 hours/day for 5 days/week and one visit each weekend. The lead operator must be a Class C operator, or higher.

After the maximum day flows reach 0.500 MGD: A Class C or higher operator 6 hours/day for 5 days/week and one visit on each weekend day. The lead operator must be a Class C operator, or higher.

[62-620.630(3), 10-23-00] [62-699.310, 5-20-92] [62-610.462, 8-8-99]

2. A certified operator shall be on call during periods the plant is unattended. [62-699.311(1), 5-20-92]
3. An updated capacity analysis report shall be submitted to the Department annually by November 1 of each year. The updated capacity analysis report shall be prepared in accordance with Rule 62-600.405, F.A.C. [62-600.405(5), 12-24-96]

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4. The application to renew this permit shall include a detailed operation and maintenance performance report prepared in accordance with Rule 62-600.735, F.A.C. [62-600.735(1), 12-24-96]
5. The permittee shall maintain the following records and make them available for inspection on the site of the permitted facility:
 - a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation and a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
 - b. Copies of all reports required by the permit for at least three years from the date the report was prepared;
 - c. Records of all data, including reports and documents, used to complete the application for the permit for at least three years from the date the application was filed;
 - d. Monitoring information, including a copy of the laboratory certification showing the laboratory certification number, related to the residuals use and disposal activities for the time period set forth in Chapter 62-640, F.A.C., for at least three years from the date of sampling or measurement;
 - e. A copy of the current permit;
 - f. A copy of the current operation and maintenance manual as required by Chapter 62-600, F.A.C.;
 - g. A copy of the facility record drawings;
 - h. Copies of the licenses of the current certified operators; and
 - i. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules. The logs shall, at a minimum, include identification of the plant; the signature and certification number of the operator(s) and the signature of the person(s) making any entries; date and time in and out; specific operation and maintenance activities; tests performed and samples taken; and major repairs made. The logs shall be maintained on-site in a location accessible to 24-hour inspection, protected from weather damage, and current to the last operation and maintenance performed.

[62-620.350, 10-23-00]

VI. SCHEDULES

1. The permittee shall conduct and implement according to the following schedule:

	Implementation Step	Completion Date
1	Submit Reuse Feasibility Study, per SJRWMD CUP	October 1, 2002

[62-620.320(1) and (2), 10-23-00] [62-4.070(3), 10-22-00]

VII. INDUSTRIAL PRETREATMENT PROGRAM REQUIREMENTS

This facility is not required to have a pretreatment program at this time. [62-625.500, 1-8-97]

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VIII. OTHER SPECIFIC CONDITIONS

1. Prior to placing the modifications to existing facilities into operation or any individual unit processes into operation, for any purpose other than testing for leaks and equipment operation, the permittee shall complete and submit to the Department DEP Form 62-620.910(12), Notification of Completion of Construction for Domestic Wastewater Facilities. *[62-620.630(2), 10-23-00]*
2. Within six months after a facility is placed in operation, the permittee shall provide written certification to the Department on Form 62-620.910(13) that record drawings pursuant to Chapter 62-600, F.A.C., and that an operation and maintenance manual pursuant to Chapters 62-600 and 62-610, F.A.C., as applicable, are available at the location specified on the form. *[62-620.630(7), 10-23-00]*
3. If the permittee wishes to continue operation of this wastewater facility after the expiration date of this permit, the permittee shall submit an application for renewal, using Department Forms 62-620.910(1) and (2), no later than one-hundred and eighty days (180) prior to the expiration date of this permit. *[62-620.410(5), 10-23-00]*
4. Florida water quality criteria and standards shall not be violated as a result of any discharge or land application of reclaimed water or residuals from this facility. *[62-610.850(1)(a) and (2)(a), 8-8-99]*
5. In the event that the treatment facilities or equipment no longer function as intended, are no longer safe in terms of public health and safety, or odor, noise, aerosol drift, or lighting adversely affects neighboring developed areas at the levels prohibited by Rule 62-600.400(2)(a), F.A.C., corrective action (which may include additional maintenance or modifications of the permitted facilities) shall be taken by the permittee. Other corrective action may be required to ensure compliance with rules of the Department. Additionally, the treatment, management, use or land application of residuals shall not cause a violation of the odor prohibition in Rule 62-296.320(2), F.A.C. *[62-600.410(8), 12-24-96 and 62-640.400(6), 3-30-98]*
6. The deliberate introduction of stormwater in any amount into collection/transmission systems designed solely for the introduction (and conveyance) of domestic/industrial wastewater; or the deliberate introduction of stormwater into collection/transmission systems designed for the introduction or conveyance of combinations of storm and domestic/industrial wastewater in amounts which may reduce the efficiency of pollutant removal by the treatment plant is prohibited, except as provided by Rule 62-610.472, F.A.C. *[62-604.130(3), 12-26-96]*
7. Collection/transmission system overflows shall be reported to the Department in accordance with Permit Condition IX. 20. *[62-604.550, 12-26-96] [62-620.610(20), 10-23-00]*
8. The operating authority of a collection/transmission system and the permittee of a treatment plant are prohibited from accepting connections of wastewater discharges which have not received necessary pretreatment or which contain materials or pollutants (other than normal domestic wastewater constituents):
 - a. Which may cause fire or explosion hazards; or
 - b. Which may cause excessive corrosion or other deterioration of wastewater facilities due to chemical action or pH levels; or
 - c. Which are solid or viscous and obstruct flow or otherwise interfere with wastewater facility operations or treatment; or
 - d. Which result in treatment plant discharges having temperatures above 40°C.

[62-604.130(4), 12-26-96]

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9. The treatment facility, storage ponds, rapid infiltration basins, and/or infiltration trenches shall be enclosed with a fence or otherwise provided with features to discourage the entry of animals and unauthorized persons. [62-610.518(1), 1-9-96] [and 62-600.400(2)(b), 12-24-96]
10. Screenings and grit removed from the wastewater facilities shall be collected in suitable containers and hauled to a Department approved Class I landfill or to a landfill approved by the Department for receipt/disposal of screenings and grit. [62-701.300(1)(a), 4-23-97]
11. The permittee shall provide adequate notice to the Department of the following:
 - a. Any new introduction of pollutants into the facility from an industrial discharger which would be subject to Chapter 403, F.S., and the requirements of Chapter 62-620, F.A.C. if it were directly discharging those pollutants; and
 - b. Any substantial change in the volume or character of pollutants being introduced into that facility by a source which was identified in the permit application and known to be discharging at the time the permit was issued.

Adequate notice shall include information on the quality and quantity of effluent introduced into the facility and any anticipated impact of the change on the quantity or quality of effluent or reclaimed water to be discharged from the facility.

[62-620.625(2), 10-23-00]

IX. GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. [62-620.610(1), 10-23-00]
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications or conditions of this permit constitutes grounds for revocation and enforcement action by the Department Central. [62-620.610(2), 10-23-00]
3. As provided in Subsection 403.087(6), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. [62-620.610(3), 10-23-00]
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. [62-620.610(4), 10-23-00]
5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [62-620.610(5), 10-23-00]

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6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6), 10-23-00]*
7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7), 10-23-00]*
8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8), 10-23-00]*
9. The permittee, by accepting this permit, specifically agrees to allow authorized Department Central personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to:
 - a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
 - b. Have access to and copy any records that shall be kept under the conditions of this permit;
 - c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
 - d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.*[62-620.610(9), 10-23-00]*
10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department Central may be used by the Department Central as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, Florida Statutes, or Rule 62-620.302, Florida Administrative Code. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10), 10-23-00]*
11. When requested by the Department Central, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department Central upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department Central, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11), 10-23-00]*
12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12), 10-23-00]*
13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13), 10-23-00]*

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14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14), 10-23-00]*
15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15), 10-23-00]*
16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300, 62-620.420 or 62-620.450, F.A.C., as applicable, at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.300 for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16), 10-23-00]*
17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department Central for penalties or revocation of this permit. The notice shall include the following information:
 - a. A description of the anticipated noncompliance;
 - b. The period of the anticipated noncompliance, including dates and times; and
 - c. Steps being taken to prevent future occurrence of the noncompliance.*[62-620.610(17), 10-23-00]*
18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate.
 - a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10).
 - b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
 - c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
 - d. Any laboratory test required by this permit for domestic wastewater facilities shall be performed by a laboratory that has been certified by the Department of Health (DOH) under Chapter 64E1, F.A.C., to perform the test. On-site tests for dissolved oxygen, pH, and total chlorine residual shall be performed by a laboratory certified to test for those parameters or under the direction of an operator certified under Chapter 62-602, F.A.C.
 - e. Under Chapter 62-160, F.A.C., sample collection shall be performed by following the protocols outlined in "DER Standard Operating Procedures for Laboratory Operations and Sample Collection Activities" (DER-QA-001/92). Alternatively, sample collection may be performed by an organization who has an approved Comprehensive Quality Assurance Plan (CompQAP) on file with the Department. The CompQAP shall be approved for collection of samples from the required matrices and for the required tests.

[62-620.610(18), 10-23-00]

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19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. [62-620.610(19), 10-23-00]
20. The permittee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
 - a. The following shall be included as information, which must be reported within 24 hours under this condition:
 1. Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,
 2. Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
 3. Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
 4. Any unauthorized discharge to surface or ground waters.
 - b. Oral reports as required by this subsection shall be provided as follows:
 1. For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph (a)4 that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:
 - (a) Name, address, and telephone number of person reporting;
 - (b) Name, address, and telephone number of permittee or responsible person for the discharge;
 - (c) Date and time of the discharge and status of discharge (ongoing or ceased);
 - (d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);
 - (e) Estimated amount of the discharge;
 - (f) Location or address of the discharge;
 - (g) Source and cause of the discharge;
 - (h) Whether the discharge was contained on-site, and cleanup actions taken to date;
 - (i) Description of area affected by the discharge, including name of water body affected, if any; and
 - (j) Other persons or agencies contacted.
 2. Oral reports, not otherwise required to be provided pursuant to subparagraph (b)1 above, shall be provided to the Department within 24 hours from the time the permittee becomes aware of the circumstances.

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- c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report.

[62-620.610(20)]

21. The permittee shall report all instances of noncompliance not reported under Permit Conditions IX. 18. and 19. of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Permit Condition IX. 20 of this permit. *[62-620.610(21), 10-23-00]*

22. Bypass Provisions.

- a. Bypass is prohibited, and the Department Central may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:
1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under Permit Condition IX. 22. b. of this permit.
- b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Permit Condition IX. 20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
- c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Permit Condition IX. 22. a. 1. through 3. of this permit.
- d. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Permit Condition IX. 22. a. through c. of this permit.

[62-620.610(22), 10-23-00]

23. Upset Provisions

- a. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
1. An upset occurred and that the permittee can identify the cause(s) of the upset;
 2. The permitted facility was at the time being properly operated;
 3. The permittee submitted notice of the upset as required in Permit Condition IX. 20. of this permit; and
 4. The permittee complied with any remedial measures required under Permit Condition IX. 5. of this permit.

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- b. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
- c. Before an enforcement proceeding is instituted, no representation made during the Department Central review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[62-620.610(23), 10-23-00]

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

____ Signed By
Christianne C. Ferraro, P.E.
Program Administrator
Water Facilities

DATE: August 8, 2002

APPENDIX B
Population and Flow Projections
(Prepared By Southlake Utilities, Inc.)

Name of Development Phase of Const. or Business Name	Number of Lots / Units	Number of ERC's Wastewater	Year End 2002	CUMULATIVE POPULATION PROJECTIONS									
				2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
RESIDENTIAL													
Clear Creek (DR Horton)	246		492	492	492	492	492	492	492	492	492	492	492
Glen Brook S/D (Whitemark Homes)	266		70	170	270	370	470	532	532	532	532	532	532
High Grove S/D, Unit One	82		0	50	120	164	164	164	164	164	164	164	164
High Grove S/D, Unit Two	82		0	0	30	130	164	164	164	164	164	164	164
Silver Creek S/D - Phase One	60		0	70	120	120	120	120	120	120	120	120	120
Silver Creek S/D - Phase Two	56		0	0	80	112	112	112	112	112	112	112	112
Sunrise Lakes S/D - Phase 1- (Amer. Heritage)	68		4	114	136	136	136	136	136	136	136	136	136
Sunrise Lakes S/D - Ph 1 Remaining- (C. Hwang)	18		0	0	36	36	36	36	36	36	36	36	36
Sunrise Lakes S/D - Phase 2 -(Charles Hwang)	207		0	0	120	240	360	414	414	414	414	414	414
Woodridge S/D (Stratford Homes)	118		236	236	236	236	236	236	236	236	236	236	236
Woodridge S/D (DR Horton)	122		244	244	244	244	244	244	244	244	244	244	244
Woodridge S/D (Woolridge Homes)	60		120	120	120	120	120	120	120	120	120	120	120
Totals:	1385		1,166	1,496	2,004	2,400	2,654	2,770	2,770	2,770	2,770	2,770	2,770
MULTI													
Nelson Park Apartments	358		448	448	448	448	448	448	448	448	448	448	448
Cagan - Town Center	255		0	255	255	255	255	255	255	255	255	255	255
Cagan - Remaining Property	5106		0	0	626	1,252	1,878	2,504	3,130	3,756	4,382	5,008	5,110
Raintree Apartments	313		391	391	391	391	391	391	391	391	391	391	391
Sara's Place Apartments	330		413	413	413	413	413	413	413	413	413	413	413
Ridgepointe Phase 2A - South Lake Apt's	272		340	340	340	340	340	340	340	340	340	340	340
Ridgepointe Phase 2B - South Lake Apt's	288		360	360	360	360	360	360	360	360	360	360	360
Aurora - Southlake	434		543	543	543	543	543	543	543	543	543	543	543
SummerBay Resort (Existing)	484		605	605	605	605	605	605	605	605	605	605	605
SummerBay - Bldg. 105	36		45	45	45	45	45	45	45	45	45	45	45
SummerBay - Bldg. 106	24		30	30	30	30	30	30	30	30	30	30	30
SummerBay Partnership	64		80	80	80	80	80	80	80	80	80	80	80
SummerBay Parcel 14	123		154	154	154	154	154	154	154	154	154	154	154
SummerBay - Remaining	2160		0	0	351	703	1,054	1,405	1,756	2,108	2,459	2,701	2,701
Totals:	10247		3,408	3,663	4,640	5,617	6,594	7,572	8,549	9,526	10,503	11,372	11,474

Name of Development	Number	Number	Year	CUMULATIVE POPULATION PROJECTIONS										
				2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Phase of Const. or	of	of ERC's	End											
Business Name	Lots / Units	Wastewater	2002											
COMMERCIAL														
BP Amoco North America		5												
Denny's Restaurant		20												
Exxon Gas Station		3												
First Federal Savings Bank		3												
Glen Brook Plaza		25												
Hess @ Summer Bay		4												
Holiday Inn Express - Bldg's 1 & 2		107												
Holiday Inn Express - Bldg. 3		54												
Lake County Fire Station		2												
Machi Building		1												
Miller Brothers - Handy Way		9												
Publix - Retail Space & Out Parcels		63												
Randy's Restaurant		5												
South Lake Complex - Office Buildings		9												
Sunrise Plaza		65												
Walgreen's - Rock 474, Inc.		2												
Walmart Store		33												
Ware Oil - Speedway		5												
Wendy's Restaurant		16												
Winn - Dixie Market & Retail		18												
Woodridge (Key Center)		20												
Totals:		469												
VACANT LAND														
220 +/- Acres @ 8 ERC's per ac. = 1760 ERC's							480	1,000	1,480	2,000	2,480	3,000	3,520	
Totals:			469	5,139	6,074	8,077	9,726	11,342	12,799	14,296	15,756	17,276	18,796	

Single Family Unit population = 2.00 people
 Multi-family Unit Population = 1.25 people
 Multi-family Unit Population = 1.00 people (Cagan multi-family units)

Name of Development Phase of Const. or Business Name	Number of Lots / Units	Number of ERC's Wastewater	Year End 2002	Southlake Utilities, Inc. - CUMULATIVE WASTEWATER PROJECTIONS (3-MONTH ADF)									
				2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
RESIDENTIAL													
Clear Creek (DR Horton)	246		36,900	36,900	36,900	36,900	36,900	36,900	36,900	36,900	36,900	36,900	36,900
Clear Brook S/D (Whitemark Homes)	266		5,250	12,750	20,250	27,750	35,250	39,900	39,900	39,900	39,900	39,900	39,900
High Grove S/D, Unit One	82		0	3,750	9,000	12,300	12,300	12,300	12,300	12,300	12,300	12,300	12,300
High Grove S/D, Unit Two	82		0	0	2,250	9,750	12,300	12,300	12,300	12,300	12,300	12,300	12,300
Silver Creek S/D - Phase One	60		0	5,250	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Silver Creek S/D - Phase Two	56		0	0	6,000	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400
Sunrise Lakes S/D - Phase 1- (Amer. Heritage)	68		300	8,550	10,200	10,200	10,200	10,200	10,200	10,200	10,200	10,200	10,200
Sunrise Lakes S/D - Ph 1 Remaining- (C. Hwang)	18		0	0	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700
Sunrise Lakes S/D - Phase 2 - (Charles Hwang)	207		0	0	9,000	18,000	27,000	31,050	31,050	31,050	31,050	31,050	31,050
Woodridge S/D (Stratford Homes)	118		17,700	17,700	17,700	17,700	17,700	17,700	17,700	17,700	17,700	17,700	17,700
Woodridge S/D (DR Horton)	122		18,300	18,300	18,300	18,300	18,300	18,300	18,300	18,300	18,300	18,300	18,300
Woodridge S/D (Woodridge Homes)	60		9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Totals:	1385		87,450	112,200	150,300	180,000	199,050	207,750	207,750	207,750	207,750	207,750	207,750
MULTIFAMILY													
Nelson Park Apartments	358		33,563	33,563	33,563	33,563	33,563	33,563	33,563	33,563	33,563	33,563	33,563
Cagan - Town Center	255		0	19,125	19,125	19,125	19,125	19,125	19,125	19,125	19,125	19,125	19,125
Cagan - Remaining Property	5110		0	0	46,950	93,900	140,850	187,800	234,750	281,700	328,650	375,600	383,250
Raintree Apartments	313		29,344	29,344	29,344	29,344	29,344	29,344	29,344	29,344	29,344	29,344	29,344
Sara's Place Apartments	330		30,938	30,938	30,938	30,938	30,938	30,938	30,938	30,938	30,938	30,938	30,938
Ridgepointe Phase 2A - South Lake Apt's	272		25,500	25,500	25,500	25,500	25,500	25,500	25,500	25,500	25,500	25,500	25,500
Ridgepointe Phase 2B - South Lake Apt's	288		27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000	27,000
Aurora - Southlake	434		40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688	40,688
SummerBay Resort (Existing)	484		45,375	45,375	45,375	45,375	45,375	45,375	45,375	45,375	45,375	45,375	45,375
SummerBay - Bldg. 105	36		3,375	3,375	3,375	3,375	3,375	3,375	3,375	3,375	3,375	3,375	3,375
SummerBay - Bldg. 106	24		2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250
SummerBay Partnership	64		6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
SummerBay Parcel 14	123		11,531	11,531	11,531	11,531	11,531	11,531	11,531	11,531	11,531	11,531	11,531
SummerBay - Remaining	2161		0	0	26,344	52,688	79,031	105,375	131,719	158,063	184,406	202,594	202,594
Totals:	10252		255,563	274,688	347,981	421,275	494,569	567,863	641,156	714,450	787,744	852,881	860,531
Name of Development	Number	Number	Year	Southlake Utilities, Inc. - CUMULATIVE WASTEWATER PROJECTIONS (3-MONTH ADF)									

Phase of Const. or Business Name	of Lots / Units	of ERC's Wastewater	End 2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
COMMERCIAL													
3P Amoco North America		5	992	992	992	992	992	992	992	992	992	992	992
Jenny's Restaurant		20	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Exxon Gas Station		3	584	584	584	584	584	584	584	584	584	584	584
First Federal Savings Bank		3	600	600	600	600	600	600	600	600	600	600	600
Glen Brook Plaza		25	0	0	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Hess @ Summer Bay		4	720	720	720	720	720	720	720	720	720	720	720
Holiday Inn Express - Bldg's 1 & 2		107	21,466	21,466	21,466	21,466	21,466	21,466	21,466	21,466	21,466	21,466	21,466
Holiday Inn Express - Bldg. 3		54	0	0	10,734	10,734	10,734	10,734	10,734	10,734	10,734	10,734	10,734
Lake County Fire Station		2	400	400	400	400	400	400	400	400	400	400	400
Machi Building		1	266	266	266	266	266	266	266	266	266	266	266
Miller Brothers - Handy Way		9	1,834	1,834	1,834	1,834	1,834	1,834	1,834	1,834	1,834	1,834	1,834
Publix - Retail Space & Out Parcels		63	12,506	12,506	12,506	12,506	12,506	12,506	12,506	12,506	12,506	12,506	12,506
Randy's Restaurant		5	934	934	934	934	934	934	934	934	934	934	934
South Lake Complex - Office Buildings		9	0	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820	1,820
Sunrise Plaza		65	0	4,000	11,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Walgreen's - Rock 474, Inc.		2	484	484	484	484	484	484	484	484	484	484	484
Walmart Store		33	0	6,666	6,666	6,666	6,666	6,666	6,666	6,666	6,666	6,666	6,666
Ware Oil - Speedway		5	938	938	938	938	938	938	938	938	938	938	938
Wendy's Restaurant		16	3,134	3,134	3,134	3,134	3,134	3,134	3,134	3,134	3,134	3,134	3,134
Winn - Dixie Market & Retail		18	3,666	3,666	3,666	3,666	3,666	3,666	3,666	3,666	3,666	3,666	3,666
Woodridge (Key Center)		20	0	0	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Totals:		469	52,524	65,010	91,744	93,744	93,744	93,744	93,744	93,744	93,744	93,744	93,744
VACANT LAND													
220 +/- Acres @ 8 ERC's per ac. = 1760 ERC's							36,000	75,000	111,000	150,000	186,000	225,000	264,000
Totals			190,637	25,498	590,025	695,012	82,362	94,167	105,650	165,242	275,268	379,675	426,025

Single Family Unit flow = 150 gpd
 Multi-family Unit Flow = 94 gpd
 Multi-family Unit Flow = 75 gpd (Cagan multi-family units)
 Commercial ERC = 200 gpd

Appendix C
Unit Process Summary and Calculations

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#38625
4/29/06

Major Unit Processes And Design Criteria Summary

	Tank 1		Tank 2	
Diameter	98ft		112ft	
Clarifier Diam	46ft		44ft	
SWD	15ft		15ft	
	Gallons	Degrees	Gallons	Degrees
Total Volume	660,000	360	934,000	360
Anoxic	75,000	41	75,000	29
Aerobic	495,000	270	495,000	191
Digester	90,000	49	364,000	140

DESIGN FLOWS

Annual Average Daily Flow (ADF) = 1.15 mgd
 Max. Month ADF (MMADF) = 1.5 mgd
 Peak Day Flow (MDF) = 2.31 mgd
 Peak Hour Flow (PHF) = 3.46 mgd

UNIT PROCESS PROCESS DESCRIPTIONS AND SIZING PARAMETERS

Influent Screening: <div style="text-align: right;">Type Size Capacity, each</div>	2 72" Diameter Vulcan 0.1 -inch wedgwire 1,350 GPM
Anoxic: <div style="text-align: right;">T-4 Anoxic Zone T-5 Anoxic Zone Mixers Hydraulic Retention Time (HRT) Internal Recycle Ratio</div>	150,000 gal. Total 75000 Gal. 75000 Gal. 2-FLYGT 4640 Mixers, 4 hp, 1 per tank 2.4 Hrs @ 1.5 MGD 0%
Aeration Basins: <div style="text-align: right;">T-4 Aerobic Zone T-5 Aerobic Zone Hydraulic Retention Time (HRT) Solids Retention Time (SRT) Loading MLSS</div>	990,000 Gal. 445,000 Gal. 445,000 Gal. 15.8 hr. DT @ 1.5 mgd 9 days 19 lb cBOD ₅ /d/1000 cf 2,683 mg/L
Process Aeration: <div style="text-align: right;">Oxygen Requirement: MMADF MDF Air Requirement For Oxygen - NO denitrification credit taken. Air Required: MMADF - To Meet Oxygen Requirements MDF - To Meet Oxygen Requirements Air for Mixing Air for Airlifts Digester Air Required Total Air Required: PDF + Airlift + Digester Air</div>	8,410 lbs O ₂ /day 12,930 lbs O ₂ /day 2,830 scfm 4,360 scfm 3,310 scfm 140 scfm 1,520 scfm 6,020 scfm

Major Unit Processes And Design Criteria Summary (Cont.)

<p>Blowers:</p> <p>Original</p> <p>New</p> <p>Firm Capacity Available</p> <p>Total Capacity Available</p>	<p>Hoffman Model 38306B1 Blowers w/ 50 hp 3 @ 1,200 SCFM @ 6.9 psi</p> <p>Hoffman Model 74206 Blowers w/ 125 hp 2 @ 3,100 SCFM @ 6.9 psi</p> <p>6,800 scfm</p> <p>9,900 scfm</p>
<p>Clarification:</p> <p>Number</p> <p>T-5 - 46' diameter</p> <p>T-4 - 44' diameter</p> <p>MMADF Hydraulic Loading Rate (HLR)</p> <p>PHF HLR</p> <p>MMADF Solids Loading Rate (HLR)</p> <p>PHF Solids Loading Rate (HLR)</p> <p>RAS Ratio</p>	<p>2</p> <p>1,661 sf</p> <p>1,520 sf</p> <p>472 gpd/sf</p> <p>1088 gpd/sf</p> <p>21 lb/d/sf</p> <p>35 lb/d/sf</p> <p>100% @ Design Q</p>
<p>Aerobic Digestion:</p> <p>Digesters:</p> <p>T-4 Digester</p> <p>T-5 Digester</p> <p>Total Volume</p> <p>Hydraulic Detention time @ AADF</p>	<p>2</p> <p>90,000 gal.</p> <p>364,000 gal.</p> <p>454,000 gal.</p> <p>30 days</p>
<p>Chlorine Feed System:</p> <p>Chlorine Feed Pumps</p> <p>Capacity</p> <p>Bulk Hypochlorite Storage Tanks</p> <p>Capacity</p>	<p>2 (+1 shelf spare)</p> <p>4 gph</p> <p>2</p> <p>1,100 gal., ea.</p>
<p>Chlorine Contact Tanks:</p> <p>Number</p> <p>Total Capacity</p> <p>Contact Time @ PHF</p>	<p>2</p> <p>75,676 gal.</p> <p>31.5 min.</p>
<p>Effluent Disposal(1):</p> <p>Ponds:</p> <p>(1) Area based on wetted bottom area</p> <p>Hydraulic Loading Rate (at AADF of 1.15 mgd)</p>	<p>Existing RIB area = 135,000 s.f.</p> <p>Expansion RIB area = 71,000 s.f.</p> <p>Total RIB area = 206,000 s.f.</p> <p>9" per day (5.6 gpd/psf)</p>

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- *** BOD, TSS, TKN, AND NH3-N FOR THIS WASTE ARE ESTIMATED VALUES
 *** SYSTEM DESIGN FOR ANOXIC TO MEET 12 MG/L NITRATE-N
 *** THE FOLLOWING SECTIONS ARE CONTAINED IN THIS SPREADSHEET:

 *** 1. FLOWS, LOADS, DESIGN PARAMETERS
 *** 2. AERATION BASIN: BOD OXIDATION AND NITRIFICATION
 *** 3. ANAEROBIC ZONE DESIGN - NA
 *** 4. NITROGEN BALANCE AND FIRST ANOXIC ZONE DESIGN
 *** 5. SECOND ANOXIC ZONE DESIGN - NA
 *** 6. REAERATION ZONE DESIGN - NA
 *** 7. CHEMICAL REQUIREMENTS
 *** 8. HYDRAULIC RESIDENCE TIMES BY ZONE
 *** 9. POLLUTANT LOADS TO SECONDARY SYSTEM
 ***10. OXYGEN REQUIREMENTS
 ***11. OXYGEN TRANSFER RATES, AIR REQUIREMENTS
 ***12. CLARIFICATION/THICKENING REQUIREMENTS AND UNDERFLOW
 *** CONCENTRATION, Cu
 ***13. EFFLUENT FILTER SIZING/A
 ***14. CHLORINE CONTACT BASIN DESIGN
 ***15. AEROBIC DIGESTION

1. FLOWS, LOADS, DESIGN PARAMETERS

FLOWS AND LOADS TO SECONDARY TREATMENT

FLOW/MMF	Qd=	1.50 MGD (DESIGN = MMF)		Effluent	% Removal
1	BOD=	2502 LBS/DAY =	200 MG/L@Qd (S)	20	90.0%
1	TSS=	2502 LBS/DAY =	200 MG/L@Qd	20	90.0%
1	TKN=	438 LBS/DAY =	35 MG/L@Qd	10	71.4%
1	NH3=	355 LBS/DAY =	28 MG/L@Qd	5	82.4%
1	TP =	58 LBS/DAY =	4.6 MG/L@Qd	3	34.8%
	pH=	7			
	ALKinf=	175 MG/L AS CaCO3			
	DES TEMP=	68 DEG F =	20 DEG C (WATER)		
	DES TEMP=	68 DEG F =	20 DEG C (AERATION)		

NOTE: NO PRIMARY CLARIFIERS IN USE

SELECT OPERATING AND DESIGN PARAMETERS

DESIGN PARAMETERS

MLSS=	2,683 MG/L
VSS/TSS=	0.80
BOD/NH3=	7.0
BOD/TP =	43.5

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$$u'm = um * (e^{0.098 * (T-15)}) * (DO / (Ko + DO)) * (1 - 0.833 * (7.2 - pH))$$

(SEE EPA NITROGEN CONTROL MANUAL, EQ 4-1, P4-8)

495,000	ea
990,000	GAL
2nd Anox	
5%	ea
-	GAL
Sludge Holding/Digestion	
#1	
90,000	gal
#2	
364,000	Gal

WHERE $u'm$ = MAX NITRIFIER GROWTH RATE AT DESIGN COND
 um = MAX SPECIFIC GROWTH RATE AT 15 DEG C
 = 0.470 /DAY
 DO = AVERAGE DISSOLVED OXYGEN CONCENTRATION
 = 2.0 MG/L
 Ko = DISS OXYGEN HALF VELOCITY CONSTANT
 = 1.3 MG/L

$$u'm = 0.387 \text{ /DAY}$$

$$SRTm = 1 / (u'm - KdT)$$

WHERE Kd = NITRIFYING DECAY CONSTANT
 = 0.05 /DAY
 KdT = $Kd * (1.029^{(T-20)})$
 = 0.05 /DAY

$$SRTm = 2.96 \text{ DAYS}$$

SET DESIGN SRT, $SRTd$

$$SRTd = SRTm * SF$$

$$SF = 3.04$$

$$SRTd = 9.00 \text{ DAYS}$$

CALCULATE AERATION BASIN VOLUME

CALCULATE EXCESS SLUDGE PRODUCTION, P

$$Ynbvss = 0.13 \text{ LB TSS/LB BOD APP}$$

$$Yf = 0.07 \text{ LB TSS/LB BOD APP (FIXED SOLIDS)}$$

$$Ybvss = 0.52 \text{ LB TSS/LB BOD APP}$$

$$Kd = 0.10 \text{ /DAY (DECAY)}$$

$$Yobs = Ybvss / (1 + SRTd * Kd) + Ynbvss + Yf$$

$$= 0.474 \text{ LB TSS/LB BOD APP}$$

$$P = Qd * 8.34 * (Yobs * So + NDVSS + FSS)$$

$$= 2461 \text{ LBS/DAY (BIO-WAS PRODUCTION)}$$

ASSUME NDVSS = 21 % TSS
 FSS = 30 % TSS

$Ygross = 0.98 \text{ LB TSS/LB BOD APP}$
 CALCULATE AERATION BASIN SOLIDS INVENTORY, SI

$$SI = P * SRT$$

$$= 22151 \text{ LBS}$$

YIELD CHECK	
LBS/D AT	$Yobs * BOD + Ytss * TSS =$
where $Ytss =$	0.52
	2,461 lb/d

CALCULATE REQUIRED AERATION VOLUME, Vae

$$Vae = SI / (MLSS * 8.34)$$

$$= 0.990 \times 10^6 \text{ GALLONS}$$

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$$= 0.132 \times 10^6 \text{ CF}$$

$$\text{USE Vae} = 0.990 \times 10^6 \text{ GALLONS}$$

$$= 0.132 \times 10^6 \text{ CF}$$

	Q - MGD			
	DESIGN	AADF	MDF	MHP
	1.500	1.15	2.31	3.46
MLTSS, mg/l	2683	2064	4127	6191

CALCULATE HYDRAULIC RETENTION TIME, HRT

$$\text{HRT} = \text{Vae} / \text{Qd}$$

$$= 15.8 \text{ HOURS}$$

CALCULATE F/M RATIO

$$F = \text{So} \times \text{Qd} \times (3.785 \text{ L/GAL})$$

$$= 1.14\text{E}+09 \text{ MG BOD/DAY}$$

$$M = \text{MLSS} \times (0.75 \text{ MG MLVSS/MLSS}) \times \text{Vae} \times 3.785$$

$$= 8.04\text{E}+09 \text{ MG MLVSS}$$

$$= 1.01\text{E}+10 \text{ MG MLSS}$$

$$F/M = 0.14 \text{ MG BOD/DAY/MG MLVSS}$$

$$F/M = 0.11 \text{ MG BOD/DAY/MG MLSS}$$

SUMMARY - TOTAL SOLIDS PRODUCTION

SOLIDS PRODUCTION - LBS/DAY

	Q - MGD			
	1.500	1.154	2.308	3.46
BIO-WAS	2461	1893	3786	5680

NOTE: THIS DOES NOT ACCOUNT FOR ANY WAS IN THE WWTP EFFLUENT
 WAS FLOW - MGD

	Q - MGD			
	1.50	1.15	2.31	3.46
BIO-WAS	0.0440	0.0338	0.0677	0.1015

$$\text{ASSUME WAS @ } 6,707 \text{ MG/L}$$

SUMMARY - AERATION VOLUME AS FUNCTION OF SOLIDS INVENTORY

$$\text{AERATION VOLUME - MG}$$

$$\text{At MLTSS} = 2,683 \text{ mg/l}$$

$$Q - \text{MGD}$$

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	1.50	1.15	2.31	3.46
BIO-WAS	0.990	0.762	1.523	2.285

3. ANAEROBIC ZONE DESIGN N/A

4. NITROGEN BALANCE AND FIRST ANOXIC ZONE DESIGN

CALCULATE NITROGEN DESIGN LOAD TO BNR SYSTEM:

TN TO BNR SYSTEM = 437.85 LBS/DAY
 ASSUME N OF WAS = 10 % WAS VSS (NIT LOST IN WAS)
 (8-12% N/WAS VSS TYP)
 TN IN WAS = 196.9 LBS/DAY
 DESIGN TN (No) = 241.0 LBS/DAY

CALCULATE NITRATE CONCENTRATION IN NITRIF ZONE, N3:

SET NRCY = 0.0 X Qd (RANGE=2-4)
 SET RAS = 1.00 X Qd (RANGE=0.5-1)
 $N3 = No / (NRCY + RAS + 1)$
 N3 = 9.6 MG/L

NRCY AND RAS NITRATE CONCENTRATION, NR = N3:

NR = 9.6 MG/L

CALCULATE NITRATE LOAD TO 1ST ANOXIC ZONE, N3L:

$N3L = 8.34 * (RAS + NRCY) * NR * Qd$
 N3L = 120 LBS/DAY

CALCULATE DENITRIFICATION CAPACITY:

$(F/M)_{anx} = So * Qd / (MLSS * Vanx)$

$SDNR1 = (0.03 * (F/M)_{anx} + 0.029) * 1.029^{(T-20)}$

WHERE SDNR1 IS THE SPECIFIC DENITRIFICATION RATE
 WITH UNITS LB NOx-N/LB MLSS-DAY, CORRECTED FOR
 THE DESIGN WATER TEMPERATURE

EST Vanx = 0.150 X 10⁶ GALLONS
 HRT = V / (Q + RAS + NRCY) THEN HRT = 1.20 HOURS @ Qd
 (F/M) anx = 0.745 LB BOD/LB MLSS-DAY
 SDNR1 = 0.051 LB NOx-N/LB MLSS-DAY

NOx DENIT CAP = SDNR1 * Vanx * MLSS * 8.34
 = 172 LBS NOx/DAY

NOx REM BY DENIT, Nd = 120 LBS NOx/DAY; %REM =
 (ANX1 SHOULD REM 65-85% TN)
 TN LOAD TO Vanx2, No2 = 120.48 LBS NOx/DAY
 9.63 mg/L NOx-N if all in effluent

5. SECOND ANOXIC ZONE DESIGN N/A

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6. REAERATION ZONE DESIGN N/A

7. CHEMICAL REQUIREMENTS

DETERMINE SYSTEM ALKALINITY REQUIREMENTS

ALKALINITY CONSUMED BY NITRIFICATION, ALKC:

ALKC CONSUMED = (7.14 MG/L ALK/MG/L NH4-N NIT) (No)

WHERE NH3 = 355 LBS/DAY = 28 MG/L @ Qd

ALKC = 203 MG/L AS CaCO3

ALKD RECOVERED BY DENITRIFICATION = 3 MG/L ALK/ MG/L NO3-N DENITRIFIED

ALKD = 29 MG/L AS CaCO3

ADDITIONAL ALKALINITY (IF REQUIRED), ALKA

ALKA = ALKI - ALKC - ALKR + ALKD

WHERE ALKI = INFLUENT ALKALINITY

= 175 MG/L AS CaCO3

ALKR = RESIDUAL ALKALINITY

= 20 MG/L AS CaCO3

ALKA = -19 MG/L AS CaCO3 ('-' = ADD REQ)

= -10 MG/L LIME (AS CAO)

8. HYDRAULIC RESIDENCE TIMES BY FLOW

HRT IN HOURS

	FLOW IN MGD			
	1.50	1.15	2.31	3.46
AER/NITR	15.84	20.59	10.30	6.86

NOTE: HRT BASED ON DESIGN FLOW BASIN VOLUME

9. POLLUTANT LOADS TO SECONDARY SYSTEM

NOTE: ASSUME
 ADF = 1.15 MGD
 DESIGN = 1.50 MGD
 MDF = 2.31 MGD

POLLUTANT LOADS IN LBS/DAY

FLOW-MGD	BOD	TSS	NH3-N
1.50	2502	2502	355
1.15	1925	1925	273
2.31	3849	3849	546
3.46	5774	5774	819

10. OXYGEN REQUIREMENTS BASED ON POLLUTANT LOADS

(ANALYSIS ASSUMES AERATION BASIN DIVIDED INTO 3 ZONES FOR TAPERED AERATION)

OXYGEN DEMAND (AOTR) IN LBS/DAY

FLOW-MGD	BOD	NH3-N	NO3-N	TOTAL
-----	-----	-----	-----	-----

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1.50	2752	1633	-345	4041
1.15	2117	1256	-265	3108
2.31	4234	2512	-530	6216
3.46	6351	3768	-795	9325

BASED ON:

BOD = 1.10 LB O2/LB BOD
 NH3 = 4.60 LB O2/LB NH3
 NO3 = -2.86 LB O2/LB NO3 (DENIT CREDIT)

DETERMINE AOTR/SOTR VALUES

USE ANALYSIS FROM EPA MANUAL "FINE PORE AERATION SYSTEMS", SEPT 89, CHAP 3.

$$AOTR/SOTR = aF \cdot 0^{(T-20)} \cdot (t \cdot B + U \cdot C_{ss,20} - C) / C_{ss,20}$$

WHERE

AOTR = ACTUAL OXYGEN TRANSFER RATE, LBS/DAY
 SOTR = STANDARD OXYGEN TRANSFER RATE, LBS/DAY
 a = ALPHA, PROCESS K_{La} /CLEAN WATER K_{La}
 F = FOULING FACTOR FOR DIFFUSER MEMBRANE
 0 = THETA, TEMPERATURE CORRECTION FACTOR
 = 1.024
 t = TAU, $C_{s,T}/C_{s,20}$, SURF SAT CONCENTRATION
 B = BETA, PROCESS C_{ss} /CLEAN WATER C_{ss}
 = 0.90
 $C_{ss,T}$ = STEADY STATE DO CONCENTRATION @ T
 C = DO CONCENTRATION IN PROCESS WATER
 = 2 MG/L
 U = OMEGA, PRESSURE CORRECTION FACTOR
 = $(P_b + 0.007 \cdot W_w \cdot d_e - P_{vt}) / (P_s + 0.007 \cdot W_w \cdot d_e - P_{vt})$
 = 1 ASSUME $P_b = P_s = 1$ ATM
 P_b = FIELD ATMOS PRESSURE, PSIA
 P_s = ATMOS PRESS @ STANDARD CONDITIONS, PSIA
 W_w = SPECIFIC WEIGHT OF WATER, LBS/FT³
 d_e = EFFECTIVE STATURATION DEPTH, FT
 P_{vt} = VAPOR PRESSURE @ TEMPERATURE T

ESTIMATE aF VALUES BY COMPARTMENT (PER BASIN = 3)

aF	COMPARTMENT		
	1	2	3
	0.8	0.8	0.8

DETERMINE $t = C_{s,T}/C_{s,20}$

T (DEG C)	20	20
$C_{s,T}$	9.17	8.53
t	1.000	0.930

DETERMINE $C_{ss,20}$

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$$C_{ss,20} = C_s, T^* \left[\frac{(P_b - P_{vt} + 0.007 \cdot W_w \cdot d_e)}{(P_s - P_{vt})} \right]$$

ASSUME SWD = 14.67 FT

WHERE

$C_{s,20} = 9.17$ MG/L
 $P_b = P_s = 14.7$ PSIA
 $W_w = 62.4$ LBS/FT³
 $P_{vt} = 0.3391$ PSIA
 $d_e = 0.4 \cdot (SWD - 1.0)$
 $= 5.5$ FT

$C_{ss,20} = 10.70$ MG/L

DETERMINE AOTR/SOTR

	COMPARTMENT		
	1	2	3
AOTR/SOTR deg C = 20	0.520	0.520	0.520
AOTR/SOTR deg C = 20	0.570	0.570	0.570

DETERMINE OXYGEN DEMAND DISTRIBUTION

BOD-SYNTHESIS = 0.60 LB O₂/LB BOD
 BOD-ENDOGENOUS = 0.50 LB O₂/LB BOD
 NITRIFICATION = 4.60 LB O₂/LB NH₃
 DENITRIFICATION = -2.86 LB O₂/LB NO₃

DISTRIBUTE DEMAND BY PERCENT PER COMPARTMENT

	COMPARTMENT			
	1	2	3	
BOD-SYNTHESIS	54.5	0.0	0.0	55%
BOD-ENDOGENOUS	45.5	0.0	0.0	45%
NITRIFICATION	100.0	0.0	0.0	100%
DENITRIFICATION	100.0	0.0	0.0	100%
COMPARTMENT TOTAL	100.0	0.0	0.0	100%

DISTRIBUTE DEMAND BY LBS O₂ (AOTR) PER COMPARTMENT

NOTE: CREDIT FOR DENITRIFICATION NOT INCLUDED IN TOTAL TO ASSURE ADEQUATE AERATION IF ANOXIC IS NOT USED OR IS INEFFICIENT

	COMPARTMENT			
	1	2	3	TOTAL
@Q =	1.50			MGD
BOD-SYNTHESIS	1501	0	0	1501
BOD-ENDOGENOUS	1251	0	0	1251
NITRIFICATION	1633	0	0	1633
DENITRIFICATION	-345	0	0	-345
COMPART TOTAL	4385	0	0	4385
@Q =	1.15			MGD
BOD-SYNTHESIS	1155	0	0	1155

PROJECT: Southlake WWTF
 LOCATION: Florida
 BRIEF: DESIGN MASS BALANCE FOR A CONVENTIONAL PACKAGE PLANT
 PROJ NO:
 DATE: 24-Apr-06
 BY: K. FITZGERALD/GNV

BOD-ENDOGENOUS	962	0	0	962
NITRIFICATION	1256	0	0	1256
DENITRIFICATION	-265	0	0	-265
COMPART TOTAL	3373	0	0	3373

@Q =	2.31	MGD		
BOD-SYNTHESIS	2310	0	0	2310
BOD-ENDOGENOUS	1925	0	0	1925
NITRIFICATION	2512	0	0	2512
DENITRIFICATION	-530	0	0	-530
COMPART TOTAL	6746	0	0	6746

@Q =	3.46	MGD		
BOD-SYNTHESIS	3464	0	0	3464
BOD-ENDOGENOUS	2887	0	0	2887
NITRIFICATION	3768	0	0	3768
DENITRIFICATION	-795	0	0	-795
COMPART TOTAL	10120	0	0	10120

OXYGEN DEMAND (SOTR) IN LBS/DAY

FLOW-MGD	SOTR	COMPARTMENT		
		1	2	3
1.50	8431	8431	0	0
1.15	6485	6485	0	0
2.31	12970	12970	0	0
3.46	19455	19455	0	0

11. DETERMINE OXYGEN TRANSFER RATES, AIR REQUIREMENTS

CONVERT SOTR TO SCFM, USE EQUATION

$$SCFM = (0.04 \text{ SCFM DAY/LB O}_2) * SOTR / SOTE$$

(SEE EPA FINE BUBBLE MANUAL, P126 FOR 0.04 VALUE)

$$0.04 = 1 / (0.23 * 0.075 * 1440)$$

WHERE SOTE = STANDARD OXYGEN TRANSFER EFFICIENCY

ASSUME DIFFUSER DEPTH = 14 FT

ASSUME DIFFUSER TYPE = COURSE BUBBLE

EST SOTE = 11.9 % FOR THIS CASE

Course BUBBLE SOTE EST

NOTE: RULE OF THUMB

0.75-1% PER FT FOR COARSE

1.50% PER FT FOR MED/FINE

RESULTING AVG TRANS EFF = 6.2 %

$$SCFM = 0.336 * SOTR$$

PROCESS AIR FOR BIOLOGICAL TREATMENT IN SCFM

AIR FOR	AIR FOR	AIR FOR	TOTAL AIR	AIR PER	AIR PER	FIRM BLOWER
FLOW-MGD	OXY TRANS	MIXING	Required	NEW BLOWER	EXIST BLOWE	CAPACITY

PROJECT: Southlake WWTF
 LOCATION: Florida
 BRIEF: DESIGN MASS BALANCE FOR A CONVENTIONAL PACKAGE PLANT
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1.50	2834	3309	140	3,449	2,500	1,100	5,800
1.15	2180	3309	140	3,449	2,500	1,100	5,800
2.31	4360	3309	140	4,500	2,500	1,100	5,800
3.46	6540	3309	140	6,680	2,500	1,100	5,800

70 cfm/lift for 10" @750 gpm

Oxygen for Mixing 25 SCFM/1000 CF

NOTE: MIXING IS DRIVER FOR AADF AND MMAADF

NOTE: CREDIT FOR DENITRIFICATION NOT INCLUDED IN TOTAL TO ASSURE ADEQUATE AERATION IF ANOXIC IS NOT USED OR IS INEFFICIENT

12. CLARIFICATION/THICKENING REQUIREMENTS AND UNDERFLOW CONCENTRATION, Cu

DESIGN VALUES:

Qd = 1.5 MGD
 MLSS (Co) = 2683 MG/L
 Qr/Qd = 1.00
 SET SLR = 20 LBS/DAY/FT2
 SET SOR = 450 GPD/FT2
 THEN Cu = $Co * (Qd + Qr) / Qr$
 = 5366 MG/L

CALCULATE REQUIRED SECONDARY CLARIFIER SURFACE AREA:

A. BASED ON SOR

AREA OF NEW CLAR = Qd / SOR
 Ac = 3333 FT2 (TOTAL AREA)

B. BASED ON SLR

TOTAL SOLIDS LOAD = $(Qd + Qr) * MLSS * 8.34$
 SLt = 67123 LBS/DAY

AREA OF NEW CLAR = SLt / SLR
 Ac = 3356 FT2 (TOTAL AREA)

RECOM. AREA OF NEW CLAR = 3,356 FT2 (TOTAL AREA)

EXISTING CLAR = 2
 DIAMETER #1 = 44 DIAMETER
 AREA CLAR #1 = 1,520 FT2
 DIAMETER #2 = 46 DIAMETER
 AREA CLAR #2 = 1,661 FT2
 TOTAL AREA = 3181 FT - EACH CLAR
 NEW SOR = 472 GPD/FT2
 NEW SLR = 21 LBS/DAY/FT2
 SET SWD = 15 FT - EACH
 CLAR HRT = 5.7 HOURS - TOTAL

ACTUAL CLAR SURF AREA = 3,181 FT2

13. EFFLUENT FILTER SIZING N/A

14. CHLORINE CONTACT BASIN DESIGN

Diffuser sizing for mixing

VELOCITY
 INFLUENT PIPE

PROJECT: Southlake WWTF
 LOCATION: Florida
 BRIEF: DESIGN MASS BALANCE FOR A CONVENTIONAL PACKAGE PLANT
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 DATE: 24-Apr-06
 BY: K. FITZGERALD/GNV

	ESTIMATED FLOWS			16 INCH
ADF =	1.154 MGD	801 GPM	1.28 FPS	
MMF =	1.500 MGD	1,041 GPM	1.66 FPS	
MDF =	2.308 MGD	1,602 GPM	2.56 FPS	
MHF =	3.462 MGD	2,402 GPM	3.83 FPS	

BASIN SIZING

15 MINUTES OF DETENTION AT MHF (CT = 120)

TOTAL CCB VOLUME =	4821 CF
NUMBER OF BASINS =	2
VOLUME PER BASIN =	2,410 CF EACH
USE L =	34.0 FT
USE w =	10.75 FT/pass
USE d =	6.92 FT
NO PASSES =	2 43 Total width
ACT BASIN VOLUME =	5,059 CF (PER BASIN)
=	37,838 GAL (PER BASIN)
=	75,676 GAL (TOTAL ALL BASINS)

HRT AT Q

HRT@Q=ADF	94.4 MINUTES
HRT@Q=MMF	72.6 MINUTES
HRT@Q=MDF	47.2 MINUTES
HRT@Q=MHF	31.5 MINUTES

CHLORINE REQUIREMENTS

12% Hypochlorite
 1.0008 lb Cl/gal

Average feed	3 MG/L AND	1.15 MGD =	29 gal/day
Peak Day Rate	3 MG/L AND	3.46 MGD =	87 gal/day
Peak feed rate	5 MG/L AND	3.46 MGD =	144 gal/day

TOTAL MAX DAILY CHLORINE REQUIREMENT = 144 gal/day

Store 30 days @ AADF	878 gal/month
Number of tanks	2
Storage tank	5.33 Diameter
Synder 1,100 Gal	6.54 SWD
VOLUME, EA	1,093 GAL
VOLUME, TOTAL	2,185 GAL
At AADF	75.7 Days Storage
At PDF	25.2 Days Storage

15. AEROBIC DIGESTION

Q - MGD

		1.5	1.15	2.31	3.46
		-----	-----	-----	-----
BIO-WAS	LBS/D	2,461	1,893	3,786	5,680
			ASSUME WAS @	6,707 MG/L	

Q - MGD

		1.50	1.15	2.31	3.46
		-----	-----	-----	-----
DIGESTER HYDRAULIC					

PROJECT: Southlake WWTF
 LOCATION: Florida
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 PROJ NO:
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DETENTION TIME, Days	23	30	15	10
Vdig/Qwas ASSUME DECANT WAS TO	15,000 MG/L			

Digester VSS Reduction =	30%
WAS VSS =	80%
VSS RED =	591 lb/d @ MMAADF
Oxygen @2 lb/lb vss =	1,181 lb/d
Rough O2 Est. =	0.6 SCFM/Lb O2
	709 SCFM

Mixing Usually Drives @	25	SCFM/1000 CF
DIG TOTAL VOL =	454,000	GAL.
AIR REQUIRED, scfm =	1,517	SCFM
DIG #1 VOL =	364,000	GAL.
DIG #2 VOL =	90,000	GAL.
AIR REQUIRED Dig #1 =	1,217	SCFM
AIR REQUIRED Dig #2 =	301	SCFM
AIR REQUIRED Dig #1&2 =	1,517	SCFM
TOTAL AIR@ MMAADF =	4,966	SCFM

END OF SPREADSHEET

APPENDIX D
Wastewater Residual Disposal Agreement

SLUDGE MANAGEMENT CONTRACT

This Contract made and entered into as of this 28th day of October, 2002, by and between Synagro Southeast, Inc., a corporation organized and existing under the laws of the State of Delaware, ("Contractor"), with a business address at 4512 Brittmore, Houston, Texas 77041 and Southlake Utilities, Inc., a Florida corporation, ("Customer"), with its business address at 16554 Crossings Boulevard, Suite 4, Clermont, Florida 34711 .

WITNESSETH:

WHEREAS, Contractor is engaged in the business of processing and arranging for disposal of municipal and industrial wastewater sludges at permitted facilities; and

WHEREAS, Customer desires to utilize the services of Contractor for the management of certain Sludge generated by Southlake Utilities;

NOW, THEREFORE, in consideration of the mutual agreements hereinafter set forth, and for other good and sufficient consideration given, the receipt of all of which is hereby acknowledged, the parties hereto agree as follows:

ARTICLE I - DEFINITIONS As used herein:

- a) "Contract" shall mean this Contract, and each and every Exhibit, Appendix and Schedule attached hereto, if any, and by this reference made part of this Contract, all as are properly amended from time to time.
- b) "Contract Price" shall be the price paid by Customer to Contractor, including any adjustments pursuant to ARTICLE III, for Processing of Sludge. The Contract Price for this Contract shall be \$0.065 per gallon of liquid Sludge.
- c) "Contract Term" shall mean the term of this Contract including any extensions as are provided for in ARTICLE VIII.
- d) "Customer" shall mean the entity identified in the first paragraph of this Contract and its successors and assigns.
- e) "Customer Sludge" shall mean the entire quantity of Sludge, generated by Customer. Contractor shall have the exclusive right to all of the Customer Sludge during the Contract Term; but such shall not preclude the possible further production and sale by Customer of appropriately treated effluent for irrigation purposes.
- f) "Effective Date" shall be Dec 01, 2002.
- g) "Non-conforming Sludge" shall mean any Customer Sludge which fails to conform in any material respect to the samples of the Sludge tested for approval as described

in APPENDIX I, Sections A and B 1) a) or any Sludge which contains a hazardous material or is excessively malodorous as a result of Customer's failure to operate its wastewater treatment plant properly.

- h) "Person" shall mean any partnership (including a limited partnership) corporation, limited liability company, governmental authority, trust and legal entity, as well as a natural person.
- i) "Processing" or "Process" shall mean the services performed by Contractor for Customer, which may include transportation, processing, treatment and final disposition of Customer Sludge, all of which shall be in strict compliance with all legal requirements pertaining thereto, including the Florida Department of Environmental Protection.
- j) "Sludge" shall mean sludge, produced by Customer's wastewater treatment plant which substantially conforms to general industry standards for wastewater sludge and meets the requirements set forth in APPENDIX I. Mercury content in Sludge shall be at a level of non-detect or zero. Sludge must not contain hazardous material or be excessively malodorous as a result of Customer's failure to operate its wastewater treatment plant properly.

ARTICLE II - GENERAL

- 1. Customer shall utilize Contractor for the Processing of Customer Sludge.
- 2. Contractor shall accept Customer's Sludge unless:
 - a) The Sludge is not of a type with respect to which Contractor is legally authorized, by regulatory agencies, to Process; or
 - b) The Sludge is Non-conforming Sludge.

ARTICLE III - CONTRACT PRICE ADJUSTMENTS

- 1. The Contract Price shall be adjusted and such adjustments will become effective one year from the Effective Date; and, thereafter, on each anniversary of the Effective Date based on the Consumer Price Index established by the United States Department Of Commerce, Bureau Of Labor Statistics, for the South Urban, All Urban Consumers ("CPIU"), with the CPIU for 2002 being the base index ("Base CPIU"). Said adjustment shall apply to all fees contained herein, and shall be based on the following formula:

$$\text{New Price} = \left(1 + \frac{\text{Current CPIU} - \text{Base CPIU}}{\text{Base CPIU}} \right) \times \text{Contract Price}$$

Once the CPIU is available, the unit price adjustment shall take effect retroactively, where applicable, as of the dates specified above for price adjustments.

2. The price for Processing Non-conforming Sludge, if Contractor decides in its sole discretion to Process such Non-conforming Sludge, shall be negotiated by the parties on each occasion of Processing such Non-conforming Sludge.

3. In the event that the costs incurred by Contractor to transport and process Sludge increase significantly in any manner for any reason beyond the reasonable control of Contractor, including, but not limited to, changes in federal, state or local laws, regulations, ordinances, rules or orders, or the interpretation of same or if the characteristics of the Sludge change in any manner to cause the same, Contractor shall have the right to adjust the then applicable Contract Price upon sixty (60) days prior written notice to Customer. In the event that Customer does not agree to the adjusted price as proposed to it by Contractor, within sixty (60) days after receipt of said notice from Contractor, then either party may terminate this Contract; provided, however, that no such termination shall in any manner relieve Customer of its obligation to pay any outstanding amounts then due and owing to Contractor or which become due and owing hereunder up to the date of such termination.

ARTICLE IV - DELIVERY OF SLUDGE

Contractor shall receive the Sludge at Customer's wastewater treatment facility located at Clermont, Florida. Customer agrees to provide Contractor with access to this facility twenty-four hours a day seven days a week so as to allow Contractor to carry out the purposes of this Contract.

ARTICLE V - REJECTION OF SLUDGE

1. Contractor shall have the right to reject any Non-conforming Sludge, provided that Contractor notifies Customer by telephone or in writing of such rejection for such non-conformance promptly upon Contractor's discovery thereof; but in no event later than the forty-eight (48) hours after the delivery of such Non-conforming sludge to Contractor.

2. Any such notice of rejection not given initially in writing shall be promptly confirmed in writing to Customer.

3. Customer shall within twenty-four (24) hours after receipt of such notice of rejection of Non-conforming Sludge from Contractor arrange for and pay all costs associated with taking possession of and the transport of such Non-conforming Sludge for appropriate processing and disposal.

ARTICLE VI - CONTRACT PAYMENTS

Customer shall pay Contractor for Processing on a monthly basis. The total amount of payment due to Contractor shall be determined by multiplying the then applicable Contract Price, including any adjustments under ARTICLE III, times the number of gallons received by Contractor

during the prior calendar month.

ARTICLE VII - TERMS OF PAYMENT

1. Within ten (10) days after the end of each calendar month, Contractor shall submit to Customer an invoice setting forth the amount due under ARTICLE VI hereof for all Processing provided during the immediately preceding calendar month and shall specify in said invoice such additional information with respect to the computation of said amount as might be reasonably required by Customer.
2. Customer shall pay to Contractor the full amount due under said invoice within thirty (30) days of the receipt of said invoice by Customer. Any invoice amount not paid in full within thirty (30) days after the receipt of said invoice shall bear interest at the lesser of the rate of one and one-half percent (1.5%) per month on the unpaid balance thereof computed from the date of the invoice or the maximum rate allowed by Florida law..
3. Contractor shall keep and maintain proper records and books of account showing all data necessary for the computation of the amounts set forth in ARTICLE VI during the term of the Contract and for twelve (12) months after the termination of the Contract; and shall on request, make such available to Customer or its authorized representatives for review and possible copying.

ARTICLE VIII - CONTRACT TERM

The Contract Term shall be for a period of three (3) years from the Effective Date, unless previously terminated pursuant to ARTICLE XIII; provided, however, that the Contract Term, thereafter, may be extended for additional three (3) year terms by agreement of the parties; provided further that the parties shall begin negotiation as to the Contract Price for such extension at least six (6) months prior to the expiration of the then current Contract Term.

ARTICLE IX - INTERRUPTION OF PROCESSING

1. It is acknowledged and agreed that equipment breakdowns may from time to time cause interruption in the Processing of Customer's Sludge by Contractor. In the event of any such interruption, Contractor shall use its best good faith efforts to:
 - a. restore Processing service as promptly as feasible by utilizing specialist contractors and suppliers with whom existing agreements are in effect;
 - b. promptly notify Customer of such breakdown so as to permit Customer to implement temporary storage and reduction in generation of its Sludge; and
 - c. take such other action as is reasonably acceptable to Contractor and Customer.
2. In the event Contractor cannot make alternative arrangements for Customer's Sludge or if such

arrangements are not reasonably acceptable to Customer and the interruption in Service is detrimental to Customer, Customer shall not be obligated to deliver its Sludge during the period of interruption of Processing, provided Customer notifies Contractor in writing of same. If the interruption in Processing lasts longer than forty-five (45) consecutive days after being notified by Contractor as provided herein, either Customer or Contractor may terminate this Contract by providing written notice of termination to the other party; and, if Processing is not restored within five (5) days of said notice, the Contract shall be terminated and both parties released from any further liability hereunder.

ARTICLE X - CONTRACTOR'S PROCESSING DUTIES

1. Contractor agrees to accept, store, transport, dispose of and otherwise deal with Customer Sludge in strict compliance with any and all Federal, State, and Local laws, rules, and regulations pertaining thereto.

ARTICLE XI - INSURANCE

1. Workers Compensation Insurance

Contractor shall provide workers compensation insurance for all its employees providing services under this Contract in accordance with the applicable Florida law.

2. General Liability Insurance

Contractor shall provide commercial general liability insurance to cover the liabilities of Contractor arising out of the Processing with limits of one million dollars (\$1,000,000) per occurrence and one million dollars (\$1,000,000) products and two million dollars (\$2,000,000) general aggregate. Such insurance shall provide that coverage shall not be canceled without thirty (30) days prior written notice to Contractor and Customer except that only fifteen (15) days notice shall be required for non-payment of premium. Contractor shall provide evidence of said insurance, in the form of an insurance certificate, within thirty (30) days from the date hereof. Said certificate shall name Customer as an additional named insured thereunder.

Contractor shall provide commercial automobile liability and physical damage insurance to cover the liabilities of Contractor arising out of the use of vehicles in connection with the Processing of Sludge with a combined single limit of two million dollars (\$2,000,000). Such insurance shall provide that coverage shall not be canceled by the insurance carrier without thirty (30) days prior written notice to Contractor and Customer, except that only fifteen (15) days notice shall be required for non-payment of premium. Contractor shall provide evidence of said insurance, in the form of an insurance certificate, within thirty (30) days from the date hereof.

ARTICLE XII - FORCE MAJEURE

Neither party shall be liable to the other party for breach or delay in the performance of its obligations hereunder caused by any act or occurrence beyond its reasonable control, including, but not limited to, fires, strikes, accidents and Acts of God; provided, however, that whenever the provisions of this Article are believed to apply, the party relying thereon shall give prompt written notice to the other party of the circumstances, the basis for applicability of this Article and the time required to cure such breach or delay and Contractor and Customer shall use reasonable efforts to agree on appropriate actions under the circumstances.

ARTICLE XIII - TERMINATION: REMEDIES

1. Pursuant to the terms and conditions contained herein, either party may terminate this Contract: (i) upon thirty days notice to the other party of its intention to terminate and the reasons therefore in the event that the other party has failed to perform any of its material obligations hereunder and if the party fails to cure the specified nonperformance within ten (10) days after receipt of such notice; (ii) under the circumstances described in ARTICLE III, Section 3 and ARTICLE IX, section 2 hereof; and (iii) upon sixty days notice for any reason whatsoever regardless of fault.

2. Notwithstanding any provisions to the contrary contained in ARTICLE I, ARTICLE II, and ARTICLE VII herein, Contractor may terminate this Contract upon written notice to Customer under the three (3) circumstances described more completely below:

- (i) Customer fails to make payment within 60 days of any invoice date;
- (ii) There is a change in any applicable Federal, State or Local laws, regulations, ordinances, rules or orders which materially affects or prohibits Contractor from performing its obligations hereunder to provide Processing;
- (iii) Contractor determines that Processing the Customer's Sludge will cause Contractor to be in violation of its federal, state or local permits, or will produce or cause to be produced a process byproduct that is classified as hazardous material under federal, state or local laws and regulations; or

In the event of a payment default by Customer under 2(i) above, termination of the Contract shall take effect ten (10) days after Contractor notifies Customer in writing of its intention to terminate the Contract unless Customer pays all monies due Contractor or makes other payment arrangements acceptable to Contractor before the end of the ten-day notice period.

3. Upon termination, except as otherwise provided herein, all obligations of the parties hereto shall cease other than payment obligations of Customer with respect to Processing performed by Contractor prior to the date of termination.

4. Except as otherwise set forth herein, each of the parties hereto shall be entitled to any and all remedies at law and equity which may be available to such party upon termination of this Agreement.

ARTICLE XIV - REPRESENTATIONS

1. Contractor hereby represents and warrants that the following statements are presently true and accurate and will continue to be true and accurate throughout the Contract Term:

- a) Contractor is a corporation, duly authorized and validly existing under the laws of the State of Delaware, has all requisite power and authority to carry on business as now conducted, to own or hold properties and to enter into and perform its obligations hereunder and under each instrument to which it is or will be a party, and is qualified to do business and is in good standing in all jurisdictions where the nature of its business requires such qualifications, including the State of Florida..
- b) Contractor is familiar with and possess all necessary permits to comply with all applicable federal, state and local statutes, laws and regulations, codes and ordinances, relating to the performance of its duties hereunder, including but not limited to the Processing contemplated hereunder and will comply in all material respects with all applicable laws and regulations thereto.
- c) This Contract, and each Appendix, Exhibit or Schedule attached hereto, if any, to which Contractor is or will be a party has been or will be duly authorized by all necessary action on the part of, and has been or will be duly executed and delivered by Contractor, and neither the execution and delivery thereof, nor compliance with the terms and provisions thereof or hereof: (i) requires the approval and consent of any governmental authority or any other Person or (ii) contravenes any existing contractual obligation, law, judgment, governmental rule, regulation or order applicable to or binding on Contractor or to the best of Contractor's knowledge, any general or limited partner of Contractor.
- d) Upon the execution of this Contract the same will be a legal and binding obligation enforceable against Contractor in accordance with its terms.

2. Customer hereby represents and warrants the following statements are presently true and accurate and will continue to be true and accurate throughout the Contract Term:

- a) Customer is a corporation, duly organized, validly existing and in good standing under the laws of Florida and has all the requisite power and authority to enter into and perform its obligations under the terms of this Contract Term.
- b) This Contract, and each Exhibit, Appendix or Schedule attached hereto, if any, to

ARTICLE XVI - MISCELLANEOUS

(1) Effective date. This Contract shall not become effective and binding until it has been executed by all parties hereto and shall be dated for purposes hereof as of the date of its execution by the last party executing it.

(2) Applicable Law. This Contract shall be construed and enforced under the laws of the State of Florida, regardless of where it is executed or delivered.

(3) Construction. This Contract shall not be construed more strongly against either party hereto, regardless of who was more responsible for its preparation.

(4) Entire Agreement. This Contract supersedes and replaces any and all previous oral agreements between the parties pertaining to the subject matter hereof, if any; and any and all such agreements, if any, are hereby declared to be null and void and of no further force and effect.

(5) Third Party Beneficiary. It is specifically understood and agreed that no person or other entity shall be a third party beneficiary hereunder, and that none of the provisions of this Contract shall be for the benefit of or be enforceable by any one other than the parties hereto, and that only the parties hereto shall have any rights hereunder.

(6) Effect. This Contract shall be binding upon and inure to the benefit of the parties hereto, and their legal representatives, successors and permissible assigns, as applicable. Either party may be released from any obligation or agreement hereunder only by a written agreement of the other specifically providing for such a release.

(7) Further Assurances. The parties hereto agree to execute any and all other and further documents as might be reasonably necessary in order to ratify, confirm, and effectuate the intent and purposes of this Contract.

(8) Counterparts. This Contract may be executed in any number of counterparts, each of which, when executed and delivered, shall be deemed to be an original instrument; but such counterparts shall together constitute one and the same instrument.

(9) Partnership. Nothing herein shall be construed as to constitute or establish any type of joint venture, partnership, or any other type of legal relationship between the parties other than the presently existing principal/agent relationship.

(10) Amendment. This Contract shall not be amended or modified except by an amendment in writing executed by all parties hereto in the same form as this Contract.

(11) Severability. All rights, powers and remedies provided herein may be exercised only to the extent that the exercise thereof does not violate any applicable law and are

intended to be limited to the extent necessary so that they will not render this Contract invalid, illegal, or unenforceable. If any term of this Contract shall be held to be invalid, illegal, or unenforceable, the validity of the other terms of this Contract shall in no way be affected thereby.

(12) Non-Impairment. It is specifically understood and agreed that this Agreement is not intended to, and shall not modify, affect, impair, or diminish any rights, duties, or liabilities of any party hereto, other than those as are expressly and specifically set forth herein.

(13) Non-Recordation. This Contract, which is intentionally prepared in non-recordable form, shall not be recorded, and any attempt to do so shall be deemed to be a nullity.

(14) Paragraph Headings. The paragraph headings contained in this Contract are for reference purposes only, and shall not in any way affect the meaning, content, or interpretation hereof.

(15) Assignment. This Contract may not be assigned by any party hereto without the consent of all other parties hereto except that Customer may assign such to any successor to its franchise as recognized by the Florida Public Service Commission.

(16) Attorney's Fees. In the event that it becomes necessary for any party hereto to engage the services of an attorney to construe or enforce this Contract, such party shall be entitled to recover from the other, in the event such party shall be successful in the purpose for which such attorney was engaged, all costs incident to such construction or enforcement action, including any arbitration, mediation, trial, or appellate procedure, including a reasonable attorney's fee and appellate attorney's fee, if any.

(17) Waiver Of Jury Trial. The parties hereto hereby knowingly, voluntarily, and intentionally waive any right that any of them might have to a trial by jury with respect to any litigation based hereon, or arising out of, under, or in connection with this contract, or any document contemplated to be executed in conjunction herewith. This provision is a material inducement for both parties to enter into this Contract.

(18) Time of Essence. Time is of the essence of this Contract.

(19) Gender. Etc. Wherever used herein, all terms shall include masculine, feminine, neuter, singular, and/or plural, as the context admits or requires.

IN WITNESS WHEREOF, the parties hereto have by their duly authorized officers or representatives executed this Contract all on the day and year first above written.

SYNAGRO SOUTHEAST, INC.
A Delaware Corporation

By: Alvin L. Thomas II
Alvin L. Thomas II
Vice President

As Its: Assistant Vice President

Date: 10/28/2002

CONTRACTOR

SOUTHLAKE UTILITIES, INC.
A Florida Corporation

By: [Signature]
As Its: President

Date: 10/10/2002

CUSTOMER

APPENDIX I

This Appendix contains information concerning the characteristics of Customer Sludge, testing procedures, method of delivery and method of measurement.

A - The Customer shall provide Sludge with the following characteristics:

- 1) Primary and waste activated solids from wastewater treatment facilities.
- 2) Dry solids content range of _____ for liquid Sludge
- 3) Must be nonhazardous per EPA Regulations (40 CFR Part 261.24 or successor provisions).
- 4) A volatile content greater than 50%.
- 5) Untreated raw septage: None.
- 6) Skimmings/scum is 4% oil and grease which is to be thoroughly mixed with the Sludge. Skimmings/scum may be taken unmixed by Contractor at Contractor's discretion.

Testing for the above parameters shall be by Contractor and Customer on a split sample.

B - The Customer shall provide the following information:

1) Testing

a) Toxicity Leachate Characteristic Procedure (TCLP) Analysis

(i) TCLP Constituents - Volatile Organic Components

<u>Volatiles</u>	<u>Regulatory Levels*</u>
Benzene	0.5 mg/L
Carbon Tetrachloride	0.5 mg/L
Chlorobenzene	100.0 mg/L
Chloroform	6.0 mg/L
1,4 Dichlorobenzene	7.5 mg/L
1,2 Dichloroethane	0.5 mg/L
1,1 Dichloroethylene	0.7 mg/L
Methylethyl Ketone	200.0 mg/L
Tetrachloroethylene	0.7 mg/L
Trichloroethylene	0.5 mg/L
Vinyl Chloride	0.2 mg/L

* Regulatory Levels and Test Procedures per 40 CFR Part 261.24

(ii) TCLP Constituents - Inorganic Components

<u>Inorganics</u>	<u>Regulatory Levels*</u>
-------------------	---------------------------

Arsenic	5.0 mg/L
Barium	100.0 mg/L
Cadmium	1.0 mg/L
Chromium	5.0 mg/L
Lead	5.0 mg/L
Mercury	0.2 mg/L
Selenium	1.0 mg/L
Silver	5.0 mg/L

* Regulatory Levels and Test Procedures per 40 CFR Part 261.24

(iii) TCLP Constituents - Semi-Volatile Organic Components

<u>Semi-Volatiles</u>	<u>Regulatory Levels*</u>
Chlordane	0.03 mg/L
Total (Cresol)	200.00 mg/L
o-Cresol	200.00 mg/L
m-Cresol	200.00 mg/L
p-Cresol	200.00 mg/L
2,4 D	10.00 mg/L
2,4 Dinitrotoluene	0.13 mg/L
Endrin	0.02 mg/L
Heptachlor & Its Epoxide	0.008 mg/L
Hexachlorobenzene	0.13 mg/L
Hexachloro-1,3 butadiene	0.50 mg/L
Hexachloroethane	3.00 mg/L
Lindane	0.40 mg/L
Methoxychlor	10.00 mg/L
Nitrobenzene	2.00 mg/L
Pentachlorophenol	100.00 mg/L
Pyridine	5.00 mg/L
Toxaphene	0.50 mg/L
2,4,5 Trichlorophenol	400.00 mg/L
2,4,6 Trichlorophenol	2.00 mg/L
2,4,5-TP (Silvex)	1.00 mg/L

* Regulatory Levels and Test Procedures per 40 CFR Part 261.24

2) Procedure

Testing shall be performed at the Customer's expense no less than four times per year.

Testing will be at the discretion of Contractor and appropriate regulatory agencies.

Testing shall be performed and analyzed by an accredited independent testing laboratory. Results shall be sent directly to Contractor for its records, and for forwarding to the appropriate regulatory agencies.

C - Method of Delivery:

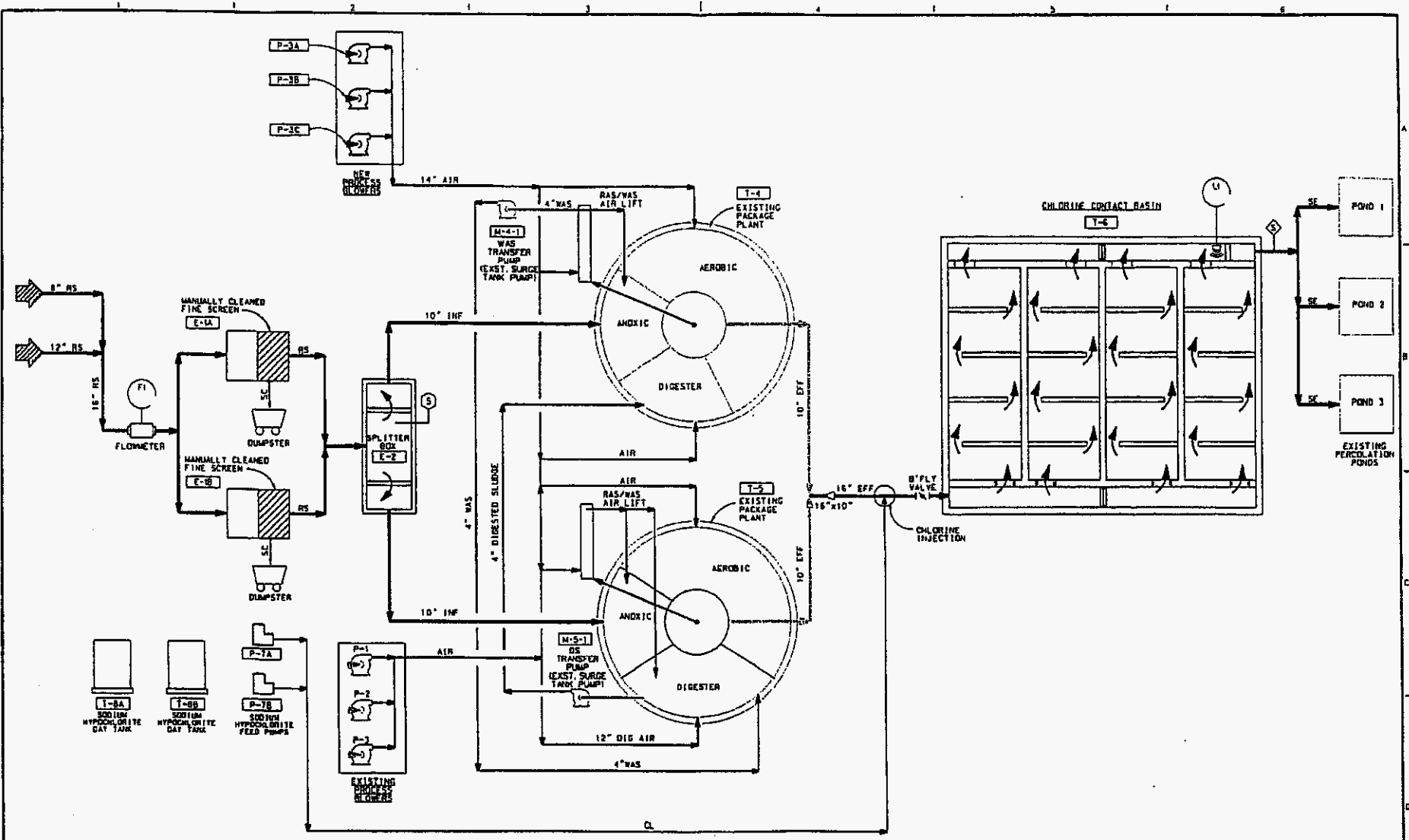
The Customer shall load the Sludge into the containers provided by Contractor. The Customer will coordinate with Contractor, 24 hours prior, to schedule a pick-up of the Sludge. If loading is performed at night the Customer shall provide sufficient lighting.

1) Liquid Sludge Delivery

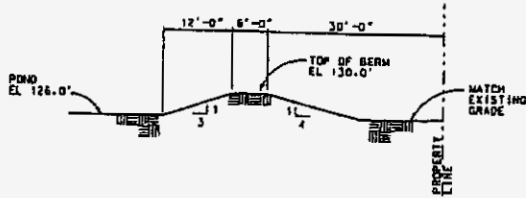
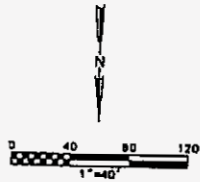
The Sludge will be transferred via a hose connection to a Contractor designated vehicle. The Contractor designated truck driver is responsible for connecting the hose to and disconnecting the hose from his truck, and for notifying the operator once the truck is full. A water hose and drain shall be provided to wash the end of the truck when required.

APPENDIX E
Drawings

G-8
C-3
M-1
E-1



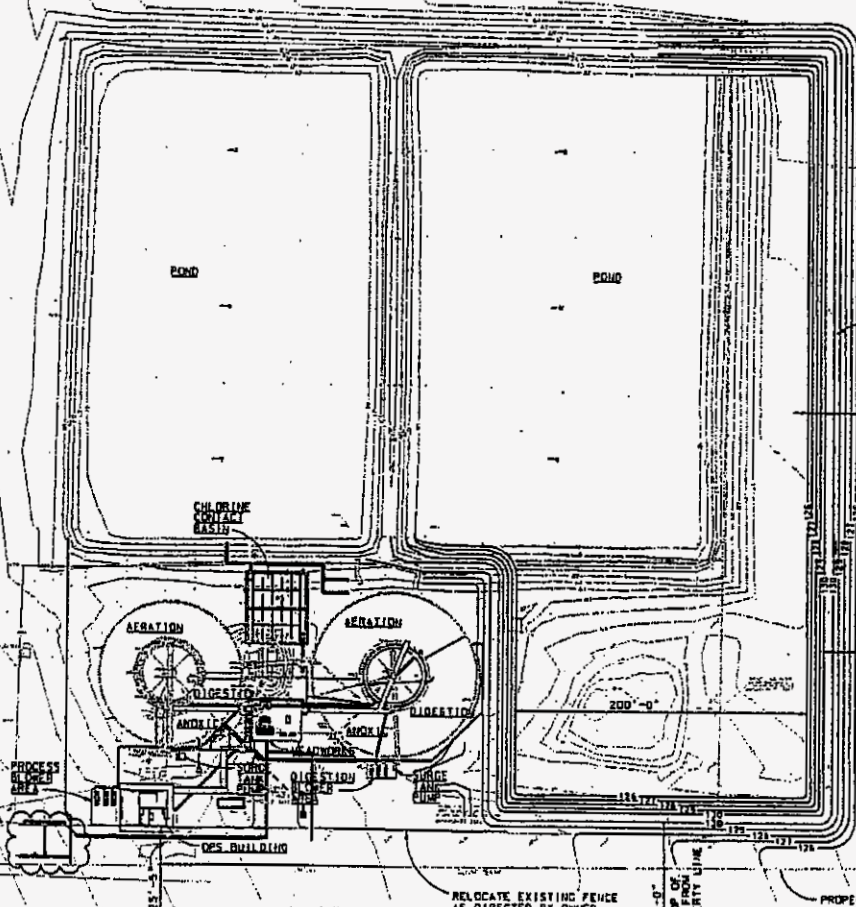
DRAWN: K PITZGERALD DATE: 10/20/04 CHECKED: D PITZGERALD APPROVED: K PITZGERALD	TITLE: WASTEWATER TREATMENT FACILITY IMPROVEMENTS SHEET NO: 10 OF 10 SCALE: AS SHOWN	TSG TECHNOLOGIES GAINESVILLE, FLORIDA CERTIFICATE OF AIR POLLUTION DESIGN	SOUTHLAKE UTILITIES, INC. CLEMATON, FLORIDA WASTEWATER TREATMENT FACILITY IMPROVEMENTS	PROCESS PROCESS FLOW DIAGRAM	SHEET NO: G-8 DATE: OCT 2004 PROJECT NO: 03-100-01 1001gca.cw 24-APR-2008
--	--	---	--	--	--



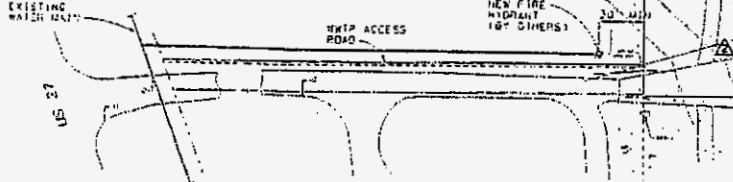
TYPICAL BERM SECTION
JFS

NOTES:

1. GENERATOR TO HAVE SELF CONTAINED FUEL STORAGE TANK WHICH WILL BE #500 GALLONS. EXISTING ACCESS ROAD PROVIDES ACCESSIBILITY FROM US HIGHWAY 27 AS SHOWN ON AERIAL PHOTOGRAPH.
2. LIQUID CHLORINE TO REPLACE GASEOUS CHLORINE SYSTEM. TWO DOUBLE-WALLED 1,100 GALLON TANKS PROVIDED FOR 12.5% BLEACH.
3. CONTRACTOR TO RELOCATE EXISTING BERMS TO PROVIDE BASE POND DIMENSIONS INDICATED.



SITE PLAN



DRWN	K FITZGERALD				
CHKD	JFS	2	11/85	AS BUILT REVISIONS	ALC KSF
APP'D	D FITZGERALD	1	10/5/84	CONSOLIDATED DRAWINGS	LEF KSF
DATE	K FITZGERALD				BY JFS

VERIFY SEALS	
SCALE	AS SHOWN ON DRAWING, UNLESS OTHERWISE NOTED
DATE	10/5/84
BY	JFS



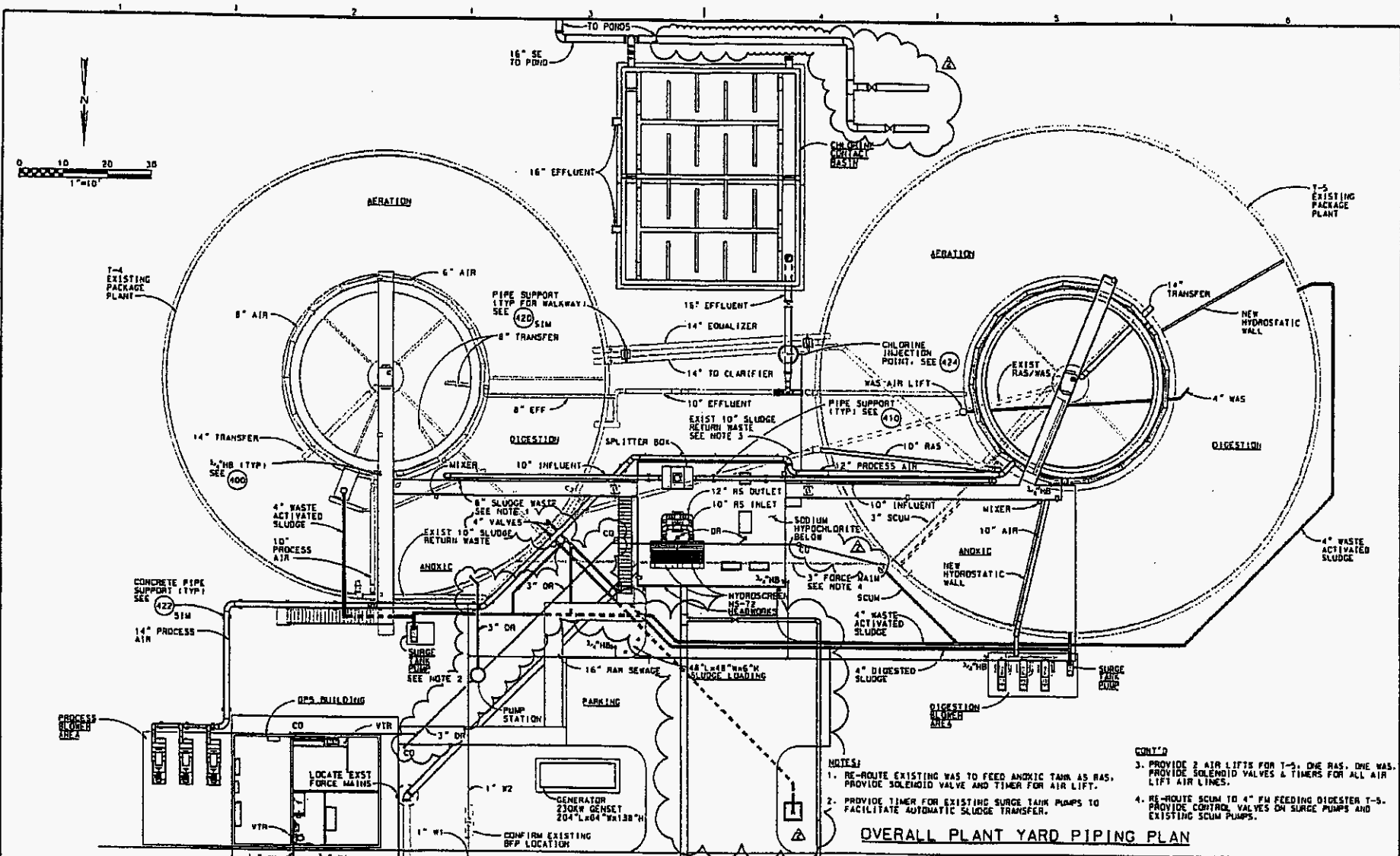
TECHNOLOGICAL SERVICES GROUP
DADE COUNTY, FLORIDA
REGISTERED PROFESSIONAL ENGINEERS

SOUTHLAKE UTILITIES, INC.
CLERMONT, FLORIDA
WASTEWATER TREATMENT FACILITY IMPROVEMENTS

CIVIL
**SITE DEVELOPMENT PLAN
TREATMENT PLANT ACCESS**

DWG NO.	C-3
DATE	OCT 2004
SCALE	AS SHOWN
PROJECT NO.	34-APR-2004

AS-BUILT



- CONT'D
- NOTES:
1. RE-ROUTE EXISTING WAS TO FEED ANOXIC TANK AS RAS. PROVIDE SOLENOID VALVE AND TIMER FOR AIR LIFT.
 2. PROVIDE TIMER FOR EXISTING SURGE TANK PUMPS TO FACILITATE AUTOMATIC SLUDGE TRANSFER.
 3. PROVIDE 2 AIR LIFTS FOR T-5, ONE RAS, ONE WAS. PROVIDE SOLENOID VALVES & TIMERS FOR ALL AIR LIFT AIR LINES.
 4. RE-ROUTE SCUM TO 4" FM FEEDING DIGESTER T-5. PROVIDE CONTROL VALVES ON SURGE PUMPS AND EXISTING SCUM PUMPS.

OVERALL PLANT YARD PIPING PLAN

DESIGN	K FITZGERALD	DATE	11/11/04	AS BUILT REVISIONS	BY	ALC	REV	1
CHK	VTR	DATE	11/11/04	CONSOLIDATED DRAWINGS	BY	LZT	REV	1
APP'D	D FITZGERALD	DATE	11/11/04	REVISION	BY	APVD	REV	1



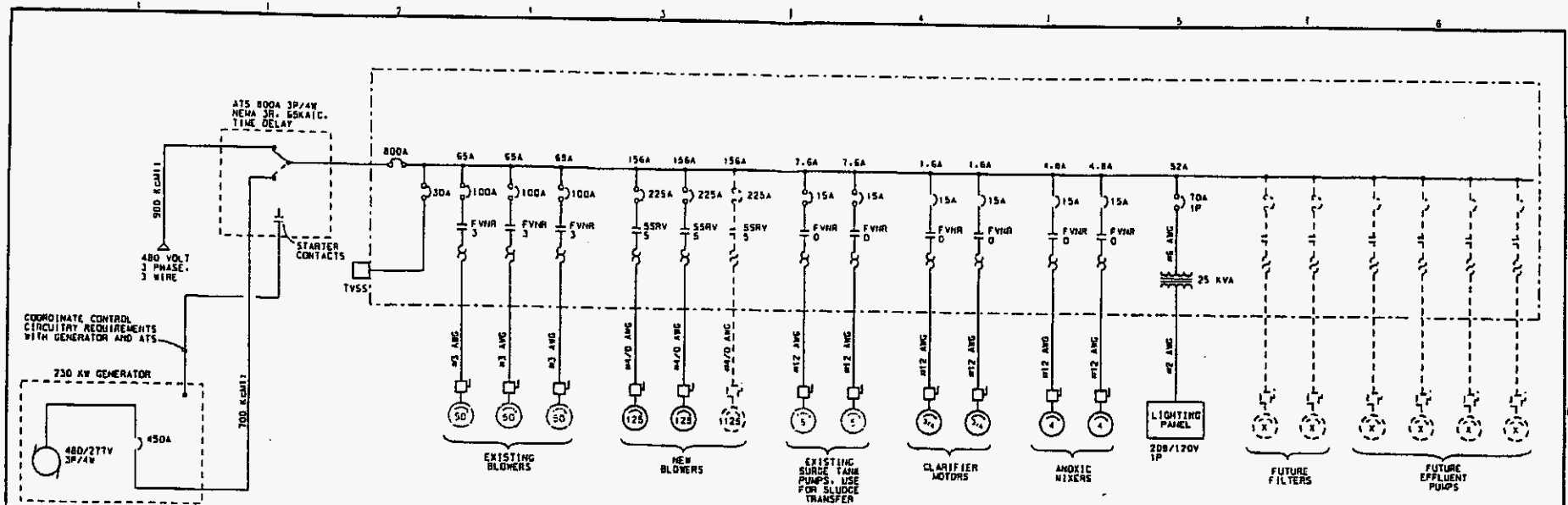
TSG TECHNOLOGIES
 TAMPA, FLORIDA
 WE ARE THE LEADERS IN WATER TREATMENT TECHNOLOGY

SOUTHLAKE UTILITIES, INC.
 CLEMONT, FLORIDA
 WASTEWATER TREATMENT FACILITY IMPROVEMENTS

Mechanical
OVERALL PLANT YARD PIPING

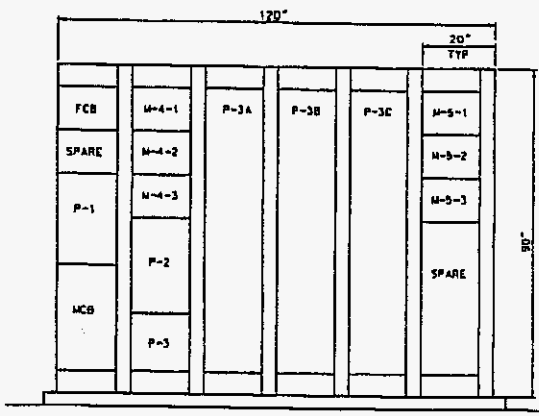
DATE	M-1
DATE	OCT 2004
SCALE	AS SHOWN

AS-BUILT



ELECTRICAL ONE LINE DIAGRAM
NTS

LEGEND
 FV FULL VOLTAGE
 RV REDUCED VOLTAGE
 SS SOLID STATE



MOTOR CONTROL CENTER
NTS

LEGEND			
ITEM NO.	DESCRIPTION	LOAD	FLA
1	EXISTING BLOWER NO. 1	31.2 KVA	65A
2	EXISTING BLOWER NO. 2	31.2 KVA	65A
3	EXISTING BLOWER NO. 3	31.2 KVA	65A
4	NEW BLOWER NO. 1	74.88 KVA	156A
5	NEW BLOWER NO. 2	74.88 KVA	156A
6	NEW BLOWER NO. 3	74.88 KVA	156A
7	SLUDGE TRANSFER PUMP NO. 1	3.65 KVA	7.6A
8	SLUDGE TRANSFER PUMP NO. 2	3.65 KVA	7.6A
9	CLARIFIER NO. 1	0.77 KVA	1.6A
10	CLARIFIER NO. 2	0.77 KVA	1.6A
11	ANOXIC MIXER NO. 1	2.3 KVA	4.8A
12	ANOXIC MIXER NO. 2	2.3 KVA	4.8A
13	LIGHTING TRANSFORMER	25 KVA	52A
		25% OF MAX LOAD	16.72 KVA 39A
		TOTAL	351.9 KVA 782A

DESIGN	D FITZGERALD
DATE	10/20/01
CHKD	T STAMONDOR
APPROV	D FITZGERALD

NO	DATE	REVISION

VERIFY AGAIN
 ALL OF THE WORK ON THIS DRAWING IS THE PROPERTY OF TSGA. ANY REVISIONS MUST BE APPROVED BY THE ORIGINAL DESIGNER.
TSGA TECHNOLOGIES
 DAVENPORT, FLORIDA
 SOFTWARE BY AUTHOREASON 2002

SOUTHLAKE UTILITIES, INC.
 CLEMONT, FLORIDA
 WASTEWATER TREATMENT FACILITY IMPROVEMENTS

ELECTRICAL
ONE-LINE DIAGRAM

DWG NO.	E-1
DATE	OCT 2001
PROJECT NO.	03-0000

AS-BUILT

Deficiency #3

**Used and Useful Calculations
Wastewater Treatment Plant**

Florida Public Service Commission

Southlake Utilities, Inc.
Docket No. 080597-WS
Test Year Ending 12/31/08
Interim [] Final [X]

Schedule: F-6 REVISED
Page: 1 of 2
Preparer: Guastella Associates

Description: Provide all calculations, analyses and governmental requirements used to determine the used and useful percentages for the wastewater treatment plant(s) for the historical test year and the projected test year (if applicable).

Projected Average Test Year

Plant Capacity-Per Permit (Annual Average Daily Flow)		1,150,000 GPD
Base Year Average Daily Flow (Sch. F-2)	691,901 GPD	
Average Base Year ERCs	3,206	
Average Daily Flow per ERC	215.8	
Test Year Average ERCs	3,281	708,177 GPD
5 Year Growth at 5% per Year	27.63%	
Margin Reserve ERCs	907	
Margin Reserve Gallons		<u>195,669 GPD</u>
Avg. Day with Margin Reserve		903,847 GPD
Used & Useful Percentage		<u>78.60%</u>
USE*		<u>100.00%</u>

*The WWTP is 100% Used & Useful because: (1) The Utility System (water and sewer) is virtually built-out even with the 5% annual growth limit on margin reserve, (2) to ensure service and reliability wastewater treatment plants are constructed on the basis of design flows greater than actually expected, as a governmental (DEP) requirement. Accordingly, at 75% of capacity, expansion plans must be submitted to DEP, which will occur before the margin reserve allowance is reached, and (3) there is an insignificant cost difference between a 1.15 mgd and .904 mgd capacity plant. Thus, the higher design flow criteria is cost justified as well as necessary to assure adequate service to existing customers.

Recap Schedules:
A-6, A-10, B-14

**Used and Useful Calculations
Wastewater Treatment Plant**

Florida Public Service Commission

Southlake Utilities, Inc.
Docket No. 080597-WS
Base Year Ended 12/31/07
Interim [X] Final []

Schedule: F-6 REVISED
Page: 2 of 2
Preparer: Guastella Associates

Description: Provide all calculations, analyses and governmental requirements used to determine the used and useful percentages for the wastewater treatment plant(s) for the historical test year and the projected test year (if applicable).

Interim Test Year

Plant Capacity-Per Permit (Annual Average Daily Flow)		1,150,000 GPD
Base Year Average Daily Flow (Sch. F-2)	691,901 GPD	
Average Base Year ERCs	3,206	
Average Daily Flow per ERC	215.8	
Year End ERCs	3,255	702,368 GPD
5 Year Growth at 5% per Year	<u>27.63%</u>	
Margin Reserve ERCs	899	
Margin Reserve Gallons		<u>194,064 GPD</u>
Avg. Day with Margin Reserve		896,433 GPD
Used & Useful Percentage		<u>77.95%</u>
USE*		<u>100.00%</u>

*The WWTP is 100% Used & Useful because: (1) The Utility System (water and sewer) is virtually built-out even with the 5% annual growth limit on margin reserve, (2) to ensure service and reliability wastewater treatment plants are constructed on the basis of design flows greater than actually expected, as a governmental (DEP) requirement. Accordingly, at 75% of capacity, expansion plans must be submitted to DEP, which will occur before the margin reserve allowance is reached, and (3) there is an insignificant cost difference between a 1.15 mgd and .900 mgd capacity plant. Thus, the higher design flow criteria is cost justified as well as necessary to assure adequate service to existing customers.

Recap Schedules:
A-6, A-10, B-14

Southlake Utilities, Inc.

Estimate of Inflow and Infiltration

Treated Gals.	252,544,000	Gallons
Water Sold - Sewer Customers TG (excludes irrigation water estimate)	457,401	TG
8" Gravity Sewer FT	103,228	FT
8" Gravity Sewer Inch Ft	825,824	Inch-FT
Total Inch Miles	156.41	Inch Miles
Daily Allowance - 500 GPD/InchMile	78,203.03	
Annual Acceptable Infiltration	28,544,106	
Inflow @ 10% of Water Sold	45,740,100	
Acceptable I&I	74,284,206	
Gallons Sold - Sewer Customers	457,401,000	
Residential Water Sold	137,280,000	
Residential Estimated Return 80%	109,824,000	
General Service Water Sold	320,121,000	
General Service Estimated Return 96%	307,316,160	
Acceptable Amount of Wastewater	417,140,160	
Acceptable Wastewater and I&I	491,424,366	
Treated Gals.	252,544,000	
Total Excess I&I	(238,880,366)	
% of Excess I&I Calculated	N/A	
% of Excess I&I Used	N/A	

Deficiency #5



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Colleen Castille
Secretary

NOTICE OF PERMIT ISSUANCE

SENT BY MAIL
jeff@cagan.com

Southlake Utilities, Inc.
16554 Crossings Boulevard, #2
Clermont, FL 3477

Attention: Jeffrey Cagan, President

Lake County - PW
Southlake
Water Treatment Plant Modifications

Dear Mr. Cagan:

Enclosed is Permit Number WC35-0080599-046 to modify a water treatment plant issued pursuant to Section 403.861(9), *Florida Statutes*.

The Department's proposed agency action shall become final unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57 of the *Florida Statutes* before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57 of the *Florida Statutes*. The petition must contain the information set forth below and must be filed (received by the clerk) with:

Clerk of the Department of Environmental Protection
Office of General Counsel
3900 Commonwealth Boulevard, Mail Station 35
Tallahassee, Florida 32399-3000.

Petitions by the applicant or any of the parties listed below must be filed within fourteen days of receipt of this written notice. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3) of the *Florida Statutes* must be filed within fourteen days of publication of the notice or within fourteen days of receipt of the written notice, whichever occurs first.

Under Section 120.60(3) of the *Florida Statutes*, however, any person who has asked the Department for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 of the *Florida Statutes*. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the *Florida Administrative Code*.

orobitg_135-0080599-046 - Southlake WTP Modifications - Permit

A petition that disputes the material facts on which the Department's action is based must contain the following information:

- (a) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any; the Department permit identification number and the county in which the subject matter or activity is located;
- (b) A statement of how and when each petitioner received notice of the Department action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department action;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A statement of facts that the petitioner contends warrant reversal or modification of the Department action;
- (f) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, *Florida Statutes*.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation under Section 120.573 of the *Florida Statutes* is not available for this proceeding.

This action is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above. Upon the timely filing of a petition this order will not be effective until further order of the Department.

Any party to the order has the right to seek judicial review of the order under Section 120.68 of the *Florida Statutes*, by the filing of a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with:

Clerk of the Department of Environmental Protection
Office of General Counsel
Mail Station 35,
3900 Commonwealth Boulevard
Tallahassee, Florida, 32399-3000

and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when the final order is filed with the Clerk of the Department.



Department of Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Jeb Bush
Governor

Colleen Castille
Secretary

Permittee:
Southlake Utilities, Inc.
16554 Crossings Boulevard, #2
Clermont, FL 3477

Permit Number: WC35-0080599-046
Expiration Date: 08/09/09
County: Lake
Utility: Southlake
Project: Water Treatment Plant Modifications

Attention: Jeffrey Cagan, President

This permit is issued under the provisions of Chapter 403, *Florida Statutes*, and Rule 62-555, *Florida Administrative Code*, (F.A.C.). The above named permittee is hereby authorized to perform the work shown on the application and approved drawing, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

This project consists of modifying the Southlake Water Plant to include constructing a new replacement Well "E" replacing abandoned Well "B"; construction of one 1.0 MG capacity ground storage tank with a top-mounted 5,000 gpm fiberglass cascade tray aerator (the existing 108,000-gallon ground storage tank will remain); new yard piping to connect the new well (Well "E") to the two ground storage tanks, and from the new GST to the fire pump and the existing GST; installing a new 4,000 gpm finished water flow meter on the discharge header of the high service pumps; a new electrical equipment & chemical room; new hypochlorite disinfection system; and, installing a new 230 KW standby generator. The existing Well "D" will also be connected to the new yard piping along with the replacement Well "E". The existing chlorination system will be in use until the new hypochlorination system is in place. The project will be completed in three (3) phases to facilitate placement into service as each phase is completed. Included are:

PHASE 1

- a new Well "E" completed 5/20/04 by the combination method to a depth of 650 ft. with 30-inch outer black steel casing to 185 ft. and 24-inch inner black steel casing to 265 ft. Static water level was reported at 21 ft. A satisfactory bacteriological well survey was completed 7/19/04. A satisfactory chemical analysis was received. Radium 228 must still be tested and this is a condition of clearance. The well was pump tested at rates of 1,000gpm, 2,000gpm & 4,000gpm.
- a new 50hp Goulds Model 12DHLC vertical turbine well pump rated at 1200 gpm at 77 ft. TDH
- 12-inch yard piping from new Well "E" to the existing 14-inch raw water main
- associated raw water meter (400-4,000 gpm)
- all associated electrical work

PHASE 2

- construct the new 1.0 MG -gallon Crom ground storage tank
- yard piping to & from the new tank to fire pump, existing 108,000-gallon ground storage tank, chemical lines to water storage tanks
- 12-inch yard piping connecting new Well "E", existing Well "D" & the new ground storage tank
- construct new Operations Building & hypochlorination system with two 550-gallon double-walled PE tanks and two 4 gph metering pumps. Injection points will be to the aerator collection tray and on the high service pump discharge piping. A chlorine residual analyzer & alarm will be provided on the finished water. An autodialer will be provided for plant alarms.
- install finished water flow meter

PHASE 3

- a new 230 KW generator for standby power, with automatic startup and 500-gallon double walled fuel tank.
- transfer of electrical system to new motor control center

The existing design capacity of 2.916 mgd will remain unchanged.

The following is a proviso of the permit: **Test Results for radium 228 for Well "E" shall be submitted and determined acceptable prior to clearance of Well "E."**

Permittee:
Southlake Utilities, Inc.
16554 Crossings Boulevard, #2
Clermont, FL 3477
Attention: Jeffrey Cagan, President

Permit Number: WC35-0080599-046
Expiration Date: 08/09/09
County: Lake
Utility: Southlake
Project: Water Treatment Plant Modifications

GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violations of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - (a) Have access to and copy any records that must be kept under conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any conditions or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (a) A description of and cause of noncompliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

Permittee:
Southlake Utilities, Inc.
16554 Crossings Boulevard, #2
Clermont, FL 3477
Attention: Jeffrey Cagan, President

Permit Number: WC35-0080599-046
Expiration Date: 08/09/09
County: Lake
Utility: Southlake
Project: Water Treatment Plant Modifications

GENERAL CONDITIONS

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
- ~~13. This permit also constitutes:~~
 - ~~() Determination of Best Available Control Technology (BACT)~~
 - ~~() Determination of Prevention of Significant Deterioration (PSD)~~
 - ~~() Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)~~
 - ~~() Compliance with New Source Performance Standards~~
14. The permittee shall comply with the following:
 - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 1. the date, exact place, and time of sampling or measurements;
 2. the person responsible for performing the sampling or measurements;
 3. the dates analyses were performed;
 4. the person responsible for performing the analyses;
 5. the analytical techniques or methods used;
 6. the results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Permittee:
Southlake Utilities, Inc.
16554 Crossings Boulevard, #2
Clermont, FL 3477

Attention: Jeffrey Cagan, President

Permit Number: WC35-0080599-046
Expiration Date: 08/09/09
County: Lake
Utility: Southlake
Project: Water Treatment Plant Modifications

SPECIFIC CONDITIONS:

Clearance of the Project

1. *A Clearance Letter must be issued by the DEP Central District Potable Water program before placement of this project into service. Failure to do so will result in enforcement action against the permittee.*

To obtain clearance letter, the engineer of record must submit the following:

- (1) completion of the enclosed "Request for Letter of Release to Place Water Supply System into Service" [DEP Form 62-555.900(9), F.A.C.];
- (2) a copy of this permit;
- (3) the "Facilities Inventory" which is attached to the engineer's copy of the permit; and
- (4) a copy of satisfactory bacteriological sample results taken on two consecutive days from the following locations:
 - A. the raw water piping from the new Well "E" to the existing tank
 - B. the raw water piping from the new Well "E" & existing Well "D" to the new tank
 - C. the new ground storage tank; and
 - D. the new high service pump suction piping.
- (5) Test Results for radium 228 for Well "E" shall be submitted and determined acceptable prior to clearance of Well "E."

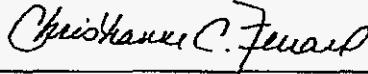
Permit Transfer

2. The permittee will promptly notify the Department upon sale or legal transfer of the permitted facility. In accordance with General Condition #11 of this permit, this permit is transferable only upon Department approval. The new owner must apply, by letter, for a transfer of permit within 30 days.
3. The permittee shall retain a Florida-licensed professional engineer in accordance with subsection 62-555.530(3), F.A.C., to take responsible charge of inspecting construction of the project for the purpose of determining in general if the construction proceeds in compliance with the permit, including the approved preliminary design report of drawings and specifications, for the project.
4. The permittee shall have complete record drawings produced for the project in accordance with Rule 62-555.530(4), F.A.C.
5. The permittee shall provide an operation and maintenance manual for the new or altered treatment facilities to fulfill the requirements under Rule 62-555.350(13), F.A.C.
6. The existing ground storage tank shall be inspected prior to construction of activities included in this permit and pressure tested for leakage.

Permittee:
Southlake Utilities, Inc.
16554 Crossings Boulevard, #2
Clermont, FL 3477
Attention: Jeffrey Cagan, President

Permit Number: WC35-0080599-046
Expiration Date: 08/09/09
County: Lake
Utility: Southlake
Project: Water Treatment Plant Modifications

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Christianne C. Ferraro P.E.
Administrator, Water Resource Management

ISSUED August 17, 2004

CCF:fh:pp



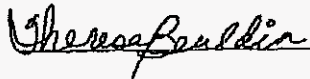
Copies furnished to:
Manipalli Sambamurthi, Consulting Engineer [sammunipalli@bellsouth.net]
Barbara Browning, DEP Monitoring Compliance

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certified that this NOTICE OF PERMIT ISSUANCE and all copies were sent by E-Mail before the close of business on 8/18/2004 to the listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, under Section 120.52(7), *Florida Statutes*, with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

August 18, 2004

Date



Department of Environmental Protection

Jeb Bush
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Colleen Castille
Secretary

Sent via e-mail: jeff@cagan.com

SOUTHLAKE UTILITIES INC
6554 CROSSINGS BOULEVARD
CLERMONT FL 34711

ATTENTION JEFFREY CAGAN
PRESIDENT

Lake County - DW
Southlake Utilities WWTF
File Number: FLA010634-005-DW1P

Dear Mr. Cagan:

The Department is in receipt of your request to revise the conditions of the permit referenced above. The conditions are changed as follows:

This permit authorizes the construction of a plant expansion. The permitted capacity of the system, once the Notification of Completion of Construction for Domestic Wastewater Facilities, DEP Form 62-620.910(12), has been submitted will be 1.15 MGD Annual Average Daily Flow (AADF) and 1.5 Maximum Monthly Average Daily Flow (MMADF). Components of the expansion include two new self-cleaning wedgewire screens each with influent isolation valves to allow the shut down of one screen, and a splitter box. The expanded activated sludge biological treatment will consist of two circular steel tanks each with an anoxic zone followed by the aerobic zone. Each anoxic zone will be equipped with paddle mixers and the aeration zone will utilize diffused air. The existing chlorine contact chamber will be removed from service and replaced with a 75,676-gallon dual train chlorine contact chamber. An additional 71,000 square foot percolation pond will be constructed adjacent to the existing percolation ponds. The existing clarifiers were built with adequate capacity to accommodate this expansion. Monitoring requirements under this permit are effective on the first day of the second month following submission to the Department DEP Form 62-620.910(12), Notification of Completion of Construction for Domestic Wastewater Facilities. [62-620.630(2)] In accordance with Specific Condition 7 of this permit. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements.

1. The permittee shall give at least 72-hours notice to the Department's Central District Ground Water Section, prior to the installation of the two new monitoring wells detailed below. [62-4.070]
2. Prior to construction of new ground water monitoring wells, a soil boring shall be made at each new monitoring well location in order to establish the well depth and screen interval. [62-522.900(3)]
3. Within 30 days after installation of a new monitoring well, the permittee shall submit to the Department's Central District Ground Water Section detailed information on the well's location and construction on the attached DEP Form(s) 62-522.900(3), Monitor Well Completion Report. [62-522.600]

The following Operation Requirements shall replace III. 4. and III. 5. in the permit.

4. The following monitoring wells shall be sampled in accordance with the monitoring frequencies specified in Permit Condition III.5. for Reuse System R-001. Quarterly sampling must be reasonably spaced to be representative of potentially changing conditions.

Facility Well Name	Permit Bullder Well ID	WAFR #	GMS #	Depth (Feet)	Aquifer Monitored	New or Existing
Pond Site						
MW-1	MWC-1	4213	3035A16750	23	Surficial	existing
MW-2	MWC-2	4212	3035A16751	23	Surficial	existing
MW-3	MWC-3	4211	3035A16752	23	Surficial	existing
MW-4	MWC-4	4210	3035A17263	23	Surficial	existing
MW-5	MWB-5	4209	3035A17264	13	Surficial	existing
MW-6	MWC-6	56158	--	--	Surficial	New
MW-7	MWC-7	56159	--	--	Surficial	New
PZ-1	MWP-1	4208	3035A17265	18.9	Surficial	existing
PZ-2	MWP-2	4207	3035A17266	18.9	Surficial	existing
PZ-3*	MWP-3	4206	3035A17267	18.9	Surficial	existing
PZ-4	MWP-4	4205	3035A17268	18.9	Surficial	existing

MWB = Background; MWI = Intermediate; MVC = Compliance, MWP-Piezometer

If the location of PZ-3 interferes with the pond construction please contact the Program Manager of the Ground Water Section, Anil Desai at (407) 893-3305 to discuss replacement of the piezometer or the reconfiguration of the pond.

[62-522.600, 12-9-96][62-610.513,8-8-99]

5. The piezometers identified in Permit Condition III. 4 shall be sampled quarterly for water level only. The monitoring wells identified in Permit Condition III. 4 shall be sampled for the following parameters:

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	feet	In-situ	Quarterly
Nitrogen, Nitrate, Total (as N)	10	mg/l	Grab	Quarterly
Solids, Total Dissolved (TDS)	500	mg/l	Grab	Quarterly
Chloride (as Cl)	250	mg/l	Grab	Quarterly
Coliform, Fecal	4	#/100ml	Grab	Quarterly
pH	6.0 to 8.5	s.u.	In-situ	Quarterly
Turbidity	Report	ntu	Grab	Quarterly

[62-522.600(11)(b), 12-9-96] [62-601.300(3), 62-601.700, and Figure 3 of 62-601, 12-24-96][62-601.300(6), 12-24-96] [62-601.300(7), 12-24-96][62-520.300(9), 12-9-96]

6. Prior to placing the new facilities into operation or any individual unit processes into operation, for any purpose other than testing for leaks and equipment operation, the permittee shall complete and submit to the Department DEP Form 62-620.910(12), Notification of Completion of Construction for Domestic Wastewater Facilities. [62-620.630(2)]
7. Within six months after a facility is placed in operation, the permittee shall provide written certification to the Department on Form 62-620.910(13) that record drawings pursuant to Chapter 62-600, F.A.C., and that an operation and maintenance manual pursuant to Chapters 62-600 and 62-610, F.A.C., as applicable, are available at the location specified on the form. [62-620.630(7)]. Please be advised that the Department will review the operations and maintenance manual upon its availability.
8. This permit does not cover any of the structural engineering aspects of this project.

This letter must be attached to Wastewater Permit No. FLA010634 and becomes a part of and subject to all conditions of that permit.

The Department's proposed agency action shall become final unless a timely petition for an administrative hearing is filed under sections 120.569 and 120.57 of the Florida Statutes before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Petitions by the applicant or any of the parties listed below must be filed within fourteen days of receipt of this written notice. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the notice or within fourteen days of receipt of the written notice, whichever occurs first.

Under section 120.60(3) of the Florida Statutes, however, any person who has asked the Department for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

- (a) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any; the Department permit identification number and the county in which the subject matter or activity is located;
- (b) A statement of how and when each petitioner received notice of the Department action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department action;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A statement of facts that the petitioner contends warrant reversal or modification of the Department action;
- (f) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

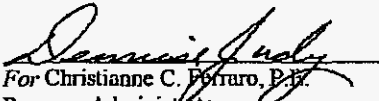
Mediation under section 120.573 of the Florida Statutes is not available for this proceeding.

This action is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above. Upon the timely filing of a petition this order will not be effective until further order of the Department.

Any party to the order has the right to seek judicial review of the order under section 120.68 of the Florida Statutes, by the filing of a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the Clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when the final order is filed with the Clerk of the Department.

Executed in Orlando, Florida.

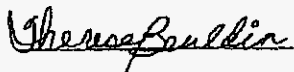
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


For Christianne C. Ferraro, P.E.
Program Administrator
Water Facilities
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767
Phone: (407)894-7555

Date: June 9, 2004

FILING AND ACKNOWLEDGEMENT

FILED, on this date, under Section 120.52(7), Florida Statutes, with the designated deputy clerk, receipt of which is hereby acknowledged.



Clerk

June 9, 2004

Date

CCF/trw/cs

Enclosure: DMRs and Well Completion Reports

cc: Kiera S. Fitzgerald P.E. (via e-mail: wastewatertreatment@tsgwater.com)
Jason Riegler, P.E. (jason.riegler@ch2m.com)
M. Sambamurthi, P.E. (via e-mail: msmurthi@bellsouth.net)
Groundwater Section (via e-mail)

CERTIFICATE OF SERVICE

This is to certify that this PERMIT REVISION and all copies were mailed before the close of business on June 10, 2004 to the listed persons by C. Hoffard.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Central District, 3319 Maguire Boulevard Suite 232, Orlando, FL, 32803-3767

PERMITTEE NAME: Southlake Utilities, Inc
 MAILING ADDRESS: 6554 Crossing Boulevard
 Clermont, FL 34711

PERMIT NUMBER: FLA010634

LIMIT: Final
 CLASS SIZE: N/A

REPORT: Monthly
 GROUP: Domestic

FACILITY: Southlake Utilities WWTF
 LOCATION: U.S. Highway 27 South
 Clermont, FL

MONITORING GROUP NUMBER: R-001
 MONITORING GROUP DESC: Percolation pond, including Influent

COUNTY: Lake

NO DISCHARGE FROM SITE:
 MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement							
PARM Code 50050 Y Mon.Site No. FLW-1	Permit Requirement	1.15 (An.Avg.)	MGD				5 Days/Week	Flow meters and totalizers
Flow	Sample Measurement							
PARM Code 50050 Y Mon.Site No. FLW-1	Permit Requirement	1.5 (Mo.Avg.)	MGD				5 Days/Week	Flow meters and totalizers
BOD, Carbonaceous 5 day, 20C	Sample Measurement							
PARM Code 80082 Y Mon.Site No. EPA-1	Permit Requirement			20.0 (An.Avg.)	MG/L		Weekly	8-hour FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement							
PARM Code 80082 A Mon.Site No. EPA-1	Permit Requirement			30.0 (Mo.Avg.)	MG/L		Weekly	8-hour FPC
Solids, Total Suspended	Sample Measurement							
PARM Code 00530 Y Mon.Site No. EPA-1	Permit Requirement			20.0 (An.Avg.)	MG/L		Weekly	8-hour FPC
Solids, Total Suspended	Sample Measurement							
PARM Code 00530 A Mon.Site No. EPA-1	Permit Requirement			30.0 (Mo.Avg.)	MG/L		Weekly	8-hour FPC
pH	Sample Measurement							
PARM Code 00400 A Mon.Site No. EPA-1	Permit Requirement			6.0 (Min.)	SU		5 Days/Week	Grab

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (YY/MM/DD)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Southlake Utilities WWTF

MONITORING GROUP NUMBER: R-001
 MONITORING PERIOD From: _____ To: _____

PERMIT NUMBER: FLA010634

Parameter		Quantity or Loading	Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Coliform, Fecal	Sample Measurement									
PARM Code: 74055 Y Mon. Site No.: EFA-1	Permit Requirement			200 (An. Avg.)			#/100ML		Weekly	Grab
Coliform, Fecal	Sample Measurement									
PARM Code: 74055 A Mon. Site No.: EFA-1	Permit Requirement			Report (Mo. Geo. Mean)	400 (90%)	800 (Max.)	#/100ML		Weekly	Grab
Total Residual Chlorine (For Disinfection)	Sample Measurement									
PARM Code: 50060 A Mon. Site No.: EFA-1	Permit Requirement			0.5 (Min.)			MG/L		5 Days/Week	Grab
Nitrogen, Nitrate, Total (as N)	Sample Measurement									
PARM Code: 00620 A Mon. Site No.: EFA-1	Permit Requirement			12.0 (Max.)			MG/L		Weekly	8-hour FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement									
PARM Code: 80082 G Mon. Site No.: INF-1	Permit Requirement			Report (Mo. Avg.)			MG/L		Weekly	8-hour FPC
Solids, Total Suspended	Sample Measurement									
PARM Code: 00530 G Mon. Site No.: INF-1	Permit Requirement			Report (Mo. Avg.)			MG/L		Weekly	8-hour FPC
Percent Capacity (TMADF/Permitted Capacity) x 100	Sample Measurement									
PARM Code: 00180 I Mon. Site No.: FLW-1	Permit Requirement			Report (Mo. Total)			PERCENT		Monthly	Calculated

DAILY SAMPLE RESULTS - PART B

Permit Number: FLA010634
 Monitoring Period From: _____ To: _____

Facility: Southlake Utilities WWTF

	CBOD5 (MG/L)	Fecal Coliform Bacteria (#/100ML)	Nitrogen, Nitrate, Total (as N) (MG/L)	pH (SU)	TSS (MG/L)	TRC (For Disinfect.) (MG/L)	Flow (MGD)	Percent Capacity (TMADF/Permitted)	CBOD5 (MG/L)	TSS (MG/L)	
Code	80082	74055	00620	00400	00530	50060	50050	00180	80082	00530	
Mon. Site	EFA-1	EFA-1	EFA-1	EFA-1	EFA-1	EFA-1	FLW-1	FLW-1	INF-1	INF-1	
1											
2											
3											
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29											
30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

GROUND WATER MONIT. G WELL REPORT - PART D

County: **Lake County**
 Facility Name: **Southlake Utilities WWTF**
 Permit Number: **FLA010634**

GMS# 3035P05827

Permit Builder MW ID: **MWC-1**
 Well Type: **Compliance**
 Description: **Well Name MW-1**
Pond Site
WAFR # 4213
GMS#: 3035A16750

Monitoring Period From: _____ To: _____
 Was the well purged before sampling? Yes No

Date Sample Obtained: _____
 Time Sample Obtained: _____

Parameter	Permit Builder PARM Code	Other Historic PARM Code	Sample Measurement (Analysis Results)	Units	Permit Requirement	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to Feet, NGVD	82545	--		Feet	Report				
Nitrate, (as N)	00620	--		mg/l	10				
Solids, Total Dissolved(TDS)	70295	--		mg/l	500				
Chloride (as Cl)	00940	--		mg/l	250				
Coliform, Fecal	74055	--		#/100/ml	4				
pH	00400	--		SU	6.5-8.5				
Turbidity, Lab - Nephelometric	82079	00070		NTU	Report				

COMMENTS AND EXPLANATION:

4/28/2004

GROUND WATER MONITORING WELL REPORT - PART D

County: **Lake County**
 Facility Name: **Southlake Utilities WWTF**
 Permit Number: **FLA010634**

GMS# 3035P05827

Permit Builder MW ID: **MWC-3**
 Well Type: **Compliance**
 Description: **Well Name MW-3**
Pond Site
WAFR # 4211
GMS#: 3035A16752

Monitoring Period From: _____ To: _____
 Was the well purged before sampling? Yes No

Date Sample Obtained: _____
 Time Sample Obtained: _____

Parameter	Permit Builder PARM Code	Other Historic PARM Code	Sample Measurement (Analysis Results)	Units	Permit Requirement	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to Feet, NGVD	82545	-		Feet	Report				
Nitrate, (as N)	00620	--		mg/l	10				
Solids, Total Dissolved(TDS)	70295	--		mg/l	500				
Chloride (as Cl)	00940	-		mg/l	250				
Coliform, Fecal	74055	--		#/100/ml	4				
pH	00400	--		SU	6.5-8.5				
Turbidity, Lab - Nephelometric	82079	00070		NTU	Report				

COMMENTS AND EXPLANATION:

4/28/2004

GROUND WATER MONITORING WELL REPORT - PART D

County: **Lake County**
 Facility Name: **Southlake Utilities WWTF**
 Permit Number: **FLA010634**

GMS# 3035P05827

Permit Builder MW ID: **MWC-4**
 Well Type: **Compliance**
 Description: **Well Name MW-4**
Pond Site
WAFR # 4214
GMS#: 3035A17263

Monitoring Period From: _____ To: _____
 Was the well purged before sampling? Yes No

Date Sample Obtained: _____
 Time Sample Obtained: _____

Parameter	Permit Builder PARM Code	Other Historic PARM Code	Sample Measurement (Analysis Results)	Units	Permit Requirement	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to Feet, NGVD	82545	--		Feet	Report				
Nitrate, (as N)	00620	--		mg/l	10				
Solids, Total Dissolved(TDS)	70295	--		mg/l	500				
Chloride (as Cl)	00940	--		mg/l	250				
Coliform, Fecal	74055	--		#/100/ml	4				
pH	00400	--		SU	6.5-8.5				
Turbidity, Lab - Nephelometric	82079	00070		NTU	Report				

COMMENTS AND EXPLANATION:

4/28/2004

GROUND WATER MONITORING WELL REPORT - PART D

County: **Lake County**
 Facility Name: **Southlake Utilities WWTF**
 Permit Number: **FLA010634**

GMS# 3035P05827

Permit Builder MW ID: **MWB-5**
 Well Type: **Background**
 Description: **Well Name MW-5**
Pond Site
WAFR # 4209
GMS#: 3035A17264

Monitoring Period From: _____ To: _____
 Was the well purged before sampling? Yes No

Date Sample Obtained: _____
 Time Sample Obtained: _____

Parameter	Permit Builder PARM Code	Other Historic PARM Code	Sample Measurement (Analysis Results)	Units	Permit Requirement	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to Feet, NGVD	82545	--		Feet	Report				
Nitrate, (as N)	00620	--		mg/l	Report				
Solids, Total Dissolved(TDS)	70295	--		mg/l	Report				
Chloride (as Cl)	00940	--		mg/l	Report				
Coliform, Fecal	74055	--		#/100/ml	Report				
pH	00400	-		SU	Report				
Turbidity, Lab - Nephelometric	82079	00070		NTU	Report				

COMMENTS AND EXPLANATION:

4/28/2004

GROUND WATER MONITORING WELL REPORT - PART D

County: **Lake County**
 Facility Name: **Southlake Utilities WWTF**
 Permit Number: **FLA010634** **GMS# 3035P05827**

Permit Builder MW ID: **MWC-6**
 Well Type: **Compliance**
 Description: **Well Name MW-6**
 Pond Site
 WAFR # 56158
 GMS# --

Monitoring Period From: _____ To: _____
 Was the well purged before sampling? Yes No

Date Sample Obtained: _____
 Time Sample Obtained: _____

Parameter	Permit Builder PARM Code	Other Historic PARM Code	Sample Measurement (Analysis Results)	Units	Permit Requirement	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to Feet, NGVD	82545	--		Feet	Report				
Nitrate, (as N)	00620	--		mg/l	10				
Solids, Total Dissolved(TDS)	70295	--		mg/l	500				
Chloride (as Cl)	00940	--		mg/l	250				
Coliform, Fecal	74055	--		#/100/ml	4				
pH	00400	--		SU	6.5-8.5				
Turbidity, Lab - Nephelometric	82079	00070		NTU	Report				

COMMENTS AND EXPLANATION:

4/28/2004

FDEP MONITORING WELL COMPLETION REPORT

FACILITY NAME / COUNTY: Southlake Utilities / Lake County

FDEP PERMIT NUMBER: FLA010634 GMS# Site Number: 3035P05827

FDEP WELL NUMBER: WAFR #56158 WELL NAME: MW-6 (MWC-6)

AQUIFER MONITORED: Surficial WELL TYPE: Compliance

DATE INSTALLED: _____ DRILLING METHOD: _____

INSTALLED BY: _____

HOLE DIAMETER: _____ TOTAL DEPTH: _____ BLS**

CASING TYPE: _____ CASING DIAMETER / LENGTH: _____

SCREEN TYPE: _____ SCREEN SLOT SIZE / LENGTH: _____

FILTER PACK TYPE / SIZE: _____ INTERVAL: _____ to _____ BLS

SEALANT TYPE: _____ INTERVAL: _____ to _____ BLS

GROUT TYPE: _____ INTERVAL: _____ to _____ BLS

WELL MEASURING POINT: _____ ELEVATION (NGVD): _____

GROUND SURFACE ELEVATION (NGVD): _____

STATIC WATER LEVEL ELEVATION (NGVD): _____

WELL LATITUDE AND LONGITUDE: _____

DESCRIBE WELL DEVELOPMENT (METHOD, APPROXIMATE VOLUME REMOVED, FINAL WATER CLARITY, PROBLEMS?): _____

NAME / TITLE OF PERSON PREPARING REPORT: _____

ATTACH AS-BUILT MONITORING WELL CONSTRUCTION DIAGRAM AND LITHOLOGIC LOG FOR THIS INDIVIDUAL WELL.

** BLS = Below Land Surface.

FDEP MONITORING WELL COMPLETION REPORT

FACILITY NAME / COUNTY: Southlake Utilities / Lake County

FDEP PERMIT NUMBER: FLA010634 GMS# Site Number: 3035P05827

FDEP WELL NUMBER: WAFR #56159 WELL NAME: MW-7 (MWC-7)

AQUIFER MONITORED: Surficial WELL TYPE: Compliance

DATE INSTALLED: _____ DRILLING METHOD: _____

INSTALLED BY: _____

HOLE DIAMETER: _____ TOTAL DEPTH: _____ BLS**

CASING TYPE: _____ CASING DIAMETER / LENGTH: _____

SCREEN TYPE: _____ SCREEN SLOT SIZE / LENGTH: _____

FILTER PACK TYPE / SIZE: _____ INTERVAL: _____ to _____ BLS

SEALANT TYPE: _____ INTERVAL: _____ to _____ BLS

GROUT TYPE: _____ INTERVAL: _____ to _____ BLS

WELL MEASURING POINT: _____ ELEVATION (NGVD): _____

GROUND SURFACE ELEVATION (NGVD): _____

STATIC WATER LEVEL ELEVATION (NGVD): _____

WELL LATITUDE AND LONGITUDE: _____

DESCRIBE WELL DEVELOPMENT (METHOD, APPROXIMATE VOLUME REMOVED, FINAL WATER CLARITY, PROBLEMS?): _____

NAME / TITLE OF PERSON PREPARING REPORT: _____

ATTACH AS-BUILT MONITORING WELL CONSTRUCTION DIAGRAM AND LITHOLOGIC LOG FOR THIS INDIVIDUAL WELL.

** BLS = Below Land Surface.

Deficiency #7

Schedule of Water Accumulated Depreciation By Primary Account

Florida Public Service Commission

Southlake Utilities, Inc.
 Docket No. 080597-WS
 Test Year Ending 12/31/08
 Historical [] Projected [X]

Schedule: A-9 REVISED
 Page: 2 of 3
 Preparer: Guastella Associates

Description: Provide the month ending balances for each month of the test year and the ending balance for the prior year.

Line No.	(1) Account No.	Account Name	(2) Prior Year-End 12/31/07	(3) 1/31/2008	(4) 2/29/2008	(5) 3/31/2008	(6) 4/30/2008	(7) 5/31/2008	(8) 6/30/2008	(9) 7/31/2008	(10) 8/31/2008	(11) 9/30/2008	(12) 10/31/2008	(13) 11/30/2008	(14) Test Year End 12/31/2008	(15) Simple Avg Balance
1		INTANGIBLE PLANT														
2	301.1	Organization	\$0												\$0	\$0
3	302.1	Franchises	0												0	0
4	339.1	Other Plant & Misc. Equipment	0												0	0
5		SOURCE OF SUPPLY & PUMPING PLANT														
6	303.2	Land & Land Rights	0												0	0
7	304.2	Structures & Improvements	0												0	0
8	305.2	Collect. & Impound Reservoirs	0												0	0
9	306.2	Lake, River & Other Intakes	0												0	0
10	307.2	Wells & Springs	163,000	167,043	171,086	175,128	179,171	183,214	187,256	191,299	195,342	199,384	203,427	207,470	211,512	187,256
11	308.2	Infiltration Galleries & Tunnels	0												0	0
12	308.2	Supply Mains	0												0	0
13	310.2	Power Generation Equipment	12,669	12,748	12,827	12,907	12,986	13,065	13,144	13,223	13,302	13,381	13,460	13,539	13,619	13,144
14	311.2	Pumping Equipment	0												0	0
15	339.2	Other Plant & Misc. Equipment	0												0	0
16		WATER TREATMENT PLANT														
17	303.3	Land & Land Rights	0												0	0
18	304.3	Structures & Improvements	95,864	97,846	99,428	101,211	102,993	104,775	106,557	108,340	110,122	111,904	113,686	115,469	117,251	106,557
19	311.3	Pumping Equipment	39,372	39,705	40,038	40,371	40,704	41,037	41,370	41,703	42,036	42,369	42,702	43,035	43,368	41,370
20	320.3	Water Treatment Equipment	4,600	4,657	4,713	4,769	4,825	4,882	4,938	4,994	5,051	5,107	5,163	5,219	5,276	4,938
21	339.3	Other Plant & Misc. Equipment	0												0	0
22		TRANSMISSION & DISTRIBUTION PLANT														
23	303.4	Land & Land Rights	0												0	0
24	304.4	Structures & Improvements	0												0	0
25	330.4	Distr. Reservoirs & Standpipes	77,962	80,644	83,326	86,008	88,690	91,372	94,054	96,736	99,417	102,099	104,781	107,463	110,145	94,054
26	331.4	Transm. & Distribution Mains	289,775	294,861	299,946	305,032	310,118	315,203	320,289	325,375	330,461	335,546	340,632	345,718	350,803	320,289
27	333.4	Services	30,720	31,286	31,851	32,417	32,982	33,547	34,113	34,678	35,244	35,809	36,374	36,940	37,505	34,113
28	334.4	Meters & Meter Installations	100,030	101,408	102,787	104,165	105,544	106,923	108,301	109,680	111,058	112,437	113,815	115,194	116,573	108,301
29	335.4	Hydrants	37,826	38,252	38,679	39,105	39,532	39,958	40,385	40,811	41,238	41,664	42,091	42,517	42,944	40,385
30	339.4	Other Plant & Misc. Equipment	4,094	4,122	4,149	4,176	4,203	4,231	4,258	4,285	4,313	4,340	4,367	4,394	4,422	4,258
31		GENERAL PLANT														
32	303.5	Land & Land Rights	0												0	0
33	304.5	Structures & Improvements	0												0	0
34	340.5	Office Furniture & Equipment	12,219	12,351	12,483	12,616	12,748	12,880	13,012	13,144	13,276	13,409	13,541	13,673	13,805	13,012
35	341.5	Transportation Equipment	0												0	0
36	342.5	Stores Equipment	0												0	0
37	343.5	Tools, Shop & Garage Equipment	467	470	474	477	481	485	488	492	495	499	502	506	509	488
38	344.5	Laboratory Equipment	0												0	0
39	345.5	Power Operated Equipment	1,032	1,098	1,164	1,229	1,295	1,361	1,426	1,492	1,558	1,623	1,689	1,755	1,820	1,426
40	346.5	Communication Equipment	0												0	0
41	347.5	Miscellaneous Equipment	0												0	0
42	348.5	Other Tangible Plant	532	674	816	958	1,101	1,243	1,385	1,527	1,669	1,811	1,953	2,096	2,238	1,385
43		TOTAL	\$870,163	\$886,965	\$903,767	\$920,570	\$937,372	\$954,174	\$970,976	\$987,779	\$1,004,581	\$1,021,383	\$1,038,185	\$1,054,988	\$1,071,790	\$970,976

Schedule of Sewer Accumulated Depreciation By Primary Account

Florida Public Service Commission

Southlake Utilities, Inc.
 Docket No. 080597-WS
 Test Year Ending 12/31/08
 Historical Projected

Schedule: A-10 REVISED
 Page: 2 of 3
 Preparer: Guastella Associates

Description: Provide the month ending balances for each month of the test year and the ending balance for the prior year.

Line No.	(1) Account No.	Account Name	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
			Prior Year-End 12/31/07	1/31/2008	2/29/2008	3/31/2008	4/30/2008	5/31/2008	6/30/2008	7/31/2008	8/31/2008	9/30/2008	10/31/2008	11/30/2008	Test Year End 12/31/2008	Simple Avg Balance
1		INTANGIBLE PLANT														
2	351.1	Organization	\$0												\$0	\$0
3	352.1	Franchisees	0												0	0
4	389.1	Other Plant & Misc. Equipment	0												0	0
5		COLLECTION PLANT														
6	354.2	Structures & Improvements	0												0	0
7	360.2	Collection Sewers - Force	71,411	73,063	74,714	76,366	78,017	79,669	81,320	82,972	84,623	86,275	87,926	89,578	91,229	81,320
8	361.2	Collection Sewers - Gravity	196,470	198,695	200,921	203,146	205,371	207,596	209,821	212,047	214,272	216,497	218,722	220,947	223,173	209,821
9	362.2	Special Collecting Structures	70,491	71,189	71,887	72,585	73,284	73,982	74,680	75,378	76,076	76,775	77,473	78,171	78,869	74,680
10	363.2	Services to Customers	33,106	33,598	34,090	34,582	35,074	35,566	36,058	36,550	37,042	37,534	38,026	38,518	39,011	36,058
11	364.2	Flow Measuring Devices	0												0	0
12	365.2	Flow Measuring Installations	0												0	0
13	389.2	Other Plant & Misc. Equipment	0												0	0
14		SYSTEM PUMPING PLANT														
15	354.3	Structures & Improvements	0												0	0
16	370.3	Receiving Wells	0												0	0
17	371.3	Pumping Equipment	10,950	11,579	12,209	12,838	13,467	14,096	14,726	15,355	15,984	16,613	17,243	17,872	18,501	14,726
18	389.3	Other Plant & Misc. Equipment	0												0	0
19		TREATMENT & DISPOSAL PLANT														
20	353.4	Land and Land Rights	0												0	0
21	354.4	Structures & Improvements	269,003	276,175	283,348	290,520	297,692	304,865	312,037	319,209	326,381	333,554	340,726	347,898	355,071	312,037
22	355.4	Power Generation Equipment	7,365	7,611	7,856	8,102	8,347	8,593	8,838	9,084	9,329	9,575	9,820	10,066	10,311	8,838
23	380.4	Treatment & Disposal Equipment	751,360	758,919	766,479	774,038	781,597	789,156	796,715	804,274	811,833	819,392	826,951	834,510	842,069	796,715
24	381.4	Plant Sewers	22,661	23,416	24,171	24,927	25,682	26,437	27,193	27,948	28,703	29,459	30,214	30,969	31,725	27,193
25	382.4	Outfall Sewer Lines	0												0	0
26	389.4	Other Plant & Misc. Equipment	11,440	11,637	11,835	12,032	12,229	12,427	12,624	12,822	13,019	13,217	13,414	13,612	13,809	12,624
27		GENERAL PLANT														
28	354.5	Structures & Improvements	0												0	0
29	390.5	Office Furniture & Equipment	11,711	11,838	11,965	12,093	12,220	12,347	12,474	12,601	12,728	12,856	12,983	13,110	13,237	12,474
30	391.5	Transportation Equipment	0												0	0
31	392.5	Stores Equipment	0												0	0
32	393.5	Tools, Shop & Garage Equipment	0												0	0
33	394.5	Laboratory Equipment	0												0	0
34	395.5	Power Operated Equipment	1,032	1,098	1,164	1,229	1,295	1,361	1,426	1,492	1,558	1,623	1,689	1,755	1,820	1,426
35	396.5	Communication Equipment	0												0	0
36	397.5	Miscellaneous Equipment	0												0	0
37	398.5	Other Tangible Plant	1,017	1,163	1,310	1,456	1,602	1,749	1,895	2,042	2,188	2,334	2,481	2,627	2,773	1,895
38		TOTAL	\$1,458,018	\$1,479,983	\$1,501,948	\$1,523,913	\$1,545,878	\$1,567,843	\$1,589,808	\$1,611,773	\$1,633,738	\$1,655,703	\$1,677,668	\$1,699,633	\$1,721,598	\$1,589,808

Deficiency #9

Schedule of Contributions in Aid of Construction By Classification

Florida Public Service Commission

Southlake Utilities, Inc.
 Docket No. 080597-WS
 Base Year Ended 12/31/07
 Historical Projected

Schedule: A-12 REVISED
 Page: 3 of 3
 Preparer: Guastella Associates

Description: Provide the monthly and average CIAC balance by classification.

Line No.	(1) Account Name	(2) Prior Year-End 12/31/06	(3) 1/31/2007	(4) 2/28/2007	(5) 3/31/2007	(6) 4/30/2007	(7) 5/31/2007	(8) 6/30/2007	(9) 7/31/2007	(10) 8/31/2007	(11) 9/30/2007	(12) 10/31/2007	(13) 11/30/2007	(14) Test Year End 12/31/2007	(15) Simple Avg Balance
WATER															
1	Plant Capacity Fees	1,441,154	1,441,154	1,459,184	1,459,184	1,470,319	1,471,840	1,476,541	1,477,152	1,477,152	1,477,152	1,487,543	1,488,902	1,491,279	1,466,216
2	Line/Main Extension Fees	0												0	0
3	Meter Installation Fees	341,480	342,471	343,298	343,865	344,245	345,889	346,149	346,409	346,409	346,976	348,046	348,046	348,646	345,063
4	Contributed Lines	1,743,682	1,743,682	1,743,682	1,743,682	1,744,454	1,744,535	1,744,535	1,744,535	1,744,535	1,744,535	1,744,535	1,744,535	1,997,983	1,870,833
5	Other - Inspections	99,330	99,330	101,571	101,571	101,571	101,571	101,571	101,571	101,571	101,571	101,571	101,571	101,571	100,451
6	TOTAL	\$3,625,647	\$3,626,637	\$3,647,735	\$3,648,302	\$3,660,589	\$3,663,835	\$3,668,796	\$3,669,667	\$3,669,667	\$3,670,234	\$3,681,695	\$3,683,054	\$3,939,479	\$3,782,563
SEWER															
7	Plant Capacity Fees	2,994,000	2,994,000	3,032,266	3,032,266	3,059,820	3,063,597	3,075,884	3,077,481	3,077,481	3,077,481	3,089,441	3,092,991	3,099,199	3,046,600
8	Line/Main Extension Fees	0												0	0
9	Contributed Lines	1,677,675	1,677,675	1,677,675	1,677,675	1,678,521	1,678,616	1,678,616	1,678,616	1,678,616	1,678,616	1,678,616	1,678,616	1,963,692	1,820,683
10	Other - Inspections	274,634	274,634	278,418	278,418	278,418	278,418	278,418	278,418	278,418	278,418	278,418	278,418	278,418	276,526
11	TOTAL	\$4,946,309	\$4,946,309	\$4,988,359	\$4,988,359	\$5,016,559	\$5,020,631	\$5,032,918	\$5,034,515	\$5,034,515	\$5,034,515	\$5,046,475	\$5,050,025	\$5,341,309	\$5,143,809

Deficiency #10

Schedule of Accumulated Amortization of CIAC By Classification

Florida Public Service Commission

Southlake Utilities, Inc.
 Docket No. 080597-WS
 Test Year Ending 12/31/08
 Historical [] Projected [X]

Schedule: A-14 REVISED
 Page: 2 of 3
 Preparer: Guastella Associates

Description: Provide the monthly and average amortization CIAC balance by classification.

Line No.	(1) Account Name	(2) Prior Year-End 12/31/07	(3) 1/31/2008	(4) 2/29/2008	(5) 3/31/2008	(6) 4/30/2008	(7) 5/31/2008	(8) 6/30/2008	(9) 7/31/2008	(10) 8/31/2008	(11) 9/30/2008	(12) 10/31/2008	(13) 11/30/2008	(14) Test Year End 12/31/2008	(15) Simple Avg Balance
WATER															
1	Plant Capacity Fees	\$419,187	\$424,113	\$429,038	\$433,964	\$438,890	\$443,816	\$448,742	\$453,668	\$458,594	\$463,520	\$468,446	\$473,372	\$478,297	\$448,742
2	Line/Main Extension Fees	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Meter Installation Fees	110,205	111,664	113,123	114,583	116,042	117,501	118,960	120,419	121,878	123,338	124,797	126,256	127,715	118,960
4	Contributed Lines	289,316	293,196	297,075	300,955	304,834	308,713	312,593	316,472	320,352	324,231	328,111	331,990	335,869	312,593
5	Other (Describe) - Services	9,128	9,325	9,522	9,719	9,916	10,114	10,311	10,508	10,705	10,903	11,100	11,297	11,494	10,311
6	TOTAL	\$827,836	\$838,297	\$848,759	\$859,221	\$869,683	\$880,144	\$890,606	\$901,068	\$911,529	\$921,991	\$932,453	\$942,915	\$953,376	\$890,606
SEWER															
7	Plant Capacity Fees	\$1,127,801	\$1,142,111	\$1,156,420	\$1,170,730	\$1,185,040	\$1,199,350	\$1,213,660	\$1,227,970	\$1,242,280	\$1,256,589	\$1,270,899	\$1,285,209	\$1,299,519	\$1,213,660
8	Line/Main Extension Fees	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Contributed Lines	296,341	300,383	304,425	308,467	312,509	316,551	320,593	324,635	328,677	332,718	336,760	340,802	344,844	320,593
10	Other (Describe) - Services	26,594	27,167	27,740	28,313	28,886	29,459	30,032	30,605	31,179	31,752	32,325	32,898	33,471	30,032
11	TOTAL	\$1,450,736	\$1,469,661	\$1,488,586	\$1,507,510	\$1,526,435	\$1,545,360	\$1,564,285	\$1,583,210	\$1,602,135	\$1,621,060	\$1,639,984	\$1,658,909	\$1,677,834	\$1,564,285

Schedule of Accumulated Amortization of CIAC By Classification

Florida Public Service Commission

Southlake Utilities, Inc.
 Docket No. 080597-WS
 Base Year Ended 12/31/07
 Historical [X] Projected []

Schedule: A-14 REVISED
 Page: 3 of 3
 Preparer: Guastella Associates

Description: Provide the monthly and average amortization CIAC balance by classification.

Line No.	(1) Account Name	(2) Prior Year-End 12/31/06	(3) 1/31/2007	(4) 2/28/2007	(5) 3/31/2007	(6) 4/30/2007	(7) 5/31/2007	(8) 6/30/2007	(9) 7/31/2007	(10) 8/31/2007	(11) 9/30/2007	(12) 10/31/2007	(13) 11/30/2007	(14) Test Year End 12/31/2007	(15) Simple Avg Balance
WATER															
1	Plant Capacity Fees	\$360,999	\$365,742	\$370,546	\$375,349	\$380,188	\$385,033	\$389,894	\$394,756	\$399,618	\$404,480	\$409,377	\$414,278	\$419,187	\$390,093
2	Line/Main Extension Fees	0												0	0
3	Meter Installation Fees	92,911	94,338	95,769	97,202	98,636	100,077	101,519	102,963	104,406	105,852	107,302	108,752	110,205	101,558
4	Contributed Lines	248,658	252,006	255,352	258,699	262,046	265,393	266,740	272,088	275,434	278,782	282,129	285,475	289,316	268,987
5	Other (Describe) - Services	6,785	6,958	7,155	7,352	7,550	7,747	7,944	8,141	8,338	8,536	8,733	8,930	9,128	7,946
6	TOTAL	\$709,333	\$719,043	\$728,822	\$738,602	\$748,420	\$758,250	\$768,097	\$777,948	\$787,796	\$797,650	\$807,541	\$817,435	\$827,836	\$768,584
SEWER															
7	Plant Capacity Fees	\$958,651	\$972,423	\$986,372	\$1,000,320	\$1,014,394	\$1,028,487	\$1,042,636	\$1,056,792	\$1,070,949	\$1,085,105	\$1,099,317	\$1,113,544	\$1,127,801	\$1,043,226
8	Line/Main Extension Fees	0												0	0
9	Contributed Lines	254,693	258,115	261,537	264,959	268,380	271,802	275,224	278,646	282,067	285,489	288,911	292,332	296,341	275,517
10	Other (Describe) - Services	19,725	20,290	20,863	21,436	22,009	22,582	23,155	23,728	24,301	24,875	25,448	26,021	26,594	23,159
11	TOTAL	\$1,233,069	\$1,250,828	\$1,268,772	\$1,286,715	\$1,304,783	\$1,322,871	\$1,341,015	\$1,359,166	\$1,377,317	\$1,395,469	\$1,413,676	\$1,431,897	\$1,450,736	\$1,341,902

Deficiency #13

Operation & Maintenance Expense Comparison - Water

Florida Public Service Commission

Southlake Utilities, Inc.
 Docket No. 080597-WS
 Test Year Ending 12/31/08

Schedule: B-7 REVISED
 Page: 1 of 1
 Preparer: Guastella Associates

Description: Complete the following comparison of the applicant's current and prior test year O & M expenses before this Commission. Provide an explanation of all differences which are not attributable to the change in customer growth and the CPI-U. If the applicant has not had a previous rate case, use the year 5 years prior to the test year for comparison. Provide an additional schedule, if necessary, to explain differences.

Line No.	(1) Account No. and Name	(2) 5-Yrs Prior 12/31/2002	(3) Current TY 12/31/2007	(4) \$ Difference	(5) % Difference
1	601 - Salaries & Wages - Employees	\$65,686	\$101,420	\$35,734	54.4%
2	603 - Salaries & Wages - Officers	0	0	0	
3	604 - Employee Pension & Benefits	2,502	1,143	(1,359)	-54.3%
4	615 - Purchased Power	23,715	79,586	55,871	235.6%
5	616 - Fuel, Power Production	1,446	1,878	432	29.9%
6	618 - Chemicals	9,333	26,821	17,488	187.4%
7	620 - Materials & Supplies	9,479	12,771	3,292	34.7%
8	631 - Contract Services - Engineering	45,000	73,948	28,948	64.3%
9	632 - Contract Services - Accounting	41,800	12,588	(29,213)	-69.9%
10	633 - Contract Services - Legal	25,000	31,820	6,820	27.3%
11	634 - Contract Services - Mgmt Fees	40,000	66,300	26,300	65.8%
12	635 - Contract Services - Testing	3,475	10,766	7,291	209.8%
13	636 - Contract Services - Other	50,826	54,455	3,629	7.1%
14	641 - Rental of Building / Real Property	13,878	15,378	1,500	10.8%
15	650 - Transportation Expense	4,820	5,625	805	16.7%
16	655 - Insurance	7,736	12,449	4,713	60.9%
17	666 - Regulatory Expense - Rate Case Exp	0	0	0	
18	667 - Regulatory Commission Expense	0	0	0	
19	670 - Bad Debt Expense	8,196	4,355	(3,841)	-46.9%
20	672 - Permitting Expense	3,000	3,912	912	30.4%
21	675 - Miscellaneous Expense	12,749	14,554	1,805	14.2%
22	676 - Communication Expense	3,865	7,085	3,220	83.3%
23	677 - Customer Bill/Postage	4,547	7,867	3,320	73.0%
24	TOTAL	\$377,053	\$544,720	\$167,667	44.5%
25	Total Customers (ERCs)	1,935	3,339	1,404	72.5%
26	Consumer Price Index - U	179.9	207.3	27.4	15.2%
27	Growth Plus Inflation				98.8%
28	Growth Plus Inflation=Growth + Inflation + (Growth x Inflation).				

Explanations:

The last time O&M expense was examined by the Commission was in the initial rate filing which uses forecasted future costs. The 5 year prior expenses were used for this benchmark comparison.

Purchase Power - Cost has escalated at greater than inflationary rates.

Chemicals - Cost escalating at greater than inflationary rates, system expansion and configuration have impacted cost.

Testing - Cost reflects changes in environmental regulation and requirements.

Operation & Maintenance Expense Comparison - Sewer

Florida Public Service Commission

Southlake Utilities, Inc.
 Docket No. 080597-WS
 Test Year Ending 12/31/08

Schedule: B-8 REVISID
 Page: 1 of 1
 Preparer: Guastella Associates

Description: Complete the following comparison of the applicant's current and prior test year O & M expenses before this Commission. Provide an explanation of all differences which are not attributable to the change in customer growth and the CPI-U. If the applicant has not had a previous rate case, use the year 5 years prior to the test year for comparison. Provide an additional schedule, if necessary, to explain differences.

Line No.	(1) Account No. and Name	(2) 5-Yrs Prior 12/31/2002	(3) Current TY 12/31/2007	(4) \$ Difference	(5) % Difference
1	701 - Salaries & Wages - Employees	\$64,847	\$75,650	\$10,803	16.7%
2	703 - Salaries & Wages - Officers	0	0	0	
3	704 - Employee Pension & Benefits	2,502	1,143	(1,359)	-54.3%
4	710 - Purchased Sewage Treatment	0	0	0	
5	711 - Sludge Removal Expense	130,605	264,515	133,910	102.5%
6	715 - Purchased Power	45,019	106,840	61,822	137.3%
7	716 - Fuel for Power Purchased	927	1,206	278	30.0%
8	718 - Chemicals	9,693	25,651	15,958	164.6%
9	720 - Materials & Supplies	9,632	7,141	(2,491)	-25.9%
10	731 - Contract Services - Engineering	45,000	75,148	30,148	67.0%
11	732 - Contract Services - Accounting	42,870	12,588	(30,283)	-70.6%
12	733 - Contract Services - Legal	20,000	21,373	1,373	6.9%
13	734 - Contract Services - Mgmt Fees	40,000	59,700	19,700	49.3%
14	735 - Contract Services - Testing	8,770	8,167	(603)	-6.9%
15	736 - Contract Services - Other	70,490	69,957	(533)	-0.8%
16	741 - Rental of Building / Real Property	47,399	48,899	1,500	3.2%
17	742 - Rental of Equipment	0	0	0	
18	750 - Transportation Expense	4,820	5,788	968	20.1%
19	755 - Insurance	7,520	12,449	4,929	65.5%
20	766 - Regulatory Expense - Rate Case Exp	0	0	0	
21	767 - Regulatory Commission Expense	0	0	0	
22	770 - Bad Debt Expense	7,670	4,355	(3,315)	-43.2%
23	772 - Permitting Expense	2,000	2,794	794	39.7%
24	775 - Miscellaneous Expense	12,651	14,499	1,848	14.6%
25	776 - Communication Expense	3,865	7,098	3,233	83.7%
26	777 - Customer Bill/Postage	4,547	7,866	3,319	73.0%
27	TOTAL	\$580,827	\$832,827	\$252,000	43.4%
	Total Customers (ERCs)	1,935	3,255	1,320	68.2%
	Consumer Price Index - U	179.9	207.3	27.4	15.2%
	Growth Plus Inflation				93.8%

Growth Plus Inflation=Growth + Inflation + (Growth x Inflation).

Explanations:

The last time O&M expense was examined by the Commission was in the initial rate filing which uses forecasted future costs. The 5 year prior expenses were used for this benchmark comparison.

Sludge Removal - Cost escalating at greater than inflationary rates due primarily to hauling and system expansion have impacted cost.

Purchase Power - Cost has escalated at greater than inflationary rates.

Chemicals - Cost escalating at greater than inflationary rates, system expansion and configuration have impacted cost.

Deficiency #14

**Internal Revenue Service
Large & Mid-Size Business**

Department of the Treasury

Date: October 14, 2008

Southlake Utilities, Inc..
16554 Cagan Crossings Blvd., Suite 2
Clermont, FL 34711

Taxpayer Identification Number:
59-3144120

Tax Year:
12/31/2008

Form Number:
1120S

Person to Contact:
Awilda Clemente

Employee Identification Number:
59-0781B

Contact Telephone Number:
321-441-2488

Fax Number:
321-441-2583

Dear Taxpayer:

I have completed the examination of your tax return for the year(s) shown above. I am pleased to inform you that I am proposing no change to your tax return. As indicated in the enclosed Form 4605-A, *Examination Changes - Partnerships, Fiduciaries, Small Business Corps. & Domestic Intl. Sales Corp.*, my findings are subject to approval. You will receive a final no change letter when we finish processing your file.

If you have any questions, please call me at the telephone number shown above within 10 days from the date of this letter. If you write, please include your telephone number and the most convenient time for me to call. I have enclosed Publication 3498, *The Examination Process*, for your information.

Thank you for your cooperation.

Sincerely,


Awilda Clemente
Internal Revenue Agent

Enclosures:
Form 4605-A
Publication 3498

Department of the Treasury
Internal Revenue Service

▶ Do not file this form unless the corporation has filed or is
attaching Form 2553 to elect to be an S corporation.
EXTENSION GRANTED TO 09/15/08

2007

For calendar year 2007, or tax year beginning

, and ending

A S election effective date 01/01/2005	Use the IRS label. Otherwise, print or type.	Name SOUTHLAKE UTILITIES, INC.	D Employer identification number 59-120
B Business activity code number (see instructions) 221300		Number, street, and room or suite no. If a P.O. box, see instructions. 16554 CROSSINGS BLVD., SUITE 2	E Date incorporated 08/27/1990
C Check if Sch. M-3 attached <input checked="" type="checkbox"/>		City or town, state, and ZIP code CLERMONT, FL 34711	F Total assets (see instructions) \$ 12,031,601.

G Is the corporation electing to be an S corporation beginning with this tax year? Yes No If "Yes," attach Form 2553 if not already filed

H Check if: (1) Final return (2) Name change (3) Address change (4) Amended return (5) S election termination or revocation

I Enter the number of shareholders in the corporation at end of the tax year ▶ 5

Caution: Include only trade or business income and expenses on lines 1a through 21. See the instructions for more information.

		1 a	b	c Bal	1c
Income	1	Gross receipts or sales	1,643,631		1,643,631
	2	Cost of goods sold (Schedule A, line 8)			
	3	Gross profit. Subtract line 2 from line 1c			1,643,631
	4	Net gain (loss) from Form 4797, Part II, line 17 (attach Form 4797)			
	5	Other income (loss) (attach statement)		STATEMENT 1	336,169
	6	Total income (loss). Add lines 3 through 5			1,979,800
Deductions (See instructions for limitations)	7	Compensation of officers			
	8	Salaries and wages (less employment credits)			170,926
	9	Repairs and maintenance			
	10	Bad debts			8,710
	11	Rents			64,277
	12	Taxes and licenses		STATEMENT 2	170,599
	13	Interest			4,100
	14	Depreciation not claimed on Schedule A or elsewhere on return (attach Form 4562)			312,888
	15	Depletion (Do not deduct oil and gas depletion.)			
	16	Advertising			
	17	Pension, profit-sharing, etc., plans			
	18	Employee benefit programs			2,286
	19	Other deductions (attach statement)		STATEMENT 3	1,129,653
	20	Total deductions. Add lines 7 through 19			1,863,439
	21	Ordinary business income (loss). Subtract line 20 from line 6			116,361
Tax and Payments	22 a	Excess net passive income or LIFO recapture tax (see instructions)	22a		
	b	Tax from Schedule D (Form 1120S)	22b		
	c	Add lines 22a and 22b			22c
	23 a	2007 estimated tax payments and 2006 overpayment credited to 2007	23a		
	b	Tax deposited with Form 7004	23b		
	c	Credit for federal tax paid on fuels (attach Form 4136)	23c		
	d	Add lines 23a through 23c			23d
	24	Estimated tax penalty (see instructions). Check if Form 2220 is attached			24
	25	Amount owed. If line 23d is smaller than the total of lines 22c and 24, enter amount owed			25
	26	Overpayment. If line 23d is larger than the total of lines 22c and 24, enter amount overpaid			26
27	Enter amount from line 26 Credited to 2008 estimated tax		Refunded	27	

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which preparer has any knowledge.

Sign Here

Signature of officer	Date	Title
----------------------	------	-------

May the IRS discuss this return with the preparer shown below (see instr.)?

Yes No

Paid Preparer's Use Only	Preparer's signature	Date	Check if self-employed <input type="checkbox"/>	Preparer's SSN or PTIN P00241693
	Firm's name (or yours if self-employed), address, and ZIP code	CARR, RIGGS & INGRAM, LLC 1031 W. MORSE BLVD., SUITE 200 WINTER PARK, FLORIDA 32789-3750		EIN 72-1396621 Phone no. (407) 644-7455

JWA For Privacy Act and Paperwork Reduction Act Notice, see separate instructions.

Form 1120S (2007)

Schedule L Balance Sheets per Books	Beginning of tax year		End of tax year	
	(a)	(b)	(c)	(d)
Assets				
1 Cash		117,643.		212,865.
2 a Trade notes and accounts receivable	471,952.		533,296.	
b Less allowance for bad debts		471,952.		533,296.
3 Inventories				
4 U.S. Government obligations				
5 Tax-exempt securities				
6 Other current assets (att. stmt.)	STATEMENT 4	787,858.		787,858.
7 Loans to shareholders				
8 Mortgage and real estate loans				
9 Other investments (att. stmt.)	STATEMENT 5	46,790.		158,896.
10 a Buildings and other depreciable assets	8,939,085.		10,533,094.	
b Less accumulated depreciation	690,770.	8,248,315.	1,003,658.	9,529,436.
11 a Depletable assets				
b Less accumulated depletion				
12 Land (net of any amortization)				
13 a Intangible assets (amortizable only)				
b Less accumulated amortization				
14 Other assets (att. stmt.)	STATEMENT 6	1,411,567.		809,250.
15 Total assets		11,084,125.		12,031,601.
Liabilities and Shareholders' Equity				
16 Accounts payable		40,533.		26,967.
17 Mortgages, notes, bonds payable in less than 1 year				
18 Other current liabilities (att. stmt.)	STATEMENT 7	740,675.		711,908.
19 Loans from shareholders				
20 Mortgages, notes, bonds payable in 1 year or more				
21 Other liabilities (att. stmt.)	STATEMENT 8	7,384,853.		7,758,286.
22 Capital stock		7,500.		7,500.
23 Additional paid-in capital		6,540,575.		7,040,590.
24 Retained earnings	STATEMENT 9	<3,630,011.>		<3,513,650.>
25 Adjustments to shareholders' equity (att. stmt.)				
26 Less cost of treasury stock				
27 Total liabilities and shareholders' equity		11,084,125.		12,031,601.

Schedule M-1 Reconciliation of Income (Loss) per Books With Income (Loss) per Return
 Note: Schedule M-3 required instead of Schedule M-1 if total assets are \$10 million or more - see instructions

1 Net income (loss) per books		5 Income recorded on books this year not included on Schedule K, lines 1 through 10 (itemize): a Tax-exempt interest \$
2 Income included on Schedule K, lines 1, 2, 3c, 4, 5a, 6, 7, 8a, 9, and 10, not recorded on books this year (Reconcile)		
3 Expenses recorded on books this year not included on Schedule K, lines 1 through 12 and 14i (Itemize): a Depreciation \$ b Travel and entertainment \$		6 Deductions included on Schedule K, lines 1 through 12 and 14i, not charged against book income this year (itemize): a Depreciation \$
4 Add lines 1 through 3		7 Add lines 5 and 6
		8 Income (loss) (Schedule K, line 18). Line 4 less line 7

Schedule M-2 Analysis of Accumulated Adjustments Account, Other Adjustments Account, and Shareholders' Undistributed Taxable Income Previously Taxed (see instructions)

	(a) Accumulated adjustments account	(b) Other adjustments account	(c) Shareholders' undistributed taxable income previously taxed
1 Balance at beginning of tax year	<2,449,143.>		
2 Ordinary income from page 1, line 21	116,361.		
3 Other additions			
4 Loss from page 1, line 21	()		
5 Other reductions	()		
6 Combine lines 1 through 5	<2,332,782.>		
7 Distributions other than dividend distributions			
8 Balance at end of tax year. Subtract line 7 from line 6	<2,332,782.>		

**Net Income (Loss) Reconciliation for S Corporations
With Total Assets of \$10 Million or More**

Department of the Treasury
Internal Revenue Service

▶ Attach to Form 1120S.
▶ See separate instructions.

2007

Name of corporation

Employer identification number

SOUTHLAKE UTILITIES, INC.

59-3144120

Part I Financial Information and Net Income (Loss) Reconciliation

1a Did the corporation prepare a certified audited non-tax-basis income statement for the period ending with or within this tax year?

(See instructions if multiple non-tax-basis income statements are prepared.)

- Yes. Skip line 1b and complete lines 2 through 11 with respect to that income statement.
 No. Go to line 1b.

b Did the corporation prepare a non-tax-basis income statement for that period?

- Yes. Complete lines 2 through 11 with respect to that income statement.
 No. Skip lines 2 through 3b and enter the corporation's net income (loss) per its books and records on line 4.

2 Enter the income statement period: Beginning _____ Ending _____

3a Has the corporation's income statement been restated for the income statement period on line 2?

- Yes. (If "Yes," attach an explanation and the amount of each item restated.)
 No.

b Has the corporation's income statement been restated for any of the five income statement periods preceding the period on line 2?

- Yes. (If "Yes," attach an explanation and the amount of each item restated.)
 No.

4	Worldwide consolidated net income (loss) from income statement source identified in Part I, line 1	4	116,361.
5a	Net income from nonincludible foreign entities (attach schedule)	5a	()
b	Net loss from nonincludible foreign entities (attach schedule and enter as a positive amount)	5b	
6a	Net income from nonincludible U.S. entities (attach schedule)	6a	()
b	Net loss from nonincludible U.S. entities (attach schedule and enter as a positive amount)	6b	
7a	Net income (loss) of other disregarded entities (except qualified subchapter S subsidiaries) (attach schedule)	7a	
b	Net income (loss) of other qualified subchapter S subsidiaries (QSubs) (attach schedule)	7b	
8	Adjustment to eliminations of transactions between includible entities and nonincludible entities (attach schedule)	8	
9	Adjustment to reconcile income statement period to tax year (attach schedule)	9	
10	Other adjustments to reconcile to amount on line 11 (attach schedule)	10	
11	Net income (loss) per income statement of the corporation. Combine lines 4 through 10	11	116,361.

For Paperwork Reduction Act Notice,
see the Instructions for Form 1120S.

Schedule M-3 (Form 1120S) 2007

Name of corporation **SOUTHLAKE UTILITIES, INC.** Employer identification number **59-3144120**

Part II Reconciliation of Net Income (Loss) per Income Statement of the Corporation With Total Income (Loss) per Return

Income (Loss) Items	(a) Income (Loss) per Income Statement	(b) Temporary Difference	(c) Permanent Difference	(d) Income (Loss) per Tax Return
1 Income (loss) from equity method foreign corporations				
2 Gross foreign dividends not previously taxed				
3 Subpart F, QEF, and similar income inclusions				
4 Gross foreign distributions previously taxed				
5 Income (loss) from equity method U.S. corporations				
6 U.S. dividends not eliminated in tax consolidation				
7 Income (loss) from U.S. partnerships (attach schedule)				
8 Income (loss) from foreign partnerships (attach schedule)				
9 Income (loss) from other pass-through entities (attach schedule)				
10 Items relating to reportable transactions (attach details)				
11 Interest income (attach Form 8916-A)				
12 Total accrual to cash adjustment				
13 Hedging transactions				
14 Mark-to-market income (loss)				
15 Cost of goods sold (attach Form 8916-A)	()			()
16 Sale versus lease (for sellers and/or lessors)				
17 Section 481(a) adjustments				
18 Unearned/deferred revenue				
19 Income recognition from long-term contracts				
20 Original issue discount and other imputed interest				
21a Income statement gain/loss on sale, exchange, abandonment, worthlessness, or other disposition of assets other than inventory and pass-through entities				
b Gross capital gains from Schedule D, excluding amounts from pass-through entities				
c Gross capital losses from Schedule D, excluding amounts from pass-through entities, abandonment losses, and worthless stock losses				
d Net gain/loss reported on Form 4797, line 17, excluding amounts from pass-through entities, abandonment losses, and worthless stock losses				
e Abandonment losses				
f Worthless stock losses (attach details)				
g Other gain/loss on disposition of assets other than inventory				
22 Other income (loss) items with differences (attach schedule)				
23 Total income (loss) items. Combine lines 1 through 22				
24 Total expense/deduction items (from Part III, line 30)	<325,698.>			<325,698.>
25 Other items with no differences STMT 11	442,059.			442,059.
26 Reconciliation totals. Combine lines 23 through 25	116,361.			116,361.

Note. Line 26, column (a), must equal the amount on Part I, line 11, and column (d) must equal Form 1120S, Schedule K, line 18.

Name of corporation

SOUTHLAKE UTILITIES, INC.

Employer identification number

59-3144120

Part III Reconciliation of Net Income (Loss) per Income Statement of the Corporation With Total Income (Loss) per Return - Expense/Deduction Items

Expense/Deduction Items	(a) Expense per Income Statement	(b) Temporary Difference	(c) Permanent Difference	(d) Deduction per Tax Return
1 U.S. current income tax expense				
2 U.S. deferred income tax expense				
3 State and local current income tax expense				
4 State and local deferred income tax expense				
5 Foreign current income tax expense (other than foreign withholding taxes)				
6 Foreign deferred income tax expense				
7 Equity-based compensation				
8 Meals and entertainment				
9 Fines and penalties				
10 Judgments, damages, awards, and similar costs				
11 Pension and profit-sharing				
12 Other post-retirement benefits				
13 Deferred compensation				
14 Charitable contribution of cash and tangible property				
15 Charitable contribution of intangible property				
16 Current year acquisition or reorganization investment banking fees				
17 Current year acquisition or reorganization legal and accounting fees				
18 Current year acquisition/reorganization other costs				
19 Amortization/impairment of goodwill				
20 Amortization of acquisition, reorganization, and start-up costs				
21 Other amortization or impairment write-offs				
22 Section 198 environmental remediation costs				
23a Depletion - Oil & Gas				
b Depletion - Other than Oil & Gas				
24 Depreciation	312,888.			312,888.
25 Bad debt expense	8,710.			8,710.
26 Interest expense (attach Form 8916-A)	4,100.			4,100.
27 Corporate owned life insurance premiums				
28 Purchase versus lease (for purchasers and/or lessees)				
29 Other expense/deduction items with differences (attach schedule)				
30 Total expense/deduction items. Combine lines 1 through 29. Enter here and on Part II, line 24	325,698.			325,698.

Schedule M-3 (Form 1120S) 2007

Depreciation and Amortization
(Including Information on Listed Property) **OTHER**

▶ See separate instructions. ▶ Attach to your tax return.

SOUTHLAKE UTILITIES, INC.

OTHER DEPRECIATION

Identifying number
59-3144120

Part I Election To Expense Certain Property Under Section 179 Note: If you have any listed property, complete Part V before you complete Part I.

1	Maximum amount. See the instructions for a higher limit for certain businesses	1	125,000.
2	Total cost of section 179 property placed in service (see instructions)	2	
3	Threshold cost of section 179 property before reduction in limitation	3	500,000.
4	Reduction in limitation. Subtract line 3 from line 2. If zero or less, enter -0-	4	
5	Dollar limitation for tax year. Subtract line 4 from line 1. If zero or less, enter -0-. If married filing separately, see instructions	5	
6	(a) Description of property	(b) Cost (business use only)	(c) Elected cost
7	Listed property. Enter the amount from line 29	7	
8	Total elected cost of section 179 property. Add amounts in column (c), lines 6 and 7	8	
9	Tentative deduction. Enter the smaller of line 5 or line 8	9	
10	Carryover of disallowed deduction from line 13 of your 2006 Form 4562	10	
11	Business income limitation. Enter the smaller of business income (not less than zero) or line 5	11	
12	Section 179 expense deduction. Add lines 9 and 10, but do not enter more than line 11	12	
13	Carryover of disallowed deduction to 2008. Add lines 9 and 10, less line 12	▶ 13	

Note: Do not use Part II or Part III below for listed property. Instead, use Part V.

Part II Special Depreciation Allowance and Other Depreciation (Do not include listed property.)

14	Special allowance for qualified New York Liberty or Gull Opportunity Zone property (other than listed property) and cellulosic biomass ethanol plant property placed in service during the tax year	14	
15	Property subject to section 168(f)(1) election	15	
16	Other depreciation (including ACRS)	16	98,196.

Part III MACRS Depreciation (Do not include listed property.) (See instructions.)

Section A

17	MACRS deductions for assets placed in service in tax years beginning before 2007	17	201,889.
18	If you are electing to group any assets placed in service during the tax year into one or more general asset accounts, check here	<input type="checkbox"/>	

Section B - Assets Placed in Service During 2007 Tax Year Using the General Depreciation System

(a) Classification of property	(b) Month and year placed in service	(c) Basis for depreciation (business/investment use only - see instructions)	(d) Recovery period	(e) Convention	(f) Method	(g) Depreciation deduction
19a 3-year property						
b 5-year property						
c 7-year property		2,220.	7	MQ	200DB	79.
d 10-year property						
e 15-year property						
f 20-year property						
g 25-year property		1,494,983.	25 yrs.	MM	S/L	12,724.
h Residential rental property	/		27.5 yrs.	MM	S/L	
	/		27.5 yrs.	MM	S/L	
i Nonresidential real property	/		39 yrs.	MM	S/L	
	/			MM	S/L	

Section C - Assets Placed in Service During 2007 Tax Year Using the Alternative Depreciation System

20a Class life					S/L	
b 12-year			12 yrs.		S/L	
c 40-year	/		40 yrs.	MM	S/L	

Part IV Summary (see instructions)

21	Listed property. Enter amount from line 28	21	
22	Total. Add amounts from line 12, lines 14 through 17, lines 19 and 20 in column (g), and line 21. Enter here and on the appropriate lines of your return. Partnerships and S corporations - see instr.	22	312,888.
23	For assets shown above and placed in service during the current year, enter the portion of the basis attributable to section 263A costs	23	

Part V Listed Property (Include automobiles, certain other vehicles, cellular telephones, certain computers, and property used for entertainment, recreation, or amusement.)

Note: For any vehicle for which you are using the standard mileage rate or deducting lease expense, complete only 24a, 24b, columns (a) through (c) of Section A, all of Section B, and Section C if applicable.

Section A - Depreciation and Other Information (Caution: See the instructions for limits for passenger automobiles.)

24a Do you have evidence to support the business/investment use claimed? Yes No 24b If "Yes," is the evidence written? Yes No

Table with columns (a) Type of property, (b) Date placed in service, (c) Business/investment use percentage, (d) Cost or other basis, (e) Basis for depreciation, (f) Recovery period, (g) Method/Convention, (h) Depreciation deduction, (i) Elected section 179 cost.

25 Special allowance for qualified Gulf Opportunity Zone property placed in service during the tax year and used more than 50% in a qualified business use 25

26 Property used more than 50% in a qualified business use: Table with columns for percentage and other details.

27 Property used 50% or less in a qualified business use: Table with columns for percentage and S/L status.

28 Add amounts in column (h), lines 25 through 27. Enter here and on line 21, page 1 28

29 Add amounts in column (i), line 28. Enter here and on line 7, page 1 29

Section B - Information on Use of Vehicles

Complete this section for vehicles used by a sole proprietor, partner, or other "more than 5% owner," or related person. If you provided vehicles to your employees, first answer the questions in Section C to see if you meet an exception to completing this section for those vehicles.

Table for Section B with columns (a) through (f) Vehicle and rows 30-36 regarding miles driven and personal use availability.

Section C - Questions for Employers Who Provide Vehicles for Use by Their Employees

Answer these questions to determine if you meet an exception to completing Section B for vehicles used by employees who are not more than 5% owners or related persons.

Table for Section C with rows 37-41 regarding policy statements and information requirements, and Yes/No columns.

Note: If your answer to 37, 38, 39, 40, or 41 is "Yes," do not complete Section B for the covered vehicles.

Part VI Amortization

Table for Part VI with columns (a) Description of costs, (b) Date amortization begins, (c) Amortizable amount, (d) Code section, (e) Amortization period or percentage, (f) Amortization for this year.

42 Amortization of costs that begins during your 2007 tax year:

43 Amortization of costs that began before your 2007 tax year 43

44 Total. Add amounts in column (f). See the instructions for where to report 44

Department of the Treasury
Internal Revenue Service

▶ Attach to Schedule M-3 for Form 1065, 1120, 1120-L, 1120-PC, or 1120S.

Name of common parent
SOUTHLAKE UTILITIES, INC.

Employer identification number
59-3144120

Name of subsidiary

Employer identification number

Part I Cost of Goods Sold

Cost of Goods Sold Items	(a) Expense per Income Statement	(b) Temporary Difference	(c) Permanent Difference	(d) Deduction per Tax Return
1 Amounts attributable to cost flow assumptions				
2 Amounts attributable to:				
a Stock option expense				
b Other equity based compensation				
c Meals and entertainment				
d Parachute payments				
e Compensation with section 162(m) limitation				
f Pension and profit sharing				
g Other post-retirement benefits				
h Deferred compensation				
i Section 198 environmental remediation costs				
j Amortization				
k Depletion				
l Depreciation				
m Corporate owned life insurance premiums				
n Other section 263A costs				
3 Inventory shrinkage accruals				
4 Excess inventory and obsolescence reserves				
5 Lower of cost or market write-downs				
6 Other items with differences (attach schedule)				
7 Other items with no differences				
8 Total cost of goods sold. Add lines 1 through 7, in columns a, b, c, and d				

JWA For Paperwork Reduction Act Notice, see page 4.

Form 8916-A (2007)

Part II Interest Income

	Interest Income Item	(a) Income (Loss) per Income Statement	(b) Temporary Difference	(c) Permanent Difference	(d) Income (Loss) per Tax Return
1	Tax-exempt interest income				
2	Interest income from hybrid securities				
3	Sale/lease interest income				
4a	Intercompany interest income - From outside tax affiliated group				
4b	Intercompany interest income - From tax affiliated group				
5	Other interest income				
6	Total interest income. Add lines 1 through 5. Enter total on Schedule M-3 (Forms 1120, 1120-PC, and 1120-L), Part II, line 13 or Schedule M-3 (Forms 1065 and 1120-S) Part II, line 11.				

Part III Interest Expense

	Interest Expense Item	(a) Expense per Income Statement	(b) Temporary Difference	(c) Permanent Difference	(d) Deduction per Tax Return
1	Interest expense from hybrid securities				
2	Lease/purchase interest expense				
3a	Intercompany interest expense - Paid to outside tax affiliated group				
3b	Intercompany interest expense - Paid to tax affiliated group				
4	Other interest expense	4,100.			4,100.
5	Total interest expense. Add lines 1 through 4. Enter total on Schedule M-3 (Form 1120) Part III, line 8; Schedule M-3 (Forms 1120-PC and 1120-L), Part III, line 36; Schedule M-3 (Form 1065) Part III, line 27; or Schedule M-3 (Form 1120-S) Part III, line 26.	4,100.			4,100.

JWA

Form 9916-A (2007)

FORM 1120S	OTHER INCOME	STATEMENT	1
DESCRIPTION		AMOUNT	
CIAC AMORTIZATION		336,169.	
TOTAL TO FORM 1120S, PAGE 1, LINE 5		336,169.	

FORM 1120S	TAXES AND LICENSES	STATEMENT	2
DESCRIPTION		AMOUNT	
REGULATORY ASSESSMENT FEES		73,963.	
PAYROLL TAXES		13,450.	
PROPERTY TAXES		76,480.	
LICENSES & PERMITS		6,706.	
TOTAL TO FORM 1120S, PAGE 1, LINE 12		170,599.	

FORM 1120S	OTHER DEDUCTIONS	STATEMENT	3
DESCRIPTION		AMOUNT	
CHEMICALS		52,472.	
COMMUNICATION EXPENSE		14,183.	
CONTRACT SERVICES		507,963.	
FUEL-POWER PRODUCTION		1,206.	
INSURANCE		24,897.	
MATERIALS AND SUPPLIES		35,645.	
MISCELLANEOUS EXPENSE		30,931.	
PURCHASED POWER		186,427.	
SLUDGE REMOVAL		264,515.	
TRANSPORTATION EXPENSE		11,414.	
TOTAL TO FORM 1120S, PAGE 1, LINE 19		1,129,653.	

SCHEDULE L	OTHER CURRENT ASSETS	STATEMENT	4
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DESCRIPTION	BEGINNING OF TAX YEAR	END OF TAX YEAR
REGULATORY ASSETS	1,928.	1,928.
DEF AFPI PROJECT COSTS	785,930.	785,930.
TOTAL TO SCHEDULE L, LINE 6	787,858.	787,858.

SCHEDULE L	OTHER INVESTMENTS	STATEMENT	5
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DESCRIPTION	BEGINNING OF TAX YEAR	END OF TAX YEAR
CASH INVESTMENTS	46,790.	158,896.
TOTAL TO SCHEDULE L, LINE 9	46,790.	158,896.

SCHEDULE L	OTHER ASSETS	STATEMENT	6
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DESCRIPTION	BEGINNING OF TAX YEAR	END OF TAX YEAR
CONSTRUCTION WORK IN PROGRESS	1,380,381.	778,064.
NON-UTILITY ASSETS	31,186.	31,186.
TOTAL TO SCHEDULE L, LINE 14	1,411,567.	809,250.

SCHEDULE L	OTHER CURRENT LIABILITIES	STATEMENT	7
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DESCRIPTION	BEGINNING OF TAX YEAR	END OF TAX YEAR
ACCRUED TAXES	119,351.	80,811.
CUSTOMER DEPOSITS	202,310.	212,083.
PREPAID CIAC	419,014.	419,014.
TOTAL TO SCHEDULE L, LINE 18	740,675.	711,908.

SCHEDULE L	OTHER LIABILITIES	STATEMENT	8
DESCRIPTION	BEGINNING OF TAX YEAR	END OF TAX YEAR	
CONTRIBUTIONS IN AID OF CONSTRUCTION, NET	6,628,784.	7,002,217.	
LAND LEASE OBLIGATION	756,069.	756,069.	
TOTAL TO SCHEDULE L, LINE 21	7,384,853.	7,758,286.	

SCHEDULE L	ANALYSIS OF TOTAL RETAINED EARNINGS PER BOOKS	STATEMENT	9
DESCRIPTION		AMOUNT	
BALANCE AT BEGINNING OF YEAR		<3,630,011.>	
NET INCOME PER BOOKS		116,361.	
DISTRIBUTIONS		0.	
OTHER INCREASES (DECREASES)			
BALANCE AT END OF YEAR - SCHEDULE L, LINE 24, COLUMN (D)		<3,513,650.>	

SCHEDULE M-3	OTHER INCOME (LOSS) ITEMS WITH NO DIFFERENCES	STATEMENT	10
DESCRIPTION	INCOME (LOSS) PER INCOME STATEMENT	INCOME (LOSS) PER TAX RETURN	
CIAC AMORTIZATION	336,169.	336,169.	
SALES	1,643,631.	1,643,631.	
TOTAL TO SCHEDULE M-3, PART II, LINE 25	1,979,800.	1,979,800.	

SCHEDULE M-3 OTHER INCOME (LOSS) AND EXPENSE / DEDUCTION STATEMENT 11
ITEMS WITH NO DIFFERENCES

DESCRIPTION	PER INCOME STATEMENT	PER TAX RETURN
OTHER INCOME (LOSS)	1,979,800.	1,979,800.
OTHER EXPENSE / DEDUCTION	<1537741.>	<1537741.>
TOTAL TO SCHEDULE M-3, PART II, LINE 25	442,059.	442,059.

SCHEDULE M-3 OTHER EXPENSE/DEDUCTION ITEMS STATEMENT 12
WITH NO DIFFERENCES

DESCRIPTION	EXPENSE/ DEDUCTION PER INCOME STATEMENT	EXPENSE/ DEDUCTION PER TAX RETURN
CHEMICALS	52,472.	52,472.
COMMUNICATION EXPENSE	14,183.	14,183.
CONTRACT SERVICES	507,963.	507,963.
EMPLOYEE BENEFIT PROGRAMS	2,286.	2,286.
FUEL-POWER PRODUCTION	1,206.	1,206.
INSURANCE	24,897.	24,897.
LICENSES & PERMITS	6,706.	6,706.
MATERIALS AND SUPPLIES	35,645.	35,645.
MISCELLANEOUS EXPENSE	30,931.	30,931.
PAYROLL TAXES	13,450.	13,450.
PROPERTY TAXES	76,480.	76,480.
PURCHASED POWER	186,427.	186,427.
REGULATORY ASSESSMENT FEES	73,963.	73,963.
RENT EXPENSE	64,277.	64,277.
SALARIES AND WAGES	170,926.	170,926.
SLUDGE REMOVAL	264,515.	264,515.
TRANSPORTATION EXPENSE	11,414.	11,414.
TOTAL TO SCHEDULE M-3, PART II, LINE 25	1,537,741.	1,537,741.

Schedule K-1
(Form 1120S)

2007

Final K-1 Amended K-1

OMB No. 1545-0130

Department of the Treasury
Internal Revenue Service

For calendar year 2007, or tax
year beginning _____
ending _____

**Shareholder's Share of Income, Deductions,
Credits, etc.** ▶ See separate instructions.

Part I Information About the Corporation

A Corporation's employer identification number
59-3144120

B Corporation's name, address, city, state, and ZIP code
SOUTHLAKE UTILITIES, INC.
16554 CROSSINGS BLVD., SUITE 2
CLERMONT, FL 34711

C IRS Center where corporation filed return
OGDEN, UT

Part II Information About the Shareholder

D Shareholder's identifying number

E Shareholder's name, address, city, state, and ZIP code
REDACTED
WILLIAM J. DEAS
PENSION PLAN
1981 GREENWOOD AVENUE
JACKSONVILLE, FL 32205

F Shareholder's percentage of stock
ownership for tax year 2.015000%

Part III: Shareholder's Share of Current Year Income, Deductions, Credits, and Other Items	
1 Ordinary business income (loss) 2,345.	13 Credits
2 Net rental real estate income (loss)	
3 Other net rental income (loss)	
4 Interest income	
5a Ordinary dividends	
5b Qualified dividends	14 Foreign transactions
6 Royalties	
7 Net short-term capital gain (loss)	
8a Net long-term capital gain (loss)	
8b Collectibles (28%) gain (loss)	
8c Unrecaptured sec 1250 gain	
9 Net section 1231 gain (loss)	
10 Other income (loss)	15 Alternative min tax (AMT) items A <3.>
11 Section 179 deduction	16 Items affecting shareholder basis
12 Other deductions	
	17 Other information

For IRS Use Only

*See attached statement for additional information.

Deficiency #15

Rate Schedule - Interim Rates

Florida Public Service Commission

Southlake Utilities, Inc.
 Docket No. 080597-WS
 Base Year Ended 12/31/07
 Historic [X] Projected []
 Water [X] Sewer []

Schedule: G-1W REVISED
 Page: 1 of 1
 Preparer: Guastella Associates

Description: Provide a schedule of present and proposed rates

(1)	(2)	(3)
<u>Class/Meter Size</u>	<u>Present Rates</u>	<u>Proposed Rates</u>
Base Facility Charge		
Residential		
5/8" X 3/4"	\$8.98	\$9.50
1"	\$22.45	\$23.76
1-1/2"	\$44.90	\$47.52
2"	\$71.85	\$76.05
3"	\$143.70	\$152.10
4"	\$224.51	\$237.63
6"	\$449.03	\$475.28
Gallonage Charge/1,000 g		
All Gallons	\$0.84	\$0.89
	\$0.84	\$0.89
	\$0.84	\$0.89
Base Facility Charge		
General Service		
5/8" X 3/4"	\$8.98	\$9.50
1"	\$22.45	\$23.76
1-1/2"	\$44.90	\$47.52
2"	\$71.85	\$76.05
3"	\$143.70	\$152.10
4"	\$224.51	\$237.63
6"	\$449.03	\$475.28
Gallonage Charge/1,000 g		
All Gallons	\$0.84	\$0.89
Fire Protection		
1-1/2"	\$14.98	\$15.86
2"	\$23.75	\$25.14
3"	\$74.83	\$79.20
4"	\$149.67	\$158.42
6"	\$149.67	\$158.42
8"	\$149.67	\$158.42
10"	\$149.67	\$158.42

Deficiency #16

Lake County Needed Fire Flow for Commercial Buildings

Effective January 1, 2007 needed fire flow requirements for commercial buildings within Lake County may be based upon criteria set forth by the 2004 Edition of the Florida Fire Prevention Code; Annex H of the NFPA 1 Section

Fire hydrant locations and distribution for commercial buildings within Lake County may be based upon criteria set forth by 2004 Edition of the Florida Fire Prevention Code; Annex I of the NFPA 1 Section

Annex H Fire Flow Requirements for Buildings

H.1 Scope.

The procedure determining fire flow requirements for buildings or portions of buildings hereafter constructed shall be in accordance with Annex H.

Annex H does not apply to structures other than buildings.

H.2 Definitions.

For the purpose of Annex I, certain terms are defined as follows.

H.2.1 Fire Area. The floor area, in square feet, used to determine the required fire flow.

H.2.2 Fire Flow. The flow rate of a water supply, measured at 20 psi (137.9 kPa) residual pressure that is available for fire fighting.

H.3 Modifications.

H.3.1 Decreases. Fire flow requirements may be modified downward by the AHJ for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire flow requirements is impractical.

H.3.2 Increases. Fire flow shall be permitted to be modified upward by the AHJ where conditions indicate an unusual susceptibility to group fires or conflagrations. An upward modification shall not be more than twice that required for the building under consideration.

H.4 Fire Area.

H.4.1 General. The fire area shall be the total floor area of all floor levels except as modified in Section H.4.

H.4.2 Area Separation. Portions of buildings that are separated by one or more 4-hour fire wall accordance with the building code, without openings and provided with a 30 in. (76 cm) parapet are allowed to be considered as separate fire areas.

H.4.3 Type I (443), Type I (332), and Type II (222) Construction. The fire area of buildings constructed of Type I (443), Type I (332), and Type II (222) construction shall be the area of the three largest successive floors.

H.5.2 Buildings Other than One- and Two-Family Dwellings. The minimum fire flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table H.5.1.

Exception: A reduction in required fire flow of up to 75 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system. The resulting fire flow shall not be less than 1000 gal per minute

Lake County Needed Fire Flow for Commercial Buildings

Cross Reference of Building Construction Types

(Annex II Construction Types Designation Per NFPA 220; NFPA 5000)

NFPA 220; NFPA 5000	I(443)*	I(332)	II(222)	II(111)	II(000)	III(211)	III(200)	IV(2HH)	V(111)	V(000)
IBC/FBC	I-A	I-B	N/A	II-A	II-B	III-A	III-B	V-A	V-A	V-B
SBC	I	II	N/A	IV 1-hr.	IV unsp	V 1-hr.	V unsp	VI 1-hr.	VI 1-hr.	VI unsp
UBC	N/A	I FR	II FR	II 1-hr.	II N	III 1-hr.	III N	IV HT	V 1-hr.	V-N
BNBC	1A	1B	2A	2B	2C	3A	3B	4	5A	5B

H.5 Fire Flow Requirements for Buildings.

Table H.5.1 Minimum Required Fire Flow and Flow Duration for Buildings

Fire Area ft² (×0.0929 for m²)

I(443), I(332), II(222)1	II(111), III(211)*1	IV(2HH), V(111)*1	II(000), III(200), III(000)*1	V(000)*1	Fire Flow gpm*2	Flow Duration (hours)
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	2
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	3
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3,500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	4
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250	
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4,500	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,750	
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	
295,901-Greater	166,501-Greater	115,801-125,500	83,701-90,600	51,501-55,700	6,250	
295,901-Greater	166,501-Greater	125,501-135,500	90,601-97,900	55,701-60,200	6,500	
295,901-Greater	166,501-Greater	135,501-145,800	97,901-106,800	60,201-64,800	6,750	
295,901-Greater	166,501-Greater	145,801-156,700	106,801-113,200	64,801-69,600	7,000	
295,901-Greater	166,501-Greater	156,701-167,900	113,201-121,300	69,601-74,600	7,250	
295,901-Greater	166,501-Greater	167,901-179,400	121,301-129,600	74,601-79,800	7,500	
295,901-Greater	166,501-Greater	179,401-191,400	129,601-138,300	79,801-85,100	7,750	
295,901-Greater	166,501-Greater	191,401-Greater	128,301-Greater	85,101-Greater	8,000	

1 Type of construction are based on NFPA 220.

2 Measured at 20 psi (139.9 kPa).

Lake County Needed Fire Flow for Commercial Buildings

Annex I Fire Hydrant Locations and Distribution

I.1 Scope. Fire hydrants shall be provided in accordance with Annex J for the protection of buildings, or portions of buildings, hereafter constructed.

I.2 Location. Fire hydrants shall be provided along required fire apparatus access roads and adjacent public streets.

I.3 Number of Fire Hydrants. The minimum number of fire hydrants available to a building shall not be less than that listed in Table I.3. The number of fire hydrants available to a complex or subdivision shall not be less than that determined by spacing requirements listed in Table I.3 when applied to fire apparatus access roads and perimeter public streets from which fire operations could be conducted.

I.4 Consideration of Existing Fire Hydrants. Existing fire hydrants on public streets are allowed to be considered as available. Existing fire hydrants on adjacent properties shall not be considered available unless fire apparatus access roads extend between properties and easements are established to prevent obstruction of such roads.

I.5 Distribution of Fire Hydrants. The average spacing between fire hydrants shall not exceed that listed in Table I.3. Exception: The AHJ shall be permitted to accept a deficiency of up to 10 percent where existing fire hydrants provide all or a portion of the required fire hydrant service. Regardless of the average spacing, fire hydrants shall be located such that all points on streets and access roads adjacent to a building are within the distances listed in Table I.3.

Table I.3 Number and Distribution of Fire Hydrants

Number and Distribution of Fire Hydrants			
Fire Flow Requirements (gpm)	Minimum Number of Hydrants	Average Spacing Between Hydrants *1, *2, *3 (ft)	Maximum Distance from any Point on Street or Road Frontage to a Hydrant *4 (ft)
1750 or less	1	500	250
2000 - 2250	2	450	225
2500	3	450	225
3000	3	400	225
3500 - 4000	4	350	210
4500 - 5000	5	300	180
5500	6	300	180
6000	6	250	150
6500 - 7000	7	250	150
7500 or more	8 or more *5	200	120

Note: 1 gpm = 3.8 L/min; 1 ft = 0.3 m.

*1 Reduce by 100 ft (30.5 m) for dead-end streets or roads.

*2 Where street are provided with median dividers which can be crossed by fire fighters pulling hose lines, or arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 ft (152.4 m) on each side of the street and be arranged on an alternating basis up to a fire flow requirement of 7000 gpm (26,500 L/min) and 400 ft (122 m) or higher fire flow requirements.

*3 Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1000 ft (305 m) to provide for transportation hazards.

*4 Reduce by 50 ft (15.2 m) for dead-end streets or roads.

*5 One hydrant for each 1000 gpm (3785 L/min) or fraction thereof.