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ROBERT M. C. ROSE
OF COUNSEL

February 10, 2000
VIA HAND DELIVERY

Mr. Bart Fletcher
Division of Water and Wastewater
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0873

Re: D.R. Horton Custom Homes, Inc.; PSC Docket No. 981609-WS
Emergency Petition to Eliminate Service Availability and AFPI Charges of Southlake Utilities, Inc.
Our File No. 33083.01

Dear Bart:

On February 8, 2000 I obtained from the Commission staff a copy of Mr. Chapman's extensive letter dated February 4, 2000, in which he discusses the critique of Southlake's proposed expansions of its water and wastewater facilities by myself and D.R. Horton Custom Homes, Inc.'s engineer, Mr. James E. Boyd. While we have not had an opportunity to fully examine the technical aspects and effects of the comments made in Mr. Chapman's letter, Mr. Boyd has performed a cursory review, and believes that there are still substantial concerns with Southlake's proposal and its effect on Service Availability Charges for its customers. As such, Mr. Boyd has drafted the attached letter with exhibits, that we felt the staff should have prior to making its final recommendation in this case.

To the extent, after a more thorough review, we believe additional comment is necessary, we will send that on to you as quickly as possible. In the meantime, we believe the attached must be considered before finalizing the Staff Recommendation.

Should you have any questions in this regard, please let me know.

Sincerely,

ROSE, SUNDSTROM & BENTLEY, LLP

F. Marshall Deterding
For The Firm

AFA
APP
CAF
CMU
CTR
EAG
LEG
MAS
OPC
RRR
SEC
WAW
OTH

FMD/tmg
cc: Samantha Cibula, Esquire
Blanca S. Bayo, Director
Tricia Merchant, CPA
Mr. David Auld
Mr. Ralph Spano
James Boyd, P.E.
Mr. Mike Burton
William E. Barfield

drhorton\3fletcher.ltr

February 9, 2000

Mr. F. Marshall Deterding
Rose, Sundstrom & Bentley, LLP
2548 Blairstone Pines Drive
Tallahassee, FL 32301

Re: Southlake Utilities Investigation
Preliminary Review of Southlake Letter Dated February 4, 2000
Boyd Environmental Project No. 031-A-01

BOYD ENVIRONMENTAL ENGINEERING, INC.

Dear Mr. Deterding:

On February 8, 2000, we received a copy of a letter written by Southlake Utilities, Inc. ("Southlake") to Mr. Bart Fletcher of the Florida Public Service Commission (FPSC). The aforementioned letter is dated February 4, 2000. In accordance with your request, we have attempted to evaluate the Southlake letter in the very short time allotted. Given the time constraints, a detailed technical analysis is not possible. However, there were several issues that became immediately apparent upon preliminary review of the letter. These issues will be defined and discussed herein.

From a facility capacity perspective, we believe that Southlake raises the following major points in its February 4, 2000 correspondence:

1. In Southlake's opinion, it is inappropriate to base the capacity of a water treatment facility on the smaller of total installed well capacity and/or total installed high service pump capacity. Rather, Southlake argues that capacity should be based on the assumption that the largest capacity unit (well and/or high service pump) is out of service. This consideration of equipment redundancy is termed "firm" capacity.
2. Southlake contends that there are environmental constraints that will preclude the full utilization of existing and future wells. These environmental constraints include a petroleum storage facility and anticipated wetland impacts.
3. In Southlake's opinion, a combination of the aforementioned redundancy considerations and environmental constraints will establish rated water plant capacity (on a maximum daily basis) in accordance with the following schedule:

   Phase 2 – 3.456 mgd (Year 2002)

   Phase 3 – 6.912 mgd (Year 2004)

   Phase 4 – 6.912 mgd (Year 2005)

   Phase 5 – 8.640 mgd (Year 2007)

166 Lookout Place • Suite 200 • Maitland, Florida 32751
Phone (407) 645-3888 FAX (407) 645-1199

4. Southlake contends that the proposed timing of improvements scheduled for the year 2000 is reasonable, based on typical Florida Department of Environmental Protection (FDEP) permit review durations.

We will address each one of these major points in turn.

Water Plant Capacity Rating Methodology

In its letter, Southlake criticizes the capacity rating methodology used in our letter dated January 3, 2000. The contention is made that the methodology is "Mr. Boyd's" approach. However, in our January 3, 2000 letter, we stated that the methodology is in accordance with plant rating criteria employed by FDEP. We felt that this was an important point, since FDEP establishes the permitted capacity of water treatment plants. We do not claim authorship of the methodology, we are merely aware of its existence. Nevertheless, Southlake made the following statements in its February 4, 2000 correspondence:

> "Mr. Boyd's "derived phasing" as stated above does not appear in our WFP. In fact it differs rather markedly from the design recommendations of the WFP. The difference is that Mr. Boyd proposes a facilities design that assumes no down time for maintenance and repair of equipment, no equipment failures and no draw-down rest time of wells. Our professional engineers do not recommend that we not *[sic]* follow Mr. Boyd's approach.
>
> From our own experience during the Sarah's Place apartment building fire in 1998, we know that pumps and wells can fail when they are most needed. Fortunately it was our 500 gpm well pump which failed, not our 1,200 gpm well pump. Had it been the other way around, a much larger disaster could have ensued. When fire protection is involved and when the health and welfare of the community is at stake, we will always opt for a conservative design philosophy.
>
> The recommendations of CPH Engineers in the WFP, signed and sealed by Allen R. Baker, P.E. on February 16, 1999, use appropriate conservative design practice. So do the professional recommendations received by Southlake Utilities from R. H. Wilson & Associates, R. H. Wilson, P.E., confirmed at the end of this letter. Both engineers recommend that future plant expansion be based on "firm capacity" rather than total capacity. Firm capacity of a water plant is assumed to be smaller *[sic]* the smaller of the following:
>
> 1. Total well capacity with the largest well (the largest) *[sic]* out of service at each plant, or:
> 2. Total high service pump capacity with the largest pump off-line plant *[sic]*."

[redacted]

In spite of the above statements made by Southlake in its February 4, 2000 letter, FDEP file records indicate that Southlake has not been following the "firm capacity" plant rating approach. Rather, the records indicate that Southlake has been following the approach dictated by FDEP, which takes into account total equipment capacity. Page 1 of a FDEP permit application submitted by Southlake for the Phase 1 expansion of the water treatment plant is included as Exhibit I. This expansion was permitted by FDEP on January 29, 1999. On Page 1 of the application, the proposed maximum daily flow capacity is calculated as one-half of the total high service pumping capacity (equivalent to 2.916 mgd). This methodology is confirmed by FDEP in the permit for the plant expansion (see Exhibit II for copy of permit).

FDEP has gone on record with the FPSC in regard to its plant rating methodology. Attached as Exhibit III is a copy of a written inquiry made by FPSC in a rate case involving Poinciana Utilities. Also included in Exhibit III is a copy of a letter written by Mr. Joseph M. McNamara of FDEP in response to this inquiry. In his letter, Mr. McNamara clearly uses total installed equipment capacity in making capacity calculations. Mr. McNamara also makes the following concluding remarks in his correspondence:

> "It is clear from the above that redundancy allowance (for rotating the equipment in operation and keeping a standby capacity to allow servicing the largest capacity unit) and fire fighting flow requirements are not taken into account in our capacity calculations. The former falls under the utility's responsibility to develop sound operation and maintenance policies and the latter is usually mandated by the agencies having jurisdiction over fire and safety issues."

From reading Mr. McNamara's correspondence, it is apparent that FDEP would encourage utilities to design redundancy into their facilities as a matter of sound operation and maintenance policies. In fact, this is common design practice and is widely supported by engineers and utilities. Nevertheless, when establishing the permitted capacity of a water treatment plant, FDEP will clearly use the total installed equipment capacity, as both FDEP and Southlake did when rating the capacity of the Phase 1 plant expansion.

Limitations on Well Capacity

In its February 4 letter, Southlake detailed the following concerns with respect to well capacity:

1. Petroleum storage tanks associated with a Speedway gasoline station are located approximately 200 feet northwest of the two existing Southlake public water supply wells (Wells A1.1 and A1.2).
2. Anticipated impacts to adjacent wetlands associated with well drawdowns.

[redacted]

In response to the petroleum storage tank issue, Southlake intends to deactivate Wells A1.1 and A1.2. On February 9, 2000, we telephoned Mr. Frank Huttner of the Orlando FDEP office and asked him if it is necessary to abandon existing wells that are located within 200-feet of a petroleum storage tank. Mr. Huttner stated that this would not be necessary, and further stated that there are many existing wells within the State that are located within 200-feet of petroleum storage tanks. Mr. Huttner further stated that State regulations regarding wellhead protection apply to the siting of new petroleum storage tanks and new public supply wells.

Instead of planning to deactivate the wells, the public interest may be better served by enhancing the water quality monitoring program for the two wells. This would help ensure that there is no negative impact from the petroleum storage facilities.

In regard to wetland impacts, we are aware that the St. Johns River Water Management District (SJRWMD) has the authority to require utilities to model the impact of well drawdowns on wetlands. If deemed necessary by SJRWMD, such modeling is usually done as part of the consumptive use permitting process. However, we are unaware of any utility arbitrarily limiting its well pumping practices without the benefit of performing a detailed modeling analysis. We believe that the prudent approach would be to perform the required modeling, then make informed decisions regarding any capacity impacts to existing and future wells. Until such a model is completed, we do not believe that the wetland constraints detailed in Southlake's letter are reasonably substantiated.

Rated Water Plant Capacity and Associated Costs

Costs associated with each water plant phase, in accordance with information supplied by Southlake, are summarized as follows:

Phase	Total Cost ($)
2	$3,297,500
3	2,130,500
4	642,500
5	355,000

A critical point to be made is that the above costs are not based on the reduced well capacities estimated by Southlake in its February 4, 2000 correspondence. Using a combination of redundancy considerations and perceived environmental constraints, Southlake has established rated water plant capacity (on a maximum daily basis) in accordance with the following schedule:

Phase 2 – 3.456 mgd (Year 2002)

Phase 3 – 6.912 mgd (Year 2004)

Phase 4 – 6.912 mgd (Year 2005)

Phase 5 – 8.640 mgd (Year 2007)

However, the costs associated with high service pumping, storage facilities, and chlorination facilities, as included in the Water Facilities Plan, are based on a much higher well capacity. Using the methodology advocated by Southlake, "firm" capacity of a water plant is assumed to be the smaller of the following:

1. Total well capacity with the largest well out of service at each plant.
2. Total high service pump capacity with the largest pump off-line at each plant.

Based on this methodology, the original Water Facilities Plan (WFP) established the following "firm" capacities:

Phase	Firm Well Capacity (mgd)	Firm High Service Capacity (mgd)
2	6.91	7.78
3	12.10	11.66
4	15.55	15.98
5	17.28	20.30

Notice that the high service pump capacity generally matches the well capacity. This is because the WFP employs the design philosophy that both the firm well capacity and the firm high service pump capacity should be adequate to meet the maximum day demand plus fire flow. However, if the reduced Phase 2 well capacity is 3.456 mgd, then why does Southlake need a high service pumping capacity of 7.78 mgd? The same comparisons can be made for Phases 3, 4 and 5:

Phase	Reduced Well Capacity (mgd)	Firm High Service Capacity (mgd)	Difference (mgd)
3	6.912	11.66	4.748
4	6.912	15.98	9.068
5	8.640	20.30	11.660

Simply stated, if Southlake is going to reduce the rated water plant capacity to match the reduced well capacity, then Southlake also needs to correspondingly reduce equipment

requirements and construction costs for associated high service pumping, storage and chlorination facilities. This reduction would also presumably extend to distribution costs, since there is less water being pumped in comparison to original projections.

Timing of Year 2000 Improvements

In its February 4, 2000 letter, Southlake defended its Year 2000 cost projections based on typical FDEP permit review durations. We concur with the typical review durations cited by Southlake, but permit reviews are only one component of overall project scheduling. Proposed improvements must also be designed, bid and constructed. In the schedules submitted by Southlake in its previous correspondence (dated December 2, 1999), the following un-permitted expenditures in the Year 2000 are indicated:

Phase 2 Water Plant Improvements - $659,500

Wastewater Plant Improvements - 1,403,951

The costs are quite substantial, indicating significant construction activity in the Year 2000. The only apparent way to substantiate the Year 2000 cost projections from a timing perspective would involve the preparation of a schedule that documents the four critical project elements: design, permitting, bidding and construction.

Marty, we trust that this preliminary analysis is of benefit. Please advise if you require any additional information.

Sincerely,
Boyd Environmental Engineering, Inc.

James C. Boyd, P.E.
President

cc: Mr. Ralph Spano
Mr. Mike Burton

Sent via fax and U.S. Mail, 2/10/00

[redacted]

EXHIBIT I

PAGE 1 OF FDEP PERMIT APPLICATION
PHASE 1 SOUTHLAKE WATER TREATMENT PLANT EXPANSION

Department of Environmental Protection

Application for a Public Drinking Water Facility Construction Permit

INSTRUCTIONS: This form shall be completed and submitted by persons proposing to construct new, or alter existing, public drinking water facilities unless such proposed construction or alteration is permitted under the "General Permit for Construction of an Extension to a Public Drinking Water Distribution System," in which case Form 62-555.900(7) is to be completed and submitted. Complete this form and submit it in quadruplicate to the appropriate district office of the Department or the appropriate Approved County Public Health Unit (ACPHU) along with a check for the proper application processing fee and the following supporting documents: a signed and sealed engineering report (including design data); signed and sealed engineering plans and specifications; a certificate that the project has been approved by the governing body of the applicant (city commissioners, corporation, board, etc.); and, for each project involving the construction of a new drinking water treatment plant in a county regulated by the Florida Public Service Commission (PSC), a copy of the PSC certificate authorizing the applicant to provide service or a copy of the PSC order exempting the applicant from PSC regulation. All supporting documents, as well as this form, shall be submitted in quadruplicate. All information provided on this form shall be typed or printed in ink. Complete Parts I, II, IV, V, and VI.A of this form for all projects, and complete Parts III and VI.B through VI.E of this form when applicable. A signature page or cover letter for engineering reports, each sheet of engineering plans, and a cover or index sheet for engineering specifications shall be signed, dated, and sealed with an impression-type metal seal by the professional engineer(s) in responsible charge of the documents. Also, engineering plans and specifications shall be those intended for construction and shall not be stamped otherwise (e.g., "For Permitting Only," "For Review Only," etc.). Application processing fees are listed in Rule 62-4.050, Florida Administrative Code (F.A.C.). Checks for application processing fees shall be made payable to the Department of Environmental Protection or to the appropriate ACPHU. NOTE THAT A SEPARATE APPLICATION AND A SEPARATE PROCESSING FEE ARE REQUIRED FOR EACH NON-CONTIGUOUS PUBLIC DRINKING WATER DISTRIBUTION SYSTEM PROJECT.

I. NAME, DESCRIPTION, AND LOCATION OF PROJECT; APPLICANT; ETC.

•Project Name: SOUTHLAKE UTILITIES Potable Water Treatment Facility # 1 Propose Expansion.

•Project Description: Existing Facility permited for Max Day flow of 1,075,200 GPD. Install new 108,000 gallon ground storage tank to provide 30 minute retention or 216,000 GPH (3,600 GPM); Upgrade 10" well to 1,500 GPM; Upgrade yard piping and install new Gas Cl_2 System; Install three (3) variable speed 1,350 GPM High Service Pumps at 160' TDH; Install new flow meter on 10" well.

3 X 1350 GPM X 1440 Min ÷ 2 = New max daily flow proposes = 2,916,000 GPD ÷ by 2.25 = 1,296,000 GPD = 3,703 ERU's.

•Project Location

County: LAKE Section: 35 Township: 24 S Range: 26 E

Latitude and Longitude of Each New Treatment Plant and Each New Raw Water Source (attach additional sheets if necessary):

Name of New Treatment Plant or Raw Water Source	Latitude	Longitude
SOUTHLAKE UTILITIES, INC. - PWTF # 1	28 ° 21 ' 40 "N	81 ° 41 ' 16 "W
	° ' "N	° ' "W
	° ' "N	° ' "W

•Applicant

Utility/Company Name: SOUTHLAKE UTILITIES, INC. Telephone No.: 352-349-8898

Address: 800 U.S. HWY. 27

City: Clermont State: FL Zip Code: 34711

•Public Water System Supplying Water for Project (complete for distribution system projects)

System Name: Not Applicable PWS Identification No.: 3354916

System Owner: Telephone No.:

Address:

City: State: Zip Code:

EXHIBIT II

FDEP PERMIT

PHASE 1 SOUTHLAKE WATER TREATMENT PLANT EXPANSION

Department of Environmental Protection

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

Jeb Bush
Governor

David B. Struhs
Secretary

Permittee:
Southlake Utilities, Inc.
800 U.S. Highway 27
Clermont, FL 34711

Attention: Robert L. Chapman, III
President

Permit Number: WC35-0080599-010
Date of Issue:
Expiration Date: 01/27/00
County: Lake
Utility: Southlake Utilities
Project: Water Treatment Plant Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule 62-555, (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 South Lake Utilities Water Plant by upgrading the capacity of the ten-inch Well "B" and adding ground storage and high service pumping facilities, as well as auxiliary power with automatic startup capability. Included are:

- upgrading the ten-inch Well "B" pump capacity from 500 gpm to 1,500 gpm
- installing a 108,000-gallon ground storage tank
- additional raw water piping to reroute the water from Well "B" and "D" to the new ground storage tank, including a new 6-inch turbine raw water flow meter rated up to 1800 gpm
- installing three 75 hp variable speed high service pumps rated at 1,350 gpm @ 160 feet TDH each, and piping for a future fourth 75 hp variable speed high service pump
- installing a new chlorine injection point on the raw water piping from Well "B" prior to the new ground storage tank
- installing a new 175 kw LP Gas auxiliary generator with automatic startup capability to operate Well "B" (1,500 gpm) plus two of the three high service pumps (2,700 gpm). An auxiliary propane gas engine is provided for Well "D" (1500 gpm).
- associated valves, piping, and appurtenances

The new limiting factor will become the three high service pumps, which must be able to satisfy the max. hour demand, which is projected as two times the max. day demand. The max. day rating following expansion will be 2.916 mgd (one-half the total high service pumping capacity).This is equivalent to 3,702 ERU's. This requires a minimum Class C or higher certified water plant operator on-site for five visits per week and one weekend visit.

General Conditions are attached to be distributed to the permittee only.

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.

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.

DEP Form 62-1.201(5)
Effective November 30, 1982

[1]Chapter 62-30 was transferred to Chapter 62-730.

Permittee:
Southlake Utilities, Inc.
800 U.S. Highway 27
Clermont, FL 34711

Attention: Robert L. Chapman, III
President

Permit Number: WC35-0080599-010
Date of Issue:
Expiration Date: 01/27/00
County: Lake
Utility: Southlake Utilities
Project: Water Treatment Plant Modification

SPECIFIC CONDITIONS:

1. General condition number 13 does not apply.
2. A LETTER OF CLEARANCE MUST BE ISSUED BY THE DEPARTMENT PRIOR TO PLACEMENT OF THIS PROJECT INTO SERVICE. FAILURE TO DO SO WILL RESULT IN THE PERMITTEE BEING SUBJECT TO APPROPRIATE ENFORCEMENT ACTION. To obtain clearance of the facilities for service, the engineer of record shall submit the enclosed "Request for Letter of Release to Place Water Supply System into Service" [DEP Form 62-555.900(9)] to the Department, a copy of this permit, and a copy of satisfactory bacteriological sample results taken on two consecutive days from the new raw water piping, the new ground storage tank, the discharge side of the new high service pumps, and from Well "B" following pump upgrading.
3. Where water and sewer mains cross with less than 18" vertical clearance, the sewer will be 20' of either ductile iron pipe or concrete encased vitrified clay or PVC pipe, centered on the point of crossing. When a water main parallels a sewer main a separation, measured edge to edge, of at least 10' should be maintained where practical.
4. This permit does not pertain to any wastewater, stormwater or dredge and fill aspects of this project.
5. 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.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Christianne C. Ferraro

Christianne C. Ferraro, P.E.
Program Administrator
Water Facilities

ISSUED Jan. 29, 1999

EXHIBIT III

CORRESPONDENCE FROM FPSC AND FDEP

HC 41

State of Florida

DIVISION OF WATER &
WASTEWATER
CHARLES HILL
DIRECTOR
(904) 488-8482

Public Service Commission

April 19, 1994

Mr. Joe McNamara
Florida Department of Environmental Protection
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803-3767

Dear Mr. McNamara:

The Florida Public Service Commission is currently involved in a water and wastewater rate proceeding with Poinciana Utilities, Inc. One of the issues in this case involves the calculation of the maximum day design capacity for Poinciana's four water treatment plants (wtp). The wtp max day design capacity is needed to calculate the water treatment plant used and useful percentage. Used and useful is a ratemaking concept which ensures that utility customers do not pay for excess plant which is not required to provide them service.

Poinciana believes that the plant capacity provided in the original FDEP permit application should be used as the max day design capacity. The May 26, 1993 sanitary surveys, however, provide a max day design capacity for the four wtps which differs from the capacity in the original permit applications.

The FPSC has asked Poinciana to explain how the wtp capacity in the original permit application was calculated. We also request that your office explain how the max day design capacities provided in the sanitary surveys were calculated. If your staff has any questions regarding this request, they should contact Mr. John Starling, who is the engineer assigned to this case. Your help in this proceeding is very much appreciated.

Sincerely,

Robert J. Crouch, P.E.
Engineering Supervisor

cc: C. Hill
M. O'Sullivan
J. Starling

Florida Department of
Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

May 16, 1994

State of Florida Public Service Commission
Division of Water and Wastewater
101 East Gaines Street
Tallahassee, FL 32399-0850

OCD-PW-94-0221

Attention: Robert J. Crouch, P.E. Engineering Supervisor

Osceola/Polk Counties - PW
Poinciana Utilities
Maximum Day Design Capacities

Dear Mr. Crouch:

In response to your letter of April 19, 1994, following are the criteria being used by the Department in determining plant capacities:

1. Raw water flow must meet maximum day demand of the system.

   Aeration, if provided for the removal of hydrogen sulfide, should originally be designed to handle the total raw water flow effectively. Common practice calls for four hours of detention in the ground storage tank following Cascade aeration at a flow of one and a half times the average daily flow in systems consisting mainly of residential units.

   Until such time that the quality of the finished water is found to be greatly affected due to decreased aeration effectiveness, this additional design criterion may not necessarily be used to limit the plant capacity because it mainly affects the aesthetic quality of the water which is more of concern to the utility in satisfying its customers than to the regulator in implementing the rules. This criterion is primarily used at the permitting stage while considering the raw water analysis, the system classification, the need to meet secondary water standards in light of the proposed engineering features.

2. High service pumping and distribution facilities must, by rule, meet maximum hour demand. The contribution from distribution storage is to be based on the assumption that its capacity is allowed to be depleted in four hours at maximum hour flow rate.

3. For design purposes, plant chlorinated water storage should provide a minimum chlorine contact time of 15 minutes at maximum hour flow rate (30 minutes at maximum day flow) prior to distribution if free chlorine disinfection is used.

4. For community water systems serving more than 350 persons or 150 connections, an auxiliary power source is required to run pumping and treatment units at a rate equal to one-half of maximum day demand. A plant with insufficient auxiliary power capacity is out of compliance and must be corrected.

5. In addition to Item 1 above, the raw water throughput (including storage) should meet the maximum hour demand for four hours.

6. For the purpose of our estimations, maximum day flow equals 2.25 times the average daily flow and the maximum hour flow is taken to be twice the maximum day flow rate.

Based on the above, the maximum day design capacity of Poinciana Utilities water treatment plants are calculated to be as follows. Note that each of these capacities is based on the limiting factor in each plant and is different from the equipment installed capacity as permitted or later revised.

Water Treatment Plant #1 - PWS ID Number 3490507:

At this stage, disregarding the limitation that may be imposed by the 50,000-gallon storage capacity in the plant and the questionable aeration effectiveness, the limiting factor in this plant is the high service pumping capacity (three installed pumps totaling 1,500 GPM). Adding the contribution from the 400,000 gallon elevated storage tank in the distribution system towards meeting the maximum hour demand, the maximum day design capacity as calculated below is 2.28 MGD. This means that the system can provide for a maximum hour flow rate twice as great in magnitude (3,167 GPM).

$$\text{Max. Day Design Capacity} = \frac{1,500 \times 60 \times 24}{2 \times 10^6} + \frac{400,000 \times 24 \times 60}{4 \times 60 \times 2 \times 10^6} = 2.28 \text{ MGD}$$

Water Treatment Plant #2 - PWS ID Number 3494315:

The high service pumps capacity is the limiting factor at this plant. Total installed capacity is 1,890 GPM.

$$\text{Max. Day Design Capacity} = \frac{1,890 \times 1,440}{2 \times 10^6} = 1.36 \text{ MGD}$$

Water Treatment Plant #3 - PWS ID Number 3531421:

The high service pumps capacity is the limiting factor at this plant. Total installed capacity is 2,200 GPM.

$$\text{Maximum Day Design Capacity} = \frac{2,200 \times 1,440}{2 \times 10^6} = 1.58 \text{ MGD}$$

Water Treatment Plant #5 - PWS ID Number 3535076:

At this stage, disregarding the limitation that may be imposed by the 69,000-gallon storage capacity, the limiting factor becomes the high service pumps capacity (total installed capacity is 1,250 GPM).

$$\text{Max. Day Design Capacity} = \frac{1,250 \times 1,440}{2 \times 10^6} = 0.90 \text{ MGD}$$

It is clear from the above that redundancy allowance (for rotating the equipment in operation and keeping a standby capacity to allow servicing the largest capacity unit) and fire fighting flow requirements are not taken into account in our capacity calculations. The former falls under the utility's responsibility to develop sound operation and maintenance policies and the latter is usually mandated by the agencies having jurisdiction over fire and safety issues.

We hope this information answers your query. If you need any further assistance in this regard, call Mr. Osama Mahmoud at (407)894-7555.

Sincerely,

Joseph M. McNamara, P.E., DEE
Manager, Drinking Water Program

JMMc:om:pp