



Florida Department of Environmental Protection

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DEP #16-0823

Rick Scott
Governor

Carlos Lopez-Cantera
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Jonathan P. Steverson
Secretary

BEFORE THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

In re: Florida Governmental Utility Authority
Petition for Variance from Rule 62-610.865, F.A.C.

OGC File No. 15-1668
DEP File No. FLA142140

FINAL ORDER GRANTING PETITION FOR VARIANCE FROM RULE 62-610.865, F.A.C.

On December 10, 2015, Florida Governmental Utility Authority ("Petitioner") filed a Petition for Variance from the requirements in Rule 62-610.865, Florida Administrative Code (F.A.C.), under section 120.542, Florida Statutes, and Rule 28-104.002, F.A.C. Petitioner seeks relief from the entirety of Rule 62-610.865, F.A.C., for Petitioner's Golden Gate wastewater treatment plant ("WWTP") located at 4931 32nd Ave. SW, Naples, Florida in Collier County. The Golden Gate WWTP operates under Department of Environmental Protection ("Department") permit number FLA142140. Rule 62-610.865, F.A.C., applies to projects that blend demineralization concentrate with reclaimed water. The rule specifies prerequisite engineering, constituent limits, monitoring requirements, permitting requirements, operating protocols, and concentrate storage requirements. Petitioner seeks relief from this rule because the substantial majority of Petitioner's concentrate is disposed via an on-site underground injection control well.

A notice of receipt of the petition was published in the Florida Administrative Register on January 11, 2016, Vol. 42/06. No comments have been received.

BACKGROUND AND APPLICABLE REGULATORY CRITERIA

1. Petitioner's address is: Florida Governmental Utility Authority, 280 Wekiva Springs Rd., Suite 2070, Longwood, FL 32779-6026.
2. In support of the Petition for Variance, the Petitioner alleges as follows:

(a) The discharge of reclaimed water blended with demineralization concentrate to the Petitioner's rapid infiltration basin ("RIB") occurs on rare occasions. The Golden Gate WWTP onsite deep injection well is the primary disposal location for the blended reclaimed water generated by the facility. A flow summary for the Golden Gate WWTP shows that 99.95% of all effluent produced by the facility was disposed via the deep injection well during the previous 12 months. Petitioner alleges this flow chart represents typical discharge data for the Golden Gate WWTP and is applicable for both summarizing recent flow characteristics as well as projecting flow trends that are expected to continue into the future. Petitioner alleges the discharge of reclaimed water blended with concentrate to the RIBs is an abnormal and exceedingly rare condition resulting from brief interruptions of service at the deep injection well pump station.

(b) The intent of Rule 62-610.865, F.A.C., is to protect public health, ensure the ground water criteria in Chapter 62-520, F.A.C., will be met at the edge of the zone of discharge, to prevent harm to any sensitive vegetation being grown on the land application site, and to ensure that the hydraulic capacity of the disposal site is not adversely affected.

(c) Data from the compliance ground water monitoring wells located along the perimeter of the Golden Gate WWTP show that all ground water quality criteria is currently being met with respect to any impact the infrequent discharge of blended reclaimed water into the RIBs may have on the ground water.

(d) No sensitive vegetation is currently being grown within the RIBs.

(e) The hydraulic capacity for the RIBs has been maintained and no reduction in capacity has been observed even though discharges of blended reclaimed water have occurred in the past.

(f) The underlying statute is intended to protect human health and guard against deleterious environmental impacts caused by wastewater facilities that frequently utilize land application sites for the disposal of reclaimed water blended with concentrate.

(g) A variance from Rule 62-610.865, F.A.C., will serve the underlying statute since no harm to human health, the ground water quality or the environment has occurred nor is it likely to occur in the future by the manner in which the Golden Gate WWTP normally operates.

3. Petitioner seeks relief from the entirety of Rule 62-610.865, F.A.C. A copy of the rule is attached hereto and incorporated herein as Exhibit "A." The Department's rule implements the following statutes: 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, and 403.088,

F.S. The Petitioner is requesting a permanent variance as long as the discharge of reclaimed water blended with concentrate to the RIBs does not contribute to the exceedance of any ground water quality criteria.

THE VARIANCE WILL MEET THE UNDERLYING PURPOSE OF THE STATUTE

4. Section 120.542(2), Fla. Stat., states “variances and waivers shall be granted when the person subject to the rule demonstrates that the purpose of the underlying statute will be or has been achieved by other means by the person and when application of a rule would create a substantial hardship or would violate principles of fairness.” The variance procedure is intended to provide relief from unreasonable, unfair, and unintended results in unique cases.

5. The statutes implemented by Rule 62-610.865, F.A.C., ensure compliance with water quality standards and ensure protection of environmental quality, public health, site vegetation, and the ability of reuse and land application sites to function as intended. Rule 62-610.865, F.A.C., (as discussed in 62-610.865(4), F.A.C.), protects human health, ensures ground water criteria is met at the edge of the zone of discharge, prevents harm to sensitive vegetation being grown on the site, and ensures that the hydraulic capacity of the disposal site is not adversely affected. The Petitioner’s infrequent use of the RIBs would not be expected to cause any of these problems.

SUBSTANTIAL HARDSHIP TO THE PETITIONER and VIOLATIONS OF PRINCIPLES OF FAIRNESS

6. “Substantial hardship” means a demonstrated economic, technological, legal, or other type of hardship to the person requesting the variance or waiver. “Principles of fairness” are violated when the literal application of a rule affects a particular person in a manner significantly different from the way it affects other similarly situated persons who are subject to the rule. Section 120.54(2), Florida Statutes.

7. The Petitioner believes that principles of fairness would be violated if the Golden Gate WWTP is required to comply with Rule 62-610.865, F.A.C., because the Golden Gate facility utilizes a deep injection well as the primary disposal location. Information submitted by the Petitioner indicates that 99.95% of all effluent produced by the facility was disposed via the deep injection well during the previous 12 months. The regulatory burden imposed by Rule 62-610.865, F.A.C., is unnecessary because the potential harm that Rule 62-610.865, F.A.C., is intended to mitigate is de minimis.

THEREFORE, IT IS ORDERED:

8. For the foregoing reasons, it has been demonstrated that the Petitioner has met the requirements for a variance from Rule 62-610.865, F.A.C., and the requested permanent variance is hereby granted subject to the four conditions below:

- (a) This variance will terminate if the discharge of reclaimed water blended with demineralization concentrate to the RIBs contributes to an exceedance of any ground criteria at the edge of the zone of discharge.
- (b) This variance will terminate if the quantity of reclaimed water blended with demineralization concentrate disposed to the RIBs exceeds the quantity of reclaimed water blended with concentrate disposed to the deep injection well in any two consecutive months.
- (c) This variance does not relieve the Petitioner from liability for harm or injury to human health or welfare, animal, or plant life, or property, or from penalties therefore; nor does it allow pollution in contravention of Florida Statutes or Department rules.
- (d) The Department hereby expressly reserves the right to initiate appropriate legal action to address any violations of statutes or rules administered by the Department.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the request for a variance or waiver.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rule 28-106.201, F.A.C., a petition for an administrative hearing must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, telephone number, and any e-mail address of the petitioner; the name, address, telephone number, and any e-mail address of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition 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. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing must be filed within 21 days of receipt of this written notice. The failure 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, F.S., or to intervene in this proceeding and participate as a party to it. 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, F.A.C.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative

hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, 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 this action is filed with the Clerk of the Department.

DONE AND ORDERED this 2nd day of June 2016, in Lee County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Jon M. Iglehart
Director of District Management

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this Order, including all copies, were mailed or emailed before the close of business on June 2, 2016, to the listed persons below.

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to s. 120.52(7), Florida Statutes, with the designated Agency Clerk, receipt of which is hereby acknowledged.

Irene S. Collins

Clerk

June 2, 2016
Date

JMI/GM/isc

Attachments: Notice of Rights of Substantially Affected Persons
Notice for Optional Publication
Exhibit A – A copy of Rule 62-610.865, F.A.C.
Attachment A – The Original Petition and Supporting Documentation

Copies furnished to:

Sam Cain, FGUA, scain@govmserv.com
Glenn Forrest, FGUA, gforrest@govmserv.com
Michael Currier, FGUA, mcurrier@govmserv.com
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Gary Maier, DEP
Deanna Newburg, DEP
Diane DiPascale, DEP
David Rhodes, DEP
Nolin Moon, DEP
Elsa Potts, DEP
Sharon Sawicki, DEP
Hsiang-Yu Chou, DEP
Joint Administrative Procedures Committee, Email: joint.admin.procedures@leg.state.fl.us

NOTICE OF RIGHTS OF SUBSTANTIALLY AFFECTED PERSONS

This determination is final and effective on the date filed with the Clerk of the Department unless a timely and sufficient petition for an administrative hearing is filed under sections 120.569 and 120.57 of the Florida Statutes as provided below. If a sufficient petition for an administrative hearing is timely filed, this determination automatically becomes only proposed agency action subject to the result of the administrative review process. Therefore, on the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. The procedures for petitioning for a hearing are set forth in Rules 28-106.201-.202 and 62-110.106, F.A.C., and are summarized below.

Be advised that, under Florida law, your neighbors and other parties who may be substantially affected by this determination have a right to request an administrative hearing. Because the administrative hearing process is designed to re-determine final agency action, the filing of a petition for an administrative hearing may result in a final determination different from this determination. Generally speaking, the 21-day period for filing a petition begins to run on the date of publication of the notice (if published) or the date a person receives actual notice, whichever occurs first (see below).

The Department will not publish notice of this determination. Publication of notice by you is optional and is not required for you to proceed. However, in the event that an administrative hearing is held and the Department's determination is reversed, proceeding with the proposed activity before the time period for requesting an administrative hearing has expired would mean that the activity was conducted without the required permit or authorization. In cases where notice is not published, there may be instances in which a substantial amount of time could pass before an affected person receives notice of the agency action.

If you wish to limit the time within which all substantially affected persons may request an administrative hearing, you may elect to publish, at your own expense, the notice specified below in the legal advertisement section of a newspaper of general circulation in the county where the activity is to take place. A single publication will suffice.

If you wish to limit the time within which any specific person(s) may request an administrative hearing, you may provide direct notice to such person(s), by certified mail and enclosing a copy of this determination.

For the purposes of publication, a newspaper of general circulation means a newspaper meeting the requirements of sections 50.011 and 50.031 of the Florida Statutes. In the event you do publish this notice, within seven days of publication, you must provide to the following address proof of publication issued by the newspaper as provided in section 50.051 of the Florida Statutes. If you provide direct written notice to any person as noted above, you must provide to the following address a copy of the direct written notice: Florida Department of Environmental Protection, P.O. Box 2549, Fort Myers, FL 33902-2549, Attention: Gary Maier; or you may submit an electronic copy to SouthDistrict@dep.state.fl.us, Attention: Gary Maier.

(This is the notice for optional publication)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF ORDER GRANTING VARIANCE

The Department of Environmental Protection (Department) gives notice that a variance has been granted to Mr. Glenn Forrest, Operations Manager, Florida Governmental Utility Authority (FGUA), 280 Wekiva Springs Rd., Ste 2070, Longwood, FL 32779-6026, to provide relief from the requirements in Rule 62-610.865, F.A.C., for FGUA's Golden Gate wastewater treatment plant located at 4931 32nd Ave. SW, Naples, Florida 34116, in Collier County. Rule 62-610.865, F.A.C., applies to projects that blend demineralization concentrate with reclaimed water, and requires prerequisite engineering, constituent limits, monitoring requirements, permitting requirements, operating protocols, and concentrate storage requirements. The Department granted a permanent variance to FGUA because the vast majority of FGUA's blend is disposed in a deep injection well and is not reclaimed in FGUA's rapid infiltration basin. The variance has been assigned OGC File No. 15-1668.

A person whose substantial interests are affected by the Department's action 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. Mediation is not available.

If a timely and sufficient petition for an administrative hearing is filed, other persons whose substantial interests will be affected by the outcome of the administrative process have the right to petition to intervene in the proceeding. Intervention will be permitted 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 (F.A.C.).

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing must be filed within 21 days of publication of the notice or receipt of written notice, whichever occurs first. Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000 before the applicable deadline. A timely request for extension of time will toll the running of the time period for filing a petition until the request is acted upon. Upon motion by the requesting party showing that the failure to file a request for an extension of time before the deadline was the result of excusable neglect, the Department may also grant the requested extension of time.

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 for an administrative hearing within the appropriate time period shall constitute a waiver of that right.

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

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action;
- (f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

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, F.A.C.

Under sections 120.569(2)(c) and (d) of the Florida Statutes, a petition for administrative hearing shall be dismissed by the agency if the petition does not substantially comply with the above requirements or is untimely filed.

Copies of documents related to this determination are available online and can be accessed through the Department's Information Portal at: <http://webapps.dep.state.fl.us/DepNexus/public/electronic-documents/FLA142140/facility!search> and are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department's South District Office, 2295 Victoria Ave, Suite 364, Ft. Myers, Florida 33901. Please contact the Department at phone number (239) 344-5600 if you have any questions or are experiencing difficulty viewing the electronic documents.

(End of the notice for optional publication)

EXHIBIT A – Rule 62-610.865, F.A.C.

62-610.865 Blending of Demineralization Concentrate with Reclaimed Water.

(1) Within this chapter, the term “concentrate” will be used synonymously with “demineralization concentrate.” The Department shall classify demineralization concentrate as a “potable water byproduct,” and not as an “industrial wastewater.”

(2) Rule 62-610.865, F.A.C., applies to projects, for which complete permit applications which request authorization to blend concentrate with reclaimed water were received by the Department on or after August 8, 1999. Rule 62-610.865, F.A.C., also shall apply to existing projects which are being expanded or modified; however, these rule requirements shall only apply to the expanded or modified portion of the project.

(3) Demineralization concentrate may be blended with reclaimed water which will be used in reuse systems regulated under Parts II, III, IV, and VII of Chapter 62-610, F.A.C., if all of the requirements of Rule 62-610.865, F.A.C., and the appropriate part of Chapter 62-610, F.A.C., are met.

(4) Permittees wishing to blend demineralization concentrate with reclaimed water are urged to proceed cautiously. Concentrate typically contains elevated concentrations of dissolved solids and inorganic constituents, which normally are not removed from the reclaimed water as it travels through the unsaturated or saturated zones beneath the Earth’s surface. As a result, the ability of a reuse or land application project to meet ground water quality criteria at the edge of the zone of discharge shall be addressed in the engineering report. Elevated concentrations of dissolved solids and salts may harm sensitive vegetation being grown on the reuse or land application site and may decrease the hydraulic capacity of reuse and land application sites, especially where reclaimed water will be used to irrigate landscape areas and edible food crops, as allowed by Part III of Chapter 62-610, F.A.C.

(5) Engineering report.

(a) The engineering report shall provide reasonable assurances that ground water criteria contained in Chapter 62-520, F.A.C., will be met at the edge of the zone of discharge.

(b) The engineering report shall provide reasonable assurances that the blend will not harm vegetation or crops grown on the reuse or land application sites and that the blend will not impair the ability of the site to function as intended. Salt tolerances of vegetation found in the reuse or land application system shall be evaluated.

(c) The engineering report shall evaluate the potential for salts and other constituents in the concentrate to adversely affect the infiltration/percolation capabilities of the soils in the reuse system. If the sodium adsorption ratio in the blend approaches or exceeds 15, it is recommended that sodicity hazards and impacts on soil infiltration/percolation be addressed in detail in the engineering report based on input from individuals having expertise in soils science.

(d) The engineering report shall evaluate the ability of the reuse system to protect public health.

(e) The engineering report shall examine constraints needed to ensure compliance with water quality standards and to ensure protection of environmental quality, public health, site vegetation, and the ability of reuse and land application sites to function as intended.

(f) The engineering report shall characterize the reclaimed water, concentrate, and blend.

(g) The engineering report shall include recommendations for a minimum blend ratio. This minimum blend ratio shall be justified based on the considerations described in subsection 62-610.865(5), F.A.C.

(6) Demineralization concentrate, reclaimed water, and blend quality.

(a) The applicant shall evaluate the tolerances of vegetation grown in areas to receive reclaimed water to constituents contained in the concentrate and the blend. The applicant shall evaluate potential affects of the blend on the soils to which the blend will be applied. These evaluations shall be included in an affirmative demonstration in the engineering report that the blend can be applied to the land and vegetation in an acceptable manner which will not harm the vegetation or impair the soil’s ability to accommodate the applied blend. The applicant shall establish limitations on total dissolved solids, chlorides, and sodium adsorption ratio in the blend to protect vegetation, soils, and ground water quality. The Department shall incorporate these limitations into the permit as single sample maxima limitations for the blend.

(b) The reclaimed water shall meet all requirements of the appropriate part of Chapter 62-610, F.A.C., at a point upstream from the addition of the concentrate.

(c) The blend shall meet all requirements of the appropriate part of Chapter 62-610, F.A.C., at the point where it is introduced into the reclaimed water conveyance or distribution system.

(d) The permit shall include a minimum blend ratio which shall be equaled or exceeded at all times.

(7) Permitting.

(a) Separate domestic wastewater and concentrate permits shall be issued, except as provided for in paragraph 62-610.865(7)(b), F.A.C. The concentrate permit holder shall be responsible for the quality of the concentrate, monitoring of

the concentrate, and facilities associated with the storage and conveyance of the concentrate. The concentrate permit holder shall be responsible for hydrogen sulfide control, if needed. The domestic permit holder shall be responsible for treatment, disinfection, storage, quality, and monitoring of the reclaimed water. The domestic wastewater permit holder shall be responsible for the quality, monitoring, conveyance, and application of the blend and for all monitoring at the reuse and land application sites.

(b) A single domestic wastewater permit shall be issued if a single municipality or utility owns and operates both the domestic wastewater facilities and the water treatment facilities which generate the concentrate.

(c) In the case where separate domestic and concentrate permits are issued, the domestic wastewater permittee shall execute an agreement with the concentrate permittee to ensure acceptable project performance. The agreement shall address the quality and quantity of the concentrate, system operation, storage requirements, monitoring, sharing of information, quality control, and remedies in the event problems develop. Remedies shall include provisions for terminating the service of accepting the concentrate if problems develop.

(d) Permit fees for the domestic wastewater permit shall be based on the sum of the capacity of the domestic wastewater facility (without the introduction of the concentrate) and the maximum anticipated flow of the concentrate.

(e) Adding concentrate to the reclaimed water at an existing domestic wastewater facility and reuse system shall be considered as a modification which will subject the reuse facilities to the requirements of Chapter 62-610, F.A.C.

(8) Monitoring.

(a) Reclaimed water shall be monitored as required by the appropriate part of Chapter 62-610, F.A.C. Monitoring requirements in Chapter 62-601, F.A.C., shall apply.

(b) Flows shall be monitored continuously in two locations. The flow of the concentrate shall be monitored continuously. In addition, either the flow of the reclaimed water (before blending) or the flow of the blend shall be continuously monitored. The blend ratio shall be calculated continuously.

(c) The blend shall be monitored continuously for specific conductance. The results of this monitoring shall be used to make continuous judgments of the quality of the blend related to inorganic constituents of the blend (such as total dissolved solids and chlorides).

(d) Continuous monitoring equipment shall be equipped with an automated data logging or recording device. Continuous monitoring equipment shall be maintained according to the manufacturer's operation and maintenance instructions. Continuous monitoring equipment shall be calibrated according to the requirements of Chapters 62-160 and 62-601, F.A.C.

(e) The blend shall be monitored as required by the appropriate part of Chapter 62-610, F.A.C. Monitoring requirements in Chapter 62-601, F.A.C., shall apply to the blend. Total suspended solids, fluoride, total dissolved solids, chlorides, pH, and sodium adsorption ratio shall be monitored weekly in the blend. Additional parameters to be sampled and analyzed for in the blend on a weekly basis shall be established in the permit based on characterization of the concentrate and the blend contained in the engineering report. After the first year of operation, the Department shall reduce the sampling frequency if the applicant provides an affirmative demonstration that ground water standards will be met and that site vegetation and public health will be protected.

(f) An annual scan of the parameters listed as primary and secondary drinking water standards in Chapter 62-550, F.A.C. (except for turbidity, total coliforms, color, and corrosivity), shall be accomplished for the reclaimed water, the concentrate, and the blend. After the first year, the Department shall reduce the parameters to be reported in the annual scan if the applicant provides an affirmative demonstration that ground water standards will be met and that site vegetation and public health will be protected. At least once during each permit cycle, the full list of parameters listed as primary and secondary drinking water parameters shall be reported for the reclaimed water and the blend.

(9) Operating protocol.

(a) In accordance with Rule 62-610.320, F.A.C., the domestic wastewater permittee shall establish an operating protocol for the blending. This operating protocol shall contain procedures designed to ensure that only acceptable quality blend water is released to the reuse system. The acceptability of the reclaimed water will be based on factors addressed in the engineering report, as described in subsection 62-610.865(5), F.A.C., such that protection of public health, environmental quality, and site vegetation will be assured. The two key parameters to be used in making continuous judgments of the acceptability of the blend are the blend ratio and the specific conductance.

(b) Reuse projects regulated under Part III of Chapter 62-610, F.A.C., will have an additional operating protocol for operation of the domestic wastewater treatment facility, as described in Rule 62-610.463, F.A.C. The permittee may combine the two operating protocols into a single document.

(10) Demineralization concentrate storage.

(a) The demineralization concentrate permittee shall be responsible for the provision, operation, and maintenance of concentrate storage facilities.

(b) Provisions shall be made for storage of demineralization concentrate, unless a permitted alternate discharge mechanism or other approved methods are available for disposal or handling of the concentrate during periods when blending is not possible.

(c) If concentrate storage is needed to meet permit requirements, the storage pond or tank shall have a capacity equal to three days flow of concentrate at the maximum flow of the process producing the concentrate. If blending will take place after the reclaimed water system storage facilities, the concentrate storage capacity shall equal the number of days storage required to be provided in the system storage facilities for the reclaimed water.

(d) Concentrate storage systems shall be lined or sealed to prevent measurable seepage or shall be constructed of impervious materials. Requirements for lined storage ponds are contained in subsection 62-610.414(4), F.A.C.

(11) The permittee shall submit an annual summary of water quality in the reclaimed water, the concentrate, the blend, and ground water monitoring wells. Correlations between specific conductance and chloride, and total dissolved solids shall be developed and reported. The summary shall include an evaluation of any adverse effects on vegetation and ground water quality and needed corrective actions, including needed revisions to the operating protocol.

(12) Except as provided in subsection 62-610.865(13), F.A.C., blending shall be accomplished after the domestic wastewater has received all treatment and disinfection. This may be before or after system storage facilities associated with the reuse system. If blending will occur before system storage associated with the reuse system, the applicant shall provide an affirmative demonstration that the system storage facilities have sufficient capacity to meet the system storage requirements based on the combined flows of reclaimed water and the concentrate.

(13) Demineralization concentrate may be discharged into the sanitary sewerage system.

(a) All of the following conditions shall be met:

1. The resulting mixture of concentrate and domestic wastewater receives the full level of treatment required by the part of Chapter 62-610, F.A.C., which regulates the reuse system.
2. The applicant provides an affirmative demonstration that the sewerage system and treatment facilities have sufficient capacities to accommodate the added volume of concentrate.
3. The addition of concentrate will not impair the ability of the treatment facility to meet reclaimed water limitations.
4. The resulting reclaimed water will not harm vegetation grown in the reuse system.
5. The resulting reclaimed water will not reduce the infiltration/percolation capacities of soils in the reuse system.
6. The reuse system will comply with ground water standards at the edge of the zone of discharge.

(b) If concentrate is added only to the sewerage system before treatment, the provisions in subsections 62-610.865(2) through (12), F.A.C., shall not apply.



FGUA Operations Office

Government Services Group, Inc.
280 Wekiva Springs Rd., Ste 2070
Longwood, FL 32779-6026

(877) 552-3482 Toll Free
(407) 629-6900 Tel
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December 10th, 2015

Florida Department of Environmental Protection
South District
Wastewater Compliance
2295 Victoria Ave.
Suite 364
Fort Myers, Florida 33901

RECEIVED

December 10, 2015

**Dept. of Environmental Protection
Office of General Counsel**

PETITION FOR VARIANCE FROM RULE 62-610.865

Dear Sir or Madam,

The Golden Gate WWTP (ID# FLA142140) is a domestic wastewater treatment plant located at 4931 32nd Ave. S.W. in Collier County that discharges reclaimed water blended with demineralization concentrate (concentrate) into waters of the state as defined in F.S. section 403.031. The FDEP has expressed concern that the operating permit for the Golden Gate WWTP does not provide reasonable assurance that operation of the facility is in accordance with the requirements of Rule 62-610.865, F.A.C., for the blending of concentrate with reclaimed water discharged to the restricted public access rapid infiltration basins (RIBs) located at the facility.

The discharge of reclaimed water blended with concentrate to the RIBs occurs on an exceedingly rare occasion. The Golden Gate WWTP onsite deep injection well is the primary disposal location for the blended reclaimed water generated by the facility. Since the discharge of reclaimed water blended with concentrate to the RIBs at the Golden Gate WWTP rarely occurs and will remain a very infrequent condition, the Florida Governmental Utility Authority (FGUA) requests relief from Rule 62-610.865 as follows:

1. Contact Information Required by Rule 28-104.002(2)(b), F.A.C.

Petitioner:

Florida Governmental Utility Authority (FGUA)
280 Wekiva Springs Rd.
Suite 2070
Longwood, FL 32779
Phone: 407-629-6900
Fax: 407-629-6963

FGUA Board of Directors

LEA ANN THOMAS, Chair, Polk County / DOUG MEURER, P.E., Lee County / KEN CHEEK, P.E., Citrus County
SHANE PARKER, P.E., Hendry County / BRUCE KENNEDY, P.E., Pasco County / MICHAEL VUOLO, DeSoto County /
FLIP MELLINGER, Marion County

FGUA Authorized Representative:

Glenn E. Forrest, P.E.
Operations Manager
280 Wekiva Springs Rd.
Suite 2070
Longwood, FL 32779
Phone: 407-629-6900
Fax: 407-629-6963

2. Rule For Which Variance Is Requested

A variance for Rule 62-610.865, F.A.C. in its entirety is being requested for the Golden Gate WWTP. The rule is titled "*Blending of Demineralization Concentrate with Reclaimed Water*" and applies to the permitting and monitoring requirements necessary for wastewater facilities that discharge reclaimed water blended with concentrate to land application sites for disposal.

3. Type of Action Requested

The FGUA is requesting that a variance be granted from the requirements contained within Rule 62-610.865 F.A.C. for the Golden Gate WWTP. In lieu of complying with the various additional monitoring and reporting requirements of this rule, the FGUA proposes that all monitoring and reporting requirements included in the current operating permit for the Golden Gate WWTP remain unchanged.

4. Specific Facts Justifying a Variance

The FGUA believes that principles of fairness would be violated if the Golden Gate WWTP is required to comply with Rule 62-610.865 F.A.C. and offers the following facts in support of the request for variance:

- i. Rule 62-610.865 F.A.C. applies to treatment facilities that discharge reclaimed water blended with concentrate to reuse systems regulated under Parts II, III, IV, and VII of Chapter 62-610 F.A.C. (Slow Rate Land Application Systems – Restricted Public Access, Slow Rate Land Application Systems – Public Access Areas, Rapid-Rate Land Application Systems, and Industrial Uses of Reclaimed Water respectively). Since the Golden Gate facility utilizes a deep injection well as the primary disposal location for ALL of the reclaimed water blended with

concentrate produced by the facility, a variance should be applied to the Golden Gate WWTP for Rule 62-610.865 F.A.C.. The RIBs were utilized as the disposal location in only a few instances during the previous 12 months and was because abnormal and exceedingly rare conditions resulted in brief interruptions of service at the deep injection well pump station. A flow summary for the Golden Gate WWTP showing that 99.95% of all effluent produced by the facility was disposed via the deep injection well during the previous 12 months is attached. This represents typical discharge data for the Golden Gate WWTP and is applicable for both summarizing recent flow characteristics as well as projecting flow trends that are expected to continue into the future.

- ii. The intent of Rule 62-610.865 F.A.C. (as discussed in 62-610.865(4) F.A.C. for land application systems) is to ensure ground water criteria is met at the edge of the zone of discharge, to prevent harm to any sensitive vegetation being grown on the site, and to ensure that the hydraulic capacity of the disposal site is not reduced. As the following points demonstrate, it is either very unlikely or impossible for the Golden Gate WWTP to cause any of the deleterious environmental impacts discussed in the rule:
 - o The previous four sampling results (11/24/14, 3/2/15, 5/28/15, & 9/8/2015) for the 5 compliance ground water monitoring wells located along the perimeter of the Golden Gate WWTP show that all ground water criteria is currently being met with respect to any impact the infrequent discharge of blended reclaimed water into the RIBs may have on the ground water (see the attached sampling results summary). Monitoring wells #1 to #4 are in compliance with all ground water quality limits. Monitoring well #5 shows elevated levels for total dissolved solids, but this well is not considered to be representative of any impact to local ground water quality that may be caused by the infrequent discharge of blended reclaimed water to the RIBs since it is located a short distance to the east of well #4 which is currently in compliance with all ground water quality limits. The elevated TDS levels observed in well #5 are believed by the FGUA to be due to local ground water quality conditions unrelated to the WWTP.
 - o No sensitive vegetation is currently being grown within the RIBs, therefore this environmental concern can be disregarded.
 - o The hydraulic capacity for the RIBs has been maintained and no reduction in capacity has been observed even though infrequent discharges of blended reclaimed water have occurred in the past. Therefore, this environmental/operational concern can be waived as these infrequent discharges have resulted in no discernible environmental harm.

5. Reason Why Variance Would Serve The Underlying Statute

The underlying statute is intended to guard against deleterious environmental impacts caused by wastewater facilities that frequently utilize land application sites for the disposal of reclaimed water blended with concentrate. The Golden Gate WWTP utilizes a deep injection well as the primary disposal location for all blended reclaimed water produced by the facility. The attached flow summary chart has demonstrated that the discharge of the blended reclaimed water to the RIBs is an extremely infrequent occurrence which has not caused any negative impact on the quality of local ground water. Therefore, a variance for Rule 62-610.865 will serve the underlying statute since no harm to the ground water quality or the environment has occurred nor is likely to occur in the future by the manner in which the Golden Gate WWTP normally operates.

6. Whether The Variance Is Permanent Or Temporary

The petition for variance from Rule 62-610.865 for the Golden Gate WWTP is requested to be PERMANENT as long as the infrequent discharge of reclaimed water blended with concentrate to the RIBs does not contribute to the exceedance of any ground water quality limitations.

If any additional information is required to process this request, or if there are any questions or concerns, please do not hesitate to contact me at Scain@govmserv.com or at 407-488-8843.

Sincerely,



Sam Cain, P.E.
Utility Engineer

Cc:

Glenn E. Forrest, P. E., FGUA Operations Manager

Michael Currier, FGUA Area Manager for South Region

Jon Meyer, South Regional Manager, US Water Services Corporation (System Operator)

Howard E. (Gene) Adams, Attorney At Law, FGUA General Council

Golden Gate WWTP

Monthly Effluent Flow Totals (millions of gallons)

Month & Year	Disposal Site		% of flow to Injection Well
	Deep Injection Well	*On-site RIBs	
Sep-14	41.871	0.000	100.00%
Oct-14	35.448	0.000	100.00%
Nov-14	38.389	0.000	100.00%
Dec-14	38.903	0.000	100.00%
Jan-15	34.684	0.000	100.00%
Feb-15	32.815	0.000	100.00%
Mar-15	37.314	0.000	100.00%
Apr-15	35.256	0.000	100.00%
May-15	35.509	0.000	100.00%
Jun-15	37.894	0.000	100.00%
Jul-15	46.082	0.230	99.50%
Aug-15	41.204	0.000	100.00%
Total:	455.369	0.230	99.95%

* Flow to the RIBs occurs only due to brief annual maintenance activities or abnormal conditions (such as loss of power).

Golden Gate WWTP - Monitoring Well Sample Results

Monitoring Well MWC-20525 (#1)						
Sample Date:		11/24/2014	3/2/2015	5/28/2015	9/8/2015	Average
Nitrate (N)	Sample:	0.24	0.87	0.93	0.67	0.68
	Limit:	10 mg/L				
Total Dissolved Solids (TDS)	Sample:	468.00	480.00	468.00	552.00	492.00
	Limit:	500 mg/L				
Arsenic	Sample:	1.40	1.10	1.60	1.20	1.33
	Limit:	10 ug/L				
Chloride	Sample:	92.00	65.00	90.00	92.00	84.75
	Limit:	250 mg/L				
Cadmium	Sample:	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
	Limit:	5 ug/L				
Chromium	Sample:	0.76 I	0.90 I	0.50 U	0.63 I	0.50 U
	Limit:	100 ug/L				
Lead	Sample:	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Limit:	15 ug/L				
Fecal Coliform	Sample:	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
	Limit:	0 #/100ML (or 1.00 U)				
pH	Sample:	7.11	6.95	6.91	6.82	6.95
	Limit:	6.5 - 8.5				
Sulfate	Sample:	72.00	58.00	63.00	71.00	66.00
	Limit:	250 mg/L				

Notes: 1. "U" indicates that the compound was analyzed for, but not detected.

2. "I" indicates that the reported value was greater than or equal to the laboratory Method Detection Limit but was less than the laboratory Practical Quantification Limit.

Golden Gate WWTP - Monitoring Well Sample Results

Monitoring Well MWC-20524 (#2)						
Sample Date:		11/24/2014	3/2/2015	5/28/2015	9/8/2015	Average
Nitrate (N)	Sample:	0.02	0.01 U	0.18	0.28	0.12
	Limit:	10 mg/L				
Total Dissolved Solids (TDS)	Sample:	352.00	480.00	420.00	536.00	447.00
	Limit:	500 mg/L				
Arsenic	Sample:	1.30	1.40	1.20	1.20	1.28
	Limit:	10 ug/L				
Chloride	Sample:	47.00	63.00	66.00	75.00	62.75
	Limit:	250 mg/L				
Cadmium	Sample:	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
	Limit:	5 ug/L				
Chromium	Sample:	0.50 U	0.68 I	0.50 U	0.50 U	0.50 U
	Limit:	100 ug/L				
Lead	Sample:	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Limit:	15 ug/L				
Fecal Coliform	Sample:	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
	Limit:	0 #/100ML (or 1.00 U)				
pH	Sample:	7.13	7.04	6.91	6.88	6.99
	Limit:	6.5 - 8.5				
Sulfate	Sample:	54.00	56.00	59.00	68.00	59.25
	Limit:	250 mg/L				

Notes: 1. "U" indicates that the compound was analyzed for, but not detected.

2. "I" indicates that the reported value was greater than or equal to the laboratory Method Detection Limit but was less than the laboratory Practical Quantification Limit.

Golden Gate WWTP - Monitoring Well Sample Results

Monitoring Well MWC-20523 (#3)						
Sample Date:		11/24/2014	3/2/2015	5/28/2015	9/8/2015	Average
Nitrate (N)	Sample:	0.01	0.07	0.01 U	0.04	0.03
	Limit:	10 mg/L				
Total Dissolved Solids (TDS)	Sample:	440.00	484.00	400.00	580.00	476.00
	Limit:	500 mg/L				
Arsenic	Sample:	4.00	4.00	3.20	1.90	3.28
	Limit:	10 ug/L				
Chloride	Sample:	30.00	50.00	62.00	61.00	50.75
	Limit:	250 mg/L				
Cadmium	Sample:	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
	Limit:	5 ug/L				
Chromium	Sample:	0.50 U	0.52 I	0.50 U	5.30	1.58
	Limit:	100 ug/L				
Lead	Sample:	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Limit:	15 ug/L				
Fecal Coliform	Sample:	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
	Limit:	0 #/100ML (or 1.00 U)				
pH	Sample:	7.00	7.01	6.94	6.75	6.93
	Limit:	6.5 - 8.5				
Sulfate	Sample:	84.00	86.00	57.00	119.00	86.50
	Limit:	250 mg/L				

Notes: 1. "U" indicates that the compound was analyzed for, but not detected.

2. "I" indicates that the reported value was greater than or equal to the laboratory Method Detection Limit but was less than the laboratory Practical Quantification Limit.

Golden Gate WWTP - Monitoring Well Sample Results

Monitoring Well MWC-20522 (#4)						
Sample Date:		11/24/2014	3/2/2015	5/28/2015	9/8/2015	Average
Nitrate (N)	Sample:	0.02	0.03	0.01 U	0.93	0.25
	Limit:	10 mg/L				
Total Dissolved Solids (TDS)	Sample:	372.00	484.00	380.00	464.00	425.00
	Limit:	500 mg/L				
Arsenic	Sample:	3.10	3.80	2.80	1.90	2.90
	Limit:	10 ug/L				
Chloride	Sample:	27.00	55.00	41.00	28.00	37.75
	Limit:	250 mg/L				
Cadmium	Sample:	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
	Limit:	5 ug/L				
Chromium	Sample:	0.50 U	0.50 U	0.50 U	0.71 I	0.50 U
	Limit:	100 ug/L				
Lead	Sample:	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Limit:	15 ug/L				
Fecal Coliform	Sample:	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
	Limit:	0 #/100ML (or 1.00 U)				
pH	Sample:	7.17	7.14	7.04	6.91	7.07
	Limit:	6.5 - 8.5				
Sulfate	Sample:	77.00	54.00	73.00	54.00	64.50
	Limit:	250 mg/L				

Notes: 1. "U" indicates that the compound was analyzed for, but not detected.

2. "I" indicates that the reported value was greater than or equal to the laboratory Method Detection Limit but was less than the laboratory Practical Quantification Limit.

Golden Gate WWTP - Monitoring Well Sample Results

Monitoring Well MWC-20521 (#5)						
Sample Date:		11/24/2014	3/2/2015	5/28/2015	9/8/2015	Average
Nitrate (N)	Sample:	0.01 U	0.02	0.01 U	0.01 U	0.01 U
	Limit:	10 mg/L				
Total Dissolved Solids (TDS)	Sample:	788.00	848.00	684.00	920.00	*810.00
	Limit:	500 mg/L				
Arsenic	Sample:	0.50 U	0.50 U	0.50 U	0.60 I	0.50 U
	Limit:	10 ug/L				
Chloride	Sample:	264.00	241.00	229.00	248.00	245.50
	Limit:	250 mg/L				
Cadmium	Sample:	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
	Limit:	5 ug/L				
Chromium	Sample:	0.68 I	1.00	0.78 I	0.60 I	0.63
	Limit:	100 ug/L				
Lead	Sample:	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
	Limit:	15 ug/L				
Fecal Coliform	Sample:	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
	Limit:	0 #/100ML (or 1.00 U)				
pH	Sample:	7.00	6.96	6.98	6.82	6.94
	Limit:	6.5 - 8.5				
Sulfate	Sample:	72.00	55.00	50.00	61.00	59.50
	Limit:	250 mg/L				

Notes: 1. "U" indicates that the compound was analyzed for, but not detected.

2. "I" indicates that the reported value was greater than or equal to the laboratory Method Detection Limit but was less than the laboratory Practical Quantification Limit.

* This monitoring well location doesn't appear to accurately represent any impact the Golden Gate WWTP may have on the level of Total Dissolved Solids in the ground water since none of the other 4 monitoring wells exceed this parameter. Also, well #4 is located just a short distance west of well #5 and would have also shown elevated levels of Total Dissolved Solids had the WWTP been the cause.

Maier, Gary

From: Maier, Gary
Sent: Monday, January 04, 2016 4:42 PM
To: 'Glenn Forrest'
Cc: Sam Cain; 'SCain2@govmserv.com'
Subject: Golden Gate WWTP (FLA142140) Petition for Variance

Mr. Glenn E. Forrest, P.E.
Operations Manager
Florida Governmental Utility Authority

RE: Request for Additional Information

Dear Mr. Forrest:

Thank you for submitting a Petition for Variance from Rule 62-610.865, F.A.C., on behalf of the Florida Governmental Utility Authority (FGUA), dated December 10, 2015.

The Department of Environmental Protection (DEP) respectfully requests the following additional information to complete the petition:

For the questions below, “blend ratio” means the ratio of the flow of reclaimed water to the flow of concentrate in a blending operation, as described in Rule 62-610.865, F.A.C.

1. What is the typical or average blend ratio?
2. At the typical or average blend ratio, what are the concentrations of the following constituents in the blend: sodium, chloride, fluoride, TDS?
3. What is the minimum expected blend ratio?
4. At the minimum expected blend ratio, what are the concentrations of the following constituents in the blend: sodium, chloride, fluoride, TDS?

The DEP suspends the processing of FGUA’s petition until receipt of the requested additional information.

Please feel free to contact the DEP anytime you have questions.

Best Regards,

Gary Maier
DEP South District Professional Engineer
(239) 344-5664

*

**FGUA Operations Office**

Government Services Group, Inc.
280 Wekiva Springs Rd., Ste 2070
Longwood, FL 32779-6026

(877) 552-3482 Toll Free
(407) 629-6900 Tel
(407) 629-6963 Fax

April 12th, 2016

Gary Maier
Florida Department of Environmental Protection
South District
Wastewater Compliance
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901

Received -
DEP - South District -
April 12, 2016 -

Subject: Golden Gate WWTP (FLA142140) Petition for Variance RAI Response

Dear Gary,

Included below for your review are responses to the request for information you sent via e-mail on 1/4/2016 with regards to the Golden Gate WWTP Petition for Variance.

"For the questions below, "blend ratio" means the ratio of the flow of reclaimed water to the flow of concentrate in a blending operation, as described in Rule 62-610.865, F.A.C." (Statement preceding the questions included in the RAI e-mail).

1. *What is the typical or average blend ratio?*

Response:

The average blend ratio observed between December 2014 & November 2015 was 4.03.

2. *At the typical or average blend ratio, what are the concentrations of the following constituents in the blend: sodium, chloride, fluoride, TDS?*

Response:

Both historical and recent sampling results for the 4 constituents were used to calculate the average concentrations for each within the blended effluent disposed via the deep injection well during average blend ratio flow conditions. A table summarizing the results is shown below:

WWTP & WTP Blend Ratios	Result Type	Average Concentration in Blend (mg/L)			
		TDS	Cl	Na	F
Average Blend Ratio 4.03	Calculated	734	108	81.5	0.62

FGUA Board of Directors

LEA ANN THOMAS, Chair, Polk County / DOUG MEURER, P.E., Lee County / KEN CHEEK, P.E., Citrus County
SHANE PARKER, P.E., Hendry County / FLIP MELLINGER, Pasco County / DOUG ANDREWS, P.E., Marion County

3. *What is the minimum expected blend ratio?*

Response:

The minimum blend ratio observed between December 2014 & November 2015 was 3.59 and occurred in April 2015. Based on historical flow patterns within the Golden Gate system, the blend ratio throughout the future is not expected to be much less than this amount.

4. *At the minimum expected blend ratio, what are the concentrations of the following constituents in the blend: sodium, chloride, fluoride, TDS?*

Response:

Both historical and recent sampling results for the 4 constituents were used to calculate the average concentrations for each within the blended effluent disposed via the deep injection well during minimum blend ratio flow conditions. A table summarizing the results is shown below:

WWTP & WTP Blend Ratios	Result Type	Average Concentration in Blend (mg/L)			
		TDS	Cl	Na	F
Minimum Blend Ratio 3.59	Calculated	757	111	82.2	0.62

In addition to the responses above, a summary of the recorded flows and sample results is attached for reference. Please note that the calculated constituent concentrations for both the average and minimum blend ratios were obtained by multiplying the average concentration for each constituent by the volume of its respective flow stream for both the WWTP effluent and the WTP concentrate, adding these two values, and then dividing by the total combined flow. Also, since actual constituent concentrations measured in the blended flow sample taken on 3/24/2016 (TDS=620, Cl=130, Na=80.2, F=0.62) were very similar to the calculated results, we are confident that the calculated results accurately represent the quality of the blended effluent being disposed of via the deep injection well.

If there are any questions regarding our responses, please do not hesitate to contact me via e-mail at Scain@govmserv.com or via cell-phone at 407-488-8843.

Sincerely,



Sam Cain, P.E.
Utility Engineer

Copy to:

Glenn E. Forrest, P. E., Operations Manager
Mike Currier, Regional Manager
Jon Meyer, Facility Operator (US Water Services Corporation, Inc.)

Golden Gate WWTP Blend Ratio Summary -

Month	WWTP Effluent Flow (MGD)	WTP Concentrate Flow (MGD)	Blend Ratio
Dec-14	31.161	7.742	4.02
Jan-15	27.479	7.205	3.81
Feb-15	26.199	6.616	3.96
Mar-15	29.735	7.579	3.92
Apr-15	27.577	7.679	3.59
May-15	28.110	7.399	3.80
Jun-15	30.072	7.822	3.84
Jul-15	38.513	7.799	4.94
Aug-15	33.631	7.573	4.44
Sep-15	33.455	8.041	4.16
Oct-15	29.888	7.982	3.74
Nov-15	30.378	7.349	4.13
Average Blend Ratio:			4.03
Minimum Blend Ratio:			3.59

Golden Gate WWTP Effluent & WTP Concentrate Sampling Results Summary -

Month	WTP RO Concentrate Parameters (mg/L)				WWTP Effluent Parameters (mg/L)			
	Sodium	Chloride	Fluoride	TDS	Sodium	Chloride	Fluoride	TDS
Dec-14		150		1,390				
Jan-15		177		1,420				
Feb-15		167		1,440				
Mar-15		203		1,530				
Apr-15		205		1,680				
May-15		213		1,620				
Jun-15		314		1,870	75.1	80	0.6	492
Jul-15		245		2,920				
Aug-15		297		1,920				
Sep-15		405		2,070				
Oct-15	118	197		1,360				
Nov-15		160		1,600				
3/24/2016	97	130	0.7	1,420				
Average:	108	220	0.7	1,711	75.1	80	0.6	492

Golden Gate WWTP Blended Effluent Characteristics Summary -

WWTP & WTP Blend Ratios	Result Type	Average Concentration in Blend (mg/L)			
		TDS	Cl	Na	F
Average Blend Ratio 4.03	Calculated	734	108	81.5	0.62
Minimum Blend Ratio 3.59	Calculated	757	111	82.2	0.62
Sample Results for 3/24/2016	Measured	620	130	80.2	0.70