

THE NEWS-PRESS
*Published every morning
Daily and Sunday
Fort Myers, Florida*
Affidavit of Publication

STATE OF FLORIDA
COUNTY OF LEE

Before the undersigned authority, personally appeared **Kathy Allebach** who on oath says that he/she is the **Legal Assistant** of the News-Press, a daily newspaper, published at Fort Myers, in Lee County, Florida; that the attached copy of advertisement, being a

Display

In the matter of:

Notice of Draft Permit

In the court was published in said newspaper
in the issues of
December 9, 2012

Affiant further says that the said News-Press is a paper of general circulation daily in Lee, Charlotte, Collier, Glades and Hendry Counties and published at Fort Myers, in said Lee County, Florida and that said newspaper has heretofore been continuously published in said Lee County, Florida, each day, and has been entered as a second class mail matter at the post office in Fort Myers in said Lee County, Florida, for a period of one year next preceding the first publication of the attached copy of the advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me this 10th day of December, 2012.

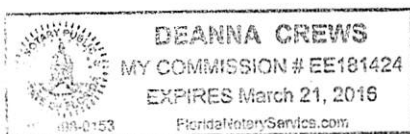
by **Kathy Allebach**
personally known to me or who has produced

as identification, and who did or did not take an oath.

Notary Public

Print Name: **Deanna Crews**

My commission Expires: **March 21, 2016**



**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION
NOTICE OF DRAFT PERMIT**

The Department of Environmental Protection gives notice of its preparation of a draft permit to City of Cape Coral, Jeff Pearson, City Of Cape Coral, PO Box 150027, Cape Coral, Florida 33915 for the Cape Coral Reverse Osmosis WTP. This permit authorizes the permittee to operate a 4.05 mgd industrial wastewater treatment facility which would discharge 3.05 mgd of reverse osmosis reject water to Lake Finisterre and Marauder Canal. Also, the facility would inject 4.05 mgd of reverse osmosis reject water to a Class I underground injection well which discharges to Class G-IV groundwater. The facility is located at latitude 26°35'29" N, longitude 82°0'57" W on SW 20th Avenue, Cape Coral, Florida 33914 in Lee County. The application number is FLO040088.

Any interested person may submit written comments on the Department's draft permit or may submit a written request for a public meeting to Mr. Nolin Moon, 2295 Victoria Ave, Suite 364, Ft. Myers, Florida 33901-3875, in accordance with Rule 62-620.555, Florida Administrative Code. The comments or request for a public meeting must contain the information set forth below and must be received in the Department's South District Office within 30 days of publication of this notice. Failure to submit comments or request a public meeting within this time period shall constitute a waiver of any right such person may have to submit comments or request a public meeting under Rule 62-620.555, Florida Administrative Code.

The comments or request for a public meeting must contain the following information:

- The commenter's name, address, and telephone number; the applicant's name and address; the Department permit file number; and the county in which the project is proposed;
- A statement of how and when notice of the Department's action or proposed action was received;
- A statement of the facts the Department should consider in making the final decision;
- A statement of which rules or statutes require reversal or modification of the Department's action or proposed action; and
- If desired, a request that a public meeting be scheduled including a statement of the nature of the issues proposed to be raised at the meeting.

If a public meeting is scheduled, the public comment period is extended until the close of the public meeting. However, the Department may not always grant a request for a public meeting. Therefore, written comments should be submitted within 30 days of publication of this notice, even if a public meeting is requested.

If a public meeting is held, any person may submit oral or written statement and data at the public meeting on the Department's proposed action. As a result of significant public comment, the Department's final action may be different from the position taken by it in this draft permit.

The permit application file and supporting data 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 33901-3875, at phone number (239)344-5600.



**AFFIDAVIT OF
PUBLICATION**



**The News-Press
media group**
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SMI
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Perfect

Moon, Nolin

From: Jeff Pearson [jpearson@capecoral.net]
Sent: Friday, November 30, 2012 8:13 AM
To: Maier, Gary; Ahmadi, Abdul
Cc: Robert Woods; Andy Fenske; Shawn Kopko; 'Dan Acquaviva'; Moon, Nolin; Newburg, Deanna
Subject: RE: DRAFT PERMIT

Gary,

We appreciate the Department's consideration regarding our suggested revisions to the final permit.

Have a great weekend!

Jeff Pearson
Utilities Director
City of Cape Coral
239.574.0709
jpearson@capecoral.net

From: Maier, Gary [<mailto:Gary.Maier@dep.state.fl.us>]
Sent: Thursday, November 29, 2012 4:24 PM
To: Jeff Pearson; Ahmadi, Abdul
Cc: Robert Woods; Andy Fenske; Shawn Kopko; 'Dan Acquaviva'; Moon, Nolin; Newburg, Deanna
Subject: RE: DRAFT PERMIT

Mr. Pearson:

Thank you for the comments.

The requested changes sound very reasonable. If any problem is encountered, we will be sure to touch base with you prior to issuing the final permit.

Have a great day!

Regards,

Gary

Please take a few minutes to share your comments on the service you received from the department by clicking on this link [DEP Customer Survey](#).

From: Jeff Pearson [<mailto:jpearson@capecoral.net>]
Sent: Thursday, November 29, 2012 3:55 PM
To: Maier, Gary; Ahmadi, Abdul
Cc: Robert Woods; Andy Fenske; Shawn Kopko; 'Dan Acquaviva'
Subject: RE: DRAFT PERMIT

Hi Gary,

Would it be possible to expressly state in the permit that during periods when no discharges occur sampling and analyses are not required? I believe this was discussed with the FDEP, but it doesn't appear to have been explicitly mentioned in the permit. Section I.C.6. (page 8) may or may not be construed as stating this. But that section is also restrictive in that it would require sampling on the first day of a discharge period, which may be hard to plan for if the discharge occurs in an emergency situation. Would it be possible to allow us to take samples on the day following the discharge?

Best regards,

Jeff Pearson
Utilities Director
City of Cape Coral
239.574.0709
jpearson@capecoral.net



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

South District Office
P.O. Box 2549
Fort Myers, FL 33902-2549

RICK SCOTT
GOVERNOR

JENNIFER CARROLL
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

November 20, 2012

Mark Nuhfer, Chief
Municipal and Industrial NPDES Section
Environmental Protection Agency Region 4
61 Forsyth Street SW
Atlanta, Georgia 30303

Dear Mr. Nuhfer:

Enclosed is a copy of the draft permit and associated documents for the following facility:

Cape Coral Reverse Osmosis Water Treatment Plant
Permit No. FL0040088-004-IW5A/NR
Minor -POTW

If there are any questions or comments concerning the enclosed material, please contact Nolin Moon, at telephone number (239) 344-5672 in the South District Office of the Florida Department of Environmental Protection.

Sincerely,

for

Jon M. Iglehart
Director of
District Management

Enclosed:

Draft Permit
Fact Sheet
Consent Order

JMI/NWM/jl



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

South District Office
P.O. Box 2549
Fort Myers, FL 33902-2549

RICK SCOTT
GOVERNOR

JENNIFER CARROLL
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

SENT BY ELECTRONIC MAIL

In the Matter of an
Application for Permit by:

City of Cape Coral
Jeff Pearson, Utilities Director
jpearson@capecoral.net

Lee County - IW
Cape Coral WTP RO Industrial Wastewater
File Number FL0040088-004-IW5A
Caloosahatchee Basin (WBID ID# 3240A2)

NOTICE OF DRAFT PERMIT

The Department of Environmental Protection gives notice of its preparation of a draft permit (copy attached) for the proposed project as detailed in the application specified above, for the reasons stated below.

The applicant, City of Cape Coral, applied on August 1, 2011, to the Department of Environmental Protection for a permit to operate a 4.05 mgd industrial wastewater treatment facility which would discharge 3.05 mgd of reverse osmosis reject water to Lake Finisterre and Marauder Canal (Water body ID# 3240A2). The facility injects 4.05 mgd of reverse osmosis reject water to a Class I underground injection well which discharges to Class G-IV groundwater. The facility is located at latitude 26°35'29" N, longitude 82°0'57" W on SW 20th Avenue, Cape Coral, Florida 33914 in Lee County.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code. The project is not exempt from permitting procedures. The Department has determined that a wastewater permit is required for the proposed work.

The applicant entered a Consent Order to eliminate the discharge to surface waters. Based upon the application and the Consent Order, the Department has determined that the applicant has provided reasonable assurance that the above describe wastewater project complies with the applicable provisions of Chapter 403 of the Florida Statutes and Title 62 of the Florida Administrative Code.

Under Section 403.815, Florida Statutes, and Rule 62-620.550, Florida Administrative Code, you (the applicant) are required to publish at your own expense the enclosed Notice of Draft Permit and Request for Public Comment. The notice must be published one time only within 30 days of receipt of this draft permit in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, Florida Statutes, in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used should be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant must provide proof of publication to the Department's South District Office, 2295 Victoria Ave, Suite 364, Ft. Myers, Florida 33901-3875, within two weeks of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department intends to issue the permit with the attached conditions unless as a result of public comment appropriate changes are made.

Any interested person may submit written comments on the Department's proposed permitting decision or may submit a written request for a public meeting to Deanna Newburg, 2295 Victoria Ave, Suite 364, Ft. Myers, Florida 33901-3875 in accordance with Rule 62-620.555, Florida Administrative Code. The comments or request for a public meeting must contain the information set forth below and must be received in the Department's South District Office. Comments from the permit applicant and the persons listed below must be received within 30 days of receipt of this draft permit. Comments submitted by other persons must be received within 30 days of publication of the public notice. Failure to submit comments or request a public meeting within this time period shall constitute a waiver of any right such person may have to submit comments or request a public meeting under Rule 62-620.555, Florida Administrative Code.

The comments or request for a public meeting must contain the following information:

- (a) The commenter's name, address, and telephone number; the applicant's name and address; the Department permit file number; and the county in which the project is proposed;
- (b) A statement of how and when notice of the Department's action or proposed action was received;
- (c) A statement of the facts the Department should consider in making the final decision;
- (d) A statement of which rules or statutes require reversal or modification of the Department's action or proposed action; and
- (e) If desired, a request that a public meeting be scheduled including a statement of the nature of the issues proposed to be raised at the meeting.

If a public meeting is scheduled, the public comment period is extended until the close of the public meeting. However, the Department may not always grant a request for a public meeting. Therefore, written comments should be submitted within 30 days of receipt of this notice, even if a public meeting is requested.

If a public meeting is held, any person may submit oral or written statements and data at the public meeting on the Department's proposed action. As a result of significant public comment, the Department's final action may be different from the position taken by it in this draft permit.

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

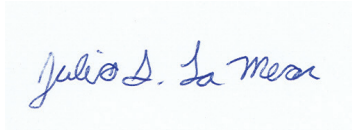


for

Jon M. Iglehart
Director of
District Management

FILING AND ACKNOWLEDGMENT

FILED, on this date, under Section 120.52, Florida Statutes, with the designated Deputy Clerk, receipt of which is hereby acknowledged.



11/20/12

Clerk

Date

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this NOTICE OF DRAFT PERMIT and all copies were mailed before the close of business on November 20, 2012, to the listed persons.

JMI/NWM/jl

Enclosed:

Public Notice
Draft Permit
Fact Sheet
Consent Order
Interim Discharge Monitoring Report

Copies with enclosure furnished to:

Lloyd E. Horvath, P.E.: lloyd.horvath@cardnoentrix.com
Dan Acquaviva, (dacquaviva@rma-geologic.com)
Shawn Kopko, (skopko@capecoral.net)

Copies with Draft Permit and Fact Sheet mailed to:

Florida Fish and Wildlife, Conservation Commission
Florida Department of State, Bureau of Historic Preservation
U. S. Fish & Wildlife Service
U.S. Corps of Engineers, District Engineer
South Florida Water Management District
Nona Schaffner, DEP, Nona.Schaffner@dep.state.fl.us



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

South District Office
P.O. Box 2549
Fort Myers, FL 33902-2549

RICK SCOTT
GOVERNOR

JENNIFER CARROLL
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

**STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT**

PERMITTEE:

City of Cape Coral

PERMIT NUMBER: FL0040088-004 (Minor)

FILE NUMBER: FL0040088-004-IW5A

ISSUANCE DATE: **DRAFT**

EXPIRATION DATE: **DRAFT**

RESPONSIBLE OFFICIAL:

Jeff Pearson, Utilities Director
PO Box 150027
Cape Coral, Florida 33915

FACILITY:

Cape Coral Reverse Osmosis Water Treatment Plant
SW 20th Avenue
Cape Coral, FL 33914
Lee County
Latitude: 26°35' 29" N Longitude: 82°00' 57" W
Waterbody # 3240A2

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and applicable rules of the Florida Administrative Code (F.A.C.) and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System. This permit is accompanied by a Consent Order, pursuant to paragraphs 403.088(2)(e) and (f), Florida Statutes. Compliance with Consent Order CO 12-1121-36 is a specific requirement of this permit. This permit does not constitute authorization to discharge wastewater other than as expressly stated in this permit. The above named permittee is hereby authorized to operate the facilities in accordance with the documents attached hereto and specifically described as follows:

FACILITY DESCRIPTION:

An existing 4.05 million gallons per day (MGD) demineralization concentrate treatment and disposal facility serving a reverse osmosis (RO) drinking water treatment plant for the City of Cape Coral.

WASTEWATER TREATMENT:

Treatment of the concentrate includes: oxidation through the use of a sodium hypochlorite feed system and aeration to remove hydrogen sulfide and to increase oxygen; and pH adjustment by a sodium hydroxide feed system.

DISPOSAL:

Surface Water Discharge D-001: During emergencies, the concentrate discharges to Lake Finisterre, a ponded section of the Marauder Canal. The canal is Class III Marine Waters, The permitted capacity for D-001 is 3.05 MGD, Daily Maximum Flow. The diffuser system is 360 feet in length consisting of 10 four-inch ports and runs along the bottom of the canal. The point of discharge is located approximately at latitude 26°35' 01" N, longitude 82°0' 34" W.

Underground Injection U-001: The concentrate discharges to an underground injection well, U-001, issued under Permit number 254598-002-UO/11. U-001 consists of one Class I underground injection well that discharges to Class G-IV ground water. The permitted capacity for U-001 is 9.9 MGD, or 6900 GPM Maximum Daily Flow. U-001 is located approximately at latitude 26°35' 10" N, longitude 82°01'35" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions set forth in this Cover Sheet and Part I through Part IX on pages 1 through 14 of this permit.

PERMITTEE: City of Cape Coral
FACILITY: Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)
EXPIRATION DATE: DRAFT

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Surface Water Discharges

- During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge reverse osmosis reject water from Outfall D-001. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.3.:

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max	3.05	Daily Maximum	Daily	Meter	EFF-1	
Oxygen, Dissolved (DO)	mg/L	Min Min	4.0 5.0	Instantaneous Minimum Daily Average	Daily	Grab	EFF-1	
pH	s.u.	Min Max	6.7 8.5	Single Sample Single Sample	Daily	Grab	EFF-1	
Hydrogen sulfide	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-1	
Specific Conductance	umhos/cm	Max	Report	Single Sample	Monthly	Grab	EFF-1	
Solids, Total Dissolved (TDS)	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-1	
Color	PCU	Max	Report	Single Sample	Monthly	Grab	EFF-1	
Aluminum, Total Recoverable	mg/L	Max	1.5	Single Sample	Monthly	Grab	EFF-1	
Methyl bromide	short ton/day	Max	Report	Single Sample	Monthly	Grab	EFF-1	
Calcium, Total Recoverable	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-1	
Chloride (as Cl)	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-1	
Copper, Total Recoverable	ug/L	Max	3.7	Single Sample	Monthly	Grab	EFF-1	
Fluoride, Total (as F)	mg/L	Max	5.0	Single Sample	Monthly	Grab	SWD-1	
Iron, Total Recoverable	mg/L	Max	0.3	Single Sample	Monthly	Grab	EFF-1	
Magnesium, Total Recoverable	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-1	
Potassium, Total	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-1	
Sodium, Total Recoverable	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-1	

PERMITTEE: City of Cape Coral
 FACILITY: Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)
 EXPIRATION DATE: DRAFT

Effluent Limitations			Monitoring Requirements			
			Limit	Statistical Basis	Frequency of Analysis	Monitoring Site Number
Parameter	Units	Max/Min				Notes
Radium 226 + Radium 228, Total	pCi/L	Max	5.0	Single Sample	Monthly	EFF-1
Alpha, Gross Particle Activity	pCi/L	Max	15.0	Single Sample	Monthly	EFF-1
Nitrogen, Nitrate, Total (as N)	mg/L	Max	Report	Single Sample	Monthly	EFF-1
Nitrogen, Total	mg/L	Max	Report	Single Sample	Monthly	EFF-1
Nitrogen, Organic, Total (as N)	mg/L	Max	Report	Single Sample	Monthly	EFF-1
Phosphorus, Total (as P)	mg/L	Max	Report	Single Sample	Monthly	EFF-1
Phosphate, Ortho (as P)	mg/L	Max	Report	Single Sample	Monthly	EFF-1
Acute Whole Effluent Toxicity, 96 Hour LC50 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	Quarterly	See I.A.4
Acute Whole Effluent Toxicity, 96 Hour LC50 (Cyprinella leedsi)	percent	Min	100	Single Sample	Quarterly	See I.A.4

PERMITTEE: City of Cape Coral
FACILITY: Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)
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2. Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.A.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
EFF-1	After final treatment but before discharge.
SWD-1	At the edge of the 12-foot mixing zone.

3. The discharge shall not contain components that settle to form putrescent deposits or float as debris, scum, oil, or other matter. *[62-302.500(1)(a)]*
4. The permittee shall comply with the following requirements to evaluate acute whole effluent toxicity of the discharge from outfall D-001.
- a. Effluent Limitation
- (1) In any routine or additional follow-up test for acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent. *[Rules 62-302.200(1), 62-302.500(1)(a)4., 62-4.244(3)(a), and 62-4.241, F.A.C.]*
- b. Monitoring Frequency
- (1) Routine toxicity tests shall be conducted once every three months, the first starting within 60 days of the issuance date of this permit and lasting for the duration of this permit.
- (2) Upon completion of four consecutive, valid routine tests that demonstrate compliance with the effluent limitation in 4.a.(1) above, the permittee may submit a written request to the Department for a reduction in monitoring frequency to once every six months. The request shall include a summary of the data and the complete bioassay laboratory reports for each test used to demonstrate compliance. The Department shall act on the request within 45 days of receipt. Reductions in monitoring shall only become effective upon the Department's written confirmation that the facility has completed four consecutive valid routine tests that demonstrate compliance with the effluent limitation in 4.a.(1) above.
- (3) If a test within the sequence of the four is deemed invalid based on the acceptance criteria in EPA-821-R-02-012, but is replaced by a repeat valid test initiated within 14 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive valid tests for the purpose of evaluating the reduction of monitoring frequency.
- c. Sampling Requirements
- (1) Routine tests shall be conducted on four separate grab samples collected at evenly-spaced (6-hr) intervals over a 24-hour period. The four grab samples shall be used in eight bioassays (four bioassays for each species) and shall represent one test. If the duration of the discharge is less than 24-hours, the duration of discharge shall be documented on the chain of custody.
- (2) For additional follow-up tests, the first test shall be conducted on four separate grab samples collected at evenly-spaced (6-hr) intervals over a 24-hour period. The four grab samples shall be used in four separate bioassays for each species that failed the routine test. The four grab samples represent one test. The second follow-up test shall be run on a single grab sample collected on the day and time when the greatest toxicity was identified in the routine or first additional follow-up test.
- d. Test Requirements
- (1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five dilutions: **100%, 75%, 50%, 25%, and 12.5%** effluent.
- (2) The permittee shall conduct 96-hour acute static renewal multi-concentration toxicity tests using the daphnid, ***Ceriodaphnia dubia***, and the bannerfin shiner, ***Cyprinella leedsi***, concurrently.
- (3) All test species, procedures and quality assurance criteria used shall be in accordance with **Methods for Measuring Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms**, 5th Edition, EPA-821-R-02-012. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct acute toxicity testing in accordance with the revised method.

PERMITTEE: City of Cape Coral
FACILITY: Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)
EXPIRATION DATE: DRAFT

- (4) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-012, Table 7.
- e. Quality Assurance Requirements
 - (1) A standard reference toxicant (SRT) quality assurance (QA) acute toxicity test shall be conducted with each species used in the required toxicity tests either concurrently or initiated no more than 30 days before the date of each routine or additional follow-up test conducted. Additionally, the SRT test must be conducted concurrently if the test organisms are obtained from outside the test laboratory unless the test organism supplier provides control chart data from at least the last five monthly acute toxicity tests using the same reference toxicant and test conditions. If the organism supplier provides the required SRT data, the organism supplier's SRT data and the test laboratory's monthly SRT-QA data shall be included in the reports for each companion routine or additional follow-up test required.
 - (2) If the mortality in the control (0% effluent) exceeds 10% for either species in any test, the test for that species (including the control) shall be invalidated and the test repeated. The repeat test shall begin within 14 days after the last day of the invalid test.
 - (3) If 100% mortality occurs in all effluent concentrations for either species prior to the end of any test and the control mortality is less than 10% at that time, the test (including the control) for that species shall be terminated with the conclusion that the test fails and constitutes non-compliance.
 - (4) Routine and additional follow-up tests shall be evaluated for acceptability based on the concentration-response relationship, as required by EPA-821-R-02-012, Section 12.2.6.2., and included with the bioassay laboratory reports.
- f. Reporting Requirements
 - (1) Results from all required tests shall be reported on the Discharge Monitoring Report (DMR) as follows:
 - (a) Routine Test Results: If an LC50 >100% effluent occurs in all four separate grab sample tests for the test species, ">100%" shall be entered on the DMR for that test species. If in any of the four separate grab sample tests for the test species an LC50 <100% effluent occurs, the lowest calculated LC50 effluent concentration shall be entered on the DMR for that test species.
 - (b) Additional Follow-up Test Results: For each additional test required, the calculated LC50 value shall be entered on the DMR for that test species.
 - (2) A bioassay laboratory report for the routine test shall be prepared according to EPA-821-R-02-012, Section 12, Report Preparation and Test Review, and mailed to the Department at the address below within 30 days after the last day of the test.
 - (3) For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-012, Section 12, and mailed within 30 days after the last day of the second valid additional follow-up test.
 - (4) Data for invalid tests shall be included in the bioassay laboratory report for the repeat test.
 - (5) The same bioassay data shall not be reported as the results of more than one test.
 - (6) All bioassay laboratory reports shall be sent to:
Florida Department of Environmental Protection
South District Office
2295 Victoria Ave, Suite 364
Ft. Myers, Florida 33901-3875
- g. Test Failures
 - (1) A test fails when the test results do not meet the limits in 4.a.(1).
 - (2) Additional Follow-up Tests:
 - (a) If a routine test does not meet the acute toxicity limitation in 4.a.(1) above, the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with 4.d.
 - (b) The first test shall be initiated within 28 days after the last day of the failed routine test. The remaining additional follow-up tests shall be conducted weekly thereafter until a total of two valid additional follow-up tests are completed.
 - (c) The first additional follow-up test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 75%, 50%, 25%, and 12.5% effluent. The permittee may modify the

PERMITTEE: City of Cape Coral
FACILITY: Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)
EXPIRATION DATE: DRAFT

dilution series in the second additional follow-up test to more accurately bracket the toxicity such that at least two dilutions above and two dilutions below the target concentration and a control (0% effluent) are run. All test results shall be statistically analyzed according to the procedures in EPA-821-R-02-012.

- (3) In the event of three valid test failures (whether routine or additional follow-up tests) within a 12-month period, the permittee shall notify the Department within 21 days after the last day of the third test failure.
 - (a) The permittee shall submit a plan for correction of the effluent toxicity within 60 days after the last day of the third test failure.
 - (b) The Department shall review and approve the plan before initiation.
 - (c) The plan shall be initiated within 30 days following the Department's written approval of the plan.
 - (d) Progress reports shall be submitted quarterly to the Department at the address above.
 - (e) During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 4.d. Additional follow-up tests are not required while the plan is in progress. Following completion or termination of the plan, the frequency of monitoring for routine and additional follow-up tests shall return to the schedule established in 4.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-012, a repeat test shall be initiated within 14 days after the last day of the invalid routine test.
 - (f) Upon completion of four consecutive quarterly valid routine tests that demonstrate compliance with the effluent limitation in 4.a.(1) above, the permittee may submit a written request to the Department to terminate the plan. The plan shall be terminated upon written verification by the Department that the facility has passed at least four consecutive quarterly valid routine whole effluent toxicity tests. If a test within the sequence of the four is deemed invalid, but is replaced by a repeat valid test initiated within 14 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive quarterly valid routine tests for the purpose of terminating the plan.
- (4) The additional follow-up testing and the plan do not preclude the Department taking enforcement action for whole effluent toxicity failures.

[62-4.241, 62-620.620(3)]

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B. Underground Injection Control Systems

Requirements for discharge to U-001 are established under Department UIC permit number 254598-002-UO/11. [62-620.610(3)]

C. Other Limitations and Monitoring and Reporting Requirements

1. The sample collection, analytical test methods, and method detection limits (MDLs) applicable to this permit shall be conducted using a sufficiently sensitive method to ensure compliance with applicable water quality standards and effluent limitations and shall be in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs (method detection limits) and PQLs (practical quantitation limits), which is titled "FAC 62-4 MDL/PQL Table (April 26, 2006)" is available at <http://www.dep.state.fl.us/labs/library/index.htm>. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:
 - a. The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;
 - b. The laboratory reported MDL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide an MDL, which is equal to or less than the applicable water quality criteria stated in 62-302, F.A.C.; and
 - c. If the MDLs for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest stated MDL shall be used.

When the analytical results are below method detection or practical quantitation limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report.

Where necessary, the permittee may request approval of alternate methods or for alternative MDLs or PQLs for any approved analytical method. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Approval of an analytical method not included in the above-referenced list is not necessary if the analytical method is approved in accordance with 40 CFR 136 or deemed acceptable by the Department. [62-4.246, 62-160]

2. The permittee shall provide safe access points for obtaining representative influent and effluent samples which are required by this permit. [62-620.320(6)]
3. Monitoring requirements under this permit are effective on the first day of the second month following permit issuance. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any. During the period of operation authorized by this permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e. monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Unless specified otherwise in this permit, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below. DMRs shall be submitted for each required monitoring period including periods of no discharge.

REPORT Type on DMR	Monitoring Period	Mail or Electronically Submit by
Monthly or Toxicity	First day of month - last day of month	28 th day of following month
Quarterly	January 1 - March 31 April 1 - June 30 July 1 - September 30 October 1 - December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 - June 30 July 1 - December 30	July 28 January 28

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Annual	January 1 - December 31	January 28
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The permittee may submit either paper or electronic DMR forms. If submitting paper DMR forms, the permittee shall make copies of the attached DMR forms, without altering the original format or content unless approved by the Department, and shall mail the completed DMR forms to the Department by the twenty-eighth (28th) of the month following the month of operation at the address specified below:

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3551
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

If submitting electronic DMR forms, the permittee shall use the electronic DMR system(s) approved in writing by the Department and shall electronically submit the completed DMR forms to the Department by the twenty-eighth (28th) of the month following the month of operation. Data submitted in electronic format is equivalent to data submitted on signed and certified paper DMR forms. *[62-620.610(18)]*

- Unless specified otherwise in this permit, all reports and other information required by this permit, including 24-hour notifications, shall be submitted to or reported to, as appropriate, the Department's South District Office at the address specified below:

Florida Department of Environmental Protection South District
2295 Victoria Ave
Suite 364
Ft. Myers, Florida 33901-3875

Phone Number - (239)344-5600
FAX Number - (850)412-0590
(All FAX copies and e-mails shall be followed by original copies.)

[62-620.305]

- All reports and other information shall be signed in accordance with the requirements of Rule 62-620.305, F.A.C. *[62-620.305]*
- If there is no discharge from the facility on a day when the facility would normally sample, the sample shall be collected on the day of the next discharge. *[62-620.320(6)]*

II. SLUDGE MANAGEMENT REQUIREMENTS

Section II is not applicable to this facility.

III. GROUND WATER REQUIREMENTS

Section III is not applicable to this facility.

IV. ADDITIONAL LAND APPLICATION REQUIREMENTS

Section IV is not applicable to this facility.

V. OPERATION AND MAINTENANCE REQUIREMENTS

- During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control. *[62-620.320(6)]*

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2. The permittee shall maintain the following records and make them available for inspection on the site of the permitted facility.
 - a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
 - b. Copies of all reports required by the permit for at least three years from the date the report was prepared;
 - c. Records of all data, including reports and documents, used to complete the application for the permit for at least three years from the date the application was filed;
 - d. A copy of the current permit;
 - e. A copy of any required record drawings; and
 - f. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules.

[62-620.350]

VI. SCHEDULES

1. In accordance with section 403.0882(2)(e) and (f), Florida Statutes, a compliance schedule for this facility is contained in Consent Order CO 12-1121-36, which is hereby incorporated by reference.
2. The permittee is not authorized to discharge to waters of the state after the expiration date of this permit, unless:
 - a. The permittee has applied for renewal of this permit at least 180 days before the expiration date of this permit using the appropriate forms listed in Rule 62-620.910, F.A.C., and in the manner established in the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.; or
 - b. The permittee has made complete the application for renewal of this permit before the permit expiration date.

[62-620.335(1)-(4)]

VII. BEST MANAGEMENT PRACTICES/STORMWATER POLLUTION PREVENTION PLANS

Section VII is not applicable to this facility.

VIII. OTHER SPECIFIC CONDITIONS

1. Where required by Chapter 471 or Chapter 492, F.S., applicable portions of reports that must be submitted under this permit shall be signed and sealed by a professional engineer or a professional geologist, as appropriate. *[62-620.310(4)]*
2. The permittee shall provide verbal notice to the Department's South District Office as soon as practical after discovery of a sinkhole or other karst feature within an area for the management or application of wastewater, or wastewater sludges. The Permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department's South District in a written report within 7 days of the sinkhole discovery. *[62-620.320(6)]*
3. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe:
 - a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels;

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- (1) One hundred micrograms per liter,
 - (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2, 4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter for antimony, or
 - (3) Five times the maximum concentration value reported for that pollutant in the permit application; or
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels;
- (1) Five hundred micrograms per liter,
 - (2) One milligram per liter for antimony, or
 - (3) Ten times the maximum concentration value reported for that pollutant in the permit application.

[62-620.625(1)]

IX. GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1)]*
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2)]*
3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3)]*
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4)]*
5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5)]*
6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6)]*
7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7)]*
8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8)]*

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9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to:
- Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
 - Have access to and copy any records that shall be kept under the conditions of this permit;
 - Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
 - Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.

[62-620.610(9)]

10. 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 as such use is proscribed by Section 403.111, F.S., or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10)]*
11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11)]*
12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12)]*
13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13)]*
14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14)]*
15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility or activity and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15)]*
16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2), F.A.C., for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16)]*
17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for

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any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:

- a. A description of the anticipated noncompliance;
- b. The period of the anticipated noncompliance, including dates and times; and
- c. Steps being taken to prevent future occurrence of the noncompliance.

[62-620.610(17)]

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246 and Chapters 62-160, 62-601, and 62-610, F.A.C., and 40 CFR 136, as appropriate.

- a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the permit.
- b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
- d. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental Laboratory Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.
- e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.
- f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220, and 62-160.330, F.A.C.

[62-620.610(18)]

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19)]*

20. The permittee shall report to the Department's South District any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- a. The following shall be included as information which must be reported within 24 hours under this condition:
 - (1) Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,
 - (2) Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
 - (4) Any unauthorized discharge to surface or ground waters.
- b. Oral reports as required by this subsection shall be provided as follows:

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- (1) For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph (a)4. that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:
 - (a) Name, address, and telephone number of person reporting;
 - (b) Name, address, and telephone number of permittee or responsible person for the discharge;
 - (c) Date and time of the discharge and status of discharge (ongoing or ceased);
 - (d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);
 - (e) Estimated amount of the discharge;
 - (f) Location or address of the discharge;
 - (g) Source and cause of the discharge;
 - (h) Whether the discharge was contained on-site, and cleanup actions taken to date;
 - (i) Description of area affected by the discharge, including name of water body affected, if any; and
 - (j) Other persons or agencies contacted.
 - (2) Oral reports, not otherwise required to be provided pursuant to subparagraph b.1 above, shall be provided to the Department's South District within 24 hours from the time the permittee becomes aware of the circumstances.
- c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department's South District shall waive the written report.
[62-620.610(20)]
21. The permittee shall report all instances of noncompliance not reported under Permit Conditions IX. 17, 18 or 19 of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Permit Condition IX.20 of this permit. *[62-620.610(21)]*
22. Bypass Provisions.
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment works.
 - b. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:
 - (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The permittee submitted notices as required under Permit Condition IX. 22. c. of this permit.
 - c. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Permit Condition IX. 20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
 - d. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Permit Condition IX. 22. b.(1) through (3) of this permit.
 - e. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Permit Condition IX. 22. b. through d. of this permit.

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[62-620.610(22)]

23. Upset Provisions.

- a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee.
 - (1) An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation.
 - (2) An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of upset provisions of Rule 62-620.610, F.A.C., are met.
- b. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in Permit Condition IX.5. of this permit; and
 - (4) The permittee complied with any remedial measures required under Permit Condition IX. 5. of this permit.
- c. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the permittee.
- d. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[62-620.610(23)]

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

DRAFT

Jon M. Iglehart
Director of
District Management

DATE: November 20, 2012

Attachment:
Discharge Monitoring Report
Consent Order CO 12-1121-36

**FACT SHEET
FOR
STATE OF FLORIDA INDUSTRIAL WASTEWATER FACILITY PERMIT**

PERMIT NUMBER: FL0040088-004 (Minor)

FACILITY NAME: Cape Coral, City of - RO WTP

FACILITY LOCATION: SW 20th Avenue, Cape Coral, FL 33914
Lee County

NAME OF PERMITTEE: City of Cape Coral

PERMIT WRITER: Nolin Moon

WATERBODY ID #: 3240A2 (Canal to the Caloosahatchee Estuary)

1. SUMMARY OF APPLICATION

a. Chronology of Application

Application Number: FL0040088-004-IW5A

Application Submittal Date: August 1, 2011

Additional Information Submitted: February 3, 2012

Notice of Permit Issuance: July 25, 2012

Request for Extension of Time
to file a petition: August 1, 2012

Consent Order Effective Date: August 31, 2012

b. Type of Facility

An existing 4.05 million gallons per day (MGD) demineralization concentrate treatment and disposal facility serving a reverse osmosis (RO) drinking water treatment plant for the City of Cape Coral.

SIC Code: 4941 - Water Supply and Irrigation Systems

c. Facility Capacity

Existing Permitted Capacity:	3.05 mgd Daily Maximum Flow
Proposed Increase in Permitted Capacity:	1.0 mgd Daily Maximum Flow
Proposed Total Permitted Capacity:	4.05 mgd daily Maximum Flow

d. Description of Wastewater Treatment

Treatment of the concentrate includes: oxidation through the use of a sodium hypochlorite feed system and aeration to remove hydrogen sulfide and to increase oxygen; and pH adjustment by a sodium hydroxide feed system.

e. Description of Effluent Disposal and Land Application Sites (as reported by applicant)

There is an emergency surface water discharge into Lake Finisterre, a ponded section of the Marauder Canal. The canal is contiguous to the Caloosahatchee Estuary.

Monitoring Group D-001:

Class III Marine Waters, Marauder Canal

Pollutants which are present in significant quantities or which are subject to permit limitations are as follows:

Parameter	Units	Max/Min	Reported Value	Statistical Basis
Flow	MGD	Max	2.986	Daily Maximum
Oxygen, Dissolved (DO)	mg/L	Min	4.4	Single Sample
		Min	5.2	Daily Minimum
pH	s.u.	Min	6.7	Single Sample
		Max	8.43	Single Sample
Hydrogen sulfide	mg/L	Max	0.26	Daily Maximum
Solids, Total Dissolved (TDS)	mg/L	Max	15,230	Single Sample
Color	PCU	Max	5	Single Sample
Aluminum, Total Recoverable	mg/L	Max	0.011	Single Sample
Chloride (as Cl)	mg/L	Max	4140	Single Sample
Copper, Total Recoverable	ug/L	Max	22.1	Daily Maximum
		Max	8.4	Average
Fluoride, Total (as F)	mg/L	Max	2.04	Daily Maximum
		Max	1.26	Average
Iron, Total Recoverable	mg/L	Max	0.05	Single Sample
Sodium, Total Recoverable	mg/L	Max	2200	Single Sample
Radium 226 + Radium 228, Total	pCi/L	Max	66.0	Daily Maximum
		Max	36.6	Average
Alpha, Gross Particle Activity	pCi/L	Max	190	Daily Maximum
		Max	116	Average
Nitrogen, Total	mg/L	Max	3.35	Daily Maximum
		Max	1.7	Average
		Max	1.5	Daily Minimum
Phosphorus, Total (as P)	mg/L	Max	0.32	Daily Maximum
		Max	0.28	Average
		Max	0.05	Daily Minimum
Whole Effluent Toxicity	percent	Min	44	Percent

2. SUMMARY OF SURFACE WATER DISCHARGE

This facility does not have a new or expanded discharge to surface waters.

The Department does not anticipate adverse impacts on threatened or endangered species as a result of permit issuance.

3. BASIS FOR PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

This facility is authorized to discharge reverse osmosis reject water from Outfall D-001 based on the following:

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Flow	MGD	Max	3.05	Daily Maximum	62-620.625(6)(a)8, FAC
Oxygen, Dissolved (DO)	mg/L	Min	4.0	Instantaneous Minimum	62-302.530(30) and 62-620.625(6)(a)8, FAC
		Min	5.0	Daily Average	62-302.530(30) and 62-620.625(6)(a)8, FAC
pH	s.u.	Min	6.7	Single Sample	62-302.530(51) and 62-620.625(6)(a)8, FAC
		Max	8.5	Single Sample	62-302.530(51) and 62-620.625(6)(a)8, FAC
Hydrogen sulfide	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Specific Conductance	umhos/cm	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Solids, Total Dissolved (TDS)	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Color	PCU	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Aluminum, Total Recoverable	mg/L	Max	1.5	Single Sample	62-302.530(2) and 62-620.625(6)(a)8, FAC
Bromides	ug/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Calcium, Total Recoverable	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Chloride (as Cl)	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Copper, Total Recoverable	ug/L	Max	3.7	Single Sample	62-302.530(23) and 62-620.625(6)(a)8, FAC
Fluoride, Total (as F)	mg/L	Max	5.0	Single Sample	62-4.244, 62-302.530(32), and 62-620.625(6)(a)8, FAC
Iron, Total Recoverable	mg/L	Max	0.3	Single Sample	62-302.530(38) and 62-620.625(6)(a)8, FAC
Magnesium, Total Recoverable	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Potassium, Total	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Sodium, Total Recoverable	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Radium 226 + Radium 228, Total	pCi/L	Max	5.0	Single Sample	62-620.625(6)(a)8 and 12
Alpha, Gross Particle Activity	pCi/L	Max	15.0	Single Sample	62-620.625(6)(a)8 and 12
Nitrogen, Nitrate, Total (as N)	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Nitrogen, Total	mg/L	Max	Report	Single Sample	62-304.800(2)(a) and 62-620.625(6)(a)8, FAC
Nitrogen, Organic, Total (as N)	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8
Phosphorus, Total (as P)	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Phosphate, Ortho (as P)	mg/L	Max	Report	Single Sample	62-620.625(6)(a)8, FAC
Acute Whole Effluent Toxicity, 96 Hour LC50 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	62-302.200(1), 62-302.500(1)(a)4 & 62-4.241(1)(a) FAC
Acute Whole Effluent Toxicity, 96 Hour LC50 (Cyprinella leedsii)	percent	Min	100	Single Sample	62-302.200(1), 62-302.500(1)(a)4 & 62-4.241(1)(a) FAC

Effluent limitations are based on a Level I WQBEL based upon the TMDL for the Tidal Caloosahatchee. The TMDL states that the wasteload allocation for point sources discharging to the receiving waterbody shall remain unchanged [62-304.800, F.A.C].

This facility has provided reasonable assurance that the discharge will not adversely affect the designated use of the receiving water. All available data have been evaluated in accordance with the Department's reasonable assurance procedures to ensure that no limits other than those included in this permit and Consent Order are needed to maintain Florida water quality standards.

The receiving water body for this discharge is not listed on the 303D list.

This facility is required to conduct acute toxicity testing for this discharge based on the results of previous toxicity tests, as required by Rule 62-62.62(3)(b), F.A.C.

This facility is authorized to discharge reverse osmosis reject water to Underground Injection Well System U-001, which consists of one Class I injection wells discharging to Class IV ground water. The discharge and limitations for U-001 are permitted by Department Permit 254598-002-UO/II.

4. DISCUSSION OF CHANGES TO PERMIT LIMITATIONS

The facility shall be required to monitor its effluent in accordance to Rule 62-62.625(6), F.A.C.

The monitoring frequency for radium and gross alpha particle shall be increase to monthly because of high concentrations in the effluent.

5. INDUSTRIAL SLUDGE MANAGEMENT

The facility does not produce sludge.

6. GROUND WATER MONITORING REQUIREMENTS

The groundwater monitoring requirements are given in Department Permit 254595-001-UC/II.

7. PERMIT SCHEDULES

A schedule to renew the permit is included in the wastewater permit. The associated Consent Order has a compliance schedule.

8. BEST MANAGEMENT PRACTICES/STORMWATER POLLUTION PREVENTION PLANS

This facility does not produce stormwater associated with the industrial activity.

9. ADMINISTRATIVE ORDERS (AO) AND CONSENT ORDERS (CO)

This facility has entered into CO 12-1121-36, effective August 31, 2012, with the Department, which includes a schedule of compliance and relaxed effluent limits. The Order requires the Respondent to completely and permanently eliminate the demineralization concentrate discharge flow from the facility to surface water (the Marauder Canal) and then permanently decommission and dismantle the submerged multiport rapid rate diffuser system for D-001.

10. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Surface water variances were requested for this facility but not granted due to previous permit requirements.

11. THE ADMINISTRATIVE RECORD

The administrative record including application, draft permit, fact sheet, public notice (after release), comments received and additional information is available for public inspection during normal business hours at the location specified in item 13. Copies will be provided at a minimal charge per page.

12. PROPOSED SCHEDULE FOR PERMIT ISSUANCE

Draft Permit and Public Notice to Applicant and EPA	October 26, 2012
Public Comment Period	Beginning: November 30, 2012 Ending: December 30, 2012
Proposed Permit to EPA	Jan. 7, 2013
Notice of Intent to Issue	Jan. 7, 2013
Notice of Permit Issuance	Jan. 24, 2013

13. DEP CONTACT

Additional information concerning the permit and proposed schedule for permit issuance may be obtained during normal business hours from:

Nolin Moon, P.E.
Engineering Specialist IV
South District Office

2295 Victoria Ave Suite 364
Ft. Myers, FL 33901-3875

Telephone No.: (239) 344-5672

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed mail this report to: Department of Environmental Protection, Wastewater Compliance Evaluation Section, MS 3551, 2600 Blair Stone Road, Tallahassee, FL 32399-2400

PERMITTEE NAME: City of Cape Coral
MAILING ADDRESS: PO Box 150027
Cape Coral, Florida 33915

PERMIT NUMBER: FL0040088-004-IW5A

LIMIT: Final
CLASS SIZE: MI
MONITORING GROUP NUMBER: D-001
MONITORING GROUP DESCRIPTION: Emergency Discharge

REPORT FREQUENCY: Monthly
PROGRAM: Industrial

FACILITY: City of Cape Coral Reverse Osmosis Water Treatment Plant
LOCATION: SW 20th Avenue
Cape Coral, FL 33914

RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD

From: _____ To: _____

COUNTY: Lee
OFFICE: South District

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. EFF-1	Permit Requirement		3.05 (Day.Max.)	MGD						Daily	Meter
Oxygen, Dissolved (DO)	Sample Measurement										
PARM Code 00300 1 Mon. Site No. EFF-1	Permit Requirement				4.0 (Inst.Min.)	5.0 (Day.Avg.)		mg/L		Daily	Grab
pH	Sample Measurement										
PARM Code 00400 1 Mon. Site No. EFF-1	Permit Requirement				6.7 (Min.)	8.5 (Max.)		s.u.		Daily	Grab
Hydrogen sulfide	Sample Measurement										
PARM Code 71875 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	mg/L		Monthly	Grab
Specific Conductance	Sample Measurement										
PARM Code 00095 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	umhos/cm		Monthly	Grab
Solids, Total Dissolved (TDS)	Sample Measurement										
PARM Code 70295 1 Mon. Site No. EFF-1	Permit Requirement						Report (Max.)	mg/L		Monthly	Grab

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

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

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

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: City of Cape Coral Reverse Osmosis Water Treatment Plant

MONITORING GROUP

D-001

PERMIT NUMBER: FL0040088-004-IW5A

NUMBER:

MONITORING PERIOD

From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Color	Sample Measurement										
PARM Code 00080 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)		PCU		Monthly	Grab
Aluminum, Total Recoverable	Sample Measurement										
PARM Code 01104 1 Mon. Site No. EFF-1	Permit Requirement					1.5 (Max.)		mg/L		Monthly	Grab
Bromides	Sample Measurement										
PARM Code 71870 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)		ug/L		Monthly	Grab
Calcium, Total Recoverable	Sample Measurement										
PARM Code 00918 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)		mg/L		Monthly	Grab
Chloride (as Cl)	Sample Measurement										
PARM Code 00940 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)		mg/L		Monthly	Grab
Copper, Total Recoverable	Sample Measurement										
PARM Code 01119 1 Mon. Site No. EFF-1	Permit Requirement					34.1 (Max.)		ug/L		Monthly	Grab
Fluoride, Total (as F)	Sample Measurement										
PARM Code 00951 6 Mon. Site No. SWD-1	Permit Requirement					5.0 (Max.)		mg/L		Monthly	Grab
Iron, Total Recoverable	Sample Measurement										
PARM Code 00980 1 Mon. Site No. EFF-1	Permit Requirement					0.3 (Max.)		mg/L		Monthly	Grab
Magnesium, Total Recoverable	Sample Measurement										
PARM Code 00921 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)		mg/L		Monthly	Grab
Potassium, Total	Sample Measurement										
PARM Code 00937 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)		mg/L		Monthly	Grab

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: City of Cape Coral Reverse Osmosis Water Treatment Plant

MONITORING GROUP

D-001

PERMIT NUMBER: FL0040088-004-IW5A

NUMBER:

MONITORING PERIOD

From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Sodium, Total Recoverable	Sample Measurement										
PARM Code 00923 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)	mg/L			Monthly	Grab
Radium 226 + Radium 228, Total	Sample Measurement										
PARM Code 11503 1 Mon. Site No. EFF-1	Permit Requirement					180 (Max.)	pCi/L			Monthly	Grab
Alpha, Gross Particle Activity	Sample Measurement										
PARM Code 80045 1 Mon. Site No. EFF-1	Permit Requirement					480 (Max.)	pCi/L			Monthly	Grab
Nitrogen, Nitrate, Total (as N)	Sample Measurement										
PARM Code 00620 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)	mg/L			Monthly	Grab
Nitrogen, Total	Sample Measurement										
PARM Code 00600 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)	mg/L			Monthly	Grab
Nitrogen, Organic, Total (as N)	Sample Measurement										
PARM Code 00605 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)	mg/L			Monthly	Grab
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)	mg/L			Monthly	Grab
Phosphate, Ortho (as P)	Sample Measurement										
PARM Code 70507 1 Mon. Site No. EFF-1	Permit Requirement					Report (Max.)	mg/L			Monthly	Grab
LC50 STATRE 96HOUR ACUTE Ceriodaphnia dubia (Routine)	Sample Measurement										
PARM Code TAN3B P Mon. Site No. EFF-1	Permit Requirement				30 (Min.)		percent			Monthly	4 grabs/24 hr.
LC50 STATRE 96HOUR ACUTE Ceriodaphnia dubia (Additional)	Sample Measurement										
PARM Code TAN3B Q Mon. Site No. EFF-1	Permit Requirement				30 (Min.)		percent			As needed	As required by the permit
LC50 STATRE 96HOUR ACUTE Ceriodaphnia dubia (Additional)	Sample Measurement										
PARM Code TAN3B R Mon. Site No. EFF-1	Permit Requirement				30 (Min.)		percent			As needed	As required by the permit
LC50 STATRE 96HOUR ACUTE Cyprinella leedsii (Routine)	Sample Measurement										
PARM Code TAN6H P Mon. Site No. EFF-1	Permit Requirement				30 (Min.)		percent			Monthly	4 grabs/24 hr.

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
LC50 STATRE 96HOUR ACUTE Cyprinella leedsi (Additional)	Sample Measurement										
PARM Code TAN6H Q Mon. Site No. EFF-1	Permit Requirement				30 (Min.)			percent		As needed	As required by the permit
LC50 STATRE 96HOUR ACUTE Cyprinella leedsi (Additional)	Sample Measurement										
PARM Code TAN6H R Mon. Site No. EFF-1	Permit Requirement				30 (Min.)			percent		As needed	As required by the permit

*ENTER "MNR" IN THE RESULTS COLUMN FOR EACH TEST THAT IS NOT REQUIRED.

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0040088-004-IW5A
From: _____ To: _____

Facility: City of Cape Coral Reverse Osmosis Water Treatment Plant

	Alpha, Gross Particle Activity pCi/L	Aluminum, Total Recoverable mg/L	Calcium, Total Recoverable mg/L	Chloride (as Cl) mg/L	Color PCU	Copper, Total Recoverable ug/L	Flow MGD	Hydrogen sulfide mg/L	Iron, Total Recoverable mg/L	Magnesium, Total Recoverable mg/L	Methyl bromide short ton/day
Code	80045	01104	00918	00940	00080	01119	50050	71875	00980	00921	34413
Mon. Site	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1
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30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator	Class: _____	Certificate No: _____	Name: _____
Evening Shift Operator	Class: _____	Certificate No: _____	Name: _____
Night Shift Operator	Class: _____	Certificate No: _____	Name: _____
Lead Operator	Class: _____	Certificate No: _____	Name: _____

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0040088-004-IW5A
From: _____ To: _____

Facility: City of Cape Coral Reverse Osmosis Water Treatment Plant

	Nitrogen, Nitrate, Total (as N) mg/L	Nitrogen, Organic, Total (as N) mg/L	Nitrogen, Total mg/L	Oxygen, Dissolved (DO) mg/L	Phosphate, Ortho (as P) mg/L	Phosphorus, Total (as P) mg/L	Potassium, Total mg/L	Radium 226 + Radium 228, Total pCi/L	Sodium, Total Recoverable mg/L	Solids, Total Dissolved (TDS) mg/L	Specific Conductance umhos/cm
Code	00620	00605	00600	00300	70507	00665	00937	11503	00923	70295	00095
Mon. Site	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1	EFF-1
1											
2											
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30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator	Class: _____	Certificate No: _____	Name: _____
Evening Shift Operator	Class: _____	Certificate No: _____	Name: _____
Night Shift Operator	Class: _____	Certificate No: _____	Name: _____
Lead Operator	Class: _____	Certificate No: _____	Name: _____

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0040088-004-IW5A
From: _____ To: _____

Facility: City of Cape Coral Reverse Osmosis Water Treatment Plant

	pH s.u.	Fluoride, Total (as F) mg/L									
Code	00400	00951									
Mon. Site	EFF-1	SWD-1									
1											
2											
3											
4											
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31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator	Class: _____	Certificate No: _____	Name: _____
Evening Shift Operator	Class: _____	Certificate No: _____	Name: _____
Night Shift Operator	Class: _____	Certificate No: _____	Name: _____
Lead Operator	Class: _____	Certificate No: _____	Name: _____

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions before completing the DMR. Hard copies and/or electronic copies of the required parts of the DMR were provided with the permit. All required information shall be completed in full and typed or printed in ink. A signed, original DMR shall be mailed to the address printed on the DMR by the 28th of the month following the monitoring period. The DMR shall not be submitted before the end of the monitoring period.

The DMR consists of three parts--A, B, and D--all of which may or may not be applicable to every facility. Facilities may have one or more Part A's for reporting effluent or reclaimed water data. All domestic wastewater facilities will have a Part B for reporting daily sample results. Part D is used for reporting ground water monitoring well data.

When results are not available, the following codes should be used on parts A and D of the DMR and an explanation provided where appropriate. Note: Codes used on Part B for raw data are different.

CODE	DESCRIPTION/INSTRUCTIONS
ANC	Analysis not conducted.
DRY	Dry Well
FLD	Flood disaster.
IFS	Insufficient flow for sampling.
LS	Lost sample.
MNR	Monitoring not required this period.

CODE	DESCRIPTION/INSTRUCTIONS
NOD	No discharge from/to site.
OPS	Operations were shutdown so no sample could be taken.
OTH	Other. Please enter an explanation of why monitoring data were not available.
SEF	Sampling equipment failure.

When reporting analytical results that fall below a laboratory's reported method detection limits or practical quantification limits, the following instructions should be used:

1. Results greater than or equal to the PQL shall be reported as the measured quantity.
2. Results less than the PQL and greater than or equal to the MDL shall be reported as the laboratory's MDL value. These values shall be deemed equal to the MDL when necessary to calculate an average for that parameter and when determining compliance with permit limits.
3. Results less than the MDL shall be reported by entering a less than sign ("<") followed by the laboratory's MDL value, e.g. < 0.001. A value of one-half the MDL or one-half the effluent limit, whichever is lower, shall be used for that sample when necessary to calculate an average for that parameter. Values less than the MDL are considered to demonstrate compliance with an effluent limitation.

PART A -DISCHARGE MONITORING REPORT (DMR)

Part A of the DMR is comprised of one or more sections, each having its own header information. Facility information is preprinted in the header as well as the monitoring group number, whether the limits and monitoring requirements are interim or final, and the required submittal frequency (e.g. monthly, annually, quarterly, etc.). Submit Part A based on the required reporting frequency in the header and the instructions shown in the permit. The following should be completed by the permittee or authorized representative:

Resubmitted DMR: Check this box if this DMR is being re-submitted because there was information missing from or information that needed correction on a previously submitted DMR. The information that is being revised should be clearly noted on the re-submitted DMR (e.g. highlight, circle, etc.)

No Discharge From Site: Check this box if no discharge occurs and, as a result, there are no data or codes to be entered for all of the parameters on the DMR for the entire monitoring group number; however, if the monitoring group includes other monitoring locations (e.g., influent sampling), the "NOD" code should be used to individually denote those parameters for which there was no discharge.

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.

Sample Measurement: Before filling in sample measurements in the table, check to see that the data collected correspond to the limit indicated on the DMR (i.e. interim or final) and that the data correspond to the monitoring group number in the header. Enter the data or calculated results for each parameter on this row in the non-shaded area above the limit. Be sure the result being entered corresponds to the appropriate statistical base code (e.g. annual average, monthly average, single sample maximum, etc.) and units.

No. Ex.: Enter the number of sample measurements during the monitoring period that exceeded the permit limit for each parameter in the non-shaded area. If none, enter zero.

Frequency of Analysis: The shaded areas in this column contain the minimum number of times the measurement is required to be made according to the permit. Enter the actual number of times the measurement was made in the space above the shaded area.

Sample Type: The shaded areas in this column contain the type of sample (e.g. grab, composite, continuous) required by the permit. Enter the actual sample type that was taken in the space above the shaded area.

Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.

Comment and Explanation of Any Violations: Use this area to explain any exceedances, any upset or by-pass events, or other items which require explanation. If more space is needed, reference all attachments in this area.

PART B - DAILY SAMPLE RESULTS

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.

Daily Monitoring Results: Transfer all analytical data from your facility's laboratory or a contract laboratory's data sheets for all day(s) that samples were collected. Record the data in the units indicated. Table 1 in Chapter 62-160, F.A.C., contains a complete list of all the data qualifier codes that your laboratory may use when reporting analytical results. However, when transferring numerical results onto Part B of the DMR, only the following data qualifier codes should be used and an explanation provided where appropriate.

CODE	DESCRIPTION/INSTRUCTIONS
<	The compound was analyzed for but not detected.
A	Value reported is the mean (average) of two or more determinations.
J	Estimated value, value not accurate.
Q	Sample held beyond the actual holding time.
Y	Laboratory analysis was from an unpreserved or improperly preserved sample.

To calculate the monthly average, add each reported value to get a total. For flow, divide this total by the number of days in the month. For all other parameters, divide the total by the number of observations.

Plant Staffing: List the name, certificate number, and class of all state certified operators operating the facility during the monitoring period. Use additional sheets as necessary.

PART D - GROUND WATER MONITORING REPORT

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.

Date Sample Obtained: Enter the date the sample was taken. Also, check whether or not the well was purged before sampling.

Time Sample Obtained: Enter the time the sample was taken.

Sample Measurement: Record the results of the analysis. If the result was below the minimum detection limit, indicate that.

Detection Limits: Record the detection limits of the analytical methods used.

Analysis Method: Indicate the analytical method used. Record the method number from Chapter 62-160 or Chapter 62-601, F.A.C., or from other sources.

Sampling Equipment Used: Indicate the procedure used to collect the sample (e.g. airlift, bucket/bailer, centrifugal pump, etc.)

Samples Filtered: Indicate whether the sample obtained was filtered by laboratory (L), filtered in field (F), or unfiltered (N).

Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.

Comments and Explanation: Use this space to make any comments on or explanations of results that are unexpected. If more space is needed, reference all attachments in this area.

SPECIAL INSTRUCTIONS FOR LIMITED WET WEATHER DISCHARGES

Flow (Limited Wet Weather Discharge): Enter the measured average flow rate during the period of discharge or divide gallons discharged by duration of discharge (converted into days). Record in million gallons per day (MGD).

Flow (Upstream): Enter the average flow rate in the receiving stream upstream from the point of discharge for the period of discharge. The average flow rate can be calculated based on two measurements; one made at the start and one made at the end of the discharge period. Measurements are to be made at the upstream gauging station described in the permit.

Actual Stream Dilution Ratio: To calculate the Actual Stream Dilution Ratio, divide the average upstream flow rate by the average discharge flow rate. Enter the Actual Stream Dilution Ratio accurate to the nearest 0.1.

No. of Days the SDF > Stream Dilution Ratio: For each day of discharge, compare the minimum Stream Dilution Factor (SDF) from the permit to the calculated Stream Dilution Ratio. On Part B of the DMR, enter an asterisk (*) if the SDF is greater than the Stream Dilution Ratio on any day of discharge. On Part A of the DMR, add up the days with an "*" and record the total number of days the Stream Dilution Factor was greater than the Stream Dilution Ratio.

CBOD₅: Enter the average CBOD₅ of the reclaimed water discharged during the period shown in duration of discharge.

TKN: Enter the average TKN of the reclaimed water discharged during the period shown in duration of discharge.

Actual Rainfall: Enter the actual rainfall for each day on Part B. Enter the actual cumulative rainfall to date for this calendar year and the actual total monthly rainfall on Part A. The cumulative rainfall to date for this calendar year is the total amount of rain, in inches, that has been recorded since January 1 of the current year through the month for which this DMR contains data.

Rainfall During Average Rainfall Year: On Part A, enter the total monthly rainfall during the average rainfall year and the cumulative rainfall for the average rainfall year. The cumulative rainfall for the average rainfall year is the amount of rain, in inches, which fell during the average rainfall year from January through the month for which this DMR contains data.

No. of Days LWWD Activated During Calendar Year: Enter the cumulative number of days that the limited wet weather discharge was activated since January 1 of the current year.

Reason for Discharge: Attach to the DMR a brief explanation of the factors contributing to the need to activate the limited wet weather discharge.

Moon, Nolin

From: Newburg, Deanna
Sent: Friday, October 12, 2012 8:30 AM
To: Moon, Nolin
Subject: FW: EXTENSION LETTER
Attachments: FDEP PERMIT EXTENSION LTR 7 25 2012.doc

From: Maier, Gary
Sent: Wednesday, July 25, 2012 1:46 PM
To: Jeff Pearson
Cc: Ahmadi, Abdul; Newburg, Deanna
Subject: FW: EXTENSION LETTER

Mr. Pearson:

Thank you for your email.

A request for extension in time under Rule 62-110.106(4), F.A.C., needs to be filed with the Agency Clerk in DEP's Office of General Counsel in Tallahassee. DEP's Agency Clerk is Ms. Lea Crandall (email: Lea.Crandall@dep.state.fl.us). We would appreciate receiving a courtesy "cc:" at our local office; but the "cc:" is not legally required.

DEP's Office of General Counsel is not picky on the format; but I have a few general suggestions on your draft:

- Put a title on the letter: "REQUEST FOR EXTENSION IN TIME TO FILE A PETITION FOR ADMINISTRATIVE HEARING".
- Put in a statement saying that there are specific conditions in the permit that the City would like to see changed.
- Put in a statement that you have discussed the extension in time with Dr. Ahmadi in DEP's South District office and he has no objection to it.
- Put in a statement that you have met with DEP's South District office and they are willing to work with the City to resolve the issues.
- Put in the requested amount of the extension, i.e., 90 days.

Hope this is helpful. Please feel free to call if you have any questions.

Regards,

Gary

Gary Maier
DEP South District Wastewater Section Manager
(239) 344-5664

Please take a few minutes to share your comments on the service you received from the department by clicking on this link. [DEP Customer Survey](#).

From: Jeff Pearson [<mailto:jpearson@capecoral.net>]
Sent: Wednesday, July 25, 2012 12:46 PM

To: Maier, Gary

Subject: RE: EXTENSION LETTER

Gary,

Would it be possible for you to provide us with assistance in reviewing the attached draft letter before we finalize? I want to ensure that I provide the FDEP with all of the necessary information to request an official extension to the SW RO WTP permit issuance.

Also, can you please let me know if I should address the letter to the Ft. Myers FDEP office or the Tallahassee Office?

I want you to know that staff and I really appreciate all the assistance you have provided us.

Sincerely,

Jeffrey L. Pearson
Utilities Director
City of Cape Coral Florida



Florida Department of Environmental Protection

South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

SENT VIA ELECTRONIC EMAIL

September 5, 2012

Jeff Pearson
City of Cape Coral
Utilities Director
P.O. Box 150027
Cape Coral, Florida 33915-0027
jpearson@capecoral.net

RE: Lee County-IW
City of Cape Coral SW RO WTP
OGC CASE NO.: 12-1121-36-IW
FL0040088

Dear Mr. Pearson:

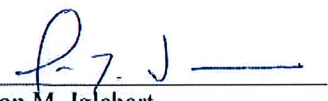
Enclosed is the signed and entered Consent Order to resolve the above referenced case. This copy is for your records.

Please note that all compliance dates begin from the date of entry of this Order, which is August 31, 2012.

Upon satisfactory completion of all conditions of the Order, we will close this case and place it in our inactive file.

If you have any questions, please contact Keith Kleinmann of this office at (239) 344-5656.
Your cooperation in resolving this case is appreciated.

Sincerely,


Jon M. Iglehart
Director of District Management

JMI/KK/jl
Enclosure

cc: Enforcement File
Lea Crandall, FDEP, OGC (lea.crandall@dep.state.fl.us)
Keith Kleinmann, FDEP, Fort Myers (keith.kleinmann@dep.state.fl.us)

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA DEPARTMENT	)	IN THE OFFICE OF THE
OF ENVIRONMENTAL PROTECTION	)	SOUTH DISTRICT
	)	
vs.	)	OGC FILE NO.: 12-1121-36-IW
	)	
CITY OF CAPE CORAL	)	
_____	)	

CONSENT ORDER

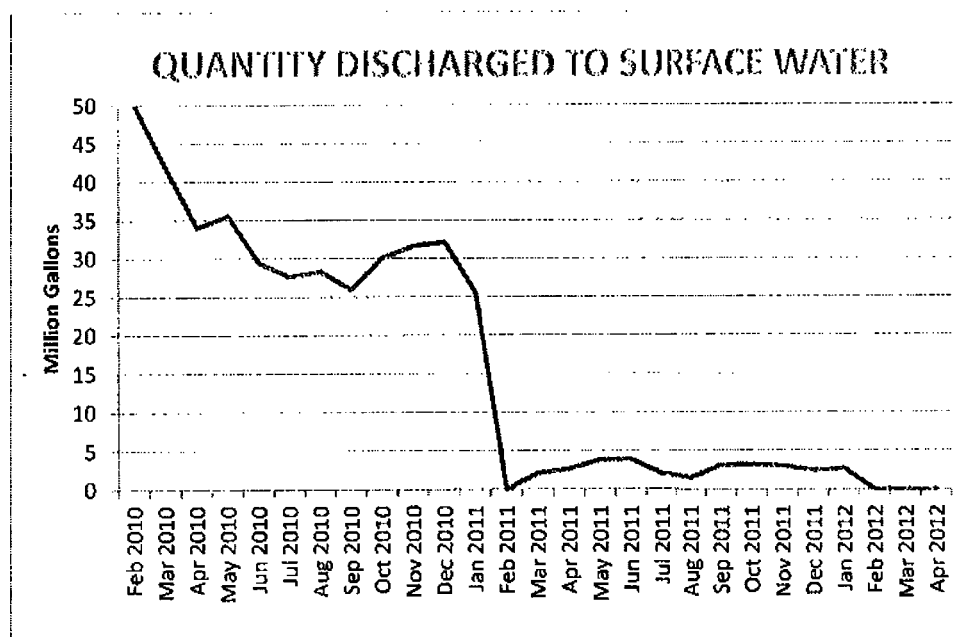
This Consent Order ("Order") is entered into between the State of Florida Department of Environmental Protection ("Department") and the City of Cape Coral ("Respondent") to reach settlement of certain matters at issue between the Department and Respondent.

The Department finds and Respondent admits the following:

1. The Department is the administrative agency of the State of Florida having the power and duty to protect Florida's air and water resources and to administer and enforce the provisions of Chapter 403, Florida Statutes ("F.S."), and the rules promulgated and authorized in Title 62, Florida Administrative Code ("F.A.C."). The Department has jurisdiction over the matters addressed in this Order.
2. Respondent is a person within the meaning of Section 403.031(5), F.S.
3. Respondent is the owner and is responsible for the operation of the City of Cape Coral Southwest Reverse Osmosis Water Treatment Plant ("Facility" or "SW RO WTP"). Respondent operates the Facility under Department Wastewater Permit No. FL0040088 which was issued on November 2, 2007 and will expire on November 26, 2012. The Facility is located at 3300 SW 20th Avenue, Cape Coral in Lee County, Florida ("Property"). Respondent owns the Property on which the Facility is located.
4. The Department finds, but the Respondent does not admit, that the following violation(s) occurred:
 - a) The respondent submitted Discharge Monitoring Reports (DMRs) to the Department with the following data in violation of F.A.C Rule 62-302.530:

<u>Month/Year</u>	<u>Parameter</u>	<u>Permit Limit</u>	<u>Reported Measurement</u>
1/11	Copper, Total Recoverable	3.7 micrograms/L	7.5 micrograms/L
5/11	Copper, Total Recoverable	3.7 micrograms/L	16. micrograms/L
6/11	Copper, Total Recoverable	3.7 micrograms/L	17. micrograms/L
7/11	Copper, Total Recoverable	3.7 micrograms/L	5.6 micrograms/L
8/11	Copper, Total Recoverable	3.7 micrograms/L	6.6 micrograms/L
9/11	Copper, Total Recoverable	3.7 micrograms/L	5.6 micrograms/L
10/11	Copper, Total Recoverable	3.7 micrograms/L	16. micrograms/L
10/11	Radium 226+228, Total	5.00 picocuries/L	60.0 picocuries/L
10/11	Alpha, Gross Particle Activity	15.0 picocuries/L	160 picocuries/L

5. Although the above concentration limits were exceeded, the Department takes notice and recognizes that the Respondent, in good faith, and with considerable expense, successfully installed a Class 1 injection well that became fully operational in January 2011 and resulted in a substantial reduction (almost 100%) in the quantity of demineralization concentrate flow discharged to surface water, (along with the corresponding reduction in mass loading for each parameter), substantially benefitting the environment.



Having reached a resolution of the matter Respondent and the Department mutually agree and it is

ORDERED:

6. It is the intent and goal of this Consent Order to require the Respondent to completely and permanently eliminate the demineralization concentrate discharge flow from the Facility to surface water (the Marauder Canal) and then permanently decommission and dismantle the submerged multiport rapid rate diffuser system (D00-1 in permit FL0040088). All required permit applications necessary to accomplish this goal shall be prepared and sealed by a professional engineer registered in the State of Florida. In the event that an application submitted is incomplete, within 30 days of written request by the Department for additional information necessary to process the application, Respondent shall submit all requested information to the Department. If the Respondent is unable or unwilling to completely and permanently eliminate the discharge of demineralization concentrate to surface water, then the Department reserves the right to seek other relief to require the Respondent to comply with its rules and permits.

7. On a day to day basis, the Respondent shall not discharge demineralization concentrate to surface water unless no other reasonable alternative is available. When such surface water discharge occurs, the following interim discharge limitations shall apply:

Discharge Interim Limits

<u>Parameter</u>	<u>Permit Limit</u>	<u>Interim Limit</u>
Copper, Total Recoverable	3.7 micrograms/L	34.1 micrograms/L
Radium 226+228, Total	5.00 picocuries/L	180 picocuries/L
Alpha, Gross Particle Activity	15.0 picocuries/L	480 picocuries/L
Whole Effluent Toxicity (Acute)	LC50 $\geq$ 100%	LC50 $\geq$ 30%

RECEIVED
SEP 05 2012
D.E.P. South District

8. Respondent shall comply with the following corrective actions within the stated time periods:

<u>Implementation Step</u>	<u>Completion Date</u>
1. Submit an application to the Department to construct: (a) a new Class 1 injection well serving the SW RO WTP, or (b) a permittable wastewater facility or activity that will result in permanent cessation of all demineralization concentrate discharge to surface water.	June 30, 2013
2. Begin construction of the project permitted per Implementation Step number 1 above.	December 31, 2014
3. Begin operational testing of the project permitted per Implementation Step number 1 above.	December 31, 2015
4. Submit an application to operate the project permitted per Implementation Step number 1 above if operation permits are required for such projects.	December 31, 2016
5. Permanently cease all demineralization concentrate discharge to surface water. Also, complete decommissioning and dismantling of all demineralization concentrate outfalls to surface water.	December 31, 2017

9. Every quarter after the effective date of this Consent Order, and continuing until all corrective actions have been completed, Respondent shall submit in writing to the Department a report containing information concerning the status and progress of projects being completed under this Order, information as to compliance or noncompliance with the applicable requirements of this Order including construction requirements and effluent limitations, and any reasons for noncompliance. These reports shall also include a projection of the work to be performed pursuant to this Order during the 12-month period which will follow the report. Respondent shall submit the reports to the Department within 30 days of the end of each quarter.

10. Within 30 days of the effective date of this Order, Respondent shall pay the Department \$500.00 in settlement of the regulatory matters addressed in this Order. This is not a civil penalty. This amount is for costs and expenses incurred by the Department during the investigation of this matter and the preparation and tracking of this Order.

11. Respondent agrees to pay the Department stipulated penalties in the amount of one thousand (\$1,000.00) dollars per day for each and every day Respondent fails to timely and fully comply with the December 31, 2017 deadline of Implementation Step Number 5 in paragraph 8 above. The Department may demand stipulated penalties at any time after violations occur. Respondent shall pay stipulated penalties owed within 30 days of the Department's issuance of written demand for payment, and shall do so as further described in paragraph 13 below. Nothing in this paragraph shall prevent the Department from filing suit to specifically enforce any terms of this Order.

12. Respondent shall make all payments required by this Order by cashier's check or money order. Payment instruments shall be made payable to the "Department of Environmental Protection" and shall include both the OGC number assigned to this Order and the notation "Ecosystem Management and Restoration Trust Fund."

13. Except as otherwise provided, all submittals and payments required by this Order shall be sent to Mr. Keith Kleinmann, Department of Environmental Protection, 2295 Victoria Ave, Ste 364, Fort Myers, Florida 33901.

14. Respondent shall allow all authorized representatives of the Department access to the Facility and the Property at reasonable times for the purpose of determining compliance with the terms of this Order and the rules and statutes administered by the Department.

15. If any event, including administrative or judicial challenges by third parties unrelated to Respondent, occurs which causes delay or the reasonable likelihood of delay in complying with the requirements of this Order, Respondent shall have the burden of proving the delay was or will be caused by circumstances beyond the reasonable control of Respondent and could not have been or cannot be overcome by Respondent's due diligence. Neither economic circumstances nor the failure of a contractor, subcontractor, materialman, or other agent (collectively referred to as "contractor") to whom responsibility for performance is delegated to meet contractually imposed deadlines shall be considered circumstances beyond the control of Respondent (unless the cause of the contractor's late performance was also beyond the contractor's control). Upon occurrence of an event causing delay, or upon becoming aware of a potential for delay, Respondent shall notify the Department by the next working day and shall, within seven calendar days notify the Department in writing of (a) the anticipated length and cause of the delay, (b) the measures taken or to be taken to prevent or minimize the delay, and (c) the timetable by which Respondent intends to implement these measures. If the parties can agree that the delay or anticipated delay has been or will be caused by circumstances

beyond the reasonable control of Respondent, the time for performance hereunder shall be extended. The agreement to extend compliance must identify the provision or provisions extended, the new compliance date or dates, and the additional measures Respondent must take to avoid or minimize the delay, if any. Failure of Respondent to comply with the notice requirements of this paragraph in a timely manner constitutes a waiver of Respondent's right to request an extension of time for compliance for those circumstances.

16. The Department, for and in consideration of the complete and timely performance by Respondent of all the obligations agreed to in this Order, hereby conditionally waives its right to seek judicial imposition of damages or civil penalties for the violations described above up to the date of the filing of this Order. This waiver is conditioned upon Respondent's complete compliance with all of the terms of this Order.

17. This Order is a settlement of the Department's civil and administrative authority arising under Florida law to resolve the matters addressed herein. This Order is not a settlement of any criminal liabilities which may arise under Florida law, nor is it a settlement of any violation which may be prosecuted criminally or civilly under federal law. Entry of this Order does not relieve Respondent of the need to comply with applicable federal, state, or local laws, rules, or ordinances.

18. The Department hereby expressly reserves the right to initiate appropriate legal action to address any violations of statutes or rules administered by the Department that are not specifically resolved by this Order.

19. Respondent is fully aware that a violation of the terms of this Order may subject Respondent to judicial imposition of damages, civil penalties up to \$10,000.00 per day per violation, and criminal penalties.

20. Respondent acknowledges and waives its right to an administrative hearing pursuant to sections 120.569 and 120.57, F.S., on the terms of this Order. Respondent also acknowledges and waives its right to appeal the terms of this Order pursuant to section 120.68, F.S.

21. Electronic signatures or other versions of the parties' signatures, such as .pdf or facsimile, shall be valid and have the same force and effect as originals. No modifications of the terms of this Order will be effective until reduced to writing, executed by both Respondent and the Department, and filed with the clerk of the Department.

22. The terms and conditions set forth in this Order may be enforced in a court of competent jurisdiction pursuant to sections 120.69 and 403.121, F.S. Failure to comply with the terms of this Order constitutes a violation of section 403.161(1)(b), F.S.

23. This Consent Order is a final order of the Department pursuant to section 120.52(7), F.S., and it is final and effective on the date filed with the Clerk of the Department unless a Petition for Administrative Hearing is filed in accordance with Chapter 120, F.S. Upon the timely filing of a petition, this Consent Order will not be effective until further order of the Department.

24. The Department agrees to close this case and this Consent Order within 15 days of receiving a case closure request from the Respondent provided that: (a) the Respondent does not owe the Department any money under this Consent Order, and (b) the Respondent submits a letter to the Department on Respondent's letterhead, signed by the Respondent's Utilities Director or higher authority, stating that the Respondent has permanently ceased all demineralization concentrate discharge to surface water, and also stating that the Respondent has permanently decommissioned and dismantled all demineralization concentrate outfalls to surface water.

25. Persons who are not parties to this Consent Order, but whose substantial interests are affected by it, have a right to petition for an administrative hearing under sections 120.569 and 120.57, Florida Statutes. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition concerning this Consent Order means that the Department's final action may be different from the position it has taken in the Consent Order.

The petition for administrative hearing must contain all of the following information:

- a) The OGC Number assigned to this Consent Order;
- b) The name, address, and telephone number of each 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;
- c) An explanation of how the petitioner's substantial interests will be affected by the Consent Order;
- d) A statement of when and how the petitioner received notice of the Consent Order;
- e) Either a statement of all material facts disputed by the petitioner or a statement that the petitioner does not dispute any material facts;

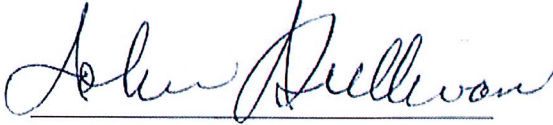
- f) A statement of the specific facts the petitioner contends warrant reversal or modification of the Consent Order;
- g) A statement of the rules or statutes the petitioner contends require reversal or modification of the Consent Order; and
- h) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Consent Order.

The petition must be filed (received) at the Department's Office of General Counsel, 3900 Commonwealth Boulevard, MS# 35, Tallahassee, Florida 32399-3000 within 21 days of receipt of this notice. A copy of the petition must also be mailed at the time of filing to the District Office at 2295 Victoria Ave, Fort Myers, Florida 33902. Failure to file a petition within the 21-day period constitutes a person's waiver of the right to request an administrative hearing and to participate as a party to this proceeding under sections 120.569 and 120.57, Florida Statutes. Before the deadline for filing a petition, a person whose substantial interests are affected by this Consent Order may choose to pursue mediation as an alternative remedy under section 120.573, Florida Statutes. Choosing mediation will not adversely affect such person's right to request an administrative hearing if mediation does not result in a settlement. Additional information about mediation is provided in section 120.573, Florida Statutes and Rule 62-110.106(12), Florida Administrative Code.

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26. Rules referenced in this Order are available at
<http://www.dep.state.fl.us/legal/Rules/rulelistnum.htm>.

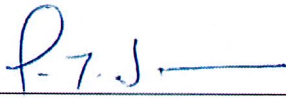
FOR THE RESPONDENT:


John Sullivan, Mayor

8/29/12
Date

DONE AND ORDERED this 5th day of ~~August~~ ^{September} 2012, in Lee County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


Jon M. Iglehart
Director of District Management

Filed, on this date, pursuant to section 120.52, F.S., with the designated Department Clerk, receipt of which is hereby acknowledged.


Clerk

9-5-12
Date

Copies furnished to:

Lea Crandall, Agency Clerk
Mail Station 35

IW_CO_permitted, (REV. 06/09)



August 1, 2012

Ms. Lea Crandall
Office of General Counsel
Florida Department of Environmental Protection (FDEP)
3900 Commonwealth Boulevard
Mail Station 35
Tallahassee, Florida 32399-3000

Subject: REQUEST FOR EXTENSION OF TIME TO FILE
PETITION FOR ADMINISTRATIVE HEARING

Dear Ms. Lea Crandall,

On Wednesday, July 25, 2012, the City of Cape Coral received a copy of the FDEP Notice of Permit Issuance via e-mail for the City of Cape Coral SW Reverse Osmosis WTP File Number FL0040088-004-IW5A. The City of Cape Coral would like to bring to your attention that there are specific conditions in the permit that the City would like to see changed.

The City of Cape Coral staff has previously discussed the extension of time with Dr. Abdul Ahmadi at the FDEP's South District Office and he has expressed no objection to the requested time extension. On July 20, 2012, City of Cape Coral staff met with Dr. Ahmadi and he indicated that he and his staff are willing to work with the City of Cape Coral to resolve the issues. The City of Cape Coral is in the process of placing the attached Consent Order on the City Council's Agenda to allow more time for the City to construct a second deep injection well for demineralization concentrate disposal. This will allow the City to have an emergency method of disposal in the event that the existing deep injection well were to experience operational issues prior to the time that the second deep injection well can be placed into operation.

The proposed Consent Order is scheduled for consideration and adoption by the City Council on August 20, 2012. Therefore, we respectfully request a 90-day extension of time pursuant to Rule 62-110.106(4) so that we may include the Consent Order in Permit File Number FL0040088-004-IW5A before final issuance.

Kindest regards,
UTILITIES DEPARTMENT

Jeffrey L. Pearson
Utilities Director

Attachment

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA DEPARTMENT	)	IN THE OFFICE OF THE
OF ENVIRONMENTAL PROTECTION	)	SOUTH DISTRICT
	)	
vs.	)	OGC FILE NO.: 12-1121-36-IW
	)	
CITY OF CAPE CORAL	)	
_____	)	

CONSENT ORDER

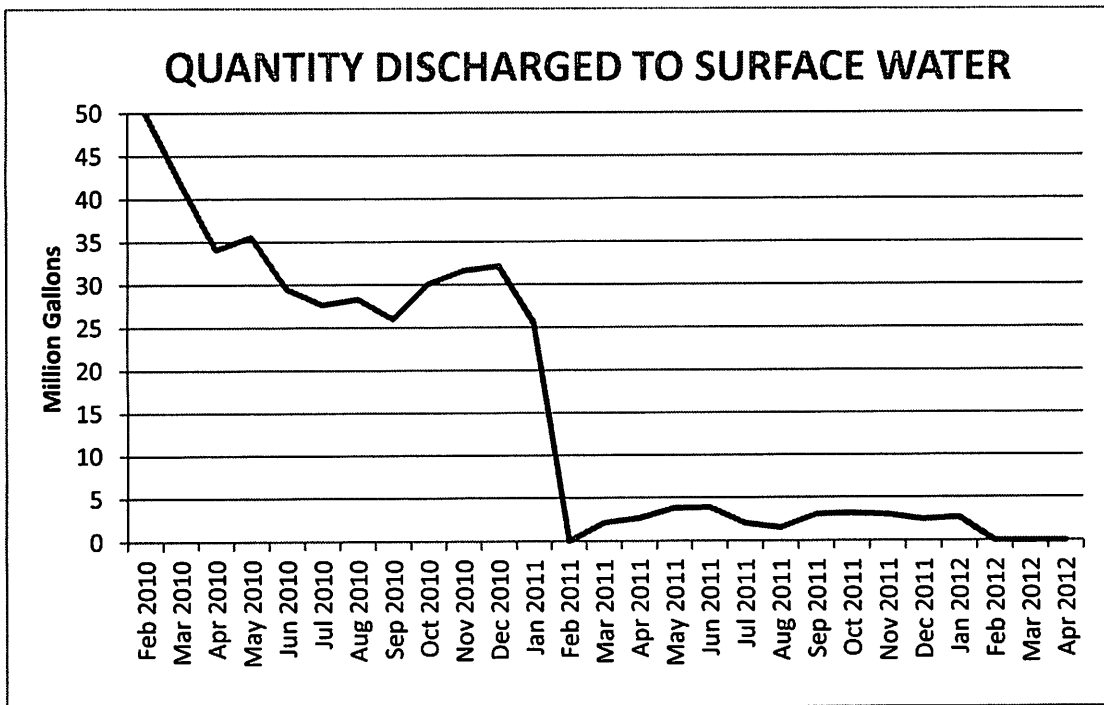
This Consent Order ("Order") is entered into between the State of Florida Department of Environmental Protection ("Department") and the City of Cape Coral ("Respondent") to reach settlement of certain matters at issue between the Department and Respondent.

The Department finds and Respondent admits the following:

1. The Department is the administrative agency of the State of Florida having the power and duty to protect Florida's air and water resources and to administer and enforce the provisions of Chapter 403, Florida Statutes ("F.S."), and the rules promulgated and authorized in Title 62, Florida Administrative Code ("F.A.C."). The Department has jurisdiction over the matters addressed in this Order.
2. Respondent is a person within the meaning of Section 403.031(5), F.S.
3. Respondent is the owner and is responsible for the operation of the City of Cape Coral Southwest Reverse Osmosis Water Treatment Plant ("Facility" or "SW RO WTP"). Respondent operates the Facility under Department Wastewater Permit No. FL0040088 which was issued on November 2, 2007 and will expire on November 26, 2012. The Facility is located at 3300 SW 20th Avenue, Cape Coral in Lee County, Florida ("Property"). Respondent owns the Property on which the Facility is located.
4. The Department finds, but the Respondent does not admit, that the following violation(s) occurred:
 - a) The respondent submitted Discharge Monitoring Reports (DMRs) to the Department with the following data in violation of F.A.C Rule 62-302.530:

<u>Month/Year</u>	<u>Parameter</u>	<u>Permit Limit</u>	<u>Reported Measurement</u>
1/11	Copper, Total Recoverable	3.7 micrograms/L	7.5 micrograms/L
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7/11	Copper, Total Recoverable	3.7 micrograms/L	5.6 micrograms/L
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9/11	Copper, Total Recoverable	3.7 micrograms/L	5.6 micrograms/L
10/11	Copper, Total Recoverable	3.7 micrograms/L	16. micrograms/L
10/11	Radium 226+228, Total	5.00 picocuries/L	60.0 picocuries/L
10/11	Alpha, Gross Particle Activity	15.0 picocuries/L	160 picocuries/L

5. Although the above concentration limits were exceeded, the Department takes notice and recognizes that the Respondent, in good faith, and with considerable expense, successfully installed a Class 1 injection well that became fully operational in January 2011 and resulted in a substantial reduction (almost 100%) in the quantity of demineralization concentrate flow discharged to surface water, (along with the corresponding reduction in mass loading for each parameter), substantially benefitting the environment.



Having reached a resolution of the matter Respondent and the Department mutually agree and it is

ORDERED:

6. It is the intent and goal of this Consent Order to require the Respondent to completely and permanently eliminate the demineralization concentrate discharge flow from the Facility to surface water (the Marauder Canal) and then permanently decommission and dismantle the submerged multiport rapid rate diffuser system (D00-1 in permit FL0040088). All required permit applications necessary to accomplish this goal shall be prepared and sealed by a professional engineer registered in the State of Florida. In the event that an application submitted is incomplete, within 30 days of written request by the Department for additional information necessary to process the application, Respondent shall submit all requested information to the Department. If the Respondent is unable or unwilling to completely and permanently eliminate the discharge of demineralization concentrate to surface water, then the Department reserves the right to seek other relief to require the Respondent to comply with its rules and permits.

7. On a day to day basis, the Respondent shall not discharge demineralization concentrate to surface water unless no other reasonable alternative is available. When such surface water discharge occurs, the following interim discharge limitations shall apply:

Discharge Monitoring and Reporting Requirements

<u>Parameter</u>	<u>Permit Limit</u>	<u>Interim Limit</u>
Copper, Total Recoverable	3.7 micrograms/L	34.1 micrograms/L
Radium 226+228, Total	5.00 picocuries/L	180 picocuries/L
Alpha, Gross Particle Activity	15.0 picocuries/L	480 picocuries/L

8. Respondent shall comply with the following corrective actions within the stated time periods:

<u>Implementation Step</u>	<u>Completion Date</u>
1. Submit an application to the Department to construct: (a) a new Class 1 injection well serving the SW RO WTP, or (b) a permittable wastewater facility or activity that will result in permanent cessation of all demineralization concentrate discharge to surface water.	June 30, 2013
2. Begin construction of the project permitted per Implementation Step number 1 above.	December 31, 2014
3. Begin operational testing of the project permitted per Implementation Step number 1 above.	December 31, 2015
4. Submit an application to operate the project permitted per Implementation Step number 1 above if operation permits are required for such projects.	December 31, 2016
5. Permanently cease all demineralization concentrate discharge to surface water. Also, complete decommissioning and dismantling of all demineralization concentrate outfalls to surface water.	December 31, 2017

9. Every quarter after the effective date of this Consent Order, and continuing until all corrective actions have been completed, Respondent shall submit in writing to the Department a report containing information concerning the status and progress of projects being completed under this Order, information as to compliance or noncompliance with the applicable requirements of this Order including construction requirements and effluent limitations, and any reasons for noncompliance. These reports shall also include a projection of the work to be performed pursuant to this Order during the 12-month period which will follow the report. Respondent shall submit the reports to the Department within 30 days of the end of each quarter.

10. Within 30 days of the effective date of this Order, Respondent shall pay the Department \$500.00 in settlement of the regulatory matters addressed in this Order. This is not a civil penalty. This amount is for costs and expenses incurred by the Department during the investigation of this matter and the preparation and tracking of this Order.

11. Respondent agrees to pay the Department stipulated penalties in the amount of one thousand (\$1,000.00) dollars per day for each and every day Respondent fails to timely and fully comply with the December 31, 2017 deadline of Implementation Step Number 5 in paragraph 8 above. The Department may demand stipulated penalties at any time after violations occur. Respondent shall pay stipulated penalties owed within 30 days of the Department's issuance of written demand for payment, and shall do so as further described in paragraph 13 below. Nothing in this paragraph shall prevent the Department from filing suit to specifically enforce any terms of this Order.

12. Respondent shall make all payments required by this Order by cashier's check or money order. Payment instruments shall be made payable to the "Department of Environmental Protection" and shall include both the OGC number assigned to this Order and the notation "Ecosystem Management and Restoration Trust Fund."

13. Except as otherwise provided, all submittals and payments required by this Order shall be sent to Mr. Keith Kleinmann, Department of Environmental Protection, 2295 Victoria Ave, Ste 364, Fort Myers, Florida 33901.

14. Respondent shall allow all authorized representatives of the Department access to the Facility and the Property at reasonable times for the purpose of determining compliance with the terms of this Order and the rules and statutes administered by the Department.

15. If any event, including administrative or judicial challenges by third parties unrelated to Respondent, occurs which causes delay or the reasonable likelihood of delay in complying with the requirements of this Order, Respondent shall have the burden of proving the delay was or will be caused by circumstances beyond the reasonable control of Respondent and could not have been or cannot be overcome by Respondent's due diligence. Neither economic circumstances nor the failure of a contractor, subcontractor, materialman, or other agent (collectively referred to as "contractor") to whom responsibility for performance is delegated to meet contractually imposed deadlines shall be considered circumstances beyond the control of Respondent (unless the cause of the contractor's late performance was also beyond the contractor's control). Upon occurrence of an event causing delay, or upon becoming aware of a potential for delay, Respondent shall notify the Department by the next working day and shall, within seven calendar days notify the Department in writing of (a) the anticipated length and cause of the delay, (b) the measures taken or to be taken to prevent or minimize the delay, and (c) the timetable by which Respondent intends to implement these measures. If the parties can agree that the delay or anticipated delay has been or will be caused by circumstances

beyond the reasonable control of Respondent, the time for performance hereunder shall be extended. The agreement to extend compliance must identify the provision or provisions extended, the new compliance date or dates, and the additional measures Respondent must take to avoid or minimize the delay, if any. Failure of Respondent to comply with the notice requirements of this paragraph in a timely manner constitutes a waiver of Respondent's right to request an extension of time for compliance for those circumstances.

16. The Department, for and in consideration of the complete and timely performance by Respondent of all the obligations agreed to in this Order, hereby conditionally waives its right to seek judicial imposition of damages or civil penalties for the violations described above up to the date of the filing of this Order. This waiver is conditioned upon Respondent's complete compliance with all of the terms of this Order.

17. This Order is a settlement of the Department's civil and administrative authority arising under Florida law to resolve the matters addressed herein. This Order is not a settlement of any criminal liabilities which may arise under Florida law, nor is it a settlement of any violation which may be prosecuted criminally or civilly under federal law. Entry of this Order does not relieve Respondent of the need to comply with applicable federal, state, or local laws, rules, or ordinances.

18. The Department hereby expressly reserves the right to initiate appropriate legal action to address any violations of statutes or rules administered by the Department that are not specifically resolved by this Order.

19. Respondent is fully aware that a violation of the terms of this Order may subject Respondent to judicial imposition of damages, civil penalties up to \$10,000.00 per day per violation, and criminal penalties.

20. Respondent acknowledges and waives its right to an administrative hearing pursuant to sections 120.569 and 120.57, F.S., on the terms of this Order. Respondent also acknowledges and waives its right to appeal the terms of this Order pursuant to section 120.68, F.S.

21. Electronic signatures or other versions of the parties' signatures, such as .pdf or facsimile, shall be valid and have the same force and effect as originals. No modifications of the terms of this Order will be effective until reduced to writing, executed by both Respondent and the Department, and filed with the clerk of the Department.

22. The terms and conditions set forth in this Order may be enforced in a court of competent jurisdiction pursuant to sections 120.69 and 403.121, F.S. Failure to comply with the terms of this Order constitutes a violation of section 403.161(1)(b), F.S.

23. This Consent Order is a final order of the Department pursuant to section 120.52(7), F.S., and it is final and effective on the date filed with the Clerk of the Department unless a Petition for Administrative Hearing is filed in accordance with Chapter 120, F.S. Upon the timely filing of a petition, this Consent Order will not be effective until further order of the Department.

24. The Department agrees to close this case and this Consent Order within 15 days of receiving a case closure request from the Respondent provided that: (a) the Respondent does not owe the Department any money under this Consent Order, and (b) the Respondent submits a letter to the Department on Respondent's letterhead, signed by the Respondent's Utilities Director or higher authority, stating that the Respondent has permanently ceased all demineralization concentrate discharge to surface water, and also stating that the Respondent has permanently decommissioned and dismantled all demineralization concentrate outfalls to surface water.

25. Persons who are not parties to this Consent Order, but whose substantial interests are affected by it, have a right to petition for an administrative hearing under sections 120.569 and 120.57, Florida Statutes. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition concerning this Consent Order means that the Department's final action may be different from the position it has taken in the Consent Order.

The petition for administrative hearing must contain all of the following information:

- a) The OGC Number assigned to this Consent Order;
- b) The name, address, and telephone number of each 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;
- c) An explanation of how the petitioner's substantial interests will be affected by the Consent Order;
- d) A statement of when and how the petitioner received notice of the Consent Order;
- e) Either a statement of all material facts disputed by the petitioner or a statement that the petitioner does not dispute any material facts;

- f) A statement of the specific facts the petitioner contends warrant reversal or modification of the Consent Order;
- g) A statement of the rules or statutes the petitioner contends require reversal or modification of the Consent Order; and
- h) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Consent Order.

The petition must be filed (received) at the Department's Office of General Counsel, 3900 Commonwealth Boulevard, MS# 35, Tallahassee, Florida 32399-3000 within 21 days of receipt of this notice. A copy of the petition must also be mailed at the time of filing to the District Office at 2295 Victoria Ave, Fort Myers, Florida 33902. Failure to file a petition within the 21-day period constitutes a person's waiver of the right to request an administrative hearing and to participate as a party to this proceeding under sections 120.569 and 120.57, Florida Statutes. Before the deadline for filing a petition, a person whose substantial interests are affected by this Consent Order may choose to pursue mediation as an alternative remedy under section 120.573, Florida Statutes. Choosing mediation will not adversely affect such person's right to request an administrative hearing if mediation does not result in a settlement. Additional information about mediation is provided in section 120.573, Florida Statutes and Rule 62-110.106(12), Florida Administrative Code.

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26. Rules referenced in this Order are available at
<http://www.dep.state.fl.us/legal/Rules/rulelistnum.htm>.

FOR THE RESPONDENT:

John Sullivan, Mayor

Date

DONE AND ORDERED this _____ day of August, 2012, in Lee County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Jon M. Iglehart
Director of District Management

Filed, on this date, pursuant to section 120.52, F.S., with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk

Date

Copies furnished to:

Lea Crandall, Agency Clerk
Mail Station 35



Florida Department of Environmental Protection

South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Hershel T. Vinyard Jr.
Secretary

By Email

In the Matter of an
Application for Permit by:

City of Cape Coral Utilities Department
Jeff Pearson, Utilities Director
City Of Cape Coral
Post Office Box 150027
Cape Coral, Florida 33915
Email: jpearson@capecoral.net

Lee County-IW
City of Cape Coral SW Reverse Osmosis WTP
File Number FL0040088-004-IW5A

NOTICE OF PERMIT ISSUANCE

Enclosed is Permit Number FL0040088, issued under Chapter 403, Florida Statutes, to operate an existing 4.05 million gallons per day (MGD) demineralization concentrate treatment and disposal facility, which serves the SW reverse osmosis (RO) drinking water treatment plant for the City of Cape Coral. **The permit prohibits the discharge of demineralization concentrate to surface water.**

Monitoring requirements under this permit are effective on the first day of the second month following permit issuance. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any.

The Department's proposed agency action shall become final unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, Florida Statutes, within fourteen days of receipt of notice. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, 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.

Under Rule 62-110.106(4), Florida Administrative Code, a person may request an extension of the time for filing a petition for an administrative hearing. The request must be filed (received by the Clerk) in the Office of General Counsel before the end of the time period for filing a petition for an administrative hearing.

Petitions by the applicant or any of the persons listed below must be filed within fourteen days of receipt of this written notice. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), Florida Statutes, must be filed within fourteen days of publication of the notice or within fourteen days of receipt of the written notice, whichever occurs first. Section 120.60(3), Florida Statutes, however, also allows that any person who has asked the Department for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition or request for an extension of time within fourteen days of receipt of notice shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, Florida Statutes. Any subsequent intervention (in a proceeding initiated by another

party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information, as indicated in Rule 28-106.201, Florida Administrative Code:

- (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 will be affected by the determination;
- (c) A statement of when and how the petitioner received notice of the Department's 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 Department's proposed action;
- (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's proposed action; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Department's proposed action.

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

In addition to requesting an administrative hearing, any petitioner may elect to pursue mediation. The election may be accomplished by filing with the Department a mediation agreement with all parties to the proceeding (i.e., the applicant, the Department, and any person who has filed a timely and sufficient petition for a hearing). The agreement must contain all the information required by Rule 28-106.404, Florida Administrative Code. The agreement must be received by the Clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, within ten days after the deadline for filing a petition, as set forth above. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement.

As provided in Section 120.573, Florida Statutes, the timely agreement of all parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57, Florida Statutes, for holding an administrative hearing and issuing a final order. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons seeking to protect their substantial interests that would be affected by such a modified final decision must file their petitions within fourteen days of receipt of this notice, or they shall be deemed to have waived their right to a proceeding under Sections 120.569 and 120.57, Florida Statutes. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under Sections 120.569 and 120.57, Florida Statutes, remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

This permit action is final and effective on the date filed with the Clerk of the Department unless a petition (or request for an extension of time) is filed in accordance with the above. Upon the timely filing of a petition (or request for an extension of time), this permit will not be effective until further order of the Department.

Any party to this permit has the right to seek judicial review of the permit action under Section 120.68, Florida Statutes, by the filing of a notice of appeal under 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, Mail Station 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 when this permit action is filed with the Clerk of the Department.

Executed in Ft. Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



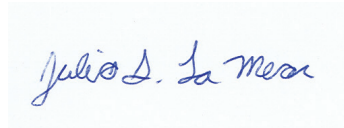
Jon M. Iglehart
Director of
District Management

FILING AND ACKNOWLEDGMENT

FILED, on this date, under Section 120.52, Florida Statutes, with the designated Deputy Clerk, receipt of which is hereby acknowledged.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed before the close of business on July 25, 2012 to the listed persons.



7/25/12

Name

Date

Enclosure

CC: Lloyd E. Horvath, P.E. – Cardno ENTRIX Lloyd.horvath@cardno.com
Mike Waldron, P.G. – Cardno ENTRIX Michael.waldron@cardno.com
John Mayhut – Cardno ENTRIX John.Mayhut@cardno.com
Shawn Kopko – City of Cape Coral skopko@capecoral.net
Jody Sorrels – City of Cape Coral jsorrels@capecoral.net
Robert Woods – City of Cape Coral rwood@capecoral.net



Florida Department of Environmental Protection

South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Hershel T. Vinyard Jr.
Secretary

STATE OF FLORIDA INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:

City of Cape Coral Utilities Department

RESPONSIBLE OFFICIAL:

Jeff Pearson, Utilities Director
City Of Cape Coral Utilities Department
Post Office Box 150027
Cape Coral, Florida 33915
Email: jpearson@capecoral.net

PERMIT NUMBER: FL0040088-004 (Minor)

FILE NUMBER: FL0040088-004-IW5A

ISSUANCE DATE: July 25, 2012

EXPIRATION DATE: July 24, 2017

FACILITY:

City of Cape Coral Southwest Reverse Osmosis WTP
3300 SW 20th Avenue
Cape Coral, FL 33991
Lee County
Latitude: 26°35' 28.8418" N Longitude: 82°0' 57.431" W

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and applicable rules of the Florida Administrative Code (F.A.C.). This permit does not constitute authorization to discharge wastewater other than as expressly stated in this permit. The above named permittee is hereby authorized to operate the facilities in accordance with the documents attached hereto and specifically described as follows:

FACILITY DESCRIPTION:

An existing 4.05 million gallons per day (MGD) demineralization concentrate treatment and disposal facility serving a reverse osmosis (RO) drinking water treatment plant for the City of Cape Coral.

WASTEWATER TREATMENT:

Treatment of the concentrate includes: oxidation through the use of a sodium hypochlorite feed system and aeration to remove hydrogen sulfide and to increase oxygen; and pH adjustment by a sodium hydroxide feed system. The concentrate discharges to Underground Injection Well, issued under Permit 254598-002-UO. **Effective immediately, the previous surface water outfall discharge, D001 to a ponded section of the Marauder Canal, and any other demineralization concentrate discharge to surface water are not allowed.**

REUSE OR DISPOSAL:

Underground Injection U-001: A new 9.9 MGD permitted capacity underground injection well system consisting of 1 Class I underground injection well permitted under Department permit number 254595-001-UC/II discharging to the Lower Oldsmar Formation. Underground Injection Well System U-001 is located approximately at latitude 26°35' 24" N, longitude 82°1' 1" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions set forth in this Cover Sheet and Part I through Part IX on pages 1 through 9 of this permit.

PERMITTEE: City of Cape Coral Utilities Department
FACILITY: City of Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Underground Injection Control Systems

1. Requirements for discharge to U-001 are established under Department UIC permit number 254595-001-UC/II. [62-620.610(3)]

B. Other Limitations and Monitoring and Reporting Requirements

1. **Effective immediately, the permittee shall not discharge demineralization concentrate to surface water.** [Rule 62-302.530, F.A.C., DEP Administrative Order Number AO-045-SD]
2. The permittee shall provide safe access points for obtaining representative influent and effluent samples which are required by this permit. [62-620.320(6)]
3. Monitoring requirements under this permit are effective on the first day of the second month following permit issuance. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any. During the period of operation authorized by this permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e. monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Unless specified otherwise in this permit, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below. DMRs shall be submitted for each required monitoring period including periods of no discharge.

REPORT Type on DMR	Monitoring Period	Mail or Electronically Submit by
Monthly or Toxicity	First day of month - last day of month	28 th day of following month
Quarterly	January 1 - March 31 April 1 - June 30 July 1 - September 30 October 1 - December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 - June 30 July 1 - December 30	July 28 January 28
Annual	January 1 - December 31	January 28

The permittee may submit either paper or electronic DMR forms. If submitting paper DMR forms, the permittee shall make copies of the attached DMR forms, without altering the original format or content unless approved by the Department, and shall mail the completed DMR forms to the Department by the twenty-eighth (28th) of the month following the month of operation at the address specified below:

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3551
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

If submitting electronic DMR forms, the permittee shall use the electronic DMR system(s) approved in writing by the Department and shall electronically submit the completed DMR forms to the Department by the twenty-eighth (28th) of the month following the month of operation. Data submitted in electronic format is equivalent to data submitted on signed and certified paper DMR forms. [62-620.610(18)]

4. Unless specified otherwise in this permit, all reports and other information required by this permit, including 24-hour notifications, shall be submitted to or reported to, as appropriate, the Department's South District Office at the address specified below:

PERMITTEE: City of Cape Coral Utilities Department
FACILITY: City of Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)

Florida Department of Environmental Protection South District
2295 Victoria Ave
Suite 364
Ft. Myers, Florida 33902-2549

Phone Number - (239)344-5600
FAX Number - (850)412-0590
(All FAX copies and e-mails shall be followed by original copies.)

[62-620.305]

5. All reports and other information shall be signed in accordance with the requirements of Rule 62-620.305, F.A.C. *[62-620.305]*
6. If there is no discharge from the facility on a day when the facility would normally sample, the sample shall be collected on the day of the next discharge. *[62-620.320(6)]*

II. SLUDGE MANAGEMENT REQUIREMENTS

1. Section II is not applicable to this facility.

III. GROUND WATER REQUIREMENTS

1. Section III is not applicable to this facility.

IV. ADDITIONAL LAND APPLICATION REQUIREMENTS

1. Section IV is not applicable to this facility.

V. OPERATION AND MAINTENANCE REQUIREMENTS

1. During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control. *[62-620.320(6)]*
2. The permittee shall maintain the following records and make them available for inspection on the site of the permitted facility.
 - a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
 - b. Copies of all reports required by the permit for at least three years from the date the report was prepared;
 - c. Records of all data, including reports and documents, used to complete the application for the permit for at least three years from the date the application was filed;
 - d. A copy of the current permit;
 - e. A copy of any required record drawings; and
 - f. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules.

[62-620.350]

PERMITTEE: City of Cape Coral Utilities Department
FACILITY: City of Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)

VI. SCHEDULES

1. **The permittee shall decommission and dismantle all demineralization concentrate outfalls to surface water by October 31, 2012. This deadline date applies only to the physical removal of the outfall pipe(s) and appurtenances. Discharge of demineralization concentrate to surface water is prohibited, effective immediately.**
2. The permittee is not authorized to discharge to waters of the state after the expiration date of this permit, unless:
 - a. The permittee has applied for renewal of this permit at least 180 days before the expiration date of this permit using the appropriate forms listed in Rule 62-620.910, F.A.C., and in the manner established in the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.; or
 - b. The permittee has made complete the application for renewal of this permit before the permit expiration date.

[62-620.335(1)-(4)]

VII. BEST MANAGEMENT PRACTICES/STORMWATER POLLUTION PREVENTION PLANS

VIII. OTHER SPECIFIC CONDITIONS

1. Where required by Chapter 471 or Chapter 492, F.S., applicable portions of reports that must be submitted under this permit shall be signed and sealed by a professional engineer or a professional geologist, as appropriate. *[62-620.310(4)]*
2. The permittee shall provide verbal notice to the Department's South District Office as soon as practical after discovery of a sinkhole or other karst feature within an area for the management or application of wastewater, or wastewater sludges. The Permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department's South District in a written report within 7 days of the sinkhole discovery. *[62-620.320(6)]*
3. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe:
 - a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels;
 - (1) One hundred micrograms per liter,
 - (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2, 4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter for antimony, or
 - (3) Five times the maximum concentration value reported for that pollutant in the permit application; or
 - b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels;
 - (1) Five hundred micrograms per liter,
 - (2) One milligram per liter for antimony, or
 - (3) Ten times the maximum concentration value reported for that pollutant in the permit application.

[62-620.625(1)]

IX. GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of

PERMITTEE: City of Cape Coral Utilities Department
FACILITY: City of Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)

Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. [62-620.610(1)]

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications or conditions of this permit, constitutes grounds for revocation and enforcement action by the Department. [62-620.610(2)]
3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. [62-620.610(3)]
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. [62-620.610(4)]
5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [62-620.610(5)]
6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. [62-620.610(6)]
7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. [62-620.610(7)]
8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [62-620.610(8)]
9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to:
 - a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
 - b. Have access to and copy any records that shall be kept under the conditions of this permit;
 - c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
 - d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.

[62-620.610(9)]

PERMITTEE: City of Cape Coral Utilities Department
FACILITY: City of Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department 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 as such use is proscribed by Section 403.111, F.S., or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10)]*
11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11)]*
12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12)]*
13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13)]*
14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14)]*
15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility or activity and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15)]*
16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2), F.A.C., for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16)]*
17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:
 - a. A description of the anticipated noncompliance;
 - b. The period of the anticipated noncompliance, including dates and times; and
 - c. Steps being taken to prevent future occurrence of the noncompliance.*[62-620.610(17)]*
18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246 and Chapters 62-160, 62-601, and 62-610, F.A.C., and 40 CFR 136, as appropriate.

PERMITTEE: City of Cape Coral Utilities Department
FACILITY: City of Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)

- a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the permit.
- b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
- d. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental Laboratory Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.
- e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.
- f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220, and 62-160.330, F.A.C.

[62-620.610(18)]

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

PERMITTEE: City of Cape Coral Utilities Department
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PERMIT NUMBER: FL0040088-004 (Minor)

- (e) Estimated amount of the discharge;
 - (f) Location or address of the discharge;
 - (g) Source and cause of the discharge;
 - (h) Whether the discharge was contained on-site, and cleanup actions taken to date;
 - (i) Description of area affected by the discharge, including name of water body affected, if any; and
 - (j) Other persons or agencies contacted.
- (2) Oral reports, not otherwise required to be provided pursuant to subparagraph b.1 above, shall be provided to the Department's South District within 24 hours from the time the permittee becomes aware of the circumstances.
- c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department's South District shall waive the written report.

[62-620.610(20)]

21. The permittee shall report all instances of noncompliance not reported under Permit Conditions IX. 17, 18 or 19 of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Permit Condition IX.20 of this permit. *[62-620.610(21)]*

22. Bypass Provisions.

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

[62-620.610(22)]

23. Upset Provisions.

- a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee.
 - (1) An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation.

PERMITTEE: City of Cape Coral Utilities Department
FACILITY: City of Cape Coral Reverse Osmosis WTP

PERMIT NUMBER: FL0040088-004 (Minor)

- (2) An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of upset provisions of Rule 62-620.610, F.A.C., are met.
- b. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in Permit Condition IX.5. of this permit; and
 - (4) The permittee complied with any remedial measures required under Permit Condition IX. 5. of this permit.
- c. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the permittee.
- d. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[62-620.610(23)]

Executed in Ft. Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Jon M. Iglehart
Director of
District Management

DATE: July 25, 2012

Attachment(s):

**FACT SHEET
FOR
STATE OF FLORIDA INDUSTRIAL WASTEWATER FACILITY PERMIT**

PERMIT NUMBER: FL0040088-004 (Minor)

FACILITY NAME: City of Cape Coral SW Reverse Osmosis Water Treatment Plant

FACILITY LOCATION: 3310 SW 20th Avenue
Cape Coral, FL 33914
Lee County

NAME OF PERMITTEE: City of Cape Coral Utilities Department

PERMIT WRITER: Deanna Newburg

1. SUMMARY OF APPLICATION

a. Chronology of Application

Application Number: FL0040088-004-IW5A

Application Submittal Date: August 1, 2011

b. Type of Facility

An existing 4.05 million gallons per day (MGD) demineralization concentrate treatment and disposal facility serving a reverse osmosis (RO) drinking water treatment plant for the City of Cape Coral.

SIC Code: 4941 - Water Supply and Irrigation Systems

c. Facility Capacity

Existing Permitted Capacity: 3.05 mgd

Proposed Increase in Permitted Capacity: 1.00 mgd

Proposed Total Permitted Capacity: 4.05 mgd

Capacity increased is based on the new operating wastewater disposal system of underground injection, issued under permit 254598-002-UO. This well has a maximum disposal of 6900 gallons per minute, (gpm), or 9.9 millions gallons per day (MGD), of which 4.05 MGD comes from this RO facility.

d. Description of Wastewater Treatment

Treatment of the concentrate includes: oxidation through the use of a sodium hypochlorite feed system and aeration to remove hydrogen sulfide and to increase oxygen; and pH adjustment by a sodium hydroxide feed system. The concentrate discharges to Underground Injection Well, issued under Permit 254598-002-UO. The previous surface water outfall discharge, D001 to a ponded section of the Marauder Canal, and any other discharge of demineralization concentrate to surface water are not allowed.

e. Description of Effluent Disposal and Land Application Sites (as reported by applicant)

See submitted map(s) for effluent disposal and land application site(s).

2. SUMMARY OF SURFACE WATER DISCHARGE

This facility is prohibited from discharging to surface water.

3. BASIS FOR PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

This facility is authorized to discharge reverse osmosis reject water to Underground Injection Well System U-001 which consists of 1 Class I injection well discharging to the Lower Oldsmar Formation based on the following limitations and monitoring requirements of UIC permit 254598-002-UO:

4. DISCUSSION OF CHANGES TO PERMIT LIMITATIONS

The wastewater permit for this facility is an existing permit. The previous permit, FL0040088-003-IW5A, allowed discharge to surface water based on the Administrative Order AO-045-SD to find other means of disposal since the mixing zones requested were not permitted by EPA. The permittee has a new Underground injection well (UIC) under permit 254598-002-UO on site for the RO discharge with a request in this permit application for the surface water discharge as a backup disposal for pipe cleaning discharge of 16 hrs a week and an emergency back-up use for the UIC well. Based on effluent violations, the backup surface water discharge is prohibited.

5. INDUSTRIAL SLUDGE MANAGEMENT

This section is not applicable to this facility.

6. GROUND WATER MONITORING REQUIREMENTS

This section is not applicable to this facility.

7. PERMIT SCHEDULES

A schedule to decommission and dismantle demineralization concentrate outfalls to surface water is included in this wastewater permit. The completion deadline is October 31, 2012.

8. BEST MANAGEMENT PRACTICES/STORMWATER POLLUTION PREVENTION PLANS

9. ADMINISTRATIVE ORDERS (AO) AND CONSENT ORDERS (CO)

This permit is not accompanied by an AO and the permittee has not entered into a CO with the Department.

10. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Unspecific and unsupported surface water variances were informally requested for this facility, but not granted because requests were never made procedurally complete, procedures were inappropriate, and Administrative Order AO-045-SD required compliance with Rule 62-302.530, F.A.C. An underground injection well has been built for the facility and placed into operation under Permit 254595-002-UO, which was issued January 19, 2012.

11. THE ADMINISTRATIVE RECORD

The administrative record including application and fact sheet, comments received and additional information is available for public inspection during normal business hours at the location specified in item 13. Copies will be provided at a minimal charge per page.

12. PROPOSED SCHEDULE FOR PERMIT ISSUANCE

Notice of Permit Issuance

July 25, 2012

13. DEP CONTACT

Additional information concerning the permit and proposed schedule for permit issuance may be obtained during normal business hours from:

Deanna Newburg
Engineering Specialist Supervisor III
South District Office
2295 Victoria Ave Suite 364
Ft. Myers, FL 33902-2549
Telephone No.: 239-344-5600

Department of Environmental Protection
South District Office
P.O. Box 2549
Fort Myers, Florida 33902-2549

P.E. CERTIFICATION

PERMITTEE: City of Cape Coral

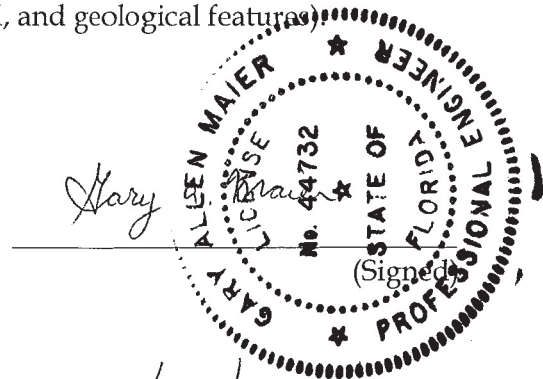
APPLICATION NUMBER: FL0040088-004-IW5A

PROJECT: Southwest Reverse Osmosis WTP
Demineralization Concentrate Treatment and Disposal

I HEREBY CERTIFY that the engineering features described in the above referenced application and subject to the proposed permit conditions provides reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Title 62. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, mechanical, structural, hydrological, and geological features).

Name: Gary A. Maier, P.E.

Certification No: 44732



07/25/2012
(Date)

(Seal)

February 3, 2012

Mr. Gary Maier, P.E.
Supervisor III, Domestic & Industrial Wastewater
Florida Department of Environmental Protection
P.O. Box 2549
Ft. Myers, FL 33902

Re: City of Cape Coral RO Concentrate Surface Water Discharge
Permit Renewal Application # FL0040088-003-IW5A

Dear Mr. Maier:

The City of Cape Coral appreciates the Department taking the time to meet with it yesterday to discuss the permit modification/renewal application for its reverse osmosis (RO) concentrate surface water discharge from the Southwest RO water treatment plant (WTP) into Lake Finisterre. Based on those discussions, the City wishes, by this letter, to amend its most recent response, dated January 19, 2012, to the Department's request for additional information (RAI), dated August 30, 2011.

The City also requests that the discharge be reclassified as emergency use only. Since the issuance of the most recent discharge permit, and accompanying Administrative Order, in November, 2007, the City has made substantial progress in reducing discharges of RO concentrate to its saltwater canal system at Lake Finisterre. This has included installing a Class I injection well system for the Southwest RO WTP and performing an engineering evaluation, as required by the AO, to determine whether there are any technological and economically feasible means of reducing the levels of the water quality parameters in the concentrate which are in noncompliance with Class III water quality standards.

The injection well is now the primary means of concentrate disposal. The surface water discharge has only been used occasionally since September, 2009 for the purpose of maintaining the functionality of the rapid rate diffuser system. As of yesterday's meeting, the City agrees to cease intermittent discharges to Lake Finisterre.

In addition, the City plans, within the next five years to permit and construct a second injection well for the Southwest RO WTP. The timing of the actual construction of that well will be dependent on the City's financial situation. When constructed, the second injection well will eliminate the need for an emergency discharge option.

Within the last 5 years the City has also achieved considerable operational flexibility of its public water supply system through the construction of its new North RO WTP. Therefore, during periods (i.e. for approximately 2 days every 5 years) when the Southwest WTP injection well is undergoing mechanical integrity testing, it may be

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D.E.P. South District

February 3, 2012
Mr. Gary Maier, P.E.
Page 2

possible, if the testing is conducted during low demand periods (i.e. during the wet season), to temporarily take the Southwest RO WTP offline. The result may be that there may be no need to utilize the surface water discharge again. However, until such time as the second injection well is installed, the City wishes to retain the surface water discharge as a permitted emergency disposal option.

The City is requesting that all water quality sampling and reporting requirements in the permit be suspended for periods during which no discharges occur.

Again, thank you for your time and cooperation in this matter.

Sincerely,

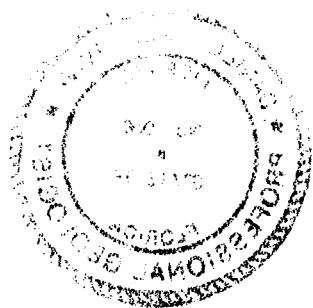


Daniel J. Acquaviva, P.G.
Vice President
FL Licensed Professional Geologist #1066



pc: S. Kopko, City of Cape Coral
A. Fenske, City of Cape Coral
R. Woods, City of Cape Coral
M. Cason, City of Cape Coral
J. Pearson, City of Cape Coral
A. Ahmadi, FDEP – Ft. Myers
D. Newburg, FDEP – Ft. Myers

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Newburg, Deanna

From: Mike Waldron [michael.waldron@cardno.com]
Sent: Thursday, January 19, 2012 2:33 PM
To: Newburg, Deanna
Cc: Robert Woods; Shawn Kopko; John Mayhut; Jody Sorrels
Subject: Corrected submittal Date: Responses to August 30, 2011 FDEP Permit Application Review FL0040088-003-IW5A: Permit to Discharge Demineralization Concentrate
Attachments: Cape Coral_RO Conc Disch_RFAI Response Ltr_011912.pdf
Importance: High

The date of this submittal has been corrected, for your files.

Michael Waldron

Senior Consultant

Cardno ENTRIX

3460 Fairlane Farms Road, Suite 8, Wellington, FL 33414

Phone: 561 791 6912 **Mobile:** 561 719 2421 **Fax:** 561 791 6915

From: Mike Waldron

Sent: Thursday, January 19, 2012 2:11 PM

To: 'Newburg, Deanna'

Cc: 'Robert Woods'; 'Shawn Kopko'; John Mayhut; 'Jody Sorrels'

Subject: RE: Responses to August 30, 2011 FDEP Permit Application Review FL0040088-003-IW5A: Permit to Discharge Demineralization Concentrate

Note: It looks like that cover date is a month off; so I'll send a correction shortly.

Michael Waldron

Senior Consultant

Cardno ENTRIX

3460 Fairlane Farms Road, Suite 8, Wellington, FL 33414

Phone: 561 791 6912 **Mobile:** 561 719 2421 **Fax:** 561 791 6915

From: Mike Waldron

Sent: Thursday, January 19, 2012 1:36 PM

To: 'Newburg, Deanna'

Cc: 'Robert Woods'; Shawn Kopko; John Mayhut; Jody Sorrels

Subject: Responses to August 30, 2011 FDEP Permit Application Review FL0040088-003-IW5A: Permit to Discharge Demineralization Concentrate

Importance: High

Ms. Newburg:

On behalf of the City of Cape Coral, please find attached the corresponding responses to the numbered comments in your correspondence of August 30, 2011. Because additional application revisions are based on analytical work for which results are pending, the City would very much appreciate an opportunity to meet in the meantime and discuss the alternatives referenced in this response. Thank you for your continued assistance with this permit application.

Michael Waldron

Senior Consultant

Cardno ENTRIX

3460 Fairlane Farms Road, Suite 8, Wellington, FL 33414

Phone: 561 791 6912 **Mobile:** 561 719 2421 **Fax:** 561 791 6915

michael.waldron@cardno.com www.cardnoentrix.com www.cardno.com

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Shaping the Future

January 19, 2012

Ms. Deanna Newburg
Engineering Specialist Supervisor
Florida Department of Environmental Protection
Industrial Wastewater Section
P.O. Box 2549
Fort Myers, Florida 33902

Cardno ENTRIX

1388 Colonial Blvd.
Fort Myers, FL 33907
USA

Phone 239 574 1919
Toll-free 800 368 7511
Fax 239 574 8106
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www.cardnoentrix.com

Subject: **City of Cape Coral Reverse-Osmosis Treatment Plant
Responses to FDEP RFAI Letter dated August 30, 2011
Application for an Existing Water Treatment Plant Discharge
Permit Application, #FL0040088-003-IW5A**

Dear Ms. Newburg:

On behalf of the City of Cape Coral Utilities, please find the enclosed responses to the Florida Department of Environmental Protection (FDEP) Request for Additional Information (RFAI) letter dated August 30, 2011. As discussed in our telephone conversation of December 9, 2011, a 60-day extension of time was requested to formulate and present responses to the FDEP RFAI letter (in our letter dated December 12, 2011). However; FDEP granted an extension of only 30 days. For this reason, the responses provided below utilized available analytical data to provide information requested by FDEP; the responses are presented in the numbered order of the FDEP RFAI Letter dated August 30, 2011:

1. On page 2DC-11 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section 1.5 Facility Description Line Drawing Showing Water Flow, all the required information was not submitted in the "Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number AO-045-SD City of Cape Coral RO WTP Concentrate Section 2.3" submitted to FDEP in October 2009 as indicated. Please provide a line drawing showing the water flow through the facility. Please indicate source water; operations contributing demineralization concentrate to the effluent; and all discharges to waters, and indicate whether they are associated with demineralization. Indicate all waste streams, including solids, which are associated with demineralization but which are not discharged to waters, and indicate their disposition. Construct a water balance on the line drawing by showing average and maximum flows between intakes, operations, treatment units, and discharges. For each discharge, provide a description of the following:

- a. All operations contributing to the effluent, including process wastewater, sanitary wastewater, filter backwash, membrane wash water, color removal wash and
- b. The design maximum flow contributed by each operation. Please note that these associated drawings submitted with the application must be signed and sealed by a Florida registered Professional Engineer.

January 19, 2012

Response No. 1:

The City of Cape Coral produces raw groundwater from the Hawthorn and Suwannee Aquifers and pumps the groundwater to the Water Treatment Plant (WTP) for processing via reverse-osmosis (RO) treatment. The WTP consists of two RO "treatment trains" and each train processes the raw water into two streams; a potable (permeate) stream and a concentrate stream. The raw water is filtered and pretreated with sulfuric acid and a scale inhibitor before being processed through the RO skids. No solids are produced. The permeate is then degasified, buffered to increase pH, and disinfected with sodium hypochlorite before being sent to ground storage and into the distribution system. The membrane concentrate is sent unaltered to the injection well, or is treated prior to discharge to Lake Finnisterre to maintain operation of the surface-water discharge facility. Concentrate discharges (to Lake Finnisterre) are treated to enhance dissolved oxygen, and disinfected and pH adjusted using sodium hypochlorite (bleach), and sodium hydroxide (caustic), respectively. Flow diagrams are presented as **Exhibit A**. The flow diagrams show the routing of water through the facility and the treatment process prior to disposal to surface waters.

2. On page 2DC-12 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section II. Source Water Description Number 1, please provide the information for the following:

Classification of Source Water. Please explain, update and resubmit page 2DC-12 and other information that will be required based on these changes.

Response No. 2:

Attached as **Exhibit B** please find the updated page 2DC-12. All source water is produced from Class G-II aquifers.

3. On page 2DC-12 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section II. Source Water Description Number 2, please provide the analytical data reports documenting water quality characterization for the source water. The Engineering Report submitted to FDEP in October 2009 sampling analysis of the source water was last conducted February 2008. Please explain, update and resubmit page 2DC-12 and other information that will be required based on these changes.

Response No. 3:

Attached as **Exhibit C** please find the February 2008 water quality analysis for the source water. The data provided is the most recent analysis. Currently, a new sampling event and analysis is being conducted, but analytical results are not yet available. Results from the recent testing will be provided under a separate cover when the results are available.

4. On page 2DC-14 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section III. Type of Disposal System Number 3: for surface water discharge, with the expansion of the flow from 3 MGD to 4.05 MGD and primary disposal to the underground injection well, please verify that the request for the mixing zones are for the radionuclides, copper, and ionic imbalance toxicity or a Variance for these three according to Rule 62-650.500(5), F.A.C. If the requests are for mixing zones, please see the following:

- a. Please provide a plume model for the mixing zone for ionic imbalance for toxicity based on Rule 62-4.244, F.A.C.
 - b. Please provide a plume model for the mixing zone for radionuclides based on Rule 62-4.244, F.A.C.
 - c. Please provide a plume model for the mixing zone for copper based on Rule 62-4.244, F.A.C.
- If the request is for a Variance, please submit the Petition for Variance or Waiver from Agency's Rule and fee.

January 19, 2012

**Response No. 4:**

The proposed permit application is for intermittent discharge for operation and maintenance purposes, to maintain a backup discharge option in the event that the City's Class I injection well becomes inoperative. For this reason, the permit itself is the primary reason for the discharge, which is also required by the Administrative Order. Because the purpose of the permit application is to allow the surface water discharge only in the unlikely event of a deep well failure, the City requests extension of mixing zone stipulations of the Administrative Order for the parameters of ionic imbalance for toxicity, and radionuclides.

In addition, per Section III, 3.G. of the permit application Instructions for Form 2DC, the City requests a water-quality criteria exemption for copper (for Section 62-302.530, FAC criteria), under Sections 62-4.243, and 62-302.300 FAC. In Section 62-302.530, FAC, additional relief is afforded under the provisions of Section 62-110.104, FAC. The City seeks some assurance that the outcome of this process has not been decided before a formal permit variance is requested. Alternative secondary disposal options can be explored concurrently, as may be necessary, or the intermittent discharge performed for maintenance reasons can be eliminated; but the currently available data indicate that the variance request will meet the intent of FDEP guidelines for an exemption and that "any hardship asserted as a basis of the need for a variance is peculiar to the affected property and not self-imposed and that the grant of a variance will be consistent with the general intent and purpose of Section 373.414 or Chapter 403, Florida Statutes, as applicable." (Section 62-110.104, FAC). Additional time will be required to prepare a new request for variance using updated water-quality information and to demonstrate that the variance request is warranted under Rule 62-650.500(5) 2.b.: "When the receiving water body does not meet the water quality standards set forth in Chapter 62-3, FAC (superseded by 62-4, FAC), the plan of study may include collection and analysis of data necessary to evaluate and application for a variance or other relief provision under department rules or Statutes."

5. On page 2DC-15 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section III. Type of Disposal System Number 4 for Design Capacity of the Underground injection Well Facility states a current design capacity of 9.94 MGD and a maximum permitted injection rate of 6,900 gpm. Permit Number 254598-001-UC states that the maximum disposal is 9.6 MGD at a maximum injection rate of 6,642 gpm. Please explain, update and resubmit page 2DC-15 and other information that will be required based on these changes.

Response No.5:

During the construction permit-application (November 2006) process, the maximum disposal rate of 9.6 million gallons per day (MGD) and the maximum injection rate of 6,642 gallons per minute (gpm) were permitted. The current "Authorization to Operate" (August 2009 and attached as **Exhibit D**) lists the maximum injection rate of 6,900 gpm, or 9.94 MGD.

6. On page 2DC-20 under Section V for Concentrate Discharge Characterization, Number 5 asks for the characterization of the demineralization concentrate discharge pursuant to Parts A, B, and C of the following tables in this section be provided with the application. Please provide the following:

- a. Part V-A, all the pollutants were not monitored at least once and
- b. Part V-B and V-C, some pollutants are marked as "believed present or believed absent" and some have not marks at all. Please mark all pollutants and add the quantitative data or explanation of their presence in the facility's discharge

Please explain, update and resubmit pages 2DC-21-28 and other information that will be required based on these changes.

January 19, 2012

**Response No. 6:**

Page 2DC-20 of Section V (#5) of the permit application will be revised with the results of additional sampling (Part V-A) for CBOD, BOD, TSS and ammonia. Part V-B and Part V-C will be revised to indicate the "believed absence" or "believed presence" for all listed parameters and updated with the results of additional constituent sampling. The additional analytical results required will be provided as soon as they are available. It is anticipated that the additional analyses can be completed within 30 days, and the results provided within 35 days (radionuclides results may take longer).

Again, we appreciate the FDEP's assistance in this permit process and look forward to continued cooperation and successful re-permitting of the facility.

Sincerely,

Michael J. Waldron, P.G.
Senior Consultant
for Cardno ENTRIX
Direct Line: 561.791.6912
Email: michael.waldron@cardno.com

John A. Mayhut
Staff Hydrogeologist
for Cardno ENTRIX
Direct Line: 239.829.7015
Email: john.mayhut@cardno.com

JAM/MJW/gng

Enclosures: Exhibit A
Exhibit B
Exhibit C
Exhibit D

File: Cape Coral_RO Conc Disch_RFAI Response Ltr_011912



Newburg, Deanna

From: Mike Waldron [michael.waldron@cardno.com]
Sent: Thursday, January 19, 2012 2:11 PM
To: Newburg, Deanna
Cc: Robert Woods; Shawn Kopko; John Mayhut; Jody Sorrels
Subject: RE: Responses to August 30, 2011 FDEP Permit Application Review FL0040088-003-IW5A: Permit to Discharge Demineralization Concentrate

Note: It looks like that cover date is a month off; so I'll send a correction shortly.

Michael Waldron

Senior Consultant

Cardno ENTRIX

3460 Fairlane Farms Road, Suite 8, Wellington, FL 33414

Phone: 561 791 6912 **Mobile:** 561 719 2421 **Fax:** 561 791 6915

From: Mike Waldron

Sent: Thursday, January 19, 2012 1:36 PM

To: 'Newburg, Deanna'

Cc: 'Robert Woods'; Shawn Kopko; John Mayhut; Jody Sorrels

Subject: Responses to August 30, 2011 FDEP Permit Application Review FL0040088-003-IW5A: Permit to Discharge Demineralization Concentrate

Importance: High

Ms. Newburg:

On behalf of the City of Cape Coral, please find attached the corresponding responses to the numbered comments in your correspondence of August 30, 2011. Because additional application revisions are based on analytical work for which results are pending, the City would very much appreciate an opportunity to meet in the meantime and discuss the alternatives referenced in this response. Thank you for your continued assistance with this permit application.

Michael Waldron

Senior Consultant

Cardno ENTRIX

3460 Fairlane Farms Road, Suite 8, Wellington, FL 33414

Phone: 561 791 6912 **Mobile:** 561 719 2421 **Fax:** 561 791 6915

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Newburg, Deanna

From: Mike Waldron [michael.waldron@cardno.com]
Sent: Thursday, January 19, 2012 1:36 PM
To: Newburg, Deanna
Cc: Robert Woods; Shawn Kopko; John Mayhut; Jody Sorrels
Subject: Responses to August 30, 2011 FDEP Permit Application Review FL0040088-003-IW5A: Permit to Discharge Demineralization Concentrate
Attachments: Cape Coral_RO Conc Disch_RFAI Response Ltrr_011912.pdf
Importance: High

Ms. Newburg:

On behalf of the City of Cape Coral, please find attached the corresponding responses to the numbered comments in your correspondence of August 30, 2011. Because additional application revisions are based on analytical work for which results are pending, the City would very much appreciate an opportunity to meet in the meantime and discuss the alternatives referenced in this response. Thank you for your continued assistance with this permit application.

Michael Waldron

Senior Consultant

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3460 Fairlane Farms Road, Suite 8, Wellington, FL 33414

Phone: 561 791 6912 **Mobile:** 561 719 2421 **Fax:** 561 791 6915

michael.waldron@cardno.com www.cardnoentrix.com www.cardno.com

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Shaping the Future

December 19, 2011

Ms. Deanna Newburg
Engineering Specialist Supervisor
Florida Department of Environmental Protection
Industrial Wastewater Section
P.O. Box 2549
Fort Myers, Florida 33902

Cardno ENTRIX

1388 Colonial Blvd.
Fort Myers, FL 33907
USA

Phone 239 574 1919
Toll-free 800 368 7511
Fax 239 574 8106
www.cardno.com

www.cardnoentrix.com

**Subject: City of Cape Coral Reverse-Osmosis Treatment Plant
Responses to FDEP RFAI Letter dated August 30, 2011
Application for an Existing Water Treatment Plant Discharge
Permit Application, #FL0040088-003-IW5A**

Dear Ms. Newburg:

On behalf of the City of Cape Coral Utilities, please find the enclosed responses to the Florida Department of Environmental Protection (FDEP) Request for Additional information (RFAI) letter dated August 30, 2011. As discussed in our telephone conversation of December 9, 2011, a 60-day extension of time was requested to formulate and present responses to the FDEP RFAI letter (in our letter dated December 12, 2011). However; FDEP granted an extension of only 30 days. For this reason, the responses provided below utilized available analytical data to provide information requested by FDEP; the responses are presented in the numbered order of the FDEP RFAI Letter dated August 30, 2011:

1. On page 2DC-11 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section I.5 Facility Description Line Drawing Showing Water Flow, all the required information was not submitted in the "Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number AO-045-SD City of Cape Coral RO WTP Concentrate Section 2.3" submitted to FDEP in October 2009 as indicated. Please provide a line drawing showing the water flow through the facility. Please indicate source water; operations contributing demineralization concentrate to the effluent; and all discharges to waters, and indicate whether they are associated with demineralization. Indicate all waste streams, including solids, which are associated with demineralization but which are not discharged to waters, and indicate their disposition. Construct a water balance on the line drawing by showing average and maximum flows between intakes, operations, treatment units, and discharges. For each discharge, provide a description of the following:

- a. All operations contributing to the effluent, including process wastewater, sanitary wastewater, filter backwash, membrane wash water, color removal wash and
- b. The design maximum flow contributed by each operation. Please note that these associated drawings submitted with the application must be signed and sealed by a Florida registered Professional Engineer.

December 19, 2011

Response No. 1:

The City of Cape Coral produces raw groundwater from the Hawthorn and Suwannee Aquifers and pumps the groundwater to the Water Treatment Plant (WTP) for processing via reverse-osmosis (RO) treatment. The WTP consists of two RO "treatment trains" and each train processes the raw water into two streams; a potable (permeate) stream and a concentrate stream. The raw water is filtered and pretreated with sulfuric acid and a scale inhibitor before being processed through the RO skids. No solids are produced. The permeate is then degasified, buffered to increase pH, and disinfected with sodium hypochlorite before being sent to ground storage and into the distribution system. The membrane concentrate is sent unaltered to the injection well, or is treated prior to discharge to Lake Finnisterre to maintain operation of the surface-water discharge facility. Concentrate discharges (to Lake Finnisterre) are treated to enhance dissolved oxygen, and disinfected and pH adjusted using sodium hypochlorite (bleach), and sodium hydroxide (caustic), respectively. Flow diagrams are presented as **Exhibit A**. The flow diagrams show the routing of water through the facility and the treatment process prior to disposal to surface waters.

2. On page 2DC-12 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section II. Source Water Description Number 1, please provide the information for the following:

Classification of Source Water. Please explain, update and resubmit page 2DC-12 and other information that will be required based on these changes.

Response No. 2:

Attached as **Exhibit B** please find the updated page 2DC-12. All source water is produced from Class G-II aquifers.

3. On page 2DC-12 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section II. Source Water Description Number 2, please provide the analytical data reports documenting water quality characterization for the source water. The Engineering Report submitted to FDEP in October 2009 sampling analysis of the source water was last conducted February 2008. Please explain, update and resubmit page 2DC-12 and other information that will be required based on these changes.

Response No. 3:

Attached as **Exhibit C** please find the February 2008 water quality analysis for the source water. The data provided is the most recent analysis. Currently, a new sampling event and analysis is being conducted, but analytical results are not yet available. Results from the recent testing will be provided under a separate cover when the results are available.

4. On page 2DC-14 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section III. Type of Disposal System Number 3. for surface water discharge, with the expansion of the flow from 3 MGD to 4.05 MGD and primary disposal to the underground injection well, please verify that the request for the mixing zones are for the radionuclides, copper, and ionic imbalance toxicity or a Variance for these three according to Rule 62-650.500(5), F.A.C. If the requests are for mixing zones, please see the following:

- a. Please provide a plume model for the mixing zone for ionic imbalance for toxicity based on Rule 62-4.244, F.A.C
 - b. Please provide a plume model for the mixing zone for radionuclides based on Rule 624.244, F.A.C.
 - c. Please provide a plume model for the mixing zone for copper based on Rule 62-4.244, F.A.C.
- If the request is for a Variance, please submit the Petition for Variance or Waiver from Agency's Rule and fee.

December 19, 2011

**Response No. 4:**

The proposed permit application is for intermittent discharge for operation and maintenance purposes, to maintain a backup discharge option in the event that the City's Class I injection well becomes inoperative. For this reason, the permit itself is the primary reason for the discharge, which is also required by the Administrative Order. Because the purpose of the permit application is to allow the surface water discharge only in the unlikely event of a deep well failure, the City requests extension of mixing zone stipulations of the Administrative Order for the parameters of ionic imbalance for toxicity, and radionuclides.

In addition, per Section III, 3.G. of the permit application Instructions for Form 2DC, the City requests a water-quality criteria exemption for copper (for Section 62-302.530, FAC criteria), under Sections 62-4.243, and 62-302.300 FAC. In Section 62-302.530, FAC, additional relief is afforded under the provisions of Section 62-110.104, FAC. The City seeks some assurance that the outcome of this process has not been decided before a formal permit variance is requested. Alternative secondary disposal options can be explored concurrently, as may be necessary, or the intermittent discharge performed for maintenance reasons can be eliminated; but the currently available data indicate that the variance request will meet the intent of FDEP guidelines for an exemption and that "any hardship asserted as a basis of the need for a variance is peculiar to the affected property and not self-imposed and that the grant of a variance will be consistent with the general intent and purpose of Section 373.414 or Chapter 403, Florida Statutes, as applicable." (Section 62-110.104, FAC). Additional time will be required to prepare a new request for variance using updated water-quality information and to demonstrate that the variance request is warranted under Rule 62-650.500(5) 2.b.: "When the receiving water body does not meet the water quality standards set forth in Chapter 62-3, FAC (superceded by 62-4, FAC), the plan of study may include collection and analysis of data necessary to evaluate and application for a variance or other relief provision under department rules or Statutes."

5. On page 2DC-15 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section III. Type of Disposal System Number 4 for Design Capacity of the Underground injection Well Facility states a current design capacity of 9.94 MGD and a maximum permitted injection rate of 6,900 gpm. Permit Number 254598-001-UC states that the maximum disposal is 9.6 MGD at a maximum injection rate of 6,642 gpm. Please explain, update and resubmit page 2DC-15 and other information that will be required based on these changes.

Response No.5:

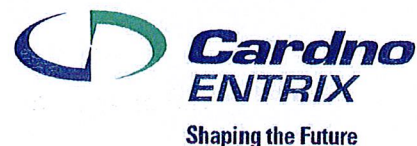
During the construction permit-application (November 2006) process, the maximum disposal rate of 9.6 million gallons per day (MGD) and the maximum injection rate of 6,642 gallons per minute (gpm) were permitted. The current "Authorization to Operate" (August 2009 and attached as **Exhibit D**) lists the maximum injection rate of 6,900 gpm, or 9.94 MGD.

6. On page 2DC-20 under Section V for Concentrate Discharge Characterization, Number 5 asks for the characterization of the demineralization concentrate discharge pursuant to Parts A, B, and C of the following tables in this section be provided with the application. Please provide the following:

- a. Part V-A, all the pollutants were not monitored at least once and
- b. Part V-B and V-C, some pollutants are marked as "believed present or believed absent" and some have not marks at all. Please mark all pollutants and add the quantitative data or explanation of their presence in the facility's discharge

Please explain, update and resubmit pages 2DC-21-28 and other information that will be required based on these changes.

December 19, 2011

**Response No. 6:**

Page 2DC-20 of Section V (#5) of the permit application will be revised with the results of additional sampling (Part V-A) for CBOD, BOD, TSS and ammonia. Part V-B and Part V-C will be revised to indicate the "believed absence" or "believed presence" for **all** listed parameters and updated with the results of additional constituent sampling. The additional analytical results required will be provided as soon as they are available. It is anticipated that the additional analyses can be completed within 30 days, and the results provided within 35 days (radionuclides results may take longer).

Again, we appreciate the FDEP's assistance in this permit process and look forward to continued cooperation and successful re-permitting of the facility.

Sincerely,

Michael J. Waldron, P.G.
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for Cardno ENTRIX
Direct Line: 561.791.6912
Email: michael.waldron@cardno.com

John A. Mayhut
Staff Hydrogeologist
for Cardno ENTRIX
Direct Line: 239.829.7015
Email: john.mayhut@cardno.com

JAM/MJW/gng

Enclosures: Exhibit A
Exhibit B
Exhibit C
Exhibit D

File: Cape Coral_RO Conc Disch_RFAI Response Ltr_011912

Section 119.071(3)(b), Florida Statutes, exempts some types of drawings from inspection or copying.

These figures have been moved to the Plans and Specifications Profile in the Wastewater Restricted Catalog.

Exhibit A

submitted February 8, 2012

Exhibit B

Application Form 2DC, Page 12
Source Water Classifications

**Cape Coral RO WTP Concentrate” Submitted to FDEP in October 2009. Please see Attachment 2
“MSDS Sheets for Items Identified in Item I.5.D”**

SECTION II SOURCE WATER DESCRIPTION

THIS SECTION MUST BE COMPLETED BY ALL APPLICANTS, REGARDLESS OF THE SIZE OF THE FACILITY OR DISCHARGE FLOW

1. For each source water, supply the following information:

A. Source Water Identification (aquifer name, screened or intake depth interval, geological formation, or name of surface water body)	B. Classification of Source Water (See instructions for this form and Chapter 62-520 or 62-302, F.A.C.)
Upper Floridan Aquifer: Arcadia Fm. 345'-700'	Class G-II
Suwanee Limestone 700'-1200'.	Class G-II
33 Wells - Cased Depths Range from 345'-745'	Class G-II
Total Well Depths Range from 520' to 1100'	Class G-II

**2. Attach analytical data reports documenting water quality characterization for the source water.
Please see the Engineering Report Table 1**

SECTION III TYPE OF DISPOSAL SYSTEM

THIS SECTION MUST BE COMPLETED BY ALL APPLICANTS, REGARDLESS OF THE SIZE OF THE FACILITY OR DISCHARGE FLOW

1. Types of disposal system(s) used by the facility:

(check all applicable items)

- ☒ Surface water discharge
- ☐ Ground water discharge (other than underground injection)
- ☒ Underground injection
- ☐ Blending at a DEP-permitted wastewater facility
- ☐ Blending with reclaimed water
- ☐ Other (describe) _____

Note: If underground injection is the sole form of disposal for demineralization concentrate at the facility, a separate wastewater permit for demineralization concentrate discharge is not required.

2. Provide a complete description of the disposal system(s) used by the subject facility.

Please see “Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number A0-045-SD City of Cape Coral RO WTP Concentrate” Submitted to FDEP in October 2009.

3. For surface water discharge, complete the following items:

Exhibit C

**Analytical Laboratory Report
Feedwater Sample: 2/5/2008**

SANDERS LABORATORIES, INC.
Laboratory Test Report

Lab Project #: N0802011
Client: City of Cape Coral
3300 SW 20th Ave.
Cape Coral, FL 33914-4900
Phone: 0
Fax:
E-mail:
Client Project Name: Feed Water
Laboratory Contact: Andy Konopacki

Page 1 of 8

All subsequent pages are identified by: N0802011. These pages may include, but are not limited to: Analytical Data, Chains of Custody, Subcontracted Data and Case Narratives.

QUALIFIER DEFINITIONS

B: Results based upon colony counts outside the acceptable range.
I: The reported value is between the laboratory MDL and the laboratory PQL.
J3: The reported value failed to meet the established quality control criteria.
J4: The sample matrix interfered with the ability to make an accurate determination.
J5: The data is questionable because of improper lab or field protocols.
K: Off scale low, actual value is less than the value given.
L: Off scale high, actual value is known to be greater than the value given.
Q: Sample held beyond acceptable holding time.
U: The compound was analyzed for, but not detected.
V: The analyte was detected in both the sample and the associated method blank.
Y: The sample was unpreserved or improperly preserved.
Z: Too many colonies present (TNTC).
** This result does not meet NELAC standards.
HACH results may not meet NELAC standards.

A statement of estimated uncertainty of results is available upon request.

Analytical results provided relate only to the samples received for this project.

Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.

Sanders Laboratories follows DEP standard operating procedures for field sampling.

Laboratory PQL's are available upon request.

Reports are archived for a minimum of 5 years. Copies of reports which are less than 1 year old are available for a fee of \$25.00 per report. Reports older than 1 year are available for a fee of \$50.00 per report. Copies will be provided within 1 week of the time of the request.

Client Project: Feed Water

Lab Project: N0802011

Report Date: 03/04/08



Laboratory Results

City of Cape Coral
3300 SW 20th Ave.
Cape Coral, FL 33914-4900

Lab ID	Sample Description	Sample Source			Received Date/Time		Sample Date/Time	
N0802011-01	Plant 1 grab	Ground Water			2/5/08 12:30		2/5/08 9:45	
Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Aluminum	EPA200.7	0.009	U	0.009	mg/l.	2/8/08 14:59	JPW	E84380
Ammonium-N	350.3	0.30		0.05	mg/L as N	2/6/08 11:00	AV	E84380
Antimony	EPA200.7	0.002	U	0.002	mg/l.	2/8/08 14:59	JPW	E84380
Arsenic	EPA200.7	0.002	U	0.002	mg/l.	2/8/08 14:59	JPW	E84380
Barium	EPA200.7	0.018		0.001	mg/L	2/8/08 14:59	JPW	E84380
Beryllium	EPA200.7	0.0001	U	0.0001	mg/L	2/8/08 14:59	JPW	E84380
Bicarbonate Alkalinity	SM4500CO2-D	34		3	mg/l CaCO3	2/14/08 11:30	AS	E84380
Cadmium	EPA200.7	0.001	U	0.001	mg/l.	2/8/08 14:59	JPW	E84380
Calcium	EPA200.7	70.0		0.006	mg/L	2/7/08 16:53	JPW	E84380
Carbon Dioxide-Total	SM4500CO2-D	30.0		0.10	mg/L	2/14/08 11:30	AS	E84380
Carbonate Alkalinity	SM4500CO2-D	0.01		0.01	mg/l CaCO3	2/14/08 11:30	AS	E84380
Chloride	SM4500Cl-B	1020		1	mg/L	2/6/08 11:00	BB	E84380
Chromium	EPA200.7	0.001	U	0.001	mg/l.	2/8/08 14:59	JPW	E84380
Color-True	SM2120B	1	U	1	C.U.	2/7/08 8:45	AS	E84380
Copper	EPA200.7	0.001	U	0.001	mg/l.	2/8/08 14:59	JPW	E84380
Dissolved Oxygen-field	360.1	3.27		0.01	mg/L	2/5/08 9:45	SO	E84380
Iron	EPA200.7	0.015	U	0.015	mg/L	2/8/08 14:59	JPW	E84380
Lead	EPA200.7	0.002	I	0.001	mg/L	2/8/08 14:59	JPW	E84380
Magnesium	EPA200.7	97.2		0.007	mg/L	2/7/08 16:53	JPW	E84380
Manganese	EPA200.7	0.001	U	0.001	mg/l.	2/8/08 14:59	JPW	E84380
Mercury	EPA245.1	0.001	U	0.001	mg/L	2/23/08 10:28	JPW	E84380
Nickel	EPA200.7	0.001	U	0.001	mg/l.	2/8/08 14:59	JPW	E84380
Nitrate-N	EPA353.2	0.01	U	0.01	mg/L as N	2/6/08 12:50	SJ	E84380
Nitrite-N	EPA353.2	0.01	U	0.01	mg/L as N	2/6/08 11:28	SJ	E84380
Odor @ 30 deg C	SM2150B	140		1	TON	2/5/08 13:30	AS	E84380
pH - field	150.1	5.23		0.01	std units	2/5/08 9:45	SO	E84380

Client Project: Feed Water
 Lab Project: N0802011
 Report Date: 03/04/08

Laboratory Results

<u>Lab ID</u>	<u>Sample Description</u>	<u>Sample Source</u>				<u>Received Date/Time</u>	<u>Sample Date/Time</u>	
N0802011-01	Plant 1 grab	Ground Water				2/5/08 12:30	2/5/08 9:45	
<u>Analysis</u>	<u>Method</u>	<u>Results</u>	<u>Qual</u>	<u>Detection Limit</u>	<u>Units</u>	<u>AnalysisDate/Time</u>	<u>Analyst</u>	<u>Cert ID</u>
Potassium	EPA200.7	36.5		0.052	mg/L	2/8/08 14:59	JPW	E84380
See attached results	Subcontract					2/6/08 9:43	SUB	
Selenium	EPA200.7	0.002	U	0.002	mg/L	2/8/08 14:59	JPW	E84380
Silica	SM4500SiO2-C	21.0		0.1	mg/L	2/11/08 15:30	AV	E84380
Silver	EPA200.7	0.001	U, J3	0.001	mg/L	2/8/08 14:59	JPW	E84380
Sodium	EPA200.7	539	U	0.400	mg/L	2/7/08 16:53	JPW	E84380
Specific Conductance-field	120.1	3400		0.1	µmhos/cm	2/5/08 9:45	SO	E84380
Sulfate	ASTM-D516-90	339		2	mg/L	2/5/08 16:56	AV	E84380
Total Dissolved Solids	SM2540C	2090		20	mg/L	2/5/08 15:30	AS	E84380
Total Suspended Solids	SM2540D	0.6	U	0.6	mg/L	2/6/08 16:30	AS	E84380
Turbidity - field	EPA180.1	0.1	U	0.1	NTU	2/5/08 9:45	SO	E84380
Water Temperature-field	170.1	26.8		0.1	C	2/5/08 9:45	SO	E84380
Zinc	EPA200.7	0.001	I	0.001	mg/L	2/8/08 14:59	JPW	E84380

<u>Lab ID</u>	<u>Sample Description</u>	<u>Sample Source</u>				<u>Received Date/Time</u>	<u>Sample Date/Time</u>	
N0802011-02	Plant 2 grab	Ground Water				2/5/08 12:30	2/5/08 10:05	
<u>Analysis</u>	<u>Method</u>	<u>Results</u>	<u>Qual</u>	<u>Detection Limit</u>	<u>Units</u>	<u>AnalysisDate/Time</u>	<u>Analyst</u>	<u>Cert ID</u>
Aluminum	EPA200.7	0.009	U	0.009	mg/L	2/8/08 14:59	JPW	E84380
Ammonium-N	350.3	0.36		0.05	mg/L as N	2/6/08 11:00	AV	E84380
Antimony	EPA200.7	0.002	U	0.002	mg/L	2/8/08 14:59	JPW	E84380
Arsenic	EPA200.7	0.002	U	0.002	mg/L	2/8/08 14:59	JPW	E84380
Barium	EPA200.7	0.022		0.001	mg/L	2/8/08 14:59	JPW	E84380
Beryllium	EPA200.7	0.0001	U	0.0001	mg/L	2/8/08 14:59	JPW	E84380
Bicarbonate Alkalinity	SM4500CO2-D	38		3	mg/L CaCO3	2/14/08 11:30	AS	E84380
Cadmium	EPA200.7	0.001	U	0.001	mg/L	2/8/08 14:59	JPW	E84380
Calcium	EPA200.7	72.2		0.006	mg/L	2/7/08 16:53	JPW	E84380
Carbon Dioxide-Total	SM4500CO2-D	33.5		0.10	mg/L	2/14/08 11:30	AS	E84380
Carbonate Alkalinity	SM4500CO2-D	0.01		0.01	mg/L CaCO3	2/14/08 11:30	AS	E84380
Chloride	SM4500Cl-B	1020		1	mg/L	2/6/08 11:00	BB	E84380
Chromium	EPA200.7	0.001	U	0.001	mg/L	2/8/08 14:59	JPW	E84380

Client Project: Feed Water

Lab Project: N0802011

Report Date: 03/04/08

Laboratory Results

Lab ID	Sample Description	Sample Source		Received Date/Time	Sample Date/Time			
N0802011-02	Plant 2 grab	Ground Water		2/5/08 12:30	2/5/08 10:05			
Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Color-True	SM2120B	1	U	1	C.U.	2/7/08 8:45	AS	E84380
Copper	EPA200.7	0.001	U	0.001	mg/l.	2/8/08 14:59	JPW	E84380
Dissolved Oxygen-field	360.1	4.36		0.01	mg/l.	2/5/08 10:05	SO	E84380
Iron	EPA200.7	0.020	I	0.015	mg/L	2/8/08 14:59	JPW	E84380
Lead	EPA200.7	0.001	U	0.001	mg/l.	2/8/08 14:59	JPW	E84380
Magnesium	EPA200.7	100		0.007	mg/L	2/7/08 16:53	JPW	E84380
Manganese	EPA200.7	0.001	U	0.001	mg/l.	2/8/08 14:59	JPW	E84380
Mercury	EPA245.1	0.001	U	0.001	mg/l.	2/23/08 10:28	JPW	E84380
Nickel	EPA200.7	0.001	V,I	0.001	mg/L	2/8/08 14:59	JPW	E84380
Nitrate-N	EPA353.2	0.01	U	0.01	mg/l. as N	2/6/08 12:50	SJ	E84380
Nitrite-N	EPA353.2	0.01	U	0.01	mg/L as N	2/6/08 11:28	SJ	E84380
Odor @ 31 deg C	SM2150B	140		1	TON	2/5/08 13:30	AS	E84380
pH - field	150.1	5.73		0.01	std units	2/5/08 10:05	SO	E84380
Potassium	EPA200.7	32.7		0.052	mg/L	2/8/08 14:59	JPW	E84380
See attached results	Subcontract					2/6/08 9:43	SUB	
Selenium	EPA200.7	0.002	U	0.002	mg/L	2/8/08 14:59	JPW	E84380
Silica	SM4500SiO2-C	17.8		0.1	mg/l.	2/11/08 15:30	AV	E84380
Silver	EPA200.7	0.001	U,J3	0.001	mg/l.	2/8/08 14:59	JPW	E84380
Sodium	EPA200.7	530		0.400	mg/l.	2/7/08 16:53	JPW	E84380
Specific Conductance-field	120.1	3460		0.1	µmhos/cm	2/5/08 10:05	SO	E84380
Sulfate	ASTM-D516-90	359		2	mg/l.	2/5/08 16:56	AV	E84380
Total Dissolved Solids	SM2540C	2150		20	mg/l.	2/5/08 15:30	AS	E84380
Total Suspended Solids	SM2540D	0.6	U	0.6	mg/L	2/6/08 16:30	AS	E84380
Turbidity - field	EPA180.1	0.2		0.1	NTU	2/5/08 10:05	SO	E84380
Water Temperature-field	170.1	27.5		0.1	C	2/5/08 10:05	SO	E84380
Zinc	EPA200.7	0.001	I	0.001	mg/l.	2/8/08 14:59	JPW	E84380

Client Project: Feed Water

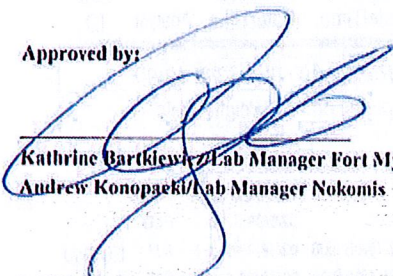
Lab Project: N0802011

Report Date: 03/04/08

Laboratory Results

Approved by:

Comments:


Kathrine Bartkiewicz/Lab Manager Fort Myers

Andrew Konopacki/Lab Manager Nokomis

Test Results meet all the requirements of the NELAC standards.

HBEL, Inc.

6600 U.S. 1 North, Fort Pierce, FL 34946
Phone: (772) 465-2400 Ext. 285 Fax: (772) 467-1684

CERTIFICATE OF ANALYSIS

[2029982]

Client: Sanders Laboratories, Inc.

Workorder ID: N0802011

Parameter	Qualifier	Result ¹	Units	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2029982001										
Sample ID: N0802011-01 Grab PLANT 1										
Sampled: 02/05/08 9:45						Received: 02/06/08 12:00				
Matrix: Water						Results reported on Wet Weight Basis				
Specific Conductance - Field	D	3400	umhos/cm	2.0	EPA 120.1	FLD3691		02/5/08 9:45	FLD	
pH Field	D	5.23	SU	0.200	EPA 150.1	FLD3691		02/5/08 9:45	FLD	
Water Temperature - Field	D	27	:C	0.20	EPA 170.1	FLD3691		02/5/08 9:45	FLD	
Strontium		16	mg/L	0.0010	EPA 200.7	META8755	02/15/08 9:06	02/18/08 14:52	DM	E96080
Thallium		0.0012U	mg/L	0.0012	EPA 279.2	META8753	02/15/08 9:09	02/18/08 13:50	DM	E96080
Cyanide		0.0047U	mg/L	0.0047	EPA 335.2	WCGE28893	02/12/08 10:45	02/13/08 15:29	GG	E96080
Sulfide, as S-		3.1	mg/L	0.040	EPA 376.1	WCGE28868		02/8/08 12:00	GG	E96080
Surfactants as LAS, Mol.wt.340		0.048	mg/L	0.022	EPA 425.1	WCGE28879	02/7/08 8:00	02/7/08 11:36	GG	E96080
Fluoride		2.1	mg/L	0.024	SM4500F C	WCGE28884		02/12/08 15:00	GG	E96080
Hydrogen Sulfide		2.9	mg/L	0.037	SM4500S2 F	CALC5480		02/8/08 13:48	DH	E96080
Laboratory ID: 2029982002										
Sample ID: N0802011-02 Grab PLANT 2										
Sampled: 02/05/08 10:05						Received: 02/06/08 12:00				
Matrix: Water						Results reported on Wet Weight Basis				
Specific Conductance - Field	D	3500	umhos/cm	2.0	EPA 120.1	FLD3691		02/5/08 10:05	FLD	
pH Field	D	5.73	SU	0.200	EPA 150.1	FLD3691		02/5/08 10:05	FLD	
Water Temperature - Field	J	28	:C	0.20	EPA 170.1	FLD3691		02/5/08 10:05	FLD	
Strontium		18	mg/L	0.0010	EPA 200.7	META8755	02/15/08 9:06	02/18/08 16:10	DM	E96080
Thallium		0.0012U	mg/L	0.0012	EPA 279.2	META8753	02/15/08 9:09	02/18/08 13:50	DM	E96080
Cyanide		0.0047U	mg/L	0.0047	EPA 335.2	WCGE28893	02/12/08 10:45	02/13/08 15:29	GG	E96080
Sulfide, as S-		3.4	mg/L	0.079	EPA 376.1	WCGE28868		02/8/08 12:00	GG	E96080
Surfactants as LAS, Mol.wt.340		0.047	mg/L	0.022	EPA 425.1	WCGE28879	02/7/08 8:00	02/7/08 11:36	GG	E96080
Fluoride		1.9	mg/L	0.024	SM4500F C	WCGE28884		02/12/08 15:00	GG	E96080
Hydrogen Sulfide		3.1	mg/L	0.073	SM4500S2 F	CALC5480		02/8/08 13:48	DH	E96080

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

- D Measurement was made in the field.
J Estimated value; value may not be accurate.

6600 US 1 North
Fort Pierce, FL 34946
FDOH # E96080

4155 St. Johns Pkwy Suite 1300
Sanford, FL 32771
FDOH # E83509

16331 Cortez Blvd
Brooksville, FL 34601
FDOH # E84418



Exhibit D

UIC Notice of Intent Southwest Water Reclamation Facility – Class I Injection Well System



Florida Department of Environmental Protection

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

South District
P.O. Box 2549
Fort Myers, Florida 33902-2549

Herschel T. Vinyard Jr.
Secretary

SENT VIA ELECTRONIC MAIL:

In the Matter of an
Application for Permit by:

December 1, 2011

PERMITTEE:

City of Cape Coral Utilities Dept.
C/O Mr. Jeff Pearson, P.E., Director,
1015 Cultural Park Blvd
Cape Coral, FL 33915
Email: jpearson@capecoral.net

Lee County -UIC

FDEP File Number: 254598-002-UO/11
WACS ID: 98508
Cape Coral SW WRF, Class 1 Injection System
IW-1 Operation Permit

NOTICE OF INTENT

The Department of Environmental Protection hereby provides Notice of Intent to issue a permit for the proposed project as detailed in the application specified above, for the reasons stated below.

The applicant, Cape Coral Utilities Department, Mr. Jeff Pearson, P.E., Director, Cape Coral Utilities Department, 1015 Cultural Park Blvd., Cape Coral, Florida, 33915 applied on May 20, 2011 to the Department of Environmental Protection for a permit to operate one, (1), Class I injection well, (IW-1), and monitor well system.

The Department has permitting jurisdiction under chapter 403 of the Florida Statutes, and Chapters 62-4, 62-520, 62-528, 62-550, 62-600, 62-601, and 62-660 of the Florida Administrative Code. The project is not exempt from permitting procedures. The Department has determined that an operation permit is required for the proposed work.

Pursuant to Section 403.815, Florida Statutes (F.S.) and Rule 62-110.106, Florida Administrative Code (F.A.C.), you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department, at South District, 2295 Victoria Ave., Fort Myers, Florida 33901 within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. Mediation is not available for this proceeding.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Sections 120.569 and 120.57, F.S. The

petition must conform to the requirements specified in the Notice and be filed (received) within 14 days of publication of the Notice in the Department's Office of General Counsel, MS 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will only be 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.

The Petition shall contain the following information:

- a. The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- b. A statement of how and when each petitioner received notice of the Department's action or proposed action;
- c. A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- d. A statement of the material facts disputed by Petitioner, if any;
- e. A statement of facts which petitioner contends warrants reversal or modification of the Department's action or proposed action;
- f. A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- g. A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

The application, draft permit, and fact sheet 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 of Environmental Protection, South District Office, located at 2295 Victoria Ave., Suite 364, Fort Myers, Florida 33901. Any additional information concerning this project may be obtained by contacting David Rhodes, P.G. at (239) 344-5687.

Executed in Lee County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Jon M. Iglehart
Director of
District Management

CERTIFICATE OF SERVICE

The undersigned designated clerk hereby certifies that this **NOTICE OF INTENT** and all copies were mailed before the close of business on December 1, 2011 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Maria A. Coleman

12-1-11

Clerk

Date

JMI/DR/mac

Enclosure

Cc Nancy Marsh, EPA (marsh.nancy@epa.gov)
Joe Haberfeld, FDEP (joe.haberfeld@dep.state.fl.us)
James Alexander, FDEP (James.Alexander@dep.state.fl.us)
Doug Wells, CDM, (WellsWD@cdm.com)
Jason A. Sciandra, P.E. (sciandraJA@cdm.com)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF INTENT

The Department of Environmental Protection hereby provides Notice of Intent to issue a permit to Cape Coral Utilities Department, Mr. Jeff Pearson, P.E., Director, Utilities Department, 1015 Cultural Park Blvd., Cape Coral, Florida, 33915, for a permit to operate one Class I Injection Well (IW-1) and associated monitor well system. The project services the Cape Coral Utilities Department Southwest WRF, (SWWRF), and Southwest WTP, (SWWTP), facilities, located at 3310 SW 20th Avenue, Cape Coral, Florida 33991. The injection system is physically located at the Cape Coral SWWRF, 3310 SW 20th Avenue, Cape Coral, Florida, 33991, in the County of Lee. (File No. 254598-002-UO/11). The purpose of the facility is to inject non-hazardous, reverse osmosis concentrate from the Cape Coral SWWTP and non-hazardous secondary treated municipal effluent from the Cape Coral SWWRF to the existing IW-1 injection well.

Operate one, (1), nominal, eighteen-inch, (18") outside diameter, (O.D.), fully cemented annulus, FRP tubing and packer Class I injection well (IW-1), with cemented twenty four-inch, (24") steel injection casing to approximate depths of 2951 feet, (IW-1), below land surface (bls) and a total depth of 3280 feet bls. Injection is into the Lower Oldsmar Formation for the primary means of disposal of non-hazardous, reverse osmosis concentrate from the North Cape Reverse Osmosis Water Treatment Facility (NROWTP) for a maximum disposal of 6900 gallons per minute, (gpm), or 9.9 million gallons per day (MGD). The maximum injection pressure shall not exceed 108 pounds per square inch, (psi) in IW-1. The existing dual zone monitoring well (DZMW-1) is completed from 1325 to 1406 feet bls and 1610 to 1660 feet bls.

The Department has permitting jurisdiction under Chapter 403 of the Florida Statutes, and Chapters 62-4, 62-520, 62-528, 62-550, 62-600, 62-601, and 62-660 of the Florida Administrative Code. The project is not exempt from permitting procedures. The Department has determined that an operation permit is required for the proposed work.

The Department will issue the permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. Mediation is not available for this proceeding.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Sections 120.569 and 120.57, F.S. The petition must conform to the requirements specified in the Notice and be filed (received) within 14 days of publication of the Notice in the Department's Office of General Counsel, MS 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will only be 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.

The Petition shall contain the following information:

- a. The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- b. A statement of how and when each petitioner received notice of the Department's action or proposed action;
- c. A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

- d. A statement of the material facts disputed by Petitioner, if any;
- e. A statement of facts which petitioner contends warrants reversal or modification of the Department's action or proposed action;
- f. A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- g. A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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

The application, draft permit, and fact sheet 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 of Environmental Protection, South District Office, located at 2295 Victoria Ave., Suite 364, Fort Myers, Florida 33901. Any additional information concerning this project may be obtained by contacting David Rhodes, P.G. at (239) 344-5687.



Florida Department of Environmental Protection

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

South District
P.O. Box 2549
Fort Myers, Florida 33902-2549

Herschel T. Vinyard Jr.
Secretary

DRAFT PERMIT

PERMITTEE:

City of Cape Coral Utilities Dept.
C/O Mr. Jeff Pearson, P.E., Director,
1015 Cultural Park Blvd
Cape Coral, FL 33915
Email: jpearson@capecoral.net

Lee County -UIC

File Number: 254598-002-UO/1I — WACS ID: 98508

Date of Issue: **DRAFT**

Expiration Date: **DRAFT**

Latitude: 26° 35' 23" N

Longitude: 82° 01' 01" W

Township, Section, and Range: T45S/04/R23E

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Rules 62-4, 62-520, 62-528, 62-550, 62-600, 62-601, and 62-660. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Operate one, (1), nominal, eighteen-inch, (18") outside diameter, (O.D.), fully cemented annulus, FRP tubing and packer Class I injection well (IW-1), with cemented twenty four-inch, (24") steel injection casing to approximately 2951 feet below land surface (bls) and a total depth of 3280 feet bls. Injection is into the Lower Oldsmar Formation for the primary means of disposal of non-hazardous, reverse osmosis concentrate from the Cape Coral Southwest WTP (SWWTP) and non-hazardous secondary treated municipal effluent from the Cape Coral Southwest WRF, (SWWRF) for a maximum disposal of 6900 gallons per minute, (gpm), or 9.9 million gallons per day (MGD). The maximum injection pressure shall not exceed 108 pounds per square inch, (psi). The existing dual zone monitoring well (DZMW-1) is completed from 1325 to 1406 feet bls and 1610 to 1660 feet bls.

The Application to Construct/Operate/Abandon Class I, III, or V Injection well System, DEP Form 62-528.900(1), was received on May 20, 2011, with supporting documents and additional information last received on August 29, 2011. The demonstration of Financial Responsibility was complete as of August 29, 2011 and remains in effect. The project services the Cape Coral Utilities Department, Southwest WRF and Southwest WTP facilities, located at 3310 SW 20th Avenue, Cape Coral, Florida 33991. The injection system is physically located at the Cape Coral Southwest WRF, 3310 SW 20th Avenue, Cape Coral, Florida, 33991, in the County of Lee. (File No.254598-002-UO/1I)

Subject to Specific Conditions 1-9.

Cape Coral Utilities
C/O Mr. Bill Peak,
1015 Cultural Park Blvd,
Cape Coral, Florida 33993

Lee County - UIC
FDEP File Number: 254598-002-UO/1I
WACS ID 98508
Date of Issue: **DRAFT**
Expiration Date: **DRAFT**
Class 1 Injection Well Operation Permit

SPECIFIC CONDITIONS:

1. General Criteria, All UIC Permits:

- (a) The terms, conditions, requirements, limitations and restrictions set forth in this permit are "permit conditions" and are binding and enforceable pursuant to section 403.141, F.S.
- (b) 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.
- (c) As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor 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.
- (d) This permit conveys no title to land, 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.
- (e) This permit does not relieve the permittee from liability for harm to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefrom; 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.
- (f) 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, or are 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.
- (g) 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:
 - 1. Have access to and copy any records that must be kept under conditions of this permit;
 - 2. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

Cape Coral Utilities
C/O Mr. Bill Peak,
1015 Cultural Park Blvd,
Cape Coral, Florida 33993

Lee County - UIC
FDEP File Number: 254598-002-UO/11
WACS ID 98508
Date of Issue: **DRAFT**
Expiration Date: **DRAFT**
Class 1 Injection Well Operation Permit

SPECIFIC CONDITIONS:

3. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

- (h) If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

1. A description of and cause of noncompliance; and
 2. 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 the 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.
- (i) 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 proscribed by sections 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.
 - (j) 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.
 - (k) This permit is transferable only upon Department approval in accordance with rules 62-4.120 and 62-528.350, F.A.C. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
 - (l) This permit or a copy thereof shall be kept at the work site of the permitted activity.
 - (m) The permittee shall comply with the following:
 1. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records shall be extended automatically unless the Department determines that the records are no longer required.
 2. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit,

Cape Coral Utilities
C/O Mr. Bill Peak,
1015 Cultural Park Blvd,
Cape Coral, Florida 33993

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Class 1 Injection Well Operation Permit

SPECIFIC CONDITIONS:

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 of the sample, measurement, report, or application unless otherwise specified by Department rule.

3. Records of monitoring information shall include:
 - a. the date, exact place, and time of sampling or measurements;
 - b. the person responsible for performing the sampling or measurements;
 - c. the dates analyses were performed;
 - d. the person responsible for performing the analyses;
 - e. the analytical techniques or methods used;
 - f. the results of such analyses.
4. The permittee shall furnish to the Department, within the time requested in writing, any information which the Department requests to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
5. If the permittee becomes aware that 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.
- (n) All applications, reports, or information required by the Department shall be certified as being true, accurate, and complete.
- (o) Reports of compliance or noncompliance with, or any progress reports on, requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each scheduled date.
- (p) Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- (q) It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (r) The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.
- (s) This permit may be modified, revoked and reissued, or terminated for cause, as provided in 40 C.F.R. sections 144.39(a), 144.40(a), and 144.41 (1998). The filing of a request by the permittee for a permit modification, revocation or reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

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- (t) The permittee shall retain all records of all monitoring information concerning the nature and composition of injected fluid until five years after completion of any plugging and abandonment procedures specified under rule 62-528.435, F.A.C. The permittee shall deliver the records to the Department office that issued the permit at the conclusion of the retention period unless the permittee elects to continue retention of the records.
- (u) All reports and other submittals required to comply with this permit shall be signed by a person authorized under rules 62-528.340(1) or (2), F.A.C. All reports shall contain the certification required in rule 62-528.340(4), F.A.C.
- (v) The permittee shall notify the Department as soon as possible of any planned physical alterations or additions to the permitted facility. In addition, prior approval is required for activities described in rule 62-528.410(1)(h).
- (w) The permittee shall give advance notice to the Department of any planned changes in the permitted facility or injection activity which may result in noncompliance with permit requirements.
- (x) The permittee shall report any noncompliance which may endanger health or the environment including:
 - 1. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water; or
 - 2. Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

2 General Criteria, All UIC Operation Permits:

- (a) In accordance with rules 62-4.090(1) and 62-528.455(3)(a), F.A.C., the permittee shall submit an application for permit renewal at least 60 days prior to expiration of this permit.
- (b) Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures.

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SPECIFIC CONDITIONS:

- (c) The injection system shall be monitored in accordance with rules 62-528.425(1)(g) and 62-528.430(2), F.A.C. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (d) Submittal of monthly monitoring data -see Specific Condition 3.e.
- (e) Mechanical Integrity - see Specific Condition 6.

3. OPERATING REQUIREMENTS

- (a) Injection of fluids other than those permitted into the disposal wells(s) will constitute a violation of this permit and shall constitute cause for permit revocation and possible enforcement action for water quality violations.
- (b) Injection into the well shall not exceed 6900 gallons per minute (9.9 MGD) and injection pressure as measured at the wellhead shall not exceed 108 psi for IW-1.
- (c) In the event the permittee is temporarily unable to comply with any of the conditions of a permit due to breakdown of equipment, power outages, destruction by hazard of fire, wind, or by other cause, the permittee of the facility shall notify the Department.
 - (1) Notification shall be made in person, by telephone, or by electronic mail within 24 hours of breakdown or malfunction to the South District office.
 - (2) A written report of any noncompliance referenced in Specific Condition 2.c.(1) above shall be submitted to the South District and Tallahassee offices within five days after its occurrence. The report shall describe the nature and cause of the breakdown or malfunction, the steps being taken or planned to be taken to correct the problem and prevent its reoccurrence, emergency procedures in use pending correction of the problem, and the time when the facility will again be operating in accordance with permit conditions.
- (d). The permittee shall calibrate all pressure gauges, flow meters, chart recorders, and other related equipment associated with the injection well system on a semiannual basis. The permittee shall maintain all monitoring equipment and shall ensure that the monitoring equipment is calibrated and in proper operating condition at all times. Laboratory equipment, methods, and quality control will follow EPA guidelines as expressed in Standard Methods for the Examination of Water and Wastewater. The pressure gauges, flow meters, and chart recorders shall be calibrated using standard engineering methods. Calibration records shall be kept by the permittee at the permitted facility and be available for inspection by Department personnel upon request.

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- (e). In the event a well must be plugged or abandoned, the permittee shall obtain a permit from the Department as required by Chapter 62-528, Florida Administrative Code. When no longer used for their intended purpose, these wells shall be properly plugged and abandoned. Within 180 days of well abandonment, the permittee shall submit to the Department and the TAC the proposed plugging method, pursuant to Rule 62-528.460, F.A.C.

4. TESTING AND REPORTING REQUIREMENTS

- (a) A specific injectivity test shall be performed quarterly on the injection wells as required by Rule 62-528.430 (2)(b)1.b., F.A.C. Pursuant to Rule 62-528.430(2)(d), F.A.C., the specific injectivity test shall be performed with the pumping rate to the well set at a predetermined level and reported as the specific injectivity index (gallons per minute/specific pressure). The pumping rate to be used shall be based on the expected flow, the design of the pump types, and the type of pump control used. As part of this test, the wells shall be shut-in for a period of time necessary to conduct a valid observation of pressure fall-off. The specific injectivity test data shall be submitted along with the monitoring results of the injection and monitoring well data.
- (b) The permittee shall demonstrate the mechanical integrity pursuant to Rule 62-528.300(6)(b) and (c), Florida Administrative Code (F.A.C.), at least once every five (5) years during the life of the wells. As part of the mechanical integrity survey a video television survey shall be conducted from the surface to the bottom of the injection zone or more frequently if deemed necessary by the Department, pursuant to Rule 62-528.425(1)(d), F.A.C. The last mechanical integrity test for injection well IW-1 was conducted on April 22, 2008. An interim integrity test was also performed on September 9, 2010. Therefore, the next mechanical integrity test on the injection wells shall be completed on or before April 21, 2013.
- (c) The Department must be notified seventy-two (72) hours prior to all testing for mechanical integrity on the injection wells. The testing procedure must be approved by the Department before testing begins. All testing must be initiated during daylight hours, Monday through Friday. An evaluation of all test results must be submitted with all test data.
- (d) The injection system shall be monitored in accordance with Rules 62-528.425(1)(g) and 62-528.430(2), F.A.C. The following injection well performance and monitor zone data shall be recorded and reported in the Monthly Operating Report as indicated below: Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

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INJECTION WELL IW-1. The specifications for the injection well are as follows:

<i><u>Casing Diameter and Type</u></i>	<i><u>Depth Cased (ft bls)</u></i>	<i><u>Open Hole Interval (feet bls)</u></i>
54" Steel Pit	75'	
44" Steel Surface Casing	475'	
36" Steel Intermediate Casing	1680'	
24" 0.50 Wall Thickness Steel Injection Casing	2951'	
18.11" O.D. 0.76 Wall Thickness FRP Tubing	2941'	
Open Hole Interval		From 2951' to 3280'

* below land surface

The injection well shall be monitored in accordance with the parameters and frequencies listed below. The permittee shall submit monthly a summary of the monthly monitoring data developed from the injection well instrumentation. The injection pressure, annular pressure, and flow rate shall be recorded continuously. All samples shall be collected and analyzed in accordance with the quality assurance requirements of Chapter 62-160, F.A.C. The report shall include the following data:

<i><u>Parameters</u></i>	<i><u>Reporting Frequency</u></i>
Injection Pressure (psi)	Daily/Monthly
Maximum Injection Pressure	Daily/Monthly
Minimum Injection Pressure	Daily/Monthly
Average Injection Pressure	Daily/Monthly
Flow Rate (gpm)	Daily/Monthly
Maximum Flow Rate	Daily/Monthly
Minimum Flow Rate	Daily/Monthly
Average Flow Rate	Daily/Monthly
Total Volume WTP Concentrate Injected (million gallons)	Daily/Monthly
Total Volume WWTP Effluent Injected (million gallons)	Daily/Monthly

WWTP Effluent Quality

<i><u>Parameters</u></i>	<i><u>Reporting Frequency</u></i>
Total Kjeldahl Nitrogen (TKN) (mg/L)	Monthly
Nitrate + Nitrite (mg/L)	Monthly
Ammonia (mg/L)	Monthly

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WTP Concentrate Water Quality

<i>Parameters</i>	<i>Reporting Frequency</i>
Specific Conductivity (μ mhos/cm)	Monthly
Total Dissolved Solids (mg/L)	Monthly
pH (std. units)	Monthly
Chloride (mg/L)	Monthly
Sulfate (mg/L)	Monthly
Field Temperature ($^{\circ}$ C)	Monthly
Total Kjeldahl Nitrogen (TKN) (mg/L)	Monthly
Nitrate Nitrite mg/L	Monthly
Ammonia (mg/L)	Monthly
Sodium (mg/L)	Quarterly
Calcium (mg/L)	Quarterly
Potassium (mg/L)	Quarterly
Magnesium (mg/L)	Quarterly
Iron (mg/L)	Quarterly
Bicarbonate (mg/L)	Quarterly
Radium 226 (pCi/L)	Quarterly
Radium 228 (pCi/L)	Quarterly
Gross Alpha (pCi/L)	Quarterly

MONITOR WELL SYSTEM:

The monitor well system consists of one dual zone monitor well as listed below:

<i>Well Name</i>	<i>Casing Diameter and Type</i>	<i>Depth Cased (ft bls)/Total (feet bls)</i>
DZMW-1	24" O.D. Steel Surface	500' bls
DZMW-1(Upper)	16" O.D. Steel	1325'
DZMW-1 (Upper)	10" Open Hole	From 1325' to 1406' bls
DZMW-1 (Lower)	6.325" FRP	1610'
DZMW-1 (Lower)	14.75" Open Hole	From 1610' to 1660'

The monitoring parameters listed below shall be developed and reported for the monitor well listed above. The monitor well casings shall be evacuated of three (3) to five (5) well volumes prior to collection of the water sample for analysis. The volume of water evacuated shall be based on the calculated volume of water in the well casing and sampling interval. The water sample collected shall be of sufficient volume to complete the analysis required. All samples must be analyzed by a laboratory certified in the State of Florida. The laboratory reports shall be submitted; all samples shall be collected and analyzed in accordance with the quality assurance requirements of Chapter 62-160, F.A.C. The monitor well water level or pressure shall be recorded continuously. The report shall include the following data:

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<i>Parameters</i>	<i>Reporting Frequency</i>
Maximum Water Level/Pressure (Ft NAVD or psi)	Daily/Monthly
Minimum Water Level/Pressure (Ft NAVD or psi)	Daily/Monthly
Average Water Level/Pressure	Monthly
Specific Conductivity (µmhos/cm)	Monthly
Total Dissolved Solids (mg/L)	Monthly
pH (std. units)	Monthly
Chloride (mg/L)	Monthly
Sulfate (mg/L)	Monthly
Field Temperature (°C)	Monthly
Ammonia (mg/L)	Monthly
Total Kjeldahl Nitrogen (TKN) (mg/L)	Monthly
Sodium (mg/L)	Quarterly
Calcium (mg/L)	Quarterly
Potassium (mg/L)	Quarterly
Magnesium (mg/L)	Quarterly
Iron (mg/L)	Quarterly
Bicarbonate (mg/L)	Quarterly
Gross Alpha (pCi/L)*	Quarterly
Radium 226 (pCi/L)*	Quarterly
Radium 228 (pCi/L)*	Quarterly

* Lower Zone Only

(e) The permittee shall submit to the Department the results of all monitoring data collected no later than the last day of the month immediately following the end of the month of record. The results shall be sent to the Department of Environmental Protection, South District Office, P.O. Box 2549, Fort Myers, Florida 33902-2549. Copies of the results shall also be sent to the Underground Injection Control Program, Bureau of Water Facilities Regulations, Department of Environmental Protection, 2600 Blair Stone Road, Mail Station #3530, Tallahassee, FL 32399-2400.

(f) In accordance with Rules 62-4.090(1) and 62-528.455(3)(a), F.A.C., the permittee shall submit an application for renewal of the existing operating permit (a minimum of 5 copies) with the applicable fee at least sixty (60) days prior to the expiration of this operation permit. The application for renewal shall include the items listed in Rule 62-528.455(3)(b), F.A.C.

5. **EMERGENCY DISPOSAL**

(a) All applicable federal, state and local permits must be in place to allow for any alternate discharges due to emergency or planned outage conditions.

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- (b) Any changes in emergency disposal methods must be submitted for Technical Advisory Committee (TAC) review and Department approval.
- (c) The permittee shall notify the local office of the Department within 24 hours in the event the emergency discharge has been used. The notification should include the reason for using the emergency discharge, the duration of the discharge, and the volume discharged. Written notification shall be provided within 5 days after its occurrence.

6. FINANCIAL RESPONSIBILITY

- (a) The permittee shall maintain separately the financial resources necessary to close, plug, and abandon the injection and associated monitor wells, at all times in accordance with Rule 62-528.435(9), F.A.C.
- (b) The permittee shall update annually the plugging and abandonment cost estimate. A certified (By Professional Geologist or Professional Engineer) copy of the annual update shall be submitted to the Department's Tallahassee UIC Program each year within 60 days after the anniversary date of issuance of this permit to the following addresses:

Underground Injection Control Program
Bureau of Water Facilities Regulation
Department of Environmental Protection
2600 Blair Stone Road, Mail Station #3530
Tallahassee, FL 32399-2400

Underground Injection Control Program
Department of Environmental Protection
South District Office
2295 Victoria Avenue, Ste 364
Ft Myers, FL 33902-2549

- (c) Upon the occurrence of the annual plugging and abandonment cost estimate exceeding, by 10 percent or more, (Section b. previously), the cost estimate upon which the current financial responsibility is based; the permittee shall submit to the Department certified financial documentation necessary to amend, renew, or otherwise replace the existing financial responsibility pursuant to Rule 62-528.435(9), F.A.C. and the conditions of this permit. Local governments shall include an updated *Certificate of Financial Responsibility* form and the comprehensive annual financial report for the latest completed fiscal year of that local entity.
- (d) In the event that the mechanism used to demonstrate financial responsibility should become insufficient or invalid for any reason, the permittee shall notify the Department of Environmental Protection in writing within 14 days of such insufficiency or invalidation. The permittee shall within 30 days of said notification submit to the Department for approval new financial documentation certifying either the remedy of current financial insufficiency or resolution of the financial instrument invalidation in order to comply with Rule 62-528.435(9), F.A.C., and the conditions of this permit.

7. MECHANICAL INTEGRITY

- (a) The permittee shall maintain the mechanical integrity of the injection well at all times.

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- (b) If the Department determines that the injection well lacks mechanical integrity, written notice shall be given to the permittee.
 - (c) Unless the Department requires immediate cessation of injection, within 48 hours of receiving written notice that the well lacks mechanical integrity the permittee shall cease injection into the well unless the Department allows continued injection pursuant to d. below.
 - (d) The Department may allow the permittee to continue operation of a well that lacks mechanical integrity if the permittee has made a satisfactory demonstration that fluid movement into or between underground sources of drinking water is not occurring.
- 8. The permittee is reminded of the necessity to comply with the pertinent regulations of any other regulatory agency, as well as any county, municipal, and federal regulations applicable to the project. These regulations may include, but are not limited to, those of the Federal Emergency Management Agency in implementing flood control measures. This permit should not be construed to imply compliance with the rules and regulations of other regulatory agencies.
 - 9. The permittee shall be aware of and operate under the General Conditions of F.A.C. Rule 62-528.307(1)(a) through (x), and 62-528.307(3)(a) through (e). These General Conditions are binding upon the permittee and enforceable pursuant to Chapter 403 of the Florida Statutes.

Note: In the event of an emergency the permittee shall contact the Department by calling (850) 488-1320. During normal business hours, the permittee shall call (239) 344-5600.

Issued this ____ day of _____, 2011

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

DRAFT

Jon M. Iglehart
Director of
District Management

JMI/DR/mac

Attachment

**Correspondence dated August 30, 2011
Florida Department of Environmental
Protection**



Florida Department of Environmental Protection

South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

SENT VIA ELECTRONIC MAIL:

August 30, 2011

Jeff Pearson, Utilities Director
City of Cape Coral Utilities
Post Office Box 150027
Cape Coral, Florida 33915
jpearson@capecoral.net

Re: Lee County - IW
City of Cape Coral Utilities
City of Cape Coral Reverse Osmosis Treatment
Application No.: FL0049088-003-IW5A
Request for Additional Information

Dear Mr. Pearson:

Thank you for your application for a wastewater permit for the above referenced facility. A Department staff review of the application and supporting documentation submitted on August 1, 2011, indicates the application is incomplete. Pursuant to the provisions of Section 62-620.510(1), Florida Administrative Code (F.A.C.), please provide the following information:

Permitting Questions

(Please contact Deanna Newburg at (239) 344-5677 for questions regarding these comments.)

1. On page 2DC-11 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section I.5 Facility Description Line Drawing Showing Water Flow, all the required information was not submitted in the "Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number AO-045-SD City of Cape Coral RO WTP Concentrate Section 2.3" submitted to FDEP in October 2009 as indicated. Please provide a line drawing showing the water flow through the facility. Please indicate source water; operations contributing demineralization concentrate to the effluent; and all discharges to waters, and indicate whether they are associated with demineralization. Indicate all waste streams, including solids, which are associated with demineralization but which are not discharged to waters, and indicate their disposition. Construct a water balance on the line drawing by showing average and maximum flows between intakes, operations, treatment units, and discharges. For each discharge, provide a description of the following:

- a. All operations contributing to the effluent, including process wastewater, sanitary wastewater, filter backwash, membrane wash water, color removal wash water, etc. and
- b. The design maximum flow contributed by each operation.

Please note that these associated drawings submitted with the application must be signed and sealed by a Florida registered Professional Engineer.

Additional Information Required
City of Cape Coral Utilities
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2. On page 2DC-12 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section II. Source Water Description Number 1, please provide the information for the following:

a. Classification of Source Water.

Please explain, update and resubmit page 2DC-12 and other information that will be required based on these changes.

3. On page 2DC-12 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section II. Source Water Description Number 2, please provide the analytical data reports documenting water quality characterization for the source water. The Engineering Report submitted to FDEP in October 2009 sampling analysis of the source water was last conducted February 2008. Please explain, update and resubmit page 2DC-12 and other information that will be required based on these changes.

4. On page 2DC-14 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section III. Type of Disposal System Number 3. for surface water discharge, with the expansion of the flow from 3 MGD to 4.05 MGD and primary disposal to the underground injection well, please verify that the request for the mixing zones are for the radionuclides, copper, and ionic imbalance toxicity or a Variance for these three according to Rule 62-650.500(5), F.A.C. If the requests are for mixing zones, please see the following:

a. Please provide a plume model for the mixing zone for ionic imbalance for toxicity based on Rule 62-4.244, F.A.C.

b. Please provide a plume model for the mixing zone for radionuclides based on Rule 62-4.244, F.A.C.

c. Please provide a plume model for the mixing zone for copper based on Rule 62-4.244, F.A.C.

If the request is for a Variance, please submit the Petition for Variance or Waiver from Agency's Rule and fee.

5. On page 2DC-15 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section III. Type of Disposal System Number 4. for Design Capacity of the Underground injection Well Facility states a current design capacity of 9.94 MGD and a maximum permitted injection rate of 6,900 gpm. Permit Number 254598-001-UC states that the maximum disposal is 9.6 MGD at a maximum injection rate of 6,642 gpm. Please explain, update and resubmit page 2DC-15 and other information that will be required based on these changes.

6. On page 2DC-20 under Section V for Concentrate Discharge Characterization, Number 5 asks for the characterization of the demineralization concentrate discharge pursuant to Parts A, B, and C of the following tables in this section be provided with the application. Please provide the following:

a. Part V-A, all the pollutants were not monitored at least once and

b. Part V-B and V-C, some pollutants are marked as "believed present or believed absent" and some have not marks at all. Please mark all pollutants and add the quantitative data or explanation of their presence in the facility's discharge.

Please explain, update and resubmit pages 2DC-21-28 and other information that will be required based on these changes.

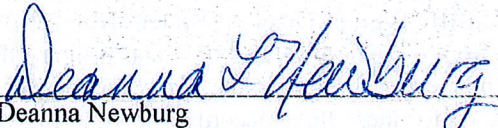
Additional Information Required
City of Cape Coral Utilities
City of Cape Coral Reverse Osmosis Treatment
Application No.: FL0040088-003-IW5A
August 30, 2011

The application will remain incomplete until receipt of the requested information. Please refer to this correspondence in your response and submit three (3) copies, an original and two duplicates, of your response and supporting documentation. Also, it is important that your response to this correspondence must be signed, sealed and dated by an engineer registered in the State of Florida.

Please note that pursuant to Section 120.60, Florida Statutes and Rule 62-620.510, Florida Administrative Code (F.A.C.), failure of an applicant to provide the timely requested information by the applicable deadline will result in denial of the application. Please submit the requested information within 30 days of this letter.

Should you have any permitting questions, please contact me at (239) 344-5677. Thank you for your continued cooperation.

Sincerely,


Deanna Newburg
Engineering Specialist Supervisor
Industrial Wastewater Section

DLN/mac

cc: Lloyd E. Horvath, P.E. – Cardno ENTRIX lloyd.horvath@cardnoentrix.com
Keith Kleinmann – FDEP Keith.Kleinmann@dep.state.fl.us
Nancy Ross – FDEP Nancy.Ross@dep.state.fl.us
Allen Hubbard, P.E. – FDEP Allen.Hubbard@dep.state.fl.us

Newburg, Deanna

From: Newburg, Deanna
Sent: Tuesday, December 20, 2011 4:18 PM
To: 'Mike Waldron'; 'jpearson@capecoral.net'
Cc: Maier, Gary; Ahmadi, Abdul; Rhodes, David
Subject: Cape Coral RO Variance Information

Follow Up Flag: Follow up
Flag Status: Flagged

Tracking:	Recipient	Delivery
	'Mike Waldron'	
	'jpearson@capecoral.net'	
	Maier, Gary	Delivered: 12/20/2011 4:18 PM
	Ahmadi, Abdul	Delivered: 12/20/2011 4:18 PM
	Rhodes, David	Delivered: 12/20/2011 4:18 PM

Good afternoon Mike,

We will grant an additional 30 days, until January 19, 2012, to submit the Additional Information. Please set up an appointment at your earliest convenience to meet to discuss this project and the possible solutions for permitting.

Please see Rule 62-4.243 Exemptions from Water Quality Criteria and Section 403.201, F.S. for the facts needed for showing a variance should be granted for your facility.

Also, additional information would also be required since a variance is considered a temporary lowering of water quality standards. A variance must be approved by EPA as before the variance may be used in an NPDES permit. When applying for a variance the applicant must demonstrate that meeting the standard will cause substantial and widespread economic and social impacts. Please refer to the EPA document, EPA Interim Economic Guidance for Water Quality Standards Workbook, EPA-823-B-95-002, which can be found online at www.epa.gov/waterscience/econ/. Please complete the applicable worksheets for your type of facility and complete the worksheets in Chapter 4 relating to substantial and widespread economic and social impacts. To complete the worksheets, you will need to evaluate all alternatives for removing or minimizing the toxicity and the costs of each alternative. Please remember that EPA denied this last time around.

If there is any additional information needed, please contact me,

Deanna Newburg

Wastewater Engineering Specialist Supervisor
FDEP South District
Phone : 239-344-5677
Fax : 850-412-0590
email to: Deanna.Newburg@dep.state.fl.us

Newburg, Deanna

From: John Mayhut [john.mayhut@cardno.com]
Sent: Monday, December 12, 2011 12:48 PM
To: Newburg, Deanna
Cc: Shawn Kopko; Robert Woods; Mike Waldron; Daniel Nelson
Subject: FW: FL0040088-003-IW5A City of Cape Coral RO
Attachments: Ext_Req_12-12-11.pdf

Good Afternoon Deanna,

Attached please find our request for additional time to respond to the request for additional information dated August 30, 2011. This request also offers an explanation for the lack of an earlier response.

Please feel free to contact myself or Mike Waldron (cc'ed to this e-mail), if you have any questions, comments and/or concerns.

Thank You,

John Mayhut
Project Scientist
Cardno ENTRIX

1388 Colonial Boulevard, Fort Myers, FL 33907

Phone: 239 574 1919 **Direct:** 239 829 7015 **Mobile:** 239 246 4343 **Fax:** 239 574 8106

john.mayhut@cardno.com www.cardnoentrix.com www.cardno.com

Privileged and Confidential Communication: This electronic mail communication and any documents attached hereto may contain confidential and privileged material for the sole use of the intended recipient(s) named above. If you are not the intended recipient (or authorized to receive for the recipient) of this message, any review, use, distribution or disclosure by you or others is strictly prohibited. Please contact the sender by reply email and delete and/or destroy the accompanying message.



December 12, 2011

Ms. Deanna Newburg
Florida Department of Environmental Protection
Engineering Specialist Supervisor
Industrial Wastewater Section
P.O. Box 2549
Fort Myers, Florida 33902

Cardno ENTRIX

1388 Colonial Blvd.
Fort Myers, FL 33907
USA

Phone 239 574 1919
Toll-free 800 368 7511
Fax 239 574 8106
www.cardno.com

www.cardnoentrix.com

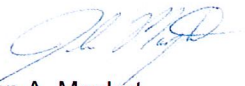
Subject: **City of Cape Coral Reverse-Osmosis Treatment Plant
Request for Extension of Time to Complete Responses to
FDEP RFAI Letter dated August 30, 2011
Application for an Existing Water Treatment Plant Discharge
Permit Application, #FL0040088-003-IW5A**

Dear Ms. Newburg:

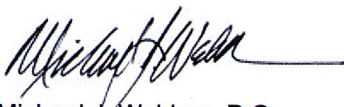
As discussed in our telephone conversation of December 9, 2011, until very recently the City of Cape Coral was not able to locate the above-referenced mailing from the Florida Department of Environmental Protection (FDEP), and is not able to confirm prior receipt. This unintentional oversight may have been due to personnel changes at the City, and although FDEP did attempt to copy Cardno ENTRIX, the e-mail address listed for Lloyd Horvath was incorrect and we cannot confirm electronic receipt.

Based on the nature of the FDEP comments of August 30, 2011, and on the potential need to address either variance or modeling requirements, on behalf of the City, we would like to request an extension of time to formulate and present responses to the FDEP RFAI letter. On behalf of the City of Cape Coral Utilities, this letter serves to request a 60-day extension of time to submit responses to the above-referenced FDEP letter. We appreciate the FDEP's assistance in this permit renewal process and look forward to continued cooperation and successful re-permitting of the facility.

Sincerely,



John A. Mayhut
Staff Hydrogeologist
for Cardno ENTRIX
Direct Line: 239.829.7015
Email: john.mayhut@cardno.com



Michael J. Waldron, P.G.
Senior Consultant
for Cardno ENTRIX
Direct Line: 561.791.6912
Email: michael.waldron@cardno.com

JAM/MJW/gng



Florida Department of Environmental Protection

South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

FILE

SENT VIA ELECTRONIC MAIL:

December 6, 2011

Jeff Pearson, Utilities Director
City of Cape Coral Utilities
Post Office Box 150027
Cape Coral, Florida 33915
jpearson@capecoral.net

Re: Lee County - IW
City of Cape Coral Utilities
City of Cape Coral Reverse Osmosis Treatment
Application No.: FL0040088-003-IW5A
Request for Additional Information

Dear Mr. Pearson:

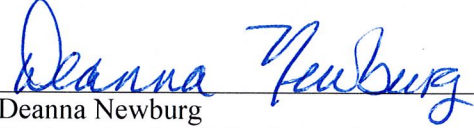
FINAL REMINDER: ADDITIONAL INFORMATION NEEDED

On, August 30, 2011, the Department sent you a Request for Additional Information Letter for the application and supporting documentation submitted on August 1, 2011. (See Attachment).

Your response to the Request for Additional Information is an essential step of the permitting processing. When not completed, Department staff has no alternative but to recommend denial of the pending permit application.

As of the date of this letter, the Department has not received the response to the Request for Additional Information. If a complete response to the Request for Additional Information is not received within 14 days of receipt of this letter, the Department will send you a Notice of Permit Denial.

Sincerely,


Deanna Newburg
Engineering Specialist Supervisor
Industrial Wastewater Section

DLN/mac

cc: Lloyd E. Horvath, P.E. – Cardno ENTRIX lloyd.horvath@cardnoentrix.com
Keith Kleinmann – FDEP Keith.Kleinmann@dep.state.fl.us
Nancy Ross – FDEP Nancy.Ross@dep.state.fl.us
Allen Hubbard, P.E. – FDEP Allen.Hubbard@dep.state.fl.us



Florida Department of Environmental Protection

South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

SENT VIA ELECTRONIC MAIL:

August 30, 2011

Jeff Pearson, Utilities Director
City of Cape Coral Utilities
Post Office Box 150027
Cape Coral, Florida 33915
jpearson@capecoral.net

Re: Lee County - IW
City of Cape Coral Utilities
City of Cape Coral Reverse Osmosis Treatment
Application No.: FL0040088-003-IW5A
Request for Additional Information

Dear Mr. Pearson:

Thank you for your application for a wastewater permit for the above referenced facility. A Department staff review of the application and supporting documentation submitted on August 1, 2011, indicates the application is incomplete. Pursuant to the provisions of Section 62-620.510(1), Florida Administrative Code (F.A.C.), please provide the following information:

Permitting Questions

(Please contact Deanna Newburg at (239) 344-5677 for questions regarding these comments.)

1. On page 2DC-11 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section 1.5 Facility Description Line Drawing Showing Water Flow, all the required information was not submitted in the "Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number AO-045-SD City of Cape Coral RO WTP Concentrate Section 2.3" submitted to FDEP in October 2009 as indicated. Please provide a line drawing showing the water flow through the facility. Please indicate source water; operations contributing demineralization concentrate to the effluent; and all discharges to waters, and indicate whether they are associated with demineralization. Indicate all waste streams, including solids, which are associated with demineralization but which are not discharged to waters, and indicate their disposition. Construct a water balance on the line drawing by showing average and maximum flows between intakes, operations, treatment units, and discharges. For each discharge, provide a description of the following:

- a. All operations contributing to the effluent, including process wastewater, sanitary wastewater, filter backwash, membrane wash water, color removal wash water, etc. and
- b. The design maximum flow contributed by each operation.

Please note that these associated drawings submitted with the application must be signed and sealed by a Florida registered Professional Engineer.

Additional Information Required
City of Cape Coral Utilities
City of Cape Coral Reverse Osmosis Treatment
Application No.: FL0040088-003-IW5A
August 30, 2011

2. On page 2DC-12 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section II. Source Water Description Number 1, please provide the information for the following:

a. Classification of Source Water.

Please explain, update and resubmit page 2DC-12 and other information that will be required based on these changes.

3. On page 2DC-12 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section II. Source Water Description Number 2, please provide the analytical data reports documenting water quality characterization for the source water. The Engineering Report submitted to FDEP in October 2009 sampling analysis of the source water was last conducted February 2008. Please explain, update and resubmit page 2DC-12 and other information that will be required based on these changes.

4. On page 2DC-14 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section III. Type of Disposal System Number 3. for surface water discharge, with the expansion of the flow from 3 MGD to 4.05 MGD and primary disposal to the underground injection well, please verify that the request for the mixing zones are for the radionuclides, copper, and ionic imbalance toxicity or a Variance for these three according to Rule 62-650.500(5), F.A.C. If the requests are for mixing zones, please see the following:

a. Please provide a plume model for the mixing zone for ionic imbalance for toxicity based on Rule 62-4.244, F.A.C.

b. Please provide a plume model for the mixing zone for radionuclides based on Rule 62-4.244, F.A.C.

c. Please provide a plume model for the mixing zone for copper based on Rule 62-4.244, F.A.C.

If the request is for a Variance, please submit the Petition for Variance or Waiver from Agency's Rule and fee.

5. On page 2DC-15 of the Application Form 2DC for a Permit to Discharge Demineralization Concentrate from a New or Existing Public Water Supply Facility, DEP Form 62-620.910(18) under Section III. Type of Disposal System Number 4. for Design Capacity of the Underground injection Well Facility states a current design capacity of 9.94 MGD and a maximum permitted injection rate of 6,900 gpm. Permit Number 254598-001-UC states that the maximum disposal is 9.6 MGD at a maximum injection rate of 6,642 gpm. Please explain, update and resubmit page 2DC-15 and other information that will be required based on these changes.

6. On page 2DC-20 under Section V for Concentrate Discharge Characterization, Number 5 asks for the characterization of the demineralization concentrate discharge pursuant to Parts A, B, and C of the following tables in this section be provided with the application. Please provide the following:

a. Part V-A, all the pollutants were not monitored at least once and

b. Part V-B and V-C, some pollutants are marked as "believed present or believed absent" and some have not marks at all. Please mark all pollutants and add the quantitative data or explanation of their presence in the facility's discharge.

Please explain, update and resubmit pages 2DC-21-28 and other information that will be required based on these changes.

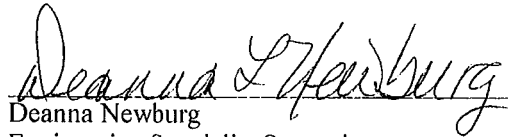
Additional Information Required
City of Cape Coral Utilities
City of Cape Coral Reverse Osmosis Treatment
Application No.: FL0040088-003-IW5A
August 30, 2011

The application will remain incomplete until receipt of the requested information. Please refer to this correspondence in your response and submit three (3) copies, an original and two duplicates, of your response and supporting documentation. Also, it is important that your response to this correspondence must be signed, sealed and dated by an engineer registered in the State of Florida.

Please note that pursuant to Section 120.60, Florida Statutes and Rule 62-620.510, Florida Administrative Code (F.A.C.), failure of an applicant to provide the timely requested information by the applicable deadline will result in denial of the application. Please submit the requested information within 30 days of this letter.

Should you have any permitting questions, please contact me at (239) 344-5677. Thank you for your continued cooperation.

Sincerely,


Deanna Newburg
Engineering Specialist Supervisor
Industrial Wastewater Section

DLN/mac

cc: Lloyd E. Horvath, P.E. – Cardno ENTRIX lloyd.horvath@cardnoentrix.com
Keith Kleinmann – FDEP Keith.Kleinmann@dep.state.fl.us
Nancy Ross – FDEP Nancy.Ross@dep.state.fl.us
Allen Hubbard, P.E. – FDEP Allen.Hubbard@dep.state.fl.us



Florida Department of Environmental Protection

South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

FILE

SENT VIA ELECTRONIC MAIL:

August 30, 2011

Jeff Pearson, Utilities Director
City of Cape Coral Utilities
Post Office Box 150027
Cape Coral, Florida 33915
jpearson@capecoral.net

Re: Lee County - IW
City of Cape Coral Utilities
City of Cape Coral Reverse Osmosis Treatment
Application No.: FL0040088-003-IW5A
Request for Additional Information

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Additional Information Required
City of Cape Coral Utilities
City of Cape Coral Reverse Osmosis Treatment
Application No.: FL0040088-003-IW5A
August 30, 2011

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b. Part V-B and V-C, some pollutants are marked as "believed present or believed absent" and some have not marks at all. Please mark all pollutants and add the quantitative data or explanation of their presence in the facility's discharge.

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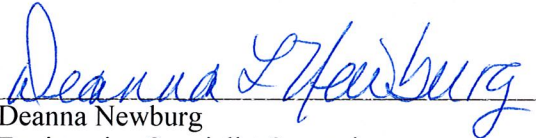
Additional Information Required
City of Cape Coral Utilities
City of Cape Coral Reverse Osmosis Treatment
Application No.: FL0040088-003-IW5A
August 30, 2011

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Should you have any permitting questions, please contact me at (239) 344-5677. Thank you for your continued cooperation.

Sincerely,


Deanna Newburg
Engineering Specialist Supervisor
Industrial Wastewater Section

DLN/mac

cc: Lloyd E. Horvath, P.E. – Cardno ENTRIX lloyd.horvath@cardnoentrix.com
Keith Kleinmann – FDEP Keith.Kleinmann@dep.state.fl.us
Nancy Ross – FDEP Nancy.Ross@dep.state.fl.us
Allen Hubbard, P.E. – FDEP Allen.Hubbard@dep.state.fl.us

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATER FACILITIES - PERMIT DATA ENTRY FORM**

Program Area: PW DW IW UIC

THIS FORM MUST BE COMPLETED AND RETURNED TO THE DATA PROCESSING TEAM WITHIN THREE BUSINESS DAYS FROM THE CHECK DATA RECEIVED LISTED BELOW, SUSPENSE 8-4-11

LOG # 324

PROCESSOR'S NAME DN

CASH RECEIVING INFORMATION:

Check # 479496 Amount \$6,000.⁰⁰ Date Rec'd 8-1-11

Check # _____ Amount _____ Date Rec'd _____

CODING INFORMATION:

FEE INFORMATION:

OVERRIDE INFORMATION.:

Type IW5A
Subtype NR
County 36

Correct Fee \$ 6,000.⁰⁰
Fee Received \$ 6,000.⁰⁰
To Be Refunded \$ _____

Override? Y or N
Reason: _____

SysReceipt # 752814

SysPayment # 1104295

SysApplication/PA # FLO040088 004 - IW5A CRA # 373362

WAFR Input: Facility # _____ Generic PA Input: Site # _____

PROJECT: CITY OF CAPE CORAL

FACILITY: SAME

SUSPENSE (3 DAYS)	Receipt Date (Initial & Date)	Completion Date (Initial & Date)
Mailroom Processor (Stamping & Sorting)	<u>DN 8-1-11</u>	
Administrative Assistant (Mail Pick Up)		
Adm. Assistant (Fee Verification, Coding, & Assign Program)	<u>meac 8-1-11</u>	
Permit Supervisor (PW)		
Permit Processor (Data Entry)	<u>meac 8-1-11</u>	
Senior Clerk (Project Creation & Money Linking)	<u>yf 8/1/11</u>	<u>yf 8/2/11</u>

COMMENTS:

WAFR Facility

ME ID ME Name EI Type
 Facility ID Submitted Name
 County Office NPDES Type Rank

Project

File # - - Project # CRA Reference #
 Permit Office Agency Action OGC
 Project Name Desc
 Type/Sub/Req / Logged
 Received Issued/Effective Expires Application Action
 Fee Fee Recd Del Override

Affiliation

Role Begin End
 Name Company
 Addr
 City State Zip - Country
 Phone Fax Email

Processors

Processor Active Inactive Events

August 02, 2011

City Of Cape Coral
P. O. Box 150027
Cape Coral FL 33915-0027

Dear Sir or Madam:

RE: Receipt Number 752814

Your remittance, check number 479496 in the amount of \$6,000.00, was received by the Department of Environmental Protection on August 01, 2011. Any future inquires regarding this payment should reference the above receipt number.

Sincerely,

Yvonne Figueroa, Admin
Department of Environmental Protection

yf

cc

CITY OF CAPE CORAL



CERTIFIED MAIL 7008 3230 0003 5054 5818

July 28, 2011

Deanna Newburg
Engineering Specialist Supervisor
Florida Department of Environmental Protection
South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549

Re: City of Cape Coral – Concentrate Discharge Permit Renewal Application
FDEP Permit No FL0040088

Attached, please find the Concentrate Discharge Permit Renewal Application for City of Cape Coral, and permit renewal fee check #479496 for the amount of \$6,000.00.

If you have any questions or require further information, please feel free to contact me.

Sincerely,

Robert M. Woods / Chief Water Plant Operator

Attachment

c: S.P. Kopko, Water Production Superintendent

RECEIVED
AUG 01 2011
D.E.P. South District

WATER PRODUCTION SECTION - REVERSE OSMOSIS PLANT

POST OFFICE BOX 150027 • CAPE CORAL, FLORIDA 33915-0027 • TELEPHONE: (239) 574-0877

**CITY OF CAPE CORAL
CONCENTRATE DISCHARGE PERMIT
RENEWAL APPLICATION FOR
CITY OF CAPE CORAL REVERSE OSMOSIS TREATMENT FACILITY
FDEP PERMIT NUMBER FL0040088**

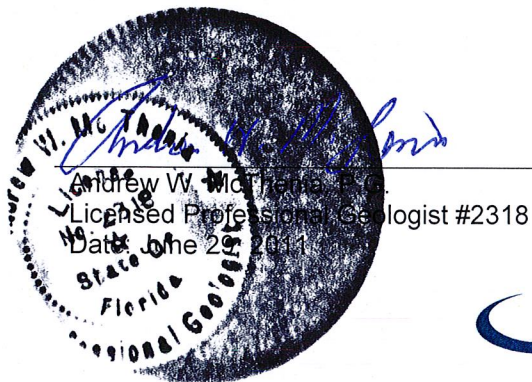
Prepared for:

The City of Cape Coral
Reverse Osmosis Plant
P.O. Box 150027
Cape Coral, Florida 33915-0027

June 2011

Cardno ENTRIX Project No.: 10766060.00

Prepared by:



1388 Colonial Boulevard • Fort Myers, FL 33907 • T 239.574.1919 • F 239.574.8106

RECEIVED
AUG 01 2011
D.E.P. South District

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Appendices

Appendix A	Existing Operation Permit (State of Florida Industrial Wastewater Facility Permit)
Appendix B	Operation Permit Renewal Application

RECEIVED
AUG 01 2011
D.E.P. South District

Executive Summary

The City of Cape Coral (City) discharges wastewater concentrate from its reverse osmosis water treatment plant (WTP) into the Class III surface waters of Lake Finisterre. The City seeks to renew and modify a concentrate disposal permit (Appendix A), which will expire in 2012. A deep injection well located at the WTP will serve as the primary method of disposal for discharges of wastewater concentrate. The current system, a submerged diffuser system, will serve as a secondary system and backup to the deep injection well. The permit modification includes an increase in discharge quantity, and to reclassify the system as a secondary disposal system. For significant portions of the year, this disposal system will be offline. However, during certain periods of the year, this secondary system will be utilized for backup disposal when the primary disposal systems are offline, and up to 16 hours per week for maintenance throughout the year.

1.1 PURPOSE AND SCOPE OF WORK

This report and accompanying permit renewal application (Appendix B) are being submitted in accordance with the basic permitting requirements and the information requested in the Florida Department of Environmental Protection (FDEP) Form for the City of Cape Coral WTP. The current permit number for this project is FL0040088. The general site location is shown on Figure 1-1.

The City has authorized the renewal and modification of the concentrate disposal permit for the reverse osmosis water treatment plant. The scope involves the following tasks associated with the project:

1. Permit renewal
2. Permit modification:
 - Reclassification from a primary to a secondary disposal system
 - Increase in permitted quantity of disposal water
 - Request for the return of the original mixing zone sampling location for gross alpha and combined radium 226 & 228 concentrations
 - Request for re-establishment of sampling location SWD-1A for monitoring copper concentrations

Introduction

2.1 BACKGROUND

This report presents the findings and conclusions to provide supporting data associated with the modification of the City's existing concentrate disposal permit.

The City maintains a reverse osmosis (RO) treatment facility with feed water supplied by production wells completed in the Upper Floridan aquifer. The water treatment plant currently has a discharge capacity for process wastewater of 3.05 million gallons per day (MGD). The City makes potable water available for use by treating brackish groundwater via reverse osmosis and distributing it to over 100,000 residents and many businesses in the regional service area. Currently, the rejected process wastewater (demineralization concentrate) is discharged through a submerged multiport rapid-rate diffuser system (360 feet in length consisting of 10 four-inch discharge ports), and into Lake Finisterre, an approximate 1.28 million square foot Class III Marine surface water body located approximately 1.5 miles southeast of the WTP, as shown on Figure 2-1.

The City's original plant (Plant 1) was built in 1977 with a 3-MGD production capacity, for finished potable water, to supplement the City's existing Lime Softening Treatment Plant (2-MGD capacity). In 1980, the City expanded the facility to a 5-MGD capacity. At that time, the City was experiencing problems with its Lime Softening Plant due to salt-water intrusion into the wellfield (uppermost Hawthorn Aquifer) and insufficient capacity for the rapid population growth. In 1985, the City decided to abandon the lime softening technology and initiate a major expansion of the RO Plant (addition to Plant 1 referred to as Plant 2). The 3-MGD RO Plant was expanded to 15-MGD capacity, allowing the City to keep pace with population growth.

Due to a planned major expansion of the utility's service area and continued rapid population growth, the City began design work in 2005 to expand the finished water production capacity of the plant from 15-MGD to 18-MGD. This increased capacity would ensure that the City had a sufficient supply of potable water until an additional RO Plant could be designed and built in the northern part of the city. The majority of the expansion at the existing plant was completed in 2007.

The City is required to maintain a National Pollutant Discharge Elimination System (NPDES) permit in conjunction with the concentrate disposal permit. In April 2004, the FDEP issued the draft renewal NPDES permit; however, the United States Environmental Protection Agency (EPA) formally objected to the proposed NPDES permit, based on the length of the mixing zones. The permitting process was suspended pending resolution of the EPA's objections. The mixing zone established in the previous permit (1999) for radionuclides encompassed Marauder Canal and the connected saltwater canals up to the point of confluence with the Caloosahatchee River. Water samples for gross alpha particle activity and combined radium 226 & 228 analyses are collected immediately after final treatment at the plant (sample location EFF-1), as the entire original mixing zone has been eliminated by the EPA. The analytical results for samples collected from the current location with no mixing zone are in exceedance of current water quality standards (Class III Marine surface waters) for both of the radionuclides (pursuant to Chapter 62-302 of the Florida Administrative Code (FAC)).

The FDEP issued an Industrial Wastewater Facility Permit (FL0040088) dated November 27, 2007, under the provisions of Chapter 403, Florida Statutes (F.S.) and applicable rules of the FAC. This permit is accompanied by an Administrative Order pursuant to paragraphs 403.088(2)(e) and (f), Florida Statutes. Compliance with the Administrative Order AO-045-SD is a specific requirement of this permit. The FDEP has ordered that the City conduct an engineering evaluation to identify potential means to control combined

radium 226 & 228 and gross alpha particle activity in its discharge to waters of the state. This engineering evaluation, prepared by Cardno ENTRIX , has been completed and submitted to the FDEP ("Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number AO-045-SD City of Cape Coral RO WTP Concentrate", May 2009). Additionally, as a part of the Administrative Order, an Ionic Imbalance Report covering an investigation to determine chronic toxicity has been prepared (and submitted with the engineering evaluation) in support of this permit renewal application.

Disposal Water Flow Data

3.1 AVERAGE AND MAXIMUM FLOW RATE TRENDS

The process wastewater (concentrate) is discharged into Lake Finisterre, with average daily flow rates ranging from 1.98 to 2.66 MGD. The maximum daily discharge during the present permit period has not exceeded the permitted maximum flow rate of 3.05 MGD. WTP maximum flows ranged between 2.34 MGD, recorded on January 1, 2004, to 3.05 MGD, which occurred on January 1, 2006 (Table 1). The data presented on Figure 3-1 shows both average and maximum flow rates, with peaks generally observed in the dry season (November thru April).

3.2 FLOW RATE MODIFICATION REQUEST

The City seeks to increase the maximum permitted volume from 3.05 MGD to 4.05 MGD in the event whereby the primary means of disposal (deep well injection) is not available. The requested increase is needed to handle the potable water expansion from 15.0 MGD to 18.0 MGD, allowing the City to have an adequate supply of finished potable water. At a maximum (i.e. emergency usage), the City expects to discharge in the 4-MGD range for up to 10 days per month.

Disposal Water Quality Data

4.1 WATER QUALITY

This section of the report summarizes the wastewater concentrate water quality data for parameters designated in the FDEP permit. The analytical results for the period from January 2004 through December 2009 are reported directly from monthly operating reports (MOR), and are presented in Table 1 and Table 2 of this report. Copies of analytical reports have been previously submitted in the corresponding MOR. The results were used to track constituent trends, compliance with permit limits and regulations, and help characterize chemical processes occurring in Lake Finisterre and to compare to background concentrations. Background water quality analyses at Bimini Basin (located southeast of Lake Finisterre) for radionuclides (gross alpha, radium 226, and radium 228), acute toxicity, salinity, and conductivity were performed in February of 1997 (Table 3).

4.2 SAMPLING LOCATIONS

Two locations are currently sampled for permit compliance. These are EFF-1 (the concentrate after final treatment at the water treatment plant) and SWD-1A (the receiving water twelve feet from the discharge in Lake Finisterre). Sampling location SWD-2 (the edge of the mixing zone between the saltwater canal system and the Caloosahatchee River) was once used for monitoring radionuclides. Refer to Figure 2-1 for a map showing all sampling point locations.

4.3 SAMPLING PROCEDURES

The samples are collected by WTP staff in accordance with FDEP Standard Operating Procedures (DEP-SOP-001/01) in order to comply with the permit conditions. Total residual chlorine, hydrogen sulfide, dissolved oxygen, pH, and total dissolved solids (TDS) are monitored daily at the WTP at sampling location EFF-1, prior to being discharged to receiving waters. Analytical results for these five parameters are reported monthly. Acute toxicity is monitored at sampling location EFF-1 once every six months. Water samples analyzed for combined radium 226 & 228 and gross alpha have historically been collected quarterly at SWD-2, until January 2008, at which time sampling occurred at EFF-1. Fluoride concentrations are currently monitored quarterly in Lake Finisterre at sampling point SWD-1A (see Figure 2-1). Copper concentrations are currently monitored at sampling location EFF-1 at least once a month. Water samples analyzed for total phosphorus and total nitrogen are currently collected quarterly at sampling location EFF-1.

Procedurally, samples are stored in laboratory-supplied containers, placed in an ice-filled cooler, and shipped by courier to the laboratory following standard chain-of-custody protocol. Analyses other than copper and toxicity were conducted by Lee County Environmental Laboratory (Fort Myers, FL). Analysis for copper was conducted by Sanders Laboratories Inc. (Fort Myers, FL). The latest toxicity testing was conducted by Marisco Bioassay Laboratory, Inc. (Sarasota, FL).

4.4 ANALYTICAL RESULTS

The data presented herein had previously been supplied to the FDEP in compliance with the criteria of the discharge permit. Results are described below, and the data tabulated in Tables 1 and 2, and graphed on Figures 4-1 thru 4-7.

4.4.1 Total Residual Chlorine and Hydrogen Sulfide

Total residual chlorine and hydrogen sulfide are monitored daily at EFF-1 and reported monthly. All reported values for total residual chlorine were below the detection limit of 0.01 milligrams per liter (mg/L). Of all the samples collected for hydrogen sulfide, all were below the detection limit of 0.01 mg/L, with the exception of one sample (collected March, 2007) reported at 0.26 mg/L. The FDEP was notified of this exceedance within 24 hours. This single high hydrogen sulfide value was attributed to an increased chlorine demand at the WTP. Following the servicing of the chlorine pump and injectors, on-site water quality testing at the WTP indicated hydrogen sulfide levels below detection limits. Historical data for the period from August, 1999 to June, 2003, for both chlorine and hydrogen sulfide parameters, indicated concentrations below the detection limit of 0.01 mg/L. Chlorine and hydrogen sulfide concentrations are plotted on Figure 4-1A and Figure 4-1B, respectively.

4.4.2 Dissolved Oxygen

Dissolved oxygen (D.O.) is monitored daily at EFF-1 and reported monthly. Dissolved oxygen levels are of importance to the waters because appropriate levels are required to support aquatic life. Average D.O. values ranged from 6.5 mg/L to 9.6 mg/L. The lowest reported D.O. concentration was 4.1 mg/L, which occurred both in April of 2005 and October of 2006. All minimum reported values for D.O. were above the permitted limit of 4.0 mg/L. Figure 4-2 shows minimum and average D.O. concentrations over a 6-year period.

4.4.3 pH

The pH of the sample water is monitored daily at EFF-1 and reported monthly. These pH values ranged from 6.7 to 8.1 standard units (s.u.), with an average of 7.03 s.u. All pH readings fell within the permitted range of 6.7 to 8.5 s.u. Linear trends for both the minimum and maximum values suggest that there is no significant deviation in water quality with respect to pH. A graph of reported pH concentrations is presented on Figure 4-3.

4.4.4 Total Dissolved Solids

TDS is monitored daily at EFF-1 and reported monthly. A gradual increase in TDS concentrations is evident over time, initially reported at 8,100 mg/L in early 2004, and rising up to 14,627 mg/L in October of 2008. Inconsistencies along this trend are attributed to seasonal changes in water quality during the dry and wet seasons. Previous data, recorded from August of 1999 to June of 2004, showed TDS concentrations ranging between 7,531 mg/L to 11,385 mg/L. TDS concentrations are plotted on Figure 4-4.

4.4.5 Total Fluoride

Total fluoride is monitored quarterly at SWD-1A. All reported values for total fluoride were below the permitted maximum value of 5.0 mg/L. Concentrations ranged from 0.05 mg/L to 2.04 mg/L. Historical monitoring results for the discharged water indicate low fluoride activity. Total fluoride concentrations are plotted on Figure 4-5.

4.4.6 Gross Alpha and Combined Radium 226 & 228

From July 1999 to December 2007, the City collected the quarterly radiochemistry data at the edge of the mixing zone as defined at sample point SWD-2. In January of 2008, the FDEP replaced sample point SWD-2 with sample point EFF-1 for radiochemistry monitoring to comply with the EPA's directives.

The initial monitoring results (first and second quarters of 2004) for gross alpha were below the detection limit. In the period from 2004 through 2007, gross alpha concentrations ranged from 1.37 picocuries per liter (pCi/L) to 18.00 pCi/L. An anomalous value of -9.36 pCi/L was reported in October of 2004. The historical high for gross alpha, 18.00 pCi/L, was reported in the third quarter of 2006.

In the two years since changing the sampling point location from SWD-2 to EFF-1, gross alpha concentrations have increased significantly, ranging from 82.0 pCi/L to 190.0 pCi/L. The maximum allowable limit for gross alpha concentrations is 15.0 pCi/L.

Gross alpha is a problematic regulatory parameter to monitor considering the high degree of analytical uncertainty as results can be affected by salinity (e.g. highest values reported during the dry season when movement of salt water up the Caloosahatchee River occurs). Of note, as part of the 1999 permit renewal, gross alpha analysis for samples collected at Bimini Basin (an unaffected background site) indicated gross alpha concentrations well above the limit for Class III marine waters.

Historical monitoring results for combined radium 226 & 228 follow a trend that is similar to that of gross alpha. In the period from 2004 thru 2007, concentrations of combined radium 226 & 228 in fourteen of the sixteen samples were below the limit for Class III marine waters. During this period, two samples did contain concentrations of combined radium 226 & 228 above the maximum limit. In March of 2005, a concentration of 17.35 pCi/L was reported, and in August of 2006, a concentration of 11.60 pCi/L was reported. A high of 55.3 pCi/L for combined radium 226 & 228 was reported for water samples collected at sample point EFF-1. The maximum allowable limit for combined radium 226 & 228 is 5.0 pCi/L. Both combined radium 226 & 228 and gross alpha concentrations are plotted on Figure 4-6.

Due to the historic variability of analytical results for these radionuclides gross alpha and radium 226 & 228, and the fact that a reclassification of the system as a secondary disposal system utilized for backup disposal only, a reinstatement of the original sampling point location (SWD-2) at the edge of the mixing zone between the saltwater canal system and the Caloosahatchee River is justified. The request for a variance is being submitted in accordance with rule 62-650.500(5) of the F.A.C.

4.4.7 Acute Toxicity

Bi-annually, water samples are collected at EFF-1 for a 96-hour acute toxicity test. *Mysidopsis Bahia* and *Menidia Beryllina* are EPA-approved species used in acute toxicity testing over a 96-hour period. These tests are based on the lethal concentration limit (LC50), which is a statistically derived concentration in water that can be expected to cause death in 50 percent of the organisms exposed. When reporting acute toxicity results, if more than 50% mortality occurs, results are reported as less than (<) 100%, conversely, if 50% or less mortality occurs, then the results are reported as greater than (>) 100%. The acute toxicity results are in compliance with FAC 62-4-244(3).

From January 2004 to February 2009, the reported survival rates for *Mysidopsis Bahia* were all passing. However, in January 2006, a survival rate <100% was reported. Since all previously results were >100%, the result was suspect. An additional test was done in late January 2006 and the result was reported as >100%.

Survival rates for *Menidia Beryllina* were all passing for samples collected between January 2004 and February 2009.

4.4.8 Copper

Copper is an additional monitoring constituent that was added to the permit by the FDEP beginning in January of 2008. Copper was not included in the original list of parameters for background water quality analyses conducted in February of 1997 at Bimini Basin, therefore, a comparison of water quality for copper to a baseline copper concentration is not possible.

The initial monitoring results (January, February, and March of 2008) for copper were below the method detection limit (MDL). January data reported copper concentrations less than 1.0 µg/L. Analytical results for copper during the February-2008 and March-2008 sampling events indicated concentrations below the MDL, however, the MDL used for these tests was 10 µg/L, therefore it cannot be demonstrated that the allowable limit of 3.7 µg/L was exceeded. All subsequent analyses for copper were based on analyses capable of a 1.0-µg/L detection limit. In the period from April 2008 thru March 2009, copper concentrations ranged from 2.2 µg/L to 96.9 µg/L (Table 2). Copper concentrations are plotted on Figure 4-7.

Although the permit requires that copper be sampled at only EFF-1, beginning in June of 2008, the plant began taking additional samples at SWD-1A. A comparison of the 25 available pairs of analytical results from EFF-1 and SWD-1A indicates that EFF-1 had only six values below 3.7 µg/L, compared to the 20 samples reported below 3.7 µg/L at SWD-1A (see Figure 4-7). From January to March 2009, the three values at SWD-1A ranged from 33.0 to 86.6 µg/L. This increase is attributed to the lack of precipitation in the region and, as a result, limited flushing of Lake Finisterre and the surrounding canal system. The possible influence of sources of copper other than the City's effluent into Lake Finisterre is indicated by the lower concentrations measured at EFF-1 than at SWD-1A in the two sample pairs collected from February and March of 2009. An additional potential source of copper is leachate from treated lumber commonly used in the construction of docks.

The plant does not currently have a treatment process or resource to reduce the levels of copper. The monitoring of copper concentrations in the plant's disposal water has only recently been initiated; therefore, there is no historical data to establish concentration trends. A change from the point of discharge EFF-1 to sample location SWD-1A could facilitate the effluent discharge copper concentrations meeting current water quality standards.

4.4.9 Total Nitrogen and Total Phosphorus

In addition to copper, quarterly sampling for total nitrogen and total phosphorus were added to the permit in January of 2008. As with copper, there is limited data currently available and no baseline concentrations for these two constituents since this permit mandate occurred within the last two years. Of the eight samples collected to date, total nitrogen concentrations ranged from 1.5 mg/L to 2.2 mg/L, and total phosphorus concentrations ranged from 0.053 mg/L to 0.32 mg/L.

Conclusions and Recommendations

5.1 CONCLUSIONS

The following conclusions and recommendations for adjustment of the system are suggested to help optimize operations:

- It is requested to increase the current permitted volume to 4.05 MGD, which is an increase of 1.0 MGD. The future discharges via EFF-1 will be greatly reduced with the placement in service of the deep injection well located at the WTP. The operational program planned for the deep injection well is such that when mechanical integrity testing is required, the injection well may be off-line for a period of three to five days every two to five years.
- The City is requesting that the discharge permit be renewed and the system reclassified as a secondary system that is operated for up to 16 hours per week to prevent the system from biological fouling (i.e. maintenance), and as an emergency backup system to the deep injection well.
- Based on a review of water quality records, the effluent discharge usually meets all of the standards set forth by the FDEP in the permit's limiting and specific conditions. Two parameter standards were exceeded on one occasion in the past. Hydrogen sulfide exceeded standards once and was attributed to a high chlorine demand at the plant. *Mysidopsis Bahia* was also exceeded once, but the test immediately following the violation came back as passing. These issues should not present a problem since it has not been a common occurrence.
- Concentrations of the radionuclides gross alpha and combined radium 226 & 228 in the effluent discharge have regularly exceeded water quality standard limits. Since sampling for radionuclides at the newly-established sampling point EFF-1, gross alpha concentrations have risen sharply, ranging from 82.0 pCi/L to 190.0 pCi/L. Similarly, since monitoring for combined radium 226 & 228 at EFF-1, a high of 55.3 pCi/L was reported. A reinstatement of the original sampling point SWD-2 is requested given the historical variability of analytical results for these radionuclides and the fact that this system is being reclassified as a secondary (backup) disposal system.
- Copper concentrations in the effluent discharge have recently exceeded the water quality standard for this parameter. Monitoring of copper in the effluent discharge has only recently been initiated; therefore, there is no historical data to use in establishing conditional trends. Re-establishing sampling location SWD-1A for monitoring copper should allow the City to meet current water quality standard limits.

5.2 RECOMMENDATIONS

- In order to prevent the system (secondary) from biological fouling, a protocol will be developed and presented to the FDEP to operate weekly for up to 16 hours.
- The City will develop a maintenance schedule to be used while the secondary disposal system is offline.

- Sampling location SWD-2 should be re-established for monitoring radionuclides.
- Salinity analysis (i.e. total dissolved solids) should be performed concurrently with radionuclide monitoring by the contract laboratory for each surface water sample collected from the Caloosahatchee River sampling site (SWD-2).
- Sampling location SWD-1A should be re-established for monitoring copper.

References

6.1 REFERENCE LIST

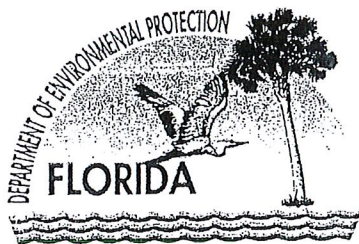
Water Resource Solutions, Inc. (WRS), November, 2003. City of Cape Coral Industrial Discharge (Reverse Osmosis Concentrate) Permit Renewal Application and Supporting Documentation.

Cardno ENTRIX, May, 2009. Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number AO-045-SD City of Cape Coral RO WTP Concentrate.

APPENDIX A

**Existing Operation Permit (State of
Florida Industrial Wastewater Facility
Permit)**

RECEIVED
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D.E.P. South District



Florida Department of Environmental Protection

South District
P.O. Box 2549
Fort Myers, Florida 33902-2549

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

COPY

STATE OF FLORIDA INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:

City of Cape Coral
P.O. Box 150027
Cape Coral, FL 33915

PERMIT NUMBER:

FL0040088 (Minor)

PA FILE NUMBER:

FL0040088-003-IW5A

ISSUANCE DATE:

November 27, 2007

EXPIRATION DATE:

November 26, 2012

RESPONSIBLE AUTHORITY:

Mr. Charles Pavlos, P.E.
Public Works Director

FACILITY:

City of Cape Coral RO WTP Concentrate
3300 SW 20th Avenue
Cape Coral, FL 33915
Lee County

Latitude: 26° 35' 25" N Longitude: 82° 01' 02" W

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.) and applicable rules of the Florida Administrative Code (F.A.C.), and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System (NPDES). This permit is accompanied by an Administrative Order pursuant to paragraphs 403.088(2)(e) and (f), Florida Statutes. Compliance with Administrative Order AO-045-SD is a specific requirement of this permit. The above named permittee is hereby authorized to operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

An existing 3.05 million gallons per day (MGD) demineralization concentrate treatment and disposal facility serving a reverse osmosis (RO) drinking water treatment plant for the City of Cape Coral.

WASTEWATER TREATMENT:

Treatment of the concentrate includes: oxidation through the use of a sodium hypochlorite feed system and aeration to remove hydrogen sulfide and to increase oxygen; and pH adjustment by a sodium hydroxide feed system. The concentrate discharges through Outfall - D001 into a ponded section of the Marauder Canal.

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PERMITTEE:
City of Cape Coral Utilities Div
P.O. Box 150027
Cape Coral, FL 33915

PERMIT NUMBER: FL0040088
PA FILE NUMBER: FL0040088-003-IW5A

EFFLUENT DISPOSAL:

Surface Water Discharge:

The demineralization concentrate discharges into the Marauder Canal, a Class III Marine surface water body, through a submerged multiport rapid rate diffuser system. The diffuser system is 360 feet in length consisting of 10 four-inch discharge ports, which runs along the bottom of the canal. The D-001 outfall is located approximately at latitude 26° 35' 10" N, longitude 82° 01' 35" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions as set forth in Part I through Part VIII on pages 2 through 16 of this permit.

PERMITTEE:
City of Cape Coral Utilities Div
P.O. Box 150027
Cape Coral, FL 33915

PERMIT NUMBER: FL0040088
PA FILE NUMBER: FL0040088-003-IW5A

I. Effluent Limitations and Monitoring Requirements

A. Surface Water Discharges

- During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge demineralization concentrate from the City Of Cape Coral reverse osmosis drinking water treatment plant through Outfall D-001. Such discharge shall be limited and monitored by the permittee as specified below:

Parameters (units)	Discharge Limitations			Monitoring Requirements		
	Single Sample	Daily Maximum	Daily Minimum	Monitoring Frequency	Sample Type	Sample Point
Flow (MGD)	--	3.05	--	Daily	Meter	EFF-1
Chlorine, Total Residual (MG/L)	--	0.01	--	Daily	Grab	EFF-1
Hydrogen sulfide (MG/L)	--	0.01	--	Daily	Grab	EFF-1
Oxygen, Dissolved (DO) (MG/L) ¹	See Permit Condition I.A.4			Daily	Grab	EFF-1
pH (SU)	--	8.5	6.7	Daily	Grab	EFF-1
Copper, Total Recoverable (UG/L)	--	3.7	--	Monthly	Grab	EFF-1
Solids, Total Dissolved (TDS) (MG/L)	--	Report	--	Monthly	Grab	EFF-1
Nitrogen, Total (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Phosphorus, Total (as P) (MG/L)	--	Report	--	Quarterly	Grab	EFF-1
Radium 226 + Radium 228, Total (PCI/L) ²	--	5.0	--	Quarterly	Grab	EFF-1
Alpha, Gross Particle Activity (PCI/L) ³	--	15.0	--	Quarterly	Grab	EFF-1
Fluoride, Total (as F) (MG/L)	--	5.0	--	Quarterly	Grab	SWD-1
Whole Effluent Toxicity (Acute) ⁴	See Permit Condition I.A.3					EFF-1

- Effluent samples shall be taken at the monitoring site locations listed in permit condition I.A.1 and as described below:

Sample Point	Description of Monitoring Location
--------------	------------------------------------

¹ Dissolved Oxygen shall not have a daily average concentration less than 5.0 mg/l and never have a single concentration of less than 4.0 mg/l

² Administrative Order AO-045-SD establishes an interim limitation of REPORT, pursuant to the conditions of the Order

³ Administrative Order AO-045-SD establishes an interim limitation of REPORT, pursuant to the conditions of the Order

⁴ Administrative Order AO-045-SD establishes an interim limitation of LC50>30%, pursuant to the conditions of the Order

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Sample Point	Description of Monitoring Location
EFF-1	The effluent shall be sampled after final treatment but prior to discharge to the receiving water.
SWD-1	At the edge of the 12 foot mixing zone.

3. The permittee shall comply with the following requirements to evaluate acute whole effluent toxicity of the discharge from outfall D-001.
- a. Effluent Limitation
- (1) Whole effluent acute toxicity shall not exceed in any "routine" or in any "additional follow-up" test an LC50 of less than 100% effluent. [Rule 62-302.200(1), Rule 62-302.500(1)(a)4., and Rule 62-4.244(3)(a), F.A.C.]
- b. Monitoring Frequency
- (1) "Routine" toxicity tests shall be conducted once every six months, the first starting in within 60 days of the issuance of the permit, and lasting for the duration of this permit unless a reduction in the frequency of monitoring is granted in writing by the Department.
- (2) Upon completion of six consecutive, valid "routine" tests that demonstrate compliance with the effluent limitation in 3.a.(1) above, the permittee may submit a written request to the Department for a reduction in monitoring frequency. The Department shall review this request within 45 days of receipt and approve or deny the request in writing. Materials submitted to the Department for review should include a summary of the data and the complete bioassay reports for all tests being considered. In no case shall the frequency of monitoring be reduced to less than annually. Requested reductions in monitoring shall only become effective upon Department approval.
- (3) If a test within the sequence of the six is deemed invalid, but is replaced by a repeat valid test initiated within seven days of the invalidation, the invalid test will not be counted against the requirement for six consecutive valid tests for the purpose of evaluating the reduction of monitoring frequency. If two or more invalidations occur, this provision does not apply.
- c. Test Requirements
- (1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100 %, 50 %, 25 %, 12.5 % and 6.25 % effluent.
- (2) Additional Follow-up Tests, if required:
- (a) If a routine test does not meet the acute toxicity limitation in 3.a.(1) above, the permittee shall conduct two additional follow-up tests on each species that failed the test.
- (b) The first and second additional follow-up tests shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5% and 6.25% effluent. All test results shall be statistically analyzed according to the Appendices in EPA-821-R-02-012.
- (c) The first test shall be initiated within two weeks of the end of the failed routine test. The remaining additional follow-up tests shall be conducted weekly thereafter until a total of two valid additional follow-up tests are completed.
- (3) The permittee shall conduct 96-hour acute static renewal toxicity tests using the mysid, *Americamysis (Mysidopsis) bahia*, and the inland silverside, *Menidia beryllina*, concurrently.
- (4) All test species, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct acute toxicity testing in accordance with the revised method.
- (5) The control water and dilution water used shall be artificial seawater and diluted to the test salinity as described in EPA-821-R-02-012, Section 7.2.4. The test salinity shall be determined as follows:
- (a) When the salinity of the effluent is between 1 and 7 parts per thousand (ppt), the following salinity adjustment shall be used. For the *A. bahia* bioassays, the effluent and the control (0% effluent)

PERMITTEE:
City of Cape Coral Utilities Div
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Cape Coral, FL 33915

PERMIT NUMBER: FL0040088
PA FILE NUMBER: FL0040088-003-IW5A

shall be adjusted to a salinity of 6-7 ppt for the 100% effluent test using artificial sea salts. No salinity adjustment shall be done for the *M. beryllina* bioassay test. The salinity of the control/dilution water (0% effluent) shall match the test salinity of the effluent.

- (b) When the salinity of the effluent is greater than 7 ppt, no salinity adjustment shall be made to the effluent and the test shall be run at the effluent salinity. The salinity of the control/dilution water (0% effluent) shall match the test salinity of the effluent.
- d. Sampling Requirements
 - (1) Routine tests shall be conducted on four separate grab samples collected at evenly-spaced (6-hr) intervals over a 24-hour period and used in four separate tests in order to catch any peaks of toxicity and to account for daily variations in effluent quality. If the duration of the discharge is less than 24-hours, the duration of discharge shall be documented on the chain of custody.
 - (2) For additional follow-up tests, the first test shall be conducted on four separate grab samples collected at evenly-spaced (6-hr) intervals over a 24-hour period. Each sample shall be run as a separate test. The second and third additional follow-up tests shall be run on a single grab sample collected on the day and time when the greatest toxicity was identified in the first additional follow-up test. Results for each additional test shall include the determination of LC50 values with 95% confidence limits.
- e. Quality Assurance Requirements
 - (1) A standard reference toxicant (SRT) quality assurance (QA) acute toxicity test shall be conducted with each species used in the required toxicity tests either concurrently or started no more than 30 days before the date of each routine or additional follow-up test conducted. The SRT-QA data shall be included in the reports for each companion routine or additional follow-up test required.
 - (2) If the mortality in the control (0% effluent) exceeds 10% for either species in any test, the test for that species (including the control) shall be invalidated and the test repeated.
 - (3) If, during any routine separate grab sample test, 100% mortality occurs prior to the end of the test and control mortality is less than 10% at that time, that test (including the control) shall be terminated with the conclusion that the test fails and constitutes non-compliance.
 - (4) Additional follow-up tests shall be evaluated for acceptability based on the concentration-response relationship, as required by EPA-821-R-02-012, Section 12.2.6.2., and included with the bioassay reports.
- f. Reporting Requirements
 - (1) Results from all required tests shall be reported on the Discharge Monitoring Report (DMR) as follows:
 - (a) Routine Test Results: If an LC50 > 100% effluent occurs in all four separate grab sample tests for the test species, ">100%" should be entered on the DMR for that test species. If in any of the four separate grab sample tests for the test species an LC50 < 100% effluent occurs, lowest calculated LC50 effluent concentration shall be entered on the DMR for that test species.
 - (b) Additional Follow-up Test Results: Report the calculated LC50 value for that test species and the 95% confidence limits.
 - (2) A bioassay laboratory report for the routine test shall be prepared according to EPA-821-R-02-012, Section 12, Report Preparation and Test Review, and mailed to the Department at the address below within 30 days of the completion of the test.
 - (3) For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-012, Section 12, and mailed within 45 days of completion of the second valid additional follow-up test. If any additional follow-up test or two consecutive routine tests do not meet the effluent limitation specified in 3.a.(1) above, the permittee shall contact the Department within 30 days of the laboratory report submittal to discuss the corrective actions necessary to remedy the observed acute toxicity.
 - (4) All bioassay reports shall be sent to:
Florida Department of Environmental Protection
South District Office
Post Office Box 2549

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4. Dissolved oxygen shall not have a daily average concentration less than 5.0 mg/l and never have a single sample concentration of less than 4.0 mg/l.
5. There shall be no discharge of floating solids or visible foam in other than trace amounts.
6. The discharge shall not cause a visible sheen on the receiving water.

B. Underground Injection Control Systems

1. This section is not applicable to this facility.

C. Land Application Systems

1. This section is not applicable to this facility.

D. Other Methods of Disposal or Recycling

1. There shall be no discharge of industrial wastewater from this facility to ground or surface waters, except as authorized by this permit.

E. Other Limitations and Monitoring and Reporting Requirements

1. The sample collection, analytical test methods and method detection limits (MDLs) applicable to this permit shall be in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs (method detection limits) and PQLs (practical quantification limits), which is titled "Florida Department of Environmental Protection Table as Required By Rule 62-4.246(4) Testing Methods for Discharges to Surface Water" dated June 21, 1996, is available from the Department on request. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:
 - a. The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;
 - b. The laboratory reported PQL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide a PQL, which is equal to or less than the applicable water quality criteria stated in 62-302 FAC; and
 - c. If the PQLs for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest stated PQL shall be used.

Where the analytical results are below method detection or practical quantification limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. However, where necessary, the permittee may request approval for alternative methods or for alternative MDLs and PQLs for any approved analytical method, in accordance with the criteria of Rules 62-160.520 and 62-160.530, F.A.C.

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2. Parameters which must be monitored as a result of a surface water discharge shall be analyzed using a sufficiently sensitive method in accordance with 40 CFR Part 136.
3. Monitoring requirements under this permit are effective on the first day of the second month following permit issuance. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any. During the period of operation authorized by this permit, the permittee shall complete and submit to the South District Office Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e., monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below.

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

DMRs shall be submitted for each required monitoring period including months of no discharge.

The permittee shall make copies of the attached DMR form(s) and shall submit the completed DMR form(s) to the Department at the address specified below:

Florida Department of Environmental Protection
Wastewater Compliance Evaluation Section, Mail Station 3551
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

4. Unless specified otherwise in this permit, all reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to the South District Office at the address specified below:

South District Office
Post Office Box 2549
Fort Myers, FL 33902-2549

Phone Number - (239) 332-6975
FAX Number - (239) 332-6969 (All FAX copies shall be followed by original copies.)

5. All reports and other information shall be signed in accordance with requirements of Rule 62-620.305, F.A.C.
6. The permittee shall provide safe access points for obtaining representative samples, which are required by this permit.

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7. If there is no discharge from the facility on a day scheduled for sampling, the sample shall be collected on the day of the next discharge.
8. Any bypass of the treatment facility which is not included in the monitoring specified in sections I.A, I.B, I.C, or I.D, is to be monitored for flow and all other required parameters. For parameters other than flow, at least one grab sample per day shall be monitored. Daily flow shall be monitored or estimated, as appropriate, to obtain reportable data. All monitoring results shall be reported on the appropriate DMR.

II. Industrial Sludge Management Requirements

1. This section not applicable to this facility.

III. Ground Water Monitoring Requirements

1. This section is not applicable to this facility.

IV. Other Land Application Requirements

1. This section is not applicable to this facility.

V. Operation and Maintenance Requirements

A. Operation of Treatment and Disposal Facilities

1. The permittee shall ensure that the operation of this facility is as described in the application and supporting documents.
2. The operation of the pollution control facilities described in this permit shall be under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control.

B. Record keeping Requirements:

1. The permittee shall maintain the following records on the site of the permitted facility and make them available for inspection:
 - a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
 - b. Copies of all reports, other than those required in items a. and f. of this section, required by the permit for at least three years from the date the report was prepared, unless otherwise specified by Department rule;
 - c. Records of all data, including reports and documents used to complete the application for the permit for at least three years from the date the application was filed, unless otherwise specified by Department rule;
 - d. A copy of the current permit;
 - e. A copy of any required record drawings;
 - f. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date on the logs or schedule.

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VI. Schedules

1. A Best Management Practices (BMP) Plan shall be prepared and implemented in accordance with Part VII of this permit and the following schedule:

Action Item		Scheduled Completion Date
1	Continue implementing the existing BMP plan	Issuance Date of Permit

2. A compliance schedule for this facility is included in an Administrative Order, which is attached to this permit. The permittee shall comply with the terms and conditions of this order.

VII. Other Specific Conditions

A. Specific Conditions Applicable to All Permits

1. Drawings, plans, documents or specifications submitted by the permittee, not attached hereto, but retained on file at the South District Office, are made a part hereof.
2. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) Florida Statutes, applicable portions of reports to be submitted under this permit, shall be signed and sealed by the professional(s) who prepared them.
3. This permit satisfies Industrial Wastewater program permitting requirements only and does not authorize operation of this facility prior to obtaining any other permits required by local, state or federal agencies.

B. Specific Conditions Related to Construction

1. This section is not applicable to this facility.

C. Duty to Reapply

1. The permittee shall submit an application to renew this permit at least 180 days before the expiration date of this permit.
2. The permittee shall apply for renewal of this permit on the appropriate form listed in Rule 62-620.910, F.A.C., and in the manner established in Chapter 62-620, F.A.C., and the Department of Environmental Protection Guide to Wastewater Permitting including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.
3. An application filed in accordance with subsections 1. and 2. of this part shall be considered timely and sufficient. When an application for renewal of a permit is timely and sufficient, the existing permit shall not expire until the Department has taken final action on the application for renewal or until the last day for seeking judicial review of the agency order or a later date fixed by order of the reviewing court.
4. The late submittal of a renewal application shall be considered timely and sufficient for the purpose of extending the effectiveness of the expiring permit only if it is submitted and made complete before the expiration date.

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D. Specific Conditions Related to Best Management Practices

1. BMP Plan:

For purposes of this part, the terms "pollutant" or "pollutants" refer to any substance listed as toxic under Section 307(a)(1) of the Clean Water Act (the "Act"), oil, as defined in Section 311(a)(1) of the Act, and any substance listed as hazardous under Section 311 of the Act. The permittee shall develop and implement a Best Management Practices (BMP) plan which prevents, or minimizes, the potential for the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations; and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. Implementation:

The BMP plan shall be developed and implemented in accordance with the schedule contained in Part VI of this permit.

3. General Requirements:

The BMP plan shall:

- a. Be documented in narrative form, and shall include any necessary plot plans, drawings or maps.
- b. Establish specific objectives for the control of pollutants.
 - (1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.
 - (2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural conditions (e.g., precipitation), or other circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.
- c. Establish specific best management practices to meet the objectives identified under paragraph (b) of this subsection, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented.
- d. Be reviewed by plant engineering staff and plant manager.

4. Documentation:

The permittee shall maintain the BMP plan at the facility and shall make the plan available to the Department upon request.

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5. **BMP Plan Modification:**

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility, which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

6. **Modification for Ineffectiveness:**

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of significant amounts of pollutants to surface waters and the specific objectives and requirements under paragraphs (b) and (c) of item 3, the permit shall be subject to modification pursuant to rule 62-620.325, F.A.C., to incorporate revised BMP requirements.

E. **Specific Conditions Related to Existing Manufacturing, Commercial, Mining, and Silviculture Wastewater Facilities or Activities**

1. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe:
 - a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
 - (1) One hundred micrograms per liter,
 - (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter for antimony, or
 - (3) Five times the maximum concentration value reported for that pollutant in the permit application.
 - b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels
 - (1) Five hundred micrograms per liter,
 - (2) One milligram per liter for antimony, or
 - (3) Ten times the maximum concentration value reported for that pollutant in the permit application.

F. **Reopener Clause**

1. The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345 F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standards, limitations, or water quality standards so issued or approved:
 - a. Contains different conditions or is otherwise more stringent than any condition in the permit/or;
 - b. Controls any pollutant not addressed in the permit.

The permit as revised or reissued under this paragraph shall contain any other requirements then applicable.

2. The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

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3. The Department may develop a Total Maximum Daily Load (TMDL) during the life of the permit. Once a TMDL has been established and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL.

VIII. General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, F.S. Any permit noncompliance constitutes a violation of Chapter 403, F.S., and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1), F.A.C.]*
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 constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2), F.A.C.]*
3. As provided in Subsection 403.087(6), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringements of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3), F.A.C.]*
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4), F.A.C.]*
5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5), F.A.C.]*
6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6), F.A.C.]*
7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7), F.A.C.]*
8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8), F.A.C.]*
9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to

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c. Steps being taken to prevent future occurrence of the noncompliance.
[62-620.610(17), F.A.C.]

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate.

- a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10).
- b. If the permittee monitors any contaminate more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- c. Calculations for all limitations, which require averaging of measurements, shall use an arithmetic mean unless otherwise specified in this permit.
- d. Any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health (DOH) under Chapter 64E-1, F.A.C., where such certification is required by Rule 62-160.300(4), F.A.C. The laboratory must be certified for any specific method and analyte combination that is used to comply with this permit. For domestic wastewater facilities, the on-site test procedures specified in Rule 62-160.300(4), F.A.C., shall be performed by a laboratory certified test for those parameters or under the direction of an operator certified under Chapter 62-602, F.A.C.
- e. Fields activities including on-site tests and sample collection, whether performed by a laboratory or a certified operator, must follow the applicable procedures described in DEP-SOP-001/01 (January 2002). Alternate field procedures and laboratory methods may be used where they have been approved according to the requirements of Rules 62-160.220, 62-160.330, and 62-160.600, F.A.C.
[62-620.610(18), F.A.C.]

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19), F.A.C.]*

20. The permittee shall report to the Department's South District Office any noncompliance, which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- a. The following shall be included as information, which must be reported within 24 hours under this condition:
 - (1) Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,
 - (2) Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
 - (4) Any unauthorized discharge to surface or ground waters.
- b. Oral reports as required by this subsection shall be provided as follows:
 - (1) For unauthorized releases or spills of untreated or treated wastewater reported pursuant to subparagraph a.4 that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:
 - (a) Name, address, and telephone number of person reporting;
 - (b) Name, address, and telephone number of permittee or responsible person for the discharge;
 - (c) Date and time of the discharge and status of discharge (ongoing or ceased);

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- (d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);
 - (e) Estimated amount of the discharge;
 - (f) Location or address of the discharge;
 - (g) Source and cause of the discharge;
 - (h) Whether the discharge was contained on-site, and cleanup actions taken to date;
 - (i) Description of area affected by the discharge, including name of water body affected, if any; and
 - (j) Other persons or agencies contacted.
- (2) Oral reports, not otherwise required to be provided pursuant to subparagraph b (1) above, shall be provided to Department's South District Office within 24 hours from the time the permittee becomes aware of the circumstances.
- c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department's South District Office shall waive the written report.
- [62-620.610(20), F.A.C.]

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

22. Bypass Provisions.

- a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:
 - (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - (3) The permittee submitted notices as required under Condition VIII.22.b. of this permit.
 - b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Condition VIII.20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
 - c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Condition VIII.22 a. (1) through (3) of this permit.
 - d. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Condition VIII.22.a. through c. of this permit.
- [62-620.610(22), F.A.C.]

23. Upset Provisions

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

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- c. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.
[62-620.610(23), F.A.C.]

Executed in Fort Myers.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION


Jon M. Iglehart
Acting Director of
District Management

DATE:

JMI/DLN/pjr

APPENDIX B

Operation Permit Renewal Application

RECEIVED
AUG 01 2011
D.E.P. South District



WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

This form must be completed by all persons applying for a permit for a wastewater facility or activity under Chapter 62-620, F.A.C. See Form 1 to determine which other application forms you will need.

RECEIVED
AUG 01 2011
D.E.P. South District



WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

I - IDENTIFICATION NUMBER:

Facility ID 5236M02011

II - CHARACTERISTICS:

INSTRUCTIONS: Complete the questions below to determine whether you need to submit any permit application forms to the Department of Environmental Protection. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the blank in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements. See Section B of the instructions. See also, Section C of the instructions for definitions of the terms used here.

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a domestic wastewater facility which results in a discharge to surface or ground waters?		X	
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters?		X	
C. Does or will this facility (other than those describe in A. or B.) discharge process wastewater, or non-process wastewater regulated by effluent guidelines or new source performance standards, to surface waters?		X	
D. Does or will this facility (other than those described in A. or B.) discharge process wastewater to ground waters?		X	
E. Does or will this facility discharge non-process wastewater, not regulated by effluent guidelines or new source performance standards, to surface waters?		X	
F. Does or will this facility discharge non-process wastewater to ground waters?		X	
G. Does or will this facility discharge stormwater associated with industrial activity to surface waters?		X	
H. Is this facility a non-discharging/closed loop recycle system?		X	
I. Is this facility a public water system whose primary purpose is the production of potable water for public consumption and which discharges demineralization concentrate to surface water or groundwater?	X		2DC

III - NAME OF FACILITY: (80 characters and spaces)

City of Cape Coral Reverse Osmosis Treat

RECEIVED
AUG 01 2011
D.E.P. South District

IV - FACILITY CONTACT: (A. 30 characters and spaces)

A. Name and Title (Last, first, & title)	B. Phone (area code & no.)
Kopko, Shawn Water Production Superinten	(239)574-0880

V - FACILITY MAILING ADDRESS: (A. 30 characters and spaces; B. 25 characters and spaces)

A. Street or P.O. Box: P.O. Box 150027		
B. City or Town: City of Cape Coral	State: FL	Zip Code: 33915

VI - FACILITY LOCATION: (A. 30 characters and spaces; B. 24 characters and spaces; C. 3 spaces (if known); D. 25 characters and spaces; E. 2 spaces; F. 9 spaces)

A. Street, Route or Other Specific Identifier: 3300 SW 20 th Avenue		
B. County Name: Lee	C. County Code (if known):	
D. City or Town: City of Cape Coral	E. State: FL	F. Zip Code: 33915

VII - SIC CODES: (4-digit, in order of priority)

1. Code #: 4941	(Specify) Water Supply	2. Code #:	(Specify)
3. Code #:	(Specify)	4. Code #:	(Specify)

VIII - OPERATOR INFORMATION: (A. 40 characters and spaces; B. 1 character; C. 1 character (if other, specify); D. 12 characters; E. 30 characters and spaces; F. 25 characters and spaces; G. 2 characters; H. 9 characters)

A. Name: City of Cape Coral Utilities Di		B. Is the name in VIII A. the owner? ☒ Yes ☐ No	
C. Status of Operator: F = Federal; S = State; P = Private; O = Other; M = Public (other than F or S)	(code) M	(specify) City	D. Phone No.: (239) 574-0710
E. Street or P. O. Box: P.O. Box 150027			
F. City or Town: City of Cape Coral		G. State: FL	H. Zip Code: 33915

IX - INDIAN LAND:

A. Is the facility located on Indian lands?	☐ Yes ☒ No
---	---

X - EXISTING ENVIRONMENTAL PERMITS:

A. NPDES Permit No.	B. UIC Permit No.	C. Other (specify)	D. Other (specify)
FL0040088	254598-001-UC/II		

XI - MAP: Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII - NATURE OF BUSINESS (provide a brief description)

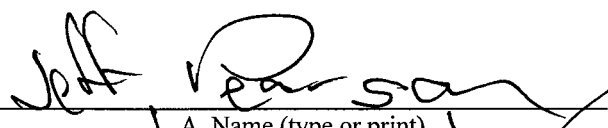
The City of Cape Coral Reverse Osmosis Water Treatment Plant serves approximately 100,000 persons potable water supply.

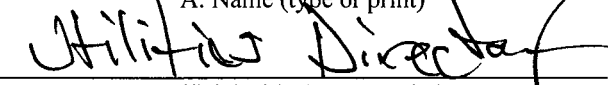
The brackish feedwater is supplied from the Floridan Aquifer

The concentrate (reject water) generated by the treatment process is discharged to a Class III marine surface water.

XIII - CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.


 A. Name (type or print) _____


 Official Title (type or print) _____


 B. Signature _____

7/7/11
 C. Date Signed _____



PERMIT APPLICATION FORM 2DC

PERMIT TO DISCHARGE
DEMINERALIZATION CONCENTRATE

INSTRUCTIONS - FORM 2DC

This form must be completed by all applicants who check "yes" to Item II.I in DEP Form 62-620.910(1).

Public Availability of Submitted Information.

You may not claim as confidential any information required by this form or DEP Form 62-620.910(1) ("Form 1"), whether the information is reported on the forms or in an attachment. This information will be made available to the public upon request. Any information you submit to the Department which goes beyond that required by this form or Form 1 you may claim as confidential, but claims for information which is effluent data will be denied. If you do not assert a claim of confidentiality at the time of submitting the information, the Department may make the information public without further notice to you. Claims of confidentiality must be in accordance with Rule 62-620.302, Florida Administrative Code (F.A.C.).

Completeness

Your application will not be considered complete unless you answer every question on this form and on Form 1, in addition to meeting all other completeness requirements. If an item does not apply to you, enter "NA" (for "not applicable") to show that you considered the question. You may also need a Plan of Study (POS) to develop Water Quality Based Effluent Limitations (WQBEL) required by Chapter 62-650, F.A.C. Please contact the Department for information.

Definitions

All significant terms used in these instructions and in this form are defined in the glossary found in the General Instructions that accompany Form 1.

DEP ID Number

If you are applying for a renewal of an existing permit or for a substantial revision to an existing permit, fill in your DEP Identification Number at the top of each page of Form 2DC. You may copy this number directly from Item 1 of Form 1. If you are applying for a permit for a proposed facility, leave the DEP Identification Number blank. The Department will assign a number.

SECTION I FACILITY DESCRIPTION

1. **Size of Demineralization Discharge** Indicate whether the demineralization concentrate flow is less than 50,000 gallons per day or greater than or equal to 50,000 gallons per day. A facility that distributes potable water to two or more customers and has a concentrate discharge of less than 50,000 gallons per day is defined as a "Small Water Utility Business," pursuant to Section 403.0882, Florida Statutes (F.S.). This flow is determined as follows:
 - For existing facilities, use the average daily concentrate flow from the month in which the flow of drinking water produced by the facility was the maximum for the calendar year preceding submittal of the application.
 - For proposed facilities, use the estimated average daily concentrate flow from the month in which the flow of drinking water produced by the facility is projected to be the maximum.
2. **Application Type** Indicate whether this application is for construction of new facilities, for substantial modification of existing facilities requiring substantial revision of an existing facility permit, or for renewal of an existing facility permit. "Substantial modification" and "substantial revision" are defined in Rule 62-620.200, F.A.C. Application for minor modification of existing facilities shall be made on Form 1. "Minor modification" and "minor revision" are defined in Rule 62-620.200, F.A.C.
3. **Type of Demineralization Technology** Indicate the type of demineralization technology used at the subject facility. Certain types of demineralization technologies are listed in the definition of

demineralization concentrate in Rule 62-620.200, F.A.C. If a technology not listed in the definition is proposed or used at the subject facility, please describe the technology.

4. **Map or Aerial Photograph with process information** The figure submitted with Form 1 may be adapted for this item and must indicate the locations of all outfalls and discharge points.

5. **Line Drawing** The drawing must incorporate the following information:

- The line drawing should depict process flow for product water and wastewater/byproduct streams in your facility from source water to distribution and/or discharge. Similar or redundant operations may be grouped into a single process flow. The water balance should depict all significant flows or losses of water and wastewater/byproduct streams to products water, atmosphere, and discharge, and should be in terms of average and maximum flow. Use actual measurements whenever available; otherwise, use the best estimate.
- List all sources of wastewater to each discharge point. Operations may be described in general terms (for example, "filter backwash" or "RO concentrate"). Estimate the flow contributed by each source if no data are available. Indicate the size, flow rate, and retention time of each treatment unit, and describe the ultimate disposal of any solid or liquid wastes not discharged to ground water or surface water of the state.
- All chemical additives or biocides used in the water or wastewater/byproduct treatment processes at the facility must be indicated and Material Safety Data Sheet (MSDS) provided, with the requested information to provide a basis for the Department to evaluate potential toxicity and monitoring requirements.

SECTION II SOURCE WATER DESCRIPTION

1. **Source water information** Obtain source water identification data from engineering and/or geological studies water treatment facility development and permitting documentation. Document the information sources. Use the classifications of surface and ground waters of the state in Chapters 62-302 and 520, F.A.C., to determine source classification. Provide any additional classification information on the source water, such as National Estuary Program, Outstanding Florida Water, etc. Consult with Department Staff if the classification of the specific source(s) is not clear.
2. **Source water characterization** Analytical data characterizing the source water(s) for the demineralization facility are of key importance in evaluating demineralization concentrate discharge characteristics, particularly for new facilities that do not have historical operating data. The Department strongly recommends that Applicants consult with Department permitting Staff during the planning process for assistance in identifying acceptable types of source water characterization data. Acceptable source water characterization data may include: monitoring data from existing production wells to be used for the facility in the application, monitoring data from onsite test wells in the areas and at the depth intervals planned for production wells, and existing analytical results from nearby offsite production or test wells that can be demonstrated to provide representative data.

SECTION III TYPE OF DISPOSAL SYSTEM

1. **Type(s) of disposal system used by the facility** Identify all types of demineralization concentrate disposal systems for which the application is submitted, whether the system is used continuously or intermittently.
2. **Complete description of the disposal systems** Describe the operations, methods of conveyance, types of equipment, treatment processes, and other relevant information regarding the means by which demineralization concentrate is disposed. If concentrate is mixed or blended with other waste streams for disposal, described the activity in this section. Subsequent sections will require details for applicable mixing and blending.

3. **Surface water discharge information** Outfall numbers must correspond to outfall numbers in the figures required by Section I of this application.
- A. Outfall location. Obtain latitude and longitude from a USGS topographic map, GPS device, or other accurate means.
- B. Outfall design. Use data from engineering drawings for the facility and surveyed elevations and locations, if available. The minimum water depth at the POD must be based on mean low water elevation.
- C. Concentrate discharge flow. Express flow in million gallons/day (mgd).
- D. Minimum receiving water depth. This information, if applicable, may be obtained from the Department's Watershed Assessment Section (850-245-8449) or from the appropriate Department District office.
- E. New discharge. If either the facility or the individual discharge has not been previously permitted by the Department, it must be considered a new discharge. Additionally, if the individual discharge has been previously permitted, but the discharge characteristics have changed, it may be considered a new discharge. If the latter circumstance is the case, consult with the Department's District office before submitting this application.
- F. Expanded discharge. If the individual discharge has been previously permitted, but its flow or pollutant load has or will increase, the discharge is considered expanded.
- G. Antidegradation analysis requirements. New or expanded discharges are subject to the antidegradation requirements in Rules 62-302.300 and 62-4.242, F.A.C. In particular, applicants should be aware of requirements in paragraph 62-4.242(1)(d), F.A.C., for industrial wastewater dischargers. Discharges from Small Water Utility Businesses are presumed to be allowable and permissible pursuant to the criteria in Sections 403.0882(6)(a)1., 2., and 3., F.S., which are listed in Section IV of this form, provided that none of the conditions that overcome the presumption, as listed in Sections 403.0882(6)(b)1. through 7., F.S., are present. The Department strongly recommends that the Applicant discuss these requirements with the District office before submitting this application in order to make the permitting process more efficient.
- H. Demonstrate the discharge meets water quality criteria. The concentrate/effluent characterization analytical data required in Section V of this application must be compared to the water quality criteria in Chapter 62-302, F.A.C., to determine whether the discharge will meet the applicable criteria.
- I. Mixing zone for ionic imbalance toxicity or other parameters.
- As identified in Rule 62-4.244(3)(d), F.A.C., the term "ionic imbalance toxicity" refers only to the failure of whole effluent toxicity tests due predominantly to the presence of constituents naturally occurring in the source water, which are listed in Rule 62-4.244(3)(d), F.A.C. and Section 403.0882(4), F.S.. The maximum size of the mixing zone available under paragraph 62-4.244(3)(d), F.A.C., shall be no greater than two times the minimum natural water depth at the POD. (refer to sub-subparagraph 62-4.244(3)(d)1.b., F.A.C.). The Department strongly recommends that the Applicant discuss all mixing zone requests with the District office before submitting this application to make the permitting process more efficient. Additionally, the Department strongly recommends that Applicants discuss implementation of the Major Seawater Ion Imbalance Toxicity (MSIIT) protocol with the Department's Biology Section in Tallahassee prior to conducting MSIIT testing.
- (a) If the application requests a mixing zone as described in Section 403.0882(4), F.S. for acute toxicity based on ionic imbalance due predominantly to constituents naturally occurring in the source water, the applicant must provide the water depth pursuant to sub-subparagraph 62-4.244(3)(d)1.b., F.A.C., and the results of the MSIIT test procedure.

(b) If the applicant is requesting a mixing zone for acute toxicity based on ionic imbalance and the facility is a Small Water Utility Business, as defined in Section 403.0882, F.S., the mixing zone informational requirements in Section IV of this application must be completed.

(c) If the application is for an existing facility, but not a Small Water Utility Business, and a mixing zone is requested for acute toxicity under the specific provisions of paragraph 62-4.244(3)(d), F.A.C., which apply only to concentrate discharges permitted under subsection 62-620.625(6), F.A.C., then the Applicant must provide MSIIT documentation testing results, or approved alternative procedure results.

Note for discharge to Outstanding Florida Waters (OFWs): Pursuant to Section 403.061(11)(b), F.S., mixing zones for demineralization concentrate discharges are prohibited, except for chronic toxicity due to ionic imbalance under Section 403.0882(4), F.S., for facilities that are otherwise permissible under Section 403.0882, F.S. Section 403.061(11)(b), F.S., and Rule 62-4.244, F.A.C., do not allow mixing zones in OFWs for other constituents.

(d) If the application is for an existing facility and a mixing zone for acute toxicity based on ionic imbalance is not requested, but a mixing zone for any other parameter, including chronic toxicity, is requested, then the informational requirements of paragraph 62-4.244(3)(a), F.A.C. must be completed for each parameter for which a mixing zone is requested.

Note for new facilities: New facilities, which have not previously discharged and therefore have not had the opportunity to conduct toxicity testing, shall provide desktop calculations to evaluate ionic imbalance as part of the permit application package. If a permit is issued, the facility will be required by permit condition to conduct appropriate toxicity testing and provide the results of the MSIIT.

J. Bioassay toxicity testing data. Provide the requested information on all bioassay toxicity tests conducted on any discharge from the facility in the three years prior to this application, regardless of who conducted the testing.

K. Specific data for failed acute or chronic toxicity tests. If any of the toxicity tests in item III.3.J. failed, provide the requested data.

4. **Underground injection discharge information** All facilities that discharge by underground injection must obtain an underground injection control (UIC) permit, pursuant to the requirements of Chapter 62-528, F.A.C. Additionally, UIC permitted facilities that discharge demineralization concentrate may also be required to obtain a permit in accordance with subsection 62-620.625(6), F.A.C., and Section 403.0882, F.S., if underground injection is not the sole means of discharge for demineralization concentrate. The Department strongly recommends that Applicants with proposed UIC discharges contact the Ground Water Regulation Section in the Bureau of Water Facilities Regulation (850-245-8644) regarding UIC permitting requirements.

A. Identify all disposal systems. Indicate whether or not UIC is the sole disposal method. Identify all primary and backup disposal systems.

B. UIC well location. Provide street address, if applicable. Provide latitude and longitude, regardless of whether street address is applicable.

C. UIC well ID number. If the facility already has existing UIC wells, provide the identification number(s). If the facility has applied for a UIC permit, but has not yet been issued identification number(s), provide the permit application number. If a UIC permit application has not been submitted, indicate that an application number and permit number will be provided when available.

D. UIC discharge flow data. Provide the required data, as applicable, to three decimal places.

E. Basis of design flow. Enter the basis for the current design capacity, the proposed incremental design capacity, and the proposed total design capacity (e.g., annual average daily flow, maximum monthly average daily flow, three-month average daily flow) for the injection well facilities.

F. Injection continuous or intermittent. Self explanatory

5. **Land application requirements**

A. Type of land application system. Subsection 62-600.200, F.A.C., defines "land application" as the "reuse of reclaimed water or the utilization or disposal of effluents or wastewater residuals on, above, or into the surface of the ground through spray irrigation, land spreading, or other methods."

B. Size of application areas and rates. Provide the data in the appropriate units for each area.

C. Groundwater Quality Evaluation. The Applicant will need to demonstrate that applicable groundwater quality standards and criteria, pursuant to Chapter 62-520, F.A.C., will be achieved at the edge of an appropriate zone of discharge, pursuant to subsection 62-522.410(2), F.A.C. The demonstration may include monitoring data (for existing systems), calculations, modeling, or other engineering information. The Applicant must also provide the background water quality data for the receiving groundwater, as required by subparagraph 62-620.625(6)(a)10., F.A.C.

D. Existing or new discharge. If either the facility or the individual discharge has not been previously permitted by the Department, it must be considered a new discharge.

E. Blended land application discharge. Indicate the type of waste stream with which the concentrate discharge is blended. Note the references to other items within Section III of this application.

F. Design capacity. Provide the required data on discharge to the land application system, as applicable, to three decimal places.

G. Basis of design flow. Enter the basis for the current design capacity, the proposed incremental design capacity, and the proposed total design capacity (e.g., annual average daily flow, maximum monthly average daily flow, three-month average daily flow) for the land application facilities.

H. Land application continuous or intermittent. Self explanatory.

I. Underdrains and perimeter ditches.

a. Self explanatory.

b. If the land application system is underdrained, provide engineering and effluent characterization data on the discharge.

c. Self explanatory.

d. The response should be based on soil borings, ground water monitoring, modeling, or other site-specific evaluations.

e. Provide monitoring data (for existing systems), calculations, modeling, or other engineering information.

6. **Blending with reclaimed water** This disposal system involves blending (i.e., mixing) concentrate with reclaimed water, which is defined in Rule 62-600.200, F.A.C., as treated domestic wastewater that has "received at least secondary treatment and is reused after flowing out of a wastewater treatment facility." The term "reuse" is defined in Rule 62-600.200(68), F.A.C., as "the deliberate application of reclaimed water, in compliance with Department and District rules, for a beneficial purpose." The term "District" in this definition refers to water management districts. If the Applicant discharging demineralization concentrate (i.e., water treatment facility) is the same utility or entity as the facility discharging reclaimed water (i.e., wastewater treatment facility), then the Applicant (i.e. utility or other entity) must determine whether it prefers to obtain a separate discharge permit for the water treatment facility discharging concentrate or to revise the existing domestic wastewater facility permit for the facility discharging the reclaimed water.

Section III.6. items A-D require the Applicant (i.e., the concentrate facility owner) to provide documentation with this application demonstrating compliance with specific requirements of Rule 62-610.865, F.A.C. The documentation shall include a copy of a written agreement with the domestic wastewater facility (required by Rule 62-610.865, F.A.C.) on responsibility for project performance. It shall also include demonstration that concentrate storage, monitoring, and blend quality are in accordance with Rule 62-610.865, F.A.C.

7. **Blending at a Department permitted wastewater facility.** This disposal system involves blending or mixing concentrate with a domestic or industrial wastewater stream during treatment within a permitted wastewater treatment facility, or following treatment but prior to discharge. Blending of concentrate for purposes of treatment or disposal with wastewater from a Department permitted wastewater facility may require a separate permit unless the receiving wastewater facility permit is revised to incorporate all aspects of concentrate treatment or disposal, in accordance with the requirements of subsection 62-620.200 (F.A.C., to provide reasonable assurance that the discharge will meet applicable water quality standards.

A. Facility ID and permit number. Self explanatory.

B. Point of concentrate blending at wastewater facility. Describe the point at which concentrate is blended at the existing wastewater facility (e.g., into head works, into equalization tank, following primary treatment, effluent prior to discharge, etc.).

C. Permitted capacity of existing wastewater facility. Indicate the maximum design flow (permitted capacity) and averaging period (e.g., maximum daily flow, etc.).

D. Blend ratio. Self explanatory.

E. Blend characterization. Provide analytical data for the blend of concentrate and wastewater. The characterization should include constituents expected in both the concentrate and wastewater. The Department recommends that the Applicant consult with the District office to identify appropriate parameters for the characterization.

F. Copy of agreement. The documentation shall include a copy of a written agreement with the existing wastewater facility on operational protocols and division of responsibilities for project performance.

SECTION IV REQUIREMENTS FOR SMALL WATER UTILITY BUSINESSES

This section applies only to facilities that:

- a. meet the definition of Small Water Utility Businesses pursuant to sub-section 62-620.200, F.A.C., which is as follows: "Small Water Utility Business" means any facility that distributes potable water to two or more customers and discharges demineralization concentrate at a flow rate less than 50,000 gallons per day; and
- b. discharge to surface waters of the state.

1. **Meeting the presumption of allowability and permissibility** In this part of Section IV, the Applicant provides information to determine whether the discharge meets the "presumption of allowability and permissibility" in Section 403.0882(6)(a), F.S. Applicants should note that facilities/discharges that cannot meet the requirements for the presumption may still be eligible for discharge permitting under other provisions of Section 403.0882, F.S., and/or Chapters 62-620 and 62-4, F.A.C.

A. Dilution ratio. The Applicant must provide calculations, modeling, and/or other appropriate information demonstrating that adequate dilution will occur in the receiving body of water at a horizontal distance from the concentrate point of discharge (POD) that is no more than two times the water depth (i.e. pre-existing bottom) at the POD, consistent with sub-subparagraph 62-4.244(3)(d)1.b., F.A.C. In a flowing, non-tidal stream, measure this distance in the downstream direction. In tidal waters, measure the distance radially from the POD. Additionally, at this distance, the receiving body of water must consist of no more than 20 percent (i.e., a 4:1 ratio) of concentrate discharge.

- 1 B. All water quality standards. Use the characterization data presented in Section V of this application to
2 evaluate compliance with water quality standards at a distance no more than two times the water depth
3 from the POD, consistent with sub-subparagraph 62-4.244(3)(d)1.b., F.A.C.
- 4 C. Analytical requirements. The applicant must provide analytical data demonstrating that the discharge
5 meets the advanced waste treatment (AWT) criteria from Section 403.086(4), F.S.
- 6 D. Fecal coliforms. If characterization data presented in Section II of this application indicate that fecal
7 coliforms are present in the source water, the Applicant must present analytical data demonstrating that
8 fecal coliforms in the discharge do not exceed the applicable water quality standard.
- 9 2. **Conditions that overcome the presumption of allowability and permissibility** Complete this item only
10 if the response was "YES" to all questions in the previous item. Section 403.0882(6)(b), F.S., lists
11 conditions related to the discharge and/or the receiving water which overcome, or negate, the presumption
12 of allowability and permissibility for Small Water Utility Businesses, if they occur. This part of the
13 application incorporates questions that the Applicant must answer in order for the Department to determine
14 whether the presumption prevails or is overcome.
- 15 A. Location of point of discharge (POD). The Applicant must demonstrate that the POD (i.e., the actual
16 end-of-pipe discharge point) meets the requirements identified in this application and in the statute.
- 17 B. Is the receiving water an Outstanding Florida Water (OFW)? Rule 62-302.700, F.A.C., lists OFWs.
18 Additionally, applicants may contact the District office or the Watershed Assessment Section (850-245-
19 8449) for assistance with the identification of OFWs.
- 20 C. Is the receiving water a Class I or Class II water? Rule 62-302.400, F.A.C., identifies the classification
21 of surface water bodies. Additionally, applicants may contact the District office or the Watershed
22 Assessment Section (850-245-8449) for assistance with the classification of specific surface water
23 bodies.
- 24 D. Total Maximum Daily Load (TMDL). The Applicant must determine whether the receiving water has a
25 TMDL established by the Department for a constituent present in the discharge. Additionally, the
26 Applicant must evaluate whether the discharge will cause or contribute to a violation of the established
27 load for the receiving water. If the receiving water has a TMDL for a constituent of the discharge, the
28 Applicant needs to contact the District office for information on meeting the requirements of the TMDL.
29 TMDLs can be identified by visiting the Watershed Assessment Section TMDL website,
30 <http://www.dep.state.fl.us/water/tmdl/index.htm>, or by contacting the Watershed Assessment Section (850-
31 245-8449).
- 32 E. Toxicity testing results. The Applicant must provide the results for toxicity tests and indicate whether
33 the test failed to meet Department requirements. Failed toxicity test results may disqualify the facility
34 from the presumption of allowability and permissibility.

35 SECTION V CONCENTRATE DISCHARGE CHARACTERIZATION

36 NOTE: This section must be completed by all Applicants.

- 37 1. **Sampling QA demonstration** Applicants must provide documentation with this application certifying
38 that samples for source water and effluent characterization were collected in accordance with Chapter
39 62-160, F.A.C.
- 40 2. **Laboratory certification** Applicants must provide documentation with this application certifying that
41 the laboratory conducting analyses for this project is appropriately certified.
- 42 3. **Standard operating procedures (SOPs) for field activities** Applicants must certify that all field
43 procedures were in accordance with Chapter 62-160, F.A.C.
- 44 4. **Ground water discharge** Provide characterization data for the appropriate ground water parameters.

5. **Surface water discharge** Provide characterization data for the appropriate surface water parameters.

6. **Chemical Additives** All chemical additives and/or biocides that the facility intends to use and which may be discharged in any quantity must be included in the permit application in order to be considered for authorization in a permit. The Applicant must provide material safety data sheets with toxicity information and characterization data with the application.

Characterization data (Table V) In addition to the preceding instructions, demineralization concentrate characterization data must be provided in accordance with the following guidance:

- This item requires the Applicant to collect and report data on the pollutants discharged from each outfall. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part.
- General Instructions: Part V-A requires the Applicant to report the results of at least one analysis for each pollutant listed. Parts V-B and V-C require the Applicant to indicate whether the listed pollutants are known or presumed to be either present or absent in the discharge. For pollutants believed to be present, analytical data, or other information, must be provided. Base the determination that a pollutant is present in or absent from the discharge on knowledge of source water, chemical additives, calculations of concentrate characteristics, and any previous analyses of the discharge or similar discharge.
- Reporting requirements: All reporting of values for metals discharged to surface water must be in terms of "total recoverable metal," unless (1) an applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or (2) all approved analytical methods for the metal inherently measure only its dissolved form (e.g., hexavalent chromium).
- General sampling: Samples should be collected during normal operations, if possible, with all processes that contribute wastewater in normal operation, with the treatment system operating properly, and with no system upsets. Hardness must be analyzed to evaluate water quality criteria for discharge of metals to predominantly fresh surface water.
- Number of samples: If only one daily value is measured, report the value under "Max. Daily Values" and report the "Number of Analyses" as "1." The Department may require additional analyses to further characterize discharges. For composite samples, the daily value is the average concentration found in a composite sample taken over the operating hours of the facility during a 24-hour period; for grab samples, the daily value is the arithmetic or flow-weighted total mass or average concentration found in a series of at least four grab samples taken over the operating hours of the facility during a 24-hour period. If more than one daily value is measured for a pollutant and those values are representative of the demineralization concentrate stream, they must be reported. Methods of testing and data analysis must be described. Analyses of "Long Term Avg. Values" and "Max. 30-day Values" are not compulsory, but should be provided if data are available.
- Sample types: For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliforms, grab samples must be used. For all other pollutants, 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for demineralization concentrate from holding ponds, or other impoundments with a retention period of greater than 24 hours. The Department may waive composite sampling for any discharge point for which you demonstrate that use of an automatic sampler is infeasible and that a minimum of four grab samples during a 24-hour period will be representative of your discharge.
- Use of prior data: Data from samples taken in the past may be used if: the sampling and analytical methods meet current requirements, sampling was done no more than three years before submission, and all data are representative of the present discharge. Among the factors that would cause the data to be unrepresentative are: significant changes in production level; changes in raw materials, processes, or final products; and changes in wastewater treatment.

- 1 ▪ Substantially identical discharges: If the facility has two or more substantially identical discharge points,
2 the Applicant may request permission from the Department to sample and analyze only one point and
3 submit the results of the analysis for other substantially identical points. In such a case, identify which
4 point was tested and describe why the points which were not tested are substantially identical to the point
5 which was tested.

6 **SECTION 6 CERTIFICATIONS**

7 There are severe penalties for submitting false information on this application form. As indicated, complete the
8 appropriate certifications for new facilities, modifications to existing facilities, and permit renewals. This
9 application and all attachments shall be signed in accordance with Rule 62-620.305, F.A.C. Additionally, this
10 application and all attachments shall be signed and sealed by a professional engineer registered in Florida in
11 accordance with Rule 62-620.310, F.A.C.



APPLICATION FORM 2DC FOR A PERMIT TO DISCHARGE DEMINERALIZATION CONCENTRATE FROM A NEW OR EXISTING PUBLIC WATER SUPPLY FACILITY

Instructions for selected items are included in the "INSTRUCTIONS – FORM 2DC." Refer to these instructions before filling out each item.

SECTION I FACILITY DESCRIPTION

THIS SECTION MUST BE COMPLETED BY ALL APPLICANTS, REGARDLESS OF THE SIZE OF THE FACILITY OR DISCHARGE FLOW

1. Size of Demineralization Concentrate Discharge

(If the facility's demineralization concentrate discharge is <50,000 gal/day,* the facility is a "Small Water Utility Business" as defined in Section 403.0882(2)(b), F.S., and the instructions for this form)

☐ <50,000 gal/day
(Facilities with concentrate flows in this range must complete all sections of this form)

✓ ☐ ≥50,000 gal/day
(Facilities with concentrate flows in this range must complete Sections I,II,III,IV, and VI of this form)

2. Application Type

☐ New
✓ ☐ Revision
✓ ☐ Renewal

3. Type of Demineralization Technology

✓ ☐ Reverse Osmosis
☐ Electrodialysis
☐ Electrodialysis Reversal
☐ Other (describe) _____

*Daily average for maximum month in one year

4. Attach a map or aerial photograph indicating the locations of the facility and all outfalls and discharge points. Please see figures 1-1 and 2-1 of the Engineering Report Entitled "City of Cape Coral Concentrate Discharge Permit Renewal Application For City of Cape Coral Reverse Osmosis Treatment Facility FDEP Permit Number FLOO40088" Dated January 2011

5. Attach a line drawing showing the water flow through the facility. Indicate source water; operations contributing demineralization concentrate to the effluent; and all discharges to waters, and indicate whether they are associated with demineralization. Indicate all waste streams, including solids, which are associated with demineralization but which are not discharged to waters, and indicate their disposition. Construct a water balance on the line drawing by showing average and maximum flows between intakes, operations, treatment units, and discharges. For each discharge, provide a description of the following: **Please see "Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number A0-045-SD City of Cape Coral RO WTP Concentrate. Section 2.3" Submitted to FDEP in October 2009.**

- A. All operations contributing to the effluent, including process wastewater, sanitary wastewater, filter backwash, membrane wash water, color removal wash water, etc.;
- B. The design maximum flow contributed by each operation;
- C. The treatment received by the effluent; and
- D. Material Safety Data Sheets (MSDS), dosage rates, frequency of addition, or similar information for any chemical additives or biocides. **Please see Section 2.3 of "Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number A0-045-SD City of**

A. Outfall Location

1. Outfall No. (List)	2. Latitude			3. Longitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.
1	26	34	13	82	00	04

B. Outfall Design

1. Outfall No. (List)	2. Design Configuration and Materials	3. Distance from Shore (ft.)	4. Diameter (ft.)	5. Invert elevation of discharge (ft. NGVD)	6. Minimum Water Depth at POD (ft.)
1	Multiport Rapid Rate Diffuser System	140' West, 75' South	10X 4" Ports	1' Above bottom	5.5

C. Identify the concentrate discharge flow from each outfall.

Maximum Proposed = 4.05 MGD from Outfall 1

D. What is the minimum 7-day 10-year low flow of the receiving water at each outfall (if applicable)?

NA Receiving water is tidal basin (Lake Finisterre) connected to Caloosahatchee River via the Maurauder Canal. The basin and canals are manmade water features with flow primarily controlled by tidal influences.

E. Is this a new discharge?

- ☐ YES
☒ NO

F. Is this an expansion of an existing discharge?

- ☒ YES
☐ NO

G. New or expanded discharges are subject to the antidegradation requirements in Rules 62-4.242, F.A.C., and 62-302.300, F.A.C. If the response is YES to either Item E. or F., above, provide documentation that the discharge will meet the antidegradation requirements in these rules by attaching a separate report.

Please see "Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number A0-045-SD City of Cape Coral RO WTP Concentrate" Submitted to FDEP in October 2009.

H. Provide documentation demonstrating that the discharge meets all applicable water quality criteria in Chapter 62-302, F.A.C. Refer to Section V, as needed.

Please see the Engineering Report Section 4. Disposal Water Quality Data

I. Mixing Zone for Ionic Imbalance Toxicity or Other Parameters.

- (a) Do you Request a Mixing Zone under paragraph 62-4.244(3)(d), F.A.C., for acute toxicity due to ionic imbalance?

Note: The term "ionic imbalance toxicity" refers only to the failure of whole effluent toxicity tests due predominantly to the presence of constituents naturally occurring in the source water (Section 403.0882(4), F.S.). The maximum size of the mixing zone available under Rule 62-4.244(3)(d), F.A.C., shall be no greater than two times the water depth at the POD. (ref. sub-subparagraph 62-4.244(3)(d)1.b., F.A.C.)

☒ YES (provide water depth at the POD and method of determination) **5.5 Feet**

☐ NO

- (b) If the response to Item I above is YES, is the facility a Small Water Utility Business as defined in Section 403.0882, F.S., and the instructions for this form?

☐ YES (complete Section IV, Item 1, regarding mixing zone requests for Small Water Utility Businesses)

☒ NO (continue)

- (c) If the response to Item I.(b), above, is NO (i.e., the facility is not a Small Water Utility Business), but the Applicant is requesting a mixing zone for acute toxicity due to ionic imbalance under paragraph 62-4.244(3)(d), F.A.C., and if the demineralization concentrate discharge is already in existence, attach the results of tests conducted in accordance with the Major Seawater Ion Imbalance Testing (MSIIT) protocol, as updated in 2004, demonstrating ionic imbalance toxicity.

Please See Section 4.3 "Ion Imbalance Study" contained in Report previously submitted to FDEP on Jan. 11, 2010 entitled "Toxicity Bioassay Review City of Cape Coral Concentration Discharge Permit Renewal"

- (d) If the response to Item I.(a), above, is NO, and a mixing zone is requested for any other parameter, documentation for each parameter for which a mixing zone is requested must be provided, in accordance with the requirements of paragraph 62-4.244(3)(a), F.A.C.

NA

J. Bioassay Toxicity Testing Data

Identify all bioassay tests for acute and chronic toxicity conducted on the demineralization concentrate discharge from this facility within the last 3 years. Describe the purposes of the tests, indicate the test result [acute test: LC₅₀ >20% effluent; chronic test: No Observed Effect Concentration (NOEC)], and indicate whether each test passed or failed. Use the space below, or attach additional sheets, if needed.

Please See Engineering Report Section 4.4.7 and Table 1.

- K. If any of the acute or chronic toxicity tests in the preceding item of this section failed, provide the analytical results, if available, for calcium, potassium, sodium, magnesium, chloride, bromide, sulfate, alkalinity, specific conductance/salinity, carbonate, and fluoride in the source water and/or concentrate in order to demonstrate whether the failure was predominantly due to naturally occurring constituents from the source water, pursuant to Section 403.0882(4) F.S. **Please See Engineering Report Section 4 and Table 1.**

4. For underground injection discharge, complete the following items:

Note: All facilities that discharge by underground injection must obtain an Underground Injection Control (UIC) permit in accordance with Chapter 62-528, F.A.C., and, if an additional disposal system is used, may also be required to obtain a permit in accordance with subsection 62-620.625(6), F.A.C., and Section 403.0882, F.S.

A. Is injection:

- ☐ the sole disposal system used by the facility?
☒ the primary disposal system for the facility?
 If so, identify other disposal system(s) used by the facility Surface Water Outfall No. 1
☐ a backup discharge for another disposal system?
 If so, identify other disposal system(s) used by the facility _____

B. Underground Injection Well Facility Location

County	<u>Lee</u>
City or Town (if applicable)	<u>Cape Coral</u>
Street or Description	<u>3310 SW 20th Ave.</u>
	<u>Cape Coral, FL</u>
Latitude	<u>26° 35' 24.233"N</u>
Longitude	<u>82° 01' 00.96"W</u>
Dates Coordinates Determined	<u>09/04/08 by Metron Surveyors</u>
Method Used to Obtain Coordinates	<u>Professional Survey using Benchmarks</u>

C. Underground Injection Well Facility

Identification Number or Permit Application Number ID 98508. Permit No. 254598-001-UC/11

D. Design Capacity of the Underground Injection Well Facility

Current Design Capacity	<u>9.94</u>	Mgd
Proposed Incremental Design Capacity	<u>+ NA</u>	Mgd
Proposed Total Design Capacity	<u>=</u>	Mgd

E. Basis of Design Flow

- ☐ Annual Average Daily Flow
☐ Maximum Monthly Average Daily Flow
☐ Three-Month Average Daily Flow
☒ Other

If other, specify. Maximum permitted injection rate of 6,900 gpm.

Maximum injection pressure of 100 psi at the wellhead.

F. Is injection continuous or intermittent?

- ☒ Continuous
☐ Intermittent

If the discharge is intermittent, describe the discharge frequency and duration and the discharge method during periods when demineralization concentrate is not injected.

5. For land application, complete the following items: NA**A. Type of Land Application System NA**

- ☐ Spray field. Date of initial operation _____
☐ Infiltration basin. Date of initial operation _____
☐ Percolation/evaporation pond. Date of initial operation _____
☐ Infiltration gallery. Date of initial operation _____
☐ Other land application system. Describe _____, Date of initial operation _____

B. Size of Application Areas and Application Rates

Site	Area (acres)	Rate (inches/week)	Capacity (mgd)
Total			

C. Ground water Quality Evaluation: For the proposed land application system, explain how the ground water quality criteria in Chapter 62-520, F.A.C. will be met at the edge of the zone of discharge. Dimensions for zones of discharge are established in subsection 62-522.410(2), F.A.C. Additionally, provide background water quality data for the receiving groundwater, in accordance with subparagraph 62-620.625(6)(a)8., F.A.C.

D. Is the land application system: **NA** ☐ Existing
☐ New

E. Is the land-applied discharge blended, or proposed to be blended if the facility is new?: ☐ YES ☐ NO **NA**
 If YES, indicate the type of waste stream with which the concentrate discharge is blended (check all of the following that apply):

- ☐ Reclaimed water (If the discharge is blended with reclaimed water, please complete Item III.6., below)
☐ Domestic or Industrial Wastewater (If the discharge is blended with wastewater please complete Item III.7., below)
☐ Other; specify **NA**

F. Design Capacity of the Land Application System **NA**

Current Design Capacity _____ Mgd
 Proposed Incremental Design Capacity + _____ Mgd
 Proposed Total Design Capacity = _____ Mgd

G. Basis of Land Application System Design Flow **NA**

- ☐ Annual Average Daily Flow
☐ Maximum Monthly Average Daily Flow
☐ Three Month Average Daily Flow
☐ Other

If other, specify **NA**

H. Is land application continuous or intermittent? **NA**

☐ Continuous ☐ Intermittent

If the discharge is intermittent, describe the discharge frequency and length of discharge periods, and the discharge method during periods when demineralization concentrate is not land applied.

I. Underdrains and Perimeter Ditches **NA**

- a. Is the land application system underdrained? ☐ YES ☐ NO
- b. If yes, describe how effluent from the underdrain system discharges, whether it drains to surface water or ground water, and include the discharge in the appropriate part of Section III of this application, with discharge characterization, as needed. **NA**
- c. Are perimeter ditches used? **NA** ☐ YES ☐ NO
- d. If the response to Item c. is YES, will the perimeter ditches be excavated to a depth which will intersect the seasonal high ground water table or the ground water mound during any portion of the year? **NA** ☐ YES ☐ NO
- e. If the response to Item c. is YES, describe measures that will be implemented to assure compliance with applicable ground water quality standards. **NA**

6. For blending with reclaimed water as defined in subsection 62-610.200 F.A.C., complete the following items: **NO blending with reclaimed water is proposed. Not Applicable, NA**

Note: If a single municipality or utility owns and operates both the water treatment facility that generates the concentrate and the domestic wastewater facility that produces the reclaimed water, a separate discharge permit is not required for the concentrate discharge in accordance with paragraph 62-610.865(7)(b), F.A.C. In this case, however, the domestic wastewater permit must be revised to incorporate all aspects of demineralization concentrate blending in accordance with the requirements of Rule 62-610.865, F.A.C.

- A. Attach a copy of an executed agreement between the water treatment facility owner and the domestic wastewater facility owner regarding acceptable project performance in accordance with paragraph 62-610.865(7)(c), F.A.C. **NA**
- B. Provide documentation that the facility will comply with the concentrate storage requirements in subsection 62-610.865(10), F.A.C. **NA**
- C. Provide documentation that the facility will comply with the concentrate monitoring requirements in subsection 62-610.865(8), F.A.C. **NA**
- D. Provide documentation of concentrate, reclaimed water, and blend quality in accordance with the requirements of subsection 62-610.865(6), F.A.C. **NA**

7. For blending at a Department-permitted wastewater facility, complete the following items: **NA**

Note: In accordance with the requirements of subparagraph 62-620.625(6)(a)4., F.A.C., blending of concentrate for purposes of treatment or disposal with wastewater from a Department-permitted wastewater facility may require a separate permit unless the receiving wastewater facility permit is revised to incorporate all aspects of concentrate treatment or disposal in accordance with the requirements of subsection 62-620.200, F.A.C., to provide reasonable assurance that the discharge will meet applicable water quality standards.

- A. Identify the type of receiving facility and DEP wastewater permit number: **NA**
 - ☐ Domestic wastewater facility -- permit number _____
 - ☐ Industrial wastewater facility -- permit number _____
- B. Identify the point at which concentrate is blended at the facility: **NA**
 - ☐ Blended with effluent (after treatment and prior to discharge)
 - ☐ Blended at another point within the treatment process. Specify _____

- C. What is the permitted capacity of the wastewater facility? Specify the averaging period used.

NA

- D. What is the proposed blend ratio of demineralization concentrate and wastewater or effluent?

NA

- E. Provide a characterization of the blended wastewater.

NA

- F. Attach a copy of an executed agreement between the water treatment facility owner and the wastewater facility owner that establishes a framework for operating protocols and provisions and a division of responsibilities regarding water quality between the two parties.

SECTION IV REQUIREMENTS FOR SMALL WATER UTILITY BUSINESSES

NOT APPLICABLE

THIS SECTION MUST BE COMPLETED FOR FACILITIES MEETING THE DEFINITION OF SMALL WATER UTILITY BUSINESS THAT DISCHARGE TO SURFACE WATERS

- 1. The following items address the information required in Section 403.0882(6)(a), F.S., to demonstrate that the discharge is presumed to be allowable and permittable in all waters:**

- A. Will the discharge achieve a 4:1 dilution ratio within a distance ≤ 2 times the water depth from the Point of Discharge under all flow conditions, consistent with sub-subparagraph 62-4.244(3)(d)1.b., F.A.C.? **NA**

☐ YES
☐ NO

- B. Will the discharge meet all applicable water quality standards pursuant to Rule 62-302.530, F.A.C. within a distance ≤ 2 times the water depth from the Point of Discharge under all flow conditions, consistent with Rule 62-4.244(3)(d)1.b., F.A.C.? Provide data and/or calculations, as needed. **NA**

☐ YES
☐ NO

- C. Does the discharge meet the following criteria? (Attach analytical data, on an annual average basis, if multiple sampling events have been performed) **NA**

Carbonaceous Biochemical Oxygen Demand (five day)	5 mg/L
Total Suspended Solids	5 mg/L
Total Nitrogen as Nitrogen	3 mg/L
Total Phosphorus as Phosphorus	1 mg/L

☐ YES
☐ NO

- D. If fecal coliforms are present in the source water, does the concentration of fecal coliforms in the demineralization concentrate discharge meet applicable water quality standards for the receiving water classification pursuant to Rule 62-302.530, F.A.C.? (provide confirmatory data in Section V of this form) **NA**

☐ YES
☐ NO

Note: If the responses to Items IV.1.A., B., C., and D. were all "YES," then continue to Item IV.2. If any responses were "NO," then the discharge does not meet the presumption of allowability and permissibility. However, the concentrate discharge potentially may be permitted in accordance with other provisions of Section 403.0882, F.S., and Chapter 62-620, F.A.C. Continue to Section V. **NA**

2. The following items address the information required in Section 403.0882(6)(b), F.S., to evaluate whether there are any specific factors that may disqualify the discharge from meeting the presumption of allowability and permissibility, as follows:

- A. Is the point of discharge located at a reasonably accessible point for operation and maintenance, regulatory inspection, sampling, and other appropriate activities? (Provide a map or other documentation demonstrating this, and describing how the selected discharge location will minimize water quality impacts to the greatest possible extent) **NA**

☐ YES
☐ NO

- B. Is the receiving water an Outstanding Florida Water other than the Indian River Lagoon? **NA**

☐ YES
☐ NO

- C. Is the discharge directly into Class I or Class II surface waters? **NA**

☐ YES
☐ NO

- D. If the discharge is into a surface water with a Department-established Total Maximum Daily Load (TMDL), does any constituent present in the discharge not meet the established load for the receiving water? **NA**

☐ YES, one or more constituents present in the discharge does not meet the Department established load for the receiving water
☐ NO, all constituents present in the discharge meet Department-established loads.
☐ NA (Not Applicable: The discharge is not into a surface water with a Department-established TMDL)

- E. Have any bioassay toxicity tests previously performed for a Department issued surface water discharge permit for the facility failed? If such results were provided as a response to Section III, Items 3.J. and K., regarding toxicity testing results, indicate so in the space below **NA**

☐ YES
☐ NO
☐ NA, no toxicity tests have been conducted.

Note: If the response to IV.2.A is NO or if the response to any one of Items IV.2.B., C., D., or E.. is YES, then the discharge does not meet the presumption of allowability and permissibility.

SECTION V CONCENTRATE DISCHARGE CHARACTERIZATION

THIS SECTION MUST BE COMPLETED BY ALL APPLICANTS, REGARDLESS OF THE SIZE OF THE FACILITY OR DISCHARGE FLOW.

- 1. Provide documentation that all sampling for the analytical results reported in this section was performed in accordance with Chapter 62-160, F.A.C.**

**Documentation about sampling protocols was previously submitted to FDEP in
Monthly Discharge Monitoring Reports (Form 62-620.910(10))**

2. Provide documentation that laboratory tests reported in this section were performed by laboratories certified by the Department of Health (DOH) as required by Chapter 62-160, F.A.C.

Laboratories Utilized Include: Lee County Environmental Health Laboratories, Marinco Bioassay Laboratory, Sanders Laboratories, and Harbor Branch Environmental Lab All are listed as DOH NELAC with ID numbers E45049, E84191, E85457, and E06897. Lists of FOAs are submitted as Attachment 1. "Lab Certifications" to this form.

3. Provide documentation that all field activities, including on-site tests and sample collection, whether performed by a laboratory or a certified operator, reported in this section follow all applicable procedures described in DEP-SOP-001/01 (February 1, 2004). Alternate field procedures and laboratory methods may be used where they have been approved according to the requirements of Rules 62-160.220, and 62-160.330, F.A.C.

Documentation about sampling protocols by certified operator was previously submitted to FDEP in Monthly Discharge Monitoring Reports (Form 62-620.910(10)). Also included in materials previously submitted to FDEP on Jan. 11, 2010 entitled "Toxicity Bioassay Review City of Cape Coral Concentration Discharge Permit Renewal" and in "Engineering Report in Support of Renewal of NPDES Permit Number FL0040088 Addressing Part III of Administrative Order Number A0-045-SD City of Cape Coral RO WTP Concentrate" Submitted to FDEP in October 2009.

4. Does the facility discharge demineralization concentrate to ground waters?

☒ YES (Provide a characterization of the demineralization concentrate discharged to ground water for the primary and secondary ground water standards as identified in Chapter 62-520, F.A.C.)
☐ NO Please See Attachment 2 "Effluent Analyses"

5. Does the facility discharge demineralization concentrate to surface waters?

☒ YES (Provide a characterization of the demineralization concentrate discharged to surface waters pursuant to Parts A, B, and C of the following tables in this section.) The sampling and analysis of the facility effluent for primary and secondary drinking water contaminants was conducted on January 10, 2011. The results are attached.
☐ NO Please See Attachment 2 "Effluent Analyses"

6. Does the facility discharge any constituents of chemical additives or biocides identified in Item I.5.D. of this form?

☒ YES (Provide a characterization of the chemical additives or biocides discharged to surface waters)
☐ NO Please see Attachment 3 "MSDS Sheets for Items Identified in Item I.5.D."

PLEASE PRINT OR TYPE ONLY: You may report some or all of this information on separate sheets instead of completing these pages. Use the same format. SEE INSTRUCTIONS. Data for

PART V-A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. Pollutant	2. Concentrate				3. Units		4. Intake (optional)		
	a. Max. Daily Value		b. Max. 30-day Value		c. Annual Avg. Value	d. No. of Analyses	a. Long Term Avg. Value		b. No. of Analyses
	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass			(1) Conc.	(2) Mass	
a. Carbonaceous Biochemical Oxygen Demand (CBOD)	NOT MONITORED								
b. Chemical Oxygen Demand (COD)	NOT MONITORED								
c. Total Organic Carbon (TOC)	NOT MONITORED								
d. Total Suspended Solids (TSS)	NOT MONITORED								
e. Total Nitrogen (as N)	2.0				1.72	5			
f. Total Phosphorus (as P)	0.3				0.28	5			
g. Ammonia (as N)	NOT MONITORED								
h. Flow - actual or projected	Value 3.014MG		Value		Value 2.16MGD		Value		
i. Flow - design	Value 3.050 MG		Value		Value		Value		
j. Specific Conductivity	Value No Data		Value		Value		Value		
k. Temperature (winter)	Value No Data		Value		Value		Value		
l. Temperature (summer)	Value No Data		Value		Value		Value		
m. pH	Min.	Max	Min. 6.70	Max. 8.06			STANDARD UNITS		

PART V-B - Mark "X" in column 2a for each pollutant you know or have reason to believe is present. Mark "X" in column 2b for each pollutant you believe to be absent. If you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Concentrate				4. Units		5. Intake (optional)	
	a. believed Present	b. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)	d. No. of Analyses	a. Long Term Avg. Value	
			(1) Conc.	(2) Mass	(1) Conc.	(2) Mass			(1) Conc.	(2) Mass
a. Bromide (24949-67-9)	☐	☐								
b. Chlorine, Total Residual	☐	☐								
c. Color	☐	☐								
d. Fecal Coliforms	☐	☐								
e. Fluoride (16984-48-8)	☒	☐	2.04				1.26	20		
f. Nitrate-Nitrite (as N)	☐	☒								

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Concentrate						4. Units		5. Intake (optional)			
	a. be- lieved present	b. be- lieved absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
			(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
g. Nitrogen, Total Organic (as N)	☐	☐												
h. Oil and grease	☐	☐												
i. Phosphorus, Total (as P) (7723-14-0)	☒	☐	0.3				0.28		5					
j. Radioactivity														
(1) Alpha, Total	☒	☐			160			116	5	(pCi/L)				
(2) Beta, Total	☒	☐												
(3) Radium, Total	☒	☐			46.1			36.6	5	(pCi/L)				
(4) Radium 226, Total	☒	☐			44				1	(pCi/L)				
k. Sulfate (as SO ₄) (14808-79-8)	☒	☐	1820						1	Mg/l				
l. Sulfide (as S)	☐	☐												
m. Sulfite (as SO ₃) (14265-45-3)	☐	☐												
n. Surfactants	☒	☐	0.29						1	Mg/l				
o. Aluminum, Total (7429-90-5)	☒	☐	0.011						1	Mg/l				
p. Barium, Total (7440-39-3)	☒	☐	0.093						1	Mg/l				
q. Boron, Total (7440-42-8)	☐	☐												
r. Cobalt, Total (7440-48-4)	☐	☐												
s. Iron, Total (7439-89-6)	☒	☐	0.05						1	Mg/l				
t. Magnesium, Total (7439-95-4)	☐	☐												
u. Molybdenum, Total (7439-98-7)	☐	☐												
v. Manganese, Total (7439-96-5)	☐	☒												
w. Tin, Total (7440-31-5)	☐	☒												
x. Titanium, Total (7440-32-6)	☐	☐												

PART V-C - Mark "X" in column 2b for each pollutant you know or have reason to believe is present. Mark "X" in column 2c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6-dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

Facility ID, Number: 5236M02011 Outfall No. 1

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Concentrate				4. Units		5. Intake (optional)		b. No. of Analyses
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value (1) Conc. (2) Mass	b. Max. 30-day Value (if available) (1) Conc. (2) Mass	c. Long Term Avg. Value (if available) (1) Conc. (2) Mass	d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		
										(1) Conc.	(2) Mass	
METALS, CYANIDE, AND TOTAL PHENOLS												
1M. Antimony, Total (7440-36-0)	☐	☐	☒				1	Mg/l				
2M. Arsenic, Total (7723-14-0)	☐	☐	☒				1	Mg/l				
3M. Beryllium, Total (7440-41-7)	☐	☐	☒				1	Mg/l				
4M. Cadmium, Total (7440-43-9)	☐	☐	☒				1	Mg/l				
5M. Chromium, Total (7440-47-5)	☐	☒	☐	0.0062			1	Mg/l				
6M. Copper, Total (7440-50-8)	☐	☒	☐	See Report Tables			40	Mg/l				
7M. Lead, Total (7439-92-1)	☐	☐	☒				1	Mg/l				
8M. Mercury, Total (7439-97-6)	☐	☐	☒				1	Mg/l				
9M. Nickel, Total (7440-02-0)	☐	☒	☐	0.0033			1	Mg/l				
10M. Selenium, Total (7782-49-2)	☐	☒	☐	.006			1	Mg/l				
11M. Silver, Total (7440-22-4)	☐	☐	☒				1	Mg/l				
12M. Thallium, Total (7440-28-0)	☐	☐	☒				1	Mg/l				
13M. Zinc, Total (7440-66-6)	☐	☒	☐	0.011			1	Mg/l				
14M. Cyanide, Total (57-12-5)	☐	☐	☒				1	Mg/l				
15M. Phenols, Total	☐	☐	☐				1	Mg/l				
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)												
1V. Acrolein (107-02-8)	☐	☐	☐									
2V. Acrylonitrile (107-13-1)	☐	☐	☐									

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Concentrate						4. Units		5. Intake (optional)		
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value	b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
					(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)														
3V. Benzene (71-43-2)	☐	☐	☒											
4V. Bis (Chloromethyl) Ether (542-88-1)	☐	☐	☐											
5V. Bromoform (75-25-2)	☐	☐	☒											
6V. Carbon Tetrachloride (56-23-5)	☐	☐	☒											
7V. Chlorobenzene (108-90-7)	☐	☐	☒											
8V. Chlorodibromomethane (124-8-1)	☐	☐	☐											
9V. Chloroethane (74-00-3)	☐	☐	☐											
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	☐	☐	☐											
11V. Chloroform (67-86-3)	☐	☐	☒											
12V. Dichlorobromomethane (75-24-4)	☐	☐	☒											
13V. Dichlorodifluoromethane (75-71-8)	☐	☐	☐											
14V. 1,1-Dichloroethane (75-34-3)	☐	☐	☒											
15V. 1,2-Dichloroethane (107-06-2)	☐	☐	☒											
16V. 1,1-Dichloroethylene (75-35-4)	☐	☐	☐											
17V. 1,2-Dichloropropane (78-87-5)	☐	☐	☒											
18V. 1,3-Dichloropropylene (542-75-6)	☐	☐	☐											
19V. Ethylbenzene (100-41-4)	☐	☐	☒											
20V. Methyl Bromide (74-83-9)	☐	☐	☐											
21V. Methyl Chloride (74-87-3)	☐	☐	☐											
22V. Methylene Chloride (74-98-2)	☐	☐	☒											
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	☐	☐	☐											
24V. Tetrachloroethylene (127-18-4)	☐	☐	☐											

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Concentrate						4. Units		5. Intake (optional)		
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value	b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass					
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)														
25V. Toluene (108-88-3)	☐	☐	☒											
26V. 1,2-Trans-Dichloroethylene (156-60-5)	☐	☐	☐											
27V. 1,1,2-Trichloroethane (71-55-6)	☐	☐	☒							1				
28V. 1,1,2-Trichloroethane (79-00-5)	☐	☐	☒							1				
29V. Trichloroethylene (79-01-6)	☐	☐	☐											
30V. Trichlorofluoromethane (75-69-4)	☐	☐	☐											
31V. Vinyl Chloride (75-01-4)	☐	☐	☒							1				
GC/MS FRACTION - SEMI-VOLATILE COMPOUNDS (continued)														
1A. 2-Chlorophenol (95-57-8)	☐	☐	☐											
2A. 2,4-Dichlorophenol (120-83-2)	☐	☐	☐											
3A. 2,4-Dimethylphenol (105-67-9)	☐	☐	☐											
4A. 4,6-Dinitro-O-Cresol (534-53-1)	☐	☐	☐											
5A. 2,4-Dinitrophenol (51-28-5)	☐	☐	☐											
6A. 2-Nitrophenol (88-75-5)	☐	☐	☐											
7A. 4-Nitrophenol (100-02-7)	☐	☐	☐											
8A. p-Chloro-m-Cresol (59-50-7)	☐	☐	☐											
9A. Pentachlorophenol (87-86-5)	☐	☐	☒							1				
10A. Phenol (108-95-2)	☐	☐	☐											
11A. 2,4,5-Trichlorophenol (88-06-2)	☐	☐	☒							1				
GC/MS FRACTION - POLYCYCLIC AROMATIC COMPOUNDS (continued)														
1B. Acenaphthene (63-32-9)	☐	☐	☐											
2B. Acenaphthylene (208-96-8)	☐	☐	☐											
3B. Anthracene (120-12-7)	☐	☐	☐											
4B. Benzidine (92-87-5)	☐	☐	☐											

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Concentrate						4. Units		5. Intake (optional)			b. No. of Analyses
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
5B. Benzo (a) Anthracene (56-55-3)	☐	☐	☐												
6B. Benzo (a) Pyrene (50-32-8)	☐	☐	☒							1					
7B. 3,4-Benzo-fluoranthene (205-99-2)	☐	☐	☐												
8B. Benzo (ghi) Perylene (191-24-2)	☐	☐	☐												
9B. Benzo (k) Fluoranthene (207-08-9)	☐	☐	☐												
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	☐	☐	☐												
11B. Bis (2-chloroethyl) Ether (111-44-4)	☐	☐	☐												
12B. Bis (2-Chloropropyl) Ether (102-60-1)	☐	☐	☐												
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	☐	☐	☒							1					
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	☐	☐	☐												
15B. Butyl Benzyl Phthalate (84-68-7)	☐	☐	☐												
16B. 2-Chloronaphthalene (91-58-7)	☐	☐	☐												
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	☐	☐	☐												
18B. Chrysene (218-01-9)	☐	☐	☐												
19B. Dibenzo (a,h) Anthracene (53-70-3)	☐	☐	☐												
20B. 1,2-Dichlorobenzene (95-50-1)	☐	☐	☒							1					
21B. 1,3-Dichlorobenzene (541-73-1)	☐	☐	☐												
22B. 1,4-Dichlorobenzene (106-46-7)	☐	☐	☒							1					
23B. 3,3-Dichlorobenzidine (92-94-1)	☐	☐	☐												
24B. Diethyl Phthalate (84-66-2)	☐	☐	☐												
25B. Dimethyl Phthalate (131-11-3)	☐	☐	☐												
26B. Di-N-Butyl Phthalate (84-74-2)	☐	☐	☐												
27B. 2,4-Dinitrotoluene (121-14-2)	☐	☐	☐												
28B. 2,6-Dinitrotoluene (606-20-2)	☐	☐	☐												

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Concentrate						4. Units		5. Intake (optional)		b. No. of Analyses
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)	d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass					(1) Conc.	(2) Mass	
29B. Di-N-Octyl Phthalate (117-84-0)	☐	☐	☐											
30B. 1,2-Diphenylhydrazine (as Azoherzene) (122-66-7)	☐	☐	☐											
31B. Fluoranthene (206-44-0)	☐	☐	☐											
32B. Fluorene (86-73-7)	☐	☐	☐											
33B. Hexachlorobenzene (118-74-1)	☐	☐	☐											
34B. Hexachlorobutadiene (87-68-3)	☐	☐	☐											
35B. Hexachlorocyclopentadiene (77-47-4)	☐	☐	☐											
36B. Hexachloroethane (67-72-1)	☐	☐	☐											
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	☐	☐	☐											
38B. Isophorone (78-59-1)	☐	☐	☐											
39B. Naphthalene (91-20-3)	☐	☐	☐											
40B. Nitrobenzene (98-95-9)	☐	☐	☐											
41B. N-Nitrosodimethylaniline (62-75-9)	☐	☐	☐											
42B. N-Nitrosodi-N-Propylaniline (621-64-7)	☐	☐	☐											
43B. N-Nitrosodiphenylamine (86-30-6)	☐	☐	☐											
44B. Phenanthrene (85-01-8)	☐	☐	☐											
45B. Pyrene (129-00-0)	☐	☐	☐											
46B. 1,2,4-Trichlorobenzene (120-82-1)	☐	☐	☒											1
1P. Aldrin (309-00-2)	☐	☐	☐											
2P. -BHC (319-84-6)	☐	☐	☐											
3P. -BHC (319-85-7)	☐	☐	☐											
4P. -BHC (58-89-9)	☐	☐	☐											
5P. -BHC (319-86-8)	☐	☐	☐											

SECTION VI. CERTIFICATIONS

1. Certifications For New Or Modified Facilities

2. This is to certify the engineering features of this project have been designed or examined by me and found to be in conformity with sound engineering principles, applicable to the treatment and/or disposal of demineralization concentrate characterized in the permit application. There is reasonable assurance, in my professional judgment, that the subject facilities, when properly maintained and operated, will discharge a demineralization concentrate that complies with all applicable statutes of the State of Florida and the rules of the Department. It is also agreed that the undersigned, if authorized by the owner, will furnish the applicant a set of instructions for the proper maintenance and operation of the subject facilities.

Signature	Company Name
	Address
Name (please type)	
(Affix Seal)	Florida Registration No.:
	Telephone No.:
	Date
Email address	

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

Name & Official Title (Please type or print)	Signature
Telephone No. (area code & No.)	Date Signed
E-mail Address:	

3. Certifications For Permit Renewals

This is to certify the engineering features of this project have been examined by me and found to be in conformity with sound engineering principles, applicable to the treatment and/or disposal of demineralization concentrate characterized in the permit application. There is reasonable assurance, in my professional judgment, that the subject facilities, when properly maintained and operated, will discharge a demineralization concentrate that complies with all applicable statutes of the State of Florida and the rules of the Department. **As pointed out in the previously referenced engineering report entitled "City of Cape Coral Concentrate Discharge Permit Renewal Application For City of Cape Coral Reverse Osmosis Treatment Facility FDEP Permit Number FLOO40088" Dated January 2011, the discharge does not always meet the standards for discharge to surface waters for Gross Alpha, Radium 226 and 228, and copper. It is recommended that the mixing zone be extended to SWD-2 for Radium 226 and 228, and the mixing zone for copper be extended to location SWD-1A.**

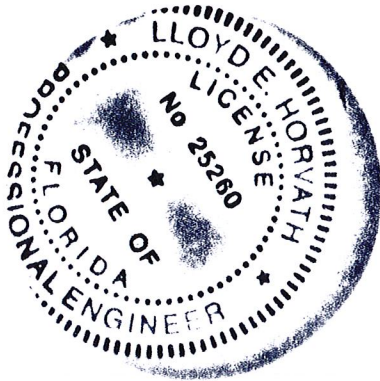

Signature

Lloyd E. Horvath, P.E.
Name (please type)

Cardno ENTRIX
Company Name

Address 1388 Colonial Blvd.

Fort Myers, FL 33907



(Affix Seal)

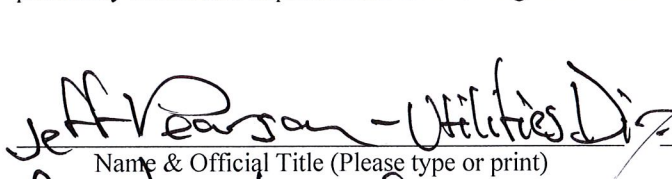
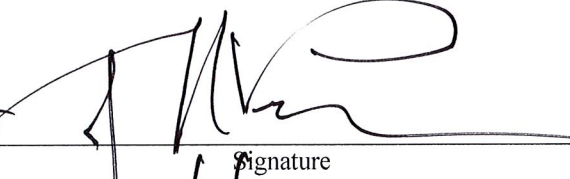
Florida Registration No.: 25260

Telephone No.: 239-829-7008

Date June 27, 2011

Email address Lloyd.horvath@cardnoentrix.com

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


Name & Official Title (Please type or print)
(239) 574-0709
Telephone No. (area code & No.)
E-mail Address: jpearson@capecoral.net

Signature
7/7/11
Date Signed

Attachment 1

Lab Certifications

Matrix	Category	Analyte	AnalyteCode	Method	MethodCode	Certification Date
Drinking Water	Group I Unregulated Contaminants	Aldrin	7025	EPA 505	10083202	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Dieldrin	7470	EPA 505	10083202	9/23/2002
Drinking Water	Group I Unregulated Contaminants	Dicamba	8595	EPA 515.1	10087000	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Butachlor	7160	EPA 525.2	10089608	9/23/2002
Drinking Water	Group I Unregulated Contaminants	Metolachlor	7835	EPA 525.2	10089608	9/23/2002
Drinking Water	Group I Unregulated Contaminants	Metribuzin	7845	EPA 525.2	10089608	9/23/2002
Drinking Water	Group I Unregulated Contaminants	Propachlor (Ramrod)	8045	EPA 525.2	10089608	5/14/2003
Drinking Water	Group I Unregulated Contaminants	3-Hydroxycarbofuran	7710	EPA 531.1	10090809	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Aldicarb (Temik)	7010	EPA 531.1	10090809	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Aldicarb sulfone	7015	EPA 531.1	10090809	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Aldicarb sulfide	7020	EPA 531.1	10090809	4/25/2003
Drinking Water	Group I Unregulated Contaminants	Carbaryl (Sevin)	7195	EPA 531.1	10090809	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Methomyl (Lannate)	7805	EPA 531.1	10090809	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Bromoacetic acid	9312	EPA 552.1	10095202	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Chloroacetic acid	9336	EPA 552.1	10095202	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Dibromoacetic acid	9357	EPA 552.1	10095202	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Dichloroacetic acid	9360	EPA 552.1	10095202	3/25/2003
Drinking Water	Group I Unregulated Contaminants	Trichloroacetic acid	9642	EPA 552.1	10095202	3/25/2003
Drinking Water	Group II Unregulated Contaminants	1 1 1 2-Tetrachloroethane	5105	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	1 1 2 2-Tetrachloroethane	5110	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	1 1-Dichloroethane	4630	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	1 1-Dichloropropene	4670	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	1 2 3-Trichloropropane	5180	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	1 3-Dichlorobenzene	4615	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	1 3-Dichloropropane	4660	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	1 3-Dichloropropene	4675	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	2 2-Dichloropropane	4665	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	2-Chlorotoluene	4535	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	4-Chlorotoluene	4540	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	Bromobenzene	4385	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	Chloroethane	4485	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	Dibromomethane	4595	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	Dichlorodifluoromethane	4625	EPA 524.2	10088605	5/29/2003
Drinking Water	Group II Unregulated Contaminants	Methyl bromide (Bromomethane)	4950	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	Methyl chloride (Chloromethane)	4960	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	Methyl tert-butyl ether (MTBE)	5000	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants	Trichlorofluoromethane	5175	EPA 524.2	10088605	3/25/2003
Drinking Water	Regulated Contaminants	Bromodichloromethane	4395	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants Other	Bromoform	4400	EPA 524.2	10088605	3/25/2003
Drinking Water	Regulated Contaminants	Chloroform	4505	EPA 524.2	10088605	3/25/2003
Drinking Water	Group II Unregulated Contaminants Other	Dibromochloromethane	4575	EPA 524.2	10088605	3/25/2003
Drinking Water	Regulated Contaminants	Escherichia coli	2525	EC + MUG	811	11/12/2004
Drinking Water	Microbiology	Heterotrophic plate count	2555	SM 9215 B	20035205	9/23/2002

Drinking Water	Microbiology	Total coliforms	2500	SM 9222 B	20036800	11/22/2002
Drinking Water	Microbiology	Escherichia coli	2525	SM 9223 B	725	10/22/2002
Drinking Water	Microbiology	Total coliforms	2500	SM 9223 B	725	10/22/2002
Drinking Water	Other Regulated Contaminants	1 1-Trichloroethane	5160	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	1 2-Trichloroethane	5165	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	1 1-Dichloroethylene	4640	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	1 2-Trichlorobenzene	5155	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	1 2-Dichlorobenzene	4610	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	1 2-Dichloropropane	4635	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	1 2-Dichlorobenzene	4655	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	1 4-Dichlorobenzene	4620	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Benzene	4375	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Carbon tetrachloride	4455	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Chlorobenzene	4475	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Dichloromethane (DCM Methylene chloride)	4650	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Ethylbenzene	4765	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Styrene	5100	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Tetrachloroethylene (Perchloroethylene)	5115	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Toluene	5140	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Total trihalomethanes	5205	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Trichloroethene (Trichloroethylene)	5170	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Vinyl chloride	5235	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	Xylene (total)	5260	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	cis-1 2-Dichloroethylene	4645	EPA 524.2	10088605	3/25/2003
Drinking Water	Other Regulated Contaminants	trans-1 2-Dichloroethylene	4700	EPA 524.2	10088605	3/25/2003
Drinking Water	Primary Inorganic Contaminants	Barium	1015	EPA 200.7	10013408	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Beryllium	1020	EPA 200.7	10013408	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Cadmium	1030	EPA 200.7	10013408	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Calcium	1035	EPA 200.7	10013408	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Chromium	1040	EPA 200.7	10013408	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Magnesium	1085	EPA 200.7	10013408	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Nickel	1105	EPA 200.7	10013408	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Sodium	1155	EPA 200.7	10013408	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Antimony	1005	EPA 200.9	10015006	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Arsenic	1010	EPA 200.9	10015006	3/12/2007
Drinking Water	Primary Inorganic Contaminants	Lead	1075	EPA 200.9	10015006	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Selenium	1140	EPA 200.9	10015006	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Thallium	1165	EPA 200.9	10015006	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Mercury	1095	EPA 245.1	10036201	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Bromide	1540	EPA 300.0	10053006	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Chloride	1595	EPA 300.0	10053006	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Nitrate	1805	EPA 300.0	10053006	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Nitrite	1835	EPA 300.0	10053006	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Total nitrate-nitrite	1825	EPA 300.0	10053006	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Nitrate	1805	EPA 353.2	10067206	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Nitrite	1835	EPA 353.2	10067206	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Total nitrate-nitrite	1825	EPA 353.2	10067206	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Alkalinity as CaCO3	1505	SM 2320 B	20003003	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Conductivity	1610	SM 2510 B	20003809	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Copper	1055	SM 3111 B	20006002	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Total residual chlorine	1940	SM 4500-Cl G	20026004	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Orthophosphate as P	1870	SM 4500-P F	20026000	11/12/2004
Drinking Water	Primary Inorganic Contaminants	Silica as SiO2	1990	SM 4500-Si D (18th/19th Ed.)UV-VIS	20026602	9/23/2002

Drinking Water	Primary Inorganic Contaminants	Silica as SiO2	1990	SM 4500-SiO2 C (20th/21st Ed.)	257	9/28/2009
Drinking Water	Primary Inorganic Contaminants	Cyanide	1635	SM 4500CN-E	20016200	9/23/2002
Drinking Water	Secondary Inorganic Contaminants & Primary Inorganic Contaminants	Copper	1055	EPA 200.7	10013408	9/23/2002
Drinking Water	Primary Inorganic Contaminants	Fluoride	1730	SM 4500 F-C	20012800	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	pH	1900	EPA 150.1	10008205	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Turbidity	2055	EPA 180.1	10011402	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Aluminum	1000	EPA 200.7	10013408	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Iron	1070	EPA 200.7	10013408	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Manganese	1090	EPA 200.7	10013408	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Potassium	1125	EPA 200.7	10013408	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Silver	1150	EPA 200.7	10013408	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Zinc	1190	EPA 200.7	10013408	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Chloride	1575	EPA 300.0	10053006	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Sulfate	2000	EPA 300.0	20001803	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Color	1605	SM 2120 B	20002802	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Odor	1855	SM 2150 B	20004404	11/22/2002
Drinking Water	Secondary Inorganic Contaminants	Total dissolved solids	1705	SM 2540 C	20016404	9/28/2009
Drinking Water	Secondary Inorganic Contaminants	pH	1900	SM 4500-H+ - B	20029009	9/23/2002
Drinking Water	Secondary Inorganic Contaminants	Surfactants - MBAS	2025	SM 5540 C		
Drinking Water	Secondary Inorganic Contaminants Primary					
Drinking Water	Inorganic Contaminants	Fluoride	1730	EPA 300.0	10053006	9/23/2002
Drinking Water	Synthetic Organic Contaminants	1,2-Dibromo-3-chloropropane (DBCP)	4570	EPA 504.1	10082607	3/25/2003
Drinking Water	Synthetic Organic Contaminants	1,2-Dibromoethane (EDB Ethylene dibromide)	4585	EPA 504.1	10082607	3/25/2003
Drinking Water	Synthetic Organic Contaminants	Chlordane (tech.)	7250	EPA 505	10083202	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Endrin	7540	EPA 505	10083202	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Heptachlor	7685	EPA 505	10083202	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Heptachlor epoxide	7690	EPA 505	10083202	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Methoxychlor	7810	EPA 505	10083202	9/23/2002
Drinking Water	Synthetic Organic Contaminants	PCBs	8870	EPA 505	10083202	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Toxaphene (Chlorinated camphene)	8250	EPA 505	10083202	9/23/2002
Drinking Water	Synthetic Organic Contaminants	gamma-BHC (Lindane gamma-gamma-BHC)	7120	EPA 505	10083202	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Hexachlorocyclohexane	8545	EPA 515.1	10087000	3/25/2003
Drinking Water	Synthetic Organic Contaminants	2,4-D	8555	EPA 515.1	10087000	3/25/2003
Drinking Water	Synthetic Organic Contaminants	Dalapon				
Drinking Water	Synthetic Organic Contaminants	Dinoseb (2-sec-butyl-4,6-dinitrophenol DNBP)	8620	EPA 515.1	10087000	3/25/2003
Drinking Water	Synthetic Organic Contaminants	Pentachlorophenol	6605	EPA 515.1	10087000	3/25/2003
Drinking Water	Synthetic Organic Contaminants	Picloram	8645	EPA 515.1	10087000	3/25/2003
Drinking Water	Synthetic Organic Contaminants	Silvex (2,4,5-TP)	8650	EPA 515.1	10087000	3/25/2003
Drinking Water	Synthetic Organic Contaminants	Alachlor	7005	EPA 525.2	10089608	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Atrazine	7065	EPA 525.2	10089608	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Benzo(a)pyrene	5580	EPA 525.2	10089608	4/25/2003
Drinking Water	Synthetic Organic Contaminants	Di(2-ethylhexyl)adipate	6062	EPA 525.2	10089608	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Hexachlorobenzene	6275	EPA 525.2	10089608	11/22/2002
Drinking Water	Synthetic Organic Contaminants	Hexachlorocyclopentadiene	6285	EPA 525.2	10089608	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Simazine	8125	EPA 525.2	10089608	9/23/2002
Drinking Water	Synthetic Organic Contaminants	bis(2-Ethylhexyl) phthalate (DEHP)	6255	EPA 525.2	10089608	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Carbofuran (Furadan)	7205	EPA 531.1	10090809	3/25/2003
Drinking Water	Synthetic Organic Contaminants	Oxamyl	7940	EPA 531.1	10090809	3/25/2003
Drinking Water	Synthetic Organic Contaminants	Glyphosate	9411	EPA 547	10091802	9/23/2002

Drinking Water	Synthetic Organic Contaminants	Endothall	7525	EPA 548.1	10092601	9/23/2002
Drinking Water	Synthetic Organic Contaminants	Diquat	9390	EPA 549.2	10093206	3/25/2003
Drinking Water	Synthetic Organic Contaminants	Total haloacetic acids (HAA5)	9414	EPA 552.1	10095202	3/25/2003
Non-Potable Water	Extractable Organics	Acenaphthene	5500	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Acenaphthylene	5505	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Anthracene	5555	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Benzo(a)anthracene	5575	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Benzo(a)pyrene	5580	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Benzo(b)fluoranthene	5585	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Benzo(g,h,i)perylene	5590	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Benzo(k)fluoranthene	5600	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Chrysene	5855	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Dibenz(a,h)anthracene	5895	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Fluoranthene	6265	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Fluorene	6270	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Indeno(1,2,3-cd)pyrene	6315	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Naphthalene	5005	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Phenanthrene	6615	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	Pyrene	6665	EPA 610	10104402	3/25/2003
Non-Potable Water	Extractable Organics	1,2,4-Trichlorobenzene	5155	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	1,2-Dichlorobenzene	4610	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	1,3-Dichlorobenzene	4615	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	1,4-Dichlorobenzene	4620	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2,4,6-Trichlorophenol	6840	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2,4-Dichlorophenol	6000	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2,4-Dimethylphenol	6130	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2,4-Dinitrophenol	6175	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2,4-Dinitrotoluene (2,4-DNT)	6185	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2,6-Dinitrotoluene (2,6-DNT)	6190	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2-Chloronaphthalene	5795	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2-Chlorophenol	5800	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2-Methyl-4,6-dinitrophenol	6360	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	2-Nitrophenol	6490	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	3,3'-Dichlorobenzidine	5945	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	4-Bromophenyl phenyl ether	5660	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	4-Chloro-3-methylphenol	5700	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	4-Chlorophenyl phenylether	5825	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	4-Nitrophenol	6500	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Acenaphthene	5500	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Acenaphthylene	5505	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Anthracene	5555	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Benidine	5595	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Benzo(a)anthracene	5575	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Benzo(a)pyrene	5580	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Benzo(b)fluoranthene	5585	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Benzo(g,h,i)perylene	5590	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Benzo(k)fluoranthene	5600	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Butyl benzyl phthalate	5670	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Chrysene	5855	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Di-n-butyl phthalate	5925	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Di-n-octyl phthalate	6200	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Dibenz(a,h)anthracene	5895	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Diethyl phthalate	6070	EPA 625	10107401	9/23/2002

Non-Potable Water	Extractable Organics	Dimethyl phthalate	6135	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Fluoranthene	6265	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Fluorene	6270	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Hexachlorobenzene	6275	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Hexachlorobutadiene	4835	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Hexachlorocyclopentadiene	6285	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Hexachloroethane	4840	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Indeno(1,2,3-cd)pyrene	6315	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Isophorone	6320	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Naphthalene	5005	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Nitrobenzene	5015	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Pentachlorophenol	6805	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Phenanthrene	6615	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Phenol	6625	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	Pyrene	6665	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	bis(2-Chloroethoxy)methane	5760	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	bis(2-Chloroethyl) ether	5765	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	bis(2-Chloroisopropyl) ether (2,2'-Oxybis(1-chloropropane))	5780	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	bis(2-Ethylhexyl) phthalate (DEHP)	6255	EPA 625	10107401	3/14/2003
Non-Potable Water	Extractable Organics	n-Nitrosodi-n-propylamine	6545	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	n-Nitrosodimethylamine	6530	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	n-Nitrosodiphenylamine	6535	EPA 625	10107401	9/23/2002
Non-Potable Water	Extractable Organics	1,2,4-Trichlorobenzene	5155	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	1,2-Dichlorobenzene	4610	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	1,2-Diphenylhydrazine	6220	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	1,3-Dichlorobenzene	4615	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	1,4-Dichlorobenzene	4620	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2,4,5-Trichlorophenol	6835	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2,4,6-Trichlorophenol	6840	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2,4-Dichlorophenol	6000	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2,4-Dimethylphenol	6130	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2,4-Dinitrophenol	6175	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2,4-Dinitrotoluene (2,4-DNT)	6185	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2,6-Dinitrotoluene (2,6-DNT)	6190	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2-Chloronaphthalene	5795	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2-Chlorophenol	5800	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2-Methyl-4,6-dinitrophenol	6360	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2-Methylnaphthalene	6385	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2-Methylphenol (o-Cresol)	6400	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2-Nitroaniline	6460	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	2-Nitrophenol	6490	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	3,3'-Dichlorobenzidine	5945	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	3-Nitroaniline	6465	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	4-Bromophenyl phenyl ether	5660	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	4-Chloro-3-methylphenol	5700	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	4-Chloroaniline	5745	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	4-Chlorophenyl phenyl ether	5825	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	4-Methylphenol (p-Cresol)	6410	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	4-Nitroaniline	6470	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	4-Nitrophenol	6500	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Acenaphthene	5500	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Acenaphthylene	5505	EPA 8270	10185203	7/1/2003

Non-Potable Water	Extractable Organics	Aniline	5545	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Anthracene	5555	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Benidine	5595	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Benzo(a)anthracene	5575	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Benzo(a)pyrene	5580	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Benzo(b)fluoranthene	5585	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Benzo(g,h,i)perylene	5590	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Benzo(k)fluoranthene	5600	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Benzoic acid	5610	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Benzyl alcohol	5630	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Butyl benzyl phthalate	5670	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Chrysene	5855	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Di-n-butyl phthalate	5925	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Di-n-octyl phthalate	6200	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Dibenz(a,h)anthracene	5895	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Dibenzofuran	5905	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Diethyl phthalate	6070	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Dimethyl phthalate	6135	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Fluoranthene	6265	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Fluorene	6270	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Hexachlorobenzene	6275	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Hexachlorobutadiene	4835	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Hexachlorocyclopentadiene	6285	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Hexachloroethane	4840	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Indeno(1,2,3-cd)pyrene	6315	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Isophorone	6320	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Naphthalene	5005	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Nitrobenzene	5015	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Pentachlorophenol	6605	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Phenanthrene	6615	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Phenol	6625	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Pyrene	6665	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	Pyridine	5095	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	bis(2-Chloroethoxy)methane	5760	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	bis(2-Chloroethyl) ether	5765	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	bis(2-Chloroisopropyl) ether (2,2'-Oxybis(1-chloropropane))	5780	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	bis(2-Ethylhexyl) phthalate (DEHP)	6255	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	n-Nitrosodi-n-propylamine	6545	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	n-Nitrosodimethylamine	6530	EPA 8270	10185203	7/1/2003
Non-Potable Water	Extractable Organics	n-Nitrosodiphenylamine	6535	EPA 8270	10185203	7/1/2003
Non-Potable Water	General Chemistry	Un-ionized Ammonia	752	DEP SOP 02/12/01	1166	9/28/2009
Non-Potable Water	General Chemistry	Un-ionized Ammonia	752	DEP SOP 10/03/83	846	9/23/2002
Non-Potable Water	General Chemistry	Color	1605	EPA 110.2	10065400	9/23/2002
Non-Potable Water	General Chemistry	Conductivity	1610	EPA 120.1	10066209	9/23/2002
Non-Potable Water	General Chemistry	Hardness	1750	EPA 130.2	10007008	9/23/2002
Non-Potable Water	General Chemistry	pH	1900	EPA 150.1	10008205	9/23/2002
Non-Potable Water	General Chemistry	Residue-filterable (TDS)	1955	EPA 160.1	10009004	9/23/2002
Non-Potable Water	General Chemistry	Residue-nonfilterable (TSS)	1960	EPA 160.2	10009402	9/23/2002
Non-Potable Water	General Chemistry	Residue-total	1950	EPA 160.3	10009800	9/23/2002
Non-Potable Water	General Chemistry	Residue-volatile	1970	EPA 160.4	10010205	9/23/2002
Non-Potable Water	General Chemistry	Turbidity	2055	EPA 180.1	10011402	9/23/2002
Non-Potable Water	General Chemistry	Bromate	1535	EPA 300.0	10053006	9/23/2002

Non-Potable Water	General Chemistry	Bromide	1540	EPA 300.0	10053006	9/23/2002
Non-Potable Water	General Chemistry	Chlorate	1570	EPA 300.0	10053006	9/23/2002
Non-Potable Water	General Chemistry	Chloride	1575	EPA 300.0	10053006	9/23/2002
Non-Potable Water	General Chemistry	Chlorite	1595	EPA 300.0	10053006	9/23/2002
Non-Potable Water	General Chemistry	Fluoride	1730	EPA 300.0	10053006	9/23/2002
Non-Potable Water	General Chemistry	Nitrate as N	1810	EPA 300.0	10053006	9/23/2002
Non-Potable Water	General Chemistry	Nitrate-nitrite	1820	EPA 300.0	10053006	9/23/2002
Non-Potable Water	General Chemistry	Nitrite as N	1840	EPA 300.0	10053006	9/23/2002
Non-Potable Water	General Chemistry	Sulfate	2000	EPA 300.0	10053006	9/23/2002
Non-Potable Water	General Chemistry	Alkalinity as CaCO3	1505	EPA 310.1	10054601	9/23/2002
Non-Potable Water	General Chemistry	Cyanide	1635	EPA 335.2	10060205	9/23/2002
Non-Potable Water	General Chemistry	Fluoride	1730	EPA 340.2	10062007	9/23/2002
Non-Potable Water	General Chemistry	Ammonia as N	1515	EPA 350.1	10063204	9/23/2002
Non-Potable Water	General Chemistry	Kjeldahl nitrogen - total	1795	EPA 351.2	10065006	9/23/2002
Non-Potable Water	General Chemistry	Organic nitrogen	1865	EPA 351.2 - EPA 350.1	809	9/23/2002
Non-Potable Water	General Chemistry	Nitrate as N	1810	EPA 353.2	10067206	9/23/2002
Non-Potable Water	General Chemistry	Nitrate-nitrite	1820	EPA 353.2	10067206	9/23/2002
Non-Potable Water	General Chemistry	Nitrite as N	1840	EPA 353.2	10067206	7/23/2004
Non-Potable Water	General Chemistry	Orthophosphate as P	1870	EPA 365.1	10069600	9/23/2002
Non-Potable Water	General Chemistry	Phosphorus total	1910	EPA 365.1	10069600	9/23/2002
Non-Potable Water	General Chemistry	Phosphorus total	1910	EPA 365.4	10071008	9/23/2002
Non-Potable Water	General Chemistry	Silica-dissolved	1995	EPA 370.1	10071804	9/23/2002
Non-Potable Water	General Chemistry	Sulfide	2005	EPA 376.1	10074007	9/23/2002
Non-Potable Water	General Chemistry	Biochemical oxygen demand	1530	EPA 405.1	10075408	9/23/2002
Non-Potable Water	General Chemistry	Chemical oxygen demand	1565	EPA 410.4	10077006	9/23/2002
Non-Potable Water	General Chemistry	Total organic carbon	2040	EPA 415.1	10078203	9/23/2002
Non-Potable Water	General Chemistry	Total phenolics	1905	EPA 420.1	10079206	9/23/2002
Non-Potable Water	General Chemistry	Total cyanide	1645	EPA 9014	10193803	7/1/2003
Non-Potable Water	General Chemistry	pH	1900	EPA 9040	10196802	7/1/2003
Non-Potable Water	General Chemistry	Total organic carbon	2040	EPA 9060	10200201	7/1/2003
Non-Potable Water	General Chemistry	Total phenolics	1905	EPA 9065	10200405	7/1/2003
Non-Potable Water	General Chemistry	Chlorophylls	9345	SM 10200 H	248	9/23/2002
Non-Potable Water	General Chemistry	Color	1605	SM 2120 B	20001803	9/23/2002
Non-Potable Water	General Chemistry	Alkalinity as CaCO3	1505	SM 2320 B	20003003	9/23/2002
Non-Potable Water	General Chemistry	Hardness	1750	SM 2340 B	20003401	9/23/2002
Non-Potable Water	General Chemistry	Hardness	1750	SM 2340 C	20003605	4/16/2009
Non-Potable Water	General Chemistry	Residue-total	1950	SM 2540 B	20004608	4/16/2009
Non-Potable Water	General Chemistry	Residue-filterable (TDS)	1955	SM 2540 C	20004404	9/23/2002
Non-Potable Water	General Chemistry	Residue-nonfilterable (TSS)	1960	SM 2540 D	20004802	9/23/2002
Non-Potable Water	General Chemistry	Chromium VI	1045	SM 3500-Cr B (20th/21st Ed.)UV-VIS	845	9/28/2009
Non-Potable Water	General Chemistry	Fluoride	1730	SM 4500 F-C	20012800	9/23/2002
Non-Potable Water	General Chemistry	pH	1900	SM 4500-H-B	20016404	4/16/2009
Non-Potable Water	General Chemistry	Sulfide	2005	SM 4500-S E (18th Ed.)/TITR	20026408	4/16/2009
Non-Potable Water	General Chemistry	Silica-dissolved	2005	SM 4500-S F (20th/21st Ed.)	804	4/16/2009
Non-Potable Water	General Chemistry	Silica as SiO2	1995	SM 4500-Si D (18th/19th Ed.)UV-VIS	20026602	9/23/2002
Non-Potable Water	General Chemistry	Total cyanide	1645	SM 4500-SiO2 C (20th/21st Ed.)	257	4/16/2009
Non-Potable Water	General Chemistry	Biochemical oxygen demand	1530	SM 4500CN-E	20016200	4/16/2009
Non-Potable Water	General Chemistry	Carbonaceous BOD (CBOD)	1555	SM 5210 B	20027401	9/23/2002
Non-Potable Water	General Chemistry	Total organic carbon	2040	SM 5310 B	20027401	9/23/2002
Non-Potable Water	General Chemistry	Surfactants - MBAS	2025	SM 5540 C	20028006	4/16/2009
Non-Potable Water	Metals	Aluminum	1000	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Antimony	1005	EPA 200.7	10013408	3/25/2003

Non-Potable Water	Metals	Arsenic	1010	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Barium	1015	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Beryllium	1020	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Boron	1025	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Cadmium	1030	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Calcium	1035	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Chromium	1040	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Cobalt	1050	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Copper	1055	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Iron	1070	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Lead	1075	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Magnesium	1085	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Manganese	1090	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Molybdenum	1100	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Nickel	1105	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Potassium	1125	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Selenium	1140	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Silver	1150	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Sodium	1155	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Thallium	1165	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Tin	1175	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Titanium	1180	EPA 200.7	10013408	7/23/2004
Non-Potable Water	Metals	Vanadium	1185	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Zinc	1190	EPA 200.7	10013408	3/25/2003
Non-Potable Water	Metals	Mercury	1095	EPA 245.1	10036201	9/23/2002
Non-Potable Water	Metals	Thallium	1165	EPA 279.2	10048405	5/1/2006
Non-Potable Water	Metals	Aluminum	1000	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Antimony	1005	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Arsenic	1010	EPA 6010	10155201	9/23/2002
Non-Potable Water	Metals	Barium	1015	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Beryllium	1020	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Boron	1025	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Cadmium	1030	EPA 6010	10155201	9/23/2002
Non-Potable Water	Metals	Calcium	1035	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Chromium	1040	EPA 6010	10155201	9/23/2002
Non-Potable Water	Metals	Cobalt	1050	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Copper	1055	EPA 6010	10155201	9/23/2002
Non-Potable Water	Metals	Iron	1070	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Lead	1075	EPA 6010	10155201	9/23/2002
Non-Potable Water	Metals	Magnesium	1085	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Manganese	1090	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Molybdenum	1100	EPA 6010	10155201	9/23/2002
Non-Potable Water	Metals	Nickel	1105	EPA 6010	10155201	9/23/2002
Non-Potable Water	Metals	Potassium	1125	EPA 6010	10155201	9/23/2002
Non-Potable Water	Metals	Selenium	1140	EPA 6010	10155201	9/23/2002
Non-Potable Water	Metals	Silver	1150	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Sodium	1155	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Strontium	1160	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Thallium	1165	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Tin	1175	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Titanium	1180	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Vanadium	1185	EPA 6010	10155201	7/1/2003
Non-Potable Water	Metals	Zinc	1190	EPA 6010	10155201	9/23/2002

Non-Potable Water	Metals	Mercury	1095	EPA 7470	10165603	9/23/2002
Non-Potable Water	Metals	Thallium	1165	EPA 7841	10170602	5/1/2006
Non-Potable Water	Microbiology	Enterococci	2520	EPA 1600	10119809	9/23/2002
Non-Potable Water	Microbiology	Heterotrophic plate count	2555	SM 9215 B	20035205	9/23/2002
Non-Potable Water	Microbiology	Total coliforms	2500	SM 9221 B	20035907	9/23/2002
Non-Potable Water	Microbiology	Fecal coliforms	2530	SM 9221 E	20036208	9/23/2002
Non-Potable Water	Microbiology	Total coliforms	2500	SM 9222 B	20036800	9/23/2002
Non-Potable Water	Microbiology	Fecal coliforms	2530	SM 9222 D	20037405	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	4 4'-DDD	7355	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	4 4'-DDE	7360	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	4 4'-DDT	7365	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Aldrin	7025	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Aroclor-1016 (PCB-1016)	8880	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Aroclor-1221 (PCB-1221)	8885	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Aroclor-1232 (PCB-1232)	8890	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Aroclor-1242 (PCB-1242)	8895	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Aroclor-1248 (PCB-1248)	8900	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Aroclor-1254 (PCB-1254)	8905	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Aroclor-1260 (PCB-1260)	8910	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Chlordane (tech.)	7250	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Dieldrin	7470	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Endosulfan I	7510	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Endosulfan II	7515	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Endosulfan sulfate	7520	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Endrin	7540	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Endrin aldehyde	7530	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Heptachlor	7685	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Heptachlor epoxide	7690	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Toxaphene (Chlorinated camphene)	8250	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	alpha-BHC (alpha-Hexachlorocyclohexane)	7110	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	beta-BHC (beta-Hexachlorocyclohexane)	7115	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	delta-BHC	7105	EPA 608	10103603	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	gamma-BHC (Lindane gamma-Hexachlorocyclohexane)	7120	EPA 608	10103603	8/19/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	2 4-D	8545	EPA 615	10105609	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Silvex (2 4 5-TP)	8650	EPA 615	10105609	9/23/2002
Non-Potable Water	Pesticides-Herbicides-PCB's	Benomyl	7095	EPA 631	10108404	11/12/2004
Non-Potable Water	Pesticides-Herbicides-PCB's	4 4'-DDD	7355	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	4 4'-DDE	7360	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	4 4'-DDT	7365	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Aldrin	7025	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Chlordane (tech.)	7250	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Dieldrin	7470	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Endosulfan I	7510	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Endosulfan II	7515	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Endosulfan sulfate	7520	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Endrin	7540	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Endrin aldehyde	7530	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Heptachlor	7685	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Heptachlor epoxide	7690	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Methoxychlor	7810	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	Toxaphene (Chlorinated camphene)	8250	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's	alpha-BHC (alpha-Hexachlorocyclohexane)	7110	EPA 8081	10178402	7/1/2003

Non-Potable Water	Pesticides-Herbicides-PCB's		beta-BHC (beta-Hexachlorocyclohexane)	7115	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		delta-BHC	7105	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		gamma-BHC (Lindane gamma-Hexachlorocyclohexane)	7120	EPA 8081	10178402	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Aroclor-1016 (PCB-1016)	8880	EPA 8082	10179007	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Aroclor-1221 (PCB-1221)	8885	EPA 8082	10179007	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Aroclor-1232 (PCB-1232)	8890	EPA 8082	10179007	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Aroclor-1248 (PCB-1248)	8900	EPA 8082	10179007	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Aroclor-1254 (PCB-1254)	8905	EPA 8082	10179007	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Aroclor-1260 (PCB-1260)	8910	EPA 8082	10179007	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		2,4,5-T	8655	EPA 8151	10183003	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		2,4-D	8545	EPA 8151	10183003	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		2,4-DB	8560	EPA 8151	10183003	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Dalapon	8555	EPA 8151	10183003	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Dicamba	8595	EPA 8151	10183003	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Dichloroprop (Dichloroprop)	8605	EPA 8151	10183003	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Dinoseb (2-sec-butyl-4,6-dinitrophenol DNBP)	8620	EPA 8151	10183003	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		MCPA	7775	EPA 8151	10183003	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		MCPP	7780	EPA 8151	10183003	7/1/2003
Non-Potable Water	Pesticides-Herbicides-PCB's		Silvex (2,4,5-TP)	8650	EPA 8151	10183003	7/1/2003
Non-Potable Water	Volatile Organics		1,1,1-Trichloroethane	5160	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		1,1,2,2-Tetrachloroethane	5110	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		1,1,2-Trichloroethane	5165	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		1,1-Dichloroethane	4630	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		1,1-Dichloroethylene	4640	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		1,2-Dichlorobenzene	4610	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		1,2-Dichloroethane	4635	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		1,2-Dichloropropane	4655	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		1,3-Dichlorobenzene	4615	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		1,4-Dichlorobenzene	4620	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		2-Chloroethyl vinyl ether	4500	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Acrolein (Propenal)	4325	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Acrylonitrile	4340	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Benzene	4375	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Bromodichloromethane	4395	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Bromoforn	4400	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Carbon tetrachloride	4455	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Chlorobenzene	4475	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Chloroethane	4485	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Chloroform	4505	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Dibromochloromethane	4575	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Ethylbenzene	4765	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Methyl bromide (Bromomethane)	4950	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Methyl chloride (Chloromethane)	4960	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Methylene chloride	4975	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Tetrachloroethylene (Perchloroethylene)	5115	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Toluene	5140	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Trichloroethene (Trichloroethylene)	5170	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Trichlorofluoromethane	5175	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Vinyl chloride	5235	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		Xylene (total)	5260	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics		cis-1,3-Dichloropropene	4680	EPA 824	10107207	9/23/2002

Non-Potable Water	Volatile Organics	trans-1,2-Dichloroethylene	4700	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics	trans-1,3-Dichloropropylene	4685	EPA 824	10107207	9/23/2002
Non-Potable Water	Volatile Organics	1,2-Dibromo-3-chloropropane (DBCP)	4570	EPA 8011	10173009	7/1/2003
Non-Potable Water	Volatile Organics	1,2-Dibromoethane (EDB Ethylene dibromide)	4585	EPA 8011	10173009	7/1/2003
Non-Potable Water	Volatile Organics	1,1,1,2-Tetrachloroethane	5105	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,1,1-Trichloroethane	5160	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,1,2,2-Tetrachloroethane	5110	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,1,2-Trichloroethane	5165	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,1-Dichloroethane	4630	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,1-Dichloroethylene	4640	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,1-Dichloropropene	4670	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,2,3-Trichlorobenzene	5150	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,2,3-Trichloropropane	5180	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,2,4-Trichlorobenzene	5155	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,2,4-Trimethylbenzene	5210	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,2-Dibromo-3-chloropropane (DBCP)	4570	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,2-Dibromoethane (EDB Ethylene dibromide)	4585	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,2-Dichlorobenzene	4610	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,2-Dichloroethane	4635	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,2-Dichloropropane	4655	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,3,5-Trimethylbenzene	5215	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,3-Dichlorobenzene	4615	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,3-Dichloropropane	4660	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	1,4-Dichlorobenzene	4620	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	2,2-Dichloropropane	4665	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	2-Butanone (Methyl ethyl ketone MEK)	4410	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	2-Chloroethyl vinyl ether	4500	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	2-Chlorotoluene	4535	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	2-Hexanone	4860	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	4-Chlorotoluene	4540	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	4-Methyl-2-pentanone (MIBK)	4995	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Acetone	4315	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Acetonitrile	4320	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Allyl chloride (3-Chloropropene)	4355	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Benzene	4375	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Bromobenzene	4385	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Bromochloromethane	4390	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Bromodichloromethane	4395	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Bromotoluene	4400	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Carbon disulfide	4450	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Carbon tetrachloride	4455	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Chlorobenzene	4475	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Chloroethane	4485	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Chloroform	4505	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Chloroprene	4525	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Dibromochloromethane	4575	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Dibromomethane	4595	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Dichlorodifluoromethane	4625	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Ethyl methacrylate	4810	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Ethylbenzene	4765	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Hexachlorobutadiene	4835	EPA 8260	10184404	7/1/2003

Non-Potable Water	Volatile Organics	Iodomethane (Methyl iodide)	4870	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Isobutyl alcohol (2-Methyl-1-propanol)	4875	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Isopropylbenzene	4900	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Methacrylonitrile	4925	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Methyl bromide (Bromomethane)	4950	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Methyl chloride (Chloromethane)	4960	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Methyl methacrylate	4990	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Methyl tert-butyl ether (MTBE)	5000	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Methylene chloride	4975	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Naphthalene	5005	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Propionitrile (Ethyl cyanide)	5080	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Styrene	5100	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Tetrachloroethylene (Perchloroethylene)	5115	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Toluene	5140	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Trichloroethene (Trichloroethylene)	5170	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Trichlorofluoromethane	5175	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Vinyl acetate	5225	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Vinyl chloride	5235	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	Xylene (total)	5260	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	cis-1 2-Dichloroethylene	4645	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	cis-1 3-Dichloropropene	4680	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	n-Butylbenzene	4435	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	n-Propylbenzene	5090	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	p-Isopropyltoluene	4910	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	sec-Butylbenzene	4440	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	tert-Butylbenzene	4445	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	trans-1 2-Dichloroethylene	4700	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	trans-1 3-Dichloropropylene	4685	EPA 8260	10184404	7/1/2003
Non-Potable Water	Volatile Organics	trans-1 4-Dichloro-2-butene	4605	EPA 8260	10184404	7/1/2003
Solids	Extractable Organics	1 2 4-Trichlorobenzene	5155	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	1 2-Dichlorobenzene	4610	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	1 3-Dichlorobenzene	4615	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	1 4-Dichlorobenzene	4620	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2 4 5-Trichlorophenol	5835	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2 4 6-Trichlorophenol	5840	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2 4-Dichlorophenol	6000	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2 4-Dimethylphenol	6130	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2 4-Dinitrophenol	6175	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2 4-Dinitrotoluene (2 4-DNT)	6185	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2 6-Dinitrotoluene (2 6-DNT)	6190	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2-Chloronaphthalene	5795	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2-Chlorophenol	5800	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2-Methyl-4 6-dinitrophenol	6360	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2-Methylnaphthalene	6385	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2-Methylphenol (o-Cresol)	6400	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2-Nitroaniline	6460	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	2-Nitrophenol	6490	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	3 3'-Dichlorobenzidine	5945	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	3-Nitroaniline	6465	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	4-Bromophenyl phenyl ether	5660	EPA 8270	10185203	1/7/2003
Solids	Extractable Organics	4-Chloro-3-methylphenol	5700	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	4-Chlorophenyl phenylether	5825	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	4-Methylphenol (p-Cresol)	6410	EPA 8270	10185203	9/23/2002

Solids	Extractable Organics	4-Nitroaniline	6470	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	4-Nitrophenol	6500	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Acenaphthene	5500	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Acenaphthylene	5505	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Aniline	5545	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Anthracene	5555	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Benzidine	5595	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Benzo(a)anthracene	5575	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Benzo(a)pyrene	5580	EPA 8270	10185203	4/7/2003
Solids	Extractable Organics	Benzo(b)fluoranthene	5585	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Benzo(g,h,i)perylene	5590	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Benzo(k)fluoranthene	5600	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Benzoic acid	5610	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Benzyl alcohol	5630	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Butyl benzyl phthalate	5670	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Chrysene	5855	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Di-n-butyl phthalate	5925	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Di-n-octyl phthalate	6200	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Dibenz(a,h)anthracene	5895	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Dibenzofuran	5905	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Diethyl phthalate	6070	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Dimethyl phthalate	6135	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Fluoranthene	6265	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Fluorene	6270	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Hexachlorobenzene	6275	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Hexachlorobutadiene	4835	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Hexachlorocyclopentadiene	6285	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Hexachloroethane	4840	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Indeno(1,2,3-cd)pyrene	6315	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Isophorone	6320	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Naphthalene	5005	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Nitrobenzene	5015	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Pentachlorophenol	6605	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Phenanthrene	6615	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Phenol	6625	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Pyrene	6665	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	Pyridine	5095	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	bis(2-Chloroethoxy)methane	5760	EPA 8270	10185203	1/7/2003
Solids	Extractable Organics	bis(2-Chloroethyl) ether	5765	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	bis(2-Chloroisopropyl) ether (2,2'-Oxybis(1-chloropropane))	5780	EPA 8270	10185203	1/7/2003
Solids	Extractable Organics	bis(2-Ethylhexyl) phthalate (DEHP)	6255	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	n-Nitrosodi-n-propylamine	6545	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	n-Nitrosodimethylamine	6530	EPA 8270	10185203	9/23/2002
Solids	Extractable Organics	n-Nitrosodiphenylamine	6535	EPA 8270	10185203	9/23/2002
Solids	General Chemistry	Toxicity Characteristic Leaching Procedure	750	EPA 1311	10118806	9/23/2002
Solids	General Chemistry	Ammonia as N	1515	EPA 350.1	10063204	11/12/2004
Solids	General Chemistry	Kjeldahl nitrogen - total	1795	EPA 351.2	10065006	11/12/2004
Solids	General Chemistry	Total nitrate-nitrite	1825	EPA 353.2	10067206	11/12/2004
Solids	General Chemistry	Phosphorus total	1910	EPA 365.4	10071008	11/12/2004
Solids	General Chemistry	Total cyanide	1645	EPA 9014	10193803	9/23/2002
Solids	General Chemistry	pH	1900	EPA 9040	10196802	9/23/2002
Solids	General Chemistry	pH	1900	EPA 9045	10197805	9/23/2002

Solids	General Chemistry	Total organic carbon	2040	EPA 9060	10200201	9/23/2002
Solids	General Chemistry	Residue-total	1950	SM 2540 G	20005203	11/12/2004
Solids	General Chemistry	Residue-volatile	1970	SM 2540 G	20005203	11/12/2004
Solids	Metals	Aluminum	1000	EPA 6010	10155201	9/23/2002
Solids	Metals	Antimony	1005	EPA 6010	10155201	9/23/2002
Solids	Metals	Arsenic	1010	EPA 6010	10155201	9/23/2002
Solids	Metals	Barium	1015	EPA 6010	10155201	9/23/2002
Solids	Metals	Beryllium	1020	EPA 6010	10155201	9/23/2002
Solids	Metals	Boron	1025	EPA 6010	10155201	9/23/2002
Solids	Metals	Cadmium	1030	EPA 6010	10155201	9/23/2002
Solids	Metals	Calcium	1035	EPA 6010	10155201	9/23/2002
Solids	Metals	Chromium	1040	EPA 6010	10155201	9/23/2002
Solids	Metals	Cobalt	1050	EPA 6010	10155201	9/23/2002
Solids	Metals	Copper	1055	EPA 6010	10155201	9/23/2002
Solids	Metals	Iron	1070	EPA 6010	10155201	9/23/2002
Solids	Metals	Lead	1075	EPA 6010	10155201	9/23/2002
Solids	Metals	Magnesium	1085	EPA 6010	10155201	9/23/2002
Solids	Metals	Manganese	1090	EPA 6010	10155201	9/23/2002
Solids	Metals	Molybdenum	1100	EPA 6010	10155201	9/23/2002
Solids	Metals	Nickel	1105	EPA 6010	10155201	9/23/2002
Solids	Metals	Potassium	1125	EPA 6010	10155201	9/23/2002
Solids	Metals	Selenium	1140	EPA 6010	10155201	9/23/2002
Solids	Metals	Silver	1150	EPA 6010	10155201	9/23/2002
Solids	Metals	Sodium	1155	EPA 6010	10155201	9/23/2002
Solids	Metals	Strontium	1160	EPA 6010	10155201	9/23/2002
Solids	Metals	Thallium	1165	EPA 6010	10155201	9/23/2002
Solids	Metals	Tin	1175	EPA 6010	10155201	9/23/2002
Solids	Metals	Titanium	1180	EPA 6010	10155201	9/23/2002
Solids	Metals	Vanadium	1185	EPA 6010	10155201	9/23/2002
Solids	Metals	Zinc	1190	EPA 6010	10155201	9/23/2002
Solids	Metals	Mercury	1095	EPA 7470	10165603	9/23/2002
Solids	Metals	Mercury	1095	EPA 7471	10166004	3/12/2007
Solids	Metals	Thallium	1165	EPA 7841	10170602	9/23/2002
Solids	Microbiology	Fecal coliforms	2530	SM 9221 E	20036208	11/12/2004
Solids	Pesticides-Herbicides-PCB's	4 4'-DDD	7355	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	4 4'-DDE	7360	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	4 4'-DDT	7365	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Aldrin	7025	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Chlordane (tech.)	7250	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Dieldrin	7470	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Endosulfan I	7510	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Endosulfan II	7515	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Endosulfan sulfate	7520	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Endrin	7540	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Endrin aldehyde	7530	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Heptachlor	7685	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Heptachlor epoxide	7690	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Methoxychlor	7810	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Toxaphene (Chlorinated camphene)	8250	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	alpha-BHC (alpha-Hexachlorocyclohexane)	7110	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	beta-BHC (beta-Hexachlorocyclohexane)	7115	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	delta-BHC	7105	EPA 8081	10178402	9/23/2002

Solids	Pesticides-Herbicides-PCB's	gamma-BHC (Lindane gamma-Hexachlorocyclohexane)	7120	EPA 8081	10178402	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Aroclor-1016 (PCB-1016)	8880	EPA 8082	10179007	5/14/2003
Solids	Pesticides-Herbicides-PCB's	Aroclor-1221 (PCB-1221)	8885	EPA 8082	10179007	5/14/2003
Solids	Pesticides-Herbicides-PCB's	Aroclor-1232 (PCB-1232)	8890	EPA 8082	10179007	5/14/2003
Solids	Pesticides-Herbicides-PCB's	Aroclor-1242 (PCB-1242)	8895	EPA 8082	10179007	7/23/2004
Solids	Pesticides-Herbicides-PCB's	Aroclor-1248 (PCB-1248)	8900	EPA 8082	10179007	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Aroclor-1254 (PCB-1254)	8905	EPA 8082	10179007	5/14/2003
Solids	Pesticides-Herbicides-PCB's	Aroclor-1260 (PCB-1260)	8910	EPA 8082	10179007	5/14/2003
Solids	Pesticides-Herbicides-PCB's	2 4 5-T	8655	EPA 8151	10183003	9/23/2002
Solids	Pesticides-Herbicides-PCB's	2 4-D	8545	EPA 8151	10183003	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Dicamba	8595	EPA 8151	10183003	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Silvex (2 4 5-TP)	8650	EPA 8151	10183003	9/23/2002
Solids	Pesticides-Herbicides-PCB's	Benomyl	7095	EPA 8321	10188804	11/12/2004
Solids	Volatile Organics	1 1 1 2-Tetrachloroethane	5105	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 1 1-Trichloroethane	5160	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 1 2-Tetrachloroethane	5110	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 1 2-Trichloroethane	5165	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 1-Dichloroethane	4630	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 1-Dichloroethylene	4640	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 1-Dichloropropene	4670	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 2 3-Trichlorobenzene	5150	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 2 3-Trichloropropane	5180	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 2 4-Trichlorobenzene	5155	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 2 4-Trimethylbenzene	5210	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 2-Dibromo-3-chloropropane (DBCP)	4570	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 2-Dibromoethane (EDB Ethylene dibromide)	4585	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 2-Dichlorobenzene	4610	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 2-Dichloroethane	4635	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 2-Dichloropropane	4655	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 3 5-Trimethylbenzene	5215	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 3-Dichlorobenzene	4615	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 3-Dichloropropane	4660	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	1 4-Dichlorobenzene	4620	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	2 2-Dichloropropane	4665	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	2-Butanone (Methyl ethyl ketone MEK)	4410	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	2-Chloroethyl vinyl ether	4500	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	2-Chlorotoluene	4535	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	2-Hexanone	4860	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	4-Chlorotoluene	4540	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	4-Methyl-2-pentanone (MIBK)	4995	EPA 8260	10184404	1/7/2003
Solids	Volatile Organics	Acetone	4315	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Benzene	4375	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Bromobenzene	4385	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Bromochloromethane	4390	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Bromodichloromethane	4395	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Bromoform	4400	EPA 8260	10184404	1/7/2003
Solids	Volatile Organics	Carbon disulfide	4450	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Carbon tetrachloride	4455	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Chlorobenzene	4475	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Chloroethane	4485	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Chloroform	4505	EPA 8260	10184404	9/23/2002

Solids	Volatile Organics	Dibromochloromethane	4575	EPA 8260	10184404	1/7/2003
Solids	Volatile Organics	Dibromomethane	4395	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Dichlorodifluoromethane	4625	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Ethyl methacrylate	4810	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Ethylbenzene	4765	EPA 8260	10184404	1/7/2003
Solids	Volatile Organics	Hexachlorobutadiene	4835	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Iodomethane (Methyl iodide)	4870	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Isobutyl alcohol (2-Methyl-1-propanol)	4875	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Isopropylbenzene	4900	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Methyl bromide (Bromomethane)	4950	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Methyl chloride (Chloromethane)	4960	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Methyl tert-butyl ether (MTBE)	5000	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Methylene chloride	4975	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Naphthalene	5005	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Styrene	5100	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Tetrachloroethylene (Perchloroethylene)	5115	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Toluene	5140	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Trichloroethene (Trichloroethylene)	5170	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Trichlorofluoromethane	5175	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Vinyl chloride	5235	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	Xylene (total)	5260	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	cis-1 2-Dichloroethylene	4645	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	cis-1 3-Dichloropropene	4680	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	n-Butylbenzene	4435	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	n-Propylbenzene	5090	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	p-Isopropyltoluene	4910	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	sec-Butylbenzene	4440	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	tert-Butylbenzene	4445	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	trans-1 2-Dichloroethylene	4700	EPA 8260	10184404	9/23/2002
Solids	Volatile Organics	trans-1 3-Dichloropropylene	4685	EPA 8260	10184404	9/23/2002

Laboratories Certified Under NELAP by the Florida Department of Health
Listing of Organization FOAs Query Results
Database Version: 3/19/2011 8:00:17 AM
Laboratory Name Lee County Environmental Laboratory
DOH ID: E45049

Matrix	Category	Analyte	AnalyteCode	Method	MethodCode	Certification Date
Drinking Water	Microbiology	Escherichia coli	2525	COLISURE	617	8/31/2005
Drinking Water	Microbiology	Total coliforms	2500	COLISURE	617	8/31/2005
Drinking Water	Microbiology	Escherichia coli	2525	EC + MUG	811	8/31/2005
Drinking Water	Microbiology	Heterotrophic plate count	2535	SM 9215 B	20035205	2/3/2003
Drinking Water	Microbiology	Total coliforms	2500	SM 9222 B	20036800	2/3/2003
Drinking Water	Microbiology	Escherichia coli	2525	SM 9223 B	725	3/19/2010
Drinking Water	Microbiology	Total coliforms	2500	SM 9223 B	725	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Arsenic	1010	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Barium	1015	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Beryllium	1020	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Cadmium	1030	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Calcium	1035	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Chromium	1040	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Magnesium	1085	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Nickel	1105	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Sodium	1155	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants	Antimony	1005	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Arsenic	1010	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Barium	1015	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Beryllium	1020	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Cadmium	1030	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Chromium	1040	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Lead	1075	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Nickel	1105	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Selenium	1140	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Thallium	1165	EPA 200.8	10014401	1/7/2009
Drinking Water	Primary Inorganic Contaminants	Mercury	1095	EPA 245.1	10036201	2/3/2003
Drinking Water	Primary Inorganic Contaminants	Bromide	1540	EPA 300.0	10053006	3/22/2005
Drinking Water	Primary Inorganic Contaminants	Chloride	1595	EPA 300.0	10053006	2/3/2003
Drinking Water	Primary Inorganic Contaminants	Fluoride	1730	EPA 300.0	10053006	2/3/2003
Drinking Water	Primary Inorganic Contaminants	Sulfate	2000	EPA 300.0	10053006	2/3/2003
Drinking Water	Primary Inorganic Contaminants	Nitrate	1805	EPA 353.2	10067206	2/3/2003
Drinking Water	Primary Inorganic Contaminants	Nitrite as N	1840	EPA 353.2	10067206	8/31/2005
Drinking Water	Primary Inorganic Contaminants	Total nitrate-nitrite	1825	EPA 353.2	10067206	2/3/2003
Drinking Water	Primary Inorganic Contaminants	Alkalinity as CaCO3	1505	SM 2320 B	20003003	8/31/2005
Drinking Water	Primary Inorganic Contaminants	Conductivity	1610	SM 2510 B	20003809	1/2/2008
Drinking Water	Primary Inorganic Contaminants	Silica as SiO2	1990	SM 4500-SiO2 C (20th/21st Ed.)	257	1/2/2008
Drinking Water	Primary Inorganic Contaminants	Cyanide	1635	SM 4500CN-E	20016200	7/31/2009
Drinking Water	Primary Inorganic Contaminants	Total organic carbon	2040	SM 5310 B	20028006	8/31/2005
Drinking Water	Primary Inorganic Contaminants Secondary Inorganic Contaminants	Copper	1055	EPA 200.7	10013408	3/19/2010
Drinking Water	Primary Inorganic Contaminants & Secondary Inorganic Contaminants	Copper	1055	EPA 200.8	10014401	1/7/2009
Drinking Water	Secondary Inorganic Contaminants	pH	1900	SM 4500-H+-B	20016404	1/2/2008
Drinking Water	Secondary Inorganic Contaminants	Aluminum	1000	EPA 200.7	10013408	3/19/2010
Drinking Water	Secondary Inorganic Contaminants	Boron	1025	EPA 200.7	10013408	3/19/2010

Drinking Water	Secondary Inorganic Contaminants	Iron	1070	EPA 200.7	10013408	3/19/2010
Drinking Water	Secondary Inorganic Contaminants	Manganese	1090	EPA 200.7	10013408	3/19/2010
Drinking Water	Secondary Inorganic Contaminants	Molybdenum	1100	EPA 200.7	10013408	3/19/2010
Drinking Water	Secondary Inorganic Contaminants	Potassium	1125	EPA 200.7	10013408	3/19/2010
Drinking Water	Secondary Inorganic Contaminants	Silver	1150	EPA 200.7	10013408	3/19/2010
Drinking Water	Secondary Inorganic Contaminants	Vanadium	1185	EPA 200.7	10013408	3/19/2010
Drinking Water	Secondary Inorganic Contaminants	Zinc	1190	EPA 200.7	10013408	3/19/2010
Drinking Water	Secondary Inorganic Contaminants	Aluminum	1000	EPA 200.8	10014401	1/7/2009
Drinking Water	Secondary Inorganic Contaminants	Manganese	1090	EPA 200.8	10014401	1/7/2009
Drinking Water	Secondary Inorganic Contaminants	Molybdenum	1100	EPA 200.8	10014401	1/7/2009
Drinking Water	Secondary Inorganic Contaminants	Silver	1150	EPA 200.8	10014401	1/7/2009
Drinking Water	Secondary Inorganic Contaminants	Vanadium	1185	EPA 200.8	10014401	1/7/2009
Drinking Water	Secondary Inorganic Contaminants	Zinc	1190	EPA 200.8	10014401	1/7/2009
Drinking Water	Secondary Inorganic Contaminants	Chlorate	1570	EPA 300.0	10053006	8/31/2005
Drinking Water	Secondary Inorganic Contaminants	Color	1605	SM 2120 C (PROPOSED 21st Ed.)	1155	1/2/2008
Drinking Water	Secondary Inorganic Contaminants	Odor	1855	SM 2150 B	20002602	2/3/2003
Drinking Water	Secondary Inorganic Contaminants	Hardness	1750	SM 2340 B	20003401	3/19/2010
Drinking Water	Secondary Inorganic Contaminants	Total dissolved solids	1705	SM 2540 C	20004404	2/3/2003
Drinking Water	Secondary Inorganic Contaminants	Chloride	1575	SM 4500 Cl- B	20011807	2/3/2003
Drinking Water	Secondary Inorganic Contaminants	Chloride	1575	SM 4500 Cl- D	20012004	1/2/2008
Drinking Water	Secondary Inorganic Contaminants	Surfactants - MBAS	2025	SM 5540 C	20029009	2/3/2003
Drinking Water	Secondary Inorganic Contaminants Primary					
Drinking Water	Inorganic Contaminants	Fluoride	1730	SM 4500 F-C	20012800	2/3/2003
Non-Potable Water	General Chemistry	Turbidity	2055	EPA 180.1	10011402	2/3/2003
Non-Potable Water	General Chemistry	Bromide	1540	EPA 300.0	10053006	2/3/2003
Non-Potable Water	General Chemistry	Fluoride	1730	EPA 300.0	10053006	3/22/2005
Non-Potable Water	General Chemistry	Sulfate	2000	EPA 300.0	10053006	2/3/2003
Non-Potable Water	General Chemistry	Ammonia as N	1515	EPA 350.1	10063204	2/3/2003
Non-Potable Water	General Chemistry	Kjeldahl nitrogen - total	1795	EPA 351.2	10065006	2/3/2003
Non-Potable Water	General Chemistry	Nitrate as N	1810	EPA 353.2	10067206	2/3/2003
Non-Potable Water	General Chemistry	Nitrate-nitrite	1820	EPA 353.2	10067206	2/3/2003
Non-Potable Water	General Chemistry	Nitrite as N	1840	EPA 353.2	10067206	3/19/2010
Non-Potable Water	General Chemistry	Orthophosphate as P	1870	EPA 365.1	10069600	2/3/2003
Non-Potable Water	General Chemistry	Phosphorus total	1910	EPA 365.1	10069600	2/3/2003
Non-Potable Water	General Chemistry	Chlorophylls	9345	SM 10200 H	248	2/3/2003
Non-Potable Water	General Chemistry	Color	1605	SM 2120 C	20002000	3/19/2010
Non-Potable Water	General Chemistry	Alkalinity as CaCO3	1505	SM 2320 B	20003003	8/31/2005
Non-Potable Water	General Chemistry	Total hardness as CaCO3	1755	SM 2340 B	20003401	3/19/2010
Non-Potable Water	General Chemistry	Conductivity	1610	SM 2510 B	20003809	1/2/2008
Non-Potable Water	General Chemistry	Residue-total	1950	SM 2540 B	20004608	1/2/2008
Non-Potable Water	General Chemistry	Residue-filterable (TDS)	1955	SM 2540 C	20004404	2/3/2003
Non-Potable Water	General Chemistry	Residue-nonfilterable (TSS)	1960	SM 2540 D	20004802	1/2/2008
Non-Potable Water	General Chemistry	Chromium VI	1045	SM 3500-Cr B (20th/21st Ed.)UV-VIS	845	8/31/2005
Non-Potable Water	General Chemistry	Chloride	1575	SM 4500 Cl- B	20011807	2/3/2003
Non-Potable Water	General Chemistry	Chloride	1575	SM 4500 Cl- D	20012004	1/2/2008
Non-Potable Water	General Chemistry	pH	1900	SM 4500-H+-B	20016404	3/19/2010
Non-Potable Water	General Chemistry	Sulfide	2005	SM 4500-S F	213	1/2/2008
Non-Potable Water	General Chemistry	Silica as SiO2	1990	SM 4500-SiO2 C (20th/21st Ed.)	257	1/2/2008
Non-Potable Water	General Chemistry	Total cyanide	1645	SM 4500CN-E	20016200	2/3/2003
Non-Potable Water	General Chemistry	Biochemical oxygen demand	1530	SM 5210 B	20027401	2/3/2003
Non-Potable Water	General Chemistry	Carbonaceous BOD (CBOD)	1555	SM 5210 B	20027401	2/3/2003
Non-Potable Water	General Chemistry	Total organic carbon	2040	SM 5310 B	20028006	8/31/2005
Non-Potable Water	General Chemistry	Surfactants - MBAS	2025	SM 5540 C	20029009	2/3/2003

Non-Potable Water	General Chemistry	Organic nitrogen	1865	TKN minus AMMONIA	299	8/31/2005
Non-Potable Water	General Chemistry	Silica-dissolved	1995	USGS I-2700-85	40005605	2/3/2003
Non-Potable Water	Metals	Aluminum	1000	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Antimony	1005	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Arsenic	1010	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Barium	1015	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Beryllium	1020	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Boron	1025	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Cadmium	1030	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Calcium	1035	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Chromium	1040	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Cobalt	1050	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Copper	1055	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Iron	1070	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Lead	1075	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Magnesium	1085	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Manganese	1090	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Molybdenum	1100	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Nickel	1105	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Potassium	1125	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Selenium	1140	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Silver	1150	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Sodium	1155	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Strontium	1160	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Thallium	1165	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Tin	1175	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Titanium	1180	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Vanadium	1185	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Zinc	1190	EPA 200.7	10013408	3/19/2010
Non-Potable Water	Metals	Aluminum	1000	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Antimony	1005	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Arsenic	1010	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Barium	1015	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Beryllium	1020	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Cadmium	1030	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Chromium	1040	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Copper	1055	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Lead	1075	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Manganese	1090	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Molybdenum	1100	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Nickel	1105	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Selenium	1140	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Silver	1150	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Thallium	1165	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Vanadium	1185	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Zinc	1190	EPA 200.8	10014401	1/7/2009
Non-Potable Water	Metals	Mercury	1095	EPA 245.1	10036201	2/3/2003
Non-Potable Water	Microbiology	Enterococci	2520	EPA 1600	10119809	2/3/2003
Non-Potable Water	Microbiology	Fecal coliforms	2530	SM 9221 E	20036208	2/3/2003
Non-Potable Water	Microbiology	Total coliforms	2500	SM 9222 B	20036800	2/3/2003
Non-Potable Water	Microbiology	Fecal coliforms	2530	SM 9222 D	20037405	2/3/2003
Solids	Metals	Mercury	1095	EPA 7471	10166004	1/2/2008

Laboratories Certified Under NELAP by the Florida Department of Health

Listing of Organization FOAs Query Results

Database Version: 3/19/2011 8:00:17 AM

Laboratory Name

Marinco Bioassay Laboratory Inc.

DOH ID: E84191

Matrix	Category	Analyte	AnalyteCode	Method	MethodCode	Certification Date
Non-Potable Water	Toxicity	Cyprinella leedsii	3340	EPA 821-R-02-012 (FW acute)(2000.0)	174	7/12/2005
Non-Potable Water	Toxicity	Prinephales promelas	3410	EPA 821-R-02-012 (FW acute)(2000.0)	174	7/12/2005
Non-Potable Water	Toxicity	Ceriodaphnia dubia	3315	EPA 821-R-02-012 (FW acute)(2002.0)	175	7/12/2005
Non-Potable Water	Toxicity	Daphnia magna	3350	EPA 821-R-02-012 (FW acute)(2021.0)	184	7/12/2005
Non-Potable Water	Toxicity	Menidia beryllina	3380	EPA 821-R-02-012 (SW acute)(2006.0)	177	7/12/2005
Non-Potable Water	Toxicity	Mysidopsis bahia	3395	EPA 821-R-02-012 (SW acute)(2007.0)	178	7/12/2005
Non-Potable Water	Toxicity	Prinephales promelas	3410	EPA 821-R-02-013 (FW chronic)(1000.0)	185	7/12/2005
Non-Potable Water	Toxicity	Ceriodaphnia dubia	3315	EPA 821-R-02-013 (FW chronic)(1002.0)	196	7/12/2005
Non-Potable Water	Toxicity	Menidia beryllina	3380	EPA 821-R-02-014 (SW chronic)(1006.0)	208	7/12/2005
Non-Potable Water	Toxicity	Mysidopsis bahia	3395	EPA 821-R-02-014 (SW chronic)(1007.0)	210	7/12/2005

Laboratories Certified Under NELAP by the Florida Department of Health

Listing of Organization FOAs Query Results

Database Version: 3/19/2011 8:00:17 AM

Laboratory Name

Sanders Laboratories Inc. - Nokomis

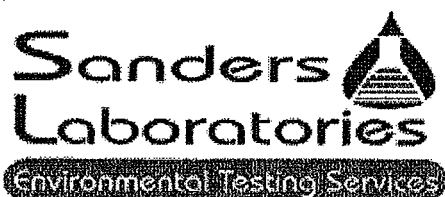
DOH ID: E84380

Matrix	Category	Analyte	AnalyteCode	Method	MethodCode	Certification Date
Drinking Water	Microbiology	Total coliforms	2500	SM 9222 B	20036800	1/18/2002
Drinking Water	Microbiology	Escherichia coli	2525	SM 9223 B	725	1/18/2002
Drinking Water	Microbiology	Total coliforms	2500	SM 9223 B	725	1/18/2002
Drinking Water	Primary Inorganic Contaminants	Sulfate	2000	ASTM D516-90	30002201	4/17/2007
Drinking Water	Primary Inorganic Contaminants	Nitrate as N	1810	EPA 353.2	10067206	3/18/2002
Drinking Water	Primary Inorganic Contaminants	Nitrite as N	1840	EPA 353.2	10067206	3/18/2002
Drinking Water	Primary Inorganic Contaminants	Total nitrate-nitrite	1825	EPA 353.2	10067206	3/18/2002
Drinking Water	Primary Inorganic Contaminants	Alkalinity as CaCO3	1505	SM 2320 B	20003003	4/17/2007
Drinking Water	Primary Inorganic Contaminants	Hardness	1750	SM 2340 C	20003605	4/17/2007
Drinking Water	Primary Inorganic Contaminants	Conductivity	1610	SM 2510 B	20003809	8/25/2004
Drinking Water	Primary Inorganic Contaminants	Total dissolved solids	1705	SM 2540 C	20004404	4/17/2007
Drinking Water	Primary Inorganic Contaminants	pH	1900	SM 4500-H+-B	20016404	4/17/2007
Drinking Water	Secondary Inorganic Contaminants	Turbidity	2055	EPA 180.1	10011402	8/25/2004
Drinking Water	Secondary Inorganic Contaminants	Calcium hardness as CaCO3	1550	EPA 215.2	10025000	8/25/2004
Drinking Water	Secondary Inorganic Contaminants	Color	1605	SM 2120 B	20001803	1/18/2002
Drinking Water	Secondary Inorganic Contaminants	Odor	1855	SM 2150 B	20002602	1/18/2002
Drinking Water	Secondary Inorganic Contaminants	Chloride	1575	SM 4500 Cl- B	20011807	1/18/2002
Drinking Water	Secondary Inorganic Contaminants Primary					
Non-Potable Water	Inorganic Contaminants	Fluoride	1730	SM 4500 F-C	20012800	1/18/2002
Non-Potable Water	General Chemistry	Sulfate	2000	ASTM D516-90	30002201	4/17/2007
Non-Potable Water	General Chemistry	Un-ionized Ammonia	752	DEP SOP 10/03/83	846	1/18/2002
Non-Potable Water	General Chemistry	Residue-volatile	1970	EPA 180.4	10010205	8/25/2004
Non-Potable Water	General Chemistry	Turbidity	2055	EPA 180.1	10011402	1/18/2002
Non-Potable Water	General Chemistry	Ammonia as N	1515	EPA 350.1	10063204	3/17/2008
Non-Potable Water	General Chemistry	Kjeldahl nitrogen - total	1795	EPA 351.2	10065006	1/18/2002
Non-Potable Water	General Chemistry	Organic nitrogen	1865	EPA 351.2 - EPA 350.3	826	1/18/2002
Non-Potable Water	General Chemistry	Nitrate as N	1810	EPA 353.2	10067206	1/18/2002
Non-Potable Water	General Chemistry	Nitrite as N	1840	EPA 353.2	10067206	10/8/2004
Non-Potable Water	General Chemistry	Total nitrate-nitrite	1825	EPA 353.2	10067206	3/18/2002
Non-Potable Water	General Chemistry	Phosphorus total	1910	EPA 385.4	10071008	10/8/2004
Non-Potable Water	General Chemistry	Chemical oxygen demand	1565	EPA 410.4	10077006	9/18/2008
Non-Potable Water	General Chemistry	Chlorophylls	9345	SM 10200 H	248	1/18/2002
Non-Potable Water	General Chemistry	Color	1605	SM 2120 B	20001803	3/18/2002
Non-Potable Water	General Chemistry	Alkalinity as CaCO3	1505	SM 2320 B	20003003	4/17/2007
Non-Potable Water	General Chemistry	Total hardness as CaCO3	1755	SM 2340 C	20003605	4/17/2007
Non-Potable Water	General Chemistry	Conductivity	1610	SM 2510 B	20003809	4/17/2007
Non-Potable Water	General Chemistry	Residue-total	1950	SM 2540 B	20004608	4/17/2007
Non-Potable Water	General Chemistry	Residue-filterable (TDS)	1955	SM 2540 C	20004404	4/17/2007
Non-Potable Water	General Chemistry	Residue-nonfilterable (TSS)	1960	SM 2540 D	20004802	4/17/2007
Non-Potable Water	General Chemistry	Total fixed and volatile residue	1725	SM 2540 G	20005203	8/25/2004
Non-Potable Water	General Chemistry	Chromium VI	1045	SM 3500-Cr D (18th/19th Ed.)/UV-VIS	20009001	8/25/2004
Non-Potable Water	General Chemistry	Chloride	1575	SM 4500 Cl- B	20011807	1/18/2002
Non-Potable Water	General Chemistry	Chloride	1575	SM 4500 Cl- E	20019209	3/17/2008
Non-Potable Water	General Chemistry	Fluoride	1730	SM 4500 F-C	20012800	3/17/2008

Non-Potable Water	General Chemistry	pH	1900	SM 4500-H+-B	20016404	4/17/2007
Non-Potable Water	General Chemistry	Orthophosphate as P	1870	SM 4500-P E	20025803	4/17/2007
Non-Potable Water	General Chemistry	Silica as SiO2	1990	SM 4500-SiO2 C (20th/21st Ed.)	257	4/17/2007
Non-Potable Water	General Chemistry	Biochemical oxygen demand	1530	SM 5210 B	20027401	4/17/2007
Non-Potable Water	General Chemistry	Carbonaceous BOD (CBOD)	1555	SM 5210 B	20027401	1/18/2002
Non-Potable Water	General Chemistry	Total organic carbon	2040	SM 5310 B	20028006	4/17/2007
Non-Potable Water	Metals	Calcium hardness as CaCO3	1550	EPA 215.2	10025000	10/8/2004
Non-Potable Water	Microbiology	Fecal coliforms	2530	SM 9221 E	20036208	8/22/2006
Non-Potable Water	Microbiology	Total coliforms	2500	SM 9222 B	20036800	1/18/2002
Non-Potable Water	Microbiology	Fecal coliforms	2530	SM 9222 D	20037405	1/18/2002
Solids	General Chemistry	Kjeldahl nitrogen - total	1795	EPA 351.2	10065006	8/22/2006
Solids	General Chemistry	Total nitrate-nitrite	1825	EPA 353.2	10067206	8/22/2006
Solids	General Chemistry	Phosphorus total	1910	EPA 365.4	10071008	8/22/2006
Solids	General Chemistry	pH	1900	EPA 9040	10196802	8/22/2006
Solids	General Chemistry	pH	1900	EPA 9045	10197805	8/25/2004
Solids	General Chemistry	Residue-fixed	952	SM 2540 G	20005203	8/22/2006
Solids	General Chemistry	Residue-total	1950	SM 2540 G	20005203	8/22/2006
Solids	General Chemistry	Residue-volatile	1970	SM 2540 G	20005203	8/22/2006
Solids	General Chemistry	Total nitrogen	946	TKN + Total nitrate-nitrite	849	8/22/2006
Solids	Microbiology	Fecal coliforms	2530	SM 9221 E	20036208	7/31/2006

Attachment 2

Effluent Analyses



Laboratory Test Report

Lab Project #: F1101129

Page 1 of 10

All subsequent pages are identified by: F1101129. These pages may include, but are not limited to: Analytical Data, Chains of Custody, Subcontracted Data and Case Narratives.

Client: City of Cape Coral
3310 SW 20th Ave
Cape Coral, FL 33914
Phone: 239-574-0784
Fax: 239-574-0861
E-mail:
Project Name: Southwest Facility

Questions regarding this report should be directed to your **Laboratory Contact:**

Tami Bright

QUALIFIER DEFINITIONS

- B: Results based upon colony counts outside the acceptable range.
I: The reported value is greater than or equal to the laboratory MDL but less than the laboratory PQL.
J: Estimated Value.
J7: Excessive amounts of Sodium Sulfite used to dechlorinate the sample due to high levels of chlorine present.
K: Off scale low, actual value is known to be less than the value given.
L: Off scale high, actual value is known to be greater than the value given.
Q: Sample held beyond acceptable holding time.
U: The compound was analyzed for, but not detected.
V: Indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.
Y: The laboratory analysis was from an improperly preserved sample.
Z: Too many colonies were present for accurate counting.
HACH results may not meet NELAC standards.

A statement of estimated uncertainty of results is available upon request.

Analytical results provided relate only to the samples received for this project.

Test results meet all the requirements of the NELAC standards, unless otherwise noted.

Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.

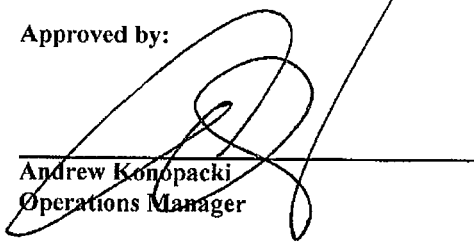
Sanders Laboratories follows DEP standard operating procedures for field sampling, unless otherwise noted.

Laboratory PQL's are available upon request.

Reports are archived for a minimum of 5 years. Copies of reports which are less than 1 year old are available for a fee of \$25.00 per report. Reports older than 1 year are available for a fee of \$50.00 per report. Copies will be provided within 1 week of the time of the request.

Approved by:

Comments:


Andrew Konopacki
Operations Manager

SANDERS LABORATORIES, INC.

Laboratory Test Report

Client: City of Cape Coral
Client Project: Southwest Facility

Page: Page 1 of 2
Lab Project: F1101129
Report Date: 02/03/11

Lab ID	Sample Description	Matrix	Sample Type	Received Date/Time	Sample Date/Time
F1101129-01	CONCENTRATE INJ WELL	Waste Water	GRAB	1/10/11 13:10	1/10/11 12:10

Parameter	Result	Qual	MDL	PQL	Units	Method	Batch #	Analysis Date/Time	Analyst	Lab ID
Aluminum	0.011	I	0.011	0.044	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Antimony	0.0035	U	0.0035	0.014	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Arsenic	0.0026	U	0.0026	0.010	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Asbestos	7.90	U	7.90	7.90	MFL	EPA100.2	NB110203002	1/11/11 13:45	EMSL	E86795
Barium	0.093		0.0010	0.0040	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Beryllium	0.00010	U	0.00010	0.00040	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Cadmium	0.00020	U	0.00020	0.00080	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Chloride	4140		1	4	mg/L	SM4500Cl-E	NB110112021	1/12/11 10:38	SE	E84380
Chromium	0.0062		0.00060	0.0024	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Color-True	5		5	5	C.U.	SM2120B	FB110111013	1/11/11 13:50	RB	E85457
Copper	0.0010	U	0.0010	0.0040	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Fluoride	7.1		0.1	0.4	mg/L	SM4500F-C	NB110125054	1/25/11 14:00	SE	E84380
Iron	0.050		0.0050	0.020	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Langlier Saturation Index @ 25°C	-0.97		0.01	0.01	NONE	LSI	NB110203003	2/3/11 0:00	AK	E84380
Lead	0.0029	U	0.0029	0.012	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Manganese	0.0020	U	0.0020	0.0080	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Mercury	0.000060	U	0.000060	0.00024	mg/L	EPA245.1	NB110202033	1/18/11 9:49	HBEL	E96080
Nickel	0.0033	I	0.0016	0.0064	mg/L	EPA200.7	NB110202032	1/21/11 23:20	HBEL	E96080
Nitrate-N	0.01	U	0.01	0.01	mg/L as N	EPA353.2	NB110112001	1/11/11 16:30	JPW	E84380
Nitrite-N	0.01	U	0.01	0.04	mg/L as N	EPA353.2	NB110112004	1/11/11 15:14	JPW	E84380
Odor @ 41°C	200		1	1	TON	SM2150B	FB110111014	1/10/11 15:00	KS	E85457
pH	6.13	Q	0.01	0.01	std units	SM4500H-B	FB110111015	1/10/11 14:28	RB	E85457
See attached results						Subcontract	NB110113050	1/13/11 12:39	SUB	
Selenium	0.0060	I	0.0043	0.017	mg/L	EPA200.7	NB110202032	1/21/11 23:20	HBEL	E96080
Silver	0.00050	U	0.00050	0.0020	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080
Sodium	2200		2.5	10	mg/L	EPA200.7	NB110202032	1/24/11 9:39	HBEL	E96080

SANDERS LABORATORIES, INC.**Laboratory Test Report****Client:** City of Cape Coral**Page:** Page 2 of 2**Client Project:** Southwest Facility**Lab Project:** F1101129**Report Date:** 02/03/11

<u>Lab ID</u>	<u>Sample Description</u>	<u>Matrix</u>	<u>Sample Type</u>	<u>Received Date/Time</u>	<u>Sample Date/Time</u>
F1101129-01	CONCENTRATE INJ WELL	Waste Water	GRAB	1/10/11 13:10	1/10/11 12:10

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>MDL</u>	<u>PQL</u>	<u>Units</u>	<u>Method</u>	<u>Batch #</u>	<u>Analysis Date/Time</u>	<u>Analyst</u>	<u>Lab ID</u>
Sulfate	1820		2	8	mg/L	ASTM-D516-90	NB110113022	1/12/11 15:28	AS	E84380
Thallium	0.0012	U	0.0012	0.0048	mg/L	EPA279.2	NB110202034	1/24/11 15:33	HBEL	E96080
Total Coliform, MF	1	U	1	1	CFU/100ml	SM9222B	FB110112008	1/10/11 15:01	KS	E85457
Total Dissolved Solids	8980		20	20	mg/L	SM2540C	FB110119012	1/14/11 9:45	SW	E85457
Zinc	0.011	I	0.0050	0.020	mg/L	EPA200.7	NB110202032	1/20/11 20:32	HBEL	E96080

HBEL, Inc.

2340 SW Poma Drive, Palm City, FL 34990
Phone: (772) 320-0091 Fax: (772) 320-0145

Date issued: January 25, 2011

To: Tami Bright
Sanders Laboratories, Inc.
1050 Endeavor Court
Nokomis, FL 34275

Client: Sanders Laboratories, Inc.
Workorder ID: F1101129 WW VOC/SOC/CN Grab [2041835]
Received: 1/11/11 10:30

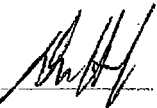
Dear Tami Bright;

Analytical results presented in this report have been reviewed for compliance with the HBEL, Inc. Quality Systems Manual and have been determined to meet applicable Method guidelines and Standards referenced in the July 2003 National Environmental Laboratory Accreditation Program (NELAP) Quality Manual unless otherwise noted. The Analytical Results within these report pages reflect the values obtained from tests performed on Samples As Received by the laboratory unless indicated differently.

FDOH Safe Drinking Water Act, Clean Water Act and RCRA Certification #'s:
E96080, E83509

Questions regarding this report should be directed to the Report Signatory at (772) 465-8584 referencing the HBEL Workorder ID [Number].

Respectfully submitted,



Eric Charest
HBEL, Inc. Laboratory Manager

Note: This report is not to be copied, except in full, without the expressed written consent of HBEL, Inc.

2340 SW Poma Drive
Palm City, FL 34990
FDOH # E96080

4155 St. Johns Pkwy Suite 1300
Sanford, FL 32771
FDOH # E83509

Printed: 1/25/2011



Page 1 of 6

HBEL, Inc.

2340 SW Poma Drive, Palm City, FL 34990
Phone: (772) 320-0091 Fax: (772) 320-0145

Quality Control Summary

Client: Sanders Laboratories, Inc.
Workorder ID: F1101129 WW VOC/SOC/CN Grab
Received: 1/11/11 10:30

[2041835]

MB=Method Blank LCS=Laboratory Control Sample LCSD=Laboratory Control Sample Duplicate MS=Matrix Spike MSD=Matrix Spike Duplicate DUP=Sample Duplicate

HBEL Sample

Method Narratives (If Applicable)

Number	Sample ID	Analytical Method	Description
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Quality Control Summary

Method	HBEL Batch	Analyte
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Analytical Issue

EPA 505

PEST5674

2041835001 Decachlorobiphenyl

Surrogate - Outside acceptance Limits.

2340 SW Poma Drive
Palm City, FL 34990
FDOH # E96080

Printed: 1/25/2011

4155 St. Johns Pkwy Suite 1300
Sanford, FL 32771
FDOH # E83509



HBEL, Inc.

2340 SW Poma Drive, Palm City, FL 34990
Phone: (772) 320-0091 Fax: (772) 320-0145

CERTIFICATE OF ANALYSIS

[2041835]

Client: Sanders Laboratories, Inc.

Workorder ID: F1101129 WW VOC/SOC/CN Grab

Parameter	Qualifier	Result ¹	Units	Detection Limit	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Laboratory ID: 2041835001 Sample ID: F1101129-1G Conc. Inj. Well							Sampled: 01/10/11 12:10 Matrix: Water				
							Received: 01/11/11 10:30 Results reported on Wet Weight Basis				
1,2-Dibromo-3-chloropropane	0.0036U		ug/L	0.0036	0.014	EPA 504.1	PEST5680	01/24/11 11:08	01/24/11 17:47	JL	E96080
1,2-Dibromoethane	0.0048U		ug/L	0.0048	0.019	EPA 504.1	PEST5680	01/24/11 11:08	01/24/11 17:47	JL	E96080
Chlordane	0.13U		ug/L	0.13	0.52	EPA 505	PEST5674	01/13/11 10:00	01/14/11 0:06	JL	E96080
Endrin	0.10U		ug/L	0.10	0.40	EPA 505	PEST5674	01/13/11 10:00	01/14/11 0:06	JL	E96080
gamma-BHC (Lindane)	0.020U		ug/L	0.020	0.080	EPA 505	PEST5674	01/13/11 10:00	01/14/11 0:06	JL	E96080
Heptachlor	0.037U		ug/L	0.037	0.15	EPA 505	PEST5674	01/13/11 10:00	01/14/11 0:06	JL	E96080
Heptachlor epoxide	0.028U		ug/L	0.028	0.11	EPA 505	PEST5674	01/13/11 10:00	01/14/11 0:06	JL	E96080
Methoxychlor	0.044U		ug/L	0.044	0.18	EPA 505	PEST5674	01/13/11 10:00	01/14/11 0:06	JL	E96080
PCB	0.14U		ug/L	0.14	0.56	EPA 505	PEST5674	01/13/11 10:00	01/14/11 0:06	JL	E96080
Toxaphene	0.61U		ug/L	0.61	2.4	EPA 505	PEST5674	01/13/11 10:00	01/14/11 0:06	JL	E96080
2,4,5-TP	0.19U		ug/L	0.19	0.76	EPA 515.1	PEST5677	01/18/11 9:33	01/20/11 6:04	JL	E96080
2,4-D	0.22U		ug/L	0.22	0.88	EPA 515.1	PEST5677	01/18/11 9:33	01/20/11 6:04	JL	E96080
Dalapon	2.3U		ug/L	2.3	9.2	EPA 515.1	PEST5677	01/18/11 9:33	01/20/11 6:04	JL	E96080
Dinoseb	0.23U		ug/L	0.23	0.92	EPA 515.1	PEST5677	01/18/11 9:33	01/20/11 6:04	JL	E96080
Pentachlorophenol	0.39U		ug/L	0.39	1.6	EPA 515.1	PEST5677	01/18/11 9:33	01/20/11 6:04	JL	E96080
Picloram	0.23U		ug/L	0.23	0.92	EPA 515.1	PEST5677	01/18/11 9:33	01/20/11 6:04	JL	E96080
1,1,1-Trichloroethane	0.31U		ug/L	0.31	1.2	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
1,1,2-Trichloroethane	0.22U		ug/L	0.22	0.88	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
1,1-Dichloroethane	0.35U		ug/L	0.35	1.4	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
1,2,4-Trichlorobenzene	0.12U		ug/L	0.12	0.48	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
1,2-Dichlorobenzene	0.15U		ug/L	0.15	0.60	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
1,2-Dichloroethane	0.21U		ug/L	0.21	0.84	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
1,2-Dichloropropane	0.24U		ug/L	0.24	0.96	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
1,4-Dichlorobenzene	0.18U		ug/L	0.18	0.72	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Benzene	0.15U		ug/L	0.15	0.60	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Bromodichloromethane	0.26U		ug/L	0.26	1.0	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Bromoform	0.15U		ug/L	0.15	0.60	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Carbon tetrachloride	0.36U		ug/L	0.36	1.4	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Chlorobenzene	0.17U		ug/L	0.17	0.68	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Chloroform	0.24U		ug/L	0.24	0.96	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
cis-1,2-Dichloroethene	0.25U		ug/L	0.25	1.0	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Dibromochloromethane	0.15U		ug/L	0.15	0.60	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Ethylbenzene	0.17U		ug/L	0.17	0.68	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080

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HBEL, Inc.

2340 SW Poma Drive, Palm City, FL 34990
Phone: (772) 320-0091 Fax: (772) 320-0145

CERTIFICATE OF ANALYSIS

[2041835]

Client: Sanders Laboratories, Inc.

Workorder ID: F1101129 WW VOC/SOC/CN Grab

Parameter	Qualifier	Result ¹	Units	Detection Limit	Reporting Limit	Method	Laboratory Batch	Prep Date/Time	Analyzed Date/Time	Analyst	Lab ID
Methylene chloride		0.43U	ug/L	0.43	1.7	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Styrene		0.17U	ug/L	0.17	0.68	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Tetrachloroethene		0.26U	ug/L	0.26	1.0	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Toluene		0.26U	ug/L	0.26	1.0	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Total THMs		0.15U	ug/L	0.15	0.60	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Total Xylenes		0.41U	ug/L	0.41	1.6	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
trans-1,2-Dichloroethene		0.30U	ug/L	0.30	1.2	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Trichloroethene		0.17U	ug/L	0.17	0.68	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Vinyl chloride		0.25U	ug/L	0.25	1.0	EPA 524.2	VOC3368		01/13/11 15:11	WR	E96080
Alachlor		0.62U	ug/L	0.62	2.5	EPA 525.2	SVOC2951	01/17/11 8:00	01/20/11 20:09	WR	E96080
Atrazine		0.49U	ug/L	0.49	2.0	EPA 525.2	SVOC2951	01/17/11 8:00	01/20/11 20:09	WR	E96080
Benzo(a)pyrene		0.071U	ug/L	0.071	0.28	EPA 525.2	SVOC2951	01/17/11 8:00	01/20/11 20:09	WR	E96080
bis(2-ethylhexyl)phthalate		0.86U	ug/L	0.86	3.4	EPA 525.2	SVOC2951	01/17/11 8:00	01/20/11 20:09	WR	E96080
Di(2-ethylhexyl)adipate		0.69U	ug/L	0.69	2.8	EPA 525.2	SVOC2951	01/17/11 8:00	01/20/11 20:09	WR	E96080
Hexachlorobenzene		0.31U	ug/L	0.31	1.2	EPA 525.2	SVOC2951	01/17/11 8:00	01/20/11 20:09	WR	E96080
Hexachlorocyclopentadiene		0.24U	ug/L	0.24	0.96	EPA 525.2	SVOC2951	01/17/11 8:00	01/20/11 20:09	WR	E96080
Simazine		0.64U	ug/L	0.64	2.6	EPA 525.2	SVOC2951	01/17/11 8:00	01/20/11 20:09	WR	E96080
Carbofuran		0.41U	ug/L	0.41	1.6	EPA 531.1	HPLC2768		01/19/11 13:08	JJM	E96080
Oxamyl		0.13U	ug/L	0.13	0.52	EPA 531.1	HPLC2768		01/19/11 13:08	JJM	E96080
Glyphosate		13U	ug/L	13	52	EPA 547	HPLC2766		01/17/11 9:47	JJM	E96080
Endosulfan		2.8U	ug/L	2.8	11	EPA 548.1	SVOC2950	01/14/11 4:00	01/19/11 18:58	WR	E96080
Diquat		1.9U	ug/L	1.9	7.6	EPA 549.2	HPLC2767	01/14/11 4:00	01/17/11 10:13	JJM	E96080
Cyanide		0.0047U	mg/L	0.0047	0.019	SM4500CN E	WCGE33549	01/17/11 10:40	01/18/11 11:44	GG	E96080

¹Result Qualifiers: U = Not Detected I = Analyte detected between the Laboratory Method Detection Limit and Laboratory Reporting Limit
Applicable Florida Department of Environmental Protection Qualifiers defined below. Statement of Estimated Uncertainty available upon request.

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SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218



Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275-3623

January 26, 2011
Work Order: 1100316

Laboratory Report

Project Name

F1101129

Sample Description Conc Inj Well F1101129-1G
Matrix Wastewater
SAL Sample Number 1100316-01
Date/Time Collected 01/10/11 12:10
Collected by Client
Date/Time Received 01/11/11 13:20

Parameters	Units	Results *	Method	PQL	MDL	Prepared	Analyzed	By
Inorganics								
Surfactants (MBAS,mw342)	mg/L	0.29	SM 5540C	0.080	0.050	01/11/11 16:30	01/11/11 17:02	SMD
Radiochemistry								
Gross Alpha (Incl. Uranium)	pCi/L	140 ± 5.5	EPA 900-02	2.5	2.5	01/14/11 07:02	01/18/11 10:11	ARM
Radium-226	pCi/L	44 ± 0.76	EPA 903.1	0.06	0.06	01/17/11 12:15	01/24/11 15:58	ARM
Radium-228	pCi/L	1.1 ± 0.4	EPA Ra-05	0.5	0.5	01/17/11 12:15	01/24/11 15:50	ARM

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218



Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275-3623

January 26, 2011
Work Order: 1100316

* Qualifiers, Notes and Definitions

Results followed by a "U" indicate that the sample was analyzed but the compound was not detected. Results followed by "I" indicate that the reported value is between the laboratory method detection limits and the laboratory practical quantitation limit.

A statement of estimated uncertainty of test results is available upon request.

For methods marked with **, all QC criteria have been met for this method which is equivalent to a SAL certified method.

Test results in this report meet all the requirements of the NELAC standards. Any applicable qualifiers are shown below. Questions regarding this report should be directed to Client Services at 813-855-1844.

A handwritten signature in cursive script, appearing to read "Francis I. Daniels".

Attachment 3

MSDS Sheets for Items Identified in Item I.5.D

MATERIAL SAFETY DATA SHEET

PAGE 1

AMERICAN WATER CHEMICALS
9203-A KING PALM DRIVE
TAMPA FL 33619

AWC A-111 UL

AWC A-111 UL

Section I – Identification of Product and Company

AMERICAN WATER CHEMICALS 9203-A KING PALM DRIVE TAMPA FL 33619	Telephone Number: (813)-246-5448 Chemtrec phone Number: (800) 424-9300
Date Prepared: March 20, 1999	Date Revised: April 15, 2007

Section II - Hazard Ingredients/Composition Information

This product is not hazardous as defined by OSHA regulations.

No component is considered to be a carcinogen by the National Toxicology Program, the International Toxicology Program, the international Agency for Research on Cancer, or the Occupational Safety and Health Administration at OSHA thresholds for carcinogens.

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

Section III – Hazards Identification

EMERGENCY OVERVIEW

CAUTION

May cause slight irritation to the skin. May cause moderate irritation to the eyes. Mists/aerosols may cause irritation to upper respiratory tract.

DOT hazard is not applicable

Emergency Response Guide is not applicable

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type). Proper fire-extinguishing media: dry chemical, carbon dioxide, foam or water.

Health Hazards (Effects of Acute and Chronic Overexposure)
Inhalation: Mists/aerosols may cause irritation to upper respiratory tract.
Eye Contact: May cause slight irritation to the eyes.
Skin Contact: Primary route of exposure; may cause slight irritation to the skin.
Ingestion (Swallowing): May cause slight gastrointestinal irritation.
Other Signs and Symptoms of Overexposure: May cause redness or itching of skin.
Medical Conditions Generally Aggravated by Exposure: Not known.

MATERIAL SAFETY DATA SHEET

PAGE 2

AMERICAN WATER CHEMICALS
9203-A KING PALM DRIVE
TAMPA FL 33619

AWC A-111 UL

Section IV – First Aid Procedures

Inhalation: Immediately remove to fresh air. Get medical attention if nasal, throat or lung irritation develops.
Eye Contact: Remove contact lenses. Hold eyelids apart. Immediately flush with plenty of low pressure water for at least 15 minutes. Get medical attention if irritation persists after flushing.
Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.
Ingestion (Swallowing): Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician. Dilute contents of stomach using 3-4 glasses of milk or water.

Section V - Fire and Explosion Hazard Data

Flash Point (Method Used) Not applicable, aqueous solution	Flammable Limits: Not applicable, aqueous solution
Extinguishing Media: Water spray, foam, dry chemical, carbon dioxide.	
Special Fire Fighting Procedures and Protective Equipment: Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).	
Hazardous Decomposition or Combustion Byproducts: Elemental oxides	

Section VI – Accidental Release Measures

Steps to Be Taken in Case Material is Released or Spilled: Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Flush area with water. Wet area may be slippery. Spread sand/grit.
Disposal Instructions: Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharge under a permit. Product as is- Incinerate or land dispose in an approved land fill.

Section VII - Precautions for Safe Handling and Storage

Handling: Normal chemical handling.
Storage: Keep container closed when not in use. Protect from freezing. Do not store at elevated temperatures. Use proper containers.

MATERIAL SAFETY DATA SHEET

PAGE 3

AMERICAN WATER CHEMICALS
9203-A KING PALM DRIVE
TAMPA FL 33619

AWC A-111 UL

Section VIII – Exposure Controls and Personal Protection**Exposure Limits:**

This product is not hazardous as defined by OSHA regulations

Engineering Controls:

Adequate ventilation

Respiratory Protection (Specify Type)

A respiratory protection program that meets OSHA's 29CFR1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Use air purifying respirators within use limitations associated with the equipment or else use supplied air respirators.

If air purifying respirator use is appropriate, use a respirator with dust/ mist filters.

Other Protective Clothing or Equipment:

Eyewash facility and safety shower in immediate area. Moreover, when handling large amounts, use of impervious aprons and boots suggested.

Skin Protection:

Neoprene gloves. Wash off after each use. Place as necessary.

Eye Protection:

Splash proof chemical goggles.

Work/Hygienic Practices:

Follow general work/hygienic practices. However, obey all federal, state and local regulations.

Section IX - Physical/Chemical Characteristics

Boiling Point: >100°C (212°F)	Crystallizing point: NE
Vapor Pressure (mm Hg @ 20°C): NE	Specific Gravity (H ₂ O = 1): 1.15±0.05
Vapor Density (AIR = 1): NE	Evaporation Rate: (Ether = 1) <1.0
Solubility in Water: Complete	pH: 3.0 – 5.0
Appearance and Odor: Clear, colorless to light yellow liquid, with a characteristic odor.	

NR: NOT REQUIRED, NE: NOT ESTABLISHED, NA: NOT APPLICABLE

Section X – Stability & Reactivity Data**Stability/Instability:**

Stable under normal storage conditions.

Incompatibility (Materials to Avoid):

May react with strong oxidizers

Hazardous Polymerization:

Does not occur

Decomposition Products:

Elemental Oxides

Section XI – Toxicological Information

NO TLV'S ESTABLISHED FOR FINISHED PRODUCT.

ORAL LD₅₀ (RAT): >5.0 g/kg.

DERMAL (acute) LD₅₀ (RABBIT) : >2.0 g/kg.

DERMAL IRRITATION (RABBIT) : NOT A PRIMARY IRRITANT

ABOVE DATA IS BASED ON COMPOSITIONALLY SIMILAR MATERIAL.

MATERIAL SAFETY DATA SHEET

PAGE 4

AMERICAN WATER CHEMICALS
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Section XII – Ecological Information

BLUE GILLS: LC_{50} =1,000 PPM; NO DISCERNIBLE EFFECT AT 680 PPM
AFTER 96 HRS. EXPOSURE SHEEPSHEAD MINNOWS: LC_{50} = 600 PPM; NO DISCERNIBLE EFFECT AT 360 PPM
AFTER 96 HRS. EXPOSURE.
THE ABOVE ENVIRONMENTAL DATA ARE FOR A COMPOSITIONALLY SIMILAR MATERIAL.

Section XIII – Disposal Considerations

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is not applicable.

The state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

Section XIV- Transport Information

D.O.T. Proper Shipping Name: N/A	
Technical class: Water treatment chemical	D.O.T. Hazard class: N/A
Identification No: N/A	Packing Group: N/A

Section XV – Regulatory Information

THIS PRODUCT DOES NOT CONTAIN HAZARDOUS SUBSTANCES AT LEVELS WHICH REQUIRE REPORTING. OBEY ALL FEDERAL, STATE OR LOCAL REGULATIONS.

Section XVI – Other Information

HMIS RATINGS:

Health	Flammability	Reactivity	Special Notice
1	0	0	NONE

NFPA RATINGS:

Health	Flammability	Reactivity	Special Notice
1	0	0	NONE

SPECIAL HAZARD DESIGNATIONS KEY: 0-MINIMAL, 1-SLIGHT, 2-MODERATE, 3-SERIOUS, 4-SEVERE

The data contained in this Material Safety Data Sheet has been prepared based upon an evaluation of the ingredients contained in the product, their concentration in the product and potential interactions. The information is offered in good faith and is believed to be accurate. It is furnished to the customer who is urged to study it carefully to become aware of hazards, if any, in the storage, handling, use and disposal of the product; and to insure his employees are properly informed and advised of all safety precautions required. The information is furnished for compliance with the "Occupational Safety and Health Act" of 1970, the "Hazards Communication Act" of 1983 as well as various other Federal, State and Local regulations. Use or dissemination of all or part of this information for any other purpose is illegal.



MATERIAL SAFETY DATA

Sodium Hydroxide Solution, 50%

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's name and address: Olin Corporation - Chlor Alkali Products Division CLEVELAND, TN OFFICE 490 Stuart Road NE Cleveland, TN 37312-4918 U.S. • (423) 336-4850	Supplier's name and address: PCI Chemicals Canada Company d/b/a Olin Chlor Alkali Products MONTREAL, QC OFFICE 2020 University, Suite 2190 Montreal, Quebec H3A 2A5 Canada • (514) 397-6100
---	---

Product Name: Sodium Hydroxide Solution, 50%
CAS#: 1310-73-2
MSDS Code: NaOH(50)-E
Synonyms: Caustic soda liquid 50%, Soda lye, Lye, Liquid Caustic, Sodium Hydrate
Product Use: Neutralizing agent, industrial cleaner, pulping and bleaching, soap manufacturing

Preparation date (M/D/Y): 10/02/08
Revision date (M/D/Y): 05/11/2010

Emergency Contacts (24 hr.)

FOR INFORMATION REGARDING ON SITE CHEMICAL EMERGENCIES INVOLVING A SPILL OR LEAK, CALL

Canada: 1-800-567-7455
U.S.: 1-800-424-9300 - CHEMTREC

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	% (w/w)	ACGIH	CAS NO.
Sodium Hydroxide	49 - 52	2 mg/m ³ (TLV-C)	1310-73-2

SECTION 3 - HAZARD IDENTIFICATION

Emergency Overview: Odorless, clear, non-volatile liquid. EXTREMELY CORROSIVE! Causes severe burns on contact. Can cause blindness, permanent scarring and death. Aerosols can cause lung injury - effects may be delayed. Highly reactive. Can react violently with water and numerous commonly encountered materials, generating enough heat to ignite nearby combustible materials. Contact with many organic and inorganic chemicals may cause fire or explosion. Reacts with some metals to liberate hydrogen gas, which can form explosive mixtures with air. Will not burn. Harmful to aquatic life. Read the entire MSDS for a more thorough evaluation of the hazards.

Potential Health Effects:

Routes of exposure: Inhalation, skin contact, eye contact

IMPORTANT: While Brenntag believes that the information contained herein to be accurate, Brenntag makes no representation or warranty, express, implied or otherwise regarding and assumes no liability for the accuracy or completeness of the information. The Buyer assumes all responsibility for using and handling the Product in accordance with applicable federal, state, and local regulations. This MSDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.



MATERIAL SAFETY DATA

SODIUM HYDROXIDE SOLUTION, 50%

Update/Review: May 11, 2010

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Inhalation: Sodium hydroxide does not readily form a vapor and inhalation exposure is likely to occur as an aerosol. Due to its corrosive nature, sodium hydroxide aerosols could cause pulmonary edema (severe, life-threatening lung injury). The development of pulmonary edema may be delayed up to 48 hours after exposure. The early symptoms of pulmonary edema include shortness of breath and tightness in the chest.

Skin Contact: EXTREMELY CORROSIVE! Sodium hydroxide is capable of causing severe burns with deep ulceration and permanent scarring. It can penetrate to deeper layers of skin and corrosion will continue until removed. The severity of injury depends on the concentration (solutions) and the duration of exposure. Burns may not be immediately painful; onset of pain may be delayed minutes to hours. Several human studies and case reports describe the corrosive effects of sodium hydroxide. A 4% solution of sodium hydroxide, applied to a volunteer's arm for 15 to 180 minutes, caused damage which progressed from destruction of cells of the hard outer layer of the skin within 15 minutes to total destruction of all layers of the skin in 60 minutes. Solutions as weak as 0.12% have damaged healthy skin within 1 hour.

Eye Contact: EXTREMELY CORROSIVE! The severity of injury increases with the concentration, the duration of exposure, and the speed of penetration into the eye. Damage can range from severe irritation and mild scarring to blistering, disintegration, ulceration, severe scarring and clouding. Conditions, which affect vision such as glaucoma and cataracts, are possible late developments. In severe cases, there is progressive ulceration and clouding of eye tissue which may lead to permanent blindness.

Ingestion: EXTREMELY CORROSIVE! Severe pain; burning of the mouth, throat and esophagus; vomiting; diarrhea; collapse and possible death may result.

Chronic Effects: SKIN: Repeated or prolonged skin contact would be expected to cause drying, cracking, and inflammation of the skin (dermatitis).

Existing Medical Conditions Possibly Aggravated by Exposure: Asthma, bronchitis, emphysema and other lung diseases and chronic nose, sinus or throat conditions. Skin irritation may be aggravated in individuals with existing skin disorders.

Carcinogenicity: Sodium hydroxide is not classified as a carcinogen by ACGIH (American Conference of Governmental Industrial Hygienists) or IARC (International Agency for Research on Cancer), not regulated as a carcinogen by OSHA (Occupational Safety and Health Administration), and not listed as a carcinogen by NTP (National Toxicology Program).

△ **Other important hazards:** Refer to TOXICOLOGICAL INFORMATION (Section 11) for additional information.

SECTION 4 – FIRST AID MEASURES

General: If you feel unwell, IMMEDIATELY seek medical advice (show this document).

Inhalation: Move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. Give artificial respiration ONLY if breathing has stopped. Do not use mouth-to-mouth method if victim ingested or inhaled the substance: induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Give Cardiopulmonary Resuscitation (CPR) only if there is no pulse AND no breathing. Obtain medical attention IMMEDIATELY. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure.

Skin Contact: Immediately flush skin with lukewarm water for at least 20 minutes, and up to 60 minutes if necessary. Under lukewarm water remove contaminated clothing, jewelry, and shoes. If irritation persists, repeat flushing. Obtain medical attention immediately. Discard contaminated clothing and shoes in a manner which limit



MATERIAL SAFETY DATA

SODIUM HYDROXIDE SOLUTION, 50%

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Eye Contact: Immediately flush eyes with lukewarm water for at least 20 minutes, and up to 60 minutes if necessary. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. Do not transport victim until the recommended flushing period is completed unless flushing can be continued during transport.

Ingestion: DO NOT INDUCE VOMITING. If victim is alert and not convulsing, rinse mouth and give as much water as possible to dilute material (8 to 10 oz. or 240 to 300 mL). If spontaneous vomiting occurs, have victim lean forward with head down, rinse mouth and administer more water. IMMEDIATELY transport victim to an emergency facility.

SECTION 5 – FIRE FIGHTING MEASURES

Flammability	Not applicable. Not combustible (does not burn).
Flash Point (method)	Not applicable.
Flammable Limits (Lower)	Not applicable
Flammable Limits (Upper)	Not applicable
Auto Ignition Temperature	Not applicable
Combustion and Thermal Decomposition Products	Sodium oxide fumes
Rate of Burning	Not applicable
Explosive Power	Not applicable
Sensitivity to Mechanical Impact	Not sensitive ; stable material
Sensitivity to Static Charge	Not applicable

Fire and Explosion Hazards: Sodium hydroxide will not burn or support combustion. The reaction of sodium hydroxide with water and a number of commonly encountered materials (see Section 10) can generate sufficient heat to ignite nearby combustible materials. Sodium hydroxide can react with metals, such as aluminum, tin and zinc, to form flammable hydrogen gas.

Extinguishing Media: Use extinguishing media suitable for the surrounding fire. If water is used, care should be taken, since it can generate heat and cause spattering if applied directly to sodium hydroxide.

Special Information: Evacuate area and fight fire from a safe distance or a protected location. Approach fire from upwind. If possible, isolate materials not involved in the fire and protect personnel. Move containers from fire area if it can be done without risk.

Water can be used with extreme caution to extinguish a fire in an area where sodium hydroxide is stored. The water must not come into contact with the sodium hydroxide. Water can be used in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat. At high temperatures, fuming may occur, giving off a strong, corrosive gas. Do not enter without wearing specialized protective equipment suitable for the situation.

Evacuation: If tank or tank truck involved in a fire, ISOLATE and consider evacuation of one-half (1/2) mile (800 meters) in all directions.

Fire Fighting Protective Equipment: Firefighter's normal protective clothing (Bunker Gear) will not provide adequate protection. Chemical resistant clothing (e.g. chemical splash suit) and positive pressure self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) may be necessary.

NOTE: Also see "Section 10 - Stability and Reactivity"

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MATERIAL SAFETY DATA

SODIUM HYDROXIDE SOLUTION, 50%
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SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills, Leaks, or Releases:

- Restrict access to area until completion of clean up. Ensure trained personnel conduct clean up. Ventilate area.
- Wear adequate personal protective equipment (See Section 8). Do not touch spilled material.
- Prevent entry into sewers or waterways.
- Land spill of sodium hydroxide: Solutions should be contained by diking with inert material, such as sand or earth. Solutions can be recovered or carefully diluted with water and cautiously neutralized with acids such as acetic acid or hydrochloric acid.
- Water spill: Neutralize with dilute acid.
- Comply with Federal, Provincial/State and local regulations on reporting releases.

Deactivating Chemicals: Weak acid solutions (acetic, hydrochloric or sulfuric acid).

Waste Disposal Methods: Dispose of waste material at an approved waste treatment/disposal facility, in accordance with applicable regulations. Do not dispose of waste with normal garbage or to sewer systems.

Note - Clean-up material may be a RCRA Hazardous Waste on disposal.
- Spills are subject to CERCLA reporting requirements: RQ = 1000 lbs. (454 kg).

SECTION 7 – HANDLING AND STORAGE

Precautions: EXTREMELY CORROSIVE! Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled. Wear appropriate Personal Protection Equipment (*Refer to Section 8*). People working with this chemical should be properly trained regarding its hazards and its safe use.

Handling Procedures and Equipment: Use smallest possible amounts in designated areas with adequate ventilation. Keep containers closed when not in use. Empty containers may contain hazardous residues. Avoid generating mists. Transfer solutions using equipment, which is corrosion-resistant. Cautiously, transfer into sturdy containers made of compatible materials. Never return contaminated material to its original container. Considerable heat is generated when diluted with water. Proper handling procedures must be followed to prevent vigorous boiling, splattering or violent eruption of the diluted solution. Never add water to a sodium hydroxide solution. **ALWAYS ADD SODIUM HYDROXIDE TO WATER** and provide agitation. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation.

Storage Requirements: Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use and when empty. Protect from damage. Store away from incompatible materials such as strong acids, nitroaromatic, nitroparaffinic or organohalogen compounds. See Section 10 for Incompatibles. Use corrosion-resistant structural materials and lighting and ventilation systems in the storage area. Containers made of nickel alloys are preferred. Steel containers are acceptable if temperatures are not elevated. Nickel is the preferred metal for handling this product. Plastics or plastic-lined steel, or FRP tanks of Derakane vinyl ester resin may be suitable. Container contents may develop pressure after prolonged storage. Drums may need to be vented. Trained personnel should only perform venting.

Storage Temperature: Avoid freezing. Do not expose sealed containers to temperatures above 40°C



MATERIAL SAFETY DATA

SODIUM HYDROXIDE SOLUTION, 50%
Update/Review: May 11, 2010

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SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

PREVENTIVE MEASURES

Recommendations listed in this section indicate the type of equipment which will provide protection against over exposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

Engineering Controls: Local exhaust ventilation should be applied wherever there is an incidence of point source emissions or dispersion of regulated contaminants in the work area. Ventilation control of the contaminant as close to its point of generation is both the most economical and safest method to minimize personnel exposure to airborne contaminants. The most effective measures are the total enclosure of processes and the mechanization of handling procedures to prevent all personal contact.

PERSONAL PROTECTIVE EQUIPMENT

Maintain eye wash fountain and quick-drench facilities in work area. Detailed requirements for personal protective equipment should be established on a site-specific basis.

Eye Protection: Wear full face-shield and chemical safety goggles when there is potential for contact.

Skin Protection: Wear appropriate personal protective clothing to prevent skin contact.

Guidelines for sodium hydroxide solutions, 30-70%:

RECOMMENDED (resistance to breakthrough longer than 8 hours): Butyl rubber, natural rubber, neoprene rubber, nitrile rubber, polyethylene, vinyl chloride, Teflon™, Viton™, Saranex™, 4H™, Barricade™, CPF 3™, Responder™, Trelchem HPS™, Tychem 10000™.

NOT RECOMMENDED for use (resistance to breakthrough less than 1 hour): Polyvinyl alcohol.

Respiratory Protection:

Up to 10 mg/m³: Supplied Air Respirator (SAR) operated in a continuous-flow mode, eye protection needed; or full face-piece respirator with high-efficiency particulate filter(s); or powered air-purifying respirator with dust and mist filter(s), eye protection needed; or full face-piece Self-Contained Breathing Apparatus (SCBA); or full face-piece SAR.

Emergency or Planned Entry into Unknown Concentrations or IDLH Conditions: Positive pressure, full face-piece SAR; or positive pressure, full face-piece SAR with an auxiliary positive pressure SAR.

ESCAPE: Full face-piece respirator with high-efficiency particulate filter(s); or escape-type SCBA.

EXPOSURE GUIDELINES

PRODUCT: Sodium hydroxide:

	ACGIH Ceiling Exposure Limit (TLV-C)	2 mg/m ³
Δ	OSHA PEL-TWA	2 mg/m ³
	NIOSH IDLH	10 mg/m ³
	NIOSH REL:	C 2 mg/m ³

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MATERIAL SAFETY DATA

SODIUM HYDROXIDE SOLUTION, 50%
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SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Alternate Name(s)	Caustic soda liquid 50%, Soda lye, Lye, Liquid Caustic, Sodium Hydrate
Chemical Name	Sodium hydroxide
Chemical Family	Alkali hydroxide
Molecular Formula	NaOH
Molecular Weight	40.01
Physical State and Appearance	Clear-to-slightly turbid liquid
Odor	Odorless
pH	14.0 (Aqueous solution: 5%)
Vapor Pressure	0.2 kPa (1.5 mm Hg) at 20 °C (68°F) (50% solution)
Vapor Density (Air = 1)	Not applicable
Boiling Point	140 °C (284 °F) (50% solution)
Freezing Point	12 °C (53.6 °F) (50% solution)
Solubility (Water)	Soluble in all proportions
Specific Gravity	1.53 (50% solution) 15.5 °C (60°F)
Evaporation Rate	Not applicable
Viscosity (cp):	78.3 at 20 °C (68°F)
Bulk Density (lbs/cu ft):	95.5
Coefficient of Oil/Water Distribution	Essentially zero

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable at room temperature.

Hazardous Decomposition Products: Thermal decomposition: sodium oxide fumes

Conditions to Avoid: Water. Keep away from incompatibles.

Incompatibility with other Substances: Sodium hydroxide reacts vigorously, violently or explosively with many organic and inorganic chemicals, such as strong acids, nitroaromatic, nitroparaffin and organohalogen compounds, glycols and organic peroxides. Reacts violently with water generating significant heat and dangerously spattering corrosive sodium hydroxide. Violently polymerizes acetaldehyde, acrolein or acrylonitrile. Produces flammable and explosive hydrogen gas if it reacts with sodium tetrahydroborate or certain metals such as aluminum, tin, or zinc. Can form spontaneously flammable chemicals upon contact with 1,2- dichloroethylene, trichloroethylene or tetrachloroethane. Can produce carbon monoxide upon contact with solutions of sugars, such as fructose, lactose and maltose.

Corrosivity to Metals: Corrosive to aluminum, tin, zinc, copper, and most alloys in which they are present including brass and bronze. Corrosive to steel at elevated temperatures above 40°C(104°F).

Stability and Reactivity Comments: Slowly attacks glass at room temperature.

Hazardous Polymerization: Will not occur. However, it can induce hazardous polymerization of acetaldehyde, acrolein, and acry

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SECTION 11 – TOXICOLOGICAL INFORMATION

For more toxicological information, refer to Section 3.

TOXICOLOGICAL DATA:

Toxicological Data: Sodium hydroxide

Toxicity data: LDLo - Lowest published lethal dose oral rabbit 500 mg /kg ;
LD₅₀ intraperitoneal mouse 40 mg/kg

Irritation data: Standard Draize Tests: 500 mg/24 hour(s) skin-rabbit severe;
400 µg eyes-rabbit mild; 1 percent eyes-rabbit severe;

Mutagenicity: There is no evidence of mutagenic potential.

Reproductive Effects: No information is available.

Teratogenicity and Fetotoxicity: No information is available.

Synergistic Materials: No information is available.

Skin and Respiratory Sensitization: No information is available.

Irritancy: Strong eye and skin irritant.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicological Information:

LC₁₀₀ Cyprinus Carpio 180 ppm/24 hr @ 25°C (77°F)

TLm mosquito fish 125 ppm/96 hr (fresh water);

TLm Bluegill 99 mg/L/48 hr (tap water)

Persistence and Degradation: Degrades readily by reacting with natural carbon dioxide in the air. Does not bioaccumulate.

SECTION 13 – DISPOSAL CONSIDERATIONS

Review federal, state and local government requirements prior to disposal.

Do not dispose of waste with normal garbage, or to sewer systems.

Whatever cannot be saved for recovery or recycling, including containers, should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.

RCRA: Test waste material for corrosivity

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MATERIAL SAFETY DATA

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SECTION 14 – TRANSPORT INFORMATION

	TDG	DOT
Shipping Name	SODIUM HYDROXIDE, SOLUTION	Sodium hydroxide, solution
Hazard Class/Division		
Identification No.		
Packing Group:		
Reportable Quantity	Not Applicable	RQ: 1000 lbs. (454 kg)
ERAP	NONE	Not Applicable

- Δ **IATA/ICAO Shipping Description:** UN1824, Sodium hydroxide solution, Class 8, PG II is accepted for air transport.
- Δ **For Chemical Emergencies in Transportation Requiring Activation of Olin 24 Hour Emergency Response Plan Call:**
- U.S. 1-800-424-9300 – Chemtrec
Canada 1-800-567-7455

SECTION 15 – REGULATORY INFORMATION

Δ **CANADIAN INFORMATION:**

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

Controlled Products Regulations (WHMIS) Classification:

E: Corrosive Material

CEPA / Canadian Domestic Substances List (DSL): Y

WHMIS Ingredient Disclosure List: Meets criteria for disclosure at 1% or greater.

Δ **USA INFORMATION:**

OSHA Classification: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

SARA Regulations sections 313 and 40 CFR 372: N

SARA Hazard Categories, SARA SECTIONS 311/312 (40 CFR 370.2):

ACUTE: Y

CHRONIC: N

FIRE: N

REACTIVE: Y

SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29 CFR 1910.119): N

CERCLA SECTION 103 (40 CFR 302.4): Y

Reportable Quantity (RQ) under CERCLA: 1000 lbs.

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TSCA Inventory Status: Y

This product does not contain nor is it manufactured with ozone depleting substances.

△ EUROPEAN ECONOMIC COMMUNITY (EEC) INFORMATION:

EINECS Number: 215-185-5

CALIFORNIA PROP 65 COMPONENTS:

This product is not listed, but it may contain elements known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. For additional information, contact Olin Technical Services (800-299-6546)

SECTION 16 – OTHER INFORMATION

- △ The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Olin will not be liable for any damages, losses, injuries or consequential damages that may result from the use of or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years.

Revision Indicators:

- △ In the left margin indicates a revision or addition of information since the previous issue.

National Fire Protection Association (NFPA) Rating Hazardous Materials Identification System (HMIS) Rating

△		NFPA	HMIS	
	HEALTH	3	3	4 = Extreme/Severe
	FIRE	0	0	3 = High/Serious
	REACTIVITY / INSTABILITY	1	1	2 = Moderate
	SPECIAL HAZARDS		N p	1 = Slight
				0 = Minimum
				W = Water Reactive
				OX = Oxidizer
				* = Chronic health hazard

△ REFERENCES:

1. Chemlist, STN Database, Chemical Abstract Service, 1999
2. "CHEMINFO", CCOHS, Canadian Centre for Occupational Health and Safety, Hamilton, Ontario, Canada, (2008).
3. DOSE, Royal Society of Chemistry, Aug 27, 1999.
4. HSDB- Hazardous Substances Data Bank, CCOHS, 2008.
5. RTECS-Registry of Toxic Effects of Chemical Substances, On-line search, Canadian Centre for Occupational Health and Safety RTECS database, Doris V. Sweet, Ed., National Institute for Occupational Safety and Health, U.S. Dept. of Health and Human Services, Cincinnati, Entry Update/ August 2007.
6. "2008 Threshold Limit Values and Biological Exposure Indices", American Conference of Government Industrial Hygienists, 2008.
- 7.

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**MATERIAL
SAFETY DATA**

SODIUM HYDROXIDE SOLUTION, 50%

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Δ LEGEND:

- ACGIH - American Conference of Governmental Industrial Hygienists
- AFFF - Aqueous Film Forming Foam
- AIHA - American Industrial Hygiene Association
- CAS # - Chemical Abstracts Service Registry Number
- CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
- CFR - Code of Federal Regulations
- DOT - Department of Transportation
- EINECS - European Inventory of Existing Chemical Substances
- EPA - Environmental Protection Agency
- ERAP - Emergency Response Assistance Plan
- IATA - International Air Transportation Association
- ICAO - International Civil Aviation Organization
- FRP - Fiberglass Reinforced Plastic
- HMIS - Hazardous Materials Identification System
- IARC - International Agency for Research on Cancer
- IDLH - Immediately Dangerous to Life and Health
- LC50 - The concentration of material in air expected to kill 50% of a group of test animals
- LD₅₀ - Lethal Dose expected to kill 50% of a group of test animals
- MSHA - Mine Safety and Health Administration
- N/Ap - Not Applicable
- N/Av - Not Available
- NFPA - National Fire Protection Association
- NIOSH - National Institute for Occupational Safety and Health
- NTP - National Toxicology Program
- OSHA - Occupational Safety & Health Administration
- PEL - Permissible Exposure Limit
- PVC - Polyvinyl chloride
- RCRA - Resource Conservation and Recovery Act
- SARA - Superfund Amendments and Reauthorization Act of the U.S. EPA
- STEL - Short Term Exposure Limit
- TDG - Transportation of Dangerous Goods Act/Regulations
- TLV - Threshold Limit Value
- TSCA - Toxic Substances Control Act
- TWA - Time Weighted Average
- WEEL - Workplace Environmental Exposure Level
- MIS - Workplace Hazardous Materials Identification System

Prepared by: Olin
(514) 397-

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SATCO
Sulphuric Acid Trading Company, Inc.
5802 Breckenridge Parkway, Suite 200, Tampa, FL 33610
PH: 800-633-1358 FX: 813-225-1001

SULPHURIC ACID
MSDS

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY, CALL **CHEMTREC @ 1-800-424-9300**

•Revision Date: February 1st, 2008•

I. PRODUCT IDENTIFICATION

PRODUCT NAME - **SULPHURIC ACID**, Concentrated
CHEMICAL FAMILY - Inorganic Acid
CHEMICAL NAME - Sulfuric Acid
SYNONYMS - Oil of Vitriol, Battery Acid

CAS NO. - 7664-93-9
MOLECULAR WGT - 98
FORMULA - H₂SO₄
DOT CLASS - Corrosive Material, UN 1830

II. COMPOSITION

	%	CAS NO.
HAZARDOUS INGREDIENTS:		
Sulphuric Acid.....	93 – 98	7664-93-9
OTHER INGREDIENTS:		
Water, approximate.....	2 – 7	7732-28-5

NOTE: Contains sulphuric acid, which is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR Part 372.

III. PHYSICAL DATA

BOILING POINT - 535 to 586°F	SPECIFIC GRAVITY (H ₂ O=1) - 1.84
VAPOR PRESSURE, mm Hg, 77°F - Less than 1	PERCENT VOLATILE - 0 at 77°F
SOLUBILITY IN WATER - Complete	pH, 1% SOLUTION - Approximately 1
APPEARANCE AND ODOR - Clear, colorless, odorless oily liquid.	

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT - Does not burn. FLAMMABLE LIMITS - Not applicable
REACTS with many metals to form flammable and explosive hydrogen gas. Reacts violently with water and many organic materials. Contact with water causes evolution of heat, and may cause spattering. Heat of a fire could cause evolution of sulphuric acid mist or sulphur trioxide.
USE water spray to cool sulphuric acid containers to prevent rupture. Firefighters and emergency personnel should use self-contained breathing apparatus and full acid-resistant clothing.

V. REACTIVITY DATA

STABILITY - Sulphuric acid is stable under normal conditions.
HAZARDOUS POLYMERIZATION will not occur.
INCOMPATIBILITY (Materials to avoid) - Reaction with many metals may cause evolution of flammable and explosive hydrogen gas. Contact with strong alkalis, strong oxidizers, or combustible materials may cause spattering of the acid and liberation of heat. Contact with sulfides or cyanides may cause release of toxic gases.
HAZARDOUS DECOMPOSITION PRODUCTS - At very high temperatures may release sulphur dioxide or sulphur trioxide.

VI. HEALTH HAZARD DATA

OSHA Permissible Exposure Limit and ACGIH TLV is a time-weighted-average of 1 mg/m³. The ACGIH Short Term Exposure Limit (STEL) is 3 mg/m³. Sulphuric acid is not considered to be a cancer-causing material by OSHA, NIOSH, or IARC.

ROUTES OF ENTRY - Lungs (breathing), ingestion (swallowing), skin contact.

EFFECTS OF OVEREXPOSURE:

INGESTION: MODERATELY TOXIC. Corrosive to the mouth, teeth, throat and stomach. Human oral LDLo=135 mg/kg. May cause gastrointestinal disturbances. Symptoms may include salivation, irritation, throat burns, nausea, abdominal pain, vomiting and diarrhea.

SKIN: EXTREMELY IRRITATING AND CORROSIVE. Contact may cause reddening, itching, inflammation, blistering and tissue damage. Extent of burns may not become apparent for several hours after contact.

EYE: EXTREMELY IRRITATING AND CORROSIVE. Direct contact may cause conjunctivitis, corneal ulceration and permanent injury.

INHALATION: HIGHLY TOXIC. Mouse LC50=320 ppm/2 hrs. May cause respiratory tract irritation, throat burns, constriction of the windpipe, severe pulmonary edema and death. May also cause inflammation of the stomach, bronchitis, and tooth erosion. Exposure may cause symptoms similar to those listed under "INGESTION".

SPECIAL TOXIC EFFECTS: No Data.

Sulphuric Acid
Page 2 Of 2

VII. FIRST AID

INGESTION: DO NOT INDUCE VOMITING. If victim is conscious, give 1-3 glasses of water or milk to dilute stomach contents. Get immediate medical attention.

SKIN CONTACT: REMOVE contaminated clothing immediately and flush area of contact with copious water for at least 15 minutes. Wash area of contact thoroughly with soap and water. Place contaminated clothing in closed container for storage until discarded. Get immediate medical attention.

EYE CONTACT: FLUSH immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Do not wait for symptoms to develop. Get immediate medical attention.

INHALATION: REMOVE affected person from source of exposure. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, give oxygen. Keep affected person warm and at rest. Get immediate medical attention.

NOTE TO PHYSICIAN: If inhalation exposure has occurred, patient should be observed for latent pulmonary edema for at least 30 hours.

VIII. PERSONAL PROTECTION INFORMATION

EYE PROTECTION: WEAR chemical safety goggles and face shield. Do not wear contact lenses when working with this substance. Have eye baths readily available where eye contact can occur.

SKIN PROTECTION: WEAR impervious gloves and protective clothing to prevent skin contact. PVC or neoprene gloves and clothing are recommended. Skin contact should be avoided at all times. Provide safety showers at locations where skin contact can occur.

RESPIRATORY PROTECTION: USE NIOSH approved respirator when airborne exposure limits are exceeded and when required for non-routine and emergency use. Ventilation may be used to control or reduce airborne concentrations.

IV. ENVIRONMENTAL INFORMATION

EMERGENCY ACTION: Stay upwind of spills and keep out of low areas. Isolate hazard area and keep unnecessary people away. Also see Personal Protection Information section.

SPILL OR RELEASE TO THE ENVIRONMENT: If your facility or operation has a "Hazardous Substance Contingency Plan", activate procedures as outlined. Caution should be exercised regarding personnel safety and exposure to the spilled material. Take immediate steps to stop and contain the spill. For technical advice and assistance related to chemicals, contact CHEMTREC (800) 424-9300 and your local fire department.

NOTIFICATION: The reportable quantity for this material is 1,000 pounds. Any spill or other release of this material to the air, water or land (unless entirely contained to the workplace) equal to or in excess of the reportable quantity must be reported immediately to the National Response Center (800) 424-8802 as required by U.S. Federal law. Similarly, any release of a reportable quantity or greater of this material must also be reported immediately to the Community Emergency Coordinator for the Local Emergency Planning Committee and to the State Emergency Response Commission. Failure to properly report spills or releases may result in civil and criminal penalties.

SPILL OR LEAK PROCEDURE: Do not apply water unless directed to do so. Do not get water inside container. Use water sprays to reduce vapors but do not put water on leak area. Do not touch spilled material. Stop leak only if it can be done without risk. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Dike spill for later disposal. Clean-up only under supervision of an expert. Hydrated lime may be used to neutralize residue.

WASTE DISPOSAL: Sulphuric acid, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations. However, sulphuric acid and mixtures containing it having a pH of 2 or less are considered corrosive, and are assigned EPA Hazardous Waste Number D002. (See 40 CFR 261.) Additionally, this material could be designated as hazardous according to state regulations and/or could become a hazardous waste if it is mixed with or comes in contact with a hazardous waste. If such contact or mixing has occurred, check 40 CFR 261 and 262, 263 and 264 to determine what, if any, disposal requirements apply. The transportation, storage, treatment and disposal of waste material must be conducted in compliance with all applicable Federal, State and local regulations.

ADDITIONAL ENVIRONMENTAL REGULATORY INFORMATION: There may be specific regulations at the local, regional or state level that pertain to this material.

HANDLING/STORAGE: Store in tightly closed containers in cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles. Do not eat, drink or smoke in areas of use or storage. Empty containers may contain toxic and corrosive residue or vapors. Do not cut, grind, drill, weld or reuse containers unless adequate precautions are taken.

X. TRANSPORTATION REQUIREMENTS

D.O.T. HAZARD CLASS (49 CFR 172.101): 8	D.O.T. PLACARDS REQUIRED: Corrosive
D.O.T. PROPER SHIPPING NAME (49 CFR 172.101): Sulfuric Acid	UN/NA CODE: UN 1830
D.O.T. LABELS REQUIRED (49 CFR 172.101): Corrosive	
BILL OF LADING DESCRIPTION: Sulfuric Acid, 8, UN 1830, PG II, RQ	

The information, data, and recommendations contained herein are believed to be accurate. Sulphuric Acid Trading Company, Inc. (SATCO) makes no warranty of any kind whatever with respect thereto and disclaims all liability from reliance thereon.



ODYSSEY
MANUFACTURING CO.

MATERIAL SAFETY DATA SHEET

REVISED 5/12/09

SECTION I **CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

ODYSSEY MANUFACTURING CO.
1484 Massaro Boulevard
Tampa, Florida 33619
1-813-635-0339

EMERGENCY RESPONSE NUMBER:
1-800-ODYSSEY (FLORIDA)
1-813-635-0339 (24 hours)

SUBSTANCE: SODIUM HYPOCHLORITE

TRADE NAME: Ultra-CHLOR

CHEMICAL NAME/SYNONYMS: Sodium Hypochlorite Solution, Bleach Solution, Bleach Liquor, Hypo-solution, Bleach, and Liquid Bleach.

CAS NUMBER: 7681-52-9

CHEMICAL FAMILY: Alkali

FORMULA: NaOCl

DOT PROPER SHIPPING NAME: Hypochlorite Solution

DOT HAZARD CLASS: 8 (Corrosive) PG III; PG II (For solutions greater than 16% available chlorine)

DOT IDENTIFICATION NO: UN1791

RQ: 100 pounds (Approximately 100 gallons of Odyssey Ultrachlor 12.5 Trade Percent Sodium Hypochlorite)

DOT EMERGENCY GUIDE NO: 154

SECTION II **COMPOSITION, INFORMATION ON INGREDIENTS**

INGREDIENT(S):

Sodium Hypochlorite (NaOCl)	10.0 - 20.0% wt
Sodium Hydroxide (NaOH)	0.1 - 0.4% wt
Water (H ₂ O)	79.7 - 89.9% wt

SECTION III **HAZARDS IDENTIFICATION**

NFPA CLASSIFICATION (SCALE 0-4): Health=2 Fire=0 Reactivity=1

EC CLASSIFICATION (ASSIGNED): C (Corrosive)

EMERGENCY OVERVIEW

COLOR: Yellow

PHYSICAL FORM: Liquid

ODOR: Chlorine Odor

MAJOR HEALTH HAZARDS: Respiratory Tract Burns, Skin Burns, Mucous Membrane Burns, and Eye Irritation

HAZARDOUS MIXTURES WITH OTHER LIQUIDS, SOLIDS, OR GASES: Reacts violently with acids liberating chlorine gas. Also reacts with organic substances. Reaction with water is *not* exothermic.

POTENTIAL HEALTH EFFECTS

INHALATION:

- **SHORT TERM EXPOSURE:** Irritation to respiratory tract. May have same as effects reported in other routes of exposure, burns, blisters, nausea, difficulty breathing, and lung congestion.
- **LONG TERM EXPOSURE:** Same as effects reported in short term exposure.

SKIN CONTACT:

- **SHORT TERM EXPOSURE:** Irritant, reddening of the skin. May have burns, blisters, and itching
- **LONG TERM EXPOSURE:** Same as effects reported in short term exposure.

EYE CONTACT:

- **SHORT TERM EXPOSURE:** Irritation (possibly severe), possible eye damage
- **LONG TERM EXPOSURE:** Same as effects reported in short term exposure.

INGESTION:

- **SHORT TERM EXPOSURE:** Burns, vomiting stomach pain, disorientation, bluish skin color, convulsions, coma
- **LONG TERM EXPOSURE:** Same as effects reported in short term exposure.

CARCINOGEN STATUS

OSHA: N

NTP: N

IARC: N

SECTION IV FIRST AID MEASURES

INHALATION: Remove from exposure and get fresh air. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Keep warm and at rest. Get medical attention immediately if artificial respiration is required.

SKIN CONTACT: Remove contaminated clothing, jewelry, and shoes immediately. Flush affected area with large amounts of water, preferably a safety shower. Use soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). For burns, cover affected area securely with sterile, dry, loose fitting dressing. If skin is burned, get medical attention immediately.

EYE CONTACT: Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15 minutes). Continue irrigating with a normal saline solution until ready to transport to physician. Cover with sterile bandages. Get medical attention immediately.

INGESTION: Rinse mouth with water. Drink large quantities of milk (water if no milk is available). Milk of magnesia may be helpful. **DO NOT USE ACIDIC ANTIDOTES SUCH AS SODIUM BICARBONATE.** When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, do not induce vomiting and turn their head to the side. Never make an unconscious person vomit or drink fluids. Get medical attention.

NOTE TO PHYSICIAN: For inhalation, consider oxygen. For ingestion, avoid gastric lavage, emesis, sodium bicarbonate and acid solutions. Consider the use of antacids.

SECTION V FIRE FIGHTING MEASURES

FLASH POINT: Non-flammable

FLAMMABLE LIMITS: Non-flammable

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard. Toxic fumes can be liberated by contact with acid or heat.

EXTINGUISHING MEDIA: Regular dry chemical, carbon dioxide, water, or foam suitable for surrounding fire. For large fires, use regular foam or flood with fine water spray.

FIRE FIGHTING: Wear self-contained breathing apparatus and full protective clothing. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Use extinguishing agents appropriate for surrounding fire. Do not get water directly on material. For large fires, flood with fine water spray. Reduce vapors with water spray. Apply water from a protected location or from a safe distance. Avoid body contact or inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SECTION VI ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE: Do not touch spilled material. Stop leak if possible without personal risk. For small spills, collect spilled material in appropriate container for disposal and consider absorbing with sand or other non-combustible material (e.g., do not use sawdust or other combustible material). Be advised, however, that the use of absorbing material is creating hazardous waste and this absorbing material must now be disposed of properly. Collect spilled material in appropriate container for disposal. For small dry spills, move containers away from spill to a safe area. For large spills, dike for later disposal. If possible, do not allow material to enter sewers, streams, ponds or storm conduits as concentrated solutions will seriously injure aquatic life. Keep unnecessary people away, isolate hazard area and deny entry. Contain in as small an area as possible, such as a holding area for dilution and neutralization. Contain spill in plastic drums when available. Dispose of in accordance with Federal, State, and local regulations. Personnel engaged in cleanup operations must be equipped with NIOSH approved respirator protection, rubber boots, gloves, and clothing to avoid body contact. Reportable Quantity (RQ): 100 pounds (approximately 100 gallons of Odyssey Ultrachlor 12.5 Trade Percent sodium hypochlorite). In the event of a spill (e.g., defined as any release to the environment), call Odyssey Manufacturing and/or the emergency contact numbers as soon as possible. For releases higher than the Reportable Quantity (RQ), you must notify either the State Emergency Response Commission (U.S. SARA Section 304) at (800) 320-519 or the National Response Center at (800) 424-8802 or (202) 426-2675 (CERCLA Section 103). Both are tied together and will communicate to the other.

ADVANCE PLANNING: Plan in advance for an occupational release and have necessary equipment and neutralization agents on-site. Contact Odyssey Manufacturing for assistance.

SECTION VII HANDLING AND STORAGE

Store in vented, closed containers that provide protection from direct sunlight. Keep separated from incompatible substances and do not store near acids, ammonia, heat, or oxidizable materials or organics. When handling, do not mix with other cleaning agents that may liberate chlorine gas vapors (e.g., acidic agents).

Store and handle in accordance with all current regulations and standards.

SECTION VIII EXPOSURE CONTROLS AND PERSONNEL PROTECTION

EXPOSURE LIMITS: 2 mg/m³ AIHA recommended STEL 15 minute(s) for Sodium Hypochlorite

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Splash goggles are preferred to a faceshield. Another option is to wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: It is recommended to wear appropriate chemical resistant clothing to avoid body contact such as a rubber apron or rain suit. Boots are preferred for footwear.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

- Any chemical cartridge respirator with organic vapor cartridge(s).
- Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s)
- Any air-purifying respirator with a full facepiece and an organic vapor canister
- Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply (Use for Unknown Concentrations or those that may be Immediately Dangerous to Life or Health)
- Any self-contained breathing apparatus with a full facepiece (Use for High Concentrations or those which are immediately Dangerous to Life or Health)

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL APPEARANCE: Liquid

APPEARANCE AND ODOR: Clear - Chlorine odor like household bleach.

COLOR: Greenish - Yellowish cast

MOLECULAR WEIGHT: 74.44

MOLECULAR FORMULA: Na-O-Cl

BOILING POINT: Degrades at 230 Degrees Fahrenheit
FREEZING POINT: 7 Degrees Fahrenheit
SPECIFIC GRAVITY: 1.15 - 1.17 at 60 Degrees Fahrenheit
PH: Approximately 11 - 13
VAPOR PRESSURE (mm HG): Vapor Pressure of water + decomposition product Vapor Pressure
VAPOR DENSITY: Not Available
SOLUBILITY IN WATER: Complete
VOLATILITY: Not Available
EVAPORATION RATE: >1
COEFFICIENT OF WATER /OIL DISTRIBUTION: Not Available

SECTION X STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.
CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Dangerous gases may accumulate in confined spaces. May ignite or explode on contact with combustible materials.
INCOMPATIBLES: Acids, metals, amines, combustible materials, reducing agents. Specific reactions with sodium hypochlorite include the following:
ACIDS: Violent reaction.
ALUMINUM: Corrosive action.
AMINES: Form explosive chloramines.
AMMONIA: Form explosive chloramines.
AMMONIUM SALTS: May form explosive product.
BENZYL CYANIDE (ACIDIFIED): Explosive reaction.
CELLOULOSE: Violent reaction
ETHYLENEIMINE: Forms explosive 1-chloroethyleneimine.
FORMIC ACID: Explosive mixture.
METHANOL: May form explosive compound.
NITROGEN COMPOUNDS: Forms explosive N-chloro compounds.
ORGANIC AND COMBUSTIBLE MATERIALS: Fire and explosion hazard.
OXALIC ACID: Intense reaction
REDUCING AGENTS: Fire and explosion hazard
ZINC: Corrosive
HAZARDOUS DECOMPOSITION:
Thermal decomposition products – Chlorine and Hydrochloric Acid Vapors
Decomposition Products – Hypochlorous Acid Vapors
POLYMERIZATION: Will not polymerize.

SECTION XI SODIUM HYPOCHLORITE TOXICOLOGICAL INFORMATION

IRRITATION DATA: 10 mg eyes – rabbit moderate
TOXICITY DATA:
1gm/ kg oral-woman; TDLo; 45mg/kg intravenous-man TDLo; 5800 mg/ kg oral-mouse LD50; 140 mg/ kg/9 week(s) continuous oral-rat TDLo
CARCINOGEN STATUS: According to the IARC, animal inadequate evidence, human no adequate data, Group 3 (Hypochlorite salts)
LOCAL EFFECTS:
Corrosive: inhalation, skin contact, eye, ingestion hazards
ACUTE TOXICITY LEVEL:
Slightly Toxic if ingested
MUTAGENIC DATA:
Mutation in micro organisms – Salmonella typhimurium 1mg / plate (-S9); DNA repair – Escherichiacoli 20ug/ disc; DNA damage – Escherichiacoli 420 umol/L; phage inhibition capacity – Escherichiacoli 103 ug/ well; micronucleus test - non-mammalian species multiple 200 ppb; cytogenetic analysis - non-mammalian species multiple 120 ug/ L; cytogenetic analysis – human lymphocyte 100 ppm 24hour(s); sister chromatid exchange – human embryo 149 mg/ L; cytogenetic analysis – hamster lung 100 mg/ L
HEALTH EFFECTS:
INHALATION
ACUTE EXPOSURE: May cause severe bronchial irritation, sore throat with possible blistering, coughing,

stomatitis, nausea, labored breathing, shortness of breath and pulmonary edema. 10-20 mg/m³ causes burning of the nose and throat; 40-60 mg/m³ may be fatal. If sufficient amounts are absorbed, may cause effects as detailed in acute ingestion.

CHRONIC EXPOSURE: No data available.

SKIN CONTACT

ACUTE EXPOSURE: Extent of damage depends on concentration, pH, volume of solution and duration of contact. May cause redness, pain, blistering, itchy eczema and chemical burns. Sensitization reactions are possible in previously exposed persons.

CHRONIC EXPOSURE: Effects depend on concentration and duration of exposure. Repeated or prolonged contact with corrosive substances may result in dermatitis or effects similar to acute exposure. Allergic dermatitis has also been reported.

EYE CONTACT

ACUTE EXPOSURE: May cause redness, pain, and blurred vision. Solutions of 5% splashed in human eyes have caused a burning sensation and later only slight superficial disturbance of the corneal epithelium which cleared completely in the next day or two without special treatment. However, one animal study reports a 5% solution causing only moderate irritation with clearing within 7 days. A higher concentration of 15% tested on rabbit eyes caused immediate severe pain, hemorrhages, rapid onset of ground-glass appearance of the corneal epithelium, moderate bluish edema of the whole cornea, chemosis and discharge for several days. Such eyes have sometimes healed in 2-3 weeks with slight or no residual corneal damage but they had neovascularization of the conjunctiva and distortion of the nictitating membrane by scarring.

CHRONIC EXPOSURE: Depending on concentration and duration of exposure, symptoms may be as those of acute exposure.

INGESTION

ACUTE EXPOSURE: May cause irritation and erosion of the mucous membranes, vomiting (possibly bloody) and abdominal pain and spasms. A drop in blood pressure, shallow respiration, edema (possibly severe) of pharynx, larynx, and glottis, confusion, convulsions, delirium and coma may occur. Cyanosis and circulatory collapse are possible. Esophageal or gastric perforation and strictures are rare. Death may occur, usually due to complications of severe local injury such as toxemia, shock, perforations, hemorrhage, infection and obstruction. Massive ingestions may produce fatal hyperchloremic metabolic acidosis or aspiration pneumonitis.

CHRONIC EXPOSURE: Sensitization reactions are reported in individuals who are exposed in small amounts through their water supply. High doses have caused sperm abnormality in mice.

SECTION XII ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

FISH TOXICITY: 94.0 ug/L 96h hour(s) LC50 (Mortality) Cutthroat trout
(*Oncorhynchus clarki*)

INVERTEBRATE TOXICITY: 31.6 ug/L 7 hour(s) IC50 (Species Diversity) Protozoan phylum (Protozoa)

ALGAL TOXICITY: 90 ug/L 96 hour(s) LC50 (Mortality) Algae, phytoplankton, algal mat (Algae)

PHYTOTOXICITY: 230 ug/L 35 hour(s) (Biomass) Curled pondweed (*Potamogeton crispus*)

OTHER TOXICITY: 2.1 ug/L 28 day(s) (Chlorophyll) Aquatic community (Aquatic community)

ENVIRONMENTAL SUMMARY: Highly toxic to aquatic life.

SECTION XIII DISPOSAL CONSIDERATIONS

Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Dispose in accordance with all applicable regulations.

SECTION XIV TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101 SHIPPING NAME-UN NUMBER: Sodium Hypochlorite) - UN1791

U.S. DOT 49 CFR 172.101 HAZARD CLASS OR DIVISION: 8

U.S. DOT 49 CFR 172.101 PACKING GROUP: III (less than 16% available chlorine) / II (16% or more available chlorine)

U.S. DOT 49 CFR 172.101 AND SUBPART E LABELING REQUIREMENTS: Corrosive

U.S. DOT 49 CFR 172.101 PACKAGING AUTHORIZATIONS:

EXCEPTIONS: 49 CFR 173.154

NON- BULK PACKAGING: 49 CFR 173.203 (less than 16% available chlorine) / 49 CFR 173.202 (16% or more available chlorine)

BULK PACKAGING: 49 CFR 173.241 (less than 16% available chlorine) / : 49 CFR 173.242 (16% or more available chlorine)

U.S. DOT 49 CFR 172.101 QUANTITY LIMITATIONS:

PASSENGER AIRCRAFT OR RAILCAR: 5 LITERS / (less than 16% available chlorine) / 1 LITERS (16% or more available chlorine)

CARGO AIRCRAFT ONLY: 60 LITERS / (less than 16% available chlorine) / 30 LITERS (16% or more available chlorine)

SECTION XV REGULATORY INFORMATION

U.S. REGULATIONS

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Y

SODIUM HYPOCHLORITE: 100 LBS RQ

SARA SECTION 302 (40CFR355.30) : N

SARA SECTION 304 (40CFR355.40) : N

SARA SECTION 313 (40CFR372.65) : N

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE: Y

CHRONIC: N

FIRE: N

REACTIVE: N

SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:

California Proposition 65: N EUROPEAN REGULATIONS:

EC NUMBER (BINECS) : 231-668-3

EC RISK AND SAFETY PHRASES:

R 31 Contact with acids liberates toxic gas.

R 34 Causes burns.

S ½ Keep locked-up and out of reach of children.

S 28b After contact with skin, wash immediately with plenty of soap and water.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S 50 Do not mix with incompatible materials.

CONCENTRATION LIMITS:

C>10% C R 31-34

5%<=C<=10% Xi R 31-36/38

GERMAN REGULATIONS:

WATER HAZARD CLASS (WGK) : 2 (Official German Classification)

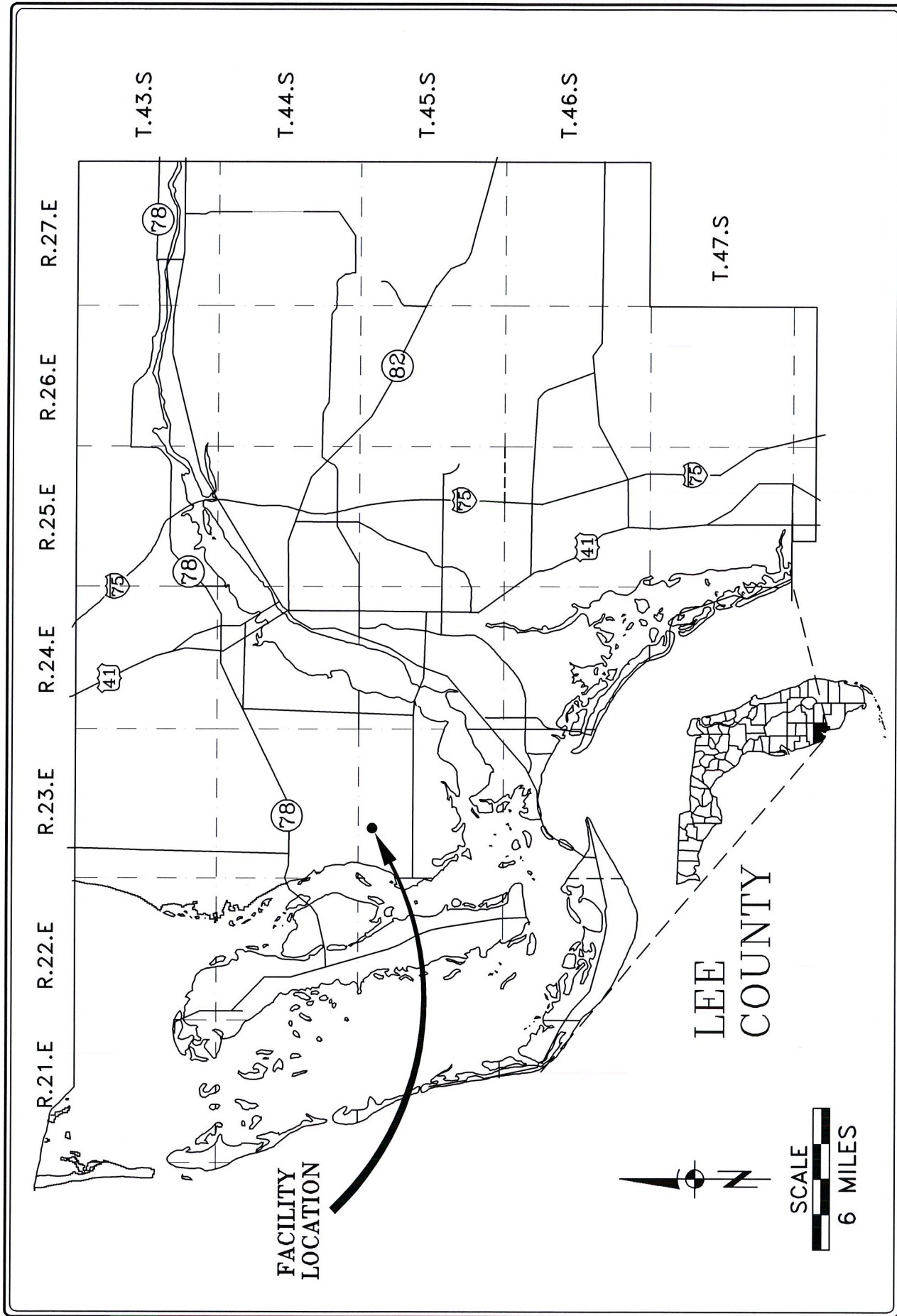
SECTION XVI OTHER INFORMATION

For additional information, contact our technical service department.

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or use involving other materials. This information is based on data believed to be reliable, and the Product is intended to be used in a manner that is customary and reasonably foreseeable. Since actual use and handling are beyond our control, no warranty, express or implied, is made and no liability is assumed by Odyssey Manufacturing in connection with the use of this information.

FIGURES

Figure 1-1 through 4-7



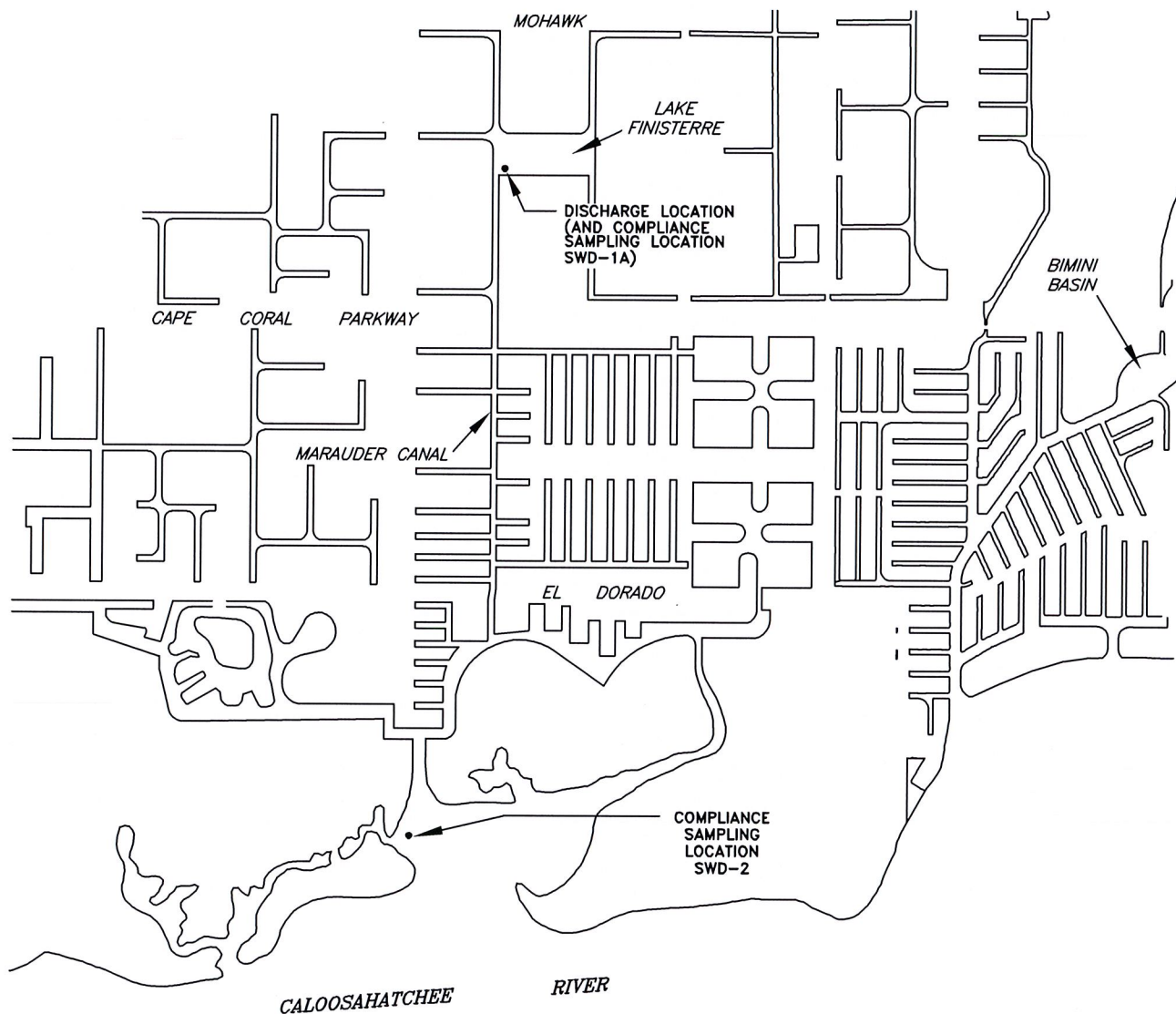
PROJECT NAME: CCC - CONCENTRATE PERMIT RENEWAL
PROJECT NUMBER: 10766060

DWG. NUMBER: 10766060am1
DATE: 12/01/10



FIGURE 1-1. GENERAL SITE LOCATION MAP OF REVERSE OSMOSIS TREATMENT FACILITY.

★ **REVERSE OSMOSIS TREATMENT FACILITY**
(Sampling Location EFF-1)



PROJECT NAME: CCC - CONCENTRATE PERMIT RENEWAL
PROJECT NUMBER: 10766060

DWG. NUMBER: 10766060am1
DATE: 12/01/10

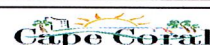
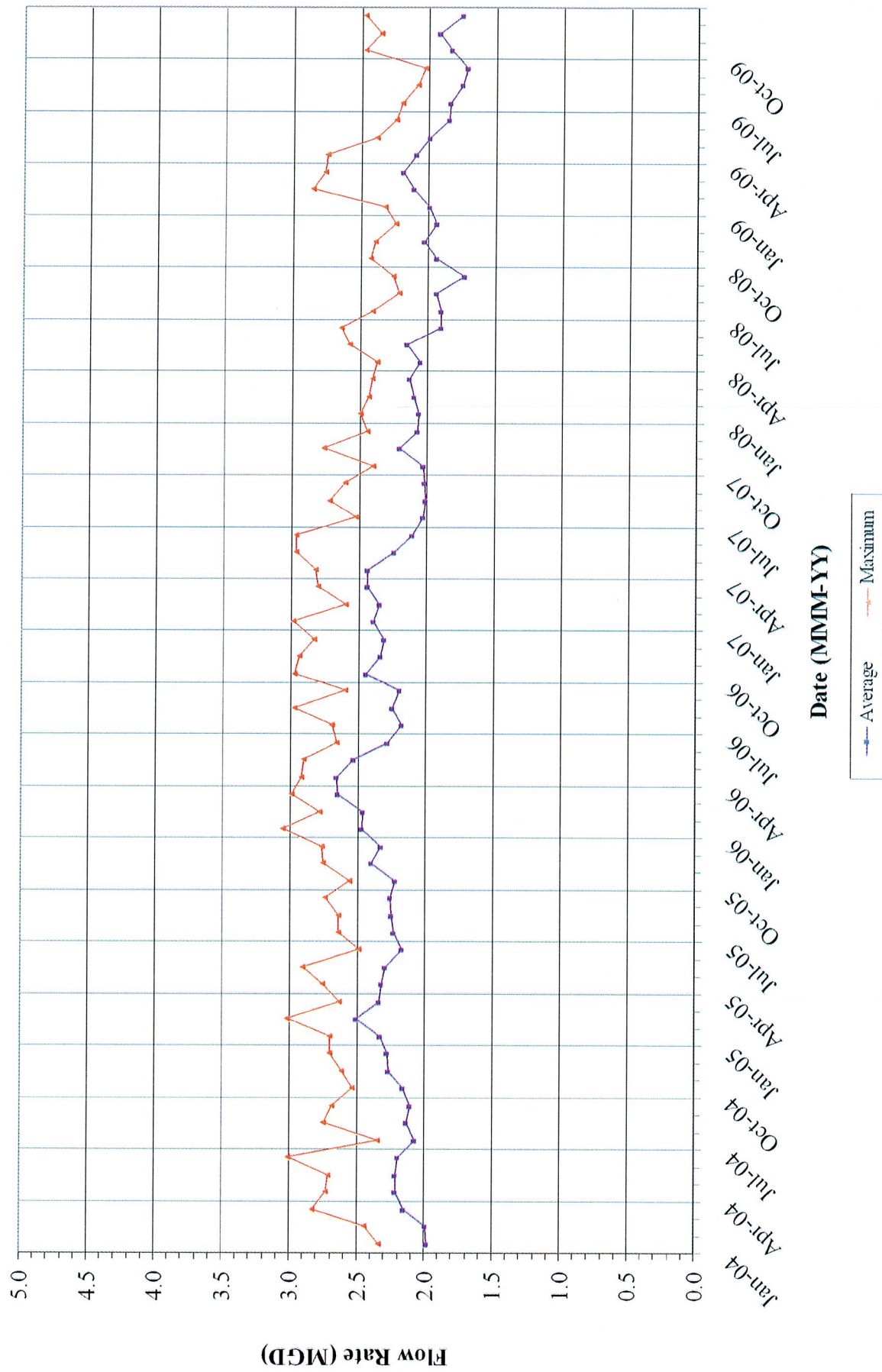


FIGURE 2-1. SITE MAP OF LAKE FINISTERRE AND SAMPLING POINT LOCATIONS.

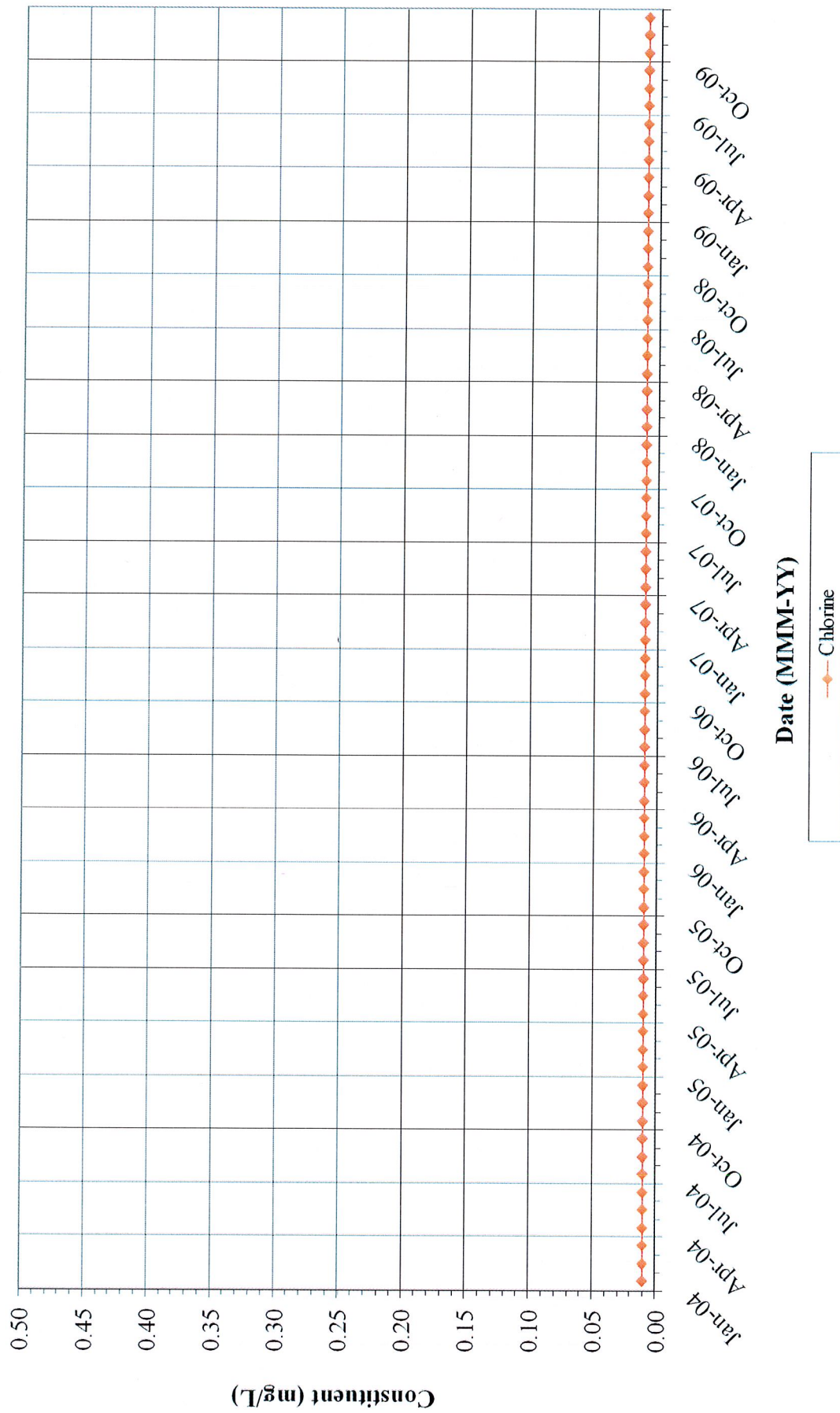


PROJECT NAME: CCC - CONCENTRATE PERMIT RENEWAL
PROJECT NUMBER: 10766060

DWG. NUMBER: 10766060am1
DATE: 12/01/10



FIGURE 3-1. AVERAGE AND MAXIMUM FLOW RATE TRENDS VERSUS TIME.

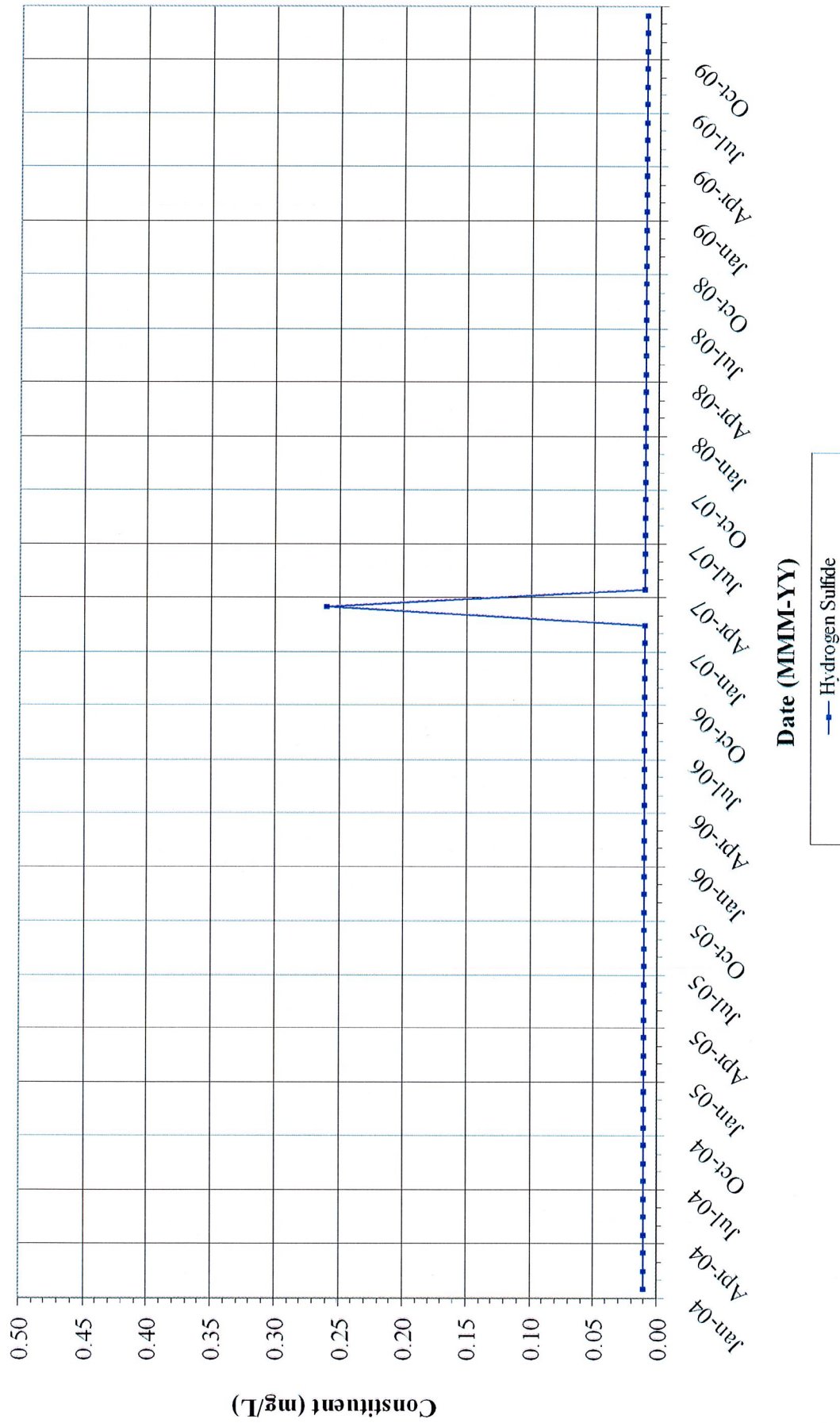


PROJECT NAME: CCC - CONCENTRATE PERMIT RENEWAL
PROJECT NUMBER: 10766060

DWG. NUMBER: 10766060am1
DATE: 12/01/10



FIGURE 4-1A. TOTAL RESIDUAL CHLORINE CONCENTRATIONS VERSUS TIME.



PROJECT NAME: CCC - CONCENTRATE PERMIT RENEWAL
PROJECT NUMBER: 10766060

DWG. NUMBER: 10766060am1
DATE: 12/01/10



FIGURE 4-1B. TOTAL RESIDUAL HYDROGEN SULFIDE CONCENTRATIONS VERSUS TIME.

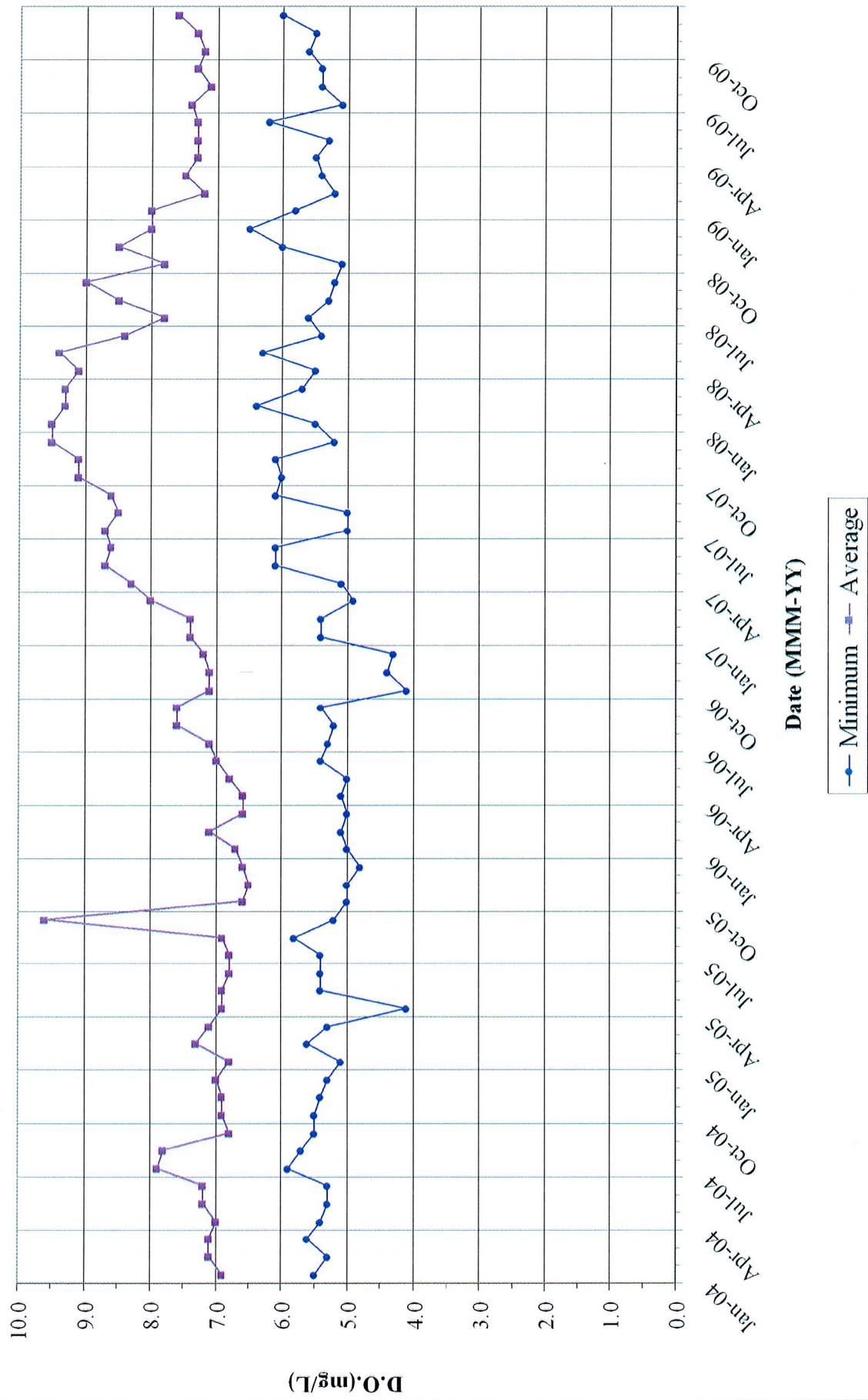
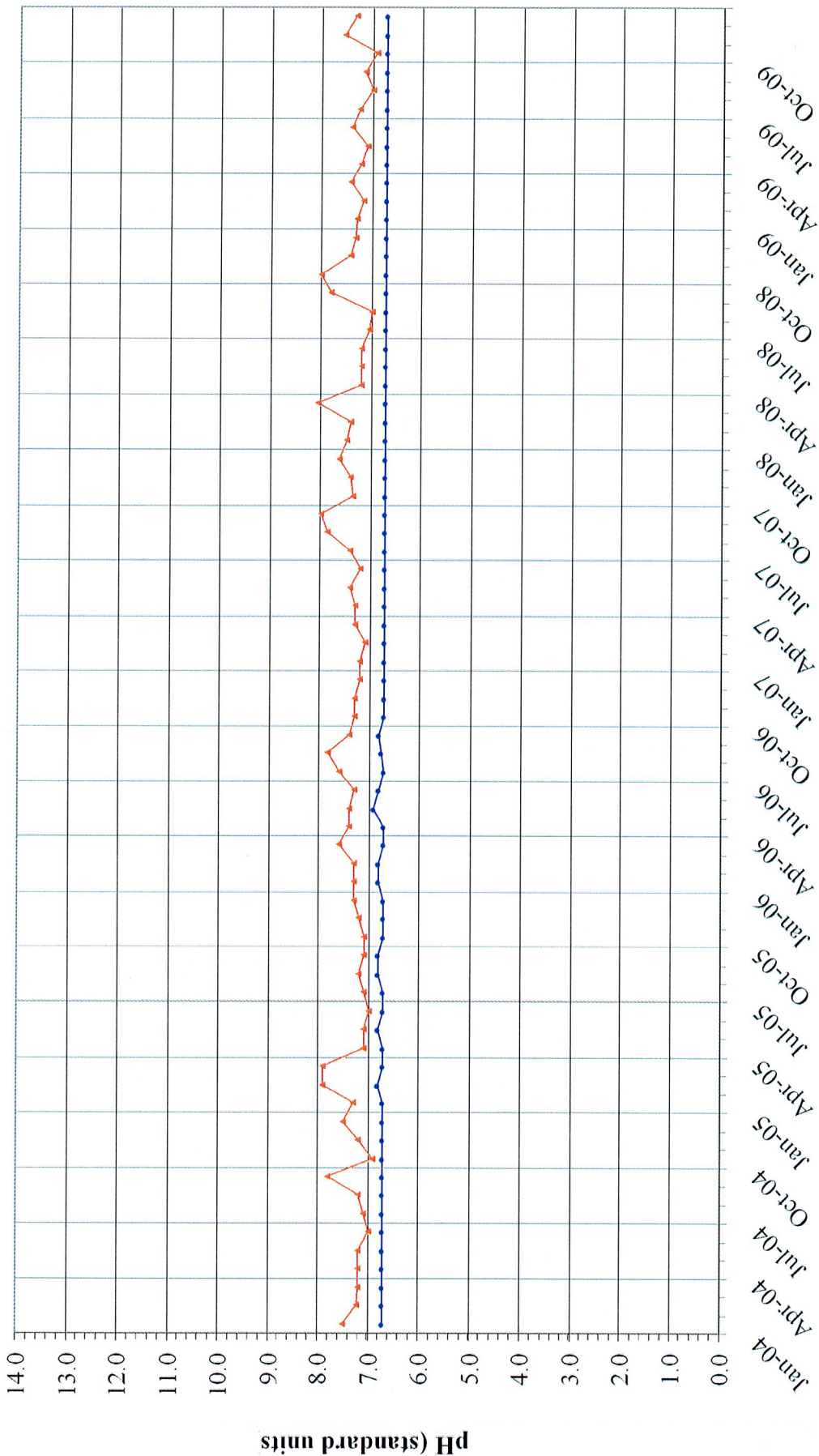


FIGURE 4-2. MINIMUM AND AVERAGE DISSOLVED OXYGEN CONCENTRATIONS VERSUS TIME.



Date (MM-YY)

Minimum Maximum

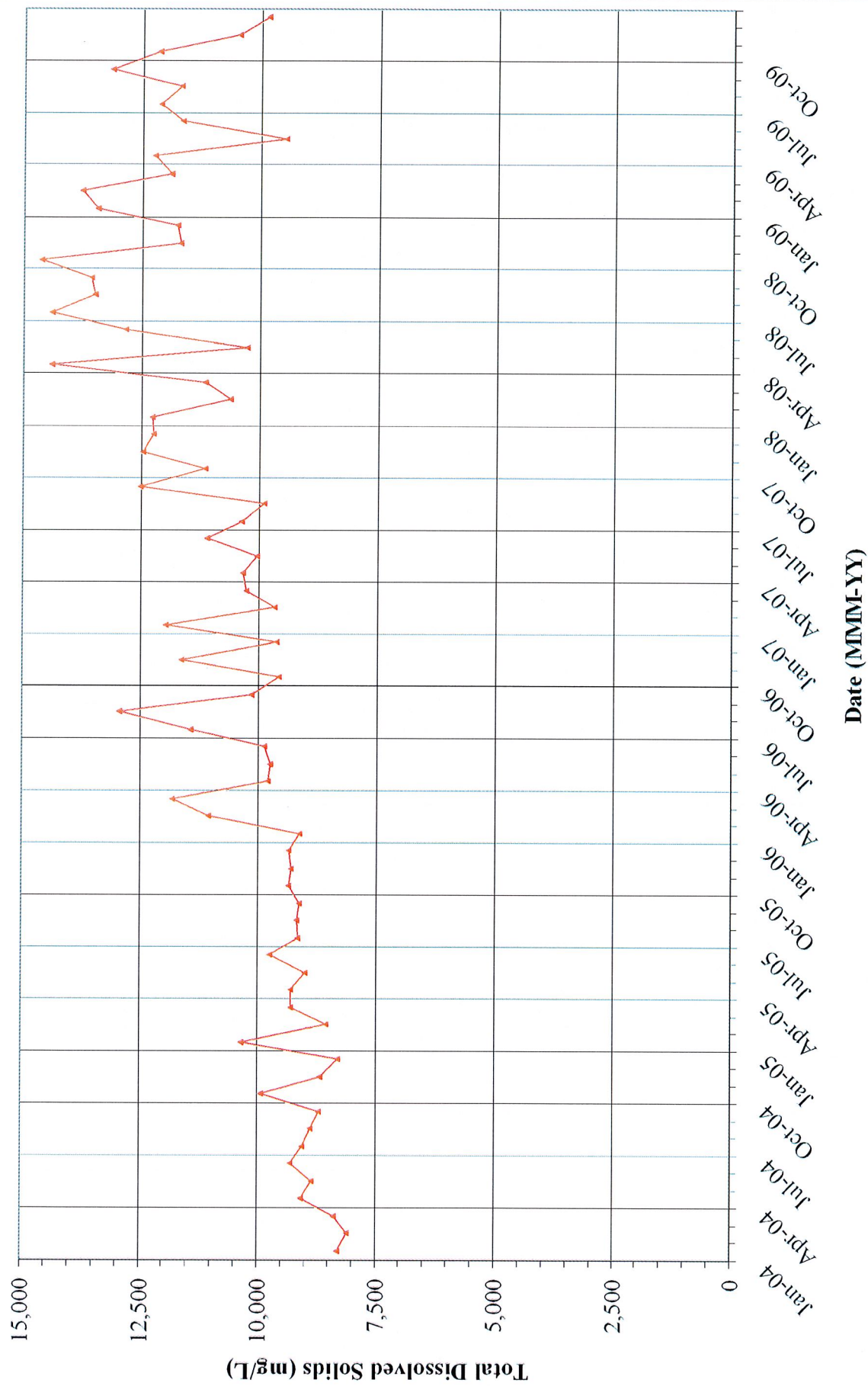


PROJECT NAME: CCC - CONCENTRATE PERMIT RENEWAL
PROJECT NUMBER: 10766060

DWG. NUMBER: 10766060am1
DATE: 12/01/10



FIGURE 4-3. PH CONCENTRATIONS VERSUS TIME.

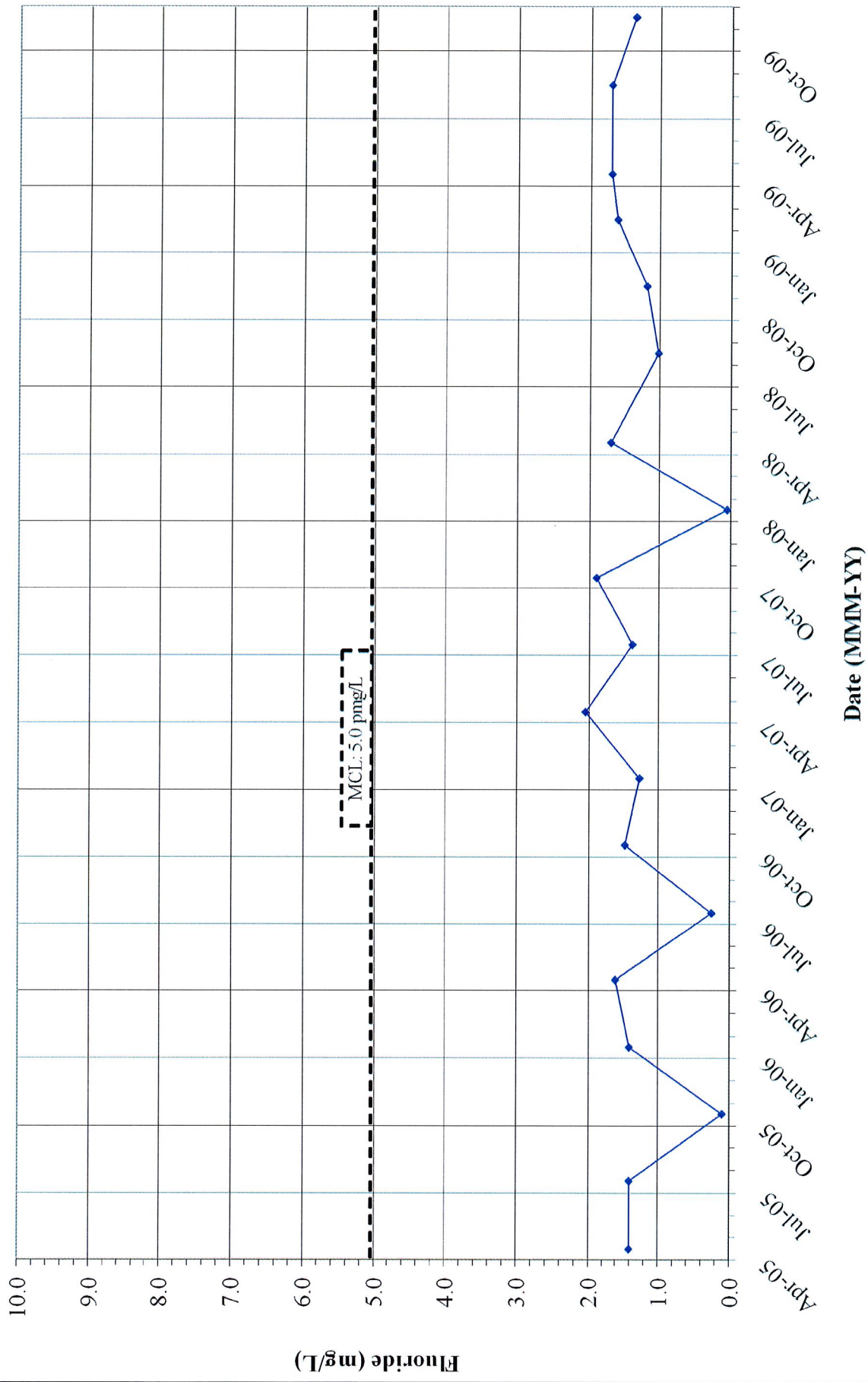


DWG. NUMBER: 10766060am1
DATE: 12/01/10

PROJECT NAME: CCC - CONCENTRATE PERMIT RENEWAL
PROJECT NUMBER: 10766060



FIGURE 4-4. TOTAL DISSOLVED SOLIDS CONCENTRATIONS VERSUS TIME.



DWG. NUMBER: 10766060am1
DATE: 12/01/10

PROJECT NAME: CCC - CONCENTRATE PERMIT RENEWAL
PROJECT NUMBER: 10766060



FIGURE 4-5. TOTAL FLUORIDE CONCENTRATIONS VERSUS TIME.

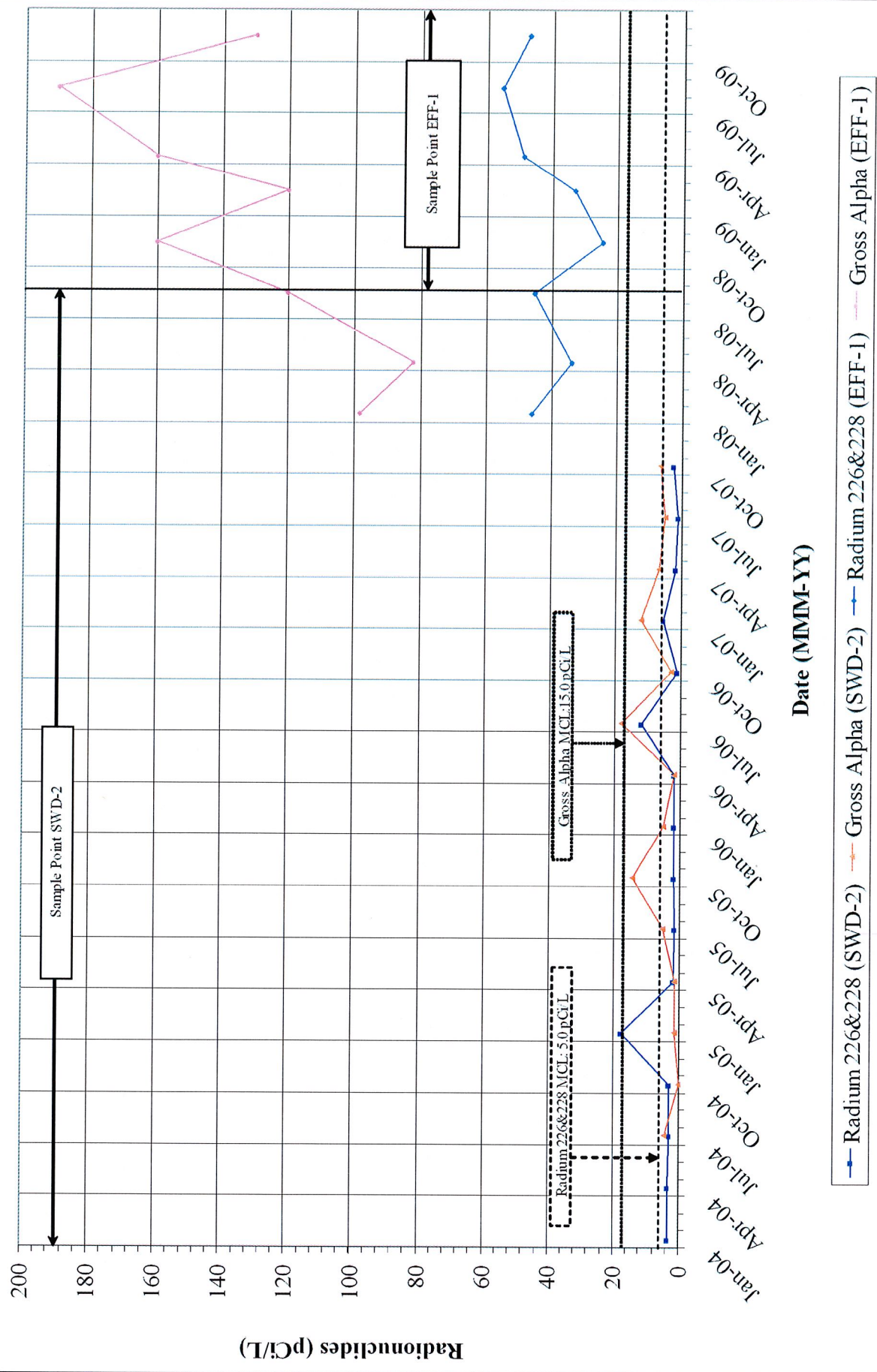
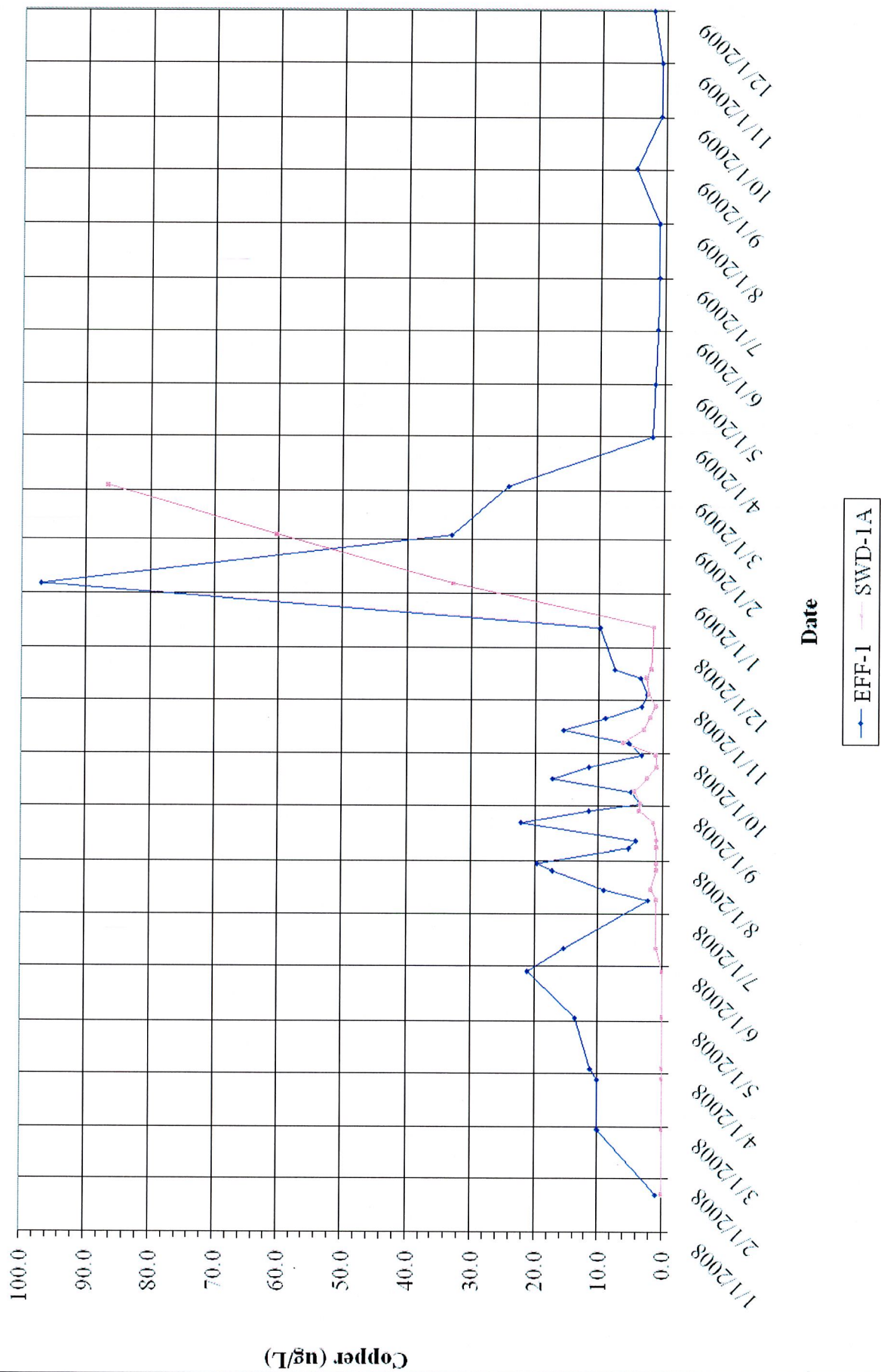


FIGURE 4-6. GROSS ALPHA RADIUM 226 & 228 CONCENTRATIONS VERSUS TIME.



PROJECT NAME: CCC - CONCENTRATE PERMIT RENEWAL
 PROJECT NUMBER: 10766060

DWG. NUMBER: 10766060am1
 DATE: 12/01/10



FIGURE 4-7. COPPER CONCENTRATIONS VERSUS TIME.

TABLES

Table 1 through 3



City of Cape Coral
Concentrate Discharge Permit Renewal
 Reverse Osmosis Plant • P.O. Box 150027 • Cape Coral, Florida 33915-0027
 FDEP Discharge Monitoring Report Data: January 2004 - December 2009
 Discharge Point Number D001 Water Quality

Facility Name: Reverse Osmosis Plant
 Project Name: City of Cape Coral Industrial Discharge
 FDEP Permit No.: FL0040088

DATE	FLOW DATA		PARAMETER															
	Average Flow (gpm)	Maximum Flow (gpm)	Chlorine, Total Residual	Hydrogen Sulfide (mg/L)	Dissolved Oxygen (mg/L)		pH (std. units)		Total Dissolved Solids (mg/L)		Fluoride, Total (as F) (mg/L)	Radium 226 & 228 (pCi/L)	Gross Alpha (pCi/L)	Mysidopsis Bahia, 96 hour acute %Effluent	Menidia Beryllina, 96 hour acute %Effluent	Copper (ug/L)	Nitrogen, Total (mg/L)	Phosphorus, Total (mg/L)
Sample Date (mm/dd/yy)	(MGD)	(MGD)	(mg/L)	(mg/L)	Min.	Ave.	Min.	Max.	Min.	Max.	(mg/L)	(pCi/L)	(pCi/L)	%Effluent	%Effluent	(ug/L)	(mg/L)	(mg/L)
Allowable	---	---	0.01	0.01	4.0	5.0	6.70	8.50	Daily Max	Max.	5.00	5.00	15.0	100%	100%	3.7	Daily Max	Daily Max
01/01/04	1.980	2.340	<0.01	<0.01	5.5	6.9	6.70	7.50	8284	NR	NR	NR	NR	NR	NR	NR	NR	NR
02/01/04	1.989	2.442	<0.01	<0.01	5.3	7.1	6.70	7.21	8100	1.31	3.11	BDL	BDL	>100%	>100%	NR	NR	NR
03/01/04	2.150	2.830	<0.01	<0.01	5.6	7.1	6.70	7.20	8370	NR	NR	NR	NR	NR	NR	NR	NR	NR
04/01/04	2.211	2.728	<0.01	<0.01	5.4	7.0	6.70	7.20	9075	1.58	3.22±1.15	BDL	BDL	NR	NR	NR	NR	NR
05/01/04	2.212	2.710	<0.01	<0.01	5.3	7.2	6.70	7.20	8840	NR	NR	NR	NR	NR	NR	NR	NR	NR
06/01/04	2.197	3.010	<0.01	<0.01	5.3	7.2	6.70	7.00	9304	NR	NR	NR	NR	NR	NR	NR	NR	NR
07/01/04	2.070	2.351	<0.01	<0.01	5.9	7.9	6.70	7.10	9040	NR	NR	NR	NR	NR	NR	NR	NR	NR
08/01/04	2.138	2.748	<0.01	<0.01	5.7	7.8	6.70	7.20	8876	NR	NR	NR	NR	NR	NR	NR	NR	NR
09/01/04	2.105	2.686	<0.01	<0.01	5.5	6.8	6.70	7.80	8702	1.10	2.825±1.40	4.43	4.43	NR	NR	NR	NR	NR
10/01/04	2.163	2.539	<0.01	<0.01	5.5	6.9	6.70	6.90	9920	NR	NR	NR	NR	NR	NR	NR	NR	NR
11/01/04	2.270	2.620	<0.01	<0.01	5.4	6.9	6.70	7.20	8680	NR	NR	NR	NR	NR	NR	NR	NR	NR
12/01/04	2.277	2.707	<0.01	<0.01	5.3	7.0	6.70	7.50	8294	1.36	3.01±0.693	-9.36±1.23	-9.36±1.23	NR	NR	NR	NR	NR

Comments: Grayed boxes indicate values above allowable limits.

Comments: Grayed boxes indicate values above allowable limits.

TABLE 1. FLOW RATES AND ANALYTICAL WATER QUALITY DATA.



City of Cape Coral
Concentrate Discharge Permit Renewal
 Reverse Osmosis Plant • P.O. Box 150027 • Cape Coral, Florida 33915-0027
FDEP Discharge Monitoring Report Data: January 2004 - December 2009
 Discharge Point Number D001 Water Quality

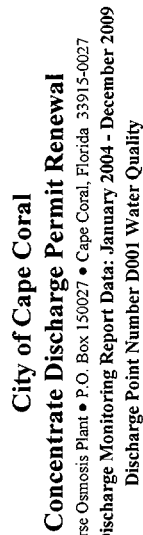
Facility Name: Reverse Osmosis Plant
 Project Name: City of Cape Coral Industrial Discharge
 FDEP Permit No.: FL0040088

DATE	FLOW DATA			PARAMETER																	
	Sample Date (mm/dd/yy)	Average Flow (MGD)	Maximum Flow Rate (gpm)	Chlorine, Total Residual	Hydrogen Sulfide	Dissolved Oxygen			pH		Total Dissolved Solids		Fluoride, Total (as F)	Radium 226 & 228	Gross Alpha	Mysidopsis Bahia, 96 hour acute	Menidia Beryllina, 96 hour acute	Copper	Nitrogen, Total	Phosphorus, Total	
					(mg/L)	Min	Ave	Max	(std. units)	Min	Max	Min	Max	(mg/L)	(pCi/L)	(pCi/L)	%Effluent	%Effluent	(ug/L)	(mg/L)	(mg/L)
Allowable		---	3.050	0.01	0.01	4.0	5.0	6.70	8.50	Daily Max				5.00	5.00	15.0	100%	>100%	3.7	Daily Max	Daily Max
01/01/05		2.333	2.709	<0.01	<0.01	5.1	6.8	6.70	7.30	10358				NR	NR	NR	>100%	>100%			
02/01/05		2.507	3.014	<0.01	<0.01	5.6	7.3	6.80	7.90	8336				NR	NR	NR	NR	NR			
03/01/05		2.339	2.637	<0.01	<0.01	5.3	7.1	6.70	7.90	9304			BDL	17.35	1.37	NR	NR	NR			
04/01/05		2.319	2.757	<0.01	<0.01	4.1	6.9	6.70	7.10	9296			NR	NR	NR	NR	NR	NR			
05/01/05		2.295	2.898	<0.01	<0.01	5.4	6.9	6.80	7.10	9000			1.40	1.80	1.60	NR	NR	NR			
06/01/05		2.168	2.491	<0.01	<0.01	5.4	6.8	6.70	7.00	9748			NR	NR	NR	NR	NR	NR			
07/01/05		2.232	2.639	<0.01	<0.01	5.4	6.8	6.70	7.10	9142			NR	NR	NR	NR	NR	NR			
08/01/05		2.253	2.646	<0.01	<0.01	5.8	6.9	6.80	7.20	9168			1.40	1.30	4.90	NR	NR	NR			
09/01/05		2.260	2.740	<0.01	<0.01	5.2	9.6	6.80	7.10	9122			NR	NR	NR	NR	NR	NR			
10/01/05		2.226	2.561	<0.01	<0.01	5.0	6.6	6.70	7.10	9346			NR	NR	NR	NR	NR	NR			
11/01/05		2.400	2.760	<0.01	<0.01	5.0	6.5	6.70	7.20	9290			0.10	1.7±1.2	14.40	NR	NR	NR			
12/01/05		2.327	2.769	<0.01	<0.01	4.8	6.6	6.70	7.30	9358			NR	NR	NR	NR	NR	NR			

Comments: Graved boxes indicate values above allowable limits.

Comments: Grayed boxes indicate values above allowable limits.

TABLE 1. FLOW RATES AND ANALYTICAL WATER QUALITY DATA.



Facility Name: Reverse Osmosis Plant

Comments: Graved boxes indicate values above allowable limits.

3 of 5



City of Cape Coral
Concentrate Discharge Permit Renewal
 Reverse Osmosis Plant • P.O. Box 150027 • Cape Coral, Florida 33915-0027
 FDEP Discharge Monitoring Report Data: January 2004 - December 2009
 Discharge Point Number D001 Water Quality

Facility Name: Reverse Osmosis Plant
 Project Name: City of Cape Coral Industrial Discharge
 FDEP Permit No.: FL0040088

DATE	FLOW DATA		PARAMETER																		
	Sample Date	Average Flow Rate (gpm)	Maximum Flow Rate (gpm)	Chlorine, Total Residual	Hydrogen Sulfide	Dissolved Oxygen			pH			Total Dissolved Solids		Fluoride, Total (as F)	Radium 226 & 228	Gross Alpha	Mysidopsis Bahia, 96 hour acute	Menidia Beryllina, 96 hour acute	Copper	Nitrogen, Total	Phosphorus, Total
	(mm/dd/yyyy)	(MGD)	(MGD)	(mg/L)	(mg/L)	(mg/L)	Ave.	Min.	(std. units)	(mg/L)	Max.	(mg/L)	(mg/L)	(pCi/L)	(pCi/L)	(pCi/L)	%Effluent	%Effluent	(ug/L)	(mg/L)	(mg/L)
	Allowable	--	3.050	0.01	0.01	4.0	5.0	6.70	8.50	Daily Max		5.00	5.00	NR	5.00	15.0	100%	100%	3.7	Daily Max	Daily Max
	01/01/07	2.395	2.986	<0.01	<0.01	5.4	7.4	6.70	7.20	11970		NR	NR	NR	NR	NR	>100%	>100%			
	02/01/07	2.350	2.600	<0.01	<0.01	5.4	7.4	6.71	7.09	9680		1.27	5.5±0.8	12±2.5	NR	NR	NR	NR			
	03/01/07	2.440	2.800	<0.01	0.26	4.9	8.0	6.70	7.30	10282		NR	NR	NR	NR	NR	NR	NR			
	04/01/07	2.440	2.820	<0.01	<0.01	5.1	8.3	6.70	7.30	10352		NR	NR	NR	NR	NR	NR	NR			
	05/01/07	2.240	2.960	<0.01	<0.01	6.1	8.7	6.71	7.39	10062		2.04	1.8±0.7	6.7±2.6	NR	NR	NR	NR			
	06/01/07	2.109	2.966	<0.01	<0.01	6.1	8.6	6.70	7.20	11098		NR	NR	NR	NR	NR	NR	NR			
	07/01/07	2.030	2.530	<0.01	<0.01	5.0	8.7	6.70	7.40	10378		NR	NR	NR	NR	NR	NR	NR			
	08/01/07	2.010	2.720	<0.01	<0.01	5.0	8.5	6.70	7.86	9905		NR	NR	NR	NR	NR	NR	NR			
	09/01/07	2.020	2.610	<0.01	<0.01	6.1	8.6	6.70	7.98	12516		1.37	1.1±0.64	5.1±2.8	NR	NR	NR	NR			
	10/01/07	2.030	2.400	<0.01	<0.01	6.0	9.1	6.70	7.34	11152		NR	NR	NR	NR	NR	NR	NR			
	11/01/07	2.206	2.770	<0.01	<0.01	6.1	9.1	6.70	7.40	12456		1.90	2.4±1.2	6.4±0.3	NR	NR	NR	NR			
	12/01/07	2.070	2.450	<0.01	<0.01	5.2	9.5	6.70	7.63	12240		NR	NR	NR	NR	NR	NR	NR			

Comments: Grayed boxes indicate values above allowable limits.

Comments: Grayed boxes indicate values above allowable limits.

TABLE 1. FLOW RATES AND ANALYTICAL WATER QUALITY DATA.



City of Cape Coral
Concentrate Discharge Permit Renewal
 Reverse Osmosis Plant • P.O. Box 150027 • Cape Coral, Florida 33915-0027
 FDEP Discharge Monitoring Report Data: January 2004 - December 2009
 Discharge Point Number D001 Water Quality

Facility Name: Reverse Osmosis Plant
 Project Name: City of Cape Coral Industrial Discharge
 FDEP Permit No.: FL0040088

DATE		FLOW DATA		PARAMETER																	
Sample Date	Average Flow Rate (gpm)	Maximum Flow Rate (gpm)	Chlorine, Total (mg/L)	Hydrogen Sulfide (mg/L)	Dissolved Oxygen			pH		Total Dissolved Solids		Fluoride, Total (as F)	Radium 226 & 228	Gross Alpha	Mysidopsis Bahia, 96 hour acute	Menidia Beryllina, 96 hour acute	SEE TABLE 2		Copper	Nitrogen, Total	Phosphorus, Total
(mm/dd/yy)	(MGD)	(MGD)	(mg/L)	(mg/L)	(mg/L)	Ave.	Min.	Max.	(std. units)	(mg/L)	(mg/L)	(mg/L)	(pCi/L)	(pCi/L)	(pCi/L)	%Effluent	%Effluent	(ug/L)	(mg/L)	(mg/L)	(mg/L)
Allowable	---	3.050	0.01	0.01	4.0	5.0	6.70	8.50	Daily Max	5.00	5.00	15.0	5.00	5.00	98.00	100%	100%	3.7	Daily Max	2.0	0.3
01/01/08	2.064	2.497	<0.01	<0.01	5.5	9.5	6.70	7.48	12254	0.05	46.10	98.00	46.10	98.00	98.00	>100%	67%		2.0	NR	NR
02/01/08	2.095	2.440	<0.01	<0.01	6.4	9.3	6.70	7.40	10634	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR
03/01/08	2.130	2.410	<0.01	<0.01	5.7	9.3	6.70	8.06	11162	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR
04/01/08	2.054	2.372	<0.01	<0.01	5.5	9.1	6.70	7.20	14406	1.70	33.90	82.00	33.90	82.00	82.00	NR	NR		1.7	NR	0.3
05/01/08	2.148	2.580	<0.01	<0.01	6.3	9.4	6.70	7.18	10278	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR
06/01/08	1.904	2.640	<0.01	<0.01	5.4	8.4	6.70	7.19	12840	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR
07/01/08	1.906	2.414	<0.01	<0.01	5.6	7.8	6.70	7.03	14407	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR
08/01/08	1.937	2.217	<0.01	<0.01	5.3	8.5	6.70	6.98	13494	1.02	45.30	120.00	45.30	120.00	120.00	NR	NR		1.7	NR	0.3
09/01/08	1.728	2.257	<0.01	<0.01	5.2	9.0	6.71	7.81	13566	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR
10/01/08	1.940	2.433	<0.01	<0.01	5.1	7.8	6.70	7.99	14627	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR
11/01/08	2.030	2.389	<0.01	<0.01	6.0	8.5	6.70	7.43	11694	1.19	24.60	160.00	24.60	160.00	160.00	NR	NR		1.5	NR	0.2
12/01/08	1.938	2.244	<0.01	<0.01	6.5	8.0	6.70	7.32	11764	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR
01/01/09	1.994	2.320	<0.01	<0.01	5.8	8.0	6.70	7.28	13444	NR	NR	NR	NR	NR	NR	NR	NR		NR	NR	NR
02/01/09	2.106	2.857	<0.01	<0.01	5.2	7.2	6.70	7.16	13766	1.61	33.00	120.00	33.00	120.00	120.00	63.41%	>100%		1.7	NR	0.3
03/01/09	2.185	2.771	<0.01	<0.01	5.4	7.5	6.71	7.42	11875												
04/01/09	2.091	2.753	<0.01	<0.01	5.5	7.3	6.70	7.21	12243												
05/01/09	1.994	2.386	<0.01	<0.01	5.3	7.3	6.70	7.08	9471												
06/01/09	1.852	2.241	<0.01	<0.01	6.2	7.3	6.70	7.38	11666												
07/01/09	1.843	2.193	<0.01	<0.01	5.1	7.4	6.71	7.24	12108												
08/01/09	1.750	2.076	<0.01	<0.01	5.4	7.1	6.70	6.98	11680												
09/01/09	1.716	2.029	<0.01	<0.01	5.4	7.3	6.70	7.14	13138												
10/01/09	1.834	2.477	<0.01	<0.01	5.6	7.2	6.71	6.91	12142												
11/01/09	1.920	2.354	<0.01	<0.01	5.5	7.3	6.70	7.55	10477												
12/01/09	1.751	2.477	<0.01	<0.01	6.0	7.6	6.70	7.32	9852												

Comments: Grayed boxes indicate values above allowable limits.

Comments: Grayed boxes indicate values above allowable limits.

TABLE 1. FLOW RATES AND ANALYTICAL WATER QUALITY DATA.



City of Cape Coral
Concentrate Discharge Permit Renewal

Reverse Osmosis Plant • P.O. Box 150027 • Cape Coral, Florida 33915-0027
FDEP Discharge Monitoring Report Data: January 2004 - December 2009
Discharge Point Number D001 Water Quality

Facility Name: Reverse Osmosis Plant

Project Name: City of Cape Coral Industrial Discharge

FDEP Permit No.: FL0040088

DATE (mm/dd/yy)	Copper (ug/L)	
	Location: EFF-1	Location: SWD-1A
10/01/09	<0.7	
11/01/09	0.7	
12/01/09	2.1	
Comments: Allowable limit of copper: 3.7 ug/L		

TABLE 2. ANALYTICAL COPPER RESULTS SAMPLED FROM EFF-1 AND SWD-1A.

TABLE 3
SUMMARY OF BACKGROUND WATER QUALITY
ANALYSES AT BIMINI BASIN

PARAMETER	SAMPLING DATE	ANALYTICAL RESULT	UNITS	REGULATORY LIMIT
Gross Alpha	2/12/1997	64 ± 51	pCi/L	15
Radium 226	2/12/1997	1.9 ± 0.2	pCi/L	5 (for Combined Rad 226/228)
Radium 228	2/12/1997	0.0 ± 0.5	pCi/L	5 (for Combined Rad 226/228)
96 Hour Acute Toxicity	2/5/1997	100% Survival, Both Species		LC50
Salinity	2/5/1997	23	0/00	NA
Conductivity	2/5/1997	36,000	umhos/cm	NA
Reference: WRS, 2003 (Table 2-1).				