PERMIT APPLICATION
DEP FORM 2DC

PERMIT TO DISCHARGE DEMINERALIZATION CONCENTRATE

Incorporated by reference in subparagraph 62-620.625(6)(a)3., F.A.C.

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 permittable 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 permittable 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 permittability** In this part of Section IV, the Applicant provides information to determine whether the discharge meets the "presumption of allowability and permittability" 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.

B. All water quality standards. Use the characterization data presented in Section V of this application to evaluate compliance with water quality standards at a distance no more than two times the water depth from the POD, consistent with sub-subparagraph 62-4.244(3)(d)1.b., F.A.C.

C. Analytical requirements. The applicant must provide analytical data demonstrating that the discharge meets the advanced waste treatment (AWT) criteria from Section 403.086(4), F.S.

D. Fecal coliforms. If characterization data presented in Section II of this application indicate that fecal coliforms are present in the source water, the Applicant must present analytical data demonstrating that fecal coliforms in the discharge do not exceed the applicable water quality standard.

2. **Conditions that overcome the presumption of allowability and permittability** Complete this item only if the response was "YES" to all questions in the previous item. Section 403.0882(6)(b), F.S., lists conditions related to the discharge and/or the receiving water which overcome, or negate, the presumption of allowability and permittability for Small Water Utility Businesses, if they occur. This part of the application incorporates questions that the Applicant must answer in order for the Department to determine whether the presumption prevails or is overcome.

A. Location of point of discharge (POD). The Applicant must demonstrate that the POD (i.e., the actual end-of-pipe discharge point) meets the requirements identified in this application and in the statute.

B. Is the receiving water an Outstanding Florida Water (OFW)? Rule 62-302.700, F.A.C., lists OFWs. Additionally, applicants may contact the District office or the Watershed Assessment Section (850-245-8449) for assistance with the identification of OFWs.

C. Is the receiving water a Class I or Class II water? Rule 62-302.400, F.A.C., identifies the classification of surface water bodies. Additionally, applicants may contact the District office or the Watershed Assessment Section (850-245-8449) for assistance with the classification of specific surface water bodies.

D. Total Maximum Daily Load (TMDL). The Applicant must determine whether the receiving water has a TMDL established by the Department for a constituent present in the discharge. Additionally, the Applicant must evaluate whether the discharge will cause or contribute to a violation of the established load for the receiving water. If the receiving water has a TMDL for a constituent of the discharge, the Applicant needs to contact the District office for information on meeting the requirements of the TMDL. TMDLs can be identified by visiting the Watershed Assessment Section TMDL website, http://www.dep.state.fl.us/water/tmdl/index.htm, or by contacting the Watershed Assessment Section (850-245-8449).

E. Toxicity testing results. The Applicant must provide the results for toxicity tests and indicate whether the test failed to meet Department requirements. Failed toxicity test results may disqualify the facility from the presumption of allowability and permittability.

SECTION V CONCENTRATE DISCHARGE CHARACTERIZATION

NOTE: This section must be completed by all Applicants.

1. **Sampling QA demonstration** Applicants must provide documentation with this application certifying that samples for source water and effluent characterization were collected in accordance with Chapter 62-160, F.A.C.

2. **Laboratory certification** Applicants must provide documentation with this application certifying that the laboratory conducting analyses for this project is appropriately certified.

3. **Standard operating procedures (SOPs) for field activities** Applicants must certify that all field procedures were in accordance with Chapter 62-160, F.A.C.

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.

- Substantially identical discharges: If the facility has two or more substantially identical discharge points, the Applicant may request permission from the Department to sample and analyze only one point and submit the results of the analysis for other substantially identical points. In such a case, identify which point was tested and describe why the points which were not tested are substantially identical to the point which was tested.

SECTION 6 CERTIFICATIONS

There are severe penalties for submitting false information on this application form. As indicated, complete the appropriate certifications for new facilities, modifications to existing facilities, and permit renewals. This application and all attachments shall be signed in accordance with Rule 62-620.305, F.A.C. Additionally, this application and all attachments shall be signed and sealed by a professional engineer registered in Florida in accordance with Rule 62-620.310, F.A.C.

Facility I.D. Number _____

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. The figure attached to Form 1 may be adapted to include this information.

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:

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.

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.)

2. Attach analytical data reports documenting water quality characterization for the source water. Note: Source water characterization is required for completion of this application. Where appropriate, results may be summarized in the tables in Section V of this form, in the columns titled "Intake."

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.

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

A. Outfall Location

1. Outfall No. (List)	2. Latitude			3. Longitude		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.

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.)

C. Identify the concentrate discharge flow from each outfall.

D. What is the minimum 7-day 10-year low flow of the receiving water at each outfall (if applicable)?

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.

Note: Discharges from Small Water Utility Businesses are presumed to be allowable and permittable 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 in Sections 403.0882(6)(b)1. through 7., F.S., are present.

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.

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)

☐ 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.

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 permittable 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 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.

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: LC_{50} >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.

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.

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 _____
☐ 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 _____
City or Town (if applicable) _____
Street or Description _____
_____

Latitude _____ ° _____ ' _____ "N
Longitude _____ ° _____ ' _____ "W
Dates Coordinates Determined _____
Method Used to Obtain Coordinates _____

C. Underground Injection Well Facility

Identification Number or Permit Application Number _____

D. Design Capacity of the Underground Injection Well Facility

Current Design Capacity _____ Mgd
Proposed Incremental Design Capacity + _____ Mgd
Proposed Total Design Capacity = _____ Mgd

E. Basis of Design Flow

☐ Annual Average Daily Flow
☐ Maximum Monthly Average Daily Flow
☐ Three-Month Average Daily Flow
☐ Other

If other, specify. _____
_____

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:

A. Type of Land Application System

☐ 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: ☐ Existing ☐ New

E. Is the land-applied discharge blended, or proposed to be blended if the facility is new?: ☐ YES ☐ NO
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 _____

F. Design Capacity of the Land Application System

Current Design Capacity _____ Mgd
Proposed Incremental Design Capacity + _____ Mgd
Proposed Total Design Capacity = _____ Mgd

G. Basis of Land Application System Design Flow

☐ Annual Average Daily Flow
☐ Maximum Monthly Average Daily Flow
☐ Three Month Average Daily Flow
☐ Other

If other, specify _____

_____

H. Is land application continuous or intermittent**?**

☐ 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

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.

c. Are perimeter ditches used? ☐ 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?

☐ 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.

6. For blending with reclaimed water as defined in subsection 62-610.200 F.A.C., complete the following items:

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.

B. Provide documentation that the facility will comply with the concentrate storage requirements in subsection 62-610-.865(10), F.A.C.

C. Provide documentation that the facility will comply with the concentrate monitoring requirements in subsection 62-610.865(8), F.A.C.

D. Provide documentation of concentrate, reclaimed water, and blend quality in accordance with the requirements of subsection 62-610.865(6), F.A.C.

7. For blending at a Department-permitted wastewater facility, complete the following items:

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:

☐ Domestic wastewater facility -- permit number _____
☐ Industrial wastewater facility -- permit number _____

B. Identify the point at which concentrate is blended at the facility:

☐ 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.

D. What is the proposed blend ratio of demineralization concentrate and wastewater or effluent?

E. Provide a characterization of the blended wastewater.

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

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.?

☐ 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.

☐ 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)

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)

☐ 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 permittability. 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.

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 permittability, 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)

☐ YES
☐ NO

B. Is the receiving water an Outstanding Florida Water other than the Indian River Lagoon?

☐ YES
☐ NO

C. Is the discharge directly into Class I or Class II surface waters?

☐ 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?

☐ 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

☐ 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 permittability.

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.

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.**

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.**

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

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.)
☐ NO

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

Facility ID. Number _____ Outfall No. _____

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.
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. Concentration	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	
a. Carbonaceous Biochemical Oxygen Demand (CBOD)												
b. Chemical Oxygen Demand (COD)												
c. Total Organic Carbon (TOC)												
d. Total Suspended Solids (TSS)												
e. Total Nitrogen (as N)												
f. Total Phosphorus (as P)												
g. Ammonia (as N)												
h. Flow - actual or projected	Value		Value		Value					Value		
i. Flow - design	Value		Value		Value					Value		
j. Specific Conductivity	Value		Value		Value					Value		
k. Temperature (winter)	Value		Value		Value			°C		Value		
l. Temperature (summer)	Value		Value		Value			°C		Value		
m. . pH	Min.	Max.	Min.	Max.				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. 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	
a. Bromide (24949-67-9)	☐	☐												
b. Chlorine, Total Residual	☐	☐												
c. Color	☐	☐												
d. Fecal Coliforms	☐	☐												
e. Fluoride (16984-48-8)	☐	☐												
f. Nitrate-Nitrite (as N)	☐	☐												

: Part V-B Contd. Facility ID. Number _____ Outfall No. _____

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. 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)	☐	☐												
j. Radioactivity														
(1) Alpha, Total	☐	☐												
(2) Beta, Total	☐	☐												
(3) Radium, Total	☐	☐												
(4) Radium 226, Total	☐	☐												
k. Sulfate (as SO_4) (14808-79-8)	☐	☐												
l. Sulfide (as S)	☐	☐												
m. Sulfite (as SO_3) (14265-45-3)	☐	☐												
n. Surfactants	☐	☐												
o. Aluminum, Total (7429-90-5)	☐	☐												
p. Barium, Total (7440-39-3)	☐	☐												
q. Boron, Total (7440-42-8)	☐	☐												
r. Cobalt, Total (7440-48-4)	☐	☐												
s. Iron, Total (7439-89-6)	☐	☐												
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)	☐	☐												

Facility ID. Number: _____ Outfall No. _____

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 column2b, 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.

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				(1) Conc.	(2) Mass	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	☐	☐	☐												
2M. Arsenic, Total (7723-14-0)	☐	☐	☐												
3M. Beryllium, Total (7440-41-7)	☐	☐	☐												
4M. Cadmium, Total (7440-43-9)	☐	☐	☐												
5M. Chromium, Total (7440-47-3)	☐	☐	☐												
6M. Copper, Total (7440-50-8)	☐	☐	☐												
7M. Lead, Total (7439-92-1)	☐	☐	☐												
8M. Mercury, Total (7439-97-6)	☐	☐	☐												
9M. Nickel, Total (7440-02-0)	☐	☐	☐												
10M. Selenium, Total (7782-49-2)	☐	☐	☐												
11M. Silver, Total (7440-22-4)	☐	☐	☐												
12M. Thallium, Total (7440-28-0)	☐	☐	☐												
13M. Zinc, Total (7440-66-6)	☐	☐	☐												
14M. Cyanide, Total (57-12-5)	☐	☐	☐												
15M. Phenols, Total	☐	☐	☐												
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☐												
GC/MS FRACTION -VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☐	☐	☐												
2V. Acrylonitrile (107-13-1)	☐	☐	☐												

Facility ID. Number: _____ Outfall No. _____

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				(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. Chlorodi-bromomethane (124-8-1)	☐	☐	☐												
9V. Chloroethane (74-00-3)	☐	☐	☐												
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	☐	☐	☐												
11V. Chloroform (67-86-3)	☐	☐	☐												
12V. Dichloro-bromomethane (75-24-4)	☐	☐	☐												
13V. Dichloro-difluoromethane (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-Tetra-chloroethane (79-34-5)	☐	☐	☐												
24V. Tetrachloroethylene (127-18-4)	☐	☐	☐												

Facility ID. Number: _____ Outfall No. _____

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				(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)	☐	☐	☐												
28V. 1,1,2-Trichloroethane (79-00-5)	☐	☐	☐												
29V. Trichloroethylene (79-01-6)	☐	☐	☐												
30V. Trichloro-fluoromethane (75-69-4)	☐	☐	☐												
31V. Vinyl Chloride (75-01-4)	☐	☐	☐												
GC/MS FRACTION - ACID COMPOUNDS															
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)	☐	☐	☐												
10A Phenol (108-95-2)	☐	☐	☐												
11A 2,4,5-Trichloro-phenol (88-06-2)	☐	☐	☐												
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (63-32-9)	☐	☐	☐												
2B. Acenaphtylene (208-96-8)	☐	☐	☐												
3B. Anthracene (120-12-7)	☐	☐	☐												
4B. Benzidine (92-87-5)	☐	☐	☐												

Facility ID. Number: _____ Outfall No. _____

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				(1) Conc.	(2) Mass	
5B. Benzo *(a)* Anthracene (56-55-3)	☐	☐	☐												
6B. Benzo *(a)* Pyrene (50-32-8)	☐	☐	☐												
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-Chloroisopropyl)* Ether (102-60-1)	☐	☐	☐												
13B. Bis *(2-Ethylhexyl)* Phthalate (117-81-7)	☐	☐	☐												
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)	☐	☐	☐												
21B. 1,3-Dichlorobenzene (541-73-1)	☐	☐	☐												
22B. 1,4-Dichlorobenzene (106-46-7)	☐	☐	☐												
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)	☐	☐	☐												

Facility ID. Number: _____ Outfall No. _____

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				(1) Conc.	(2) Mass	
29B. Di-N-Octyl Phthalate (117-84-0)	☐	☐	☐												
30B. 1,2-Diphenylhydrazine *(as Azobenzene)* (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-Nitrosodimethylamine (62-75-9)	☐	☐	☐												
42B. N-Nitrosodi-N-Propylamine (621-64-7)	☐	☐	☐												
43B. N-Nitro-sodiphenylamine (86-30-6)	☐	☐	☐												
44B Phenanthrene (85-01-8)	☐	☐	☐												
45B. Pyrene (129-00-0)	☐	☐	☐												
46B. 1,2,4-Trichlorobenzene (120-82-1)	☐	☐	☐												
GC/MS FRACTION - PESTICIDES															
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)	☐	☐	☐												

Facility ID. Number: _____ Outfall No. _____

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				(1) Conc.	(2) Mass	
6P. Chlordane (57-74-9)	☐	☐	☐												
7P. 4,4'-DDT (50-29-3)	☐	☐	☐												
8P. 4,4'-DDE (72-55-9)	☐	☐	☐												
9P. 4,4'-DDD (72-54-8)	☐	☐	☐												
10P. Dieldrin (60-57-1)	☐	☐	☐												
11P. -Endosulfan (115-29-7)	☐	☐	☐												
12P. -Endosulfan (115-29-7)	☐	☐	☐												
13P. Endosulfan Sulfate (1031-07-8)	☐	☐	☐												
14P. Endrin (72-20-8)	☐	☐	☐												
15P. Endrin Aldehyde (7421-92-4)	☐	☐	☐												
16P. Heptachlor (76-44-8)	☐	☐	☐												
17P. Heptachlor Epoxide (1024-57-3)	☐	☐	☐												
18P. PCB-1242 (53469-21-9)	☐	☐	☐												
19P. PCB-1254 (11097-69-1)	☐	☐	☐												
20P. PCB-1221 (11104-28-2)	☐	☐	☐												
21P. PCB-1232 (11141-16-5)	☐	☐	☐												
22P. PCB-1248 (12672-29-6)	☐	☐	☐												
23P. PCB-1260 (11096-82-5)	☐	☐	☐												
24P. PCB-1016 (12674-11-2)	☐	☐	☐												
25P. Toxaphene (8001-35-2)	☐	☐	☐												

SECTION VI. CERTIFICATIONS

1. Certifications For New Or Modified Facilities

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)

Florida Registration No.:

(Affix Seal)

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:

2. 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.

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: _____