

**STATE OF FLORIDA
DEPARTMENT
OF
ENVIRONMENTAL PROTECTION**



Conditions of Certification

**JEA
St. Johns River Power Park**

PA 81-13Q

Modified October 31, 2023

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SECTION A: GENERAL CONDITIONS

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I. SCOPE

A. Pursuant to the Florida Electrical Power Plant Siting Act (PPSA), Sections 403.501-.518, Florida Statutes (F.S.), and Chapter 62-17, Florida Administrative Code (F.A.C.), this certification is issued to JEA as owner/operator and Licensee of the St. Johns River Power Park. Subject to the requirements contained in these Conditions of Certification (Conditions), JEA will maintain the remaining facilities associated with two decommissioned fossil fuel-fired steam generating units. These facilities are located on a 264 -acre site which is located in Duval County, Florida. UTM coordinates are: Zone (17); {447.302} km East; {3367.562} km North and Zone (17); {448.265} km East; {3368.048} km North. The Department does not intend, solely by the incorporation of these General Conditions, to require the retrofitting of existing Certified Facilities.

B. The Certified Facility includes but is not limited to the following major associated facilities;

- Three closed solid waste landfills and associated groundwater monitoring wells
- Substation
- Byproduct storage area B stormwater management system
- Five 230 kV transmission lines exiting from plant: plant to Center Park Substation, plant to Fort Caroline Substation, plant to Mount Pleasant Substation, plant to Normandy Substation, and Plant to Westlake Substation

C. These Conditions, unless specifically amended or modified, are binding upon the Licensee and shall apply to the construction, operation and maintenance of the Certified Facility. If a conflict should occur between the design criteria of this Certified Facility and the Conditions, the Conditions shall prevail unless amended or modified. In any conflict between any of these Conditions, the more specific condition governs.

D. Within 120 days following approval of a change to Site boundaries, the Licensee shall submit to the Department an updated land survey (or legal description) and aerial photograph delineating the new boundaries of the Site. The survey and aerial photograph shall be identified as "Site Delineation" and attached hereto as part of Attachment A. Absent the above description/delineation of the Site, the Department will consider the perimeter fence line of the property on which the Certified Facilities are located to be the boundaries of the Site.

E. If both certified and uncertified facilities lie within the boundaries of the Site, the Licensee shall also comply with the requirements of this paragraph. Within 60 days after completion of construction of the electrical power plant and on-site associated facilities, but excluding off-site associated facilities, the Licensee shall provide to the Department in .pdf format: a survey map signed by a professional land surveyor, or acceptable equivalent documentation such as an official legal description, delineating the boundaries of the certified areas within the Site; and an aerial photograph delineating the boundaries of the certified areas within the Site. The boundaries of the Certified Areas of the Site shall include the electrical power plant's certified generating facilities and the on-site "associated facilities" (including on-site linear facilities) as defined by Section 403.503(7), F.S. The survey and the aerial photograph

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shall be known as “Delineation of the Certified Area” of the Site and attached hereto as part of Attachment A.

F. Within 180 days after completion of construction of associated off-site (linear and non-linear) facilities, as defined by Section 403.503(7), F.S., the Licensee shall provide: an aerial photograph(s)/map(s) at a scale of at least 1:400, or acceptable equivalent documentation such as an official legal description or survey map(s) signed by a professional land surveyor, delineating the boundaries of the certified area(s), following acquisition of all necessary property interests and the corridor narrowing as described in section 403.503(11), F.S., which shall be known as ‘Delineation of Off-Site Facilities’ and attached as part of Attachment A.

Following any post-certification approvals that require a change to the boundaries of the certified area(s) depicted in Delineation of Off-Site Facilities in Attachment A, the Licensee shall submit an updated aerial photograph/map, survey map or legal description.

[Sections 403.511, F.S.; Rule 62-17.205(2), F.A.C.]

II. APPLICABLE DEPARTMENT RULES

The construction, operation, and maintenance of the Certified Facilities shall be in accordance with all applicable non-procedural provisions of Florida Statutes and Florida Administrative Code, including, but not limited to, the applicable non-procedural portions of the following rules, except to the extent a variance, exception, exemption or other relief is granted in the final order of certification, in a subsequent modification to the Conditions, or as otherwise provided under the PPSA. Should any of these regulations or portions thereof be repealed or otherwise eliminated, they will not be considered applicable.

Florida Administrative Codes:

- 18-2 (Management of Uplands Vested in the Board of Trustees)
- 18-14 (Administrative Fines for Damaging State Lands)
- 18-20 (Florida Aquatic Preserves)
- 18-21 (Sovereign Submerged Lands Management)
- 62-4 (Permits)
- 62-17 (Electrical Power Plant Siting)
- 62-40 (Water Resource Implementation Rule)
- 62-150 (Hazardous Substance Release Notification)
- 62-160 (Quality Assurance)
- 62-204 (Air Pollution Control-General Provisions)
- 62-210 (Stationary Sources-General Requirements)
- 62-212 (Stationary Sources-Preconstruction Review)
- 62-213 (Operation Permits for Major Sources of Air Pollution)
- 62-256 (Open Burning)
- 62-296 (Stationary Sources-Emission Standards)
- 62-297 (Stationary Sources-Emission Monitoring)
- 62-302 (Surface Water Quality Standards)
- 62-303 (Identification of Impaired Surface Waters)
- 62-304 (Total Maximum Daily Loads)
- 62-330 (Environmental Resource Permitting)
- 62-340 (Delineation of the Landward Extent of Wetlands and Surface Waters)
- 62-342 (Mitigation Banks)

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62-345 (Uniform Mitigation Assessment Method)
62-520 (Ground Water Classes, Standards and Exemptions)
62-528 (Underground Injection Control)
62-531 (Water Well Contractor Licensing Requirements)
62-532 (Water Well Permitting and Construction Requirements)
62-550 (Drinking Water Standards, Monitoring and Reporting)
62-555 (Permitting, Construction, Operation, and Maintenance of Public Water Systems)
62-560 (Requirements for Public Water Systems That Are Out of Compliance)
62-600 (Domestic Wastewater Facilities)
62-604 (Collection Systems and Transmission Facilities)
62-610 (Reuse of Reclaimed Water and Land Application)
62-620 (Wastewater Facility and Activities Permitting)
62-621 (Generic Permits)
62-650 (Water Quality Based Effluent Limitations)
62-660 (Industrial Wastewater Facilities)
62-699 (Treatment Plan Classification and Staffing)
62-701 (Solid Waste Management Facilities)
62-709 (Criteria for Organics Processing and Recycling Facilities)
62-710 (Used Oil Management)
62-730 (Hazardous Waste)
62-737 (The Management of Spent Mercury-Containing Lamps and Devices Destined for Recycling)
62-740 (Petroleum Contact Water)
62-761 (Underground Storage Tank Systems)
62-762 (Aboveground Storage Tank Systems)
62-777 (Contaminant Cleanup Target Levels)
62-780 (Contaminated Site Clean-Up Criteria)
62-814 (Electric and Magnetic Fields)

For Facilities in the St. Johns River Water Management District:

40C-8 (Minimum Flows and Levels)

III. REVISIONS TO DEPARTMENT STATUTES AND RULES

A. The Licensee shall comply with rules adopted by the Department subsequent to the issuance of the certification under the PPSA which prescribe new or stricter criteria, to the extent that the rules are applicable to electrical power plants. Except when express variances, exceptions, exemptions, or other relief have been granted, subsequently adopted Department rules which prescribe new or stricter criteria shall operate as automatic modifications to certifications.

B. Upon written notification to the Department, the Licensee may choose to operate the certified electrical power plant in compliance with any rule subsequently adopted by the Department which prescribes criteria more lenient than the criteria required by the terms and conditions in the certification which are not site-specific.

[Section 403.511(5)(a) and (b), F.S; Rule 62-4.160(10), F.A.C.]

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IV. DEFINITIONS

Unless otherwise indicated herein, the meaning of terms used herein shall be governed by the applicable definitions contained in Chapters 373 and 403, F.S., and any regulation adopted pursuant thereto. In the event of any dispute over the meaning of a term used in these conditions which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other state or federal statute or regulation or, in the alternative by the use of the commonly accepted meaning. As used herein, the following shall apply:

A. “Application” or “SCA” is defined in Section 403.503(6), F.S. For purposes of this license, the site certification application shall also include materials submitted for post certification amendments and petitions for modification to the Conditions of Certification, as well as supplemental applications.

B. “Associated Facilities” is defined by Section 403.503(7), F.S.

C. “Certified Facility” or “Certified Facilities” means all on- or off-site associated linear and non-linear facilities, such as those facilities identified in Section A.I., Scope.

D. “DEM” means the Florida Division of Emergency Management

E. “DEP” or “Department” means the Florida Department of Environmental Protection.

F. “DHR” means the Florida Department of State, Division of Historical Resources.

G. “DOT” means the Florida Department of Transportation.

H. “Emergency conditions” means urgent circumstances involving potential adverse consequences to human life or property as a result of weather conditions or other calamity.

I. “Feasible” or “Practicable” means reasonably achievable considering a balance of land use impacts, environmental impacts, engineering constraints, and costs.

J. “FWC” means the Florida Fish and Wildlife Conservation Commission.

K. “Licensee” means JEA which has obtained a certification order for the Certified Facilities.

L. “NED” shall mean the DEP Northeast District Office.

M. “Post-certification submittal” shall mean a submittal made by the Licensee pursuant to a Condition of Certification.

N. “ROW” means the right-of-way to be selected by the Licensee within the certified corridor in accordance with the Conditions of Certification and as defined in section 403.5039 (27), F.S.

O. “SCO” means the Department’s Siting Coordination Office.

P. “Site” is defined in Section 403.503(28).

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Q. “Surface Water Management System” or “System” means a stormwater management system, dam, impoundment, reservoir, appurtenant work, or works, or any combination thereof. The terms “surface water management system” or “system” include areas of dredging or filling, as those terms are defined in Sections 373.403(13) and (14), F.S.

R. SJRWMD means the St. Johns River Water Management District.

S. “State water quality standards” shall mean the numerical and narrative criteria applied to specific water uses or classifications set forth in Chapter 62-302, F.A.C.

T. “Wetlands” shall mean those areas meeting the definition set forth in Section 373.019(25), F.S., as delineated pursuant to Chapter 62-340, F.A.C.

[Section 403.511, F.S.]

V. DEPARTMENT PERMITS UNDER FEDERAL PROGRAMS

Subject to the Conditions set forth herein, this certification shall constitute the sole license of the state and any agency as to the approval of the location of the site and any Associated facility and the construction and operation of the electrical power plant, except for the issuance of Department Licenses required under any federally delegated or approved permit program. This certification is not a waiver of any other Department approval that may be required under federally delegated or approved programs. In the event of a conflict between the certification process and federally required procedures, the applicable federal requirements shall control.

[Sections 403.5055, 403.508(8), and 403.511(1), F.S.]

VI. DESIGN AND PERFORMANCE CRITERIA

Certification, including these Conditions, is predicated upon preliminary designs, concepts, and performance criteria described in the Application or in testimony and exhibits in support of certification. Final engineering design will be consistent and in substantial compliance with the preliminary information described in the Application or as explained at the certification hearing. Conformance to those criteria, unless specifically modified in accordance with Section 403.516, and Rule 62-17.211, F.A.C., is binding upon the Licensee in the design, construction, operation and maintenance of the Certified Facilities.

[Sections 403.511 (2)(a) and 403.516, F.S.; Rules 62-4.160(2) and 62-17.211, F.A.C.]

VII. NOTIFICATION

A. If, for any reason, the Licensee does not comply with or will be unable to comply with any condition or limitation specified in this certification, the Licensee shall immediately provide the NED and the SCO 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 recurrence of the noncompliance. The Licensee 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 certification.

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Unless otherwise requested, all notifications which are made in writing shall additionally be immediately provided to the Siting Office via email to SCO@dep.state.fl.us.

[Rule 62-4.160(8), F.A.C.]

B. The Licensee shall promptly notify the Department in writing of any previously submitted information concerning the Certified Facility that is later discovered to be inaccurate.

[Rule 62-4.160(15), F.A.C.]

C. Any owner or operator of a facility who has knowledge of any incident reportable to the State Watch Office regarding a certified facility shall notify the State Watch Office at (800) 320-0519 as soon as possible, but not later than 24 hours after discovery of the incident.

D. Any owner or operator of a facility who has knowledge of any reportable pollution release shall submit a Public Notice of Pollution by following the instructions at <https://prodenv.dep.state.fl.us/DepPNP/user/pnpRequest>, as soon as possible, but not later than 24 hours after discovery of the release.

[Section 403.077, F.S.]

VIII. EMERGENCY CONDITION NOTIFICATION AND RESTORATION

If the Licensee is temporarily unable to comply with any of the conditions of the License due to breakdown of equipment or destruction by hazard of fire, wind, or other cause, such as an emergency as defined by Sections 252.34(4), (7), (8), or (10), F.S., the Licensee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the Licensee from any liability for failure to comply with Department rules. Any exceedances and/or violations recorded during emergency conditions shall be reported as such, but the Department acknowledges that it intends to use its enforcement discretion during this timeframe. This acknowledgement by the Department does not constitute a waiver or variance from any requirements of any federal permit. Relief from any federal agency must be separately sought.

[Rule 62-4.130, F.A.C.]

IX. CONSTRUCTION PRACTICES

A. Local Building Codes

Subject to the conditions set forth herein, this certification constitutes the sole license of the state and any agency as to the approval of the location of the site and any associated facility and the construction and operation of any Certified Facilities. The Licensee is not required to obtain building permits for Certified Facilities. However, this certification shall not affect in any way the right of any local government to charge appropriate fees or require that construction of structures used by the electric utility that are not an integral part of a generating plant, substation, or control center (such as, office buildings, warehouses, garages, machine shops, and recreational buildings) be in compliance with applicable building construction codes.

[Section 403.511(4), F.S.]

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B. Open Burning

Prior to open burning in connection with land clearing, the Licensee shall seek authorization from the Florida Forest Services, in accordance with the non-procedural requirements of Chapters 62-256 and 5I-2, F.A.C.

[Chapters 5I-2 and 62-256, F.A.C.]

C. Existing Wells

Any existing wells in the path of construction of the non-linear Certified Facilities that will no longer be used shall be abandoned by a licensed well contractor. All abandoned wells shall be filled and sealed in accordance with Rule 62-532.500(5), F.A.C., or with the rules of the authorizing agency, unless these Conditions provide otherwise.

[Rule 62-532.440 and Rule 62-532.500(5), F.A.C.]

D. Abandonment of Existing Septic Tanks

Any existing septic tanks that will no longer be used shall be abandoned in accordance with Rule 64E-6.011, F.A.C., unless these Conditions provide otherwise.

[Chapter 64E-6, F.A.C.]

E. Existing Underground Utilities

The Licensee must follow all applicable portions of the Underground Facility Damage Prevention and Safety Act, Chapter 556, F.S. Tickets numbers shall be available for request until construction has been completed in the affected area.

X. RIGHT OF ENTRY

A. Upon presentation of credentials or other documents as may be required by law, the Licensee shall allow authorized representatives of the Department or other agencies with jurisdiction over a portion of a Certified Facility, any authorized off-site mitigation/compensation area or Associated facility:

1. At reasonable times, to enter upon the Certified Facility in order to monitor activities within their respective jurisdictions for purposes of assessing compliance with this certification; or

2. During business hours, to enter the Licensee's premises in which records are required to be kept under this certification; and to have access to and copy any records required to be kept under this certification.

B. When requested by the Department, on its own behalf or on behalf of another agency with regulatory jurisdiction, the Licensee shall within 10 working days, or such longer period as may be mutually agreed upon by the Department and the Licensee, furnish any information required by law, which is needed to determine compliance with the certification.

[paragraph 62-4.160(7)(a) and Rule 62-4.160(15), F.A.C.]

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XI. DISPUTE RESOLUTION

A. General

If a situation arises in which mutual agreement cannot be reached between the Department and the Licensee, and/or, an agency with substantive regulatory jurisdiction over a matter, the Department may act as a facilitator in an attempt to resolve the issue. If the dispute is not resolved informally in this manner, Licensee may request one or more meetings in which both Licensee and the agency with substantive regulatory jurisdiction over the matter can participate and attempt to resolve the issue informally. If, after such meetings, a mutual agreement cannot be reached between the parties, then the matter shall be referred to the Division of Administrative Hearings (DOAH) for disposition in accordance with the provisions of Chapter 120, F.S. The Licensee or the Department may request DOAH to establish an expedited schedule for processing the dispute. Any filing with DOAH shall state with particularity the specific project and geographic location to which the dispute relates. Work unrelated to the specific project and in areas other than the location to which the dispute relates will not be affected by the dispute.

B. Modifications

If written objections are filed regarding a modification, and the objections address only a portion of a requested modification, then the Department shall issue a Final Order approving the portion of the modification to which no objections were filed, unless that portion of the requested modification is substantially related to or necessary to implement the portion to which written objections are filed.

C. Post-Certification Submittals

If it is determined, after assessment of a post-certification submittal, that compliance with the Conditions will not be achieved for a particular portion of a submittal, the Department may make a separate assessment of other portions of the submittal, unless those portions of the submittal are substantially related to or necessary to implement that portion for which it has been determined that compliance with the Conditions will not be achieved. The Licensee may proceed with those portions of the submittal which were separately assessed and approved by the Department.

[Sections 120.57, F.S. and Rule 62-17.211, F.A.C.]

XII. SEVERABILITY

The provisions of this certification are severable, and if any provision of this certification or the application of any provision of this certification to any circumstance is held invalid, the remainder of the certification or the application of such provision to other circumstances shall not be affected thereby.

XIII. ENFORCEMENT

A. The terms, conditions, requirements, limitations, and restrictions set forth in these Conditions are binding and enforceable pursuant to Sections 403.141, 403.161, 403.514, 403.727, and 403.859 through 403.861, F.S., as applicable. Any noncompliance by the Licensee with these Conditions constitutes a violation of Chapter 403, F.S., and is grounds for enforcement action, license termination, license revocation, or license revision. The Licensee is

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placed on notice that the Department may review this certification periodically and may initiate enforcement action for any violation of these Conditions.

B. All records, notes, monitoring data, and other information relating to the construction or operation of the Certified Facilities which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the Certified Facilities and arising under the Florida Statutes or Department rules, subject to the restrictions in Sections 403.111 and 403.73, F.S. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

[Sections 403.121, 403.131, 403.141, 403.151, 403.161, and 403.514, F.S.; Rules 62-4.160(1) and 62-4.160(9), F.A.C.]

XIV. REVOCATION OR SUSPENSION

This certification shall be final unless revised, revoked, or suspended pursuant to law. This certification may be suspended or revoked pursuant to Section 403.512, F.S. This certification is valid only for the specific processes and operations identified in the SCA and approved in the final order of certification or indicated in the testimony and exhibits in support of certification or approved in a subsequent amendment or modification of the certification. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this approval may constitute grounds for revocation and enforcement action by the Department. Any enforcement action, including suspension and revocation, shall only affect the portion(s) of the certified facility that are the cause of such action, and other portions of the certified facility shall remain unaffected by such action.

[Sections 403.512, F.S.; Rule 62-4.160(2), F.A.C.]

XV. REGULATORY COMPLIANCE

As provided in Sections 403.087(7) and 403.722(5), F.S., except as specifically provided in the final order of certification, a subsequent modification or amendment, or these Conditions, the issuance of this License does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This License is not a waiver of or approval of any other Department license or permit that may be required for other aspects of the certified facility that are not addressed in this License. This license does not relieve the Licensee from liability for harm or injury to human health or welfare, animal, or plant life, or public or private property caused by the construction or operation of the certified facility, or from penalties therefore.

[Rules 62-4.160(3) and 62-4.160(5), F.A.C.]

XVI. CIVIL AND CRIMINAL LIABILITY

Except to the extent a variance, exception, exemption or other relief is granted in the final order of certification, in a subsequent modification to these Conditions, or as otherwise provided under Chapter 403, F.S., this certification does not relieve the Licensee from civil or criminal penalties for noncompliance with any Condition, applicable rules or regulations of the Department, or any other state statutes or regulations which may apply.

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[Sections 403.141, 403.161, 403.511, F.S.]

XVII. USE OF STATE LANDS

A. Except as specifically provided in the final order of certification or these conditions, the issuance of this certification 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.

B. If any portion of the certified facility is located on sovereign submerged lands, state-owned uplands, or within an aquatic preserve, then the Licensee must comply with the applicable portions of Chapters 18-2, 18-20, and 18-21, F.A.C., and Chapters 253 and 258, F.S., except as specifically provided in the final order of certification or these Conditions. If any portion of the certified facility is located on sovereign submerged lands, the Licensee must submit section F of Form 62-330.060(1), *Application for Individual and Conceptual Approval Environmental Resource Permit* (State 404 Program Permit) and *Authorization to Use State-Owned Submerged Lands* to the Department prior to construction. If any portion of the certified facility is located on state-owned uplands, the Licensee must submit an Upland Easement Application to the Department prior to construction.

C. If a portion of a Certified Facility is located on sovereign submerged lands or state-owned uplands owned by the Board of Trustees of the Internal Improvement Trust Fund, pursuant to Article X, Section 11 of the Florida Constitution, then the proposed activity on such lands requires a proprietary authorization. Under such circumstances, the proposed activity is not exempt from the need to obtain a proprietary authorization. Unless otherwise provided in the final order of certification or these Conditions, the Department has the responsibility to review and take action on requests for proprietary authorization in accordance with Rules 18-2.018 or 18-21.0051, F.A.C.

D. The Licensee is hereby advised that Florida law states: “A person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund under this chapter, until the person has received the required lease, license, easement, or other form of consent authorizing the proposed use.” Pursuant to Chapter 18-14, F.A.C., if such work is done without consent, or if a person otherwise damages state land or products of state land, the Board of Trustees may levy administrative fines of up to \$10,000 per offense.

E. The terms, conditions, and provisions of any required lease or easement issued by the State shall be met. Any construction activity associated with the Certified Facility shall not commence on sovereign submerged lands or state owned uplands, title to which is held by the Board of Trustees of the Internal Improvement Trust Fund, until all required lease or easement documents have been executed to the satisfaction of the Department.

[Chapters 253 and 258, and Section 403.511, F.S.; Chapter 3.1.1. of the B.O.R.; Chapters 18-2, 18-14, 18-21, 62-340, and Rules 62-343.900(1) and 62-4.160(4), F.A.C.; Upland Easement Application and Section G of the Environmental Resource Permit Application Form.]

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XVIII. PROCEDURAL RIGHTS

Except as specified in Chapter 403, F.S., or Chapter 62-17, F.A.C., no term or condition of certification shall be interpreted to preclude the post-certification exercise by any party of whatever procedural rights it may have under Chapter 120, F.S., including those related to rule-making proceedings.

[Chapter 120, and Section 403.511(5)(c), F.S.]

XIX. AGENCY ADDRESSES FOR POST-CERTIFICATION SUBMITTALS AND NOTICES

Where a Condition requires post-certification submittals and/or notices to be sent to a specific agency, the following agency addresses shall be used as applicable unless the Conditions specify otherwise or unless the Licensee and the Department are notified in writing of an agency's change in address for such submittals and notices:

Florida Department of Environmental Protection
Siting Coordination Office, MS 3500
2600 Blair Stone Road
Tallahassee, FL 32399-3000
SCO@FloridaDEP.gov

Florida Department of Environmental Protection
Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Florida Fish & Wildlife Conservation Commission
Conservation Planning Services
620 South Meridian Street, MS 5B5
Tallahassee, FL 32399-1600
ConservationPlanningServices@MyFWC.com

Florida Department of Transportation
District Administration
605 Suwannee Street
Tallahassee, FL 32399-0450

St. Johns River Water Management District
Office of General Counsel
7775 Baymeadows Way, Suite 102
Jacksonville, FL 32256-7538

Florida Department of State
Division of Historical Resources
500 S. Bronough Street
Tallahassee, FL 32399-0250
CompliancePermits@DOS.MyFlorida.com

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City of Jacksonville
Environmental Quality Division
407 N. Laura Street, 3rd Floor
Jacksonville, FL 32202

[Section 403.511, F.S.]

XX. PROFESSIONAL CERTIFICATION

To ensure protection of public health, safety, and welfare, any construction, modification, or operation of an installation which may be a source of pollution, or of a public drinking water supply, shall be in accordance with sound professional engineering practices pursuant to Chapter 471, F.S.; and all final geological papers or documents involving the practice of the profession of geology shall be in accordance with sound professional geological practices pursuant to Chapter 492, F.S. Where required by Chapter 471 or 492, F.S., applicable portions of amendment requests, petitions for modifications, post certification submittals, and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

[Rule 62-4.050, F.A.C.]

XXI. PROCEDURES FOR POST-CERTIFICATION SUBMITTALS

A. Purpose of Submittals

Conditions which provide for the post-certification submittal of information to DEP or other agencies by the Licensee are for the purpose of facilitating the agencies' monitoring of the effects arising from the location of the Certified Facilities and the construction and maintenance of the Certified Facilities. This monitoring is for DEP to assure, in consultation with other agencies with applicable regulatory jurisdiction, continued compliance with these Conditions, without further agency action. Any submittal of information or determination of compliance pursuant to a post-certification submittal under this Condition does not provide a point of entry for a third party.

B. Filings

All post-certification submittals of information by Licensee are to be filed with the agency or office that requires the submittal pursuant to these Conditions. The SCO shall be copied on all post-certification submittals in electronic .pdf format (unless other formats are requested), via email to SCO@dep.state.fl.us. Each submittal shall clearly identify the Certified facility name, PA#, and the Condition number(s) (i.e. Section X, Condition XX.y.(z)) requiring the submittal. As required by Section 403.5113(2), F.S., each post-certification submittal will be reviewed by each agency with regulatory authority over the matters addressed in the submittal on an expedited and priority basis.

[Section 403.5113, F.S.; Rule 62-17.191(3), F.A.C.]

C. Completeness

DEP shall review each post-certification submittal for completeness. This review may include consultation with the other agency(ies) receiving the post-certification

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submittal with regulatory jurisdiction over the matter addressed in the submittal. DEP's finding of completeness shall specify the area of the Certified Facility affected and shall not delay further processing of the post-certification submittal for non-affected areas.

If any portion of a post-certification submittal is found to be incomplete, the Licensee shall be so notified. Failure to issue such a notice within 30 days after filing of the submittal shall constitute a finding of completeness. Subsequent findings of incompleteness, if any, shall address only the newly filed information.

[subparagraph 62-17.191(1)(c) 2, F.A.C.]

D. Interagency Meetings

DEP may conduct an interagency meeting with other agencies that received a post-certification submittal. The purpose of such an interagency meeting shall be for the agencies with regulatory jurisdiction over the matters addressed in the post-certification submittal to discuss whether compliance with these Conditions has been provided. Failure of DEP to conduct an interagency meeting or failure of any agency to attend an interagency meeting shall not be grounds for DEP to withhold a determination of compliance with these Conditions nor to delay the timeframes for review established by these Conditions. At DEP's request, the Licensee shall conduct a field inspection with the agency representative in conjunction with the interagency meeting.

E. Determination of Compliance

DEP shall give written notification within 90 days to the Licensee and the other agency/ies to which the post-certification information was submitted of DEP's determination whether there is demonstration of compliance with the conditions of certification. If it is determined that compliance with these Conditions has not been provided, the Licensee shall be notified with particularity of the deficiencies and possible corrective measures suggested. Failure to notify Licensee in writing within 90 days of receipt of a complete post-certification submittal shall constitute a determination of compliance. A post-certification compliance review may be the basis for initiating modifications to the relevant Condition or to other related Conditions.

[Rule 62-17.191(1), F.A.C.]

F. Commencement of Construction

If DEP does not object within the time period specified in paragraph E. above, Licensee may begin construction pursuant to the terms of these Conditions and the subsequently submitted construction details.

[Rule 62-17.191(1), F.A.C.]

G. Revisions to Design Previously Reviewed for Compliance

If revisions to site-specific designs occur after submittal, the Licensee shall submit revised plans prior to construction for review in accordance with the post-certification process specified in this Condition.

[Sections 403.511, F.S.; Rule 62-17.191, F.A.C.]

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XXII. POST-CERTIFICATION SUBMITTAL REQUIREMENTS SUMMARY

Within 90 days after certification, and within 90 days after any subsequent modification or certification, the Licensee shall provide the Department a complete summary of those post-certification submittals that are identified in these Conditions where due-dates for the information required of the Licensee are identified. A summary shall be provided as a separate document for each transmission line, if any. Such submittals shall include, but are not limited to, monitoring reports, management plans, wildlife surveys, etc. The summary shall be provided to the Siting Coordination Office, in a sortable spreadsheet, via email, in the format identified below or equivalent. For subsequent modifications and certifications, a “Post-Certification Submittal Requirements Summary” shall be required only for new or altered post-certification requirements.

Condition Number	Requirement and Timeframe	Due Date	Name of Agency or Agency Subunit to whom the submittal is required to be provided

[Section 403.5113, F.S.; Rule 62-17.191(3), F.A.C.]

XXIII. POST-CERTIFICATION AMENDMENTS

If, subsequent to certification, the Licensee proposes any material change to the Application and revisions or amendments thereto, as certified, the Licensee shall submit a written request for amendment and a description of the proposed change to the Application to the Department. Within 30 days after the receipt of a complete request for an amendment, the Department shall determine whether the proposed change to the application requires a modification to the Conditions.

A. If the Department concludes that the change would not require a modification to the Conditions, the Department shall provide written notification of the approval of the proposed amendment to the Licensee, all agencies, and all other parties.

B. If the Department concludes that the change would require a modification to the Conditions, the Department shall provide written notification to the Licensee that the proposed change to the Application requires a request for modification pursuant to Section 403.516, F.S.

[Section 403.5113, F.S.]

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XXIV. MODIFICATION OF CERTIFICATION

A. Pursuant to Section 403.516(1)(a), F.S., and Rule 62-17.211, F.A.C., the Siting Board hereby delegates the authority to the Department to modify any Condition which would not otherwise require approval by the Siting Board, after notice and receipt of no objection by a party to the certification within 45 days after notice by mail to the party's last address of record, and if no other person whose substantial interests will be affected by the modification objects in writing within 30 days of public notice.

B. The Department may modify Conditions, in accordance with Section 403.516(1)(b), F.S., which are inconsistent with the terms of any subsequent and separately issued DEP permits, permit amendments, permit modifications, or permit renewals under a federally delegated or federally approved permit program. Such modification may be made without further notice if the matter has been previously noticed under the requirements for any federally delegated or approved permit program.

C. In accordance with Section 403.516(1)(c), F.S., the Licensee may file a petition for modification with the Department, or the Department may initiate the modification upon its own initiative.

D. Any anticipated facility expansions, production increases, or process modifications which may result in new, different, or increased discharge or emission of pollutants, change in fuel, or expansion in generating capacity must be reported by submission of an appropriate request for an amendment, modification, or certification.

E. Alteration of Site boundaries may require modification of the Conditions of Certification.

[Section 403.516, F.S.; Rule 62-17.211, F.A.C.]

XXV. COASTAL ZONE CONSISTENCY

Pursuant to Sections 373.428 and 403.511, F.S., certification of the Certified Facility constitutes the State's concurrence that the licensed activity or use is consistent with the federally approved program under the Florida Coastal Management Act.

[Sections 373.428, 380.23 and 403.511(7), F.S.]

XXVI. WATER QUALITY CERTIFICATION

Pursuant to the Operating Agreement between the Department, United States Army Corps of Engineers (USACE) and water management districts, the written final order granting certification under the Florida Electrical Power Plant Siting Act, sections 403.501-.518, F.S., also constitutes certification of compliance with state water quality standards pursuant to section 401 of the Clean Water Act, 33 U.S.C.

[2012 Operating Agreement, Jacksonville District USACOE, DEP and Water Management Districts, Section II.A.1.(f)]

XXVII. TRANSFER OF CERTIFICATION

A. This certification is transferable in whole or in part, upon Department approval, to an entity determined to be able to comply with these Conditions. A transfer of certification of all or part of the certified facility may be initiated by the Licensee's filing of a Notice of Intent to

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Transfer Certification with the Department's SCO. The notice of intent shall: identify the intended new certification holder or Licensee; identify the current and the new entity responsible for compliance with the certification; and include a written agreement from the intended new Licensee/Transferee to abide by all Conditions, as well as, applicable laws and regulations. Upon receiving a complete notice of intent, the transfer shall be approved by the Department unless the Department objects to the transfer on the grounds that the new Licensee will be unable to comply with the Conditions, specifies in writing its reasons for its objections, and gives notice and an opportunity to petition for an administrative hearing pursuant to Section 120.57, F.S. Upon approval, the Department will initiate a modification to the Conditions to reflect the change in ownership in accordance with Rule 62-17.211, F.A.C.

B. In the event of the dissolution of the Licensee, the Department may transfer certification to successor entities which are determined to be competent to construct, operate and maintain the Certified Facility in accordance with the Conditions of certification and which are proper applicants as defined by the PPSA. Upon determination that such a successor entity complies with the requirements for transfer of certification, the Department will initiate a modification to the Conditions to reflect the change in ownership in accordance with Rule 62-17.211, F.A.C.

[Chapter 120, F.S.; Rule 62-17.211, F.A.C.]

XXVIII. LABORATORIES AND QUALITY ASSURANCE

Chemical, physical, biological, microbiological, and toxicological data collected as a requirement of these Conditions must be reliable and collected and analyzed by scientifically sound procedures. Unless otherwise specified in these Conditions, the Licensee shall adhere to the minimum field and laboratory quality assurance, methodological and reporting requirements of the Department as set forth in Chapter 62-160, F.A.C.

[Chapter 62-160, F.A.C.]

XXIX. ENVIRONMENTAL RESOURCES

A. General

1. Submittals for Construction Activities

a. Prior to the commencement of construction of new facilities and/or new Associated facilities the Licensee shall provide to the DEP NED for review, all information necessary for a complete *Application for Individual and Conceptual Approval Environmental Resource Permit and Authorization to Use State-Owned Lands* (ERP), DEP Form 62-330.060(1), F.A.C., or other applicable ERP authorization form. A copy of the submittal shall also be provided to the SCO.

b. This form may: 1) be submitted concurrently with a SCA; 2) be submitted as part of an amendment request or a petition for modification; or 3) be submitted as a post-certification submittal following approval of a Project through certification, modification, or amendment. Such ERP submittals, once received, shall be reviewed in accordance with the non-procedural standards and criteria for issuance of an ERP, including all the provisions related to reduction and elimination of impacts, conditions for issuance, additional conditions for issuance, and mitigation contained in Chapter 62-330, F.A.C., as applicable, unless otherwise stated in these Conditions. While the information is provided for review via submittal of the ERP form,

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consistent with Section 403.511, F.S., a separate ERP is not required for certified facilities, and therefore, a separate ERP will not be issued.

c. Those forms submitted as part of a SCA, an amendment, or modification, shall be processed concurrently with the respective SCA, amendment, or modification, in compliance with the applicable PPSA procedures. Those forms submitted as a post-certification submittal (after certification, modification, or amendment and prior to construction) shall be processed in accordance with Section A. General Conditions, Condition XXI., Procedures for Post-Certification Submittals. Post-certification submittal information may be submitted for discrete portions of the certified facilities for a determination of compliance with these Conditions.

d. No construction shall commence on a project feature, or in a particular segment of a linear facility, until the Department has determined that there is a demonstration of compliance with these Conditions. For post-certification submittal reviews, the Department's determination is governed by Section A, General Conditions, Condition XXI, Procedures for Post-Certification Submittals.

e. Concurrent with submittal of the DEP form required in subparagraph A.1.a., above, the Licensee shall submit, as applicable, a survey of wetland and surface water areas as delineated in accordance with Chapter 62-340, F.A.C., and verified by appropriate agency staff for Department compliance review. Available DEP-approved wetland and surface water delineations within the boundaries of a certified site or a portion thereof may be used and reproduced for this delineation submittal and verification. Formal DEP-approved wetland and surface water delineations are valid only for a period of five years.

[Section 373.416, F.S.; Chapters 62-330 and 62-340, F.A.C.]

2. Construction, operation, and maintenance of the proposed project (including any access roads and structures constructed within wetlands and other surface waters, and/or Associated facilities) shall satisfy any applicable non-procedural requirements in the Department rules.

[Section 373.414(1)(a), F.S.]

3. Any delineation of the extent of a wetland or other surface water submitted as part of the DEP ERP Application Form required by subparagraph A.1.a., above, including plans or other supporting documentation, shall not be considered binding on the Department unless a specific condition of this certification or a formal wetlands jurisdictional determination under Section 373.421(2), F.S., provides otherwise.

[Sections 373.421, and 403.504, F.S.]

4. Silt screens, hay bales, turbidity screens/barriers or other such sediment control measures shall be utilized during construction. The selected sediment control measure shall be installed landward of all protected wetlands and other surface waters and shall be properly "trenched" etc. All areas shall be stabilized and vegetated immediately after construction to prevent erosion into wetlands and other surface waters.

[Chapter 62-330, F.A.C.]

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B. Surface Water Management Systems

1. Information regarding surface water management systems (SWMS) will be reviewed for consistency with the applicable non-procedural requirements under Part IV of Chapter 373, F.S., following submittal of Form 62-330.060(1), F.A.C., to the Northeast DEP District.
2. All construction, operation, and maintenance of the SWMS(s) for the certified facilities shall be as set forth in the plans, specifications, and performance criteria contained in the SCA and other materials presented during the certification proceeding, post-certification submittals, and as otherwise approved. If specific requirements are necessary for construction, operation, and/or maintenance of an approved SWMS, those requirements shall be incorporated into a SWMS Operation and Maintenance Requirements for that system and included in Attachment B (Surface Water Management System Requirements). Any alteration or modification to the SWMS Plan or the SWMS as certified requires prior approval from the Department.
3. To allow for stabilization of all disturbed areas, prior to construction, during construction of the SWMS, and for a period of time after construction of the SWMS, the Licensee shall implement and maintain erosion and sediment control best management practices, such as silt fences, erosion control blankets, mulch, sediment traps, polyacrylamide (PAM), temporary grass seed, permanent sod, and floating turbidity screens to retain sediment on-site and to prevent violations of state water quality standards. These devices shall be installed, used, and maintained at all locations where the possibility exists of transferring suspended solids into the receiving waterbody due to the licensed work, and shall remain in place at all locations until construction in that location is completed and soils are permanently stabilized. All best management practices shall be in accordance with the guidelines and specifications described in the *State of Florida Erosion and Sediment Control Designer and Reviewer Manual* (Florida Department of Transportation and Florida Department of Environmental Protection, by HydroDynamics Incorporated in cooperation with Stormwater Management Academy, June 2007) unless a project-specific erosion and sediment control plan is approved as part of this License. If project-specific Conditions require additional measures during any phase of construction or operation to prevent erosion or control sediments beyond those specified in the approved erosion and sediment control plan, the Licensee shall implement additional best management practices as necessary, in accordance with the guidelines and specifications in the *State of Florida Erosion and Sediment Control Designer and Reviewer Manual*. The Licensee shall correct any erosion or shoaling that causes adverse impacts to the water resources as soon as feasible. Once project construction is complete in an area, including the re-stabilization of all side slopes, embankments, and other disturbed areas, and before conversion to the operation and maintenance phase, all silt screens and fences, temporary baffles, and other materials that are no longer required for erosion and sediment control shall be removed.
4. The Licensee shall complete construction of all aspects of the SWMS described in the ERP Application Form, submitted as part of a post-certification submittal, amendment, modification, or SCA including water quality treatment features, and discharge control facilities prior to use of the portion of the certified facility being served by the SWMS.
5. At least 48 hours prior to beginning the authorized activities, the Licensee shall submit to the DEP District a fully executed Form 62-330.350(1), "Construction Commencement Notice," (October 1, 2013),

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(<http://www.flrules.org/Gateway/reference.asp?No=Ref-02505>), indicating the expected start and completion dates. A copy of this form may be obtained from the Department, as described in subsection 62-330.010(5), F.A.C., and shall be submitted electronically. However, for activities involving more than one acre of construction that also require a NPDES stormwater construction general permit, submittal of the Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities, DEP Form 62-621.300(4)(b), shall also serve as notice of commencement of construction and, in such a case, submittal of Form 62-330.350(1) is not required.

6. Each phase or independent portion of the approved system must be completed in accordance with the submitted DEP Form prior to the operation of the portion of the certified facility being served by that portion or phase of the system.

7. Within 30 days, or such other date as agreed to by DEP and the Licensee, after completion of construction of any new portions of the SWMS, the Licensee shall submit to the DEP District, and copy the SCO, a written statement of completion and certification by a registered professional engineer (P.E.), or other appropriate registered professional, as authorized by law, utilizing the required “As-Built Certification and Request for Conversion to Operation Phase” (DEP Form 62-330.310(1), F.A.C.). Additionally, if deviations from the approved drawings are discovered, the As-Built Certification must be accompanied by a copy of the approved drawings with deviations noted.

8. Any substantial deviation from the approved drawings, exhibits, specifications, or Conditions, may constitute grounds for revocation or enforcement action by the Department.

9. The operation phase of any new SWMS approved by the Department shall not become effective until the Licensee has complied with the requirements of the conditions herein, the Department determines the system to be in compliance with the approved plans, and the entity approved by the Department accepts responsibility for operation and maintenance of the system.

10. The DEP District must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in off-site discharge or sediment transport into wetlands or surface waters, a written dewatering plan must be submitted to and approved by the Department prior to the dewatering event.

[Section 373.414, F.S.; Chapters 62-302, 62-330, and Rule 62-4.242, F.A.C.]

C. Wetland and Other Surface Water Impacts

1. All certified facilities shall be constructed in a manner which will eliminate or reduce adverse impacts to on-site and/or adjacent wetlands or other surface waters to the extent practicable or otherwise comply with the Department’s substantive criteria for elimination or reduction of such impacts. When impacts to wetlands will occur as a result of a future amendment, modification, or certification, and cannot be practicably eliminated or reduced, the Licensee may propose, and the Department or Board shall consider, mitigation to offset otherwise such impacts under the ERP review process pursuant to subparagraph A.1., above.

2. Proposed mitigation requirements/plans submitted with the DEP ERP Application forms required in subparagraph A.1.a., above, or submitted as part of an amendment,

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modification, or certification, and that are deemed acceptable by DEP, shall include applicable construction conditions, success criteria, monitoring plans, and remedial actions (if applicable), and shall be incorporated into these Conditions as Attachment C (Wetland Mitigation Requirements/Plans).

[Sections 373.413, 373.414, 373.4145, 403.511, and 403.814(6), F.S.; Chapters 62-312, 62-330, 62-340, 62-342, and 62-345, F.A.C.]

XXX. THIRD PARTY IMPACTS

The Licensee is responsible for maintaining compliance with these Conditions even when third party activities authorized by the Licensee occur in or on the Certified Site.

[Sections 403.506(1), F.S.]

XXXI. FACILITY OPERATION

The Licensee shall properly operate and maintain the Certified Facilities and systems of treatment and control (and related appurtenances) that are installed and used by the Licensee to achieve compliance with these Conditions, as required by the final order of certification, these Conditions, or a post-certification amendment or modification. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the final order of certification, these Conditions, or a post-certification amendment or modification.

[Rule 62-4.160(6), F.A.C.]

XXXII. RECORDS MAINTAINED

A. These Conditions or a copy thereof shall be retained by the Licensee.

B. The Licensee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation required by these Conditions, copies of all reports required by these Conditions, and records of all data used to complete the Application for this approval. These materials shall be retained at least three (3) years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

C. Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used; and,
6. the results of such analyses.

[Rules 62-4.160(12) and 62-4.160(14)(b), F.A.C.]

XXXIII. WATER DISCHARGES

A. Discharges

1. Except as otherwise authorized by a permit issued by the Department under a federally delegated or approved program or to the extent a variance, exception, exemption or other relief is granted or authorized by these Conditions, the Licensee shall not discharge to surface or ground waters of the State wastes in concentrations which alone or in combinations with other substances, or components of discharges (whether thermal or non-thermal) are carcinogenic, mutagenic, or teratogenic to human beings (unless specific criteria are established for such components in Rule 62-520.400, F.A.C.) or are acutely toxic to indigenous species of significance to the aquatic community within surface waters affected by the ground water at the point of contact with surface waters.

2. Except as otherwise authorized by a permit issued by the Department under a federally approved or delegated program or to the extent a variance, exception, exemption, or other relief is granted or authorized by these Conditions, all discharges and activities must be conducted so as to not cause a violation of the water quality standards set forth in Chapters 62-4, 62-302, 62-520, 62-550, and 62-620, F.A.C., including the provisions of Rules 62-4.243, 62-4.244, and 62-4.246, F.A.C., the antidegradation provisions of Rules 62-4.242(1)(a), (1)(b), and 62-302.300, F.A.C., and any special standards for Outstanding Florida Waters and Outstanding National Resource Waters set forth in Rules 62-4.242(2) and (3), F.A.C.

3. Except as otherwise authorized by a permit issued by the Department under a federally delegated or approved program or to the extent a variance, exception, exemption, or other relief is granted or authorized by these Conditions, all dewatering discharges must be in compliance with Rule 62-621.300, F.A.C.

[Chapters 62-4, 62-302, 62-520, 62-550, 62-620, and 62-621, F.A.C.]

B. Wastewater Incident Reporting

The Licensee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Licensee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Licensee 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; clean up actions taken and status; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. For noncompliance events related to sanitary sewer overflows, bypass events, or unauthorized discharges, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (e.g., sanitary sewer overflow, bypass, unauthorized discharge); type of sanitary sewer overflow structure (e.g., manhole); the discharge location address and latitude/longitude; type of water discharged; discharge volumes and volumes recovered; volume discharged to surface waters and receiving waterbody name; types of human health and environmental impacts of the sanitary sewer overflow, bypass event, or unauthorized discharge (e.g., beach closure); whether the noncompliance was caused by a third party; and whether the noncompliance was related to wet weather. The written submission may be provided electronically using the Department's Business Portal at <http://www.fldeportal.com/go/> (via "Submit" followed by "Report" or

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“Registration/Notification”). Notice required for public notice of pollution under paragraph (d) may be provided together with the written submission using the Business Portal. All noncompliance events related to sanitary sewer overflows or bypass events submitted after (September 14, 2021), shall be submitted electronically.

1. The following shall be included as information, to the extent known, which must be reported within 24 hours under this condition:

a. Any unanticipated bypass which causes any reclaimed water or the effluent to exceed any permit limitation or results in an unpermitted discharge,

b. Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,

c. Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice; and,

d. Any unauthorized discharge to surface or ground waters, except for discharges to ground water of reclaimed water meeting Part III or Part V treatment standards under Chapter 62-610, F.A.C.

2. Oral reports as required by this subsection shall be provided as follows:

a. For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph 1.d. above, 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 WATCH OFFICE toll free number (800)320-0519, as soon as practicable, but no later than 24 hours from the time the Licensee becomes aware of the discharge. The Licensee, to the extent known, shall provide the following information to the State Watch Office:

(1) Name, address, and telephone number of person reporting,

(2) Name, address, and telephone number of Licensee or responsible person for the discharge,

(3) Date and time of the discharge and status of discharge (ongoing or ceased),

(4) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater),

(5) Estimated amount of the discharge,

(6) Location or address of the discharge,

(7) Source and cause of the discharge,

(8) Whether the discharge was contained on-site, and cleanup actions taken to date,

(9) Description of area affected by the discharge, including name of water body affected, if any; and,

(10) Other persons or agencies contacted.

b. Oral reports, not otherwise required to be provided pursuant to

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subparagraph 2.a., above, shall be provided to the Department within 24 hours from the time the Licensee becomes aware of the circumstances.

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

4. In accordance with Section 403.077, F.S., unauthorized releases or spills reportable to the State Watch Office pursuant to subparagraph 2.a. above shall also be reported to the Department within 24 hours from the time the Licensee becomes aware of the discharge. The Licensee shall provide to the Department information reported to the State Watch Office. Notice of unauthorized releases or spills may be provided to the Department through the Department's Public Notice of Pollution web page at <https://floridadep.gov/pollutionnotice> or by reporting electronically using the Department's Business Portal at <http://www.fldepportal.com/go/> (via "Submit" followed by "Report" or "Registration/Notification").

a. If, after providing notice pursuant to paragraph (d) above, the Licensee determines that a reportable unauthorized release or spill did not occur or that an amendment to the notice is warranted, the Licensee may submit a letter to the Department documenting such determination at pollution.notice@floridadep.gov.

b. If, after providing notice pursuant to paragraph 4. above, the Licensee discovers that a reportable unauthorized release or spill has migrated outside the property boundaries of the installation, the Licensee must provide an additional notice to the Department that the release has migrated outside the property boundaries within 24 hours after its discovery of the migration outside of the property boundaries.

5. Unless discharged to surface waters, a spill, release, discharge, upset or bypass involving reclaimed water meeting Part III or Part V treatment standards under Chapter 62-610, F.A.C., shall not be considered to endanger health or the environment and shall be reported under subsection (21) of Rule 62-610, F.A.C.

[Chapter 403, F.S.; Rule 62-620.610(20), F.A.C.]

XXXIV. SOLID AND HAZARDOUS WASTE

A. Solid Waste

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-701, F.A.C., for any solid waste generated within the Certified Facility during construction, operation, maintenance, and closure.

[Chapters 62-701, F.A.C.]

B. Hazardous Waste

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-730, F.A.C., for any hazardous waste generated within the certified facility. An EPA identification number must be obtained before beginning hazardous waste activities unless the facility is a Very Small Quantity Generator (VSQG). VSQGs generate no more than 100 kg (220 lbs) of hazardous waste in any month.

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The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-710, F.A.C., for any used oil and used oil filters generated within the certified facility.

[Chapters 62-710, and 62-730, F.A.C.]

C. Hazardous Substance Release Notification

1. Any owner or operator of a facility who has knowledge of any release of a hazardous substance from a certified facility in a quantity equal to or exceeding the reportable quantity in any 24-hour period shall notify the Department by calling the State Watch Office, (800) 320-0519, as soon as possible, but not later than one working day of discovery of the release.

2. Any owner or operator of a facility who has knowledge of any release of a hazardous substance from a certified facility in a quantity equal to or exceeding the reportable quantity in any 24-hour period shall notify the public by submitting a Public Notice of Pollution, <https://prodeinv.dep.state.fl.us/DepPNP/user/pnpRequest>, as soon as possible, but not later than 24 hours after discovery of the release.

3. Releases of mixtures and solutions are subject to these notification requirements only where a component hazardous substance of the mixture or solution is released in a quantity equal to or greater than its reportable quantity.

4. Notification of the release of a reportable quantity of solid particles of antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, or zinc is not required if the mean diameter of the particles released is larger than 100 micrometers (0.004 inches).

[Chapter 62-150, F.A.C.]

D. Contaminated Site Cleanup

The Licensee shall comply with all applicable non-procedural provisions of Chapter 62-780, F.A.C., for any violations of relevant provisions of Chapters 376 or 403, F.S., that result in legal responsibility for site rehabilitation pursuant to those chapters. This responsibility for site rehabilitation does not affect any activity or discharge permitted or exempted pursuant to Chapters 376 or 403, F.S., or rules promulgated pursuant to Chapters 376 or 403, F.S.

[Chapter 62-780, F.A.C.]

SECTION B. SPECIFIC PLANT CONDITIONS

I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

A. *Solid Waste Landfill*

1. The solid waste landfill area shall be monitored and studied pursuant to a detailed ground water testing and monitoring program as defined in Condition B.I.B. below. The results of the program will be used by the Department in determining whether JEA has affirmatively demonstrated that Florida water quality criteria (Chapters 62-302, 62-520, and 62-701, F.A.C.) will not be violated.

2. JEA may implement a test program to demonstrate the quality and quantity of leachate from an unlined or uncontrolled waste facility. During the testing program, JEA shall either provide an impermeable liner under the solid waste disposal areas or shall utilize a chemical fixation process, stabilization or other approved methods to control leachate from the solid waste. Upon an affirmative showing that an uncontrolled solid waste facility will not cause violation of ground water quality criteria, the Department may approve use of non-lined or uncontrolled landfill cells.

3. JEA St. Johns River Power Park – Landfill Area I, Landfill Area II, Landfill Area B have been closed in accordance with the requirements of Site Certification No. PA-81-13 and Department Rule 62-701, F.A.C. Closed waste disposal units shall continue to be maintained in accordance with the requirements of Rule 62-701.620, F.A.C. The delineated Recovered Screen Material (RSM) shall not be removed or distributed. In the event there is a need to disturb the RSM or utilize the landfill material in the location associated with the RSM, the RSM shall be re-addressed with the DEP prior to any action.

4. Construction of perimeter berms shall be in conformance with the provisions of Chapter 62-672, F.A.C., regarding earthen dams.

B. *Solid Waste Ground Water Monitoring*

1. Ground water monitoring is required around all solid waste landfill sites. The Licensee shall install a solid waste ground water monitoring well network to monitor the water quality of the surficial aquifer around each site, in accordance with applicable provisions of Chapters 62-520, and 62-701, F.A.C. The ground water monitoring requirements are provided in Attachment D, Solid Waste Ground Water Monitoring Requirements.

2. The Solid Waste Ground Water Monitoring Plan shall include a list of all existing monitor wells, a location map of monitor wells, construction details of monitor wells with top of well casing and land surface elevations, latitude and longitude (in degrees, minutes, seconds) of each monitor well, a list of all monitoring and field parameters. Any proposed changes to the Solid Waste Ground Water Monitoring Plan or Ground Water Monitoring Requirements shall be submitted for review and approval through the post-certification process referred to in Condition XXI, Procedures for Post-Certification Submittals, unless otherwise determined by the Department. At a minimum, projects which involve any one of the following shall be reviewed for a determination on the requirement of a modification to these Conditions and if a modification is required, it shall be processed in accordance with Section 403.516(1)(c), F.S., and Rule 62-17.211, F.A.C., as applicable:

- (1) new major sources of wastewater;

SECTION B: PLANT SPECIFIC CONDITIONS

- (2) new wastewater treatment facilities;
- (3) pollutants not addressed in the Groundwater Monitoring Requirements or these Conditions; and
- (4) other projects that cause or may cause changes to the quantity and/or quality of discharges to groundwater.

3. Ground water samples shall be collected in accordance with Attachment D. All correspondence, reports, plans, and summaries pertaining to ground water monitoring pursuant to this condition shall be submitted to the Florida Department of Environmental Protection Compliance Solid Waste Section, 8800 Baymeadows Way W., Suite 100, Jacksonville, Florida 32256-7549, DEP_NED@FloridaDEP.gov, and Florida Department of Environmental Protection Solid Waste Section, MS 4565, 2600 Blair Stone Road Tallahassee, Florida, 32399-2400, SWPP@FloridaDEP.gov, with a copy to DEP's Siting Coordination Office at SCO@FloridaDEP.gov.

C. Substation Equipment

Substation equipment shall be constructed, operated, and maintained in such a manner as to allow complete collection and recovery of any spills or leakage of oily, toxic, or hazardous substances.

[Chapter 62-762, F.A.C.]

D. Zone of Discharge

The solid waste landfills, sludge disposal test cells, coal storage piles, wastewater treatment ponds, or sedimentation ponds shall not contaminate waters of the State (including both surface and ground waters) in excess of the limitations of Chapters 62-302 and 62-520, F.A.C. beyond the boundary of a zone of discharge extending to a depth of 90 feet below the waste landfill cell or pond at a horizontal distance of 200 feet from the edge of the landfill or ponds; provided that DEP may provide a larger zone of discharge if warranted by the solid waste test program.

II. DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

Only herbicides registered by the U.S. Environmental Protection Agency and the Florida Department of Agriculture and Consumer Services shall be used at certified facilities. Herbicide applications will be in accordance with label directions and will be carried out by a licensed applicator, in compliance with all federal, state and local regulations. Herbicide applications shall be selectively applied to targeted vegetation. Broadcast application of herbicide shall not be used unless effects on non-targeted vegetation are minimized.

[Chapter 487, F.S.]

III. ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

A. General

1. The use of ground water shall be minimized to the greatest extent practicable, but in no case shall exceed 7.6 mgd on a maximum daily basis from any new wells or 5.1 mgd on an average annual basis.

SECTION B: PLANT SPECIFIC CONDITIONS

B. Ground Water Monitoring

1. The ground water levels shall be monitored continuously at selected wells as approved by the St. Johns River Water Management District. Chemical analyses shall be made on samples from all monitored wells identified in Condition III.G., below. The location, frequency and selected chemical analyses shall be as given in Condition III.G.

2. The ground water monitoring program shall be implemented at least one year prior to operation of SJRPP Unit 1. The chemical analyses shall be in accord with the latest edition of *Standard Methods for the Analysis of Water and Wastewater*. The data shall be submitted within 30 days of collection/analysis to the St. Johns River Water Management District and to the DEP's Northeast District Office.

C. Well Criteria

The submission of well logs, test results, and location, design and construction of wells to provide plant and coal unloading facility service water shall be in accordance with applicable rules of the Department of Environmental Protection and the St. Johns River Water Management District (SJRWMD). Total water use per month shall be reported quarterly to SJRWMD commencing with the start of construction.

D. Well Withdrawal Limits

Reclaimed water may be used for the purpose of irrigation. Following the issuance of a watershed permit (which includes SJRPP), reclaimed water shall be used in the Flue Gas Desulfurization Systems (FGDS) unless reclaimed water is unavailable, identified for a more beneficial use, and/or the quality results in the inability to utilize for irrigation and/or in the FGD. JEA is authorized to make a combined average annual withdrawal for plant service water for SJRPP of 5.1 million gallons of water per day with a maximum combined withdrawal rate not to exceed 7.6 million gallons during a single day. Withdrawals may be made from a well field consisting of up to four (4) wells whose approximate locations are described in Figure 1.

JEA is authorized to make an average annual withdrawal for the coal unloading facility of 60,000 gallons of water per day with a maximum withdrawal rate not to exceed 200,000 gallons during a single day. Withdrawals may be made from either of two wells whose approximate locations are described in Figure 3.

After wells have been constructed, St. Johns River Water Management District may evaluate the individual wells and may recommend to the Department authorization of different withdrawals based upon hydrologic characteristics for the individual wells. The Department, pursuant to Section 403.516, F.S., may modify the above withdrawal limitations with the concurrence of SJRWMD and the licensee.

E. Water Use Restriction

Said water is restricted to uses other than main steam condensing. Any change in the use of said water will require a modification of this condition.

F. Emergency Shortages

In the event an emergency water shortage should be declared pursuant to Section 373.175 or 373.246, F.S., by St. Johns River Water Management District for an area

SECTION B: PLANT SPECIFIC CONDITIONS

including the location of these withdrawal points, the Department pursuant to Section 403.516, F.S., may alter, modify, or declare to be inactive, all or parts of Condition V. A.-F.

G. Monitoring and Reporting

JEA shall, within the time limits hereinafter set forth, complete the following items:

1. JEA shall install a flow meter for the plant production well field and coal unloading facility well and will maintain pump logs for operation of each production well in compliance with SJRWMD specifications on all production wells.
2. JEA shall submit to SJRWMD, on forms available from the District, a record of pumpage for each meter installed in F.1. above. Said pumpage shall be provided on a monthly basis, and shall be submitted by April 15, July 15, October 15, and January 15 for each preceding calendar quarter.
3. JEA shall maintain and operate a continuous water level recorder on the standby production well located at the test site in Duval County, Florida. Detailed hydrographs of water level fluctuations shall be constructed with the data collected from the water level recorder and shall be submitted to SJRWMD by April 15, July 15, October 15, and January 15 for each preceding calendar quarter.
4. Water quality analysis shall be performed on water withdrawn from each production well. The water samples collected from each of the wells shall be collected immediately after removal by pumping of a quality of water equal to at least two casing volumes. The JEA and staff of SJRWMD may determine and adjust the intervals to be monitored in accordance with hydrologic conditions determined from drilling logs. The water quality analyses shall be performed monthly during the first year of operation, quarterly during the second year and twice each year (May and September) thereafter. Results shall be submitted to SJRWMD and the City of Jacksonville Environmental Quality Division (CJEQD) within 45 days after following such analyses were performed. Testing for the following parameters is required:
 - a. When Drilled:
Bicarbonate, Calcium, Chloride, Gross Alpha, Magnesium, Nitrate, Potassium, Radiation, Radium 226 (only if gross alpha is greater than 15 pci/l), Sodium, Specific Conductance, Sulfate, Total Dissolved Solids, Total phosphate.
 - b. During Operation:
Chloride, Nitrate, Specific Conductance, Sulfate, and Total Dissolved Solids.
5. In the event that SJRWMD or CJEQD determines there is a significant change in the water quality (substantially caused by SJRPP and causing a potentially significant effect on water use), they may propose pursuant to Section 403.516, F.S., that the licensee be required to reduce or cease withdrawal from these ground water sources and that additional parameters be monitored.
6. Minimum Water Level Restrictions for Floridan Production Wells

SECTION B: PLANT SPECIFIC CONDITIONS

If the SJRWMD at a future date establish a minimum water level of general applicability to all users in the aquifer or aquifers hydrologically associated with these withdrawals, they may propose pursuant to Section 403.516, F.S. that JEA reduce or cease withdrawal from these ground water sources at times when water levels fall below these minimums.

After consultation with the SJRWMD, JEA shall install a monitoring well network to monitor ground water quality horizontally and vertically through to the top of the Hawthorne Formation's first clayey lithologic unit.

SECTION C. TRANSMISSION LINE SPECIFIC CONDITIONS

I. REPLACEMENT FOR RESTORATION OF SYSTEM INTEGRITY

A. Replacement of all or a portion of a transmission line(s) that is necessary to restore system integrity following an emergency as defined by Sections 252.34(6), (7) or (9), F.S., and requiring deviation from any condition of certification shall not be considered a modification pursuant to Section 403.516, F.S. A verbal report of the emergency replacement for restoration of system integrity shall be made to the Department as soon as possible. Within 30 days after correction of the emergency condition requiring a replacement for system integrity, a report to the Department shall be made outlining the details of the emergency condition requiring the replacement and the steps taken for its relief. The report shall be a written description of all of the work performed and shall set forth any pollution control measures or mitigative measures which were utilized or are being utilized to prevent pollution of waters, harm to sensitive areas or alteration of archaeological or historical resources.

II. ROW ACTIVITIES

A. Maintenance roads under control of the licensee shall be planted with native species to prevent erosion and subsequent water quality degradation where drainage from such roads would impact waters of the State significantly.

B. Good environmental practices such as described in Environmental Criteria for Electric Transmission Systems as published by the U.S. Department of Interior and the U.S. Department of Agriculture shall be followed to the extent practicable.

C. Compliance with the most recent version of the National Electric Safety Code adopted by the Public Service Commission is required.

III. FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

Where suitable habitat is present, field reconnaissance of rare and endangered species shall be performed in order to minimize impact on these species.

IV. VEGETATION

A. Vegetative clearing operations for maintenance purposes to be carried out within the corridor shall follow the general standards for clearing right-of-way for overhead transmission lines.

B. For areas located in any Florida Department of Transportation (DOT) ROW, Chapter 7 of the Florida DOT Utility Accommodation Manual shall serve as guidelines for best management practices.

V. ELECTRIC AND MAGNETIC FIELDS

Any certified transmission lines and electric substations shall comply with the applicable requirements of Chapter 62-814, F.A.C.

[Chapter 62-814, F.A.C.]

VI. ARCHAEOLOGICAL SITES

Any archaeological sites discovered during construction of the transmission lines shall be disturbed as little as possible and such discovery shall be communicated to the Department of State, Division of Archives, History and Record Management (DAHRM).

SECTION C: TRANSMISSION LINE SPECIFIC CONDITIONS

Potentially affected areas will be surveyed, and if a significant site is located, the site shall be avoided, protected, or excavated as directed by DAHRM.

VII. DEPARTMENT OF TRANSPORTATION

For all locations where the transmission line will cross State highways, the applicant will submit materials pursuant to the Department of Transportation's (DOT) "2017 Utility Accommodation Manual" to DOT's district office for review and approval. All applicable regulations pertaining to roadway crossings by transmission lines shall be complied with.

History Notes

Certification issued 06/29/82; signed by Governor Graham
Modified 09/18/86; signed by Secretary Tschinkel
Modified 11/21/86; signed by Secretary Tschinkel
Modified 07/21/87; signed by Secretary Twachtman
Modified 01/31/92; signed by Secretary Browner
Modified 06/24/92; signed by Secretary Browner
Modified 04/14/94; signed by Secretary Wetherell
Modified 05/19/95; signed by Secretary Wetherell
Modified 08/02/96; signed by Secretary Wetherell
Modified 10/04/96; signed by Secretary Wetherell
Modification Correction 10/29/96; signed by Secretary Wetherell
Modified 12/31/97; signed by Secretary Wetherell
Modified 04/12/00; signed by Deputy Secretary Green
Modified 05/17/01; signed by Deputy Secretary Green
Modified 08/29/05; signed by Siting Administrator Owen
Modified 03/08/07; signed by Siting Administrator Halpin
Modified 03/16/09; signed by Siting Administrator Halpin
Modified 12/23/09; signed by Siting Administrator Halpin
Modified 05/30/12; signed by Siting Administrator Mulkey
Modified 10/31/23; signed by Deputy Director Mulkey

ATTACHMENTS

ATTACHMENT A: Certified Site/Facilities Delineation Map(s)



Legend

Locations (X-Y Given in WGS84 UTM Zone 17N [Meters])

Proposed Site Certification Boundary (Approximately 264 Acres)

Notes:

1. Proposed Site Certification Boundary is from Aptim Environmental, 2022.

2. 2020 aerial source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

1,00050001,000 Feet

Site Certification Boundary

JEA St. Johns River Power Park
11201 New Berlin Road
Jacksonville, FL

Geosyntec
consultants

Jacksonville, FL

Figure

1

January 2023

ATTACHMENTS

ATTACHMENT B: Surface Water Management System

ATTACHMENTS

ATTACHMENT C: Mitigation Requirements/Plans

ATTACHMENTS

ATTACHMENT D: Groundwater Monitoring Requirements

DEP Summary of the Ground Water Monitoring Requirements as approved in the Revised Solid Waste and Industrial Wastewater Ground Water Monitoring Plans, Dated February 8, 2023, and Site Certification PA 81-13Q, Section B, Conditions I.B. and I.G.

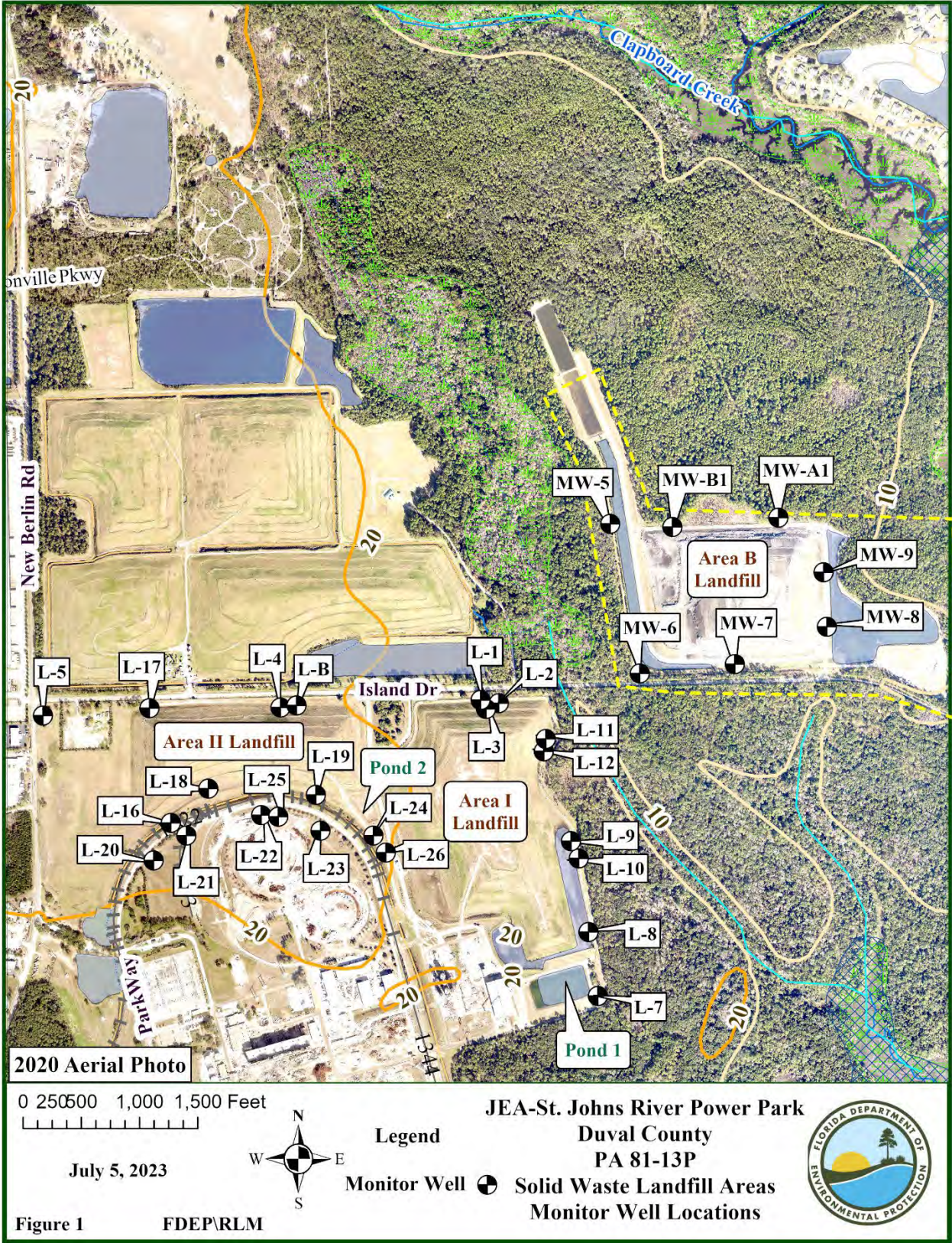
A. Solid Waste Ground Water Monitoring Plan Requirements

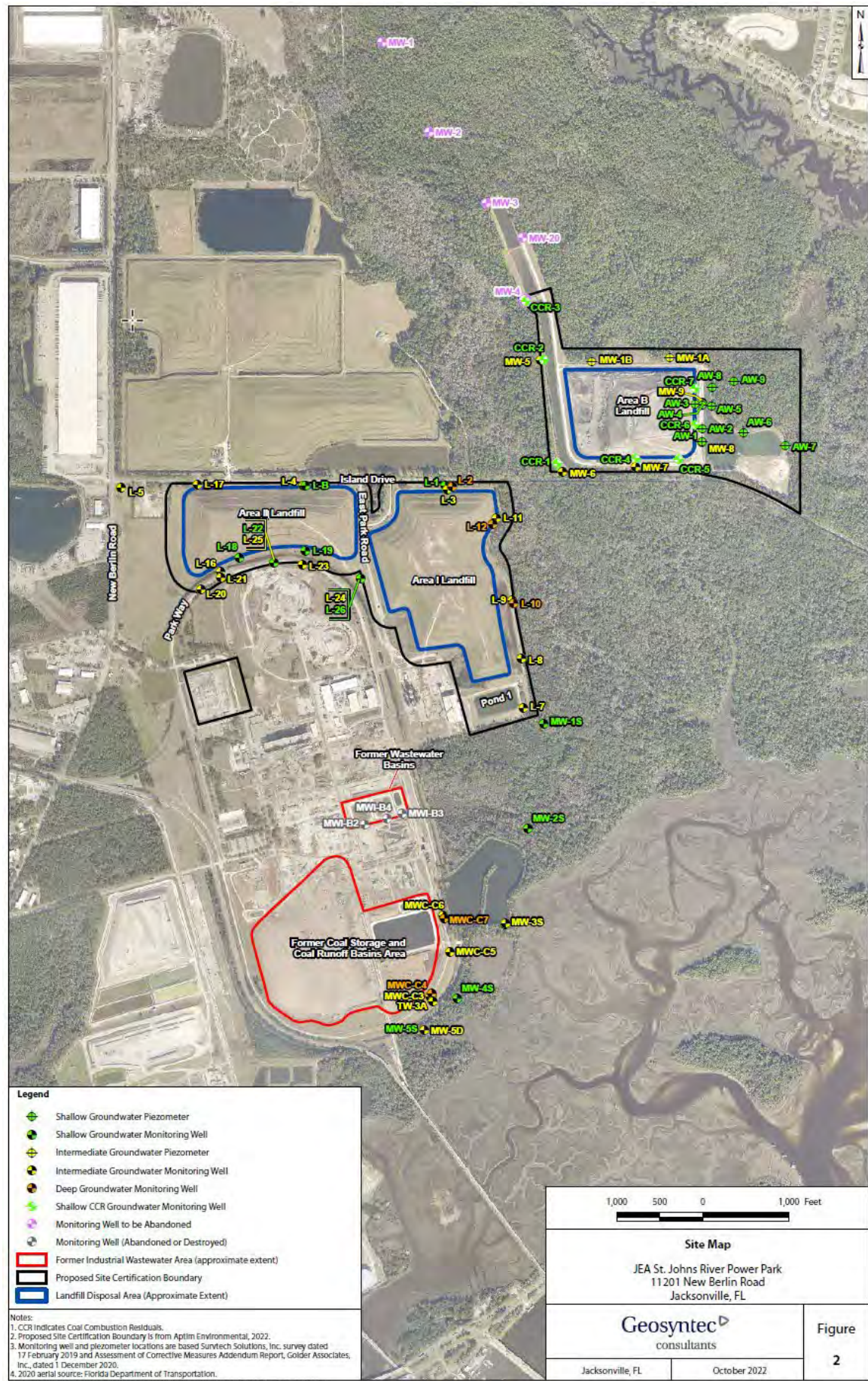
1. During the period of operation authorized by the Site Certification, the Licensee shall sample ground water at the monitoring wells identified in item B.2 below in accordance with the Site Certification and the approved ground water monitoring plan prepared in accordance with Rules 62-701 and 62-520.600, F.A.C. [62-701] [62-520.600].
2. The following tables includes the monitoring wells that shall be sampled at the solid waste landfill and runoff pond sites. The monitoring well locations are shown in Figure 1 and duplicated in Figure 2 below the tables.

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude			Longitude			Depth (Feet)	Aquifer Monitored	New or Existing
		°	'	"	°	'	"			
Area I Landfill										
L-1	Area I Landfill, Background Well.	30	26	28	81	32	45	23	Surficial	Existing
L-2	Area I Landfill, Deep Background Well.	30	26	28	81	32	44	83.5	Surficial	Existing
L-3	Area I Landfill, Background Well.	30	26	27	81	32	45	49	Surficial	Existing
L-7	Area I Landfill, Compliance Well.	30	26	2	81	32	34	39.5	Surficial	Existing
L-8	Area I Landfill, Intermediate Well.	30	26	8	81	32	35	41.5	Surficial	Existing
L-9	Area I Landfill, Intermediate Well.	30	26	15	81	32	37	44.5	Surficial	Existing
L-10	Area I Landfill, Deep Intermediate Well.	30	26	14	81	32	36	81	Surficial	Existing
L-11	Area I Landfill, Intermediate Well.	30	26	24	81	32	39	39	Surficial	Existing
L-12	Area I Landfill, Deep Intermediate Well.	30	26	23	81	32	39	87.5	Surficial	Existing
Area II Landfill										
L-B	Area II Landfill, Background Well.	30	26	27	81	33	3	18.5	Surficial	Existing
L-4	Area II Landfill, Background Well.	30	26	28	81	33	4	29.5	Surficial	Existing
L-5	Area II Landfill, Background Well.	30	26	27	81	33	28	29.5	Surficial	Existing
L-16	Area II Landfill, Intermediate Well.	30	26	18	81	33	16	42	Surficial	Existing
L-17	Area II Landfill, Background Well.	30	26	27	81	33	17	29.5	Surficial	Existing
L-18	Area II Landfill, Intermediate Well.	30	26	21	81	33	12	15	Surficial	Existing

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude			Longitude			Depth (Feet)	Aquifer Monitored	New or Existing
L-19	Area II Landfill, Intermediate Well.	30	26	20	81	33	1	15	Surficial	Existing
L-20	Area II Landfill, Compliance Well.	30	26	15	81	33	17	29.5	Surficial	Existing
L-21	Area II Landfill, Compliance Well.	30	26	17	81	33	14	29.5	Surficial	Existing
L-22	Area II Landfill, Compliance Well.	30	26	18	81	33	7	13	Surficial	Existing
L-23	Area II Landfill, Compliance Well.	30	26	17	81	33	1	29.6	Surficial	Existing
L-24	Area II Landfill, Compliance Well.	30	26	16	81	32	56	29.5	Surficial	Existing
L-25	Area II Landfill, Compliance Well.	30	26	18	81	33	5	29.5	Surficial	Existing
L-26	Area II Landfill, Compliance Well.	30	26	15	81	32	55	15.7	Surficial	Existing
Area B Landfill										
MW-5	Area B Landfill, Background Well.	30	26	42	81	32	32	43.3	Surficial	Existing
MW-6	Area B Landfill, Background Well.	30	26	30	81	32	30	53.5	Surficial	Existing
MW-7	Area B Landfill, Intermediate Well.	30	26	30	81	32	20	54.1	Surficial	Existing
MW-8	Area B Landfill, Intermediate Well.	30	26	33	81	32	11	53.5	Surficial	Existing
MW-9	Area B Landfill, Intermediate Well.	30	26	38	81	32	11	50.9	Surficial	Existing
MW-A1	Area B Landfill, Background Well.	30	26	43	81	32	16	53.4	Surficial	Existing
MW-B1	Area B Landfill, Background Well.	30	26	42	81	32	26	43.3	Surficial	Existing

[62-701] [62-520.600(6)]





3. The following parameters in the table below shall be sampled and analyzed at the stated frequency for each monitoring well at the Area I and II Landfills.

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	Feet	In-Situ	Annual
pH	Report	SU	In-Situ	Annual
Specific Conductance	Report	umhos/cm	In-Situ	Annual
Dissolved Oxygen	Report	mg/L	In-Situ	Annual
Aluminum, Total Recoverable	200	ug/L	Grab	Annual
Iron, Total Recoverable	300	ug/L	Grab	Annual
Temperature	Report	Celsius	In-Situ	Annual
Total Dissolved Solids	500	mg/L	Grab	Annual
Turbidity	Report	NTU	In-Situ	Annual
Sulfate, Total	250	mg/L	Grab	Annual

[62-701] [62-777] [62-520.600(11)(b)] [62-520.310(5)]

Annually = Once Per Year

4. The following parameters in the table below shall be sampled and analyzed at the stated frequency for each monitoring well at the Area B Landfill.

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency*
Water Level Relative to NGVD	Report	Feet	In-Situ	Quarterly
pH	Report	SU	In-Situ	Quarterly
Specific Conductance	Report	umhos/cm	In-Situ	Quarterly
Dissolved Oxygen	Report	mg/L	In-Situ	Quarterly
Aluminum, Total Recoverable	200	ug/L	Grab	Quarterly
Arsenic, Total Recoverable	10	ug/L	Grab	Quarterly
Barium, Total Recoverable	2,000	ug/L	Grab	Quarterly
Beryllium, Total Recoverable	4	ug/L	Grab	Quarterly
Boron, Total Recoverable	Report	ug/L	Grab	Quarterly
Cadmium, Total Recoverable	5	ug/L	Grab	Quarterly
Chloride, Total	250	mg/L	Grab	Quarterly
Chromium, Total Recoverable	100	ug/L	Grab	Quarterly
Copper, Total Recoverable	1,000	ug/L	Grab	Quarterly
Iron, Total Recoverable	300	ug/L	Grab	Quarterly
Lead, Total Recoverable	15	ug/L	Grab	Quarterly
Mercury, Total Recoverable	2	ug/L	Grab	Quarterly
Nickel, Total Recoverable	100	ug/L	Grab	Quarterly
Selenium, Total Recoverable	50	ug/L	Grab	Quarterly
Sulfate, Total	250	mg/L	Grab	Quarterly
Temperature	Report	Celsius	In-Situ	Quarterly
Total Dissolved Solids	500	mg/L	Grab	Quarterly
Turbidity	Report	NTU	In-Situ	Quarterly
Vanadium, Total Recoverable	Report	ug/L	Grab	Quarterly

*Quarterly for one-year post-closure, then transition to annual, if groundwater concentrations remain stable, or are decreasing relative to concentrations observed pre-closure. Reduction in parameters will also be made based upon two consecutive groundwater sampling events with concentrations below the limits, per DEP approval.

[62-701] [62-777] [62-520.600(11)(b)] [62-520.310(5)]

Quarterly = Four Times Per Year

Annual = Once Per Year

5. Analytical Data Reports. The Licensee shall submit all groundwater sampling results on the Parameter Monitoring Report Form [DEP Form 62-520.900(2)], not DEP Form 62-620.910(10), and electronically, according to the following schedule:

SAMPLE PERIOD	REPORT DUE DATE
Quarterly Monitoring	
January 1 – March 31	April 28
April 1 – June 30	July 28
July 1 – September 30	October 28
October 1 – December 31	January 28
Annual Monitoring	
January 1 – June 30	July 28
July 1 – December 31	January 28

All ground water monitoring reports shall be submitted electronically, with one hard copy submitted to the District office, unless the Department indicates otherwise in writing. The ground water monitoring reports shall be submitted in Adobe pdf format. The ground water data Electronic Data Deliverable (EDD) shall be provided to the Department in an electronic format consistent with requirements for importing the data into the Department's databases. Ground water monitoring reports shall be signed and sealed by a Florida registered professional geologist or professional engineer with experience in hydrogeological investigations and shall include the following:

- 1) Cover letter;
- 2) Summary of exceedances and sampling problems, if any (e.g., variation from SOP field criteria);
- 3) Conclusions and recommendations;
- 4) Ground water contour maps;
- 5) Chain of custody forms;
- 6) Water levels, water elevation table;
- 7) Ground Water Monitoring Report Certification, using the appropriate Department form;
- 8) Appropriate sampling information on Form FD 9000-24 (DEP-SOP-001/01); and,
- 9) Laboratory and Field EDDs and error logs, as applicable.

All submittals in response to this specific condition shall be sent to the following addresses:

Florida Department of Environmental Protection
Compliance Solid Waste Section
8800 Baymeadows Way W., Suite 100
Jacksonville, Florida 32256-7549,
or Email to: DEP_NED@floridadep.gov

Florida Department of Environmental Protection
Solid Waste Section, MS 4565
2600 Blair Stone Road
Tallahassee, Florida, 32399-2400,
or Email to: sco@floridadep.gov

[62-701] [62-520.600(11)(b)]

6. New Well Requirements. The Licensee shall submit, the following information to the Department within 15 days of completion of construction of any new groundwater monitoring well(s) (permanent and temporary):

Well identification	Driller's Lithologic Log
Latitude/Longitude	Total well depth
Aquifer monitored	Casing diameter
Screen type and slot size	Casing type and length
Elevation at top of pipe	Well construction permit number
Elevation at land surface	Depth to groundwater

New groundwater monitoring wells shall be designed and constructed in accordance with Chapter 62-520, F.A.C., and ASTM Standard D-5092. A surveyed drawing shall be submitted showing the horizontal location of all monitoring wells by metes and bounds or equivalent surveying techniques. The surveyed drawing shall include the monitoring well identification number as well as the location and elevation of all permanent benchmark(s) and/or corner monument marker(s) at the site. The survey shall be conducted by a Florida Licensed Professional Surveyor and Mapper.

7. Compliance with groundwater standards and/or criteria shall be determined by analysis of unfiltered groundwater samples, unless the requirements of Rule 62-520.310(5), F.A.C., are satisfied. Additional samples, wells, and parameters may be required based upon subsequent analyses.
8. Groundwater samples shall be collected from the monitor wells in item B.2 for the parameters in item B.3 in accordance with DEP's Standard Operating Procedures Manual for Field Sampling, and shall conform to the applicable Quality Assurance/Quality Control requirements of Chapter 62-160, F.A.C. [62-160]
9. Damaged Well Requirements. In the event any monitoring well becomes damaged or inoperable, the Licensee shall notify the Department within 72 hours and shall submit a detailed written report within seven days. The written report shall detail the problem that has occurred and remedial measures that have been taken to prevent a recurrence. Damaged wells shall be repaired or replaced within 60 days. If a monitoring well is unable to be sampled during its normal time frame, it shall be sampled within 30 days of repair or replacement and its analysis shall be submitted to the Department within 60 days of repair or replacement. All monitoring well design and replacement shall be approved by the Department prior to installation. [62-520.600] [62-4.070(3)]

B. Industrial Wastewater Ground Water Monitoring Plan Requirements:

1. Due to the removal of the Industrial Wastewater (IW) discharge sites, monitoring of the previously existing permanent IW monitor wells, and monitoring of the IW sites is no longer required. However, the facility may continue to voluntarily monitor some test wells around the IW sites outside of the Site Certification requirements for specific parameters until further notice. [62-520.600]

Guidance for Submitting Electronic Ground Water Monitoring Reports to the Solid Waste Program, ADaPT

June 15, 2021

I. General Information

Water quality monitoring reports and all groundwater, surface water, and leachate (when required) analytical results for the Solid Waste Programs can be submitted to the Department of Environmental Protection (the Department) electronically through the DEP Business Portal; <http://www.fldepportal.com/go/>. The FDEP Business Portal is the Department's preferred method of submittal. Water quality monitoring reports shall be submitted as a single file in Adobe PDF format. Unless otherwise approved by the Department, the water quality Electronic Data Deliverable (EDD) shall be compatible with software called Florida DEP Automated Data Processing Tool (ADaPT). ADaPT has been developed to evaluate and upload water quality data into the Department's Water Assurance Compliance System (WACS) database. A copy of this ADaPT software with installation instructions and EDD specifications can be downloaded from the following website address:
<https://www.floridadep.gov/waste/waste/content/adapt>

II. Monitoring Report

The groundwater monitoring report shall be submitted as a single file in Adobe PDF format, along with the EDD zip file, and shall include the following items:

1. Cover letter;
2. Summary of exceedances and recommendations;
3. Groundwater contour maps;
4. Chain of custody forms;
5. Water levels, water elevation table;
6. Groundwater Monitoring Report Certification, using the appropriate Department form;
7. Appropriate sampling information on Form FD 9000-24 (DEP-SOP-001/01); and,
8. Laboratory EDDs and associated Lab EDD ErrorLogs, Field EDDs that are compatible with ADaPT software and ADaPT export file(s); all in a single zip file.

Submit all ADaPT files in a single zip file named as follows:

12345_20081128_SWzdd.zip

Please do not submit multiple documents for the monitoring report; combine all documents in a single PDF document. Submit the monitoring report in a single (text, no scanned content) PDF file named as follows:

12345_20081128_SWgwmr.pdf

III. ADaPT EDDs

The ADaPT EDD consists of four electronic deliverables: (1) a Laboratory EDD, identified as SWldd.txt; (2) a Laboratory EDD Error Log, identified as SWldd_ErrorLog.txt; (3) a Field EDD identified as SWfdd.txt; and (4) an ADaPT export identified as ADaPTSWYYYYMMDDHHMMSS.csv where YYYYMMDDHHMMSS is the year, month, day, hour, minute, and second the export file was created.

The Laboratory EDD shall be submitted in a comma separated (csv format) text file using the .txt filename extension. The Laboratory EDD file name format shall be: [WACS Facility I.D.] underscore [Begin Sampling Year, Month and Day (yyyymmdd)] underscore SWldd.txt. The period at the end would not be included. For example, with WACS Facility I.D. # 12345 where sampling started November 28 and ended December 4, 2008, the Laboratory EDD file name should be: 12345_20081128_SWldd.txt

The Field EDD shall be submitted in the same comma separated (.csv format) text file as the Laboratory EDD. The Field EDD file name format shall be: [WACS Facility I.D.] underscore [Begin Sampling Year, Month and Day (yyyymmdd)] underscore SWfdd.txt. Again, the period at the end is not included. For example, with WACS Facility I.D. # 12345, where sampling started November 28 and ended December 4, 2008, the file name should be 12345_20081128_SWfdd.txt

For confirmation sampling, add the term “_CONF” to the EDD filenames as follows:
12345_20081128_CONF_SWldd.txt for the Laboratory EDD or
12345_20081128_CONF_SWfdd.txt for the Field EDD.

For radiochemistry results, add the term “_RAD” similar to confirmation sampling indicated above.

IV. Signatures Required

Water quality monitoring reports shall be signed and sealed by a Florida registered professional geologist or professional engineer with experience in hydrogeological investigations. An electronic signed and sealed signature page may be submitted with the report provided a stamped seal is used. If a raised seal is used, ensure that the seal is legible (gray the embossed seal and scan). Otherwise, you must separately mail the signed and sealed page.

V. Process Required

Three steps are generally required. First, the Laboratory EDD, in comma separated text format, must be submitted by the laboratory. To validate the QA/QC aspects of the Laboratory EDD, the permittee shall ensure the laboratory processes the Laboratory EDD through ADaPT using both their laboratory specific library and the Department's Division of Waste Management master library and corrects all critical errors and explains all non-critical errors prior to submittal. Second, the appropriate entity (laboratory, consultant, or permittee) shall process the Field EDD through ADaPT and correct all Field EDD errors prior to submittal.

Finally, as a completeness check, the laboratory, permittee or consultant shall process both the Laboratory EDD and the Field EDD through ADaPT and confirm a successful export to disk and submit the ADaPT generated export file (ADaPTSWYYYYMMDDHHMMSS.csv).

VI. Resources

In the event help is needed to prepare these EDDs, you can contact Clark Moore, clark.b.moore@dep.state.fl.us, (850) 245-8739 or by emailing ADaPT.EDDs.and.Reports@floridadep.gov

If monitoring test site information needs updating in the WACS Oracle database, or if you need help in submitting the groundwater monitoring report, please contact the Department's Solid Waste staff at the appropriate District office:

Northwest District Office
160 Governmental Center, Suite 308
Pensacola, Florida 32502
(850) 595-8300

Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, FL 32256
(904) 256-1700

Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, FL 32803
(407) 897-4100

Southwest District Office
13051 N. Telecom Parkway
Temple Terrace, Florida 33637
(813) 470-5700

Southeast District Office
3301 Gun Club Road, MSC7210-1
West Palm Beach, Florida 33406
(561) 681-6600

South District Office
P.O. Box 2549
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33902
(239) 344-5600

Florida Department of Environmental Protection

Bob Martinez Office Bldg. 2600 Blair Stone Road Tallahassee, Florida 32399-2400

DEP Form # 62-520.900(2)

Form Title Ground Water Monitoring
Report

Effective Date _____

DEP Application No. _____

GROUND WATER MONITORING REPORT
Rule 62-520.600(11)

PART I GENERAL INFORMATION

- (1) Facility Name _____
Address _____
City _____ Zip _____
Telephone Number () _____
- (2) The GMS Identification Number _____
- (3) DEP Permit Number _____
- (4) Authorized Representative Name _____
Address _____
City _____ Zip _____
Telephone Number () _____
- (5) Type of Discharge _____
- (6) Method of Discharge _____

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, 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.

Date: _____

Signature of Owner or Authorized Representative

PART II QUALITY ASSURANCE REQUIREMENTS

Sample Organization Comp QAP # _____

Analytical Lab Comp QAP # /HRS Certification # _____

 *Comp QAP # /HRS Certification # _____

Lab Name _____

Address _____

Phone Number () _____

or (MSL): _____

* Attach Laboratory Reports

ATTACHMENTS

ATTACHMENT D. APPENDIX I: Solid Waste and Industrial Wastewater Groundwater Monitoring Plan



engineers | scientists | innovators

SOLID WASTE AND INDUSTRIAL WASTEWATER GROUNDWATER MONITORING PLAN

ST. JOHNS RIVER POWER PARK 11201 NEW BERLIN ROAD JACKSONVILLE, DUVAL COUNTY, FLORIDA

Prepared for

JEA

21 W. Church St.
Jacksonville, Florida 32202

Prepared by

Geosyntec Consultants, Inc.

1200 Riverplace Blvd., Suite 710
Jacksonville, Florida 32207

Project Number: FR8073

October 2022

*Solid Waste and Industrial Wastewater Groundwater Monitoring Plan
JEA – St. Johns River Power Park*

Geosyntec[®]
consultants

**SOLID WASTE AND INDUSTRIAL
WASTEWATER GROUNDWATER
MONITORING PLAN**

ST. JOHNS RIVER POWER PARK

11201 NEW BERLIN ROAD

JACKSONVILLE, DUVAL COUNTY, FLORIDA

Prepared for

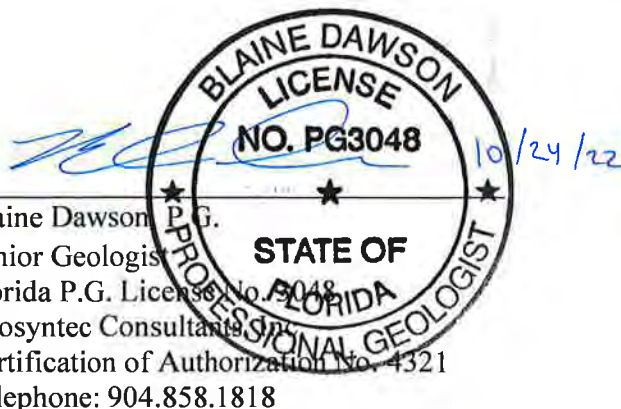
JEA
21 W. Church St.
Jacksonville, Florida 32202

Prepared by

Geosyntec Consultants, Inc.
1200 Riverplace Blvd., Suite 710
Jacksonville, Florida 32207

I hereby certify that in my professional judgment this document satisfies the requirements set forth in Chapter 471, Florida Statutes, and other applicable rules and regulations of the state of Florida. I have completed and/or been in responsible charge of work completed by a qualified professional working directly under my supervision.

Rachel A. Klinger, P.E., BCEE
Sr. Principal Engineer



Blaine Dawson, P.E.
Senior Geologist
Florida P.G. License No. PG3048
Geosyntec Consultants, Inc.
Certification of Authorization No. 4321
Telephone: 904.858.1818

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1. INTRODUCTION

1.1 Terms of Reference

This Solid Waste and Industrial Wastewater Groundwater Monitoring Plan (GMP) was prepared by Geosyntec Consultants, Inc. (Geosyntec) on behalf of JEA for the former St. Johns River Power Park (SJRPP) (Site), located at 11201 New Berlin Road in Jacksonville, Duval County, Florida in Section 12, Township 1 South, and Range 27 East, as illustrated in **Figure 1**.

1.2 Background

JEA has monitored groundwater quality at the SJRPP in accordance with the Conditions of Certification (COC) PA 81-13P for the SJRPP – Units 1 & 2 dated 30 May 2012, which provided specific plant conditions associated with groundwater monitoring at each of the solid waste disposal and industrial wastewater areas. Monitoring of these areas was performed in accordance with the Florida Department of Environmental Protection (FDEP) approved Industrial Wastewater and Solid Waste Groundwater Monitoring Plans Revision 4 dated June 2013. In addition, JEA has monitored the Area B Landfill per applicable requirements of 40 Code of Federal Regulations (CFR) Part 257, Subpart D (coal combustion residual (CCR) Rule) as CCR was received in Area B Landfill following the CCR Rule effective date of April 17, 2015.

In 2017, JEA and Florida Power and Light (FPL) began cessation of active power generation activities at the SJRPP. As part of closure and demolition, JEA is in the process of modifying the 2012 COC, including the certified Site boundaries and the groundwater monitoring associated with the areas within the certified Site boundaries. The modified certified Site boundaries will include the three solid waste landfills (Area I, Area II, and Area B) and will exclude the industrial wastewater areas previously monitored as part of the 2013 GMP. Recommendations for the monitoring of the Former Industrial Wastewater Area is discussed in Section 4.

The locations of Area I, Area II, and Area B Landfills and the Former Industrial Wastewater Area are illustrated on **Figure 2**.

1.3 Objectives

This GMP has been prepared to present the groundwater monitoring network following modification of certified Site boundaries. In accordance with Sections B.I.B.2. and B.I.G.2. of the 2012 COC, this GMP has been updated to present the methodologies necessary to monitor and evaluate groundwater quality associated with the Area I, Area II, and Area B Landfills that will be retained within the modified certified Site boundaries. Additional

changes to this GMP may be needed depending on the final modified certified Site boundaries.

1.4 Zone of Discharge and Monitored Areas

In Section B. O. of the 2012 COC, the Zone of Discharge (ZOD) for the solid waste landfills is defined as extending to a depth of 90 feet (ft) below the landfill cell at a horizontal distance of 200 feet from the edge of the landfill cell. For the solid waste landfills, Area I and II Landfills, which stopped receiving CCR prior to the effective date of the CCR Rule (April 17, 2015), the ZOD will remain 200 feet from the edge of the landfill cell. The ZOD associated with Area I and Area II Landfills is shown on **Figure 3**.

Since the Area B Landfill received CCR following the effective date of the CCR Rule, the requirements of 40 CFR Part 257, Subpart D, as amended will apply to this solid waste landfill. However, for the purposes of this GMP, the Area B Landfill will continue to be monitored in accordance with Section B. O. of the 2012 COC, inclusive of the current ZOD of 200 ft from the edge of the landfill cell. Monitoring currently in progress as part of the referenced CCR Rule will continue but be conducted separately from this GMP.

1.5 Report Organization

The remainder of this GMP is organized as follows:

- Section 2 – *Site Summary* – provides a site summary, including site description and setting, property use/ownership, site topography, site geology and hydrogeology, and surface water and drainage;
- Section 3 – *Solid Waste Groundwater Monitoring Plan* – presents details of the GMP including monitoring well locations, monitoring well construction details, water sample collection frequency, and water quality parameters for the solid waste areas including the Area I, Area II, and Area B Landfills; and
- Section 4 – *Former Industrial Wastewater Area Groundwater Monitoring Plan* – presents details of the ongoing groundwater monitoring activities in the Former Industrial Wastewater Area.
- Section 5 – *References* – provides references that were utilized in the preparation of this GMP.

2. SITE SUMMARY

2.1 Ownership/Property Use

Pursuant to the Florida Electrical Power Plant Siting Act, Sections 403.501-518, Florida Statutes (FS), the FDEP issued the COC to JEA as the owner/operator of the SJRPP. During operation, the SJRPP utilized coal in two large steam units to produce electricity. JEA is the property owner by deed.

2.2 Description and Setting

Currently, three landfill monitoring areas have been identified where groundwater monitoring will be conducted as part of this GMP. These areas include the Area I, Area II, and Area B Landfills. Each of these landfills are located adjacent to Island Drive as shown on **Figure 2**. Details for each landfill are provided below.

2.2.1 Landfill Areas

2.2.1.1 Area I Landfill

The Area I Landfill is located in the southwest corner of Island Drive and East Park Road, as illustrated in **Figure 2**. The major solid waste components in the Area I Landfill include CCRs, such as gypsum (flue gas desulfurization (FGD) byproduct) and coal combustion ash in the form of fly ash and bottom ash. Other small quantities of solid waste associated with electric power generation activities including pyrites, settled solids from the sedimentation basin/ponds and cooling towers, and dewatered solids from the former wastewater treatment facility have been disposed of in the Area I Landfill.

The Area I Landfill is closed. The final Closure Certification Report was submitted to the FDEP in April 2008 (Golder Associates 2008). The Area I Landfill occupies approximately 57 acres with an elevation of approximately 106-ft National American Vertical Datum of 1988 (NAVD88) and a side slope grade no steeper than 3 feet horizontal to 1 foot vertical (3H:1V). The top deck cover system consists of the following from top to bottom: (i) 2-ft thick protective soil layer; (ii) 30-mil and 40-mil low density polyethylene (LLDPE) geomembrane; and (iii) graded subgrade layer consisting of CCRs. The 3H:1V side slopes are covered with a 2-ft thick protective soil layer over a graded subgrade layer consisting of CCRs (Golder 2008).

Nine monitoring wells (L-1, L-2, L-3, and L-7 through L-12) comprise the groundwater monitoring network for the Area I Landfill. Three monitoring wells (L-1, L-2, and L-3) are upgradient of the Area I Landfill and six monitoring wells (L-7 through L-12) are downgradient of the Area I Landfill with L-11 and L-12 at the Northeast corner of the landfill area. The ZOD for the Area I Landfill is defined as extending to a depth of 90 feet below the Area I Landfill at a horizontal distance of 200 feet from the Area I Landfill. Based on

the ZOD definition, in accordance with Chapter 62-520, Florida Administrative Code (F.A.C.), and as previously approved in the 2013 GMP, L-1 through L-3 are designated as Background Monitoring Wells as they are located upgradient of the Area I Landfill and L-7 through L-12 are designated as Intermediate Monitoring Wells as they are located within the Area I Landfill ZOD.

2.2.1.2 Area II Landfill

The Area II Landfill is located in the southeast corner of Island Drive and East Park Road, as illustrated in **Figure 2**. The major solid waste components in the Area II Landfill include CCRs and other small quantities of solid waste associated with electric power generation activities including pyrites, settled solids from the sedimentation basin/ponds and cooling towers, and dewatered solids from the former wastewater treatment facility.

The Area II Landfill is closed. The final Closure Certification Report was submitted to the FDEP on 6 December 2011. FDEP approved the closure of the Area II Landfill in a letter dated 1 May 2012. The Area II Landfill is approximately 32 acres in size and has an average 3H:1V side slope. The elevation of the Area II Landfill is approximately 93-ft NAVD88 at the crown of the top deck. Like the Area I Landfill, the top deck cover system consists of the following from top to bottom: (i) 2-ft thick protective soil layer; (ii) 40-mil thick smooth LLDPE geomembrane; and (iii) graded subgrade layer consisting of CCRs. The 3H:1V side slopes are covered with a 2-ft thick protective soil layer over a graded subgrade layer consisting of CCRs.

Fourteen monitoring wells (L-B, L-4 [aka: MWB-L4], L-5, and L-16 through L-26) comprise the groundwater monitoring network for the Area II Landfill. Three monitoring wells (L-B, L-4 [aka: MWB-L4], and L-17 [aka: MWB-L17]) are upgradient of the Area II Landfill, L-5 is located to the west of the Area II Landfill, and nine monitoring wells (L-18 through L-26) are downgradient of the Area II Landfill. Monitoring wells L-4 (aka: MWB-L4), and L-17 (aka: MWB-L17) are also utilized for Solid Waste Monitoring.

The ZOD for the Area II Landfill is defined as extending to a depth of 90 feet below the Area II Landfill at a horizontal distance of 200 feet from the Area II Landfill. Based on the ZOD definition, in accordance with Chapter 62-520, F.A.C., and as previously approved in the 2013 GMP, L-B, L-4 (aka: MWB-L4), L-5, and L-17 (aka: MWB-L17) are designated as Background Monitoring Wells as they are located upgradient of the Area II Landfill; L-16, L-18, and L-19 are designated as Intermediate Monitoring Wells as they are located within the Area II Landfill ZOD; and L-20 through L-26 are designated as Compliance Monitoring Wells as they are located downgradient of the Area II Landfill and outside the ZOD.

2.2.1.3 Area B Landfill

The Area B Landfill is located northeast of the Area I Landfill on the north side of Island Drive, as illustrated in **Figure 2**. The Area B Landfill received CCRs and other small quantities of solid waste associated with electric power generation activities including pyrites, settled solids from the sedimentation basin/ponds and cooling towers, and dewatered solids from the former wastewater treatment facility. The closure plan associated with the Area B Landfill was submitted to FDEP in 2018, and closure activities were completed in January 2022.

According to the 2018 Closure Plan prepared by Golder Associates, Inc., the Area B Landfill is approximately 25 acres in size and has an average 3H:1V side slope. Similar to the Area I and II Landfills, the top deck cover system will consist of the following from top to bottom: (i) 2-ft thick protective soil layer; (ii) AGRU Super Gripnet 50-mil LLDPE geomembrane; and (iii) graded subgrade layer consisting of CCRs. The 3H:1V side slopes were covered with a 2-ft thick protective soil layer and AGRU Super Gripnet 50-mil LLDPE geomembrane.

Twelve monitoring wells (MW-1 through MW-9, MW-20, MW-A1, and MW-B1) comprised the groundwater monitoring network for the Area B Landfill as defined in the 2013 GMP. Seven additional monitoring wells (CCR-1 through CCR-7) and nine additional assessment wells (AW-1 through AW-9) have been installed in accordance with the CCR Rule. CCR-1 through CCR-3 were installed upgradient of the Area B Landfill and CCR-4 through CCR-7 were installed at the downgradient edge of the disposal unit.

The ZOD for the Area B Landfill is defined as extending to a depth of 90 feet below the Area B Landfill at a horizontal distance of 200 feet from the Area B Landfill. Based on the ZOD definition, in accordance with Chapter 62-520, F.A.C., and as previously approved in the 2013 GMP, MW-5, MW-6, and MW-1B are designated as Background Monitoring Wells as they are located upgradient of the Area B Landfill; MW-7, MW-8, MW-9, and MW-1A are designated as Intermediate Monitoring Wells as they are located within the Area B Landfill ZOD.

2.3 Topography/Drainage

In general, the topography in the vicinity of the SJRPP slopes gently to the east southeast towards the St. Johns River, located 1 mile south of the property. According to the United States Geologic Survey (USGS) Quadrangle topographic maps, the land surface elevation at the SJRPP is approximately 20-ft NGVD29.

2.4 Regional and Local Hydrogeology

The hydrogeology of Duval County, including near the Site, has been documented in many publications (Leve, 1966; Fairchild, 1972; Phelps, 1993 and others). As documented in Florida Geological Survey Report of Investigations No. 59, *The Shallow-Aquifer System in*

Duval County, Florida (Fairchild, 1972), the stratigraphic series, in descending order, that comprise the surficial aquifer system in Duval County (including near the Site) are the Pleistocene and Holocene deposits and the upper Miocene or Pliocene deposits. The Pleistocene and Holocene deposits comprise the water table unit and the upper Miocene or Pliocene deposits comprise the limestone unit (Phelps, 1993). The surficial aquifer is approximately 30 to 90 feet thick at the Site. Within Duval County, the Pleistocene and Holocene deposits consist of sand, tan to yellow, loose, medium to fine quartz, sometimes with shells and/or minor clay content. The upper Miocene or Pliocene deposits consist of two parts: the upper and lower. The upper part consists of tan to buff, fine to coarse sand and gray to light gray sandy clay, clayey sand, and shell beds. The lower part consists of tan to yellow, often highly sandy, porous, and cavernous with a few sections of dolomitic limestone. The thickness of the upper Miocene or Pliocene deposits ranges from 10 to 100-ft.

Underlying the surficial aquifer system deposits are the Miocene deposits comprising the Hawthorn Group, also referred to as the Intermediate Confining Unit. The Hawthorn Group consists of gray to blue-green and olive-green clay, sandy clay, and sandy limestone, well-rounded, polished, granules and pebbles of phosphate with a thickness ranging from 250 to 500-ft in Duval County. At the Site, the Hawthorn Group Formation is over 500 feet thick (Phelps, 1993). Throughout most of northeast Florida, the Hawthorn Group serves as a confining layer that minimizes movement of water between the surficial aquifer system and the underlying artesian Floridian Aquifer.

The surficial aquifer system at the Site is approximately 90-ft thick. For the purposes of the groundwater monitoring programs, the surficial aquifer has been divided into three separate zones: the shallow, intermediate, and deep. The shallow surficial aquifer zone extends from the top of the water table (10 to 12 ft below land surface [bls]) to approximately 25 ft bls. The intermediate surficial aquifer zone extends from approximately 25 ft bls to approximately 45 ft bls. The deep surficial aquifer extends from approximately 50 to 90 ft bls. **Table 1** summarizes the construction data for each monitoring well and provides the surficial aquifer zone each monitoring well is screened in.

2.5 Groundwater Flow Direction and Gradient

Groundwater potentiometric maps were generated based on June 2021 groundwater elevation data. Groundwater flow in the shallow surficial aquifer zone at the Site is generally to the south-southeast towards the St. Johns River (**Figure 4**) with an average groundwater flow gradient of approximately 0.002 ft/ft, measured between monitoring wells L-1 and MW-1S. Groundwater flow in the intermediate surficial aquifer zone is generally to the east-southeast towards the St. Johns River (**Figure 5**) with an average groundwater flow gradient of approximately 0.004 ft/ft, measured between monitoring wells L-4 and L-24. This remains consistent with historic data. Groundwater flow in the deep surficial aquifer zone is

to the south towards the St. Johns River (**Figure 6**) with an average groundwater flow gradient of approximately 0.001 ft/ft, measured between monitoring wells L-2 and L-10.

Historical data suggests that there is little to no significant seasonal variation in the direction of groundwater flow or the gradient at the Site.

3. SOLID WASTE GROUNDWATER MONITORING PLAN

3.1 Introduction

This section presents the GMP for the Area I, Area II, and Area B Landfills (**Figure 2**). This section summarizes the Site-specific geology and hydrogeology, water quality, monitoring well network, parameters, and sampling frequency for each monitored area.

3.2 Geology

Based on a lithologic log from monitoring well L-2 (located to the northeast of Area I Landfill), as documented in JEA's *Groundwater Monitoring Well Program, Design and Location Information* Report, the following stratigraphy is representative of conditions in the northern portion of the SJRPP near the Area I, Area II, and Area B Landfills:

- dense brown to dark brown silty sand from approximately 3 to 22 ft bls;
- firm grey slightly clayey fine sand from approximately 22 to 32 ft bls;
- very dense grey sand with blue-green clay seams from 32 to 42 ft bls;
- very dense grey-brown medium sand from 42 to 60 ft bls; and
- very dense interbedded tan shelly with trace quartz sand from 60 to 85 ft bls.

3.3 Hydrogeology

3.3.1 Area I Landfill

Groundwater elevations in the intermediate zone (approximately 13 to 46 ft bls) and deep zone (approximately 70 to 85 ft bls) have been recorded quarterly since 1995 in monitoring wells L-1 through L-3 and L-7 through L-12 located on the perimeter of the Area I Landfill. Based on June 2021 groundwater elevation data, groundwater flow in the shallow, intermediate, and deep zones of the surficial aquifer is generally towards the south and southeast within the Area I Landfill, as illustrated in **Figure 7**. Based on historical data, the groundwater flow direction in the intermediate and deep zones of the surficial aquifer is consistent during the spring and fall.

3.3.2 Area II Landfill

Groundwater elevations in the intermediate zone (approximately 20 to 30 ft bls) of the surficial aquifer have been recorded quarterly since 2000 in monitoring wells (L-4 [aka: MWB-L4] through L-6, and L-16) located along the perimeter of the Area II Landfill. Monitoring wells L-17 (aka: MWB-L17) through L-26 were installed in 2011 as part of the Area II Landfill closure. Groundwater elevations have been recorded in these monitoring wells quarterly since installation. Based on June 2021 groundwater elevation data,

groundwater flow in the intermediate zone and deep zone of the surficial aquifer is generally to the south and southeast within the Area II Landfill as illustrated in **Figure 8**. Based on historical data, the groundwater flow direction is generally consistent during spring and fall.

3.3.3 Area B Landfill

Groundwater elevations in the intermediate zone (approximately 40 to 50 ft bls) of the surficial aquifer have been recorded quarterly since 2009 (with the exception of 2008 when they were recorded monthly) in monitoring wells (MW-1 through MW-9, MW-A1, and MW-B1) located on the perimeter of the Area B Landfill. Groundwater elevations in piezometers AW-1 through AW-9 have been recorded quarterly following installation. AW-1 through AW-3 were installed in 2018. AW-4 through AW-8 were installed in 2019. AW-9 was installed in 2020. Based on June 2021 groundwater elevation data, groundwater flow in the shallow and intermediate zones of the surficial aquifer is generally to the east and southeast within the Area B Landfill as illustrated in **Figure 9**. This is generally consistent with historical data.

3.4 Groundwater Analytical Data and Trends

In preparation of this GMP, an evaluation of current and historical groundwater quality data was conducted to evaluate whether any revisions to the previous groundwater monitoring plan are warranted. To support any such changes, analytical data must be provided that demonstrates a revision to either the previous monitoring parameters and/or sampling frequencies is appropriate/justified based on the criteria presented in the FDEP Guidance Document SWM-04.44 titled *Changing Monitoring Parameters or Sampling Frequencies* dated 20 February 2016.

To support the proposed revisions to the groundwater monitoring plan, Mann-Kendall analyses were conducted to statistically evaluate whether or not a trend exists in the time series of analytical data available for each landfill unit with the SJRPP. A Mann-Kendall analysis is a non-parametric test which includes no underlying assumptions about the normality or seasonality of the data. The results of each analysis provide a level of confidence (in percent agreement) with the observed data trend, if present. The observations of the data and trend evaluations for each landfill are further discussed below.

3.4.1 Area I Landfill

Historical groundwater analytical results collected from the Area I Landfill over the past 5 years (2016-2021) were evaluated as part of the preparation of this GMP to identify potential trends in contaminant concentrations for refinement of the current monitoring well network. As part of the evaluations, contaminant concentrations were evaluated against those reported for the background monitoring wells, as designated in the 2013 GMP, to evaluate whether any changes in concentrations over time may be attributed to the landfill or are a reflection

of background aquifer concentrations. The historical groundwater analytical result tables for the Area I Landfill are presented in **Appendix A**.

Of the parameters analyzed, only aluminum, arsenic, beryllium, chromium, iron, sulfate, and total dissolved solids (TDS) were observed above their respective groundwater cleanup target levels (GCTLs) during the observation period. Following the observed GCTL exceedances for arsenic, beryllium, and chromium, the concentration of each of these constituents decreased back below the GCTL for at least the past three semi-annual sampling events. The remaining constituents observed above their respective GCTLs (aluminum, iron, sulfate, and TDS) were each evaluated against the previously defined background monitoring wells (L-1, L-2, and L-3) over the same time period. Concentrations of these secondary drinking water standards were generally observed below background or to be stable and/or shrinking.

To provide statistical significance to the trend evaluations, Mann-Kendall analyses were performed at each monitoring well where contaminant concentrations were observed in excess of the GCTL and analytical results for at least four sampling events were available. The Mann-Kendall analysis summary table and constituent graphs are presented in **Appendix B**.

The Mann-Kendall analysis indicates increasing or probably increasing trends were observed at monitoring wells L-1 (aluminum, sulfate, and TDS), L-3 (iron), L-7 (aluminum and sulfate), L-8 (aluminum and TDS), and L-9 (aluminum). In evaluating each of these increasing or probably increasing trends, it is important to note how they relate to the defined background monitoring wells (L-1, L-2, and L-3). At the Area I Landfill, contaminant concentrations in non-background monitoring wells, that indicated increasing or probably increasing trends, were observed below concentrations in the background monitoring wells and generally exhibited similar fluctuations in concentrations over time. This indicates these observed changes in contaminant concentrations are likely the result of changes in background aquifer conditions and not associated with the Area I Landfill.

3.4.2 Area II Landfill

Historical groundwater analytical results collected from the Area II Landfill over the past 5 years (2016-2021) were evaluated as part of the preparation of this GMP to identify potential trends in contaminant concentrations for refinement of the current monitoring well network. As part of the evaluations, contaminant concentrations were evaluated against those reported for the background monitoring wells, as designated in the 2013 GMP, to evaluate whether any changes in concentrations over time may be attributed to the landfill or are a reflection of background aquifer concentrations. The historical groundwater analytical result tables for the Area II Landfill are presented in **Appendix A**.

Of the parameters analyzed, only aluminum, arsenic, iron, sulfate, and TDS were observed above their respective GCTLs during the observation period. Each of these constituents were evaluated against the previously defined background monitoring wells (L-B, L-4, and L-17) over the same time period. Arsenic was only observed above the GCTL at the Area II Landfill in monitoring well L-22 during a singular sampling event conducted in September 2017. Following this sampling event, arsenic has been observed below the GCTL during each of the past seven semi-annual sampling events. Concentrations of the remaining secondary drinking water standards observed above the GCTLs at the Area II Landfill were generally observed below concentrations observed in the background monitoring wells or to be stable and/or shrinking.

To provide statistical significance to the trend evaluations, Mann-Kendall analyses were performed at each monitoring well where contaminant concentrations were observed in excess of the GCTL and analytical results for at least four sampling events were available. The Mann-Kendall analysis summary table and constituent graphs are presented in **Appendix B**.

The Mann-Kendall analysis indicates increasing or probably increasing trends were observed at monitoring wells L-4 (sulfate and TDS), L-5 (aluminum), and L-17 (aluminum and iron). In evaluating each of these increasing or probably increasing trends, it is important to note how they relate to the defined background monitoring wells (L-B, L-4, and L-17). At the Area II Landfill, contaminant concentrations in non-background monitoring wells, that indicated increasing or probably increasing trends, were observed below concentrations in the background monitoring wells and generally exhibited similar fluctuations in concentrations over time. This indicates these observed changes in contaminant concentrations are likely the result of changes in background aquifer conditions and not associated with the Area II Landfill.

3.4.3 Area B Landfill

Historical groundwater analytical results collected from the Area B Landfill over the past 5 years (2016-2021) were evaluated as part of the preparation of this GMP to identify potential trends in contaminant concentrations for refinement of the current monitoring well network. As part of the evaluations, contaminant concentrations were evaluated against those reported for the background monitoring wells, as designated in the 2013 GMP, to evaluate whether any changes in concentrations over time may be attributed to the landfill or are a reflection of background aquifer concentrations. The historical groundwater analytical result tables for the Area B Landfill are presented in **Appendix A**.

Of the parameters analyzed, only aluminum and iron were observed above their respective GCTLs during the observation period. Each of these constituents were evaluated against the previously defined background monitoring wells (MW-1 through MW-6, MW-A1, MW-B1,

and MW-20) over the same time period. Concentrations of these secondary drinking water standards were generally observed below concentrations observed in the background monitoring wells or to be stable and/or shrinking.

To provide statistical significance to the trend evaluations, Mann-Kendall analyses were performed at each monitoring well where contaminant concentrations were observed in excess of the GCTL and analytical results for at least four sampling events was available. The Mann-Kendall analysis summary table and constituent graphs are presented in **Appendix B**.

The Mann-Kendall analysis indicates increasing or probably increasing trends at monitoring wells MW-1 (iron), MW-3 (iron), MW-8 (iron), MW-9 (aluminum and iron), and MW-20 (aluminum and iron). In evaluating each of these increasing or probably increasing trends, it is important to note how they relate to the defined background monitoring wells (MW-1 through MW-6, MW-A1, MW-B1, and MW-20). At the Area B Landfill, contaminant concentrations in non-background monitoring wells, that indicated increasing or probably increasing trends, were observed below concentrations in the background monitoring wells and generally exhibited similar fluctuations in concentrations over time. This indicates these observed changes in contaminant concentrations are likely the result of changes in background aquifer conditions and not with the Area B Landfill.

3.5 Groundwater Monitoring Area Network

3.5.1 Area I Landfill

Nine monitoring wells (L-1, L-2, L-3, and L-7 through L-12) comprise the groundwater monitoring network for the Area I Landfill. Three monitoring wells (L-1, L-2, and L-3) are upgradient of the Area I Landfill and six monitoring wells (L-7 through L-12) are downgradient of the Area I Landfill with L-11 and L-12 at the Northeast corner of the landfill area.

The ZOD for the Area I Landfill is defined as extending to a depth of 90 feet below the Area I Landfill at a horizontal distance of 200 feet from the Area I Landfill. Based on the ZOD definition, in accordance with Chapter 62-520, Florida Administrative Code (F.A.C.), and as previously approved in the 2013 GMP, L-1 through L-3 are designated as Background Monitoring Wells as they are located upgradient of the Area I Landfill and L-7 through L-12 are designated as Intermediate Monitoring Wells as they are located within the Area I Landfill ZOD.

Well construction details for monitoring wells associated with the Area I Landfill are provided in **Table 1**. Geographical coordinates and designations for monitoring wells associated with the Area I Landfill are provided in **Table 2**.

3.5.2 Area II Landfill

Fourteen monitoring wells (L-B, L-4 [aka: MWB-L4], L-5, and L-16 through L-26) comprise the groundwater monitoring network for the Area II Landfill. Three monitoring wells (L-B, L-4 [aka: MWB-L4], and L-17 [aka: MWB-L17]) are upgradient of the Area II Landfill, L-5 is located to the west of the Area II Landfill, and nine monitoring wells (L-18 through L-26) are downgradient of the Area II Landfill. Monitoring wells L-4 (aka: MWB-L4), and L-17 (aka: MWB-L17) are also utilized for Solid Waste Monitoring.

The ZOD for the Area II Landfill is defined as extending to a depth of 90 feet below the Area II Landfill at a horizontal distance of 200 feet from the Area II Landfill. Based on the ZOD definition, in accordance with Chapter 62-520, F.A.C., and as previously approved in the 2013 GMP, L-B, L-4 (aka: MWB-L4), L-5, and L-17 (aka: MWB-L17) are designated as Background Monitoring Wells as they are located upgradient of the Area II Landfill; L-16, L-18, and L-19 are designated as Intermediate Monitoring Wells as they are located within the Area II Landfill ZOD; and L-20 through L-26 are designated as Compliance Monitoring Wells as they are located downgradient of the Area II Landfill and outside the ZOD.

Well construction details for monitoring wells associated with the Area II Landfill are provided in **Table 1**. Geographical coordinates and designations for monitoring wells associated with the Area II Landfill are provided in **Table 2**.

3.5.3 Area B Landfill

Historically, twelve monitoring wells (MW-1 through MW-9, MW-20, MW-A1, and MW-B1) comprised the groundwater monitoring network for the Area B Landfill as defined in the 2013 GMP. Seven additional monitoring wells (CCR-1 through CCR-7) and nine additional assessment wells (AW-1 through AW-9) have been installed in accordance with the CCR Rule. CCR-1 through CCR-3 were installed upgradient of the Area B Landfill and CCR-4 through CCR-7 were installed at the downgradient edge of the disposal unit. AW-1 through AW-9 were installed to assess groundwater impacts downgradient of Area B Landfill. As indicated in Section 1.2 of this GMP, the CCR wells presented above are being monitored separately from those included in this GMP.

During the development of this GMP, optimization of the current groundwater monitoring network was evaluated. From the observations gathered during the data and trend evaluations and the reduction in the final footprint of the Area B Landfill, monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-20 were identified as no longer necessary for monitoring the Area B Landfill in accordance with the COC. As such, they are recommended for abandonment in accordance with Section 3.8 of the 2013 GMP.

Seven monitoring wells (MW-5 through MW-9, MW-1A, and MW-1B) will comprise the groundwater monitoring network for the Area B Landfill pursuant to this GMP. Three

monitoring wells (MW-5, MW-6, and MW-1B) are upgradient of the Area B Landfill, MW-1A is located to the northeast of the Area B Landfill, and two monitoring wells (MW-7 and MW-8) are downgradient of the Area B Landfill.

The ZOD for the Area B Landfill is defined as extending to a depth of 90 feet below the Area B Landfill at a horizontal distance of 200 feet from the Area B Landfill. Based on the ZOD definition, in accordance with Chapter 62-520, F.A.C., and as previously approved in the 2013 GMP, MW-5, MW-6, and MW-1B are designated as Background Monitoring Wells as they are located upgradient of the Area B Landfill; MW-7, MW-8, MW-9, and MW-1A are designated as Intermediate Monitoring Wells as they are located within the Area B Landfill ZOD.

Well construction details for the existing monitoring wells associated with the Area B Landfill are provided in **Table 1**. Geographical coordinates and designations for monitoring wells associated with the Area B Landfill are provided in **Table 2**.

3.6 Groundwater Monitoring Parameters and Frequency

3.6.1 Groundwater Sampling

Groundwater samples will be collected from the following monitoring wells identified in Section 3.5. Groundwater sampling will be completed in accordance with FDEP's Standard Operating Procedures Manual for Field Sampling and shall conform to the applicable Quality Assurance/Quality Control requirements of Chapter 62-160, F.A.C. (SOPs). Water levels will be recorded before purging each monitoring well for sample collection. Groundwater elevation references shall include the top of the well casing and land surface at each monitoring well (NAVD 1988) at a precision of plus or minus 0.01 foot. Monitoring wells will be purged prior to sampling to obtain representative samples. Analyses will be conducted on unfiltered samples, unless filtered samples have been approved by the FDEP's Northeast District Office as being more representative of groundwater conditions.

3.6.2 Parameters and Frequency – Area I and II Landfills

Groundwater samples from the monitoring well network associated with the Area I and Area II Landfills will be analyzed by a certified laboratory that meets the requirements of Chapter 62-160, F.A.C., and minimum analytical detection limits will be at or below the groundwater standards and/or criteria. As was presented in Sections 3.4.1 and 3.4.2 of this GMP, the Mann-Kendall analyses provided in **Appendix B** demonstrate that each of the constituents analyzed for within the Area I and Area II Landfill monitoring well networks over the past five years (2016-2021) are either below background or stable and/or shrinking. In addition, observed exceedances of the GCTLs over the same 5-year time period have been limited to aluminum, arsenic, beryllium, chromium, iron, sulfate, and TDS. The remaining constituents previously analyzed for as part of the 2013 GMP have either not been detected in

groundwater or are observed at concentrations below background, indicating the detections are due to factors other than the landfill.

Due to the generally stable groundwater contaminant concentrations observed during the previous ten sampling events conducted over the past five years, a reduction in sampling frequency from semi-annual to annual has been included as part of this GMP. The data and trend evaluations presented in Sections 3.4.1 and 3.4.2 of this GMP demonstrate the referenced contaminant plume stability and indicate that changes in contaminant concentrations are likely the result of changes in background aquifer conditions and not associated with the Area I or II Landfills.

As the conditions for demonstrating proposed changes in monitoring parameters and sampling frequencies have been met, groundwater samples will be analyzed for the following parameters. Future removal of monitoring parameters from the list below will be made based upon two consecutive groundwater sampling events reflecting concentrations below the parameter's corresponding GCTL or concentrations in background monitoring wells.

Parameter	Units	Sample Type	Monitoring Frequency
Water Level (NGVD 88)	Feet	In-situ	Annual
pH (field)	SU	In-situ	Annual
Specific Conductance (field)	µmhos/cm	In-situ	Annual
Dissolved Oxygen (field)	mg/L	In-situ	Annual
Aluminum, Total Recoverable	µg/L	Grab	Annual
Iron, Total Recoverable	µg/L	Grab	Annual
Temperature (field)	Celsius	In-situ	Annual
Total Dissolved Solids	mg/L	Grab	Annual
Turbidity (field)	NTU	In-situ	Annual
Sulfate	mg/L	Grab	Annual

3.6.3 Parameters and Frequency – Area B Landfill

Groundwater samples from the monitoring well network associated with the Area B Landfill will be analyzed by a certified laboratory that meets the requirements of Chapter 62-160, F.A.C., and minimum analytical detection limits will be at or below the groundwater standards and/or criteria. As was presented in Section 3.4.3 of this GMP, the Mann-Kendall analyses provided in **Appendix B** demonstrate that each of the constituents analyzed for within the Area B Landfill monitoring well network over the past five years (2016-2021) are either below concentrations in the background monitoring wells or stable and/or shrinking. In addition, observed exceedances of the GCTLs over the same 5-year time period have been limited to aluminum and iron. Of the remaining constituents previously analyzed for as part of the 2013 GMP, only cadmium, chloride, chromium, and mercury exhibited a detection in groundwater at concentrations above background but below their respective GCTLs. However, each of these detected constituents was observed at concentrations similar to background and each did not exhibit an increasing trend over the same time period, indicating the detections are likely due to factors other than the landfill.

Groundwater monitoring will be performed on a quarterly basis for at least one year post-closure to evaluate groundwater impacts. Following the completion of one year of post-closure monitoring, removal of parameters, from the list below, will be made based upon two consecutive groundwater sampling events with concentrations below the GCTLs or concentrations in background monitoring wells. In addition, the frequency of monitoring will be modified to annual if groundwater concentrations one year following closure remain stable or are decreasing relative to concentrations observed pre-closure.

Until such criteria have been met, groundwater samples will be analyzed for the following parameters:

Parameter	Units	Sample Type	Monitoring Frequency*
Water Level (NGVD 88)	Feet	In-situ	Quarterly
pH (field)	SU	In-situ	Quarterly
Specific Conductance (field)	µmhos/cm	In-situ	Quarterly
Dissolved Oxygen (field)	mg/L	In-situ	Quarterly
Aluminum, Total Recoverable	µg/L	Grab	Quarterly
Arsenic, Total Recoverable	µg/L	Grab	Quarterly

Parameter	Units	Sample Type	Monitoring Frequency*
Barium, Total Recoverable	µg/L	Grab	Quarterly
Beryllium, Total Recoverable	µg/L	Grab	Quarterly
Boron, Total Recoverable	µg/L	Grab	Quarterly
Cadmium, Total Recoverable	µg/L	Grab	Quarterly
Chloride, Total Recoverable	µg/L	Grab	Quarterly
Chromium, Total Recoverable	µg/L	Grab	Quarterly
Copper, Total Recoverable	µg/L	Grab	Quarterly
Iron, Total Recoverable	µg/L	Grab	Quarterly
Lead, Total Recoverable	µg/L	Grab	Quarterly
Mercury, Total Recoverable	µg/L	Grab	Quarterly
Nickel, Total Recoverable	µg/L	Grab	Quarterly
Selenium, Total Recoverable	µg/L	Grab	Quarterly
Sulfate, Total Recoverable	µg/L	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Vanadium, Total Recoverable	µg/L	Grab	Quarterly
Temperature (field)	Celsius	In-situ	Quarterly
Turbidity (field)	NTU	In-situ	Quarterly

*Quarterly for one year post-closure, then transition to annual if groundwater concentrations remain stable or are decreasing relative to concentrations observed pre-closure. Reduction in parameters will also be made based upon two consecutive groundwater sampling events with concentrations below the GCTLs or concentrations in background monitoring wells.

3.7 Reporting

The annual Solid Waste groundwater monitoring results shall be submitted to the FDEP using the Solid Waste Electronic Data Deliverable submission procedures by the deadlines indicated in the table below. In addition, a copy of the associated laboratory analytical report will also be provided.

Sample Period	Semi-Annual	Annual	Report Deadline
(January - December)		X	January 28 th

Correspondence, reports, plans, and summaries pertaining to groundwater monitoring will be submitted electronically, unless DEP indicates otherwise in writing.

3.8 Monitoring Well Installation and Abandonment

Existing monitoring wells that are not incorporated in this GMP for Area I, II, and B Landfills may be abandoned by a licensed well driller or used as piezometers to support potentiometric groundwater map development. In addition, monitoring wells that are included in this GMP that are damaged will be abandoned and reinstalled. Documentation of monitoring well abandonment and reinstallation will be summarized in the transmittal of groundwater analytical results associated with the most recent sampling event.

4. FORMER INDUSTRIAL WASTEWATER AREA GROUNDWATER MONITORING PLAN

The Former Industrial Wastewater Area previously monitored as part of the 2013 GMP has been excluded from the modified certified Site boundaries; however, groundwater monitoring will continue based on the details presented herein.

The monitoring well network is comprised of 13 monitoring wells located downgradient of the Former Industrial Wastewater Area (**Figure 10**). Five monitoring wells (MW-1S, MW-2S, MW-3S, MW-4S, and MW-5S) are screened within the shallow zone of the surficial aquifer. Six monitoring wells (MW-3D, MW-5D, MWC-C6, MWC-C5, MWC-C3, and TW-3A) are screened within the intermediate zone of the surficial aquifer. Two monitoring wells (MWC-C4 and MWC-C7) are screened within the deep zone of the surficial aquifer. Monitoring wells MW-1S, MW-2S, MW-3S, MW-3D, MW-4S, MW-5S, and MW-5D are 1-in diameter polyvinyl chloride wells installed using a 4-in diameter auger, resulting in a 1.5-in filter pack surrounding each screened interval. Additional well construction details for monitoring wells associated with the Former Industrial Wastewater Area are provided in **Table 3**. Geographical coordinates and designations for monitoring wells are provided in **Table 4**.

Historical groundwater analytical results collected from the monitoring well network over the past 4 years (2018-2022) were evaluated to identify potential trends in contaminant concentrations and refinement of the monitoring well network. As part of the evaluations, contaminant concentrations were compared against those reported for the background monitoring wells of the upgradient Area I and II Landfills, as designated in the 2013 GMP, to evaluate whether any changes in concentrations over time may be attributed to the industrial wastewater areas or are a reflection of background aquifer concentrations. The historical groundwater analytical result tables for the industrial wastewater areas are presented in **Appendix A**.

Of the parameters analyzed, only aluminum, arsenic, boron, chloride, iron, sulfate, and TDS were observed above their respective GCTLs during the 2018-2022 monitoring time period. Each of these constituents was evaluated against the previously defined background monitoring wells for the upgradient Area I and II Landfills (L-B, L-1, L-2, L-3, L-4, and L-17) over the same time period. Arsenic is the only primary drinking water standard observed above its GCTL within the industrial wastewater areas in monitoring well TW-3A during one of the two most recent sampling events. Boron was also observed above its GCTL in monitoring wells TW-3A, MW-3S, and MW-3D; however, background data for boron was not available from historical monitoring results. Concentrations of the remaining secondary drinking water standards observed above the GCTLs at the industrial wastewater areas were generally observed below concentrations observed in the background monitoring wells or to be stable and/or shrinking. These observed contaminant concentrations are likely the result

of changes in background aquifer conditions and not associated with the industrial wastewater areas. As a result of the foregoing, monitoring for secondary drinking water standards will no longer continue and those parameters have been removed from the monitoring list associated with the industrial wastewater areas.

Based on the observed contaminant concentration trends relative to background conditions, groundwater samples will only be collected from monitoring wells exhibiting background and/or GCTL exceedances (TW-3A, MW-3S, and MW-3D). Groundwater samples will be analyzed for the following parameters until the constituent is observed below background and/or the GCTL for at least two consecutive sampling events:

Parameter	Units	Sample Type	Monitoring Frequency
Water Level (NGVD 88)	Feet	In-situ	Annual
pH (field)	SU	In-situ	Annual
Specific Conductance (field)	µmhos/cm	In-situ	Annual
Dissolved Oxygen (field)	mg/L	In-situ	Annual
Arsenic, Total Recoverable	µg/L	Grab	Annual
Boron, Total Recoverable	µg/L	Grab	Annual
Temperature (field)	Celsius	In-situ	Annual
Turbidity (field)	NTU	In-situ	Annual

The remaining monitoring wells not proposed to be sampled within the industrial wastewater areas may be abandoned by a licensed well driller or used as piezometers to support potentiometric groundwater map development. Documentation of monitoring well abandonment will be summarized in the transmittal of groundwater analytical results associated with the most recent sampling event.

5. REFERENCES

- Camp Dresser and McKee and Geosyntec Consultants, *Closure Design Plan Area II Landfill, St. Johns River Power Park*. September 2009.
- Camp Dresser and McKee and Geosyntec Consultants, *Response to First Request for Additional Information, St. Johns River Power Park*. 28 January 2010.
- Fairchild, R.W., 1972. *The Shallow-Aquifer System in Duval County, Florida*. Florida Geological Survey Report of Investigations No. 59.
- FDEP, *First Request for Additional Information, St. Johns River Power Park Area II Landfill Closure*. 12 November 2009.
- FDEP, Conditions of Certification, PA 81-130, Jacksonville Electric Authority, St. Johns River Power Park – Units 1 & 2, dated December 23, 2009.
- Geosyntec Consultants, *JEA Industrial Wastewater and Solid Waste Groundwater Monitoring Plans Revision 4*, St. Johns River Power Park. June 2013.
- Golder Associates, *Stormwater Management System Modifications, St. Johns River Power Park (Area I Landfill)*. 26 May 2009.
- Golder Associates, *Closure Construction Area I Landfill*, St. Johns River Power Park. April 2008.
- Golder Associates, *Area B Byproduct Storage Area Hydrogeological and Geotechnical Site Evaluation*, St. Johns River Power Park. April 2007.
- Golder Associates, *Monitored Natural Attenuation Evaluation*, St. Johns River Power Park. August 2021.
- JEA's *Groundwater Monitoring Well Program, Design and Location Information Report*. Date Unknown.
- JEA's *Selection of Groundwater Monitoring Well Locations for the St. Johns River Power Park*. July 1985.
- Leve, G.W., 1966. *Ground Water in Duval and Nassau Counties, Florida*. Florida Geological Survey Report of Investigations No. 43.
- Phelps, G.G., 1993. *Water Resources of Duval County, Florida*. U.S Geological Survey Water-Resources Investigations Report 93-4130.

TABLES

TABLE 1: WELL CONSTRUCTION DETAILS - SOLID WASTE AREAS
JEA St. Johns River Power Park
Jacksonville, FL

WELL NO.	DIAMETER (inches)	WELL DEPTH (ft bls)	SCREEN INTERVAL (ft bls)	TOC ELEVATION (ft - NAVD 1988)	GROUND ELEVATION (ft - NAVD 1988)	COMPLETION DATE	AQUIFER ZONE
Area I Landfill							
L-1	2	23	13-23	15.975	14.059	3/6/1986	Intermediate Surficial
L-2	2	83.5	63.5-83.5	14.549	12.716	3/6/1986	Deep Surficial
L-3	2	49	39-49	16.491	13.699	3/6/1986	Intermediate Surficial
L-7	2	39.5	29.5-39.5	15.631	13.673	5/19/1986	Intermediate Surficial
L-8	2	41.5	31.5-41.5	15.621	13.704	2/28/1986	Intermediate Surficial
L-9	2	44.5	34.5-44.5	13.048	11.131	3/5/1986	Intermediate Surficial
L-10	2	81	71-81	11.843	10.26	3/10/1986	Deep Surficial
L-11	2	39	29-39	13.441	11.566	3/10/1986	Intermediate Surficial
L-12	2	87.5	77.5-87.5	13.365	11.573	3/12/1986	Deep Surficial
Area II Landfill							
L-B	2	18.5	8.5-18.5	24.567	22.567	5/17/1988	Shallow Surficial
L-4 (aka: MWB-L4)	2	29.5	19.5-29.5	24.723	22.723	2/24/1986	Intermediate Surficial
L-5	2	29.5	19.5-29.5	26.971	24.971	2/24/1986	Intermediate Surficial
L-16	2	42	32-42	16.118	14.285	3/10/1986	Intermediate Surficial
L-17 (aka: MWB-L17)	2	29.5	19.2-29.2	26.947	24.207	8/10/2011	Intermediate Surficial
L-18	2	15	4.7-14.7	20.147	17.437	8/8/2011	Shallow Surficial
L-19	2	15	4.7-14.7	19.207	16.477	8/8/2011	Shallow Surficial
L-20	2	29.5	19.2-29.2	14.397	11.567	8/8/2011	Intermediate Surficial
L-21	2	29.5	19.2-29.2	14.267	11.567	8/10/2011	Intermediate Surficial
L-22	2	13	2.7-12.7	14.227	11.317	8/8/2011	Shallow Surficial
L-23	2	29.6	19.3-29.3	14.147	11.397	8/9/2011	Intermediate Surficial
L-24	2	29.5	19.2-29.2	20.907	18.157	8/9/2011	Intermediate Surficial
L-25	2	29.5	19.2-29.2	14.207	11.427	8/9/2011	Intermediate Surficial
L-26	2	15.7	5.4-15.4	20.787	18.027	8/8/2011	Shallow Surficial
Area B Landfill							
MW-1	2	52.44	42.44-52.44	17.67	14.95	11/6/2007	Intermediate Surficial
MW-2	2	52.37	42.37-52.37	18.39	15.72	11/7/2007	Intermediate Surficial
MW-3	2	54.28	44.28-54.28	19.36	16.35	11/13/2007	Intermediate Surficial
MW-4	2	46.84	36.84-46.84	16.33	13.90	11/7/2007	Intermediate Surficial
MW-5	2	43.31	33.31-43.31	14.70	12.01	11/8/2007	Intermediate Surficial
MW-6	2	53.50	43.50-53.50	16.01	13.53	3/14/2006	Intermediate Surficial
MW-7	2	54.09	44.09-54.09	17.44	14.82	11/13/2007	Intermediate Surficial
MW-8	2	53.51	43.51-53.51	17.08	14.34	8/25/2009	Intermediate Surficial
MW-9	2	50.89	40.89-50.89	13.86	10.93	11/5/2007	Intermediate Surficial
MW-20	2	52.00	42.00-52.00	20.64	17.81	11/7/2007	Intermediate Surficial
MW-A1	2	53.43	43.43-53.43	15.01	12.46	11/8/2007	Intermediate Surficial
MW-B1	2	43.34	33.34-43.34	14.68	12.10	11/8/2007	Intermediate Surficial

Notes:

1. ft bls = feet below land surface
2. ft-NAVD 1988 indicates measurement in feet with respect to North American Vertical Datum of 1988
3. TOC = top of casing
4. Gray shading indicates monitoring well previously abandoned

TABLE 2: GEOGRAPHICAL COORDINATES AND WELL DESIGNATIONS - SOLID WASTE AREAS
JEA St. Johns River Power Park
Jacksonville, FL

WELL NO.	WELL DESIGNATION	DATE INSTALLED	Northing Florida East (NAD 1983)	Easting Florida East (NAD 1983)
Area I Landfill				
L-1	Background	3/6/1986	2220746.17	484150.21
L-2	Background	3/6/1986	2220736.14	484230.46
L-3	Background	3/6/1986	2220703.32	484172.12
L-7	Compliance	5/19/1986	2218158.53	485058.06
L-8	Intermediate	2/28/1986	2218741.87	485036.19
L-9	Intermediate	3/5/1986	2219419.99	484926.81
L-10	Intermediate	3/10/1986	2219383.53	484941.39
L-11	Intermediate	3/10/1986	2220367.91	484744.52
L-12	Intermediate	3/12/1986	2220294.99	484700.77
Area II Landfill				
L-B	Background	5/17/1988	2220750.48	482527.71
MWB-L4 (aka: L-4)	Background	2/24/1986	2220747.90	482502.87
L-5	Background	2/24/1986	2220720.71	480380.22
L-16	Intermediate	3/10/1986	2219753.35	481539.83
MWB-L17 (aka: L-17)	Background	8/10/2011	2220763.99	481270.09
L-18	Intermediate	8/8/2011	2219915.62	481755.07
L-19	Intermediate	8/8/2011	2219990.69	482526.24
L-20	Compliance	8/8/2011	2219542.52	481311.39
L-21	Compliance	8/10/2011	2219682.81	481543.99
L-22	Compliance	8/8/2011	2219847.97	482157.59
L-23	Compliance	8/9/2011	2219832.51	482491.07
L-24	Compliance	8/9/2011	2219669.02	483163.28
L-25	Compliance	8/9/2011	2219848.52	482160.49
L-26	Compliance	8/8/2011	2219670.19	483167.08
Area B Landfill				
MW-1	--	11/6/2007	2225908.48	483416.80
MW-2	--	11/7/2007	2224863.05	483965.59
MW-3	--	11/13/2007	2224042.98	484628.21
MW-4	--	11/7/2007	2222905.52	485082.00
MW-5	Background	11/8/2007	2222214.94	485257.64
MW-6	Background	3/14/2006	2220905.86	485512.08
MW-7	Intermediate	11/13/2007	2220966.39	486362.57
MW-8	Intermediate	8/25/2009	2221255.06	487135.79
MW-9	Intermediate	11/5/2007	2221712.38	487140.00
MW-20	--	11/7/2007	2223638.91	485052.46
MW-1A	Background	11/8/2007	2222247.45	486761.88
MW-1B	Background	11/8/2007	2222197.16	485851.33

Notes:

1. -- indicates monitoring well/piezometer to be abandoned
2. NAD 1983 indicates horizontal coordinate system United State Plane North American Datum of 1983, Florida East, feet.
3. -- indicates wells not designated as background, intermediate, or compliance wells
4. Gray shading indicates monitoring well proposed for abandonment

TABLE 3: WELL CONSTRUCTION DETAILS - FORMER INDUSTRIAL WASTEWATER AREA
JEA St. Johns River Power Park
Jacksonville, FL

WELL NO.	DIAMETER (inches)	WELL DEPTH (ft bls)	SCREEN INTERVAL (ft bls)	TOC ELEVATION (ft - NAVD 1988)	GROUND ELEVATION (ft - NAVD 1988)	COMPLETION DATE	AQUIFER ZONE
Perimeter Wells							
MW-1S	1	12	2-12	11.16	8.5	12/5/2018	Shallow Surficial
MW-2S	1	13	3-13	11.66	9.4	12/4/2018	Shallow Surficial
MW-3S	1	12	2-12	11.10	8.5	12/4/2018	Shallow Surficial
MW-3D	1	30	25-30	10.92	8.7	12/4/2018	Intermediate Surficial
MW-4S	1	12	2-12	12.40	9.6	12/4/2018	Shallow Surficial
MW-5S	1	12	2-12	11.21	8.6	12/5/2018	Shallow Surficial
MW-5D	1	30	25-30	11.21	8.4	12/5/2018	Intermediate Surficial
TW-3A	1	40	30-40	NS	NS	10/13/2009	Intermediate Surficial

Notes:

1. ft bls = feet below land surface
2. ft-NAVD 1988 indicates measurement in feet with respect to North American Vertical Datum of 1988
3. TOC = top of casing
4. NS = not surveyed

**TABLE 4: GEOGRAPHICAL COORDINATES AND WELL DESIGNATIONS -
FORMER INDUSTRIAL WASTEWATER AREA
JEA St. Johns River Power Park
Jacksonville, FL**

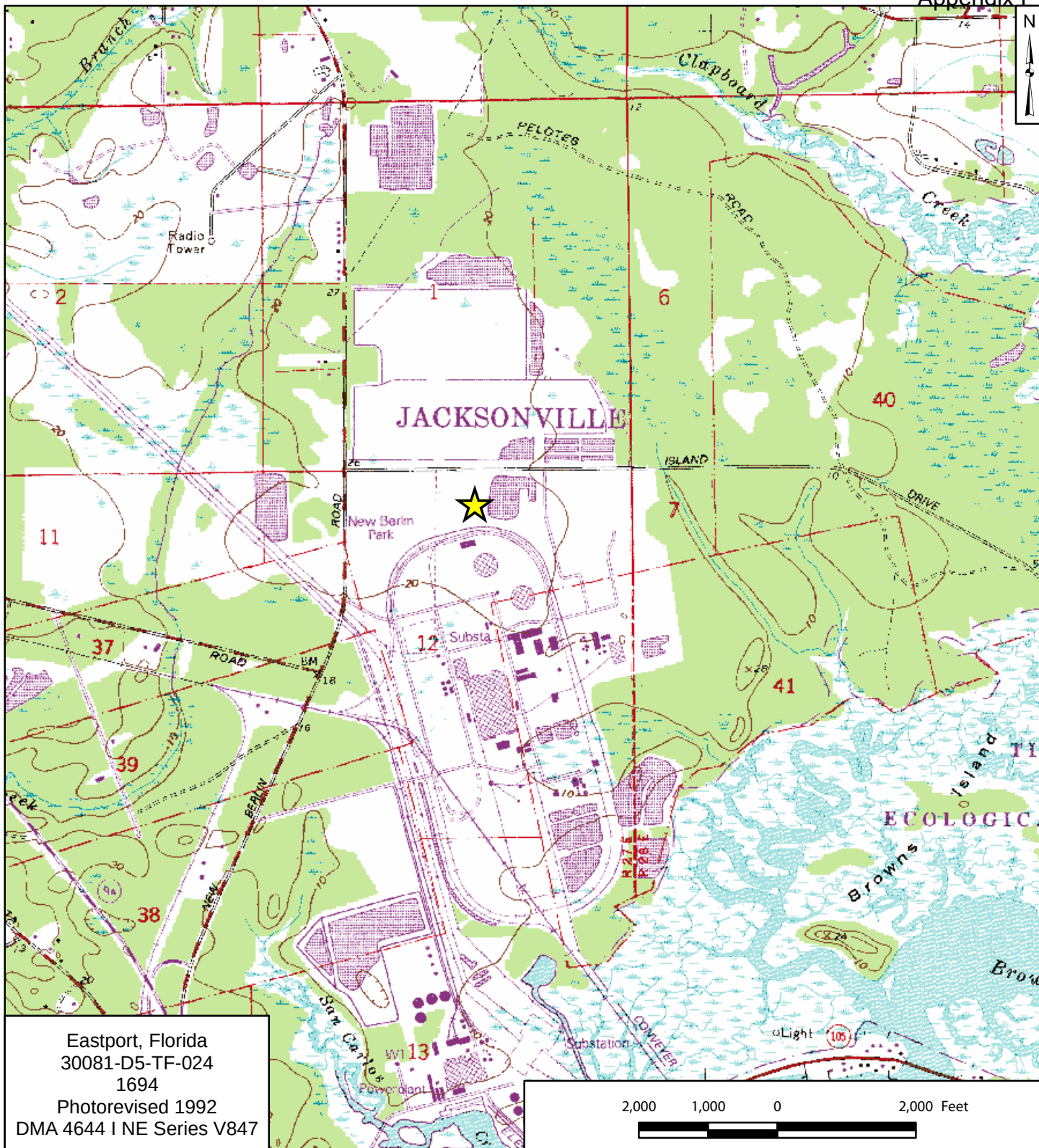
WELL NO.	WELL DESIGNATION	DATE INSTALLED	Northing Florida East (NAD 1983)	Easting Florida East (NAD 1983)
Perimeter Wells				
MW-1S	ND	12/5/2018	2217977.1	485293.0
MW-2S	ND	12/4/2018	2216758.1	485110.8
MW-3S	ND	12/4/2018	2215645.4	484847.8
MW-3D	ND	12/4/2018	2215650.4	484852.0
MW-4S	ND	12/4/2018	2214779.5	484286.5
MW-5S	ND	12/5/2018	2214412.7	483902.1
MW-5D	ND	12/5/2018	2214407.6	483907.1
TW-3A	ND	10/13/2009	NA	NA

Notes:

- indicates monitoring well/piezometer to be abandoned
- NAD 1983 indicates horizontal coordinate system United State Plane North American Datum of 1983, Florida East, feet.
- ND indicates wells not designated as background, intermediate, or compliance wells
- NA = not available

FIGURES





Legend

★ Approximate Subject Site Location

Note:
Source of Eastport, FL USGS 7.5 Minute Quadrangle:
Florida Department of Environmental Protection, Land Boundary Information
System (LABINS)

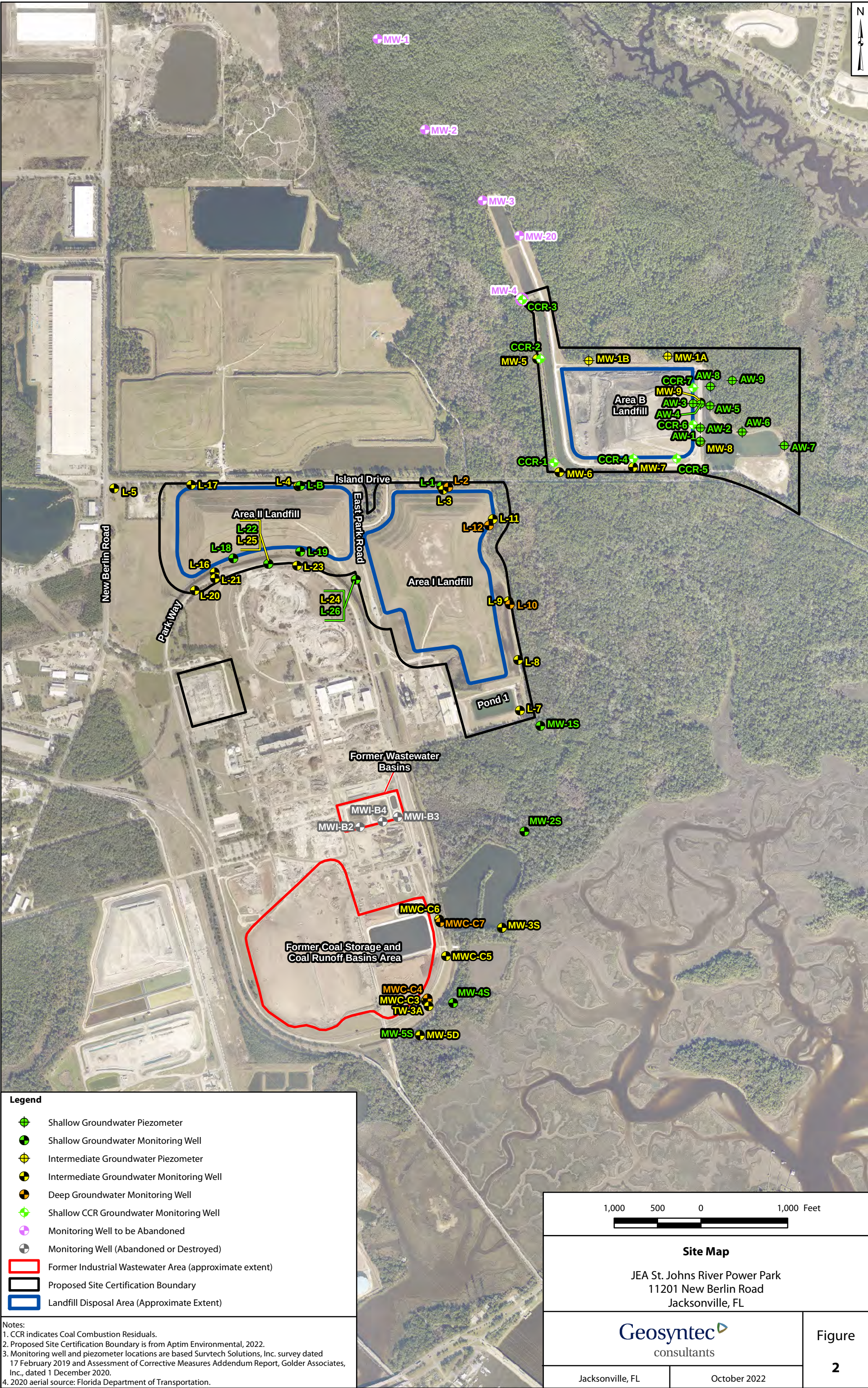
Site Location Map

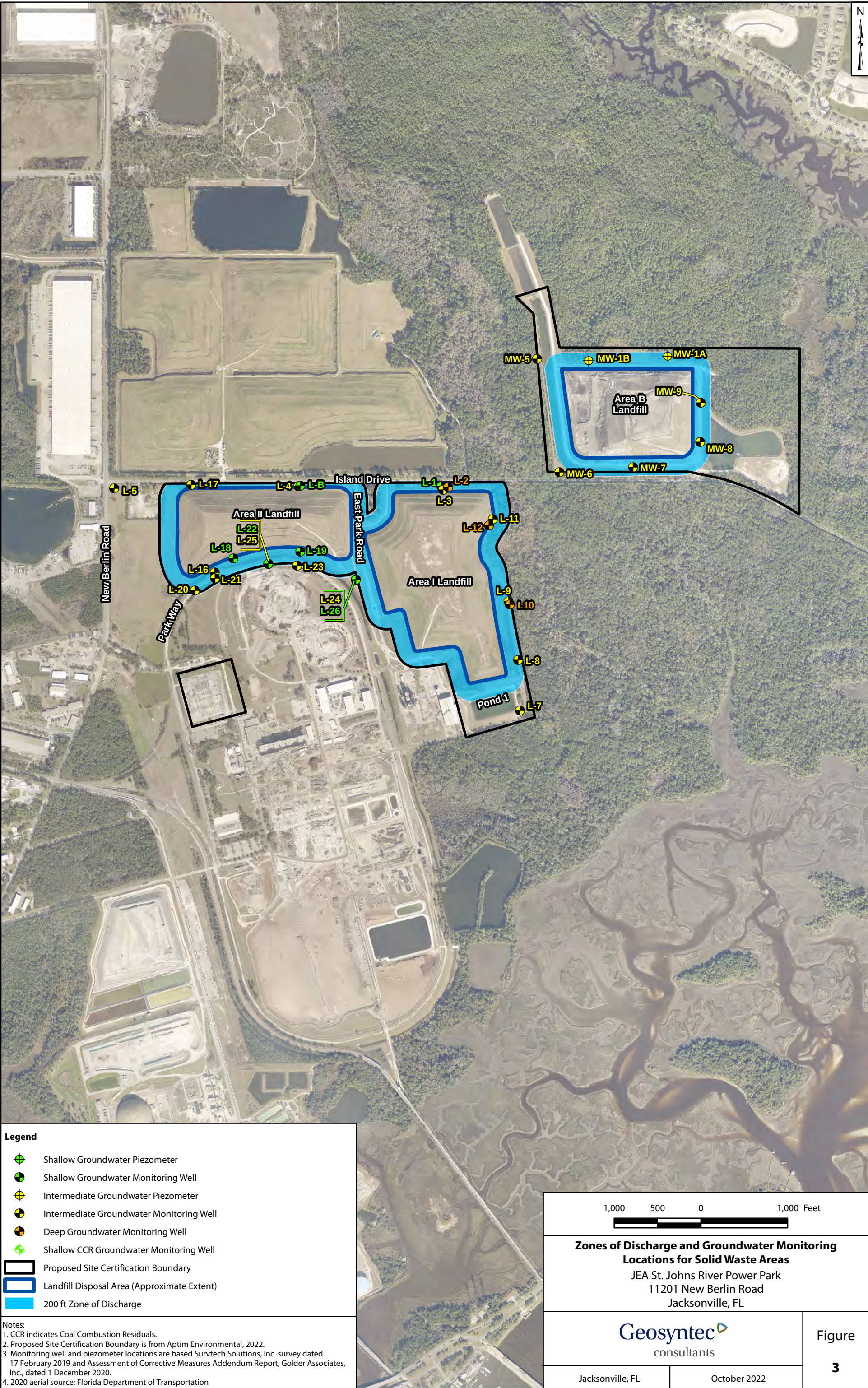
JEA St. Johns River Power Park
11201 New Berlin Road
Jacksonville, FL

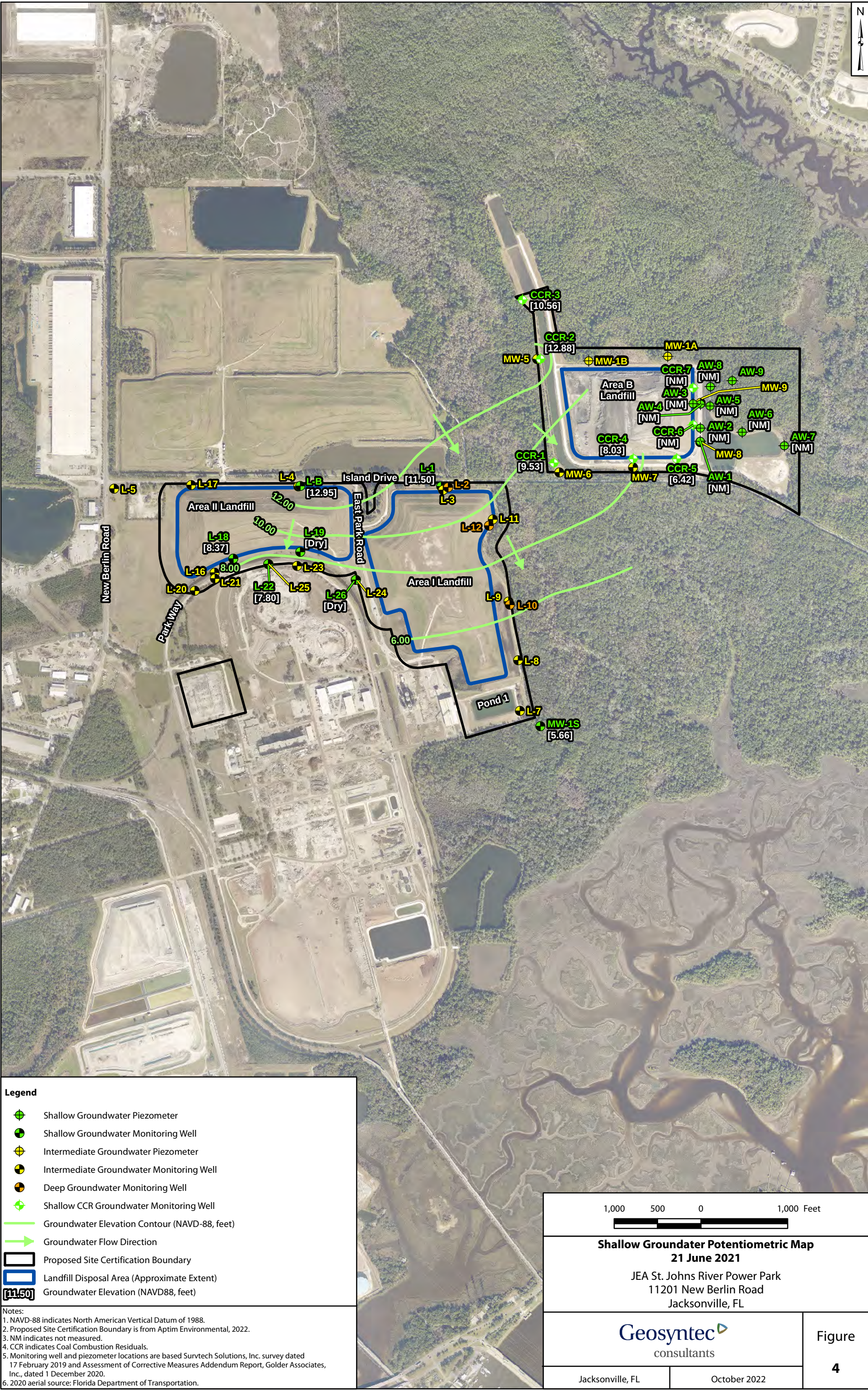
Geosyntec
consultants

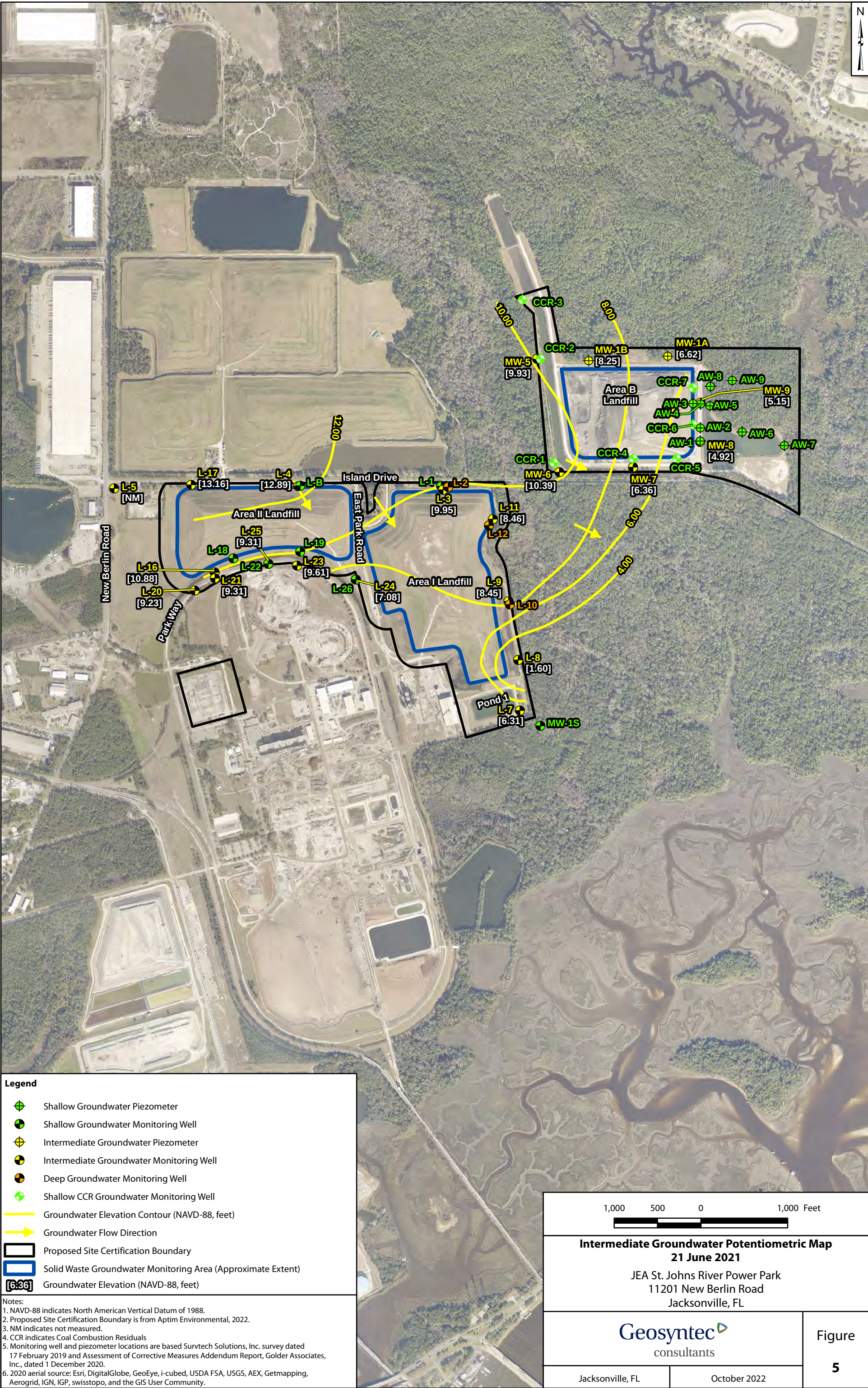
Jacksonville, FL October 2022

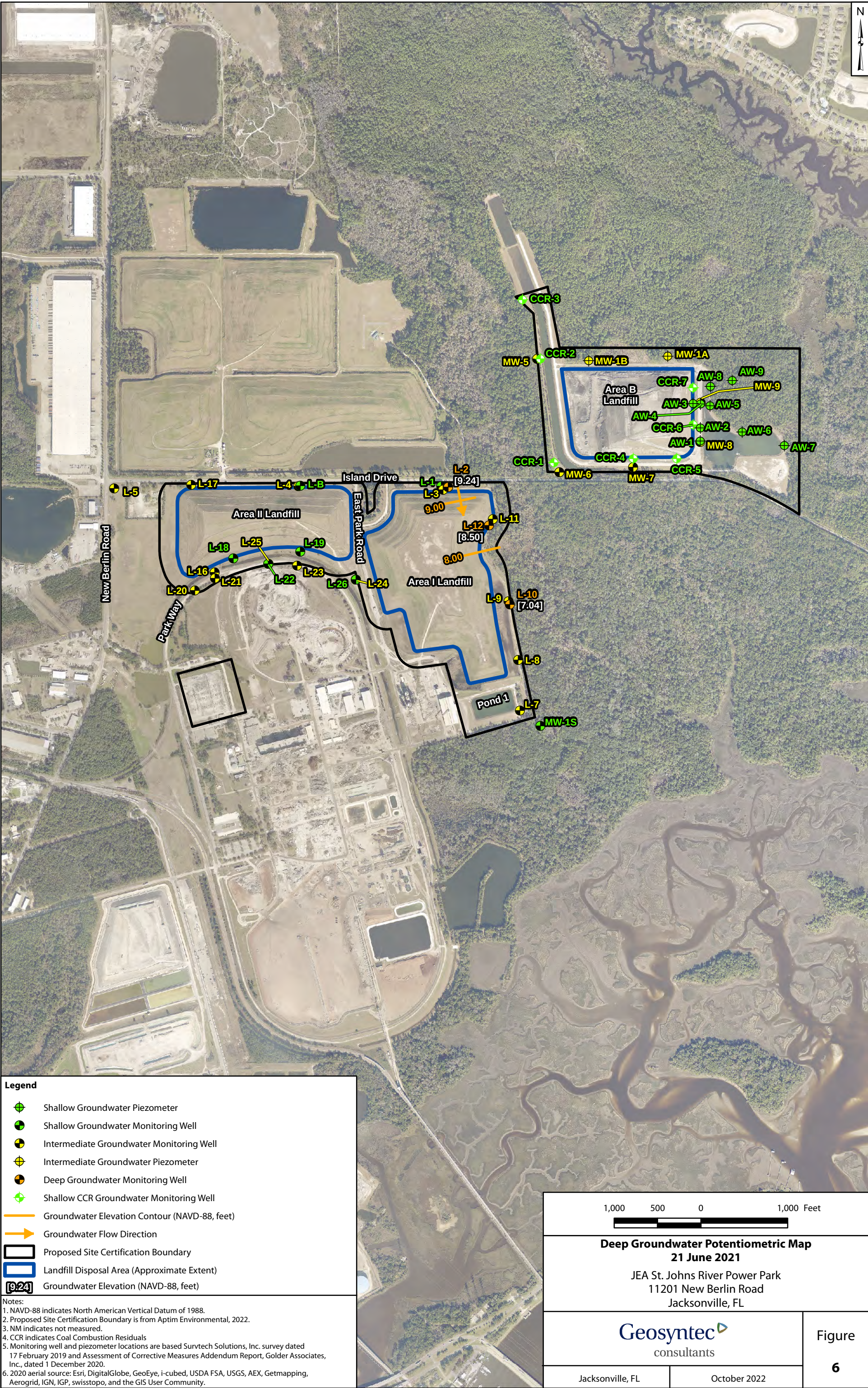
Figure 1

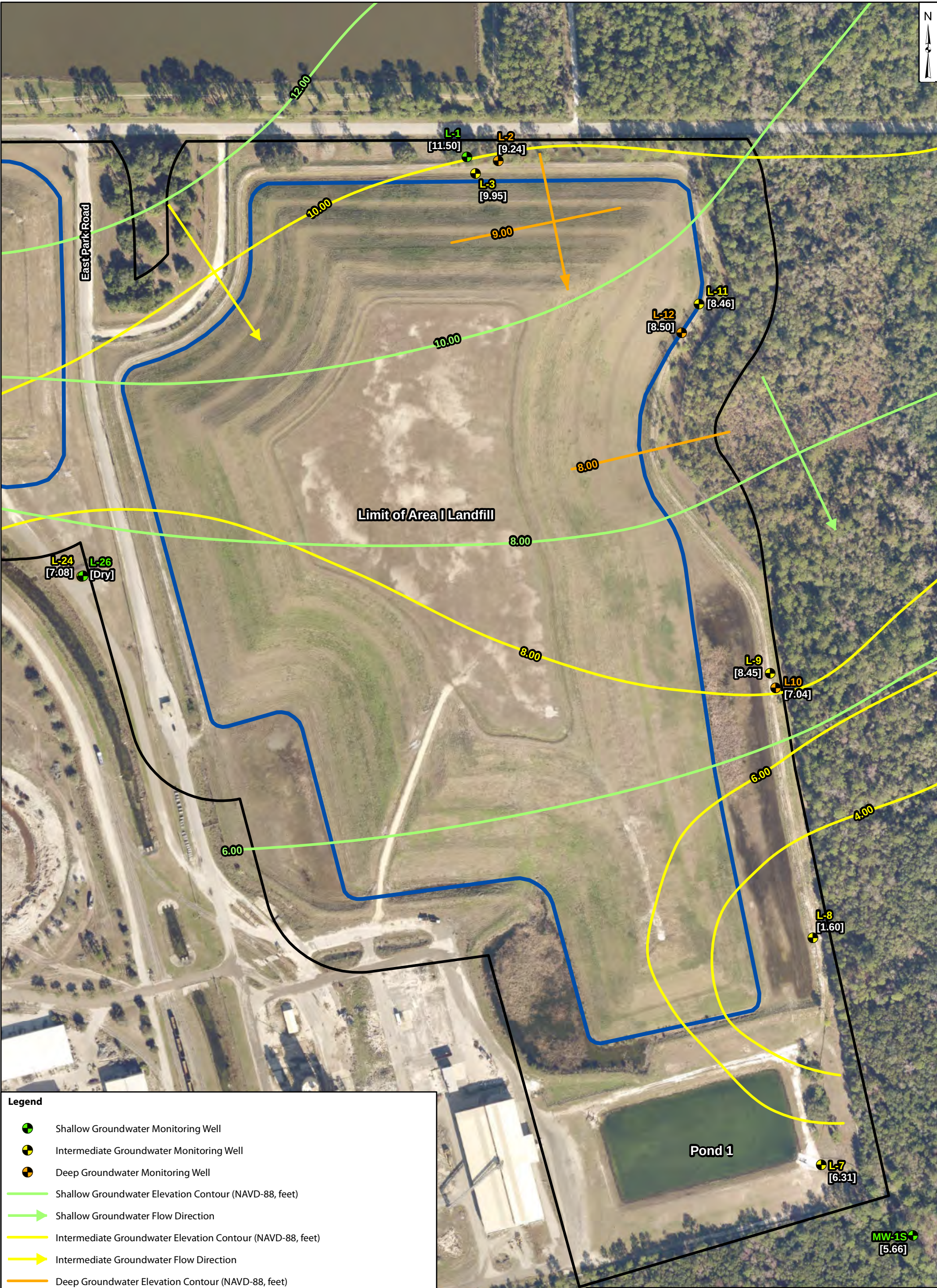












Legend

Shallow Groundwater Monitoring Well

Intermediate Groundwater Monitoring Well

Deep Groundwater Monitoring Well

Shallow Groundwater Elevation Contour (NAVD-88, feet)

Shallow Groundwater Flow Direction

Intermediate Groundwater Elevation Contour (NAVD-88, feet)

Intermediate Groundwater Flow Direction

Deep Groundwater Elevation Contour (NAVD-88, feet)

Deep Groundwater Flow Direction

Proposed Site Certification Boundary

Landfill Disposal Area (Approximate Exent)

Groundwater Elevation (NAVD-88, feet)

Notes:

1. NAVD-88 indicates North American Vertical Datum of 1988.
2. Proposed Site Certification Boundary is from Aptim Environmental, 2022.
3. CCR indicates Coal Combustion Residuals.
4. Monitoring well and piezometer locations are based Survtech Solutions, Inc. survey dated 17 February 2019 and Assessment of Corrective Measures Addendum Report, Golder Associates, Inc., dated 1 December 2020.
5. 2020 aerial source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

2401200240 Feet

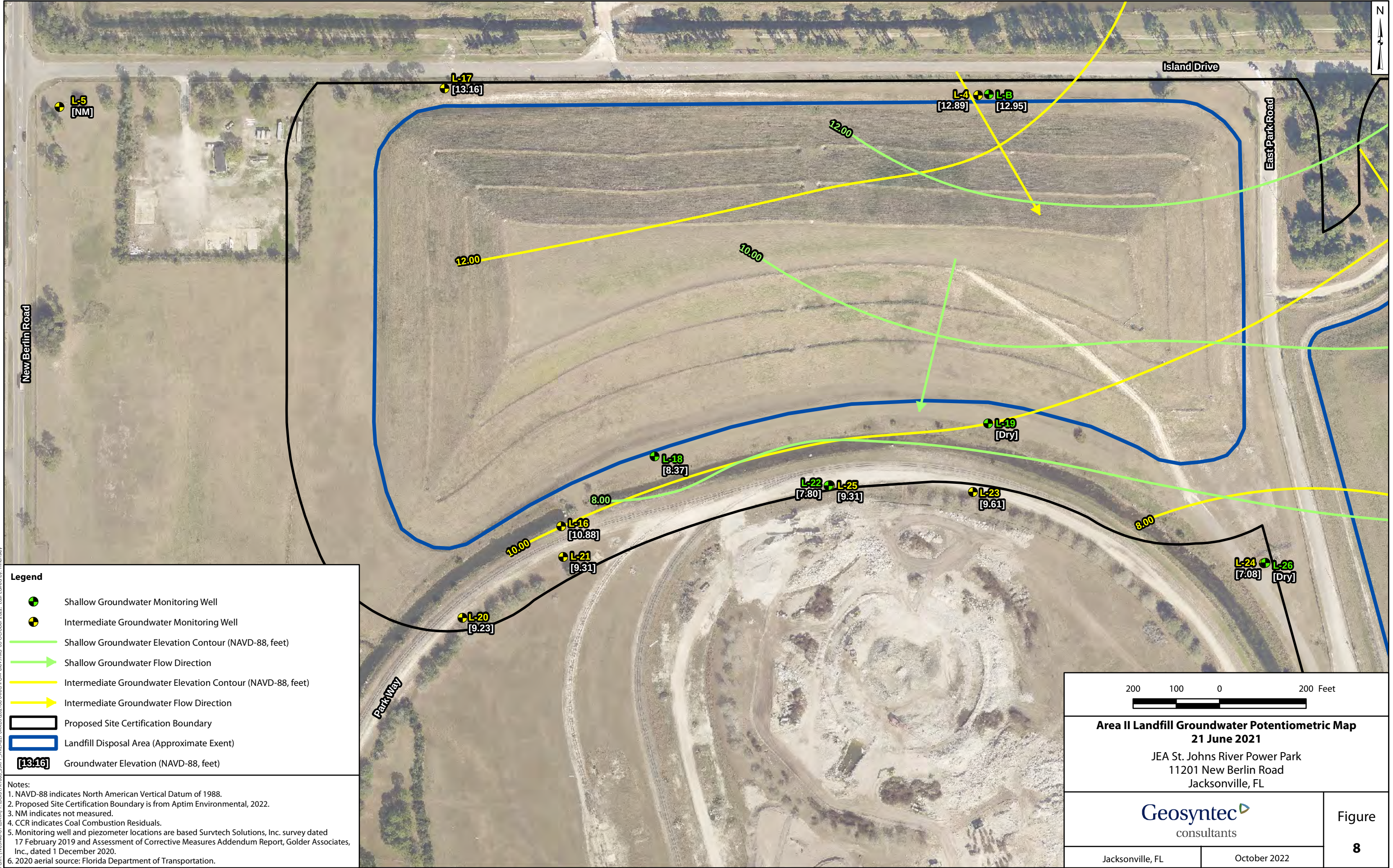
Area I Landfill Groundwater Potentiometric Map
21 June 2021
JEA St. Johns River Power Park
11201 New Berlin Road
Jacksonville, FL

Geosyntec
consultants

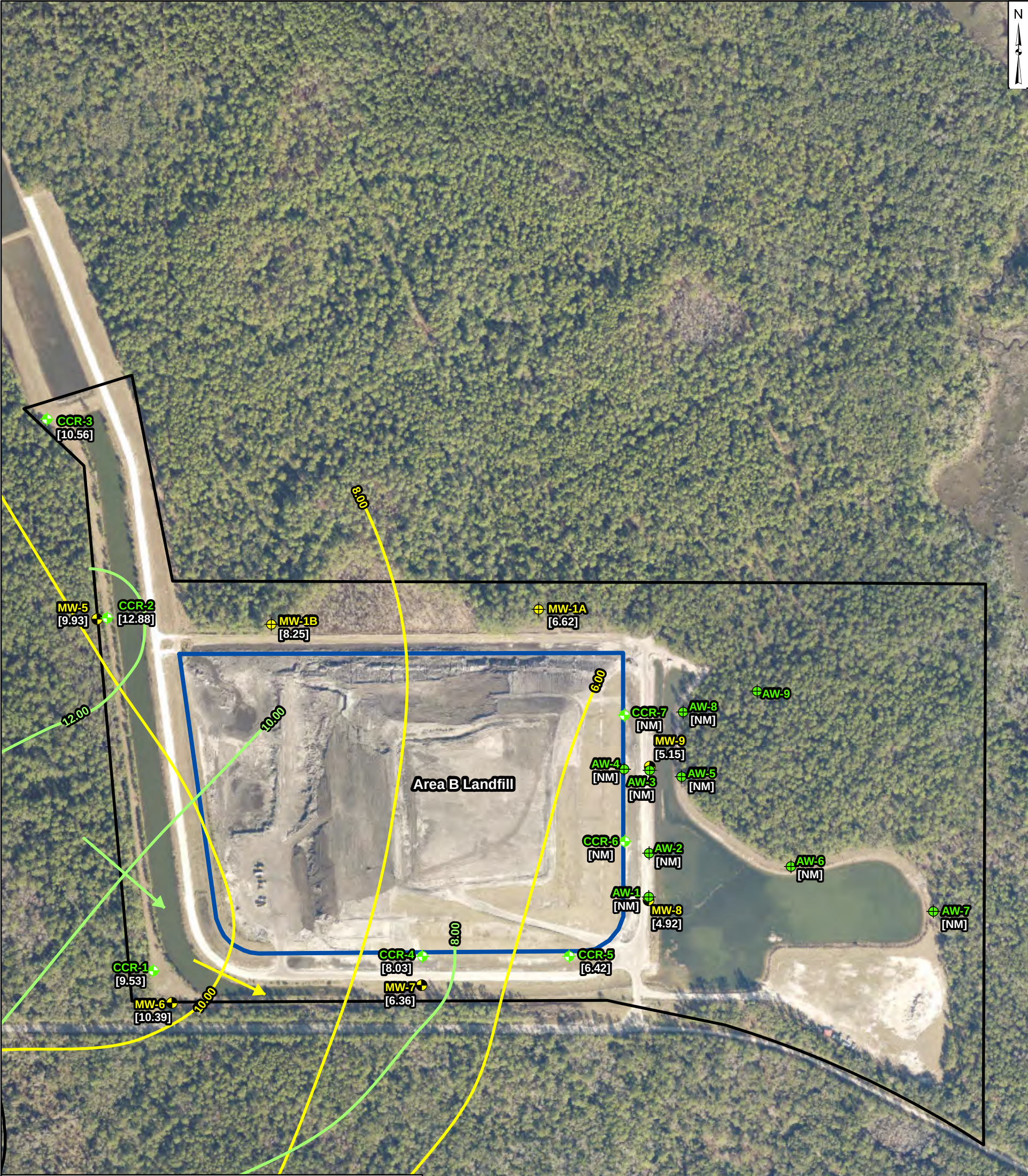
Jacksonville, FL

Figure
7

October 2022



Path: I:\Trustee-01\DATA\TUGS\SRP\465\S\SRP\AREA2\NAVD88\Area II GW elev.mxd 03 October 2022. Last Edited by: mhenley



Legend

Shallow Groundwater Piezometer

Shallow Groundwater Monitoring Well

Intermediate Groundwater Piezometer

Intermediate Groundwater Monitoring Well

Deep Groundwater Monitoring Well

Shallow CCR Groundwater Monitoring Well

Shallow Groundwater Elevation Contour (NAVD-88, feet)

Shallow Groundwater Flow Direction

Intermediate Groundwater Elevation Contour (NAVD-88, feet)

Intermediate Groundwater Flow Direction

Proposed Site Certification Boundary

Landfill Disposal Area (Approximate Extent)

Groundwater Elevation (NAVD-88, feet)

Notes:

1. NAVD-88 indicates North American Vertical Datum of 1988.

2. Proposed Site Certification Boundary is from Aptim Environmental, 2022.

3. NM indicates not measured.

4. CCR indicates Coal Combustion Residuals.

5. Monitoring well and piezometer locations are based Survtech Solutions, Inc. survey dated 17 February 2019 and Assessment of Corrective Measures Addendum Report, Golder Associates, Inc., dated 1 December 2020.

6. 2020 aerial source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

3501750350 Feet

Area B Landfill Groundwater Potentiometric Map

21 June 2021

JEA St. Johns River Power Park

11201 New Berlin Road

Jacksonville, FL

Geosyntec

consultants

Jacksonville, FL

October 2022

Figure

9

Path: [\\thruwell-01\DATA\1\CGIS\RF\66_S\REFP_ARE2\1\WDS\202108\Area B GW elev_202112.mxd 03 October 2022. Last Edited by: mhenrley



Legend

Shallow Groundwater Monitoring Well

Intermediate Groundwater Monitoring Well

Deep Groundwater Monitoring Well

Monitoring Well (Abandoned or Destroyed)

Former Industrial Wastewater Area (approximate extent)

Proposed Site Certification Boundary

Notes:

1. Proposed Site Certification Boundary is from Aptim Environmental, 2022.

2. Monitoring well and piezometer locations are based Survtech Solutions, Inc. survey dated 17 February 2019 and Assessment of Corrective Measures Addendum Report, Golder Associates, Inc., dated 1 December 2020.

3. The Coal and Limestone Storage Areas and Wastewater Basins have been decommissioned and are no longer present.

4. 2020 aerial source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

6003000600 Feet

Groundwater Monitoring for Former Industrial Wastewater Area

JEA St. Johns River Power Park

11201 New Berlin Road

Jacksonville, FL

Geosyntec

consultants

Jacksonville, FL

October 2022

Figure

10

APPENDIX A
HISTORICAL GROUNDWATER
ANALYTICAL RESULT TABLES

TABLE 2: GROUNDWATER ANALYTICAL RESULTS - AREA I LANDFILL

Facility Name: ST. JOHNS RIVER POWER PARK

Well ID	Screen Interval (ft bls)	Date Sampled	Aluminum (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Iron (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Vanadium (µg/L)
		GCTL	200	10	2000	4	5	100	1000	300	15	2	100	50	250	500	49
		NADC	2000	100	20000	40	50	1000	10000	3000	150	20	1000	500	2500	5000	490
L-1	13-23	09/29/16	6470	0.57 I	50.8	0.34	ND	4.2 I	NS	3140	ND	ND	3 I	ND	433	896	ND
		03/21/17	4123.8	0.615 U	45.7	0.364 U	0.258 U	1.75 I	0.914 U	2698.5	0.491 U	0.00500 U	1.75 I	2.72 I	301	648	0.908 I
		09/26/17	4404.1	1.38 U	58.3	0.192 U	0.698 U	2.96 I	0.914 U	3315.4	0.412 U	0.0170 U	1.37 I	2.35 U	306	701	1.11 I
		03/28/18	8760	0.55 I	56.0	5.7 J	0.05 U	2.5 U	2.5 U	2500	0.5 U	0.1 U	3.6 I	7.5 U	577	1024	5 U
		09/19/18	9474.6	0.555 I	50.8	0.350 I	0.0981 U	2.81 I	1.33 U	1426.5	0.460 U	0.0170 U	3.30 I	2.85 U	790	1214	0.911 U
		03/26/19	9424.5	0.561 I	46.5	0.302 I	0.0981 U	1.35 I	1.33 U	932.47	0.460 U	0.00575 U	1.78 I	2.85 U	778	1132	0.911 U
		09/19/19	9909.3	0.576	49.4	0.293 I	0.0276 U	0.740 I	1.33 U	1558.1	0.0490 I	0.00575 U	3.34 I	2.85 U	816	1298	0.911 U
		03/11/20	8892.8	0.558	42.0	0.382 I	0.0276 U	3.33 I	1.93 I	1034.7	0.513	0.00575 U	3.31 I	2.85 U	655	1162	1.31 I
		09/23/20	9215.9	0.813	52.0	0.371 I	0.0597 U	4.06 I	1.33 U	1174.6	0.362 I	0.00575 U	2.81 I	2.85 U	742	1220	1.21 I
		03/16/21	9384.0	0.709	41.1	0.310 I	0.0597 U	1.24 I	1.33 U	857.54	0.144 I	0.00600 U	1.02 I	2.85 U	860	1271	1.41 I
L-1 DUP	13-23	03/11/20	9366.3	0.636	43.6	0.366 I	0.0276 U	4.61 I	1.64 I	1270.2	0.429 I	0.00575 U	3.75 I	2.85 U	674	1192	1.31 I
L-2	63.5-83.5	09/29/16	ND	ND	34.3	ND	ND	ND	NS	1340	ND	ND	ND	ND	ND	292	ND
		03/21/17	8.52 I	0.615 U	33.0	0.364 U	0.258 U	0.300 I	0.914 U	1194.2	0.491 U	0.00500 U	0.281 U	2.35 U	2.5 U	229	1.05 I
		09/26/17	11.5 I	1.38 U	32.5	0.192 U	0.698 U	0.298 U	0.914 U	1318.9	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	262	0.941 I
		03/28/18	50 U	0.5 U	33.6	0.07 U	0.05 U	2.5 U	2.5 U	1260	0.5 U	0.1 U	2.5 U	7.5 U	2.5 U	284	5 U
		09/19/18	9.86 I	0.0499 U	33.1	0.0955 U	0.0981 U	0.342 U	1.33 U	1200.7	0.512 I	0.0170 U	0.717 U	2.85 U	2.5 U	287	0.911 U
		03/26/19	4.25 I	0.0499 U	31.8	0.0955 U	0.0981 U	0.363 I	1.33 U	1198.4	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	290	0.911 U
		09/19/19	4.63 I	0.149 U	33.2	0.0492 U	0.0276 U	0.711 U	1.33 U	1071.6	0.0448 U	0.00575 U	0.717 U	2.85 U	2.5 U	303	0.911 U
		03/11/20	15.1 I	0.149 U	32.5	0.0610 I	0.0276 U	0.711 U	1.33 U	1233.4	0.0770 I	0.00575 U	0.717 U	2.85 U	2.5 U	300	1.20 I
		09/23/20	3.62 I	0.149 U	33.9	0.0492 U	0.0597 U	10.4 I	1.33 U	1088.2	0.138 I	0.00575 U	0.717 U	2.85 U	2.5 U	312	1.45 I
		03/16/21	1.62 U	0.149 U	33.5	0.0590 I	0.0597 U	0.711 U	1.33 U	943.91	0.112 I	0.00600 U	0.717 U	2.85 U	2.5 U	280	0.972 I
L-3	39-49	09/29/16	86.1 I	ND	109	0.35	ND	ND	NS	6920	ND	ND	ND	ND	30.5	168	ND
		03/21/17	74.0	0.615 U	99.3	0.364 U	0.258 U	0.508 I	0.914 U	5957.7	0.491 U	0.00500 U	0.281 U	2.35 U	29.8	168	0.826 I
		09/26/17	75.4	1.38 U	101.29	0.192 U	0.698 U	0.298 U	0.914 U	6403.8	0.412 U	0.0170 U	0.281 U	2.35 U	29.7	145	0.944 I
		03/28/18	70.8 I	0.5 U	104	0.35	0.05 U	2.5 U	2.5 U	6610	0.5 U	0.1 U	2.5 U	7.5 U	29.1	160	5 U
		09/19/18	72.4	0.0499 U	105.77	0.334 I	0.0981 U	0.342 U	1.33 U	6412.9	0.460 U	0.0170 U	0.717 U	2.85 U	30.7	200	0.992 I
		03/26/19	61.7	0.0499 U	101.57	0.412 I	0.0981 U	0.596 I	1.33 U	6612.2	0.460 U	0.00575 U	0.717 U	2.85 U	33.4	200	0.911 U
		09/19/19	69.3	0.149 U	110.93	0.380 I	0.0276 U	0.711 U	1.33 U	6799.3	0.0500 I	0.00575 U	0.717 U	2.85 U	35.0	205	0.911 U
		03/11/20	77.0	0.149 U	111.04	0.484 I	0.0276 U	0.711 U	1.33 U	6975.4	0.0450 I	0.00575 U	0.717 U	2.85 U	31.9	180	0.968 I
		09/23/20	68.7	0.149 U	109.64	0.335 I	0.0597 U	0.711 U	1.33 U	6984.1	0.069 I	0.00575 U	0.717 U	2.85 U	31.1	78	0.989 I
		03/16/21	75.0	0.149 U	123.94	0.475 I	0.0597 U	0.711 U	1.33 U	7998.9	0.132 I	0.00600 U	0.717 U	2.85 U	41.4 J(M1)	175	0.911 U
L-3 DUP	39-49	09/19/19	70.8	0.149 U	113.37	0.372 I	0.0276 U	0.711 U	1.33 U	6875.6	0.0448 U	0.00575 U	0.717 U	2.85 U	31.9	190	0.911 U
L-7	29.5-39.5	09/28/16	5620	1.7	22	2.5	ND	ND	NS	1080	ND	ND	ND	ND	392	661	ND
		03/21/17	5847.6	0.615 U	22.3	2.01	0.258 U	0.298 U	0.914 U	948.58	0.491 U	0.00500 U	0.281 U	2.35 U	406	612	1.74 I
		09/26/17	5792.7	1.38 U	21.3	1.76	0.698 U	0.298 U	10.3 I	1032.2	0.412 U	0.0170 U	0.281 U	2.35 U	400	657	1.94 I
		03/28/18	5830	0.69 I	22.3	2.9	0.05 U	2.5 U	2.5 U	890	0.5 U	0.1 U	2.5 U	7.5 U	433	679	5 U
		09/19/18	9730.5	1.03	79.2	2.82	0.0981 U	0.342 U	1.33 U	273.89	0.460 U	0.0170 U	0.717 U	2.85 U	739	1180	1.41 I
		09/19/18	9969.5	0.999	26.3	2.88	0.0981 U	0.342 U	1.37 I	11741	0.460 U	0.0170 U	0.717 U	2.85 U	750	1183	1.63 I
		03/26/19	6491.5	0.794	18.9 I	2.59	0.0981 U	0.386 I	1.62 I	11929	0.460 U	0.00575 U	0.717 U	2.85 U	663	995	1.35 I
		09/19/19	8598.9	0.946	21.3	2.42	0.0276 U	0.711 U	1.33 U	6022.1	0.0610 I	0.00575 U	0.717 U	2.85 U	712	1023	1.20 I
		03/11/20	7300.6	0.889	20.5	2.54	0.0276 U	0.711 U	1.43 I	3692.0	0.0860 I	0.00900 I	0.717 U	3.43 I	544	882	2.12 I
		09/23/20	6490.0	0.878	19.4 I	1.94	0.0597 U	0.711 U	1.33 U	2254.9	0.055 I	0.00575 U	0.717 U	2.85 U	515	928	2.19 I
		03/22/21	7041.0	0.903	20.3	2.36	0.0597 U	0.711 U	1.33 U	1663.7	0.0448 U	0.00600 U	0.717 U	2.85 U	528	812	2.56 I

TABLE 2: GROUNDWATER ANALYTICAL RESULTS - AREA I LANDFILL

Facility Name: ST. JOHNS RIVER POWER PARK

Well ID	Screen Interval (ft bls)	Date Sampled	Aluminum (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Iron (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Vanadium (µg/L)
		GCTL	200	10	2000	4	5	100	1000	300	15	2	100	50	250	500	49
		NADC	2000	100	20000	40	50	1000	10000	3000	150	20	1000	500	2500	5000	490
L-8	31.5-41.5	09/29/16	178	6.5	23.7	3.8	ND	ND	NS	52800	ND	ND	ND	14.5 I	381	707	ND
		03/21/17	226.76	0.615 U	28.9	3.66	0.258 U	0.298 U	0.914 U	61185	0.491 U	0.00500 U	0.281 U	2.35 U	382	618	0.960 I
		09/26/17	191.84	1.38 U	21.2	3.69	0.698 U	0.298 U	0.914 U	58087	0.412 U	0.0170 U	0.281 U	2.35 U	362	740	0.783 U
		03/28/18	209	1.5	23.5	0.07 U	0.05 U	2.5 U	4.8 I	47400	0.5 U	0.1 U	2.5 U	7.5 U	366	630	5 U
		09/19/18	109.58	0.899	22.4	2.49	0.0981 U	0.342 U	1.33 U	37386	0.460 U	0.0170 U	0.717 U	2.85 U	278	519	1.79 I
		03/26/19	428.84	1.21	28.1	3.97	0.0981 U	0.477 I	1.33 U	30079	0.460 U	0.00575 U	0.717 U	2.85 U	358	662	0.911 U
		09/19/19	320.29	1.18	30.7	3.28	0.0276 U	0.711 U	1.33 U	49466	0.0640 I	0.00575 U	0.717 U	7.18 I	385	614	0.911 U
		03/10/20	413.14	1.42	65.9	3.42	0.0330 I	0.827 I	1.66 I	46893	0.242 I	0.00575 U	0.717 U	3.98 I	311	608	1.93 I
		09/23/20	472.67	1.69	49.0	2.57	0.0597 U	0.711 U	1.33 U	40561	0.16 I	0.00575 U	0.717 U	3.03 I	327	636	1.97 I
L-9	34.5-44.5	03/22/21	350.20	1.61	32.2	3.01	0.0597 U	0.711 U	1.33 U	41412	0.0860 I	0.00600 U	0.717 U	4.32 I	335	582	0.911 U
		09/29/16	ND	3.9	2.3	1.3	0.098 I	ND	NS	9230	ND	ND	ND	ND	620	1361	ND
		03/21/17	110.38	0.615 U	30.1	1.66	0.258 U	0.891 I	1.02 I	13576	0.491 U	0.00500 U	0.281 U	2.35 U	652	1303	1.34 I
		09/27/17	37.2	1.38 U	13.4	0.290 I	0.698 U	0.298 U	0.914 U	5318.7	0.412 U	0.0170 U	0.281 U	2.35 U	388	808	0.783 U
		03/28/18	250	0.5 U	30.6 I	5.5	0.05 I	5 U	5 U	12400	0.5 U	0.1 U	5 U	15 U	1040	1643	10 U
		09/19/18	1049.6	1.65	21.9	2.2	0.0981 U	0.554 I	1.33 U	8762.7	0.460 U	0.0170 U	0.717 U	2.85 U	621	1094	2.91 I
		03/26/19	1431.9	2.41	21.4	3.23	0.0981 U	1.39 I	1.33 U	9410.3	0.460 U	0.00575 U	0.717 U	2.85 U	640	1063	5.08 I
		09/19/19	840.01	2.06	23.9	1.99	0.0276 U	0.793 I	1.33 U	11698	0.218 I	0.00575 U	0.717 U	2.85 U	660	1217	4.91 I
		03/12/20	1094.3	1.81	24.6	2.20	0.0276 U	0.866 I	1.33 U	9283.2	0.268 I	0.00575 U	0.717 U	2.85 U	611	1170	3.79 I
L-9 (DUP)	34.5-44.5	09/23/20	2007.9	2.41	25.0	2.65	0.0597 U	0.817 I	1.33 U	9266.7	0.115 I	0.00575 U	0.717 U	2.85 U	763	1458	4.02 I
		03/22/21	1178.2	2.34	26.4	1.92	0.0597 U	0.711 U	1.33 U	9546.8	0.258 I	0.00600 U	0.717 U	2.85 U	858 M6	1456	1.82 I
L-10	71-81	03/21/17	112.36	0.615 U	29.6	1.62	0.258 U	0.859 I	1.00 I	13273	0.491 U	0.00500 U	0.281 U	2.35 U	641	1293	1.33
		09/27/17	36.5	1.38 U	13.3	0.244	0.698 U	0.298 U	0.914 U	5106.5	0.412 U	0.0170 U	0.281 U	2.35 U	405	828	0.783 U
		09/29/16	ND	ND	14.4	ND	ND	ND	NS	2400	ND	ND	ND	ND	ND	275	ND
		03/21/17	1.26 U	0.615 U	12.1 I	0.364 U	0.258 U	0.298 U	0.914 U	1518.8	0.491 U	0.00500 U	0.281 U	2.35 U	2.5 U	259	0.783 U
		09/27/17	4.74 I	1.38 U	13.1 I	0.192 U	0.698 U	0.298 U	0.914 U	1830.4	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	278	0.783 U
		03/28/18	50 U	0.5 U	15.4	0.07 U	0.05 U	2.5 U	2.5 U	2380	0.5 U	0.1 U	2.5 U	7.5 U	2.5 U	261	5 U
		09/19/18	3.91 U	0.0499 U	15.5 I	0.0955 U	0.0981 U	0.342 U	1.69 I	2185.5	0.738	0.0170 U	0.717 U	2.85 U	2.5 U	287	0.911 U
		03/26/19	8.00 I	0.0499 U	15.0 I	0.0955 U	0.0981 U	0.342 U	1.63 I	1780.8	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	284	0.911 U
		09/19/19	4.25 I	0.149 U	16.9 I	0.0492 U	0.0276 U	0.711 U	1.33 U	2266.2	0.195 I	0.00575 U	0.717 U	2.85 U	2.5 U	297	0.911 U
L-11	29-39	03/10/20	4.93 I	0.156 I	15.1 I	0.0492 U	0.0276 U	0.711 U	1.44 I	1776.5	0.202 I	0.00575 U	0.717 U	2.85 U	2.5 U	287	0.911 U
		09/23/20	5.94 I	0.149 U	15.8 I	0.0492 U	0.0597 U	0.711 U	1.33 U	1994.7	0.048 I	0.00575 U	0.717 U	2.85 U	2.6 I	334	0.911 U
		03/22/21	1.62 U	0.149 U	14.6 I	0.0492 U	0.0597 U	0.711 U	1.33 U	1627.2	0.133 I	0.00600 U	0.717 U	2.85 U	4.9 I	276	0.911 U
		09/29/16	13500	4.6	46.7	2.9	ND	3.8 I	NS	686	ND	ND	ND	ND	1550	3269	ND
		03/21/17	13565	10.1 I	49.2	2.43	0.258 U	13.1 I	1.50 I	827.25	0.491 U	0.00500 U	0.281 U	2.35 U	1410	2988	0.783 U
		09/27/17	12259	16.8	35.7 I	3.40	0.698 U	7.94 I	1.83 U	1021.4	0.412 U	0.0170 U	0.562 U	4.71 U	1320	3196	1.57 U
		03/28/18	9940	3.5	40.6	1.10	0.05 U	3.4 I	2.5 U	508	0.5 U	0.1 U	2.5 U	7.5 U	1330	3114	5 U
		09/19/18	13737	3.94	36.6	2.50	0.0981 U	10.6 I	1.33 U	663.54	0.460 U	0.0170 U	0.717 U	2.85 U	1360	3093	0.911 U
		03/26/19	12046	4.69	41.3	2.07	0.0981 U	429.90	3.53 I	3442.8	0.460 U	0.00575 U	48.2	2.85 U	1450	3103	0.911 U
L-11	29-39	09/19/19	10314	5.01	42.8	1.86	0.0276 U	110.04	1.33 U	1144.5	0.116 I	0.00575 U	14.1 I	2.85 U	1450	2993	0.911 U
		03/12/20	8868.5	4.73	38.3	2.30	0.0276 U	16.4 I	1.74 I	670.98	0.117 I	0.00575 U	2.73 I	2.85 U	1240	2870	0.911 U
		09/23/20	8511.3	4.33	36.9	2.02	0.0597 U	5.80 I	1.33 U	718.93	0.062 I	0.00575 U	1.14 I	2.85 U	1230	2843	0.911 U
		03/16/21	8683.3	5.45	39.5	1.90	0.0597 U	3.25 I	1.33 U	390.75	0.172 I	0.00600 U	0.717 U	2.85 U	1430	2819	0.911 U

TABLE 2: GROUNDWATER ANALYTICAL RESULTS - AREA I LANDFILL

Facility Name: ST. JOHNS RIVER POWER PARK

Well ID	Screen Interval (ft bls)	Date Sampled	Aluminum (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Iron (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Vanadium (µg/L)
		GCTL	200	10	2000	4	5	100	1000	300	15	2	100	50	250	500	49
		NADC	2000	100	20000	40	50	1000	10000	3000	150	20	1000	500	2500	5000	490
L-11 RS	29-39	10/17/19	NS	NS	NS	NS	NS	82.1	NS	NS	NS	NS	NS	NS	NS	NS	NS
L-11 RS DUP	'29-39	10/17/19	NS	NS	NS	NS	NS	72.6	NS	NS	NS	NS	NS	NS	NS	NS	NS
L-12	77.5-87.5	09/29/16	64.2 I	ND	20	ND	ND	ND	NS	1540	ND	ND	ND	8.4 I	ND	297	ND
		03/21/17	15.8 I	0.615 U	16.5 I	0.364 U	0.258 U	0.298 U	0.914 U	1449.6	0.491 U	0.00500 U	0.281 U	3.49 I	2.5 U	291	0.783 U
		09/27/17	1.26 U	1.38 U	16.2 I	0.192 U	0.698 U	0.298 U	0.914 U	1459.8	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	292	0.783 U
		03/28/18	50 U	0.5 U	17.4	0.07 U	0.05 U	2.5 U	2.5 U	1580	0.5 U	0.1 U	2.5 U	7.5 U	2.5 U	264	5 U
		09/19/18	3.91 U	0.0499 U	18.6 I	0.0955 U	0.0981 U	0.342 U	1.47 I	1633.6	0.460 U	0.0170 U	0.717 U	2.85 U	2.5 U	280	0.911 U
		03/26/19	3.91 U	0.0499 U	16.1 I	0.0955 U	0.0981 U	0.342 U	1.33 U	1433.1	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	270	0.911 U
		09/19/19	1.62 U	0.149 U	17.0 I	0.0492 U	0.0276 U	0.711 U	1.33 U	1463.7	0.0470 I	0.00575 U	0.717 U	2.85 U	2.5 U	290	0.911 U
		03/12/20	4.47 I	0.149 U	16.6 I	0.0500 I	0.0276 U	0.711 U	1.33 U	1415.7	0.0690 I	0.00575 U	0.717 U	2.85 U	2.5 U	277	0.911 U
		09/23/20	4.79 I	0.149 U	15.9 I	0.077 I	0.0597 U	0.711 U	1.33 U	1432.8	0.0650 I	0.00575 U	0.717 U	2.85 U	2.5 U	312	0.911 U
		03/16/21	1.62 U	0.149 U	16.7 I	0.0730 I	0.0597 U	0.711 U	1.33 U	1439.8	0.111 I	0.00600 U	0.717 U	2.85 U	2.5 U	284	0.911 U

Notes:

1. NS indicates Not Sampled.
2. Results highlighted in yellow indicate an exceedance of the groundwater cleanup target level (GCTL) pursuant to Chapter 62-777, Florida Administrative Code (FAC).
3. Results highlighted in orange indicate an exceedance of the Natural Attenuation Default Source Concentrations (NADCs) specified in Table V of Chapter 62-777, FAC.
4. ft-bl = feet below land surface
5. mg/L = milligrams per liter
6. µg/L = micrograms per liter
7. Dup indicates duplicate.
8. U = indicates the constituent was not detected above the reported value.
9. I = indicates the constituent was detected between the method detection limit (MDL) and the practical quantitation limit (PQL).
10. ND indicates analyte Not Detected.

TABLE 3: GROUNDWATER ANALYTICAL RESULTS - AREA II LANDFILL

Facility Name: ST. JOHN'S RIVER POWER PARK

Well ID	Screen Interval (ft bls)	Date Sampled	Aluminum (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Iron (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Vanadium (µg/L)
		GCTL	200	10	2000	4	5	100	1000	300	15	2	100	50	250	500	49
		NADC	2000	100	20000	40	50	1000	10000	3000	150	20	1000	500	2500	5000	490
L-B	8.5-18.5	04/26/17	4893.8	0.732 I	34.5	0.364 U	0.258 U	0.871 I	0.914 U	70.5	0.491 U	0.00500 U	0.281 U	2.43 I	481	848	2.80 I
		09/26/17	1347.8	1.38 U	20.0	0.192 U	0.698 U	0.661 I	0.914 U	28.1	0.412 U	0.0170 U	0.281 U	3.66 I	217	467	7.25 I
		03/28/18	2880.0	0.56 I	20.6	0.16	0.05 U	2.5 U	2.5 U	72.8	0.5 U	0.1 U	2.5 U	7.5 U	317	593	6.5 I
		09/19/18	2953.1	0.779	19.2 I	0.174 I	0.0981 U	0.735 I	1.33 U	66.3	0.460 U	0.0170 U	0.717 U	2.85 U	403	671	5.90 I
		03/21/19	4031.4	0.533 I	13.5 I	0.103 I	0.0981 U	1.51 I	1.33 U	68.0	0.460 U	0.00600 I	0.717 U	2.85 U	476	665	10.3 I
		09/18/19	5139.0	0.595	21.2	0.130 I	0.0276 U	0.823 I	1.33 U	62.2	0.0870 I	0.00575 U	0.717 U	2.85 U	598	870	9.89 I
		03/10/20	3720.7	0.639	17.9 I	0.167 I	0.0276 U	0.849 I	1.47 I	134.01	0.0830 I	0.00575 U	0.717 U	2.85 U	415	703	6.22 I
		09/24/20	2322.8	1.06	16.9 I	0.205 I	0.0597 U	3.08 I	1.33 U	65.8	0.387 I	0.00575 U	0.717 U	2.85 U	171	418	12.6 I
		03/22/21	6729.6	3.08	14.2 I	0.132 I	0.0597 U	2.27 I	1.40 I	125.59	0.353 I	0.0130	0.717 U	2.85 U	207	436	12.4 I
L-4	19.5-29.5	09/27/16	25500	ND	34.3	0.8	ND	ND	ND	2110	ND	ND	ND	ND	2400	3768	ND
		03/21/17	24964	0.615 U	33.6	0.571 I	0.258 U	0.453 I	1.06 I	2397.9	0.491 U	0.00500 U	0.313 I	5.54 I	2470	3754	0.783 U
		09/26/17	23519	1.38 U	35.2	0.279 I	0.698 U	0.298 U	0.914 U	3270.6	0.412 U	0.0170 U	0.281 U	5.70 I	2340	3804	0.783 U
		03/28/18	22200 J	0.5 U	37.1	0.96 J	0.05 U	2.5 U	2.5 U	3900 J	0.5 U	0.1 U	2.5 U	7.5 U	2490	4090	5 U
		09/19/18	22567	0.468 I	37.1	0.632	0.0981 U	0.342 U	1.33 U	4180.0	0.460 U	0.0170 U	0.717 U	5.10 I	2820	3940	0.911 U
		03/26/19	22645	0.414 I	33.8	0.674	0.0981 U	1.07 I	1.33 U	4306.8	0.460 U	0.00575 U	0.766 I	2.85 U	2940	4214	0.911 U
		09/18/19	22693	0.681	31.9	0.551	0.0276 U	0.711 U	1.33 U	3617.2	0.150 I	0.00575 U	4.28 I	2.85 U	2870	4070	0.911 U
		03/11/20	21301	0.657	32.7	0.658	0.0276 U	0.711 U	1.78 I	3781.3	0.223 I	0.00575 U	4.08 I	2.85 U	2790	4220	0.911 U
		09/24/20	20208	0.425 I	31.8	0.767	0.0597 U	0.711 U	1.33 U	3529.4	0.335 I	0.00575 U	1.97 I	2.85 U	2820	3945	0.911 U
L-4 DUP		03/22/21	18614	0.561	30.9	0.631	0.0597 U	0.711 U	1.33 U	3117.1	0.233 I	0.00600 U	1.46 I	2.85 U	2540	3980	1.16 I
L-5	19.5-29.5	09/18/19	24724	0.534	34.4	0.659	0.0276 U	0.711 U	1.33 U	4593.6	0.111 I	0.00575 U	4.52 I	2.85 U	2910	4210	0.911 U
		09/28/16	174	0.89 I	32.2	ND	ND	ND	NS	763	ND	ND	ND	ND	51.3	147	ND
		03/21/17	160.97	0.615 U	27.6	0.364 U	0.258 U	0.298 U	0.914 U	148.47	0.491 U	0.00500 U	0.281 U	2.35 U	46.1	110	1.31 I
		09/26/17	183.75	1.38 U	28.2	0.192 U	0.698 U	0.298 U	0.914 U	504.75	0.412 U	0.0170 U	0.281 U	2.35 U	51.1	57	1.46 I
		03/28/18	178	0.5 U	27.8	0.07 U	0.05 U	2.5 U	2.5 U	84.8	0.5 U	0.1 U	2.5 U	7.5 U	41	119	5 U
		09/19/18	185.85	0.663	28.2	0.0955 U	0.0981 U	0.342 U	1.33 U	673.60	0.460 U	0.0170 U	0.717 U	2.85 U	45.7	133	1.51 I
		03/26/19	213.30	0.552 I	30.3	0.0955 U	0.0981 U	0.590 I	5.96 I	269.06	1.15	0.00575 U	0.717 U	2.85 U	53.5	137	1.02 I
		09/19/19	181.99	0.987	30.5	0.0492 U	0.0276 U	0.711 U	1.33 U	641.87	0.0720 I	0.00575 U	0.717 U	2.85 U	56.7	142	0.911 U
		03/10/20	248.49	1.1	27.5	0.0790 I	0.0276 U	0.711 U	1.33 U	366.83	0.252 I	0.00575 U	0.717 U	2.85 U	39.9	117	1.44 I
L-5 DUP	19.5-29.5	09/24/20	218.01	0.737	26.0	0.352 I	0.0597 U	0.899 I	1.33 U	346.72	0.121 I	0.00575 U	0.717 U	2.85 U	37.4	152	1.36 I
		03/23/21	291.69	0.719	31.9	0.0890 I	0.0597 U	0.711 U	1.33 U	294.55	0.234 I	0.00600 U	0.717 U	2.85 U	39.8	120	1.70 I
L-16	32-42	03/23/21	273.97	0.759	31.2	0.0860 I	0.0597 U	0.711 U	1.38 I	263.86	0.325 I	0.00600 U	0.717 U	2.85 U	40.0	129	1.88 I
		09/27/16	92.1 I	ND	27.6	ND	ND	ND	ND	1600	ND	ND	ND	ND	ND	60	ND
		03/22/17	96.8	0.615 U	23.8	0.364 U	0.258 U	0.696 I	0.914 U	1335.6	0.491 U	0.0183 I	0.281 U	2.35 U	2.5 U	76	0.923 I
		09/25/17	73.4	1.38 U	25.3	0.192 U	0.698 U	0.537 I	0.914 U	1512.0	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	36	0.925 I
		03/28/18	52.5 I	0.5 U	22.6	0.07 U	0.05 U	2.5 U	2.5 U	1130.0	0.5 U	0.1 U	2.5 U	7.5 U	2.5 U	60	5 U
		09/18/18	75.7	0.0499 U	26.5	0.0955 U	0.0981 U	0.735 I	1.33 U	1469.7	0.460 U	0.0170 U	0.717 U	2.85 U	2.5 U	75	0.911 U
		03/26/19	54.1	0.0499 U	24.3	0.0955 U	0.0981 U	0.854 I	1.33 U	1295.2	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	62	0.911 U
		09/19/19	64.1	0.149 U	27.7	0.0590 I	0.0276 U	0.711 U	1.33 U	1495.2	0.0448 U	0.00575 U	0.717 U	2.85 U	2.5 U	85	0.911 U
		03/10/20	68.9	0.180 I	27.0	0.113 I	0.0276 U	0.724 I	1.33 U	1564.6	0.0510 I	0.00575 U	0.717 U	2.85 U	2.5 U	68	0.911 U
L-16	32-42	09/24/20	78.2	0.149 U	27.9	0.0492 U	0.0597 U	1.24 I	1.33 U	1558.2	0.062 I	0.00575 U	0.717 U	2.85 U	2.5 U	64	0.988 I
		03/22/21	72.0	0.149 U	26.3	0.0980 I	0.0597 U	0.711 U	1.33 U	1379.2	0.0560 I	0.00600 U	0.717 U	2.85 U	2.5 U, J(M1)	58	1.08 I

TABLE 3: GROUNDWATER ANALYTICAL RESULTS - AREA II LANDFILL
Facility Name: ST. JOHN'S RIVER POWER PARK

Well ID	Screen Interval (ft bls)	Date Sampled	Aluminum (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Iron (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Vanadium (µg/L)
		GCTL	200	10	2000	4	5	100	1000	300	15	2	100	50	250	500	49
		NADC	2000	100	20000	40	50	1000	10000	3000	150	20	1000	500	2500	5000	490
L-17	19.2-29.2	09/27/16	834	1.2	74.1	0.072 I	ND	ND	ND	172	ND	ND	ND	ND	121	257	ND
		03/22/17	1004.4	0.615 U	75.4	0.364 U	0.258 U	0.547 I	0.914 U	191.87	0.491 U	0.0144 I	0.281 U	3.39 I	151	266	2.16 I
		09/26/17	797.70	1.38 U	61.4	0.192 U	0.698 U	0.298 U	0.914 U	147.55	0.412 U	0.0170 U	0.281 U	2.35 U	99.9	244	1.36 I
		03/28/18	811.00	0.65 I	61.4	0.07 U	0.05 U	2.5 U	2.5 U	141	0.5 U	0.1 U	2.5 U	7.5 U	102	246	5 U
		09/19/18	1282.1	0.993	74.7	0.0955 U	0.0981 U	0.342 U	1.33 U	257.86	0.460 U	0.0170 U	0.717 U	2.85 U	185	359	1.52 I
		03/26/19	1546.3	2.01	69.3	0.144 I	0.0981 U	0.365 I	1.33 U	459.81	0.460 U	0.00575 U	0.717 U	2.85 U	237	423	1.87 I
		09/18/19	1329.7	2.43	56.1	0.118 I	0.0276 U	0.711 U	1.33 U	458.63	0.0448 U	0.00575 U	0.717 U	2.85 U	153	300	1.76 I
		03/10/20	1498.1	2.68	54.4	0.140 I	0.0276 U	0.711 U	1.33 U	526.1	0.0690 I	0.00575 U	0.717 U	2.85 U	132	288	2.70 I
		09/24/20	2589.9	1.4	57	0.148 I	0.0597 U	1.74 I	1.33 U	468.2	0.197 I	0.00575 U	0.717 U	2.85 U	98.9	258	2.54 I
		03/23/21	2265.3	0.727	75.3	0.123 I	0.0597 U	0.711 U	1.33 U	353.96	0.0448 U	0.00600 U	0.717 U	2.85 U	252	462	1.77 I
L-18	4.7-14.7	09/27/16	5070	7.5	57	ND	0.15	ND	5.4	5040	ND	ND	ND	ND	2140	3470	9.7 I
		03/22/17	7291.6	4.45 I	47.3	0.364 U	1.13 I	0.459 I	0.914 U	4450.7	0.491 U	0.0215 I	0.628 I	2.70 I	1990	1597	3.35 I
		09/26/17	6797.1	5.42	55.7	0.192 U	1.20 I	0.298 U	0.914 U	5255.1	0.412 U	0.0170 U	0.281 U	2.35 U	1890	3178	5.34 I
		03/28/18	7760	2.4	44	0.35 U	0.098 I	2.5 U	2.5 U	5490	0.5 U	0.1 U	2.5 U	7.5 U	2060	3206	5 U
		09/18/18	6072.9	4.41	56.8	0.177 I	0.516 I	0.708 I	1.33 U	4340.8	0.460 U	0.0170 U	0.717 U	2.85 U	2130	3310	0.911 U
		03/20/19	8803.4	2.45	49.8	0.237 I	0.401 I	0.999 I	1.35 I	6019.3	0.460 U	0.00575 U	0.717 U	2.85 U	116	3528	0.911 U
		09/18/19	5310.1	4.58	58.8	0.201 I	0.426 I	0.711 U	1.33 U	5224.1	0.0448 U	0.00575 U	1.74 I	2.85 U	2280	3550	2.14 I
		03/10/20	6473.5	3.17	51.4	0.245 I	0.388 I	0.711 U	1.33 U	4973.3	0.0590 I	0.00575 U	1.89 I	2.85 U	2090	3327	2.65 I
		09/24/20	3763.1	3.9	53.7	0.179 I	0.466 I	0.711 U	1.33 U	5177.0	0.058 I	0.00575 U	0.964 I	2.85 U	2050	3322	3.28 I
		03/22/21	4823.4	1.46	48.9	0.137 I	0.242 I	0.711 U	1.33 U	4044.8	0.0620 I	0.00600 U	0.717 U	2.85 U	2040	3222	2.67 I
L-19	4.7-14.7	09/27/16	128	ND	148	ND	ND	ND	ND	11400	ND	ND	ND	ND	982	1670	ND
		03/22/17	195.61	0.615 U	191.21	0.364 U	0.258 U	0.429 I	1.15 I	15999	0.491 U	0.0145 I	0.281 I	8.27 I	746	531	0.783 U
		09/26/17	526.27	1.38 U	32.9	0.192 U	0.698 U	0.566 I	0.914 U	908.44	0.412 U	0.0170 U	0.281 U	20.0 I	139	287	2.54 I
		03/28/18	188	0.5 U	141	0.14 U	0.05 U	2.5 U	2.5 U	6030.0	0.5 U	0.1 U	2.5 U	8.4 I	882	1520	5 U
		09/18/18	149.18	0.124 I	112.08	0.108 I	0.0981 U	0.342 U	1.39 I	7466.0	0.460 U	0.0170 U	0.717 U	8.74 I	537	993	0.911 I
		03/20/19	174.48	0.169 I	99.6	0.162 I	0.0981 I	0.611 I	1.33 U	4979.4	0.460 U	0.00575 U	0.717 U	7.38 I	606	953	0.911 U
		09/19/19	848.83	0.574	81.9	0.299 I	0.0276 U	1.06 I	1.33 U	5745.4	0.0530 I	0.00575 U	0.897 I	11.6 I	653	1340	2.55 I
		03/10/20	163.35	0.296 I	65.0	0.174 I	0.0430 I	0.711 U	1.97 I	3940.2	0.0930 I	0.00575 U	0.717 U	16.4 I	428	780	1.64 I
		09/24/20	220.42	0.149 U	34.4	0.093 I	0.0597 U	0.711 U	1.33 U	2262.2	0.077 I	0.00575 U	0.717 U	11.5 I	235	444	3.78 I
		03/22/21	219.96	0.158 I	100.02	0.130 I	0.0597 U	0.711 U	1.33 U	4010.3	0.0840 I	0.00600 U	0.717 U	8.76 I	711	1166	4.32 I
L-20	19.2-29.2	09/27/16	93 I	ND	10.3	ND	ND	ND	ND	139	ND	ND	ND	42.0	ND	42	ND
		03/22/17	74.3	0.615 U	9.61 I	0.364 U	0.258 U	0.298 U	0.914 U	137.43	0.491 U	0.0127 I	0.281 U	3.31 I	2.5 U	20	0.783 U
		09/25/17	79.1	1.38 U	9.25 I	0.192 U	0.698 U	0.298 U	0.914 U	138.17	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	39	0.783 U
		03/27/18	121	0.5 U	9.5 I	0.07 U	0.05 U	2.5 U	2.5 U	158	0.5 U	0.1 U	2.5 U	7.5 U	2.5 U	58	5 U
		09/18/18	110.40	0.0499 U	9.07 I	0.0955 U	0.0981 U	0.342 U	1.33 U	149.38	0.460 U	0.0170 U	0.717 U	2.85 U	2.5 U	54	0.911 U
		03/21/19	163.72	0.0499 U	8.82 I	0.0955 U	0.0981 U	0.455 I	1.33 U	171.88	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	43	0.911 U
		09/18/19	102.95	0.149 U	8.91 I	0.1250 I	0.0276 U	0.711 U	1.33 U	136.36	0.122 I	0.00575 U	0.717 U	2.85 U	2.5 U	36	0.911 U
		03/10/20	116.15	0.175 I	8.78 I	0.103 I	0.0276 U	0.711 U	1.33 U	150.84	0.0710 I	0.00575 U	0.717 U	2.85 U	2.5 U	41	0.911 U
		09/24/20	110.95	0.149 U	9.03 I	0.0492 U	0.0597 U	0.711 U	1.33 U	144.73	0.057 I	0.00575 U	0.717 U	2.85 U	2.5 U	39	0.911 U
		03/22/21	148.06	0.149 U	8.75 I	0.0610 I	0.0597 U	0.711 U	1.33 U	145.68	0.0650 I	0.00600 U	0.717 U	2.85 U	2.5 U	39	0.911 U
L-20 DUP	19.2-29.2	03/10/20	119.6	0.155 I	8.59 I	0.0660 I	0.0276 U	0.711 U	1.33 U	147.83	0.0610 I	0.00575 U	0.717 U	2.85 U	2.5 U	38	0.911 U

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Facility Name: ST. JOHN'S RIVER POWER PARK

Well ID	Screen Interval (ft bls)	Date Sampled	Aluminum (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Iron (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Vanadium (µg/L)
		GCTL	200	10	2000	4	5	100	1000	300	15	2	100	50	250	500	49
		NADC	2000	100	20000	40	50	1000	10000	3000	150	20	1000	500	2500	5000	490
L-21	19.2-29.2	09/27/16	810	ND	59.5	0.39	ND	3 I	ND	2590	ND	ND	ND	ND	ND	58	ND
		03/22/17	1408.2	0.615 U	45.6	0.364 U	0.258 U	2.79 I	0.914 U	2339.5	0.491 U	0.0111 I	0.281 U	2.35 U	2.5 U	23	3.66 I
		09/25/17	986.06	1.38 U	43.6	0.192 U	0.698 U	1.81 I	0.914 U	2169.1	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	65	2.97 I
		03/27/18	422	0.5 U	43.8	0.31	0.05 U	2.5 U	2.5 U	2000	0.5 U	0.1 U	2.5 U	7.5 U	2.5 U	60	5 U
		09/18/18	603.69	0.0700 I	43.4	0.273 I	0.0981 U	1.30 I	1.33 U	2009.8	0.460 U	0.0170 U	0.717 U	2.85 U	2.5 U	65	1.83 I
		03/20/19	289.41	0.0640 I	48.8	0.332 I	0.0981 U	1.02 I	1.33 U	2746.9	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	57	0.922 I
		09/18/19	438.28	3.89	41.9	0.0492 U	0.0276 U	0.963 I	1.33 U	1832.6	0.0448 U	0.00575 U	0.717 U	2.85 U	2.5 U	106	0.911 U
		03/10/20	1177.4	0.441 I	46.0	0.355 I	0.0276 U	2.18 I	1.33 U	2332.4	0.456 I	0.00575 U	0.717 U	2.85 U	2.5 U	65	2.74 I
		09/24/20	313.04	0.149 U	46.5	0.256 I	0.0597 U	0.888 I	1.33 U	2014.4	0.103 I	0.00575 U	0.717 U	2.85 U	2.5 U	84	1.36 I
		03/22/21	408.97	0.149 U	52.7	0.349 I	0.0597 U	1.04 I	1.33 U	3321.4	0.154 I	0.00600 U	0.717 U	2.85 U	2.5 U	50	1.77 I
L-21 (DUP)	19.2-29.2	03/22/17	1310.8	0.615 U	44.5	0.364 U	0.258 U	2.53	0.914 U	2254.4	0.728	0.0136	0.281 U	2.35 U	2.5 U	32	3.46
		09/25/17	1029.7	1.38 U	43.3	0.192 U	0.698 U	1.86	0.914 U	2185.2	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	77	2.94
		09/27/16	2380	0.64 I	149	0.1	ND	ND	ND	1090	ND	ND	ND	ND	645	9332	ND
L-22	2.7-12.7	03/22/17	2636.5	7.04 I	75.9	0.364 U	0.258 U	0.824 I	0.914 U	1442.9	0.491 U	0.0223 I	0.281 U	3.44 I	475	3806	4.52 I
		09/25/17	1697.6	16.1	3.01 I	0.192 U	0.698 U	0.298 U	0.914 U	974.72	0.412 U	0.0170 U	0.281 U	3.25 I	352	5076	4.39 I
		03/27/18	1310	1	74	0.07 U	0.05 U	2.5 U	2.5 U	682	0.5 U	0.1 U	2.5 U	7.5 U	530	7550	5 U
		09/18/18	1643.1	0.759	77.5	0.0955 U	0.0981 U	0.380 I	1.33 U	1011.8	0.460 U	0.0170 U	0.717 U	4.04 I	455	6230	0.979 I
		03/20/19	2016.3	0.539 I	73.9	0.0955 U	0.0981 U	0.755 I	1.33 U	1131.8	0.460 U	0.00575 U	0.717 U	2.85 U	208	--	1.69 I
		09/18/19	1905.9	1.14	81.4	0.0710 I	0.0276 U	0.912 I	1.33 U	1151.5	0.156 I	0.00575 U	1.17 I	2.85 U	604	7170	6.08 I
		03/10/20	2172.1	0.987	80.0	0.0940 I	0.0276 U	0.976 I	1.33 U	1735.3	0.0760 I	0.00900 I	1.28 I	2.85 U	504	6990	9.75 I
		09/24/20	1639.8	0.582	64.2	0.0820 I	0.0597 U	1.40 I	1.33 U	1241.4	0.0730 I	0.00575 U	0.717 U	2.85 U	523	6340	3.90 I
		03/22/21	1307.9	0.959	19.9 I	0.0690 I	0.0597 U	0.816 I	1.33 U	546.14	0.115 I	0.00600 U	0.717 U	2.85 U	211	2240	6.95 I
		09/27/16	1030	1.3 I	33.5	0.66	ND	4.3 I	ND	1910	0.79 I	ND	ND	ND	ND	77	ND
L-23	19.3-29.3	03/22/17	650.01	0.615 U	31.1	0.364 U	0.258 U	2.40	0.914 U	2207.3	0.491 U	0.0145 I	0.281 U	2.35 U	2.5 U	36	4.01 I
		09/25/17	1812.0	1.38 U	29.2	0.192 U	0.698 U	2.07 I	0.914 U	1751.6	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	44	2.64 I
		03/27/18	674.0	0.77 I	30.8	0.56	0.05 U	2.6 I	2.5 U	1940	0.8 I	0.1 U	2.5 U	7.5 U	2.5 U	68	5 U
		09/18/18	581.22	0.270 I	27.0	0.355 I	0.0981 U	1.51 I	1.33 U	1377.2	0.460 U	0.0170 U	0.717 U	2.85 U	2.5 U	60	2.28 I
		03/20/19	753.23	0.298 I	29.6	0.380 I	0.0981 I	1.73 I	1.33 U	1642.2	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	55	2.06 I
		09/18/19	655.67	0.231 I	28.3	0.427 I	0.0276 U	1.38 I	1.33 U	1260.7	0.225 I	0.00575 U	0.717 U	2.85 U	2.5 U	59	1.75 I
		09/24/20	1045.0	0.740	33.1	0.514	0.0597 U	3.09 I	1.33 U	2363.9	0.704	0.00575 U	0.717 U	2.85 U	2.5 U	66	4.55 I
		03/22/21	356.44	0.253 I	30.8	0.438 I	0.0597 U	1.09 I	1.33 U	1378.8	0.238 I	0.00600 U	0.717 U	2.85 U	2.5 U	41	1.96 I
L-24	19.2-29.2	09/27/16	4220	1 I	30.3	0.72	ND	ND	ND	1680	ND	ND	ND	ND	619	1010	ND
		03/22/17	4475.1	0.764 I	28.0	0.469 I	0.258 U	0.392 I	0.914 U	1774.2	0.491 U	0.0148 I	0.281 U	2.35 U	627	997	1.65 I
		09/26/17	3717.1	1.38 U	22.9	0.192 U	0.698 U	0.298 U	0.914 U	1288.5	0.412 U	0.0170 U	0.281 U	2.35 U	626	1050	0.783 U
		03/28/18	4130	0.5 U	24.2	1.2	0.05 U	2.5 U	2.5 U	1950	0.5 U	0.1 U	2.5 U	7.5 U	497	803	5 U
		09/18/18	3788.8	0.387 I	22.8	0.547 I	0.0981 U	0.342 U	1.33 U	1455.8	0.460 U	0.0170 U	0.717 U	2.85 U	587	947	0.911 U
		03/20/19	3735.3	0.329 I	21.7	0.811	0.0981 U	0.342 U	1.33 U	1878.6	0.460 U	0.00575 U	0.717 U	2.85 U	388	638	0.911 U
		09/18/19	2829.0	0.286 I	21.9	0.623	0.0276 U	0.711 U	1.33 U	1276.0	0.0448 U	0.00575 U	0.717 U	2.85 U	371	596	0.911 U
		03/09/20	2900.9	0.460 I	23.1	0.839	0.0276 U	0.711 U	1.33 U	1506.5	0.0448 U	0.00575 U	0.717 U	2.85 U	295	505	1.04 I
		09/24/20	2550.7	0.272 I	23.9	0.47 I	0.0597 U	0.711 U	1.33 U	1126.7	0.0550 I	0.00575 U	0.717 U	2.85 U	345	596	0.911 U
		03/22/21	2911.6	0.311 I	24.4	0.598	0.0597 U	0.711 U	1.33 U	1160.8	0.0448 U	0.00600 U	0.717 U	2.85 U	272	690	1.29 I

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Facility Name: ST. JOHN'S RIVER POWER PARK

Well ID	Screen Interval (ft bls)	Date Sampled	Aluminum (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Iron (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Vanadium (µg/L)
		GCTL	200	10	2000	4	5	100	1000	300	15	2	100	50	250	500	49
		NADC	2000	100	20000	40	50	1000	10000	3000	150	20	1000	500	2500	5000	490
L-25	19.2-29.2	09/27/16	140	ND	31.9	0.2	ND	ND	ND	624	ND	ND	ND	ND	ND	38	ND
		03/22/17	88.2	0.615 U	30.4	0.364 U	0.258 U	0.45	0.914 U	598.53	0.491 U	0.0136 I	0.281 U	2.35 U	2.5 U	29	1.53
		09/25/17	248.99	1.38 U	28.9	0.192 U	0.698 U	0.298 U	0.914 U	597.94	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	37	0.783 U
		03/27/18	51.1 I	0.5 U	28.5	0.19	0.05 U	2.5 U	2.5 I	496	0.5 U	0.1 U	2.5 U	7.5 U	2.5 U	64	5 U
		09/18/18	160.23	0.0500 I	29.1	0.156 I	0.0981 U	0.342 U	1.33 U	642.37	0.460 U	0.0170 U	0.717 U	2.85 U	4.2 I	59	0.940 I
		03/21/19	84.3	0.0499 U	28.9	0.165 I	0.0981 U	0.380 I	1.33 U	522.96	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	38	0.911 U
		09/18/19	120.52	0.149 U	28.9	0.204 I	0.0276 U	0.711 U	1.33 U	581.37	0.0620 I	0.00575 U	0.717 U	2.85 U	2.5 U	41	0.911 U
		03/10/20	87.2	0.226 I	29.1	0.248 I	0.0276 U	0.711 U	1.33 U	532.98	0.0820 I	0.00575 U	0.717 U	2.85 U	2.5 U	39	0.911 U
		09/24/20	111.53	0.149 U	28.5	0.203 I	0.0597 U	1.54 I	1.33 U	599.2	0.0660 I	0.00575 U	0.717 U	2.85 U	2.5 U	46	0.911 U
		03/22/21	97.7	0.149 U	29.5	0.168 U	0.0597 U	0.711 U	1.33 U	531.79	0.0740 I	0.00600 U	0.717 U	2.85 U	2.5 U	37	0.911 U
L-26	5.4-15.4	09/27/16	78.3 I	0.74 I	29.4	ND	ND	ND	ND	93.1	ND	ND	ND	ND	551	1025	ND
		03/22/17	173.99	1.45 I	26.7	0.364 U	0.258 U	0.660 I	0.914 U	151.64	0.491 U	0.0153 I	0.788 I	2.35 U	559	925	2.47 I
		09/26/17	224.74	1.38 U	6.36 I	0.192 U	0.698 U	0.323 I	0.914 U	58.0	0.412 U	0.0170 U	0.281 U	2.35 U	41.3	192	4.89 I
		03/28/18	79.2 I	2.7	29	0.07 UJ	0.05 U	2.5 U	2.5 U	78.3	0.5 U	0.1 U	2.5 U	7.5 U	504	947	5 U
		09/18/18	137.47	2.12	10.6 I	0.0955 U	0.0981 U	0.342 U	1.33 U	181.25	0.460 U	0.0170 U	0.717 U	2.85 U	128	305	2.03 I
		03/21/19	149.04	2.12	14.2 I	0.0955 U	0.0981 U	0.342 U	1.33 U	113.2	0.460 U	0.00575 U	0.717 U	2.85 U	255	462	1.37 I
		09/18/19	42.5	2.59	28.9	0.0492 U	0.0276 U	0.711 U	1.33 U	145.99	0.0448 U	0.00575 U	0.717 U	2.85 U	482	829	0.911 U
		03/09/20	280.75	3.10	9.06 I	0.0510 I	0.0276 U	0.711 U	1.33 U	447.83	0.147 I	0.00575 U	0.717 U	2.85 U	101	296	5.08 I
		09/24/20	178.40	2.46	5.18 I	0.0492 U	0.0597 U	0.711 U	1.33 U	132.68	0.0710 I	0.00575 U	0.717 U	2.85 U	22.5	196	3.83 I
		03/22/21	84.0	2.03	20.4	0.0492 U	0.0597 U	0.711 U	1.33 U	230.51	0.0510 I	0.00600 U	0.717 U	2.85 U	366	646	2.96 I
L-26 DUP	5.4-15.4	03/21/19	180.43	2.29	14.5 I	0.0955 U	0.0981 U	0.398 I	1.33 U	173.15	0.460 U	0.00575 U	0.717 U	2.85 U	261	478	1.64 I

Notes:

1. NS indicates Not Sampled.
2. Dup indicates duplicate.
3. ft bls = feet below land surface.
4. Results highlighted in yellow indicate an exceedance of the groundwater cleanup target level (GCTL) pursuant to Chapter 62-777, Florida Administrative Code (FAC).
5. Results highlighted in orange indicate an exceedance of the Natural Attenuation Default Source Concentrations (NADCs) specified in Table V of Chapter 62-777, FAC.
6. µg/L = micrograms per liter.
7. mg/L = milligrams per liter.
8. U = indicates the constituent was not detected above the reported value.
9. I = indicates the constituent was detected between the method detection limit (MDL) and the practical quantitation limit (PQL).
10. ND indicates analyte Not Detected.

TABLE 4: GROUNDWATER ANALYTICAL RESULTS - AREA B LANDFILL

Facility Name: ST. JOHNS RIVER POWER PARK

Well ID	Screen Interval (ft-bls)	Date Sampled	Aluminum	Arsenic	Barium	Beryllium	Boron	Cadmium	Chloride	Chromium	Copper	Iron	Lead	Mercury	Nickel	Selenium	Sulfate	Total Dissolved Solids	Vanadium	Radium-226	Radium-228	Total Radium	
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(µg/L)	(pCi/L)	(pCi/L)	(pCi/L)
			GCTL	200	10	2000	4	1400	5	250	100	1000	300	15	2	100	50	250	500	49	---	---	5
NADC	2000	100	20000	40	14000	50	2500	1000	10000	3000	150	20	1000	500	2500	5000	490	---	---	---			
MW-1	42.44-52.44	09/21/16	142	ND	10.4	ND	NS	ND	NS	ND	ND	771	ND	ND	ND	ND	6	69	ND	NS	NS	NS	
		03/16/17	138.61	0.615 U	14.2 I	0.364 U	NS	0.258 U	NS	0.298 U	0.914 U	971.77	0.491 U	0.00500 U	0.281 U	2.35 U	6.9	72	0.783 U	NS	NS	NS	
		03/26/18	88 I	0.5 U	14.5	0.07 U	NS	0.05 U	NS	2.5 U	2.5 U	1030	0.5 U	0.1 U	2.5 U	7.5 U	6.5	80 Q	NS	NS	NS		
		09/13/18	140.23	0.0499 U	16.3 I	0.0955 U	NS	0.0981 U	NS	0.342 U	1.33 U	1159.5	0.460 U	0.0170 U	0.717 U	2.85 U	6.9	86	0.911 U	NS	NS	NS	
		03/19/19	120.08	0.0499 U	17.8 I	0.0955 U	NS	0.0981 U	NS	0.342 U	1.33 U	1265.9	0.460 U	0.00575 U	0.717 U	2.85 U	6.3	78	0.911 U	NS	NS	NS	
		09/17/19	111.42	0.149 U	14.7 I	0.0492 U	NS	0.0276 U	NS	0.711 U	1.33 U	1021.4	0.0760 I	0.00575 U	0.717 U	2.85 U	6.0	87	0.911 U	NS	NS	NS	
		03/11/20	128.65	0.149 U	17.7 I	0.0850 I	NS	0.0276 U	NS	0.711 U	1.33 U	1294.0	0.0448 U	0.00575 U	0.717 U	2.85 U	6.4	93	0.911 U	NS	NS	NS	
		09/22/20	105.35	0.149 U	18.3 I	0.067 I	NS	0.0597 U	NS	0.711 U	1.33 U	1219.3	0.0448 U	0.00575 U	0.717 U	2.85 U	7.1	102	0.911 U	NS	NS	NS	
		03/18/21	118.35	0.149 U	20.5	0.0600 I	NS	0.0597 U	NS	0.711 U	1.33 U	1407.4	0.123 I	0.00600 U	0.717 U	2.85 U	6.5	88	0.911 U	NS	NS	NS	
		MW-1 (DUP)	42.44-52.44	03/16/17	133.88	0.615 U	14.1	0.364 U	NS	0.258 U	NS	0.298 U	0.914 U	971.51	0.491 U	0.00500 U	0.281 U	2.35 U	6.7	70	0.783 U	NS	NS
MW-2	42.37-52.37	09/21/16	61 I	ND	11.5	ND	NS	ND	NS	ND	ND	1760	ND	ND	ND	ND	ND	136	ND	NS	NS	NS	
		03/16/17	94.6	0.615 U	12.0 I	0.364 U	NS	0.258 U	NS	0.317 I	0.914 U	1576.1	0.491 U	0.00500 U	0.281 U	2.35 U	2.5 U	118	0.923 I	NS	NS	NS	
		10/12/17	73.3	1.38 U	10.9 I	0.192 U	NS	0.698 U	NS	0.472 I	1.13 I	1390.5	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	117	0.824 I	NS	NS	NS	
		03/26/18	50 U	0.5 U	10.6	0.07 U	NS	0.05 U	NS	2.5 U	2.5 U	1490	0.5 U	0.1 U	2.5 U	7.5 U	2.5 U	188 Q	5 U	NS	NS	NS	
		09/13/18	172.98	0.0499 U	12.4 I	0.0955 U	NS	0.0981 U	NS	0.366 I	1.33 U	1651.7	0.460 U	0.0170 U	0.717 U	2.85 U	2.5 U	107	0.947 I	NS	NS	NS	
		03/19/19	110.87	0.0499 U	10.7 I	0.0955 U	NS	0.0981 U	NS	0.662 I	1.33 U	1340.7	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	110	0.919 I	NS	NS	NS	
		09/17/19	75.6	0.149 U	10.6 I	0.0492 U	NS	0.0276 U	NS	0.711 U	1.33 U	1478.4	0.225 I	0.00575 U	0.717 U	2.85 U	2.5 U	133	0.911 U	NS	NS	NS	
		03/11/20	64.3	0.149 U	10.2 I	0.0492 U	NS	0.0276 U	NS	0.711 U	1.33 U	1371.8	0.371 I	0.00575 U	0.717 U	2.85 U	2.5 U	134	0.911 U	NS	NS	NS	
		09/22/20	48.2	0.149 U	9.47 I	0.0492 U	NS	0.0597 U	NS	0.711 U	1.33 U	1229.1	0.0448 U	0.00575 U	0.717 U	2.85 U	2.5 U	329	0.911 U	NS	NS	NS	
		MW-2 (DUP)	42.37-52.37	03/18/21	50.3	0.149 U	9.42 I	0.0830 I	NS	0.0597 U	NS	0.711 U	1.33 U	1254.7	0.133 I	0.00600 U	0.717 U	2.85 U	2.5 U	104	0.911 U	NS	NS
MW-3	44.28-54.28	10/12/17	76.4	1.38 U	11.1	0.192 U	NS	0.698 U	NS	0.436	1.53	1429.9	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	117	0.849	NS	NS	NS	
		09/21/16	ND	ND	29	0.16	NS	ND	NS	ND	ND	1110	ND	ND	ND	ND	5	78	ND	NS	NS	NS	
		03/16/17	59.4	0.615 U	29.7	0.364 U	NS	0.258 U	NS	0.298 U	0.914 U	1097.1	0.491 U	0.00500 U	0.281 U	2.35 U	5.8	52	0.783 U	NS	NS	NS	
		10/11/17	52.5	1.38 U	29.4	0.192 U	NS	0.698 U	NS	0.356 I	0.914 U	1066.7	0.412 U	0.0170 U	0.385 I	2.35 U	5.3	53	0.783 U	NS	NS	NS	
		03/27/18	50 U	0.5 U	30.1	0.07 U	NS	0.05 U	NS	2.5 U	2.5 U	1120	0.5 U	0.1 I	2.5 U	7.5 U	5.1	55	5 U	NS	NS	NS	
		09/18/18	38.5	0.0499 U	28.9	0.160 I	NS	0.0981 U	NS	0.342 U	1.33 U	972.28	0.460 U	0.0170 U	0.717 U	2.85 U	5.1	51	0.911 U	NS	NS	NS	
		03/19/19	45.1	0.0499 U	34.6	0.190 I	NS	0.0981 U	NS	0.354 I	1.33 U	1104.6	0.460 U	0.00575 U	0.717 U	2.85 U	4.7 I	57	0.911 U	NS	NS	NS	
		09/17/19	22.7	0.149 U	34.1	0.190 I	NS	0.0276 U	NS	0.711 U	1.33 U	1084.2	0.0448 U	0.00575 U	0.717 U	2.85 U	5.2	60	0.911 U	NS	NS	NS	
		03/11/20	24.9	0.149 U	39.1	0.262 I	NS	0.0276 U	NS	0.711 U	1.33 U	1232.5	0.0760 I	0.00575 U	0.717 U	2.85 U	4.9 I	70	0.911 U	NS	NS	NS	
		09/23/20	22.8	0.149 U	38.5	0.276 I	NS	0.0597 U	NS	0.711 U	1.33 U	1188.2	0.0690 I	0.00575 U	0.717 U	2.85 U	5.4	98	0.911 U	NS	NS	NS	
MW-3 Dup	44.28-54.28	03/19/21	34.3	0.149 U	53.0	0.335 I	NS	0.0597 U	NS	0.711 U	1.33 U	1685.7	0.118 I	0.00600 U	0.717 U	2.85 U	8.6	64	0.911 U	NS	NS	NS	
MW-4	36.84-46.84	03/27/18	50 U	0.5 U	29.6	0.22	NS	0.05 U	NS	2.5 U	2.5 U	1080	0.5 U	0.1 U	2.5 U	7.5 U	5.1	3 U	5 U	NS	NS	NS	
		09/21/16	ND	ND	20.3	ND	NS	ND	NS	ND	ND	1490	ND	ND	ND	ND	ND	270	ND	NS	NS	NS	
		03/16/17	1.26 U	0.615 U	19.3 I	0.364 U	NS	0.258 U	NS	0.422 I	0.914 U	1371.9	0.491 U	0.00500 U	0.281 U	2.35 U	2.5 U	270	1.46 I	NS	NS	NS	
		10/11/17	31.2	1.38 U	18.2 I	0.192 U	NS	0.698 U	NS	0.722 I	0.971 I	1281.4	0.412 U	0.0170 U	0.281 U	2.35 U	2.5 U	265	1.27 I	NS	NS	NS	
		03/27/18	50 U	0.5 U	18.2	0.07 U	NS	0.05 U	NS	2.5 U	2.5 U	1290	0.5 U	2	2.5 U	7.5 U	2.5 U	250	5 U	NS	NS	NS	
		09/18/18	28.5	0.0499 U	17.0 I	0.0955 U	NS	0.0981 U	NS	0.579 I	1.33 U	1212.9	0.460 U	0.0170 U	0.717 U	2.85 U	2.5 U	240	1.12 I	NS	NS	NS	
		03/19/19	22.9	0.0499 U	15.6 I	0.0955 U	NS	0.0981 U	NS	0.688 I	1.33 U	1043.8	0.460 U	0.00700 I	0.717 U	2.85 U	2.5 U	224	1.29 I	NS	NS	NS	
		09/17/19	12.4 I	0.149 U	14.3 I	0.0492 U	NS	0.0276 U	NS	0.711 U	1.33 U	995.19	0.0700 I	0.00575 U	0.717 U	2.85 U	2.5 U	217	0.911 U	NS	NS	NS	
		03/11/20	14.7 I	0.149 U	15.5 I	0.0492 U	NS	0.0276 U	NS	0.711 U	1.33 U	1080.6	0.0710 I	0.00575 U	0.717 U	2.85 U	2.5 U	233	1.19 I	NS	NS	NS	
		09/23/20	25.3	0.149 U	14.0 I	0.0492 U	NS	0.0597 U	NS	0.711 U	1.33 U	932.40	0.075 I	0.00575 U	0.717 U	2.85 U	2.5 U	244	1.18 I	NS	NS	NS	
MW-4 Dup	36.84-46.84	03/19/21	13.8 I	0.149 U	15.6 I	0.0530 I	NS	0.0597 U	NS	0.711 U	1.33 U	998.02	0.170 I	0.00600 U	0.717 U	2.85 U	3.0 I	208	1.44 I	NS	NS	NS	
MW-5	33.31-43.31	09/23/20	24.5	0.149 U	38.4	0.171 I	NS	0.0597 U	NS	0.711 U	1.33 U	1208.90	0.0690 I	0.00575 U	0.717 U	2.85 U	2.5 U	72 V	0.911 U	NS	NS	NS	
		09/21/16	583	1.2	23.5	0.45	NS	ND	NS	ND	ND	2090	0.54 I	ND	ND	ND	ND	72	ND	NS	NS	NS	
		03/16/17	1527.1	0.615 U	26.7	0.429 I	NS	0.258 U	NS	3.37 I	0.914 U	2239.5	0.515 I	0.00500 U	0.37 I	2.35 U	2.5 U	64	5.42 I	NS	NS	NS	
		10/11/17	4883.0	1.38 U	30.8	0.386 I	NS	0.698 U	NS	5.04 I	1.58 I	3006.4	0.412 U	0.0170 U	0.925 I	2.35 U	2.5 U	66	7.31 I	NS	NS	NS	
		03/27/18	224.00	0.5 U	23.3	0.43	NS	0.05 U	NS	2.5 U	2.5 U	1550.0	0.5 U	0.31	2.5 U	7.5 U	2.5 U	65	5 U	NS	NS	NS	
		09/18/18	365.79	0.119 I	22.9	0.259 I	NS	0.0981 U	NS	0.723 I	1.33 U	1253.0	0.460 U	0.0170 U	0.717 U	2.85 U	2.5 U	55	1.25 I	NS	NS	NS	
		03/19/19	302.72	0.190 I	24.8	0.381 I	NS	0.0981 U	NS	0.962 I	1.33 U	1497.2	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	67	1.21 I	NS	NS	NS	
		09/17/19	189.28	0.149 U	25.2	0.346 I	NS	0.0276 U	NS	0.711 U	1.33 U	1322.2	0.105 I	0.00575 U	0.717 U	2.85 U	2.8 I	65	0.911 U	NS	NS	NS	
		03/11/20	371.02																				

TABLE 4: GROUNDWATER ANALYTICAL RESULTS - AREA B LANDFILL

Facility Name: ST. JOHNS RIVER POWER PARK

Well ID	Screen Interval (ft-bls)	Date Sampled	Aluminum (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Boron (µg/L)	Cadmium (µg/L)	Chloride (mg/L)	Chromium (µg/L)	Copper (µg/L)	Iron (µg/L)	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Vanadium (µg/L)	Radium-226 (pCi/L)	Radium-228 (pCi/L)	Total Radium (pCi/L)
		GCTL	200	10	2000	4	1400	5	250	100	1000	300	15	2	100	50	250	500	49	---	---	5
		NADC	2000	100	20000	40	14000	50	2500	1000	10000	3000	150	20	1000	500	2500	5000	490	---	---	---
MW-A1	43.43-53.43	09/21/16	58.9 I	ND	18.4	ND	NS	ND	NS	ND	ND	355	ND	ND	ND	ND	ND	92	ND	NS	NS	NS
		03/16/17	46.0	0.615 U	18.2 I	0.364 U	NS	0.258 U	NS	0.630 I	0.914 U	325.29	0.491 U	0.00500 U	0.281 U	2.35 U	2.5 U	90	1.94 I	NS	NS	NS
		10/12/17	58.0	1.38 U	18.8 I	0.192 U	NS	0.698 U	NS	0.802 I	1.07 I	330.38	0.579 I	0.0170 U	0.589 I	2.35 U	2.5 U	92	1.8 I	NS	NS	NS
		03/26/18	71.6 I	0.5 U	18.9	0.07 U	NS	0.05 U	NS	2.5 U	2.5 U	380	0.5 U	0.1 U	2.5 U	7.5 U	2.5 U	80 Q	5 U	NS	NS	NS
		09/18/18	85.0	0.0499 U	17.9 I	0.127 I	NS	0.0981 U	NS	0.440 I	1.33 U	326.91	0.460 U	0.0170 U	0.717 U	2.85 U	2.6 I	75	1.93 I	NS	NS	NS
		03/19/19	63.9	0.0499 U	17.3 I	0.0955 U	NS	0.0981 U	NS	0.758 I	1.33 U	314.38	0.460 U	0.00575 U	0.717 U	2.85 U	2.5 U	88	1.39 I	NS	NS	NS
		09/18/19	61.2	0.149 U	19.0 I	0.0180 I	NS	0.0276 U	NS	0.711 U	1.33 U	338.66	0.0448 U	0.00575 U	0.717 U	2.85 U	2.5 U	84	1.19 I	NS	NS	NS
		03/11/20	53.60	0.149 U	19.0 I	0.112 I	NS	0.0276 U	NS	0.711 U	1.33 U	331.86	0.0670 I	0.00575 U	0.717 U	2.85 U	2.5 U	87	1.51 I	NS	NS	NS
		09/23/20	82.7	0.149 U	16.6 I	0.0550 I	NS	0.0597 U	NS	0.795 I	1.33 U	290.83	0.0460 I	0.00575 U	0.717 U	2.85 U	2.5 U	134	1.67 I	NS	NS	NS
		03/19/21	105.32	0.149 U	16.4 I	0.111 I	NS	0.0597 U	NS	0.711 U	1.33 U	324.78	0.118 I	0.00600 U	0.717 U	2.85 U	2.5 U	68	1.48 I	NS	NS	NS
MW-B1	33.34-43.34	09/21/16	182	ND	41	0.1000	NS	ND	NS	ND	ND	681	ND	ND	ND	ND	7	78	ND	NS	NS	NS
		03/16/17	166.66	0.615 U	41.7	0.364 U	NS	0.258 U	NS	0.298 U	0.914 U	650.71	0.491 U	0.00500 U	0.281 U	2.35 U	7.1	82	0.783 U	NS	NS	NS
		10/12/17	157.90	1.38 U	43.3	0.192 U	NS	0.698 U	NS	0.298 U	1.06 I	661.23	0.412 U	0.0170 U	0.542 I	2.35 U	6.8	87	0.783 U	NS	NS	NS
		03/26/18	171.00	0.5 U	46	0.07 U	NS	0.05 U	NS	2.5 U	2.5 U	786	0.5 U	0.1 U	2.5 U	7.5 U	6.9	95 Q	5 U	NS	NS	NS
		09/18/18	161.46	0.110 I	45.5	0.119 I	NS	0.0981 I	NS	0.342 U	1.33 U	709.41	0.460 U	0.0170 U	0.717 U	2.85 U	7.1	76	0.911 U	NS	NS	NS
		03/19/19	164.46	0.120 I	46.1	0.126 I	NS	0.0981 U	NS	0.342 U	1.33 U	709.69	0.460 U	0.00575 U	0.717 U	2.85 U	6.9	97	0.911 U	NS	NS	NS
		09/18/19	161.88	0.149 U	48.5	0.136 I	NS	0.0276 U	NS	0.711 U	1.33 U	758.29	0.0448 U	0.00575 U	0.717 U	2.85 U	6.7	87	0.911 U	NS	NS	NS
		03/11/20	174.02	0.149 U	49.6	0.155 I	NS	0.0276 U	NS	0.711 U	1.33 U	970.12	0.0448 U	0.00575 U	0.717 U	2.85 U	6.3	83	0.911 U	NS	NS	NS
		09/23/20	183.35	0.149 U	49.3	0.111 I	NS	0.0597 U	NS	9.95 I	1.33 U	946.63	0.0448 U	0.00575 U	0.717 U	2.85 U	7.3	114	1.17 I	NS	NS	NS
		03/19/21	246.27	0.209 I	53.2	0.150 I	NS	0.0597 U	NS	0.711 U	1.33 U	534.62	0.131 I	0.00600 U	0.717 U	2.85 U	6.9	70	0.911 U	NS	NS	NS
MW-B1 RS	33.34-43.34	05/04/21	187.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-B1 DUP	33.34-43.34	09/21/16	191	ND	40.9	0.11	NS	ND	NS	ND	ND	674	ND	ND	ND	ND	7.2	92	ND	NS	NS	NS
		03/26/18	163	0.5 U	45.7	0.077 I	NS	0.05 U	NS	2.5 U	2.5 U	747	0.5 U	0.1 U	2.5 U	7.5 U	7.3	88 Q	5 U	NS	NS	NS

Notes:

1. NS indicates Not Sampled.
2. Results highlighted in yellow indicate an exceedance of the groundwater cleanup target level (GCTL) pursuant to Chapter 62-777, Florida Administrative Code (FAC).
3. Results highlighted in orange indicate an exceedance of the Natural Attenuation Default Source Concentrations (NADCs) specified in Table V of Chapter 62-777, FAC.
4. ft-bls = feet below land surface
5. µg/L = micrograms per liter
6. pCi/L = picocuries per liter
7. --- indicates GCTL or NADC not available
8. J4 indicates value is an estimated result.
9. I = indicates the constituent was detected between the method detection limit (MDL) and the practical quantitation limit (PQL).
10. U = indicates the constituent was not detected above the reported value.
11. ND indicates analyte Not Detected.
12. Q identifier shown in the analytical report however no distinction for it provided.

TABLE 5: MONITORING WELL CONSTRUCTION AND GROUNDWATER ELEVATION DATA
Facility Name: ST. JOHNS RIVER POWER PARK

	AREA I LANDFILL																	
FDEP WELL NO.	L-1		L-2		L-3		L-7		L-8		L-9		L-10		L-11		L-12	
DIAMETER (inches)	2		2		2		2		2		2		2		2		2	
WELL DEPTH (ft BLS)	23.0		83.5		49.0		39.5		41.5		44.5		81.0		39.0		87.5	
SCREEN INTERVAL (ft)	13.0-23.0		63.5-83.5		39.0-49.0		29.5-39.5		31.5-41.5		34.5-44.5		71.0-81.0		29.0-39.0		77.5-87.5	
AQUIFER ZONE	Intermediate Surficial		Deep Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Deep Surficial		Intermediate Surficial		Deep Surficial	
TOC ELEVATION (ft)	15.98		14.55		16.49		15.63		15.62		13.05		11.84		13.44		13.37	
DATE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE
01/22/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/05/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/21/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/14/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/25/20	3.05	12.93	2.98	11.57	4.45	12.04	7.35	8.28	12.02	3.60	3.52	9.53	2.95	8.89	2.88	10.56	2.75	10.62
11/24/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06/21/21	4.48	11.50	5.31	9.24	6.54	9.95	9.32	6.31	14.02	1.60	4.6	8.45	4.80	7.04	4.98	8.46	4.87	8.50

	AREA II LANDFILL																											
FDEP WELL NO.	L-B		L-4 (MWB-L4)		L-5		L-16		L-17 (MWB-L17)		L-18		L-19		L-20		L-21		L-22		L-23		L-24		L-25		L-26	
DIAMETER (inches)	2		2		2		2		2		2		2		2		2		2		2		2		2		2	
WELL DEPTH (ft BLS)	18.5		29.5		29.5		42.0		29.5		15.0		15.0		29.5		29.5		13.0		29.6		29.5		29.5		15.7	
SCREEN INTERVAL (ft)	8.5-18.5		19.5-29.5		19.5-29.5		32.0-42.0		19.2-29.2		4.7-14.7		4.7-14.7		19.2-29.2		19.2-29.2		2.7-12.7		19.3-29.3		19.2-29.2		19.2-29.2		5.4-15.4	
AQUIFER ZONE	Shallow Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Shallow Surficial		Shallow Surficial		Intermediate Surficial		Intermediate Surficial		Shallow Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Shallow Surficial	
TOC ELEVATION (ft)	24.57		24.72		26.97		16.12		26.95		20.15		19.21		14.40		14.27		14.23		14.15		20.91		14.21		20.79	
DATE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE
01/22/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/05/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/21/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/14/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/25/20	10.03	14.54	10.26	14.46	8.48	18.49	5.47	10.65	12.60	14.35	10.99	9.16	12.10	7.11	3.76	10.64	3.47	10.80	6.72	7.51	3.93	10.22	12.96	7.95	3.40	10.81	12.78	8.01
11/24/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06/21/21	11.62	12.95	11.83	12.89	-	-	5.24	10.88	13.79	13.16	11.78	8.37	DRY	-	5.17	9.23	4.96	9.31	6.43	7.80	4.54	9.61	13.83	7.08	4.90	9.31	DRY	-

	AREA B LANDFILL																							
FDEP WELL NO.	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6		MW-7		MW-8		MW-9		MW-20		MW-1A		MW-1B	
DIAMETER (inches)	2		2		2		2		2		2		2		2		2		2		2		2	
WELL DEPTH (ft BLS)	52.44		52.37		54.28		46.84		43.31		53.50		54.09		53.51		50.89		52.00		53.43		43.34	
SCREEN INTERVAL (ft)	42.44-52.44		42.37-52.37		44.28-54.28		36.84-46.84		33.31-43.31		43.50-53.50		44.09-54.09		43.51-53.51		40.89-50.89		42.00-52.00		43.43-53.43		33.34-43.34	
AQUIFER ZONE	Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial		Intermediate Surficial	
TOC ELEVATION (ft)	17.67		18.39		19.36		16.33		14.70		16.01		17.44		17.08		13.86		20.64		15.01		14.68	
DATE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE
01/22/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/05/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/21/19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/14/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
09/25/20	4.62	13.05	5.12	13.27	5.60	13.76	3.58	12.75	3.09	11.61	6.00	10.01	8.34	9.10	8.30	8.78	5.58	8.28	6.84	13.80	5.30	9.71	3.68	11.00
11/24/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06/21/21	-	-	-	-	9.16	10.20	6.69	9.64	4.77	9.93	5.62	10.39	11.08	6.36	12.16	4.92	8.71	5.15	10.45	10.19	8.39	6.62	6.43	8.25

TABLE 5: MONITORING WELL CONSTRUCTION AND GROUNDWATER ELEVATION DATA
Facility Name: ST. JOHNS RIVER POWER PARK

	PERIMETER WELLS															
FDEP WELL NO.	MW-1S		MW-2S		MW-3S		MW-3D		MW-4S		MW-5S		MW-5D		TW-3A	
DIAMETER (inches)	1		1		1		1		1		1		1		1	
WELL DEPTH (ft BLS)	12		13		12		30		12		12		30		40	
SCREEN INTERVAL (ft)	2-12		3-13		2-12		25-30		2-12		2-12		25-30		30-40	
AQUIFER ZONE	Shallow Surficial		Shallow Surficial		Shallow Surficial		Intermediate Surficial		Shallow Surficial		Shallow Surficial		Intermediate Surficial		Intermediate Surficial	
TOC ELEVATION (ft)	11.16		11.66		11.10		10.92		12.40		11.21		11.21		NS	
DATE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE	DTW	ELE
01/22/19	5.30	5.86	8.25	3.41	9.32	1.78	9.76	1.16	10.89	1.51	9.19	2.02	9.25	2.10	-	-
05/05/19	6.00	5.16	9.04	2.62	9.38	1.72	9.16	1.76	11.15	1.25	9.63	1.58	9.57	1.78	-	-
11/21/19	4.71	6.45	8.08	3.58	8.80	2.30	9.87	1.05	9.99	2.41	8.42	2.79	8.55	2.80	-	-
05/14/20	5.80	5.36	8.90	2.76	9.60	1.50	10.25	0.67	10.93	1.47	9.55	1.66	9.60	1.75	-	-
09/25/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/24/20	5.49	5.67	7.96	3.70	9.13	1.97	9.93	0.99	10.42	1.98	8.74	2.47	8.85	2.50	-	-
06/21/21	5.50	5.66	9.09	2.57	9.57	1.53	10.28	0.64	11.08	1.32	9.4	1.81	9.44	1.77	11.61	-

- Notes:**
1. DTW = depth to water (feet below top-of-casing [TOC])
 2. ELE = elevation in feet relative to NGVD 1929 datum
 3. TOC = top of casing elevation in feet relative to NGVD 1929 datum
 4. ft BLS = feet below land surface
 5. NS = not surveyed
 6. - = not measured
 7. DRY = no water observed in well

APPENDIX B

MANN-KENDALL ANALYSIS

Mann-Kendall Analysis Summary

St. Johns River Power Park Jacksonville, Florida

Perimeter Wells	Well ID	Aluminum Concentration Trend	Arsenic Concentration Trend	Barium Concentration Trend	Boron Concentration Trend	Cadmium Concentration Trend	Chloride Concentration Trend	Chromium Concentration Trend	Iron Concentration Trend	Lead Concentration Trend	Mercury Concentration Trend	Selenium Concentration Trend	Sulfate Concentration Trend	TDS Concentration Trend	Radium-226 Concentration Trend	Radium-228 Concentration Trend	Total Radium Concentration Trend
Area B Landfill	MW-1S	No Trend	--	--	--	--	--	--	Stable	--	--	--	Probably Increasing	No Trend	NS	NS	NS
	MW-1	--	--	--	NS	--	NS	--	Increasing	--	--	--	--	--	NS	NS	NS
	MW-2	--	--	--	NS	--	NS	--	Decreasing	--	--	--	--	--	NS	NS	NS
	MW-3	--	--	--	NS	--	NS	--	Probably Increasing	--	--	--	--	--	NS	NS	NS
	MW-4	--	--	--	NS	--	NS	--	Decreasing	--	--	--	--	--	NS	NS	NS
	MW-5	Probably Decreasing	--	--	NS	--	NS	--	Stable	--	--	--	--	--	NS	NS	NS
	MW-6	--	--	--	NS	--	NS	--	Probably Decreasing	--	--	--	--	--	NS	NS	NS
	MW-7	--	--	--	NS	--	NS	--	Decreasing	--	--	--	--	--	NS	NS	NS
	MW-8	--	--	--	NS	--	NA	--	Increasing	--	--	--	--	--	NA	NA	NA
	MW-9	Probably Increasing	--	--	NA	--	NA	--	Probably Increasing	--	--	--	--	--	NA	NA	NA
	MW-20	Increasing	--	--	NS	--	NS	--	Probably Increasing	--	--	--	--	--	NS	NS	NS
Area I Landfill	MW-A1	--	--	--	NS	--	NS	--	Stable	--	--	--	--	--	NS	NS	NS
	MW-B1	No Trend	--	--	NS	--	NS	--	No Trend	--	--	--	--	--	NS	NS	NS
	L-1	Increasing	--	--	NS	--	NS	--	Decreasing	--	--	--	Increasing	Increasing	NS	NS	NS
	L-2	--	--	--	NS	--	NS	--	Decreasing	--	--	--	--	--	NS	NS	NS
	L-3	--	--	--	NS	--	NS	--	Increasing	--	--	--	--	--	NS	NS	NS
	L-7	Probably Increasing	--	--	NS	--	NS	--	No Trend	--	--	--	Probably Increasing	No Trend	NS	NS	NS
	L-8	Increasing	--	--	NS	--	NS	--	Decreasing	--	--	--	Stable	Probably Decreasing	NS	NS	NS
	L-9	Increasing	--	--	NS	--	NS	--	No Trend	--	--	--	No Trend	No Trend	NS	NS	NS
	L-10	--	--	--	NS	--	NS	--	Stable	--	--	--	--	--	NS	NS	NS
	L-11	Decreasing	--	--	NS	--	NS	--	Stable	--	--	--	Stable	Decreasing	NS	NS	NS
	L-12	--	--	--	NS	--	NS	--	Stable	--	--	--	--	--	NS	NS	NS
Area II Landfill	L-B	No Trend	--	--	NS	--	NS	--	--	--	--	--	--	--	NS	NS	NS
	L-4	Decreasing	--	--	NS	--	NS	--	No Trend	--	--	--	Probably Increasing	Increasing	NS	NS	NS
	L-5	Increasing	--	--	NS	--	NS	--	Stable	--	--	--	--	--	NS	NS	NS
	L-16	--	--	--	NS	--	NS	--	No Trend	--	--	--	--	--	NS	NS	NS
	L-17	Increasing	--	--	NS	--	NS	--	Increasing	--	--	--	No Trend	--	NS	NS	NS
	L-18	Stable	--	--	NS	--	NS	--	Stable	--	--	--	Stable	No Trend	NS	NS	NS
	L-19	No Trend	--	--	NS	--	NS	--	Decreasing	--	--	--	Stable	Stable	NS	NS	NS
	L-20	--	--	--	NS	--	NS	--	--	--	--	--	--	--	NS	NS	NS
	L-21	Probably Decreasing	--	--	NS	--	NS	--	Stable	--	--	--	--	--	NS	NS	NS
	L-22	Probably Decreasing	--	--	NS	--	NS	--	No Trend	--	--	--	Stable	Stable	NS	NS	NS
	L-23	Stable	--	--	NS	--	NS	--	Stable	--	--	--	--	--	NS	NS	NS
	L-24	Decreasing	--	--	NS	--	NS	--	Probably Decreasing	--	--	--	Decreasing	Decreasing	NS	NS	NS
	L-25	--	--	--	NS	--	NS	--	Stable	--	--	--	--	--	NS	NS	NS
	L-26	--	--	--	NS	--	NS	--	--	--	--	--	Probably Decreasing	Stable	NS	NS	NS

Notes:

1. Statistical analyses were not completed for wells with concentrations below Groundwater Cleanup Target Levels (GCTLs) for at least two most recent consecutive events.

2. If the concentration of a constituent was reported below the laboratory method detection limit (MDL), then one-half of the MDL was used in the analyses.

3. -- indicates statistical analysis was not completed because concentrations were below GCTLs for at least two most recent consecutive events.

4. TDS = Total Dissolved Solids

5. Yellow highlighting indicates increasing trend

6. NA indicates not analyzed due to well having insufficient number of independent sampling events for Mann-Kendall trend analysis.

7. NS indicates constituent not sampled for.

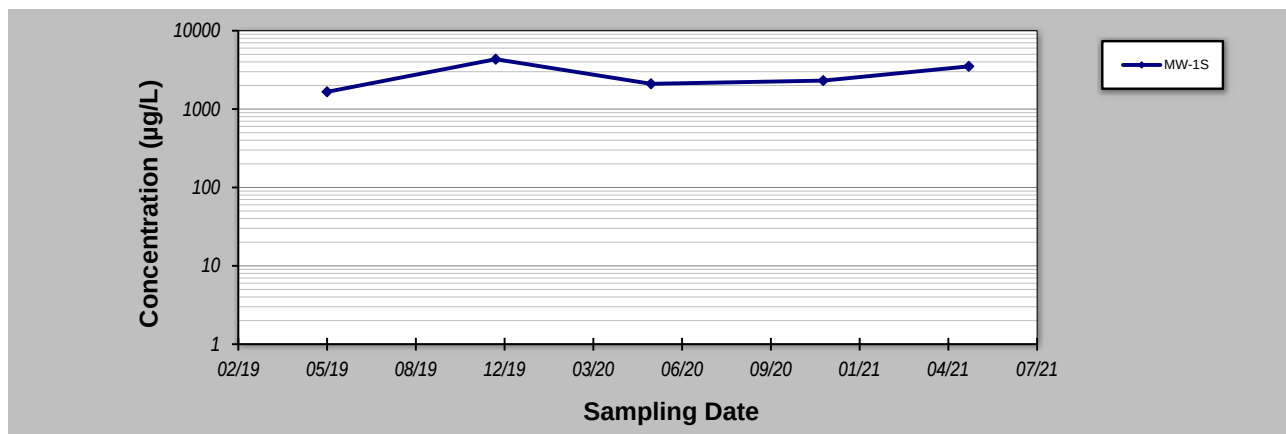
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **30-Aug-21**
 Facility Name: **JEA SJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Aluminum**
 Concentration Units: **µg/L**

Sampling Point ID: **MW-1S**

Sampling Event	Sampling Date	ALUMINUM CONCENTRATION (µg/L)					
1	May-19	1660					
2	Nov-19	4330					
3	May-20	2100					
4	Nov-20	2310					
5	May-21	3510					
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		0.40					
Mann-Kendall Statistic (S):		4					
Confidence Factor:		75.8%					
Concentration Trend:		No Trend					



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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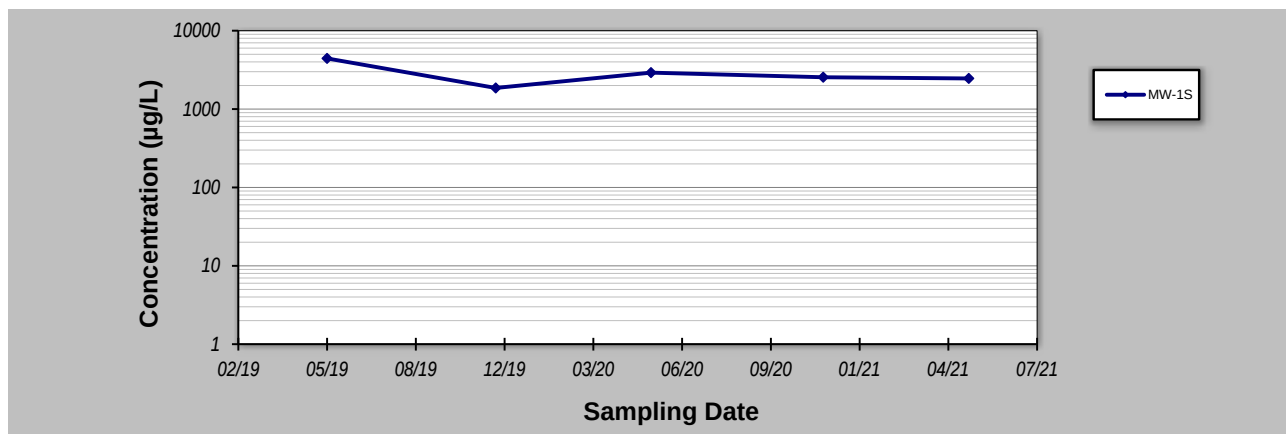
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **30-Aug-21**
 Facility Name: **JEA SJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Iron**
 Concentration Units: **µg/L**

Sampling Point ID: **MW-1S**

Sampling Event	Sampling Date	IRON CONCENTRATION (µg/L)					
1	May-19	4430					
2	Nov-19	1860					
3	May-20	2920					
4	Nov-20	2550					
5	May-21	2460					
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		0.34					
Mann-Kendall Statistic (S):		-4					
Confidence Factor:		75.8%					
Concentration Trend:		Stable					



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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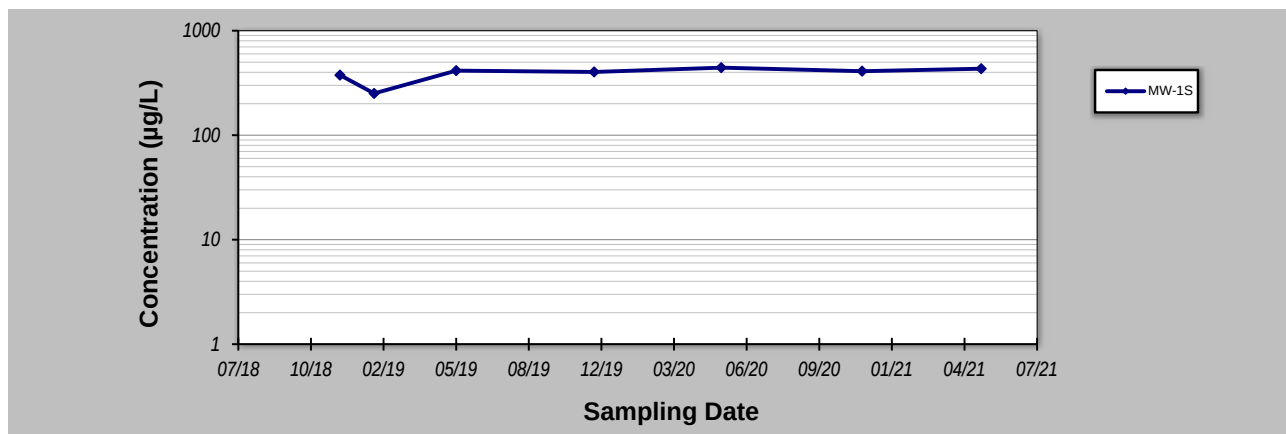
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **30-Aug-21**
 Facility Name: **JEA SJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Sulfate**
 Concentration Units: **µg/L**

Sampling Point ID: **MW-1S**

Sampling Event	Sampling Date	SULFATE CONCENTRATION (µg/L)					
1	Dec-18	376					
2	Jan-19	251					
3	May-19	415					
4	Nov-19	403					
5	May-20	443					
6	Nov-20	410					
7	May-21	433					
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		0.17					
Mann-Kendall Statistic (S):		11					
Confidence Factor:		93.2%					
Concentration Trend:		Prob. Increasing					



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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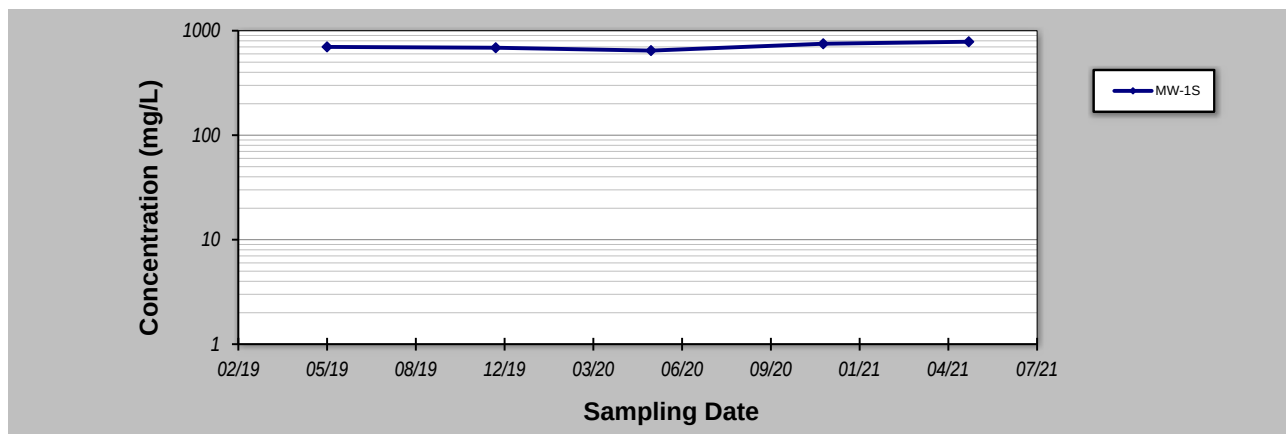
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **30-Aug-21**
 Facility Name: **JEA SJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Total Dissolved Solids**
 Concentration Units: **mg/L**

Sampling Point ID: **MW-1S**

Sampling Event	Sampling Date	TOTAL DISSOLVED SOLIDS CONCENTRATION (mg/L)					
1	May-19	700					
2	Nov-19	687					
3	May-20	645					
4	Nov-20	750					
5	May-21	784					
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Coefficient of Variation:		0.08					
Mann-Kendall Statistic (S):		4					
Confidence Factor:		75.8%					
Concentration Trend:		No Trend					



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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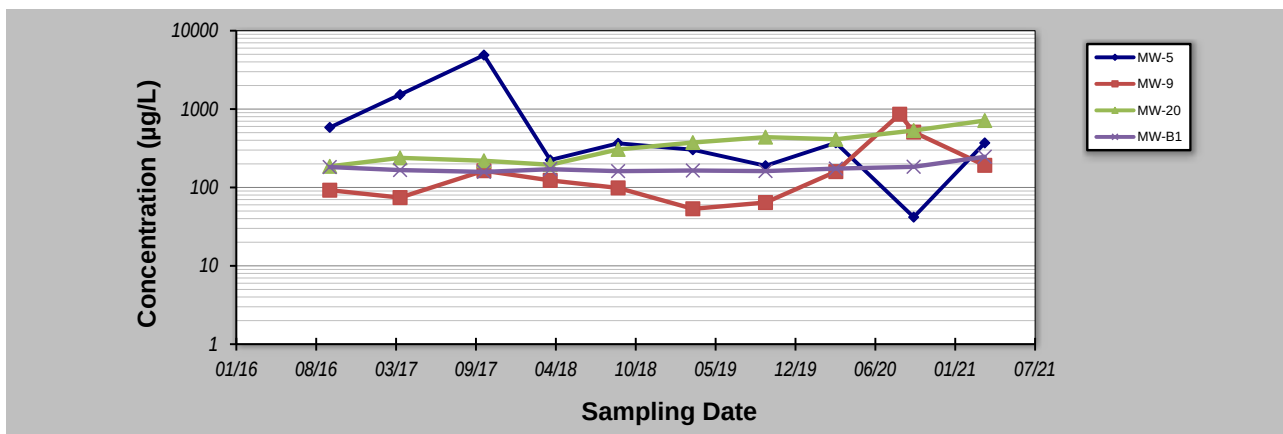
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **27-Aug-21**
 Facility Name: **JEA SJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Aluminum**
 Concentration Units: **µg/L**

Sampling Point ID:		MW-5	MW-9	MW-20	MW-B1			
Sampling Event	Sampling Date	ALUMINUM CONCENTRATION (µg/L)						
1	Sep-16	583	92.2	186	182			
2	Mar-17	1527.1	74.2	238.55	166.66			
3	Oct-17	4883.00	163.55	219.19	157.9			
4	Mar-18	224	123	195	171			
5	Sep-18	365.79	98.7	305.65	161.46			
6	Mar-19	302.72	53.4	374.04	164.46			
7	Sep-19	189.28	64.2	438.53	161.88			
8	Mar-20	371.02	159.03	411.91	174.02			
9	Aug-20	NS	858.92	NS	NS			
10	Sep-20	41.80	507.99	532.58	183.35			
11	Mar-21	370.01	191.51	714.37	246.27			
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20								
Coefficient of Variation:		1.65	1.14	0.47	0.15			
Mann-Kendall Statistic (S):		-17	19	37	15			
Confidence Factor:		92.2%	91.8%	>99.9%	89.2%			
Concentration Trend:		Prob. Decreasing	Prob. Increasing	Increasing	No Trend			



Notes:

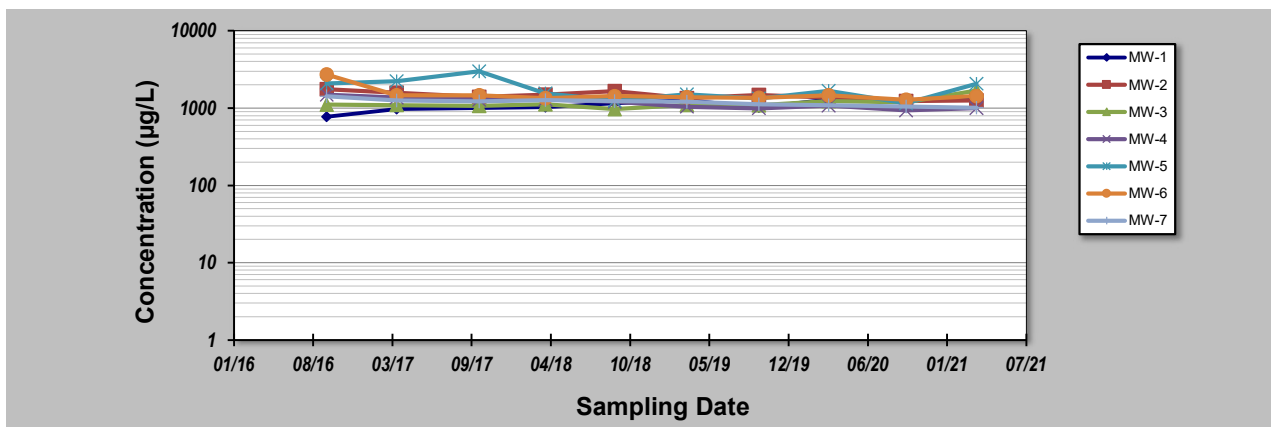
- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $>95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date:	18-Jun-21			Job ID:	FR8073			
Facility Name:	JEA SJRPP			Constituent:	Iron			
Conducted By:	Amy Langteau			Concentration Units:	µg/L			
Sampling Point ID:	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	
Sampling Event	Sampling Date	IRON CONCENTRATION (µg/L)						
1	Sep-16	771	1760	1110	1490	2090	2730	1420
2	Mar-17	971.77	1576.1	1097.1	1371.9	2239.5	1463.3	1258.8
3	Oct-17	NS	1390.5	1066.7	1281.4	3006.4	1467.87	1217.8
4	Mar-18	1030	1490	1120	1290	1550	1340	1260
5	Sep-18	1159.5	1651.7	972.28	1212.9	1253	1427.1	1228.6
6	Mar-19	1265.9	1340.7	1104.6	1043.8	1497.2	1377	1210.7
7	Sep-19	1021.4	1478.4	1084.2	995.19	1322.2	1356.9	1114.5
8	Mar-20	1294	1371.8	1232.5	1080.6	1678.8	1461.9	1095.1
9	Sep-20	1219.3	1229.1	1188.2	932.4	1149.7	1284.1	1052.3
10	Mar-21	1407.4	1254.7	1685.7	998.02	2073.2	1432.9	1012.7
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Coefficient of Variation:	0.17	0.12	0.17	0.16	0.32	0.28	0.10	
Mann-Kendall Statistic (S):	26	-29	17	-35	-15	-19	-39	
Confidence Factor:	99.7%	99.5%	92.2%	100.0%	89.2%	94.6%	>99.9%	
Concentration Trend:	Increasing	Decreasing	Prob. Increasing	Decreasing	Stable	Prob. Decreasing	Decreasing	



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $>95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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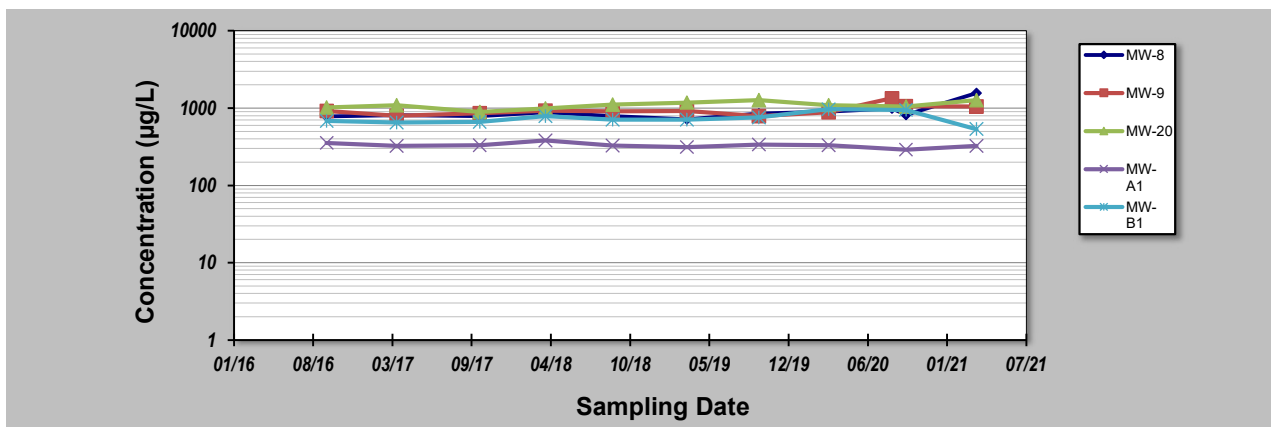
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **18-Jun-21**
 Facility Name: **JEASJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Iron**
 Concentration Units: **µg/L**

Sampling Point ID:		MW-8	MW-9	MW-20	MW-A1	MW-B1		
Sampling Event	Sampling Date	IRON CONCENTRATION (µg/L)						
1	Sep-16	783	918	1020	355	681		
2	Mar-17	815.53	799.58	1088	325.29	650.71		
3	Oct-17	785.39	860.82	890.99	330.38	661.23		
4	Mar-18	887	929	985	380	786		
5	Sep-18	787.31	911.23	1111	326.91	709.41		
6	Mar-19	719.18	922.88	1182.1	314.38	709.69		
7	Sep-19	850.53	787.05	1273.9	338.66	758.29		
8	Mar-20	894.18	884.97	1095.8	331.86	970.12		
9	Aug-20	988.06	1338.2	NS	NS	NS		
10	Sep-20	819.62	1054.7	1048.8	290.83	946.63		
11	Mar-21	1561	1048.8	1264.7	324.78	534.62		
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Coefficient of Variation:		0.26	0.16	0.11	0.07	0.18		
Mann-Kendall Statistic (S):		29	19	19	-15	15		
Confidence Factor:		98.7%	91.8%	94.6%	89.2%	89.2%		
Concentration Trend:		Increasing	Prob. Increasing	Prob. Increasing	Stable	No Trend		



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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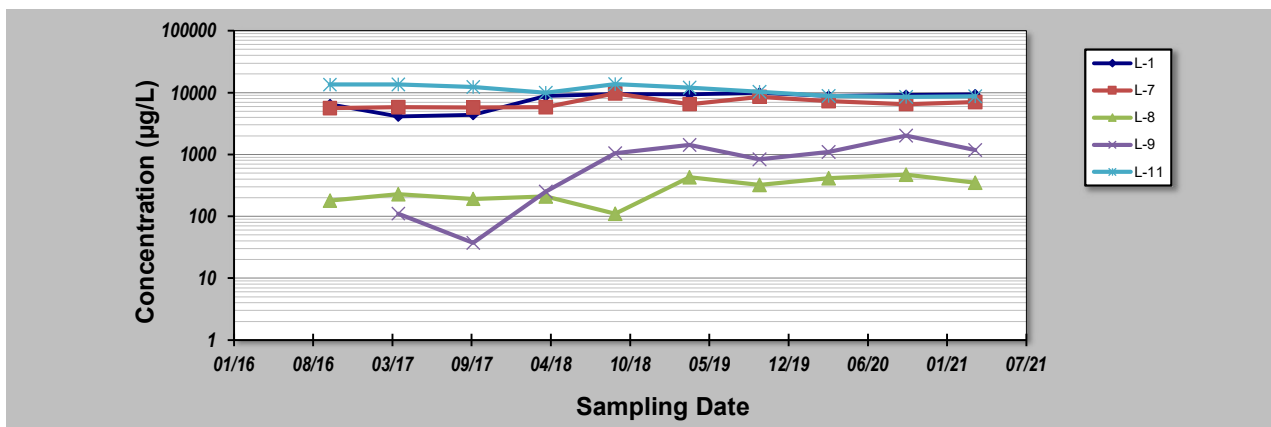
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 18-Jun-21		Job ID: FR8073	
Facility Name: JEASJRPP		Constituent: Aluminum	
Conducted By: Amy Langteau		Concentration Units: µg/L	

Sampling Point ID:		L-1	L-7	L-8	L-9	L-11		
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Sampling Event	Sampling Date	ALUMINUM CONCENTRATION (µg/L)						
1	Sep-16	6470	5620	178.0	ND	13500		
2	Mar-17	4123.8	5847.6	226.76	110.38	13565		
3	Sep-17	4404.1	5792.7	191.84	37.2	12259		
4	Mar-18	8760	5830	209.0	250	9940		
5	Sep-18	9474.6	9730.5	109.58	1049.6	13737		
6	Mar-19	9424.5	6491.5	428.84	1431.9	12046		
7	Sep-19	9909.3	8598.9	320.29	840.01	10314		
8	Mar-20	8892.8	7300.6	413.14	1094.3	8868.5		
9	Sep-20	9215.9	6490	472.67	2007.9	8511.3		
10	Mar-21	9384	7041	350.2	1178.2	8683.3		
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Coefficient of Variation:	0.27	0.20	0.43	0.74	0.19		
Mann-Kendall Statistic (S):	21	19	23	24	-29		
Confidence Factor:	96.4%	94.6%	97.7%	99.4%	99.5%		
Concentration Trend:	Increasing	Prob. Increasing	Increasing	Increasing	Decreasing		



Notes:

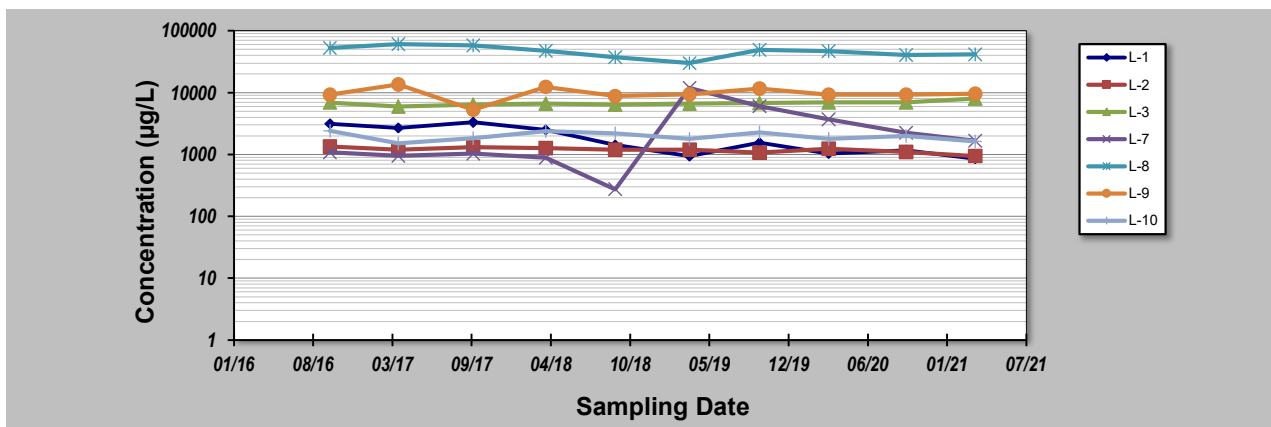
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- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date:	18-Jun-21			Job ID:	FR8073			
Facility Name:	JEA SJRPP			Constituent:	Iron			
Conducted By:	Amy Langteau			Concentration Units:	µg/L			
Sampling Point ID:		L-1	L-2	L-3	L-7	L-8	L-9	L-10
Sampling Event	Sampling Date	IRON CONCENTRATION (µg/L)						
1	Sep-16	3140	1340	6920	1080	52800	9230	2400
2	Mar-17	2698.5	1194.2	5957.7	948.58	61185	13576	1518.8
3	Sep-17	3315.4	1318.9	6403.8	1032.2	58087	5318.7	1830.4
4	Mar-18	2500	1260	6610	890	47400	12400	2380
5	Sep-18	1426.5	1200.7	6412.9	273.89	37386	8762.7	2185.5
6	Mar-19	932.47	1198.4	6612.2	11929	30079	9410.3	1780.8
7	Sep-19	1558.1	1071.6	6799.3	6022.1	49466	11698	2266.2
8	Mar-20	1034.7	1233.4	6975.4	3692	46893	9283.2	1776.5
9	Sep-20	1174.6	1088.2	6984.1	2254.9	40561	9266.7	1994.7
10	Mar-21	857.54	943.91	7998.9	1663.7	41412	9546.8	1627.2
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Coefficient of Variation:		0.51	0.10	0.08	1.20	0.20	0.23	0.16
Mann-Kendall Statistic (S):		-31	-27	31	7	-21	1	-13
Confidence Factor:		99.8%	99.2%	99.8%	70.0%	96.4%	50.0%	85.4%
Concentration Trend:		Decreasing	Decreasing	Increasing	No Trend	Decreasing	No Trend	Stable



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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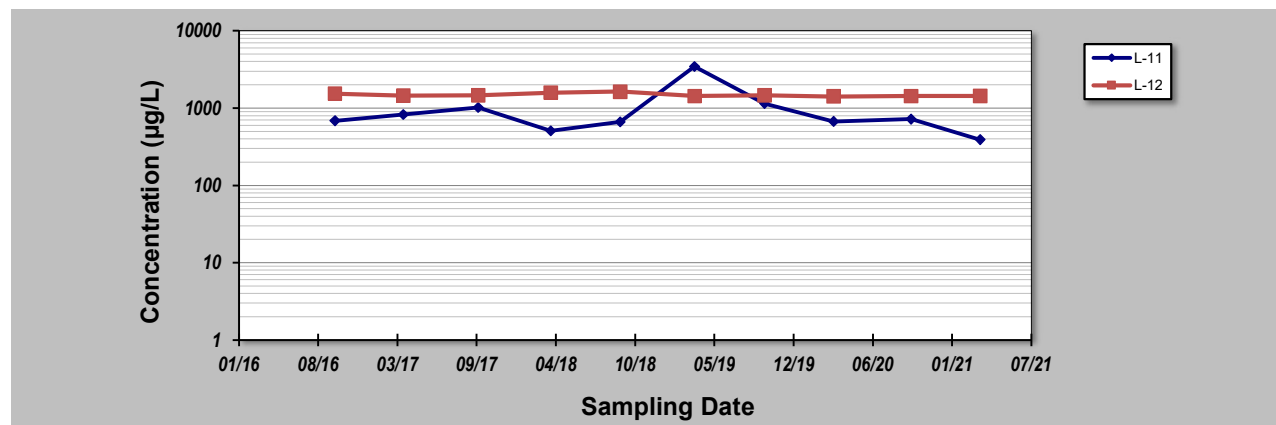
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **18-Jun-21**
 Facility Name: **JEASJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Iron**
 Concentration Units: **µg/L**

Sampling Point ID: **L-11** **L-12**

Sampling Event	Sampling Date	IRON CONCENTRATION (µg/L)						
1	Sep-16	686	1540					
2	Mar-17	827.25	1449.6					
3	Sep-17	1021.4	1459.8					
4	Mar-18	508	1580					
5	Sep-18	663.54	1633.6					
6	Mar-19	3442.8	1433.1					
7	Sep-19	1144.5	1463.7					
8	Mar-20	670.98	1415.7					
9	Sep-20	718.93	1432.8					
10	Mar-21	390.75	1439.8					
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Coefficient of Variation:		0.88	0.05					
Mann-Kendall Statistic (S):		-5	-15					
Confidence Factor:		63.6%	89.2%					
Concentration Trend:		Stable	Stable					



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
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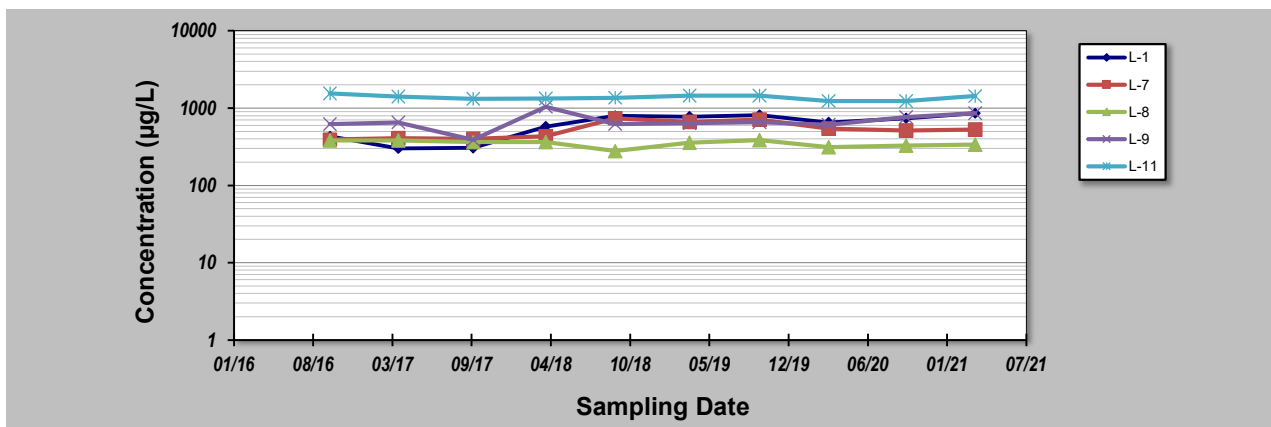
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 18-Jun-21		Job ID: FR8073	
Facility Name: JEASJRPP		Constituent: Sulfate	
Conducted By: Amy Langteau		Concentration Units: µg/L	

Sampling Point ID:		L-1	L-7	L-8	L-9	L-11	
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Sampling Event	Sampling Date	SULFATE CONCENTRATION (µg/L)					
1	Sep-16	433	392	381	620	1550	
2	Mar-17	301	406	382	652	1410	
3	Sep-17	306	400	362	388	1320	
4	Mar-18	577	433	366	1040	1330	
5	Sep-18	790	739	278	621	1360	
6	Mar-19	778	663	358	640	1450	
7	Sep-19	816	712	385	660	1450	
8	Mar-20	655	544	311	611	1240	
9	Sep-20	742	515	327	763	1230	
10	Mar-21	860	528	335	858	1430	
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Coefficient of Variation:	0.34	0.25	0.10	0.25	0.07	
Mann-Kendall Statistic (S):	27	17	-15	15	-10	
Confidence Factor:	99.2%	92.2%	89.2%	89.2%	78.4%	
Concentration Trend:	Increasing	Prob. Increasing	Stable	No Trend	Stable	



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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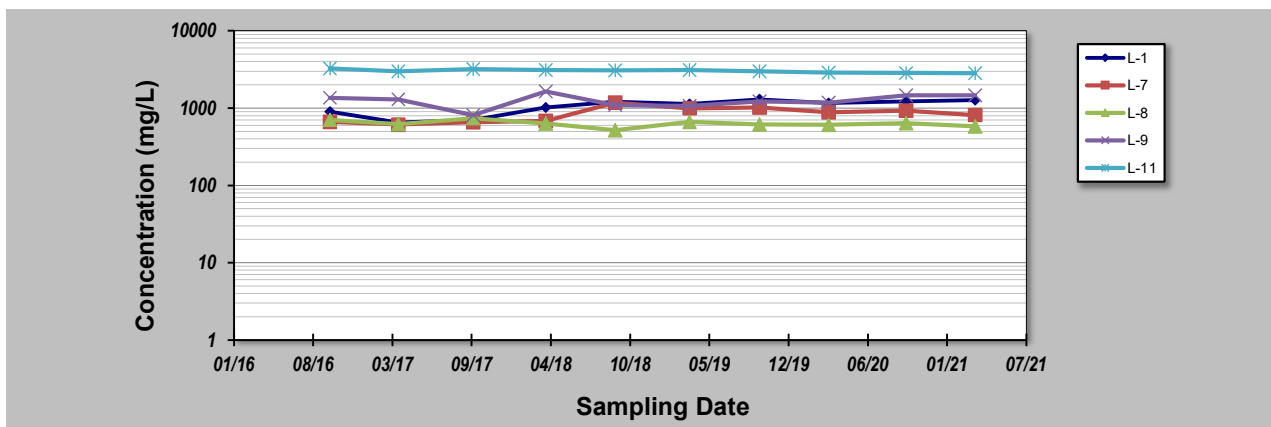
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **18-Jun-21**
 Facility Name: **JEASJRPP**
 Conducted By: **Mary Rommer**

Job ID: **FR8073**
 Constituent: **Total Dissolved Solids**
 Concentration Units: **mg/L**

Sampling Point ID:		L-1	L-7	L-8	L-9	L-11		
Sampling Event	Sampling Date	TOTAL DISSOLVED SOLIDS CONCENTRATION (mg/L)						
1	Sep-16	896	661	707	1361	3269		
2	Mar-17	648	612	618	1303	2988		
3	Sep-17	701	657	740	808	3196		
4	Mar-18	1024	679	630	1643	3114		
5	Sep-18	1214	1180	519	1094	3093		
6	Mar-19	1132	995	662	1063	3103		
7	Sep-19	1298	1023	614	1217	2993		
8	Mar-20	1162	882	608	1170	2870		
9	Sep-20	1220	928	636	1458	2843		
10	Mar-21	1271	812	582	1456	2819		
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13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.22	0.23	0.10	0.19	0.05		
Mann-Kendall Statistic (S):		31	15	-17	5	-33		
Confidence Factor:		99.8%	89.2%	92.2%	63.6%	99.9%		
Concentration Trend:		Increasing	No Trend	Prob. Decreasing	No Trend	Decreasing		



Notes:

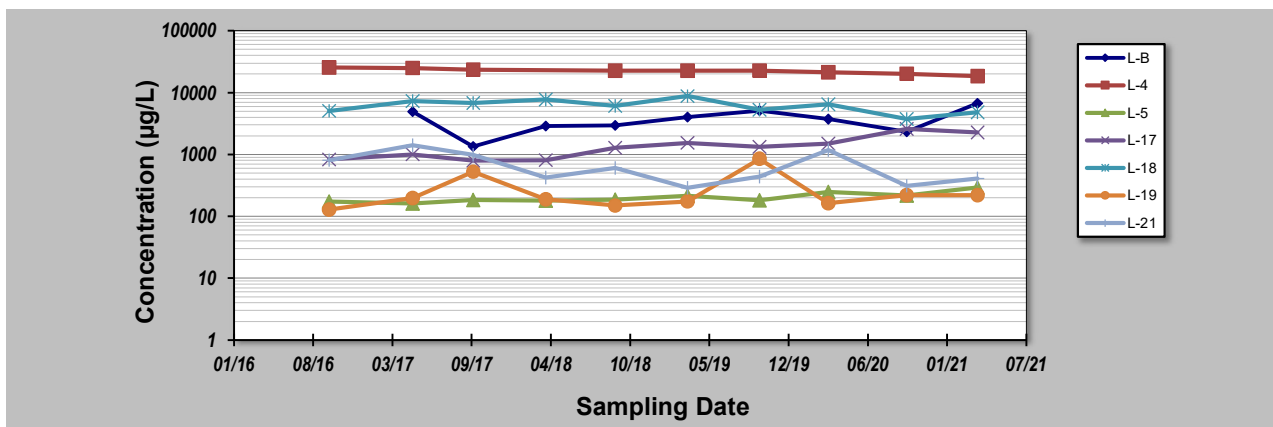
- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date:	18-Jun-21			Job ID:	FR8073					
Facility Name:	JEA SJRPP			Constituent:	Aluminum					
Conducted By:	Amy Langteau			Concentration Units:	µg/L					
Sampling Point ID:				L-B	L-4	L-5	L-17	L-18	L-19	L-21
Sampling Event	Sampling Date	ALUMINUM CONCENTRATION (µg/L)								
1	Sep-16	NS	25500	174	834	5070	128	810		
2	Apr-17	4893.8	24964	160.97	1004.4	7291.6	195.61	1408.2		
3	Sep-17	1347.8	23519	183.75	797.7	6797.1	526.27	986.06		
4	Mar-18	2880.00	22200 J	178	811	7760	188	422		
5	Sep-18	2953.1	22567	185.85	1282.1	6072.9	149.18	603.69		
6	Mar-19	4031.4	22645	213.3	1546.3	8803.4	174.48	289.41		
7	Sep-19	5139	22693	181.99	1329.7	5310.1	848.83	438.28		
8	Mar-20	3720.7	21301	248.49	1498.1	6473.5	163.35	1177.4		
9	Sep-20	2322.8	20208	218.01	2589.9	3763.1	220.42	313.04		
10	Mar-21	6729.6	18614	291.69	2265.3	4823.4	219.96	408.97		
11										
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17										
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Coefficient of Variation:		0.43	0.10	0.20	0.44	0.24	0.81	0.57		
Mann-Kendall Statistic (S):		10	-30	33	31	-13	9	-17		
Confidence Factor:		82.1%	100.0%	99.9%	99.8%	85.4%	75.8%	92.2%		
Concentration Trend:		No Trend	Decreasing	Increasing	Increasing	Stable	No Trend	Prob. Decreasing		



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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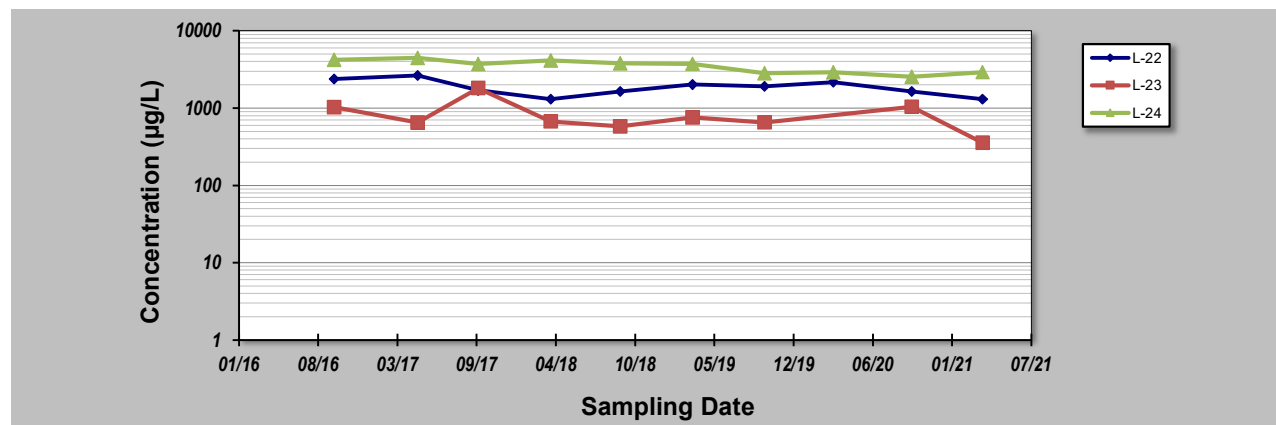
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **18-Jun-21**
 Facility Name: **JEASJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Aluminum**
 Concentration Units: **µg/L**

Sampling Point ID: **L-22** **L-23** **L-24**

Sampling Event	Sampling Date	ALUMINUM CONCENTRATION (µg/L)						
1	Sep-16	2380	1030	4220				
2	Apr-17	2636.5	650.01	4475.1				
3	Sep-17	1697.6	1812	3717.1				
4	Mar-18	1310.00	674	4130				
5	Sep-18	1643.1	581.22	3788.8				
6	Mar-19	2016.3	753.23	3735.3				
7	Sep-19	1905.9	655.67	2829				
8	Mar-20	2172.1	NS	2900.9				
9	Sep-20	1639.8	1045	2550.7				
10	Mar-21	1307.9	356.44	2911.6				
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19								
20								
Coefficient of Variation:		0.23	0.50	0.19				
Mann-Kendall Statistic (S):		-17	-8	-29				
Confidence Factor:		92.2%	76.2%	99.5%				
Concentration Trend:		Prob. Decreasing	Stable	Decreasing				



Notes:

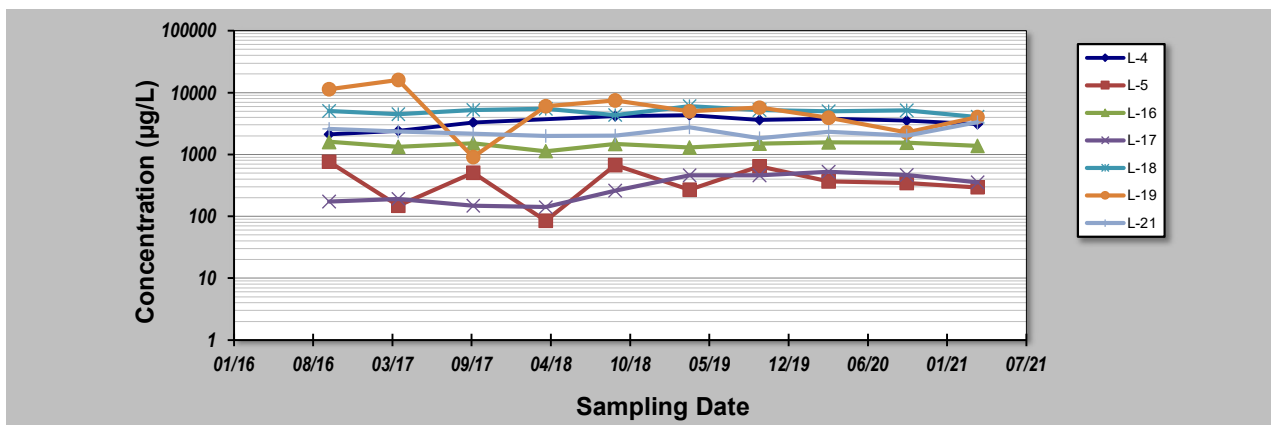
- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date:	18-Jun-21				Job ID:	FR8073		
Facility Name:	JEA SJRPP				Constituent:	Iron		
Conducted By:	Amy Langteau				Concentration Units:	µg/L		
Sampling Point ID:		L-4	L-5	L-16	L-17	L-18	L-19	L-21
Sampling Event	Sampling Date	IRON CONCENTRATION (µg/L)						
1	Sep-16	2110	763	1600	172	5040	11400	2590
2	Mar-17	2397.9	148.47	1335.6	191.87	4450.7	15999	2339.5
3	Sep-17	3270.6	504.75	1512	147.55	5255.1	908.44	2169.1
4	Mar-18	3900 J	84.8	1130	141	5490	6030	2000
5	Sep-18	4180	673.6	1469.7	257.86	4340.8	7466	2009.8
6	Mar-19	4306.8	269.06	1295.2	459.81	6019.3	4979.4	2746.9
7	Sep-19	3617.2	641.87	1495.2	458.63	5224.1	5745.4	1832.6
8	Mar-20	3781.3	366.83	1564.6	526.1	4973.3	3940.2	2332.4
9	Sep-20	3529.4	346.72	1558.2	468.2	5177	2262.2	2014.4
10	Mar-21	3117.1	294.55	1379.2	353.96	4044.8	4010.3	3321.4
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Coefficient of Variation:		0.22	0.56	0.10	0.48	0.12	0.71	0.19
Mann-Kendall Statistic (S):		8	-7	1	23	-7	-21	-1
Confidence Factor:		76.2%	70.0%	50.0%	97.7%	70.0%	96.4%	50.0%
Concentration Trend:		No Trend	Stable	No Trend	Increasing	Stable	Decreasing	Stable



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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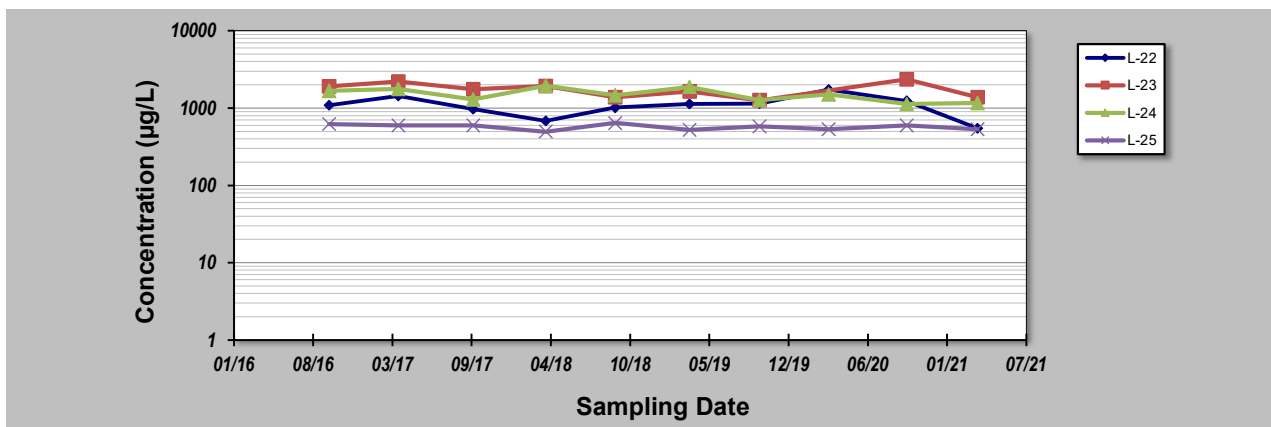
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 18-Jun-21		Job ID: FR8073	
Facility Name: JEASJRPP		Constituent: Iron	
Conducted By: Amy Langteau		Concentration Units: µg/L	

Sampling Point ID:		L-22	L-23	L-24	L-25		
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Sampling Event	Sampling Date	IRON CONCENTRATION (µg/L)					
1	Sep-16	1090	1910	1680	624		
2	Mar-17	1442.9	2207.3	1774.2	598.53		
3	Sep-17	974.72	1751.6	1288.5	597.94		
4	Mar-18	682	1940	1950	496		
5	Sep-18	1011.8	1377.2	1455.8	642.37		
6	Mar-19	1131.8	1642.2	1878.6	522.96		
7	Sep-19	1151.5	1260.7	1276	581.37		
8	Mar-20	1735.3	NS	1506.5	532.98		
9	Sep-20	1241.4	2363.9	1126.7	599.2		
10	Mar-21	546.14	1378.8	1160.8	531.79		
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Coefficient of Variation:	0.31	0.22	0.20	0.08		
Mann-Kendall Statistic (S):	5	-10	-19	-11		
Confidence Factor:	63.6%	82.1%	94.6%	81.0%		
Concentration Trend:	No Trend	Stable	Prob. Decreasing	Stable		



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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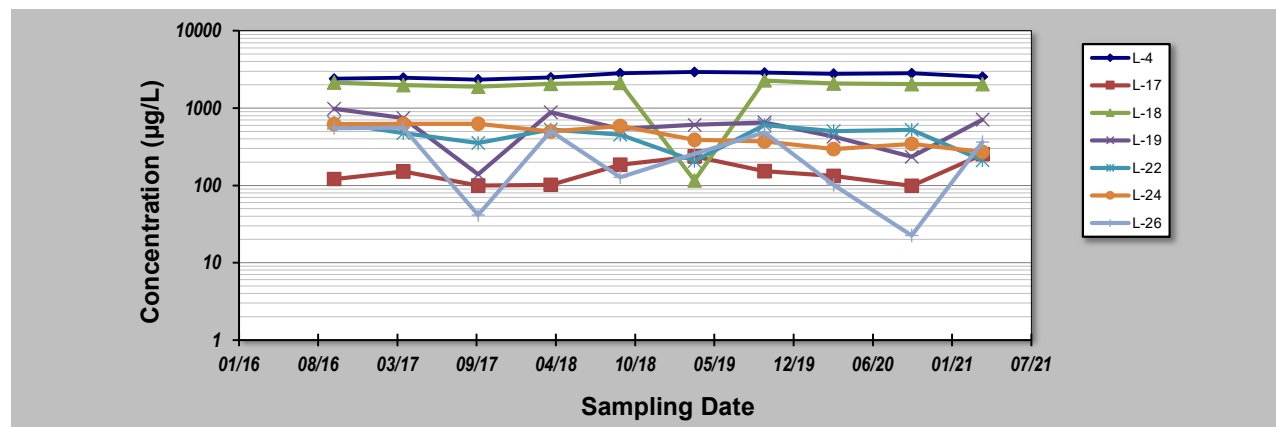
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **18-Jun-21**
 Facility Name: **JEASJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Sulfate**
 Concentration Units: **µg/L**

Sampling Point ID: **L-4** **L-17** **L-18** **L-19** **L-22** **L-24** **L-26**

Sampling Event	Sampling Date	SULFATE CONCENTRATION (µg/L)						
1	Sep-16	2400	121	2140	982	645	619	551
2	Mar-17	2470	151	1990	746	475	627	559
3	Sep-17	2340	99.9	1890	139	352	626	41.3
4	Mar-18	2490	102	2060	882	530	497	504
5	Sep-18	2820	185	2130	537	455	587	128
6	Mar-19	2940	237	116	606	208	388	255
7	Sep-19	2870	153	2280	653	604	371	482
8	Mar-20	2790	132	2090	428	504	295	101
9	Sep-20	2820	98.9	2050	235	523	345	22.5
10	Mar-21	2540	252	2040	711	211	272	366
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Coefficient of Variation:		0.08	0.36	0.33	0.45	0.33	0.31	0.72
Mann-Kendall Statistic (S):		18	9	-3	-13	-9	-37	-17
Confidence Factor:		93.4%	75.8%	56.9%	85.4%	75.8%	>99.9%	92.2%
Concentration Trend:		Prob. Increasing	No Trend	Stable	Stable	Stable	Decreasing	Prob. Decreasing



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $>95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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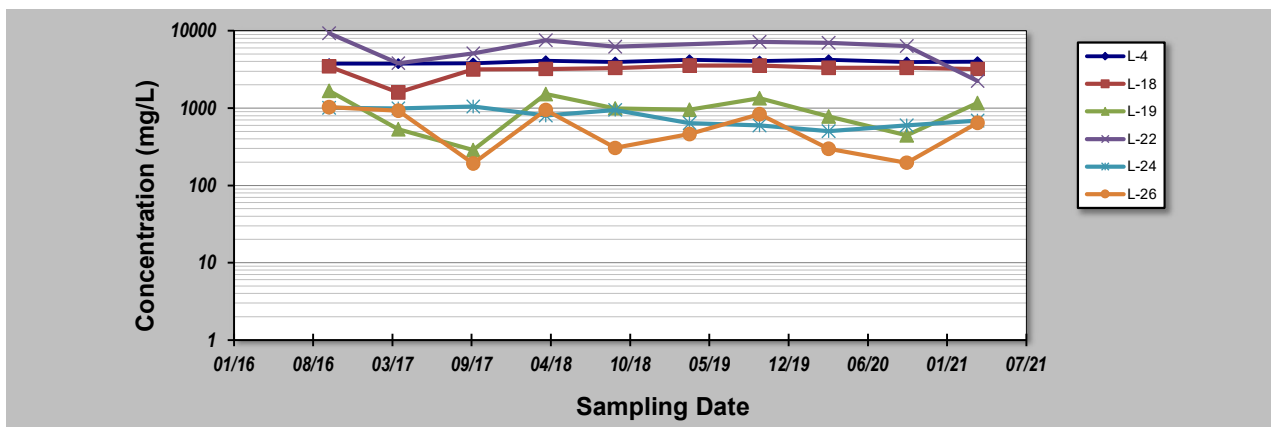
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **18-Jun-21**
 Facility Name: **JEASJRPP**
 Conducted By: **Amy Langteau**

Job ID: **FR8073**
 Constituent: **Total Dissolved Solids**
 Concentration Units: **mg/L**

Sampling Point ID:		L-4	L-18	L-19	L-22	L-24	L-26	
Sampling Event	Sampling Date	TOTAL DISSOLVED SOLIDS CONCENTRATION (mg/L)						
1	Sep-16	3768	3470	1670	9332	1010	1025	
2	Mar-17	3754	1597	531	3806	997	925	
3	Sep-17	3804	3178	287	5076	1050	192	
4	Mar-18	4090	3206	1520	7550	803	947	
5	Sep-18	3940	3310	993	6230	947	305	
6	Mar-19	4214	3528	953	NS	638	462	
7	Sep-19	4070	3550	1340	7170	596	829	
8	Mar-20	4220	3327	780	6990	505	296	
9	Sep-20	3945	3322	444	6340	596	196	
10	Mar-21	3980	3222	1166	2240	690	646	
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12								
13								
14								
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17								
18								
19								
20								
Coefficient of Variation:		0.04	0.18	0.48	0.35	0.26	0.57	
Mann-Kendall Statistic (S):		21	11	-7	-8	-28	-15	
Confidence Factor:		96.4%	81.0%	70.0%	76.2%	99.4%	89.2%	
Concentration Trend:		Increasing	No Trend	Stable	Stable	Decreasing	Stable	



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing ($S > 0$) or decreasing ($S < 0$): $> 95\%$ = Increasing or Decreasing; $\geq 90\%$ = Probably Increasing or Probably Decreasing; $< 90\%$ and $S > 0$ = No Trend; $< 90\%$, $S \leq 0$, and $COV \geq 1$ = No Trend; $< 90\%$ and $COV < 1$ = Stable.
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