



July 21, 2015

LETTER TO ALL BIDDERS

Subject: Florida Power & Light Company

Request for Proposal: Manatee Plant – Cooling Pond Soil-Cement Replacement Project

RFP # IJD081415

**BID DUE DATE: August 14<sup>th</sup>, 2015 2:00 PM/EST**

To All Bidders:

Florida Power & Light Company (“Purchaser”) desires to engage one or more bidders to perform Construction and Detail engineering, procurement and construction services required for the rehabilitation of the soil-cement revetment on the upstream slope, below and above the water line of the perimeter dam of the cooling pond at FPL Manatee Plant. The work to be performed is currently scheduled to commence on or about August 21, 2015.

All Work shall be performed in accordance with the attached Specification titled “Appendix A – PMT Cooling Pond Soil-Cement Replacement Project, Rev. 07/13/2015”, and other documents listed as attachments below.

Purchaser provides no assurance that any Contract will be awarded to any particular firm. Contract(s) awarded may incorporate one phase or multiple phases. Any resulting Contract shall not represent a commitment by Purchaser to perform any particular volume of Work nor guarantee Supplier any exclusive rights during the term of the Contract.

**Pre-Bid Meeting**

All interested bidders **must** attend a pre-bid meeting and walk-down for this project. The pre-bid meeting will be at FPL Manatee Plant, 19050 State Road 62, Parrish, FL 26292 on **Wednesday, July 29<sup>th</sup> at 10:00AM EST**. For directions to Manatee Plant, you may contact Lewis Rounds Office (561) 691.2364.

All visitors are required to produce a photo ID to enter Purchaser Property. Visitors are required to provide their **own hardhat, steel toe shoes, hearing protection and safety glasses** while on plant property. Please limit the number of individuals attending as representatives of your company to a total of **no more than two (2)**. Please provide the names of the person(s) attending and cell numbers to the undersigned no later than **noon Thursday July 23, 2015**. You may e-mail the names to the undersigned at [ivy.davis@nexteraenergy.com](mailto:ivy.davis@nexteraenergy.com).

**Terms and Conditions**

Any resulting Purchase Document will be subject to the attached “**Purchaser General Conditions for Contract Work**”, Rev. 04/07/15 (Florida Work). In the event a master set of terms and conditions exist between Purchaser and your company, such terms will apply.

Questions concerning this Request for Proposal (RFP) may be directed to the undersigned: office 561-691-7267 or email: [ivy.davis@nexteraenergy.com](mailto:ivy.davis@nexteraenergy.com).

### **Schedule**

All Work must be completed on or before **December 31<sup>st</sup>, 2017**, dates subject to change. All Work must be coordinated with the Purchaser Company Representative.

### **Cost**

Bidder shall provide pricing in accordance with the requirements of the attached Appendix B – Bid Pricing Sheet. The Bid Pricing Sheet is required to be completed and returned with the submittal of your proposal.

### **Instructions to Bidders**

The documents comprising this RFP constitute a request for proposal only and are not an authorization to commence work. Purchaser provides no assurance that the work described herein will be undertaken or that if undertaken, any work awarded will be to a particular firm. All costs incurred by the bidders in response to this RFP, including but not limited to developing proposals, site visits and negotiations shall be the bidder's responsibility.

In order for your response to be considered, you must address the requirements shown in this RFP and attachments including terms and conditions. Any exceptions or clarifications to requirements set forth in this RFP including attachments herein must be clearly detailed in your proposal. PREPRINTED TERMS AND CONDITIONS RETURNED WITH PROPOSALS ARE NOT CONSIDERED SPECIFIC EXCEPTIONS AND ARE NOT ACCEPTABLE. Additionally, non-specific or wholesale deletion of Purchaser's RFP requirements or language, or portions thereof, is not acceptable. Proposals containing such changes may, at Purchaser's option, be rejected without consideration.

Should any addenda to the RFP be necessary, your response to such addenda will become part of your proposal. Purchaser expressly reserves the right to accept or reject any or all proposals submitted, or to negotiate with one or more bidders, as appropriate. Only solicited proposals will be accepted.

Information provided by Purchaser as part of this RFP is considered proprietary information. It must be held in trust and handled by you in a manner appropriate to its confidential and proprietary nature. Such information should be protected and not reproduced in whole or in part.

All copies of the documents comprising this RFP must be returned if requested by Purchaser. In the event you do not desire to submit a proposal, please advise the undersigned promptly in writing or email. All proposals become the property of Purchaser upon submittal and will not be returned.

### **Bid Submittal**

Suppliers should clearly identify each page of information, which you consider to be confidential or proprietary. Purchaser reserves the right to release all proposals, including such information, to agents or contractors for purposes of evaluation. Such agents or contractors will be contractually bound by Purchaser disclosure standards.

Proposals must remain firm and valid for a period of not less than 60 calendar days following the due date stated below.

In order to receive consideration, an electronic copy of your proposal must be received no later than **the aforementioned Bid Due Date listed above** and shall be sent to the attention of Ivy Davis, at [ivy.davis@nexteraenergy.com](mailto:ivy.davis@nexteraenergy.com) by the time indicated above.

Your original submittal must be received no later than **2:00 PM EST/EDT** on the Bid Due Date or your proposal will be disqualified.

### **Technical Requirements**

Your proposal must address all of the following technical items, but not be limited to:

1. Meeting Purchaser's specification as detailed in attached technical attachments.
2. Providing written exceptions/clarifications, if any to technical specifications, including delivery requirements, or any other technical documentation in this RFP. Specific reference to section or sections shall be included for each exception or clarification submitted.
3. Bidder's proposal price shall be for all materials, management, supervision, labor, tools, equipment, consumables and every item of expense (including travel and per diem expenses) required to complete the scope identified in this RFP package.
4. Other exceptions/clarifications shall be clearly outlined and submitted in the proper format as requested above in INSTRUCTIONS TO BIDDERS to the undersigned. Bidders should provide a proposal in full compliance with the requirements included in this RFP package. A secondary and optional proposal may also be included, but should be documented as such.
5. Provide names, titles and rates for the proposed individual supervisors that will be assigned to this project if you are successful. Include resumes of key individuals also.
6. Bidder's/Supplier's experience statement with a minimum 3 similar projects within the past five (5) years. Particularly focus on those projects that are of similar size and scope. Statements are to include project description and client references, including names of contacts and their telephone numbers.

### **Commercial Requirements**

Purchaser has structured this RFP in a manner, which will facilitate Purchaser's evaluation. Your proposal should be prepared in a manner consistent with Purchaser's requests.

The commercial portion of your proposal must include the following:

- Firm pricing as detailed in both APPENDIX B – Supplier Bid Sheet.
- Checklists completed in both Appendix B and returned.
- A statement indicating bidder's acceptance to "**Purchaser General Conditions for Contract Work**", Rev. 04/07/15 (Florida Work), section 58.2 to replace 12 month warranty period with a 60 month warranty period. For any exceptions, bidders shall propose new language with a redlined markup in the original document.
- Other information which may be helpful to Purchaser in understanding and evaluating the proposal or your qualifications.
- Supplier shall procure and maintain, at its own expense, the minimum insurance coverage required to complete the work. **Supplier shall provide evidence of the insurance coverage by providing an ACORD Certificate or other equivalent Certificate of Insurance. Insurance coverage must be in forms and with insurance companies**

**acceptable to Purchaser before the execution of the Agreement and any work under the contract begins.**

- Your firm's Experience Modification Rate (EMR) for Workers' Compensation is required for the current and two previous policy years, including the associated policy expiration date for each EMR. This information must be provided on your insurance carrier letterhead or directly from the National Council on Compensation Insurance (NCCI). Please Note: Unless extenuating circumstances exist, it is Purchaser's policy to only contract with suppliers whose EMR is 1.0 or lower. Should your firm's EMR exceed 1.0 due to such circumstances, provide documentation describing the reasons.
- Safety work record and OSHA Form 200/300 for the current and four previous years.
- Explanation of any OSHA citations received by your company in the last five (5) years.

#### **COVERAGE TYPE**

- **Marine Liability Insurance** (Protection & Indemnity) – Policy covers the liability for injury to both the public and the crew plus the liability for damage to the cargo and other property, collision including fixed and floating objects, removal of wreck, towers liability.
- **Marine Pollution Insurance** Statutory Marine Pollution Liability Policy or a Certificate of Financial Responsibility as required by OPA 90, described in Schedule H.
- **Marine Hull Insurance** with limits equal to the agreed value of the vessel.

#### **Additional Bid Requirements**

- Provide rates for labor and any other items of expense that could apply to this project. These rates will be used to calculate **changes** to the scope of Work.
- Provide a Preliminary Project Schedule for the Work.
- The size of the crew to be provided to perform the scope of Work.
- Identification of subcontractors and associated work scope, if you intend to subcontract any portion of the services. Information to include proposed subcontractor's names, addresses, descriptions of work to be performed, contacts, and telephone numbers; Note: If you intend to subcontract any portion of the Work, Bidder must clearly identify each Subcontractor in its proposal, and each such Subcontractor's EMR must be below 1.0.
- Submit history of previous work, similar to the scope specified herein, that shows qualification and experience.
- Submit history of "power plant" experience
- Supplier to provide Gantt chart detailing their proposed schedule for this project.

Sincerely,

Ivy Davis  
Contract Development and Procurement



Commercial Attachments:

- Purchaser General Conditions for Contract Work (Rev. 04/07/15 – Florida Work)
- Appendix B – Cooling Pond Project
- NextEra Energy Supplier Code of Conduct (Rev. 08/21/14)
- Attachment 1 Site Safety Requirement, Rev. 5/5/15
- Attachment 2 General Requirements, Rev. 5/5/15
- Attachment 3 Contractor Requirements, Rev. 5/5/15

Technical Attachments:

- Appendix A – PMT Cooling Pond Soil-Cement Replacement Project, Rev. 07/13/2015
- Section A – Construction Specification: Turbidity Control, Rev. 7/10/15
- Section B – Construction Specification: Surface Preparation, Rev. 7/10/15
- Section C – Construction Specification: Excavation of Bottom Key Trench, Rev. 7/10/15
- Section D – Construction Specification: Concrete Overlay and Bottom Key, Rev. 7/10/15
- Site Information for Bidders Report-Manatee Plant, Rev. 07/2015
- Schedule H – OPA 90
- Schedule B – Marine Insurance

Project Drawings:

**Drawing Title**

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- FPL Manatee Cooling Pond Construction Plans Drawings
- Lay Down Area Map



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## PURCHASER GENERAL CONDITIONS FOR CONTRACT WORK

### 1.0 DEFINITIONS:

When used in these General Conditions and in the Supplemental Conditions with initial or complete capitalization, whether in singular or in plural, the following terms have the following defined meanings:

- 1.1 **Acceptance:** Final approval in writing by the Company Representative, indicating apparent conformity of the Work to the Contract, in accordance with Section 49.0, COMPLETION AND ACCEPTANCE.
- 1.2 **Agents:** Has the meaning set forth in Section 62.2.
- 1.3 **Change Form:** A signed Purchaser change form or change order which serves as an amendment to the Contract and which may include changes in the scope of Work.
- 1.4 **Changed Work:** Deviation from the Work originally authorized by the Contract which results in costs to Purchaser lower than or in excess of the original Contract Price.
- 1.5 **Company Representative:** The individual within Purchaser having responsibility and authority for administration of this Contract on behalf of Purchaser. Company Representative may sometimes be referred to in the Contract as the "contract coordinator." If the Company Representative is not identified in the Contract, Supplier shall contact the procurement representative identified in Contract to identify such individual(s).
- 1.6 **Confidential Information:** All information, regardless of the form in which it is communicated or maintained (whether oral, written, electronic or visual) and whether prepared by Purchaser or otherwise, which is disclosed to Supplier, its employee, Subcontractors or Subcontractor employees, and including, without limitation, all records, reports, analyses, notes, memoranda, documentation, data, specifications, diagrams, statistics, systems or software, manuals, business plans, operational information or practices, processes (whether or not patented, patentable or reduced to practice), customer lists, contractual arrangements with, and information about, Purchaser's suppliers, distributors, and customers, or other information that are based on, contain or reflect any such Confidential Information. All information received by or disclosed to Supplier, its employee, Subcontractors or Subcontractor employees from, by or through Purchaser or any Purchaser Entity shall be considered Confidential Information, unless it is specifically designated as non-proprietary and non-confidential or as otherwise set forth in Section 62.1.
- 1.7 **Contract:** The agreement between Purchaser and Supplier as set forth in (i) the body of the Purchase Document, (ii) these General Conditions; (iii) other documents as may be incorporated into the Purchase Document such as Supplemental Conditions, drawings, and specifications, (iv) the schedule provided pursuant to Section 36.0, TIME, ORDER OF COMPLETION AND DELAYS, and (v) any subsequent Releases and Change Forms.
- 1.8 **Contract Price:** The authorized dollar value of the Contract, or portion thereof, as may be amended by subsequent Change Forms and Releases, reduced by Section 11.0, CONSTRUCTION EQUIPMENT.
- 1.9 **Cure:** Supplier's obligation and actions to repair, replace or otherwise correct any failure to meet a warranty obligation or to repair, replace or otherwise correct any defect, deficiency or nonconformance with the conditions and standards prescribed in Section 58.0, WARRANTY.
- 1.10 **EPA:** Has the meaning set forth in Section 21.1.
- 1.11 **General Conditions:** These Purchaser General Conditions for Contract Work that are comprised of Sections 1.0 through 70.0.
- 1.12 **Hazardous Material:** Any substance, or material (whether solid, liquid or gas) which is "hazardous substances," "toxic substances," "radioactive materials," "product, equipment or device containing hazardous materials" or other similar designations in, or otherwise subjected to regulation under, any applicable law, rule or regulation.
- 1.13 **ISO 27001/27002 Certification:** A certification that Supplier's information security management system satisfies the information security standard of the International Organization for Standardization and the International Electrotechnical Commission, or an equivalent report or certification applicable to international locations.
- 1.14 **Jobsite:** The location(s) where the Work shall be performed as specified in the Contract.
- 1.15 **Notice:** Formal written correspondence providing notice of action, purpose, intent or the like given under the provisions of the Contract. Unless otherwise provided in the Contract, Notice shall be delivered in person, by overnight delivery or by certified mail to the Company Representative or Supplier and shall be effective when received. General correspondence is not categorized as Notice. Notice shall be deemed effective if another mode of delivery is used and actual receipt is accomplished.
- 1.16 **OSHA:** Has the meaning set forth in Section 21.1.
- 1.17 **Personal Information:** Any one or more data elements identified in applicable law of a Purchaser customer, employee, retiree or contractor, which includes, without limitation: (i) social security number; (ii) driver's license number or government issued ID number; (iii) financial account number or credit or debit card number when combined with a security code, access code or password; (iv) personal user name or email address when combined with a password or security question and answer; (v) personal medical information; (vi) passport/alien registration information; (vii) date of birth; (viii) tax identification number; (ix) biometric data; (x) health insurance policy number when combined with a unique identifier; and (xi) salary information.
- 1.18 **Project:** The total construction of which the Work performed under the Contract may be the whole or a part.
- 1.19 **Purchase Document:** The Purchaser purchase order or purchase contract form that is a part of and incorporates the remaining documents comprising the Contract.
- 1.20 **Purchaser:** The entity named and designated as the Purchaser on the Purchase Document, and includes its successors and assigns.
- 1.21 **Purchaser Entities:** Purchaser, its parent, subsidiaries and any affiliated company of NextEra Energy, Inc. and their respective officers, directors, agents and employees.
- 1.22 **Records:** Has the meaning set forth in Section 24.1.
- 1.23 **Release:** A written document (including, but not limited to, electronic mail and fax) serving as a delivery or work authorization and used by Purchaser to authorize Supplier to commence Work (or a portion thereof) or which amends or revises a previous Release. Releases shall be valid only to specify the Company Representative, scope of the Work, compensation method, price, time of performance and other details necessary to describe the scope of Work. A Purchaser purchase order form, when released against a Purchaser purchase contract form, may serve as a Release. Releases shall not in any way change, amend, supersede or supplement the other terms and conditions of a Contract.
- 1.24 **SSAE 16 Report:** Any audit report (including both those commonly referred to as "Type I" and "Type II" and/or SOC 1, SOC 2, and SOC 3) of which Supplier is the subject and which is prepared in conformance with Standards for Attestation Engagements No. 16, as promulgated by the American Institute of Certified Public Accountants, or an equivalent report as may be set forth in succeeding guidance which replaces or modifies those standards as part of generally accepted accounting or auditing principles followed in the United States of America.
- 1.25 **Subcontractor:** Any person, firm, partnership, association, joint venture, company, corporation, or other entity, regardless of tier, having an agreement, formal or informal, with Supplier to provide any part of the Work under the Contract. The term Subcontractor shall include vendors and suppliers of Supplier.
- 1.26 **Superintendent:** Supplier's representative at the Jobsite during the term of the Contract as further defined in Section 12.0, SUPERVISION OF THE WORK.
- 1.27 **Supplemental Conditions:** The Supplemental Conditions that have been incorporated in the Purchase Document, if applicable.
- 1.28 **Supplier:** The individual or organization responsible for performing the Work identified in the Purchase Document.
- 1.29 **Transactional Taxes:** Sales, use or other transactional taxes lawfully imposed upon the sale of the Work to Purchaser or upon Purchaser's storage, use or consumption of the Work.
- 1.30 **Waste:** Any substance or material (whether solid, liquid or gas) which is an "unused material," "discarded material," "pollutant," "contaminant," "hazardous waste," or other similar designation in, or otherwise subject to regulation under any applicable law, rule or regulation.
- 1.31 **Work:** Work shall include any and all labor, supervision, services, materials, goods, consumables, equipment, reports, evaluations, engineering, delivery, erection, construction, testing, tools, drawings, manuals, documents, and all other necessary activities for the execution and timely completion of Supplier's obligations under the Contract, including, but not limited to, the scope of Work or in the body of a Purchase Document.

## PURCHASER GENERAL CONDITIONS FOR CONTRACT WORK

### 2.0 WORDS AND PHRASES:

Where the words "as shown," "as detailed," "as indicated," or other such words are used in the Contract, reference is to the drawings and specific instructions unless the context clearly indicates a different meaning. "Approved", "reasonable", "suitable", "acceptable", "proper", "satisfactory", or other such words, except as otherwise specified, shall mean satisfactory in the judgment of Purchaser only to the extent of judging the apparent compliance of the Work with the Contract. "As ordered", "as directed", "as required", "as permitted", "as allowed", or other such words shall mean the action of Purchaser is intended only to the extent of judging the apparent compliance of the Work with the Contract and to require appropriate action. The parties explicitly recognize that Purchaser's judgments for apparent compliance of the Work with the Contract are administrative in nature and do not relieve Supplier of its obligations under the Contract or impose any such obligations on Purchaser. Wherever the Contract provides that Supplier shall perform certain Work "at its expense" or "without charge," or that certain Work "shall not be paid for separately," such quoted or similar words and phrases mean that Supplier shall not be entitled to any additional compensation from Purchaser for such Work, and the cost thereof, unless otherwise specified, shall be considered as included in the payment for other items of Work.

### 3.0 EFFECT OF SECTION HEADINGS:

Section headings appearing in the Contract are inserted for convenience of reference only and shall in no way be construed to be interpretations of text.

### 4.0 SUPPLIER'S REPRESENTATIONS:

- 4.1 Supplier hereby represents that it has, by careful examination, satisfied itself as to the nature and location of the Work, the conformation and configuration of the ground, the character, quality and quantity of the materials to be encountered both above and below ground, environmental conditions including weather, the character of equipment and facilities needed preliminary to and during the prosecution of the Work, the general and local conditions including labor relations and all other matters, including, but not limited to applicable laws which may in any way affect the performance of the Work under the Contract. Supplier shall have no claim for additional compensation or additional time based on a lack of knowledge of such conditions.
- 4.2 Records of conditions above and below ground, water records or other observations which may have been made by or for Purchaser shall be made available to Supplier for its information, upon request, but there is no express or implied guarantee as to the accuracy of such records or any interpretation of them. Supplier acknowledges this disclaimer and that it has formed its own opinion concerning all of these conditions from an inspection of the Jobsite and has made its own interpretation of such records.
- 4.3 Supplier shall secure from Purchaser all information necessary for the performance of the Work prior to commencing such Work.
- 4.4 Supplier shall carefully study and review the Contract and related documents and, prior to commencing any portion of the Work, shall carefully review applicable drawings and specifications and shall immediately provide to the Company Representative Notice of any conflict with applicable laws or of any errors, inconsistencies or omissions it may discover. Provided that Supplier has furnished Purchaser timely Notice, Supplier shall not be liable to Purchaser for any damage resulting from any such reported errors, inconsistencies or omissions in the drawings or specifications. Supplier shall perform work on any portion of the Work only upon receipt of approved drawings, specifications or instructions from the Company Representative.
- 4.5 Purchaser assumes no responsibility for any understandings or agreements made by any of its representatives during or prior to execution of the Contract unless such understandings or agreements are expressly stated in the Contract.
- 4.6 All loss or damage to Supplier arising out of the Work or from the action of the elements, or from any unforeseen circumstance in the prosecution of the Work including inefficiencies or claims of inefficiencies, shall be sustained and borne by Supplier at its own cost and expense.
- 4.7 Supplier represents and warrants that it is fully experienced in projects of the nature, scope and magnitude of the Work, properly qualified, registered, licensed, equipped, organized and financed to perform the Work.

### 5.0 STANDARDS AND CODES:

- 5.1 All correspondence, invoicing, reports, drawings and other communications, both oral and written, related to the Contract shall be in the English language. All drawings, specifications and other technical submittals shall be provided in a format consistent with the technical standards for presentation of such material then in effect by the prevalent United States of America organization responsible for the promulgation of such standards, including, but not limited to, American National Standards Institute, American Petroleum Institute, American Society of Mechanical Engineers, National Electric Code, and National Electrical Manufacturer's Association. All measurements shall use the English system unless otherwise specifically set forth in the Contract. All monies due shall be invoiced and payable in U.S. Dollars.
- 5.2 Whenever references are made in the Contract to standards or codes in accordance with which Work is to be performed or tested, the edition or revision of the standards or codes current on the effective date of the Purchase Document (if the scope of Work is initially specified in the Purchase Document) or Release (if the scope of Work is initially specified by a Release) shall apply unless otherwise expressly set forth in the Contract.
- 5.3 In case of conflict between any referenced codes, specifications and standards and the specifications in the Contract, the more stringent shall govern.

### 6.0 DRAWINGS AND SPECIFICATIONS:

- 6.1 Drawings, specifications and copies thereof furnished by Purchaser are the property of Purchaser and shall not be used by Supplier on other jobs and shall be returned on request of Purchaser.
- 6.2 Engineering drawings and specifications issued for construction shall be provided by Purchaser and shall be adhered to by Supplier in performance of the Work and any additional information concerning the Work may be provided by or through the Company Representative. Any such additional information shall not be interpreted as requiring or allowing Supplier to deviate from approved drawings and specifications.
- 6.3 Any review of Work in process or any visit or observation during construction or any clarification of drawings and specifications by the Company Representative, whether through personal observation on the Jobsite or by means of approval of shop drawings for temporary construction of construction processes, or by other means or method, is agreed by Supplier to be for the purpose of observing the extent and nature of Work completed or being performed, as measured against drawings and specifications constituting the Contract, or for the purpose of enabling Supplier to more fully understand drawings and specifications so that the completed Work will conform thereto, and shall in no way relieve Supplier from full and complete responsibility for proper performance of Work including but not limited to the propriety of means and methods of Supplier in performing the Contract, and the adequacy of any designs, plans or other facilities for accomplishing such performance. Deviation by Supplier from drawings and specifications that may have been in evidence during any such visitation or observation by the Company Representative, whether called to Supplier's attention or not, shall in no way relieve Supplier from its responsibility to complete all Work in accordance with said drawings and specifications.
- 6.4 If in the performance of the Work Supplier determines, observes, or questions any part of the Work despite compliance with the applicable drawings, design or specifications, which may render the Work to be deficient, unsafe or in noncompliance with codes or standard industry practice, Supplier shall notify the Company Representative immediately for disposition.
- 6.5 If applicable, Supplier shall be furnished with at least one hard copy of specification text and drawings smaller than 11inch x 17inch and one (1) reproducible copy of larger drawings that comprise Project plans associated with the Work. Supplier shall at all times keep at least one (1) copy of such plans accessible on the Jobsite, with all approved revisions entered in said copy and noted thereon.
- 6.6 Upon completion of the applicable portion of the Work, Supplier shall furnish Purchaser with a complete set of drawings and specifications with all revisions and modifications shown as they are incorporated into the Work.

### 7.0 LINES AND GRADES:

- 7.1 Unless otherwise specified in the Contract and if applicable, the Company Representative shall provide Supplier with sufficient control lines and grades. All transition of such control lines to the point of execution of the Work shall be the responsibility of Supplier and shall be subject to verification of the Company Representative at any time.
- 7.2 Supplier shall carefully preserve all control lines provided by the Company Representative and, in case of their destruction or removal by Supplier or its personnel or Subcontractors, Supplier shall immediately inform the Company Representative and re-establish the control lines at Supplier's expense.

## PURCHASER GENERAL CONDITIONS FOR CONTRACT WORK

### 8.0 CONTRACT INTERPRETATION:

- 8.1 All claims of Supplier, all questions concerning interpretation or clarification of the Contract or the acceptable fulfillment of the Contract on the part of Supplier and all questions as to compensation and to extension of time shall be submitted in writing to the Company Representative for determination within a reasonable time. Supplier shall proceed with the Work at the direction of and in accordance with the determinations, instructions and clarifications of such representative. Supplier shall be responsible for requesting instructions or interpretations in accordance with this Section 8.0 or Section 9.0, DISPUTES AND CLAIMS, and shall be solely liable for any cost and expenses arising from its failure to do so.
- 8.2 In case of conflict between or among documents related to the Contract, the following order of precedence shall apply unless otherwise specified: first: Change Forms, second: information contained in the body of the Purchase Document, third: Supplemental Conditions, fourth: these General Conditions, fifth: releases and last: other documents incorporated into the Purchase Document. Releases shall not in any way change, amend, supersede, or supplement the terms and conditions of the Contract except as provided in these General Conditions. In case of conflict among Change Forms, the Change Form with the most recent date shall take precedence. In case of conflict among Releases, the Release with the most recent date shall take precedence.
- 8.3 Figure dimensions on drawings shall govern over scale dimensions and detail drawings shall govern over general drawings.

### 9.0 DISPUTES AND CLAIMS:

- 9.1 Where particular sections of the Contract contain express provisions with respect to disputes or claims arising thereunder, including Section 8.0, CONTRACT INTERPRETATION, such provisions shall constitute the sole dispute or claim procedure. In the absence of such a provision, all disputes, claims or adjustments shall be submitted by Supplier in writing to the Company Representative within thirty (30) calendar days after the dispute arises or the disputed direction, order or instruction is given. The Company Representative shall reply within thirty (30) calendar days and render Purchaser's decision to Supplier in writing.
- 9.2 Any disputes resulting in litigation between the parties shall be conducted in the state or federal courts of the State of Florida. Proceedings shall take place in the Circuit Court for Palm Beach County, Florida, the United States District Court for the Southern District of Florida, or such other Florida location or forum all at Purchaser's election. The parties irrevocably waive any objection, which any of them may now or hereafter have to the bringing of any such action or proceeding in such respective jurisdictions, including any objection to the laying of venue based on the grounds of forum non conveniens and any objection based on the grounds of lack of in personam jurisdiction.
- 9.3 THE PARTIES TO THE CONTRACT HEREBY KNOWINGLY, VOLUNTARILY, AND INTENTIONALLY WAIVE ANY RIGHT THAT MAY EXIST TO HAVE A TRIAL BY JURY IN RESPECT OF ANY LITIGATION BASED UPON OR ARISING OUT OF, UNDER, OR IN ANY WAY CONNECTED WITH, THE CONTRACT OR THE PERFORMANCE OF WORK BY SUPPLIER HEREUNDER.
- 9.4 To the maximum extent permitted by law, it is understood and agreed by the parties that the provisions and requirements of Chapter 558, Florida Statutes, that sets forth an alternative dispute resolution mechanism, shall not apply to any dispute that may arise out of the Contract. THE PARTIES KNOWINGLY AND VOLUNTARILY WAIVE AND RELEASE ANY EXPRESS RIGHTS AND/OR OBLIGATIONS SET FORTH IN CHAPTER 558, FLORIDA STATUTES.

### 10.0 SUPPLIER'S PERFORMANCE:

Supplier shall provide, pay for and use in the performance of the Work, all labor, materials, goods, consumables, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services, except those provided by Purchaser, for proper and timely execution and completion of the Work as provided for in the Contract.

### 11.0 CONSTRUCTION EQUIPMENT:

Purchaser, at its option, shall furnish to Supplier any items of construction equipment with individual purchase value of Five Hundred Dollars (\$500) or more required by Supplier to perform the Work in accordance with the Contract. In such case the Contract Price shall be reduced accordingly.

### 12.0 SUPERVISION OF THE WORK:

- 12.1 Supplier shall provide a competent Superintendent and adequate supervision on the Jobsite at all times during performance of the Work to ensure that the Work is being performed in accordance with the Contract. Purchaser shall have the right to review the experience, qualification and certification record of Supplier's key personnel prior to their assignment to the Work.
- 12.2 Superintendent shall represent Supplier and shall be a duly authorized agent of Supplier. Superintendent shall not be removed from the Work without prior Notice to Purchaser.
- 12.3 Supplier, Superintendent and Supplier's supervisors shall cooperate at all times with Purchaser, Company Representative and other contractors and subcontractors in all matters, including labor relations.
- 12.4 In the event of any reassignment or change in key personnel such as the Superintendent or supervisors, Supplier shall provide an overlap of key personnel for a period of time sufficient to ensure that no adverse impact to the Work occurs. All costs of such overlap shall be borne by Supplier and shall not be reimbursable under the Contract.

### 13.0 COOPERATION WITH OTHERS:

Supplier shall cooperate with Purchaser in scheduling the order of performance of, and shall pursue the Work in such a manner to eliminate interference with, other work being performed at the Jobsite.

### 14.0 CHARACTER OF WORKERS:

- 14.1 Supplier shall at all times enforce strict discipline and good order among personnel engaged in the performance of the Work and shall ensure that all personnel are skilled in, qualified for and otherwise fit for the performance of the portion of the Work assigned to such personnel. Supplier shall immediately remove from the Work Supplier's personnel who Supplier determines are unfit, who create disciplinary, security or safety problems.
- 14.2 Purchaser reserves the right to request Supplier to remove immediately from the Jobsite any personnel of Supplier, any Subcontractor, or any Subcontractor personnel, who, in the sole opinion of Purchaser (i) poses any threat to the security, health or safety of Purchaser, its property, its customers, or the public, (ii) whose conduct adversely affects the Work or reflects unfavorably upon Purchaser, or (iii) who have been terminated for cause by Purchaser or its affiliates.
- 14.3 With respect to Supplier or Subcontractor personnel who receive Purchaser identity badges or passwords to Purchaser automated systems, Supplier shall notify the Company Representative or the Purchaser Corporate Security Department in writing within two (2) business days following the conclusion of any such person's assignment to perform a portion of Work which ends prior to the completion of all Work so that Purchaser may appropriately revoke that individual's access. In the event Supplier removes from the Work any such individual "for cause", Supplier shall not later than one (1) hour following such removal provide written notification to the Company Representative and the Purchaser Corporate Security Department of such removal for purposes of having removals related to: (i) falsifications and misrepresentations; (ii) violation of Supplier policy or procedure; (iii) violation of any Purchaser, Supplier or Subcontractor safety rule or procedure; (iv) violation any Purchaser, Supplier or Subcontractor security rule or procedure of security rules; (v) workplace violence or disciplinary problem; (vi) felony arrest; or (vii) any behavior that could adversely affect the Work or reflects unfavorably upon Purchaser Entities. Supplier's written notification of it or its Subcontractors removal of any personnel for cause shall include the following information: (a) name of Supplier or Subcontractor personnel removed; (b) date of such removal; (c) general description of reason for removal; and (d) the name of Supplier's supervisor removing such individual from the Work.
- 14.4 Upon Purchaser's request, Supplier shall promptly provide to the Company Representative written listings of the names of Supplier or Subcontractor personnel who have been assigned to participate in Work during the period under report, and whose work has, or reasonably could, entail unescorted (e.g. personnel who receive Purchaser identity badges) access to Purchaser premises, or access via password to Purchaser automated systems.

### 15.0 LABOR RELATIONS:

- 15.1 Supplier shall establish and administer a labor relations program covering the Work. Such program shall be in compliance with requirements and guidelines established for the Project. Purchaser's interface for construction labor relations matters shall be its designated contact for labor relations and Supplier shall provide reports regarding such matters as Purchaser may require.

## PURCHASER GENERAL CONDITIONS FOR CONTRACT WORK

- 15.2 In the event that Supplier experiences labor relations difficulties that may affect the progress of the Work or the work of Purchaser or other contractors, it shall immediately notify the Company Representative. If such difficulties result in a strike, lockout or other labor problems which disrupt the progress of the Work or the work of Purchaser or other contractors, Purchaser may take any or all of the following actions:
- 15.2.1 Replace Supplier upon twenty-four (24) hour Notice with another contractor at no cost whatsoever to Purchaser and require Supplier to reimburse Purchaser for any additional expenses incurred in exercising this right.
  - 15.2.2 Require Supplier to reimburse Purchaser for any damages suffered by reason of the labor problems.
  - 15.2.3 If such labor problems continue beyond forty-eight (48) hours, by Notice require Supplier to take whatever steps are necessary to perform the Work.
- 15.3 Failure of Purchaser to exercise any of its rights under this Section 15.0 shall not constitute a waiver of those rights with respect to future labor problems. Supplier's ability to obtain labor to perform its own Work shall not constitute a defense if Supplier's labor problems are disrupting the work of other contractors or Purchaser.
- 16.0 SUPPLIER'S WORK AREA:**  
All of Supplier's work areas on the Jobsite shall be assigned by Purchaser. Supplier shall confine its office, shops, storage, assembly, equipment and vehicle parking to the areas so assigned. Should Supplier find it necessary or advantageous to use any additional land outside the Jobsite for any purpose whatever, Supplier shall, at its expense, provide and make its own arrangements for the use of such additional land and all facilities and services used thereon.
- 17.0 SUPPLIER'S BUILDINGS:**  
The buildings, trailers or structures at the Jobsite provided by Supplier for its operations and personnel shall be permitted only when and at such places as designated by the Company Representative. Supplier's buildings shall be prominently marked with its name and logo. Lighting, safety, housekeeping and sanitary conditions in or about such structures shall at all times be maintained by Supplier in a manner satisfactory to the Company Representative.
- 18.0 SUPPLIER'S PLANT, EQUIPMENT AND FACILITIES:**
- 18.1 Supplier shall provide and use in the performance of the Work only such construction plant, equipment, materials and facilities capable of producing the quality and quantity of Work required by the Contract and within the time or times specified by the Contract or at such other time specified by the Company Representative.
  - 18.2 Before proceeding with the Work, Supplier shall furnish to Purchaser all information and drawings, as Purchaser may request, relative to such equipment, plant and facilities including but not limited to temporary structures, machinery, equipment, offices, warehouses, and camps. Upon written notification from Purchaser, Supplier shall discontinue operation of unsatisfactory plant, equipment or facilities and shall either modify the unsatisfactory items to resolve Purchaser's concerns or remove the unsatisfactory items from the Jobsite at Supplier's expense.
  - 18.3 Supplier shall not remove its construction plant, equipment or facilities from the Jobsite before the Work is complete and accepted without first obtaining Purchaser's written approval. Such approval shall not be unreasonably withheld.
  - 18.4 Supplier shall, prior to any equipment being moved onto or off the Jobsite, present to the Company Representative an itemized list of all equipment, including but not limited to power tools, welding machines, pumps and compressors. Such list must include a description, quantity, and serial numbers where applicable. Unless otherwise approved by the Company Representative, Supplier shall identify its equipment by color (other than yellow), decal and etching. Prior to removal of any or all equipment, Supplier shall clear such removal through the Company Representative. No equipment or tools can be removed from the Jobsite without proper clearance by Purchaser. Nothing contained herein shall relieve Supplier of its obligations with respect to safety, security and storage of such equipment or tools.
- 19.0 PROTECTION OF PROPERTY:**
- 19.1 Supplier shall not damage, close, or obstruct any utility installation, highway, road or other property until all required and necessary permits and operating licenses, notification and regulatory approvals therefor have been obtained and the affected parties have been properly notified. If facilities are closed, obstructed, damaged or rendered unsafe by Supplier's operations, Supplier shall, at its expense, make such repairs and provide such temporary guards, lights and other signals as necessary or required for safety and as will be acceptable to Purchaser.
  - 19.2 Unless otherwise specifically provided in the Contract, Supplier shall not do any Work that would disrupt or otherwise interfere with the operation of any pipeline, telephone or electric transmission line, telecommunication or computer cable, communication system, ditch or other structure, nor enter upon lands in their natural state until approved by Purchaser. Before beginning such Work, Supplier shall give Notice to Purchaser of its intention to start such Work. Supplier shall not be entitled to any extension of time or any extra compensation on account of any postponement, interference or delay caused by any such facility, ditch or structure being on or adjacent to the Jobsite.
  - 19.3 Supplier shall preserve, protect and prevent loss or damage to all cultivated and planted areas, vegetation walks, pavements, roadways, structures and utilities on or adjacent to the Jobsite, except as expressly provided in the Contract or approved by the Company Representative. Supplier shall be responsible for damage to any such areas and vegetation and for unauthorized cutting of trees and vegetation including without limitation damage arising from the performance of the Work through operation of equipment or stockpiling of materials. All costs in connection with any repairs or restoration necessary or required by reason of any such damage or unauthorized cutting shall be borne by Supplier.
- 20.0 SANITATION:**  
Except as otherwise provided in the Contract, necessary sanitary conveniences for use by Supplier's employees and Subcontractors at the Jobsite shall be furnished and maintained by Supplier in such manner and at such locations as shall be acceptable and approved by the Company Representative and their use shall be strictly enforced.
- 21.0 HEALTH AND SAFETY:**
- 21.1 Responsibility: Supplier shall be solely responsible for the safety and health of its personnel and Subcontractors engaged in the execution of the Work, as well as for the protection of the environment and of the Work and its personnel or Subcontractors. Supplier shall be responsible for the prevention of accidents and incidents and the administration of Supplier's safety, health and environmental programs in accordance with all applicable laws, rules and regulations, which includes, without limitation, applicable U.S. Occupational Safety and Health Administration ("OSHA") and U.S. Environmental Protection Agency ("EPA") or any other applicable federal, state and local government agency regulations and rules, and shall report all Work related injuries, illnesses, and/or incidents to Purchaser immediately.
  - 21.2 Precautions: Supplier shall take all precautions for the safety and health of all affected persons and the environment and shall provide all protection necessary to prevent damage and mitigate injury, illness or loss to:
    - 21.2.1 All persons and entities engaged in or performing the Work and all other persons and entities who may be affected thereby;
    - 21.2.2 All Work and all materials and equipment to be incorporated therein, whether in storage on or off the Jobsite, under the care, custody, or control of Supplier or Subcontractor; and to
    - 21.2.3 All existing Purchaser equipment or property and/or equipment or property of customers.
  - 21.3 Compliance:
    - 21.3.1 In performing any part of the Work at the Jobsite, including Cure pursuant to Section 58.0, WARRANTY, Supplier shall comply with all applicable laws and industry standards pertaining to the health and safety of persons or property and protect them from damage, injury or loss. Supplier shall also comply with all Jobsite work rules and regulations, copies of which shall be provided to Supplier upon request. If Supplier does not work the minimum "30 employee days cumulative per 12 month period" requirement, as defined in Purchaser's Supplier Safe and Secure Workplace Policy, and therefore is not subject to such policy, the following shall apply:
      - 21.3.1.1 Supplier shall not permit or suffer the introduction or use of intoxicating liquor, firearms, or drugs upon the Work, including Cure, or upon any of the grounds occupied or controlled by Supplier.



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- 21.3.1.2 All Supplier and Subcontractor employees shall be subject to "post-accident" and/or "reasonable suspicion" controlled substances and alcohol testing while at the Jobsite. "Reasonable suspicion" shall be determined in the sole discretion of Purchaser. No Supplier or Subcontractor employee required to take a post-accident alcohol test shall use alcohol for eight hours following the accident, or until he/she undergoes a post-accident alcohol test, whichever occurs first.
- 21.3.2 Dust, smoke, and other air contaminants from any source whatsoever shall not be discharged into the atmosphere in violation of the laws, rules and regulations of governmental authorities having jurisdiction. Supplier shall use reasonable effort to minimize dust conditions in all areas within the Jobsite of Supplier's operations.
- 21.4 Chemicals:
- 21.4.1 Supplier shall not bring chemicals to the Jobsite that exceed the thresholds prescribed in accordance with applicable laws, rules and regulations (including, without limitation, 29 CFR and 40 CFR) without prior written approval of the Company Representative. Supplier's request for approval shall include a Risk Management Plan ("RMP") for the Jobsite. This plan shall follow and be in compliance with all applicable laws, rules and regulations (including, without limitation, 29 CFR and 40 CFR). Such RMP shall be in place before a threshold is exceeded.
- 21.4.2 All used and unused flushing and/or cleaning agents, oil and petroleum Wastes shall be treated and disposed of by Supplier in accordance with local, state and federal regulations as applicable.
- 21.5 Hazardous Materials: When the use or storage of explosives or other Hazardous Materials or equipment is necessary for execution of the Work, Supplier shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel and in accordance with the requirements of all laws and regulatory agencies. Supplier shall give Notice to the Company Representative at least twenty-four (24) hours prior to bringing to the Jobsite any explosive or other Hazardous Materials or equipment necessary for execution of the Work.
- 21.6 Safety Program and Verification: Supplier shall (and shall cause its Subcontractors to) maintain and implement a safety and health program, which shall include safety training and education program for the purpose of maintaining a safe workplace and to ensure compliance with all applicable OSHA regulatory requirements and applicable safety standards by Supplier and its Subcontractors.
- 21.6.1 If requested by Purchaser, Supplier shall provide reasonable documentation to Purchaser setting forth Supplier's safety program.
- 21.6.2 If requested by Purchaser, Supplier shall provide Purchaser access to and true copies of any safety incident logs maintained by Supplier pursuant to OSHA or any other applicable federal, state and local government agency.
- 21.6.3 During the term of the Contract, Supplier shall at Purchaser's option and request, provide Purchaser or its agents with reasonable access to Supplier's and Subcontractors' personnel, Supplier's and Subcontractors' office facilities, and Supplier's Work sites for purposes of observation and audit of the Supplier's or Subcontractors' safety program application. Such access shall include the reasonable cooperation of Supplier clerical and supervisory personnel at no additional cost to Purchaser. (Costs for Purchaser's own personnel or agents in connection with any such observation or audit shall, however, be borne by Purchaser.) Any such observation shall not be deemed to be supervision of Supplier's or Subcontractors' personnel by Purchaser, nor shall any such observation or audit (or election by Purchaser not to conduct such observations or audits) be deemed to relieve Supplier of Supplier's sole responsibility for the safety of its personnel, equipment, property, and Subcontractors.
- 21.6.4 The Company Representative shall have access to the Jobsite and all facilities, vehicles, shelters, sheds, trailers and the like at all times.
- 21.7 Penalties: Any civil or criminal penalties imposed upon Supplier by governmental agencies having jurisdiction shall not constitute reimbursable costs of Supplier. In addition, Supplier shall reimburse Purchaser for any penalties and cost of compliance relating to citations incurred by Purchaser arising from Supplier's violations of applicable laws or regulations.
- 21.8 Training and Personnel: Supplier shall ensure in all cases that Supplier (and Subcontractor) personnel have received all training relevant to Work to be performed which is: (i) as required by law or regulation; (ii) necessary in order to perform the Work properly and safely; and (iii) necessary in order to operate any equipment used in the Work in compliance with all applicable laws, rules, regulations and the equipment manufacturer's operating instructions. Supplier shall make available to Purchaser, upon request, evidence of such training. Purchaser may require Supplier at no increased cost to Purchaser, to remove from the Project its personnel or Subcontractors who fail to comply with applicable laws, rules or regulations or for whom evidence of required training cannot be provided.
- 21.9 Supplier shall erect and maintain, as required by existing conditions and progress of the Work, all safeguards for safety and protection, including, without limitations, posting danger signs and other warnings against hazards, enforcing and complying with applicable laws, rules and regulations, including those pertaining to safety and health and fire protection, and notifying owners and users of adjacent utilities. Except as otherwise provided in the Contract, Supplier shall be solely responsible for the design, construction, installation, use, and adequacy of all temporary supports, shoring, bracing, scaffolding, machinery or equipment, safety precautions or devices and similar items or devices used by Supplier and Subcontractors during performance of the Work.
- 21.10 Supplier shall provide and maintain for the duration of the Contract adequate first-aid facilities at the Jobsite unless specified otherwise in the Contract.
- 21.11 Obligation: Work place safety is an integral part of Supplier's obligations and duties owed Purchaser under the Contract. A Purchaser representative may notify Supplier (which can be a verbal discussion with Supplier's management or Supplier Jobsite supervisor or Superintendent) the need for enhanced safety practices based upon Purchaser representative's observations or the findings or recommendations of any governmental agency having jurisdiction over matters of safety. Supplier is solely responsible for, and liable for, the health and safety of its personnel, equipment, property and Subcontractors, notwithstanding Purchaser's rights as set for in this Section 21.11. Supplier's responsibility for safety extends to Purchaser employees and members of the public who might reasonably be expected to come in contact with the Work. Once Supplier is notified of any need for an improvement in safety and/or environmental protection practices (including, but not limited to: (i) recommended safety equipment, practices or methods not being used by its personnel or Subcontractors or (ii) Supplier or Subcontractor personnel not appearing fit for work), Supplier must make an immediate investigation and take immediate appropriate corrective action before performing any further Work. Failure to stop Work and take such immediate appropriate corrective action shall constitute grounds for immediate termination of the Contract for cause in accordance with Section 45.0, TERMINATION FOR CAUSE. Supplier acknowledges that Purchaser is under no obligation or duty to notify Supplier of the need for enhanced safety practices and any such notification is not a condition precedent for termination under Section 45.1.4. For avoidance of doubt, Supplier's failure to perform any of its requirements under this Section 21.0 is grounds for immediate termination under Section 45.1.4 without further Notice or opportunity to effect Cure.

### 22.0 CLEANING UP:

Supplier shall, at all times, keep its work areas in a neat, clean, and safe condition. Supplier shall be responsible for continuous clean up and removal of its trash, debris, Waste and scrap and disposal of such trash, debris, Waste and scrap off the Jobsite. Upon completion of any portion of the Work, Supplier shall immediately remove all of its equipment, construction plant, temporary structures and surplus materials not to be used at or near the same location during later stages of the Work. Upon completion of the Work and before final payment is made, Supplier shall, at its expense, satisfactorily dispose of all plant, buildings, rubbish, unused materials, and other equipment and materials belonging to it or used in the performance of the Work, including return to Purchaser's warehouse or designated lay down area(s), at Purchaser's option of any salvageable materials for which Purchaser has reimbursed Supplier or that has been supplied by Purchaser for incorporation into the Work but not used; and Supplier shall leave the premises in a neat, clean and safe condition acceptable to the Company Representative. In the event of Supplier's failure to comply with the foregoing, the same may be accomplished by Purchaser at Supplier's expense.

### 23.0 RECORDS AND ACCOUNTS:

Supplier shall, at its expense, keep and maintain such records and accounts in connection with the performance of the Contract as shall permit Supplier to furnish Purchaser an accurate written allocation of the total amount paid for performance of the Work to the various elements of the Work, and such further records and accounts as may be required by Purchaser.

### 24.0 AUDITS OF SUPPLIER'S RECORDS:

24.1 Supplier's and Subcontractors' books, records and accounts, correspondence, accounting procedures and practices and any other supporting evidence related to the Contract (all the foregoing hereinafter referred to as "Records") shall be open to inspection, audit and reproduction, during customary working hours, by

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Purchaser or its authorized representative to the extent necessary to adequately permit evaluation and verification of (i) any invoices, payments or claims based on Supplier's or Subcontractors' actual costs incurred, or number of units expended, and (ii) compliance with the provisions of this Contract, including, but not limited to, adherence to requirements related to safety and security in the performance of the Work under the Contract.

- 24.2 Purchaser, or its authorized representative, shall have the right to inspect and audit Supplier's information technology controls to the extent that such controls impact Work under this Contract, including, without limitation, Work that entails the Supplier utilizing any Personal Information.
- 24.3 For the foregoing purposes set forth in Sections 24.1 and 24.2 of evaluating, inspecting, audit and/or reproduction, Purchaser or its authorized representative shall have access to applicable Records of Supplier from the date of the Contract, until three (3) years after the date of final payment by Purchaser to Supplier.
- 24.4 Purchaser or its authorized representative shall have access during customary working hours, to all facilities of Supplier and Subcontractors, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the provisions of this Section 24.0. Purchaser shall give Supplier and Subcontractors reasonable advance notification of intended audits.
- 24.5 Supplier shall, upon written request from Purchaser, promptly provide to Purchaser a copy of the most recent ISO 27001/27002 Certification or SSAE 16 Report that is possessed by Supplier or any subsequent ISO 27001/27002 Certification or SSAE 16 Report that Supplier obtains during the period of time when Work is or was performed pursuant to the Contract. In addition, should Supplier receive in any ISO 27001/27002 Certification or SSAE 16 Report it receives during the term of the Contract or an adverse opinion as to the adequacy of Supplier's controls, Supplier shall promptly and without request from Purchaser provide written notice to Purchaser of that fact. Purchaser shall treat any ISO 27001/27002 Certification or SSAE 16 Report received from Supplier as confidential, shall obtain no proprietary interest in the contents of any such ISO 27001/27002 Certification or SSAE 16 Report, and shall not use or distribute such report except as necessary to (i) perform Purchaser's own internal evaluations of Supplier, (ii) enforce the terms of the Contract, (iii) allow Purchaser's auditors to place reliance on Supplier's controls, or (iv) fulfill regulatory or judicial demand upon Purchaser. Notwithstanding anything to the contrary in this Section 24.5, unless otherwise required in the Purchase Document, (a) the requirements of this Section 24.5 only apply to the extent that Supplier has in its possession, maintains, or obtains a ISO 27001/27002 Certification or SSAE 16 Report any time beginning upon commencement of the Work and continuing through the expiration of all applicable warranties under the Contract and (b) nothing in this Section 24.5 is intended to be construed as conferring any express right for Purchaser to compel Supplier to obtain a ISO 27001/27002 Certification or SSAE 16 Report.
- 24.6 Supplier shall require Subcontractors to comply with the provisions of this Section 24.0 by insertion of the requirements hereof in any subcontract.
- 25.0 APPROVAL OF SUBCONTRACTORS:**
- 25.1 Nothing contained in the Contract shall create any contractual relationship between Purchaser and any Subcontractor.
- 25.2 Prior to commencing Work, Supplier shall submit a list of the potential Subcontractors proposed for all portions of the Work. Purchaser shall notify Supplier of any objection or non-acceptance of any potential Subcontractor at any time. Supplier shall then replace such Subcontractor with an acceptable Subcontractor.
- 25.3 Supplier shall not contract with any Subcontractor disallowed by Purchaser. Supplier shall not be required to contract with any Subcontractor against whom Supplier has a reasonable objection.
- 25.4 Supplier shall not make any substitution for any Subcontractor who has been accepted by Purchaser unless the substitution is accepted in writing by Purchaser.
- 26.0 SUBCONTRACTUAL RELATIONS:**
- All Work performed for Supplier by a Subcontractor shall be pursuant to an appropriate agreement between Supplier and Subcontractor which agreement shall:
- 26.1 Preserve and protect the rights of Purchaser under the Contract with respect to the Work to be performed under the subcontract so that the subcontracting hereof will not prejudice such rights; and
- 26.2 Obligate each Subcontractor specifically to consent to the applicable provisions of the Contract.
- 27.0 ASSIGNMENT:**
- 27.1 Neither the Contract nor the Work nor any duty, interest or rights hereunder shall be subcontracted, assigned, transferred, delegated or otherwise disposed of by Supplier without Purchaser's prior written approval. However, Purchaser may at any time and at its sole and unrestrained discretion assign the Contract to one of its subsidiaries or affiliates by Notice to Supplier.
- 27.2 No assignment or transfer of the Contract shall relieve either party of any of its obligations hereunder until such obligations have been assumed by the assignee and agreed to by Purchaser, Supplier and assignee.
- 27.3 If the Contract should be permitted to be assigned by either party, it shall be binding upon and shall inure to the benefit of the permitted assignee.
- 28.0 COMMERCIAL ACTIVITIES:**
- Neither Supplier nor Subcontractors shall establish any commercial activity or issue concessions or permits of any kind to third parties for establishing commercial activities on lands owned or controlled by Purchaser. Supplier shall not allow its personnel or Subcontractors to engage in any commercial activities on the Jobsite.
- 29.0 TERM:**
- The term of the Contract shall conform to the dates set forth in the Purchase Document. Termination shall occur at 11:59 PM (prevailing Eastern time unless otherwise mutually agreed) of the date of termination or expiration contained in the Purchase Document, provided the Contract shall not have been otherwise terminated or extended.
- 30.0 WORK AUTHORIZATION:**
- Unless expressly authorized in the Purchase Document or Supplemental Conditions, Supplier shall not commence Work until receipt of a Release from Purchaser. Releases may be sent by U.S. mail, fax or electronic mail. Receipt by Purchaser of successful transmission shall constitute confirmation that the fax or electronic mail was received.
- 31.0 COMPANY REPRESENTATIVE:**
- 31.1 The Company Representative, in addition to other responsibilities delineated in the Contract, shall:
- 31.1.1 Determine whether Work performed and materials furnished are in compliance with the terms of the Contract;
- 31.1.2 Coordinate the Work of Supplier with other work activities on the Jobsite; and
- 31.1.3 Stop or delay the Work whenever, in the Company Representative's opinion, such stoppage or delay may be necessary.
- 31.2 The Company Representative shall not have the power to waive any obligations of Purchaser or Supplier under the Contract.
- 31.3 Instructions and other communications between Purchaser and Supplier shall be made through the Company Representative, unless otherwise provided in the Contract.
- 32.0 AGREEMENT TO PAY:**
- Purchaser agrees to pay Supplier the Contract Price upon Acceptance of the Work in full conformity with the specifications and provisions contained in the Contract.
- 33.0 INVOICES:**
- 33.1 Unless specific invoicing instructions are provided elsewhere in the Contract, prior to commencement of Work hereunder, Supplier shall obtain information from Purchaser concerning the method to be used in classifying all costs incurred by Supplier in performing the Contract. Supplier shall classify all costs in accordance with such methods and when invoicing shall utilize such classifications.
- 33.2 If specific invoicing instructions are not provided in the Purchase Document, Release or Supplemental Conditions, Supplier shall submit invoices in duplicate which shall contain the following information:
- 33.2.1 Purchaser's Purchase Document number;
- 33.2.2 Purchaser's Release number;
- 33.2.3 Purchaser's M & S number and the serial number(s), if applicable;
- 33.2.4 Item description, if applicable;

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- 33.2.5 Description of the Work;
  - 33.2.6 Quantity, if applicable;
  - 33.2.7 Item price, if applicable;
  - 33.2.8 Total price; and
  - 33.2.9 Cumulative total amount per Release, if applicable.
- 33.3 All invoices are subject to verification and approval of the Company Representative prior to payment.
- 33.4 All payments shall be due and payable in accordance with the Purchaser Purchase Document after Purchaser's receipt of a correct and properly documented invoice except as provided in Section 34.0, PAYMENTS WITHHELD. If Purchaser, at its sole discretion, determines that an affidavit of Supplier and releases of liens by Subcontractors are required, the amount due shall be the total amount of Supplier's approved invoice, less ten percent (10%) of the total amount thereof which shall be retained until final payment, pursuant to Section 50.0, FINAL PAYMENT, or as otherwise stated in the Contract. If requested by Purchaser, Supplier shall provide partial releases of liens before progress payments shall be due and payable.
- 33.5 In the event Purchaser makes progress payments or otherwise advances funds to Supplier with respect to the Work to be furnished under the Contract, Supplier agrees to cooperate fully with Purchaser in the creation and perfection in Purchaser's favor of a security interest in such Work commensurate with Purchaser's interest as represented by such progress payments or advanced funds, in accordance with the provisions of Article 9 of the Uniform Commercial Code as enacted in the state or states where such Work may be located. Such cooperation shall include without limitation the execution of security agreements, financing statements or any other papers required by applicable law. Actual reasonable costs or expenses incurred by Supplier in complying with the foregoing shall be reimbursed by Purchaser.
- 33.6 Any third-party billings (such as for air travel or hotel costs) which are reimbursed to Supplier by Purchaser under the terms of the Contract shall be directly charged to Purchaser by Supplier net of any discounts or rebates received by Supplier from the third-party provider of those items. Where such discounts or rebates are received by Supplier on a consolidated or after-the-fact basis, Supplier shall fulfill the requirements of this Section 33.0 by making a reasonable estimation or pro-ration of such discounts or rebates and applying this to the billing of the reimbursable item to Purchaser.
- 33.7 Any charges billed and received by Supplier which are later determined to have been billed in error, by deception, or otherwise unsubstantiated, shall be repayable in full to Purchaser. Purchaser shall send a written notification to Supplier and Supplier promptly verify and have five (5) business days from date of notification to refund the verified amount (plus reasonable costs of collection and funds associated with such overpayment as are agreed between Supplier and Purchaser).
- 34.0 PAYMENTS WITHHELD AND SET-OFF:**
- 34.1 Purchaser shall notify Supplier in writing of an invoice of its intention to withhold payment and a statement of the reason for such withholding. Purchaser may withhold any payment or portion thereof to protect it from loss on account of Supplier's failure to comply with the provisions of the Contract, including, but not limited to:
- 34.1.1 Supplier is in default;
  - 34.1.2 Defective Work not remedied;
  - 34.1.3 Claims or liens filed or reasonable evidence indicating probable filing of claims by any third party against Purchaser;
  - 34.1.4 Reasonable doubt as to the ability of Supplier to make payments properly and immediately to Subcontractors for material or labor;
  - 34.1.5 Damage to another contractor;
  - 34.1.6 Reasonable indication that the amount invoiced exceeds the value of the Work completed during the invoiced period;
  - 34.1.7 Failure to provide a timely response to a reasonable request for supporting data regarding invoiced amount; and
  - 34.1.8 Damage to Purchaser-provided equipment, materials and tools.
- 34.2 After Supplier remedies the cause of withholding identified pursuant to Section 34.1 to Purchaser's satisfaction, payment shall be made for the amounts withheld.
- 34.3 Purchaser shall be entitled at all times to set-off any amount due from Supplier, or its affiliates, to Purchaser Entities against any amount payable by Purchaser to Supplier.
- 35.0 CHANGES IN THE WORK:**
- 35.1 Purchaser may require and Supplier shall immediately proceed with changes in, deviations from, additions, omissions or reductions in the Work herein contracted, or any part thereof, or in the line, grade, form, dimensions, plans or materials related to the Work, as Purchaser may desire or request either before or after the beginning of the Work, without affecting the validity of the Contract. Subject to Sections 35.2 and 35.6, upon receipt of a Change Form or Release, as applicable, authorizing changes in the Work, Contract Price or Work schedule, Supplier shall immediately proceed with such changes.
- 35.2 In the event of an emergency that Purchaser determines endangers life or property, Purchaser may issue oral orders to Supplier for any Work required by reason of such emergency. Failure of Supplier to commence Work of such an emergency nature in a timely fashion shall entitle Purchaser to invoke the provisions of Section 45.0, TERMINATION FOR CAUSE. Such orders shall be confirmed in writing as soon as practicable.
- 35.3 The basis of Contract Price adjustment for any Changed Work shall be as follows:
- 35.3.1 Method (A) By agreed lump sum pricing stated in the Contract, or in its absence, a lump sum negotiated for each Change Form or Release.
  - 35.3.2 Method (B) By agreed unit prices stated in the Contract, or in their absence, unit prices negotiated for each Change Form or Release.
  - 35.3.3 Method (C) If the parties agree, by payment of the "actual field cost" of the Work, plus a negotiated percentage of such "actual field cost."
- 35.4 "Actual field cost" is hereby defined to be the cost to Supplier of the following:
- 35.4.1 Direct Labor Cost - Payment shall be made for the direct labor costs of all manual classifications calculated on an hourly basis up to and including foremen, but shall not include superintendents, assistant superintendents, general foremen, surveyors, office personnel, timekeepers or any other supervisory personnel. The time charged to Changed Work shall be subject to the daily verification of Purchaser and no charges shall be accepted unless evidence of such verification is submitted by Supplier with its billing. Labor rates used to calculate the direct labor costs shall be those rates in effect during the accomplishment of the Changed Work. The direct labor costs shall only include, in addition to the direct salaries, payroll taxes and insurance, vacation allowance, and any other payroll additives required to be paid by Supplier by law or applicable collective bargaining agreements, provided however, that no reimbursement shall be made for any payments by Supplier to industry advancement funds nor for any payments to trust funds subject to terms of 29 United States Code Section 186 and or ERISA (Employee Retirement Income Security Act on 1974) without written approval of Purchaser. Supplier shall furnish to Purchaser's designated contact for labor relations, upon request, copies of the applicable underlying trust documents for review. Purchaser shall have the right to audit any reimbursable industry advancement funds and trust funds, including applicable underlying trust documents, prior to payment and from time to time thereafter. Copies of certified pertinent payrolls and daily time sheets, if requested, shall be submitted to Purchaser.
  - 35.4.2 Subcontract and Outside Service Costs - Actual net invoiced amounts for work and services subcontracted by Supplier in the performance or completion of the Changed Work shall be subject to disallowance if both the Subcontractor and the terms of payment to such Subcontractor have not been approved in writing by Purchaser before the Subcontractor starts to work on the Changed Work.
  - 35.4.3 Permanent Material Cost - Payment for the cost of permanent materials furnished by Supplier for use in performing the Changed Work shall be made, provided such furnishing and use of materials were as specifically authorized by Purchaser and the actual use was verified by Purchaser. Charges must be the actual net invoiced amount to Supplier delivered at the Jobsite and Subcontractor's invoice must accompany the billing along with the verification by Purchaser of such use of such materials.
  - 35.4.4 Construction Machinery and Equipment Costs - Charges for construction machinery and equipment shall be allowed at actual reasonable local market rental rates for the geographical region where the equipment is being used. If Supplier or Subcontractors utilize their own construction machinery and equipment, the charges shall be competitive and shall not exceed the local market rental rates for the geographical region where the equipment is being used. The use of any such construction machinery and equipment shall be subject to the prior written approval of Purchaser.

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- 35.4.5 Small Tools and Consumables Costs - Charges for small tools and consumables utilized by Supplier in the performance of Changed Work shall be determined by using three percent (3%) of direct labor costs, referenced in Section 35.4.1 for such Changed Work.
- 35.5 If requested by Purchaser, Supplier shall immediately provide a detailed, written estimate of the cost to Purchaser of any anticipated Changed Work being considered for authorization to Supplier.
- 35.6 Should a dispute arise as to whether any change requested by Purchaser constitutes Changed Work, or as to the payment therefor, Supplier shall nevertheless proceed with the Work required by the change after making written request for authorization as Changed Work, and shall keep an accurate account of the "actual field cost" thereof, as provided under Method (C) and further described in Section 35.4.
- 35.7 The provisions of this Section 35.0 shall constitute Supplier's sole remedy and compensation for such Changed Work.
- 36.0 TIME, ORDER OF COMPLETION AND DELAYS:**
- 36.1 Prior to performing the Work, Supplier shall submit schedule(s) to the Company Representative that show the order in which Supplier will start the several parts of the Work and the dates of completion of the several parts to conform to Purchaser's Project requirements. The schedule(s), as approved by the Company Representative, shall become a part of the Contract. Supplier shall not revise such approved schedule(s) without the written approval of the Company Representative. Supplier shall notify the Company Representative within twenty-four (24) hours of its determination that there will be a delay in completion of the Work in accordance with the approved schedule(s). Supplier shall also, within a reasonable time not to exceed seventy-two (72) hours after the time it gives notification of its belief that its performance may be delayed, give Purchaser a written recovery plan which Purchaser may accept or reject in its sole discretion.
- 36.2 Time of delivery or performance of the Contract is of the essence. Supplier shall conform to all requirements for time of completion and scheduling of the Work as prescribed in the Contract.
- 36.3 If progress of the Work is such that Purchaser has reasonable grounds for insecurity that the Work will not be completed in accordance with the schedule(s), Supplier shall, as approved by Purchaser, utilize overtime or other means as required to overcome the effects of lack of progress at Supplier's expense.
- 36.4 If the parties agree that liquidated damages are applicable, the Purchase Document or Supplemental Conditions shall reflect such agreement and the following sections shall apply:
- 36.4.1 Since Purchaser's loss from delay in delivery of the Work (shipping point or Purchaser destination, based on F.O.B. terms) supplied under the Contract would be difficult or uncertain of measurement, the parties have agreed upon the liquidated damages provisions set forth in this Section 36.4 as a reasonable measure of that loss, which shall be applicable to the extent such delay is not a force majeure for which Notice has been provided pursuant to Section 42.0, FORCE MAJEURE. For any delay in the delivery of the Work (i) to the Jobsite or other Purchaser destination (if delivery is F.O.B. destination) or (ii) at the shipping point (if delivery is F.O.B. shipping point) from the dates specified in the Contract including, but not limited to, delays in delivery arising from the fault or negligence of Supplier or Subcontractors, Supplier shall pay to Purchaser as liquidated damages, and not as a penalty, the amount specified in the applicable Purchase Document or Supplemental Conditions [Purchase Document or Supplemental Conditions to specify dollar amount or percent of the Contract Price of the late portion of the Work which may vary based on extent of delay as agreed by the parties] for each calendar day that any portion of the Work is delivered after the specified date in the Contract as may be adjusted by Section 42.0, FORCE MAJEURE.
- 36.4.2 The total liquidated damages for delay in delivery of the Work shall be limited to a maximum specified in the applicable Purchase Document or Supplemental Conditions. [Purchase Document or Supplemental Conditions to specify the dollar amount or percent of the Contract Price.]
- 36.4.3 Payment of liquidated damages to Purchaser as provided in this Section 36.4 shall constitute fulfillment of all liabilities of Supplier to Purchaser for delay in delivery of the Work, whether based on contract, on negligence of any kind, strict liability or tort on the part of Supplier or Subcontractors; or otherwise. Purchaser may offset the amount of liquidated damages due Purchaser by Supplier against any monies owed to Supplier by Purchaser.
- 36.5 Notwithstanding anything to the contrary, Supplier shall be in no way relieved of or excused from its performance under the Contract for delays due to normal weather conditions, including, but not limited to seasonal rainfall.
- 37.0 COLLATERAL CONTRACTS:**  
Purchaser shall provide for completion of any related work on a schedule that shall not unreasonably delay the progress of the Work.
- 38.0 RIGHT OF ENTRY:**
- 38.1 Purchaser reserves the right to authorize its agents or designees to enter the Jobsite as it may elect for the purpose of inspecting the Work, or constructing or installing such collateral work as it may desire, or testing, boring or surveying, or any other purpose.
- 38.2 Supplier understands and agrees that duly authorized representatives of government agencies having appropriate jurisdiction may enter the Jobsite at any time and from time to time.
- 38.3 Supplier waives any right to any additional compensation arising out of or caused by any such entry.
- 39.0 INSPECTION:**
- 39.1 All Work shall be properly inspected, and tested if appropriate, by Supplier and shall at all times be subject to additional inspection by Purchaser and its designee(s), including, but not limited to, Work performed at the Jobsite. Purchaser, Purchaser's designee(s) and government agencies shall be afforded full and free access to the shops, factories or places of business of Supplier and Subcontractors for such inspection and to determine the status of the Work. Neither the failure to make such inspection, nor the failure to discover defective workmanship, materials, or equipment, nor approval of or payment to Supplier for such Work shall prejudice the rights of Purchaser thereafter to correct or reject the same.
- 39.2 Supplier shall keep complete and accurate records of Supplier's inspection and testing of all materials and equipment received, stored, and issued for use in the Work.
- 40.0 BAR CODING, PACKAGING, SHIPPING, UNLOADING AND STORAGE:**
- 40.1 At Purchaser's option, Supplier packing lists and material labels for materials, consumables, goods, parts, equipment and all other similar items furnished as Work under the Contract shall display information in both human readable and 3 of 9 bar code font. Purchaser shall identify the specific elements to be encoded and/or printed on packing lists and material labels prior to exercising such option.
- 40.2 Supplier shall comply with the specifications requirements regarding packaging or in the absence thereof shall package and/or crate all shipments to ensure adequate protection from damage during loading, shipping, hauling, unloading and storing. Supplier shall load and secure all shipments to comply with all tariff rules and regulations to ensure adequate protection from in-transit damage to the applicable delivery destination.
- 40.3 Unless Purchaser directs otherwise in writing, Supplier shall receive, unload, store in a secure place, and deliver from storage to the work area all materials and equipment required for the performance of the Work, including materials and equipment purchased by Purchaser and provided to Supplier for installation in connection with the Work. Supplier's storage facilities and methods of storing shall be subject to Purchaser's review and shall meet Purchaser requirements. Materials and equipment subject to degradation by outside exposure shall be stored in a weather-tight enclosure provided by Supplier.
- 40.4 Supplier shall keep complete and accurate records of receipt and inspection of all Purchaser-provided materials and equipment used in the Work. Supplier shall follow Purchaser procedures and utilize Purchaser forms for receipt and inspection of Purchaser-provided materials and equipment. Purchaser shall provide Supplier with all necessary documentation including purchase orders, specifications and drawings required to receive, inspect and install Purchaser-provided equipment and materials. Supplier's receipt inspection shall carefully note all damage, deficiencies or shortages of Purchaser-provided equipment and materials. Such discrepant conditions shall immediately be called to the attention of the Company Representative for appropriate action. Purchaser assumes no responsibility for delays to Supplier's schedule resulting from action to correct such discrepant Purchaser-provided equipment and materials in the event Supplier neglects to utilize reasonable care in inspection of such Purchaser-provided equipment and materials.

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### 41.0 UNCOVERING OF WORK:

- 41.1 If any Work or part thereof shall be covered contrary to the requirements of the Contract or the request of the Company Representative, it must, if required by the Company Representative, be uncovered for observation and inspection and covered again at Supplier's sole expense.
- 41.2 If any other Work that the Company Representative has not specifically requested to observe and inspect prior to being covered has been covered, the Company Representative may request to see such Work or part thereof and it shall be uncovered by Supplier. If such Work or part thereof is found to be in accordance with the Contract, the cost of uncovering and covering again shall, by appropriate Change Form or Release, be charged to Purchaser. If such Work or part thereof fails to meet the requirements of the Contract, Supplier shall pay all costs of uncovering, correcting, and covering again and any additional costs resulting therefrom, including but not limited to schedule impacts, unless it is found that this condition was caused by a separate contractor employed by Purchaser as provided in Section 37.0, COLLATERAL CONTRACTS, and in such event Supplier shall not be responsible for the payment of such costs.

### 42.0 FORCE MAJEURE:

- 42.1 Performance by each party shall be pursued with due diligence in all requirements under the Contract; however, except as otherwise expressly provided herein, neither party shall be liable to the other for any loss or damage for delay due to causes that (i) were beyond the reasonable control and (ii) were not caused by the negligence or lack of due diligence of the affected party or its subcontractors or suppliers. The parties agree that, provided the conditions stated in (i) and (ii) above apply, the following are causes or events of force majeure: acts of civil or military authority (including courts and regulatory agencies), acts of God (excluding normal or seasonal weather conditions), war, riot or insurrection, inability to obtain required permits or licenses (other than Supplier's occupational licenses), blockades, embargoes, sabotage, epidemics and unusually severe floods. The party affected shall promptly provide Notice to the other party indicating the nature, cause, date of commencement thereof, the anticipated extent of such delay and whether it is anticipated that any completion or delivery dates will be affected thereby, and shall exercise due diligence to mitigate the effect of the delay.
- 42.2 In the event of any delay resulting from such causes, and provided the affected party has promptly notified the other and exercised due diligence as provided in Section 42.1, the time for performance under the Contract (including the payment of monies) shall be extended for a period of time reasonably necessary to overcome the effect of such delay. Such extension of time shall constitute the sole remedy of either party in the event of such delay.
- 42.3 Supplier specifically agrees that any strike, work stoppage or labor disputes among Supplier, its employees, Subcontractors or Subcontractors' employees are not excusable delays and will not relieve or postpone Supplier's obligations to perform Work within the time specified or relieve Supplier of its obligation for payment of liquidated damages, if such damages are specified in the Contract.
- 42.4 In the event the affected party fails to provide prompt Notice to the other or fails to exercise due diligence as provided in this Section 42.0, the obligations under the Contract shall remain the same and the affected party shall be obligated to perform those measures determined by the other party to minimize the impact of such delay at its own expense or be liable to the other party for additional expenses caused by such delay.

### 43.0 SUSPENSION FOR CAUSE:

- 43.1 Purchaser may, by Notice, temporarily suspend the Work, or any portion thereof, under the Contract when the performance by Supplier is unsatisfactory to obtain the results required by the Contract.
- 43.2 The methods by which Supplier performs its Work are entirely the responsibility of Supplier. Purchaser's right to suspend Work under this Section 43.0 is intended solely to verify that the Work being performed by Supplier conforms to the drawings, specifications and schedule and shall not obligate Purchaser to review the efficiency, adequacy or safety of Supplier's methods or means of operation or construction.
- 43.3 Any additional costs incurred by Supplier resulting from such suspension shall be borne solely by Supplier.
- 43.4 If Supplier immediately corrects the unsatisfactory condition, Purchaser shall authorize resumption of the Work. Supplier's failure to immediately effect correction of the unsatisfactory conditions shall be cause for termination of the Contract in accordance with Section 45.0, TERMINATION FOR CAUSE.

### 44.0 SUSPENSION FOR CONVENIENCE:

- 44.1 Purchaser may, at its convenience and in its sole discretion, by Notice to Supplier, suspend at any time the performance of all or any portion of the Work. If all of the Work is suspended, the expiration date of the Contract shall automatically be extended for a period of time equal to the duration of the anticipated suspension period. Upon such Notice of suspension, Purchaser will designate the amount and type of plant, labor and equipment to be committed to the Jobsite. During the period of suspension, Supplier shall use its best efforts to utilize its plant, labor and equipment in such a manner as to minimize costs associated with suspension.
- 44.2 Upon receipt of any such Notice, Supplier shall, unless the Notice requires otherwise:
- 44.2.1 Immediately discontinue Work on the date and to the extent specified in the Notice;
- 44.2.2 Place no further orders or subcontracts for material, services, or facilities with respect to suspended Work other than to the extent required in the Notice;
- 44.2.3 Immediately make every reasonable effort to obtain suspension upon terms satisfactory to Purchaser of all orders, subcontracts and rental agreements to the extent they relate to performance of Work suspended;
- 44.2.4 Continue to protect and preserve the Work; and
- 44.2.5 Immediately consult with Purchaser to determine if any portion of the Work is in a state of manufacture, fabrication, or erection such that interruption of Work would result in substantially increased costs. If both parties agree, with Purchaser's written concurrence, Supplier may complete such portion of the Work.
- 44.3 As full compensation for such suspension, Supplier shall be reimbursed for the following costs, reasonably incurred, without duplication of any item, to the extent that such direct costs result from such suspension of Work:
- 44.3.1 A stand-by charge to be paid to Supplier during the period of suspension of Work which stand-by charge shall be sufficient to compensate Supplier for keeping, to the extent required in the Notice, its organization and equipment committed to the Work in a stand-by status;
- 44.3.2 All reasonable costs of mobilization and demobilization of Supplier's plant, forces and equipment actually incurred by Supplier;
- 44.3.3 All reasonable costs of protecting and preserving any portion of the Work completed or delivered actually incurred by Supplier; and
- 44.3.4 If as a result of any such suspension of the Work the cost of subsequently performing the Work is increased or decreased, an adjustment will be made for performing the remaining portion of Work. Such amount shall be determined by agreement of Supplier and Purchaser.

### 45.0 TERMINATION FOR CAUSE:

- 45.1 Purchaser may, upon Notice to Supplier, and without prejudice to any remedy available to Purchaser under law, in equity or under the Contract, terminate the whole or any part of the Contract for cause and take possession of the Work without termination charge, penalty or obligation, if any one of the following events occurs:
- 45.1.1 Supplier's failure to maintain the insurance coverages required of it in accordance with Section 56.0 is grounds for immediate termination;
- 45.1.2 Reasonable grounds for insecurity arise with respect to Supplier's expected performance and Supplier fails to furnish adequate assurance of due performance within five (5) calendar days after a written request by Purchaser for such adequate assurance unless the Work supports a power plant outage, in which case the adequate assurance must be furnished within twenty-four (24) hours after Purchaser's written request;
- 45.1.3 Supplier enters into any voluntary or involuntary bankruptcy or other insolvency or receivership proceeding, or makes an assignment for the benefit of creditors; in such event, all "goods" (as that term is defined in the Uniform Commercial Code adopted by the State of Florida) supplied by Supplier or Subcontractor shall be deemed identified to the Contract and subject to replevin by Purchaser is grounds for immediate termination;
- 45.1.4 Supplier fails to perform any of its obligations under Section 21.0, HEALTH AND SAFETY, is grounds for immediate termination; or
- 45.1.5 Supplier fails to perform a material obligation (other than those obligations set forth in Section 45.1.1 through 45.1.4) under the Contract and fails to Cure such material obligation default within a reasonable period of time, but in no event more than five (5) business days after Notice from Purchaser

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specifying the nature of such default. For avoidance of doubt, the specific obligation to provide Notice and an opportunity to Cure under this Section 45.1.5 does not apply to Section 45.1.1 through 45.1.4.

### In the event of termination for cause by Purchaser, Supplier shall:

- 45.2 Unless instructed otherwise in the Notice, immediately stop all Work hereunder;
  - 45.2.1 Issue no further subcontracts or purchase orders except with the prior written consent of Purchaser;
  - 45.2.2 Assign to Purchaser, to the extent requested by Purchaser, all rights of Supplier under subcontracts or purchase orders outstanding;
  - 45.2.3 Terminate, to the extent requested by Purchaser, outstanding subcontracts or purchase orders;
  - 45.2.4 Fully cooperate and refrain from hindering or interfering in any manner with any other persons or parties currently or prospectively performing work at the Jobsite or related to the Project; and
  - 45.2.5 Take any other action toward termination, or toward preservation of the Work, that Purchaser may direct.
- 45.3 Whenever the Contract has been terminated for cause in accordance with Section 45.1, payment for completed Work delivered to and accepted by Purchaser shall be made in accordance with the Contract and any obligation of Supplier with respect to such Work shall remain in effect. However, Purchaser may withhold from amounts otherwise due under the Contract such sums as Purchaser determines to be necessary to protect itself against loss or damage. Purchaser may either re-procure the terminated Work or take over the terminated Work and proceed to provide such materials, supplies, equipment and labor of both Purchaser and Purchaser contractors, as may be reasonably necessary to complete said Work. Purchaser may have any partially fabricated portion of the Work removed from Supplier's or Subcontractor's facilities upon Notice to Supplier. Supplier shall be liable for any increase of Purchaser's direct costs, including re-procurement costs, incurred by Purchaser as a result of Purchaser's termination of the Contract for cause.
- 45.4 In the event of termination for cause under Section 45.1, Purchaser shall have no liability to Supplier for costs incurred by Supplier as a result of such termination nor for any costs incurred by Supplier following its receipt of a termination Notice.
- 45.5 In the event the cause for termination is determined by a court of competent jurisdiction to be unfounded, Supplier agrees that the termination shall be converted to one of convenience under Section 46.0, TERMINATION FOR CONVENIENCE, with Supplier's rights and remedies limited to those rights and remedies identified in Section 46.0, TERMINATION FOR CONVENIENCE, subject to any other limitations set forth in the Contract.

### 46.0 TERMINATION FOR CONVENIENCE:

- 46.1 In addition to Purchaser's rights to terminate pursuant to Section 45.0, TERMINATION FOR CAUSE, upon five (5) business days' Notice to Supplier, Purchaser may at its sole discretion and without prejudice to any other right or remedy, terminate the whole or any part of the Contract for its convenience. Such termination shall be effective in the manner specified in the Notice. Should Purchaser elect to terminate the Contract under this Section 46.0, complete settlement of all claims of Supplier arising thereunder shall be made as follows:
  - 46.1.1 Purchaser shall compensate Supplier for such services performed after the date Notice is given only as approved in advance by Purchaser.
  - 46.1.2 Purchaser shall pay Supplier for that portion of the Work actually completed in accordance with the terms of the Contract.
  - 46.1.3 Such payment shall be Purchaser's sole obligation and Supplier's exclusive remedy for termination for convenience.
- 46.2 In the event of termination for convenience by Purchaser, Supplier shall:
  - 46.2.1 Unless otherwise specified in the Notice, immediately stop all Work hereunder;
  - 46.2.2 Issue no further subcontracts or purchase orders except with the prior written consent of Purchaser;
  - 46.2.3 Assign to Purchaser, to the extent requested by Purchaser, all rights of Supplier under subcontracts or purchase orders outstanding;
  - 46.2.4 Terminate, to the extent requested by Purchaser, outstanding subcontracts or purchase orders;
  - 46.2.5 Fully cooperate and refrain from hindering or interfering in any manner with any other persons or parties currently or prospectively performing work at the Jobsite or related to the Project;
  - 46.2.6 Take any other action toward termination, or toward preservation of the Work, that Purchaser may direct;
  - 46.2.7 Exercise best efforts to minimize cost or expenses arising out of termination; and
  - 46.2.8 Maintain books and records supporting all costs charged to the termination.
- 46.3 Prior to final settlement, Supplier shall furnish a complete general release of all claims by Supplier against Purchaser.

### 47.0 ABANDONMENT BY SUPPLIER:

- 47.1 If Supplier should abandon the Work or fail to comply with the terms of the Contract or the orders of the Company Representative, then Purchaser may give Notice to Supplier to resume the Work in accordance with the Contract. After receiving said Notice Supplier shall not remove any machinery, equipment, tools, materials or supplies then on the Jobsite, and the same, together with any other materials and equipment under the Contract, may be held for use by Purchaser, Supplier's surety, or another contractor to complete the Work; and Supplier shall not receive any rental or credit therefor. If Supplier does not resume the Work or otherwise comply immediately after receipt of said Notice, then Purchaser, without prejudice to any other remedy, may make good such deficiencies, the cost of which shall be deducted from the Contract Price.
- 47.2 Upon Supplier's refusal to resume the Work or to comply with the terms of the Contract within ten (10) calendar days of Notice, Purchaser may cease all performance under the Contract and may resort to any remedy under the Contract or law.

### 48.0 USE OF PORTIONS OF THE WORK:

Purchaser shall have the right to take possession of and use any completed or partially completed portion of the Work, although the time for completing the entire Work or such portion may not have expired. Such taking possession and use shall not be deemed an Acceptance of any Work.

### 49.0 COMPLETION AND ACCEPTANCE:

- 49.1 If applicable, additional completion criteria shall be as specified in the Release, Supplemental Conditions or in the Purchase Document.
- 49.2 Supplier shall submit to the Company Representative an invoice for the completed Work. The Company Representative may make such field checks as considered necessary to verify that the Work has been executed in accordance with the Contract and shall approve the invoice as submitted or return it to Supplier specifying the deficiencies or defects in the Work which must be immediately corrected at Supplier's sole expense. Work under the Contract is not accepted by Purchaser until all applicable drawings, manuals and reports have been received by Purchaser and Notice of Acceptance has been given by Purchaser.

### 50.0 FINAL PAYMENT:

- 50.1 Supplier agrees that final payment by Purchaser shall constitute a full and final release of Purchaser from any and all claims, obligations, and liabilities under the Contract or portion thereof for which payment is made.
- 50.2 Except for direct payments to Subcontractors which have filed liens pursuant to the Florida Construction Lien Law or otherwise made claim against Purchaser Entities, final payment to Supplier shall be due and payable by Purchaser the later of (i) within forty-five (45) calendar days after Acceptance of the Work and, if requested by Purchaser, receipt by Purchaser of an affidavit of Supplier, satisfactory to Purchaser, certifying payment of all indebtedness to all Subcontractors and (ii) the time frame specified in the Purchase Document for payments after Purchaser's receipt of a correct and properly documented invoice. Supplier agrees to execute a written release and to submit releases of liens from Subcontractors prior to final payment in a form acceptable to Purchaser if requested by Purchaser. Purchaser may withhold ten percent (10%) of the Contract Price until receipt of the above-described affidavit.
- 50.3 Supplier shall, at Supplier's sole expense, discharge and cause to be released, whether by payment or posting of an appropriate surety bond in accordance with applicable law, within ten (10) days after receipt of a written demand from Purchaser, any lien in respect to the Project, the Contract, the Work, the Jobsite or any fixtures or personal property included in the Work (whether or not any such lien is valid or enforceable) created by, through or under, or as a result of any act or omission (or alleged act or omission) of, Supplier or any Subcontractor or other person or entity providing labor or materials within the scope of Supplier's Work. The expense of discharging or satisfying by bond any such lien shall be paid by Supplier at its sole cost and expense and shall not be a part of the Contract Price.

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payable to Supplier. If Purchaser receives notice of any such lien, Purchaser shall provide Notice thereof to Supplier. Supplier shall promptly commence all necessary proceedings to discharge or satisfy by bond any such lien as soon as possible, bearing all the relevant costs thereof. Purchaser shall have the right to retain and withhold amounts of the Contract Price in an amount sufficient to indemnify Purchaser against any such lien until such time as Purchaser becomes satisfied that such lien is discharged or satisfied by bond.

- 50.4 Supplier further agrees to indemnify and hold Purchaser Entities harmless from all claims, including but not limited to liens, growing out of the demands of Subcontractors incurred in the performance of the Work under the Contract.
- 50.5 Except as provided in the Contract, the maximum amount to be paid to Supplier for the full performance of all Work hereunder, not including Changed Work, shall be the original Contract Price, regardless of Supplier's total cost.

### 51.0 INTENTIONALLY LEFT BLANK

### 52.0 PERMITS AND FEES:

- 52.1 Supplier shall secure and pay for all permits, governmental fees and licenses necessary for proper execution and completion of the Work unless otherwise specified in the Contract.
- 52.2 Supplier shall obtain and maintain those consents, permits, licenses and other authorizations that are required to conduct its business at no cost to Purchaser.

### 53.0 TAXES:

- 53.1 Supplier is responsible for and shall pay all taxes due under the Contract, if any, including all present or future import duty, federal, state, county, municipal or other excise or similar taxes levied with respect to the Work, except all current applicable Transactional Taxes which shall be paid in accordance with the instructions contained in the Purchase Document as further described in Section 53.3. Supplier expressly agrees that Purchaser shall incur no liability or expense under the Contract due to change in tax or duty requirements, excluding all current applicable Transactional Taxes. Any increase in taxes or duties, excluding applicable Transactional Taxes, shall be at the expense of Supplier and not Purchaser.
- 53.2 In no event shall Purchaser be required to pay any tax levied on or determined by Supplier's income, taxes expressly imposed to be paid solely by Supplier or licenses and permits required for Supplier to conduct business.
- 53.3 Purchaser's Purchase Document may indicate one (1) of the following four (4) manners of addressing Transactional Taxes: (i) Transactional Taxes shall be separately itemized and charged by the Supplier on Supplier's invoice; (ii) Transactional Taxes are applicable to the transaction, but will be paid by Purchaser under Purchaser's direct pay permit, which will be provided to Supplier upon request; (iii) The transaction is exempt from Transactional Taxes pursuant to a valid tax exemption certificate, which will be provided to Supplier upon request; or (iv) Transactional Taxes are not applicable to the transaction. In the event that Purchaser's Purchase Document fails to indicate one of the above four (4) manners of addressing Transactional Taxes, applicable Transactional Taxes, if any, shall be separately itemized and charged by the Supplier on Supplier's invoice.
- 53.4 Purchaser shall not be obligated to pay, and shall be immediately reimbursed by Supplier if Purchaser does pay, any taxes, including penalties or interest charges, levied or assessed by reason of any failure of Supplier to comply with the Contract, applicable laws or governmental regulations, and Supplier shall defend, indemnify and hold Purchaser Entities harmless from the payment of any and all such taxes, penalties and interest.

### 54.0 INDEPENDENT CONTRACTOR:

Supplier is at all times and shall remain an independent contractor and not a subcontractor, agent or employee of Purchaser Entities, solely responsible for completing its Work under the Contract with full power and authority to select the methods, means and manner of performing such Work, so long as such methods, means and manner conform to all applicable specifications and drawings or authorized changes thereto and do not adversely affect the completed improvements or efforts of other suppliers and subcontractors in the execution of their work. Purchaser retains no control or direction over Supplier, its employees and Subcontractors or over the detail, manner or methods of performance of the Work by Supplier, its employees, and Subcontractors.

### 55.0 INDEMNITY:

- 55.1 Supplier agrees to protect, defend, indemnify and hold Purchaser Entities free and unharmed from and against any liabilities whatsoever resulting from or in connection with the Contract or in connection with the performance of the Work by Supplier, its employees, Subcontractors or Subcontractor employees, whether or not such liabilities are due to or caused in whole or in part by negligence of Purchaser Entities.
- 55.2 Subject to Sections 55.3 and 55.4, unless otherwise specified in the Purchase Document or in the Supplemental Conditions, the limit of Supplier's indemnity obligation per occurrence shall not exceed the sum of One Million Dollars (\$1,000,000). If Supplier is insured for liability with limits in excess of One Million Dollars (\$1,000,000) for claims arising from a single occurrence, Supplier's indemnity obligation shall extend up to but shall not exceed the higher limits of that insurance.
- 55.3 The limits of Supplier's indemnity obligation under Section 55.2 shall not apply to or limit Supplier's responsibility for attorneys' fees and costs under the Contract. The selection of counsel by Supplier or by its insurer to represent and defend Purchaser Entities shall be subject to the prior written approval of Purchaser.
- 55.4 The limits of Supplier's indemnity obligation contained in this Section 55.0 shall not apply to Supplier's indemnity obligations pursuant to Section 50.0, FINAL PAYMENT, Section 53.0, TAXES, Section 61.0, PATENT OR COPYRIGHT INFRINGEMENT, Section 62.0, CONFIDENTIALITY AND OWNERSHIP, Section 63.0, COMPLIANCE WITH LAWS, RULES AND REGULATIONS, and Section 68.0, ENVIRONMENTAL MATTERS.

### 56.0 INSURANCE:

- 56.1 Before commencing Work under the Contract, Supplier shall procure and maintain the following minimum insurance, unless otherwise specified in the Purchase Document, with insurance companies acceptable to Purchaser (insurers rated "A-, VII" or higher by A.M. Best's Key Rating Guide are deemed acceptable) that are licensed to do business in the State where the Work is performed or to be performed, or as may be approved in writing by Purchaser from time to time:
  - 56.1.1 Workers' Compensation Insurance for statutory obligations imposed by applicable laws where the Work is performed, including, where applicable, the Alternate Employer Endorsement, the United States Longshoremen's and Harbor Workers' Act, the Maritime Coverage and the Jones Act;
  - 56.1.2 Employers' Liability Insurance, including Occupational Disease, shall be provided with a limit of (i) One Million Dollars (\$1,000,000) for bodily injury per accident, (ii) One Million Dollars (\$1,000,000) for bodily injury by disease per policy and (iii) One Million Dollars (\$1,000,000) for bodily injury by disease per employee;
  - 56.1.3 Automobile Liability Insurance which shall apply to all owned, non-owned, leased and hired automobiles in an amount with minimum limits of not less than One Million Dollars (\$1,000,000) combined single limit per occurrence for bodily injury and property damage per accident; and
  - 56.1.4 General Liability Insurance, written on Insurances Services Office form CG 00 01 1204 (or equivalent) covering liability arising out of premises, operations, bodily injury, property damage, products and completed operations and liability insured under and insured contract (contractual liability), with minimum limits of One Million Dollars (\$1,000,000) per occurrence, which shall insure the performance of the contractual obligations assumed by Supplier under the Contract. The products and completed operations coverage shall be provided for the duration of any applicable warranty period, pursuant to Section 58.0, WARRANTY.
- 56.2 Except for the Workers' Compensation Insurance, Purchaser Entities shall be endorsed as an additional insured on Supplier's insurance policies required to be maintained under the Contract and such policies shall provide for a waiver of subrogation in favor of Purchaser Entities. All policies of insurance required to be maintained by Supplier hereunder shall provide for a severability of interests clause and include a provision in such policies that Supplier's insurance policies are to be primary and non-contributory to any insurance that may be maintained by or on behalf of Purchaser Entities.
- 56.3 In the event that any policy furnished by Supplier provides for coverage on a "claims made" basis, the retroactive date of the policy shall be the same as the effective date of the Contract, or such other date, as to protect the interest of Purchaser Entities. Furthermore, for all policies furnished on a "claims made" basis, Supplier's providing of such coverage shall survive the termination of the Contract and the expiration of any applicable warranty period, pursuant to Section 58.0,

## PURCHASER GENERAL CONDITIONS FOR CONTRACT WORK

WARRANTY, until the expiration of the maximum statutory period of limitations in the State of Florida for actions based in contract or in tort. If coverage is on "occurrence" basis, Supplier shall maintain such insurance during the entire term of the Contract.

56.4 Supplier shall promptly provide evidence of the minimum insurance coverage required under the Contract in the form of an ACORD certificate or other certificate of insurance acceptable to Purchaser. Upon Purchaser's request, Supplier shall provide Purchaser with complete copies of all required insurance policies under the Contract. If any of the required insurance is cancelled or non-renewed, Supplier shall within thirty (30) days provide written notice to Purchaser and file a new Certificate of Insurance or binder with Purchaser demonstrating to Purchaser's satisfaction that the required insurance coverage to be maintained hereunder have been extended or replaced. Neither Supplier's failure to provide evidence of minimum coverage of insurance following Purchaser's request, nor Purchaser's decision to not make such request, shall release Supplier from its obligation to maintain the minimum coverage provided for in this Section 56.0.

56.5 In the event Supplier performs Work pursuant to Section 58.0, WARRANTY, Supplier shall comply with the requirements in this Section 56.0.

### 57.0 LIMITATIONS OF LIABILITY:

Subject to the next sentence and except as expressly set forth hereunder, neither Purchaser Entities nor Supplier shall be liable to the other for consequential, special, exemplary, punitive, indirect or incidental losses or damages, including loss of use, cost of capital, loss of goodwill, lost revenues or loss of profit under the Contract, and Purchaser and Supplier each hereby releases the other and each of such persons and entities from any such liability. The foregoing exclusion shall not be construed to limit recovery under any indemnity for third party claims under the Contract or preclude recovery, where applicable, of liquidated damage amounts hereunder. Supplier shall secure the limitations of liability in this Section 57.0 in all its subcontracts.

### 58.0 WARRANTY:

58.1 Supplier warrants that the Work furnished under the Contract shall be (i) provided in conformance with all specifications and other descriptions and requirements set forth in the Contract; (ii) performed in accordance with standards of care, skill and diligence consistent with recognized and sound industry practices, procedures and techniques; (iii) delivered to Purchaser free from faulty design (to the extent of Supplier's design responsibilities); (iv) constructed utilizing new materials and equipment (if furnished by Supplier) free from faults and defects and of sufficient size, capability and materials to meet in all respects the requirements and operating conditions specified in the Contract; (v) suitable for the use intended; (vi) in conformance with applicable laws, regulations and codes; and (vii) conveyed with free and clear title. Supplier further warrants that nothing in the Work furnished under the Contract shall adversely impact or impair the performance specifications and warranties for any Purchaser equipment or components that are or have been furnished by others.

58.2 If any failure to meet the foregoing warranty, or any additional warranties or performance guarantees as may be specified elsewhere in the Contract, occurs or is discovered during the performance of the Work or within twelve (12) months after Acceptance of the Work by Purchaser (or such longer period of time as may be stated elsewhere in the Contract), Supplier shall immediately Cure all materials, equipment or Work (including, if Supplier provided installation services as part of the original scope of Work, then payment for labor associated with such Cure inclusive of disassembly, removal, replacement and reinstallation charges) affected by such failure at Supplier's sole cost and expense. Supplier shall reimburse Purchaser for costs directly incurred by Purchaser as a result of reliance by Purchaser on Work that fails to meet such warranties. Work so Cured shall be warranted for an additional period of twelve (12) months (or such longer period of time as may be stated elsewhere in the Contract) following completion of the Cure. Notwithstanding the above, there shall be no time limitations on Supplier's warranty of free and clear title.

58.3 Neither payment, nor any other provision of the Contract, nor partial or entire use or possession of the Work shall relieve Supplier of liability with respect to the warranties contained in the Contract.

58.4 Purchaser shall give Notice to Supplier of any failure of the Work or nonconformance with the warranties or performance guarantees discovered by Purchaser. All warranty Work shall be performed on a schedule established by Purchaser as required to support system operations. Purchaser shall, without impact to the warranties provided in this Section 58.0, have the right to operate and otherwise use the Work until such time as Purchaser deems prudent to suspend such operation or use for Cure by Supplier. If the Work has been placed in service, Supplier shall make such corrections or replacements as soon as Purchaser deems it prudent to remove the Work from service for any warranty Cure by Supplier, even if the warranty expires prior to the removal of the Work from service. Supplier shall provide labor for Cure on a straight time and overtime basis, at its expense, as necessary to meet Purchaser's schedule.

58.5 On all warranty issues, Supplier shall address such issues and provide Purchaser with the following information on each issue as it occurs: (i) root cause of the issue; (ii) analysis information concluding root cause as defined; (iii) material required for repair or replacement; and (iv) manpower requirements for repair or replacement.

58.6 Whenever Cure is required, Supplier shall bear the risk of loss or damage for Work requiring Cure during the period of such Cure. If any Work must be removed from the Jobsite, transportation charges associated with any Cure shall be borne by Supplier. Supplier shall revise any and all drawings, as appropriate, to reflect any changes or modifications made during Cure.

58.7 If Supplier fails or refuses to effect Cure of nonconforming Work or fails to (i) identify the problem, schedule for Cure and initiate Cure within a reasonable period not to exceed ten (10) calendar days after Notice of non-conformance and (ii) complete Cure, utilizing its best efforts, within a reasonable period of time not to exceed thirty (30) calendar days (or such longer period or periods as Purchaser may authorize in writing), Purchaser may effect such Cure without impairing the warranties stated in this Section 58.0, and charge the cost incurred by Purchaser to Supplier. In addition, if Supplier fails to furnish timely disposition instructions, Purchaser may dispose of the non-conforming Work in a reasonable manner, in which case Purchaser shall be entitled to reimbursement from Supplier for reasonable expenses as well as for any excess cost incurred in the disposition of said Work.

58.8 Supplier shall obtain, for the benefit of Purchaser, all available warranties of Subcontractors for all materials and equipment manufactured or furnished or Work performed by them to the extent such warranties exceed the requirement of the warranties set forth in this Section 58.0. To the extent such warranties are in written form, originals identifying Purchaser as the warranty beneficiary shall be furnished to Purchaser. Supplier's warranty shall be primary to any additional warranties furnished under this Section 58.8.

58.9 Supplier warrants that the written instructions regarding use of the Work shall conform to accepted engineering and operating practices as of the time such instructions are prepared. If any non-conformance to this warranty occurs or is discovered, Supplier shall furnish, at no cost to Purchaser, corrected instructions. In the event such non-conformance causes the Work to (i) be damaged or (ii) fail to meet applicable performance standards, Supplier shall effect Cure as specified in this Section 58.0.

58.10 On a schedule convenient to Purchaser, Supplier shall be granted access to the Work to perform Cure and, if Supplier provided installation services as part of the original scope of Work, Supplier shall be solely responsible for the disassembly, removal, replacement and reinstallation of all ductwork, structures, electrical work, instrumentation, insulation or any equipment or any obstruction, all at Supplier's expense. Upon completion of Cure, all Work shall be returned or restored to its proper and original condition, including but not limited to fit, alignment, adjustment, operability and finish.

58.11 The warranties and remedies provided herein shall be in addition to all warranties and remedies provided by law.

### 59.0 TITLE AND RISK OF LOSS:

59.1 Title to all or any part of the Work shall pass to Purchaser upon Acceptance. However, under no circumstances shall passage of title be construed to impair any rights that Purchaser may have for recovery of damages and Purchaser may revoke Acceptance and reject title for any Work that does not meet the requirements of the Contract.

59.2 Supplier shall bear all risk of loss or damage of any kind to any and all Work, including risk of loss or damage for all materials and equipment furnished to Supplier, until completion of such Work by Supplier and Acceptance thereof by Purchaser in accordance with Section 49.0, COMPLETION AND ACCEPTANCE.

59.3 After any loss or damage for which Supplier shall have the risk of loss or damage, Supplier shall, with due diligence and dispatch, repair or replace all lost or damaged items with items of like kind and quality conforming to the requirements of the Contract at no expense to Purchaser.

59.4 Risk of loss or damage to any Work removed from the Jobsite for repairs or replacement shall be borne by Supplier.



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### 60.0 TITLE TO MATERIALS FOUND:

The title to water, soil, rock, gravel, sand, minerals, timber and any other materials developed or obtained in the excavation or other operations of Supplier or any Subcontractors and the right to use said items or to dispose of same is hereby expressly reserved by Purchaser unless otherwise stated in the Contract. Neither Supplier, any Subcontractors nor any of their representatives or personnel shall have any right, title or interest in said materials. Supplier may, as determined by Purchaser, be permitted to use in its Work without charge any such materials which meet requirements of the Contract provided Purchaser shall have the right to use or consume these materials without payment to a third party.

### 61.0 PATENT OR COPYRIGHT INFRINGEMENT:

- 61.1 Supplier shall pay all royalties and license fees and at its sole expense shall provide for Purchaser the right to use any Supplier-provided design, device, material or process covered by a patent or copyright. Supplier shall, at its sole expense, defend, indemnify and hold Purchaser Entities harmless from and against liability or loss, including all costs, expenses, and attorneys' fees, demands, claims, suits or judgments in connection with any claim or allegation that any part of the Work or the Supplier's services infringes any patent, copyrights, trademarks, trade dress, or otherwise misappropriates any trade secret.
- 61.2 If, in any such suit or proceeding, a temporary restraining order or preliminary injunction is granted, Supplier shall immediately exert its best efforts, by giving satisfactory bond or otherwise, to secure the suspension of the injunction or restraining order. If such efforts prove unsuccessful, Supplier shall, at no expense to Purchaser, secure a temporary license to permit Purchaser to continue using the accused subject matter pending the final outcome of the dispute. If Supplier is unable to secure a temporary license prior to such temporary restraining order or preliminary injunction goes into effect, Supplier shall, at its own expense, and without impairing either (i) performance requirements of the Work, or any part, combination, process thereof, or (ii) other normal operations of Purchaser, either replace the affected Work, part, combination or process thereof with non-infringing components or parts, or modify same so that they become non-infringing.
- 61.3 If, in any such suit or proceeding, the Work, any part, combination or process thereof is held to constitute an infringement and its use is permanently enjoined, Supplier shall immediately exert its best efforts to secure for Purchaser a license, at no expense to Purchaser, authorizing its continued use. If Supplier is unable to secure such license within a reasonable time, Supplier shall, at its own expense, and without impairing either (i) performance requirements of the Work, any part, combination, or process thereof, or (ii) other normal operations of Purchaser, either replace the affected Work, part, combination or process thereof with non-infringing components or parts or modify same so that they become non-infringing.
- 61.4 At Purchaser's option and sole discretion, Supplier shall immediately refund all monies paid by Purchaser to Supplier for the Work, should Supplier fail to secure a license or replace or modify such Work, pursuant to Section 61.3 or secure the lifting of an injunction, pursuant to Section 61.2 within a reasonable time. The exercise of this option shall not impair or limit Supplier's defense and indemnification obligations set forth in Section 61.1.

### 62.0 CONFIDENTIALITY AND OWNERSHIP:

- 62.1 Except as set forth in this Section 62.0, Supplier shall (and shall cause its Subcontractors and Agents to) hold all Confidential Information in confidence and not disclose any such Confidential Information to any third party. Notwithstanding the foregoing, Supplier may disclose the following categories of information or any combination thereof: (i) information which is or becomes publicly available other than as a result of a violation of the Contract; (ii) information which is or becomes available on a non-confidential basis from a source which is not known to Supplier to be prohibited from disclosing such information pursuant to a legal, contractual or fiduciary obligation to Purchaser; (iii) information which Supplier can demonstrate was legally in its possession prior to disclosure by Purchaser; or (iv) information which is developed by or for Supplier independently of Purchaser's Confidential Information. All right, title and interest in and to the Confidential Information shall remain with Purchaser.
- 62.2 Confidential Information shall not be used for any purpose other than to complete the Work. Confidential Information shall be held in strict confidence by Supplier and shall not be disclosed without prior written consent of Purchaser, except to those advisors, affiliates, agents, assigns, attorneys, employees, directors, and/or officers (collectively, "Agents") and/or Subcontractors, in each case, with a need-to-know the Confidential Information for the purposes of performing or completing the Work. Supplier shall (i) be responsible for any breach of the Contract by Supplier or its Subcontractors or Agents and (ii) use the same degree of care to protect the Confidential Information as Supplier employs to protect its own information of like importance, but in no event less than a reasonable degree of care based on industry standard.
- 62.3 In the event Supplier is requested or required by legal or regulatory authority to disclose any Confidential Information, Supplier shall promptly notify Purchaser in writing of such request or requirement prior to disclosure, if permitted by law, so that Purchaser may seek an appropriate protective order. In the event that a protective order or other remedy is not obtained, Supplier agrees to furnish only that portion of the Confidential Information that it reasonably determines, in consultation with its counsel, is consistent with the scope of the subpoena or demand, and to exercise reasonable efforts to obtain assurance that confidential treatment will be accorded such Confidential Information. Supplier will cooperate with Purchaser and its legal counsel with respect to performance of the covenants undertaken pursuant to this Section 62.3.
- 62.4 Supplier shall not (and Supplier shall cause its Subcontractors and Agents not to) release or make any announcements, public disclosures, social media postings or press releases, including, without limitation, use of any Purchaser Entity name, any advertisements, publications or documents or the release of any information to any member of the public, press or official body, regarding or concerning the Contract, the Work, or any part thereof without obtaining prior written consent from Purchaser's Marketing and Corporate Communications Department, which consent may be withheld in Purchaser's sole and absolute discretion.
- 62.5 Supplier agrees that money damages would not be a sufficient remedy for any breach of this Section 62.0 and that Purchaser shall be entitled to seek injunctive or other equitable relief to remedy or prevent any breach or threatened breach of this Section 62.0. Such remedy shall not be the exclusive remedy for any breach of this Section 62.0, but shall be in addition to all other rights and remedies available at law or in equity.
- 62.6 Supplier, in the performance of the Work under the Contract, shall (and shall cause its Subcontractors and Agents to) comply with and shall protect all rights of patents, including patent pending, copyrights, trademarks, secret processes, trade secrets, and any other proprietary interest (i) of Purchaser, (ii) which Purchaser is obligated to comply with or protect or (iii) which are otherwise involved in or related to Supplier's performance of the Work under the Contract.
- 62.7 Subject to the provisions of Section 62.9, any information, designs, data or engineering results delivered to Purchaser hereunder and which are generated for the first time by Supplier under the Contract solely at Purchaser's expense shall be considered Purchaser Confidential Information and shall become the property of Purchaser.
- 62.8 If any of Purchaser's Personal Information that is held by Supplier is breached, Supplier shall utilize its best efforts to: (i) provide Purchaser written notice of such breach no later than five (5) calendar days from the date it obtains actual or constructive knowledge of the breach or it otherwise has reason to believe a breach has occurred; and (ii) mitigate any and all adverse effects of the Personal Information breach, which shall include, without limitation, providing Purchaser all statutorily required documentation that Purchaser determines is necessary in order to satisfy any breach reporting obligations under applicable law. The written notice to Purchaser required in the previous sentence shall include the names of all individuals whose Personal Information was breached, as well as the type of Personal Information that was breached. Supplier shall: (a) limit its use and distribution of Personal Information to only those employees with a legitimate "need-to-know" such Personal Information, as necessary to perform the Work under the Contract; and (b) use the same degree of care to protect the Personal Information as Supplier employs to protect its own information of like importance, but in no event less than a reasonable degree of care based on industry standards. For purposes of the unauthorized use of Personal Information in this provision, "breach" means any unlawful or unauthorized acquisition or use of Personal Information that compromises the security, privacy, or integrity of the Personal Information.
- 62.9 At any time upon Purchaser's request, Supplier shall return or destroy, at Purchaser's option, all written Confidential Information, and Supplier shall not (and shall cause its Agents not to) retain any copies of such written Confidential Information; provided, however, that Confidential Information may be retained by Supplier or its Agents to the extent that retention of such Confidential Information is necessary to comply with Supplier's or its Agents' internal document retention policies aimed at legal, corporate governance or regulatory compliance and any such retained Confidential Information shall remain subject to the disclosure and use restrictions set forth herein, notwithstanding any termination of the Contract.
- 62.10 Supplier and Purchaser agree that Purchaser may, in its discretion, treat the Work products resulting from the Contract as work made for hire under the copyright laws. Supplier hereby and herein irrevocably assigns the entire right, title and interest in all such copyrights and other works of authorship to Purchaser. Supplier

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also agrees to sign any necessary or appropriate documents to register the copyrights in the name of Purchaser or to assign such copyrights to Purchaser. Such documents shall be prepared by Purchaser, at Purchaser's expense, and Supplier shall sign them upon the request of Purchaser.

- 62.11 Supplier acknowledges and agrees that Purchaser is permitted to create training materials and/or manuals to be used internally by Purchaser. All rights and title to such materials and manuals will be owned by Purchaser. Supplier hereby authorizes and grants to Purchaser the right to use Supplier provided documentation, data, drawings, pictures and logos in such materials and manuals.
- 62.12 Supplier shall, at its own expense, defend, indemnify and hold Purchaser Entities harmless from and against all liability; loss or damage (including attorneys' fees and costs) assessed against or suffered by Purchaser Entities as a result of an allegation or claim of noncompliance by Supplier with this Section 62.0.
- 62.13 Supplier shall include the provisions of this Section 62.0 in all its subcontracts.

### 63.0 COMPLIANCE WITH LAWS, RULES AND REGULATIONS:

- 63.1 The Contract shall be construed in accordance with and governed by the laws of the State of Florida without giving effect to its conflict of laws provisions.
- 63.2 Supplier shall perform all Work in accordance with all applicable codes, laws, rules, regulations, orders and standards of federal, state, regional, local and municipal governmental agencies and all standards, rules, regulations, ordinances and orders issued by such agencies.
- 63.3 Supplier shall provide all inspections required by law and shall pay all fees and charges in connection therewith, unless otherwise provided in the Contract.
- 63.4 If Supplier observes that any part of the Contract is at variance with this Section 63.0 in any respect, it shall immediately notify the Company Representative in writing and any necessary changes shall be made by Change Form or Release, as applicable. If Supplier performs any work contrary to law, Supplier shall assume full responsibility therefore and shall bear all costs attributable thereto.
- 63.5 Supplier shall, at its own expense, defend, indemnify and hold Purchaser Entities harmless from and against all liability, loss or damage (including attorneys' fees and costs) assessed against or suffered by Purchaser Entities as a result of an allegation or claim of noncompliance by Supplier with this Section 63.0.
- 63.6 Supplier agrees to conduct all business with Purchaser in an ethical manner. Supplier shall not give any commissions or payments whatsoever to any employee or agent of Purchaser, nor give any gifts or entertainment which reasonably could be considered as intending to influence such person. Supplier hereby confirms that there are no conflicts of interest between Purchaser Entities and Supplier of which Supplier's management is (or reasonably should be) aware. Prohibited conflicts of interest include, but are not limited to, circumstances where, (i) an Purchaser employee (or a close family member of an employee) is an officer of Supplier, (ii) an Purchaser employee and/or close family members of an employee collectively have a greater than 5% ownership interest in Supplier, or (iii) an employee of Purchaser (or close family member of an employee) stands to gain personally from business between Purchaser and Supplier. Supplier hereby acknowledges that any violation of this Section 63.6 would constitute a violation of Purchaser's corporate policies, and may result in the termination for cause of this Contract and of other contracts between Supplier and Purchaser. Should Supplier become aware, or have reasonable suspicion, that a violation of this Section 63.6 exists, Supplier shall promptly notify Purchaser's Company Representative. In addition, Supplier shall promptly notify Purchaser's Internal Auditing department of any solicitation of Supplier by an employee or agent of Purchaser with the apparent intent of encouraging Supplier to violate this Section 63.6.
- 63.7 Purchaser is committed to seeking out and encouraging the use of small, minority, women, or otherwise diverse suppliers to the greatest extent possible and encourages contractors to do the same. Purchaser is a prime contractor to the Federal Government and, as such, is committed to complying with the regulations and laws of the Federal Acquisition Regulations, and flowing down certain requirements to its suppliers, as indicated in the following provisions: (i) if the Contract provides subcontracting opportunities, Supplier is required to offer small business concerns (as defined by the Federal government in FAR 52-219.8 – [http://acquisition.gov/far/current/html/52\\_217\\_221.html#wp1136032](http://acquisition.gov/far/current/html/52_217_221.html#wp1136032)) the maximum practicable opportunity to participate in subcontracting opportunities and (ii) if the Contract is in excess of \$650,000 (or \$1.5 million for construction of any public facility with further subcontracting opportunity) and Supplier is other than a small business concern (as defined by the U.S. Small Business Administration at <http://www.sbaonline.sba.gov/index.html>), Supplier is required to prepare and submit a Small Business Subcontracting Plan (as defined by the Federal government in FAR 52-219.9 – [http://acquisition.gov/far/current/html/52\\_217\\_221.html#wp1136058](http://acquisition.gov/far/current/html/52_217_221.html#wp1136058)) to Purchaser.
- 63.8 In the event the Work by the Supplier includes lobbying, as defined by applicable law, Supplier will comply with all requirements for registration and disclosure of expenditures as set forth in applicable law.

### 64.0 EQUAL EMPLOYMENT OPPORTUNITY, CIVIL RIGHTS AND HOMELAND SECURITY:

- 64.1 To the extent applicable to the performance of the Work, Supplier shall (and shall cause its Subcontractors to) comply with the Equal Employment Opportunity clause in Section 202, Paragraphs 1 through 7, of Executive Order 11246, as amended, and applicable portions of Executive Orders 11701 and 11758, relative to Equal Employment Opportunity and the Implementing Rules and Regulations of the Office of Federal Contract Compliance Programs and shall abide by the requirements of 41 CFR 60- 1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, marital status, genetics, sex, sexual orientation, gender identity, gender expression, or national origin. Moreover, these regulations require that Supplier and its Subcontractors take affirmative action to employ and advance in employment qualified individuals without regard to race, color, religion, marital status, genetics, sex, sexual orientation, gender identity, gender expression, national origin, protected veteran status or disability.
- 64.2 Supplier shall (and shall cause its Subcontractors to) comply with the Department of Homeland Security Bureau of U.S. Citizenship and Immigration Services Employment Eligibility Form I-9 for all employees performing any Work at the Jobsite or any other Purchaser site, including, without limitation, examination of documents that establish identity and citizenship.

### 65.0 SEVERABILITY OF PROVISIONS:

Should any provision, portion or application thereof, of the Contract be determined by a court of competent jurisdiction to be illegal, unenforceable or in conflict with any applicable law, the parties shall negotiate an equitable adjustment to the affected provisions of the Contract with a view toward effecting the purpose of the Contract and the validity and enforceability of the remaining provisions, portions or applications thereof, shall not be impaired.

### 66.0 SURVIVAL:

The obligations of the parties hereunder which by their nature survive the termination of the Contract and/or the completion of the Work hereunder, shall survive and inure to the benefit of the parties including but not limited to Sections, 9.0, 23.0, 24.0, 27.0, 33.7, 50.0, 55.0, 56.0, 57.0, 58.0, 61.0, 62.0, 63.0 and 67.0. Those provisions of the Contract which provide for the limitation of or protection against liability shall apply to the full extent permitted by law and shall survive termination of the Contract and completion of the Work.

### 67.0 NON-SOLICITATION:

During the term of the Contract and one year after the termination or expiration of the Work performed under the Contract, Supplier shall not without prior consent directly solicit for employment (whether as an employee, contractor, or agent) any employee of Purchaser Entities who are involved in the Work under the Contract or with the administration of the Contract. In the event of a breach of this Section 67.0, Purchaser's damages shall be limited to a maximum amount equal to six (6) months of the affected employee's Purchaser salary. It shall not be considered a breach of this Section 67.0 for Supplier to (i) make employment solicitations to the general public or groups that may include employees of Purchaser Entities, (ii) respond to, act upon, or accept unsolicited employment inquires or applications from employees of Purchaser Entities, or (iii) solicit for employment any former employee of Purchaser Entities.

### 68.0 ENVIRONMENTAL MATTERS:

- 68.1 Waste Management, Transport, and/or Disposal.
- 68.1.1 Supplier shall, and shall cause its Subcontractors to, comply with all applicable federal, state and local laws, rules, regulations and permits related to the treatment, storage, disposal, transportation and handling of Wastes. Supplier shall be responsible for the proper management, storage, transport, disposal and/or recycle of all Wastes brought onto the Jobsite by it or its Subcontractors.

## PURCHASER GENERAL CONDITIONS FOR CONTRACT WORK

- 68.1.2 Supplier shall not cause or allow the release or disposal of Waste at the Jobsite or during transport to and from the Jobsite, except in accordance with applicable laws, rules, regulations and permits. Supplier shall cause all Waste brought onto or generated at the Jobsite by it or its Subcontractors to be (i) transported only by carriers maintaining valid permits and operating in compliance with such permits and laws regarding Waste pursuant to manifest and shipping documents. The documents should identify only Supplier, or the Subcontractor, as applicable, as the generator of Waste or person who arranged for Waste disposal and (ii) treated and disposed of only at treatment, storage and disposal facilities maintaining valid permits operating in compliance with such permits and laws regarding Waste disposal.
- 68.1.3 Supplier shall submit to Purchaser a list of all Waste to be brought onto or generated at the Jobsite prior to bringing or generating such Waste onto or at the Jobsite. Supplier shall keep Purchaser informed as to the status of all Waste on the Jobsite and disposal of all Waste from the Jobsite.
- 68.2 Hazardous Materials.
- 68.2.1 Supplier shall, and shall cause its Subcontractors to, comply with all applicable federal, state and local laws, rules, regulations and permits related to Hazardous Materials, and all applicable licenses and permits.
- 68.2.2 Supplier shall provide a current OSHA-conforming GHS Safety Data Sheet (SDS) to Purchaser for review prior to any such Hazardous Materials being used on the Jobsite.
- 68.2.3 Supplier shall not cause or allow the release of Hazardous Materials at the Jobsite.
- 68.2.4 Supplier shall be responsible for the proper management and proper transport and disposal of all Hazardous Material brought onto or generated at the Jobsite by it or its Subcontractors.
- 68.3 If Supplier, or its Subcontractor, releases any Waste or Hazardous Material (i) on the Jobsite, (ii) during transport to or from the Jobsite, or (iii) becomes aware of any release caused by a third party in connection with the Work, Supplier shall immediately provide Purchaser Notice writing. Supplier shall, at its sole cost and expense, diligently take all remedial action to clean up the contamination as required under the applicable federal, state and local laws.
- 68.4 Supplier shall, at its own expense, defend, indemnify and hold Purchaser Entities harmless from and against all liability; loss or damage (including attorneys' fees and costs) assessed against or suffered by Purchaser Entities as a result of an allegation or claim of negligence by Supplier or its Subcontractors with this Section 68.0.
- 69.0 CONSTRUCTION:**
- 69.1 The parties acknowledge and agree that each party has carefully reviewed these General Conditions, and that any presumption or rule of construction resolving ambiguities against the drafting party shall not be employed in the interpretation of these General Conditions.
- 69.2 The provisions of the Convention on the International Sale of Goods shall not apply to the Contract.
- 70.0 ACKNOWLEDGMENT, CORRESPONDENCE, COMPLETE AGREEMENT AND NONWAIVER:**
- 70.1 Except as provided in Section 35.0, CHANGES IN THE WORK, Supplier shall acknowledge agreement to any Purchase Document, Release or Change Form, or notify Purchaser by phone, followed by a mailed summary, of any exceptions within five (5) working days of receipt of such document. Acknowledgements for Purchase Documents shall be mailed to the Purchaser purchasing agent who issued the document. Acknowledgement of Change Forms shall be mailed to the Purchaser purchasing agent or Company Representative, as applicable, who issued the document. Acknowledgements for Releases shall be mailed to the Company Representative. Failure of Supplier to respond within the time period or Supplier's commencement or delivery of Work, whichever is earlier, shall be deemed acceptance of the terms by Supplier. No terms and conditions stated by Supplier in the acknowledgement or otherwise in accepting the Contract shall be binding upon Purchaser unless specifically accepted by Purchaser through its issuance of a Change Form or amended Release, as applicable, and Purchaser hereby objects to any such additional terms and conditions.
- 70.2 Either party shall be entitled to specify as its proper address any other address, upon Notice to the other party.
- 70.3 Either party shall be entitled to designate by Notice to the other party a change in the name of any person named herein or hereafter named to fill any position specified in the Contract.
- 70.4 The Contract is intended as the complete and exclusive statement of the terms of the agreement between the parties. The parties agree that parol or extrinsic evidence shall not be used to vary or contradict the express terms of the Contract and that recourse shall not be had to alleged prior dealings, usage of trade, course of dealing, or course of performance to explain or supplement the express terms of the Contract. Except as specifically provided herein, the Contract shall not be amended or modified, and no waiver of any provision hereof shall be effective, unless set forth in a written instrument authorized and executed with the same formality as the Contract. Supplier acknowledges that Purchaser's course of dealing with other suppliers under similar contract terms is not relevant to the interpretation of the Contract.
- 70.5 Failure by Purchaser or the Company Representative to enforce any provisions hereof, Purchaser's or the Company Representative's failure or delay in exercising any rights or remedies provided herein or by law, Purchaser's approval of, acceptance of, or payment for the Work, or any part or combination thereof, or any purported oral modification or rescission of the Contract by an employee or agent of Purchaser shall neither relieve nor release Supplier from any of its obligations under the Contract, shall not be deemed a waiver of any rights of Purchaser to insist upon strict performance hereof or of any of Purchaser's rights or remedies under the Contract or by law, and shall not operate as a waiver of any of the provisions hereof. Supplier acknowledges that Purchaser's failure to any right or remedy with other supplier under similar contract terms is not relevant to Supplier's duties and obligations under the Contract and shall not be considered a release or waiver of any duties and obligations owed by Supplier to Purchaser under the Contract.



**APPENDIX B – Bid Proposal Form**  
**FPL Manatee Plant (PMT) Cooling Pond Perimeter Dam Soil-Cement Rehabilitation**  
[Return with submittal of proposal]

The undersigned proposes to furnish all management, supervision, labor, tools and equipment, consumables, materials, warehousing and all other items of expense contained in these bid documents necessary for the proper completion of this Work in accordance with the requirements of this Request for Proposal. This Appendix B must be completed and returned as part of your proposal.

**PRICING**

The Supplier shall provide Lump Sum pricing for the scope of work as defined in “FPL Manatee Plant (PMT) Cooling Pond Perimeter Dam Soil-Cement Rehabilitation, Appendix A, Scope of Work and Specification”, dated 07/10/2015 and other documents listed as attachments. At a minimum, the Supplier shall provide a price breakdown as detailed below:

**Phase I: 1000 LFT (STA.285+00 to STA.295+00) - 2015**

Item	Labor	Material	Other	Total
Mobilization				
Surface preparation				
Excavation of Bottom Key Trench, Reinforcement & Concrete Placed				
Formwork				
Reinforcement				
Concrete (material, delivery, placement)				
Turbidity Control and Monitoring				
Soil/Sediment Handling/Disposal				
Temporary Construction & Restoration of Existing Site Features				
Demobilization				
<b>TOTAL</b>				

**Phase II: 5500 LFT (STA.260+00 to STA.285+00 AND STA.295+00 to STA.325+00) - 2016**

Item	Labor	Material	Other	Total
Mobilization				
Surface preparation				
Excavation of Bottom Key Trench, Reinforcement & Concrete Placed				
Formwork				
Reinforcement				
Concrete (material, delivery, placement)				
Turbidity Control and Monitoring				
Soil/Sediment Handling/Disposal				
Temporary Construction & Restoration of Existing Site Features				
Demobilization				
<b>TOTAL</b>				

**Phase III: 6000 LFT (STA.200+00 to STA.260+00) - 2017**

Item	Labor	Material	Other	Total
Mobilization				
Surface preparation				
Excavation of Bottom Key Trench, Reinforcement & Concrete Placed				
Formwork				
Reinforcement				
Concrete (material, delivery, placement)				
Turbidity Control and Monitoring				
Soil/Sediment Handling/Disposal				
Temporary Construction & Restoration of Existing Site Features				
Demobilization				
<b>TOTAL</b>				

**Unit Prices**

<b>Item</b>	<b>Unit</b>	<b>\$\$</b>	<b>Notes/conditions</b>
Addition or subtraction for concrete	<u>Yd^3</u>		
Addition or subtraction for elevation changes	<u>Lifts per design</u>		

**TIME AND MATERIAL RATES**

**Note: Unit Pricing may be provided in addition to the following:**

In the event Work is authorized by Purchaser to be performed in excess of the Base Price (Out-of-Scope), the Supplier shall provide a rate schedule for any tools, equipment, consumables, labor and supervision necessary for completion of the Work as described herein. The hourly labor rates provided should be “all inclusive” for all disciplines required in the performance of the Work, including straight time, overtime, and per diem rates as applicable. The hourly labor rates should be inclusive of all base wages, applicable federal, state, and local taxes, fringe benefits, applicable administrative expenses, safety supplies, overhead, profit, and all other like costs (excluding per diem) directly or indirectly associated with the performance of the Work. The rates for each position classification should be the total hourly billing costs to Purchaser, excluding per diem. Per diem should be quoted separately as applicable. The Supplier is responsible to accurately monitor and account for per diem entitlement.

**T&M Rate Schedule (designate if Shop or Field)**

<b>Job Title/Classification</b>	<b>Billing Rate Cost Per Hour</b>	<b>OT Rate Cost Per Hour</b>	
Engineer			
Draftsman			
Welder			
Fitter / Journeyman			
QA/QC Technician			

**T&M Rate Schedule Field**

<b>Craft</b>	<b>Local</b>	<b>Effective thru</b>	<b>Per Diem</b>
Site Manager			
Field Service Engineer			
Engineer			
Foreman			
Journeyman			
Divers			
Laborer			
Tool Room Attendant			
Safety Technician			
QA/QC Technician			

Note: Purchaser may request additional rates for disciplines not identified above, which will be subject to review and approval prior to incorporation into any resulting Contract/Change Order.

Overtime rates (for qualifying positions) will apply for Work performed on weekends, holidays or outside normal working hours (over 8 hours per day or over 40 hours per week). All overtime requires prior approval by Purchaser’s authorized representative. Overtime rates shall exclude costs which are fully recouped after the first forty (40) straight time hours. A maximum of 8 hours shall be charged for travel time e.g. in and out.

Reasonable expenses incurred during performance of the Work will be reimbursed at cost without markup and are subject to Purchaser approval. All such expenses and costs must be substantiated and support by actual receipts with time / date / location / name of establishment.

Materials, Equipment, Rental Equipment, Consumable Supplies, and Subcontracts authorized by the Purchaser for performance of Time and Material Work will be billed at cost plus 5%.

Equipment	Hourly rate	Daily rate	Monthly rate	In/out charge	Owned or Rental	Notes/comments

Note:

All equipment to be provided “wet” – “Maintained”. The supplier is to designate if operator is inclusive of the rate. Any proposed markups for 3<sup>rd</sup> party rentals, materials, or subcontractors shall be provided.

**PAYMENT SCHEDULE**

FPL Suggests the following Payment Schedule for this type of work. Bidder is to fill in the table below with pricing for each of the milestone payments.

Milestone	Expected Invoice Date	% of Total	% of Total Cumulative	Value of Payment
Award of Contract				\$
Mobilization				\$
Delivery of all Materials				\$
Monthly Progress Payments				\$
Final Acceptance (10% total contract value)				\$

**Notes:**

1. All payments to be due within **45** days after receipt of accurate invoices.
2. Complete the Appendix B Checklist below.

Purchaser expressly reserves the right to accept or reject any bid submitted or to reject all bids submitted. We reserve the right to award all or any portion of this project.

\_\_\_\_\_  
COMPANY

\_\_\_\_\_  
Name and Title (Print)

\_\_\_\_\_  
Phone Number      Date

\_\_\_\_\_  
Authorized Signature



<b>Appendix "B" Checklist:</b> <b>(PLEASE ADDRESS EACH ITEM)</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
Supplier Bid Sheet Returned with Pricing breakdown as detailed?			
Acceptance of Purchaser General Conditions for Contract Work, Rev. 4/07/15.			
Willing to provide 60 month warranty.			
Confirm no taxes are included in your Bid price. (Yes = taxes included; No = taxes not included).			
Submittal of Insurance Certificates.			
Bidder has filled out the suggested invoice milestone schedule.			
EMR / OSHA information provided.			
Rate Sheets Included.			
Names, Rates, Titles, Resumes of Specific Supervisors / key personnel included.			
All Document and Data Submittals per Appendix A submitted.			
Acceptance of Technical Specification? (Appendix A with Attachments)?			
Acceptance of Required Schedule Dates in Appendix A.			
List of Subcontractors			
Provided Project Schedule per Appendix A			
Construction & Installation Plan included.			
Acceptance of Payment Terms Net 45 (Check) or Net 48 (electronic)?			
Red-Lined and comments for App A and other Bid Documents (note: the successful supplier's proposal will be replaced by conforming the bid documents provided)			
Alternate Bid provided?			
List of References.			



# NextEra Energy Supplier Code of Conduct



## Preface

NextEra Energy, Inc. including all its employees, representatives, affiliates and subsidiaries (collectively, the “Company”, or “we” or “our”) have three core values which underscore all of our business practices: We are committed to excellence. We do the right thing. We treat people with respect. We expect all our employees and representatives to act with the highest standards of personal and professional integrity in all aspects of their activities and to comply with all applicable laws, rules, and our standards, policies and procedures.

In turn, we expect our contractors, consultants, suppliers and vendors (each a “Supplier” and collectively, the “Suppliers”) to adhere to the fundamental values set forth in this NextEra Energy, Inc. Supplier Code of Conduct (“Code”). We are committed to doing business with Suppliers who support our passion for excellence and for conducting business in a safe, legal, and highly ethical manner with respect for social responsibility, environmental stewardship and clear-cut integrity and professionalism.

Our Suppliers are an integral part of the overall success of the Company. This Code sets forth the policies, guidelines, and expectations for doing business with the Company. Many of the items noted in this Code are included in the policies that employees of the Company are required to follow. We believe that the dissemination of this Code to our Suppliers will enhance their understanding of our fundamental business requirements. The Company seeks Suppliers who share its commitment to sustainable business practices and whose business practices are consistent with our values and core convictions.

The Company expects all of its Suppliers to review and comply with both the letter and the spirit of the Code and to share this Code with its employees, subcontractors, agents and other individuals assigned to perform work on behalf of the Company. Suppliers are strongly encouraged to contact the Company’s Integrated Supply Chain unit (“ISC”) contact for procurement transactions whenever they have questions relating to the appropriateness of any activity related to goods or services performed (or to be performed) for the Company.

We appreciate the contributions our Suppliers make to the success of the Company and firmly believe that as the Company succeeds our suppliers and partners will share in that success.

## Supplier Philosophy and Ethics

The Company expects its Suppliers to help maintain an ethical environment by adhering to the same standards as the Company when conducting business on the Company’s behalf. We also believe in doing business with Suppliers who embrace our core values and demonstrate high standards of business ethics. The Company honors its business relationships in everything it does and says.

Suppliers should be aware that the Company’s employees are obligated to comply with its *Code of Business Conduct & Ethics*, including the following issues that relate to Suppliers:

- Employees shall deal with all Suppliers, customers, and all other persons doing business with the Company in a completely fair and objective manner without favor or preference for their own personal financial or relationship consideration; and
- Employees shall refrain from accepting (directly or indirectly) gifts, discounts, payments, fees, loans, entertainment, favors or services from any person or firm that may influence or give the appearance of influencing purchasing decisions.

Suppliers that knowingly seek to have a Company employee or representative violate its *Code of Business Conduct & Ethics*\* will be subject to appropriate sanctions, including the possible loss of all current and future contracts.

### **Legal and Regulatory Compliance**

The Company expects its Suppliers to comply with the letter and spirit of applicable statutes and regulatory requirements including those prohibiting bribery, kickbacks, corruption and other unethical business practices. Suppliers must comply with anti-trust and fair trade statutes and regulatory guidelines including the Foreign Corrupt Practices Act and any other anti-bribery laws.

Antitrust laws are intended to promote free and fair competition and prohibit business practices and activities that unreasonably restrain competition:

Potentially unlawful relations with competitors include:

- Understandings or agreements that have the purpose or effect of restraining competition;
- The exchange of competitive information; and
- Price fixing, bid rigging, or market allocation.

In addition, Suppliers must ensure compliance with federal and state energy regulatory commission specific codes and standards of conduct that address discrimination and preferential treatment between regulated companies and their affiliates.

### **Environmental Protection and Sustainability**

The Company is committed to being an industry leader in environmental protection and stewardship, not only because it makes business sense, but because it is the right thing to do. Our commitment to compliance, conservation, communication, and continuous improvement fosters a culture of environmental excellence and drives the sustainable management of our business planning, operations, and daily work. This commitment is consistent with our values and our NextEra Energy Environmental Policy. We expect our Suppliers to share this commitment to protect our environment and to abide by the letter and spirit of all applicable environmental laws and regulations.

### **Decision Making**

All purchasing decisions will be based on the best value realized by the Company and must be in alignment with business standards and the goals of the Company. Important components of purchasing include, without limitation, competitive bids, maintenance of confidentiality, quality verification, confirmation of the legal status and financial condition of the Supplier, and avoidance of conflicts of interest.

### **Conflicts of Interest**

Company employees and representatives who come in contact with Suppliers are forewarned about conflicts of interest. A conflict of interest occurs when the personal interests of the Company employee or representative interfere or appear to interfere with Company business. Because conflicting loyalties impair a Company employee's or representative's ability to make objective decisions, conflicts of interest must be avoided. A conflict of interest can result from a relationship between a Company employee or representative and a customer, Supplier, competitor, family member, or even a friend. A conflict exists when the parties to the relationship give or receive – or even appear to give or receive – unfair advantages or preferential treatment not available to others. A conflict of interest occurs when a Company employee or representative chooses between doing something that will benefit them personally instead of benefiting the Company for which they work. Having such a conflict can arouse suspicion about a Company employee's or representative's integrity and can cause damage to the reputation of the company concerned. The Company expects all Suppliers to be aware of this policy and to avoid contributing to a conflict or the appearance of a conflict.

### **Gift Policy**

The Company adheres to a strict policy of ensuring that gifts or entertainment do not influence business decisions or the selection of Suppliers. Each Company employee and representative is required to abide by specific standards, which are reflected in our internal policies and procedures. These requirements prohibit the Company's employees and representatives and any related person from accepting any gifts or anything of value (including meals and entertainment) from an existing or potential Supplier, business partner or customer if that gift or other thing of value is intended to materially influence the Company employee's or representative's behavior toward that Supplier, business partner or customer. Absent such circumstances, gifts or things of value may be accepted when permitted by applicable law so long as they are non-cash gifts of nominal value (\$250 or less, individually or in the aggregate) or customary and reasonable meals and entertainment at which the giver is present, such as an occasional business meal or sporting event.

### **Anti-Bribery & Corruption**

The Company will never tolerate bribery in any form. Each Company employee and representative may not offer, attempt to offer, authorize, or promise any sort of bribe or kickback. Suppliers are prohibited from making or offering payments (including facilitating payments), gifts or incentives to any foreign or domestic government official or agent on their own behalf or on behalf of the Company in the hope of influencing that individual. Moreover, neither Company funds, services, nor labor may be given, directly or indirectly, to anyone in an effort to obtain or retain business for the Company or to obtain any special or unusual treatment in connection with a business transaction or any foreign or domestic government agency approval. In addition, Suppliers are prohibited from "kicking-back" any portion of a contract payment to government or private-sector employees of other parties to a contract nor may Suppliers use subcontracts, purchase orders, consulting agreements or similar devices to channel payments to foreign or domestic government officials, political candidates, political parties or associations, employees of other parties to a contract, or their relatives or business associates.

### **International Business Parties**

In order to protect the Company's reputation, goodwill and to ensure the integrity of our business and marketing relationships, the Company performs due diligence on Suppliers, agents, joint venture partners and other third party intermediaries that help us with our business outside of the United States and that are anticipated to interact directly or indirectly with Foreign Officials\* on our behalf (collectively, "International Business Parties"). The Company expects its Suppliers to cooperate and comply with our due diligence process for screening International Business Parties and to promptly advise the Company if the Supplier anticipates or becomes aware of a scope of work that may require the Supplier to interface with a Foreign Official on the Company's behalf.

\*"Foreign Official" means, for purposes of the Code, any officer or employee of a foreign government or any department, agency, or subsidiary branch thereof, or of a public international organization, or, any person acting in an official capacity for or on behalf of any such government or department, agency or subsidiary branch, or for or on behalf of any such public international organization. "Foreign Official" also means any foreign political party or official thereof or any candidate for foreign political office or any employee of a foreign government-owned entity.

### **Diversity and Fair Treatment**

The Company not only expects a work environment free from all forms of unlawful discrimination, intimidation and/or harassment, but also seeks to foster a work environment that reflects our commitment to diversity and inclusion. Suppliers are expected to support the Company's commitment to equal employment opportunity as well as diversity and inclusion. Suppliers are required to conduct business in a professional and socially responsible manner and shall not engage in behavior that unlawfully discriminates, intimidates or harasses the Company's employees or others.

## NextEra Energy Supplier Code of Conduct

The Company believes that diversity and inclusion is a competitive advantage and our culture of respect for people makes us a stronger more successful company. Accordingly, it is the Company's goal to provide minority-owned, women-owned, and small, disadvantaged businesses an opportunity to compete for the Company's business on an equal basis and to develop and strengthen our relationship with those business enterprises. The Company encourages its Suppliers to adopt a similar approach with respect to such business enterprises.

### **Labor and Human Rights**

The Company expects its Suppliers to comply with the letter and spirit of all applicable U.S. and international labor and employment laws including, without limitation, those associated with equal employment opportunity, immigration, child labor, forced or compulsory labor, work hours, wages and benefits, employment security, health and safety, freedom of association and a harassment-free work environment.

### **Safety Conscious Work Environment**

The Company maintains a safety culture to help the company achieve a zero-injury work record across its operations. Suppliers must share in this same commitment and exercise good judgment in work decisions and apply safe work practices in the performance of all activities. Suppliers must adhere to all applicable safety rules, laws, standards and procedures including general and site-specific requirements.

### **Safe and Secure Workplace - Security of Persons**

Each Company facility is committed to providing for the safety of its employees and products through a safe and secure workplace. All Suppliers will be required to obtain and wear security badges at all of the Company's facilities.

The Company has established a zero-tolerance policy regarding threats of violence in the workplace. This policy prohibits any comments or behavior that could be perceived by a reasonable person as threatening or indicating the possibility of violence. Supplier personnel who work on the Company premises will be expected to be non-violent, free of illegal drugs, and to not engage in illegal and/or violent or threatening behavior. Suppliers are to abide by site-specific requirements pertaining to the prohibition of the use and possession of illegal drugs, alcohol, restrictions on the possession of weapons (as defined by appropriate local or state statutes) and to support a violence-free environment.

### **Protecting Company Assets**

Those who are entrusted with the Company's assets must honor that trust and safeguard those assets against damage, theft and unauthorized use. Suppliers must use the Company assets responsibly and only for legitimate business purposes. The Company assets include, without limitation, Company facilities, equipment, systems, computers, telephones, cell phones, fax machines, information technology and/or supplies.

### **Computer and Information Security**

The Company expects that all Supplier computers or computer systems that interact with the Company computer network contain the necessary security firewalls and do not contain any computer viruses that can damage any Company system. Suppliers will be expected to adhere to all Company Information Security Policies and Standards and/or Network Property/Access requirements, as applicable, in order to protect the Company's data and computer network systems.

### **Confidential Information**

Each Company Supplier is expected to protect Company confidential or proprietary information from any unauthorized disclosure. Suppliers are to access only those Company files or programs which they have been authorized by the Company to utilize in connection with the work being conducted for the Company. Suppliers will be expected to manage such information in compliance with the Company's policies, standards and requirements (particularly privacy and Information Security requirements) as well as applicable laws, rules and regulations. Suppliers may not duplicate, remove, damage or disseminate any Company files, passwords, computer systems or programs.

### **Sales Techniques**

Suppliers are expected to interact with the Company in an open and honest manner. In order to ensure that proper sales techniques are utilized, the following sales techniques are strictly prohibited:

- Backdoor selling – circumventing the proper Company channels in order to convince an individual(s) to purchase a specific product;
- Inaccurate lead time commitments – knowingly providing unattainable lead time commitments to the Company in an effort to secure the business;
- Over-committing capacity – making commitments to provide a product or service without having the capacity to meet the commitment;
- Requesting competitor information – asking for information regarding a competitor's product, pricing, terms, distribution, or other segment of their business;
- Offering gifts in excess of nominal value;
- Requesting the Company to accept a proposal after the closing date; and
- "Gouging" when the Company is purchasing in a pre-storm, post-storm or other emergency situation.

### **Supplier Visitation Process**

Suppliers have limited access to a Company facility. The following procedures must be followed by all Company Suppliers:

- Suppliers should not be on a Company premise without an appointment. Appointments are to be made with each individual to be visited;
- Suppliers should wait in the appropriate reception area until greeted by a Company employee or representative;
- Suppliers are not to bring other Suppliers to a Company facility without being accompanied by a Company employee or representative;
- Suppliers are never to occupy a Company employee's or representative's office or cubicle without the express permission of the employee or representative;
- Suppliers on a Company premise must at all times display proper identification issued by the Company; and
- Suppliers are to surrender any visitor badges when exiting a Company premise.

### **Conditions of Payment**

Timely receipt of payment is dependent on the execution of the proper Company procurement documentation.



### **Communication, Endorsements and Publicity**

Suppliers are encouraged to maintain a high level of communication with Company designated employees throughout the purchasing cycle.

Suppliers (including subcontractors and agents) are strictly prohibited from releasing or making any announcements, public disclosures, social media postings, or press releases, including, without limitation, using any Company name, any advertisements, publications or documents or releasing any information to any member of the public, press or official body, regarding or concerning the Supplier's relationship with the Company, its work for the Company or any part thereof without obtaining prior written consent from the Company's Marketing and Communication Department. Consent may be withheld at the Company's sole and absolute discretion.

Suppliers may not solicit anti-competitive information in such a way that creates an unfair advantage over other Suppliers.

General marketing or promotional solicitation or communication (flyers, promotional material, etc.) on any Company premises are prohibited without prior approval.

### **Reporting Concerns or Violations**

Suppliers are expected to report any conduct suspected of being illegal or improper, or that may constitute a violation of this Code to a toll-free 24-hour hotline at 888-906-9633 from anywhere in the U.S. or Canada, or through the secure web portal at <https://nee.alertline.com/gcs/portal> from anywhere in the world. These resources are administered by a third-party global provider of employee hotline services. Suppliers are expected to fully cooperate with any investigation conducted by the Company on a potential violation as well as any corrective action when required including legal proceedings.

### **Non-Retaliation Commitment**

If you observe or suspect a violation of applicable law or any deviation from our Code, Company policy, or the principles embodied therein, it is your responsibility to report your concerns. You may report your concerns through any of our channels without fear of retaliation or negative impact on your employment for having done so. The Company prohibits acts of retaliation against any person for reporting a possible compliance concerns in good faith, or for participating in any investigation. Acting in "good faith" means that you provide a sincere, complete report that you believe to be true. In other words, it does not matter whether your report uncovers actual misconduct, as long as you deliver it honestly and with all relevant facts. Anyone who retaliates against another individual for making a good faith report will be subject to disciplinary action, which may include termination of employment. Conversely, anyone making a bad faith report will also be subject to appropriate disciplinary action.

### **Conclusions**

Purchasing issues can be complex. This Code is intended only as a starting point for providing an overview of the main issues that the Company will consider in terms of assessing Supplier alignment with our values. The Code also serves as a guide for fair business dealings by encouraging open communication between the Company and its current and potential Suppliers.

The Company reserves and retains the sole and exclusive right to interpret and enforce the standards set forth in this Code. Compliance with these standards will not confer any contract or other right or expectancy on the Supplier, nor does it impose obligations on the Company. In case of conflict between this Code and your contract, the terms of your contract will prevail.

\*NEE's Code of Business Conduct and Ethics is available at this link:  
<http://www.investor.nexteraenergy.com/phoenix.zhtml?c=88486&p=irol-policies>



**SITE SAFETY REQUIREMENTS**

**Rev. 5/5/15 (consolidated)**

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## SITE SAFETY REQUIREMENTS

Rev. 5/5/15 (consolidated)

### Supplier Safe and Secure Workplace Policy

#### Purpose

The purpose of this policy is to provide a safe and secure workplace for employees of NextEra Energy, Inc. and its subsidiaries (collectively, “NEE”), and NEE suppliers, contractors, and consultants (hereinafter collectively referred to as “Supplier”), NEE business visitors, NEE customers, and the public.

#### Policy

Suppliers to whom this policy applies must demonstrate they are providing employees who are non-violent, drug-free, and who do not have a propensity for illegal and/or violent behavior. To comply with this Supplier Safe and Secure Workplace Policy, the Supplier must address three specific areas of concern:

- Pre-assignment Screening
- Controlled Substances and Alcohol Abuse, and
- Workplace Violence

#### Personnel and Facilities Affected

This policy applies to any individual or organization, its employees, and its subcontractors, responsible for performing work for or on behalf of NEE on NEE premises, NEE customer premises, NEE rights-of-way, NEE facilities (including facilities under construction) or NEE projects located in the United States and excluding nuclear power stations and nuclear facilities (collectively, “NEE premises”) for periods equal to or greater than 30 work days or 240 work hours, cumulative, per twelve month period.

**Note:** Work performed at nuclear power facilities or on premises outside the United States of America is outside the scope of this policy.

For example, this policy applies to a Supplier who has

- 30 employees who each work one full 8 hour day on NEE premises in any twelve month period, or
- only one employee who works 30 or more full 8 hour days on NEE premises in any twelve month period.

#### Violations

Any supplier employees who are found to be in pre-access violation of this policy will be denied access to NEE premises. Supplier employees found to be in post-access violation of any part of this policy shall be immediately removed from the premises by the Supplier.

## SITE SAFETY REQUIREMENTS

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### Compliance

If a Supplier fails to comply with this policy, the Supplier will be considered in breach of contract. Upon request, NEE or its designee shall have immediate access to Suppliers' records to ensure compliance with the requirements of this policy.

### Pre-assignment Screening

This policy does not necessarily preclude anyone from working on NEE premises based on a criminal record. It is the intent of this policy to ensure NEE has the ability to maintain a safe and secure workplace for its employees, Supplier employees, customers and the public.

Prior to assignment of any Supplier employee to NEE premises, Suppliers shall conduct a detailed background investigation to include, as a minimum, the following:

#### Criminal Records

Criminal records checked for criminal activity within

- the state where work is to be performed; and
- other states in which the Supplier employee either resided or was employed within the preceding 7 years.

For any convictions the results must demonstrate the following:

- no felony convictions within the last 7 years (to include pre-trial intervention, pleas of guilty, and nolo contendere), regardless of whether adjudication has been withheld; and
- not more than two misdemeanor convictions within the last 5 years, which display a propensity for violent, immoral, or drug-related activity.

#### Driving Record

Driving record checked for those jobs which require driving as part of the job duties/work. A valid driver's license with no restrictions must be held by a Supplier employee (restrictions do not include any physical limitations) for any position requiring a driver's license. The results must demonstrate the following:

- No alcohol/drug-related driving offenses in the last 5 years.
- The license is not currently suspended or restricted as to hours of driving or reason for driving (i.e., for work purposes only).

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### Drug Testing

Suppliers assigned to NEE must perform pre-assignment drug testing. Except as otherwise prohibited by law, any drug test required under this policy will test for the presence of the following substances:

- Marijuana
- Cocaine
- Opiates
- Amphetamines
- Phencyclidine

A positive test result for controlled substances not lawfully prescribed or for misuse of a lawfully prescribed controlled substance shall result in the denial of access of the Supplier employee to NEE Premises.

Supplier shall ensure that Supplier employees assigned to perform work on NEE premises do not constitute a threat of violence or criminal activity toward NEE employees, property, visitors, customers, other Supplier employees, or the general public.

Supplier employees not meeting the required results set forth in this pre-assignment investigation will not be allowed to perform work on NEE premises.

### **Controlled Substances and Alcohol Abuse**

All Supplier employees must be fit-for-duty and report to work able to perform their duties safely. Use or possession of controlled substances and/or alcoholic beverages, as defined in state statutes, by Supplier employees is an unsafe work practice which creates an increased risk to Supplier employee safety and the safety of others. The use or possession of any illegal drug or of a controlled substance without a valid prescription and/or the misuse of any prescription or over-the-counter medication by any Supplier employee shall constitute a violation of this policy.

Any Supplier employee who is consuming or is under the influence of any alcoholic beverage while on NEE premises shall be in violation of this policy.

### Random Testing

All Suppliers must have in place a controlled substance and alcohol policy. Except as otherwise prohibited by law, such policy must include a provision to test their employees, on a random basis, at a rate of not less than 25% per year of employees engaged in work on NEE premises. All employees who are subject to the requirements of the Omnibus Transportation Employee Testing Act of 1991, including Supplier employees required to hold a Commercial Driver's License, will be subject to random testing for controlled substances and alcohol according to the federally mandated random testing rate.

## SITE SAFETY REQUIREMENTS

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Supplier employees will be denied access to or immediately removed from NEE premises for: (1) possession or use of a controlled substance without a valid prescription; (2) distribution or sale of controlled substances at any time on or off the job; (3) positive test result for controlled substances without a valid prescription or alcohol; (4) being under the influence of a controlled substance or alcohol; or (5) refusal to test for controlled substances or alcohol.

### Prescription Medication and Over-the-Counter

Supplier employees taking prescription medication are required to consult with their physicians to determine whether the medication may have an adverse effect on performance. Supplier employees taking over-the-counter medication are responsible for being aware of any adverse effects such medication may have on their performance as defined on the manufacturer's label. If prescribed or over-the-counter medication may have an adverse effect on performance, the Supplier employee is required to notify the Supplier prior to reporting to NEE's premises. Failure to inform the Supplier's representative of taking prescription or over-the-counter medication which may have an adverse effect on performance may result in that employee's denial of access to NEE premises. In all events, the Supplier is responsible for determining the fitness for duty of each of its employees.

Supplier employees taking prescription medications must be prepared to provide satisfactory, verifiable proof that the medication has been lawfully prescribed to the Supplier employee, and that it is necessary for the individual's current medical condition. Possession of the prescription bottle will provide the required proof.

### Unscheduled Work - Call-out

Any Supplier employee called to perform unscheduled work at NEE premises must state whether he/she has consumed alcohol within five (5) hours of the time he/she reports to work or is otherwise "unfit" for duty. Supplier employees that have consumed alcohol within the five (5) hour abstinence period shall not be permitted to work on NEE premises except under conditions when

the Supplier employee being called believes that he/she is fit for duty; and, based on information provided by the individual, the Supplier also believes he/she is fit for duty; or

the Supplier employee's fitness for duty is verified by a breath analysis for alcohol prior to entering the NEE worksite and the individual believes he/she is fit for duty.

### Post Accident and/or Reasonable Suspicion Testing

In addition to the requirements set forth herein, all Suppliers shall comply with all applicable state and/or federal laws regarding drug and alcohol testing of their employees that are assigned to NEE premises. All testing performed pursuant to this policy shall be at the blood alcohol rates specified in the Omnibus Transportation Employee Testing Act of 1991. All Supplier employees will be subject to "post accident" and/or "reasonable suspicion" controlled substances and alcohol testing while on NEE premises. "Reasonable suspicion" shall be determined in the sole discretion of NEE. No Supplier employee required to take a post-accident alcohol test under this policy shall use alcohol for eight hours following the

## **SITE SAFETY REQUIREMENTS**

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accident, or until he/she undergoes a post-accident alcohol test, whichever occurs first. Supplier shall immediately notify NEE of any accidents involving or caused by its employees or subcontractors on NEE premises.

### **Workplace Violence**

NEE is committed to providing a safe and secure workplace. Supplier employees are expected to work in concert with NEE employees to ensure that the workplace remains safe and secure for all.

Behavior that could be perceived by a reasonable person as threatening or indicating the possibility of violence is prohibited. This may include, but is not limited to verbal threats, gestures, abusive language or physical altercation (fighting, shoving, etc.).

Displaying or possessing a weapon, firearm or destructive device (as defined by the appropriate state statute) on the Supplier employee's person or in his/her belongings, on any NEE premises, in his/her personal vehicle while operating the vehicle on NEE work or activities or in a NEE vehicle at any time is prohibited.

Supplier employees that violate these policies shall be removed immediately by the Supplier from NEE premises, and denied access to any NEE premises. Supplier shall immediately notify NEE Corporate Security of any violations described in this Workplace Violence section.

### **Reporting Illegal Conduct or Workplace Violence**

NEE employees and Supplier employees benefit from an atmosphere of good, ethical, and legal conduct. Suppliers and their employees with information concerning abuse of company assets, fraud, theft, possession or use of illegal drugs, threats of violence or any other behavior at NEE which may be considered illegal or in violation of this policy, shall report that information immediately. Such information can be reported to the Corporate Security Operations Center anytime, day or night, at 561-694-5000 or 888-694-6444.

### **Supplier Employee Acknowledgment**

Suppliers must make their employees aware of this policy and have Supplier employees acknowledge in writing prior to beginning work at NEE premises.

### **Non-Retaliation Commitment**

If you observe or suspect any deviation from NEE's Code of Business Conduct and Ethics\*, NEE policy or the principles embodied by either, it is your responsibility to report your concerns. You may report your concerns through any of our channels without fear of retaliation or negative impact on your employment or contract commitments for having done so. NEE prohibits acts of retaliation against any person for reporting a possible violation in good faith, or for participating in any investigation. Acting in "good faith" means that you provide a sincere, complete report that you believe to be true. In other words, it does not matter whether your report uncovers actual misconduct, as long as you deliver it honestly and with all relevant facts. Anyone who retaliates against another individual for making a good

## **SITE SAFETY REQUIREMENTS**

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faith report will be subject to disciplinary action which may include discharge (for NEE employees) or denial of access/removal from property/project (for Supplier employees). Conversely, anyone making a bad faith report will also be subject to appropriate action (disciplinary or otherwise, as appropriate).

\*NEE's Code of Business Conduct and Ethics is available at this link:

<http://www.investor.nexteraenergy.com/phoenix.zhtml?c=88486&p=irol-policies>

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### CONTRACTOR GUIDELINES VARIOUS FOSSIL POWER PLANTS AND FUEL TERMINALS

**Purpose:** To highlight some pertinent safety guidelines and other plant specific guidelines for Contractor personnel and Subcontractors while on OWNER plant property. These guidelines are not intended to supersede or replace the Health & Safety requirements contained in Contractor's Purchase Order, or any other applicable health and safety law. Contractor shall comply with all applicable laws pertaining to the health and safety of persons or property and protect them from injury, damage or loss.

1. **General Information:** The OWNER Contract Representative responsible for the oversight of the Work by the Contractor shall ensure the following guidelines are read and understood by Contractor's personnel and Subcontractors. The "Contractor Guideline Acknowledgement Sheet" on the last page of this document must be completed and provided to the OWNER Contract Representative for placement into the contract file. The Contractor is responsible for ensuring that Contractor's personnel and Subcontractors comply with this guideline, and all applicable safety and health laws. This guideline applies to all Contractors who perform work on the plant site.

OWNER may require Contractor to remove from the plant site its personnel or  
Subcontractors who fail to adhere to these Guidelines.

In Case of Emergency Dial 0 or 227 or 267

2. **Safety:** Safety is of the utmost importance on all jobs. It is the responsibility of the Contractor to ensure that all applicable OSHA rules are complied with and that each job be continually reviewed for possible OSHA violations. Any other applicable health and safety related law shall be similarly handled.
  - 2a. **Personal Protection Equipment:** Hard hats and safety glasses shall be worn at all times in the power block area, the shop area, and any other area of the plant when the work or the environment warrants, or if the local plant policy requires. While on the plant site all Contractor's personnel and Subcontractors shall wear work shoes that meet ANSI Z41 standards. Other items of personal protection equipment such as fall protection, hearing protection, hand protection, and respiratory protection shall be utilized as appropriate for the job. Appropriate clothing for the job must be worn. Tank tops and shorts are not permitted on the plant site. Exceptions to this Personal Protection Equipment policy may be allowed for low risk work such as for certain delivery personnel, office or other safe area work, etc., and shall be approved by the Contract Representative.
  - 2b. **Confined Spaces:** Contractors working in confined spaces must have an active confined space program which includes up to date training of those personnel working in confined spaces. A confined space permit must be completed by the Contractor prior to entry. Contractors working in a confined space or hazardous gaseous environment must first have the confined space thoroughly surveyed by a qualified person. Confined spaces can include such areas as transformers, tanks, vessels, boilers, hoppers, steam drums, condensers, manholes, exhaust and ventilation ducts, etc.. These spaces are large enough and so configured that a person can enter and perform work, however, there is limited means for entry and exit and the space is not designed for continuous human occupancy. Contractor's confined space entry program and training records shall be subject to review by the OWNER Contract Representative upon request.
  - 2c. **Clearance Procedure:** An in-plant clearance is required prior to commencing work on any mechanical or electrical equipment where the inadvertent energizing or pressurizing of the equipment could endanger the safety of the worker(s) or damage the equipment. Clearances for Contractor personnel will be obtained and released through the



## SITE SAFETY REQUIREMENTS

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Contractor's OWNER Contract Representative. All clearances will be executed as per the "In-Plant Clearance Procedure". Contractor has the option to hang a "Control Tag" on the primary source in addition to the OWNER Control Tag. Anyone found violating equipment clearances shall be subject to removal from the plant site. **Clearance tags are white and black plus red and have "Danger" written on each side.** Equipment shall not be operated while under a clearance. No valve is to be fumed or closed if a "Danger" tag is hanging on the valve. Tags will remain on the equipment until the equipment is released and put back in operation by the appropriate plant personnel. **Yellow tags are "Caution" tags** which are used to warn personnel of potential hazards, or caution personnel about unsafe practices. **These tags are not clearance tags!**

- 2d. **Handling Compressed Gases:** Cylinders containing acetylene, oxygen, hydrogen, nitrogen, helium, argon, carbon dioxide, etc., shall always be stored upright with their caps in place in approved safe places away from highly combustible material and well separated from radiators, furnaces and other sources of heat. Cylinders shall never be subjected to a temperature above 125 degrees F. Bottled flammable gases such as hydrogen and liquefied petroleum shall be stored in designated locations. Cylinders of compressed gases shall be transported only when they are properly secured in their upright position with caps in place. Cylinder valves shall be closed at all times unless in active use. If a cylinder leaks, attach a tag stating that the cylinder is unserviceable, remove to a well ventilated area, and contact the OWNER Contract Representative to resolve disposition. Cylinders shall not be placed where they may become part of an electrical circuit. Fuel and oxygen cylinders shall not be transported in an elevator at the same time. Contractor personnel shall not ride in elevators with compressed gas cylinders. A minimum of 20 feet of separation is necessary between fuel and oxygen cylinders in storage areas. All valves, cylinders, regulators and hoses shall be kept free from oil and greasy substances. Flashback protector devices shall be used. No cylinders shall be taken into a confined space.
- 2e. **Welding and Cutting:** Adequate precautions shall be taken to guard against hazards such as electric shock, burns, toxic fumes (i.e. vanadium pentoxide, etc.), fires and explosion. Hot material shall be cooled or plainly marked before leaving it unguarded. When welding or cutting in elevated positions, precautions shall be taken to prevent hot metal from falling on people or combustible materials. No welding or cutting shall be attempted in dusty or gaseous areas until the area has been ventilated sufficiently to eliminate all possibility of fire or explosion. No welding or cutting shall be performed on empty containers or pipelines until verification by sampling with gas monitoring equipment that the component is safe to begin Work. Safety signs, shields or barricades shall be placed around welding jobs where needed to protect fellow workers or the public from direct rays of electric arc or welding fumes. Familiarization of the area to assess the requirement for fire fighting equipment shall be conducted prior to welding. Electric arc welders shall be grounded properly before use and shut off or leads disconnected if leaving the welder for extended periods.
- 2f. **Ladders, Scaffolds and Platforms:** There are numerous Federal requirements for working on ladders, scaffolds and platforms. It is the responsibility of the Contractor's personnel and Subcontractors to adhere to these requirements while on the plant site. **Common sense in placement, tying off, and climbing will reduce the potential for injury.** Likewise, personal fall protection and proper construction of scaffolds greatly reduces the potential for personnel injuries. When people are required to work or pass under scaffolding, the scaffolding shall be provided with a screen between the toe board and guard, extending along the entire opening, consisting of 18' gauge US Standard 1/2" wire mesh or the equivalent.
- 2g. **Barrier Tape:** Black and yellow barrier tape indicates work is in progress and personnel shall observe the area prior to entering due to the potential danger. Black and red barrier

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tape means do not enter the area as immediate danger exists. If your work scope creates a hazard for other people the work area must be barricaded using yellow/black (caution) or red/black (danger) tape. Anyone found violating any red/black barriers shall be subject to removal from the plant site.

- 2h. **Housekeeping:** Housekeeping and safety shall not be separated. Trash shall be deposited in the proper dumpster or trash can and metal scrap shall be put in the proper container. Aisles, walkways and stairways shall be kept clear of debris, tooling, boxes, parts, electrical cords, etc.. Spills shall be cleaned up promptly and barricaded to prevent a potential hazard to personnel. Jobs which produce light material and which can be blown throughout the plant by wind shall be contained. Contractor's personnel and Subcontractors shall adhere to any additional housekeeping standards at each plant site.
  - 2i. **Safety Program:** Contractor shall have and maintain an active 'Safety Program' that instills and emphasizes the importance of working in a manner that insures the safety of employees and others.
- 3.0 **Hazard Communications:** OWNER shall review Hazard Communications with Contractor prior to starting Work. At this meeting OWNER shall identify hazardous substances which may be present in the work place, and provide Contractor access to Material Safety Data Sheets (MSDS) for those substances. Contractor shall convey this information to Contractor's personnel and Subcontractors. Likewise, the Contractor shall inform the OWNER Contract Representative of all hazardous materials which Contractor or Subcontractor brings onto OWNER property, and supply MSDS's for those materials. No hazardous material shall be brought on site unless required in the performance of the Work. No hazardous material shall be brought on site without prior approval by the OWNER Contract Representative.

Hazardous materials containers shall be labeled to clearly identify the content of the container. If materials are transferred from the original container to another container, both containers shall be clearly labeled.

Hazardous materials such as antifreeze, oil, solvents, halogenated solvents, etc., shall be disposed of in the appropriate manner as described by the Purchase Order. The OWNER Contract Representative will provide the Contractor with the appropriate procedures. No hazardous material brought onto the site shall be disposed of without the prior approval of the OWNER Contract Representative.

- 4.0 **General Behavior:** Contractor's personnel and Subcontractors are subject to immediate removal from the plant site if in violation of any of the following:
- 4a. Safety Rules
  - 4b. Drinking alcoholic beverages on site (including the parking lot)
  - 4c. Under the apparent influence of alcohol or drugs
  - 4d. Gambling
  - 4e. Possession of firearms
  - 4f. Fighting
  - 4g. Willfully damaging OWNER's or a third party's property
  - 4h. Sleeping
  - 4i. Theft of any kind
- 5.0 **Parking and Gates:** Contractor's personnel and Subcontractors shall park in a designated parking area. Entering and exiting from the plant shall only be done through a designated "Contractor Gate". OWNER assumes no risk for property damage or loss while vehicles are in the parking lot.
- 6.0 **Contractor Materials and Equipment:** Contractor tools and equipment shall be clearly marked prior to arrival on site. An inventory of the tooling and equipment to be used by the Contractor or

## SITE SAFETY REQUIREMENTS

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Subcontractor shall be provided to the OWNER Contract Representative upon arrival on site. Deliveries of materials for the Contractor must be made through the Contractor Gate. All Contractor trailers, vehicles, tool boxes, lunch boxes, etc., are subject to inspection on demand by the OWNER Contract Representative with the employee present.

- 7.0 **Contractor Operating Vehicles, Forklifts, Trucks or Mobile Cranes:** No vehicles shall be allowed in the plant site except those approved by the Plant Manager or his/her designee. All vehicles entering the plant site shall have the company identification clearly visible. Contractor's personnel and Subcontractors shall adhere to any additional access requirements at each plant site. Contractor shall provide to the OWNER Plant Manager or his/her designee a list of the names of the personnel qualified to operate equipment, and verification that these people have completed the physical and operating requirements of the appropriate OSHA Standard. **Only those people qualified to operate equipment, and whose names have been submitted to the Plant Manager or his/her designee, shall be authorized to operate vehicles, forklifts, trucks, and mobile cranes on the Plant site.**
- 8.0 **Emergencies/Accidents:** If a fire alarm or other emergency alarm is sounded, all Contractor personnel and Subcontractor personnel are to report to the designated area as defined by OWNER. These areas shall be identified by the OWNER Contract Representative prior to the start of Work. All personnel are to be accounted for and the OWNER Contract Representative notified.

In the event of an accident, Contractor shall immediately attend to all injured persons. Any job related injury/illness that occurs to an individual who is under OWNER wrap-up insurance program shall be reported to his/her Supervisor and Form # 1880C completed. Those injuries which are classified as OSHA recordables shall be jointly investigated by the Contractor designee and the Local Joint Advisory Safety Committee. All injuries/accidents shall be reported to the control room. Emergency medical assistance may be obtained by contacting the control room (if not already obtained); the control room operator will contact the local Emergency Medical Services Company (EMS). All accidents occurring on OWNER property which result in property damage or personal injury shall be reported to the OWNER Contract Representative using the OWNER Forms #1880 or 1880A.

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**CONTRACTOR GUIDELINES ACKNOWLEDGEMENT SHEET**

I have reviewed these guidelines and have ensured that all \_\_\_\_\_  
personnel and Subcontractors have also reviewed these guidelines to the point of their clear understanding.  
They understand that violation of these guidelines is grounds for removal from OWNER property.

\_\_\_\_\_  
Supervisor In Charge  
for

Date \_\_\_\_\_

\_\_\_\_\_  
(Name of Company)

Return to OWNER Contract Representative prior to start of Work.

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**EQUIPMENT OPERATING AUTHORIZATION**

**REFERENCE REGULATION 22257**

**OPERATOR TRAINING:**

**ONLY TRAINED AND AUTHORIZED OPERATORS SHALL BE PERMITTED TO OPERATE A POWERED INDUSTRIAL TRUCK. METHODS SHALL BE DEvised TO TRAIN OPERATORS IN THE SAFE OPERATION OF POWERED INDUSTRIAL TRUCKS.**

**FEDERAL REGISTER VOLUME 37, NO. 202, WED OCT 18, 1972**

**IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE DESIGNATED EQUIPMENT OPERATORS MEET THE PRECEEDING OSHA REQUIREMENT.**

**COMPANY NAME:**

**COMPANY REPRESENTATIVE:**

**(SIGNATURE)**

**USE OF MOBILE EQUIPMENT**

**The OWNER's Coordinator shall approve all mobile equipment brought on to the site.**

**SAYREVILLE GENERATION FACILITY CONTRACTOR PREPARATION PACKAGE**

**The contractor shall provide to Contract coordiantor a list of names of his personnel qualified to operate equipment and verification that these people have completed the physical and operating requirements of the appropriate OSHA standard. (Form for certification is attached to this package.) Only those people qualified to operate equipment and whose names have been submitted to the Contractor Coordinator shall be authorized to operate forklifts. trucks and mobile cranes on the plant site.**

**EQUIPMENT - Contractor personnel are not to operate Owner's mobile equipment without approval of the Contractor Coordinator.**

**All equipment shall be checked for proper operation, leaks, etc. Oil pads should be used to catch and dispose of drips from operating equipment. If larger leaks are found, the use of the equipment shall be discontinued until the leaks are repaired and the area cleaned up.**

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**START OF JOB TAILBOARD**

**I ACKNOWLEDGE THAT I HAVE RECEIVED, REVIEWED AND UNDERSTAND THE INFORMATION IN THIS PACKAGE. THIS MATERIAL HAS BEEN COVERED WITH THE OWNER CONTRACT COORDINATOR FOR THE PROJECT REFERENCED BELOW.**

**DATE:**            \_

**PROJECT:**-----

**FPL Energy CONTRACT COORDINATOR:**-----

**CONTRACTOR SUPERVISOR:**-----

**YOUR NAME:** \_

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### **POWER PLANT SITE IDENTIFICATION REQUIREMENT**

**Effective Date:** November 16, 2001

All contractors, suppliers, vendors and their subcontractors, agents and representatives (collectively "Personnel") must present photo identification ("ID") to obtain access to any Florida Power & Light (OWNER) power generation facility ("Plant").

The photo ID may be a current driver's license, a government issued ID or a Contractor issued ID, which will be checked by OWNER or its designee daily before access is granted to the controlled area of the Plant. While on site, Personnel must wear visible, positive identification at all times. ID badges, hardhats with Contractor's logo and identifying numbers issued by the Contractor, are examples of acceptable identification.

Additionally, OWNER requires that all Contractors submit, at least one week before Personnel are scheduled to arrive at an OWNER Plant, a listing of the prospective Personnel delineating: name, scheduled date of arrival at the Plant and Social Security numbers. This list will be forwarded to OWNER's Corporate Security group for review. OWNER will advise, as soon as practicable from receipt of this list, if any of the submitted Personnel will not be permitted access to the Plant along with the reason why. The OWNER Company Representative may waive or modify this requirement in situations where time does not permit.

Personnel who fail to produce adequate ID may be denied access to the Plant. Contractor shall bear all costs associated with those Personnel that are not admitted.

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### PROTECTIVE FOOTWEAR POLICY

Approved work boots or shoes shall be worn in all work areas with the exception of the following locations:

- 1) Office environments and the control room
- 2) While entering and leaving the plant for your work shift
- 3) While traveling in pre-established and identified walkways which are designated free of hazards that may cause foot injury.

Approved work boots or shoes are those with leather uppers and heavy soles which meet the requirements of the ANSI Z41-1991, American National Standard for Personal Protection - Protective Footwear. All personnel shall assure that their work boots or shoes provide adequate protection from foot injuries due to falling or rolling objects as identified in the hazard assessment. **Deck and athletic style shoes which meet the ANSI Z41 standard are not considered an approved work shoe and therefore are not to be worn in work areas.** Persons handling hot compounds, hot solder, or other hot materials, including welding or torch cutting operations shall wear approved all leather high top boots. The upper portion of high top shoes/boots shall extend far enough above the ankle to provide protection from hot metal particles accidentally entering the area between the leg and cuff of the footwear.

Electrical bench soldering does not require high top shoes. Shoes shall be maintained in good repair.

Chemical resistant protective footwear shall be worn when there is a possibility of hazardous chemicals coming in contact with the foot, and shall also meet the requirements of ANSI Z41- 1991. Chemical protective footwear shall be resistant to the type of chemical to which it is exposed



# SITE SAFETY REQUIREMENTS

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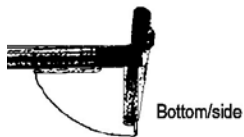
## EYE & FACE PROTECTION POLICY

**Effective Date:** April 22, 1996

The following is the eye and face protection policy in effect for all Florida Power & Light Co. Power Generation Business Unit ("PGBU") locations:

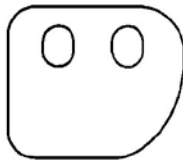
- A. Approved eye and face protective equipment shall be constructed in accordance with ANSI Z87.1-1989.
- B. Approved eye protection with acceptable side shields shall be worn by all personnel at PGBU work locations except for personnel in offices, control centers, vehicles, locker rooms, lunchrooms, meeting rooms and similarly protected areas, as determined by the Local Joint Advisory Safety Committee and as explained in the Local Safety Plan. Personnel must always wear approved eye and/or face protection when machines or operations present a potential of eye or face injury from physical, chemical or radiation agents.
- C. Personnel whose vision requires the use of corrective lenses shall use one of the following methods to achieve the appropriate level of eye protection.
  - 1. By use of approved prescription safety glasses. Only prescription glasses with full sideshields and "Z87" engraved in the temple are acceptable. "Z87" indicates the glasses were manufactured in accordance with ANSI Z87.1-1989.
  - 2. By use of non-approved prescription glasses covered with approved goggles.
  - 3. By use of contact lenses covered with either approved safety glasses or goggles. **Note:** Contact lenses and non-approved prescription glasses by themselves do not constitute approved eye protection.

### Acceptable/Non Acceptable Side Shield

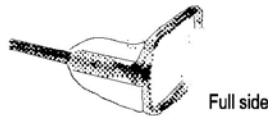


CS72: Bottom/side protection

Not  
Acceptable



Not Acceptable



Full side

Acceptable



Top/side

Acceptable

## **SITE SAFETY REQUIREMENTS**

**Rev. 5/5/15 (consolidated)**

### **SAFETY RULES AND REGULATIONS FOR CONTRACTORS**

#### **Purpose**

Safety is vital to the well being of all employees, the quality of the work being done, and the cost effectiveness of OWNER projects. The purpose of this procedure is to ensure that Contractors comply with OSHA standard 29 CFR Part 1926, identify and correct potential safety hazards prior to starting work, and monitor the effectiveness of their own safety programs.

#### **Contractor's Responsibilities**

Prior to the commencement of any site work by the Contractor, the Contractor will designate in writing to OWNER a competent safety representative. This representative shall make frequent and regular safety inspections of the Jobsite. These inspections shall be documented in writing. All at-risk behavior and/or unsafe conditions noted during the inspections shall be corrected immediately. At risk behavior and /or unsafe conditions noted during inspections shall be corrected immediately. A Job Safety Analysis (JSA) is required to be performed by the Contractor for all essential jobs.

Contractor shall initiate an accident prevention program and shall instruct each employee on the Jobsite in the recognition and avoidance of unsafe acts and/or conditions applicable to its work environment to control or eliminate injury. The Contractor shall enforce the project and OSHA safety rules on its employees.

The Contractor is responsible for providing and requiring the use of appropriate personal protective equipment (PPE) in all operations where there is and exposure to hazardous conditions or where the hazard assessment results would require PPE.

The Contractor shall designate in writing to OWNER the names of the competent persons as required by OSHA Standard 29 CFR Part 1926 for the Contractors work activities. The Contractor shall ensure this individual understands his responsibilities and is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and understands that he/she has the authorization to take prompt corrective measures to eliminate them.

#### **Pre-Construction Meeting**

Contractor shall attend a pre-construction meeting with OWNER to understand the project conditions, safety requirements, and site policies and rules before starting work at the Jobsite. A Jobsite tour may be made to confirm Contractor's awareness of potential safety hazards. It is Contractor's obligation to implement measures necessary to establish and maintain safe working conditions on the Project.

#### **Instruction and Training**

Instruction and training of employees in an OSHA requirement will be required on this Project. Examples of such training to be provided by the Contractor are:

Orientation – Newly employed or transferred personnel shall be instructed in the site safety rules/policies and the safety practices required by their work assignments. The Contractor shall document this training and demonstrate to OWNER that the employees know and understand the training.

Daily Work Assignments – All work assignments must include specific attention to safety. The Risk Assessment Tailboard (RAT) process or equivalent will be utilized each morning or when a new task is assigned. (See attached program)

Safety Meetings – Properly conducted and recorded weekly safety meetings are required.

## **SITE SAFETY REQUIREMENTS**

**Rev. 5/5/15 (consolidated)**

Specific Instructions – OSHA requires that employees who perform specific tasks or operate specific equipment be trained in its usage. Contractor shall ensure only those personnel qualified by training or experience shall be permitted to operate machinery. These qualifications shall be documented by the Contractor, maintained and kept on file at the Jobsite for review by OWNER.

### **Recordkeeping**

It is the Contractor's responsibility to maintain all records required by OSHA, Workers Compensation Insurance or similar regulations. This includes the maintenance of an accident log, annual summary and posting of posters.

### **Hazardous materials**

The Contractor is responsible for notifying OWNER of any hazardous chemicals or substances that are brought or caused to have been brought on the Jobsite.

If hazardous chemicals are going to be used, then the Contractor will implement a Hazard Communication program that will include training, MSDS, and labeling.

Use of chemicals may result in hazardous waste. In such cases, the Contractor shall institute a program to address hazardous waste storage and disposal in accordance with the code of federal regulations, state regulations, and other requirements delineated in the bid and Contract documents.

When personal exposure to chemicals, particulates, aerosols or fumes is reasonably expected to exist and exceed allowable limits, then the Contractor shall put an Industrial Hygiene program in place.

### **Fire Prevention**

Contractor shall be responsible for fire protection in its work, operational, and storage areas in accordance with all local, county, state, and federal requirements 24 hours per day, seven days per week, through the duration of this Contract.

Contractor shall comply with all fire and safety rules and regulations established on the project.

### **Third Party Safety Inspections**

In additions to visits and safety inspections by corporate representatives, Contractor is advised that the Project may be inspected from time to time by authorized third parties. These may include representatives of the Owner, insurance companies, or OSHA. Upon proper identification, they are entitled to access and courteous consideration.

### **Project Safety Rules and Guidelines**

All personnel on the project are required to comply with project specific rules and these guidelines. Contractor shall ensure that all of its employees have read these guidelines and understand its contents. The following Jobsite rules apply:

#### **Clothing Requirements**

Shirts with at least a 4-inch sleeve shall be worn at all times. Tank tops are not permitted. Long pants are required.

Sandals, tennis shoes, or any other street type shoe will not be permitted.

Loose fitting clothes or jewelry shall not be worn around moving machinery, grinding operations, etc.

## SITE SAFETY REQUIREMENTS

Rev. 5/5/15 (consolidated)

### Personal Protective Equipment

ANSI approved hard hats shall be worn at all times in the construction area unless a hazard assessment performed by the Contractor shows that wearing the hard hat would make the specific job more unsafe. All areas of this Jobsite are hard hat areas. This includes cabs on heavy equipment such as cranes and backhoes.

Safety glasses with side shields are required in the construction areas at all times.

Approved eye and face protection is required as follows: goggles, welding hoods and shields, and face shields will be required to be properly worn at all times when in the area of operations, such as when welding, burning, grinding, chipping, chemical handling, corrosive liquids or molten materials, drilling, sawing, driving nails, power actuated tools, concrete pouring, tampers and gas fueled hand operated equipment (i.e. chainsaws). This section will also apply to those employees of Contractor who are assisting any worker as an apprentice or helper. Prescription glasses must be ANSI approved or safety glasses must be worn over the prescription glasses.

OSHA approved hearing and respiratory equipment shall be worn when required. Contractor shall meet the selection, fitting and maintenance requirements of OSHA.

All employees shall wear approved safety harnesses when working six feet or more above the ground or when working in a precarious position. The lanyard shall be securely attached to the employee 100% of the time and shall be rigged such that the employee can neither free fall more than 6 feet (1.8m), nor contact any lower level. Safety harnesses shall also be worn and attached to the tie-off rail when working out of extensible and articulating boom platforms and to vertical drop lines when working from suspended scaffolding. Specific project requirements may exist and Contractor will adhere to the more stringent requirements of fall arrest equipment use.

Seat belts shall be worn by all employees operating any motor vehicle and any equipment with rollover protection structures during performance of the Work.

Safety nets shall be provided when work places are more than 25 feet above the ground where the use of other fall protection devices is impractical.

Approved work boots or shoes shall be worn in all construction areas unless a hazard assessment performed by the Contractor shows that ANSI approved shoes are required. All Contractors shall ensure that their work boots or shoes provide adequate protection from foot injuries due to falling or rolling objects as identified in the hazard assessment. Deck and athletic style shoes are not considered an approved work shoe and are not to be worn on the project.

Chemical resistant protective footwear shall be worn when there is a possibility of hazardous chemicals coming in contact with the foot. Chemical resistant footwear shall be resistant to the type of chemical to which it is exposed.

Work gloves are required to be worn for all manual material handling jobs.

### Signs, Signals, Barricades and Lights

Signs, Signals and barricades shall be visible at all times where a hazard exists.

All streets, roads, highways, and other public thoroughfares, which are closed to traffic, shall be protected by effective barricades on which shall be placed acceptable and highly visible warning signs. Barricades shall be located at the nearest intersecting public highway or street on each side of the blocked section.

## **SITE SAFETY REQUIREMENTS**

**Rev. 5/5/15 (consolidated)**

All open trenches and other excavations shall be provided with suitable barriers, signs, and lights to the extent that adequate protection is provided. Obstructions, such as material piles and equipment, shall be provided with similar warning signs and lights.

All barricades, signs, lights and other protective devices shall be installed and maintained in conformity with applicable statutory requirements.

When any work is performed at night or where daylight is shut off or obscured, Contractor shall, at its expense, provide artificial light sufficient to permit work to be carried on efficiently, satisfactorily and safely, and to permit thorough inspection. During such times, the access to the place of work shall also be clearly illuminated. All wiring for electric light and power shall be installed and maintained in a first-class manner, securely fastened in place at all points, and shall be kept as far as possible from telephone wires, signal wires, and wires used for firing blasts.

Signs, signals and barricades shall be removed when the hazard no longer exists.

Contractor's employees working in an area of potential traffic had shall wear approved reflective type vests.

### **Rigging Equipment**

All rigging equipment shall be free from defects, in good operating condition and maintained in a safe condition. Rigging equipment shall be inspected before use on each shift and as necessary to ensure that it is safe.

A designated, competent employee of Contractor shall thoroughly inspect rigging equipment monthly to ensure that it is safe. Records shall be kept on Jobsite of each of these inspections by Contractor and shall be made available to OWNER upon request.

Contractor shall immediately remove damaged rigging equipment from service.

### **Hand and Power Tools**

All hand and power tools, whether furnished by Contractor, or by Contractor's employee, shall be maintained in a safe condition.

Contractors shall not issue nor permit the use of unsafe hand or power tools.

Electrical power tools shall be grounded or double insulated with proper assured equipment grounding inspections or Ground Fault Interrupter circuit protection provided.

Pneumatic power tools shall be secured to the hose or whip by some positive means.

Only properly trained Contractor's employees shall operate power actuated tools. Contractor shall maintain certification records, employee certification cards, or equivalent certification documentation or each of its employees using power actuated tools during performance of the work.

All portable grinders shall conform to OSHA and ANSI requirements.

Cords, leads and hoses shall be kept at least seven feet off the ground or placed off to the side to prevent creating a tripping or traffic hazard.

### **Compressed Gas Cylinders**

Compressed gas cylinders shall be secured in an upright position at all times. Location of cylinder storage areas must be approved by OWNER.

## **SITE SAFETY REQUIREMENTS**

**Rev. 5/5/15 (consolidated)**

When transporting, moving and storing cylinders, valve protection caps shall be in place and secured.

Cylinders shall not be hoisted by magnets or choker slings. Valve protection caps shall not be used for hoisting cylinders.

Cylinders shall be kept away from sparks, hot slag and flames, or be adequately protected.

Cylinders shall not be placed where they can become part of an electrical circuit.

Cylinders shall be labeled as to the nature of their contents.

Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible material a minimum of 20 feet, or by a non-combustible barrier at least five feet high having a fire resistant rating of at least one-half hour. Empty cylinders shall be separated as above from full cylinders and stored with like cylinders.

“No Smoking” signs shall be posted at storage areas and signs shall clearly indicate contents of cylinders.

Anti-flash back valves shall be provided on all oxygen and acetylene lines.

### **Jobsite Transportation Rules**

All drivers of motor vehicles shall be licensed, trained, and instructed to exercise good cautious operating judgement as well as observe posted speed limits. Maximum speed limit is 25 miles per hour unless posted otherwise. However, slower speeds are necessary in congested areas.

Seat belts shall be worn at all times when travelling in vehicles and equipment.

All Contractor’s means of ingress, egress and parking will be adequately marked as such, since their employees are to travel these routes only.

Use your horn for safety at blind corners, when passing, etc.

Established hand signals or turns signals are to be used.

Reckless driving or other non-observance of these instructions will be cause for withdrawal of drive-in privileges and may result in denial of access to the Project.

### **Cranes and Derricks**

Contractor shall certify all cranes and derricks as being in safe operating condition before using the crane or derrick on Jobsite. This certification shall be maintained by Contractor and made available to OWNER upon request.

The Contractor shall comply with the manufacturer’s specifications and limitations applicable to the operation of all cranes and derricks. The Contractor shall designate a competent person who shall inspect all machinery and equipment before each use, to make sure it is in safety operating condition. Any deficiencies shall be repaired, or defective parts replaced, before continued use.

The swing radius of cranes shall be barricaded where practical and/or in areas where work is being performed.

Hand signals prescribed by ANSI shall be posted at an operator’s station; employees assigned to work around the crane will be trained in the use of hand signals.

## **SITE SAFETY REQUIREMENTS**

**Rev. 5/5/15 (consolidated)**

Equipment shall not be operated where any of the equipment or load will come within 10 feet (3.1 M) of electrical distribution or transmission lines less than 50 kV. Minimum clearance between lines and any part of the crane or load must be 10 feet plus 0.4 inches for each 1 kV over 50 kV or twice the length of the line insulator but never less than 10 feet.

Contractor's employees shall not ride headache ball, hook, or load being handled by the crane.

While in use, equipment shall not be lubricated or have maintenance performed.

Rated load capabilities, recommended operating speeds, special hazard warning, specific hand signal diagrams and special instructions shall be visible to the operator while he is at the control station.

Contractor's employees shall not be allowed to work under the load of cranes. Tag lines shall be used on all loads. Special caution should be used in concrete bucket operations.

Cranes and derricks shall be inspected prior to use and at monthly intervals. Contractor shall maintain records on Jobsite of these inspections. Contractor shall make copies available to OWNER upon request.

### **Equipment and Motor Vehicles**

All equipment must be inspected daily before use by Contractor's operator. Contractor must also make formal inspections at 30-day intervals with proper documentation maintained at the Jobsite by Contractor and copies shall be made available to OWNER upon request.

Defective equipment shall be repaired or removed from service immediately.

All rubber-tired, self-propelled scrapers, rubber-tired, front-end loaders, rubber-tired dozers, wheel-type agricultural and industrial tractors, crawler tractors, crawler-type loaders and motor graders shall be equipped with rollover protective structures and seat harnesses.

All Contractors' operators of construction equipment should be properly licensed and certified by a competent person. Copies of the certifications shall be maintained on Jobsite by Contractor and made available to OWNER upon request.

All equipment with an obstructed view to the rear must have a reverse signal alarm audible above the noise level or a flagman.

All cracked or broken glass shall be replaced before bringing vehicles on the Jobsite. If glass is broken or damaged on Jobsite and if damage is severe enough to cause a potential safety problem, the machine shall be stopped until such damage has been repaired.

Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried and all passengers should be properly seated. Standing on the back of moving vehicles is prohibited.

Location for storage of all fuels, lubricants, starting fluids, etc., shall be reviewed by OWNER before use by Contractor.

### **Ladders**

The use of ladders with broken or missing rungs or steps, broken or split rails or other defective construction is prohibited.

Ladders shall extend no less than 36 inches above landing and be secured to prevent displacement.

Portable ladders must be equipped with safety shoes.

## **SITE SAFETY REQUIREMENTS**

**Rev. 5/5/15 (consolidated)**

Wooden ladders shall not be painted.

Metal or conductive ladders shall not be used on the Jobsite.

### **Floor and Wall Openings and Stairways**

Floor and wall openings shall be guarded by a standard guardrail, midrail, and toeboard, or a cover installed and secured to prevent movement.

Guardrails must be of sufficient strength to support 200 pounds of pressure when applied at midspan of the guardrail parallel with the floor and perpendicular to the guardrail with a minimum deflection of 3 inches.

Covers must be adequately secured to prevent displacement and have "Danger" signs attached identifying the hazard.

Every flight of stairs having four or more risers shall be equipped with standard stair railings. Stairs are not to be used until risers and railings are securely installed. Treads will be poured as soon as possible were poured treads apply.

Debris and other loose materials shall not be allowed on stairways or at access point to stairway. Debris shall not be allowed to accumulate on stairwells.

### **Excavations and Trenching**

Prior to opening any excavation or trench, Contractor must notify OWNER. In addition, Contractor shall contact any other necessary personnel to determine whether underground installations, i.e., sewer, telephone, fuel, electric lines, etc., may be encountered and where they are located. An excavation permit may be required specific by project.

Excavations and trenches shall be inspected by a competent person daily and after every rainfall to determine if they are safe.

After the soil is classified, all banks 4 feet high or more shall be sloped to the angle of repose (the greatest angle above the horizontal plane at which a material will lie without sliding), shored, or have trench shields installed.

Ladders or steps shall be provided in all trenches 4 feet or more in depth. Ladders or steps shall be located to require no more than 25 feet of lateral travel before having access or egress.

Material excavated shall be stored at least 2 feet from the edge of the excavation, or the trench shall be shored to prevent material from falling into the excavation.

All trenches and excavations shall be properly barricaded to prevent persons from waling into them.

All walkways or ramps crossing over excavations shall be securely fastened and equipped with standard guardrails.

### **Housekeeping**

During the course of construction, all debris and scrap material shall be kept away from the work area.

Containers shall be provided by Contractor for the collection and separation of waste, trash, oily and used rags and other refuse. Metal (dumpster type) containers must be used and emptied promptly.



## **SITE SAFETY REQUIREMENTS**

**Rev. 5/5/15 (consolidated)**

Garbage and other waste shall be disposed of at frequent and regular intervals in a manner approved by OWNER.

Contractor shall notify OWNER of any hazardous waste it will generate during performance of the work.

Contractor shall not pour, bury, burn, nor in any way dispose of any chemical on the work Jobsite without the written permission of owner.

Contractor shall dispose of all combustible debris to a solid waste disposal site.

**NO OPEN BURNING OF DEBRIS OR RUBBISH WILL BE PERMITTED ON THE PROJECT.**

Materials and supplies shall be stored in locations that will not block access ways, and shall be arranged to permit easy cleaning of the area.

All hoses, cables, extension cords, and similar materials shall be located, arranged, and grouped so they will not block any access way and will permit easy cleaning and maintenance.

### **Medical Services - Contractor's Responsibilities**

Provisions shall be made prior to commencement of the project for prompt medical attention in case of serious injury.

In the absence of a hospital or physician that is reasonably accessible in terms of time and distance to the worksite and available for the treatment of injured employees, a person who has a certificate in first aid/CPR shall be available at the Jobsite.

Contractor shall ensure that first aid supplies approved by the consulting physician be easily accessible when required. Contents shall be inspected and refilled weekly.

Contractor shall provide proper equipment for prompt transportation of injured person to a physician or hospital or a communication system to contact necessary ambulance service.

Contractor shall post telephone numbers and addresses of the physicians, hospital and ambulances.

Contractor shall complete and retain on file "Employer's First Report of Injury" and OSHA Form 200 and provide OWNER a copy upon request.

Contractor shall ensure that each of its lower-tier subcontractors meet these medical requirements.

### **First Aid and Medical Procedures**

Each occupational illness or injury shall be reported immediately by Contractor to OWNER's project manager. For emergency cases, ambulance services will be contacted immediately by the quickest means available.

A daily record shall be kept on all employees requiring first aid treatment.

If medical treatment is required, Contractor must provide transportation of the injured to a hospital or physician. A representative of the Contractor shall accompany the injured employee and remain at the facility until the employee is ready to return. All reports from the physician concerning treatment, diagnosis, return to work status and restrictions shall be brought back to the Project and a copy forwarded to OWNER's construction manager.

Contractor must conduct accident investigations for all serious accidents and OSHA recordable injuries. The accident report shall include root cause determination, corrective actions taken, and measures to prevent the incident from reoccurring.

## SITE SAFETY REQUIREMENTS

Rev. 5/5/15 (consolidated)

### Specific Emergency -DIAL 227

In the event that emergency assistance is required by ANY employee on the site, OWNER or Contractor, assistance should be summoned by DIALING 227 on any plant telephone. This call rings in the Control Room. Describe the LOCATION, NATURE OF THE EMERGENCY (fire, medical emergency, etc.) AND HELP REQUIRED to the control room operator who answers the call.

Be prepared to remain on the phone or have someone stay while you (or other personnel) remain at the emergency site. The operator will need to communicate additional information as requested by outside authorities. The evacuation alarm may or may not be sounded. Remain with the situation until help arrives and the situation stabilizes.

### Site Emergency

In the event of a site emergency, ALL personnel on site are expected to respond to this condition by doing the following:

- Stop and Secure work in a safe manner (complete lifts, tie down work etc.).
- Evacuate the work area and proceed to the assigned muster site.
- At the muster area - all personnel must be accounted for and reported to the event coordinator.
  
- Remain at the muster site until directed to return to work, proceed to the next area or leave the premises.
- OWNER Contractor Coordinator must verify with the contractor supervisor that all contract personnel have been accounted for.

Most contractors will muster at the GATE. A specific muster area will be assigned by the OWNER Contractor Coordinator at the start of the project.

### EQUIPMENT CLEARANCES I TAG OUT

No person shall work on any plant equipment or apparatus without first obtaining proper authorization from the Contractor Coordinator or designee.

All In-Plant Clearances on plant equipment shall be issued and removed by the Production Leader or Control Room Operator. Other personnel are NOT permitted to install, move, alter or remove clearance tags. Once equipment has been properly cleared, it is the responsibility of the Contractor Coordinator to "walk out" the clearance and to assure that the proper equipment has been isolated and cleared to allow work. The Contractor Supervisor is strongly encouraged (though not required) to accompany the Contractor Coordinator on this "walk-out". Following the visual verification of the clearance by the Contractor Coordinator (and) (the Contractor Supervisor), the Contractor Coordinator must sign as a clearance holder in the Clearance Book in the control room.

The granting of clearance by the Production Leader in charge means only that all switches or valves through which the equipment could become energized have been isolated and tagged with clearance tags.

**IT DOES NOT MEAN THAT THE EQUIPMENT HAS BEEN TESTED TO PROVE THAT IT IS DE-ENERGIZED, GROUNDED, DRAINED, COOLED, ETC., AND THEREFORE SAFE TO WORK ON. THIS VERIFICATION MUST BE MADE PRIOR TO THE START OF ANY WORK.**

Prior to the start of work, the Contractor Supervisor must complete the Contractor Clearance tag with the necessary information about his company, list himself as the contractor supervisor and on the back of the tag list the names (and date) of all contractor personnel that will be working under the clearance. This is done to extend the protection of the clearance to all contractor personnel.

## **Attachment 2**

# **Contractor General Requirements**

**FPL**



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## **1.0 INTRODUCTION**

### **1.1 INSTRUCTIONS TO CONTRACTOR**

This document pertains to Contractor's Requirements for work performed for THE OWNER. These are not the only requirements that apply but outline the general criteria for the project. All correspondence should be directed to the Project Manager and other individuals listed in the project communication plan.

### **1.2 PLANT LOCATION AND ACCESS**

Specific directions to the location of the project will be provided to Contractor in a separate document. The site has no known access restrictions unless specifically provided impacting the on time completion of this project. Contractor is obligated to provide and share any concerns as well as discuss specific logistical problems prior to and during the project.

### **1.3 WORK INCLUDED AS PART OF THIS PROJECT**

The scope boundaries for the work for this project are defined in other documents. If materials are provided by THE OWNER, a list of the material will be provided separately.

### **1.4 MATERIALS**

Materials not supplied by THE OWNER and required to complete the installation shall be furnished by Contractor except as specified. Contractor shall furnish all planning, environmental controls, documentation, construction labor, supervision, tools, equipment, consumables, and supplies required to perform the work from receiving and unloading materials to installing the material and assisting placing the equipment in operation.

Unless otherwise specified, all materials and equipment supplied by Contractor and permanently incorporated shall be new and unused.

### **1.5 DESIGN SERVICES**

If Design services are required they will be included within the Work scope provided.

### **1.6 CONTRACTOR RESPONSIBILITIES**

Contractor shall provide necessary qualified personnel to perform the work specified. Contractor shall assume responsibility for employees conduct while on THE OWNER'S property. Contractor shall not permit alcoholic beverages or illegal drugs on the project site. Likewise, no firearms or explosives may be brought onto the property.

All equipment operated by Contractor shall meet all federal, state and local standards. Contractor shall provide all required temporary office facilities, tool storage facilities, safety equipment, etc. needed for Contractor's portion of the project. Contractor shall furnish all tools, equipment and

lighting. All equipment brought to the jobsite shall be certified to OSHA regulations, and Contractor-furnished operators shall be certified and qualified to operate the equipment.

All installation shall be completed in accordance with equipment manufacturer's recommendations, applicable codes and standards, permit conditions, all referenced specifications. The Contractor shall submit for OWNER approval a Demolition, Construction and Installation Plan. All elements of the plan shall be based on and executed according to THE OWNER's approved Plan. If THE OWNER deems that the Plan is incomplete or otherwise unacceptable THE OWNER may at Contractor's expense require re-submittal of the document(s) prior to allowing Contractor's activities to proceed. No schedule extensions will be granted for failure to meet THE OWNER approval due to the requirements above being incomplete.

Prior to any site Work, including mobilization of equipment, delivery of materials, or installation of temporary facilities, Contractor shall take and submit pre-construction photographs showing the work site and all adjacent work areas. Photos shall be submitted in digital format to THE OWNER. Contractor shall implement active measures as necessary to control dust and pollution, including wet suppression, tarp coverings, cleaning of vehicles and tires, and diesel engine emissions controls.



## 2.0 LIST OF DELIVERABLES

The following items are described in this document and are to be submitted, if required, by Contractor to THE OWNER as part of this project.

- a) Contractor's organizational chart and resumes of key personnel
- b) Proof of Training and certification for Contractor's personnel
- c) Manufacturer's SDS for any chemicals to be brought onsite by Contractor
- d) Written reports for all NDE requirements including inspections, photographs, performance analysis, NDE completion, and Hydro testing
- e) Quality control plan, Quality Reports and Quality control plans with checklists
- f) List of proposed working hours and holidays Contractor observes during the duration of the project
- g) Project schedule, updated Monthly and as required, and weekly construction progress reports
- h) Meeting minutes
- i) List of action items identified at all daily progress meetings
- j) Certificate of insurance coverage
- k) Lifting and Rigging plans
- l) Testing and evaluation procedures.
- m) Environmental control plan.
- n) Waste management and disposal plan.
- o) Tailboard documentation. Company safety manual and job-specific safety plan
- p) Detailed implementation schedule including completion milestones.
- q) List of required clearances or lockout tagout control points for proper de-energization of equipment in proximity to work area.
- r) List of all personnel (including any subcontractor, if required,) who will be on site.
- s) Complete Installation Plan, including the following:
  - i. set of installation and approved for construction drawings
  - ii. procedures for testing
- t) Environmental Control Program (ECP)
- u) Risk assessment with mitigation plans and contingency plans for each potential risk. In particular Safety, including, but not limited to, work being performed at high elevations.
- v) Insurance certificates for THE OWNER and all subcontractors
- w) Welding certifications
- x) Copies of all permit documentation and approvals
- y) Pre-construction photographs

## 3.0 APPROVAL AND ACCEPTANCE

### 3.1 PERFORMANCE TESTING

The installed and/or modified equipment shall be tested after completion of the installation process ("Initial Performance Testing"), by THE OWNER with Contractor providing assistance as needed. The installed equipment must demonstrate its ability to operate under the conditions

specified and fulfill the guarantees required by the contract. If the Initial Performance Testing indicates that the installed and/or modified equipment fails to meet guaranteed performance specified herein, Contractor shall perform additional work and make modifications as needed. Further testing beyond the first officially declared test will be to the Contractor's account.

## 4.0 PERMITTING

THE OWNER shall obtain and pay for all state and federal regulatory permits, governmental fees, and licenses required to be in its name for execution of the work, unless otherwise noted. The Contractor shall prepare these for submittal. The Contractor shall provide continued reasonable assistance and documents to THE OWNER in connection with THE OWNER's efforts to obtain THE OWNER's Permits and approvals. Contractor shall comply with all applicable conditions of any permits required for the Work.

THE OWNER may retain the service of a 3<sup>rd</sup> party to aid in the permitting and licensing. THE OWNER may request that the 3<sup>rd</sup> party aid contact the Contractor on occasions to obtain information for setting up and/or communicating with the various agencies involved with this Project.

Contractor shall be responsible for obtaining and submitting all required all other construction and work permits and notices required to be issued in their name to complete the scope specified herein. Contractor shall handle all drawing submittals and the approval process required by the permitting authority, unless otherwise required by the governing or regulating body or requested by THE OWNER. Contractor shall be responsible to pay all permit fees, inspections, approvals, building department services, and Chief Building Official services required for completion of the Work not explicitly stated as supplied by THE OWNER. Copies of all submittals to permitting or regulating agencies shall be provided in duplicate to THE OWNER.

## 5.0 DOCUMENT SUBMITTALS

### 5.1 SCHEDULES

The requirements for schedule submittals shall include but not be limited to:

- 1) The Contractor shall provide an early work CPM schedule to THE OWNER with in 14 day of Contract Award. The early work schedule shall show planned work for the first 120 days of the contract.
- 2) For Field work The Contractor shall provide a baseline resource loaded CPM schedule for approval within 60 days of Contract Award. CPM schedule shall be on a jointly agreed Scheduling Software Program.
- 3) The Baseline CPM schedule shall be of sufficient detail to clearly show the intended sequencing of design and construction. The schedule shall reflect milestone completion dates, planned start and finish dates of each activity, relative relationships between

activities and the degree of criticality (float) of each activity with respect to the contract completion date.

- 4) No schedule construction shall exceed 5 days in duration nor shall design activities exceed 10 working days in duration. Schedule, procurement, off site manufacturing or approval/review time activities may exceed the 20 day duration. The schedule shall show procurement or approval/review time activities on all major submittals and long lead procurement items. Long lead-time items must be identified by name.
- 5) A Work Breakdown Structure shall be used to allow for easy roll-up of major work items. Key Milestones shall be shown on the schedule as milestone activities. Schedule activities that are susceptible to weather impacts shall include these weather contingencies in their schedule.
- 6) An update CPM schedule shall be provided to THE OWNER with the progress report each month. Any critical path activities that are falling behind shall be identified, explained and a recovery plan presented for bringing the Project back on schedule. THE OWNER may request specific schedule reports be provided that are available through the scheduling software program. Update schedules shall be provided in print form as well as the electronic format may be imported in to the scheduling software program.
- 7) The updated CPM schedule shall include a stand alone narrative explaining the updates to the schedule. They should explain at a minimum present status of the schedule compared to the baseline schedule, updates of any activities occurring since the last update including both duration and logic changes, any internal or external impacts to the schedule as well as any potential problem areas. If the current updated CPM schedule indicates actual or potential impacts to the schedule that could result in cost impact, identify causes of delay, disruption and provide explanation of work affected and possible corrective actions to mitigate impacts.
- 8) A two week look-ahead schedule shall be provided to THE OWNER at the end of each week for work planned for the next two weeks. The schedule shall show the planned activities for each day as well as the labor, material, equipment and subcontractor resources planned.
- 9) Contractor agrees, at no additional cost to THE OWNER, to take all steps necessary to meet the completion dates stated in the schedule. In the event Contractor falls behind the schedule at any time during the performance of this project, Contractor shall immediately and/or upon notification from THE OWNER, work overtime and/or add workers, and/or take other action as may be necessary to promptly bring the Project back on schedule to meet the dates.

## **5.2 SUBMITTALS**

### **5.2.1 Submittal Requirements**

All submittals, including documents, text, drawings, third party submittals, and invoices shall be submitted in both electronic and hardcopy formats to those listed in the distribution list in this section, as follows:

- 1) Unless noted otherwise, a minimum of three (3) copies [five (5) copies of permits]. All Drawing with in the scope shall be clearly marked with the Project title, THE OWNERS project drawing number (blocks of numbers will be supplied by THE OWNER), facility name, Consultant's name or manufacturer's name and specification or bill of material reference number. All drawings shall be produced and furnished in PDF format and in AutoCAD 2010 DWG format. Drawing size requirements shall be as follows:
  - A size – 8 ½" x 11"
  - B size – 11" x 17"
  - C size – 17" x 22"
  - D size – 24" x 36" (Preferred Drawing size) – half-size drawings will be utilized for field use.
- 2) Electronic Submittals for drawings, completed documents, manuals, and submittal packages shall be in Adobe PDF format. Drawings, with the final as-built package or as requested by THE OWNER, shall be submitted in AutoCAD format. Contract or document markups requiring comment or revision shall be submitted in the native format, such as Microsoft Word, Excel, etc. Draft documents shall be stamped "DRAFT" or "FOR REVIEW" and construction documents shall include the signature and seal of the licensed Professional Engineer if required. Submittals shall be compiled into the minimum practical number of files; one consolidated PDF file is usually preferred.
- 3) Hardcopy submittals shall be transmitted and presented into one consolidated package, preferably in a three ring binder with cover and side inserts.
- 4) All submittals are subject to inspection and potentially require approval. On occasion the contractor may be required to work directly with along with the OWNER to resolve issues pertaining to rules, regulations, criteria, guidelines and concerns. All submittals must be received early enough to allow for normal review and comment periods. Work may not begin until approval from is received.
- 5) The Contractor shall submit project calculations that have been completed at each milestone. All engineering calculations shall become the property of THE OWNER upon completion of the project. The Contractor shall submit finalized calculations to THE OWNER bound in a three ring binder with a table of Contents listing calculations for each portion of the project as well as an electronic version in PDF format of the same.

### **5.2.2 Pre-Construction Submittals**

Contractor shall submit the following prior to construction; however, the following is not an all inclusive list of requirements stated throughout this specification. Contractor is responsible for responding to all issues presented throughout this Document.

- 1) List and schedule of anticipated submittals.
- 2) Approval for substitution of specified equipment or material (if different than submitted in Engineering and Design Package)

- 3) Construction Plan and Specifications including dam safety with red flag criteria. It is anticipated that these will come in construction work packages to allow for efficient construction progress. (Record drawings should combine all of these work packages.)
- 4) All drawings and technical information required to support permit efforts.
- 5) Left blank intentionally
- 6) Technical data/cut sheets for all equipment procured by the Contractor.
- 7) The contractor shall plan on a reasonable amount of time for the regulatory approval process once the OWNER has received the required drawings and technical information from the contractor to support the Permitting process.
- 8) Submittals may include but not be limited to:
  - Laydown Plans and calculations are required to be submitted to THE OWNER for approval a minimum of 60 days prior to the start of construction.
  - Construction Plans and Specifications are required to be submitted to THE OWNER for approval a minimum of 60 days prior to the start of construction.
  - A Temporary Construction Emergency Action Plan (TCEAP) is required and shall be prepared by the Contractor and approved by THE OWNER prior to mobilizing to the Site. The Contractor and all personnel who will be onsite, including Subcontractors, shall be responsible to read and understand this plan. The Contractor shall post the plan in a visible location on the Job Site. The TCEAP must be submitted a minimum of 30 days prior to the start of construction.
  - A Temporary Construction Surveillance and Monitoring Plan (TCSMP) is required by and shall be prepared by the Contractor and approved by THE OWNER prior to mobilizing to the Site. The Contractor's Superintendent and all other employees who will serve in responsible charge at the Site shall read and understand the TCSMP. The Contractor shall post the plan in a visible location on the Job Site. The TCSMP must be submitted a minimum of 40 days prior to the start of construction.
  - An Erosion Control and Sedimentation Plan (ESC) is required and shall be prepared by the Contractor and approved by THE OWNER prior to mobilizing to the Site. The Contractor's Superintendent and all other employees who will serve in responsible charge at the Site shall read and understand the ESC. The Contractor shall post the plan in a visible location on the Job Site. The ESC must be submitted a minimum of 30 days prior to the start of construction.

### **5.2.3 Closeout Submittals**

Contractor shall submit the following; however, the following is not an all inclusive list.

- 1) The Contractor shall submit a complete set of Record Drawings, Record Specifications, and Record Product Data. The drawings shall be submitted in hardcopy and electronic format (AutoCAD files for Contractor generated drawings and tiff images for vendor drawings). Record Drawings shall combine any work packages into one complete and concise set of drawings for each site.

- 2) The Contractor shall submit a complete set of finalized calculations to THE OWNER bound in a three ring binder with a table of Contents listing calculations for each portion of the project as well as an electronic version in PDF format of the same. Each site shall have its own set of finalized calculations

#### **5.2.4 Submittal Distribution**

Contractor shall distribute submittals as follows:

- 1) Electronic Submittals: One electronic submittal package shall be sent to each of THE OWNER's Company Representatives by email or Compact Disc transmittal.
- 2) Hardcopy Submittals: One hard copy of each submittal package shall be sent to THE OWNER's Construction Manager and THE OWNER's Project Manager. Contractor shall notify intended recipients by e-mail or phone upon transmittal of the submittal package.
- 3) Third Party Submittals: The required copies of any submittal intended for a third-party (i.e., permit applications, etc.) shall be submitted through THE OWNER's Project Manager for review prior to THE OWNER'S of submittal to the third party.

#### **5.2.5 Review Process**

Upon receipt from Contractor, THE OWNER will review submittals for conformity. THE OWNER's review does not indicate a thorough review of all details, dimensions, quantities, materials, devices and does not relieve Contractor of the responsibilities and requirements under the contract, scope of work, specifications, and all applicable codes, standards, and regulations. THE OWNER shall have 10 business days for initial submittal reviews and 5 business days for re-submittals. Additional time shall be allowed if processing is delayed due to permit coordination or third party approvals.

Documents submitted to assist with the LURC permitting process may take up to 90 days for approval. This review time shall be considered in the construction schedule.

No extension of deadlines will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing. No extension of deadlines will be authorized as a result of Contractor's failure to provide all required deliverables in proper format.

### **5.3 JOB BOOK**

Contractor shall provide a complete Job Book, integrating all project documentation into one document, including, but not limited to, the following:

- 1) As-built drawings (Including P&IDs, isometrics, process flow diagrams, control logic diagrams, one line drawings, structural drawings, etc.)
- 2) Design and engineering data, including structural calculations and certifications

- 3) Product and material specifications
- 4) Inspection and test data and reports
- 5) QA/QC documentation, including alignment and calibration records
- 6) Waste disposal documentation

## **5.4 PROGRESS REPORTS**

Weekly Progress reports shall be submitted to THE OWNER's Project Manager and Construction Manager on a mutually agreeable day. The progress report shall include, at a minimum, an assessment of current progress, labor resources and equipment levels for each day worked, identification of issues that have impacted or may impact cost or schedule, and an updated 2 week look-ahead construction schedule. Weekly progress reports shall include photographs from several different vantage points to document progress, as well as highlight any issues. Progress reports shall include an accident and safety report.

Monthly Progress reports shall be submitted to THE OWNER's Project Manager and Construction Manager a week prior to the end of each month. Report should include a written narrative of activities worked on the project during the month, construction photos showing construction activities, updated schedule, updated cash flow, cost accruals, updated submittal, correspondence and RFI logs, look ahead activities for the month and a narrative of any unresolved problems related to the project. Report shall be submitted in written and electronic form. Progress reports shall include an accident and safety report.

## **6.0 MANAGEMENT**

### **6.1 CONTRACTOR'S FIELD ORGANIZATION AND MANAGEMENT**

Contractor shall submit an organizational chart showing the names of field management, supervisory, and key technical personnel, and the details of the management, supervisory, and technical organization that he proposes to use for this project. The detailed experience record of Contractor's Lead Personnel shall also be submitted.

Contractor's organizational chart and resumes of the personnel identified on the chart will be subject to the review of THE OWNER. All key personnel identified on the organizational chart are subject to interview prior to beginning work on the project. If needed, interviews will be conducted at a location selected by THE OWNER. During the life of the project, replacement personnel will also be subject to review by THE OWNER.

Contractor shall provide a competent, suitably qualified, Project Lead who will perform up-front planning and site specific data gathering. Contractor shall keep a knowledgeable authorized representative available on the jobsite at all times who shall be authorized to act upon notices, directions, oversee and manage construction/repair activities as well as coordinating with simultaneous construction/maintenance activities in proximity to work area and instructions given by THE OWNER or THE OWNER Representatives.

The Project Lead shall be on site during the mobilization and until the project is completed during the first shift and shall be THE OWNER contact for all installation related matters.

If multiple shifts are utilized, Contractor's Project Lead shall work a schedule that will enable him to review job progress on the preceding shift and coordinate the work plan for the following shift.

Contractor shall at all times maintain good discipline and order at site. Incompetent or incorrigible employees shall be dismissed from the project by Contractor, or its representative when requested by THE OWNER, and such persons shall not be permitted to return to work without written consent of THE OWNER.

Contractor shall assign a competent, suitably qualified, Project Safety Coordinator who will ensure that that all work is conducted in a safe manner. Contractor's Project Safety Coordinator shall work full time on Site during all phases of the erection and installation of the project and during any other work by Contractor considered part of this Project.

Contractor, all Subcontractor, agents and employees shall in no way delay or alter the Project at the jobsite on account of other work being furnished or performed, or not furnished or performed.

## **6.2 CONSTRUCTION COORDINATION AT THE SITE**

Contractor should include adequate time for their key personnel to attend regular meetings with THE OWNER. After the start of construction at the Site, Contractor and all principal Subcontractors shall attend scheduled meetings with THE OWNER, and other Contractor. At the project meetings, Contractor shall submit a list of work to be accomplished.

Contractor shall have its craftsmen and supervision at the Site cooperate with personnel under the control of other contractors. When a Contractor is required to place, install, or connect up material or equipment furnished by others, Contractor shall notify necessary parties in advance in writing and notify them when such equipment or material will be needed and when the work will be taking place.

Contractor shall obtain prior written authorization from THE OWNER prior to any changing or modifying of work of others.

Contractor's Lead shall communicate any anomaly encountered during execution of the scope of work to THE OWNER. If the discovered anomaly appears to be a safety hazard or to compromise the structural integrity of the scope of work all efforts shall cease until the condition has been evaluated by THE OWNER and subsequently released to Contractor for re-commencement.

### **6.2.1 *Work Shifts and Holidays***

Contractor shall abide by the following work shift and holiday requirements:



- 1) Preferred On-Site Work Hours: Work shall be generally performed during normal working hours of 7:30 a.m. to 4:30 p.m., Eight hours per work day, Monday through Friday. Deviation from the preferred on site work hours shall require written approval of THE OWNERS Representative.
- 2) Workers shall not arrive on site more than one half hour prior to the beginning of work shift and shall leave the site within a half hour of completing the work shift.
- 3) Contractor shall provide a schedule of observed holidays that fall within the duration of this Project and one month beyond.
- 4) If it is envisioned that modifying these work hour restrictions could result in savings or schedule improvement alternate proposals to perform the work shall be offered.

### **6.2.2 Force Reports**

Contractor shall include sufficient time and resources to prepare a detailed daily Force Report covering all craft labor and supervision for Contractor and each of its Subcontractors. This report will give a general description of the work accomplished by each craft during the day and show the overtime man-hours and shift work used. The Report shall be submitted to THE OWNER's Coordinator or his designee not later than 10 am of each working day.

### **6.2.3 Access to Site**

The site has the following known restrictions:

- 1) Not used
- 2) Contractor is responsible for all road plowing(Snow) for the project needs, while contractor is on site. If there has been any recorded damage at completion of the project, Contractor shall restore road to the conditions similarly found. Also the contractor shall provide plant approved de-icing methods for winter months.

### **6.2.4 Coordination with Land and Property Owners**

Contractor shall note, and coordinate with adjacent land and property owners if required:

- 1) Allowances for land owner's traffic
- 2) Any access restrictions need to be published and posted in advance.

### **6.2.5 Contractor Laydown and ground clearing requirements**

- 1) Locations to be determined
- 2) Any Laydown and storage areas are subject to the following requirements:
  - i) Adherence to a provided plan or submittal of an Erosion and Sediment Control Plan will need to be submitted and approved for all disturbed areas.

- ii) Any clearing and grubbing will require pre-approval by Owner's and any appropriate agencies. Prior to undertaking any clearing activities, the contractor will walk the perimeter of the area with the Owner to determine the cutting limits.
- iii) Any areas require replanting will be stripped and stockpiled and replaced after completion of the project.
  
- iv) At the Completion of the project the Area will be replanted with approved seed mix.
- v) There will be no overnight camping in the project areas provided.

## 7.0 MEETINGS

Contractor shall include sufficient time and resources to comply with required meetings.

Contractor shall hold Project Coordination Meetings with THE OWNER's Representative on a weekly basis or as mutually agreed upon frequency based on project activity. The agenda topics for each meeting will include items such as reviewing previous action items, reviewing work in progress, safety and quality issues, discussing field observations, problems, and decisions, identifying problems which impede planned progress, reviewing schedule status, identifying corrective measures to regain projected schedules, identifying planned progress during succeeding work period, discussing coordination of projected progress, discussing work quality and standards, discussing the effect of proposed changes on the progress schedule and coordinating and discussing other business relating to the Project.

Contractor shall record a list of action items and distribute copies after each meeting to THE OWNER, participants, and those affected by decisions made. Contractor shall prepare and distribute Agenda prior to each meeting and record and distribute minutes of each meeting within two business days following each meeting.

### *1.1.1. Preconstruction Meeting*

THE OWNER will schedule a meeting after the Notice of Award that pertains to this project. Meeting attendees will include THE OWNER, and Contractor's representatives. Agenda items will be determined prior to the meeting but will include listing approved subcontractor, scheduling, contact information, procedures and processing of site access, security requirements, field decisions, material receiving, submittals, substitutions, applications for payments, procedures for Change Orders, and Contract closeout procedures.

Contractor shall record minutes and distribute copies within two (2) days after the meeting to all participants, with copies to those affected by any decisions made.

### ***1.1.2. Site Mobilization Meeting***

THE OWNER will schedule a meeting at the Project site prior to Contractor's occupancy. Meeting attendees will include THE OWNER, Contractor, Contractor's Project Superintendent, and Major Subcontractor.

Agenda items will include items such as the use of premises by Contractor, clearance procedures, safety procedures, construction facilities, the temporary utilities provided, Contractor's designated lay down areas, security and housekeeping procedures, schedules, invoicing and other accounting procedures, procedures for testing, procedures for maintaining record documents, requirements for start-up of equipment, and the inspection of work.

Contractor shall record minutes and distribute copies within two (2) days after the meeting to participants, with copies to THE OWNER, and those affected by decisions made.

### ***1.1.3. Site Environmental Meeting***

THE OWNER will schedule a meeting at the Project site prior to Contractor's occupancy. Meeting attendees will include THE OWNER, Contractor, Contractor's Project Superintendent, and Major Subcontractor.

Agenda items will include site safety and environment procedures. Issues requiring coordination with state agencies and procedures for maintaining required documentation.

Contractor shall record minutes and distribute copies within two (2) days after the meeting to participants, with copies to THE OWNER, and those affected by decisions made.

## **2. QUALITY**

THE OWNER will provide a number of representatives, to support the manufacturing and/or construction Quality Assurance interface and progress and assure code and regulatory adherence in co-operation with the Contractor's Quality Control Manager.

The Contractor shall develop, implement, and maintain a written Contractor's Quality Control Program (CQCP) acceptable to THE OWNER for the work. The Contractor's Quality Control Manager shall be approved by OWNER. Specific criteria, such as tests types and frequencies, associated with the CQCP are not defined in these Specifications but shall be provided by the Contractor in its CQCP and approved by THE OWNER. Duplicate copies of all Quality Control reports shall be provided to THE OWNER's Quality Assurance Representative.

### **2.1. STANDARDS FOR QUALITY WORKMANSHIP PRACTICES**

Contractor shall ensure that all elements of the scope of work, including, but not limited to, materials, equipment, construction methods, environmental practices, safety practices, and testing methods and standards, shall comply with all applicable codes and standards, whether or not specifically referenced. A partial list of codes and standards includes, but is not limited to the

following:

AASHTO	American Association of State Highways Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AGA	American Gas Association
AMCA	American National Standards Institute
ANSI	American National Standards Institute
API	American Petroleum Institute
AREA	American Railway Engineering Association
ASCE	American Society of Civil Engineers (ASCE 7-98)
ASME/ANSI STS-1	Steel Stacks
ASHRAE	American Society of Heating, Refrigeration & Air Conditioning
ASME	American Society of Mechanical Engineers, Section I, II, V, VII, VIII, IX
ASNT	American Society of Nondestructive Testing
ASTM	American Society of Testing and Materials
ASQC	American Society of Quality Control
AWS	American Welding Society
AWWA	American Water Works Association
BOCA	BOCA National Building Cod, 1999 (NBC)
CFR	Code of Federal Regulation
CRSI	Concrete Reinforcing Steel Institute
EPA	Environmental Protection Agency
	Federal Energy Regulatory Commission
FM	Factory Mutual
HI	Hydraulic Institute
IEEE	Institute of Electrical and Electronic Engineers
ISA	Instrument Society of America
ISO	Instrument Organization of Standardization
NACE	National Association of Corrosion Engineers
MSS	Manufacturers Standardization Society of Valves and Fittings
NBS	National Bureau of Standards
NEC	National Electrical Code
NECA	National Electrical Contractor Association
NESC	National Electrical Contractor Association
NESC	National Electrical Safety Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Agency
NIST	National Institute of Standards and Technology
OSHA	Occupational Safety and Health Administration
PFI	Pipe Fabrication Institute
SSPC	The Society for Protective Coatings
UL	Underwriter's Laboratories, Inc
(IBC)	*International Building Code

\* Note: Local building code or jurisdictional regulatory body is inclusive within this list of codes and standards.

Invocation by title, name and/or number of specific codes, standards or regulations in this specification, shall in no way diminish the Contractor's responsibility for compliance with any and all codes, standards or regulations with are generally recognized to be applicable to the Work specified herein.

## **2.2. NON-DESTRUCTIVE EVALUATION (NDE)**

Contractor shall provide all Non-Destructive Evaluation or Non-Destructive Examination (NDE), if required. This includes radiography, magnetic particle, dye penetrant, or ultrasonic testing, visual inspections, hardness, etc.

Contractor shall provide written reports that include the following:

- 1) Description of inspections performed on all equipment involved, including problems encountered, corrections, and parts utilized.
- 2) Photographic record of all problems encountered (cracks, erosion, galling, bulges, corrosion, etc.).
- 3) Complete NDE report indicating that 100% NDE was completed on all welds.
- 4) Complete report indicating that sponges were blown through all tubing.
- 5) Complete report indicating Post-Hydro NDE was performed (if required).
- 6) Results of all other testing and NDE functions in accordance with the quality plan.

## **2.3. QUALITY REPORTS**

Contractor shall include sufficient time and resources to prepare Quality Documentation specific to the project. The Reports shall be submitted to THE OWNER's Quality Assurance Representative or his designee daily or as determined reasonable by the Quality Assurance Representative based on QC requirements.

Contractor will provide access to the all quality records specifically applying to this project.

## **2.4. QA/QC MANUALS**

QA/QC manuals shall contain at a minimum details regarding general and all special process procedures (e.g., welding, NDE, welder qualifications, and test procedures, etc.) required by codes and standards, all Specifications, and all factory test data and certificates applying to the project. Contractor shall provide all test reports, QA/QC documentation and inspection reports to THE OWNER no more than five (5) days following test/inspection. The exception to this shall be any change order which shall be provided to THE OWNER facilitating restoration of newly discovered areas. All documentation shall be collected and appropriately arranged in the job book.

## **2.5. INSPECTIONS AND TEST POINTS**

Contractor shall provide to THE OWNER a list of witness points, test points, and QA/QC hold points throughout the complete fabrication, installation, and commissioning process. THE OWNER shall have the right to witness any field tests, shop tests, hold points, or witness points at its option. For any witness points, test points, or QA/QC hold points not included in the Design and Engineering Package, Contractor shall notify THE OWNER in writing upon planning the event, with no less than ten business days advance notice to THE OWNER.

Contractor shall perform all tests, checks, and inspections required by this specification or referenced documents and all applicable regulations, codes, or standards. All costs of third party inspections shall be borne by Contractor, except where otherwise explicitly stated. Contractor shall obtain THE OWNER's approval of a third party testing/inspection firm or agency prior to contracting or testing. Test procedures, submitted with the Installation Plan shall include, at a minimum, the following: Nature and scope of test, equipment to be used (supply calibration records), qualifications of personnel who will perform the test, and a detailed procedure. All checks shall be completed and documented with deficiencies immediately rectified prior to retesting.

THE OWNER shall have the right to inspect all equipment and materials before, during and after delivery/prior to use and/or installation. Inspectors shall be allowed free and ready access to Contractor's work area, shops and the shops of its contractor, at all reasonable times, for the purpose of inspecting the equipment or material, or any of its parts and to obtain information as to the progress of the work. Failure on the part of THE OWNER to discover or reject materials or work not in accordance with the specified requirements shall not be deemed an acceptance thereof nor a waiver of defects therein.

## **3. GENERAL**

### **3.1. LIFTING AND RIGGING**

All rigging and related equipment shall be inspected prior to use. Sufficient load capabilities for all rigging and equipment shall be considered and discussed in depth at the planning meeting to ensure adequate equipment is used to lift and transport loads.

Contractor shall provide a written Rigging and Lifting Plan meeting the quality requirements of the Specification.

Contractor shall provide a written Rigging and Lifting Plan for all complex, transfer of load lifts (handshake) or lifts above 78% of rated crane capability. The plan must comply with all safety requirements and safety standards. The plan will be reviewed by THE OWNER prior to the lift.

### **3.2. MANUFACTURER'S TECHNICAL SERVICES**

The OEM service representatives is required to be present during initial operation of the equipment, certain commissioning and interface activities with the plant, during plant startup, and

testing, and shall instruct the operating personnel in the proper operation of the equipment. During this time the Contractor may be required to provide supporting craft to assist in the commissioning process.

### **3.3. ELECTRICAL POWER**

All Electrical Power to be provided by the Contractor. Unless agreed otherwise.

### **3.4. COMPRESSED AIR**

All Compressed Air shall be provided by the Contractor. Unless agreed otherwise.

### **3.5. STORAGE AND LAY DOWN AREAS**

THE OWNER will designate or approve all storage and lay down areas which will not interfere with the general operations of the plant. Contractor shall notify THE OWNER representative in writing ten (10) business days in advance of the arrival of equipment or materials on site.

Contractor shall be responsible for all aspects of receiving, storage and security of materials supplied to or by him for this project. Contractor shall be required to unload material in the designated lay down and storage areas. Contractor shall be responsible for developing and maintaining an inventory list of material received. All equipment and materials shall be packaged or protected against damage during and after transit and during the storage period on site.

Contractor shall be responsible for moving material supplied for the project from the designated storeroom or the lay down areas to the jobsite, and returning unused THE OWNER material back to the storeroom along with an inventory list.

### **3.6. LIGHTING**

Contractor shall provide any additional or special lighting required for his part of the project.

### **3.7. SPARE PARTS**

Contractor is responsible for ensuring the spares are properly stored, and if used, are replaced prior to the end of the project.

### **3.8. LOGISTICS AND TEMPORARY FACILITIES**

Contractor shall provide and arrange for all required construction logistics and temporary facilities, including but not limited to the following:

- 1) Trailers
- 2) Communication facilities, including phone, fax, data lines, and radios. Cell phones are not permitted with craft.
- 3) Sanitary facilities, including toilets wash facilities, and drinking water (Inclusive of OWNER).

- 4) Trucks, personnel transport, forklifts, equipment, etc.
- 5) Waste disposal facilities(Inclusive of OWNER).
- 6) Scaffolding
- 7) All tools and special equipment
- 8) Water and Cleaning service and distribution(Inclusive of OWNER).
- 9) Lighting
- 10) Fencing
- 11) Electric power and distribution (Comply with ANSI A10.6, NFPA 241, and NECA's "Temporary Electrical Facilities")
- 12) Signage
- 13) Equipment and personnel security and protection
- 14) N/A
- 15) To the greatest extent possible all construction equipment utilized on site shall use biodegradable and environmentally friendly oils and fluids.
- 16) Construct and maintain temporary roads adequate for construction operations.
- 17) Provide dust-control treatment, reapply treatment as required to minimize dust.
- 18) Construct, remove and restore all parking areas, plant locations and laydown area required to perform the work.
- 19) Laydown shall be limited to that shown on the drawings.

It is contractor's sole responsibility to ensure that all temporary facilities are provided, operated and maintained, and disposed of in accordance with all laws and regulations. Contractor shall provide and operate all temporary facilities in a manner that eliminates health risks, unsightly appearances, and offensive odors. All hoses, cable, equip. etc. shall be run/located as to not cause a tripping and or access hazard, either overhead or laid/placed/positioned neatly out of walkways and access areas.

Support facilities shall be maintained until they are no longer required, at which time they shall be removed completely by contractor. Contractor shall return all areas affected by temporary facilities to the condition prior to occupation. Contractor shall be responsible for all associated costs.

#### **4. USE OF PREMISES**

Contractor shall adhere to the following use of premises requirements:

- 1) Owner building access and utilization must be maintained by Contractor.
- 2) All Contractor employees are required to leave Owner property after work hours.



- 3) Site utilization by the Contractor must not restrict Owner access. Staging, work platforms, and barricades, for example, must not restrict access to operation of the Facility.
- 4) Contractor shall erect and maintain barricades, staging, work platforms and temporary handrails to confine their efforts to the immediate work area and to protect all personnel and Owner's equipment from any and all hazards created or incidental to this work.
- 5) The Contractor shall notify THE OWNER's Project Manager 24 hours in advance of any irregular work hour plans. The station operator shall be notified immediately prior to the Contractor entering the work areas and at the conclusion of all work activity daily.
- 6) The Contractor is responsible to report to THE OWNER and to repair any damage that they cause. All damage shall be repaired immediately in kind. The Contractor is responsible for maintaining the integrity of any items warranted to THE OWNER by others.
- 7) All material, equipment and tools left on site during non-working hours shall be secured. Loss or damage to such equipment will be the Contractor's responsibility.
- 8) The Contractor will be responsible for all water control and dewatering associated with their scope of work.
- 9) If during construction piezometers are damaged, as determined by THE OWNER, the Contractor will, at their costs, be required to replacement the piezometer(s) using the same well construction.

## 5. OTHER REQUIREMENTS

Contractor shall adhere to the following other requirements:

- 1) THE OWNER reserves the right to deny use of certain individuals.
- 2) All dimensions shall be field verified by the Contractor prior to start of work activities.
- 3) The Contractor shall be responsible verify all underground utilities prior to making any excavations. Contractor shall conduct drawing research as well as field investigations of utility system to verify utility locations.
- 4) The Contractor's work shall result in finished, complete, and operable systems and equipment, ready for use. Any defects, deficiencies, or inconsistencies affecting the scope of work shall be brought to the attention of the THE OWNER's Project Manager for rectification.
- 5) Failure by the Contractor to comply with the design requirements and specifications will be sufficient reason for affected areas. No exceptions or deviations from the specifications shall be made without prior approval in writing from THE OWNER.

## 6. GENERAL

The Contractor is required to make themselves aware of the particular nuances of the particulate site such as water runoff, and wind. The Contractor shall conform to the following important requirements:

- 1) The Contractor shall exercise care in order to prevent damaging the existing structures, including erosion protection, embankment, buried piping, or any other features.
- 2) The Contractor shall monitor the weather and adjust schedule to minimize impact.
- 3) Dewatering of any type including, well points, open ditch, or pump operation dewatering is not allowable unless included specifically in the permit(s).

Active dewatering requires constant monitoring (24 hours/7 days a week if necessary).

## 7. COMMISSIONING

Contractor shall create project-specific construction checklists to commission and test each piece of equipment on the project. They shall make any necessary adjustments to bring equipment within specified limits.

Contractor shall provide adequate training on all equipment. Training shall be scheduled as portions of the project are turned over to THE OWNER.

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**PURPOSE:**

To highlight some pertinent safety requirements and other plant specific requirements for Contractor personnel and Subcontractors while on FPL property. These Contractor Requirements are not intended to supersede or replace specific requirements contained in Contract/Purchase Order, or any other applicable health and safety law. Contractor shall comply with all applicable laws pertaining to the health and safety of persons or property and protect them from injury, damage or loss.

**DEFINITIONS:**

**When used in these Contractor Requirements with initial or complete capitalization, whether in singular or in plural, the following terms have the following defined meanings:**

- 1) Florida Power and Light hereinafter referred to as “FPL”
- 2) Company Representative: The individual within FPL having responsibility and authority for administration of the Contract on behalf of FPL.
- 3) Contractor shall be defined as a Supplier.
- 4) Contract Coordinator shall be defined as a Company Representative.
- 5) Supplier is the individual or organization responsible for performing the Work identified in the Contract.
- 6) Jobsite is the location(s) where the Work shall be performed as specified in the Contract.
- 7) The definitions of “Contract” and “Work” can be found in FPL Contract’s terms and conditions.

**REQUIREMENTS:**

1) General Information

The Contract Coordinator responsible for the oversight of the Work by the Contractor shall ensure the following guidelines are read and understood by Contractor’s personnel and Subcontractors. The “Contractor Requirements Acknowledgement Sheet” on the last page of this document must be completed and provided to the Contract Coordinator for placement into the contract file. The Contractor is responsible for ensuring that Contractor’s personnel and Subcontractors comply with this guideline, and all applicable safety and health laws. This guideline applies to all Contractors who perform Work on the Jobsite.

FPL may require Contractor to remove from the Jobsite its personnel or Subcontractors who fail to adhere to these Contractor Requirements.

2) Safety

Safety is of the utmost importance on all jobs. It is the responsibility of the Contractor to ensure that all applicable OSHA rules are complied with and that each job be continually reviewed for possible OSHA violations. Any other applicable health and safety related law shall be similarly handled.

3) Safety Program

Contractor shall have and maintain an active safety program that instills and emphasizes the importance of working in a manner that ensures the safety of employees and others.

4) Site Safety Supervisor

Each FPL Contractor and Subcontractor shall have a designated Site Safety Supervisor who will be responsible for enforcing all site and general safety rules and procedures. The prime Contractor shall be responsible for enforcing safety rules and procedures for their subcontractors.

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5) Project Safety Plan

The Contractor shall provide a Project Safety Plan to the Contract Coordinator.

6) Safety Information Posting

Before beginning Work on Jobsite, the Contractor shall have the following information posted at an accessible location on Jobsite:

- a) Name, address, phone, and directions to Contractor designated workman's compensation medical provider (doctor).
- b) Name, address, phone, and directions to the nearest hospital.
- c) Name, phone number, and after-hours contact information for the designated Site Safety Supervisor.
- d) All OSHA-required forms and paperwork (posted as required by OSHA).
- e) Safety performance indicators to monitor the effectiveness of Contractor and its Subcontractors' safety programs.

7) Initial Safety Meeting

The Contractor and Subcontractor Site Safety Supervisors shall attend an initial (start-up) safety and environmental meeting with the Contract Coordinator or designee at the beginning of each construction job or major phase of a phased construction job.

8) Weekly Meetings

The Contractor Site Safety Supervisor shall conduct one formal safety and environmental meeting for all Contractor and Subcontractor's employees at the outset of the project and weekly thereafter (approximately every 5 to 7 working days). Minutes of these meetings, list of attendees, and subject matter discussed shall be provided to Contract Coordinator, upon request.

9) Daily Tailboard Meetings

Safety tailgate meetings shall be conducted by each Contractor team leader or supervisor at the start of each day, focusing on the potential safety and environmental hazards of the day's tasks. Tailgate meetings shall be documented and made available to the Contract Coordinator, upon request.

10) First Aid

Visitors and Contractor's personnel are hereby notified that a first aid facility is not maintained at the site. Contractors shall provide their own first aid kits.

11) Watches and Jewelry

Personnel shall not wear rings, wrist watches, exposed key chains, watch chains, or any other jewelry while working on or near energized lines, moving machinery, or where it constitutes a hazard.

12) Reporting Injuries and Environmental Events

The Contractor Site Safety Supervisor or designee shall inform the Contract Coordinator immediately (within 2 hours of occurrence) of all injuries requiring first aid, a doctor's visit, a hospital visit, or are otherwise OSHA-recordable and any environmental event (see #18a. below). All near misses and minor injuries shall be reported to the Contract Coordinator in writing within two (2) working days of occurrence. All injuries shall be reported to the Contract Coordinator.

13) Stop Work Order

All independent Contractors working for FPL shall comply with all federal, state and local safety regulations. The Contract Coordinator in charge of Contractor's Work may order work stopped immediately if the work is not being carried out in accordance with these instructions.

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14) Accident Investigations & Reports

Accident investigations must be conducted for all major accidents, OSHA-recordable injuries, and environmental events (see #18 below). The accident report shall include root cause, corrective actions taken and preventative measures identified and implemented to prevent the incident from reoccurring. Accident investigation reports will be provided to FPL Contract Coordinator. FPL reserves the right to participate in all accident investigations and request Fitness for Duty testing should FPL deems it necessary.

15) Posting

The FPL Contractor Requirements (this document) must be posted in an area accessible to Contractor's and Subcontractor's employees, or distributed to Contractor's and Subcontractor's employees. Contractors and Subcontractors are required to adhere to these safety and environmental rules and practices, as well as all applicable federal, state, and local regulations.

16) Personal Protection Equipment

The Contractor and Subcontractors are required to furnish protective equipment for their employees. All Contractors and Subcontractors are to be properly equipped to enter work areas. Personal protective devices will be intact and functional while on the job. Any defective safety equipment must be destroyed or removed from Jobsite. Personal protective devices include but are not limited to the following:

- a) Hard hats (required)
- b) Safety glasses or goggles (required and in accordance with the attached Eye and Face Protection Policy)
- c) Leather safety shoes or boots (required and in accordance with the attached Footwear Policy)
- d) Gloves (where required)
- e) Hearing protection (where required)
- f) Respiratory protection (where required)
- g) Fall protection (where required)
- h) Hand protection (where required)

17) Hazard Communications

The Contract Coordinator shall review Hazard Communications with Contractor prior to starting Work. At this meeting the Contract Coordinator shall identify hazardous substances which may be present in the work place and provide Contractor access to Safety Data Sheets (SDS) for those substances. Contractor shall convey this information to Contractor's personnel and Subcontractors. Likewise, the Contractor shall inform the Contract Coordinator of all hazardous materials which Contractor or Subcontractor brings onto FPL property, and supply SDSs for those materials. No hazardous material shall be brought on site unless required in the performance of the Work. No hazardous material shall be brought on site without prior approval by the Contract Coordinator.

Hazardous materials containers shall be labeled to clearly identify the content of the container. If materials are transferred from the original container to another container, both containers shall be clearly labeled. No hazardous material brought onto the site shall be disposed of without the prior approval of the Contract Coordinator. Unused hazardous materials are to be removed by the Contractor and not remain on site.

18) Environmental

- a) Contractors shall immediately notify the Contract Coordinator of any spill of oil or hazardous materials, regardless of the amount.
- b) Contractor must inform the Contract Coordinator in writing prior to onsite Work initiation of the type and estimated amount of any chemicals to be brought on-site to complete the Work. Contractor shall further notify the Contract Coordinator in writing during the course of construction, if any additional chemicals are to be brought on site.
- c) The Contractor will provide and maintain an environmental control plan. The plan will address the management of the environmental concerns outlined in this document, but are not limited to waste handling and disposal, spills, chemicals and records of all regulatory required training. The Contractor should be aware that FPL has the right to inspect the Contractor's performance and remove from Jobsite any Contractor's or Subcontractor's employee failing to fulfill guidelines.
- d) Prior to starting Work a meeting will be held in which information regarding FPL environmental policies and

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procedures, the identification of potential environmental risks and the possibility of generating chemical and/or hazardous materials at the Jobsite will be discussed.

- e) During discussions of work scope the Contractor will disclose any activities with the potential to cause the release of hazardous materials or process water into the environment.
- f) Oil impacted absorbents including gravel, dirt, rags or material contaminated with petroleum based materials are to be collected in FPL designated Jobsite satellite accumulation drums or other FPL designated container located in secondary containment. Contractor will not dispose of rags or any other materials contaminated with petroleum in any regular trash receptacle.
- g) Used oil is to be collected in an FPL approved Used Oil Drum or other FPL designated Used Oil storage tank or container.
- h) Empty aerosol cans will be disposed of in designated FPL containers.
- i) Waste management, including determination of the type of waste, quantity, and appropriate storage prior to off-site disposal, must be coordinated with the Contract Coordinator. No hazardous materials are to be placed in trashcans.
- j) Contractor shall provide the Contract Coordinator with its waste minimization plan. Plans often include product substitution, process changes to eliminate or reduce chemical use, and/or recycling or reusing materials;
- k) Any analyses performed to classify wastes must be coordinated with the FPL Contract Coordinator.
- l) Hazardous materials used and hazardous waste generated, including potentially hazardous waste, must be stored so as to minimize the potential for releases to the environment. Secondary containment or storage inside a building is required.
- m) All wastes must be stored and disposed in designated hazardous and non-hazardous containers.
- n) All original manifests, shipping papers, certificates of disposal, or other documents associated with waste transport and disposal must be provided to the Contract Coordinator. Waste manifests/shipping papers must be signed by the Contract Coordinator or designee.
- o) Disposal of hazardous wastes will remain the responsibility of FPL. Non-hazardous, including Special Wastes should be disposed by the Contractor.
- p) The Contractor will contact the Contract Coordinator prior to pumping or discharging any water or wastewater in order to ensure that the use or discharge of the water is permissible.
- q) Contractor must inform the Contract Coordinator of all disposal sites to be used for non-hazardous wastes prior to shipment.
- r) All contractor employees responsible for managing hazardous materials and wastes must be properly trained.
- s) Contractor must consult with Contract Coordinator to determine if a hazardous waste identification number should be obtained prior to commencement of work.
- t) The Contract Coordinator will conduct a “walk-down” of the facility to acquaint the Contractor, the contractor’s personnel and subcontractors with all locations that are environmentally sensitive (i.e., hazardous waste areas, drains, sumps, piping, chemical locations, etc.).
- u) Contractor must arrange with the Contract Coordinator for proper storage of flammable or other types of chemicals.
- v) Contractor must comply with all applicable local, state, and federal laws in the course of performing its work hereunder. Contractor must coordinate with the Contract Coordinator to ensure that the terms of permits to conduct work are met. Contractor must coordinate any contact with regulatory agencies with the Contract Coordinator.
- w) Contractor must include environmental issues in daily safety tailboard sessions. Actions to mitigate any

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environmental hazardous shall be discussed. The Contract Coordinator or designee should attend meetings when possible.

- x) Contractor must implement “good housekeeping” during the course of the project and must conduct a thorough site clean-up following completion of the work. All unused chemicals are the property of the Contractor and must be removed from the site at the end of the job unless specific arrangements are made with the Contract Coordinator.
- y) Contractor must conduct a post-project site “walk-down” with the Contract Coordinator to ensure that environmental issues are addressed and no material is left on site.
- z) Contractor must ensure that spill prevention and remediation measures are in place during the course of work at the plant. This includes:
  - i. Ensuring that all containers are closed at the end of each work day;
  - ii. Use of temporary hoses is carefully planned;
  - iii. Work around drains may require secondary containment;
  - iv. All fuel and oil tanks used by Contractor must be placed in temporary secondary containment on an impervious surface;
  - v. Following work and prior to start up, Contractor must ensure that all valves, manways, and pipelines are closed if appropriate to minimize risk of spills;
  - vi. Contractor must assume that all “out-of-service” lines will leak when brought back into service – appropriate spill containment measures should be taken;
  - vii. Contractor must demonstrate training of personnel in spill awareness, notification, and identification of spill risk areas.

19) Clearance Procedure

- a. FPL uses an In-Plant Clearance Process to establish a zone of protection for all FPL and Contractor personnel. This procedure is based upon the standards 29 CFR 1910.147 *The Control of Hazardous Energy (Lockout/Tagout)* and 29 CFR 1910.269 *Electric Power Generation, Transmission and Distribution*.
- b. All FPL personnel and Contractors working on FPL property, and / or equipment are required to comply with this procedure.
- c. Do not move, alter, work on or remove any device that has a “**Do Not Operate**” or any other tag.
- d. All tagging shall be done by FPL personnel only. All Contractors shall abide by the in-house Clearance Process.
- e. The Contractor Supervisor shall read, understand and abide by those sections of the FPL In Plant Clearance Procedure pertaining to Contractors. The Contractor Supervisor shall ensure that all of his/her employees understand the Contractor sections of this procedure, and provide all the required supplies and materials to comply with this procedure.

20) Confined Space

Contractors working in confined spaces must have an active confined space program and calibrated monitoring equipment meeting all OSHA requirements which includes up to date training of those personnel working in confined spaces. A confined space permit must be completed and posted by the Contractor prior to entry. Contractors working in a confined space or hazardous gaseous environment must first have the confined space thoroughly surveyed by a qualified person. Confined spaces can include such areas as transformers, tanks, vessels, boilers, hoppers, steam drums, condensers, manholes, exhaust and ventilation ducts. These spaces are large enough and so configured that a person can enter and perform work, however, there is limited means for entry and exit and the space is not designed for continuous human occupancy. Contractor’s confined space entry program and training records shall be subject to review by the Contract Coordinator upon request.

All work by contractor personnel in a confined space must be performed under the Contractor’s Confined Space Program. The Contractor shall provide all required confined space entry equipment. All personnel entering a confined space must wear safety eye protection designed to keep all types of debris from entering the eyes, such as: goggles, spectoggles, full face respirator, and air fed hood, etc. unless written permission is received from the Hydro Production Manager. Contractors shall provide monitoring and hole watchers. A confined space must be permitted before performing any hot work, using flammable material or toxic substances.

21) Welding and Cutting

Adequate precautions shall be taken to guard against hazards such as electric shock, burns, toxic fumes (i.e. vanadium pentoxide, etc.), fires and explosion. Hot material shall be cooled or plainly marked before leaving it unguarded. When welding or cutting in elevated positions, precautions shall be taken to prevent hot metal from falling on people or

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combustible materials. No welding or cutting shall be attempted in dusty or gaseous areas until the area has been ventilated sufficiently to eliminate all possibility of fire or explosion. No welding or cutting shall be performed on empty containers or pipelines until verification by sampling with gas monitoring equipment that the component is safe to begin Work. Safety signs, shields or barricades shall be placed around welding jobs where needed to protect fellow workers or the public from direct rays of electric arc or welding fumes. Familiarization of the area to assess the requirement for fire fighting equipment shall be conducted prior to welding. Electric arc welders shall be grounded properly before use and shut off or leads disconnected if leaving the welder for extended periods.

22) Hot Work

A fire watch person is required when cutting, welding, grinding or doing any other activity or operation in an area that contains flammable materials or liquids or may contain explosive gases that could result in a fire or explosion. The fire watch must remain at the site for a minimum of 30 minutes after completion of hot work. Fire extinguishers must be at the job site (provided by the Contractor). All welding, burning and grinding sites will be required to have curtains and enclosures provided by all Contractors.

23) Concrete Drilling or Chipping

Contractor shall follow the FPL's procedure for drilling into powerhouse concrete.

24) Trenching and Excavations

Prior to beginning any digging, trenching or excavation, the Contractor shall notify at least three business days, prior to outdoor construction or digging, contractors and property owners – whoever is excavating – must call New Jersey One Call at 811 and take the following steps:

- Wait for the site to be marked with paint, flags or stakes. Yellow indicates the presence of underground natural gas lines.
- Respect the marks and dig with care.
- Hand dig within two feet of buried piping and facilities.
- Be mindful that inclement weather may wash away the painted markings.

Know what's below and call before you dig - 811. It's FREE and it's the LAW. Underground utilities must be identified and de-energized, if possible, prior to any excavation taking place. Suitable barriers and signage must be erected around all open excavations and trenches.

25) Traffic Control

Where necessary, traffic control measures must be used when working on or adjacent to the site roads especially when using cranes and excavators, digging trenches or blocking part of the road for any reason.

26) Electrical Tools and Equipment

Electric tools and equipment are to be Underwriters Laboratory (U.L.) approved and in good working order. All electric cords are to have a separate grounding conductor and fitted with terminals that allow this conductor to be connected. Cords that have had the grounding connection removed or have bare spots in the insulation shall not be used. Regular inspections of tools and equipment shall be performed. Tools, which are defective, will be replaced. Contractor supplied ground fault protective equipment is required for all cords/tools on site.

All electrical work including installation and removal of temporary power supplies must be done by a qualified electrician.

27) Fire Extinguishers

Contractors and subcontractors are to familiarize themselves with the location of fire extinguishers in the surrounding work area. Contractors shall supply their own extinguishers.

28) Working Near or Over Water.

Workers working over or near water, where the danger of drowning exists, shall wear a U.S. Coast Guard approved life jacket or buoyant work vest and the jacket or vest shall be zipped or securely fastened while in use.



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29) Cranes & Hoist

All lifts above 10,000 lbs shall require a written pre-lift plan.

All broken or defective rigging or lifting equipment must be removed from service immediately and reported promptly so that they may be repaired or replaced.

All ropes, cables chains, hoists, blocks, slings and related rigging equipment shall be inspected each day before use and again before returned to storage. All equipment found to be unsafe will be removed from service immediately for repair or replacement

All slings shall be stored such that damage and/or kinking are prevented. Where practicable, slings should be hung from suitable pegs.

Crane, hoist or boom equipment operators shall accept signals only from a previously designated signal person. No response shall be made to unclear signals. All crew members engaged in rigging shall be trained in the use of proper hand signals.

Tools and materials shall not be thrown up to workers on elevated structures and shall not be thrown to the ground by the workers. They shall be raised or lowered by means of hand lines or in material bags.

When tools or materials are being raised or lowered, workers shall stand clear at all times and they shall avoid coming directly under any load until it is properly placed and secured.

30) Flammable Liquids

The smallest possible quantity of oil, gasoline and other flammable liquids shall be kept in buildings other than separate oil houses. In all cases, gasoline and other flammable liquids shall be kept in containers approved by the U.L. The use of gasoline as a cleaning solvent is prohibited. In determining which solvent to use for cleaning operations, factors such as possible health hazards, personal protective equipment required and permissible exposure limits shall be considered.

31) Ladders, Scaffolds and Platforms

There are numerous Federal requirements for working on ladders, scaffolds and platforms. It is the responsibility of the Contractor's personnel and Subcontractors to adhere to these requirements while on the plant site. Common sense in placement, tying off, and climbing will reduce the potential for injury. Likewise, personal fall protection and proper construction of scaffolds greatly reduces the potential for personnel injuries. When people are required to work or pass under scaffolding, the scaffolding shall be provided with a screen between the toe board and guard, extending along the entire opening, consisting of 18' gauge US Standard ½" wire mesh or the equivalent.

Only approved fiberglass ladders will be used around electrical equipment. Defective ladders shall be so tagged and removed from service.

Ladders must be equipped with approved safety feet, but, regardless of this, when used on cement, tile or iron floors or other smooth or slippery surfaces, they shall be held by another worker or firmly lashed (this does not necessarily apply to stepladders). Where practicable, the top of the ladder shall be lashed to prevent side slip.

32) Staging

- a) All staging used on the site will comply with applicable OSHA standards (e.g. height of rails, toe boards, securing of lifts, and securing at proper height intervals).
- b) Staging shall be erected and inspected by properly trained and certified personnel. Staging must be inspected daily by a qualified individual before use.
- c) Specially designed staging shall be certified by a professional engineer.

33) Industrial Bottled Gas

All workers involved in handling and/or using industrial bottled gas shall be instructed in its proper handling, moving, storage, installation and use.

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Cylinders containing acetylene, oxygen, hydrogen, nitrogen, helium, argon, carbon dioxide, etc., shall always be stored upright with their caps in place in approved safe places away from highly combustible material and well separated from radiators, furnaces and other sources of heat. Cylinders shall never be subjected to a temperature above 125 degrees F. Bottled flammable gases such as hydrogen and liquefied petroleum shall be stored in designated locations. Cylinders of compressed gases shall be transported only when they are properly secured in their upright position with caps in place. Cylinder valves shall be closed at all times unless in active use. If a cylinder leaks, attach a tag stating that the cylinder is unserviceable, remove to a well ventilated area, and contact the Contract Representative to resolve disposition. Cylinders shall not be placed where they may become part of an electrical circuit. Fuel and oxygen cylinders shall not be transported in an elevator at the same time. Contractor's personnel shall not ride in elevators with compressed gas cylinders. A minimum of 20 feet of separation is necessary between fuel and oxygen cylinders in storage areas. All valves, cylinders, regulators and hoses shall be kept free from oil and greasy substances. Flashback protector devices shall be used. No cylinders shall be taken into a confined space.

34) Chain Saws/other engine driven saws

Extreme caution must be used when operating any type of chain saw. Before operating a power chain saw, the operator shall assure that all handles and guards are in place and tight, that all controls function properly, and that the muffler is operating.

Workers operating chain saws must wear proper personal protective equipment as required by OSHA.

When operating a gasoline powered chain saw on the ground, leg protection is required. The power saw shall be started on the ground or where otherwise firmly supported and when all other workers are clear of the saw.

When operating power chain saws for more than a few minutes at a time, hearing protection is required.

Power chain saws must be equipped with a chain brake and the brake must be operating properly.

35) Warning Signs and/or Barrier Tape

**Barrier Tapes:** FPL uses 2 different barrier tapes—one is yellow and black with the word “CAUTION” printed on it, and the other is red and black with the word “DANGER” printed on it.

The yellow and black caution barrier tape is used to warn people of a potential hazard before entering the barricaded area. The red and black danger barrier tape is used to warn people of a potential danger situation. When red and black danger tape is used, the barricaded area **CANNOT** be entered unless permission is granted. All barrier tapes must have either a yellow and black CAUTION tag or a red and black DANGER tag hanging from the barrier tape explaining the hazard or danger and the name of the person controlling the area and the reason for barrier installation. All caution and danger tags must be visible from all sides and must be signed by the person erecting the barrier.

36) OSHA and other Regulator Visit Protocol

The FPL Contract Coordinator shall be contacted as soon as possible by the Contractor when an OSHA site visit occurs or a visit by any other state or federal regulator.

37) Diving

Diving operations at FPL facilities shall comply with the following requirements:

- a) Diving Contractors shall meet all applicable OSHA requirements for commercial diving operations at General Industry.
- b) Diving Contractors shall use only appropriately trained and certified personnel.
- c) Diving Contractors shall establish a dive plan for each unique dive which identifies limiting conditions, job hazards and emergency response.
- d) Diving Contractors are responsible to have on-hand all required emergency safety equipment to meet OSHA requirements.
- e) Diving Contractors shall have sufficient personnel on-site to tend and support all aspects of the diving operation.
- f) The diving Contractor shall not commence diving operations until briefed by FPL personnel as to the local

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operating conditions at the proposed diving location.

- g) Before any dive near a dam/unit intake may take place, two (2) FPL employees shall independently verify dive location and the Contractor is responsible to ensure that this has been done and that the entry point has been permanently labeled.

38) Pick-Up and Delivery of Materials

Pick-up and delivery of materials at FPL sites shall be coordinated with the FPL Contract Coordinator.

39) Removal for Cause

Visitors and Contractor personnel shall be subject to immediate removal from FPL property for reasonable cause as solely determined by FPL site management, which causes shall include, but not be limited to:

- a) Violation of these general site rules, personal safety rules or of applicable laws or regulations;
- b) Fighting, gambling, sleeping or engaging in horseplay or other inappropriate conduct;
- c) Possession of firearms or other weapons;
- d) Possession and/or consumption of alcoholic beverages or any illegal substances;
- e) Willfully damaging FPL tools, materials or equipment;
- f) Theft of FPL equipment or supplies;

**ANY INFRACTIONS RESULTING IN THE REMOVAL OF PERSONNEL FOR JUST CAUSE MAY RESULT IN THAT COMPANY NOT BEING CONSIDERED FOR FUTURE JOB BID PACKAGES OR PROPOSALS.**

40) Training and Qualifications

All contract employees shall be properly trained and qualified for all tasks or activities which they are required to perform.

41) Smoking

Smoking on FPL premises is in accordance with the site specific smoking policy. Cigarette butts and matches must be disposed of in a properly designated container.

42) Driving on FPL Property

- a) Site speed limit is 15 mph.
- b) Seat belts must be worn at all times.
- c) Riding in the back of pick-up trucks or outside of another vehicle is prohibited.
- d) Before backing any vehicle, check for people, obstacles or other conditions that will pose a hazard.

43) Housekeeping

Good housekeeping shall be maintained on FPL property at all times. All trash shall be promptly disposed of in appropriately marked trash containers, and all disposal of waste, hazardous or otherwise, shall be done in accordance with applicable environmental rules and regulations and subject to applicable contractual requirements. Contractors are responsible for providing their own cleaning supplies.

44) Access

Visitors shall only be admitted to FPL property at the discretion of FPL Site Supervisor. All visitors must check in at the gate upon entry to the site, and follow the log-in log-out process unless other arrangements have been made. The safe and reliable operation of FPL facilities shall take precedence over the admittance of visitors to the site.

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45) Property Leaving the Site

No FPL tools, vehicles, equipment, materials or scrap shall be removed from FPL property without the knowledge and consent of FPL site management and of Contractor supervision (if applicable). All vehicles and containers (tool boxes, lunch boxes, brief cases, etc.) exiting FPL property are subject to inspection by FPL on demand. Any theft will lead to immediate dismissal and all persons will be prosecuted to the full extent of the law.

46) Photographs

Photography of FPL sites and equipment shall be permitted only with the approval of FPL site management. In cases where such approval is given, every reasonable effort shall be made to confine such photography to equipment and facilities only, and not to include photography of site employees. In all cases the publication or distribution of any photograph taken on site or the use of any such photograph in any promotional or advertising material or medium is strictly prohibited without the express prior written authorization of FPL.

47) Contractor Materials and Equipment

Contractor tools and equipment shall be clearly marked prior to arrival on site. An inventory of the tooling and equipment to be used by the Contractor or Subcontractor shall be provided to the Contract Coordinator upon arrival on site. All Contractor trailers, vehicles, tool boxes, lunch boxes, etc., are subject to inspection on demand by the Contract Coordinator with the employee present.

48) Equipment

Any and all equipment brought onto FPL property shall be in proper working order, shall meet all relevant regulatory standards, and shall be operated only by appropriately trained personnel. This will include current certification stickers for Ground Fault Interruption (GFI) devices, chainfalls and hoists. Oil containing equipment shall be checked for leaks prior to bringing the equipment on site. Equipment with oil or fluid leaks (including coolant) will immediately be secured and the leaks or spill communicated to the Contract Coordinator. The equipment will be immediately removed from the site. The Contractor will ensure that moving the equipment does not cause additional spills or leaks. No vehicles with oil or coolant leaks will be permitted on site.

49) Contractor Operating Vehicles, Forklifts, Trucks or Mobile Cranes

No vehicles shall be allowed in the plant site except those approved by the Contract Coordinator or his/her designee. All vehicles entering the plant site shall have the company identification clearly visible. Contractor's personnel and Subcontractors shall adhere to any additional access requirements at each plant site. Contractor shall provide to the Contract Coordinator or his/her designee a list of the names of the personnel qualified to operate equipment, and verification that these people have completed the physical and operating requirements of the appropriate OSHA Standard. Only those people qualified to operate equipment, and whose names have been submitted to the Contract Coordinator or his/her designee, shall be authorized to operate vehicles, forklifts, trucks, and mobile cranes on the Plant site.

50) Wildlife and Vegetation

The Contractor will not endanger, threaten, aggravate or interact with any protected or endangered species found at the work site. Wild life of all kinds is to be left alone. Any wildlife interfering with the performance of services outlined with the contract will be referred to the Contract Coordinator. The Contractor will not trim or remove any vegetation without approval from the Contract Coordinator.

51) Work Site Condition

The Contractor will at all times keep the Site work area neat, clean and in a safe condition. The Contractor is responsible for the continuous clean-up and removal of trash, debris, waste materials and scrap; and disposal of same off the Site. Upon completion of any portion of the work, the Contractor will immediately remove all equipment, temporary structures and surplus materials not to be used at or near the same location during later stages of the work.

Upon completion of the work and before final payment is made, the Contractor will, at their expense, satisfactorily dispose of all buildings, rubbish, unused materials, and other equipment and materials belonging to, or used in the performance of work, including return to a designated area any salvageable materials for which FPL has reimbursed the Contractor or that has been supplied by FPL for incorporation into the work but not used. The Contractor will leave the premises in a neat, clean and safe condition acceptable to the Contract Coordinator. In the event that the

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Contractor fails to comply with the foregoing, the same may be accomplished by FPL at the Contractor's expense

53) Emergencies/Accidents

If a fire alarm or other emergency alarm is sounded, all Contractor personnel and Subcontractor personnel are to report to the designated area as defined by FPL. These areas shall be identified by the Contract Coordinator prior to the start of Work. All personnel are to be accounted for and the Contract Coordinator notified.

In the event of an accident, Contractor shall immediately attend to all injured persons.

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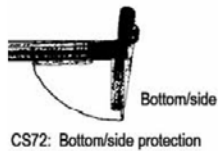
**Eye & Face Protection Policy**

The following is the eye and face protection policy in effect for all FPL locations:

- A. Approved eye and face protective equipment shall be constructed in accordance with ANSI Z87.1-latest revision.
  
- B. Approved eye protection with acceptable side shields shall be worn by all personnel at work locations except offices, control centers, vehicles, locker rooms, lunchrooms, meeting rooms and similarly protected areas. Personnel must always wear approved eye and/or face protection when machines or operations present a potential of eye or face injury from physical, chemical or radiation agents.
  
- C. Personnel whose vision requires the use of corrective lenses shall use one of the following methods to achieve the appropriate level of eye protection.
  - 1. By use of approved prescription safety glasses. Only prescription glasses with full sideshields and “Z87” engraved in the temple are acceptable. “Z87” indicates the glasses were manufactured in accordance with ANSI Z87.
  - 2. By use of non-approved prescription glasses covered with approved goggles.
  - 3. By use of contact lenses covered with either approved safety glasses or goggles.

**Note:** Contact lenses and non-approved prescription glasses by themselves do not constitute approved eye protection.

**Acceptable/Non Acceptable Side Shield**



Not  
Acceptable



Acceptable



Acceptable

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**Protective Footwear Policy**

Approved work boots or shoes shall be worn in all work areas with the exception of the following locations:

- 1) Office environments and the control room
- 2) While entering and leaving the plant for your work shift
- 3) While traveling in pre-established and identified walkways which are designated free of hazards that may cause foot injury.

Approved work boots or shoes are those which meet OSHA requirements. All personnel shall assure that their work boots or shoes provide adequate protection from foot injuries due to falling or rolling objects as identified in the hazard assessment. Persons handling hot compounds, hot solder, or other hot materials, including welding or torch cutting operations shall wear approved all leather high top boots. The upper portion of high top shoes/boots shall extend far enough above the ankle to provide protection from hot metal particles accidentally entering the area between the leg and cuff of the footwear.

Electrical bench soldering does not require high top shoes. Shoes shall be maintained in good repair.

Chemical resistant protective footwear shall be worn when there is a possibility of hazardous chemicals coming in contact with the foot and shall also meet OSHA requirements. Chemical protective footwear shall be resistant to the type of chemical to which it is exposed.





**CONTRACTOR REQUIREMENTS ACKNOWLEDGEMENT SHEET**

I have reviewed these requirements and have ensured that all personnel and Subcontractors' personnel have also reviewed these requirements to the point of everyone's clear understanding. Everyone understands that violation of these requirements is grounds for removal from FPL property.

Supervisor in Charge

Date

for

(Name of Company)

Return to Contract Coordinator prior to start of Work.

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**ACCIDENT INVESTIGATION REPORT**  
**(To be completed by Contractor Supervisor)**

**Name**

**Time**

**Date**

**Dept-Shift**

**Job**

**How long on this job?** \_\_\_\_\_

**WHAT HAPPENED?** <sup>1</sup> \_\_\_\_\_

**WHY DID IT HAPPEN?** <sup>2</sup>

**WHAT SHOULD BE DONE?** <sup>3</sup>

**WHAT HAS BEEN DONE THUS FAR?** <sup>4</sup>

**HOW WILL THIS IMPROVE OPERATIONS?** <sup>5</sup>

**Investigated By:** \_\_\_\_\_

**Date:**

**Reviewed By:** \_\_\_\_\_

**Date:**

<sup>1</sup> Describe how the accident or "near miss" took place. Indicate the nature of the injury and expected lost-time from work, if any.

<sup>2</sup> Get all the facts by studying the job and situation involved. Question by use of WHY—WHAT—

<sup>3</sup> What action is appropriate to eliminate or control the possibility of a reoccurrence?

<sup>4</sup> Take or recommend action, depending upon your authority. Follow-up – was action effective?

<sup>5</sup> OBJECTIVE – Improve Productivity, eliminate job hindrances.



FPL MANATEE PLANT (PMT)  
COOLING POND SOIL-CEMENT REPLACEMENT PROJECT

APPENDIX A  
SCOPE OF WORK AND SPECIFICATION

REVISION HISTORY

REV	DATE	REVISION	BY	REVIEW
1	6/19/2015	DRAFT	RF	JB
2	7/8/2015	FINAL	RF	JB
3	7/10/2015	DRAFT	LR	
4	7/13/2015	FINAL FPL	RWV	

PMT COOLING POND SOIL-CEMENT REPLACEMENT PROJECT  
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## 1.0 GENERAL

- 1.1. FPL Manatee Plant (Purchaser) is soliciting bids for Construction and Detail engineering, procurement and construction services required for the completion of the Work defined herein. The project involves the rehabilitation of the soil-cement revetment on the upstream slope, below and above the water line of the perimeter dam of the cooling pond at FPL Manatee Plant (PMT) located in Parrish, Manatee County, Florida.
- 1.2. The Work includes all elements required to deliver a complete in place system including but not limited to the Engineering details for placement and construction of a stair-step concrete overlay atop the irregular surface of the soil-cement revetment on the slope of the cooling pond dam. The overlay will extend from elevation 70 feet NAVD to the toe of the slope, and will include a concrete key trench with a minimum depth of 3 feet and a minimum thickness of 2 feet cut into the soils at the bottom of the pond. All work will have to be performed while the PMT Cooling Pond remains in normal operation. Work is for the first phase of a Multi-phase project. It is expected that phase 1 (work in 2015) will cover approximately 1000 linear feet of slope from location stations 285 to 295. With successful completion of phase 1, this project can be extended through 3 more phases (2016-2018) where it is expected to cover as much as 20,000 linear feet total. Based on completed phases, FPL will exercise its Sole discretion the other phased option to either extend the current contract or release the remaining phases (Work) for competitive bid.

## 2.0 CODES AND STANDARDS

- 2.1. Supplier shall ensure that all elements of the scope of work include, but are not limited to, engineering, materials, equipment, construction methods, environmental practices, safety practices, testing methods, and standards shall comply with all applicable codes and standards, whether or not they are specifically referenced. A partial list of codes and standards include, but is not limited to the following:
  - ACI American Concrete Institute
  - ASCE American Society of Civil Engineers
  - ASTM American Society for Testing and Materials
  - CFR Code of Federal Regulation
  - DEP Department of Environmental Protection
  - EPA Environmental Protection Agency
  - FBC Florida Building Code
  - OSHA Occupational Safety and Health Administration
  - SWFWMD Southwest Florida Water Management District
  - USACE US Army Corps of Engineers
- 2.2. All materials and components shall be subject to compliance with local and state building codes.

- 2.3. Where conflict exists between this specification and any of the above standards, or between two or more of the applicable standards, codes, and/or regulations, Supplier shall notify the Purchaser Representative for resolution of the conflict.

### 3.0 DEFINITIONS

- 3.1. Authorities Having Jurisdiction: Government agency or sub agencies who regulate the construction process.
- 3.2. Construction Phase: The phase in which the Supplier's Project Manager as well as any other required Supplier field personnel first arrive at the Manatee Power Plant property, and remain at the facility until the construction is complete.
- 3.3. Construction Plan: See Section 14.
- 3.4. Electronic Copy: Electronic Copy is defined as a submittal in its native format (e.g. Word, Excel, and AutoCAD). If the submittal is a drawing, Adobe Acrobat format shall be submitted in addition to the native format.

### 4.0 SPECIFICATIONS, DOCUMENTS, DRAWINGS, AND EXHIBITS

- 4.1. The reference drawings are for information only. While these drawing are believed accurate, the Supplier is required to field check all critical key dimensions before proceeding with the Work. The Purchaser Representative shall provide access to the Jobsite for inspection and dimensional verification approximately one week after Purchase Order award.
- 4.2. The Supplier will be responsible for the design and detailing of any derricks, scaffolding, formwork, and equipment required to perform the Work
- 4.3. All Work shall be performed in strict accordance with this specification, and with the additional specifications, drawings, and documents listed in this section. Where conflict exists between this specification and the additional specifications, drawings and documents listed below, Supplier shall notify the Purchaser Representative for resolution of the conflict.

#### 4.3.1. Reports:

- Site Information for Bidders Report

#### 4.3.2. Drawings:

- Set of Construction Plans Issued 07/07/2015
  - Sheet 1 - Cover Sheet
  - Sheet 2 - Aerial Photograph and Project Limits
  - Sheet 3 - Project Layout Plan
  - Sheet 4 - Existing Soil-Cement Topography
  - Sheet 5 - Typical Concrete Overlay Section and Details

- Sheet 6 – Key and Construction Joint Details
- Sheets 7 thru 12 - Soil Cement Cross Sections

4.3.3. Construction Specifications:

- Section A - Turbidity Control
- Section B - Surface Preparation
- Section C - Excavation of Bottom Key Trench
- Section D - Concrete Overlay and Bottom Key

5.0 SITE DATA AND LOCATION

5.1. The PMT facility is located at the following address:

19050 State Road 62  
Parrish, FL 34219

6.0 SUPPLIER SCOPE AND RESPONSIBILITIES

- 6.1. Nothing in this section shall relieve Supplier of responsibilities or scope stated elsewhere in this specification, applicable Purchase Order, referenced documents/specifications/ drawings/ exhibits, or applicable laws, regulations, codes or standards.
- 6.2. Supplier shall utilize technically proven designs, equipment, methods, and processes with proven reliable service in similar applications and configurations.
- 6.3. Supplier shall make all modifications required to assure safety and compliance with all codes and standards.
- 6.4. Any errors or omissions in this specification shall not relieve Supplier of the responsibility to provide a complete, safe, functional design in full compliance with general engineering practices, and applicable codes and standards.

7.0 GENERAL REQUIREMENTS

- 7.1. Supplier shall install all elements of the project in accordance with the specifications herein, all applicable codes, and standards, and all referenced documents and approved plans presented to FPL.
- 7.2. A mandatory pre-bid site walk-down will be scheduled and is required from all qualified suppliers.

- 7.3. For all submittals, two (2) hardcopies and one (1) Electronic Copy shall be submitted to the Purchaser Representative. Purchaser shall have up to ten (10) business days to review the submittals, and advise the Supplier as follows:
- Proceed with procurement/fabrication/construction - no comments
  - Proceed with procurement/fabrication/construction - comments as noted
  - Do not proceed with procurement/fabrication/construction - revise and resubmit
  - Accepted/Approved - no comments
  - For information only - no comments
  - For information only - comments as noted
- 7.4. All Supplier submittals shall contain the following information on the title block or title page, as a minimum, in addition to the items normally entered by the Supplier:
- Customer - FPL Manatee Plant (PMT)
  - Project - PMT Cooling Pond Soil-Cement Replacement Project
  - Purchaser Purchase Order Number
- 7.5. It is Supplier's sole responsibility to ensure the completeness and design in the submittals.
- 7.6. Supplier shall not proceed with procurement/fabrication/construction until drawings, calculations, procedures, specifications, and other pertinent information have been submitted and reviewed for comments by Purchaser. No schedule extensions will be granted for Supplier's failure to achieve timely Purchaser approval due to submittal requirements being incomplete.
- 7.7. Supplier shall participate in a Construction Kickoff Meeting with the Purchaser Representative prior to the start of site construction.
- 7.8. Supplier shall advise the Purchaser Representative of any work considered to be out of scope. The Purchaser Representative will review the Supplier's findings to determine if the findings are out of scope, and will advise whether Supplier shall submit additional scope pricing based on the findings.
- 7.9. Supplier shall maintain continuous records of all field changes and shall incorporate all such changes into as-built drawings. As-built drawings shall reflect as-built details. Supplier shall submit all as-built drawings to the Purchaser Representative for review and acceptance.
- 7.10. Supplier submittals shall not be based on any reproductions of Purchaser items listed in Section 4.
- 7.11. Purchaser shall have full rights to use and distribute Supplier submittals as required.



- 7.12. All Supplier submittals shall utilize English units with Metric units optional and English language.
- 7.13. Supplier shall not provide any submittals, which are not applicable to this project (e.g. items crossed out in catalog cuts).
- 7.14. Where supplier includes standard drawings or data, the standard drawing submittal shall be modified to include project title information and specific design conditions for that component.
- 7.15. Purchaser's review and acceptance is for general compliance with the contractual requirements, and it does not indicate a thorough review of all details, dimensions, quantities, materials, devices, and does not relieve the Supplier of the responsibilities and requirements under the Purchase Order, scope of work, documents, drawings, specifications, exhibits, and all applicable codes, standards, and regulations.
- 7.16. Supplier shall review all submittals, including submittals from Supplier's subcontractors prior to submittal to Purchaser.
- 7.17. Supplier shall include dimensional tolerances on all drawings for all new or modified material/equipment. These tolerances shall be adhered to during fabrication/installation and will be verified by the Purchaser. If any deviation from a set dimension arises, it shall be reported at once to the Purchaser for decision as to further actions to be taken.

## 8.0 SPECIFIC REQUIREMENTS

- 8.1. The scope of work is provided solely to identify the major activities covered by the specifications and shall not be construed to limit the Supplier scope or responsibilities. All work shall meet the requirements of this specification and the additional drawings and specifications listed in Section 4.
- 8.2. Supplier is to furnish all drawings, supervision, labor, equipment, and materials necessary to complete the scope of work. All materials supplied for this project shall be in full compliance with these specifications, drawings, and work orders.
- 8.3. Supplier is to furnish a list of reference with similar job experience.
- 8.4. All work shall be performed in accordance with the latest standards established by OSHA and applicable safety standards/procedures plus those site and condition specific standards implemented at the site.
- 8.5. Supplier shall provide within their Work third party inspection services which must be approved by FPL for all major activities. Supplier is to submit their plan for this support including Durations, timing, sub-supplier recommendation, resumes'
- 8.6. The specific Work scope includes but is not limited to:
- Procurement of any and all required permits for construction activities

PMT COOLING POND SOIL-CEMENT REPLACEMENT PROJECT  
APPENDIX A – SCOPE OF WORK AND SPECIFICATION

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- Construction of temporary facilities (For specific requirements refer to Section 13)
- Development and implementation of means and methods for turbidity control (For specific requirements refer to attached Construction Specifications, Section A).
- Preparation of soil-cement surface to receive concrete overlay (For specific requirements refer to attached Construction Specifications, Section B).
- Excavation of toe key trench (For specific requirements refer to attached Construction Specifications, Section C).
- Stabilization and disposal of soils/sediments produced by the surface preparation and trench excavation procedures (For specific requirements refer to attached Construction Specifications, Sections B & C).
- Construction of concrete overlay and bottom key (For specific requirements refer to attached Construction Specifications, Section D).
  - The concrete overlay shall extend from elevation 70 feet NAVD to the toe of the slope.
  - The design provided with this request for proposal should be considered minimum design criteria. Modifications can be proposed with Suppliers Offer to improve constructability and efficiency. Any proposed changes must be approved by FPL in writing prior to Work commencement.
  - The concrete overlay shall have a stair-step configuration. As designed, the steps have a height (rise) of 12 inches and a width (run) of 24 inches. However, the rise can be reduced to a minimum of 6 inches; the run would have to be adjusted proportionally to match the existing slope. For portions of the slope below elevation 57, the rise can be increased up to but not exceeding 2 feet.
  - The concrete overlay shall provide a minimum thickness of 1-foot overlay measured perpendicular to the embankment slope at any point.
  - The concrete overlay will be keyed a minimum of 4 inches into the underlying soil-cement at the ends of the work area.
  - The concrete key/cutoff at the toe of the soil-cement slope shall have a minimum width of 2 feet and shall extend to a minimum depth of 3 feet below the bottom of the existing soil-cement revetment. If due to the firm sands at the toe of the dam, it is desired to utilize the soil as a form, slopes will have to be provided and an allowance for concrete contamination will need to be provided. The concrete required to provide these slopes will be added to the minimum dimensions.
  - The concrete overlay and bottom key shall be provided with a reinforcement mat consisting of No. 5 epoxy coated rebar spaced a maximum of 8 inches in each direction, placed near the center of the overlay, maintaining a minimum 6-inch cover from the overlay surface.
  - The concrete mix shall attain a minimum compressive strength of 3,000 psi at 28 days. Additional reinforcement in the form of polypropylene fiber shall

be added. (For specific requirements refer to attached Construction Specifications, Section D).

- Construction of (access ramps, laydown areas, ingress and egress) and Removal of temporary facilities and restoration of all areas affected by the construction to their pre-construction conditions or to conditions satisfactory to the Purchaser. Any soils, or structural fill brought on site must be tested and be approved by Purchaser prior to arriving at the site.
- On-site specific remote location security services are not provided by Purchaser, if Supplier requires these services the Purchaser can provide them to the supplier at Purchasers cost, however at no time is the Purchaser responsible for Suppliers losses, or damages.

## 9.0 SAFETY AND PERMITTING

- 9.1. This work is taking place on an operational high risk dam. No excavation or traffic outside of established roads is permitted without express written permission by FPL. The use of vibratory equipment and equipment that exceeds HS-20 loading must also be evaluated and approved before use.
- 9.2. Supplier shall be responsible for obtaining all required construction and work permits required to complete the scope of work specified herein. Supplier shall also be responsible for obtaining any necessary environmental permits.
- 9.3. Supplier shall be responsible for all permit fees, inspections, and approvals required to obtain the permits, as well as any other requirements to satisfy the authorities having jurisdiction.
- 9.4. Supplier shall be responsible for all submittals required by federal, state, and local agencies related to the permits. Supplier shall provide the Purchaser with a copy of all items submitted to federal, state, and local agencies.
- 9.5. Supplier shall provide Material Safety Data Sheets (MSDS) for all components being brought on site, as applicable. Supplier shall provide a list of all MSDS to be submitted to the Purchaser Representative for review and acceptance.
- 9.6. Supplier shall participate in Tailboard (safety) Meetings with the Purchaser Representative to identify all risks and hazards. The frequency of the meetings shall be established during the Construction Kickoff Meeting
- 9.7. Supplier shall be responsible for confirming all clearances, including any tag outs that may be needed.
- 9.8. Supplier shall be responsible for inspecting all of their equipment they plan to bring on the Jobsite prior to use and on a regular basis as required by regulatory agencies.
- 9.9. Supplier shall submit a safety manual, including all subcontractor's safety manuals to Purchaser. This shall include detailed diving safety procedures and monitoring.

- 9.10. Periodic Behavior Based Safety Observation (BBSO) will be conducted by the Purchaser on Supplier and subcontractors working on site. This BBSO is to observe and acknowledge safe working conditions/practices.
- 9.11. Supplier shall submit Emergency Response Plan for Purchaser's review and approval.
- 9.12. Supplier shall provide name and driver's license information for all personnel working on site to Purchaser for review by Purchaser's Security Group. Supplier shall prevent any person rejected by Purchaser's Security Group from working onsite.

#### 10.0 SPARE PARTS (NOT USED)

#### 11.0 SHIPPING, DELIVERY, STORAGE, AND HANDLING

- 11.1. Supplier shall be responsible for all aspects of shipping, delivery, storage and handling to complete the scope specified herein.

#### 12.0 CONSTRUCTION/PROJECT MANAGEMENT AND SUPERVISION

- 12.1. Supplier shall provide a dedicated, full-time Construction Manager to oversee and manage construction activities. Supplier's Construction Manager shall be responsible for directing Supplier's activities at the Jobsite.
- 12.2. Supplier and its Subcontractors shall comply with Purchaser's Jobsite security processes and requirements.
- 12.3. Supplier shall schedule and conduct periodic progress meetings at the Jobsite with the Purchaser Representative. The frequency of the meetings shall be established during the Construction Kickoff Meeting.
- 12.4. Supplier shall advise the Purchaser Representative immediately of any items of significance that could affect the project schedule, safety concerns or environmental concerns. When this situation occurs, the Supplier shall submit a mitigation plan to address the concerns.
- 12.5. Supplier's Project Manager shall notify the Purchaser Representative of any existing items damaged by the Supplier or its Subcontractors during the construction phase within 24 hours of the occurrence. Supplier shall be responsible for repairing and/or replacing any existing items damaged by the Supplier or its Subcontractors at their own expense, and shall provide the Purchaser Representative detailed information concerning the repair and/or replacement for review and approval prior to proceeding with the repair or replacement.

### 13.0 CONSTRUCTION LOGISTICS AND TEMPORARY FACILITIES

13.1. Supplier shall provide and arrange for all required construction logistics and temporary facilities, including required permits, for its own use, possibly including, but not limited to the following:

- Construction trailer
- Communication facilities, including computers, phone, fax, data lines, and radios
- Sanitary facilities, including toilets, wash facilities, and drinking water
- Trucks, riding equipment, vehicles, etc. Supplier shall provide spotter for all vehicles transporting equipment within the plant property crane
- Tools and equipment, including those required for divers and underwater work
- Safety equipment and personal protection equipment (PPE).
- Lighting
- Barriers preventing unauthorized personnel from entering work area, as well as identifying hazards
- Signage
- Security and protection power, service water, service air, oil, gasoline, etc.
- Security fencing around lay down area
- Concrete Batch Plant set-up, operation, and removal.

13.2. Purchaser will designate allowable on-site lay-down, setup, and work areas as per attached map.

13.3. Purchaser shall provide power only for the construction trailer (no special terminations) where power is already currently available. If construction facilities are placed in an area away from existing utilities, the Supplier will need to supply their own power. Purchaser will not provide any additional construction logistics and temporary facilities.

13.4. It is Supplier's sole responsibility to ensure that all Suppliers' temporary facilities are provided, operated, and maintained in accordance with all laws and regulations.

13.5. Supplier shall provide and operate all temporary facilities in a manner that eliminates health risks, unsightly appearances, and offensive odors.

13.6. All temporary hoses and cables either shall be run as to not cause a tripping hazard, overhead, or laid neatly out of walkways.

13.7. Supplier shall ensure that all safety equipment and consumables are in place and accessible during all times of on-site work, including proper UL-rated fire extinguishers complying with NFPA 10 and NFPA 241, and first aid kits.

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APPENDIX A – SCOPE OF WORK AND SPECIFICATION

13.8. Supplier shall be responsible for returning any laydown area(s) or work area(s) to their original condition. This shall include removal of any temporary facilities provided by the Supplier.

13.9. Division of Responsibility Matrix: On-site Work

	Purchaser	Supplier
Personal Safety Equipment		X
Safety and security orientation for labor force	X	X
Supervision and work force employee badge with photo ID and company name.		X
Small Tools		X
Expendable material (rags, solvent, etc.)		X
Fuel for all trucks and equipment		X
Wash and sanitary facilities		X
Change facilities for Contractor work force		X
Parking for Contractor work force	X	
Office area, computer and telephone service		X
Single phase 120 VAC, 30 Amp power feed to Contractor trailer (dependent upon Location)	X	X
First aid and fire protection initial response and call to local emergency responder as required by Purchaser	X	X
Waste disposal (per General Conditions)		X
Supplementary lighting for second shift as required		X
Labor to disconnect and reconnect wiring & conduit necessary for disassembly/reassembly		X
Lockout/Tag out program	N/A	N/A
As built drawings for all work completed		X

14.0 CONSTRUCTION PLAN / CONSTRUCTION ACTIVITIES

14.1. Prior to the beginning of the Construction Phase, Supplier shall submit a complete Construction Plan. This includes but is not limited to the following submittals:

- Detail project schedule (submitted with bid and updated on a bi-weekly basis in MS Project format)
- Progress report (submitted on a weekly basis)
- Insurance certificates (both Supplier and its Subcontractors)
- Safety manual (for Supplier and Subcontractors). Including detailed diving safety plan.
- MSDS as applicable for all components being brought on site
- Permit documentation and approvals
- Waste Management Plan and Disposal Plan
- Spill prevention and recovery plans
- Environmental Control Program (ECP)

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- Risk assessment with mitigation plans and contingency plans for each potential risk
- Severe Storm preparedness plans e.g. hurricane, and tropical storms
- Emergency Response Plan, including procedures and precautions to be taken for personnel and equipment during a hurricane warning and a hurricane watch. Traffic control pattern and direction of work flow while on dam crest.
- Rigging and lifting plans
- Concrete pump, Crane operation plan, crane certifications, and crane operator licenses, when mobile this equipment must be escorted whenever onsite.
- Field walk down of the work to be performed under this specification.
- Inspection and Testing Plan
- Quality Assurance Manual
- All Quality, test and Inspection Reports
- Shop drawings, material submittals and detailed procedures as needed for the following:
  - Soil-Cement surface preparation to receive concrete overlay
  - Excavation of bottom key trench
  - Stabilization and disposal of soils/sediments from surface preparation and bottom key trench
  - Turbidity control measures and monitoring
  - Formwork
  - Concrete reinforcement
  - Concrete mix design
  - Concrete placement (above and under water)

14.2. Supplier shall keep one updated hard copy of all documents contained in the Construction Plan on the Jobsite at all times.

14.3. No schedule extensions will be granted for failure to meet Purchaser approval due to the requirements in Paragraph 14.1 being incomplete or otherwise unacceptable.

14.4. Supplier and its Subcontractors shall review Jobsite procedures with all of its employees prior to allowing employees to begin Work on the Jobsite. Each employee must sign the last sheet of said document and submit a copy of the signed document to the Purchaser Representative prior to the employee beginning work on the Jobsite.

14.5. Supplier shall coordinate with the Purchaser Representative all required clearances or lockout tag-out points. All lockout tag-out shall be conducted in accordance with Purchaser's Jobsite safety processes.

- 14.6. Supplier shall complete major milestones according to the schedule outlined in Section 18.
- 14.7. Supplier shall prepare and maintain a construction punch list for all incomplete items. Purchaser may add items to the punch list at any time, at Purchaser's discretion.
- 14.8. Supplier shall provide a list to FPL Company Representative of all of its personnel and its Subcontractors requiring access to the Jobsite.

#### 15.0 QUALITY CONTROL, TESTING, AND INSPECTION

- 15.1. Supplier shall submit a copy of their latest uncontrolled quality assurance manual to Purchaser Representative.
- 15.2. Supplier shall submit an inspection and test plan covering any witness points, QA/QC hold points, test points, and Purchaser's hold points throughout the complete construction process. The inspection and test plan shall cover as a minimum, nature, and scope of inspection and tests, equipment that will be used (supply calibration records); provide qualifications of personnel who will perform the test, and detailed procedures. Purchaser shall have the right to witness any inspection and tests listed on the inspection and test plan at its option.
- 15.3. Supplier shall notify the Purchaser no less than ten (10) Business Days prior to all shipments to allow Purchaser the option to inspect prior to shipments to the Jobsite.
- 15.4. Supplier shall submit inspection test reports detailing the various inspection and tests listed in the inspection and test plan.
- 15.5. Purchaser, at its option, may utilize third party companies to witness any inspection and tests listed in the inspection and test plan.
- 15.6. Supplier shall provide 3<sup>rd</sup> party QA/QC services according this document and associated attachments.

#### 16.0 PURCHASER REPRESENTATIVES

- 16.1. **Project Manager** for all project issues, submittals, and technical issues is the following: Kanthi Chellaiah, Email: [Kanthi.Chellaiah@fpl.com](mailto:Kanthi.Chellaiah@fpl.com), Phone:561.691.2556; 700 Universe Blvd, Juno Beach, FL - 33408 mail stop : GTG\JB.
- 16.2. **Construction Manager** for all on-site issues and coordination is the following: Rob Maxwell, Phone: 772.204.4906
- 16.3. **Contract Representative** for all contractual issues is the following: Ivy Davis, Email: [Ivy.Davis@nexteraenergy.com](mailto:Ivy.Davis@nexteraenergy.com)
- 16.4. **Purchaser's representatives**, including additional representatives, are subject to change at Purchaser's discretion.



**17.0 SUPPLIER AND SITE SCHEDULE**

- 17.1. As stated in paragraph 14.1, Supplier shall maintain an updated and detailed project schedule in Microsoft Project format, submitted bi-weekly, showing critical path in Gantt chart format, outlining design and engineering activities, on-site work activities, witness points, hold points, and schedule milestones for completion of the scope specified herein.
- 17.2. As stated in paragraph 14.1, Supplier shall submit a progress report on a bi-weekly basis, providing an overall summary of the Supplier's activities. Progress reports shall include photographs from several different vantage points, as well as highlight any issues. Progress reports shall include an accident and safety report. If no accidents have occurred, Supplier shall state this in the report.
- 17.3. Supplier must strictly adhere to all schedule deadlines in completion of the Work.
- 17.4. Supplier shall be responsible for assessing and determining information regarding site and soil conditions that may affect the methods or cost of construction of the scope. Supplier shall ascertain actual locations of utilities and substructures that may affect the Work. Supplier shall exhaust all available means to provide assurance to Purchaser that the Work may proceed unobstructed.
- 17.5. Supplier shall consider all documents/specifications/drawings/exhibits provided by Purchaser prior to commencement of the Work to ensure mitigation of any conflicts or potential issues. Supplier shall immediately suspend related work and notify the Purchaser Representative if any discrepancies or constructability issues are identified. Supplier may continue to perform work not affected by the discrepancy.
- 17.6. Supplier shall adhere to the following Submittal & Completion Schedule, submitting, completing, or achieving each item by the specified time:

<b>Deliverable/Event/Milestone</b>	<b>Days/ Completion/ Submittal Date</b>	<b>Submittal Schedule Code</b>
P.O. Issued	TBD	-
Project kickoff meeting	Within 10 Days	DAE
Submittal of Supplier's Construction Manager Resume	With Proposal	WBP
Submittal of subcontractors and vendors list	With Proposal	WBP
Submittal of High Level Construction Plan	With Proposal	WBP
Submittal of Construction Plan (refer to paragraph 14.1)	Within 10Days	DAE
Mobilization	01 <sup>st</sup> Oct 2015	-
Progress meetings	Weekly	DAC
Safety tailboard meetings	Daily/each shift	DAC
Project Schedule Updates	Bi-Weekly	DAC
Inspection and Testing Reports	As Completed/and final package at conclusion of the	-

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Deliverable/Event/Milestone	Days/ Completion/ Submittal Date	Submittal Schedule Code
	phases	
Completion of Project Phase – I	15 <sup>th</sup> Dec 2015	-
Final Report Phase – I (with all submittals)	22 <sup>nd</sup> Dec 2015	-

Schedule Codes

- TBA: To be advised
- TBD: To be determined
- WBP: With Bid Proposal
- DAE: Business Days after Effective Date of Contract
- DBS: Business Days before Shipment to Manatee Plant
- DAC: Business Days after Supplier Project Manager arrives on site

18.0 MILESTONE DEFINITIONS

18.1. Release for Procurement of Materials

Supplier will achieve *Release for Procurement of Materials* milestone upon satisfaction of the following:

- Purchaser has reviewed all Supplier submittals related to the work and has approved all submittals to proceed with procurement
- Purchaser has received permit approval from the authorities having jurisdiction.

18.2. Completion of Construction

Supplier will achieve *Completion of Construction* milestone upon satisfaction of the following:

- All submittals required in the Contract have been provided and accepted as complete by Purchaser Representative.
- Construction of all the features included in the project plans and specifications is complete.
- Punch list has been developed
- Notification by Supplier to Purchaser

18.3. Final Acceptance

Supplier will achieve *Final Acceptance* milestone and Purchaser shall issue written notification of Final Acceptance upon satisfaction of all of the following:

- Supplier has provided and Purchaser has approved all submittals and deliverables required in the Contract
- All construction activities are complete

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- Supplier has been completely demobilized and Supplier laydown, temporary facilities, and work areas returned to their original or Purchaser approved condition
- All punch list items have been completed to Purchaser's satisfaction, with no defective or incomplete portions of the Work remaining
- Supplier has provided as-built drawings to Purchaser
- All waste and debris has been disposed of properly, with documentation provided to Purchaser
- Written waiver and final release of liens has been submitted to Purchaser
- All findings from Purchaser or Third Party Consultant have been resolved
- All other outstanding obligations of Supplier hereunder have been performed
- Final report issued and accepted by Purchaser

18.4. Final Report

Final Report shall include the following:

- All QA / QC Reports
- As Built Drawings
- Problem Resolutions
- Dissertation of work completed
- Weekly Progress Reports – Appendix A
- Pictures – Appendix B
- 3<sup>rd</sup> Party Inspection Reports – Appendix C

19.0 OPERATIONS & MAINTENANCE MANUAL (NOT USED)

20.0 WASTE AND DISPOSAL MANAGEMENT, AND ENVIRONMENTAL CONTROLS

20.1. Waste and Disposal Management General Provisions - The following requirements apply to Supplier and its Subcontractor(s)

- 20.1.1. Comply with all applicable waste management laws, regulations, and all applicable permits. Responsible for management of and proper disposal of all wastes brought and generated at the Jobsite. Dispose of all materials and components that were removed as part of the scope of work.
- 20.1.2. Comply with, maintain, and renew all required permits. Supplier shall not allow, bring, or transport any wastes on site without prior approval by Purchaser.

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- Submit a list of all wastes to be brought on the Jobsite or generated on site to Purchaser prior to bringing or generating wastes at the Jobsite.
- 20.1.3. Must keep Purchaser informed regarding the status of all wastes on the Jobsite and disposal of all wastes removed from the Jobsite.
  - 20.1.4. Conduct activities in a manner designed to prevent pollution of the environment and release of any wastes.
  - 20.1.5. Responsible for prompt removal of liquid and solid waste from on-construction activities and shall maintain good housekeeping and safe conditions. This includes, but is not limited to, use of oil during on-site work, oily rags, any potentially hazardous waste, include chemical cleaning waste and water used to flush.
  - 20.1.6. Ensure all wastes brought on site are transported only by carriers maintaining valid permits and operating in compliance with all laws regarding wastes pursuant to manifest and shipping documents
  - 20.1.7. Ensure all wastes are treated and disposed of at Purchaser approved treatment, storage, and disposal facilities that maintain valid permits for the waste being managed.
  - 20.1.8. Cooperatively perform an environmental risk assessment with Purchaser to identify any environmental hazards that may be presented prior to any work being performed. Should work scope or construction activities change, affected activities shall cease until agreed-upon countermeasures are implemented to mitigate any new risks identified.
  - 20.1.9. Execute all waste management activities per the Purchaser approved waste management plan and in cooperative effort with Purchaser.
- 20.2. Environmental Control Program (ECP) - The following requirements apply to Supplier and its Subcontractor(s)
- 20.2.1. Develop and maintain an Environmental Control Program (ECP) document to assure that all construction activities associated with the Project conform to best environmental practices, federal, state and local regulations, applicable permit conditions, and any other construction constraints identified in the Project's environmental permitting process. A secondary purpose of the ECP is to provide the basis for emergency response programs that will be in place during the construction period.
  - 20.2.2. The ECP assigns specific responsibilities for compliance with environmental restrictions and response to emergency situations during construction activities. The ECP shall contain a process for monitoring the activities of each Subcontractor during the construction period. This process includes, but is not limited to, Supplier meetings, site inspections, Supplier reviews, non-compliance reporting procedures, emergency action procedures, and Supplier reporting procedures.

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APPENDIX A – SCOPE OF WORK AND SPECIFICATION

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- 20.2.3. The ECP must also contain an Emergency Action Plan, Oil Spill Response Plan, and a Spill Prevention Control and Countermeasure Plan, which serve as the basis for responses to potential environmental emergencies at the site.
- 20.2.4. The ECP document shall also include a matrix of permit compliance activities, due dates, responsible person, and current status. The ECP shall also include copies of Supplier's environmental permits and regulations applicable to the Project.
- 20.2.5. The ECP document shall be submitted to Purchaser for review prior to beginning of the Construction Phase.
- 20.2.6. In the event the Supplier becomes aware of any imminent conditions of non-compliance or receives either a letter of non-compliance or notice of violation, Supplier shall immediately contact Purchaser's Project Manager and Purchaser's Construction Manager, and initiate appropriate measures to correct the non-complying condition or activity and prevent its reoccurrence.
- 20.2.7. Purchaser shall reserve the right to conduct periodic environmental audits of Supplier's project activities. Audit findings in non-compliance with the project permit requirements, regulatory requirements, or Supplier's ECP, shall be immediately corrected by Supplier.
- 20.2.8. To mitigate potential risks in the referenced Environmental Risk Mitigation Plan, Supplier shall ensure that all mitigation actions are in place prior to on-site work.
- 20.2.9. Supplier shall provide all methods, means, facilities, and monitoring to prevent contamination of soil, water, and atmosphere from discharge of noxious and toxic substances, and pollutants produced by construction operations, including diesel and gasoline powered engines and other equipment.
- 20.2.10. All work shall be completed in such a manner to minimize raising dust from construction operations. Positive means shall be provided to prevent air-borne dust from dispersing into the atmosphere.
- 20.2.11. Supplier shall provide all methods, means, facilities, and monitoring to prevent erosion of soil entering existing waterways and catch basins/underground drainage system during construction operations.



PMT COOLING POND SOIL-CEMENT REPLACEMENT PROJECT  
CONSTRUCTION SPECIFICATIONS  
SECTION A – TURBIDITY CONTROL

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SECTION A TURBIDITY CONTROL

PART 1 - GENERAL

1.01 SCOPE

- A. Supplying labor, equipment and materials and utilize appropriate means and methods of turbidity controls necessary and sufficient to meet all requirements specified herein, comply with the requirements in any applicable permits and any other requirements to satisfy the authorities having jurisdiction.

1.02 APPLICABLE PUBLICATIONS

- A. The environmental protection rules and standards in the applicable sections of the Florida Administrative Code (F.A.C.) incorporated herein by reference are:
1. <http://www.dep.state.fl.us/legal/Rules/rulelistnum.htm>
  2. Design and Performance Standards - 62-25.025 F.A.C.
  3. Quality Assurance - 62-160 F.A.C.
  4. Surface Waters of the State - 62-301 F.A.C.
  5. Surface Water Quality Standards - 62-302 F.A.C.
  6. Generic Permits - 62-621.300(2) & (4) F.A.C.

1.03 DEFINITIONS (NOT USED)

1.04 SUBMITTALS

- A. All proposals and submissions by the Supplier and all responses by the Purchaser Representative shall be in writing. Acceptance of the Supplier's proposals and submissions by the Purchaser shall not relieve the Supplier of his responsibility for the work as defined by the Contract.
- B. The Supplier shall submit a detailed Turbidity Control and Monitoring Plan for review and approval to the Purchaser Representative prior to beginning work. Supplier submissions shall include qualifying documentation for all materials and products including:
1. Detailed information on the turbidity barriers and proposed layout.
  2. Detailed information and calibration data on the turbidity monitoring equipment, proposed monitoring locations and frequency.
  3. Periodical Turbidity monitoring reports.

1.05 QUALIFICATIONS (NOT USED)

1.06 RESPONSIBILITIES

PMT COOLING POND SOIL-CEMENT REPLACEMENT PROJECT  
CONSTRUCTION SPECIFICATIONS  
SECTION A – TURBIDITY CONTROL

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- A. The Supplier shall provide on onsite representative certified by the Florida Department of Environmental Protection as a Stormwater Erosion and Sedimentation Control inspector.
- B. The Supplier is responsible for implementing a Turbidity Control and Monitoring Plan in compliance with the requirements in these specifications and any applicable permits, and any additional requirements to satisfy the authorities having jurisdiction.

1.07 CERTIFICATIONS AND TESTING (NOT USED)

1.08 INSPECTION COORDINATION

- A. The Supplier shall provide access to the Work for the Purchaser Representative on a continual basis as required for inspection by the Purchaser.

1.09 WARRANTY (NOT USED)

PART 2 - PRODUCTS

2.01 TURBIDITY BARRIERS

- A. The Supplier shall provide full depth turbidity barriers that are flexible and impermeable.
- B. The Supplier shall provide floats for barriers of sufficient buoyancy to prevent the top of the barrier from submerging under any water and wind conditions. If the top of the barrier becomes submerged for any reason, the Supplier shall suspend construction operations until the condition is corrected.
- C. The Supplier shall provide and maintain an anchoring system to secure the barriers in position. Attach weights to the barrier as necessary to keep the fabric at an angle to the vertical of 30 degrees or less.

PART 3 - EXECUTION

3.01 TURBIDITY CONTROL

- A. The Supplier shall install and maintain turbidity barriers as necessary to maintain turbidity outside of the work area below permit compliance levels. Barriers shall be installed prior to the commencement of any work on the upstream embankment slope and maintained in place until construction is complete, and turbidity from construction has dissipated and turbidity levels return to background levels based on monitoring results.
- B. Any rips or tears that occur in the turbidity barrier material during use shall be repaired or replaced immediately by the Supplier at its expense. Rips or tears that occur in the turbidity barrier material in use that are not repaired or replaced immediately by the Supplier will result in a suspension of construction operations, and shall require repairs and replacements as a prerequisite to the resumption of work.



PMT COOLING POND SOIL-CEMENT REPLACEMENT PROJECT  
CONSTRUCTION SPECIFICATIONS  
SECTION A – TURBIDITY CONTROL

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- C. The Supplier shall conduct its operations at all times in a manner that minimizes turbidity. The Supplier is required to conform to the requirements herein and to meet the special requirements of any environmental permits that may be necessary.
- D. Turbidity controls shall be inspected by the Supplier every workday, after every rainfall event of 0.5 inches or greater in a 24-hour period, and after every extreme weather event that could dislodge or damage the turbidity controls, to assure that the turbidity controls remain properly installed, undamaged, and fully functional at all times.

### 3.02 TURBIDITY MONITORING

- A. The Supplier shall conduct and record the results of turbidity monitoring appropriate to the conditions and at the locations, times, and frequencies specified below.
- B. Background Monitoring Location: At least 1,000 feet upstream of the construction activities, at least 50 feet away from the water's edge, at mid-depth in the water column, and outside of any visible turbidity plume.
- C. Compliance Monitoring Location: At a point no greater than 500 feet downstream of the construction activities, at least 50 feet away from the water's edge, at mid-depth in the water column, in the densest portion of any visible plume.
- D. Sampling Time:
  - 1. During Activities or Environmental Conditions that Can Generate Construction-Related Turbidity: Water samples for turbidity measurement shall be collected beginning no sooner than one hour after and no later than two hours after construction activity commences and every four hours thereafter until the work day ends or as directed by FPL. Water samples shall be collected at the same time(s) every workday according to this schedule. Any substantial deviation from this schedule must be approved by the Purchaser Representative, unless otherwise compelled by force majeure, in which case, an explanation must be provided verbally as soon as possible and in writing within 48 hours of the deviation.
  - 2. During Activities and Conditions That Cannot Generate Construction-Related Turbidity: Once daily mid-morning. Water samples shall be collected at the same time every workday.
- E. Equipment: The turbidity monitoring equipment shall meet the specifications and be calibrated, maintained, repaired, and replaced according to the methods, procedures, and frequencies set forth in Chapter 62-160, F.A.C.
- F. Records Management: The individual conducting the turbidity monitoring shall transcribe the readings to the approved Turbidity Log Form and sign and date the form at the close of each monitoring day. The notebook containing the signed and dated daily turbidity log forms shall be accessible at the construction site during the workday.

The Supplier shall submit monitoring data (Turbidity Log Forms) bi-weekly or as directed by the FPL representative. Documents submitted shall contain the following information: Dates of

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CONSTRUCTION SPECIFICATIONS  
SECTION A – TURBIDITY CONTROL

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sampling and analysis, a statement describing the methods used in collection, handling, storage, and analysis of the samples, a map indicating the sampling locations, a statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, and limits of detection and accuracy of the data. The monitoring reports that also include the following information for each sample that is taken: Time of day samples taken, overall depth of water, depth of sample, and weather conditions prior to sampling.

**3.03 EXCEEDANCES OF WATER QUALITY STANDARDS**

- A. If at any time, monitoring reveals the turbidity levels, at the compliance sampling station are greater than 29 NTUs above the corresponding background sample, construction activities shall cease immediately and not resume until corrective measures have been taken and turbidity has returned to acceptable levels. Turbidity violations and corrective measures shall be documented in the monitoring reports.
- B. The Supplier must notify the Purchaser Representative immediately of any exceedances of the water quality standards. The Supplier must also follow applicable notification procedures required by any environmental permits.

END OF SECTION

PMT COOLING POND SOIL-CEMENT REPLACEMENT PROJECT  
CONSTRUCTION SPECIFICATIONS  
SECTION B – SURFACE PREPARATION

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SECTION B SURFACE PREPARATION

PART 1 - GENERAL

1.01 SCOPE

- A. Supplying labor, equipment and materials for the preparation of the soil-cement surface to receive the concrete overlay. The extents of the concrete overlay shall be as shown on the Drawings. Surface preparation involves initial cleaning to remove any sediments and/or loose debris using hand tools, low-pressure washing and suction dredging; followed by pressure washing with a medium-pressure water jet. Alternative means for surface preparation can be proposed by the Supplier, subject to approval by the Purchaser. Disposal of dredge sediments using best practices to maintain turbidity levels within the specified range should also be considered part of this Specification.

1.02 APPLICABLE PUBLICATIONS (NOT USED)

1.03 DEFINITIONS (NOT USED)

1.04 SUBMITTALS

- A. All proposals and submissions by the Supplier and all responses by the Purchaser Representative shall be in writing. Acceptance of the Supplier's proposals and submissions by the Purchaser shall not relieve the Supplier of his responsibility for the work as defined by the Contract.
- B. The Supplier shall submit a detailed Surface Preparation Plan for review and approval to the Purchaser Representative prior to beginning work. The plan shall include detailed information of the equipment to be used, surface preparation procedures, and disposal of the debris and sediments.
- C. Supplier and third party QA/QC reports for this process shall be supplied on demand by FPL representative.

1.05 QUALIFICATIONS (NOT USED)

1.06 RESPONSIBILITIES

- A. The Supplier shall provide a full time coordinator who shall be present at all times during the performance of the work and who shall be experienced in the procedures involved in this task.
- B. The Supplier is responsible for performing the work described herein in accordance with all applicable regulations, adhering to the diving safety procedures, and monitoring plan.
- C. The Supplier is responsible for obtaining any necessary environmental permits and conducting any necessary compliance monitoring.

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CONSTRUCTION SPECIFICATIONS  
SECTION B – SURFACE PREPARATION

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- D. The Supplier is responsible for disposal of the soils/sediments excavated from the trench at a location approved by the Purchaser.
- E. The Purchaser Representative will identify soil/sediment acceptable disposal areas within and outside cooling pond.
- F. The Supplier is responsible for providing, installing, and maintaining turbidity barriers during the excavation of the trench and disposal of the soils/sediments.

1.07 CERTIFICATIONS AND TESTING

1.08 INSPECTION COORDINATION

- A. The Supplier shall provide access to the Work for the Purchaser Representative on a continual basis as required for inspection and testing.

1.09 WARRANTY (NOT USED)

PART 2 - PRODUCTS

2.01 GEOTEXTILE CONTAINERS (GEOTUBES)

- A. If the excavation procedures involve the use of suction dredging with containment of the solids from the dredge slurry using geotubes, the Supplier is responsible for the adequacy of the geotubes.
- B. Geotubes should be designed such that they have adequate permeability to accommodate the slurry flow while containing the dredged solids, and sufficient strength to withstand the pressures during filling and the anticipated stresses from handling once filled.

PART 3 - EXECUTION

3.01 INITIAL CLEANING

- A. The above-water portion of the soil-cement to be rehabilitated shall be cleaned to remove any sediment and loose debris using hand tools or low-pressure washing. If low-pressure washing is used, sufficient time should be allowed for the sediments washed onto the pond water settle before proceeding with the underwater cleaning.
- B. The underwater portion of the soil-cement to be rehabilitated shall be cleaned using suction dredging methods or other method approved by FPL. The dredge slurry should be pumped into a designated settling area identified by the Purchaser. The settling area should be enclosed by full depth turbidity curtains. Alternatively, geotextile containers (geotubes) can be used to separate soils/sediments from the dredge slurry. The solids collected in the geotubes can be disposed outside the pond at a suitable area identified by the Purchaser or deposited at the bottom of the cooling pond after it is stabilized. If the sediments are disposed at the bottom of the cooling pond at a location approved by FPL, the Supplier shall remove the geotube fabric in its entirety and dispose it offsite.

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CONSTRUCTION SPECIFICATIONS  
SECTION B – SURFACE PREPARATION

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The soils shall then be spread within the area enclosed by the turbidity barriers in a manner that will minimize the suspension of fines and the development of turbidity.

3.02 PRESSURE WASHING

- A. The entire surface of the soil-cement revetment to receive the concrete overlay shall be pressure washed with a stream of water under a pressure of 1,000 to 2,000 psi to remove any loose/deteriorated soil-cement and/or any deleterious deposits adhered to the soil-cement surface. Care should be exercised to prevent erosion of the sound soil-cement mass.
- B. Additional cleaning immediately preceding concrete placement will be required if sediments greater than 1/8 of an inch are observed by the supplier, third party inspector or the FPL representative.

END OF SECTION



PMT COOLING POND SOIL-CEMENT REPLACEMENT PROJECT  
CONSTRUCTION SPECIFICATIONS  
SECTION C – EXCAVATION OF BOTTOM KEY TRENCH

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SECTION C EXCAVATION OF BOTTOM KEY TRENCH

PART 1 - GENERAL

1.01 SCOPE

- A. Supplying labor, equipment and materials for the underwater excavation of a key trench along the upstream embankment toe as shown on the Drawings. Disposal of excavated soils and sediments using best practices to maintain turbidity levels within the specified range should also be considered part of this Specification.

1.02 APPLICABLE PUBLICATIONS

1.03 DEFINITIONS (NOT USED)

1.04 SUBMITTALS

- A. All proposals and submissions by the Supplier and all responses by the Purchaser Representative shall be in writing. Acceptance of the Supplier's proposals and submissions by the Purchaser shall not relieve the Supplier of his responsibility for the work as defined by the Contract.
- B. The Supplier shall submit a detailed excavation plan for review and approval to the Purchaser Representative prior to beginning work. The plan shall include detailed information on the equipment to be used, excavation methods, and means/methods for the disposal of the excavated materials based on the type of excavation as well as the disposal location.
- C. Third party inspection reports prior to and post concrete placement.

1.05 QUALIFICATIONS (NOT USED)

1.06 RESPONSIBILITIES

- A. The Supplier shall provide a full time coordinator who shall be present at all times during the performance of the work and who shall be experienced in the procedures involved in this task.
- B. The Supplier is responsible for performing the work described herein in accordance with all applicable regulations, adhering to the diving safety procedures, and monitoring plan.
- C. The Supplier is responsible for conducting any necessary compliance monitoring.
- D. The Supplier is responsible for disposal of the soils/sediments excavated from the trench at a location approved by the Purchaser.
- E. The Purchaser Representative will identify soil/sediment acceptable disposal areas within and outside cooling pond.

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CONSTRUCTION SPECIFICATIONS  
SECTION C – EXCAVATION OF BOTTOM KEY TRENCH

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- F. The Supplier is responsible for taking all necessary precautions to minimize undermining of the toe of the embankment and soil-cement revetment during the excavation of the toe trench and construction of the concrete key.
- G. The Supplier is responsible for providing, installing, and maintaining turbidity barriers during the excavation of the trench and disposal of the soils/sediments.

1.07 CERTIFICATIONS AND TESTING (NOT USED)

1.08 INSPECTION COORDINATION

- A. The Supplier shall provide access to the Work for the Purchaser Representative and third party inspector on a continual basis as required for inspection.

1.09 WARRANTY (NOT USED)

PART 2 - PRODUCTS

2.01 GEOTEXTILE CONTAINERS (GEOTUBES)

- A. If the excavation procedures involve the use of suction dredging with containment of the solids from the dredge slurry using geo-tubes, the Supplier is responsible for the adequacy of the geo-tubes.
- B. Geo-tubes should be designed such that they have adequate permeability to accommodate the slurry flow while containing the dredged solids, and sufficient strength to withstand the pressures during filling and the anticipated stresses from handling once filled.

PART 3 - EXECUTION

3.01 TRENCH EXCAVATION

- A. The trench shall be sized as needed to allow the construction of a concrete key with the minimum dimensions shown in the Drawings. The minimum three-foot depth shall be measured from the lowest point of the bottom of the existing soil cement; the minimum two-foot width shall be considered as a two foot width with vertical sides. Any slopes that artificially expand the top width shall not be considered part of the two foot width. Alternate designs using sloped sides may be proposed as long as the result includes a minimum two-foot width at the bottom and a three-foot total effective depth.
- B. If the trench is excavated using mechanical methods, the excavated soils can be disposed at the bottom of the cooling pond, in close proximity to the excavation. The soils shall be spread within the area enclosed by the turbidity barriers in a manner that will minimize the suspension of fines and the development of turbidity. Soils may be spread after construction is complete as long as turbidity barriers are in place.



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- C. If the trench is excavated using suction dredging methods, the dredge slurry should be pumped into a designated settling area identified by the Purchaser. The settling area should be enclosed by full depth turbidity curtains. Alternatively, geotextile containers (geo-tubes) can be used to separate soils/sediments from the dredge slurry. The solids collected in the geo-tubes can be disposed outside the pond at a suitable area identified by the Purchaser or deposited at the bottom of the cooling pond after it is stabilized. If the sediments are deposited at the bottom of the cooling pond, the Supplier shall remove the geo-tube fabric in its entirety and dispose of it offsite. The soils shall then be spread within the area enclosed by the turbidity barriers in a manner that will minimize the suspension of fines and the development of turbidity.
- D. The trench must be founded in well-consolidated sands. Before placement of concrete, the trench shall be cleaned of debris and fine materials that would be subject to settlement.

END OF SECTION



SECTION D CONCRETE OVERLAY AND BOTTOM KEY

PART 1 - GENERAL

1.01 SCOPE

- A. Supplying materials, mixing, and placing reinforced, cast-in-place concrete as shown and described on the Drawings and in this Specification. Developing concrete mix design(s) that the performance requirements. This specification includes concrete placement above and below water. Conformance test shall be performed with the requirements of this specification.

1.02 APPLICABLE PUBLICATIONS

- A. American Society of Testing Materials, (ASTM – latest edition):
1. ASTM A615:  
Standard Specification for Deformed and Carbon Steel Bars for Concrete Reinforcement.
  2. ASTM A775 - Standard Specification for Epoxy-Coated Steel Reinforcing Bars
  3. ASTM C1116:  
Standard Specification for Fiber-Reinforced Concrete.
  4. ASTM D7508:  
Standard Specification for Polyolefin Chopped Strands for Use in Concrete
  5. ASTM C33:  
Standard Specification for Concrete Aggregates.
  6. ASTM C39:  
Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
  7. ASTM C94:  
Standard Specification for Ready-Mixed Concrete.
  8. ASTM C105:  
Standard Specification for Portland Cement.
  9. ASTM C143:  
Standard Testing Method for Slump of Portland Cement Concrete.
  10. ASTM C231:  
Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.

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11. ASTM C260:  
Standard Specification for Air-Entraining Admixtures for Concrete.
12. ASTM C494:  
Standard Specification for Chemical Admixtures for Concrete.
13. ASTM C1017:  
Standard Specification for Chemical Admixtures for Use-In Producing Flowing Concrete.
14. ASTM C309:  
Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
15. ASTM C171:  
Standard Specification for Sheet Materials for Curing Concrete.
- B. American National Standards Institute/American Welding Society, (ANSI/AWS):
  1. ANSI/AWS D 1-4:  
Structural Welding Code – Reinforcing Steel.
- C. American Concrete Institute, (ACI):
  1. ACI 301:  
Specification for Structural Concrete.
  2. ACI 304.6R-00:  
Guide for Measuring, Mixing, Transporting, and Placing Concrete.
  3. ACI 305R-10:  
Specification for Hot Weather Concreting.
  4. ACI 306R-10:  
Specification for Cold Weather Concreting.
  5. ACI 318:  
Building Code Requirements for Structural Concrete.
  6. ACI 544.2R:  
Measurement of Properties of Fiber Reinforced Concrete
  7. ACI 347:  
Guide to Formwork for Concrete.
  8. ACISP 04:  
Formwork for Concrete.
  9. ACISP 66:  
ACI Detailing Manual.

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1.03 DEFINITIONS (NOT USED)

1.04 SUBMITTALS

- A. All proposals and submissions by the Supplier and all responses by the Purchaser Representative shall be in writing. Acceptance of the Supplier's proposals and submissions by the Purchaser shall not relieve the Supplier of his responsibility for the work as defined by the contract.
- B. Supplier submissions to the Purchaser Representative shall include qualifying documentation for all materials and products including.
1. Proposed concrete mix design(s) that meet the minimum performance criteria for the various types of concretes as shown on the Drawings and specified in Section 2.02 of this Specification. The mix design shall detail proportions including supporting trial mix results and certification that the mix proportions will produce concrete of the specified quality and yield; anticipated slumps for each proposed mix before and after addition of superplasticizer.
  2. Documentation that the plant, equipment, and all materials to be used in the concrete comply with the requirements of ACI 301.
  3. Mill certificates for reinforcing steel.
  4. Reinforcing bar detail lists and placing drawings shall be submitted to the Purchaser Representative for his records.
  5. Mill certificates for cement and supplemental cementing materials.
  6. Fiber reinforcing product data including storage and handling requirements, mixing and preparation requirements, and installation methods.
  7. Description of the proposed concrete batching plant and conveying systems, including capacity, admixture provision batching system, cold weather capabilities, hot weather capabilities, quality control procedures.
  8. The Supplier shall submit the name and qualifications of the proposed Ready Mix Concrete Supplier (Concrete Supplier) at least 21 days prior to placing concrete. The Purchaser Representative will verify acceptability of the Concrete Supplier. Acceptance of the Concrete Supplier and the concrete mix design(s) by the Purchaser does not relieve or reduce the responsibility of the Supplier or Concrete Supplier from the requirements of this Specification.
  9. Supplier shall submit to the Purchaser Representative qualifying documentation for Water-Reducing Admixture; Water-Reducing High Range Admixture (Superplasticizer); Accelerating Admixtures and fiber reinforcement including: Manufacturer, Proposed dosage, and timing of addition for each class of concrete, as applicable, and Type of admixture (retarding, accelerating, normal set).

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10. Note that submissions to the Purchaser Representative and reviews of submissions by the Purchaser shall be completed prior to placing any concrete or doing any concrete work. The Supplier shall schedule the submissions to allow for at least two weeks for review by the Purchaser.

1.05 QUALIFICATIONS (NOT USED)

1.06 RESPONSIBILITIES

- A. The Supplier is responsible for the supply, storage, and handling of all materials set forth in this Specification. Materials are to be obtained from the same source of supply or Manufacturer for the duration of the contract.
- B. The evaluation of concrete quality shall be the responsibility of the Supplier and shall be carried out as outlined in Drawing Plan.
- C. The Supplier shall provide a full time coordinator who shall be present at all times during concrete work and who shall be thoroughly trained and experienced in placing the types of concrete specified and who shall direct all the work performed under this specification. The coordinator shall have the authority to request that mixing trucks return to the batch plant if delivery times are exceeded or to interrupt work if any other quality issues are not being met.
- D. The Supplier shall, at the start and during the course of Work where appropriate, meet with the Purchaser Representative for the review of the following:
  1. Proposed equipment and methods for storing constitutive components, mixing, and conveying concrete. The Supplier shall provide documentation that the concrete supplier meets industry certification.
  2. Supplier's Quality Control Program. The concrete supplier shall implement a Quality Control Plan to ensure that the Owner and Supplier's performance requirements will be met.
  3. Inspection and testing of cement, aggregate, water, admixtures, reinforcement, and storage of these materials.
  4. Proposed form material, form ties, and form release materials. The Supplier shall provide calculations for all concrete formwork and shoring, sealed by a Professional Engineer.
  5. Concrete mix designs with regard to strength, performance, shrinkage, porosity, durability, and suitability for Project requirements. The concrete supplier shall submit documentation to the satisfaction of the Owner demonstrating that the proposed mix design(s) will achieve the required strength, durability, and performance requirements.
  6. Proposed methods of placing concrete.
  7. Proposed methods and materials for supporting and securing reinforcement items to be cast-in and formwork including details of the reinforcement chairs and spacers.

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8. Proposed details and positions of construction and crack control joints.
  9. The inspection by the Purchaser and/or third party inspector of formwork, reinforcement, cast-in items, and preparation of existing concrete. Inspection by the Purchaser and/or third party inspector of formwork shall be for conformance with the project documents, but not for structural strength and stability, which is the sole responsibility of the Supplier.
  10. Sampling and testing of concrete and inspection of concrete placement procedures.
  11. Preparation of existing soil-cement for bonding to new concrete.
  12. Proposed curing methods, stripping times and hot and cold weather protection and concreting procedures.
- E. The Supplier shall submit test results to the Purchaser Representative for review within 5 working days of the tested concrete placement.
- F. The Supplier shall keep all records of the following:
1. Temperature, slump, and air content of the plastic concrete and strength tests.
  2. A certificate of accuracy of the scales at the batch plant or approved measurement/accounting records for quantities if supplier batch plant is utilized.
  3. Temperature at the time of concrete placement.
  4. Delivery tickets or concrete mixing records (if supplier batch plant is utilized): The Supplier shall ensure that the records indicate where the delivered concrete was used so that remedial action can be taken if it is subsequently determined that the concrete is unsuitable for use.
- G. Placing concrete in hot weather shall be in accordance with recommended practice for hot weather concreting (ACI-305). Concrete with a placement temperature that will cause loss of slump, flash set or cold joints shall not be used.
- H. Placing concrete in cold weather shall be in accordance with recommended practice for cold weather concrete placement (ACI-306). Concrete shall be placed with the mix temperature between 50°F and 90°F. When the mean daily outdoor temperature is at or below 40°F, the concrete shall be maintained between 50°F and 70°F for the required curing period. Concrete will not be placed against or on frozen material.

#### 1.07 CERTIFICATIONS AND TESTING

- A. The compressive strength tests shall conform to ASTM C39, "Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens".
- B. A set of four standard cylinders shall be molded and tested from the first placement of 50 cubic yards, or any fraction thereof, placed each day. Additional sets shall be molded and tested for each additional 50 cubic yards, or fraction thereof, placed in the same day.

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- C. Unconfined compressive strength tests shall be performed on one of the cylinders at 7 days and two of the cylinders at 28 days, holding the fourth cylinder in reserve to verify the test results or test at a greater age if necessary. The acceptance of the test results shall be based on the average of the two specimens tested at 28 days as per ACI 318. Evaluation and acceptance of the concrete shall be per ACI 318, Chapter 5.
- D. The slump test shall conform to ASTM C143, "Standard Testing Method for Slump of Portland Cement Concrete". Tests shall be performed on the first two trucks delivering concrete for any placement, when molding test cylinders, and as specified by the Purchaser Representative.
- E. The air content shall be determined by testing in accordance with ASTM C231 or C173. Tests shall be performed on the first two trucks delivering concrete for any placement, when molding test cylinders, and as specified by the Purchaser Representative.

1.08 INSPECTION COORDINATION

- A. The Supplier shall provide access to the Work for the Purchaser Representative on a continual basis as required for inspection and testing.

1.09 WARRANTY (NOT USED)

PART 2 - PRODUCTS

2.01 FORMWORK

- A. The Supplier is responsible for the adequacy of all formwork and falsework, and for satisfying all codes and regulations governing formwork and falsework.
- B. All form lumber in contact with exposed concrete shall produce a smooth, hard, uniform texture on the concrete. It may be plywood, tempered concrete-form-grade hardboard, metal, plastic, or other acceptable material capable of producing the desired finish.
- C. Form ties shall be a type which does not leave an open hole through the concrete and which permits neat and solid patching at every hole. Wire ties and wood spreaders shall not be used. When forms are removed, all metal shall be not less than two inches from the surface. Alternative forming systems may be used subject to advance approval by the Purchaser Representative.
- D. All other materials not specifically described but required for proper completion of concrete formwork, shall be as selected by the Supplier subject to advance approval by the Purchaser Representative.
- E. Design and construction of all required forms shall be sufficiently tight to prevent leakage of mortar, and shall be able to prevent excessive deflection when filled with wet concrete. Design loads and pressures shall conform to those stipulated



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in "Guide to Formwork for Concrete Recommended Practice for Concrete Formwork", American Concrete Institute Publication ACI 347.

- F. All required cast-in-place concrete shall be formed to the shapes, sizes, lines, and dimensions indicated on the Drawings. Reinforcement and other such items required to be anchored in the concrete, shall be set before the concrete is placed.
- G. The forms shall be braced and/or anchored to maintain position and shape and to ensure safety to personnel. Bracing and supporting members of ample size and strength shall be constructed to safely carry, without excessive deflection, all dead, and live loads to which they may be subjected. The Supplier shall provide metal spreader ties that give positive tying and accurate spreading. Forms shall be constructed straight, true, plumb, and square.

2.02 CONCRETE MIX

- A. Portland cement shall be ASTM C150 Type I/II with minimum requirements as shown in Tables 1 and 2 unless otherwise shown on the Drawings.

Table 1  
 Minimum Requirement for Concrete Mix – Underwater Placement \*

Max. Size Aggregate (in.)	Total Entraining Air $\pm 1\%$	Minimum 28-Day Compressive Strength (psi)	Max. Water Cement	Min-Max Slump (in.)
3/4	5	3,000	0.40	7-10

\* Special Requirements - Shall include an anti-washout admixture conforming to ASTM C494, Type S for concrete and 5.0 lbs/cy of monofilament fiber approved by Purchaser

Table 2  
 Minimum Requirement for Concrete Mix – Above Water Placement\*

Max. Size Aggregate (in.)	Total Entraining Air $\pm 1\%$	Minimum 28-Day Compressive Strength (psi)	Max. Water Cement	Min-Max Slump (in.)
3/4	5	3,000	0.40	4-6

\* Special Requirements - Shall include 5.0 lbs/cy of monofilament fiber approved by Purchaser

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- B. All aggregates shall be handled to prevent segregation and inclusion of any foreign substances, and to obtain uniformity of materials. The coarse and fine aggregates, and aggregates secured from different sources, shall be piled in separate stockpiles.
- C. The maximum nominal size of coarse aggregate shall be ¾-inch. Coarse aggregate shall be uniformly graded and not more than 1% shall pass a No. 200 sieve. Coarse aggregate shall consist of crushed stone or gravel or a combination thereof, having hard, strong, durable particles free from elongation, dust, shale, earth, vegetable matter or other injurious substances.
- D. Fine aggregate shall be graded uniformly and not more than 3% shall pass a No. 200 sieve. Fine aggregate shall consist of sand, stone, screenings, other inert materials with similar characteristics, or a combination thereof.
- E. All concrete, unless otherwise specifically permitted by the Purchaser, shall be ready-mixed in accordance with ASTM C 94.

2.03 REINFORCEMENT

- A. All concrete reinforcement shall be new, free from rust, and comply with ASTM A615/A615M, ASTM A82, and ASTM A185.
- B. Concrete reinforcement shall be provided in accordance with the requirements of ACI 318.
- C. Reinforcement shall be epoxy coated for protected from corrosion. Epoxy coating for reinforcing and accessories, where indicated, shall conform to ASTM A775.
- D. Epoxy coated reinforcing bars shall be stored, transported, and placed in such a manner as to avoid chipping of the epoxy coating. Non-abrasive slings made of nylon and similar materials shall be used. Specially coated bar supports shall be used. Chips or cracks in the epoxy coating shall be repaired with a compatible epoxy repair material prior to placing concrete.
- E. Concrete reinforcement shall be fabricated in strict accordance with the approved shop drawings. The Supplier shall not use bars with kinks or bends not shown on the Drawings or on the accepted shop drawings. Bending or straightening steel, which has been partially embedded in hardened concrete or in any other manner that will injure the material will not be permitted. Any bending shall be done cold. Bends for stirrups and ties shall be made around a pin having a diameter not less than four times the minimum thickness of the bar. Bends for other bars, including hooks, shall be made around a pin having a diameter not less than six times the minimum thickness of the bar for bars up to one inch in diameter and eight times the minimum thickness of the bar for bars over one inch in diameter.
- F. Before the start of concrete placement, all concrete reinforcement shall be accurately placed, secured, and supported with chairs, spacers, or metal hangers. The Supplier shall provide a minimum 6 inches of concrete covering for all reinforcement as shown on the drawings.
- G. The Supplier shall place bars with minimum laps at splices sufficient to develop the strength of the bars. Bars may be wired together at laps. Only splices indicated on the approved shop drawings or specifically approved by the

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Purchaser shall be made. Welded splices shall not be used unless specifically approved by the Purchaser. Steel dowels, if required, shall be placed and securely anchored into position before the concrete is placed.

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PART 3 - EXECUTION

3.01 CONCRETE DELIVERY

- A. The Supplier's on-site construction superintendent and the concrete supplier shall attend a pre-placement meeting with the Purchaser Representative at least two weeks prior to the first scheduled placements. The concrete placement plan may be revised at the request of the Supplier or Purchaser Representative based on the meeting. Concrete placement shall not proceed until the revised placement plan has been submitted and approved by the Purchaser.
- B. The maximum time allowed for all types of concrete to be delivered to the site of the Work, including the time required to discharge, shall not exceed 90 minutes from the time concrete was mixed, if centrally mixed, or from the time the original water was added, if transit-mixed, or before the drum has been revolved [300] revolutions, whichever is first.
- C. Under no circumstances shall the Supplier add retarders to the concrete mix without first obtaining the written approval of the Purchaser.

3.02 CONCRETE PLACEMENT

- A. The Supplier shall give the Purchaser Representative a minimum of two days advance notice of a concrete placement date.
- B. Concrete placement shall not be started until the Purchaser and/or the third party inspector has inspected and approved all forms, reinforcement, and methods of mixing, conveying, spreading, consolidating, finishing, curing, and protection of the concrete.
- C. The concrete shall be deposited in a manner meeting with the approval of the Purchaser, and the concrete placing shall not begin until the Purchaser's approval has been obtained. Concrete placed underwater shall be pumped and tremied in a manner that reduces exposure to free water. The Purchaser may stop the Supplier from placing concrete in the event of adverse or even threatening adverse weather conditions when, in the Purchaser's opinion, these weather conditions may adversely influence the proper placing of the concrete.
- D. All equipment proposed for use in mixing, conveying, placing and compacting concrete shall be approved by the Purchaser prior to its use. All the necessary equipment for any particular placement shall be on site and proven to be in working condition before the placement commences, with backup equipment on site as determined by the Purchaser. The equipment shall be well maintained, suitable in kind, and adequate in capacity for the work.
- E. In preparation for the concrete placement, all soils/sediments, loose soil-cement, debris and other deleterious matter shall be removed from the interior of forms.
- F. The forms (except in freezing weather) shall be thoroughly wet or oiled as needed. All transporting and handling equipment shall be thoroughly cleaned.

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- G. Concrete shall be placed in conformance with ACI 304. Concrete shall be conveyed from the mixer to the place of final deposit by a method that will prevent separation and loss of materials. Only equipment of such size and design as to ensure a practically continuous flow of concrete at the delivery end without loss or separation of materials shall be used. Concrete shall be deposited as nearly as possible in its final position to avoid segregation due to re-handling and flowing. Concrete shall be placed as dry as possible consistent with good workmanship, never exceeding the maximum specified slump. Concrete shall be placed in a manner that will avoid splashing forms or reinforcing bars and shall not be dropped freely more than two feet. When placing operations would involve free drop of concrete by more than two feet, it shall be deposited through metal or other pipes as approved by the Purchaser.
- H. Concrete shall be placed at such a rate that it is at all times plastic and flows readily between bare bars. Once concrete placement is started, it shall be a continuous operation until placement of the panel or section is complete.
- I. Concrete batches delivered to the job site shall be kept as uniform as possible in consistency and strength. The following shall be considered a basis for the rejection of the concrete delivered to the site:
1. Concrete that has been contaminated with foreign material;
  2. Slump exceeding maximum specified;
  3. Percent of entrained air outside specified limits; and
  4. The maximum time allowed for discharge has been exceeded.
  5. Unauthorized or un-accounted for water has been added to the mixing truck.
- J. Concrete placed underwater shall be relatively self-leveling, and self-consolidating. Concrete placed above water shall be consolidated with a vibrator, and then push-floated with a bull float as necessary.
- K. When concrete is to be placed by pump, properties shall be measured at discharge from the hose.
- L. All concrete shall be cured regardless of temperature, weather, or season, to protect it from premature drying, excessively hot or cold temperatures, and mechanical damage. Immediately upon removing formwork from vertical surfaces, water-curing procedures shall be initiated. Curing shall be continued for at least seven days.
- M. Alternative curing methods shall not be permitted unless written approval from the FPL representative has been obtained first.
- N. Moisture loss from surfaces placed against wooden forms or metal forms exposed to heating by the sun shall be minimized by keeping the forms wet until they can be safely removed. After form removal, the concrete shall be water cured until the end of the time prescribed.

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3.03 CONSOLIDATION OF CONCRETE

- A. Concrete shall be compacted thoroughly and uniformly to obtain a dense, homogeneous structure, free of cold joints, fill planes, voids and honeycombing. Formed surfaces shall be smooth and free from large air and water pockets. The concrete shall be well bonded to all reinforcement, hardware anchors, water stops and other embedded parts.
- B. Concrete for placement underwater shall be of a mix designed to prevent washout of the cement and promote self-consolidation.

3.04 CONSTRUCTION JOINTS

- A. Construction joints shall be constructed only as indicated on the Drawings or as shown in the concrete placement schedule, unless otherwise approved by the Purchaser.
- B. Saw-cut construction joints shall be constructed within 6 hours of placement or before shrinkage cracks develop.
- C. The surface of hardened concrete at construction joints shall be thoroughly cleaned prior to the placement of new concrete.

3.05 REMOVAL OF FORMS

- A. Forms may be removed, with Purchaser's approval, 24 hours after placement of concrete, but the time may be extended if deemed necessary. Nails, tie wires and form ties shall be cut off flush, and all surfaces shall be left smooth and clean.
- B. Immediately after forms have been removed, the Supplier and third party inspector shall inspect all concrete surfaces and patch all placement joints, voids, rock pockets, form tie holes, and other imperfections before the concrete is thoroughly dry. No patching of defective areas shall commence until the concrete has been inspected by the Purchaser.

3.06 SURFACE FINISH

- A. All exposed concrete surfaces shall receive an ordinary surface finish, unless otherwise indicated on the Drawings. Ordinary surface finish shall be defined as smooth, even concrete surfaces, free of all honeycomb, objectionable fins, projections, offsets, streaks or other surface imperfections. No remedial measures will be required for satisfactory ordinary surface finish beyond the filling of the holes or cavities caused by the removal of the snap ties and tie rods.
- B. Immediately after the removal of the forms, all defects in the concrete surfaces shall be brought to the attention of the Purchaser Representative, and such defects shall be repaired as herein specified or as the Purchaser may approve.

3.07 PATCHING

- A. Minor Areas:

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1. The Supplier shall chip away defective areas to a depth of about one inch, leaving edges perpendicular to the surface. The area to be patched and a margin area extending at least six inches beyond shall be thoroughly wet to prevent water being absorbed out of the mortar.
  2. Bonding agent approved by Purchaser shall be applied on the area to be patched. The patching mortar shall be applied after the bond becomes tacky.
  3. Patching mortar shall consist of one part cement to two and one-half parts (1:2 1/2) sand. With bonding agent added, the mortar shall be wetted to a consistency as dry as possible within the requirements of handling and placing. The mortar shall be thoroughly compacted by ramming it into place
  4. The patch shall be screeded off so as to leave the patch slightly higher than surrounding surfaces. It shall be left undisturbed for a period of one to two hours to permit initial shrinkage, before performing final finishing.
  5. The patch shall be finished to match adjacent surfaces and kept wet for at least seven days. The Supplier shall provide and install all required protective covering.
- B. Major Defective Areas: If the defects are serious or if patching does not satisfactorily restore the quality and appearance of the surface, the Purchaser may require the concrete be completely removed and replaced in accordance with the provisions of this section, all at no additional cost to the Purchaser.

END OF SECTION







# Site Information For Bidders Final Report FPL Manatee Plant

Cooling Pond Perimeter Dam Soil-Cement  
Revetment Rehabilitation  
Parrish, Florida

Project Number 300906



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To: Mr. Lewis Rounds, P.E.  
FPL Manatee Plant

Date: July 2015

From: Jeff Beriswill  
Amec Foster Wheeler Environment & Infrastructure, Inc.

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**CERTIFICATION  
Lakeland**

Engineering Certification

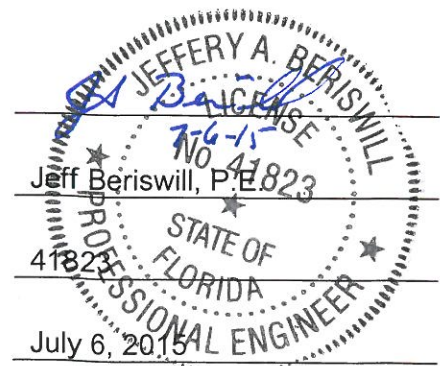
I hereby certify that I am a registered professional engineer in the State of Florida practicing with Amec Foster Wheeler Environment & Infrastructure, Inc., (Amec Foster Wheeler), as the successor in interest to AMEC Environment & Infrastructure, Inc., 2000 E. Edgewood Drive, Suite 215, Lakeland, FL 33803, a corporation authorized to operate as a business providing engineering consulting services (5392) by the State of Florida Department of Professional Regulation, Board of Engineers. I further certify that I, or others under my direct supervision, have prepared the geotechnical engineering evaluations, findings, opinions, calculations, conclusions or technical advice hereby represented in this report.

SIGNATURE:

NAME:

LICENSE NO:

Date:



**Report Title:** Site Information for Bidders Final Report  
FPL Manatee Plant  
Cooling Pond Perimeter Dam  
Soil-Cement Revetment Rehabilitation  
Parrish, Florida

July 2015

Project No: 300906



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# Site Information for Bidders Final Report

## FPL Manatee Plant

Cooling Pond Perimeter Dam

Soil-Cement Revetment Rehabilitation

Parrish, Florida

Project Number 300906

Prepared for:

Mr. Lewis Rounds, P.E.  
FPL Manatee Plant

Prepared by:

Amec Foster Wheeler Environment & Infrastructure, Inc.  
2000 E. Edgewood Dr., Ste. 215  
Lakeland, FL 33803

July 2015  
Project No. 300906

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APPENDIX F	Topographic Map Detailed Segments

## 1.0 INTRODUCTION

On behalf of Florida Power and Light (FPL), Amec Foster Wheeler Environmental & Infrastructure, Inc. (Amec Foster Wheeler) has completed a condition assessment and design for the rehabilitation of the perimeter dam soil-cement revetment at the FPL Manatee Plant Cooling Pond. The Plant is located at 19050 State Route (SR) 62 in Manatee County near Parrish, Florida (see **Figure 1**). This report describes our field investigations and presents our findings for others to use in the preparation of bids for the construction phase of the project.

### 1.1 Project Description

The FPL Manatee Plant Cooling Pond is located northeast of the power plant facility. The cooling pond was constructed in 1973 and 1974. The perimeter embankment designed by Mid Valley, Inc. (a division of Brown & Root, Houston). The perimeter embankment is approximately 48,000 feet (9 miles) long. The upstream slopes are protected from erosion by a layer of stair-stepped soil-cement. The designed upstream slope is 2 horizontal to 1 vertical (2H:1V) for the majority of the embankment, however the as-built slopes vary from approximately 1.5H:1V to 2.5H:1V.

Referring to **Figure 1**, an existing stationing system is established along the crest and is marked at an approximate interval of every 500 linear feet from Station 5+00 (STA 5+00) at the eastern side of its southern embankment to STA 475+00 at the eastern side of its northern embankment. The stationing is approximate and is estimated to vary by approximately  $\pm 50$  feet over 500 feet. A spillway structure is located on the northern embankment at STA 334+04 in addition to discharge and intake structures near the plant at STA 148+31 and STA 162+16 on the western embankment, respectively.

In October of 2014, FPL requested an in-depth inspection of the existing soil-cement slopes of the cooling pond. FPL has determined that the upstream soil-cement face of the embankment is deteriorating and required further evaluation. An inspection and comprehensive engineering evaluation of the entire 48,000 linear feet of the pond's perimeter dam soil-cement revetment has been completed. The information provided in this report is limited to the segment of the perimeter dam at the northwest corner of the reservoir, between stations 270+00 and 300+00.

## 2.0 CONDITION ASSESSMENT

The condition assessment of the soil-cement included a historical review of available information, both an above water and below water visual inspection, soil-cement coring and compressive strength testing, topographic survey of the perimeter of the cooling pond, and GIS modeling. The following sections discuss the methodologies and findings of these tasks within the overall condition assessment.

### 2.1 Historical Review

FPL provided Amec Foster Wheeler with readily available historical information related to the cooling-pond/dam soil-cement slopes. This information included:

Clearing & Grubbing Plan for construction(overlay of an aerial photograph),Mid-Valley, Inc., 1972;

Embankment Plan Sheets, 1972;

Rye Quadrangle, 7.5 Minute Series, Manatee Co. Florida, 1972;  
Wimauma Quadrangle, 7.5 Minute Series, Manatee Co. Florida, 1972;  
Embankment Layout, FPL, 1995;  
Soil Boring Logs, Stone and Webster, 1980; and  
Previous underwater surveys and repair notes, Underwater Services Inc.

This information was reviewed for indications of historical issues related to the condition and performance of the soil-cement embankments at the cooling pond. The review of the Clearing & Grubbing Plan and Embankment Plan sheets indicated the condition of the cooling pond area prior to construction. Soils from within the pond area were mined for use as fill in construction of the pond embankments.

The Rye and Wimauma Quadrangles indicated the topography of the cooling pond area prior to construction. Portions of the site overly or adjoin the Little Manatee Drainage. The topography of the site was generally level, sloping toward the east from an elevation of approximately 50 to 70 feet NAVD 88<sup>1</sup>.

The Soil Boring Logs indicate that the embankment fill and the underlying foundation soils typically consisted of fine sand with variable amounts of silt and clay. A clay soil layer was typically encountered at elevations ranging from about 5 to 15 feet.

The previous underwater surveys and repair notes provided in **Appendix A** indicated previous inspections were less detailed and typically focused on voids, missing steps, and readily apparent degradation of the soil-cement. The repairs typically consisted of placing formed concrete in areas with missing steps, cracking, and separations between steps. In February 2011, a 3-foot wide by 2-foot tall by 5-foot deep void was repaired near STA 345+00. In addition, FPL representatives stated that voids, identified as fish beds and other soil deltas located along the toe of the slope, were filled with pumped sand. No documentation was provided to Amec Foster Wheeler to confirm this repair methods.

## 2.2 Visual Inspection

### Above-Water Visual Inspection

Amec Foster Wheeler conducted the above-water visual inspection of the soil-cement slopes along the perimeter embankment. The first inspection was conducted on February 11 and 12, 2015. The initial inspection included Amec Foster Wheeler representatives, FPL representatives, and Kenneth Hansen PE, an industry expert on soil-cement structures. This initial inspection was conducted as an overall inspection to develop a methodology for inspection and a collective understanding of the soil-cement condition.

Amec Foster Wheeler conducted a more detailed visual inspection of the above-water soil-cement between February 18, 2015 and March 31, 2015. The visual inspection was conducted by Derek Richcreek, P.G. The inspection included review of an approximately 30-foot wide strip from the dam crest to the water elevation, which was typically elevation 65 feet throughout the inspection. The detailed inspections were conducted at 400-foot intervals along the soil-cement slope. The areas between the detailed inspections were reviewed for readily observable features relating to the condition of the soil-cement. The inspection locations were referenced to station numbers

<sup>1</sup> North American Vertical Datum 88  
All elevations in feet reference the North American Vertical Datum, 1988 (NAVD 88)

located at the dam crest. The station numbering at the crest varied  $\pm 50$  feet over a 500-foot length, and the inspection locations were adjusted to tie to the existing station markers. The inspection included observation and measurement of:

- Transverse crack spacing, length and depth;
- Presence of vegetation;
- Pitting or “honey combing”;
- Erosion;
- Previous repairs;
- Voids or holes;
- Lateral cracking;
- Step loss and deterioration; and
- Step numbers, thickness, width, and hardness.

Observations were recorded and photographs were taken of observations related to the condition of the soil-cement. Inspection forms were completed in the field and entered into a digital visual inspection log on a daily basis. The visual inspections were recorded at typically 400-foot intervals. The visual inspection logs are presented in **Appendix B**, and a summary of the visual observations is provided on **Figures 2A** and **2B**.

The above-water and underwater inspections included slightly different methodologies but assessed the exposed soil-cement for similar information.

#### Underwater Visual Inspection

Amec Foster Wheeler contracted Underwater Engineering Services, Inc. (UESI) of Fort Pierce, Florida to conduct an underwater visual inspection. The underwater inspection started on February 26, 2015. The inspection consisted of a diver with video recording capabilities recording the inspection through a dive support trailer. The video recording was monitored by another diver who documented any observations by recording the stationing, depth and dimensions of the observation.

The work included a nearly continuous inspection of the exposed soil-cement slope from near the top of water elevation, which was typically 65 feet, to the embankment upstream toe. The inspection observations referenced station numbers located at the dam crest and depths from the top of water. The underwater inspection included the observable soil-cement slope. Where voids were observed, a white fiberglass pole with one-foot increments marked was used to probe the voids to explore their extent. The station numbering at the crest varied  $\pm 50$  feet, and the inspection locations were generally corrected to tie to the existing station markers. The inspection included observation and measurement of defects including:

- Transverse, longitudinal and diagonal cracks spacing, length and depth;
- Undermining;
- Erosion;
- Previous repairs;

Soil deltas;  
Voids or holes,  
Pitting or “honeycombing”; and  
Differential settlement.

Observations were recorded at the surface and video was taken of notable observations. The observations and measurements were recorded on inspection forms, which were completed in the field. Some areas of the soil-cement slope were covered by a muck or mud layer. A summary table of significant deficiencies and the detailed inspection forms are in **Appendix C**. UESI’s inspection report and video data are provided under separate cover.

### 2.3 Soil-Cement Coring

UESI also conducted coring along the soil-cement slope. The coring was performed using both 3-inch and 1-inch diameter cores along the perimeter soil-cement slopes. The 3-inch diameter cores were performed predominately at the 400-foot interval visual inspection locations and at other areas of concern along the embankment alignment. The 1-inch diameter cores were performed at 100-foot intervals between the 3-inch diameter core locations. All core holes were backfilled with a cement/water grout.

The cores were conducted at three different levels beneath the water along the soil-cement slope. The cores were typically performed at an elevation of 65 feet, 59 feet and 53 feet. Where shallower bottom of slope elevations were encountered the top 65-foot elevation and bottom elevation were cored and the middle core was performed at mid-depth between the top and bottom cores.

The 3-inch diameter cores were inspected, measured and logged by Derek Richcreek, PG. The cores were observed for indications of strength, quality, bond between soil-cement layers, and length of the soil-cement pieces retrieved. The quality was recorded as a Rock Quality Designation (RQD) in accordance with ASTM D6032. A log of each core was prepared including measurements, observations and a photograph of the core. The cores were placed in core boxes and transported to Amec Foster Wheeler’s Tampa Materials Laboratory for review and testing. Inspection forms were completed in the field and entered into a digital core log on a daily basis. The core logs are provided in **Appendix D**.

The 1-inch cores were measured, and the core holes were measured and probed for the presence of voids. The 1-inch cores were disposed on-site and the core holes were grouted. The 1-inch cores were observed to be generally consistent with the information developed from the 3-inch cores. Voids within the core holes were not observed based on probing the core holes.

### 2.4 Soil-Cement Strength Testing

Amec Foster Wheeler collected all of the cored 3-inch samples and transported them back to the Lakeland offices. The 3-inch cores collected from the project site were reviewed and select cores were pulled and prepared for compressive strength testing. The cores were typically selected from poor quality soil-cement layers based on Rock-Quality Designation values and noted visual damage associated with the testing locations. However, some cores were selected at locations to develop an understanding of soil-cement strength throughout the cooling pond embankment.



Point Load Strength (PLS) and Unconfined Compressive Strength (UCS) tests were performed in general accordance with the procedures described in ASTM D5761 and ASTM C42, respectively. The compressive strength test results are summarized in **Appendix E**. A plot of PLS versus UCS tests for companion samples is also provided in **Appendix E**. The test results show that the PLS tests do not correlate well with the UCS tests, largely as a result of the relatively low strength of the soil-cement as compared to a typical concrete mixture.

## 2.5 Topographic Survey

Amec Foster Wheeler retained George F. Young, Inc. (GFY) to perform an underwater and above water survey of the soil-cement slopes. GFY conducted an underwater survey using SONAR imaging. During the SONAR imaging, LiDAR 3D modeling was conducted on the above water soil-cement slopes from a boat. At the completion of the survey, the data was processed and compiled. The data was then used to develop a 3D model of the soil-cement slope for further analysis and review.

Detailed topographic maps obtained from the 3D model are included in **Appendix F**. The 3D models could not detect the soil-cement surface in the immediate vicinity of the water line due to wave action. Also, the model did not provide fine resolution of individual soil-cement steps. However, the survey model did show trends of erosion that typically matched visual observations.

## 3.0 BIBLIOGRAPHY

Clearing & Grubbing Plan for construction(overlay of an aerial photograph), Mid-Valley, Inc., 1972;

Embankment Plan Sheets, 1972;

Rye Quadrangle, 7.5 Minute Series, Manatee Co. Florida, 1972;

Wimauma Quadrangle, 7.5 Minute Series, Manatee Co. Florida, 1972;

Embankment Layout, FPL, 1995; and

Soil Boring Logs, Stone and Webster, 1980.

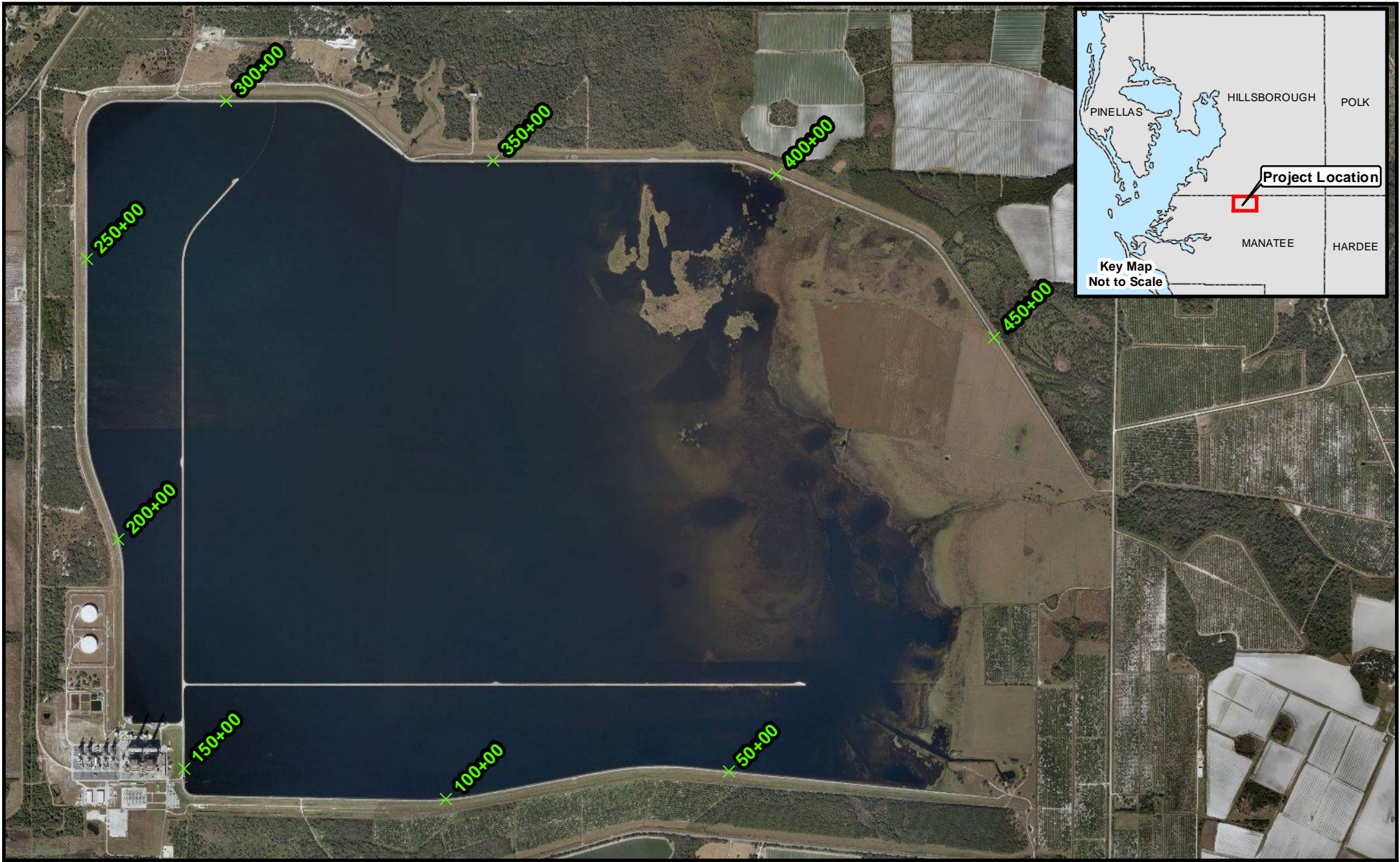


# FIGURES

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FIGURE 1	Site Location Plan
FIGURE 2 A-B	Summary of Plan and Visual Inspection

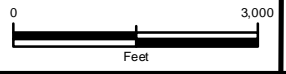




**Notes:**  
 1- Project No.: 300906  
 2- Data Sources - Amecfw, 2014 FDOT Imagery  
 3- This map is intended to be used for planning purposes only. It is not a survey.  
 Date: 05/08/2014  
 Revised: 05/27/2015  
 Checked By: JB

**Explanation of Features**

N  X Stations (5,000-Ft Interval)  
 County



  
 amec foster wheeler  
 Amec Foster Wheeler  
 Environment & Infrastructure, Inc.  
 2000 E. Edgewood Drive Ste #215  
 Lakeland, FL 33803  
 CA-5392  
 (853) 567-2345

**Figure 1**  
**Location Map**  
**Manatee Plant Cooling Pond**  
**Manatee County, Florida**





STA	Visual Inspection								
	Typical Transvers Crack Spacing (ft)	Typical Transvers Crack Width (in)	# of Soft Steps	# of Moderate Steps	# of Hard Steps	# of Eroded Steps	Pitting Observed	Vegetation Observed	Repairs Observed
164+00	20	2	2	7	2	8	Yes	No	No
169+00			3	8	1	8	Yes	Yes	No
172+00	20	1	8	2	2	6	Yes	Yes	No
176+00	15	1	9	0	3	8	Yes	Yes	No
180+00	10	1	9	3	0	6	Yes	Yes	No
184+00	10	0.5	11	2	0	8	Yes	Yes	No
188+00	15	1	6	3	3	7	Yes	Yes	No
192+00		1.5	4	5	3	8	Yes	Yes	No
196+00	15	1	5	3	4	12	Yes	No	No
200+00	30	1.5	4	6	2	12	Yes	Yes	Yes
203+00									Yes
204+00	20	1	7	3	3	8	Yes	Yes	No
205+75									Yes
206+00	20	1	7	3	3	8	No	No	No
212+00	12	1	5	6	2	13	Yes	Yes	No
216+00	15	1	4	5	4	7	Yes	Yes	No
220+00	15	1	6	4	3	10	Yes	Yes	No
224+00	10	2	5	6	2	13	Yes	No	No
228+00	15	2	6	5	2	12	Yes	Yes	No
232+00	15	2	3	7	3	12	Yes	Yes	No
236+00	12	2	4	7	2	6	Yes	Yes	No
240+00	12	2	4	6	3	6	Yes	No	No
244+00	10	2	5	4	4	6	Yes	No	No
248+00	10	2	4	3	5	5	Yes	Yes	No
252+00	15	2	4	4	5	6	Yes	Yes	No
253+35									Yes
256+00	15	1	3	3	7	5	Yes	Yes	No
259+25									Yes
260+00	20	2	2	6	4	8	Yes	No	No
264+00	20	2	3	6	4	5	Yes	No	No
268+00	10	3	4	6	3	5	Yes	No	No
268+80									Yes
272+00	20	2	4	4	5	4	Yes	Yes	No



- Notes:**
- 1- Project No.: 300906
  - 2- Data Sources - Amecfw, 2014 FDOT Imagery
  - 3- This map is intended to be used for planning purposes only. It is not a survey.



**Explanation of Features**

**GPS Locations # of Eroded Steps**

- X Stations
- △ Repair
- 0 - 4
- 5 - 8
- 9 - 12
- >12

**LABEL KEY**

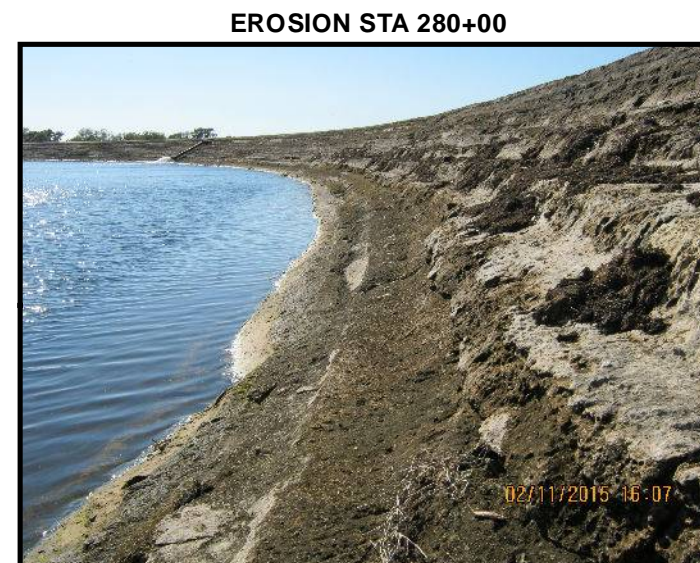
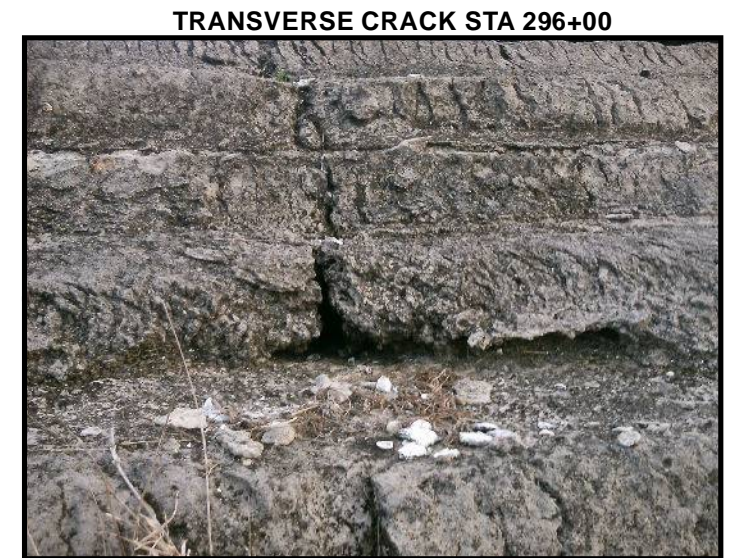
- Station Number
- Typical crack width (inches)

Amec Foster Wheeler  
Environment & Infrastructure, Inc.  
2000 E. Edgewood Drive Ste #216  
Lakeland, FL 33803  
CA-6392  
(863) 667-2345

**Figure 2**  
**Summary Plan of Visual Inspections**  
**Stations 164+00 to 272+00**  
**Manatee Plant Cooling Pond**  
**Manatee County, Florida**



STA	Visual Inspection								
	Typical Transvers Crack Spacing (ft)	Typical Transvers Crack Width (in)	# of Soft Steps	# of Moderate Steps	# of Hard Steps	# of Eroded Steps	Pitting Observed	Vegetation Observed	Repairs Observed
272+00	20	2	4	4	5	4	Yes	Yes	No
276+00	20	1	3	4	6	4	Yes	No	No
280+00	20	3	7	5	1	6	Yes	Yes	No
284+00	15	1	3	3	8	4	Yes	No	Yes
288+00	20	6	2	3	11	4	Yes	Yes	No
292+00	15	6	3	3	10	4	Yes	No	No
296+00	15	3	3	3	10	4	Yes	No	No
300+00	15	2	3	3	10	6	Yes	Yes	No
304+00	10	1	3	3	10	5	Yes	No	No
308+00	15	2	3	2	12	5	Yes	No	No
308+50									Yes
310+65									Yes
312+00	15	2	4	3	11	6	Yes	No	No
316+00	10	2	3	3	10	4	Yes	No	No
320+00	15	2	5	4	8	7	Yes	No	No
324+00	15	2	5	7	6	5	Yes	No	No
328+00	20	2	5	5	7	5	Yes	No	No



**Notes:**

- Project No.: 300906
- Data Sources - Amecfw, 2014 FDOT Imagery
- This map is intended to be used for planning purposes only. It is not a survey.

Date: 04/16/2015  
Revised: AB  
Checked By: JB



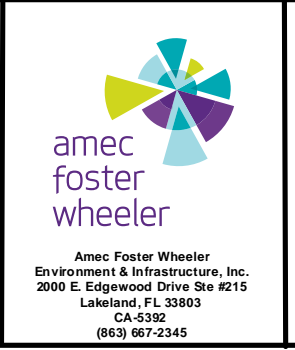
**Explanation of Features**

**GPS Locations # of Eroded Steps**

- Stations: Green 'X' symbol
- Repair: White triangle symbol
- 0 - 4: Light blue circle
- 5 - 8: Yellow circle
- 9 - 12: Orange circle
- >12: Red circle

**LABEL KEY**

- Station Number: Green label with black border
- Typical crack width (inches): White label with black border



**Figure 2B**  
**Summary Plan of Visual Inspections**  
**Stations 272+00 to 328+00**  
**Manatee Plant Cooling Pond**  
**Manatee County, Florida**



# APPENDIX A

APPENDIX A

Soil-cement Cooling Pond Repairs 2010 to 2014



**UNDERWATER SERVICE ASSOCIATES**  
**PO BOX 3041**  
**HIGH SPRINGS, FL 32655-3041**  
**PHONE: 772-485-1734**  
**FAX 1-800-957-5378**

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**FP&L**  
**Kevin Kleist**  
**Manatee Power Plant**

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**January 5, 2015**

**2010 to 2014**  
**Soil Cement Cooling Pond**  
**Repairs**

December 2014 PO 2000158283, Invoice 0485

Repair 5 wash outs:

3 wash outs at +466 to 493

1 wash out at +435

1 wash out at +405

March 2014 PO 2000132733, Invoice 0454

Diving Services to perform Cooling Pond Soil Cement Repairs in three areas, one area north side of cooling pond, one area south side of cooling pond, and one area west side of the cooling pond.

Location 135+369. This area was found to have 10-15 feet of step four eroded and broke away. There are remnants of the step 4 on the bottom of the lake. At the break point of step four where a vertical crack was the area has washed out under step three with the max depth of 6 feet to hard material and extends east to west 6 feet.

Location 205+299-330. This location was found to have soft and honey cone areas of soil cement. It was found at the location a previous repair had been made one step above the bottom. It was found that approx. 50- 100 feet of honey coning exists mainly from the south side of the previous repair northward. The honey cone appears to be the worse the length of the previous repair underside, as a result the previous repaired are had voiding underneath and is causing stress to the steps above the repair

Location 300+460. This area was found to be soil cement erosion over time that has left and area 2"H X 7' in length there was found voiding in this are from 4' to 9 feet max. The area 9' in depth is an area 6" in length but is clearly into the soil behind the dike, and without doing core drilling it cannot be determined if voiding exists. This step location is number 6 below water lime.

June 2013 PO 2000096866, Invoice 0418

Diving Services to perform repairs on cooling pond retention dike:

170+250-350 Repair 100' Length, up to the third step from bottom.

**UNDERWATER SERVICE ASSOCIATES**  
**PO BOX 3041**  
**HIGH SPRINGS, FL 32655-3041**  
**PHONE: 772-485-1734**  
**FAX 1-800-957-5378**

March 2013 PO 2000096866, Invoice 0407

Diving Services to perform repairs on cooling pond retention dike:

- 115 + 38 Repair size 4'L x 1/4" H x 5' D at first step below water line
- 136 + 421 Repair size 3.5" L x 1" H x 5' D at 4th step below water line
- 245 + 64 Repair size 12' L x 18" H x 4' D at bottom step 12
- East end of intake cooling pond at finger dike transition, Repair size 30' L x 18" H

March 2012 PO 2000064597, Invoice 0357

Diving Services to perform Soil Cement Repairs:

- 140 + 200 Missing bottom step with wash out, 6 ft L x 3 ft H x 4 ft D
- 140 + 255 Missing step, 2nd above bottom, 10 ft L x 2 ft H x 5 ft D
- 345+99 Horizontal step separation between steps 2 & 3 below waterline, 3 ft L x 2 in H x 5 ft D

February 2012 PO 2000063227, Invoice 0354

Diving Services to perform repair of minor cracks in finger dike

February 2011 4500650767, Invoice 0308

Diving Services to perform Soil Cement Repairs:

- 160+ 32 Crack 6th step to last step below water line. Step at water line to step 3 below water is 3" W x 2' D
- 160+ 47 Crack at water line 4" W x 4' D
- 160+ 65 Crack from Road to bottom step below water line. Step at water line is 6" W x 4' D
- 160+ 70 At corner of where soil cement and concrete structure for intake meet is a void 4' W x 2' H x 4' D
- 345+ 111 Void 3' W x 2' H x 5' D inside measurement 10' W x 2' H x 10' D

August 2010 4500584118, Invoice 0276, 0277 and 0279

Finger dike repairs located at E75 +121-160

Additionally, there have been minor repairs that were performed to use leftover cement, these repair locations are not documented above.

Submitted by:

Fred C. West  
General Manager  
Underwater Service Associates  
Contact at 772-485-1734

# APPENDIX B

APPENDIX B

Above Water Visual Inspection Logs





# Manatee Cooling Pond Visual Inspection

amec  
foster  
wheeler

Project: Manatee FPL Cooling Pond  
 Project #: 300906.\*\*\*\*.3  
 Date: 3/6/2015  
 Amec FW Staff: Derek Richcreek

Station: 268+00 # of Steps : 13  
 Water Level (ft.): 65.5 ASL

**General Observations**

Steps 8 and 9 moderately to severely eroded and pitted. Steps 10 through 12 virtually eroded away entirely.

Transverse Crack Observations					
Spacing (feet)	Step #	Width (inches)	Length (feet)	Depth (inches)	Noted Void Y/N
10	8 through 13	3	10	6	N
<b>Notes:</b> 7 transverse cracks noted with an approximate average spacing of 10 feet.					

Additional Damage or Repair Observations		
Station	Step #	Description
268+60	10 through underwa	3 types of repairs noted; step repair on 11 through 13
		Concrete slurry ramp on steps 11 through 13, sections broken away
		Underwater shelf type extension of step 13
<b>Notes:</b> No additional damage or repairs observed.		

Overall Step Condition and Observation	
Step Hardness	Step Width
3 hard, 6 moderate, 4 soft	(4) 0 to 6 inches, (1) 6 to 12 inches, (8) > 12 inches

General Photographs of Observations		
1	2	3
Description: Steps 8 and 9 looking South	Description: Station profile looking North	Description: Absence of steps 10 through 12



# Manatee Cooling Pond

## Additional Damage/Repair Observations

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek  
**Date:** 3/6/2015

**Location:** STA 268+60



**Description:** A repair to the soil-cement slope was observed at steps 11 through 13 at STA 268+60.

**Location:** STA 268+60



**Description:** A concrete slurry repair was made to steps 11 through 13 at STA 268+60.



# Manatee Cooling Pond

## Additional Damage/Repair Observations

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek  
**Date:** 3/6/2015

**Location:** STA 268+60



**Description:** A shelf extension was made to step 13 at STA 268+60.

# Manatee Cooling Pond Visual Inspection



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*\*.3  
**Date:** 3/2/2015  
**Amec FW Staff:** Derek Richcreek

**Station:** 272+00  
**Water Level (ft.):** 65.5 ASL

**# of Steps :** 13

General Observations
Steps 7 through 9 severely eroded, weathered, and pitted with moderate amounts of decaying vegetation and little new growth. Steps 10 through 13 extremely eroded and well rounded.

Transverse Crack Observations					
Spacing (feet)	Step #	Width (inches)	Length (feet)	Depth (inches)	Noted Void Y/N
20	7 through 13	2	12	3	N
<b>Notes:</b> 2 transverse cracks noted with a spacing of 20 feet.					

Additional Damage or Repair Observations		
Station	Step #	Description
272+00	9	25 ft. X 1 ft. X 0.5 ft. step repair
<b>Notes:</b>		

Overall Step Condition and Observation	
Step Hardness	Step Width
5 hard, 4 moderate, 4 soft	(4) 0 to 6 inches (1) 6 to 12 inches (8) > 12 inches

General Photographs of Observations		
1	2	3
<b>Description:</b> Steps 7 through 9 looking South	<b>Description:</b> Large transverse crack just below step repair	<b>Description:</b> Steps 10 through 13 looking North

# Manatee Cooling Pond Visual Inspection



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Date:** 3/6/2015  
**Amec FW Staff:** Derek Richcreek

**Station:** 276+00  
**Water Level (ft.):** 65.5 ASL

**# of Steps :** 13

General Observations
Steps 10 and 11 eroded and pitted moderately to severely. Steps 12 and 13 extremely eroded and well rounded.

Transverse Crack Observations					
Spacing (feet)	Step #	Width (inches)	Length (feet)	Depth (inches)	Noted Void Y/N
20	10 through 13	1	8	3	N
<b>Notes:</b> 3 transverse cracks noted spaced approximately 20 feet apart.					

Additional Damage or Repair Observations		
Station	Step #	Description
<b>Notes:</b> No additional damage or repairs observed.		

Overall Step Condition and Observation	
Step Hardness	Step Width
6 hard, 4 moderate, 3 soft	(3) 0 to 6 inches (10) > 12 inches

General Photographs of Observations		
1	2	3
<b>Description:</b> Steps 12 and 13 looking South	<b>Description:</b> Steps 12 and 13 looking North	<b>Description:</b> Steps 10 and 11 looking South

# Manatee Cooling Pond Visual Inspection



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Date:** 3/6/2015  
**Amec FW Staff:** Derek Richcreek

**Station:** 280+00  
**Water Level (ft.):** 65.5 ASL

**# of Steps :** 13




**General Observations**

Step 1 moderately eroded and pitted. Steps 7 through 10 has moderate amounts of decaying vegetation with little new growth. Steps 9 through 11 eroded, pitted, and weathered from moderately to severely. Steps 11 through 13 extremely eroded and well rounded. Step 11 has large sections missing. Step 12 has moderate under cutting.

Transverse Crack Observations					
Spacing (feet)	Step #	Width (inches)	Length (feet)	Depth (inches)	Noted Void Y/N
20	10 through 13	3	7	6	N
<b>Notes:</b> 5 transverse cracks noted spaced approximately 20 feet apart.					

Additional Damage or Repair Observations		
Station	Step #	Description
<b>Notes:</b> No additional damage or repairs observed.		

Overall Step Condition and Observation	
Step Hardness	Step Width
1 hard, 5 moderate, 7 soft	(3) 0 to 6 inches (1) 6 to 12 inches (9) > 12 inches

General Photographs of Observations		
1	2	3
		
<b>Description:</b> Step 1 erosion	<b>Description:</b> Decaying vegetation on steps 7 through 10	<b>Description:</b> Section of step 11 missing



# Manatee Cooling Pond

## Additional Damage/Repair Observations



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek  
**Date:** 3/6/2015

**Location:** STA 280+00



**Description:** Steps 11 through 13 extremely eroded and well-rounded at STA 280+00.

**Location:** STA 280+00



**Description:** Large sections of step 11 observed to be missing at STA 280+00.

# Manatee Cooling Pond Visual Inspection



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Date:** 3/9/2015  
**Amec FW Staff:** Derek Richcreek

**Station:** 284+00  
**Water Level (ft.):** 65.5 ASL

**# of Steps :** 14

General Observations
Steps 10 through 12 variable erosion and pitting from moderate to severe. Steps 13 and 14 extremely eroded and well rounded. No significant vegetation observed.

Transverse Crack Observations					
Spacing (feet)	Step #	Width (inches)	Length	Depth (inches)	Noted Void Y/N
15	1 through 14	1	Steps 1 through 14	1	N
<b>Notes:</b> Typical spacing between transvers cracks were approximately 20ft or greater. 3 transverse cracks no					

Additional Damage or Repair Observations		
Station	Step #	Description
284+00	1 through 14	Foam filled repair of a transverse crack.
<b>Notes:</b>		

Overall Step Condition and Observation	
Step Hardness	Step Width
8 hard, 3 moderate, 3 soft	(2) 0 to 6 inches (3) 6 to 12 inches (9) > 12 inches

General Photographs of Observations		
1	2	3
<b>Description:</b> Steps 10 through 12 looking West	<b>Description:</b> General profile of STA 284+00	<b>Description:</b> Steps 13 and 14 looking East

# Manatee Cooling Pond

## Additional Damage/Repair Observations



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek  
**Date:** 3/9/2015

**Location:** STA 284+00



**Description:** A repair to a transverse crack was observed at STA 284+00.

# Manatee Cooling Pond Visual Inspection



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Date:** 3/9/2015  
**Amec FW Staff:** Derek Richcreek

**Station:** 288+00  
**Water Level (ft.):** 65.5 ASL

**# of Steps :** 16

General Observations
Steps 12 through 14 variably eroded and pitted moderately to severely. Steps 15 and 16 extreme eroded and well rounded. Step 16 under cut moderately to severe. Moderate amounts of decaying vegetation with minor new growth.

Transverse Crack Observations					
Spacing (feet)	Step #	Width (inches)	Length (feet)	Depth (inches)	Noted Void Y/N
20	8 through 16	6	12	6	N
<b>Notes:</b> 3 transverse cracks noted with an average spacing of 20 feet.					

Additional Damage or Repair Observations		
Station	Step #	Description
288+00	16 into water	Numerous potholes
<b>Notes:</b>		

Overall Step Condition and Observation	
Step Hardness	Step Width
11 hard 3 moderate 2 soft	(2) 0 to 6 inches (2) 6 to 12 inches (12) > 12 inches

General Photographs of Observations		
1	2	3
<b>Description:</b> Steps 15 and 16	<b>Description:</b> Erosion of step 12 to waterline	<b>Description:</b> Potholes below water just below a transverse crack in step 16



# Manatee Cooling Pond Visual Inspection



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Date:** 3/9/2015  
**Amec FW Staff:** Derek Richcreek

**Station:** 292+00  
**Water Level (ft.):** 65.5 ASL

**# of Steps :** 16

**General Observations**

Step 1 numerous cracks and broken sections. Steps 12 through 14 pitted and eroded from moderate to severely. Steps 13 and 14 moderate under cutting. Steps 15 and 16 extreme erosion and well rounded. Step 16 moderate under cutting. Moderate amounts of decaying vegetation and new growth on steps 8 through 10.

Transverse Crack Observations					
Spacing (feet)	Step #	Width (inches)	Length (feet)	Depth (inches)	Noted Void Y/N
15	6 through 16	6	12	6	N
<b>Notes:</b> 6 transverse cracks noted with an average spacing of 15 feet.					

Additional Damage or Repair Observations		
Station	Step #	Description
292+00	16 into water	Numerous potholes
<b>Notes:</b>		

Overall Step Condition and Observation	
Step Hardness	Step Width
10 hard, 3 moderate, 3 soft	(2) 0 to 6 inches (1) 6 to 12 inches (13) > 12 inches

General Photographs of Observations		
1	2	3
<u>Description:</u> steps 12 through 14	<u>Description:</u> General profile of steps 3 through 10	<u>Description:</u> Steps 14 through 16

# Manatee Cooling Pond

## Additional Damage/Repair Observations



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek  
**Date:** 3/9/2015

**Location:** STA 292+00



**Description:** Step 1 at STA 292+00 showing multiple cracks and breaks.

# Manatee Cooling Pond Visual Inspection



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*\*.3  
**Date:** 3/9/2015  
**Amec FW Staff:** Derek Richcreek

**Station:** 296+00  
**Water Level (ft.):** 65.5 ASL

**# of Steps :** 16

General Observations
Steps 12 and 13 pitted and eroded moderately to severely. Steps 8 through 10 has moderate decaying vegetation and new growth. Steps 14 through 16 extremely eroded and well rounded.

Transverse Crack Observations					
Spacing (feet)	Step #	Width (inches)	Length (feet)	Depth (inches)	Noted Void Y/N
15	8 through 16	3	10	3	N
<b>Notes:</b> 4 transverse cracks noted with an average spacing of 15 feet.					

Additional Damage or Repair Observations		
Station	Step #	Description
296+00	3	Lateral void 6 inches deep.
296+00	9	Lateral void 6 inches deep.
296+00	12	Lateral void 6 inches deep.
<b>Notes:</b>		

Overall Step Condition and Observation	
Step Hardness	Step Width
10 hard, 3 moderate, 3 soft	(3) 0 to 6 inches (2) 6 to 12 inches (13) > 12 inches

General Photographs of Observations		
1	2	3
<b>Description:</b> Steps 12 through 16 looking West	<b>Description:</b> Steps 12 through 16 looking East	<b>Description:</b> 6 inch lateral void at step 4



# Manatee Cooling Pond

## Additional Damage/Repair Observations

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek  
**Date:** 3/9/2015

**Location:** STA 296+00



**Description:** A 6 inch deep lateral void measured at STA 296+00 step 12.

**Location:** STA



**Description:** A 6 inch deep lateral void measured at STA 296+00 step 9.

# Manatee Cooling Pond Visual Inspection



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Date:** 3/9/2015  
**Amec FW Staff:** Derek Richcreek

**Station:** 300+00  
**Water Level (ft.):** 65.5 ASL

**# of Steps :** 16

General Observations
Steps 8 through 13 has moderate amounts of decaying vegetation with minor new growth. Steps 11 through 13 variably eroded, pitted, and weathered moderately to severely. Steps 14 through 16 extremely eroded and well rounded.

Transverse Crack Observations					
Spacing (feet)	Step #	Width (inches)	Length (feet)	Depth (inches)	Noted Void Y/N
15	10 through 16	2	10	2	N
<b>Notes:</b> 4 transverse cracks were noted with an approximate average spacing of 15 feet.					

Additional Damage or Repair Observations		
Station	Step #	Description
300+00	13	Extreme erosion and under cutting
<b>Notes:</b>		

Overall Step Condition and Observation	
Step Hardness	Step Width
10 hard, 3 moderate, 3 soft	(2) 0 to 6 inches (1) 6 to 12 inches (13) > 12 inches

General Photographs of Observations		
1	2	3
<b>Description:</b> Steps 8 through 16 looking West	<b>Description:</b> Steps 8 through 16 looking East	<b>Description:</b> Under cutting step 13



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# Manatee Cooling Pond

## Additional Damage/Repair Observations

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek  
**Date:** 3/9/2015

**Location:** STA 300+00



**Description:** Extreme erosion and under cutting of step 13 was noted at STA 300+00.

# APPENDIX C

APPENDIX C

Underwater Visual Inspection Summary Table







**FPL MANATEE PLANT UNDERWATER INSPECTION OF THE COOLING POND SOIL- CEMENT  
Summary of Significant Deficiencies**

<b>Beg Station</b>	<b>End Station</b>	<b>Comment</b>
269 + 00 TO 278 + 00		HC / Brittle material, 8 ft wide starting from bottom - 900 ft long
278 + 00 TO 285 + 00		HC / Brittle material, 12 ft wide starting from bottom - 700 ft long
285 + 00 TO 287 + 70		HC / Brittle material, 8 ft wide starting 4 ft from bottom and 4- to 5-ft from waterline - 270 ft long
286 + 89		Void / Undermining under Step 4 from WL - 5 ft x 8 in. vertical x 2 ft penetration
288 + 22		Missing step at 4th step from waterline - 4 ft x 1 ft vertical x 2 ft wide
288 + 45		Missing step at 4th step from waterline - 8 ft x 1 ft vertical x 1.5 ft wide
287 + 70 TO 291 + 00		HC / Brittle material, 4 ft wide starting 6 ft from waterline - 330 ft long
289 + 50 TO 291 + 00		HC / Brittle material, 2 ft wide starting 2 ft from waterline - 150 ft long
289 + 00 TO 289 + 51		HC / Missing step at 1st step from waterline - 51 ft x 10 in. vertical x 1 ft wide
290 + 00 TO 290 + 90		HC/Missing step at 1st step from waterline - 10 in. vertical x 1 ft wide over 80 percent of the 90 feet
290 + 20		Void / Missing step - at 15 ft from the waterline - 4 ft long x 1.5 ft vertical x 2.5 ft wide with up to 1.5 ft penetration
291 + 00 TO 295 + 00		HC / Brittle material, 6 ft wide starting 6 ft from waterline - 400 ft long
291 + 00 TO 295 + 05		HC / Brittle material, 4- to 6-ft wide starting 1 to 2 ft from waterline - 405 ft long
293 + 00 TO 293 + 43		Old repair formwork left in place - no concrete - 1.5 ft vertical x 2 ft wide x 43 ft long
294 + 00 TO 296 + 00		HC / Brittle material, 2-ft wide starting from bottom - intermittent - 200 ft long
295 + 00 TO 297 + 00		HC / Brittle material, 6 ft wide starting 6 ft from waterline - not as advanced as previous 400 ft - 200 ft long
298 + 00 TO 300 + 00		HC / Brittle material, 3-ft wide starting from bottom - intermittent - not too defined - 200 ft long



# APPENDIX D

APPENDIX D

Soil-Cement Core Logs



# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

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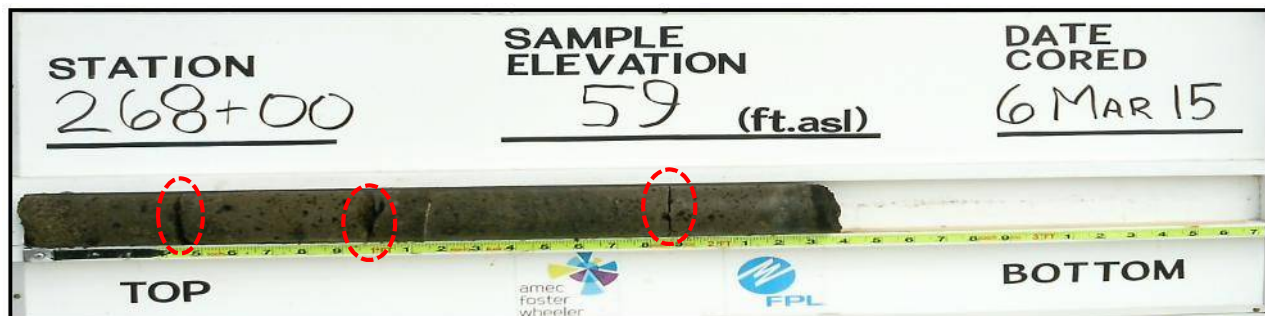
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 268+00



<b>Core ID:</b>	268+00 (top)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	2.13	<b>SC Thickness (ft):</b>	2.33
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location:** STA 268+00



<b>Core ID:</b>	268+00 (middle)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	2.35	<b>SC Thickness (ft):</b>	2.5
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

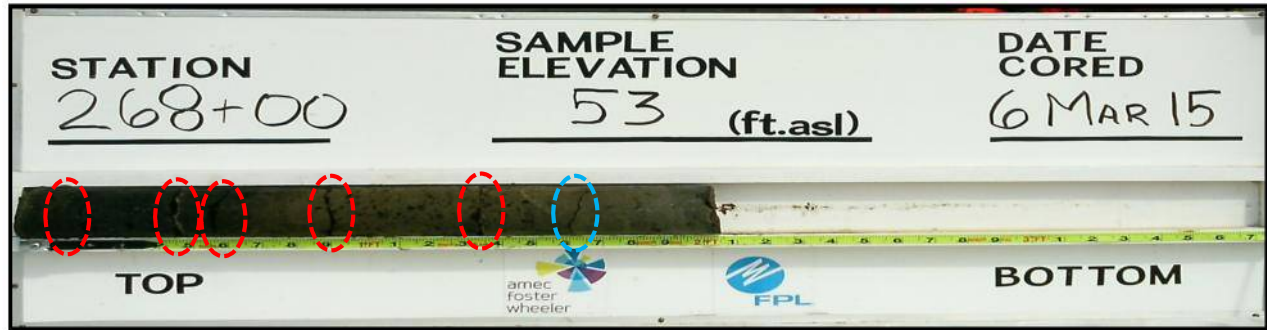
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

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**Location:** STA 268+00



<b>Core ID:</b>	268+00 (bottom)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	2.05	<b>SC Thickness (ft):</b>	2.05
<b>RQD (%):</b>	63	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.9 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

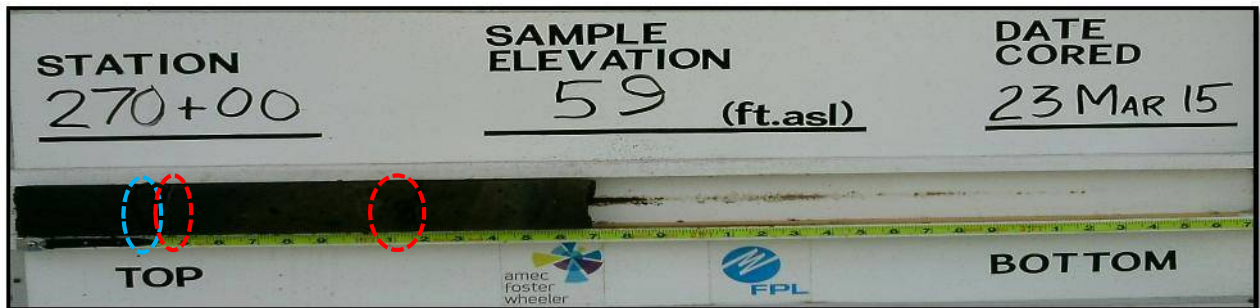
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 270+00



<b>Core ID:</b>	270+00 (top)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.2	<b>SC Thickness (ft):</b>	2.33
<b>RQD (%):</b>	86	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.1 feet. Fractured pieces from 1.9 to 2.45 feet.		

**Location:** STA 270+00



<b>Core ID:</b>	270+00 (middle)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	1.65	<b>SC Thickness (ft):</b>	1.75
<b>RQD (%):</b>	97	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.7 feet.		

# Manatee Cooling Pond

## Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

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**Location:** STA 270+00



<b>Core ID:</b>	270+00 (bottom)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.05	<b>SC Thickness (ft):</b>	2.42
<b>RQD (%):</b>	99	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Insitu soil 2.05 to 2.13 feet.		



# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

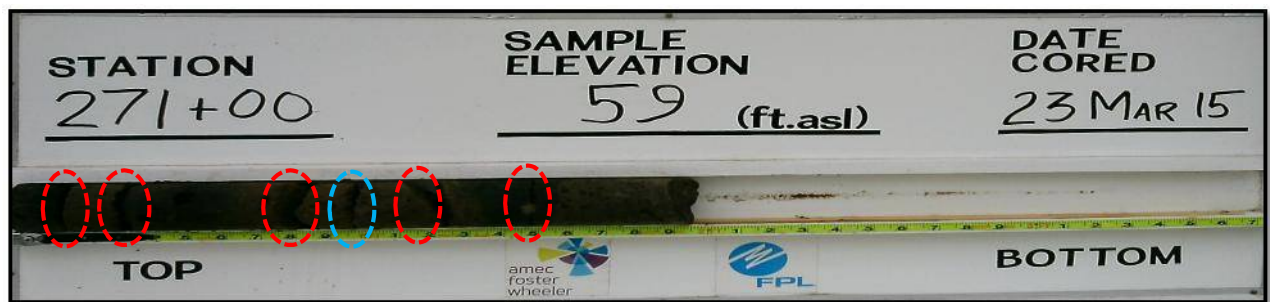
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 271+00



<b>Core ID:</b>	271+00 (top)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	1.88	<b>SC Thickness (ft):</b>	2.0
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.1 feet. Fractured pieces from 1.9 to 2.45 feet.		

**Location:** STA 271+00



<b>Core ID:</b>	271+00 (middle)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	1.92	<b>SC Thickness (ft):</b>	2.08
<b>RQD (%):</b>	49	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 1.48 feet.		

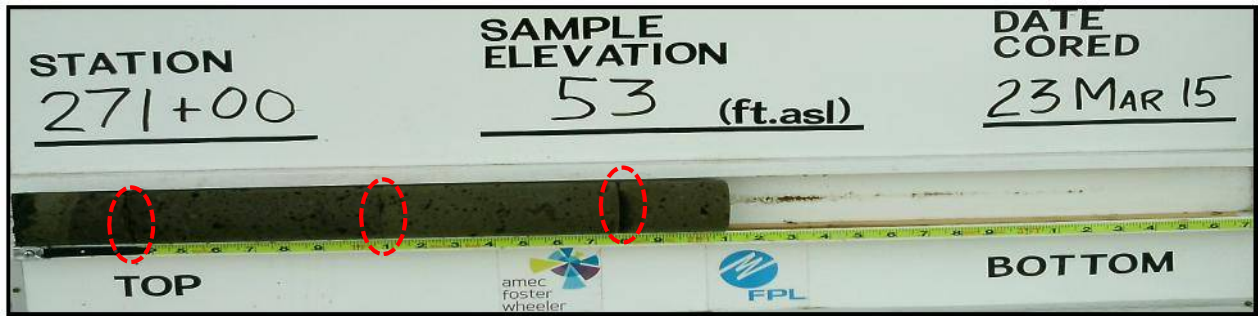
# Manatee Cooling Pond Soil-Cement Core Logs



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**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 271+00



<b>Core ID:</b>	271+00 (bottom)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.08	<b>SC Thickness (ft):</b>	3.0
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

# Manatee Cooling Pond Soil-Cement Core Logs

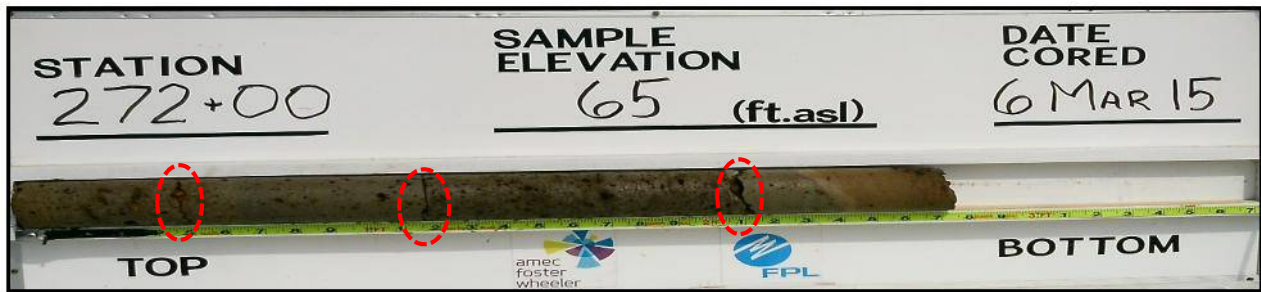


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wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

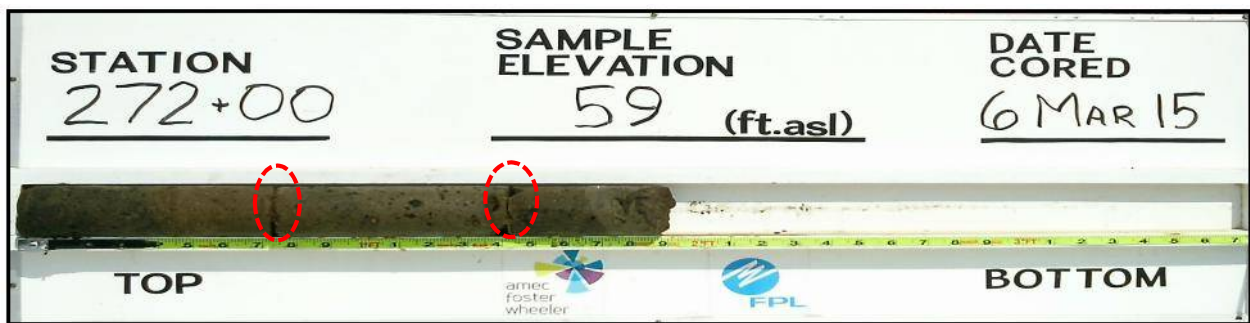
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 272+00



<b>Core ID:</b>	272+00 (top)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	2.7	<b>SC Thickness (ft):</b>	2.7
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Wood noted in break at 0.5 feet.		

**Location:** STA 272+00



<b>Core ID:</b>	272+00 (middle)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	1.87	<b>SC Thickness (ft):</b>	2.0
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

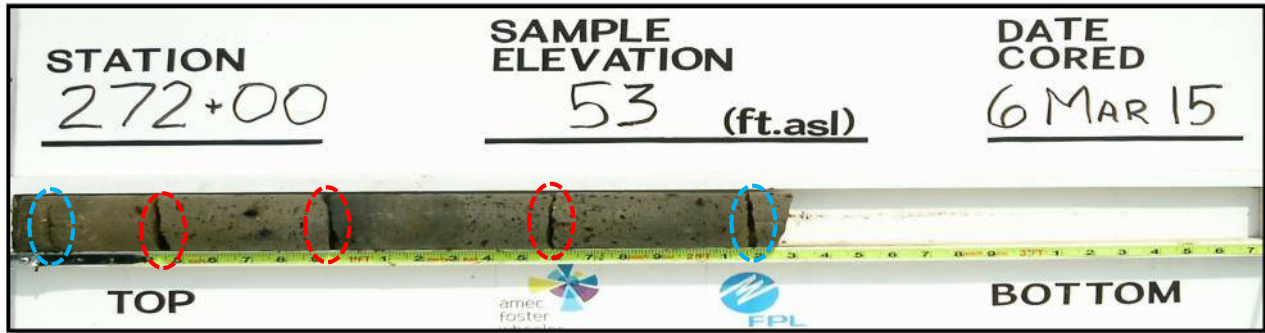
# Manatee Cooling Pond Soil-Cement Core Logs



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**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 272+00



<b>Core ID:</b>	272+00 (bottom)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	2.25	<b>SC Thickness (ft):</b>	2.25
<b>RQD (%):</b>	75	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

# Manatee Cooling Pond Soil-Cement Core Logs

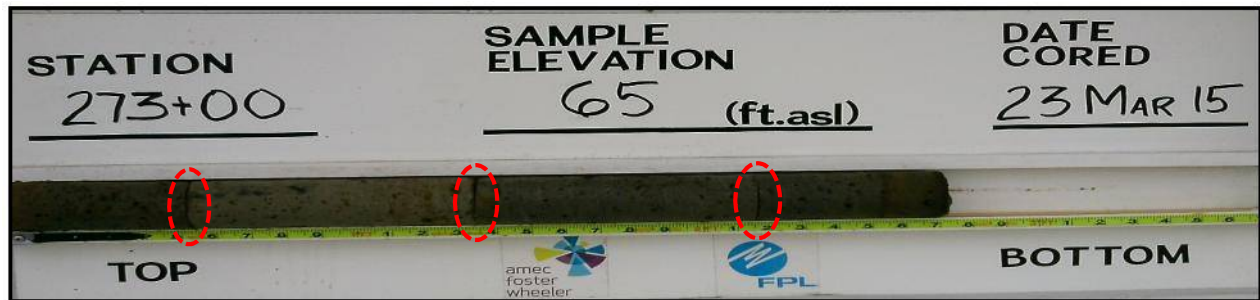


**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

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wheeler

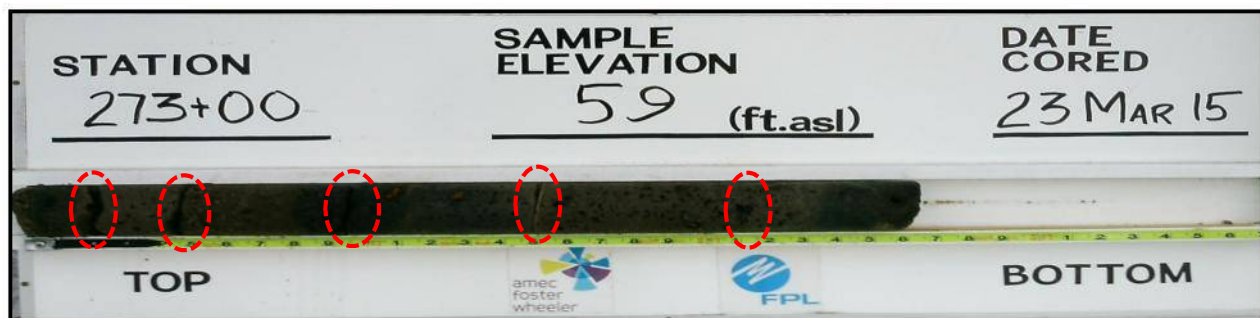
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 273+00



<b>Core ID:</b>	273+00 (top)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.7	<b>SC Thickness (ft):</b>	2.83
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location:** STA 273+00



<b>Core ID:</b>	273+00 (middle)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.57	<b>SC Thickness (ft):</b>	2.67
<b>RQD (%):</b>	82	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.2 feet and from 0.45 to 1.1 feet. Soft material between 0.2 to 0.45 feet.		



# Manatee Cooling Pond

## Soil-Cement Core Logs



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**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 273+00



<b>Core ID:</b>	273+00 (bottom)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	1.95	<b>SC Thickness (ft):</b>	2.5
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

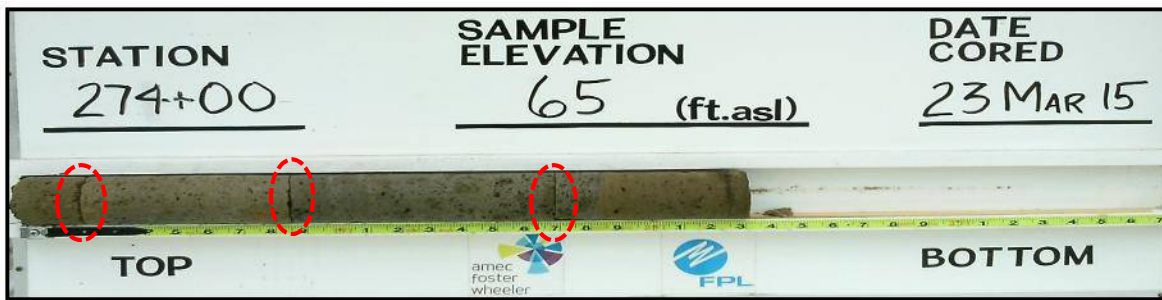
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 274+00



<b>Core ID:</b>	274+00 (top)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.3	<b>SC Thickness (ft):</b>	2.5
<b>RQD (%):</b>	91	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.2 feet.		

**Location:** STA 274+00



<b>Core ID:</b>	274+00 (middle)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	1.7	<b>SC Thickness (ft):</b>	2.0
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.1 feet. Soft fill material between 1.05 and 1.1 feet.		

# Manatee Cooling Pond

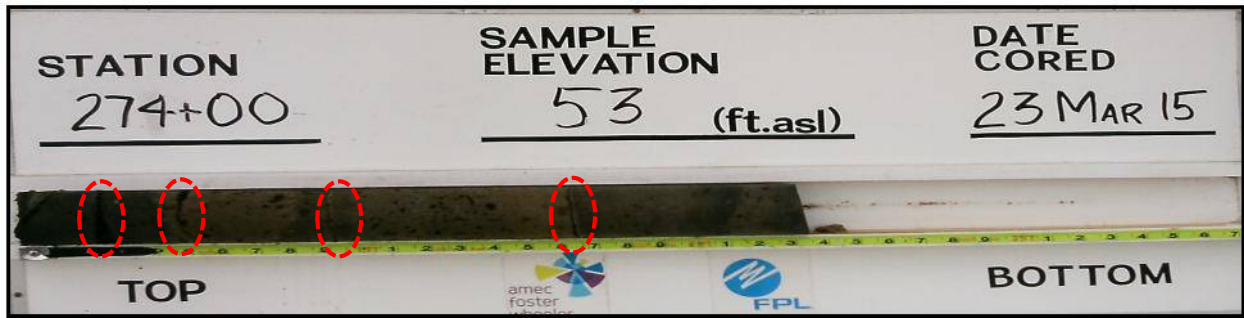
## Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
 foster  
 wheeler

**Location:** STA 274+00



<b>Core ID:</b>	274+00 (bottom)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.3	<b>SC Thickness (ft):</b>	2.5
<b>RQD (%):</b>	78	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			



# Manatee Cooling Pond Soil-Cement Core Logs

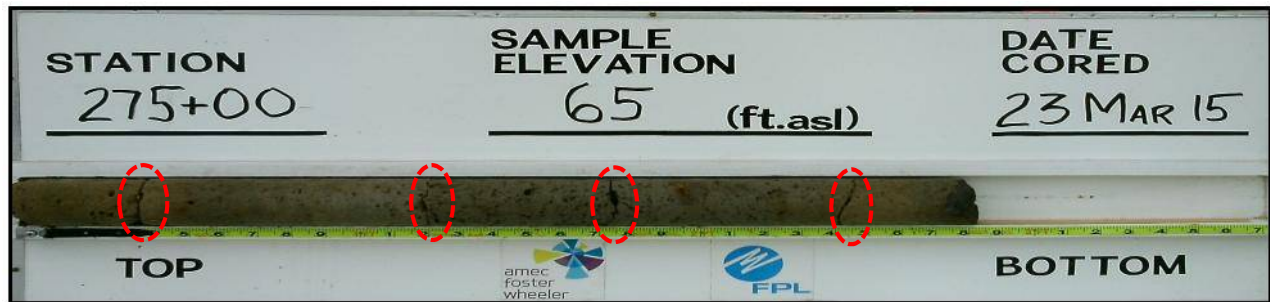


amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

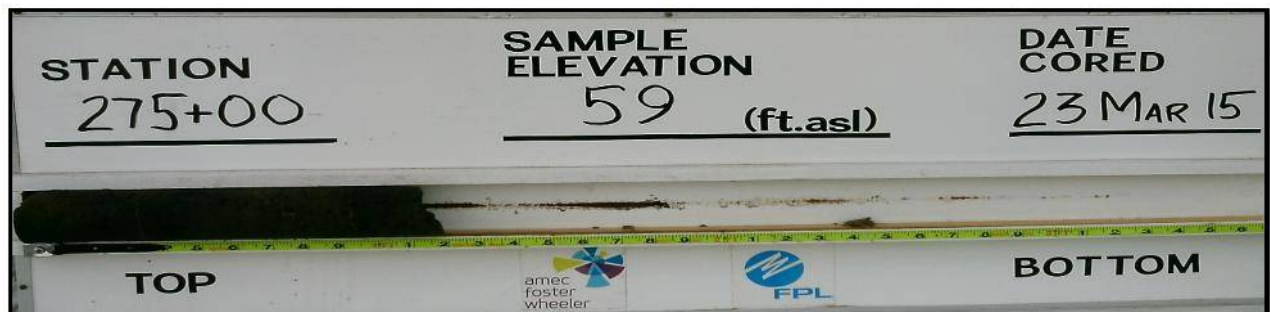
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 275+00



<b>Core ID:</b>	275+00 (top)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.8	<b>SC Thickness (ft):</b>	3.33
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.38 feet.		

**Location:** STA 275+00



<b>Core ID:</b>	275+00 (middle)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	1.15	<b>SC Thickness (ft):</b>	1.5
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

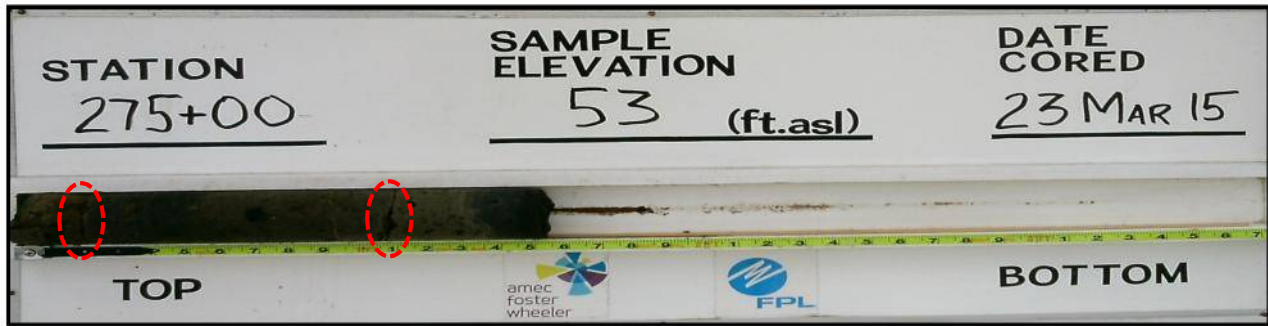
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
 foster  
 wheeler

**Location:** STA 275+00



<b>Core ID:</b>	275+00 (bottom)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	1.5	<b>SC Thickness (ft):</b>	2.0
<b>RQD (%):</b>	87	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.2 feet. Soft material from 0.2 to 1.08 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 278+00



<b>Core ID:</b>	278+00 (top)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	2.25	<b>SC Thickness (ft):</b>	2.75
<b>RQD (%):</b>	90	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location:** STA 278+00



<b>Core ID:</b>	278+00 (middle)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	2.02	<b>SC Thickness (ft):</b>	2.33
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

# Manatee Cooling Pond Soil-Cement Core Logs



amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 278+00



<b>Core ID:</b>	278+00 (bottom)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	1.1	<b>SC Thickness (ft):</b>	1.42
<b>RQD (%):</b>	90	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.39 feet. Wood piece at 0.8 feet.		



# Manatee Cooling Pond Soil-Cement Core Logs

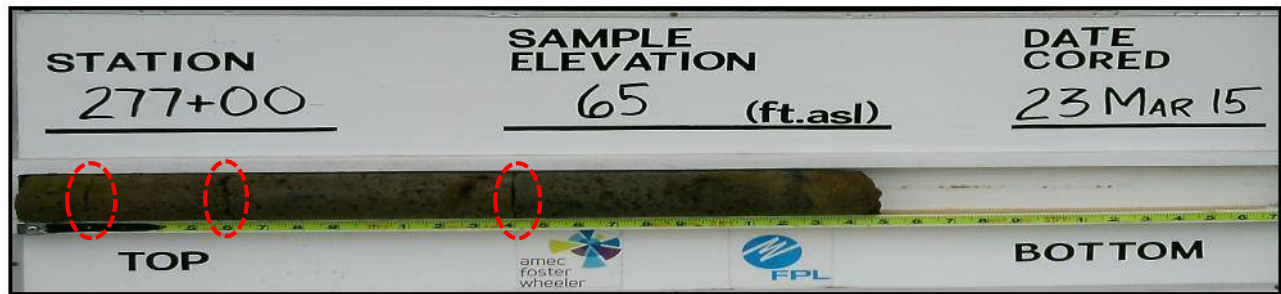


amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

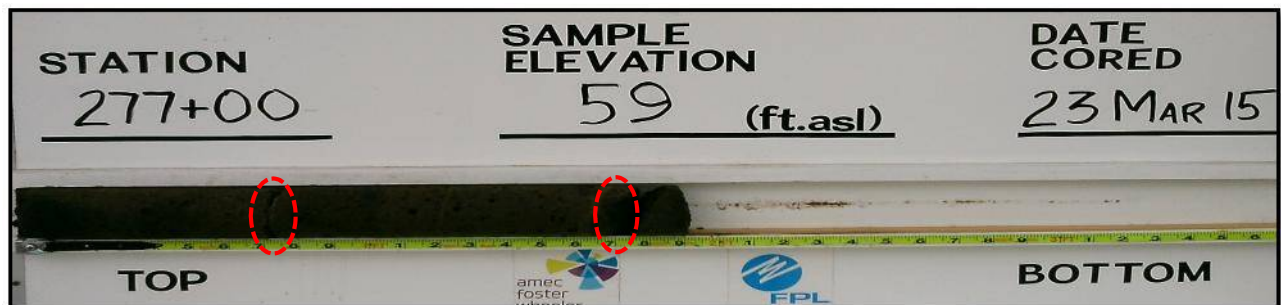
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 277+00



<b>Core ID:</b>	277+00 (top)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.43	<b>SC Thickness (ft):</b>	2.58
<b>RQD (%):</b>	92	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.45 feet.		

**Location:** STA 277+00



<b>Core ID:</b>	277+00 (middle)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	1.9	<b>SC Thickness (ft):</b>	2.08
<b>RQD (%):</b>	89	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.74 feet. Very soft material from 1.7 to 1.9 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs



amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 277+00



<b>Core ID:</b>	277+00 (bottom)	<b>Date Cored:</b>	3/23/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/23/15
<b>Recovered Length (ft):</b>	2.0	<b>SC Thickness (ft):</b>	2.42
<b>RQD (%):</b>	80	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Wood piece at 0.18 feet. Soft material 0.2 to 0.75 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 278+00



<b>Core ID:</b>	278+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.55	<b>SC Thickness (ft):</b>	2.58
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.1 feet. Fractured pieces from 1.9 to 2.45 feet.		

**Location:** STA 278+00



<b>Core ID:</b>	278+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	1.6	<b>SC Thickness (ft):</b>	1.67
<b>RQD (%):</b>	31	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.3 feet. Very soft material from 0.3 to 0.5 feet. Fragments from 1.3 to 1.6 feet.		

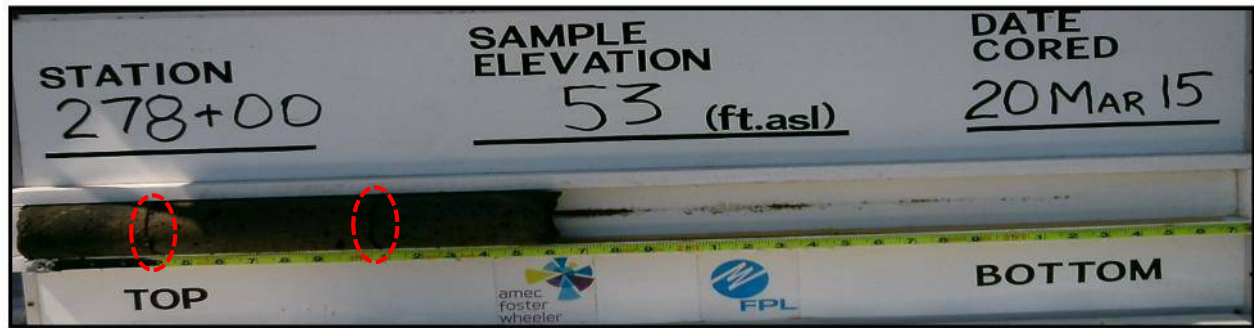
# Manatee Cooling Pond Soil-Cement Core Logs



amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 278+00



<b>Core ID:</b>	278+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	1.6	<b>SC Thickness (ft):</b>	1.6
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.4 feet.		



# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

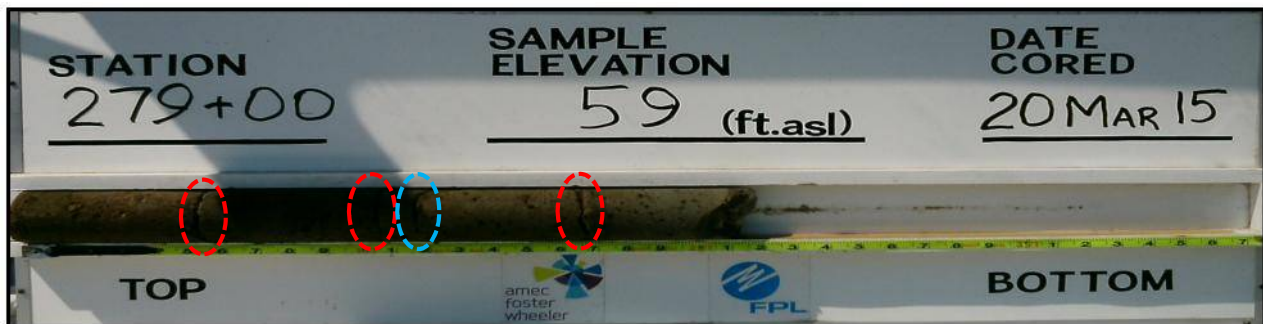
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 279+00



<b>Core ID:</b>	279+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.35	<b>SC Thickness (ft):</b>	2.35
<b>RQD (%):</b>	89	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.25 feet. Soft material from 0.25 to 0.64 feet.		

**Location:** STA 279+00



<b>Core ID:</b>	279+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.1	<b>SC Thickness (ft):</b>	2.165
<b>RQD (%):</b>	94	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.55 feet. Soft material from 0.55 to 1.07 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

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wheeler

**Location:** STA 279+00



<b>Core ID:</b>	279+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	1.94	<b>SC Thickness (ft):</b>	2.165
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0.58 to 1.28 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs

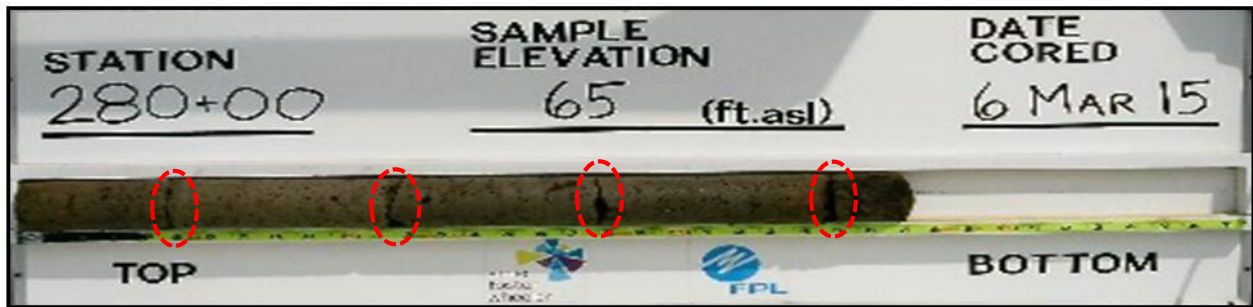


amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 280+00



<b>Core ID:</b>	280+00 (top)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	2.7	<b>SC Thickness (ft):</b>	2.7
<b>RQD (%):</b>	91	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location:** STA 280+00



<b>Core ID:</b>	280+00 (middle)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	1.65	<b>SC Thickness (ft):</b>	1.92
<b>RQD (%):</b>	44	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.95 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

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 foster  
 wheeler

**Location:** STA 280+00



<b>Core ID:</b>	280+00 (bottom)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	1.8	<b>SC Thickness (ft):</b>	1.6
<b>RQD (%):</b>	81	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			



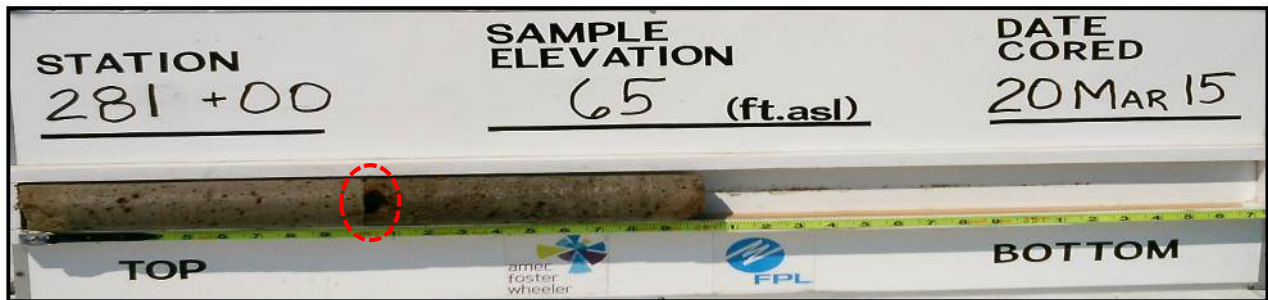
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 281+00



<b>Core ID:</b>	281+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.0	<b>SC Thickness (ft):</b>	2.165
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Small void with rotting vegetation at 1.0 feet.		

**Location:** STA 281+00



<b>Core ID:</b>	281+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	1.25	<b>SC Thickness (ft):</b>	1.33
<b>RQD (%):</b>	50	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.62 feet. Very soft material from 0.62 to 1.25 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
 foster  
 wheeler

**Location:** STA 281+00



<b>Core ID:</b>	281+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.05	<b>SC Thickness (ft):</b>	2.08
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

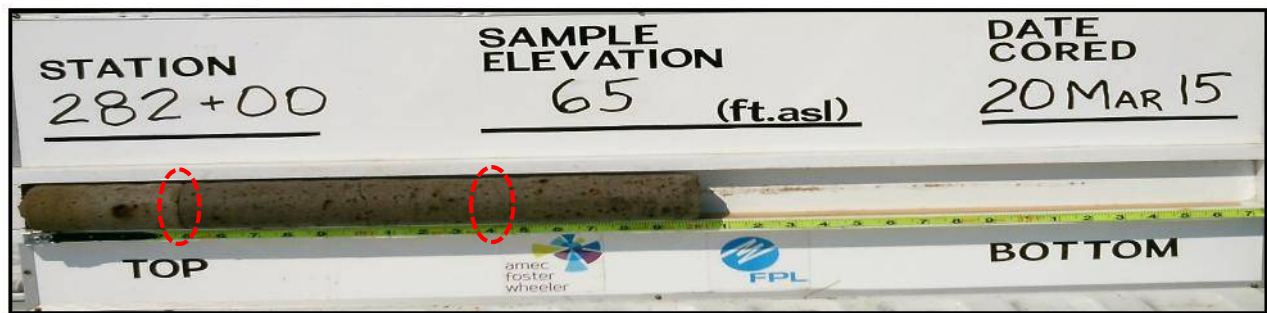
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 282+00



<b>Core ID:</b>	282+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.0	<b>SC Thickness (ft):</b>	2.5
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location:** STA 282+00



<b>Core ID:</b>	282+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.3	<b>SC Thickness (ft):</b>	2.33
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

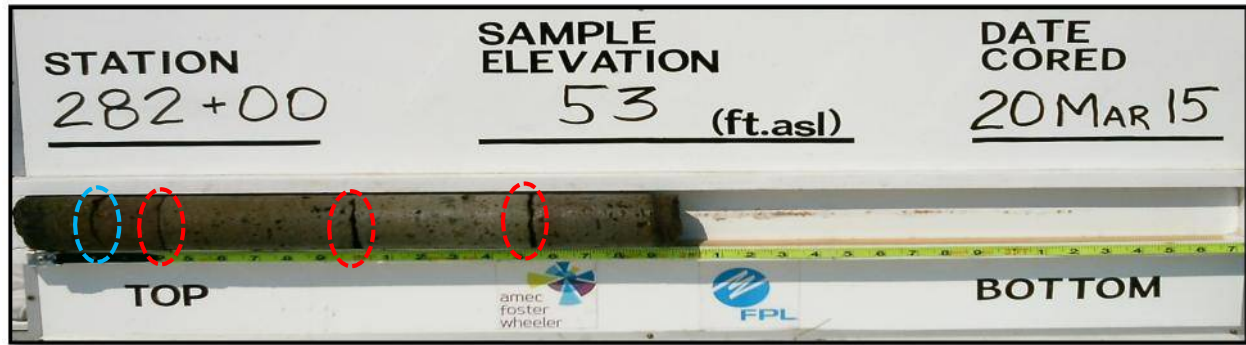
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
foster  
wheeler

**Location:** STA 282+00



<b>Core ID:</b>	282+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	1.95	<b>SC Thickness (ft):</b>	2.0
<b>RQD (%):</b>	78	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.43 feet.		



# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 283+00



<b>Core ID:</b>	283+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.45	<b>SC Thickness (ft):</b>	2.58
<b>RQD (%):</b>	92	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.4 feet.		

**Location:** STA 283+00



<b>Core ID:</b>	283+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	1.9	<b>SC Thickness (ft):</b>	2.0
<b>RQD (%):</b>	87	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.83 feet.		

# Manatee Cooling Pond

## Soil-Cement Core Logs



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foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 283+00



<b>Core ID:</b>	283+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	1.75	<b>SC Thickness (ft):</b>	2.0
<b>RQD (%):</b>	91	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.5 feet. Very soft material from 0.5 to 0.98 feet. Soft material from 0.98 to 1.75 feet.		

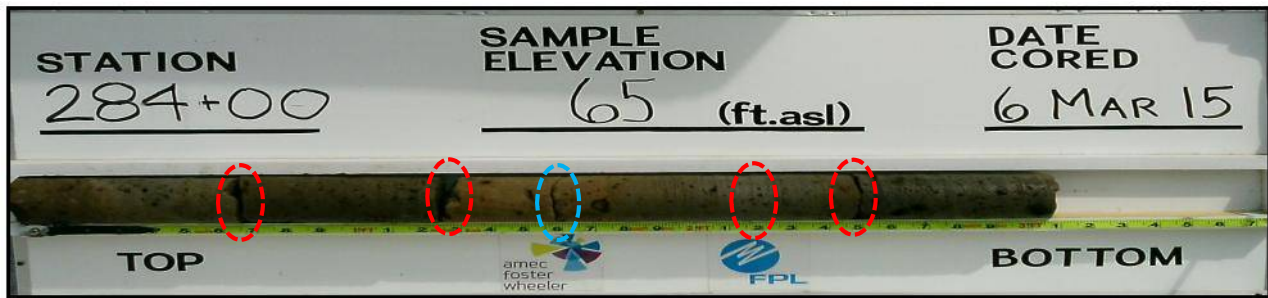
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

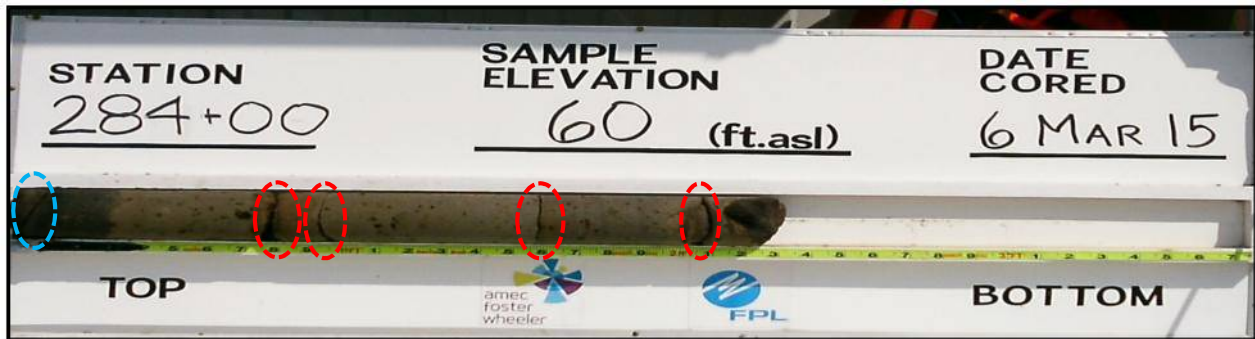
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 284+00



<b>Core ID:</b>	284+00 (top)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	3.05	<b>SC Thickness (ft):</b>	3.05
<b>RQD (%):</b>	84	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 1.25 to 1.75 feet.		

**Location:** STA 284+00



<b>Core ID:</b>	284+00 (middle)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	60' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	2.25	<b>SC Thickness (ft):</b>	2.9
<b>RQD (%):</b>	77	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.1, 0.75 to 0.95, and 2.05 to 2.25 feet.		

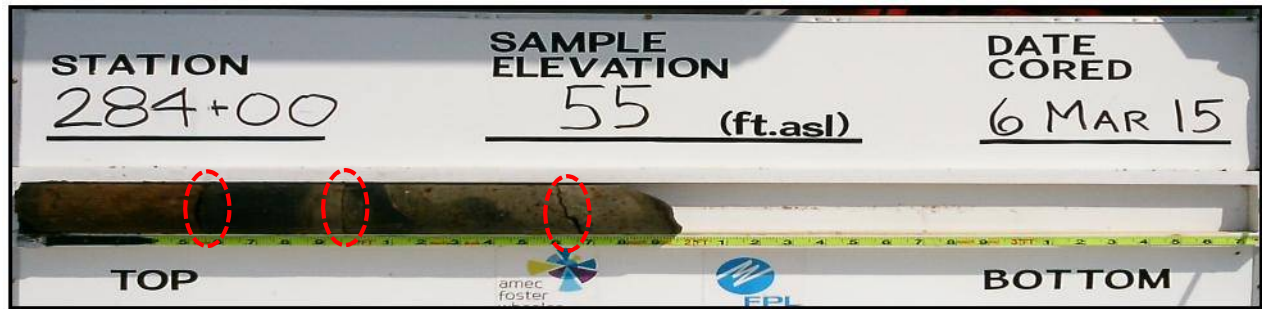
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
foster  
wheeler

**Location:** STA 284+00



<b>Core ID:</b>	284+00 (bottom)	<b>Date Cored:</b>	3/6/15
<b>Core Elevation:</b>	55' ASL	<b>Date Photographed:</b>	3/6/15
<b>Recovered Length (ft):</b>	1.8	<b>SC Thickness (ft):</b>	2.6
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.55 feet.		



# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 285+00



<b>Core ID:</b>	285+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.2	<b>SC Thickness (ft):</b>	2.25
<b>RQD (%):</b>	86	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.45 feet.		

**Location:** STA 285+00



<b>Core ID:</b>	285+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.03	<b>SC Thickness (ft):</b>	2.5
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 1.65 to 2.03 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs



amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 285+00



<b>Core ID:</b>	285+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.7	<b>SC Thickness (ft):</b>	3.0
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

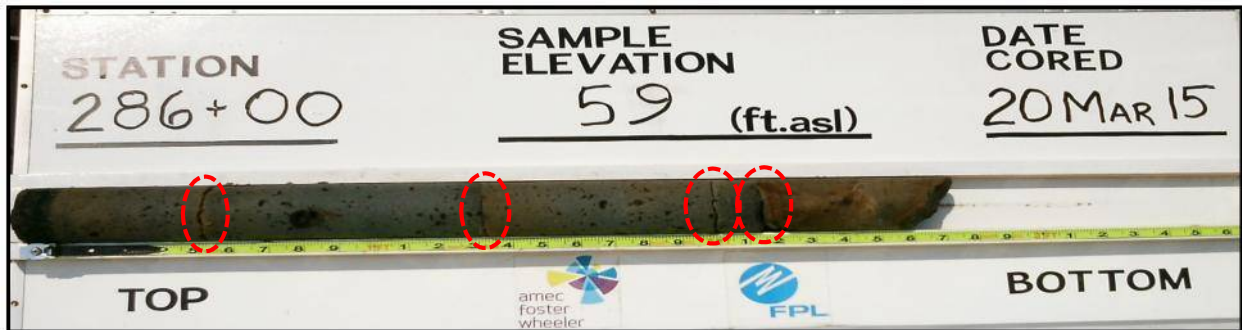
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 286+00



<b>Core ID:</b>	286+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.2	<b>SC Thickness (ft):</b>	2.25
<b>RQD (%):</b>	99	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.2 feet.		

**Location:** STA 286+00



<b>Core ID:</b>	286+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.6	<b>SC Thickness (ft):</b>	2.83
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 2.14 to 2.6 feet.		

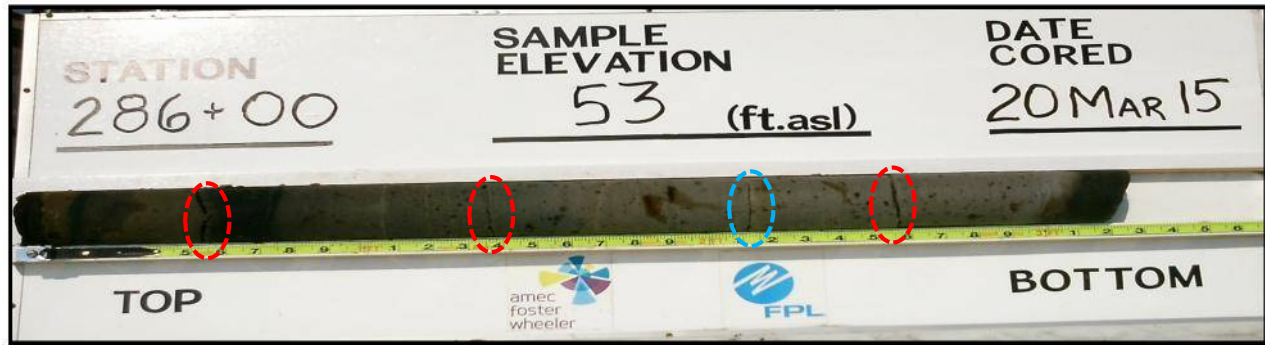
# Manatee Cooling Pond Soil-Cement Core Logs



amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 286+00



<b>Core ID:</b>	286+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	3.2	<b>SC Thickness (ft):</b>	3.33
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.54 feet.		



# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
foster  
wheeler

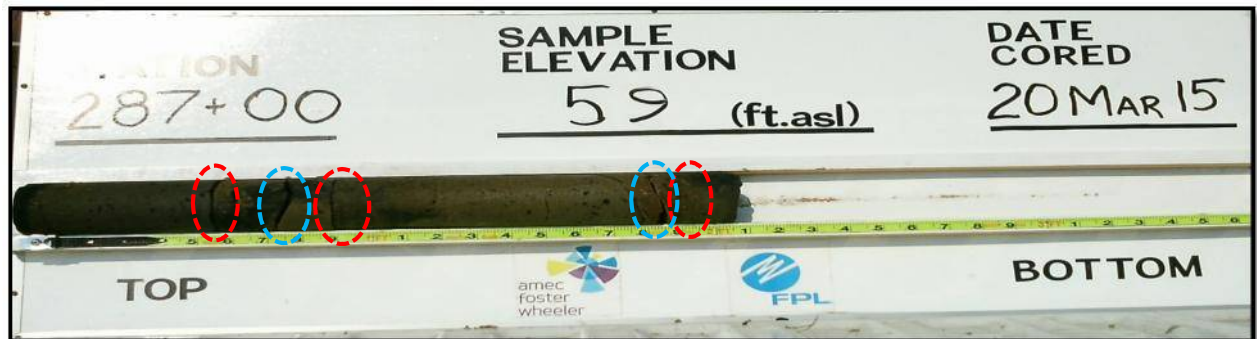
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 287+00



<b>Core ID:</b>	287+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.22	<b>SC Thickness (ft):</b>	2.25
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.35 feet. Soft material from 0.35 to 2.22 feet.		

**Location:** STA 287+00



<b>Core ID:</b>	287+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.05	<b>SC Thickness (ft):</b>	2.25
<b>RQD (%):</b>	84	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0.55 to 0.9 and 1.83 to 2.05 feet.		

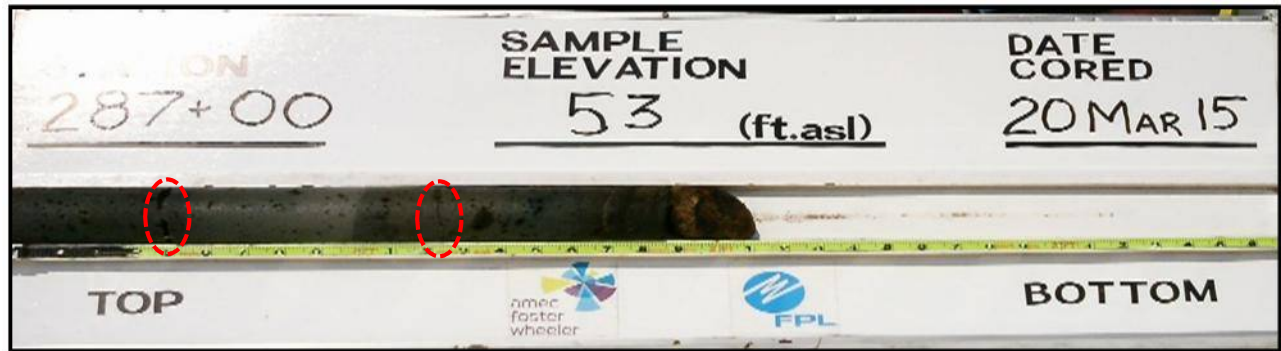
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
foster  
wheeler

**Location:** STA 287+00



<b>Core ID:</b>	287+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	1.85	<b>SC Thickness (ft):</b>	2.33
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Insitu soil from 1.85 to 2.05 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs

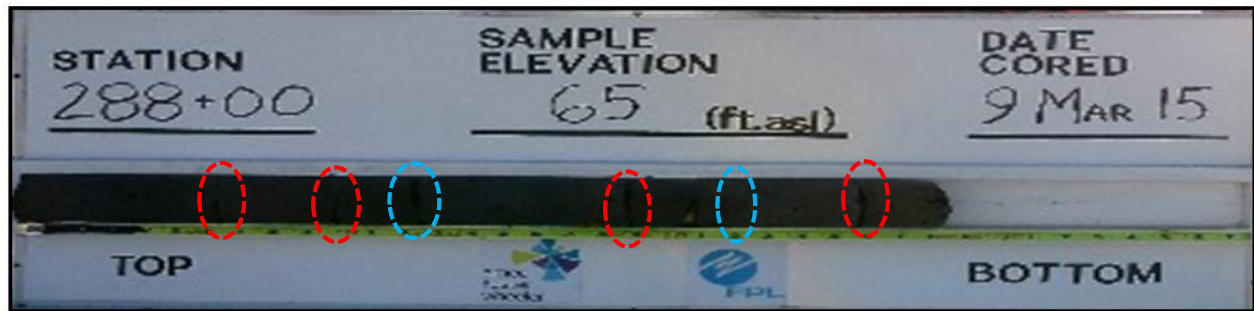


**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**amec  
foster  
wheeler**

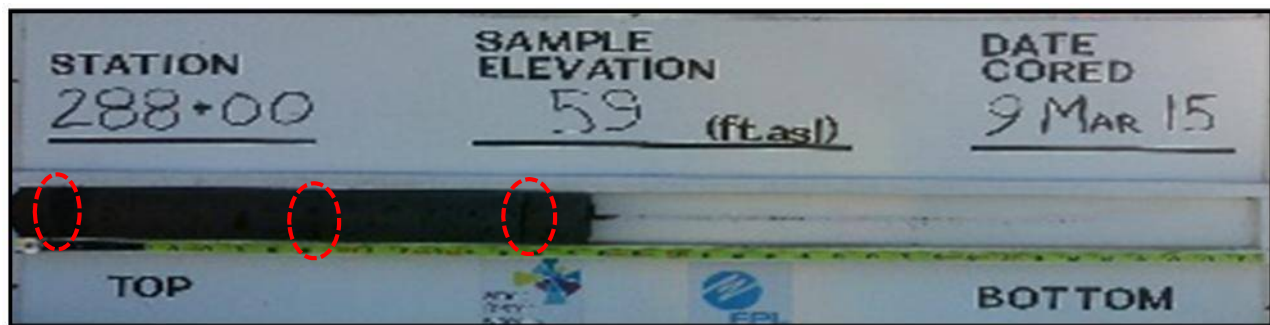
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location: STA 288+00**



<b>Core ID:</b>	288+00 (top)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	2.8	<b>SC Thickness (ft):</b>	32.8
<b>RQD (%):</b>	75	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location: STA 288+00**



<b>Core ID:</b>	288+00 (middle)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	1.75	<b>SC Thickness (ft):</b>	2.67
<b>RQD (%):</b>	80	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.15 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**amec  
foster  
wheeler**

**Location:** STA 288+00



<b>Core ID:</b>	288+00 (bottom)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	2.2	<b>SC Thickness (ft):</b>	2.33
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			



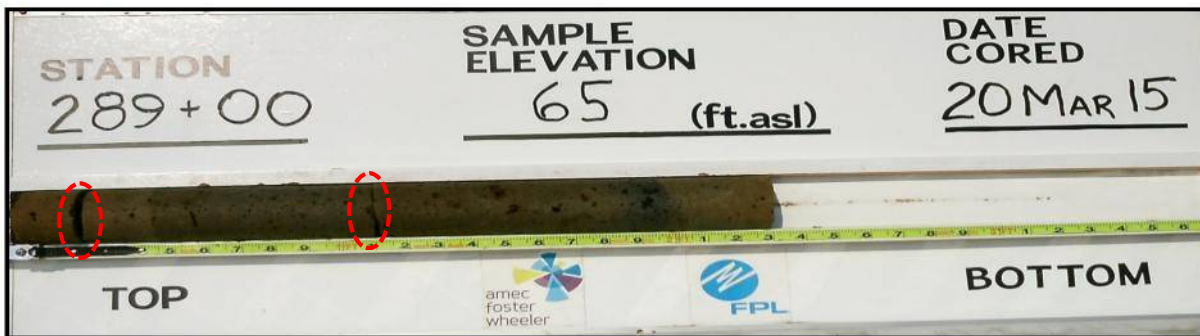
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

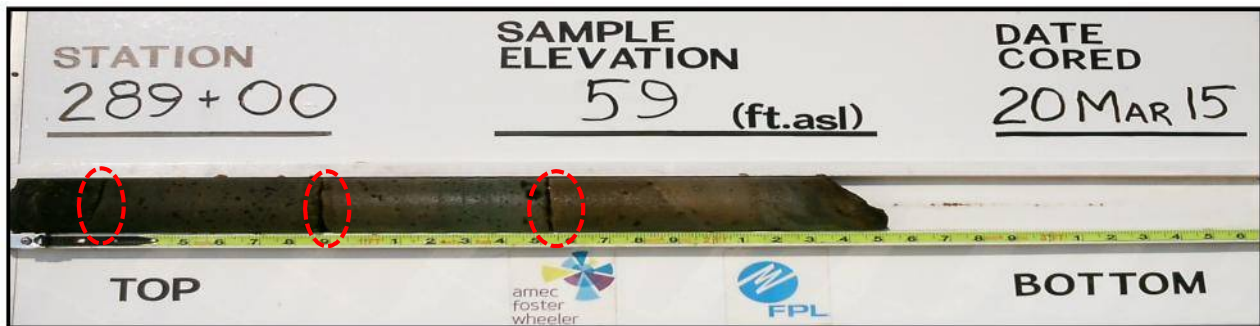
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 289+00



<b>Core ID:</b>	289+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.3	<b>SC Thickness (ft):</b>	2.33
<b>RQD (%):</b>	89	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.25 feet. Soft material from 0.25 to 2.3 feet.		

**Location:** STA 289+00



<b>Core ID:</b>	289+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.35	<b>SC Thickness (ft):</b>	2.67
<b>RQD (%):</b>	89	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.25 feet. Soft material from 0.25 to 2.35 feet.		

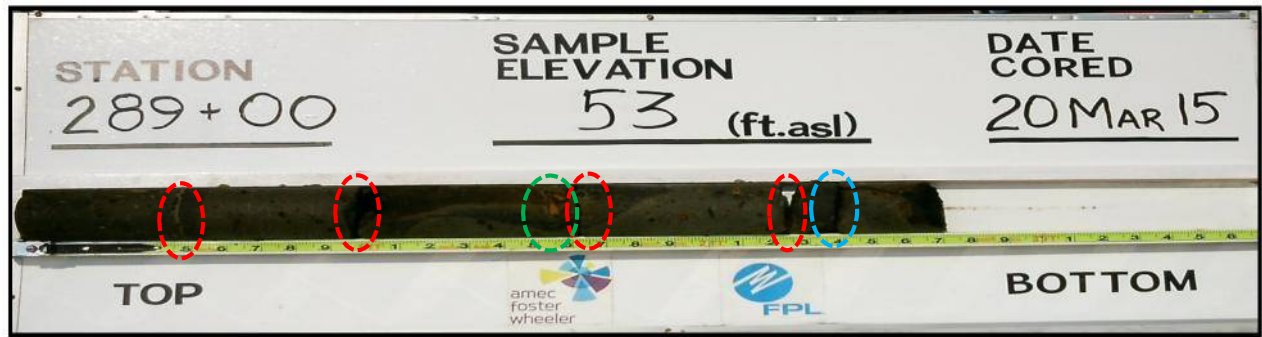
# Manatee Cooling Pond Soil-Cement Core Logs



amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 289+00



<b>Core ID:</b>	289+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.7	<b>SC Thickness (ft):</b>	3.0
<b>RQD (%):</b>	75	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Entire core sample comprised of soft material. Lateral fracture from 0.97 to 1.3 feet and from 2.35 to 2.7 feet. Woods parts at 1.55 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs

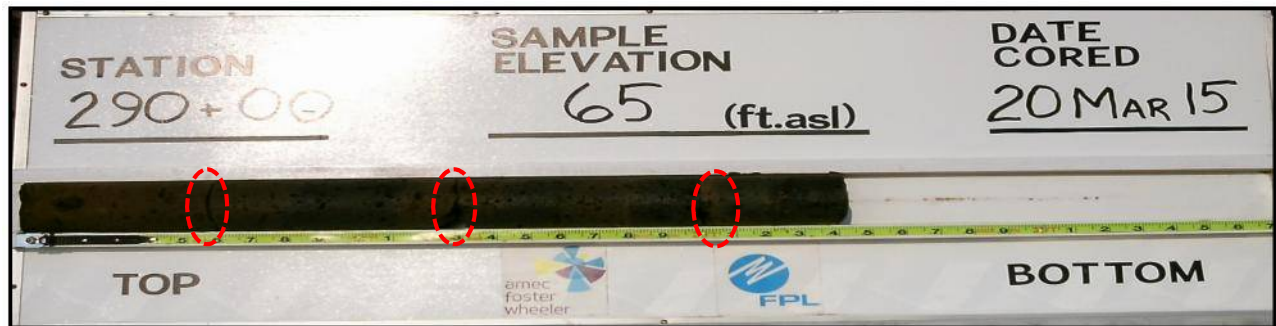


amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 290+00



<b>Core ID:</b>	290+00 (top)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.4	<b>SC Thickness (ft):</b>	2.42
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location:** STA 290+00



<b>Core ID:</b>	290+00 (middle)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.3	<b>SC Thickness (ft):</b>	2.5
<b>RQD (%):</b>	70	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 2.0 feet. Soft material between 2.0 to 2.3 feet.		

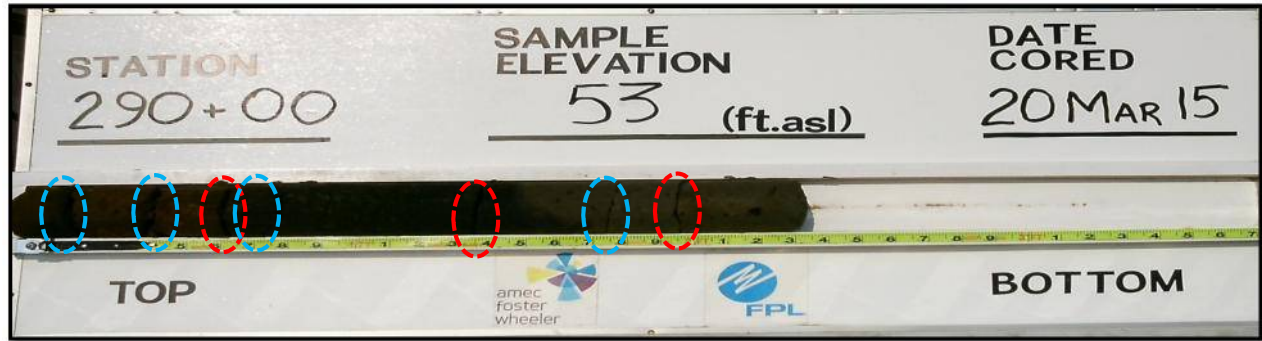
# Manatee Cooling Pond Soil-Cement Core Logs



amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

**Location:** STA 290+00



<b>Core ID:</b>	290+00 (bottom)	<b>Date Cored:</b>	3/20/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/20/15
<b>Recovered Length (ft):</b>	2.3	<b>SC Thickness (ft):</b>	2.42
<b>RQD (%):</b>	60	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 0.6 feet. Soft material 0.6 to 1.35 feet.		



# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
foster  
wheeler

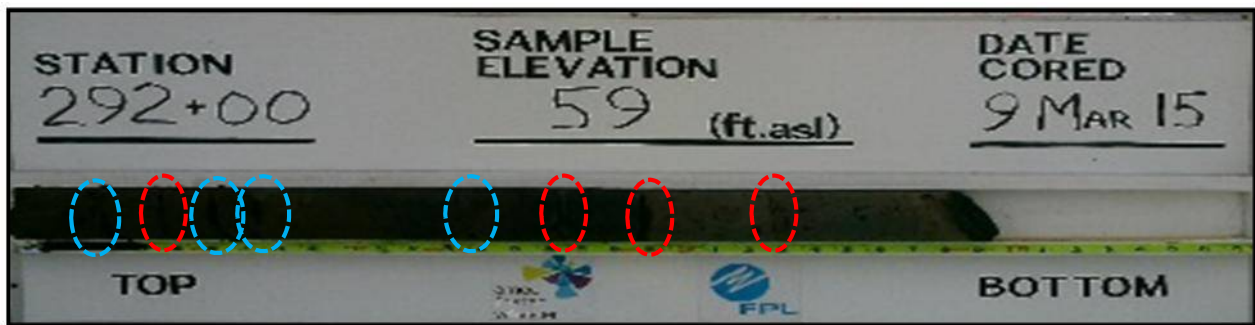
Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 292+00



<b>Core ID:</b>	292+00 (top)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	1.35	<b>SC Thickness (ft):</b>	2.6
<b>RQD (%):</b>	77	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location:** STA 292+00



<b>Core ID:</b>	292+00 (middle)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	5.9	<b>SC Thickness (ft):</b>	3.0
<b>RQD (%):</b>	2.85	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Very soft material from 0 to 1.0 feet.		

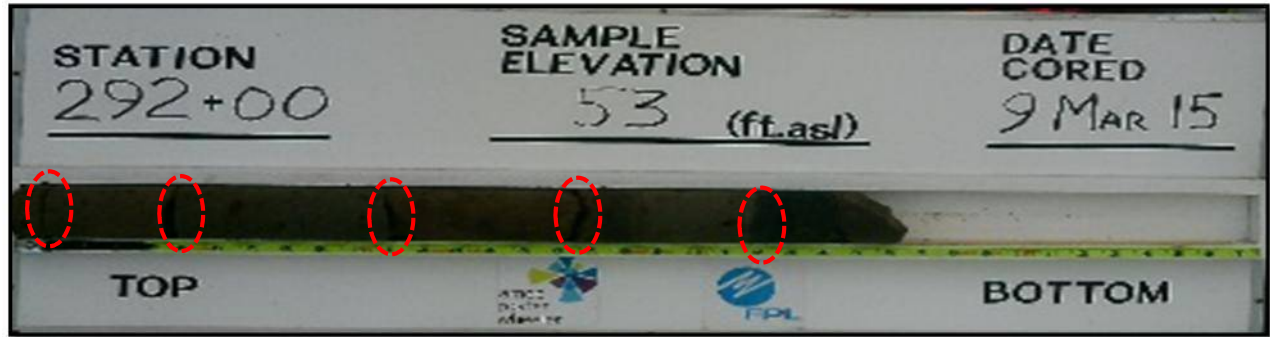
# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
 foster  
 wheeler

**Location:** STA 292+00



<b>Core ID:</b>	292+00 (bottom)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	2.55	<b>SC Thickness (ft):</b>	2.67
<b>RQD (%):</b>	90	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.1 feet. Very soft material from 1.1 to 1.65 feet.		

# Manatee Cooling Pond Soil-Cement Core Logs

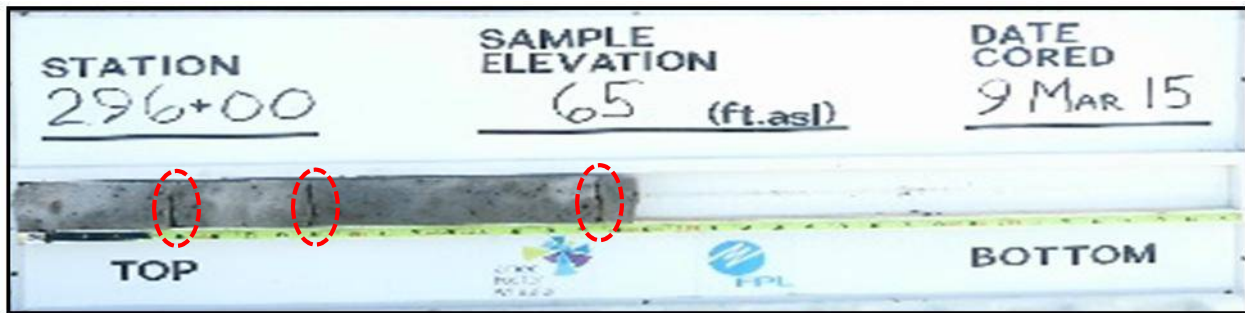


**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
foster  
wheeler

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 296+00



<b>Core ID:</b>	296+00 (top)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	1.85	<b>SC Thickness (ft):</b>	1.85
<b>RQD (%):</b>	92	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location:** STA 296+00



<b>Core ID:</b>	296+00 (middle)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	2.7	<b>SC Thickness (ft):</b>	2.7
<b>RQD (%):</b>	99	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

amec  
 foster  
 wheeler

**Location:** STA 296+00



<b>Core ID:</b>	296+00 (bottom)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	2.6	<b>SC Thickness (ft):</b>	2.6
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

# Manatee Cooling Pond Soil-Cement Core Logs

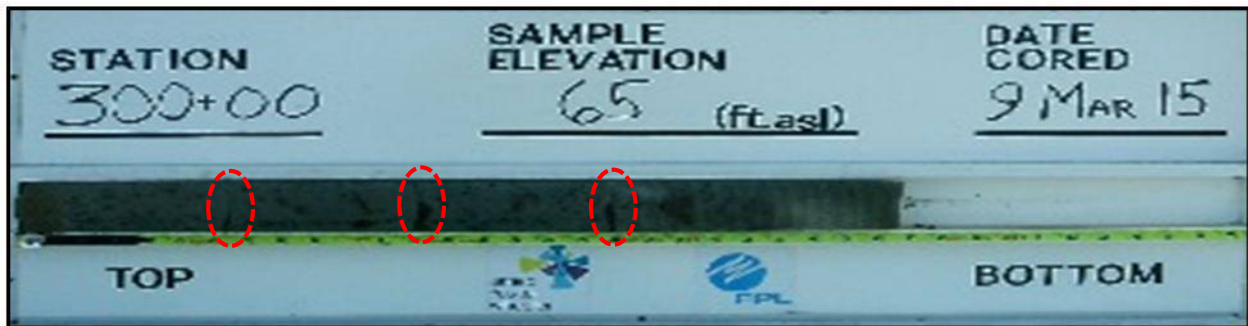


amec  
foster  
wheeler

**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

Legend	
	Mechanical Break
	Fracture
	Debris or other foreign object (see notes for description)

**Location:** STA 300+00



<b>Core ID:</b>	300+00 (top)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	65' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	2.6	<b>SC Thickness (ft):</b>	2.92
<b>RQD (%):</b>	100	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>			

**Location:** STA 300+00



<b>Core ID:</b>	300+00 (middle)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	59' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	1.95	<b>SC Thickness (ft):</b>	2.0
<b>RQD (%):</b>	84	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.1 and 1.25 to 1.47 feet.		



# Manatee Cooling Pond Soil-Cement Core Logs



**Project:** Manatee FPL Cooling Pond  
**Project #:** 300906.\*\*\*.3  
**Amec FW Staff:** Derek Richcreek

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wheeler**

**Location:** STA 300+00



<b>Core ID:</b>	300+00 (bottom)	<b>Date Cored:</b>	3/9/15
<b>Core Elevation:</b>	53' ASL	<b>Date Photographed:</b>	3/9/15
<b>Recovered Length (ft):</b>	2.5	<b>SC Thickness (ft):</b>	2.75
<b>RQD (%):</b>	99	<b>Void Depth (ft):</b>	N/A
<b>Notes:</b>	Soft material from 0 to 0.1 feet.		

# APPENDIX E

APPENDIX E

Soil-Cement Strength Test Results





**Florida Power and Light (FPL)  
Manatee Plant Cooling Pond  
Soil-Cement Cores / Soil-Cement Strength Test Results**

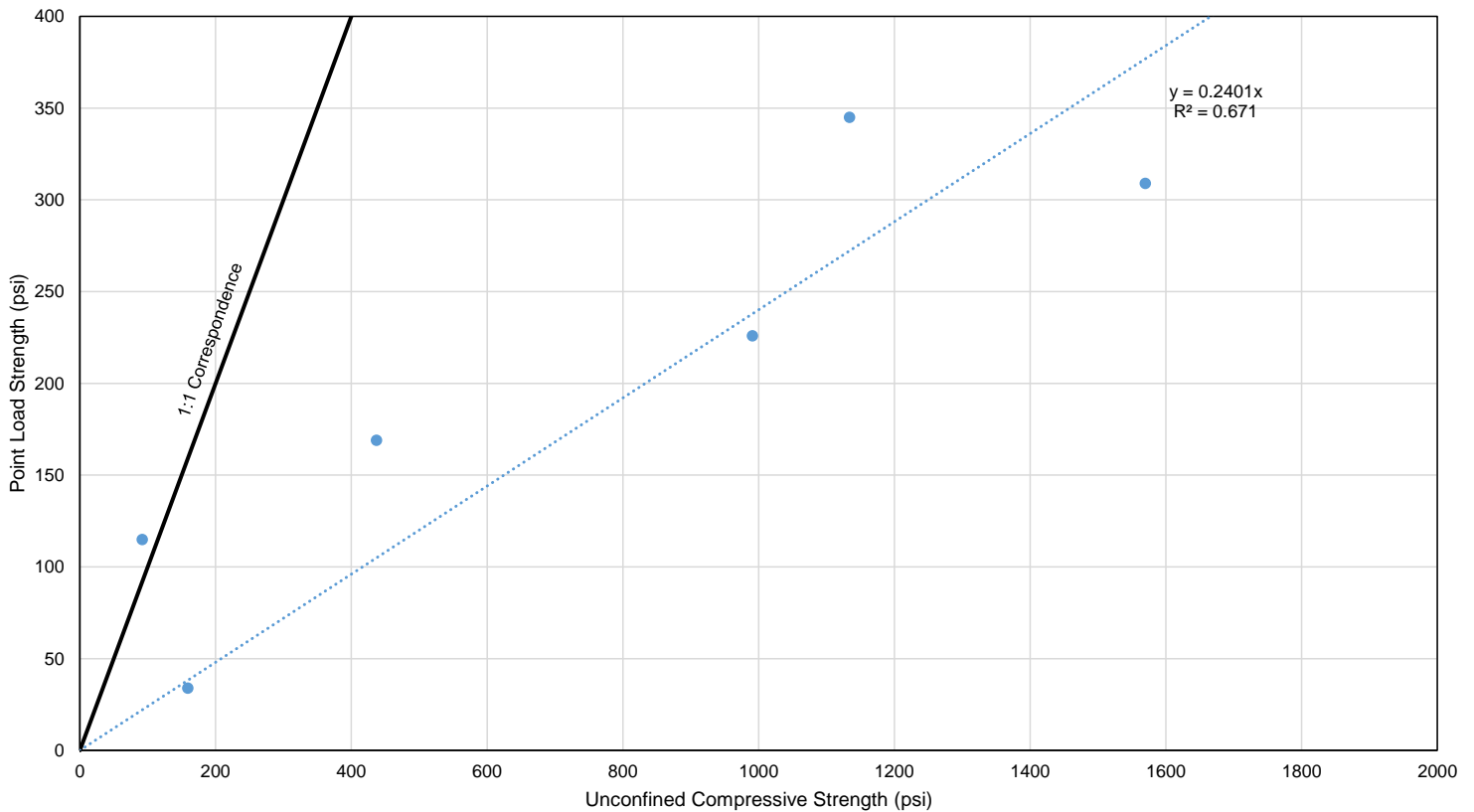


Point Load Test Results and UCS Correlation

Florida Power and Light (FPL) Manatee Plant Cooling Pond - Soil Cement Cores

STA	Compressive Strength (psi)						UCS vs Point Load Correlation		
	Point Load Strength Tests			Unconfined Compressive Strength Tests					
	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom
268+00	214		248						
276+00	241	67	70						
280+00	309	115	34	1,570	92	159	5.08	0.80	4.66
300+00	226	345	169	991	1,134	437	4.39	3.28	2.58

Point Load Strength vs UCS



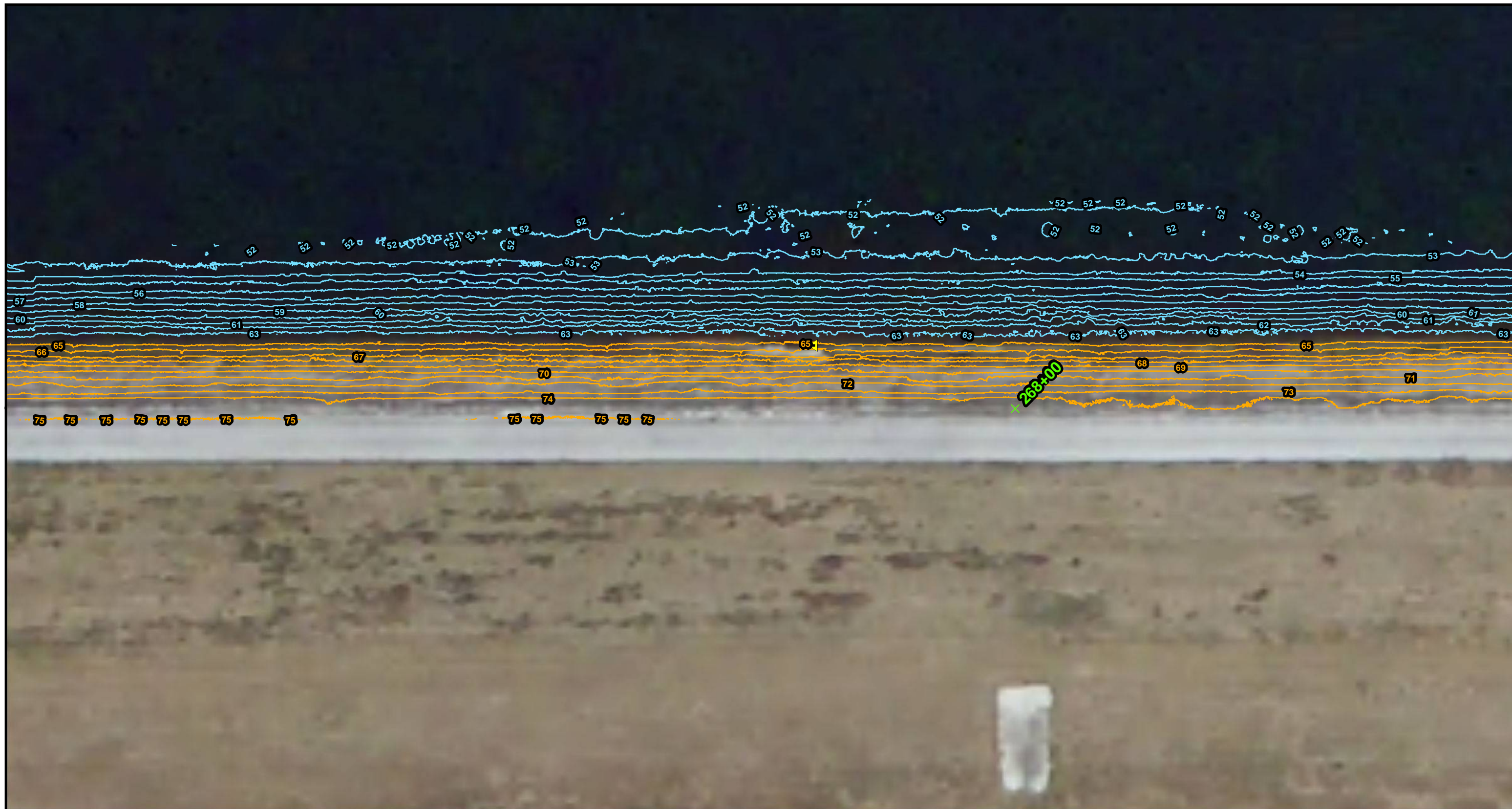


# APPENDIX F

APPENDIX F

Topographic Map Detailed Segments





**Notes:**

- 1- Project No.: 300906
- 2- Data Sources - GFY & ACA  
Contours derived from LiDAR and Sonar DTMs (NAVD 88 feet)
- 3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 04/29/20145  
Revised: AB  
Checked By: JB



**Explanation of Features**

- LiDAR derived 1ft contours
- Sonar derived 1ft contours

**GPS Locations**

- ✕ Stations
- ▲ Repair

**Scale:** 0 15 30  
1" = 30 Feet

**North Arrow:** N

**amec foster wheeler**

Amec Foster Wheeler  
Environment & Infrastructure, Inc.  
2000 E. Edgewood Drive Ste #215  
Lakeland, FL 33803  
CA-5392  
(863) 667-2345

**Appendix F**  
**Figure 54**  
**Topographic Contours**  
**Manatee Cooling Pond**  
**Manatee County, Florida**





Notes:

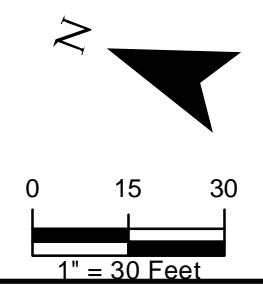
- 1- Project No.: 300906
- 2- Data Sources - GFY & ACA  
Contours derived from LiDAR and Sonar DTMs (NAVD 88 feet)
- 3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 04/29/20145  
Revised: AB  
Checked By: JB



**Explanation of Features**

- LiDAR derived 1ft contours
- Sonar derived 1ft contours
- ✕ GPS Stations
- ▲ Repair



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**Appendix F**  
**Figure 55**  
**Topographic Contours**  
**Manatee Cooling Pond**  
**Manatee County, Florida**





**Notes:**

- 1- Project No.: 300906
- 2- Data Sources - GFY & ACA  
Contours derived from LiDar and Sonar DTMs (NAVD 88 feet)
- 3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 04/29/20145  
Revised: AB  
Checked By: JB



**Explanation of Features**

- LiDAR derived 1ft contours
- Sonar derived 1ft contours

**GPS Locations**

- ✕ Stations
- ▲ Repair

N

0 15 30

1" = 30 Feet

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**Appendix F**  
**Figure 56**  
**Topographic Contours**  
**Manatee Cooling Pond**  
**Manatee County, Florida**





**Notes:**

- 1- Project No.: 300906
- 2- Data Sources - GFY & ACA  
Contours derived from LiDAR and Sonar DTMs (NAVD 88 feet)
- 3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 04/29/20145  
Revised: AB  
Checked By: JB



**Explanation of Features**

- LiDAR derived 1ft contours
- Sonar derived 1ft contours

**GPS Locations**

- ✕ Stations
- ▲ Repair

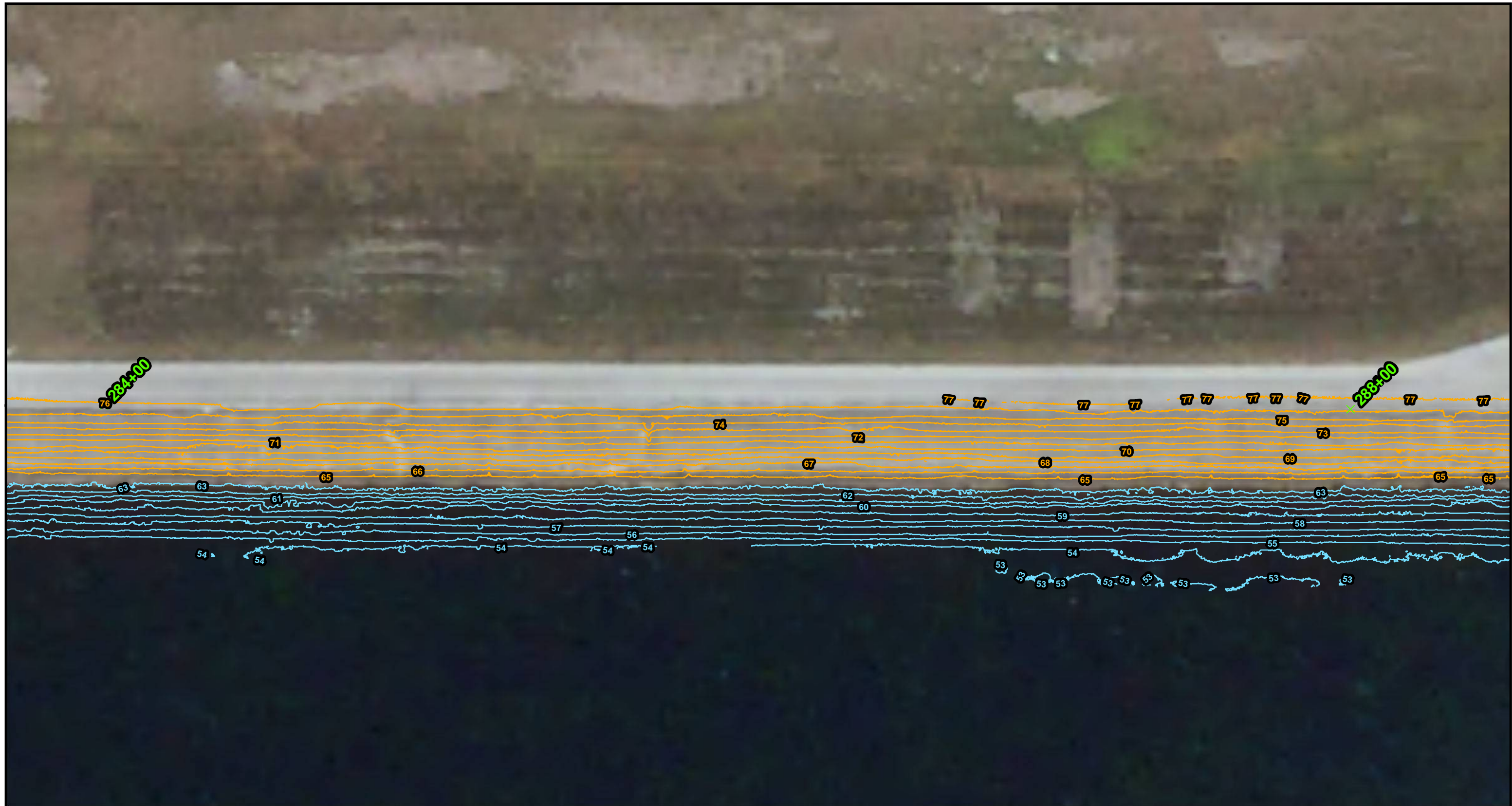
N

0 15 30  
1" = 30 Feet

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**Appendix F**  
**Figure 57**  
**Topographic Contours**  
**Manatee Cooling Pond**  
**Manatee County, Florida**





Notes:

- 1- Project No.: 300906
- 2- Data Sources - GFY & ACA  
Contours derived from LiDar and Sonar DTMs (NAVD 88 feet)
- 3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 04/29/20145  
Revised: AB  
Checked By: JB



**Explanation of Features**

- LiDAR derived 1ft contours
- Sonar derived 1ft contours

**GPS Locations**

- ✕ Stations
- ▲ Repair

N

0 15 30  
1" = 30 Feet

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**Appendix F**  
**Figure 58**  
**Topographic Contours**  
**Manatee Cooling Pond**  
**Manatee County, Florida**





**Notes:**

- 1- Project No.: 300906
- 2- Data Sources - GFY & ACA  
Contours derived from LiDAR and Sonar DTMs (NAVD 88 feet)
- 3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 04/29/20145  
Revised: AB  
Checked By: JB



**Explanation of Features**

- LiDAR derived 1ft contours
- Sonar derived 1ft contours

**GPS Locations**

- ✕ Stations
- ▲ Repair

N

0 15 30  
1" = 30 Feet

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**Appendix F**  
**Figure 59**  
**Topographic Contours**  
**Manatee Cooling Pond**  
**Manatee County, Florida**





**Notes:**

- 1- Project No.: 300906
- 2- Data Sources - GFY & ACA  
Contours derived from LiDAR and Sonar DTMs (NAVD 88 feet)
- 3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 04/29/20145  
Revised: AB  
Checked By: JB



**Explanation of Features**

- LiDAR derived 1ft contours
- Sonar derived 1ft contours

**GPS Locations**

- ✕ Stations
- ▲ Repair

**Scale and Orientation:**

N

0 15 30

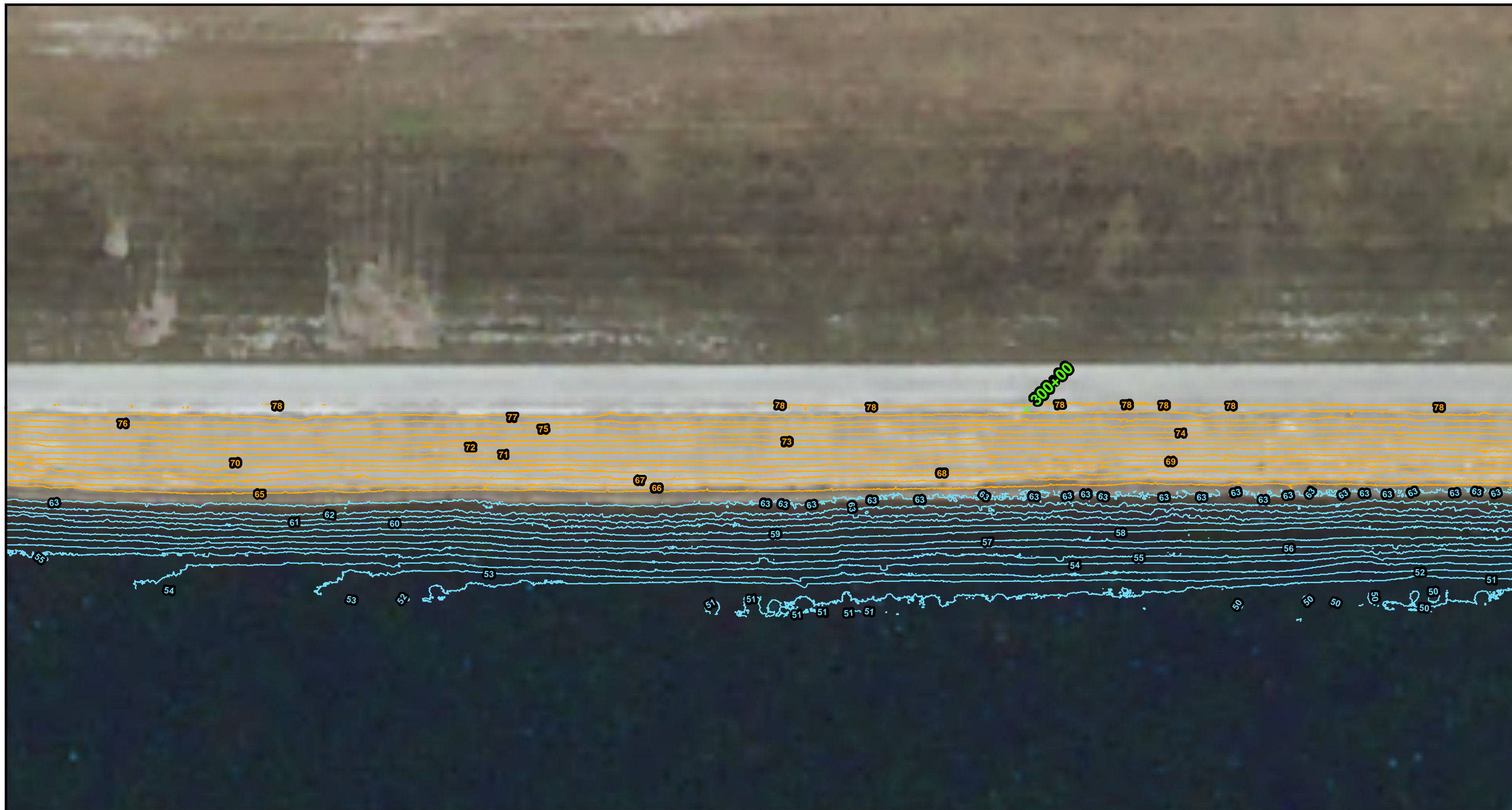
1" = 30 Feet

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**Appendix F**  
**Figure 60**  
**Topographic Contours**  
**Manatee Cooling Pond**  
**Manatee County, Florida**





Notes:

- 1- Project No.: 300906
- 2- Data Sources - GFY & ACA  
Contours derived from LiDAR and Sonar DTMs (NAVD 88 feet)
- 3- This map is intended to be used for planning purposes only. It is not a survey.

Date: 04/29/20145  
Revised: AB  
Checked By: JB



**Explanation of Features**

- LiDAR derived 1ft contours
- Sonar derived 1ft contours

**GPS Locations**

- × Stations
- ▲ Repair

N

0 15 30  
1" = 30 Feet

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**Appendix F**  
**Figure 61**  
**Topographic Contours**  
**Manatee Cooling Pond**  
**Manatee County, Florida**