



Matthew R. Bernier
Senior Counsel
Duke Energy Florida, Inc.

September 16, 2014

VIA HAND-DELIVERY

Ms. Carlotta Stauffer, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

RECEIVED-FPSC
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COMMISSION
CLERK

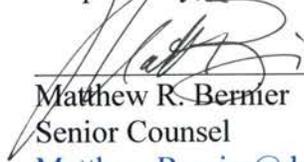
Re: *Petition of Duke Energy Florida, Inc. for Approval to Construct an Independent Spent Fuel Storage Installation and an Accounting Order to Defer Amortization Pending Recovery from the Department of Energy; Docket No. 140113-EI*

Dear Ms. Stauffer:

On September 9, 2014, Duke Energy Florida, Inc. ("DEF") filed its Response to Staff's Second Data Request. Please find enclosed for filing, DEF's Supplemental Response to Staff's Second Data Request (Nos. 1-7), specifically, question #6 and DEF's Notice of Intent to Request Confidential Classification of certain documents provided in its response to Staff's Second Data Request (1-7), specifically question #6 which will be subject to the Request for Confidential Classification. The confidential documents are enclosed on a CD in a separate sealed envelope labeled "confidential Exhibit A."

Thank you for your assistance in this matter. Please feel free to call me at (850) 521-1428 should you have any questions concerning this filing.

Respectfully,


Matthew R. Bernier
Senior Counsel
Matthew.Bernier@duke-energy.com

MRB/mw
Enclosures

cc: Keino Young & J.R. Kelly/Charles J. Rehwinkel

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Duke Energy Florida, Inc.
For Approval to Construct an Independent Spent
Fuel Storage Installation and an Accounting Order
to Defer Amortization Pending Recovery from the
Department of Energy

Docket No. 140113

Filed: September 16, 2014

**DUKE ENERGY FLORIDA INC.'S FIRST NOTICE OF
INTENT TO REQUEST CONFIDENTIAL CLASSIFICATION**

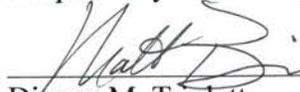
Duke Energy Florida, Inc. ("DEF" or "Company"), pursuant to Section 366.093, Florida Statutes (F.S.), and Rule 25-22.006, Florida Administrative Code (F.A.C.), submits its First Notice of Intent to Request for Confidential Classification of confidential portions of DEF's responses to Staff's 2nd Data Request (Nos. 1-7). Specifically, documents and information responsive to Question #6 contain confidential proprietary information, including specific information about contracts, bids, and internal policies and procedures. Strict procedures are established and followed at DEF to maintain the confidentiality of contracts. Disclosure of this information to the public would harm the Company and adversely impact DEF's competitive business interests. Moreover, using the information competitors and the public at large would be able to discern proprietary information about contracts and internal procedures which have not been disclosed to the public.

Attached as Exhibit A is a disc which contains a copy of the above referenced confidential documents.

Pursuant to Rule 25-22.006(3)(a)(1), DEF will file its Request for Confidential Classification

for the confidential information contained herein within twenty-one (21) days of filing this request.

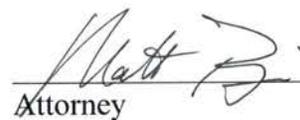
Respectfully submitted,



Dianne M. Triplett
Associate General Counsel
Matthew R. Bernier
Senior Counsel
Duke Energy Florida, Inc.
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St. Petersburg, FL 33701
Telephone: 727-820-4692
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Matthew.Bernier@duke-energy.com
Attorneys for Duke Energy Florida, Inc.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing was served on the following via electronic mail and overnight delivery, this 16th day of September, 2014.



Attorney

<p>Keino Young Office of General Counsel Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 kyoung@psc.state.fl.us</p>	<p>J. R. Kelly Office of Public Counsel 111 W. Madison Street, Room 812 Tallahassee, FL 32393-1400 Kelly.jr@leg.state.fl.us</p>
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**DUKE ENERGY FLORIDA, INC.'S SUPPLEMENTAL RESPONSE TO
STAFF'S SECOND DATA REQUEST (NOS. 1 - 7), SPECIFICALLY QUESTION 6
Docket No. 140113-EI**

6. Please explain in detail the process used for selection of Konecranes, and provide copies of any RFP or similar document, bid selection documentation, financial information and/or comparisons, analyses of qualifications of potential contractors, and any other documentation related to the selection of Konecranes for this work costing almost \$30 million.

DEF SUPPLEMENTAL RESPONSE:

DEF followed the process steps that are stated in Response #5 for the selection of Konecranes for the new single failure proof crane. Konecranes' contract value is approximately \$4.8 million not \$30 million as stated in Question #6.

Additional non-confidential documents related to the selection of Konecranes are attached.

The confidential documents related to the selection of Konecranes have been filed with DEF's Notice of Intent to Request Confidential Classification dated September 16, 2014.

PURPOSE: Please supply the following safety information for your company. Safety is important to Progress Energy and will be used as criteria in selecting contractors. **NOTE: INCOMPLETE FORMS CANNOT BE PROCESSED.**

SECTION 1: TO BE COMPLETED BY THE CONTRACTOR

Contractor Name:	American Crane & Equipment Corporation
Address:	531 Old Swede Road
Web Site Address (optional):	Douglassville, PA 19518 www.americancrane.com
Telephone:	610-385-6061
NAICS Code:	333923
Scope of Work:	Replacement of CR-3 Spent Fuel Cask Crane
Name of Subcontractor(s) if applicable:	Rigging International (Site Heavy Rigging)
Progress Energy Contact:	William Brewer

	Yes	No	NA
Safety Program			
Please provide your current written safety manual (diskette or CD-ROM, if possible). (Note: Unless there are changes to the manual, resubmission is not necessary for annual reviews).	X		
Does your company have a high level corporate officer responsible for safety compliance? Title: President & CEO	X		
Does your company have a formal safety program to assure compliance with safety regulations?	X		
Does program include:			
• Job hazard analysis and control	X		
• Medical management of work related injuries and illnesses	X		
• On-site supervision to ensure compliance with safety regulations and Progress Energy Safety policies	X		
• Pre-qualification and management of subcontractors to ensure compliance with safety regulations and Progress Energy Safety policies	X		
Does your company hold periodic crew/team safety meetings?	X		
• How Often? Daily			
Does your company provide and document required initial and refresher training to prepare employees to perform duties in compliance with safety regulations? NOTE: If a contract is awarded, the DR will need this documentation prior to commencement of work for Progress Energy.	X		

Compliance History			
Has a serious, willful or repeat OSHA citation been issued to your company within the last three years? (Please check the OSHA web site at www.osha.gov/oshstats and click on Establishment Search). This site also provides SIC numbers. If yes, please provide a copy of the citation and a certification of abatement.			X
Has your company and/or any of its officers been convicted of any violation of any federal or state occupational health and safety laws? If yes, please attach a description of this case, including its resolution.			X
Line & Service Contractors: Is your Federal Motor Carrier Safety Rating Satisfactory? (Can be found at http://www.saferysys.org) If not, state what the rating is (Unsatisfactory or Conditional).		X	

Using your company's OSHA log for the last 3 years:	Yr: 2005	Yr: 2006	Yr: 2007
• Total number of OSHA Recordable injuries and illnesses	7	11	14
• Total number of cases involving Days Away, Restricted or Transferred	4	3	4
• Total number of fatalities	0	0	0
Employee hours worked each year for last three years	185,017	216,893	235,256
OSHA Incident Rate last three years (OI Rate)*	7.57	10.14	11.9
Days Away, Restricted or Transferred Rate last three years (DART Rate)*	4.32	2.77	3.40
Your company's EMR for the last three years	1.034	.846	1.058

* Rates are calculated as follows: OI Rate= $\frac{\# \text{ OSHA Recordable injuries} \times 200,000}{\# \text{ employee hours}}$

DART Rate= $\frac{\# \text{ cases involving DART} \times 200,000}{\# \text{ employee hours}}$

Please have an authorized representative of the company who is responsible for your company's safety program sign on the line below certifying that the information provided above is current and accurate. Providing false information may result in termination of the contract.

Name: Oddvar Norheim Title: President & CEO

Signature:  Date: September 15, 2008

SECTION 2: TO BE COMPLETED BY THE PROGRESS ENERGY DR OR CONTRACT SERVICES

Print Name, Location and Phone of Designated Rep:

Progress Energy Experience with Contractor	Yes	No	NA	Number (if appl)
Are you aware of any safety-related incidents on Progress Energy jobs last three years?				
If yes, was contractor safety program found to be deficient?				
If yes, has program been corrected?				
Have any negative comments been reported by Progress Energy employees about contractor's safety performance?				
If yes, has situation been satisfactorily resolved?				

Contractor OSHA Rates (Last Year)	Industry Average (Latest from OSHA)	Comments
OI Rate		
DART Rate		

Recommended Rating (DR/Contract Services): RED YELLOW GREEN

Signature: _____ Date: _____

SECTION 3: TO BE COMPLETED BY THE HEALTH AND SAFETY SUPPORT

Final Rating (Health & Safety Support): RED YELLOW* GREEN

Signature: _____ Date: _____

Comments:

*Necessary improvements to upgrade contractor from Yellow to Green:

PURPOSE: Please supply the following safety information for your company. Safety is important to Progress Energy and will be used as criteria in selecting contractors. **NOTE: INCOMPLETE FORMS CANNOT BE PROCESSED.**

SECTION 1: TO BE COMPLETED BY THE CONTRACTOR

Contractor Name:	Morris Material Handling, Inc
Address:	2724 S. 163rd St.
Web Site Address (optional):	New Berlin, WI 53151 www.morriscranes.com
Telephone:	262-821-4032
NAICS Code:	
Scope of Work:	Crane replacement
Name of Subcontractor(s) if applicable:	
Progress Energy Contact:	John Gottshall

	Yes	No	NA
Safety Program			
Please provide your current written safety manual (diskette or CD-ROM, if possible). (Note: Unless there are changes to the manual, resubmission is not necessary for annual reviews).	Upon request		
Does your company have a high level corporate officer responsible for safety compliance? Title:	X		
Does your company have a formal safety program to assure compliance with safety regulations?	X		
Does program include:			
• Job hazard analysis and control	X		
• Medical management of work related injuries and illnesses	X		
• On-site supervision to ensure compliance with safety regulations and Progress Energy Safety policies	X		
• Pre-qualification and management of subcontractors to ensure compliance with safety regulations and Progress Energy Safety policies			X
Does your company hold periodic crew/team safety meetings? • How Often? – Varies (Typically daily for Nuclear Projects)	X		
Does your company provide and document required initial and refresher training to prepare employees to perform duties in compliance with safety regulations? NOTE: If a contract is awarded, the DR will need this documentation prior to commencement of work for Progress Energy.	X		

Compliance History			
Has a serious, willful or repeat OSHA citation been issued to your company within the last three years? (Please check the OSHA web site at www.osha.gov/oshstats and click on Establishment Search). This site also provides SIC numbers. If yes, please provide a copy of the citation and a certification of abatement.		X	
Has your company and/or any of its officers been convicted of any violation of any federal or state occupational health and safety laws? If yes, please attach a description of this case, including its resolution.		X	
Line & Service Contractors: Is your Federal Motor Carrier Safety Rating Satisfactory? (Can be found at http://www.safersys.org) If not, state what the rating is (Unsatisfactory or Conditional).	X		

Using your company's OSHA log for the last 3 years:	Yr: 2007	Yr: 2006	Yr: 2005
• Total number of OSHA Recordable injuries and illnesses	32	19	43
• Total number of cases involving Days Away, Restricted or Transferred	14	5	16
• Total number of fatalities	0	0	0
Employee hours worked each year for last three years	1,332,002	1,249,768	1,184,770
OSHA Incident Rate last three years (OI Rate)*	4.80	3.04	7.26
Days Away, Restricted or Transferred Rate last three years (DART Rate)*	2.10	1.44	3.71
Your company's EMR for the last three years	0.82	0.83	0.9

* Rates are calculated as follows: OI Rate= $\frac{\# \text{ OSHA Recordable injuries} \times 200,000}{\# \text{ employee hours}}$

DART Rate= $\frac{\# \text{ cases involving DART} \times 200,000}{\# \text{ employee hours}}$

Please have an authorized representative of the company who is responsible for your company's safety program sign on the line below certifying that the information provided above is current and accurate. Providing false information may result in termination of the contract.

Name: STEVE LAWRENCE Title: PRODUCT MANAGER
 Signature: *Steve Lawrence* Date: 9-16-08

SECTION 2: TO BE COMPLETED BY THE PROGRESS ENERGY DR OR CONTRACT SERVICES

Print Name, Location and Phone of Designated Rep:

Progress Energy Experience with Contractor	Yes	No	NA	Number (if appl)
Are you aware of any safety-related incidents on Progress Energy jobs last three years?				
If yes, was contractor safety program found to be deficient?				
If yes, has program been corrected?				
Have any negative comments been reported by Progress Energy employees about contractor's safety performance?				
If yes, has situation been satisfactorily resolved?				

Contractor OSHA Rates (Last Year)	Industry Average (Latest from OSHA)	Comments
OI Rate		
DART Rate		

Recommended Rating (DR/Contract Services): RED YELLOW GREEN

Signature: _____ Date: _____

SECTION 3: TO BE COMPLETED BY THE HEALTH AND SAFETY SUPPORT

Final Rating (Health & Safety Support): RED YELLOW* GREEN

Signature: _____ Date: _____

Comments:

*Necessary improvements to upgrade contractor from Yellow to Green:

Environmental, 5-S and Safety Documents

From Morris Intranet

Employee Safety Manual

Accident Reporting & Investigation Information

- Injury Reporting Form
- Accident Investigation Form
- Employee Light Duty Form
- Employee Work Restriction Acknowledgement Forms

Field Service Safety

- Worksite Prejob Safety Inspection
- Worksite Prejob Safety Inspection Guidelines

Product Incident

- Product Incident Report Form
- Product Incident Report Guidelines

Environmental

- Environmental Commitment Policy
- Environmental Management System Manual

Facility Chemical Safety

- New Chemical Rules & Guidelines
- Edmon Chemical Watch List
- BH Chemical Watch List
- FR Chemical Watch List
- WN Chemical Watch List
- WT Chemical Watch List

Prequalification Questionnaire Support Information

- Experience Modification Rates
- Standard Insurance Certificate
- Safety Policies, Procedures & Metrics

OSHA Compliance Training Programs

- Fall Protection Program
- Hazard Communication Program
- Energy Control Lock-Out / Tag-Out
- Accident Reporting Program
- Rigging & Overhead Lifting
- Powered Industrial Truck Program
- Blood Borne Pathogens Program

OSHA Compliance Fact Sheets

- Lock-Out / Tag-Out
- Fire Emergency Response
- Hazard Communication
- Hearing Conservation
- Industrial Hygiene
- PPE
- Powered Industrial Trucks
- Respiratory Protection
- Safety Filing System Requirements
- Severe Weather Emergency Response

New Monthly Safety Chart

- August 2008

Fatal Injuries - Case Descriptions

- Caught By
- Electrocutation
- Falls
- Fire Explosion
- Lock Out & Tag Out
- Struck By

Worldwide Emergency Communications Guidelines

Franklin Manufacturing Environmental Management System

- Environmental Policy and System Management Manual
- Safety Guidelines

Monthly Safety Awareness Training

5 Minute Tool Box Talks

Fleet Safety

- Fleet Safety Policy & Procedures
- Driver's Use Agreement Form
- Auto Accident & Accident Diagram Form

Employee Recognition Program

- 90 Day Recognition Sign Up Sheet
- 180 Day Recognition Sign Up Sheet
- 270 Day Recognition Sign Up Sheet
- 1 Year Recognition Sign Up Sheet

5 - S Program

- 2007 Implementation Schedule
- 5 - S Event Preparation
- SORT
- SET
- SHINE
- STANDARDIZE & SUSTAIN

Retrieved from "http://intranet.mmhnet.net/index.php/Environmental%2C_5-S_and_Safety_Documents"

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- This page has been accessed 5,063 times.
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- About Morris Intranet
- Disclaimers



EMPLOYEE SAFETY GUIDE

Updated January, 2003

INTRODUCTION TO THIS SAFETY MANUAL

Safety Mission Statement:

“to achieve excellence in safety performance through management and employee involvement.”

This safety manual was designed to guide the development of safety programs as well as to clearly state the safety policies of the company. This manual includes guidelines for branch managers, operations managers, service managers, supervisors, field service site lead persons, and all Morris employees on the administration of company policies and procedures as they relate to the safety and health of our employees.

This safety manual is only one aspect of our overall safety and health program. Continuous management commitment and an emphasis on employee safety and health in all operations are the key to eliminating accidents and associated workers compensation costs. Additional safety and health initiatives and management/employee involvement programs which may not be included in this manual will also contribute to the effectiveness of the overall safety and health program.

This safety manual will be reviewed every two years and updated as necessary. It has been divided into five sections as follows:

Section 1.0: Management Roles & Responsibilities for Safety - identifies the primary safety roles and responsibilities for the Morris Material Handling- P&H Environmental, Health, & Safety Director; General Managers and Branch Managers; Human Resources; Operations and Service Managers, Supervisors, and Field Service Site Lead Persons.

Section 2.0: Administrative - a detailed working guide for General Managers, operations managers, service managers, supervisors, and field service site coordinators.

Section 3.0: Safety Compliance Programs - detailed procedures satisfying OSHA requirements. Employees receive specific training on the various safety programs and policies of the company.

Section 4.0: Employee Safety Guide - a general overview working guide for all employees. It is important to note that programs listed in section 3.0 are merely explained in section 4.0, and a more detailed comprehensive training is required if a program is applicable to an employee's job (example: lockout tagout training).

A copy of this section is to be issued for all employees to read. The last page of the employee safety guide is to be signed by all employees and a record kept in their personnel file. New employees are to receive and review this manual as part of the new hire orientation.

Section 5.0: Resources and Contacts - a list of safety resources and contacts including Morris Material Handling- P&H, their internet site, Insurance Loss Control Services and the National Safety Council.

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PURPOSE: Please supply the following safety information for your company. Safety is important to Progress Energy and will be used as criteria in selecting contractors. **NOTE: INCOMPLETE FORMS CANNOT BE PROCESSED.**

SECTION 1: TO BE COMPLETED BY THE CONTRACTOR

Contractor Name:	
Address:	
Web Site Address (optional):	
Telephone:	
NAICS Code:	333923
Scope of Work:	
Name of Subcontractor(s) if applicable:	
Progress Energy Contact:	

	Yes	No	NA
Safety Program			
Please provide your current written safety manual (diskette or CD-ROM, if possible). (Note: Unless there are changes to the manual, resubmission is not necessary for annual reviews).	✓		
Does your company have a high level corporate officer responsible for safety compliance? Title: <i>SAFETY DIRECTOR</i>	✓		
Does your company have a formal safety program to assure compliance with safety regulations?	✓		
Does program include:			
• Job hazard analysis and control	✓		
• Medical management of work related injuries and illnesses	✓		
• On-site supervision to ensure compliance with safety regulations and Progress Energy Safety policies		✓	
• Pre-qualification and management of subcontractors to ensure compliance with safety regulations and Progress Energy Safety policies			
Does your company hold periodic crew/team safety meetings?	✓		
• How Often? <i>WEEKLY & MONTHLY</i>			
Does your company provide and document required initial and refresher training to prepare employees to perform duties in compliance with safety regulations? NOTE: If a contract is awarded, the DR will need this documentation prior to commencement of work for Progress Energy.	✓		

SECTION 2: TO BE COMPLETED BY THE PROGRESS ENERGY DR OR CONTRACT SERVICES

Print Name, Location and Phone of Designated Rep:

Whiting Corporation

Progress Energy Experience with Contractor	Yes	No	NA	Number (if appl)
Are you aware of any safety-related incidents on Progress Energy jobs last three years?		✓		
If yes, was contractor safety program found to be deficient?				
If yes, has program been corrected?				
Have any negative comments been reported by Progress Energy employees about contractor's safety performance?		✓		
If yes, has situation been satisfactorily resolved?				

Contractor OSHA Rates (Last Year)	Industry Average (Latest from OSHA)	Comments
OI Rate <i>N/A</i>	<i>N/A</i>	
DART Rate <i>N/A</i>	<i>N/A</i>	

Recommended Rating (DR/Contract Services): *N/A* RED YELLOW GREEN

Signature: _____ Date: _____

SECTION 3: TO BE COMPLETED BY THE HEALTH AND SAFETY SUPPORT

Final Rating (Health & Safety Support): *N/A* RED YELLOW* GREEN

Signature: _____ Date: _____

Comments:

*Necessary improvements to upgrade contractor from Yellow to Green:

Compliance History			
Has a serious, willful or repeat OSHA citation been issued to your company within the last three years? (Please check the OSHA web site at www.osha.gov/oshstats and click on Establishment Search). This site also provides SIC numbers. If yes, please provide a copy of the citation and a certification of abatement.			✓
Has your company and/or any of its officers been convicted of any violation of any federal or state occupational health and safety laws? If yes, please attach a description of this case, including its resolution.			✓
Line & Service Contractors: Is your Federal Motor Carrier Safety Rating Satisfactory? (Can be found at http://www.safersys.org) If not, state what the rating is (Unsatisfactory or Conditional).			

2005 2006 2007

Using your company's OSHA log for the last 3 years:	Yr: 2002	Yr: 2003-	Yr: 2004-
• Total number of OSHA Recordable injuries and illnesses	9	14	10
• Total number of cases involving Days Away, Restricted or Transferred	7	9	7
• Total number of fatalities	0	0	0
Employee hours worked each year for last three years	235040	241280	257792
OSHA Incident Rate last three years (OI Rate)*	7.66	11.6	7.8
Days Away, Restricted or Transferred Rate last three years (DART Rate)*	5.96	7.46	5.43
Your company's EMR for the last three years	0.78	0.8	0.84

* Rates are calculated as follows: OI Rate= $\frac{\# \text{ OSHA Recordable Injuries} \times 200,000}{\# \text{ employee hours}}$ DART Rate= $\frac{\# \text{ cases involving DART} \times 200,000}{\# \text{ employee hours}}$

Please have an authorized representative of the company who is responsible for your company's safety program sign on the line below certifying that the information provided above is current and accurate. Providing false information may result in termination of the contract.

Name: Rock Rosati Title: Safety Director
 Signature: *Rock Rosati* Date: 9-11-08



**Progress Energy
Crystal River Nuclear Plant
P.O. Box 1551 Raleigh N.C. 27602**

**ATTENTION: John Gottshall
SUBJECT: Whiting Proposal for 130/15 ton Single Failure Proof Crane
REFERENCES: 1. Event Doc 2390831
2. Scope Document for Spent Fuel Cask Crane at the Crystal
River Nuclear Plant (CR-3) REVISION 0 June 18, 2008
PROGRESS ENERGY FLORIDA, INC.**

Mr. Gottshall,

Whiting Corporation is pleased to provide the following Proposal for one (1) 130/75 ton trolley. This includes design, fabrication, delivery and installation.

The crane described will meet CMAA Specification #70 for overhead dual girder top running cranes and ASME NOG-1 Type 1 for Single Failure Proof Cranes used at Nuclear Facilities. General Assembly layout drawings U-108136 (Trolley), and U-108135 (Bridge), T-55301 (Rope Reeving Diagram 6 parts of 12 Rope No. 1), T-55302 (Rope Reeving Diagram 6 parts of 12 Rope No. 2), T-91487 (Rope Reeving Diagram 4 parts of 8 Rope No. 1), and T-91488 (Rope Reeving Diagram 4 parts of 8 Rope No. 2) are included.

Although we believe our bid complies with your request, we would be pleased to modify it to meet any additional needs. Please let me know if I can be of any further assistance. My work number is (708) 587-2076, and my cell phone number is (630) 881-0267.

This proposal will remain valid for 30 days from date of issue.

Sincerely yours,

Steven W. Coulter
VP & GM, Nuclear Division
Whiting Corporation
26000 Whiting Way
Monee, Illinois 60449

CC: R. Kelleher
A. Horgan
E. Slota
J. Poradzisz



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I) EXECUTIVE SUMMARY

Whiting Corporation proposes to design, engineer, fabricate, , and deliver one (1) 130/15 ton single failure proof cask crane in compliance with ASME NOG-1 Type 1. The NRC has determined that cranes manufactured to ASME NOG-1 Type 1 satisfy the requirements of NUREG 0554, and NUREG 0612 to safely move spent fuel casks.

Whiting Corporation will Project Manage and provide technical support for site supplied labor to safely remove the existing crane/trolley, install, test, and provide pre operational training for the new 130/15 ton single failure proof cask crane.

The crane will be designed to resist tornado loading to withstand postulated 300 mph winds.

As an option, Whiting proposes to conduct an interim feasibility study to determine what modifications need to be made to the existing girders to avoid replacement. A cost benefit decision can then be made by Crystal River and the contract scope adjusted accordingly.

The 130/15 ton spent fuel cask crane shall be supplied to meet the spent fuel loading schedule provided in Crystal Rivers Request for Proposal Section 2.4. The 130 ton spent fuel cask crane shall have a minimum design life of 40 years and shall utilize the existing 175# runway with a span of 46 feet.

II) REDUNDANT HOIST SYSTEM

The Whiting Redundant Hoist System (patent # 3,786,935 dated January 22,1974) consists of a dual load path through the hoist gear train, reeving system and load block(s), and together with restraints at critical points throughout the load path, provides for load retention, and minimizes uncontrolled motions of the load should failure of any single hoist component occur. The system includes two complete gear trains connecting the hoist motor to the hoist drum.

Each gear train is designed to accept full motor torque at rated load in accordance with CMAA #70 standards, along with strength ratings adequate to absorb shock loadings (described later), and remain within the yield strength of the component materials. Separate motor brakes are included, with wheels mounted on an extension of each motor pinion input shaft.

The hoist drum with its shafts and bearings is designed to accept the forces and moments produced by full rated load, and in addition is provided with close clearance retainers at its hubs to restrain the drum, preventing pinion-gear mesh disengagement, incase of shaft or bearing failure at either or both ends of the drum.

The reeving system consists of a sufficient number of parts of wire crane rope, sized as commercially available, to provide a minimum static design factor of 10:1 per NUREG 0554, with all parts of rope effective, and based on the manufacturers published ultimate rope strength and the static rated load, as defined by CMAA #70 specifications. This rope is furnished as two separate pieces, each of which is fastened at one end to the drum in a conventional manner, reeved through the upper and lower blocks of the trolley as described below, with the other end fitted to an adjustable terminal and attached to a specially damped equalizer assembly. The equalizer assembly is provided with special retainers to assure its continued support of the load in case of pivot pin failure. Hydraulic dampers and mechanical stops are also provided on this assembly to define its maximum rate and extent of rotation about its pivot pin in either direction. If either piece of rope should fail, the equalizer assembly dampens the effects of the increased force developed in the remaining rope due to load transfer, to minimize rope strain. This hydraulic damping system does not restrict the normally small degree of oscillations in the equalizer, as it moves to accommodate rope length variations, while all parts of rope are effectively supporting the load. A special limit switch system is also supplied on this equalizer assembly, which can either stop the hoist or provide a warning to the operator, if rope variations cause the equalizer to move close to either end of its travel limit and to a point where insufficient travel remains to assure proper damping action in case of rope failure. This signal implies that an adjustment of either or both rope anchors at the equalizer should be made prior to critical load handling.

Upper and lower block sheaves are sized based on a minimum of 24 rope diameters, and are uniquely arranged in upper and lower blocks so that the total sustaining force, of all effective ropes, remains nearly coaxial and concentric about the vertical axis of the hook shank, whether one or both pieces of rope are supporting the load. Each sheave, in both the upper and lower block, is also provided with vertical and lateral restraints that will assure continued support of the load in case of sheave shaft or bearing failures. A design factor of 10:1, as required per NUREG 0554, is followed in the selection of the hoisting cable to provide for an ample design margin, which will accommodate the increased loading and shock due to load transfer from a failed rope, and where by the stresses in the remaining rope will remain conservatively above the yield strength of the rope. With all parts of rope in the reeving system effectively supporting the load, it is safe to assume that rope tension is uniform throughout. However, if one rope should fail while supporting the rated (critical) load, the strain in the remaining rope would, as a minimum, double as it sustains support of the load. This increase in strain or change in stretch of the remaining rope, allows a downward acceleration of the load which, for the first period of oscillation, is accompanied by a further increase in rope stress, of as much as the initial change in stress, which accelerated the load in order to counter balance its gain in kinetic energy and produce zero downward velocity. This means that the peak stresses of the first oscillation would be three times the normal rope stress, with all ropes effective, resulting in a net design factor of 3.33:1. The aforementioned

does not account for load damping in the operation of the equalizer sheave assembly and the spring constants of the structural portions of the trolley, bridge, and runway, all of which serve to reduce the downward acceleration of the load to less than 1 G, with a corresponding reduction in the strain necessary to provide Load deceleration.

The load block is unique in that it provides a dual concentric pair of load connecting devices to carry the load in to and through the block housing and sheaves, either of which has the ability to sustain the full load, while still providing normal load rotation capabilities ordinarily found in crane blocks. The normal load path is to the Lower connector consisting of an "eye" similar to that found on the ordinary crane hook, and capable of connection to any existing handling devices designed for such Load Connection. The upper device consists of a sister type crane hook, also capable of supporting the full load, which will accommodate secondary load connections such as slings or pinned links connecting to the Load or handling device. Since either load support may be rotated to any degree with respect to the other, various methods of load support combinations are available other than those normally employed in rigging to a normal sister hook with "eye" combination. However, care must be exercised in the design of the load supports so that transfer of load from one attachment point to the other, in the event of a rigging failure, does not result in excessive free fall of the load. The complete system also offers the possibility of careful continued operation of the hoist on the remaining Load path after the failure of any single component, as soon as the failed component is either removed or cleared as an encumbrance. This could avoid extended suspension of operation involving the critical lift, which may require connection of external cooling if complete repairs were required.

III) DEFINITIONS

Critical Load – Any lifted load whose uncontrolled movement or release could adversely affect any safety-related system when such a system is required for unit safety or could result in potential off-site exposure in excess of the limit

Heavy Load – Any load, carried in a given area after a plant becomes operational that weighs more than the combined weight of a single spent fuel assembly and its associated handling tool for Crystal River Nuclear Plant.

Single Failure Proof – Features that are included in the design of the crane such that any credible failure of a single component will not result in the loss of capability to stop and hold the critical load.

Type I Crane – A crane that is used to handle a critical load. It shall be designed and constructed to remain in place and support the critical load during and after a seismic event, but does not have to be operational after the event. Single failure proof features shall be included so that any credible failure of a single component



will not result in the loss of capability to stop and hold the critical load.

IV) ABBREVIATIONS/ACRONYMS

The following abbreviations are used throughout this specification:

- A/C Air Conditioner
- ASME American Society of Mechanical Engineer
- CR Crystal River Nuclear Plant
- DBE Design Basis Earthquake
- FLS Full Load Speed
- I&C Instrumentation and Control
- MCL Maximum Critical Load
- NLS No Load Speed
- NOG-1 Crane Standard ASME NOG-1-2004, "Rules for Construction of Overhead and Gantry Cranes - Top Running Bridge, Multiple Girder"

- NPP Nuclear Power Plant
- NUM-1 Crane Standard ASME NUM-1-2004, "Rules for Construction of Cranes, Monorails, and Hoists (With Bridge or Trolley or Hoist of the under hung Type)"

- OID Operator's Interface Display
- CCRC Cask Crane Radio Control
- PLC Programmable Logic Controller
- RB Reactor Building
- RC or R/C Radio Control
- SSE Safe Shutdown Earthquake
- USNRC United States Nuclear Regulatory Commission
- VFD Variable Frequency Drive
- Whiting Whiting Corporation
- WSI Whiting Nuclear Services

V) REFERENCE CODES AND STANDARDS

In general, design, fabrication, inspection and testing of the will meet applicable requirements of the following: ASME NOG-1-2004, "Rules for Construction of Overhead and Gantry Cranes (Top Running Bridge, Multiple Girder)"

- A) ASME NUM-1-2004, "Rules for Construction of Cranes, Monorails, and Hoists (With Bridge or Trolley or Hoist of the Under hung Type)
- B) USNRC NUREG-0554, "Single-Failure-Proof Cranes for Nuclear Power Plants", May 1979, as modified by Generic Letter 83-042, "Clarification to GL 81-07 Regarding Response to NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants"" (12-19-83)
- C) USNRC NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants", July 1980, as modified by Generic Letter 85-011, "Completion of Phase II of "Control Of Heavy Loads At Nuclear Power Plants" NUREG-0612" (6-28-85)
- D) CMAA Specification #70, "Specifications for Top Running Bridge and Gantry Type Multiple Girder Electric Overhead Traveling Cranes", Revised 2004
- E) ASME B30.2-2005, "Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist)"

VI) PROPOSAL SPECIFICATIONS

- A) CAPACITY: Bridge: 130 Auxiliary Hoist: 15 tons
- B) SPAN: (Center to center of runway rails) 46 ft. 0 in.
- C) LIFT: Main Hook: 80 ft. 0 in. Auxiliary Hook: 80 ft. 0 in.
- D) ELECTRIC CURRENT: 3 phase, 60 cycles, 480 volts, alternating current
- E) SPEEDS: Approximate speeds in feet per minute:

	Main Hoist	Auxiliary Hoist	Trolley Traverse	Bridge Travel
Speeds – Full Load	5	23	40	50
Motor Horsepower	50	25	2 @ 3	2 @ 5
Motor speed RPM	1200	1200	1800	1800

- F) MOTORS: Marathon or equal, selection by Whiting, vector duty, squirrel cage motors, rated continuous duty, TENV, with thermal overload protection, ball bearing, with Class 'H' insulation for bridge, trolley, main and auxiliary hoists. Bridge and trolley motors with disc brakes. All motors to comply with NEMA standards.(See attached Electrical Overview)
- G) CONTROLLERS: Whiting Ultra-Drive™ flux vector controls, stepless with thermal overload protection, dynamic lowering, NB resistors for main and auxiliary hoists. Brake contactors, Trolley and bridge drive to be duplex. All controls to be mounted in A/C NEMA 12 enclosures.(See attached Electrical Overview)
- H) SWITCHBOARD: Fused manual magnetic mainline disconnects witch in NEMA 12 enclosures.(See attached Electrical Overview)

VII) BRIDGE PROPOSAL SPECIFICATION

- A) Bridge End Trucks: Four (4) Heavy Duty, Fixed Bogie, Welded Box Construction , 5'-0 Wheelbase, with 24" Dia. Rim-Toughened Tapered-Tread wheels, mounted on rotating axles, with Timken tapered roller bearings.
- B) Bridge Drive: CMAA A4 Type, with enclosed, splash lubricated, shaft mounted, motor reducer at each end of the bridge.
- C) Bridge Girders: Welded Box Construction, with full depth diaphragms and stiffeners, designed in accordance with the structural requirements of CMAA Specification #70 for Class 'A' service, and notched at the ends to receive the bolt-on end trucks.
- D) Footwalk: Checkered (raised lug) Steel floor plate extending the full length of the bridge span along the outside of both the drive girder (Girder 'A') and the idler girder (Girder 'B'), with toe boards, supports, and hand railing designed in accordance with CMAA Specification #70, and OSHA 1910.179.
- E) Bumpers: Four (4) Polyurethane
- F) Runway Collectors: Customer to provide (recommended) Four (4) Conductor bar system, including ground conductor, extending the full length of bridge (runway) travel, with 200 Amp rating.
- G) Lubrication: All bearings, gears, and pinions inside of gear cases are oil splash lubricated. Wheel and sheave bearings are grease lubricated via Alemite fittings piped to accessible locations on bridge and trolley.

VIII) TROLLEY PROPOSAL SPECIFICATIONS

- A) Trolley Type: Four motor type with welded steel frame. Center to center of trolley rails: 21 ft. 0 in.
- B) Trolley Drive: Two (2) enclosed shaft mounted motoreducer type.
- Wheels: Diameter: 4-24",
 - Material: Rolled Steel-Rim Toughened
 - Drum: Main Hoist: 36"
 - Auxiliary Hoist: 30"
- C) Ropes:
1. Main Hoist: 12 (2x6 parts) 1 1/2" Extra-Extra Improved Plow Steel with Independent Wire Rope Center. One left regular lay and one right regular lay -
 2. Auxiliary Hoist: 8 (2x4 parts) 3/4"
 3. Safety Related
- D) Limit Switch: Weight operated upper type plus upper and lower screw type for hoists.
- E) Hoist Mechanism: Hoist units to be totally enclosed splash lubricated with anti-friction bearings. Main hoist 4 reduction with helical gearing. Auxiliary hoist 2 reduction with herringbone gearing.
- F) Hoist cases horizontally split.
- G) Load Block: Special Dual load path enclosed (redundant) anti-friction short type on hoists.
- H) Hoist Brakes: Main three (3) 13 " Rect. D.C. magnet brakes with manual release. Auxiliary three (3) 10" Rect. D.C. magnet brakes with manual release.
- I) Trolley Brake: Motor mounted disc brake.
- J) Trolley Collectors: Junction box with towing arm provided for use with festooned type bridge conductors.
- K) Bumpers: Four (4) polyurethane bumpers.



IX) CRANE DESIGN FEATURES

- Balanced SFP (dual load path) Reeving System
- Symmetrical Reeving System
 - ❖ Each Hoist Rope Is An Independent Balanced Reeving System
 - ❖ No Terminal Load Swing Upon Rope Failure
- Crane arranged for indoor CMAA Class "A" service
- No Torque Limiter Requiring Inspection, Adjustments, & Maintenance
- Periodic Two-Blocking Test Not Required Verifying Operation of Safety Related Components.
- Redundant Hoist Braking
- Controls mounted on footwalk and operated from Telemotive R/C System or pendant P. B. Station
- Three (3), 120 VAC duplex mounted along footwalk .
- Hoist reducer at each end of drum to provide means for redundant braking.
- Each hoist with electronic load sensing system with scoreboard readout.
- Bar type equalizers for main & aux. hoists.
- Lifting lugs.
- Jacking pads.
- Seismic lugs.
- Hardened sheave grooves.
- Rim toughened wheels.
- Hoist rope spooling monitor.
- Trolley end travel limits.
- Bridge weight est. 95,000 lbs.
- Trolley weight 115,000 lbs.
- Tornado Locks for 300 mph winds

X) ELECTRICAL DESCRIPTION AND OPERATIONAL OVERVIEW:

- A) This proposal to Crystal River provided by Whiting Corporation includes CMAA class 'A' rated controls for a 130/15 ton crane. Information for this quote is based on Event Doc 2390831.

Hoist(s) motors will be controlled by Electromotive IMPULSE VG+ Series 3 flux vector drives. The bridge & trolley motion each will be controlled by Impulse G+ Series 3 drives. All motors will be equipped with "klixon" type thermal protection. The traverse drives will utilize disc brakes. The hoist drives will utilize Rect. D.C. shoe type brakes.



Line and load reactors will be provided for each drive to reduce EMI RFI/EMI. Line filters will also be provided for each drive. All hoist motors will utilize harmonic filters consisting of capacitive/reactor combinations per specification.

The crane is controlled from a fixed position pendant, P.B. Station or Telemotive RK System Controls layouts for the P. B. Station and RC transmitter are to be mutually agreed upon during the design phase of the project.

The digital scoreboard display weight will be mounted below the footwalk.

End of travel limit switches will be provided for the trolley motion.

All enclosures and j-boxes will be minimum NEMA 12.

B) EQUIPMENT SPECIFICATION:

- Power Supplied: The main power and electrification supplied to this system is 480 VAC, 3 phase plus ground, 60 hertz.
- Service Class: Main hoist, trolley, and bridge to be CMAA Class 'A' Aux. hoist to be CMAA Class 'A'.
- Environment: Operation temperature to be +104 F Max.
- Storage/Accident 60-130° F Peak

C) Control Hardware:

- NEMA 12 steel control enclosure
- Free standing, Fused Safety Disconnect Switch
- IEC mainline contactor
- Control transformer
- Utility transformer
- (1) Impulse VG+, Series 3 Adjustable Frequency Drive for main hoist
- (1) Impulse VG+, Series 3 Adjustable Frequency Drive for aux hoist
- (2) Impulse G+, Series 3 Adjustable Frequency Drive for trolley
- (2) Impulse G+, Series 3 Adjustable Frequency Drive for bridge
- (1) 50 HP, 1200 rpm, 364T motor for main hoist, with encoder
- (1) 25 HP, 1200 rpm, 364T motor for aux hoist, with encoder
- (2) 3 HP, 1800 rpm, gear motors for trolley, with disc and brake
- (2) 5 HP, 1800 rpm, gear motors for bridge, with disc and brake
- Two brake contactors in series for each hoist
- Shoe type brakes for hoists rated at min 150% motor torque
- Disc brakes for trolley and bridge rated at min. 100% motor torque
- Line and load reactors for each drive
- D-B Resistor banks for all hoist motors
- 120 V receptacle and fluorescent lighting inside each control enclosure
- E-stop button on control enclosure

D) Hook Approach Clearance: (See on GA drawings).

XI) EXCEPTIONS/CLARIFICATIONS

- 6.1.9.3 A.10. Reference to NOG-7210 is incorrect we believe NOG-7240 is intended.
- 6.1.9.3 C.8. Reference to NOG-3483 is incorrect we believe NOG-6483 is intended.
- 6.1.9.4 D 2. "Hoist Drums' brake is not provided as part of Whiting's standard design (not mandatory per NOG requirements). Whiting is providing multiple shoe type holding brakes which satisfy NOG requirements for a Type 1 cranes.
- 6.1.9.5 1. Costs for testing to meet EPRI-TR-102323 are not included. Crystal River needs to clarify whose responsibility this will be.
- 6.2.1.2 Whiting believes that load testing of the Trolley system at the factor is unnecessary, since this testing of the trolley does not demonstrate structural integrity, and does not fully represent the actual operational performance in its installed condition. If this test is mandatory, Whiting Corporation will provide a quotation.
- 6.4.1 See 6.2.1.2 above.
- 7.1 Where certified mill test reports are not available (i.e. original material ID is inadvertently lost, certified material of the type and grade required is unavailable to meet schedule requirements, or material of this type is not available with the necessary test reports) a qualified independent test lab material verification report may be substituted.
- 7.2 B.1. UT will be the preferred volumetric examination method, and may be substituted for RT.
- 7.2 H. 1. Certifications of chemical and mechanical properties will be as required by the material standard utilized for the part being supplied (i.e. not all ASTM standards require both chemistry and physicals).
- 7.4.2 1. The Crane will comply with meet NOG-1 Type 1 standards.
- 7.4.2 2. Whiting has supplied as individual components of its cranes



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specific features required by NOG-1 Type 1 crane. Whiting is fully capable of designing and manufacturing this crane to comply with NOG-1 Type 1 requirements. Whiting, Engineering is represented at NOG-1 Design Conferences

- 7.6 A certificate of compliance will be supplied certifying that the crane has been manufactured to ASME NOG-1 Type 1 standards. Please provide a copy of any specific NRC Certification of Compliance form to be completed. We do not expect this to be a problem.

XII) NEW CRANE/TROLLEY INSTALLATION

Whiting Corporation has reviewed the facility and has determined that there will only be minimal interferences such as chain link fencing out side the building, and material stored next to the tank farm that will need to be temporally removed. There is adequate floor space to stage the disassembly and install the new crane and trolley. There will be no need to carry any load over the spent fuel pool or occupied buildings. Whiting Corporation will provide a detailed plan after award of contract.

XIII) COMMERCIAL

- A) Design Criteria: All crane parts shall equal or exceed design criteria as established by CMAA Specification #70, and NOG-1 Type 1.

This proposal covers equipment which complies with the manufacturer's interpretation of the mandatory requirements of the William-Steiger Occupational Safety & Health Act of 1970 (OSHA) as amended June 27, 1974.

Mounting of control panels will provide for 30" minimum clearance in front of cabinets to comply with 1978 NEC Section 610.57. Floating rails shall not be used for runways. They may cause rapid wheel wear and overheating of the bridge motor due to the crane running out of square. Rails should be held firmly in all directions.

- B) Drawings: Unless otherwise specified prior to the date of this proposal, Whiting Corporation shall submit three (3) prints of our standard crane general arrangement drawings for your approval. These drawings will show all critical clearance dimensions and other data that is pertinent to your project.



Nuclear Division

- C) Shipping: The crane shall be disassembled sufficiently to allow for proper handling and shipment. The manner and extent the crane is broken down for shipment is at the sole discretion of Whiting Corporation.
- D) Painting: Exterior (non-machined) surfaces of the crane will be cleaned to meet SSPC SP6, Commercial Blast Cleaning requirements. One shop coat, 1.5 mils min. DFT, of Keeler & Long 3200 series epoxy primer, or equal, to be applied to the blast cleaned surfaces followed by Two (2) coats, 2.5 mils min. DFT per coat, of Keeler & Long 'J' series (yellow) epoxy enamel, or equal. Overall coating thickness to be 6.5 mils min. DFT. Electrical components, including motors, brakes, limit switches, and enclosures, will be supplied with their respective manufacturer's standard finish.
- E) Hi-Strength structural bolts will not be painted. Commercial hardware, i.e., zinc or cadmium plated nuts, bolts, washers, including lubrication tubing and fittings, will not be painted. The crane will be cleaned and painted using a rust inhibiting primer, and a finish coat of Ferrite Pigment type yellow. Nuts, bolts, washers and piping shall be painted, or cadmium or zinc plated. Electrical equipment and purchased components will be furnished with manufacturer's standard finish
- F) Quality Assurance: Unless otherwise stated in this Proposal, Whiting Corporation will utilize our Standard Quality Assurance practices in accordance to out ISO and TE-9000 procedures. Copy of our manual is available upon request.

XIV) PRICE:

UNPRICED VERSION



XV) OPTIONAL RECOMMENDED SPARES

UNPRICED COPY



XVI) DELIVERY:

Delivery is estimated to be eleven (28) months after Purchase Order acceptance.
(Reference Attached Schedule)

XVII) .TERMS OF PAYMENT:

UNPRICED COPY

XVIII) VALIDITY:

Price quoted is valid for acceptance within 90 days from date of proposal and is based upon acceptance of the Proposed General Proposal Conditions.

XIX) ESTIMATED DRAWING DELIVERY

Twelve (12) to fourteen (14) weeks after receipt of order.

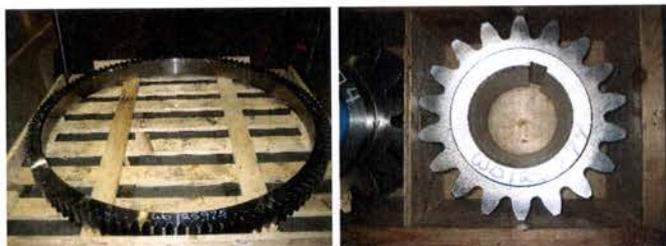
XX) RECENT NUCLEAR ACTIVITY

AEP, DC Cook – 10035, 10038 Refuel Outage Support
APS - S/N 11309 Crane Improvement Materials
APS - S/N 11310 Engineering Emergency Support
APS - S/N 11310 Outage/Engineering Support
Bechtel, U.S. Department of Energy (DOE) at Hanford – (4X) 10, & 25 ton NEW Waste to Glass Handling Cranes



LAW Crane 8 Installed Over Process Cells

Constellation Energy, Ginna - NEW 30T Waste Handling Crane
Constellation Energy, Nine Mile Point 2 - S/N 11470 Gears, Bearing, Seals, Gaskets



New Ring & Pinion Gears

Constellation Energy, Nine Mile Point 2 - S/N 11470 Polar Crane Justification For Continued Operation
Constellation Energy, Nine Mile Point 2 - S/N 11470 Polar Crane Rerate
Constellation Energy, Nine Mile Point 2 - S/N 11470 Polar Crane Rope



New ITS Dedicated High Strength Rope

Dominion, Kewaunee - S/N 9914 Polar Crane, Girder Splice weld study

Dominion, Kewaunee - S/N 9914 (Records Search)
Duke Oconee - S/N 9769, 9770, 9771 Polar Crane Engineering Analytical Support, Standing Retainer Support
Entergy, Grand Gulf - S/N 10857 Design Compliance Study
Exelon, Dresden - S/N 9492 Engineering Analysis
Exelon, Oyster Creek - S/N 9291 40T Aux. Hoist Support
Exelon, Peach Bottom - S/N 9980 Support Return to Service
Exelon, Quad Cities - S/N 9641 Eng Lift Analysis



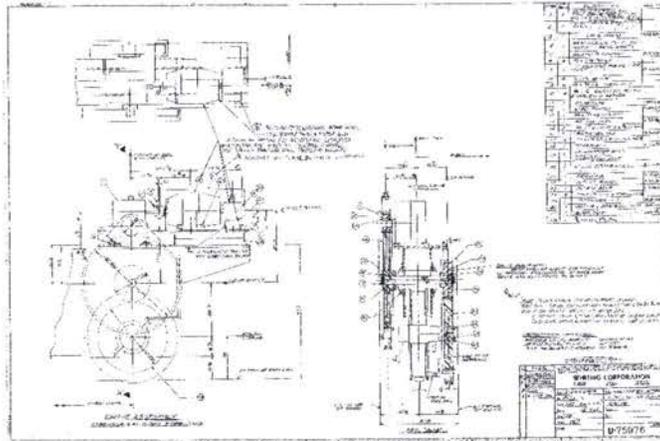
The Whiting 175/25 ton Quad Cities Turbine Crane

Exelon, TMI - S/N 9847 Crane Improvement Alternate Mod Emergency Support
Exelon, TMI - S/N 9847 Tension Rod Bracket assembly
Florida Power & Light, Seabrook - S/N 10950 Conductor Bars
Florida Power & Light, Seabrook - S/N 10950 Phase I Modernization Project

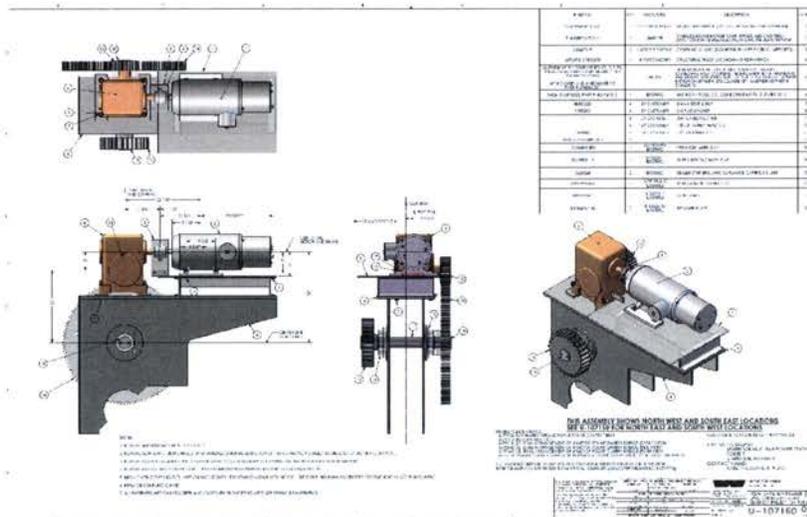


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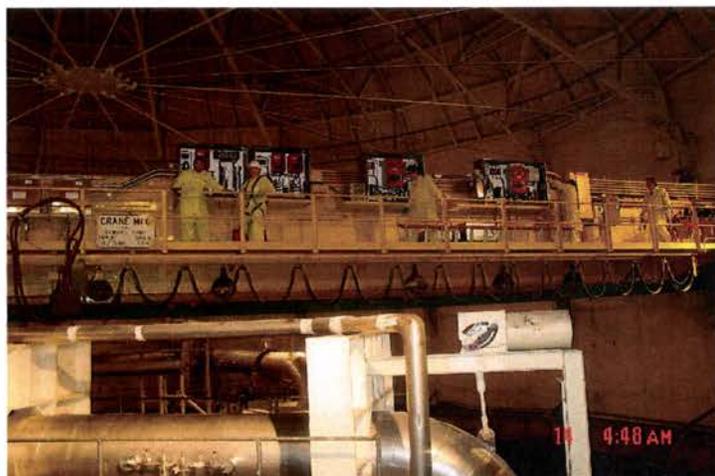
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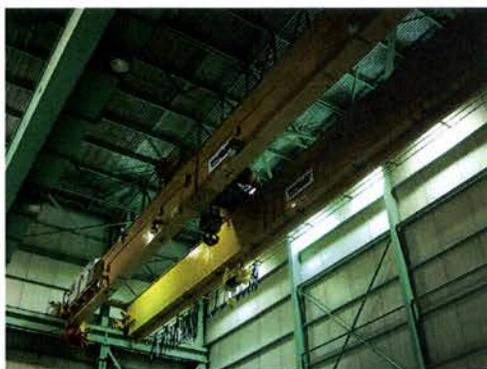
Florida Power & Light, Turkey Point 3/4 - S/N 9687 Refuel Outage Support
 Florida Power & Light, Turkey Point 3/4 - S/N 9687 Rerate Study
 Florida Power & Light, Turkey Point 3/4 - S/N 9837, 9838 Modernization Project

Florida Power & Light, Point Beach – Polar Crane Modernization Project



Point Beach Polar Crane Modernization Project

Iberinco, Angra - S/N 10745 Polar Crane Technical Support
Iberinco/ Angra - S/N 10745 Polar Crane Engineered Lift For Steam Generator Replacement
Nebraska Public Power District, Cooper - NEW 75 ton Auxiliary Crane



NPPD 75 ton Auxiliary Turbine Room Crane

Nebraska Public Power District, Cooper - S/N 9976 Crane Improvement Material
Nuclear Management Company, Prairie Island - S/N 9915, 9916 Engineering Support
Progress Energy, Brunswick Public Power District - S/N 10388, 10389 Full FEA Analysis to meet NRC Requirements, including seismic and tornado loadings
Progress Energy, HB Robinson - S/N 9701 Polar Gantry Crane Recertification Including Seismic Study
Progress Energy, HB Robinson - S/N 9700 Outdoor Turbine Gantry Crane Rerate Study
Progress Energy, HB Robinson - S/N 9700 Outdoor Turbine Gantry Crane Modifications for Uprate
Southern Company, Farley - S/N 10779 High Wind Study
Southern Company, Votgle - S/N 11423 Refuel Outage Support



XXI) REFERENCES

ARIZONA PUBLIC SERVICE
Palo Verde Nuclear Unit 1/2/3
P.O. Box 52034
Phoenix, AZ 85072
Dan Cook
623-393-7418

New cab, inverter controls, PLC,
scale system, motors, festoon and
cab display for three turbine cranes

ENTERGY
Indian Point Energy Center
P.O. Box 308
Buchanan, N.Y.
Bill Henries
914-827-7622

New Inverter controls, motors, festoon
and safe zone limit control system on
Unit 1 spent fuel storage crane.

ENTERGY
Pilgrim Nuclear
600 Rocky Hill Road
Plymouth, MA.
Charlie Minott
508-830-7900

New Inverter controls, motors,
festoon on BWR turbine crane

FLORIDA POWER & LIGHT
Turkey Point Station Unit 3/4
9760 S.W. 344th Street
Florida City, FL 33035
Jaime Delgado

New Inverter controls, motors,
festoon installed over three outages
on both polar cranes. Re-rate study
conducted on Turbine Crane.

305-246-6084
Jaime_Delgado@fpl.com

NUCLEAR MANAGEMENT COMPANY
Point Beach Nuclear Station
6610 Nuclear Road
Two Rivers, Wi 64241
Harry Soulia
920-755-6783

New Inverter controls, motors,
festoon and dual radio control
system installed on four primary
cranes over four years



Nuclear Division

CONSTELLATION ENERGY

Nine Mile Point 2
300 Erie Boulevard West
Syracuse, NY 13202
Mike Flood
(315) 349-7252
michael.flood@constellation.com

Rerate on Reactor Building Crane
Replace ropes, Ring & Pinion Gears

Enercon Services, Inc.
Ralph Schwartzbeck, P.E.
770-919-1931 Ext 501

Multiple FEA Modal Analysis



XXII) WHITING EQUIPMENT FOR NUCLEAR POWER GENERATING PLANTS

The following operating nuclear generating units contain at least one Whiting Crane as well as other Whiting equipment. Items marked with * indicate Single Failure Proof Cranes

Ameren Corporation

Callaway

Fulton, MO

American Electric Power

Donald C. Cook 1*

Birdgman, MI

Donald C. Cook 2*

Bridgman, MI

Arizona Public Service Co.

Palo Verde 1

Wintersburg, AZ

Palo Verde 2

Wintersburg, AZ

Palo Verde 3

Wintersburg, AZ

Constellation

Calvert Cliffs 1

Lusby, MD

Calvert Cliffs 2

Lusby, MD

Robert E. Ginna

Ontario, NY

Nine Mile Point 2 *

Scriba, NY

Detroit Edison

Fermi

Monroe, MI

Dominion

Kewaunee

Carlton, WI

Millstone 1*

Waterford, CT

Millstone 2*

Waterford, CT

Duke Power Co.

Catawba 1

Clover, SC

Catawba 2

Clover, SC

Oconee 1

Seneca, SC

Oconee 2

Seneca, SC

Oconee 3

Seneca, SC

McGuire 1

Terrell, NC

McGuire 2

Terrell, NC



Nuclear Division

Entergy

Cooper	Brownville, NE
Grand Gulf 1*	Port Gibson, MS
Indian Point 2	Indian Point, NY
Indian Point 3	Indian Point, N.Y
Pilgrim 1	Plymouth, Mass
Pilgrim 2	Plymouth, Mass
Palisades	South Haven, MI
River Bend 1	St. Francisville, LA
River Bend 2	St. Francisville, LA
Vermont Yankee*	Vernon, VT
Waterford 3	Taft, LA

EXCEL Energy

Monticello	Monticello, MN
Prairie Island 1	Red Wing, MN
Prairie Island 2	Red Wing, MN

Exelon

Dresden 2 *	Morris, IL
Dresden 3 *	Morris, IL
Limerick 1	Pottstown, PA
Limerick 2	Pottstown, PA
Oyster Creek 1	Toms River, NJ
Peach Bottom 2	Peach Bottom, PA
Peach Bottom 3	Peach Bottom, PA
Quad-Cities 1*	Cordova, IL
Quad-Cities 2*	Cordova, IL
Three Mile Island 1	Goldsboro, PA
Zion 1	Zion, IL
Zion 2	Zion, IL

First Energy Operating Co (FENOC)

Beaver Valley 1	Shippingport, PA
Beaver Valley 2	Shippingport, PA
Perry 1	North Perry, OH
Perry 2	North Perry, OH

Florida Power & Light Co.

Turkey Point 3	Florida City, FL
Turkey Point 4	Florida City, FL
St. Lucie 2	Hutchinson Island, FL
Seabrook 1	Seabrook, NH
Seabrook 2	Seabrook, NH



Nuclear Division

Duane Arnold Cedar Rapids, IA

Furnas

Angra 1 Itaorna, Brazil

Maine Yankee Atomic Power Co.
Maine Yankee Wiscasset, ME

Northeast Energy
Columbia Richland, WA

Progress Energy

Brunswick 1 *	Southport, NC
Brunswick 2 *	Southport, NC
Crystal River 3	Red Level, FL
Shearon Harris 1 & 2	Newhill, NC
Shearon Harris 3 & 4	Newhill, NC
H. B. Robinson 2 *	Hartsville, SC

Public Service Electric & Gas Co.
Salem 1 Salem, NJ
Salem 2 Salem, NJ

South Carolina Electric & Gas Co.
Virgil C. Summer 1 Parr, SC

Southern California Edison
San Onofre 2 San Clemente, CA
San Onofre 3 San Clemente, CA

STP

South Texas Project 1 Palacios, TX
South Texas Project 2 Palacios, TX

Southern Company
Joseph M, Farley 1 * Dothan, ALA
Joseph M. Farley 2 * Dothan, ALA

Taiwan Power
Chin-Shan 1 Shihmin Hsiang, Taiwan
Chin-Shan 2 Shihmin Hsiang, Taiwan

Wolf Creek Nuclear Operating Co.
Wolf Creek Burlington, KA



Nuclear Division

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XXIII) GENERAL TERMS & CONDITIONS

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