

May 5, 2017

John M. Giddens, SAFER Chairman
SAFER Steering & Equipment Committee
Pooled Equipment Inventory Company - PIM
Post Office Box 1295
Birmingham, AL 35201-1295

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION OF THE
MEMPHIS NATIONAL SAFER RESPONSE CENTER REPORT
NO. 99901013/2017-201

Dear Mr. Giddens:

On March 20-23, 2017, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Pooled Equipment Inventory Company (PEICo) Strategic Alliance for FLEX Emergency Response (SAFER) facility in Memphis, TN. Pooled Inventory Management (PIM), as agent for the PEICo, and under contract to support the SAFER program (hereafter referred to as PEICo/PIM), supports the nuclear industry by warehousing and maintaining SAFER FLEX equipment in support of the mitigation strategies required by NRC Order EA-12-049, "Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events." The purpose of the limited-scope inspection was to assess PEICo/PIM's conformance with the provisions of Nuclear Energy Institute 12-06, "Diverse and Flexible Coping Strategies FLEX Implementation Guide," as endorsed by the NRC.

This technically focused inspection evaluated PEICo/PIM's implementation of activities, at its second location in Memphis, TN, associated with the storage, maintenance, procurement, testing, and FLEX equipment deployment during an emergency to U.S. operating nuclear plants. The enclosed report presents the results of this inspection. This NRC inspection report does not constitute NRC endorsement of your overall program.

Based on the results of this inspection, the NRC inspection team found that the implementation of your SAFER program met the requirements imposed on you by NRC licensees. No findings of significance were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if any, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your

claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

Sincerely,

/RA Jeffrey Jacobson Acting for/

Terry W. Jackson, Chief
Quality Assurance Vendor Inspection Branch-1
Division of Construction Inspection
and Operational Programs
Office of New Reactors

Docket No.: 99901013

Enclosure:
Inspection Report 99901013/2017-201
and Attachment

SUBJECT: NUCLEAR REGULATORY COMMISSION VENDOR INSPECTION OF THE
PHOENIX NATIONAL SAFER RESPONSE CENTER REPORT
NO. 99901013/2017-201

Dated May 5, 2017

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**U.S. NUCLEAR REGULATORY COMMISSION OFFICE OF NEW REACTORS
DIVISION OF CONSTRUCTION INSPECTION AND OPERATIONAL PROGRAMS VENDOR
INSPECTION REPORT**

Docket No.: 99901013

Report No.: 99901013/2017-201

Vendor: POOLED EQUIP INVENTORY CO (PEICO)
Barnhart Crane & Rigging
1701 Dunn Ave.
Memphis, TN 38106

Vendor Contact: John M. Giddens, SAFER Chairman
jmgidden@southernco.com
205-992-7924

Nuclear Industry Activity: Pooled Inventory Management (PIM), as agent for PEICo, and under contract to support the Strategic Alliance for FLEX Emergency Response (SAFER) program, is responsible for the storage, maintenance, and testing of the SAFER FLEX equipment used by NRC licensees in the event of a beyond design basis accident in accordance with NRC Order EA-12-049 and Nuclear Energy Institute (NEI) 12-06.

Inspection Dates: March 20-23, 2017

Inspectors: Jose G. Jimenez NRO/DCIP/QVIB-1 Team Lead
Nicholas Savvoir NRO/DCIP/QVIB-1

Approved by: Terry W. Jackson, Chief
Quality Assurance Vendor Inspection Branch-1
Division of Construction Inspection
and Operational Programs
Office of New Reactors

Enclosure

EXECUTIVE SUMMARY

PEICo – SAFER FLEX Equipment
99901013/2017-201

The U.S. Nuclear Regulatory Commission (NRC) conducted a vendor inspection to verify PIM, as agent for the Pooled Equipment Inventory Company (PEICo), and under contract to support the Strategic Alliance for FLEX Emergency Response (SAFER) program, (hereafter referred to as PEICo/PIM) implemented an adequate program that complies with NRC Order EA-12-049 and the implementation of Nuclear Energy Institute (NEI) 12-06, “Diverse and Flexible Coping Strategies FLEX Implementation Guide,” as endorsed by the NRC.

The vendor inspection of PEICo/PIM focused on the SAFER program as it applies to supporting the beyond design mitigation efforts including procurement, maintenance, testing, and storage of equipment to be relied upon an emergency. Since this inspection assessed activities at the Memphis, TN facility which shares the same overall programmatic process (i.e. procedures, qualification, procurement, etc.) as the Phoenix facility previously inspected, the inspection activities focused more on testing and corrective action activities.

The NRC inspection team observed a selection of maintenance and testing activities during the week. The NRC inspection team reviewed the SAFER program, which included purchase orders, the technical evaluation process for selection of purchased equipment, receipt inspection reports, certificates of compliance, test reports, and corrective actions. The NRC inspectors also observed PEICo personnel conducting maintenance tests of various FLEX equipment.

During the course of this inspection, the NRC inspection team implemented Inspection Procedure (IP) 43006, “Inspection of the implementation of mitigation strategies order regarding the use of the National SAFER Response Centers (NSRC).” The information below summarizes the results of this inspection.

SAFER Program

The NRC inspection team concluded that PEICo/PIM is implementing the SAFER program in accordance with NRC Order EA-12-046 and NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the SAFER program. No findings of significance were identified.

Procurement Control

The NRC inspection team concluded that PEICo/PIM is implementing the necessary procurement controls in accordance with NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the procurement activities. No findings of significance were identified.

Test, Maintenance and Measuring & Test Equipment (M&TE) Control

The NRC inspection team concluded that PEICo/PIM is adequately implementing its test, maintenance and M&TE program in accordance with NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the maintenance activities. No findings of significance were identified.

Handling, Storage, and Deployment

The NRC inspection team concluded that PEICo/PIM is implementing its handling, storage, and deployment activities in accordance with NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the handling of SAFER equipment. No findings of significance were identified.

Corrective Actions

The NRC inspection team concluded that PEICo/PIM is implementing its corrective action program in accordance with NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the corrective action program. No findings of significance were identified.

REPORT DETAILS

1. SAFER Program

a. Inspection Scope

The NRC inspection team reviewed PEICo/PIM's policies and implementing procedures that govern the overall implementation of the SAFER program including storage, maintenance, procurement, testing, and deployment activities. The NRC inspection team evaluated PEICo/PIM's SAFER program process which includes the development of procedures governing all activities including determination of procurement technical specifications, vendor selection, receipt inspection, periodic maintenance, adequate testing, adequate storage, and development of training for on-site staff and staff activated during an emergency. Specifically, the scope of the inspection was to verify that all the documents reviewed at the Phoenix, AZ facility were being used in Memphis, TN as well to implement the SAFER program. The NRC inspection team reviewed a smart sample of the set of FLEX equipment stored at the Memphis NSRC facility to verify that the control processes were effectively implemented throughout the various stages from procurement to storage specific to the Memphis, TN facility and the eventual emergency deployment if activated.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified

c. Conclusions

The NRC inspection team concluded that PEICo/PIM is implementing the SAFER program in accordance with NRC Order EA-12-046 and NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the SAFER program.

2. Procurement Controls

a. Inspection Scope

The NRC inspection team reviewed PEICo/PIM's policies and implementing procedures of its procurement activities to verify compliance with the requirements of NEI 12-06. Specifically, the NRC inspection team reviewed PEICo/PIM's equipment specification development process, purchase orders, receipt inspection reports and compared the information with observations in the warehouse of the equipment stored in the different redundant bins. The NRC inspection team focused on key elements of the process including verification of equipment specifications with observations of testing and inspection activities as they applied specifically to activities conducted at the Memphis site.

The NRC inspection team reviewed PEICo's purchase order of the 480 VAC Turbine Generator (PO: 201310) to verify procurement requirements were met and documented correctly. Additionally, the NRC inspection team reviewed receipt inspection, certificates of conformance, purchase orders, NEI 12-06 Section 12.2.1 and 480V Turbine Generator specification, Revision 5 for the Memphis and Phoenix SAFER air lift containers. The air lift containers are collapsible drums used for storage and transportation of fuel. Air lift contains (fuel bladders) are highly mobile, rugged, may be rolled, towed, floated, lifted by helicopter and dropped with a parachute or free fall from a limited height.

The NRC inspection team reviewed receipt inspection records, certificates of conformance, purchase orders and specifications for 480V cables and associated electrical connections, cable reels and transportation trailers at the PEICO Memphis SAFER facility. The NRC inspection team reviewed PEICo's receipt inspection documents which included an equipment checklist, shipping damage and shortage checklist, and a document checklist. PEICo purchased cables from Coalmont Electrical Development by way of sub-supplier TPC Wire & Cable. The NRC inspection team reviewed sub supplier, TPC Wire & Cable specifications and TPC Wire & Cable certificate of conformance supplied to Coalmont Electrical Development to verify compliance with specifications.

The NRC inspection team reviewed PEICo's procurement documents for a 480V Turbine Generator. The procurement documents required the turbine to have the capability to load share in accordance with the Turbine Generator Specifications Revision 5; Sections 3.3.4, 3.3.5, 3.3.6, and 3.3.13. The NRC inspection team reviewed PEICo's engineering report and interviewed the program manager to determine the applicability of the load shed feature. PEICo demonstrated that although the load sharing capability was specified this feature will not be used as the SAFER instructions only call for the supply of one generator per reactor unit. The load sharing feature would only apply if multiple generators were deployed per unit.

NERRC101A001TGL05 No. 201310, Revision 5, specifications reviewed:

- 3.2.4 - 480V Turbine Marine Generator weight/ separate tank
- 3.3.4 - 480V Turbine Marine Generator load sharing capabilities and controls
- 3.3.6 - 480V Turbine Marine Generator load sharing capabilities and controls
- 3.3.13 - 480V Turbine Marine Generator load sharing capabilities and controls
- 4.11 - 480V Turbine Marine Generator output, load test and analytical calculations

The attachment to this inspection report lists the documents reviewed and personnel interviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that PEICo/PIM is implementing the necessary procurement controls in accordance with NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the procurement activities.

3. Test, Maintenance and Measuring & Test Equipment Control (M&TE)

a. Inspection scope

The NRC inspection team reviewed implementation of Section 12.2 of NEI 12-06 to ensure provisions and processes established for periodic maintenance, testing, and calibration of off-site FLEX equipment at the Memphis NSRC were comparable and consistent with that performed at the operating nuclear power plants. The inspection team reviewed procedures for tests, preventive maintenance, test objectives, test requirements, and acceptance criteria contained in the applicable technical documents. The NRC inspection team assessed whether M&TE was calibrated, adjusted, and maintained at prescribed intervals prior to being used to test critical FLEX equipment functions.

The NRC inspection team observed quarterly maintenance of one of ten PEICo Memphis NSRC, Turbine Marine manufactured, 480 VAC Turbine Generators (TGL05). PEICo contracts Barnhart Crane and Rigging to handle equipment, house, and perform maintenance at the Memphis NSRC. The inspection team observed Barnhart personnel performing maintenance per Work Instruction-2-11, Version 3, March 9, 2017, including their safety pre-job brief to verify they followed warnings, cautions, and notes per the work instruction procedures. The inspection team verified Barnhart recorded and verified values within maintenance thresholds. The NRC inspection team verified that the 480 VAC Turbine Generator load bank disconnection test notes made during maintenance were submitted for engineering to ensure compliance with work instructions. The NRC inspection team interviewed Barnhart personnel and PEICo engineering to determine their procedural level of understanding.

PEICo performs quarterly maintenance on the 480 VAC Turbine Generator using test cables (maintenance cables) which are checked for signs of degradation and lubricated before being connected. Deployable cables for the 480 VAC Turbine Generator are not tested with the 480 VAC Turbine Generator during the 480 VAC Turbine Generator quarterly maintenance. The NRC inspection team reviewed annual maintenance Work Instruction-2-22 for 480 VAC Turbine Generator's standard cable and electrical connections; in addition to 4160V cables and electrical connections. The NRC reviewed PEICo actions where they committed to develop test plans for 480V Cable and 4160 Cable performance in order to address this omission in the original performance test plans. The NRC inspection team reviewed PEICo's engineering submittal to develop performance test plans and required instrumentation verification for 480V Cable and 4160 Cable to verify compliance with the program management submission process. The NRC inspection team also reviewed PEICo's program management submission on March 21, 2017 assigned to engineering for the development of performance test plans for water treatment, Hale pumps, turbine generators, light towers, high pressure injection pumps, hoses, step-up transformer, portable submersible pump, air compressors, fuel transfer pumps, and load distribution centers.

The NRC inspection team reviewed annual maintenance and Work Instructions-2-18 for Air Lift Fuel Containers. Air lift containers provide transportation of diesel fuel by air. The NRC inspection team reviewed Areva's test plan training matrix of SAFER FLEX equipment operations training for the staging area technicians. In addition, the NRC inspection team reviewed Areva's NSRC Equipment Technical Requirement Document (ETRD) for medium and low voltage generators. Areva updates ETRDs and training requirements in accordance with revisions to SAFER FLEX equipment specifications.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusion

The NRC inspection team concluded that PEICo/PIM is adequately implementing its test, maintenance and M&TE program in accordance with NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the all the maintenance activities.

4. Handling, Storage, and Deployment

a. Inspection Scope

The NRC inspection team reviewed PEICo/PIM's handling, storage, and deployment policies and procedures to verify conformance with NEI 12-06. The inspectors observed a PEICo/PIM's storage area in the Memphis warehouse. Specifically, the NRC inspection team observed how FLEX equipment is stored, cataloged, and tagged out of service, and tracked for easy deployment to the correct NRC licensee that requests the equipment. The NRC inspection team discussed the conduct of the warehouse operations for all the handling activities with PEICo/PIM's management.

The NRC inspection team performed walk downs of the different storage sections to verify the FLEX equipment described in the emergency deployment procedures and the bill of lading matched the different transportation pallets. NRC inspectors reviewed handling, storage, and deployment procedures to verify they provide adequate guidance for the easy identification of equipment location and licensee-specific equipment as well as properly identified the necessary FLEX equipment. PEICo/PIM personnel in charge of handling the equipment were interviewed to determine their knowledge of the different storage and deployment procedures. The NRC inspectors verified that the storage facility would provide the necessary protection of the equipment and also meet the availability requirements in accordance with the mitigation strategies requirements. A number of FLEX equipment were sampled to verify that storage conditions were adequately preserved and maintained. The NRC inspectors verified that all the documentation at the Memphis facility for deployment of equipment when called upon during an emergency was up to date and reflected the current conditions of the warehouse.

The attachment to this inspection report lists the documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspection team concluded that PEICo/PIM is implementing its handling, storage, and deployment activities in accordance with NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the handling of SAFER equipment.

5. Corrective Action Program

a. Inspection Scope

The NRC inspection team reviewed PEICo/PIM's policies and implementing procedures for the Corrective Action Program (CAP) to ensure prompt identification, correction, and verification of effectiveness in accordance with the requirements of NEI 12-06. The NRC inspection team discussed and reviewed a sample of PEICo/PIM's corrective actions, including nonconformances with PEICo/PIM's quality assurance manager and technical staff. The NRC inspection team verified implementation of PEICo/PIM's nonconformance report process (NCR) during maintenance activities throughout the week. The NRC inspectors verified that PEICo/PIM adequately identified possible deficiency trends through operating experience and previous NCRs to ensure proper corrective actions were taken when required.

The NRC inspection team reviewed 480V and 4160V Turbine Marine Generator non-conformances associated with non-functional impacted equipment conditions. The NRC inspection team reviewed 4160V Turbine Generator SAFER Response Plan Standing Order (SO22-G-1) and NEI 12-06, Section 12.2.4. Standing Order (SO22-G-1) notifies duty officers that the 4160V turbine generators are to be deployed as tuned sets physically designated by three inch colored dots (green, orange, purple, yellow, and pink). A tuned set are two 4160V Turbine Marine Generators with the same three inch colored dot. Currently, the Memphis NSRC has 3 color groupings (green, orange, purple) while Phoenix NSRC has 2 color groupings (yellow and pink).

The NRC inspection team reviewed PEICo's corrective actions to corrective action report (CAR) 16-54 identified during the previous NRC inspection at the Phoenix NSRC, during the period from November 28 to December 1, 2016. The NRC inspection team reviewed PEICo's technical justification and extent of condition for the Steam Generator Reactor Pressure Vessel Make-up Pump. The NRC inspection team reviewed the manufacturer's (e.g. Safe Industries) bid proposal, emails from the manufacturer's director of engineering, manufacturer's pump curves and calculations. CAR16-54 identified that the Program Manager Organization (PMO) specifically failed to adequately document the resolution of vertical suction height per Areva's quality control surveillance report to accept the application of a single pump test as sufficient to meet the specification requirements for the procured pumps.

The NRC inspection team reviewed PEICo's corrective actions to CAR 14-12 which identified 480V Turbine Marine Generator could not produce rated output of 1100kW. The NRC reviewed emails between PEICo engineering and generator manufactures (Turbine Marine and Marathon/ Regal Beloit). The NRC inspection team reviewed PEICo's 480V Turbine Generator Specification, Revision 5. Revision 5 to the specifications de-rated the 480V Turbine Generator's output from 1100kW to 1000kW. The NRC inspection team reviewed SAFER and Equipment Committee presentations for the derating of the 480V turbine generator's output wattage. During October 2015, the Equipment Committee voted and approved Revision 5 of PEICo's specification to de-rate the 480V Turbine Generator's output to 1000kW. The NRC inspectors reviewed a sample of CARs to ensure they complied with PEICo's corrective action program timelines, significance thresholds, proper level of management review, and adequate actions to prevent recurrence. In addition personnel were interviewed to verify they could demonstrate how the CAP works and when corrective actions have been implemented.

The attachment to this inspection report lists the individuals interviewed and documents reviewed by the NRC inspection team.

b. Observations and Findings

No findings of significance were identified.

c. Conclusions

The NRC inspection team concluded that PEICo/PIM is implementing its corrective action program in accordance with NEI 12-06. Based on the limited sample of documents reviewed, the NRC inspection team also determined that PEICo/PIM is implementing its policies and procedures associated with the corrective action program.

6. Entrance and Exit Meetings

On March 20, 2017, the NRC inspection team discussed the scope of the inspection during an entrance meeting with Mr. John Giddens, SAFER Chairman, and members of PEICo/PIM management and technical staff. On March 22, 2017, the NRC inspection team presented the inspection results and observations during an exit meeting with John Giddens, SAFER Chairman, and members of PEICo/PIM management and technical staff.

ATTACHMENT

1. ENTRANCE/EXIT MEETING ATTENDEES

Name	Title	Affiliation	Entrance	Exit	Interviewed
Jim Ripple	SCM Director	SNC	X	X	
John McLean	SCM Analyst	SNC	X	X	X
Greg Green	Warehouse Supervisor	PIM		X	X
John Kapitz	QA & Licensing Sub-committee Chairman	PIM		X	
Pat Long	Project Manager	PIM		X	X
John Allen Roberts	Principle Contracts Agent	PIM		X	
Tim Pettibone	Lead Engineer	PIM		X	
Greg Clark	Lead Engineer	PIM		X	
Chuck Arbuthnot	Contract Engineer	PIM		X	
Lisa Williams	Senior Buyer	PIM		X	
Kevin Shea	Senior Buyer	PIM		X	
Kathy Padilla	Sr. Admin Assistant	PIM	X		
Janet Fondren	Senior Secretary	PIM		X	
Lisa Fraser	Senior Contract Agent	PIM		X	
David Handly	Accounting Manager	PIM		X	
Martin Trum	AREVA SAFER Manager	AREVA USA	X	X	X
Jeff Harris	Project Manager	Barnhart	X		
John Giddens	SAFER EC Chairman	SNC	X	X	X
David Crawley	SAFER Project Manager	SAFER/ PIM	X	X	X
Stan Piedra	PIM QA Manager	PIM	X	X	X
Randy Mundy	PIM Program Manager	PIM	X	X	X
Rebecca Rutherford	PIM Project Manager	PIM	X	X	X
Mark Boggs	PIM Inventory & Facility Manager	PIM		X	
Jane Marshall	Director, JLD	NRC		X	
Joylynn Quinonez	Rx Op Engineer, JLD	NRC	X	X	
Tony Brown	Rx Op Engineer, JLD	NRC	X	X	
Terry Jackson	Branch Chief	NRC		X	
Jose Jimenez	Reactor Operations Engineer	NRC	X	X	
Nicholas Savwoir	Reactor Operations Engineer	NRC	X	X	

2. INSPECTION PROCEDURES USED

IP 43006, "Inspection of the implementation of mitigation strategies order regarding the use of the NSRC."

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item Number</u>	<u>STATUS</u>	<u>TYPE</u>	<u>ITAAC</u>	<u>DESCRIPTION</u>
N/A	N/A	N/A	N/A	N/A

LIST OF ACRONYMS USED

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
ADAMS	Agencywide Documents Access and Management System
CAP	corrective action program
CAR	corrective action report
ETRD	Equipment Technical Requirement Document
FLEX	Flexible Coping Strategies
IP	inspection procedure
M&TE	measuring and test equipment
NCR	nonconformance report
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
NSRC	National SAFER Response Centers
PEICo	Pooled Emergency Inventory Company
PIM	Pooled Inventory Management
PO	purchase order
QA	quality assurance
SAFER	Storage Alliance for FLEX Emergency Response

DOCUMENTS REVIEWED

Programmatic Procedures

PRP 7.4 "Program Manager Organization, Authorities and Responsibilities", Revision 8 dated June, 2011

PRP 10.0 "Preparation and Review of Procurement Specification and Request for Bid (RFB)" revision 10

PIM Policy and Procedure (PPM) 7-7 "Corrective Action" revision 7, dated June 4, 2012

PEICo Quality Assurance Manual revision 3, dated April 1, 2014

AREVA N-51-9199717-014 "National SAFER Response Center Equipment Technical Requirements" revision 145, dated February 10, 2016

PPM 4-7 "Specification Preparation and Revision" revision 6, dated April 25, 2014

PPM 2-0 "Organizational Structure and Responsibilities" revision 11, dated September 23, 2015

PPM 6-7 "Purchase Order Development and Review" revision 16, dated April 12, 2016

PPM 7-7 "Corrective Action Program" revision 7, dated June 4, 2012

AP-1 "Indoctrination and Training" revision 5, dated May 20, 2015

AP-7 "PIM Storage Facility Procedure Controls" revision 4

PIM – Q7 "Equipment Maintenance Certification" revision 5, dated May 20, 2015

MI-0 "Maintenance and Storage Instructions for Equipment" revision 2, dated June 17, 2016

CP-9 "Measuring and Test Equipment Control and Calibration" revision 4, dated December 17, 2012

Procurement Documents

- TM 10-5430-255-13&P
- Technical Manual - Operator and Field Level Maintenance Manual including repair parts and special tools list (RPSTL)
- For Drum, fabric, collapsible, fuel, 500 gallon capacity model GTA500F (NSN 8110-01-482-9152)
- PO No. 542176, GTA500F NSN: 8110-01-482-9152, (diesel fuel bladder)
- Coalmont Electrical Development, Certificate of Conformance, date July 16, 2014, PO: 201410, model/PN: 480VAC cable delivery trailer, quantity 8
- Coalmont Electrical Development, Certificate of Conformance, June 23, 2014, PO: 20109, P/N: Assembly PA22MF86326F100-XX-XX, cable P/N 86326E, quantity 36,800 ft.
- Interstate Products, Inc. - Certificate of Conformance, February 6, 2014, PO No. 201329C01, Air Container, change order 1, shipped to Phoenix.
- Interstate Products, Inc. - Certificate of Conformance, February 23, 2013, PO No. 201329C01, Air Container, shipped to Memphis.
- PIM Storage Facility Equipment/ Material Receiving Inspection Report, November 3, 2013, vendor: Interstate Products, PO: 201329

Test, M&TE, and Maintenance Documents

- Submittal list 3/21/2017-Develop performance test plans and required instrumentation verification for:
 - Water Treatment – April 15, 2017
 - Hale Pumps – May 1, 2017
 - Turbine Generators – May 1, 2017
 - Light Towers – May 1, 2017
 - High Pressure (HP) Injection Pumps – May 1, 2017
 - Hoses – May 1, 2017
 - Step-up Transformer – May 1, 2017
 - Portable Submersible Pump – May 1, 2017

- Air Compressors – May 1, 2017
- Fuel Transfer Pumps – May 1, 2017
- Load Distribution Centers – May 1, 2017
- 480V Cable – September 1, 2017
- 4160V Cable – September 1, 2017
- Submittal list entry March 22, 2017 - Revise work instructions on Turbine generator cable disconnection, Work Order P104304:
 - Turbine Generator cable disconnection work instructions - June 30, 2017
- AREVA National SAFER Response Center Equipment Technical Requirements Document no. 51-9199717-015
- Barnhart 480V Turbine Generator Maintenance Personnel Qualifications:
 - Dwight Cooper – Foreman
 - Kory Pimental – Rigger
 - Karon Brown – Rigger
 - George Maclin – Rigger
- [Draft] Industry Position Paper Preventative Maintenance Template Strategy FLEX Electrical Cables- Medium and Low Voltage Rev. 1, Dated March 3, 2015
- PIM Storage Facility Equipment/ Material Receiving Inspection Report, August 4, 2014, vendor: Coalmont Electrical Development, PO: 201410C01
- Preventative Maintenance Work Order - Quarterly (3 months)
Work order # P104304, WI-2-11
- Preventative Maintenance Work Order- annual (1 yr.) - December 21, 2016
WO: P102722, Asset No. NERRC101A001CBL07, WI-2-22
- Preventative Maintenance Work Order- annual (1 yr.) - November 15, 2016
WO: P102146, Asset No. NERRC101A001CBM05, WI-2-22
- Preventative Maintenance Work Order- annual (1 yr.) - November 15, 2016
WO: P102145, Asset No. NERRC101A001CBL01, WI-2-22
- Preventative Maintenance Work Order- annual (1 yr.) - December 21, 2016
WO: P102145, Asset No. NERRC101A001CBLX05, WI-2-22
- MI-2-11, 480VAC Turbine Generator, version 5, November 17, 2016
- MI-2-22, Cable and Electrical Connection Trailers, version 2, September 29, 2016
- MI-2-18, Air Lift Fuel Container, version 2, August 22, 2016
- WI-2-18, Air Lift Fuel Container, version 2, December 15, 2016
- AREVA Test Plan, SAFER Training Process, document no. 108-9263772-000, Appendix A: training matrix

Non-conformances and Corrective Actions

- Turbine Marine Inc., Compact Series Portable Generator, Owner/Operator Manual Models 480V & 4160V
- Presentation: Equipment Committee Items Requiring Vote October 2015 SAFER Equipment Committee
- SAFER committee meeting minutes October 1-2, 2015, Dallas Fort Worth:
 - Miscellaneous
 - NRC RAI - Turbine Generator - presentation 10
 - Specifications - presentation 11
- CAR No. 14-12
Attached email:
May 12-13, 2014
John Arruda (Turbine Marine)
Wade Akey (Regal Beloit)
Mark Boggs (SAFER)

-Extension to June 15, 2014
April 25-April 28, 2014
Mark Boggs (SAFER)
Randy Mundy (SAFER)

-Extension to September 25, 2014
June 11, 2014
Mark Boggs (SAFER)
Randy Mundy (SAFER)

-Extension to December 15, 2014
September 19-22, 2014
Mark Boggs (SAFER)
Randy Mundy (SAFER)

-Extension to March 31, 2015
December 2, 2015
Mark Boggs (SAFER)
Randy Mundy (SAFER)

-Extension to April 15, 2015
March 18, 2015
Mark Boggs (SAFER)
Randy Mundy (SAFER)

-Extension to September 30, 2015
April 15, 2015
Mark Boggs (SAFER)
Randy Mundy (SAFER)

-Extension to November 4, 2015
August 18, 2015-September 14, 2015
Greg Green
Randy Mundy

- List of non-functional NCRs reviewed at Memphis:
 - NCR 288, January 14, 2016
 - NCR 289, January 14, 2016
 - NCR 290, January 14, 2016
 - NCR 291, January 14, 2016
 - NCR 292, January 14, 2016
 - NCR 293, January 14, 2016
 - NCR 277, November 20, 2015
 - NCR 275, November 30, 2015
 - NCR 284, January 11, 2016
 - NCR 309, February 12, 2016
 - NCR 328, April 13, 2016
 - NCR 334, April 13, 2016
 - NCR 337, March 31, 2016
 - NCR 344, April 19, 2016
 - NCR 345, April 19, 2016
 - NCR 346, April 12, 2016
 - NCR 351, July 6, 2016
 - NCR 356, May 12, 2016
 - NCR 358, June 2, 2016
 - NCR 371, July 18, 2016
 - NCR 386, August 8, 2016
 - NCR 387, August 12, 2016
 - NCR 400, September 8, 2016
 - NCR 408, October 7, 2016
 - NCR 424, October 7, 2016
 - NCR 426, November 17, 2016
 - NCR 427, November 17, 2016
 - NCR 428, November 17, 2016
 - NCR 436, December 7, 2016
 - NCR 440, November 7, 2016
 - NCR 447, January 24, 2017

- CAR No. 16-54, January 31, 2017-answer to CAR opened at Phoenix inspection

- SAFER Response Plan Standing Order No. SO22-G-1

- PIM Bid Proposal RFB# 201324R01 from Safe Industries