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Edwin I. Hatch Unit 2 SEISMIC WALKDOWN REPORT, RER SNC425082

For

Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic

Prepared by: David V. Lee FOR WINSTON STEWART Date: 11-26-2012
Winston Stewart PER TELECON

Reviewed by: [signature] FOR PATRICK KELLY Date: 11-26-2012
Patrick Kelly PER TELECON

Approved by: (ENERCON) [signature] Date: 11-26-2012
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Technical Lead or Designee/
Peer Review Team Leader
Melanie Brown

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Project Manager or Designee
David Whitman

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EXECUTIVE SUMMARY

The Seismic Walkdowns at Hatch Unit 2 in response to the NRC 50.54(f) letter dated March 12, 2012, "Enclosure 3, Recommendation 2.3: Seismic" are not complete as all items on the SWEL have not been accessible. A supplementary report will be required. The walkdowns are being performed using the methodology outlined in the NRC endorsed "Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic" (EPRI Report number 1025286). Plant Hatch Unit 2 had no significant degraded, non-conforming or unanalyzed conditions that warranted modification to the plant. Plant Hatch Unit 2 had no as-found conditions that would prevent SSCs from performing their required safety functions.

1.0 SCOPE AND OBJECTIVE

The objective of this report is to document the results of the Seismic Walkdowns at E. I. Hatch Unit 2 in response to the NRC 50.54(f) letter dated March 12, 2012, "Enclosure 3, Recommendation 2.3: Seismic" (Reference 10.1).

The Seismic Walkdowns followed the guidance contained in EPRI Report 1025286 (Reference 10.2), which was endorsed by the NRC on May 31, 2012. The scope of the walkdowns was to identify potentially degraded, unanalyzed, or nonconforming conditions relative to the seismic licensing basis.

The 2.3: Seismic Walkdowns for Hatch Unit 2 are not complete as all items on the SWEL have not been accessible. A supplementary report will be required. This report documents the findings from all Seismic Walkdowns and Area Walk-bys completed to date.

2.0 SEISMIC WALKDOWN PROGRAM IMPLEMENTATION APPROACH

The requirements of the 50.54(f) Letter are satisfied by application of and compliance with the NRC endorsed methodology provided in EPRI Report 1025286 (Reference 10.2). In accordance with EPRI Report 1025286 (Reference 10.2), the following topics are addressed in this report:

- Documentation of the seismic licensing basis for the SSCs in the plant (Section 3.0);
- Assignment of appropriately qualified personnel (Section 4.0);
- Reporting of actions taken to reduce/eliminate seismic vulnerabilities identified by the Individual Plant Examination for External Events (IPEEE) program (Section 5.0);
- Selection of SSCs to be inspected in the plant (Section 6.0);
- Performance of the Seismic Walkdowns and Area Walk-bys (Section 7.0);
- Evaluation of potentially adverse seismic conditions with respect to the seismic licensing bases (Section 8.0); and
- Performance of Peer Reviews (Section 9.0).

While the Seismic Walkdowns were in progress at Hatch Unit 2, supplemental guidance/clarification for opening cabinets to inspect for adverse conditions was received on September 18, 2012. This required the opening of cabinets, electrical boxes, and switchgear to inspect the internals for potentially adverse seismic conditions, even when opening the components was not required to inspect the anchorage. Implementation of the supplemental guidance was incorporated into the walkdowns by first identifying the affected components.

During the Seismic Walkdowns of Hatch Unit 2, electrical cabinets (where no extensive disassembly was required) were opened to inspect the cabinet internals for mounting of internal components, inspect the condition of fasteners of adjacent cabinets, and confirm the absence of any other adverse seismic conditions. The Seismic Walkdown Engineers (SWE) followed the supplemental guidance for all cabinets that were accessible during plant operation, even where opening the cabinets was not required to inspect the anchorage. However, some that could not be opened (due to personnel safety or due to the sensitivity of the equipment) were scheduled during an outage to have the component doors opened.

Section 7.0 identifies cabinets that were inaccessible for internal inspections. Table 7-1 and Table 7-2 provide the schedule to complete the cabinet internal inspections.

3.0 SEISMIC LICENSING BASIS SUMMARY

This section provides a summary of the licensing bases for the Seismic Category I Structures, Systems, and Components (SSCs) in the plant. It includes a discussion of the Design Basis Earthquake (DBE) and the codes and standards used in the design of the Seismic Category I SSCs for meeting the plant-specific seismic licensing basis requirements.

3.1 DESIGN BASIS EARTHQUAKE

The plant site geologic and seismologic investigations are covered in Section 2.5 of the Hatch Unit 2 Final Safety Analysis Report (FSAR). Based on this data, the peak ground accelerations for the Safe Shutdown Earthquake (SSE) (referred to as the Design Basis Earthquake - DBE) and Operating Basis Earthquake (OBE) are established as 0.15 g and 0.08 g, respectively, as discussed in subsection 2.5.2 of the Hatch Unit 2 FSAR (Reference 10.7).

The basic description of the earthquake is provided by spectrum response curves. Separate curves are used for the OBE of 0.08 g horizontal acceleration and the DBE of 0.15 g horizontal acceleration. The spectrum response curves are provided in FSAR, Figures 3.7A-1 and 3.7A-2 for OBE and DBE respectively. The response of the structure to the earthquake is obtained by using the spectrum response technique. Appropriate response levels are read from the earthquake spectrum curve corresponding to the natural frequencies of the structure.

During the original design of Plant Hatch a set of seismic response spectra was developed by GE using the modified El Centro earthquake ground motion, as discussed in the Hatch Unit 2 FSAR, Section 3.7A (Reference 10.7).

In 1984 another set of spectra was generated to correct a broadening error found in the original spectra. The 1984 spectra were generated using the artificial time histories that more closely enveloped the ground spectra. These are the Seismic Floor Response Spectra of Record (FRS of Record).

In 1989 a Seismic Margins Assessment (SMA) was performed in part to resolve the errors in peak broadening and soil velocity found in the 1984 spectra. The effect of the soil velocity error is that the peak acceleration for each spectrum is shifted to a higher frequency content. Therefore, a new non-design basis set of spectra was generated using seismic margin techniques for use in the SMA. These spectra are called the Seismic Margin Earthquake (SME) spectra. The SME spectra are based on a maximum ground horizontal acceleration of 0.3 g, which is twice that of the Plant Hatch DBE (0.15 g).

As a result of the SMA, the NRC concluded that the spectra used in the design of Plant Hatch resulted in a safe overall design. The NRC determined that the FRS of Record was adequate as the licensing basis spectra. As recognition of the shifting of the maximum seismic response to a higher frequency,

Southern Nuclear elected to consider the SME spectra, factored by ½ to account for the increased ground input, in conjunction with the design basis earthquake (DBE) for all designs. This practice results in a seismic demand that is more conservative than that which would result from a corrected FRS, but avoids a license revision. The NRC agreed with this approach and the NRC also agreed that the SME spectra, when reduced by a factor of one-half (½ SME), best approximates current seismic regulatory requirements for Plant Hatch.

POWER GENERATION DESIGN BASES

Seismic Category I systems, structures and components are designed so that stresses remain within normal code allowable limits during the OBE and to ensure that they will perform their safety-related functions during and/or after a DBE.

MAJOR COMPONENT DESIGN BASES

The horizontal and vertical OBE and DBE in-structure response spectra curves form the basis for the seismic qualification and design of Category I SSCs and for demonstrating the structural integrity of Seismic Category 2 SSCs, where required. In addition, systems running between structures shall be designed to withstand the seismic relative displacements.

The seismic analysis of safety related systems, equipment, and components is generally based on the response spectra method. Alternatively, Seismic Category I equipment is analyzed using the methodology based on earthquake experience data developed by the Seismic Qualification Utility Group (SQUG) and documented in the Generic Implementation Procedure (GIP), Revision 2, plus any addition to the GIP reviewed and accepted by the NRC for resolving Unresolved Safety Issue A-46 in response to NRC Generic Letter 87-02. The SQUG GIP may be used to verify the seismic adequacy of currently installed equipment after the equipment has been walked down and any outliers resolved. New and replacement equipment within the scope of the GIP may also be seismically qualified using the same SQUG methodology. This alternative method is acceptable where no specific NRC commitment to use IEEE 344-1975 has been made.

3.2 DESIGN CODES, STANDARDS, AND METHODS

An extensive list of design codes, standards, methods, studies and tests utilized for seismic design is provided in the FSAR (Reference 10.7). Examples of the pertinent codes, standards, and methods used for the design of Seismic Category I structures, systems and components is provided here:

- USAS B31.1, Code for Power Pressure Piping, 1967 Edition
- USAS B31.7, Nuclear Power Piping, 1969 Edition
- 10 CFR 50, Appendix A, General Design Criterion 2, "Design Basis for Protection Against Natural Phenomena"
- IEEE 323-1971, Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations
- IEEE 323-1974, Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations
- IEEE 344-1971, IEEE Recommended Practice for Seismic Qualification of Class 1E Equipment for Nuclear Power Generation Stations
- IEEE 344-1975, IEEE Recommended Practice for Seismic Qualification of Class 1E Equipment for Nuclear Power Generation Stations
- NRC Generic Letter 87-02, Verification of Seismic Adequacy of Mechanical and Electrical Equipment In Operating Reactors (USI A-46)
- Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment, Revision 2, Seismic Qualification Utility Group (SQUG)
- American Institute of Steel Construction (AISC), 7th Edition

4.0 PERSONNEL QUALIFICATIONS

Table 4-1 identifies the project team members and their project responsibilities per EPRI Report 1025286 (Reference 10.2). Table 4-2 identifies the Peer Review Team members and responsibilities. Section 4.1 provides an overview of the project responsibilities. Section 4.2 includes brief experience summaries for all project personnel in alphabetical order.

Table 4-1 Project Team Members and Responsibilities

Name	Site Point of Contact (POC)	Equipment Selection / IPEEE Reviewer	Plant Operations	Seismic Walkdown Engineer (SWE)	Licensing Basis Reviewer
Warren Barr		X			
Chris Burke		X	X		
David Edenfield		X			
Jeffrey Horton				X	X
Patrick Kelly				X	X
Kursat Kinali				X	X
Johnathon McFarland				X	X
Michael Steele*	X	X		X	X
Winston Stewart*				X	X
James Tootle		X	X		
Juan Vizcaya				X	X
Wesley Williams		X		X	X
Alan Wolfe		X	X		

Table 4-2 Peer Review Team Members and Responsibilities

Name	Peer Review Team Leader	SWEL Peer Reviewer	Walkdown Peer Reviewers	Licensing Basis Peer Reviewer	Submittal Report Peer Reviewers
Robert Ashworth*		X	X	X	X
Melanie Brown*	X	X		X	X
Richard Starck*		X			X
Kenneth Whitmore*		X	X	X	X

Notes (Table 4-1 and Table 4-2):

1) * Indicates Seismic Capability Engineer

2) As stated in Section 7.0, all potentially adverse conditions were entered into the plant Corrective Action Program (CAP) system. However, as part of the process of entering the condition into the CAP, the SWEs made a preliminary assessment of the condition with respect to the plant licensing basis. Further licensing basis reviews were performed as discussed in Section 8.0 as part of the CAP resolution process by personnel not directly involved in the walkdowns.

4.1 OVERVIEW OF PROJECT RESPONSIBILITIES

The Site Point of Contact (POC) is a site engineer from Southern Nuclear that has experience with the site equipment, site procedures, plant operations, and overall personnel organization. The site POC coordinated site access for walkdown personnel and any resources required for the walkdowns such as inspection equipment and support from plant operations. The POC was responsible for development of the walkdown schedule and any updates to the schedule based on equipment availability.

Equipment Selection Personnel (ESP) were responsible for identifying the sample of SSCs for the Seismic Walkdowns. The ESP have knowledge of plant operations, plant documentation, and associated SSCs. The ESP also have knowledge of the IPEEE program. For this project, site engineers and plant operations personnel participated in the equipment selection. The ESP also performed the responsibilities of the IPEEE Reviewers. The IPEEE Reviewers also ensured that the walkdown scope included a sample of equipment that had IPEEE seismic vulnerabilities.

Plant Operations Personnel provided detailed review of the sample of SSCs to ensure the walkdown scope included equipment located in a variety of environments, equipment in a variety of systems, and equipment accessible for a walkdown. For the Hatch Unit 2 project, the Plant Operations Personnel were either former or currently licensed Senior Reactor Operators.

The SWEs were trained on the NTTF Recommendation 2.3: Seismic, and on the material contained in EPRI Report 1025286 (Reference 10.2). SWEs who had previously completed the Seismic Walkdown Training Class developed by the SQUG were not required to complete training on the NTTF Seismic recommendations but were trained on the differences between SQUG activities and activities associated with the NTTF Seismic recommendations.

The Licensing Basis Reviewer was responsible for determining whether any potentially adverse seismic conditions identified by the SWEs met the plant seismic licensing basis. The Licensing Basis Reviewer has knowledge of and experience with the seismic licensing basis and documentation for the SSCs at Hatch Unit 2.

A Peer Review Team was formed for this project to provide both oversight and review of all aspects of the walkdowns. The Peer Review Team members have extensive experience in seismic design and qualification of structures, systems and components as well as extensive field experience. The Peer Review Team for this project interfaced with the ESP and SWEs to ensure that the walkdown program satisfied the guidance in EPRI Report 1025286 (Reference 10.2).

4.2 TEAM EXPERIENCE SUMMARIES

Robert Ashworth, SCE (MPR)

Mr. Ashworth has more than six years of experience providing engineering solutions for a wide variety of nuclear power plant components and systems. His experience includes equipment walkdowns at industrial facilities to assess material condition, structural modeling and analyses; and seismic qualification in accordance with current industry standards for mechanical and electrical equipment in nuclear power plants. Mr. Ashworth has completed the training course for the EPRI Report 1025286 and is also a Seismic Capability Engineer (SCE) as defined in the SQUG GIP for resolution of Unresolved Safety Issue (USI) A-46.

Warren Barr (SNC)

Mr. Barr is currently a Senior Plant Support Engineer at the Hatch Plant. He has over forty-three (43) years of on-site and off-site nuclear power related experience in the area of mechanical design and engineering for Southern Company nuclear units. Experience consists of new plant design, unit start-up, unit recovery, modification design and implementation, system design and operation, engineering support, outage support, maintenance support, problem resolution, vendor interface, project management, and project and group coordination and supervision.

Melanie Brown, SCE (SNC)

Ms. Brown has over 31 years of experience with Southern Company, the majority of which has been serving the nuclear fleet. Ms. Brown's most recent assignment was as a Seismic Qualification Engineer in the Fleet Design Department, where she was responsible for performing activities associated with the Governance, Oversight, Support, and Perform (GOSP) Model including:

- Management of the seismic design bases,
- Seismic equipment qualification,
- Seismic evaluation of plant structures and components,
- Design documentation and configuration management.

She is currently serving as the Southern Nuclear Seismic Technical Lead for the Fukushima Near-Term Task Force (NTTF) 2.3 Seismic Walkdowns for all three Southern Nuclear plants.

Chris Burke (SNC)

Mr. Burke is currently the Operations Support Manager for the Hatch site. He has a Bachelor of Science Degree in Aerospace Engineering and 15 years of nuclear plant experience within the Engineering and Operations departments. Mr. Burke obtained a Senior Reactor Operator license from the NRC in 2005. In addition to his current function, Mr. Burke has served in various leadership roles in support of plant operation including Shift Support Supervisor, Shift Supervisor, and Shift Manager.

David Edenfield (SNC)

Mr. Edenfield is currently the Risk Analyst for the Hatch Site. He has a Bachelor of Science Degree in Electrical Engineering and 34 years of nuclear plant experience including 10 years in plant construction and 24 years in plant support at Plant Hatch. Some of his related experience and responsibilities includes, Maintenance Rule Expert Panel member, On-site administrator for EPRI software package EOOS (Equipment Out of Service), reviewer for all design change packages for EOOS model impact, High and Low Voltage Switchyard System Engineer, and Component Engineer for Relays (Protective, Control, and Timing) and Large Transformers.

Jeffrey Horton, SWE (ENERCON)

Mr. Horton, P.E., is a degreed Professional Engineer with 37 years of experience specializing in applied mechanics with an emphasis on structural analysis of mechanical components and piping. His experience includes structural and thermal design of Nuclear Pressure Vessels, structural design of Nuclear Pipe Systems, Pipe Support Analysis, and Concrete Design. Mr. Horton holds a Bachelor of Science degree in Aerospace Engineering and a Master of Science degree in Material Science specializing in Solid Mechanics. Mr. Horton has performed numerous ANSI B31.1, B31.7, ASME Section I, III, and VIII component structural calculations and design verifications for Oyster Creek, TMI-1 and other nuclear facilities. Mr. Horton has used AutoPIPE since 1989 for pipe stress evaluations at Oyster Creek, TMI-1 and other nuclear facilities. Most recently, Mr. Horton was involved in the pipe stress and pipe support analysis for the James A. Fitzpatrick HPCI Steam Trap Valve replacement project, and the Oyster Creek 2010 buried pipe project where he performed the pipe design for the Condensate Storage Tank overflow pipe using AutoPIPE. Mr. Horton has significant field experience including extended site assignments at Oyster Creek, TMI and Perry, and has performed equipment walkdowns at numerous facilities. Mr. Horton completed the EPRI training on Near Term Task Force Recommendation 2.3 – Plant Seismic Walkdowns as an SWE.

Patrick Kelly, SWE (ENERCON)

Mr. Kelly, P.E., has a Master's degree in Civil Engineering with over 5 years of engineering experience in commercial and nuclear plant design having prepared and developed several design change packages, calculations, evaluations and engineering judgments. Mr. Kelly brings considerable experience in structural analysis, building evaluations, conduit evaluations, and miscellaneous structural analysis. He has supported various security related projects at SNC. Additionally, Mr. Kelly was the lead civil engineer on the recent detailed and final designs packages for the Unit 1 and 2 Diesel Generator Excitation Panel Replacement projects at Plant Hatch. Mr. Kelly completed the EPRI training on Near Term Task Force Recommendation 2.3 – Plant Seismic Walkdowns as an SWE.

Kursat Kinali, SWE (ENERCON)

Mr. Kinali, Ph.D., P.E., is a Civil/Structural Engineer and Responsible Engineer for modifications. Dr. Kinali has M.S. and Ph.D. degrees in Structural Engineering with industry experience in commercial and nuclear design. He is a registered Professional Engineer. He is experienced in seismic analysis, reinforced concrete design, and seismic performance assessment of existing structures. Dr. Kinali worked on Southern California Edison's SONGS Units 3&4 for design of removable bar panels on a Large Organism Exclusion Device (LOED). He was the responsible structural engineer for designing and detailing the stainless steel removable bar panels. These frames employed a fail-open mechanism that prevents damage to the rest of the LOED frame during extreme wave or seismic events. Dr. Kinali was one of the responsible engineers for an Engineering Change (EC) package at Robinson which involved ballistic resistant enclosure (BRE) replacement. He was also the primary reviewer for BRE drop analysis for the Farley Nuclear Plant. He reviewed the calculation which investigated the possible effects of BRE drop on safety-related underground features. For the last couple years, he has been working on numerous design change packages associated with 10 CFR 73.55 security compliance projects for all four Progress Energy's plants, where he was responsible for designing/detailing the reinforced concrete foundations for buildings and miscellaneous equipment, designing electrical duct banks running under a heavy-haul path, preparing/reviewing calculations and drawings for conduit supports and miscellaneous component mountings, and preparing/reviewing (EC) packages. Mr. Kinali completed the EPRI training on Near Term Task Force Recommendation 2.3 – Plant Seismic Walkdowns as an SWE.

Johnathon McFarland, SWE (ENERCON)

Mr. McFarland, P.E., is a Civil/Structural Engineer providing engineering support for various nuclear generating stations. Mr. McFarland has a B.S. in Civil Engineering and over 5 years of experience in civil/structural design, including ECCS Suction Strainers, seismic and hydrodynamic analysis, yard modifications and field engineering. Mr. McFarland has significant experience at Florida Power and Light's Turkey Point Plant, and at the Wolf Creek Nuclear Operating Station (WCNOC). Mr. McFarland supported various modifications at WCNOC including providing outage support. Additionally, Mr. McFarland provided EPU related support at Turkey Point including the analysis and walkdowns of structural systems. He supported structural analysis of shipping casks. Mr. McFarland completed the EPRI training on Near Term Task Force Recommendation 2.3 – Plant Seismic Walkdowns as an SWE.

Richard Starck, SCE (MPR)

Mr. Starck is a registered Professional Engineer with more than 30 years of experience in seismic qualification of nuclear plant equipment. He is the principal author of the EPRI Seismic Walkdown Guidance Document (EPRI Report 1025286, Reference 10.2). He developed and taught the six sessions of the NTTF 2.3 Seismic Walkdown Training Course to more than 200 engineers. He has provided technical oversight of work for various SQUG projects aimed at resolving USI A-46. Mr. Starck developed for SQUG the generic guidelines, criteria, and procedure for identifying safe shutdown equipment for resolution of USI A-46, is the editor and principal author of the SQUG GIP, and has interfaced with the NRC Staff and the SQUG Steering Group to resolve open issues on several revisions of the GIP. Mr. Starck is a SCE and has performed Seismic Walkdowns and evaluations of nuclear plant electric and mechanical equipment as part of the NRC required USI A-46 program. This work included equipment qualification, anchorage evaluation, seismic interaction review, outlier resolution, and operability determination.

Michael Steele, SCE (SNC)

Mr. Steele is currently a Principal Design Engineer at Plant Hatch. He has a Bachelor's of Science Degree in Civil Engineering and 20 years of experience as a structural engineer. He is a qualified SQUG Seismic Capability Engineer and Certified Lead Auditor. He has comprehensive and in-depth technical experience in nuclear facilities structural design, construction, modification and maintenance.

Winston Stewart, SCE (ENERCON)

Mr. Stewart is a Mechanical Engineer with over eight years of experience in various capacities including: Modification Engineer, Engineering Mentor, 10CFR50.59 Evaluator, Apparent Cause Evaluator, Contract Administration and Designated Representative, Project Manager, Procedure Technical Reviewer, and Environmental Monitoring Team Leader for Emergency Response Organization. Mr. Stewart was responsible for the preparation of technical evaluations for various configuration changes to plant systems, structures, or components; as well as the preparation and revision of civil/structural calculations, pipe stress calculations, and other design documents. Mr. Stewart served as subject matter expert for Pipe Stress Analysis and Pipe Flaw Evaluation (ASME B31.1, Section III and Section XI). During this time he qualified as SQUG Seismic Capability Engineer. Mr. Stewart completed the EPRI training on Near Term Task Force Recommendation 2.3 – Plant Seismic Walkdowns as an SWE.

James Tootle, Jr. (SNC)

Mr. Tootle is the Hatch Severe Accident Management Program Manager. He holds a Bachelor's Degree in Civil Engineering Technology from Georgia Southern University. He has 30 years of experience at an operating nuclear plant. Mr. Tootle is currently licensed as an SRO and served ten years as Shift Support Supervisor. He also has supervisory experience in Operations Training and Nuclear Oversight. Mr. Tootle's certifications include the following:

- Shift Supervisor Qualified (1998-2003)
- Shift Support Supervisor (1993-2003)
- Senior Reactor Operator (BWR) licensed (1993-present)
- Station Nuclear Engineering / Shift Technical Advisor Certification - General Electric (1990)

Juan Vizcaya, SWE (ENERCON)

Mr. Vizcaya has over 30 years of structural engineering and design experience. He has significant experience being the structural lead engineer on ISFSI projects and overall nuclear plant modifications and has a wide range of design/engineering experience. Projects range from the seismic analysis and design of concrete and steel structures and concrete pads to the analysis and design of restraint systems for a vertical cask vendor stack-up configurations. Other projects include heavy load drop assessments and the analysis and design of protective structures, foundations and various mechanical and structural modifications using sophisticated finite element models. Mr. Vizcaya is skilled at using finite element analyses in the design process, and at the practical design of mechanical components, along with concrete and steel structures. He leads a group structural staff on issues involving structures, stress analysis, and site work such as layout, excavation, roads, drainage and subterranean structures. Mr. Vizcaya has extensive field experience including during construction of the Laguna Verde Nuclear Plant. Mr. Vizcaya completed the EPRI training on Near Term Task Force Recommendation 2.3 – Plant Seismic Walkdowns as an SWE.

Kenneth Whitmore, SCE (ENERCON)

Mr. Whitmore is a Registered Professional Engineer with more than 30 years of experience in seismic design and seismic equipment qualification in nuclear power plants. Mr. Whitmore is a Seismic Capability Engineer that was involved in the development of the SQUG methodology for verification of nuclear plant components. Specifically, Mr. Whitmore served on the sub-committee that developed the SQUG methodology for evaluation of raceways and on the sub-committee that performed the peer review of the SQUG walkdown training class. Mr. Whitmore performed A-46 and IPEEE walkdowns at Oyster Creek and Three Mile Island and has subsequently performed SQUG evaluations at numerous nuclear power plants. Mr. Whitmore served as both Chairman and Technical Chairman of the Seismic Qualification Reporting and Testing Service (SQRTS), has witnessed numerous seismic tests and is a recognized industry expert in seismic qualification of components. Mr. Whitmore has significant experience in all aspects of structural analysis and design and has extensive experience in performing plant walkdowns associated with seismic issues. Mr. Whitmore completed the EPRI training on Near Term Task Force Recommendation 2.3 – Plant Seismic Walkdowns as an SWE.

Wesley Williams, SWE (SNC)

Mr. Williams has a degree in Civil Engineering from the University of South Alabama. He is a System Engineer for Southern Nuclear at Plant Hatch in Baxley, GA. He has participated in numerous Structural Monitoring Walkdowns at Plant Hatch which are governed by 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance of Nuclear Power Plants." In addition, Mr. Williams had the opportunity to work in the Civil Design Group at Southern Nuclear Corporate Headquarters as a summer intern before he graduated. Mr. Williams completed the EPRI training on Near Term Task Force Recommendation 2.3 – Plant Seismic Walkdowns as an SWE.

Alan Wolfe (SNC)

Mr. Wolfe has a BS in Nuclear Engineering Technology. He has more than 33 years of experience in the nuclear industry, all in the Operations department at Plant Hatch. He obtained a Reactor Operator's License in 1982 and a Senior Reactor Operator's License in 1987. Mr. Wolfe held positions of System Operator, Licensed Nuclear Plant Operator, Shift Supervisor, Shift Technical Advisor, Shift Manager, and Operations Superintendent prior to retiring in 2010. Following retirement he returned to the plant in January 2012 to support the Severe Accident Management team in response to the accident in Japan.

5.0 IPEEE VULNERABILITIES REPORTING

Information on the seismic vulnerabilities identified during the IPEEE program are reported in Attachment 5. Within this context, "vulnerabilities" means seismic anomalies, outliers, or other findings. For each vulnerability, Attachment 5 also reports a description of the action taken to eliminate or reduce the seismic vulnerability.

The Seismic Walkdown Equipment List (SWEL) for Hatch Unit 2 included six (6) components for which seismic vulnerabilities were previously identified during the IPEEE program. During the Seismic Walkdowns, the walkdown teams verified that the resolutions to IPEEE vulnerabilities for 4 of the 6 SWEL components are implemented as stated in the IPEEE outlier resolution (Attachment 5). The extent of this verification is discussed in the individual SWCs for the components with identified IPEEE seismic vulnerabilities.

The following components with IPEEE vulnerabilities could not be verified due to inaccessibility. Completion of the walkdowns, for both components, is deferred until the next refueling outage (2R22) which is scheduled February of 2013.

1) 2R22-S005, 4160V SWGR EMERGENCY BUS 2E – The anchorage was previously determined to be inadequate. Also, there are interaction concerns with the overhead lights. Attachment 5 notes that additional anchorage was installed and the light fixtures were tied up to prevent falling per design change request (DCR) 94-017 and DCR 90-10. However, the Seismic Walkdown team could not verify anchorage since the switchgear could not be opened at that time.

2) 2R22-S007, 4160V SWGR EMERGENCY BUS 2G – The anchorage was previously determined to be inadequate. Attachment 5 notes that additional anchorage was installed per DCR 94-017. However, the Seismic Walkdown team could not verify anchorage since the switchgear could not be opened at that time.

6.0 SEISMIC WALKDOWN EQUIPMENT LIST DEVELOPMENT

A team of individuals with extensive knowledge of Plant Hatch systems and components developed the SWEL. Qualifications of the personnel responsible for developing the SWEL are provided in Section 4.0 of this report. The equipment selection personnel used an SNC-template to ensure compliance with EPRI Report 1025286 (Reference 10.2) and consistency across the fleet.

Two SWELs were developed (SWEL 1 and SWEL 2) consistent with the guidance in EPRI Report 1025286 (Reference 10.2). SWEL 1 consists of a sample of equipment related to safe shutdown of the reactor and maintaining containment integrity as described in Section 3.0 of the EPRI Report 1025286 (Reference 10.2). SWEL 2 consists of items related to the spent fuel pool as described in Section 3.0 of the EPRI Report 1025286 (Reference 10.2). The two SWELs form the overall SWEL for the plant. Attachment 1 provides the final SWEL 1 and SWEL 2.

In some cases, components listed on the SWEL were removed from the SWEL or were replaced with equivalent components. These changes were made when it was determined during the Seismic Walkdown that access to the equipment on the original SWEL would be impractical to achieve during a walkdown. For example, components located very high overhead were replaced with equivalent items that could be seen without erecting scaffolding. All such changes meet the provisions of the EPRI Report 1025286 (Reference 10.2). The SWELs provided in Attachment 1 reflect the final SWELs with all changes incorporated.

6.1 DEVELOPMENT OF SWEL 1

SWEL 1 was developed using the four screens described in EPRI Report 1025286 (Reference 10.2).

Screens 1 to 3

Screens 1 to 3 were used to select Seismic Category I equipment that do not undergo regular inspection and support the five safety functions.

In accordance with the EPRI Report 1025286 (Reference 10.2, Page 3-3), Screens 1 through 3 can be satisfied using previous equipment lists developed for the IPEEE program. Consequently, the Seismic Review Safe Shutdown Equipment List (SSEL) developed for the Hatch Nuclear Plant's response to Generic Letter 88-20 (Reference 10.3) was included in Base List 1 for the development of SWEL 1. Additional items were added to Base List 1 from the USI A-46 Summary Report (Reference 10.9) and the Safe Shutdown Analysis Report (Reference 10.7), Tables 3.A1-1 and 4.A1-1, to provide components to address the twenty-one classes of equipment from Appendix B of the EPRI Report 1025286 (Reference 10.2).

The specific guidance used to create the IPEEE Seismic SSEL was EPRI Report NP-6041, "A Methodology for Assessment of Nuclear Power Plant Seismic Margin" (Reference 10.10). The Seismic SSEL from IPEEE - Seismic was checked and verified to meet the intentions set forth in the EPRI Report 1025286 (Reference 10.2). The intent of the Base List 1 was to provide an equipment list of the SSCs used to safely shut down the reactor and maintain containment integrity following a Design Basis Earthquake. The EPRI Report 1025286 (Reference 10.2, Page 3-1) listed three screens to use in selecting the Base List 1 if a utility was to not start from an existing equipment list used in previous plant evaluations. Applying these three screens would result in an acceptable base list that was comprised of Seismic Category I SSCs associated with maintaining the following five safety functions listed in EPRI Report 1025286 (Reference 10.2):

- Reactor reactivity control
- Reactor coolant pressure control
- Reactor coolant inventory control
- Decay heat removal, and
- Containment function.

The criteria used in selection of the Seismic SSEL are detailed in Section 3.1.2.2 of the IPEEE – Seismic Report (Reference 10.8). Specifically, one preferred and one alternate path capable of achieving and maintaining a safe-shutdown condition for at least 72 hours following a Seismic Margin Earthquake (SME) was selected for each unit. Further, it was assumed that a Small Break Loss of Coolant Accident (SBLOCA) had occurred and as such, the paths were also selected as being capable of mitigating a SBLOCA following an SME.

Therefore, based upon the review of the Base List 1, it was determined that the list satisfied the requirements as specified in the EPRI Report 1025286 (Reference 10.2). Base List 1 is presented in Attachment 1.

Screen 4

Screen 4 is the sample considerations to select components from the Base List 1. The selection of components for SWEL 1 was developed through an iterative process that ensured a representative sample (i.e., Screen 4 from EPRI Report 1025286 - Reference 10.2). Various drafts of SWEL 1 were provided to Hatch Licensed Senior Reactor Operators (SROs) for review and input. The SROs identified and recommended inclusion of additional equipment important to plant operations.

The following list summarizes the sample considerations used to develop SWEL 1:

- Variety of systems
- Major new or replacement equipment
- Classes of equipment
- Variety of environments
- Equipment enhanced due to vulnerabilities identified during the IPEEE program
- Risk Significance

Variety of Systems – EPRI Report 1025286 (Reference 10.2) specifies that equipment from a variety of plant systems must be included on the SWEL 1. The systems represented in the Base List were reviewed and components from a majority of these systems are included on the SWEL.

Major New and Replacement Equipment – Major new or replacement equipment installed within the previous 15 years was identified through a search of work order (WO) histories for selected equipment and input from the plant personnel familiar with plant modification and from the PRA group on equipment changes to components that are included in the PRA.

Variety of Equipment Classes – A list of the 21 Classes of Equipment that should be included on the SWEL is provided in Appendix B of the EPRI Report 1025286 (Reference 10.2). SWEL 1 includes components from each equipment class.

Variety of Environments – The EPRI Report 1025286 (Reference 10.2) specifies that the SWEL contain components located in various plant environments, including environments subject to corrosion and high temperatures. SWEL 1 includes equipment in three environment types. These include Harsh (e.g. Reactor Building), Mild (e.g. Control Room, Diesel Generator Building), and Outdoors/Intake Structures (e.g. Plant Service Water Intake Structure, Yard Valve Pits).

IPEEE Vulnerabilities – SWEL 1 includes equipment identified with seismic vulnerabilities identified in Hatch Nuclear Plant's response to Generic Letter 88-20 (Reference 10.3).

Risk Significance – The risk ranking was performed using the at-power internal events PRA model and by identifying those components that, in the model, have a Risk Achievement Worth of 2.0 or greater, or a Risk Reduction Worth of 1.005 or greater. The importance ranking spreadsheet contained in calculation PRA-BC-H-10-008 (Reference 10.6) was the actual document used as a source.

6.2 DEVELOPMENT OF SWEL 2

SWEL 2 is developed using four screens described in EPRI Report 1025286 (Reference 10.2). SWEL 2 is presented in Attachment 1.

Screens 1 to 2

The equipment selected through Screens 1 and 2 provide any Seismic Category I components associated with the Spent Fuel Pool (SFP) that are also suitable for a walkdown. For Hatch Unit 2, the only Seismic Category 1 equipment associated with the SFP is the Spent Fuel Pool Cooling System. The Base List 2 includes components from the Spent Fuel Pool Cooling System that are suitable for a walkdown per Screens 1 and 2 from EPRI Report 1025286 (Reference 10.2).

Screen 3

Screen 3 is the sample considerations that ensure that a broad category of equipment from Base List 2 is included in SWEL 2. These considerations include:

- Variety of systems
- Major new or replacement equipment
- Classes of equipment
- Variety of environments

The Hatch SFP System has a very basic system design with very limited component types. SWEL 2 includes components associated with maintaining seals around the SFP gates, which are Seismic Category I components. There were no new/replacement equipment in SWEL 2 because there have been no major modifications to the Spent Fuel Pool systems that would affect equipment that meets the screening requirements. Equipment associated with cooling of the SFP are located in locked areas (due to radiation) and are not suitable for a walkdown.

The Decay Heat Removal System is the only major new or replaced equipment associated with the SFPs. However, the Decay Heat Removal System is Non-Safety Related and all piping connected to the SFP either terminates greater than 10 feet above the fuel or has anti-siphon holes located greater than 10 feet above the fuel to prevent rapid drain-down of the SFP.

For Hatch Unit 2, SWEL 2 contains all the equipment on Base List 2. Thus, sampling was not a consideration in developing SWEL 2.

Screen 4

Screen 4 identifies any items that could potentially lead to rapid drain down of the SFP. These include any penetrations in the SFP that are below 10 feet above the top of the fuel assemblies.

For Hatch Unit 2, there are no SFP penetrations within 10 feet above the fuel in the SFP. All piping connected to the SFP, either terminates more than 10 feet above the fuel or has anti-siphon holes, located more than 10 feet above the fuel, to prevent rapid drain-down of the SFP.

Based on a review of plant documents, the only items that could potentially lead to rapid drain down of the pool are the Seismic Class 2 items that could contribute to deflation of the air seal in the seismic gap located in the transfer canal between the spent fuel pools. Air accumulators and gate seal ball valves that could contribute to deflation of the air gap, if damaged during a seismic event, are included in SWEL 2.

7.0 SEISMIC WALKDOWNS AND AREA WALK-BYS

Walkdowns were performed for all components on the (combined) SWEL except for those that were inaccessible (see Section 7.1). A Seismic Walkdown Checklist (SWC) was completed for each component and an Area Walk-by Checklist (AWC) was completed for each area containing equipment on the SWEL. Copies of the SWCs and AWCs are provided in Attachments 3 and 4, respectively.

The personnel performing walkdowns received training on the NTTF 2.3 Seismic Walkdown guidance. Prior to the walkdown teams arriving onsite, walkdown packages were assembled into folders that contained the SWCs and AWCs and other pertinent information (e.g., calculations, test reports, IPEEE walkdowns, equipment location, and layout drawings). Each walkdown team consisted of two SWEs. The walkdown teams spent the first week on site obtaining unescorted plant access and organizing for the walkdowns. Organization included assignment of specific components to the teams; review of the walkdown packages; development of a process for tracking the Seismic Walkdowns and Area Walk-bys; and familiarization with the plant.

The second week began with peer reviewers (Whitmore and Ashworth) providing an overview on the information contained in the EPRI Report 1025286 (Reference 10.2). Expectations for the walkdowns were discussed and questions were answered. After this overview, each walkdown team performed an initial Seismic Walkdown and Area Walk-by. This initial walkdown was performed in the presence of the other teams and at least one peer reviewer. The purpose of this initial walkdown was to ensure consistency between the different teams, to reinforce the expectations for identifying potentially adverse seismic conditions, and to allow team members to provide and obtain feedback.

Following the initial walkdowns, the walkdown teams began performing the Seismic Walkdowns and Area Walk-bys. Support from plant personnel (operators, electricians, engineering) was obtained as required to open equipment and to assist in locating and identifying components. All component Seismic Walkdowns and Area Walk-bys were documented on the SWCs and AWCs, respectively. The final status of all SWCs and AWCs indicated one of the three following statuses:

- "Y" – Yes, the equipment is free from potentially adverse seismic conditions;
- "N" – No, the equipment is not free from at least one potentially adverse seismic condition;
- "U" – Undetermined, a portion(s) of the walkdown could not be completed due to equipment inaccessibility and the condition is not known.

The walkdown focused on anchorage and seismic spatial interactions but also included inspections for other potentially adverse seismic conditions. Anchorage in all cases was considered to be anchorage to

the structure. This included anchor bolts to concrete walls or floors, structural bolts to structural steel and welds to structural steel or embedded plates. For welds, the walkdown team looked for cracks and corrosion in the weld and base metal. Other bolts such as flange bolts on in-line components were not considered to be anchorage. These connections were evaluated and any potentially adverse seismic concerns were documented under "other adverse seismic conditions".

As part of the walkdown, the anchorage of at least 50% of the anchored components was evaluated to verify if the anchorage was consistent with plant documentation. The document that provides the anchorage configuration was identified on the SWC and the anchorage in the field was compared to the information on this referenced document. In cases where the anchorage could not be observed (e. g. where the anchorage is inside a cabinet that could not be opened at the time of the walkdown), the items related to anchorage were marked as "U" (Undetermined) and deferred until equipment is available for inspection. However, all other possible inspections associated with that item were completed and the results were documented on the SWC. These items were considered to be incomplete at the time of this report preparation and have been deferred to a time when they would be available for inspection (see Section 7.1). All "U" items have been deferred until the earliest opportunity during Refueling Outage 2R22 or Refueling Outage 2R23, which are scheduled for February 2013 and February 2015 respectively.

In cases where the Seismic Walkdown team members identified a potentially adverse condition, the condition was noted on the SWC or on the AWC and a CR was written to document and evaluate/resolve the condition. As part of the process of generating the CR, preliminary licensing basis evaluations were performed by the SWEs during the walkdowns. Additionally, detailed licensing basis reviews were conducted as part of the resolution of the CR, as required. Conditions that were not obviously acceptable were documented on the checklists and a basis was provided for why the observed condition was determined to be acceptable.

Area Walk-bys were performed in the rooms containing the SSCs for walkdowns. For cases in which the room where a component was located was large, the extent of the area encompassed by the Area-Walk-by was clearly indicated on the AWCs. For large areas, the walk-by included all structures, systems and components within a 35-foot radius of the equipment being walked down, as described on the AWC. The AWCs are included in Attachment 4.

SWEL 1 Walkdowns

A total of 81 of the 104 SWEL 1 Component Seismic Walkdowns have been performed to date. However 3 must be revisited in order to inspect for other adverse conditions inside the cabinets. In addition, 23 of the 104 SWEL 1 components were delayed due to inaccessibility. The schedule for

performing the remaining component walkdowns is presented in Tables 7-1 and 7-2. All areas of the plant that contain items on the SWEL were included in the Area Walk-bys.

SWEL 2 Walkdowns

A total of 2 component Seismic Walkdowns were performed. In addition, a total of 2 Area Walk-bys were completed. All areas of the plant that contain items on the SWEL were included in the Area Walk-bys.

7.1 INACCESSIBLE ITEMS

Table 7-1 identifies the components originally determined to be inaccessible for walkdowns. These items are located throughout the plant and the required Seismic Walkdowns and Area Walk-bys were not completed for these items during the initial phase of walkdowns.

Plant Hatch Unit 2 2013 Refueling Outage (2R22) is scheduled to begin on February 11, 2013. Due to the proximity of the start date of 2R22 to the NTTF 2.3: Seismic walkdowns, those Unit 2 SWEL items that were deemed inaccessible during the 180-day response period, and that require special planning for a Unit outage to complete inspection, will be walked down in the 2015 Refueling Outage (2R23). The outage scope and schedule, and all associated tag-outs, for 2R22 had been set prior to beginning the NTTF 2.3 Seismic Walkdowns, and there are currently no electrical tag-outs in 2R22 that will accommodate walkdowns of the Unit 2 inaccessible SWEL items. Plant Hatch has chosen to defer the Unit 2 inaccessible SWEL items that require special outage planning for inspection to 2R23. Other inaccessible items will be walked down during 2R22.

Table 7-1. Inaccessible Equipment per Original Walkdown Scope

#	Item No.	Description	Access	Remaining Walkdown Scope	Schedule for Completion
1.	2R23-S003	600V STATION SERVICE SWGR 2C & XFMR	See Note 2	SWC and AWC	Outage 2R23
2.	2R23-S004	600V STATION SERVICE SWGR 2D & XFMR	See Note 2	SWC and AWC	Outage 2R23

Table 7-1. Inaccessible Equipment per Original Walkdown Scope

#	Item No.	Description	Access	Remaining Walkdown Scope	Schedule for Completion
3.	2R22-S016	250V DC BATTERY SWGR 2A	See Note 2	SWC and AWC	Outage 2R23
4.	2R22-S005	4160V SWGR EMERGENCY BUS 2E	See Note 2	SWC and AWC	Outage 2R23
5.	2R22-S007	4160V SWGR EMERGENCY BUS 2G	See Note 2	SWC and AWC	Outage 2R23
6.	2P64-F039	RBCHW COIL INLET ISO AOV	See Note 1	SWC and AWC	Outage 2R22
7.	2P64-F029	RBCHW COIL INLET ISO AOV	See Note 1	SWC and AWC	Outage 2R22
8.	2E11-F060A	LOOP A ISO GATE VALVE	See Note 1	SWC and AWC	Outage 2R22
9.	2E11-F009	SHUTDOWN COOL INBRD ISO	See Note 1	SWC and AWC	Outage 2R22
10.	2T47-B007A	DW Cooling System Unit	See Note 1	SWC and AWC	Outage 2R22
11.	2T47-B009A	DW Cooling System Unit	See Note 1	SWC and AWC	Outage 2R22
12.	2T47-B008B	DW Cooling System Unit	See Note 1	SWC and AWC	Outage 2R22

Table 7-1. Inaccessible Equipment per Original Walkdown Scope

#	Item No.	Description	Access	Remaining Walkdown Scope	Schedule for Completion
13.	2P33-B001A	H2/02 ANALYZER SAMPLE CHILLER	See Note 2	SWC and AWC	Outage 2R22
14.	2C71-P001	RPS POWER DISTRIBUTION PANEL	See Note 2	SWC and AWC	Outage 2R22
15.	2R25-S001	125V DC DIV 2 CAB 2A	See Note 2	SWC and AWC	Outage 2R22
16.	2R25-S002	125V DC DIV 2 CAB 2B	See Note 2	SWC and AWC	Outage 2R22
17.	2R25-S004	125V DC CAB 2D	See Note 2	SWC and AWC	Outage 2R22
18.	2R25-S005	125V DC CAB 2E	See Note 2	SWC and AWC	Outage 2R22
19.	2R25-S036	120/208V AC ESS CAB 2A	See Note 2	SWC and AWC	Outage 2R22
20.	2R25-S064	120/208V AC VITAL CAB 2A INSTR BUS	See Note 2	SWC and AWC	Outage 2R22
21.	2R25-S037	120/208V AC ESS CAB 2B	See Note 2	SWC and AWC	Outage 2R22
22.	2R24-S021	2A RX BLDG 250V DC MCC	See Note 2	SWC and AWC	Outage 2R22
23.	2R24-S018B	600VAC MCC 2E-B	See Note 2	SWC and AWC	Outage 2R22

Table 7-2 provides a list of components determined to be inaccessible to open doors to perform inspections for other adverse conditions. The anchorage for these components was visible without opening all panels of the cabinet and was therefore inspected during the initial walkdowns.

Table 7-2. Inaccessible Equipment Resulting from Guidance on Opening Cabinets to Inspect for Other Adverse Conditions

#	Item No.	Description	Access	Remaining Walkdown Scope	Schedule for Completion
1.	2R24-S011	600V MCC 2C ESS DIV 1	See Note 2	Internal of panel	Outage 2R22
2.	2R24-S022	125/250V DC MCC 2B ESS DIV 2	See Note 2	Internal of panel	Outage 2R22
3.	2P33-B001B	H2/02 ANALYZER SAMPLE CHILLER	See Note 2	Internal of panel	Outage 2R22

Notes (Table 7-1 and Table 7-2):

1) The component was located inside an area of the plant not accessible during normal plant operation. Walkdowns of these components and of the associated plant areas were deferred to an outage.

2) Inspection of the cabinet's internals could not be performed without opening the doors of the equipment. Opening doors on these types of components was not permitted by plant operations at the time of the Seismic Walkdowns due to equipment deemed too sensitive to permit access, or requiring special, planned precautions, to open the doors.

3) While the Seismic Walkdowns were in progress at Hatch Unit 2, supplemental guidance/clarification for opening cabinets to inspect for adverse conditions was received on September 18, 2012. This required the opening of cabinets, electrical boxes and switchgear and the inspection of internals for SWC attributes, even when opening the components was not

required to inspect the anchorage. However, the affected components were identified and scheduled for re-inspection with component doors opened.

4) Hatch Unit 2 has 6 transformers (Equipment Class 4) in the SWEL-1. With the exception of components (MPL #) 2R23-S003 and 2R23-S004, which were deferred as stated above, the transformers were inspected to the extent practical. All visible anchors, hardware and surfaces were inspected. The anchorage for the transformers was visible without opening the component. To inspect the transformer further would require disassembly and therefore would not be considered part of a normal electrical inspection. The inspection of the transformers meets the requirements of the guidance document and the 50.54(f) letter. Listed below are the 4 transformers for which inspections were completed:

MPL #	2R11-S004	45KVA 600-120/208V PWR XFMR
MPL #	2R11-S041	600-120/208 V ESSENTIAL XFMR
MPL #	2S11-S009	4160/600V225KVA XFMR
MPL #	2S11-S012	4160/600V 75KVA XFMR

Note that some of these MPL numbers include both the switchgear and the transformer.

8.0 RESULTS

This section discusses the results of the Seismic Walkdowns that were performed in response to the NRC 50.54(f) letter dated March 12, 2012, "Enclosure 3, Recommendation 2.3: Seismic". As potentially adverse conditions were identified conditions reports were initiated in the Plant CAP program and evaluated. The sections below discuss the results of these walkdowns and evaluations.

8.1 POTENTIALLY ADVERSE SEISMIC CONDITIONS

All potentially adverse conditions were conservatively entered into the site Corrective Action Program (CAP) per Southern Nuclear expectations in a timely fashion. While some preliminary licensing basis evaluations were performed by the SWEs as part of the generation of the CAP entries, the items did not first undergo a detailed seismic licensing basis review as described in EPRI Report 1025286 (Reference 10.2). Consequently, the as-found conditions in Table 8-1 below do not necessarily indicate that SSCs are deficient or not in conformance with their seismic licensing basis. Instead, it is an indication that Southern Nuclear has a very low threshold for CRs and actively uses the system.

SNC personnel familiar with the Plant Hatch Seismic Licensing basis, Plant Hatch seismic qualification methods and documentation, and Southern Nuclear requirements and procedures for entering items into the CAP reviewed and dispositioned all of the potentially adverse seismic conditions as part of the CAP process. The subsections below summarize the key findings from the CAP reviews that pertain to equipment operability, SSC conformance with the seismic licensing basis, and any required plant changes.

During the course of the seismic walkdowns, a total of 49 Unit 2 Potentially Adverse Conditions were identified and entered into the Corrective Action Program. In addition, another 5 were entered that are Common to both Units 1 and 2. Table 8-1 provides additional details on the SSCs that were identified during the walkdowns and entered into the CAP as degraded, nonconforming, or unanalyzed relative to their seismic licensing basis.

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
Unit 2 Reactor Building el 203'	Seismic Walkdown Engineers observed two overhead lights with open clasp hooks. The lights in question are in the Unit 2 Reactor Bldg, elevation 203', by the SBLC Boron Solution Tank Area (2C41-A001). Lights are in proximity to safety related equipment and have the potential to fall out of the hooks during a seismic event.	513069	Seismic Walkdown Engineers determined that the lights would remain supported by the electrical cable if lights dislodged from the clasp. Consequently, this condition does not pose any adverse condition that would affect the function of the equipment.	Repair or replace clasp hooks.	Closed
Unit 2 Reactor Building el 130'	Seismic Walkdown Engineers observed what appears to be a hammer lying loose on top of conduit near the ceiling above the aisle way between MCC panel 2R24-S022 and the CRDs in the Unit 2 Reactor Building elevation 130'. This tool needs to be removed.	515100	Hammer should be removed.	Build scaffold to remove hammer.	Open Due 3/16/2013
2R43-C005C	Seismic Walkdown Engineers observed the Southeast anchor of the DG 2C Air Compressor (2R43-C005C) is missing the required grout as contained on the other three anchor bolts.	515115	Seismic Walkdown Engineers judge the as-found anchorage adequate to support the compressor in a seismic event. Grout is provided under the other three anchor bolts. Any potential bending of this bolt in a seismic event is minimized by all four anchor bolts clamping the compressor support frame securely to the concrete pad. Adding grout will also further protect the anchor bolt from corrosion.	Install the grout per site procedures.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2R43-C005C	The Seismic Walkdown Engineers (SWEs) identified a condition on the DG 2C Air Compressor (2R43-C005C) located in the Diesel Building, Elevation 130'. A flexible conduit that spans to 2R43-C005C lies against the hard edge of a tube track.	515118	The flexible conduit presently has no adverse conditions, but may experience fretting in the long term as the compressor operates and introduces vibratory loads on the flexible conduit.	Install padding to soften the hard edge.	Open Due 11/27/2013
2R43-C006C	The Seismic Walkdown Engineers (SWEs) identified two conditions on the DG 2C Air Compressor (2R43-C006C) located in the Diesel Building, Elevation 130'. The first condition is a flexible conduit that spans from 2E23-247 to 2R43-C006C and lies against the hard edge of a tube track. The second condition is a missing screw on the fan belt cover plate on compressor.	515119	The first condition - The flexible conduit presently has no adverse conditions, but may experience fretting in the long term as the compressor operates and introduces vibratory loads on the flexible conduit. It is recommended that a padding be installed to soften the hard edge. The second condition - The screw is not a required for structural adequacy of the cover.	Install padding to soften the hard edge. Install missing screw.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
Unit 2 HPCI Room	Seismic Walkdown Engineers in Unit 2 HPCI Room noticed a knee-brace for conduit support near Valve 2E41-F007 near the 2T41-B005B HPCI cooler in the Unit 2 HPCI Room has only one anchor bolt. There is a hole in the base plate and the wall for the second bolt, but it appears that only one bolt was ever installed. The knee-brace is one of a pair of supports for a small conduit near the wall. The second knee brace is fairly large and has all anchor bolts, so it is judged to have sufficient capacity to support the small conduit during a seismic event. However, it is against good engineering practice to have a support with only one bolt.	515489	The knee-brace is one of a pair of supports for a small conduit near the wall. The second knee brace is fairly large and has all anchor bolts, so it is judged to have sufficient capacity to support the small conduit during a seismic event. However, it is against good engineering practice to have a support with only one bolt.	Install missing anchor bolt.	Open Due 11/27/2013
2R25-S006	The Seismic Walkdown Engineers (SWEs) identified a screw missing from the top left corner of the front panel of distribution panel 2R25-S006.	515500	Seismic Walkdown Engineers judged the panel will perform its design function during a seismic event in the as-found condition with the one screw missing based on an evaluation of a similar panel with only one screw present at each of the four corners (reference DOEJ-HX-35281-C001, "Evaluate Capacity of 4 Screws to Hold Door in Place".	Replace the missing screw.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2R25-S031	The Seismic Walkdown Engineers (SWEs) identified a screw missing at the bottom of the front panel of distribution panel 2R25-S031.	515506	Seismic Walkdown Engineers judged the panel will perform its design function during a seismic event in the as-found condition with the one screw missing based on an evaluation of a similar panel with only one screw present at each of the four corners (reference DOEJ-HX-35281-C001, "Evaluate Capacity of 4 Screws to Hold Door in Place".	Replace the missing screw.	Open Due 11/27/2013
2T41-D007/8	Seismic Walkdown Engineers in Unit 2 Reactor Building elevation 203' noticed more than mild surface corrosion on the bolts that anchor down the Standby Gas Treatment Filter Train (SBGT) 2T41-D007/8. The extent of corrosion on some bolts appears sufficient to slightly reduce the structural capacity of these bolts.	515661	While it appears that the capacity of some of the bolts may be slightly reduced, the overall seismic adequacy of the installation is judged not to be adversely impacted at this time. This judgment is based on the fact that the equipment is anchored with at least 20 anchors and only a small number (approximately 3 or 4) appear to have more than mild corrosion. However, the corrosion appears to be getting progressively worse based on observations of other anchors and components in the area. Therefore, the corrosion on the bolts needs to be investigated and corrected to ensure that the seismic adequacy of the SBGT is maintained.	Clean and coat anchor bolts, or replace.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
Unit 2 Reactor Building el 185'	Corroded plates and welds were found adjacent to SBGT Filter Train, 2T46-D001B in the Unit 2 Reactor Building at elevation 185'. Galvanized Unistrut members seem to be not corroded. However the welded connection and the small baseplate is corroded. This Unistrut framing system is needed to support the conduits from the panel of the filter train.	515700	Currently, it has been judged to perform its function, however, corrosion appears to be getting progressively worse.	Corroded members and connections should be replaced.	Open Due 11/27/2013
2R24-S027	Seismic Walkdown Engineers observed a broken, or loose, piece of raceway 2E23448 exiting MCC MPL number 2R24-S027 and entering cable tray 2LBC801. Any sharp edge on this piece of raceway could potentially damage the cable jacket within raceway.	515721	Loose piece should be properly installed and tightened.	Properly install and tighten loose piece.	Open Due 4/30/2013
2H21-P021	Seismic Walkdown Engineers noticed there is one anchor missing on the south side of the support for Instrument Rack 2H21-P021 on the 87' elevation of the Unit 2 SE Diagonal in the Reactor Building. A good deal of debris in the hole, so it is unsure whether the anchor is broken off, was removed, or was never installed.	515727	There are seven other anchors in good condition, and the rack frame is very stiff. It is judged that the remaining anchors have sufficient strength to restrain the rack during a seismic event.	Replace the missing anchor bolt.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
Unit 2 SE Diagonal 87'	Seismic Walkdown Engineers noticed on the 87' elevation of the Unit 2 SE Diagonal in the Reactor Building, there is a Unistrut pipe clamp on the west wall missing a bolt. The pipe clamp is spread open, offering no restraint to the supported pipe.	515734	There are intact pipe clamps above and below the open clamp, so the unrestrained span of the conduit is small. The existing pipe clamps offer enough support to prevent significant movement during a seismic event.	Replace the missing bolt.	Open Due 11/27/2013
2T46-D001B	Seismic Walkdown Engineers found an anchor bolt missing from the support of the SBGT Filter Train (2T46-D001B) in Room 2R303, elevation 185', of the Unit 2 Reactor Building.	515744	The train currently has 17 anchors (9 on one side and 8 on the other side). The Seismic Walkdown Engineers judged the support to be adequate during a seismic event due to the number of existing bolts remaining on each side of the train.	The missing anchor bolt should be replaced.	Open Due 11/27/2013
Unit 2 Reactor Building el 158'	Seismic Walkdown Engineers noticed on the 158' elevation of the Unit 2 Reactor Building, there are two brass nozzles sitting loose on top of the Gas Cylinder Location 2P33-P066 and two brass nozzles sitting on the frame for panel 2H21-P405B, which is a high trip hazard.	515750	The nozzles are small and relatively light, so they are unlikely to cause any structural damage during a seismic event. However, due to their location on the support for a high trip hazard panel, there is a concern that the nozzles could cause a trip event.	The nozzles were removed.	Closed
Unit 2 Reactor Building SBGT Area	A crack was found on the concrete floor on elevation 203' of Unit 2 Reactor Building where the SBGT filter train is located. This crack goes through one of the base plates supporting the exhaust fan (2T41-C005B). It appears that the crack goes through one of the post-installed anchor bolts. Due to this crack, the capacity of the anchor is reduced.	515779	The Seismic Walkdown Engineers judged the support to be adequate for the ductwork during a seismic event due to the number of existing nearby supports and relatively light loading on the base plates.	Repair crack.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
Intake Structure el 110'	Seismic Walkdown Engineers found that numerous piping, instrumentation, and conduit/equipment supports in the Intake Structure elevation 110' has general coatings degradation and minor surface rusting. Note that this potentially adverse seismic condition is common to both units.	516327	Perform prompt resurfacing and coating as needed to interrupt degradation.	Prompt resurfacing and coating is needed to interrupt degradation per work order SNC433192	Open Due 11/27/2013
2E11-F252A	Seismic Walkdown Engineers (SWEs) observed that there is one anchor bolt missing from a two-bolt support for the tubing near valve 2E11-F252A in the NE diagonal on the 97' elevation of the Unit 2 Reactor Building.	516572	The Seismic Walkdown Engineers judged the support to be adequate during a seismic event and is therefore judged to not be a potentially adverse seismic condition.	A new anchor bolt should be installed.	Open Due 11/27/2013
Unit 2 Reactor Building NE Diagonal 108'	Seismic Walkdown Engineers (SWEs) observed there is a small section of grating broken near the corner of the 2T41-B003B RHR/CS Pump Room Cooler in the NE diagonal on the 108' elevation of the Unit 2 Reactor Building.	516577	The section of grating is extremely small and is welded to the kick plate around the pipe going through the grating at that location. The grating is not in immediate danger of separating and becoming an impact hazard and does not affect the larger grating panel's ability to support load. The Seismic Walkdown Engineers judged the grating to be seismically adequate.	Repair or replace grating.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2E11-B001A	Seismic Walkdown Engineers found 2E11-B001A RHR Heat Exchanger A in the NE diagonal on the 97' elevation of the Unit 2 Reactor Building has eight anchors to the steel frame. Two of the bolts have full thread engagement but do not have the required minimum of two threads above the nut; an additional two bolts have bolts approximately 1/4" below the nuts and so do not have full thread engagement.	516593	The bolts are welded to the steel frame, providing additional support for the connection. In addition, the heat exchanger is also supported by four sway struts below the roof above to prevent overturning of the equipment. The shear strength is not impacted, overturning is restrained, and the center of gravity of the equipment is below the bolts and the vertical seismic acceleration at that level will not exceed 1.0, so the largest tension load the bolts will see is the preload, which is already applied. Therefore, the bolts are judged to be acceptable and do not create a potentially adverse seismic condition.	CR for documentation purposes only.	Closed
2E11-B001B	Seismic Walkdown Engineers found 2E11-B001B RHR Heat Exchanger B in the SE diagonal on the 97' elevation of the Unit 2 Reactor Building has eight anchors to the steel frame. Two of the bolts have full thread engagement but do not have the required minimum of two threads above the nut.	516595	The bolts are welded to the steel frame, providing additional support for the connection. In addition, the heat exchanger is also supported by four sway struts below the roof above to prevent overturning of the equipment. The shear strength is not impacted, overturning is restrained, and the center of gravity of the equipment is below the bolts and the vertical seismic acceleration at that level will not exceed 1.0, so the largest tension load the bolts will see is the preload, which is already applied. Therefore, the bolts are judged to be acceptable and do not create a potentially adverse seismic condition.	CR for documentation purposes only.	Closed

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2H21-P305	Seismic Walkdown Engineers observed 5 missing slip connectors out of 12 for the door to timer panel 2H21-P305 located in the Diesel Generator Building Switchgear Room 2G.	516713	Seismic Walkdown Engineers judged the panel will perform its design function during a seismic event in the as-found condition with the 7 remaining connectors installed based on conclusions outlined in DOEJ-HX-35281-C001, "Evaluate Capacity of 4 Screws to Hold Door in Place".	Replace the 5 missing connectors.	Open Due 11/27/2013
2R24-S022	Seismic Walkdown Engineers observed a bolt inside MCC 2R24-S022 that is misaligned and not in full contact with the surface. Due to the misalignment, it cannot be determined whether the bolt is properly installed and whether it is fully engaged and fully tightened. It was observed in the field and documented in the attached picture that, most likely, the bolt is misaligned due to the fact that there is an interfering object in back of the cabinet. The bolt is to be checked to assure that it is properly tighten and that it is fully engaged as noted in the design documents. If not, adequate measures are to be taken to meet the design documents and have the bolt properly tightened and in full contact with the surface.	516767	This MCC is composed of 10 frames which are bolted down in each corner, so 4 bolts for each frame in addition to the frames being bolted to each other. This bolt misalignment occurs on one of the bolts of Frame 7 which is an internal frame. As such, by engineering judgment it is determined that having one bolt out of the total 40 not properly tightened, the MCC would still be adequate to maintain its integrity during a seismic event.	Replace missing bolt.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2R43-P001C	The Seismic Walkdown Engineers (SWEs) identified two screws missing on the back panel of 2R43-P001C. The screws function to fasten the panel cover to the cabinet.	518617	Per the SWEs judgment this condition is not considered to be a seismic concern based on the proper installation of the remaining screws. The stiffness of the cabinet is not significantly degraded and the remaining screws are sufficient to fasten the panel to the cabinet.	Replace missing screws.	Open Due 11/27/2013
Unit 2 Reactor Building el 87' Bay 10 of Torus Room	Seismic Walkdown Engineers noticed in Bay 10 of the Torus Room on the 87' elevation of the Unit 2 Reactor Building, there is a ladder left leaning against the wall adjacent to ESS Air ACC 2P52-A001. The ladder is not secured at the top of the bottom, so it is free to move during a seismic event.	518746	The ACC is the only sensitive equipment in the area, and it is protected by a large conduit between the component and the ladder. The valve is chained into position, so incidental contact will not cause the valve to change position. Therefore, it is judged that there is no potentially adverse seismic condition and will not affect operability.	Restrain ladder properly.	Closed
Unit 2 Reactor Building el 87' Bay 10 of Torus Room	Seismic Walkdown Engineers noticed in Bay 10 of the Torus Room on the 87' elevation of the Unit 2 Reactor Building, there is a four-bolt vertical support for a small conduit running to 2E51-F003 that is missing one anchor bolt.	518751	There is a second vertical support a few feet away that is fully intact, and the conduit is also supported at the wall with a fully intact support. The conduit is very light, and it is judged that the remaining anchors have sufficient capacity to restrain the conduit during a seismic event. Therefore, it is judged that there is no potentially adverse seismic condition and will not affect operability.	Install missing anchor bolt.	Open Due 11/27/2013
Unit 2 Control Building el 130'	Seismic Walkdown Engineers noticed there is a HVAC duct directly over the 2R42-S031 battery charger on the 130' elevation of the Unit 2 Control Building. The lower left hand bolt has a loose nut on what appears to be a seismic restraint for the HVAC at the wall.	519481	The remaining three bolts are judged to have sufficient capacity due to the strength of the bolts to restrain the HVAC at the wall under a seismic event, however good engineering practice requires that the nut be tightened fully.	Tighten nut.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2R11-S041	Seismic Walkdown Engineers noticed there are 8 screws missing out of 40 (six on the top and two on the bottom) on the front panel cover of 2R11-S041 that is adjacent to Penetration 2Z43-H1002D in Room 2L48-C34 on the 130' elevation of the Unit 2 Control Building.	519565	The remaining screws are judged sufficient to restrain the relatively light panel cover in the case of a seismic event. Therefore, there is no potentially adverse seismic condition and operability is not impacted.	Install missing screws.	Open Due 11/27/2013
2R43-S017B	Seismic Walkdown Engineers noticed the junction box attached to battery rack 2R42-S017B is missing one screw out of four in the top right corner of the cover plate.	519568	There are three existing screws and two holes in the cover plate that are not meant to have screws. The existing screws are judged to be sufficient to hold the cover plate in the case of a seismic event. Therefore, it is judged that there is no potentially adverse seismic condition and will have no impact on operability.	Replace missing screw.	Open Due 11/27/2013
Unit 2 Control Building el 112'	Seismic Walkdown Engineers noticed a loose nut on a conduit support for Conduit 2E21611 in the 2R42-S001B battery room on the 112' elevation of the Unit 2 Control Building.	519680	The support is lightly loaded and will be in compression due to the configuration of the support. Therefore, it is judged that the other three anchors have sufficient strength to restrain the support during a seismic event, so there is no potentially adverse seismic condition and will have no impact on operability.	Tighten nut.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
Unit 2 Reactor Building el 130'	Seismic Walkdown Engineers observed a cantilever frame supporting a 12" diameter sheet-metal duct located in Unit 2 Reactor Building elevation 130'on the West wall of room 2R103 in the vicinity of the airlock. This frame is supposed to have six anchor bolts supporting it to the structure. Of the six bolts, the upper most bolt on the north leg of the support is missing.	519729	The frame acts as lateral support for a sheet metal duct, which by nature does not impose significant loads on the structure. Based on engineering judgment, no potentially adverse seismic condition and will have no impact on operability.	Replace missing bolt.	Open Due 11/27/2013
2H21-P008	Seismic Walkdown Engineers observed MPL 2H21-P008 located in the Unit 2 Reactor Bldg elevation 130' Room 2R103. The supporting structure has two legs that are supposed to have three bolts on the base of each leg. Both legs are supposed to have two bolts on the edge and one in the middle. One leg was observed to have a middle bolt missing. Also, the pliers should be removed from support area as well.	519996	The legs are very thin plates (1/8") with no significant stiffness. By engineering judgment, it is considered that the absence of the third bolt on the one leg will not adversely affect the stability of the panel structure. There are no safety related components in the vicinity of this panel. Therefore, there is no potentially adverse seismic condition and operability is not impacted.	Replace missing bolt.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
Unit 2 Reactor Building el 130'	Seismic Walkdown Engineers observed in Room 2R103 of the Unit 2 Reactor Building Elevation 130' that a miscellaneous support column has washers that are not in contact with two of the nuts for the base plate. There is a gap of approximately 1/8" between the nuts and their corresponding washers.	519997	The column supports miscellaneous conduits of various sizes and it spans from the floor up to the ceiling. The column is a made up of tube steel with stiffeners at the base. During a seismic event the column would deflect 1/8" perpendicular to the main axis prior to stressing the member. Considering the member is long slender column and the fact that the conduits being supported do not contribute significant loads, it is determined by engineering judgment that the temporary effects of this gap will not adversely affect the stability of the support. Therefore, there is no potentially adverse seismic condition and operability is not impacted.	The nuts are to be removed, cleaned and replaced to be in full contact as was intended in their designed condition.	Open Due 11/27/2013
2R42-S052	Seismic Walkdown Engineers (SWEs) observed that the top Globe Strut channel supporting the 2R42-S052 24V Battery Charger 2B is bent out from the wall at the far end of the member. The charger is supported by two Globe Strut channels near the top and bottom of the charger. The bolt attaching the charger to the bent portion of the Globe Strut channel appears to be over-tightened to the point that the Globe Strut channel is sprung and the lower edge of the spring nut does not make proper contact with the inner edge of the channel. This condition reduces the capacity of the connection compared to a properly installed spring nut connection.	520297	The other three fasteners supporting the charger are properly fastened. A vertical conduit fastened to the bottom of the panel provides additional support to the battery charger in the vertical direction. Therefore, the SWE's judge that the attachment of the battery charger to the wall will perform its design function during a seismic event based on the properly installed connections.	The bent unistrut-type member should be replaced.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
Unit 2 Reactor Building NE Diagonal el 87'	Seismic Walkdown Engineers (SWEs) identified a 6' metal scaffold ladder left unrestrained behind the 2H21-P018 RHR Instrument Rack and a support structure in the Unit 2 Reactor Building Northeast Diagonal at elevation 87'. The ladder was laid horizontally and leaned against the east Reactor Building wall behind the diagonal support steel for the rack and a steel column.	522935	During a seismic event, the ladder would not be able to impact anything except the support steel. The impact is judged by the SWEs to be credible but not significant. Therefore, there is no potentially adverse seismic condition and design function of any nearby component is not affected.	Properly restrain ladder.	Closed
Unit 2 Reactor Building NE Diagonal el 87'	The Seismic Walkdown Engineers (SWEs) identified an approximately 1" diameter demineralized water line in the NE Diagonal on the 87' elevation of the Unit 2 Reactor Building that appears to be missing a U-bolt connection to a support. There is an angle supported from the platform steel above with two holes drilled in it immediately adjacent to the pipe located above the 2P21-F006 valve and the 2H21-P001 instrument rack. This support looks like it was intended to be connected to this pipe. There is approximately 14 linear feet of piping between the adjacent supports because of the apparently missing support point.	523085	The longer contributory span adds less than 10 pounds of weight to each of the adjacent supports. The adjacent supports are judged by the SWEs to adequately carry the additional contributory weight and seismic loads of the small diameter water piping because of the short support member spans and stiffness. Therefore, there is no potentially adverse seismic condition that would cause the demineralized water piping to affect nearby components.	Missing U-bolt should be reinstalled.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2H21-P414A/B	Seismic Walkdown Engineers noticed one hole metal clamps were not properly holding down flex conduit on the back of Instrument Racks 2H21-P414A/B located in Unit 2 HPCI Room elevation 87'.	523140	The flex conduits are clamped down appropriately in other locations on the back of the Instrument Racks. Therefore, there is no potentially adverse seismic condition and operability is not impacted.	The one hole metal clamps should be appropriately positioned on the flex conduit.	Open Due 11/27/2013
2X41-C010A 1X41-C006E	Seismic Walkdown Engineers observed that the bolts missing on the covers of the following equipment located on the DGB Roof: There is a bolt missing in the cover panel of MPL # 2X41-C010A. There is a bolt missing in the cover panel of MPL # 1X41-C006E. Note that this potentially adverse condition is common to both units.	523328	These two bolts are to be installed in the respective equipment. The cover panels are supported with multiple bolts, it is judged that the absence of one bolt on each panel will not adversely affect the functionality or the seismic capability of the dampers.	These two bolts are to be installed in the respective equipment.	Open Due 11/27/2013
Carbon Dioxide piping on Diesel Building Roof	Seismic Walkdown Engineers (SWEs) observed loose nuts on two U-bolts securing the carbon dioxide piping to supports on the Diesel Generator Building roof. Note that this potentially adverse condition is common to both units.	523486	The nuts on the U-bolts need to be properly fastened to secure the loose U-bolts to the pipe and supports.	The nuts on the U-bolts need to be properly fastened to secure the loose U-bolts to the pipe and supports.	Open Due 11/27/2013
2T41-B004B	Seismic Walkdown Engineers noticed 2T41-B004B RCIC Pump Room Cooler Unit is missing a bolt. The cooler is located in the NW Diagonal of the Unit 2 Reactor Building elevation 104'.	523718	The cooler is support by additional bolts throughout; there are bolts on both side of the missing bolt. The additional bolts are about 6 inches from the hole in both directions. Therefore, missing a single bolt will not adversely affect the functionality or the seismic capability of the housing.	Install missing bolt.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
Unit 2 Reactor Building el 158'	Seismic Walkdown Engineers noticed top bolt of one of the supports for the ladder in the area has a loose nut. The location of this support is Unit 2 Reactor Building elevation 158' against the East wall (RL column).	523720	This was judged not to be a seismic concern since the ladder is far from other equipment in the area.	Tighten nut.	Open Due 11/27/2013
Unit 2 Control Building el 112'	Seismic Walkdown Engineers observed two pull boxes near Penetration 2Z43-H1064C with missing screws on the cover plates. The pull boxes are located on the 112' elevation of the Unit 2 Control Building in the Station Battery 2A Room. There are three out of six cover plate screws missing on one box and one out of six cover plate screws missing on the second box.	524309	Due to the light weight of the cover plate, the remaining screws are judged sufficient by the SWEs to keep the cover plates secure and not interact with any other SSCs during a seismic event.	Install missing screws.	Open Due 11/27/2013
Unit 2 Control Building el 112' Room C027	Seismic Walkdown Engineers observed on the 112' elevation of the Unit 2 Control Building in Room C027 that there is a screw missing securing a support strap to one side of the HVAC duct near Penetration 2Z43-H182C. The strap wraps under the HVAC duct and is secured by one screw on the bottom of the duct.	524311	All screws are present securing the corresponding strap on the opposite side of the duct. The single remaining screw for the strap in question is judged adequate to maintain the connection between the strap and the HVAC and there is no potentially adverse seismic condition resulting.	Replace missing screw.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2R25-S129	Seismic Walkdown Engineers observed on the 130' elevation of the Unit 2 Control Building in Room C-010 that there is one screw missing and one screw missing a washer on the Q2R25-S129 distribution panel.	524321	The remaining four screws are sufficient to hold the light gauge cover plate, so there is no potentially adverse seismic condition affecting the design function of the panel.	Replace the missing screw and washer.	Open Due 11/27/2013
Unit 2 Control Building el 130'	Seismic Walkdown Engineers observed on the 130' elevation of the Unit 2 Control Building above transformer 1R11-S041 that there are three screws missing from a duct support strap on the side of an HVAC duct. The support strap wraps under the duct and is secured with one screw fastened into the bottom of the duct.	524549	The support strap wraps under the duct and is secured with one screw fastened into the bottom of the duct. The corresponding HVAC duct support strap on the opposite side of the duct has all screws fastened. The adjacent duct support has all screws present and fastened tightly. The HVAC duct is in good condition and all joints fastened securely in the inspected area. Based on these observations, the duct will perform its design function and have no adverse effects on other SSCs.	Replace missing screws	Open Due 11/27/2013
Unit 2 Control Building el 130'	Seismic Walkdown Engineers observed on the 130' elevation of the Unit 2 Control Building in Room 2C114 that there are eight bolts missing from the north flange of the 56" x 30" HVAC duct at Penetration 2Z43-H750D on the west wall.	524552	The HVAC is supported at the wall by the flanged connection to the fire damper in the wall and by a strap support about two feet east of the flanged connection. Therefore, there is negligible load from the duct on the flanged connection. Eighteen bolts properly installed on the other visible sides of the duct at the flanged connection are judged sufficient to restrain the duct. The fire damper is not adversely affected by the flanged connection with the missing bolts. Therefore, there is no potentially adverse seismic condition created by the missing bolts.	Replace missing bolts.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2R42-S032A	Seismic Walkdown Engineers observed a loose hinge nut on the inside door panel of 2R42-S032A located in the Diesel Building Switchgear 2E on elevation 130'.	524998	The 125 Volt Battery Charger has another hinge located at the bottom of the door that is properly secured. The remaining hinge for the door in question is judged adequate to maintain the connection between the door and panel. Therefore, there is no potentially adverse seismic condition resulting.	Loose hinge nut should be tightened.	Open Due 11/27/2013
2E11-F004	Seismic Walkdown Engineers (SWEs) identified that the 2E11-F004 Torus Suction Valve Motor Operator does not have a minimum of 1" space between the operator and the platform grating in NE Diagonal of the Unit 2 Reactor Building. The operator for the subject valve is almost resting on the platform at the 118'-10" elevation of the NE Diagonal Room. The predicted seismic movement of the valve operator will potentially cause impact between the motor operator and the platform grating.	525108	The grating is considered flexible compared to the valve operator and valve stem. So damage of the valve is unlikely. But having safety related valve operators this close to building structures is not seismically acceptable, due to the potential for creating high stresses. Therefore, portions of the grating should be removed, as required, to provide a minimum of about 1" clearance at all locations around the valve operator. Do not remove any existing support steel for the grating. Additional grating support steel may be required to support the grating around the cut out section.	Portions of the grating should be removed to provide a minimum of about 1" clearance at all locations around the valve operator. Do not remove any existing support steel for the grating. Additional grating support steel may be required to support the grating around the cut out section.	Open Due 11/27/2013
Unit 2 Nitrogen Storage Tank area	Seismic Walkdown Engineers observed Unit 2 Nitrogen Storage Tank Area contain some general coatings degradation and surface corrosion on the nearby pipe supports and piping.	525163	Due to multiple supports located throughout the area the load is minimal on each support. Therefore, supports and piping were judged to be seismically adequate by SWEs.	Clean and coat per procedure.	Open Due 11/27/2013

Table 8-1. Potentially Adverse Conditions

Component / Area	Brief Description of Potentially Adverse Seismic Condition	CR #	Brief Discussion of Analysis/Conclusion	Action Taken or Planned to Address/ Resolve the Condition	Status (open/ closed)
2T48-R075 and 2T48-R076	Seismic Walkdown Engineers observed Oxygen Analyzer (2T48-R075) on the wall has 2 of the 4 bolts missing. These missing screws are located in the Unit 2 Nitrogen Storage Tank Room of the Reactor Building. Also, Oxygen Analyzer (2T48-R076) on the wall has 1 of the 4 bolts missing.	525168	These items are light weight components that are screwed into a concrete wall. Therefore, the remaining screws for the analyzers in question are judged adequate to maintain the connection between analyzer and the concrete wall, so there is no potentially adverse seismic condition resulting.	Replace missing screws.	Open Due 11/27/2013
Unit 2 Reactor Building el 118' SE Diagonal	Seismic Walkdown Engineers observed on the 118' elevation of the Southeast diagonal in the Unit 2 Reactor, there is a junction box above conduit 2MR9314 with two out of six cover plate screws missing.	525221	The cover plate is very light, and the four remaining screws have sufficient capacity to restrain the cover plate, so there is no potentially adverse seismic condition.	Replace missing screws.	Open Due 11/27/2013
Unit 2 Div 1 Yard Pit	Seismic Walkdown Engineers (SWEs) observed one out of four missing screws was observed on the front of the splitter box and one out of four screws missing on the Chemelex box supported against the wall. These missing screws are located in U2 Division 1 Yard Pit.	525473	The remaining screws for the splitter box in question are judged adequate to maintain connection during a seismic event due to the weight of the cover. Chemelex box is a light weight components that is screwed into a concrete wall. Therefore, the Chemelex box in question is judged adequate to maintain the connection between Chemelex box and the concrete wall, so there is no potentially adverse seismic condition resulting.	Replace missing screws.	Open Due 11/27/2013

During the course of the walkdowns the team identified issues that, while not rising to the level of a seismic concern, warranted evaluation to determine if programmatic enhancements are necessary. These issues have been entered into the SNC corrective action program.

CR # 516003 - The Seismic Walkdown Engineers (SWEs) identified that drawing B-45555, Version 1.0, "Seismic Configuration Control Requirements General Notes & Specifications", does not provide clear guidance how to restrain gas bottles when stored near safety-related equipment in the plant.

CR # 517213 - The Resident Inspector noted that several components inspected had various problems with bolting. He questioned the craftsmanship involving bolted connections as well as supervisory oversight of the maintenance activities involving bolted connections for the plant in general. The condition report was written for Maintenance management to determine the extent of the condition regarding the quality of bolting connections following maintenance activities.

8.2 EQUIPMENT OPERABILITY

Plant Hatch Unit 2 had no as-found conditions that would prevent SSCs from performing their required safety functions.

8.3 PLANT CHANGES

There were no plant changes that resulted from the as-found conditions. Plant changes are any planned or newly installed protection and mitigation features (i.e., plant modifications) that result from the Seismic Walkdowns or Area Walk-bys.

8.4 OTHER NON-SEISMIC CONDITIONS

Housekeeping items were identified during walkdowns and walk-bys that were not potentially seismic adverse conditions. All such items were brought to the attention of plant personnel and CRs were generated as necessary. These issues included water on the floor and loose items (small tools, trash, etc.) stored in the plant areas. These items were processed through the site CAP process and are not specifically documented in this report though are available in the Plant CAP database.

9.0 PEER REVIEW

9.1 PEER REVIEW PROCESS

The peer review for the Near Term Task Force (NTTF) Recommendation 2.3 Seismic Walkdowns was performed in accordance with Section 6 of the EPRI Report 1025286 (Reference 10.2). The peer review included an evaluation of the following activities:

- review of the selection of the structures, systems, and components, (SSCs) that are included in the Seismic Walkdown Equipment List (SWEL);
- review of a sample of the checklists prepared for the Seismic Walkdowns and Area Walk-bys;
- review of licensing basis evaluations and decisions for entering the potentially adverse conditions in to the plant's Corrective Action Plan (CAP); and
- review of the final submittal report.

This report provides results of the review process for each review activity as well as the results of the peer review.

9.2 PEER REVIEW RESULTS SUMMARY

9.2.1 Seismic Walkdown Equipment List Development

The selection of items for the SWEL underwent peer review according to the guidance in Section 3 of EPRI Report 1025286 (Reference 10.2). The SSCs to be evaluated during the Seismic Walkdown were selected as described in Section 6.0 of this report. The list of components was provided to the members of the Peer Review Team, which consisted of all four peer reviewers listed in Section 4.0. The Peer Review Team members independently provided comments to the personnel who selected the components on the SWEL. All comments were addressed and the Peer Review Team reviewed the changes made to the SWEL and the final SWEL, to ensure all recommendations from the EPRI Report 1025286 (Reference 10.2) were met. Specifically, the peer reviewers confirmed that all SSCs in SWEL 1 and 2 were Seismic Category I components that do not undergo regular inspections. Specific considerations for the peer review process are described below for SWEL 1 and SWEL 2. The peer review check sheet of the SWEL is provided in Attachment 2.

For SWEL 1, the Peer Review Team verified that the list of SSCs represented a diverse sample of the equipment required to perform the following five safety functions, as specified by EPRI Report 1025286 (Reference 10.2):

- Reactor Reactivity Control
- Reactor Coolant Pressure Control
- Reactor Coolant Inventory Control
- Decay Heat Removal and
- Containment Function

For SWEL 1, the Peer Review Team also verified that the SSCs included an appropriate representation of items having the following sample selection attributes:

- Various types of systems
- Major new and replacement equipment
- Various types of equipment
- Various environments
- Equipment enhanced based on the findings of the IPEEE and
- Risk insight consideration

The final SWEL 1 contains items that perform each of the five safety functions specified by EPRI Report 1025286 (Reference 10.2). Numerous components perform more than one of the safety functions and all five safety functions are well represented by the components on the list. SWEL 1 contains components from all the classes of equipment listed in Appendix B of EPRI Report 1025286 (Reference 10.2), except for cases where there are no safety-related components at the plant that fall into that specific equipment class. The list contains major new and replacement items, and items enhanced based on the IPEEE as well as equipment located in various environments and areas of the plant. All major safety-related systems are represented and risk factors were considered in development of the list.

For SWEL 2, the Peer Review Team determined that the process to select spent fuel pool related items complied with EPRI Report 1025286 (Reference 10.2). Portions of the spent fuel pool cooling system at Hatch Unit 2 are Seismic Category 1 and all different types of components associated with the Spent Fuel Pool Cooling system are represented on the SWEL 2. The Peer Review Team concluded that the bases for including/excluding items associated with the spent fuel pool were well documented and that the final SWEL 2 complies with EPRI Report 1025286 (Reference 10.2).

In summary, all of the Peer Review comments made during development of SWEL 1 and SWEL 2 were resolved by the team that prepared the SWELs. The resolutions were reviewed

by the Peer Review Team and it was determined that all comments were adequately addressed. The SWEL was determined to incorporate all comments made by the Peer Review Team during the process.

During the process of conducting the walkdowns, a small number of isolated components that were not accessible were removed from the list and in some cases, equivalent items that were determined to be accessible were added. The Peer Review Team reviewed all changes made to the SWELs and determined that these changes had no impact on the adequacy of the SWELs with respect to the provisions contained in the EPRI Report 1025286 (Reference 10.2). The Peer Review Team concludes that the team that developed the SWELs appropriately followed the SWEL development process described in Section 3 of the EPRI Report 1025286 (Reference 10.2).

The Peer Review Checklist for development of the SWEL is provided in Attachment 2.

9.2.2 Seismic Walkdowns and Area Walk-Bys

The Peer Review Team was on-site and very involved with the Seismic Component Walkdowns and Area Walk-bys. The Peer Review was performed as follows:

- Each of the three walkdown teams performed an initial equipment Seismic Walkdown and an Area Walk-by while being observed by the other teams and at least one member of the walkdown Peer Review Team. The Peer Review Team provided comments and suggestions and answered questions raised by the team performing the walkdown and the other walkdown teams.
- During the first week of walkdowns, a member of the walkdown Peer Review Team individually accompanied each of the SWE walkdown teams and observed the SWE team conducting the Seismic Walkdowns and Area Walk-bys. The Peer Review Team confirmed first-hand that the SWE walkdown teams performed the Seismic Walkdowns and Area Walk-bys as described in Section 4 of the EPRI Report 1025286 (Reference 10.2). A Peer Review Team member accompanied each of the three walkdown teams on at least one full day of walkdowns. SWE walkdown teams were encouraged and expected to carry a copy of Section 4 from the EPRI Report 1025286 (Reference 10.2) and refer to it as necessary, during conduct of the Seismic Walkdowns and Area Walk-bys.
- During the remaining weeks of walkdowns, at least one Peer Review Team member remained on site until the majority of the walkdowns were completed. The Peer Review Team member reviewed essentially all the SWCs and AWC prepared by the three walkdown teams. When the walkdown team members had questions or potential concerns,

the Peer Review Team member walked down the specific component or area along with the walkdown team to provide additional input to the seismic evaluations.

- At least one member of the walkdown Peer Review Team reviewed the Seismic Walkdown and Area Walk-by packages to ensure that the checklists were completed in accordance with the guidance provided in the EPRI Report 1025286 (Reference 10.2). The walkdown Peer Review Team confirmed that the Seismic Walkdown and Area Walk-by packages were consistent, thorough, and the packages accurately reflected the results of the walkdowns and walk-bys as witnessed during the first week of walkdowns.

The Peer Review Team concluded that the SWE teams were familiar with the process for Seismic Equipment Walkdowns and Area Walk-bys. The SWE teams adequately demonstrated their ability to identify potentially adverse seismic conditions such as adverse anchorage, adverse spatial interaction, other adverse conditions related to anchorage, and perform anchorage configuration verifications, where applicable. The SWEs also demonstrated the ability to identify seismically-induced flooding interactions and seismically-induced fire interactions. The SWEs documented the results of the Seismic Walkdowns and Area Walk-bys on the appropriate checklists from Appendix C of the EPRI Report 1025286 (Reference 10.2).

The Peer Review Team reviewed approximately 40% of the Seismic Walkdowns and Area Walk-by checklists and at least one member of the walkdown peer review team reviewed more than 90% of the packages. Peer review of the Seismic Walkdowns and Area Walk-bys identified minor editorial errors and also some instances where comments in the checklists required additional explanation and information. Mr. Ashworth and Mr. Whitmore provided verbal feedback to the SWEs to adjust these entries accordingly. The SWEs understood the comments and incorporated the recommendations and updates from the Peer Review Team.

Since the peer review occurred at the start of the Seismic Walkdowns, the peer reviewers were able to provide comments at every stage of the walkdown process to ensure consistency in the reporting for all packages. Therefore, the Peer Review Team considered the number of completed walkdown packages reviewed to be appropriate. In addition, all members of the Peer Review team, including Mr. Ashworth, Ms. Brown, Mr. Starck and Mr. Whitmore were available by phone as necessary during the entire Walkdown process.

9.2.3 Licensing Basis Evaluations

All potentially adverse seismic conditions identified were immediately entered into the plant CAP for further review and disposition as discussed in Section 8.1 of this report. Therefore, the Seismic Walkdown teams did not perform licensing basis evaluations apart from evaluations performed for the CAP. The Peer Review Team considers this CAP process approach fully comprehensive and acceptable for addressing the potentially adverse seismic conditions observed during the Seismic Walkdowns.

9.2.4 Submittal Report

The Peer Review Team was provided with drafts of the submittal report. This allowed the Peer Review Team to verify that the submittal report would meet the objectives and requirements of the EPRI Report 1025286 (Reference 10.2).

The Peer Review Team provided both verbal and written comments on the draft reports and was active in ensuring the report was thorough, complete and accurate. The final version of the submittal report includes all necessary elements of the Peer Review and meets the requirements of the 50.54(f) letter.

10.0 REFERENCES

10.1 10CFR50.54(f) Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3 and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident, dated March 12, 2012

10.2 EPRI 1025286, Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic, June 2012

10.3 Generic Letter No. 88-20, Supplement 4, Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities

10.4 Generic Letter No. 87-02, Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors, Unresolved Safety Issue (USI) A-46

10.5 Seismic Qualification Utility Group (SQUG) Procedure: Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Power Plant Equipment, Revision 3A, December 2001

10.6 SNC Calculation PRA-BC-H-10-008, Hatch Unit 1 PRA Model, Revision 4 (applicable to both units)

10.7 Final Safety Analysis Report (FSAR) for Edwin I. Hatch Nuclear Plant Unit 2

10.8 Hatch Letter 5102, dated January 26, 1996, and titled 'Edwin I. Hatch Nuclear Plant, Response to Generic Letter 88-20, Supplement 4', Docket Nos. 50-321 and 50-366

10.9 Edwin I. Hatch Nuclear Plant, USI A-46 Summary Report

10.10 EPRI Report NP-6041, A Methodology for Assessment of Nuclear Power Plant Seismic Margin

10.11 USAS B31.1, Code for Power Pressure Piping, 1967 Edition

10.12 USAS B31.7, Nuclear Power Piping, 1969 Edition

10.13 IEEE 323-1971, Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations

10.14 IEEE 323-1974, Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations

10.15 IEEE 344-1971, IEEE Recommended Practice for Seismic Qualification of Class 1E Equipment for Nuclear Power Generation Stations

10.16 IEEE 344-1975, IEEE Recommended Practice for Seismic Qualification of Class 1E Equipment for Nuclear Power Generation Stations

10.17 American Institute of Steel Construction (AISC), 7th Edition

11.0 ATTACHMENTS

ATTACHMENT 1 – SEISMIC WALKDOWN EQUIPMENT LISTS

ATTACHMENT 2 – UNIT 2 - PEER REVIEW CHECKLIST FOR SWEL 1 AND 2

ATTACHMENT 3 – SEISMIC WALKDOWN CHECKLISTS

ATTACHMENT 4 – AREA WALK-BY CHECKLISTS

ATTACHMENT 5 – IPEEE VULNERABILITIES INFORMATION

ATTACHMENT 6 – SEISMIC WALKDOWN ENGINEER CERTIFICATIONS

ATTACHMENT 1

UNIT 2 – SEISMIC WALKDOWN EQUIPMENT LISTS

NO. SNCH082-RPT-02

ATTACHMENT 1

SEISMIC WALKDOWN EQUIPMENT LISTS
UNIT 2 - BASE LIST 1
NO. SNCH082-RPT-02

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000001	07	2B21-F028A	OUTBOARD MS	H-26000	REACTOR
000002	07	2B21-F028B	OUTBOARD MS	H-26000	REACTOR
000003	07	2B21-F028C	OUTBOARD MS	H-26000	REACTOR
000004	07	2B21-F028D	OUTBOARD MS	H-26000	REACTOR
000005	07	2B21-F004	RPV HEAD VEN	H-26000	DRYWELL
000006	07	2B21-F013D	RPV SAFETY/RE	H-26000	DRYWELL
000007	07	2B21-F013G	RPV SAFETY/RE	H-26000	DRYWELL
000008	07	2B21-F013A	RPV SAFETY/RE	H-26000	DRYWELL
000009	07	2B21-F013K	RPV SAFETY/RE	H-26000	DRYWELL
000010	08A	2B21-F019	STEAM DRAIN I	H-26000	REACTOR
000011	08A	2E32-F001B	MSIV LEAKAGE	H-26022	REACTOR
000012	08A	2E32-F001F	MSIV LEAKAGE	H-26022	REACTOR
000013	08A	2E32-F001K	MSIV LEAKAGE	H-26022	REACTOR
000014	08A	2E32-F001P	MSIV LEAKAGE	H-26022	REACTOR
000015	05	2E41-C001	HPCI PUMP	H-26021	REACTOR
000016	05	2E41-C002	HPCI TURBINE	H-26021	REACTOR
000017	05	2E41-C002-3	HPCI LUBE OIL	H-51165	REACTOR
000018	08A	2E41-F001	HPCI TURBINE	H-26020	REACTOR
000019	08A	2E41-F002	HPCI STEAM SU	H-26020	DRYWELL
000020	08A	2E41-F003	HPCI STEAM SU	H-26020	REACTOR
000021	08A	2E41-F004	HPCI PUMP SU	H-26020	REACTOR
000022	08A	2E41-F006	HPCI PUMP INB	H-26020	REACTOR
000023	08A	2E41-F007	HPCI PUMP OU	H-26020	REACTOR
000024	08A	2E41-F008	HPCI BYPASS TE	H-26020	REACTOR
000025	08A	2E41-F012	HPCI MINIMU	H-26020	REACTOR
000026	08A	2E41-F041	HPCI PUMP SU	H-26020	REACTOR
000027	08A	2E41-F042	HPCI PUMP SU	H-26020	REACTOR
000028	07	2E41-F051	HPCI SUPP POO	H-26020	REACTOR
000029	08A	2E41-F059	HPCI BAR CON	H-26021	REACTOR
000030	08A	2E41-F104	HPCI VACUUM	H-26020	REACTOR
000031	08A	2E41-F111	HPCI VACUUM	H-26020	REACTOR
000032	08B	2E41-F124	HPCI REMOTE	H-26021	REACTOR
000033	0	2E41-F3052	HPCI TURBINE	H-26021	REACTOR
000034	0	2E41-F3053	HPCI TURBINE	H-26021	REACTOR
000035	07	2E41-F026	BAR COND & L	H-26021	REACTOR
000036	18	2E41-K600	FLOW TRANSM	H-26020	CONTROL
000037	18	2E41-K601	DISCH. FLOW S	H-26020	CONTROL
000038	18	2E41-K603	DC/AC INVERTE	H-26020	CONTROL
000039	18	2E41-K615	HPCI DISCHARG	H-26020	CONTROL
000040	18	2E41-K616	HPCI DISCHARG	H-26020	CONTROL
000041	18	2E41-N008	HPCI DISCH. FL	H-26020	REACTOR
000042	18	2E41-N050	HPCI DISCH. PR	H-26020	REACTOR

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000043	18	2E41-N051	HPCI DISCHARG	H-26020	REACTOR
000044	18	2E41-N053	HPCI PUMP SU	H-26021	REACTOR
000045	18	2E41-N055A	HPCI TURB EXH	H-26021	REACTOR
000046	18	2E41-N055B	HPCI TURB EXH	H-26021	REACTOR
000047	18	2E41-N055C	HPCI TURB EXH	H-26021	REACTOR
000048	18	2E41-N055D	HPCI TURB EXH	H-26021	REACTOR
000049	18	2E41-N056B	HPCI TURBINE	H-26021	REACTOR
000050	18	2E41-N056D	HPCI TURBINE	H-26021	REACTOR
000051	18	2E41-N057A	HPCI STEAM LI	H-26020	REACTOR
000052	18	2E41-N057B	HPCI STEAM LI	H-26020	REACTOR
000053	18	2E41-N058A	HPCI STEAM LI	H-26020	REACTOR
000054	18	2E41-N058B	HPCI STEAM LI	H-26020	REACTOR
000055	18	2E41-N058C	HPCI STEAM LI	H-26020	REACTOR
000056	18	2E41-N058D	HPCI STEAM LI	H-26020	REACTOR
000057	18	2E41-N062B	SUPPRESSION P	H-26020	REACTOR
000058	18	2E41-N062D	SUPPRESSION P	H-26020	REACTOR
000059	18	2E41-N074	HPCI TURBINE	H-26021	REACTOR
000060	18	2E41-N650	HPCI DISCH PRE	H-26020	CONTROL
000061	18	2E41-N651	HPCI DISCH DP	H-26020	CONTROL
000062	18	2E41-N653	HPCI PUMP SU	H-26021	CONTROL
000063	18	2E41-N655A	TURB EXH RUP	H-26021	CONTROL
000064	18	2E41-N655B	TURB EXH RUP	H-26021	CONTROL
000065	18	2E41-N655C	TURB EXH RUP	H-26021	CONTROL
000066	18	2E41-N655D	TURB EXH RUP	H-26021	CONTROL
000067	18	2E41-N656B	HPCI TURB EXH	H-26021	CONTROL
000068	18	2E41-N656D	HPCI TURB EXH	H-26021	CONTROL
000069	18	2E41-N657A	HPCI STM LINE	H-26020	CONTROL
000070	18	2E41-N657B	HPCI STM LINE	H-26020	CONTROL
000071	18	2E41-N658A	HPCI STM LINE	H-26020	CONTROL
000072	18	2E41-N658B	HPCI STM LINE	H-26020	CONTROL
000073	18	2E41-N658C	HPCI STM LINE	H-26020	CONTROL
000074	18	2E41-N658D	HPCI STM LINE	H-26020	CONTROL
000075	18	2E41-N660A	HPCI STM LINE	H-26020	CONTROL
000076	18	2E41-N660B	HPCI STM LINE	H-26020	CONTROL
000077	18	2E41-N662B	SUPP POOL LEV	H-26020	CONTROL
000078	18	2E41-N662D	SUPP POOL LEV	H-26020	CONTROL
000079	18	2E41-R612	HPCI FLOW CO	H-26020	CONTROL
000080	18	2E41-R613	HPCI FLOW IND	H-26020	CONTROL
000081	08A	2E11-F091B	HPCI DISCH TO	H-26014	REACTOR
000082	08A	2E11-F140A	HPCI STEAM TO	H-26015	REACTOR
000083	06	2E21-C001B	CORE SPRAY PU	H-26018	REACTOR
000084	08A	2E21-F001B	CORE SPRAY TO	H-26018	REACTOR

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000085	08A	2E21-F004B	CORE SPRAY TO	H-26018	REACTOR
000086	08A	2E21-F005B	CORE SPRAY TO	H-26018	REACTOR
000087	08A	2E21-F015B	CORE SPRAY TE	H-26018	REACTOR
000088	07	2E21-F019B	CORE SPRAY TO	H-26018	REACTOR
000089	08A	2E21-F031B	CORE SPRAY MI	H-26018	REACTOR
000090	18	2E21-K600B	CORE SPRAY FL	H-26018	CONTROL
000091	18	2E21-N003B	CORE SPRAY FL	H-26018	REACTOR
000092	18	2E21-N051B	CORE SPRAY FL	H-26018	REACTOR
000093	18	2E21-N651B	CORE SPRAY FL	H-26018	CONTROL
000094	20	2E21-R601B	CORE SPRAY FL	H-26018	CONTROL
000095	21	2E11-B001B	RHR HEAT EXC	H-26014	REACTOR
000096	06	2E11-C001D	RHRSW PUMP	H-21039	INTAKE
000097	06	2E11-C002B	RHR PUMP 2B	H-26014	REACTOR
000098	08A	2E11-F003B	RHR HX B DISC	H-26014	REACTOR
000099	08A	2E11-F004B	RHR PUMP 2B S	H-26014	REACTOR
000100	08A	2E11-F006B	RHR SDC SUCTI	H-26014	REACTOR
000101	08A	2E11-F007B	RHR PUMP 2D	H-26014	REACTOR
000102	08A	2E11-F010	RHR HX HDR CR	H-26014	REACTOR
000103	08A	2E11-F011B	RHR HX B DRAI	H-26014	REACTOR
000104	08A	2E11-F016B	CONT SPRAY DI	H-26014	REACTOR
000105	08A	2E11-F024B	RHR TEST LINE	H-26014	REACTOR
000106	08A	2E11-F026B	RHR HX TO RCI	H-26014	REACTOR
000107	08A	2E11-F027B	SUPP POOL SPR	H-26014	REACTOR
000108	08A	2E11-F028B	RHR INLET TO S	H-26014	REACTOR
000109	08A	2E11-F047B	RHR HX B INLET	H-26014	REACTOR
000110	08A	2E11-F048B	RHR HX B BYPA	H-26014	REACTOR
000111	08A	2E11-F049	RHR RADWAST	H-26014	REACTOR
000112	07	2E11-F065B	RHR PUMP 2B S	H-26014	REACTOR
000113	08A	2E11-F068B	RHR HX B TUBE	H-21039	REACTOR
000114	08A	2E11-F073B	RHR HX B SERVI	H-26014	REACTOR
000115	08A	2E11-F091B	HPCI DISCH TO	H-26014	REACTOR
000116	08A	2E11-F104B	RHR HX B VENT	H-26014	REACTOR
000117	08A	2E11-F119B	RHR HX B BYPA	H-21039	REACTOR
000118	18	2E11-K600B	RHR HDR FLOW	H-26014	CONTROL
000119	18	2E11-N002B	RHR HX B TUBE	H-26014	REACTOR
000120	18	2E11-N007B	RHRSW FLOW T	H-21039	REACTOR
000121	18	2E11-N015B	RHR HX B DISC	H-26014	REACTOR
000122	18	2E11-N017B	RHR HX B INLET	H-21039	REACTOR
000123	18	2E11-N017D	RHR HX B INLET	H-21039	REACTOR
000124	18	2E11-N082B	RHR PUMP 2B	H-26014	REACTOR
000125	18	2E11-N682B	RHR PUMP 2B&	H-26014	CONTROL
000126	18	2E11-R600B	RHR HX B TUBE	H-26014	CONTROL

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000127	18	2E11-R603B	RHR HX B DISC	H-26014	CONTROL
000128	18	2E11-S600B	RHR HX B TUBE	H-26014	CONTROL
000129	07	2B21-F022A	INBOARD MSIV	H-26000	DRYWELL
000130	07	2B21-F022B	INBOARD MSIV	H-26000	DRYWELL
000131	07	2B21-F022C	INBOARD MSIV	H-26000	DRYWELL
000132	07	2B21-F022D	INBOARD MSIV	H-26000	DRYWELL
000133	07	2B21-F003	RPV HEAD VEN	H-26000	DRYWELL
000134	08A	2B21-F016	STEAM DRAIN I	H-26000	DRYWELL
000135	07	2B21-F013B	RPV SAFETY/RE	H-26000	DRYWELL
000136	07	2B21-F013F	RPV SAFETY/RE	H-26000	DRYWELL
000137	07	2B21-F013H	RPV SAFETY/RE	H-26000	DRYWELL
000138	07	2B21-F013M	RPV SAFETY/RE	H-26000	DRYWELL
000141	07	2C11-F010A	SCRAM DISCH	H-26007	REACTOR
000142	07	2C11-F010B	SCRAM DISCH	H-26007	REACTOR
000143	07	2C11-F011	SCRAM DISCH	H-26007	REACTOR
000144	08B	2C11-F110B	BACKUP SCRA	H-26007	REACTOR
000145	07	2C11-F035A	SCRAM DISCH	H-26007	REACTOR
000146	07	2C11-F035B	SCRAM DISCH	H-26007	REACTOR
000147	07	2C11-F037	SCRAM DISCH	H-26007	REACTOR
000148	08B	2C11-F110A	BACKUP SCRA	H-26007	REACTOR
000149	0	2C71-S3A	MANUAL SCRA		CONTROL
000150	0	2C71-S3B	MANUAL SCRA		CONTROL
000151	0	2C71-S3C	MANUAL SCRA		CONTROL
000152	0	2C71-S3D	MANUAL SCRA		CONTROL
000153	0	2C71-S3A	MANUAL SCRA		CONTROL
000154	0	2C71-S3B	MANUAL SCRA		CONTROL
000155	0	2C71-S3C	MANUAL SCRA		CONTROL
000156	0	2C71-S3D	MANUAL SCRA		CONTROL
000157	08A	2B31-F023A	RECIRC PUMP S	H-26003	DRYWELL
000158	08A	2E11-F004A	TORUS SUCTIO	H-26015	REACTOR
000159	08A	2E11-F006A	SHUTDOWN C	H-26015	REACTOR
000160	06	2E11-C002A	RHR PUMP 2A	H-26015	REACTOR
000161	08A	2E11-F007A	RHR PUMP MI	H-26015	REACTOR
000162	08A	2E11-F026A	RHR HX DRAIN	H-26015	REACTOR
000163	08A	2E11-F104A	RHR HX VENT	H-26015	REACTOR
000164	08B	2E11-F079A	RHR HX SAMPL	H-26015	REACTOR
000165	08A	2E11-F048A	RHR HX BYPASS	H-26015	REACTOR
000166	08A	2E11-F091A	HPCI STEAM TO	H-26015	REACTOR
000167	08A	2E11-F010	RHR HX HDR CR	H-26015	REACTOR
000168	08A	2E11-F028A	TORUS SPRAY	H-26015	REACTOR
000169	08A	2E11-F016A	CONTAINMENT	H-26015	REACTOR
000170	08A	2E11-F017A	RHR LPCI DISCH	H-26015	REACTOR

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000171	08A	2E11-F015A	INBOARD INJEC	H-26015	REACTOR
000172	21	2E11-B001A	RHR HEAT EXC	H-26015	REACTOR
000173	18	2E11-N015A	RHR DISCH HEA	H-26015	REACTOR
000174	18	2E11-K600A	RHR DISCH HEA	H-26015	CONTROL
000175	18	2E11-R603A	RHR DISCH HEA	H-26015	CONTROL
000176	18	2E11-N082A	RHR PUMP FLO	H-26015	REACTOR
000177	18	2E11-N682A	RHR PUMP FLO	H-26015	CONTROL
000178	18	2E11-K603A	POWER SUPPLY	H-26015	CONTROL
000179	08A	2B31-F023A	RECIRC PUMP S	H-26003	DRYWELL
000180	08A	2E11-F004A	TORUS SUCTIO	H-26015	REACTOR
000181	08A	2E11-F006A	SHUTDOWN C	H-26015	REACTOR
000182	06	2E11-C002A	RHR PUMP 2A	H-26015	REACTOR
000183	08A	2E11-F007A	RHR PUMP MI	H-26015	REACTOR
000184	08A	2E11-F026A	RHR HX DRAIN	H-26015	REACTOR
000185	08A	2E11-F104A	RHR HX VENT	H-26015	REACTOR
000186	08B	2E11-F079A	RHR HX SAMPL	H-26015	REACTOR
000187	08A	2E11-F048A	RHR HX BYPASS	H-26015	REACTOR
000188	08A	2E11-F091A	HPCI STEAM TO	H-26015	REACTOR
000189	08A	2E11-F010	RHR HX HDR CR	H-26015	REACTOR
000190	08A	2E11-F028A	TORUS SPRAY	H-26015	REACTOR
000191	08A	2E11-F016A	CONTAINMENT	H-26015	REACTOR
000192	08A	2E11-F017A	RHR LPCI DISCH	H-26015	REACTOR
000193	08A	2E11-F015A	INBOARD INJEC	H-26015	REACTOR
000194	21	2E11-B001A	RHR HEAT EXC	H-26015	REACTOR
000195	18	2E11-N015A	RHR DISCH HEA	H-26015	REACTOR
000196	18	2E11-K600A	RHR DISCH HEA	H-26015	CONTROL
000197	18	2E11-R603A	RHR DISCH HEA	H-26015	CONTROL
000198	18	2E11-N082A	RHR PUMP FLO	H-26015	REACTOR
000199	18	2E11-N682A	RHR PUMP FLO	H-26015	CONTROL
000200	18	2E11-K603A	POWER SUPPLY	H-26015	CONTROL
000201	07	2E11-F065A	RHR PUMP 2A	H-26015	REACTOR
000206	08A	2E11-F006C	SHUTDOWN C	H-26015	REACTOR
000207	08A	2E11-F047A	RHR HX INLET	H-26015	REACTOR
000208	06	2E11-C001A	RHRSW PUMP	H-21039	INTAKE
000209	08A	2E11-F119A	RHRSW SYSTE	H-21039	REACTOR
000210	08A	2E11-F068A	RHRSW HX FLO	H-21039	REACTOR
000211	08A	2E11-F073A	RHRSW TO RHR	H-26015	REACTOR
000212	20	2E11-K613A	CONTROL AMP	H-26015	CONTROL
000213	18	2E11-N002A	RHR HX TUBE T	H-26015	REACTOR
000214	18	2E11-R600A	RHR HX TUBE T	H-26015	CONTROL
000215	18	2E11-S600A	F068A POSITIO	H-26015	CONTROL
000216	18	2E11-N017A	RHRSW HX INL	H-21039	REACTOR

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000217	18	2E11-N017C	RHRSW HX INL	H-21039	REACTOR
000218	18	2E11-N007A	RHRSW HX INL	H-21039	REACTOR
000219	18	2E11-R602A	RHRSW HX INL	H-21039	CONTROL
000220	18	2E11-R628A	RHRSW CONTR	H-26015	CONTROL
000221	08A	2E11-F003A	RHR HX OUTLE	H-26015	REACTOR
000222	18	2E11-R602B	RHRSW HEAT E	H-21039	CONTROL
000223	20	2E11-K603B	POWER SUPPLY	H-26015	CONTROL
000224	18	2E11-R628B	RHR SERVICE W	H-26014	CONTROL
000225	20	2E11-K613B	AMPLIFIER (K62	H-26014	CONTROL
000226	08B	2C11-F009	PILOT AIR HEA	H-26007	REACTOR
000227	08B	2C11-F040	PILOT AIR HEA	H-26007	REACTOR
000228	06	2P41-C001B	PLANT SERVICE	H-21033	INTAKE
000229	08A	2P41-F316B	TURBINE BUILD	H-21033	YARD
000230	08A	2P41-F315B	REACTOR BUIL	H-21033	YARD
000231	08A	2P41-F312B	DIESEL GENERA	H-21033	YARD
000232	07	2P41-F339B	DIESEL GENERA	H-21033	DIESEL
000233	08A	2P41-F310	RADWASTE DIL	H-21033	YARD
000234	08A	1P41-F313C	UNIT 2 PSW IS	D-11001	INTAKE
000235	07	2P41-F037B	E11C002B CON	H-26051	REACTOR
000236	07	2P41-F036B	T41B002B CON	H-26051	REACTOR
000237	07	2P41-F035B	T41B005B CON	H-26051	REACTOR
000238	08A	2N71-F013	CIRC WATER BL	H-21026	YARD
000239	18	2P41-K601B	ELECTRICAL SU	H-21033	CONTROL
000240	18	2P41-N303B	PSW DISCHARG	H-21033	INTAKE
000241	18	2P41-R601B	PSW DIV. 2 PI	H-21033	CONTROL
000242	07	2P41-F067	PSW DIV. I-II	H-26054	REACTOR
000243	06	2P41-C001A	PLANT SERVICE	H-21033	INTAKE
000244	08A	1P41-F313D	UNIT 2 PSW IS	D-11001	YARD
000245	08A	2P41-F312A	DIESEL GENERA	H-21033	YARD
000246	07	2P41-F339A	DIESEL GENERA	H-21033	DIESEL
000247	08A	2P41-F315A	REACTOR BUIL	H-21033	YARD
000248	08A	2P41-F316A	TURBINE BUILD	H-21033	YARD
000249	07	2P41-F066	2P64/2E51 CO	H-26050	REACTOR
000250	07	2P41-F037A	2E11C002A CO	H-26050	REACTOR
000251	07	2P41-F039A	2T41B003A CO	H-26050	REACTOR
000252	18	2P41-N303A	PSW DISCHARG	H-21033	INTAKE
000253	18	2P41-R601A	PSW DIV. I PI	H-21033	CONTROL
000254	18	2P41-K601A	ELECTRICAL SU	H-21033	CONTROL
000255	08A	2N71-F012	CIRC WATER M	H-21026	YARD
000256	10	2T41-B002B	CS/RHR PUMP	H-26071	REACTOR
000257	10	2T41-B005B	HPCI PUMP RO	H-26071	REACTOR
000258	19	2T41-N019B	HPCI PUMP RO	H-26071	REACTOR

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000259	19	2T41-N020B	CS/RHR PUMP	H-26071	REACTOR
000260	18	2T41-R609B	HPCI PUMP RO	H-26071	CONTROL
000261	18	2T41-R610B	CS/RHR PUMP	H-26071	CONTROL
000262	10	2T41-B003A	CS/RHR PUMP	H-26071	REACTOR
000263	19	2T41-N021A	CS/RHR PUMP	H-26071	REACTOR
000264	18	2T41-R611A	CS/RHR PUMP	H-26071	CONTROL
000265	0	2B21-A003D	SRV AIR ACCU	H-26000	DRYWELL
000266	0	2B21-A003G	SRV AIR ACCU	H-26000	DRYWELL
000267	0	2B21-A003H	SRV AIR ACCU	H-26000	DRYWELL
000268	0	2B21-A003M	SRV AIR ACCU	H-26000	DRYWELL
000269	07	2T48-F112B	NITROGEN FLO	H-26083	REACTOR
000270	0	2P70-A002A	EMERGENCY NI	H-26066	REACTOR
000271	0	2P70-A002B	EMERGENCY NI	H-26066	REACTOR
000272	0	2P70-A002C	EMERGENCY NI	H-26066	REACTOR
000273	0	2P70-F138A	EMERGENCY NI	H-26066	REACTOR
000274	0	2P70-F138B	EMERGENCY NI	H-26066	REACTOR
000275	0	2P70-F138C	EMERGENCY NI	H-26066	REACTOR
000276	0	2P70-F141	EMERGENCY NI	H-26066	REACTOR
000277	0	2P70-F084	EMERGENCY NI	H-26066	REACTOR
000278	0	2B21-A003A	SRV AIR ACCU	H-28023	DRYWELL
000279	0	2B21-A003B	SRV AIR ACCU	H-28023	DRYWELL
000280	0	2B21-A003F	SRV AIR ACCU	H-28023	DRYWELL
000281	0	2B21-A003K	SRV AIR ACCU	H-28023	DRYWELL
000282	21	2T48-A001	NITROGEN STO	H-26083	YARD
000283	07	2T48-F112A	NITROGEN FLO	H-26083	REACTOR
000284	07	2T48-F104	NITROGEN SUP	H-26083	REACTOR
000285	07	2P70-F001A	NITROGEN BAC	H-26066	REACTOR
000286	08B	2P70-F004	DRYWELL PNEU	H-26066	REACTOR
000287	08B	2P70-F005	DRYWELL PNEU	H-26066	REACTOR
000288	07	2T48-F321	DRYWELL NITR	H-26083	REACTOR
000289	07	2T48-F325	DRYWELL/TOR	H-26083	REACTOR
000290	20	2B21-R604B	RPV WATER LE	H-26001	CONTROL
000291	20	2B21-N691B	RPV WATER LE	H-26001	CONTROL
000292	18	2B21-N091B	RPV WATER LE	H-26001	REACTOR
000293	20	2B21-R623B	RPV PRESSURE	H-26001	CONTROL
000294	20	2B21-N690D	RPV PRESSURE	H-26001	CONTROL
000295	18	2B21-N090D	RPV PRESSURE	H-26001	REACTOR
000296	20	2B21-R610	RPV WATER LE	H-26001	CONTROL
000297	20	2B21-N685B	RPV WATER LE	H-26001	CONTROL
000298	18	2B21-N085B	RPV WATER LE	H-26001	REACTOR
000299	20	2B21-R604A	RPV WATER LE	H-26001	CONTROL
000300	20	2B21-N691A	RPV WATER LE	H-26001	CONTROL

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000301	18	2B21-N091A	RPV WATER LE	H-26001	REACTOR
000302	20	2B21-R623A	RPV PRESSURE	H-26001	CONTROL
000303	20	2B21-N690A	RPV PRESSURE	H-26001	CONTROL
000304	18	2B21-N090A	RPV PRESSURE	H-26001	REACTOR
000305	20	2B21-R615	RPV WATER LE	H-26001	CONTROL
000306	20	2B21-N685A	RPV WATER LE	H-26001	CONTROL
000307	18	2B21-N085A	RPV WATER LE	H-26001	REACTOR
000308	18	2T47-R627	TORUS TEMPER	H-26074	CONTROL
000309	18	2T48-N009B	TORUS WATER	H-26084	REACTOR
000310	18	2T48-N009D	TORUS WATER	H-26084	REACTOR
000311	18	2T47-K600	SIGNAL CONVE	H-26284	CONTROL
000312	18	2T48-K604B	INSTRUMENT D	H-26284	CONTROL
000313	18	2T48-N010B	TORUS WATER	H-26084	REACTOR
000314	18	2T48-R622B	TORUS WATER	H-26084	CONTROL
000315	18	2T48-K621B	TORUS LEVEL I	H-26284	CONTROL
000316	07	2T48-F361B	TORUS LEVEL I	H-26084	REACTOR
000317	07	2T48-F362B	TORUS LEVEL I	H-26084	REACTOR
000318	18	2T47-R626	TORUS TEMPER	H-26074	CONTROL
000319	18	2T48-N009A	TORUS WATER	H-26084	REACTOR
000320	18	2T48-N009C	TORUS WATER	H-26084	REACTOR
000321	18	2T48-K622	TORUS TEMPER	H-26285	CONTROL
000322	18	2X75-K651A	POWER DISTRI	H-26285	CONTROL
000323	18	2T48-N010A	TORUS WATER	H-26084	REACTOR
000324	18	2T48-R622A	TORUS WATER	H-26084	CONTROL
000325	18	2T48-K604A	INSTRUMENT D	H-26284	CONTROL
000326	18	2T48-K621A	TORUS WATER	H-26285	CONTROL
000327	07	2T48-F361A	TORUS LEVEL I	H-26084	REACTOR
000328	07	2T48-F362A	TORUS LEVEL I	H-26084	REACTOR
000329	08A	2E11-F004A	TORUS SUCTIO	H-26015	REACTOR
000330	08A	2E11-F006A	SHUTDOWN C	H-26015	REACTOR
000331	06	2E11-C002A	RHR PUMP 2A	H-26015	REACTOR
000332	08A	2E11-F007A	RHR PUMP MI	H-26015	REACTOR
000333	08A	2E11-F026A	RHR HX DRAIN	H-26015	REACTOR
000334	08A	2E11-F104A	RHR HX VENT	H-26015	REACTOR
000335	08B	2E11-F079A	RHR HX SAMPL	H-26015	REACTOR
000336	08A	2E11-F048A	RHR HX BYPASS	H-26015	REACTOR
000337	08A	2E11-F091A	HPCI STEAM TO	H-26015	REACTOR
000338	08A	2E11-F010	RHR HX HDR CR	H-26015	REACTOR
000339	08A	2E11-F028A	TORUS SPRAY	H-26015	REACTOR
000340	08A	2E11-F016A	CONTAINMENT	H-26015	REACTOR
000341	08A	2E11-F015A	INBOARD INJEC	H-26015	REACTOR
000342	21	2E11-B001A	RHR HEAT EXC	H-26015	REACTOR

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000343	18	2E11-N015A	RHR DISCH HEA	H-26015	REACTOR
000344	18	2E11-K600A	RHR DISCH HEA	H-26015	CONTROL
000345	18	2E11-R603A	RHR DISCH HEA	H-26015	CONTROL
000346	18	2E11-N082A	RHR PUMP FLO	H-26015	REACTOR
000347	18	2E11-N682A	RHR PUMP FLO	H-26015	CONTROL
000348	18	2E11-K603A	POWER SUPPLY	H-26015	CONTROL
000349	08A	2E11-F047A	RHR HX INLET	H-26015	REACTOR
000350	06	2E11-C001A	RHRSW PUMP	H-21039	INTAKE
000351	08A	2E11-F119A	RHRSW SYSTE	H-21039	REACTOR
000352	08A	2E11-F068A	RHRSW HX FLO	H-21039	REACTOR
000353	08A	2E11-F073A	RHRSW TO RHR	H-26015	REACTOR
000354	20	2E11-K613A	CONTROL AMP	H-26015	CONTROL
000355	18	2E11-N002A	RHR HX TUBE T	H-26015	REACTOR
000356	18	2E11-R600A	RHR HX TUBE T	H-26015	CONTROL
000357	18	2E11-S600A	F068A POSITIO	H-26015	CONTROL
000358	18	2E11-N017A	RHRSW HX INL	H-21039	REACTOR
000359	18	2E11-N017C	RHRSW HX INL	H-21039	REACTOR
000360	18	2E11-N007A	RHRSW HX INL	H-21039	REACTOR
000361	18	2E11-R602A	RHRSW HX INL	H-21039	CONTROL
000362	18	2E11-R628A	RHRSW CONTR	H-26015	CONTROL
000363	08A	2E11-F003A	RHR HX OUTLE	H-26015	REACTOR
000364	07	2E11-F065A	RHR PUMP 2A	H-26015	REACTOR
000365	08A	2E11-F027A	TORUS SPRAY I	H-26015	REACTOR
000366	08A	2E11-F024A	TEST LINE TO T	H-26015	REACTOR
000367	08A	2E11-F021A	CONTAINMENT	H-26015	REACTOR
000368	21	2E11-B001B	RHR HEAT EXC	H-26014	REACTOR
000369	06	2E11-C001D	RHRSW PUMP	H-21039	INTAKE
000370	06	2E11-C002B	RHR PUMP 2B	H-26014	REACTOR
000371	08A	2E11-F003B	RHR HX B DISC	H-26014	REACTOR
000372	08A	2E11-F004B	RHR PUMP 2B S	H-26014	REACTOR
000373	08A	2E11-F006B	RHR SDC SUCTI	H-26014	REACTOR
000374	08A	2E11-F007B	RHR PUMP 2D	H-26014	REACTOR
000375	08A	2E11-F010	RHR HX HDR CR	H-26014	REACTOR
000376	08A	2E11-F016B	CONT SPRAY DI	H-26014	REACTOR
000377	08A	2E11-F024B	RHR TEST LINE	H-26014	REACTOR
000378	08A	2E11-F026B	RHR HX TO RCI	H-26014	REACTOR
000379	08A	2E11-F027B	SUPP POOL SPR	H-26014	REACTOR
000380	08A	2E11-F028B	RHR INLET TO S	H-26014	REACTOR
000381	08A	2E11-F047B	RHR HX B INLET	H-26014	REACTOR
000382	08A	2E11-F048B	RHR HX B BYPA	H-26014	REACTOR
000383	08A	2E11-F049	RHR RADWAST	H-26014	REACTOR
000384	07	2E11-F065B	RHR PUMP 2B S	H-26014	REACTOR

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000385	08A	2E11-F068B	RHR HX B TUBE	H-21039	REACTOR
000386	08A	2E11-F073B	RHR HX B SERVI	H-26014	REACTOR
000387	08A	2E11-F091B	HPCI DISCH TO	H-26014	REACTOR
000388	08A	2E11-F104B	RHR HX B VENT	H-26014	REACTOR
000389	08A	2E11-F119B	RHR HX B BYPA	H-21039	REACTOR
000390	18	2E11-K600B	RHR HDR FLOW	H-26014	CONTROL
000391	18	2E11-N002B	RHR HX B TUBE	H-26014	REACTOR
000392	18	2E11-N007B	RHRSW FLOW T	H-21039	REACTOR
000393	18	2E11-N015B	RHR HX B DISC	H-26014	REACTOR
000394	18	2E11-N017B	RHR HX B INLET	H-21039	REACTOR
000395	18	2E11-N017D	RHR HX B INLET	H-21039	REACTOR
000396	18	2E11-N082B	RHR PUMP 2B	H-26014	REACTOR
000397	18	2E11-N682B	RHR PUMP 2B&	H-26014	CONTROL
000398	18	2E11-R600B	RHR HX B TUBE	H-26014	CONTROL
000399	18	2E11-R603B	RHR HX B DISC	H-26014	CONTROL
000400	18	2E11-S600B	RHR HX B TUBE	H-26014	CONTROL
000401	18	2E11-R602B	RHRSW HEAT E	H-21039	CONTROL
000402	20	2E11-K603B	POWER SUPPLY	H-26015	CONTROL
000403	18	2E11-R628B	RHR SERVICE W	H-26014	CONTROL
000404	20	2E11-K613B	AMPLIFIER (K62	H-26014	CONTROL
000405	08A	2E11-F015B	INBOARD INJEC	H-26014	REACTOR
000406	08A	2E11-F021B	CONTAINMENT	H-26014	REACTOR
000407	17	2R43-S001A	DIESEL GENERA	H-21074	DIESEL
000408	21	2Y52-A101A	DG 2A FUEL OIL	H-21074	DIESEL
000409	21	2Y52-A001A	DG 2A FUEL OIL	H-21074	YARD
000410	05	2Y52-C001A	DG 2A FUEL OIL	H-21074	YARD
000411	18	2R43-N001A	DG 2A DAY TAN	H-21074	DIESEL
000412	0	2R43-A005A	DG 2A STARTIN	H-21074	DIESEL
000413	0	2R43-A006A	DG 2A STARTIN	H-21074	DIESEL
000414	09	2X41-C010A	DG 2A ROOM E	H-12619	DIESEL
000415	18	2X41-N011A	DG 2A ROOM F	H-12619	DIESEL
000416	0	2X41-C013A	DG 2A ROOM L	H-12619	DIESEL
000417	09	2X41-C016A	DG 2A BATTERY	H-12619	DIESEL
000418	0	2X41-C028A	DG 2A BATTERY	H-12619	DIESEL
000419	17	2R43-S001C	DIESEL GENERA	H-21074	DIESEL
000420	21	2Y52-A101C	DG 2C FUEL OIL	H-21074	DIESEL
000421	21	2Y52-A001C	DG 2C FUEL OIL	H-21074	YARD
000422	05	2Y52-C101C	DG 2C FUEL OIL	H-21074	YARD
000423	18	2R43-N003C	DG 2C DAY TAN	H-21074	DIESEL
000424	0	2R43-A005C	DG 2C STARTIN	H-21074	DIESEL
000425	0	2R43-A006C	DG 2C STARTIN	H-21074	DIESEL
000426	09	2X41-C010C	DG 2C ROOM E	H-12619	DIESEL

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000427	18	2X41-N011B	DG 2C ROOM F	H-12619	DIESEL
000428	0	2X41-C013B	DG 2C ROOM L	H-12619	DIESEL
000429	09	2X41-C016C	DG 2C BATTERY	H-12619	DIESEL
000430	0	2X41-C028B	DG 2C BATTERY	H-12619	DIESEL
000431	03	2R22-S005	4160V STA SVC	H-23023	DIESEL
000432	02	2R22-S016	250 V DC BATT	H-23239	CONTROL
000433	02	2R23-S003	600 V STA SVC	H-23240	CONTROL
000434	01	2R24-S009	600/208 V MCC	H-23027	INTAKE
000435	01	2R24-S011	600 V MCC 2C	H-27279	REACTOR
000436	01	2R24-S011A	600 V MCC ESS	H-27296	REACTOR
000437	01	2R24-S018A	600 V MCC 2E-	H-27279	REACTOR
000438	01	2R24-S021	125/250 V DC	H-27284	REACTOR
000439	01	2R24-S025	600/208 V MCC	H-23023	DIESEL
000440	14	2R25-S001	125 V DC CABI	H-23239	CONTROL
000441	14	2R25-S004	125 V DC CABI	H-23025	DIESEL
000442	14	2R25-S029	120/208 VAC C	H-23025	DIESEL
000443	14	2R25-S036	120/208 V AC E	H-23240	CONTROL
000445	14	2R25-S064	120/208 V AC C	H-23240	CONTROL
000446	14	2R25-S101	120/208 V ESS	H-27279	REACTOR
000447	14	2R25-S129	125 V DC DISTR	H-23239	CONTROL
000448	15	2R42-S001A	125/250 V STA	H-23220	CONTROL
000449	15	2R42-S002A	125 V DIESEL S	H-23022	DIESEL
000450	16	2R42-S026	125 V BATTERY	H-23240	CONTROL
000451	16	2R42-S027	125 V BATTERY	H-23240	CONTROL
000452	16	2R42-S032A	125 V BATTERY	H-23025	DIESEL
000453	16	2R44-S002	STATIC INVERT	H-13131	CONTROL
000454	04	2R11-S041	CONT BLDG ESS	H-23240	CONTROL
000455	04	2R11-S004	600-120/208 V	H-23025	DIESEL
000456	18	2R20N-P001	FUSE BOX	H-23240	CONTROL
000457	04	2R11-S011	600/208 V XFM	H-23027	YARD
000458	18	2R26-M031B	125 V DC THRO	H-23240	CONTROL
000459	18	2R26-M032A	125 V DC THRO	H-23025	DIESEL
000460	20	2H21-P198	AMMETER SHU	H-23025	DIESEL
000461	20	2H21-P291	BATTERY 2A FU	H-23022	DIESEL
000462	18	2R26-M002	2R25-S064 DIS	H-23240	CONTROL
000463	18	2R20M-P001	FUSE BOX	H-23023	DIESEL
000464	18	2R26-M031A	125 V DC THRO	H-23240	CONTROL
000465	04	2R11-S031	600/208 V XFM	H-27279	REACTOR
000466	20	2H21-P285	SHUNT BOX A	H-23235	CONTROL
000467	20	2H21-P286	SHUNT BOX B	H-23235	CONTROL
000468	20	2H21-P287	SHUNT BOX C	H-23235	CONTROL
000469	03	2R22-S007	4160V STA SVC	H-23023	DIESEL

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000470	02	2R22-S017	250 V DC BATT	H-23239	CONTROL
000471	02	2R23-S004	600 V STA SVC	H-23240	CONTROL
000472	01	2R24-S010	600/208 V MCC	H-23027	INTAKE
000473	01	2R24-S012	600 V MCC 2B	H-27281	REACTOR
000474	01	2R24-S012B	600 V ESS MCC	H-27298	REACTOR
000475	01	2R24-S022	125/250 V DC	H-27281	REACTOR
000476	01	2R24-S027	600/208 V MCC	H-23023	DIESEL
000478	01	2R24-S018B	600 V MCC 2E-	H-27279	REACTOR
000479	14	2R25-S002	125 V DC CABI	H-23240	CONTROL
000480	14	2R25-S006	125 V DC CABI	H-23023	DIESEL
000481	14	2R25-S031	120/208 V AC C	H-23023	DIESEL
000482	14	2R25-S037	120/208 V AC E	H-23240	CONTROL
000484	14	2R25-S065	120/208 V AC C	H-23240	CONTROL
000485	14	2R25-S130	125 V DC DISTR	H-23239	CONTROL
000486	15	2R42-S001B	125/250 V DC S	H-23235	CONTROL
000487	15	2R42-S002C	125 V DIESEL S	H-23022	DIESEL
000488	16	2R42-S029	125 V BATTERY	H-23240	CONTROL
000489	16	2R42-S030	125 V BATTERY	H-23240	CONTROL
000490	16	2R42-S032C	125 V BATTERY	H-23025	DIESEL
000491	16	2R44-S003	STATIC INVERT	H-13131	CONTROL
000492	04	2R11-S042	CONT BLDG ESS	H-23240	CONTROL
000493	04	2R11-S006	LTG & MISC PO	H-23023	DIESEL
000494	18	2R20M-P002	FUSE BOX	H-23023	DIESEL
000495	18	2R20N-P002	FUSE BOX	H-23240	CONTROL
000496	04	2R11-S012	600/208 V XFM	H-23027	YARD
000497	18	2R26-M031C	125 V DC THRO	H-23240	CONTROL
000498	18	2R26-M031D	125 V DC THRO	H-23240	CONTROL
000499	18	2R26-M032C	125 V DC THRO	H-23025	DIESEL
000500	20	2H21-P199	AMMETER SHU	H-23025	DIESEL
000501	20	2H21-P293	BATTERY 2C FU	H-23022	DIESEL
000502	18	2R26-M004	2R25-SO25 DIS	H-23240	CONTROL
000503	20	2H21-P288	BATTERY SHUN	H-23235	CONTROL
000504	20	2H21-P289	BATTERY SHUN	H-23235	CONTROL
000505	20	2H21-P290	BATTERY SHUN	H-23235	CONTROL
000733	01	2R27-S093	LOCAL STARTER	H-27991	REACTOR
000527	09	2Z41-C014	STN BATT RM E	H-26093	TURBINE
000528	09	2Z41-C015	STN BATT RM E	H-26093	TURBINE
000529	09	2X41-C014E	SWGR RM 2G F	H-12619	DIESEL
000530	0	2X41-C015C	SWGR RM 2G L	H-12619	DIESEL
000531	18	2X41-N013C	SWGR RM 2G L	H-12619	DIESEL
000532	18	2X41-N042	FLOW SWITCH	H-12619	DIESEL
000533	18	2X41-N061	FLOW SWITCH	H-12619	DIESEL

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000534	09	2X41-C014A	SWGR RM 2E F	H-12619	DIESEL
000535	0	2X41-C015A	SWGR RM 2E L	H-12619	DIESEL
000536	18	2X41-N013A	SWGR RM 2E L	H-12619	DIESEL
000537	18	2X41-N044	FLOW SWITCH	H-12619	DIESEL
000538	18	2X41-N046	FLOW SWITCH	H-12619	DIESEL
000539	08B	2G11-F003	DRYWELL FL DR	H-26026	REACTOR
000540	08B	2G11-F004	DRYWELL FL DR	H-26026	REACTOR
000541	08B	2G11-F019	DRYWELL EQ D	H-26026	REACTOR
000542	08B	2G11-F020	DRYWELL EQ D	H-26026	REACTOR
000543	08A	2G31-F001	RWCU INBOAR	H-26036	DRYWELL
000544	08A	2G31-F004	RWCU OUTBOA	H-26036	REACTOR
000545	08B	2T48-F310	TORUS VAC BR	H-26084	REACTOR
000546	08B	2T48-F311	TORUS VAC BR	H-26084	REACTOR
000507	08A	2E11-F011A	RHR HX A DRAI	H-26014	REACTOR
000632	20	2H11-P601	REAC CNTMT C	H-13138	CONTROL
000633	20	2H11-P602	REAC WTR CLN	H-23259	CONTROL
000634	20	2H11-P603	REAC CONTROL	H-23258	CONTROL
000635	20	2H11-P604	PROCESS RAD	H-23259	CONTROL
000636	20	2H11-P605A	CNTMT ATM OI	H-23733	CONTROL
000637	20	2H11-P605B	CNTMT ATM OI	H-23733	CONTROL
000638	20	2H11-P606	STARTUP NEUT	H-23259	CONTROL
000639	20	2H11-P608	RWR RNGE NE	H-23259	CONTROL
000640	20	2H11-P609	CH A PRI ISOL &	H-23259	CONTROL
000641	20	2H11-P611	CH B PRI ISOL &	H-23247	CONTROL
000642	20	2H11-P612	FW AND RECIR	H-23247	CONTROL
000643	20	2H11-P613	PROCESS INST	H-23258	CONTROL
000644	20	2H11-P614	NSSS TEMP DET	H-23258	CONTROL
000645	20	2H11-P617	CHAN A RHR RE	H-23258	CONTROL
000646	20	2H11-P618	CHAN B RHR RE		CONTROL
000647	20	2H11-P620	HPCI RELAY VE	H-13138	CONTROL
000648	20	2H11-P622	INBD ISO VLV V	H-13138	CONTROL
000649	20	2H11-P623	OUTBD ISO VLV	H-23257	CONTROL
000650	20	2H11-P626	CORE SPRAY CT	H-13138	CONTROL
000651	20	2H11-P627	CORE SPRAY CT	H-13138	CONTROL
000652	20	2H11-P628	ADS RELAY PAN	H-23258	CONTROL
000653	20	2H11-P650	TURB FDWTR 7	H-23258	CONTROL
000654	20	2H11-P652	DSL GEN & EM		CONTROL
000655	20	2H11-P654	GAS TREAT VEN	H-23257	CONTROL
000656	20	2H11-P656	TURB AUX SYST	H-23257	CONTROL
000657	20	2H11-P657	VNT DRYWELL I	H-23258	CONTROL
000658	20	2H11-P664	MSIV LEAK CTR		CONTROL
000659	20	2H11-P674	START UP XFM		CONTROL

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000660	20	2H11-P675	START UP XFM	H-23666	CONTROL
000661	20	2H11-P679	STA SERV XFMR	H-23257	CONTROL
000662	20	2H11-P691	ANALOG SIG C		CONTROL
000663	20	2H11-P700	ANALOG VNT L	H-23246	CONTROL
000664	20	2H11-P921	RPS TRIP UNIT	H-16249	CONTROL
000665	20	2H11-P922	RPS TRIP UNIT	H-16249	CONTROL
000666	20	2H11-P923	RPS TRIP UNIT	H-16249	CONTROL
000667	20	2H11-P924	RPS TRIP UNIT	H-16249	CONTROL
000668	20	2H11-P925	ECCS TRIP UNIT	H-16249	CONTROL
000669	20	2H11-P926	ECCS TRIP UNIT	H-16249	CONTROL
000670	20	2H11-P927	ECCS TRIP UNIT	H-16249	CONTROL
000671	20	2H11-P928	ECCS TRIP UNIT	H-16249	CONTROL
000672	18	2H21-P002	REACTOR WAT	H-26100	REACTOR
000673	18	2H21-P016	MAIN STEAM F	H-27279	REACTOR
000674	18	2H21-P018	RHR INST RACK	H-27267	REACTOR
000675	18	2H21-P036	HPCI SYS LOCAL	H-27281	REACTOR
000676	20	2H21-P052	HPCI TEST VLV	H-27271	REACTOR
000677	20	2H21-P173	SHUTDOWN IN	H-27284	REACTOR
000678	20	2H21-P200	DIESEL GEN 2A	H-23071	DIESEL
000679	20	2H21-P202	DIESEL GEN 2C	H-23071	DIESEL
000680	18	2H21-P220	TURBINE BUILD	H-23067	TURBINE
000681	18	2H21-P225	TURBINE BUILD	H-23067	TURBINE
000682	20	2H21-P230	RELAY PANEL 2	H-23071	DIESEL
000684	20	2H21-P232	RELAY PANEL 2	H-23023	DIESEL
000685	20	2H21-P245	600 VOLT BUS	H-23240	CONTROL
000686	20	2H21-P246	600 VOLT BUS	H-23240	CONTROL
000687	20	2H21-P248	250 VOLT DC S	H-23240	CONTROL
000688	20	2H21-P249	250 VOLT DC S	H-23240	CONTROL
000689	20	2H21-P255	DG FUEL PMP	H-23071	DIESEL
000690	20	2H21-P256	DG FUEL PMP	H-23071	DIESEL
000691	20	2H21-P257	D/G 2A HT/VEN	H-23071	DIESEL
000692	20	2H21-P259	D/G 2C HT/VEN	H-23071	DIESEL
000693	20	2H21-P260	SWGR 2E RM H	H-23071	DIESEL
000694	20	2H21-P262	SWGR 2G RM H	H-23023	DIESEL
000695	20	2H21-P266	MOV CONTROL	H-23027	INTAKE
000696	20	2H21-P267	MOV CONTROL	H-23027	INTAKE
000697	20	2H21-P303	DG 2A LOADIN	H-23340	DIESEL
000698	20	2H21-P305	DG 2C LOADIN	H-23071	DIESEL
000699	18	2H21-P401	CS INSTRUMEN	H-26096	REACTOR
000700	18	2H21-P404A	RPV LVL/PRESS	H-26100	REACTOR
000701	18	2H21-P404B	RPV LVL/PRESS	H-26100	REACTOR
000702	18	2H21-P404C	RPV LVL/PRESS	H-26100	REACTOR

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000703	18	2H21-P404D	RPV LVL/PRESS	H-26100	REACTOR
000704	18	2H21-P404E	RPV LVL/PRESS	H-26100	REACTOR
000705	18	2H21-P405A	RPV LVL/PRESS	H-26100	REACTOR
000706	18	2H21-P405B	RPV LVL/PRESS	H-26100	REACTOR
000707	18	2H21-P405C	RPV LVL/PRESS	H-26100	REACTOR
000709	18	2H21-P405E	RPV LVL/PRESS	H-26100	REACTOR
000708	18	2H21-P405D	RPV LVL/PRESS	H-26100	REACTOR
000710	18	2H21-P409	JET PUMP INST	H-26098	REACTOR
000711	18	2H21-P410	JET PUMP INST	H-26098	REACTOR
000712	18	2H21-P414A	HPCI INSTR RAC	H-26096	REACTOR
000713	18	2H21-P414B	HPCI INSTR RAC	H-26096	REACTOR
000715	18	2H21-P415B	MAIN STM FLO	H-26098	REACTOR
000714	18	2H21-P415A	MAIN STM FLO	H-26098	REACTOR
000716	18	2H21-P418A	RHR INSTRUME	H-26096	REACTOR
000717	18	2H21-P418B	RHR INSTRUME	H-26096	REACTOR
000718	18	2H21-P419	CS INSTRUMEN	H-26096	REACTOR
000719	18	2H21-P421A	RHR INSTRUME	H-26096	REACTOR
000720	18	2H21-P421B	RHR INSTRUME	H-26096	REACTOR
000721	18	2H21-P425A	RHR INSTRUME	H-26096	REACTOR
000722	18	2H21-P425B	RHR INSTRUME	H-26098	REACTOR
000723	18	2H21-P434	HPCI INSTRUM	H-26098	REACTOR
000724	20	2R43-P001A	DIESEL GEN 2A	H-23022	DIESEL
000725	20	2C82-P001	REMOTE SHUT	H-27284	REACTOR
000726	20	2R43-P001C	DIESEL GEN 2C		DIESEL
000727	20	2U61-P001	LEAK DETECTIO	H-23240	CONTROL
000728	20	2U61-P002	LEAK DETECTIO	H-23240	CONTROL
000729	20	2U61-P003	LEAK DETECTIO	H-23240	CONTROL
000730	20	2U61-P004	LEAK DETECTIO	H-23240	CONTROL
000731	20	2X43-P003A	CO2 ZONE 1 CO	H-23747	DIESEL
000732	20	2X43-P003B	CO2 ZONE 2 CO	H-23747	DIESEL
000506	01	2R27-S096	LOCAL STARTER	H-27281	REACTOR
000740	08B	2C11-D001-117	PILOT SCRAM S	H-26006	REACTOR
000741	08B	2C11-D001-118	PILOT SCRAM S	H-26006	REACTOR
000742	08B	2C11-D001-120	ROD POSITION	H-26006	REACTOR
000745	08B	2C11-D001-123	ROD POSITION	H-26006	REACTOR
000744	08B	2C11-D001-122	ROD POSITION	H-26006	REACTOR
000743	08B	2C11-D001-121	ROD POSITION	H-26006	REACTOR
000746	0	2C11-D001-125	SCRAM ACCUM	H-26006	REACTOR
000747	07	2C11-D001-126	SCRAM INLET V	H-26006	REACTOR
000748	07	2C11-D001-127	SCRAM INLET V	H-26006	REACTOR
000749	08B	2C11-D001-120	ROD POSITION	H-26006	REACTOR
000750	08B	2C11-D001-121	ROD POSITION	H-26006	REACTOR

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NUMBER	CLASS	MARK_NO	DESCRIPT	DRAWING	BUILDING
000751	08B	2C11-D001-122	ROD POSITION	H-26006	REACTOR
000752	08B	2C11-D001-123	ROD POSITION	H-26006	REACTOR
000753	0	2C11-D001-125	SCRAM ACCUM	H-26006	REACTOR
000754	07	2C11-D001-126	SCRAM INLET V	H-26006	REACTOR
000755	07	2C11-D001-127	SCRAM INLET V	H-26006	REACTOR
000756	0	2L48-D134	D/G RM 2A FIR	H-23395	DIESEL
000757	0	2L48-D137	D/G RM 2C FIR	H-23395	DIESEL
000758	0	2X41-C024A	D/G BATT RM 2	H-23395	DIESEL
000759	0	2X41-C024B	D/G BATT RM 2	H-23395	DIESEL
000760	0	2X41-C024C	D/G BATT RM 2	H-23395	DIESEL
000761	0	2X41-C024D	D/G BATT RM 2	H-23395	DIESEL
000762	0	2X41-C030A	D/G RM 2A FIR	H-23395	DIESEL
000763	0	2X41-C030B	D/G RM 2C FIR	H-23395	DIESEL
000764	0	2X41-C030C	D/G RM 2A FIR	H-23395	DIESEL
000765	0	2X41-C030D	D/G RM 2C FIR	H-23395	DIESEL
000767	18	2B21-N093B	RPV LEVEL 8 LT	H-26001	REACTOR
000768	18	2C71-N050C	DRYWELL PRES	H-28001	REACTOR
000769	18	2C71-N050D	DRYWELL PRES	H-28001	REACTOR
000770	18	2E11-N094A	DRYWELL PRES	H-26015	REACTOR
000771	18	2E11-N094B	DRYWELL PRES	H-26014	REACTOR
000772	18	2E11-N094C	DRYWELL PRES	H-26015	REACTOR
000773	18	2E11-N094D	DRYWELL PRES	H-26014	REACTOR
000774	01	2R24-S012A	600 V AC MCC		REACTOR
000775	0	2R34-S005B	SURGE PAK FO	H-23699	INTAKE
000776	0	2R34-S005A	SURGE PAK FO	H-23698	INTAKE
000777	0	2R34-S006A	SURGE PAK FO	H-27656	INTAKE
000778	0	2R34-S006D	SURGE PAK FO	H-27656	INTAKE
000779	0	2R34-S006A	SURGE PAK FO	H-27656	INTAKE
000780	0	2R34-S006D	SURGE PAK FO	H-27656	INTAKE
000781	20	2C82-P001	REMOTE SHUT	H-27284	REACTOR
000782	18	2H21-P002	REACTOR WAT	H-26100	REACTOR
000783	20	2H11-P601	REAC CNTMT C	H-13138	CONTROL
000784	20	2H11-P603	REAC CONTROL	H-23258	CONTROL
000785	20	2H11-P606	STARTUP NEUT	H-23259	CONTROL
000786	20	2H11-P608	RWR RNGE NE	H-23259	CONTROL
000787	20	2H11-P609	CH A PRI ISOL &	H-23259	CONTROL
000788	20	2H11-P611	CH B PRI ISOL &	H-23247	CONTROL
000789	20	2H11-P628	ADS RELAY PAN	H-23258	CONTROL
000790	20	2H11-P650	TURB FDWTR 7	H-23258	CONTROL
000791	20	2H11-P652	DSL GEN & EM		CONTROL
000792	20	2H11-P656	TURB AUX SYST	H-23257	CONTROL
000793	20	2H11-P664	MSIV LEAK CTR		CONTROL

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NUMBER	CLASS	MARK NO	DESCRIPT	DRAWING	BUILDING
000794	20	2H11-P674	START UP XFM		CONTROL
000795	20	2H11-P700	ANALOG VNT L	H-23246	CONTROL
000683	20	2H21-P231	RELAY PANEL 2	H-23071	DIESEL
000796	18	2E11-N094A	DRYWELL PRES	H-26015	REACTOR
000800	18	2E11-N094A	DRYWELL PRES	H-26015	REACTOR
000804	18	2E11-N094A	DRYWELL PRES	H-26015	REACTOR
000797	18	2E11-N094C	DRYWELL PRES	H-26015	REACTOR
000801	18	2E11-N094C	DRYWELL PRES	H-26015	REACTOR
000805	18	2E11-N094C	DRYWELL PRES	H-26015	REACTOR
000798	18	2E11-N094B	DRYWELL PRES	H-26014	REACTOR
000802	18	2E11-N094B	DRYWELL PRES	H-26014	REACTOR
000799	18	2E11-N094D	DRYWELL PRES	H-26014	REACTOR
000803	18	2E11-N094D	DRYWELL PRES	H-26014	REACTOR
000205	07	2E11-F065A	RHR PUMP 2A	H-26015	REACTOR

Table 4.A1-1 (Sheet 1 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2B21-F013A		C	C	1 2 3	RPV Safety/Relief Valve - ADS	2201		H-26000	148 AZ235
2B21-F013B		C	VAR	1 3	RPV Safety/Relief Valve - LLS	2201		H-26000	148 AZ235
2B21-F013B		C	C	2	RPV Safety/Relief Valve - LLS	2201		H-26000	148 AZ235
2B21-F013C		C	C	1 2 3	RPV Safety/Relief Valve - ADS	2201		H-26000	148 AZ095
2B21-F013D		C	C	1 3	RPV Safety/Relief Valve - LLS	2201		H-26000	148 AZ135
2B21-F013D		C	VAR	2	RPV Safety/Relief Valve - LLS	2201		H-26000	148 AZ135
2B21-F013E		C	C	1 2 3	RPV Safety/Relief Valve - ADS	2201		H-26000	148 AZ235
2B21-F013F		C	VAR	1 3	RPV Safety/Relief Valve - LLS	2201		H-26000	148 AZ260
2B21-F013F		C	C	2	RPV Safety/Relief Valve - LLS	2201		H-26000	148 AZ260
2B21-F013G		C	C	1 3	RPV Safety/Relief Valve - LLS	2201		H-26000	148 AZ095
2B21-F013G		C	VAR	2	RPV Safety/Relief Valve - LLS	2201		H-26000	148 AZ095
2B21-F013H		C	C	1 2 3	RPV Safety/Relief Valve - ADS	2201		H-26000	148 AZ135
2B21-F013K		C	C	1 2 3	RPV Safety/Relief Valve - ADS	2201		H-26000	148 AZ260
2B21-F013L		C	C	1 2 3	RPV Safety/Relief Valve - ADS	2201		H-26000	148 AZ270
2B21-F013M		C	C	1 2 3	RPV Safety/Relief Valve - ADS	2201		H-26000	148 AZ090
2B21-F016		C	C	H	Steam Line Drain Inboard Containment Isolation Valve (MOV)	2201	H-24612	H-26000	127 AZ170
2B21-F019		C	C	H	Steam Line Drain Outboard Containment Isolation Valve (MOV)	2205	H-24623	H-26000	130 RBR19
2B21-F022A		C	C	1 3	Inboard MSIV	2201		H-26000	127 AZ190
2B21-F022B		C	C	1 3	Inboard MSIV	2201		H-26000	127 AZ220
2B21-F022C		C	C	1 3	Inboard MSIV	2201		H-26000	127 AZ160
2B21-F022D		C	C	1 3	Inboard MSIV	2201		H-26000	127 AZ175
2B21-F028A		C	C	2	Outboard MSIV	2205		H-26000	130 RBR19
2B21-F028B		C	C	2	Outboard MSIV	2205		H-26000	130 RBR18
2B21-F028C		C	C	2	Outboard MSIV	2205		H-26000	130 RBR20
2B21-F028D		C	C	2	Outboard MSIV	2205		H-26000	130 RBR19
2B21-N031A		ON	ON	3	RPV Water Level Transmitter (2H21-P004)	2203		H-26001	158 RER16
2B21-N036		ON	ON	3	RPV Shroud Water Level Indicator (2H21-P010)	2203	H-24623	H-26001	130 RFR16
2B21-N042A		ON	ON	3	RPV Water Level Indicator (2H21-P004)	2203		H-26001	158 RER16
2B21-N085A		ON	ON	1	RPV Shroud Water Level Transmitter (2H21-P409) (Subcomponent)	2203	H-24623	H-26001	130 RGR15
2B21-N085B		ON	ON	2	RPV Shroud Water Level Transmitter (2H21-P410) (Subcomponent)	2205	H-24625	H-26001	130 RHR22
2B21-N090A		ON	ON	1	RPV Pressure Transmitter (RHR/Core Spray Permissive) (2H21-P404A) (Subcomponent)	2203	H-24627	H-26001	158 RHR18
2B21-N090B		ON	ON	2	RPV Low Pressure Transmitter (2H21-P410) (Subcomponent)	2205	H-24625	H-26001	130 RHR22
2B21-N090C		ON	ON	1	RPV Low Pressure Transmitter (2H21-P409) (Subcomponent)	2203	H-24623	H-26001	130 RGR15
2B21-N090D		ON	ON	2	RPV Pressure Transmitter (RHR/Core Spray Permissive) (2H21-P405A) (Subcomponent)	2205	H-24629	H-26001	158 RHR22
2B21-N091A		ON	ON	1	RPV Water Level Transmitter for RCIC Initiation (2H21-P404A) (Subcomponent)	2203	H-24627	H-26001	158 RHR18
2B21-N091B		ON	ON	2	RPV Water Level Transmitter for HPCI Initiation (2H21-P405A) (Subcomponent)	2205	H-24629	H-26001	158 RHR22
2B21-N091C		ON	ON	1	RPV Water Level Transmitter for RCIC Initiation (2H21-P404A) (Subcomponent)	2203		H-26001	158 RHR18
2B21-N091D		ON	ON	2	RPV Water Level Transmitter for HPCI Initiation (2H21-P405A) (Subcomponent)	2205		H-26001	158 RHR22
2B21-N093A		ON	ON	1	RPV Water Level Transmitter (Local) (Subcomponent)	2205		H-26001	158 RHR22

(1) Notes are listed on page 17 of 17.
(2) Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
(3) For primary component / subcomponent cross-reference, see Table 4.A1-2.
(4) For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 2 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2B21-N093B		ON	ON	2	RPV Water Level Transmitter (Local) (Subcomponent)	2203	H-24627	H-26001	158 RHR17
2B21-N095A		ON	ON	1	RPV Water Level Transmitter (2H21-P405B) (Subcomponent)	2203		H-26001	158 RHR18
2B21-N095B		ON	ON	2	RPV Water Level Transmitter (2H21-P405B) (Subcomponent)	2205	H-24627	H-26001	158 RHR22
2B21-N120A	k	ON	ON	1	RPV LLS Pressure Transmitter (2H21-P404A)	2203		H-26001	158 RHR16
2B21-N120B	k	ON	ON	2	RPV LLS Pressure Transmitter (2H21-P405A)	2205		H-26001	158 RHR22
2B21-N120C	k	ON	ON	1	RPV LLS Pressure Transmitter (2H21-P404B)	2203		H-26001	158 RHR16
2B21-N120D	k	ON	ON	2	RPV LLS Pressure Transmitter (2H21-P405B)	2205		H-26001	158 RHR22
2B21-N122A	k	ON	ON	1	RPV LLS Pressure Transmitter (2H21-P404A)	2203		H-26001	158 RHR16
2B21-N122B	k	ON	ON	2	RPV LLS Pressure Transmitter (2H21-P405A)	2205		H-26001	158 RHR22
2B21-N122C	k	ON	ON	1	RPV LLS Pressure Transmitter (2H21-P404B)	2203		H-26001	158 RHR16
2B21-N122D	k	ON	ON	2	RPV LLS Pressure Transmitter (2H21-P405B)	2205		H-26001	158 RHR22
2B21-N127A	k	ON	ON	1	RPV Pressure Transmitter (2H21-P404B)	2203		H-26001	158 RHR16
2B21-N127B	k	ON	ON	2	RPV Pressure Transmitter (2H21-P405B)	2205		H-26001	158 RHR23
2B21-N127C	k	ON	ON	1	RPV Pressure Transmitter (2H21-P404C)	2203		H-26001	158 RHR16
2B21-N127D	k	ON	ON	2	RPV Pressure Transmitter (2H21-P405D)	2205		H-26001	158 RHR23
2B21-N620A	k	ON	ON	1	RPV Low Pressure MTU	0024		H-26001	2H11-P925
2B21-N620B	k	ON	ON	2	RPV Low Pressure MTU	0024		H-26001	2H11-P926
2B21-N620C	k	ON	ON	1	RPV Low Pressure MTU	0024		H-26001	2H11-P925
2B21-N620D	k	ON	ON	2	RPV Low Pressure MTU	0024		H-26001	2H11-P926
2B21-N621A	k	ON	ON	1	RPV Low Pressure STU	0024		H-26001	2H11-P925
2B21-N621B	k	ON	ON	2	RPV Low Pressure STU	0024		H-26001	2H11-P926
2B21-N621C	k	ON	ON	1	RPV Low Pressure STU	0024		H-26001	2H11-P925
2B21-N621D	k	ON	ON	2	RPV Low Pressure STU	0024		H-26001	2H11-P926
2B21-N622A	k	ON	ON	1	RPV Low Pressure STU	0024		H-26001	2H11-P925
2B21-N622B	k	ON	ON	2	RPV Low Preasure STU	0024		H-26001	2H11-P926
2B21-N622C	k	ON	ON	1	RPV Low Pressure MTU	0024		H-26001	2H11-P925
2B21-N622D	k	ON	ON	2	RPV Low Pressure MTU	0024		H-26001	2H11-P926
2B21-N641B	k	ON	ON	2	RPV Low Pressure STU	0024		H-26001	2H11-P928
2B21-N641C	k	ON	ON	1	RPV Low Pressure STU	0024		H-26001	2H11-P927
2B21-N642A	k	ON	ON	1	RPV Low Pressure STU	0024		H-26001	2H11-P925
2B21-N642B	k	ON	ON	2	RPV Low Pressure STU	0024		H-26001	2H11-P926
2B21-N643A	k	ON	ON	1	RPV Low Pressure MTU	0024		H-26001	2H11-P925
2B21-N643B	k	ON	ON	2	RPV Low Pressure MTU	0024		H-26001	2H11-P926
2B21-N685A		O/ON	O/ON	1	RPV Shroud Water Level 0 MTU (Subcomponent)	0024		H-26001	2H11-P925
2B21-N685B		O/ON	O/ON	2	RPV Shroud Water Level 0 MTU (Subcomponent)	0024		H-26001	2H11-P926
2B21-N690A		O/ON	VAR/ON	1	RPV Press Channel A Indication MTU to 2B21-R623A (Subcomponent)	0024		H-26001	2H11-P927
2B21-N690B		O	VAR	2	RPV Low Pressure MTU (to Core Spray/RHR) (Subcomponent)	0024		H-26001	2H11-P928
2B21-N690C		O	VAR	1	RPV Low Pressure MTU (to Core Spray/RHR) (Subcomponent)	0024		H-26001	2H11-P927
2B21-N690D		O/ON	VAR/ON	2	RPV Press Channel B Indication MTU to 2B21-R623B (Subcomponent)	0024		H-26001	2H11-P928

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 3 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2B21-N691A		O/ON	O/ON	1	RPV Water Level Indication MTU to 2B21-R604A (Subcomponent)	0024		H-26001	2H11-P925
2B21-N691B		O/ON	O/ON	2	RPV Water Level Indication MTU to 2B21-R604B (Subcomponent)	0024		H-26001	2H11-P926
2B21-N691C		ON	ON	1	RPV Water Level MTU (Subcomponent)	0024		H-26001	2H11-P927
2B21-N691D		ON	ON	2	RPV Water Level MTU (Subcomponent)	0024		H-26001	2H11-P928
2B21-N692A		O	VAR	1	RPV Water Level 2 STU for RCIC Initiation (Subcomponent)	0024		H-26001	2H11-P925
2B21-N692B		O	VAR	2	RPV Water Level 2 STU for HPCI Initiation (Subcomponent)	0024		H-26001	2H11-P926
2B21-N692C		O	VAR	1	RPV Water Level 2 STU for RCIC Initiation (Subcomponent)	0024		H-26001	2H11-P927
2B21-N692D		O	VAR	2	RPV Water Level 2 STU for HPCI Initiation (Subcomponent)	0024		H-26001	2H11-P928
2B21-N693A		O	VAR	1	RPV Water Level 8 MTU for RCIC Shutoff (Subcomponent)	0024		H-26001	2H11-P925
2B21-N693B		O	VAR	2	RPV Water Level 8 MTU for HPCI Shutoff (Subcomponent)	0024		H-26001	2H11-P926
2B21-N693C		O	VAR	1	RPV Water Level 8 STU for RCIC Shutoff (Subcomponent)	0024		H-26001	2H11-P925
2B21-N693D		O	VAR	2	RPV Water Level 8 STU for HPCI Shutoff (Subcomponent)	0024		H-26001	2H11-P926
2B21-N695A		O	VAR	1	RPV Water Level 3 MTU (Subcomponent)	0024		H-26001	2H11-P925
2B21-N695B		O	VAR	2	RPV Water Level 3 MTU (Subcomponent)	0024		H-26001	2H11-P926
2B21-N697A	k	O	VAR	1	RPV Low Pressure MTU	0024		H-26000	2H11-P927
2B21-N697B	k	O	VAR	2	RPV Low Pressure MTU	0024		H-26000	2H11-P928
2B21-N697C	k	O	VAR	1	RPV Low Pressure MTU	0024		H-26000	2H11-P927
2B21-N697D	k	O	VAR	2	RPV Low Pressure MTU	0024		H-26000	2H11-P928
2B21-N697E	k	O	VAR	1	RPV Low Pressure STU	0024		H-26000	2H11-P927
2B21-N697F	k	O	VAR	1	RPV Low Pressure STU	0024		H-26000	2H11-P927
2B21-N697G	k	O	VAR	1	RPV Low Pressure STU	0024		H-26000	2H11-P927
2B21-N697H	k	O	VAR	2	RPV Low Pressure STU	0024		H-26000	2H11-P928
2B21-N697J	k	O	VAR	2	RPV Low Pressure STU	0024		H-26000	2H11-P928
2B21-N697K	k	O	VAR	2	RPV Low Pressure STU	0024		H-26000	2H11-P928
2B21-N697L	k	O	VAR	1	RPV Low Pressure STU	0024		H-26000	2H11-P927
2B21-N697M	k	O	VAR	2	RPV Low Pressure STU	0024		H-26000	2H11-P928
2B21-R004A		ON	ON	3	RPV Pressure Indicator (2H21-P004)	2203	H-26100	H-26001	158 RER16
2B21-R004B		ON	ON	3	RPV Pressure Indicator (2H21-P005)	2205	H-26100	H-26001	158 RHR22
2B21-R604A		ON	ON	1	RPV Water Level Indicator	0024	H-24613	H-26001	2H11-P603
2B21-R604B		ON	ON	2	RPV Water Level Indicator	0024	H-24613	H-26001	2H11-P603
2B21-R623A		ON	ON	1	RPV Level/Pressure Recorder	0024	H-24613	H-26001	2H11-P601
2B21-R623B		ON	ON	2	RPV Level/Pressure Recorder	0024	H-24613	H-26001	2H11-P601
2C32-K660	b	ON	ON	1 2	Feedwater Inst. Loop Power Supply (Subcomponent)	0024	H-24613	NAS-25398	2H11-P612
2C32-N010	b	ON	ON	1 2	RPV Water Level Transmitter (Subcomponent)	2205	H-24627	H-26001	158 RBR17
2C32-R655	b	ON	ON	1 2	RPV Water Level Indicator	0024	H-24613	H-26001	2H11-P602
2C82-K002		ON	ON	3	Inverter for RCIC REM S/D Flow Cont (2C82-P001) (Subcomponent)	2203	H-24623		130 RAR15
2C82-K010		ON	ON	3	Power Supply for REM S/D Inst (2C82-P001) (Subcomponent)	2203	H-24623	H-26014	130 RAR15

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 4 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2C82-N001		ON	ON	3	RHR System Flow Transmitter (Local) (Subcomponent)	2205		H-26014	087 RLR24
2C82-N005		ON	ON	3	RPV Level Transmitter (Local) (Subcomponent)	2203		H-26001	158 RBR17
2C82-N006		ON	ON	3	RPV Pressure Transmitter (Local) (Subcomponent)	2203		H-26001	158 RBR17
2C82-R001		ON	ON	3	RCIC Flow Indicating Controller (Subcomponent)	2203			130 RAR17
2C82-R004		ON	ON	3	RHR System Flow Indicator (2C82-P001)	2203	H-24623	H-26014	130 RAR17
2C82-R005		ON	ON	3	RPV Level Indicator (2C82-P001)	2203	H-24623	H-26001	130 RAR17
2C82-R006		ON	ON	3	RPV Pressure Indicator (2C82-P001)	2203	H-24623	H-26001	130 RAR17
2E11-C001A		OFF	ON	1	RHR Service Water Pump 2A	0501	H-24633	H-21039	INTAKE
2E11-C001B		OFF	ON	2 3	RHR Service Water Pump 2B	0501	H-24633	H-21039	INTAKE
2E11-C002A		OFF	ON	1	RHR Pump 2A	2203	H-24618	H-26015	087 RLR14
2E11-C002B		OFF	ON	2 3	RHR Pump 2B	2205	H-24621	H-26014	087 RLR24
2E11-F003A		O	O	1	RHR Heat Exchanger A Discharge Valve (MOV)	2203	H-24618	H-26015	112 RLR14
2E11-F003B		O	O	2 3	RHR Heat Exchanger B Discharge Valve (MOV)	2205	H-24621	H-26014	087 RLR24
2E11-F004A		O	O	1	RHR Pump 2A Torus Suction Valve (MOV)	2203	H-24618	H-26015	087 RLR14
2E11-F004B		O	O	2	RHR Pump 2B Torus Suction Valve (MOV)	2205	H-24621	H-26014	087 RLR24
2E11-F004B		O	VAR	3	RHR Pump 2B Torus Suction Valve (MOV)	2205	H-24621	H-26014	087 RLR24
2E11-F006A		C	C	1 3	RHR Pump 2A SDC Suction Valve (MOV)	2203	H-24618	H-26015	112 RLR14
2E11-F006B		C	C	2	RHR Pump 2B SDC Suction Valve (MOV)	2205	H-24621	H-26014	112 RLR24
2E11-F006B		C	VAR	3	RHR Pump 2B SDC Suction Valve (MOV)	2205	H-24621	H-26014	112 RLR24
2E11-F006C		C	C	3	RHR Pump 2C SDC Suction Valve (MOV)	2203	H-24618	H-26015	109 RLR14
2E11-F006D		C	C	3	RHR Pump 2D SDC Suction Valve (MOV)	2205	H-24621	H-26014	110 RLR24
2E11-F007A		O	VAR	1	RHR Pumps 2A and 2C Minimum Flow Bypass Valve (MOV)	2203	H-24618	H-26015	087 RLR14
2E11-F007B		O	VAR	2 3	RHR Pumps 2B and 2D Minimum Flow Bypass Valve (MOV)	2205	H-24621	H-26014	087 RLR24
2E11-F008		C	O	3	RHR SDC Suction Outboard Containment Isolation Valve (MOV)	2203	H-24623	H-26015	130 RJR19
2E11-F008	f	C	C	H	RHR SDC Suction Outboard Containment Isolation Valve (MOV)	2203	H-24623	H-26015	130 RJR19
2E11-F009		C	O	3	RHR SDC Suction Inboard Containment Isolation Valve (MOV)	2201		H-26015	127 AZ340
2E11-F009	f	C	C	H	RHR SDC Suction Inboard Containment Isolation Valve (MOV)	2201		H-26015	127 AZ340
2E11-F010	g	C	C	1 2 3	RHR Heat Exchanger Header Crosstie Valve (MOV)	2203	H-26110	H-26015	118 RHR19
2E11-F011A		C	C	1	RHR Heat Exchanger A Drain to Suppression Pool Valve (MOV)	2203	H-24618	H-26015	087 RLR14
2E11-F011B		C	C	2 3	RHR Heat Exchanger B Drain to Suppression Pool Valve (MOV)	2205	H-24621	H-26014	087 RLR24
2E11-F015A		C	O	1	RHR LPCI Inboard Discharge Valve (MOV)	2203	H-24623	H-26015	130 RJR18
2E11-F015A		C	C	H	RHR LPCI Inboard Discharge Valve (MOV)	2203	H-24623	H-26015	130 RJR18
2E11-F015B		C	O	2 3	RHR LPCI Inboard Discharge Valve (MOV)	2205	H-24625	H-26014	130 RJR21
2E11-F015B		C	C	H	RHR LPCI Inboard Discharge Valve (MOV)	2205	H-24625	H-26014	130 RJR21
2E11-F016A		C	C	1	Containment Spray Outboard Isolation Valve (MOV)	2205	H-24625	H-26015	130 RJR21
2E11-F016B		C	C	2 3	Containment Spray Outboard Isolation Valve (MOV)	2205	H-24629	H-26014	158 RFR23
2E11-F017A		O	O	1	RHR LPCI Outboard Discharge Valve (MOV)	2203	H-24623	H-26015	130 RJR18
2E11-F017B		O	O	2 3	RHR LPCI Outboard Discharge Valve (MOV)	2205	H-24625	H-26014	130 RJR21

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 5 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2E11-F026A	g	C	C	1 3	RHR Heat Exchanger A to RCIC Valve (MOV)	2203	H-24618	H-26015	110 RLR14
2E11-F026B	g	C	C	2 3	RHR Heat Exchanger B to RCIC Valve (MOV)	2205	H-24621	H-26014	110 RLR24
2E11-F028A		C	C	1	Torus Spray/RHR Test Line Outboard Isolation Valve (MOV)	2203	H-24616	H-26015	124 RHR14
2E11-F028B		C	C	2 3	Torus Spray/RHR Test Line Outboard Isolation Valve (MOV)	2205	H-24619	H-26014	124 RHR24
2E11-F047A		O	O	1	RHR Heat Exchanger A Inlet Valve (MOV)	2203	H-24618	H-26015	116 RLR14
2E11-F047B		O	O	2 3	RHR Heat Exchanger B Inlet Valve (MOV)	2205	H-24621	H-26014	116 RLR24
2E11-F048A		O	VAR	1	RHR Heat Exchanger A Bypass Valve (MOV)	2203	H-24618	H-26015	112 RLR14
2E11-F048B		O	VAR	2 3	RHR Heat Exchanger B Bypass Valve (MOV)	2205	H-24621	H-26014	115 RLR24
2E11-F049		C	C	2 3	RHR to Radwaste Isolation Valve (MOV)	2205	H-24622	H-26014	121 RJR21
2E11-F065A		O	O	1	RHR Pump 2A Suppression Pool Suction Valve (AOV)	2203	H-24616	H-26015	087 RHR16
2E11-F065B		O	O	2 3	RHR Pump 2B Suppression Pool Suction Valve (AOV)	2205	H-24619	H-26014	087 RHR22
2E11-F068A		C	VAR	1	RHR Heat Exchanger A Service Water Flow Control Valve (MOV)	2203	H-24618	H-21039	110 RHR14
2E11-F068B		C	VAR	2 3	RHR Heat Exchanger B Service Water Flow Control Valve (MOV)	2205	H-24621	H-21039	110 RHR24
2E11-F073A		C	C	1	RHR Service Water to RHR Crosstie Valve (MOV)	2203	H-24616	H-26015	123 RHR15
2E11-F073B		C	C	2 3	RHR Service Water to RHR Crosstie Valve (MOV)	2205	H-24619	H-26014	087 RHR21
2E11-F104A		C	C	1	RHR Heat Exchanger A Vent Valve (MOV)	2203	H-24618	H-26015	120 RLR14
2E11-F104B		C	C	2 3	RHR Heat Exchanger B Vent Valve (MOV)	2205	H-24621	H-26014	120 RLR24
2E11-F119A		C	C	1	RHR Service Water Crosstie Valve (MOV)	2203	H-24622	H-21039	121 RLR18
2E11-F119B		C	C	2 3	RHR Service Water Crosstie Valve (MOV)	2205	H-24622	H-21039	122 RLR20
2E11-F122A		C	C	H	LPCI Discharge Check Valve Pressure Equalizing Valve (AOV)	2201		H-26015	148 AZ315
2E11-F122B		C	C	H	LPCI Discharge Check Valve Pressure Equalizing Valve (AOV)	2201		H-26014	148 AZ045
2E11-K071		ON	ON	3	Square Root Converter FOR 2E11-N071 (2H21-P173) (Subcomponent)	2203	H-24623	H-21039	130 RAR17
2E11-K073		ON	ON	3	Power Source for 2E11-K071 & 2E11-N071 (2H21-P173) (Subcomponent)	2203	H-24623	H-21039	130 RAR17
2E11-K600A		ON	ON	1	RHR Heat Exch A Disc Header Flow Square Root Conv (Subcomponent)	0024		H-26015	2H11-P613
2E11-K600B		ON	ON	2	RHR Heat Exch B Disc Header Flow Square Root Conv (Subcomponent)	0024		H-26014	2H11-P612
2E11-K603A		ON	ON	1	RHR Ht Exc A Disc HDR Flow Loop Pwr Supply (Subcomponent)	0024		H-26015	2H11-P613
2E11-K603B		ON	ON	2	RHR Ht Exc B Disc HDR Flow Loop Pwr Supply (Subcomponent)	0024		H-26015	2H11-P612
2E11-N003B		ON	ON	3	RHR Heat Exchanger B Tube to Shell Diff Press Indicator (2H21-P021)	2205	H-24621	H-26014	093 RLR24
2E11-N007A		ON	ON	1	RHR Heat Exchanger A Service Water Inlet Flow Transmitter (2H21-P418A) (Subcomponent)	2203	H-24618	H-21039	096 RLR14
2E11-N007B		ON	ON	2	RHR Heat Exchanger B Service Water Inlet Flow Transmitter (2H21-P421A) (Subcomponent)	2205	H-24621	H-21039	087 RLR24
2E11-N015A		ON	ON	1	RHR Heat Exchanger A Discharge Header Flow Transmitter (2H21-P418A) (Subcomponent)	2203	H-24618	H-26015	102 RLR14
2E11-N015B		ON	ON	2	RHR Heat Exchanger B Discharge Header Flow Transmitter (2H21-P421A) (Subcomponent)	2205	H-24621	H-26014	087 RLR24
2E11-N017A		C	O	1	RHR Heat Exchanger A Service Water Inlet Pressure Switch (Subcomponent)	2203	H-24618	H-21039	111 RHR14
2E11-N017B		C	O	2	RHR Heat Exchanger B Service Water Inlet Pressure Switch (Subcomponent)	2205	H-24621	H-21039	111 RHR24
2E11-N017C		C	O	1	RHR Heat Exchanger A Service Water Inlet Pressure Switch (Subcomponent)	2203	H-24618	H-21039	111 RHR14
2E11-N017D		C	O	2	RHR Heat Exchanger B Service Water Inlet Pressure Switch (Subcomponent)	2205	H-24621	H-21039	111 RHR24
2E11-N021B		C/ON	VAR/ON	3	RHR Heat Exc B Disc Header Flow Diff Press Ind Sw (Subcomponent)	2205	H-24621	H-26014	092 RLR23
2E11-N055A	k	ON	ON	1	RHR Pump High Pressure Transmitter (2H21-P418B)	2203		H-26015	096 RLR14
2E11-N055B	k	ON	ON	2	RHR Pump High Pressure Transmitter (2H21-P421B)	2205		H-26014	087 RLR24

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 6 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2E11-N055C	k	ON	ON	1	RHR Pump High Pressure Transmitter (2H21-P418B)	2203		H-26015	096 RLR14
2E11-N055D	k	ON	ON	2	RHR Pump High Pressure Transmitter (2H21-P421B)	2205		H-26014	087 RLR24
2E11-N056A	k	ON	ON	1	RHR Pump High Pressure Transmitter (2H21-P418B)	2203		H-26015	096 RLR14
2E11-N056B	k	ON	ON	2	RHR Pump High Pressure Transmitter (2H21-P421B)	2205		H-26014	087 RLR24
2E11-N056C	k	ON	ON	1	RHR Pump High Pressure Transmitter (2H21-P418B)	2203		H-26015	096 RLR14
2E11-N056D	k	ON	ON	2	RHR Pump High Pressure Transmitter (2H21-P421B)	2205		H-26014	087 RLR24
2E11-N071		ON	ON	3	RHR Heat Exchanger B Service Water Inlet Flow Transmitter (Local) (Subcomponent)	2205	H-27267	H-21039	097 RLR24
2E11-N082A		ON	ON	1	RHR Heat Exchanger A Discharge Header Flow Diff Press Trans (2H21-P418A)(Subcomponent)	2203	H-24618	H-26015	102 RLR14
2E11-N082B		ON	ON	2	RHR Heat Exchanger B Discharge Header Flow Diff Press Trans (2H21-P421A) (Subcomponent)	2205	H-24621	H-26014	087 RLR24
2E11-N094A	k	ON	ON	1	RHR High Drywell Pressure Transmitter (Local)	2203		H-26015	158 RER16
2E11-N094B	k	ON	ON	2	RHR High Drywell Pressure Transmitter (Local)	2205		H-26014	158 RHR21
2E11-N094C	k	ON	ON	1	RHR High Drywell Pressure Transmitter (Local)	2203		H-26015	158 RER16
2E11-N094D	k	ON	ON	2	RHR High Drywell Pressure Transmitter (Local)	2205		H-26014	158 RHR21
2E11-N104A		ON	ON	1	RHR Heat Exchanger A Service Water Inlet Flow Current Transmitter / Isolator (Subcomponent)	0024		H-21039	2H11-P612
2E11-N104B		ON	ON	2	RHR Heat Exchanger B Service Water Inlet Flow Current Transmitter / Isolator (Subcomponent)	0024		H-21039	2H11-P612
2E11-N655A	k	C	VAR	1	RHR Pump High Pressure MTU	0024		H-26015	2H11-P927
2E11-N655B	k	C	VAR	2	RHR Pump High Pressure MTU	0024		H-26014	2H11-P928
2E11-N655C	k	C	VAR	1	RHR Pump High Pressure MTU	0024		H-26015	2H11-P927
2E11-N655D	k	C	VAR	2	RHR Pump High Pressure MTU	0024		H-26014	2H11-P928
2E11-N656A	k	C	VAR	1	RHR Pump High Pressure MTU	0024		H-26015	2H11-P927
2E11-N656B	k	C	VAR	2	RHR Pump High Pressure MTU	0024		H-26014	2H11-P928
2E11-N656C	k	C	VAR	1	RHR Pump High Pressure MTU	0024		H-26015	2H11-P927
2E11-N656D	k	C	VAR	2	RHR Pump High Pressure MTU	0024		H-26014	2H11-P928
2E11-N682A		C	VAR	1	RHR Pumps 2A & 2C Minimum Flow Control MTU (Subcomponent)	0024		H-26015	2H11-P925
2E11-N682B		C	VAR	2	RHR Pumps 2B & 2D Minimum Flow Control MTU (Subcomponent)	0024		H-26014	2H11-P926
2E11-N694A	k	C	VAR	1	RHR High Drywell Pressure MTU	0024		H-26015	2H11-P927
2E11-N694B	k	C	VAR	2	RHR High Drywell Pressure MTU	0024		H-26014	2H11-P928
2E11-N694C	k	C	VAR	1	RHR High Drywell Pressure MTU	0024		H-26015	2H11-P927
2E11-N694D	k	C	VAR	2	RHR High Drywell Pressure MTU	0024		H-26014	2H11-P928
2E11-R071		ON	ON	3	RHR Heat Exchanger B Service Water Inlet Flow Indicator (2H21-P173)	2203	H-24623	H-21039	130 RAR17
2E11-R602A		ON	ON	1	RHR Heat Exchanger A Service Water Inlet Flow Indicator	0024	H-24613	H-21039	2H11-P601
2E11-R602B		ON	ON	2	RHR Heat Exchanger B Service Water Inlet Flow Indicator	0024	H-24613	H-21039	2H11-P601
2E11-R603A		ON	ON	1	RHR Heat Exchanger A Discharge Header Flow Indicator	0024	H-24613	H-26015	2H11-P601
2E11-R603B		ON	ON	2	RHR Heat Exchanger B Discharge Header Flow Indicator	0024	H-24613	H-26014	2H11-P601
2E21-C001A	m	OFF	ON	1	Core Spray Pump 2A	2203		H-26018	087 RLR14
2E21-C001B	e	OFF	ON	2	Core Spray Pump 2B	2205		H-26018	087 RLR24
2E21-F001A	m	O	O	1	Core Spray Pump 2A Outboard Torus Suction Valve (MOV)	2203		H-26018	087 RHR14
2E21-F001B	e	O	O	2	Core Spray Pump 2B Outboard Torus Suction Valve (MOV)	2205	H-24621	H-26018	095 RHR24

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 7 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path		Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2E21-F004A	m	O	O	1		Core Spray 2A to RPV Outboard Valve (MOV)	2203		H-26018	158 RFR17
2E21-F004B	e	O	O	2		Core Spray 2B to RPV Outboard Valve (MOV)	2205	H-24629	H-26018	158 RFR21
2E21-F005A	m	C	O	1		Core Spray 2A Containment Isolation Valve (MOV)	2203	H-24627	H-26018	158 RFR17
2E21-F005A		C	C		H	Core Spray 2A Containment Isolation Valve (MOV)	2203	H-24627	H-26018	158 RFR17
2E21-F005B	e	C	O	2		Core Spray 2B Containment Isolation Valve (MOV)	2205	H-24629	H-26018	158 RFR21
2E21-F005B		C	C		H	Core Spray 2B Containment Isolation Valve (MOV)	2205	H-24629	H-26018	158 RFR21
2E21-F015A	m	C	C	1		Core Spray Pump 2A Test Bypass Valve (MOV)	2203		H-26018	118 RLR15
2E21-F015B	e	C	C	2		Core Spray Pump 2B Test Bypass Valve (MOV)	2205	H-24621	H-26018	087 RLR23
2E21-F019A	m	O	O	1		Core Spray Pump 2A Inboard Torus Suction Valve (AOV)	2203		H-26018	087 RHR14
2E21-F019B	e	O	O	2		Core Spray Pump 2B Inboard Torus Suction Valve (AOV)	2205	H-24621	H-26018	087 RHR24
2E21-F031A	m	O	VAR	1		Core Spray Pump 2A Minimum Flow Bypass Valve (MOV)	2203		H-26018	087 RLR14
2E21-F031B	e	O	VAR	2		Core Spray Pump 2B Minimum Flow Bypass Valve (MOV)	2205	H-24621	H-26018	087 RLR24
2E21-F037A		C	C		H	Core Spray 2A Check Valve Pressure Equalizing Valve (AOV)	2201		H-26018	171 AZ090
2E21-F037B		C	C		H	Core Spray 2B Check Valve Pressure Equalizing Valve (AOV)	2201		H-26018	171 AZ090
2E21-K600A	m	ON	ON	1		CS Loop A Flow Instr Loop Power Supply (Subcomponent)	0024		H-26018	2H11-P613
2E21-K600B	e	ON	ON	2		CS Loop B Flow Instr Loop Power Supply (Subcomponent)	0024		H-26018	2H11-P612
2E21-N003A	m	ON	ON	1		Core Spray Loop A Flow Transmitter (2H21-P419) (Subcomponent)	2203		H-26018	087 RLR14
2E21-N003B	e	ON	ON	2		Core Spray Loop B Flow Transmitter (2H21-P419) (Subcomponent)	2205		H-26018	087 RLR24
2E21-N051A	m	ON	ON	1		Core Spray Loop A Flow Diff Press Trans (Local) (Subcomponent)	2203		H-26018	087 RLR14
2E21-N051B	e	ON	ON	2		Core Spray Loop B Flow Diff Press Trans (Local) (Subcomponent)	2205		H-26018	087 RLR24
2E21-N052A	m,k	ON	ON	1		Core Spray Loop A High Pressure Transmitter (2H21-P401)	2203		H-26018	087 RLR14
2E21-N052B	e,k	ON	ON	2		Core Spray Loop B High Pressure Transmitter (2H21-P419)	2205		H-26018	087 RLR24
2E21-N055A	m,k	ON	ON	1		Core Spray Loop A High Pressure Transmitter (2H21-P401)	2203		H-26018	087 RLR14
2E21-N055B	e,k	ON	ON	2		Core Spray Loop B High Pressure Transmitter (2H21-P419)	2205		H-26018	087 RLR24
2E21-N651A	m	C	VAR	1		Core Spray Pump 2A Minimum Flow Control MTU (Subcomponent)	0024		H-26018	2H11-P927
2E21-N651B	e	C	VAR	2		Core Spray Pump 2B Minimum Flow Control MTU (Subcomponent)	0024		H-26018	2H11-P928
2E21-N652A	m,k	C	VAR	1		Core Spray Loop A High Pressure MTU	0024		H-26018	2H11-P927
2E21-N652B	e,k	C	VAR	2		Core Spray Loop B High Pressure MTU	0024		H-26018	2H11-P928
2E21-N655A	m,k	C	VAR	1		Core Spray Loop A High Pressure MTU	0024		H-26018	2H11-P927
2E21-N655B	e,k	C	VAR	2		Core Spray Loop B High Pressure MTU	0024		H-26018	2H11-P928
2E21-R601A	m	ON	ON	1		Core Spray Loop A Flow Indicator	0024		H-26018	2H11-P601
2E21-R601B	e	ON	ON	2		Core Spray Loop B Flow Indicator	0024	H-24613	H-26018	2H11-P601
2E41-C001		OFF	ON	2		HPCI Pump	2205	H-24621	H-26021	087 RLR25
2E41-C001		OFF	OFF		3	HPCI Pump	2205	H-24621	H-26021	087 RLR25
2E41-C002		OFF	ON	2		HPCI Turbine (Subcomponent)	2205	H-24621	H-26021	087 RGR24
2E41-C002-3		OFF	ON	2		HPCI Turbine Aux Lube Oil Pump	2205	H-24621	H-51165	087 RGR24
2E41-F001	c	C	O	2		HPCI Turbine Steam Supply Valve (MOV)	2205	H-24621	H-26020	087 RGR25
2E41-F002	c	O	VAR	2		HPCI Turbine Steam Supply Inboard Containment Isolation Valve (MOV)	2201		H-26020	127 AZ020

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 8 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2E41-F003	c	O	VAR	2	HPCI Turbine Steam Supply Outboard Containment Isolation Valve (MOV)	2205	H-24625	H-26020	130 RHR19
2E41-F004		O	VAR	2	HPCI Pump Suction Valve from CST (MOV)	2205	H-24621	H-26020	094 RLR25
2E41-F006		C	O	2	HPCI Pump Inboard Discharge Valve (MOV)	2205	H-24622	H-26020	121 RBR19
2E41-F007		O	O	2	HPCI Pump Outboard Discharge Valve (MOV)	2205	H-24621	H-26020	110 RGR25
2E41-F008		C	C	2	HPCI Pump Discharge Bypass Test Valve to CST (MOV)	2205	H-24621	H-26020	112 RGR24
2E41-F012		C	VAR	2	HPCI Pump Minimum Flow Bypass Valve to Suppression Pool (MOV)	2205	H-24621	H-26020	087 RGR24
2E41-F041		C	VAR	2	HPCI Pump Suction from Suppression Pool Valve (MOV)	2205	H-24621	H-26020	094 RLR25
2E41-F042		C	O	2	HPCI Pump Suction from Suppression Pool Outboard Isolation Valve (MOV)	2205	H-24621	H-26020	095 RGR24
2E41-F051		O	O	2	HPCI Pump Suction from Suppression Pool Inboard Isolation Valve (AOV)	2205	H-24619	H-26020	090 RFR24
2E41-F059		C	O	2	HPCI Barometric Condenser and Lube Oil Cooler Cooling Water Supply Valve (MOV)	2205	H-24621	H-26021	091 RGR24
2E41-F104		O	O	2	HPCI Turbine Exhaust Vacuum Breaker Isolation Valve (MOV)	2205	H-24619	H-26020	123 RFR23
2E41-F111		O	O	2	HPCI Turbine Exhaust Vacuum Breaker Isolation Valve (MOV)	2205	H-24619	H-26020	087 RFR23
2E41-F124	c	C	VAR	2	HPCI Remote Manual Trip Solenoid Valve (Subcomponent)	2205		H-26021	090 RGR25
2E41-F3052	c	C	VAR	2	HPCI Turbine Control Valve (HOV) (Subcomponent)	2205	H-24621	H-26021	087 RGR24
2E41-F3053		C	O	2	HPCI Turbine Stop Valve (HOV) (Subcomponent)	2205	H-24621	H-26021	087 RGR24
2E41-K065		ON	ON	2	HPCI EGM Power Supply (Subcomponent)	0024			2H11-P601
2E41-K600		ON	ON	2	HPCI Discharge Flow Transmitter Power Supply (Subcomponent)	0024		H-26020	2H11-P612
2E41-K603		ON	ON	2	HPCI Instrument Power Inverter (Subcomponent)	0024		H-26020	2H11-P612
2E41-N008		ON	ON	2	HPCI Pump Discharge Flow Transmitter (2H21-P414A) (Subcomponent)	2205	H-24621	H-26020	087 RLR24
2E41-N050		ON	ON	2	HPCI Pump Discharge Pressure Transmitter (Subcomponent)	2205	H-24621	H-26020	087 RLR24
2E41-N051		ON	ON	2	HPCI Pump Discharge Flow Differential Pressure Transmitter (2H21-P414A) (Subcomponent)	2205	H-24621	H-26020	087 RLR24
2E41-N053	k	ON	ON	2	HPCI Pump Suction Diff Press Trans (2H21-P414B)	2205		H-260219	087 RLR24
2E41-N055A	k	ON	ON	2	HPCI Turbine Exhaust Press Trans (2H21-P434)	2205		H-26021	087 RLR24
2E41-N055B	k	ON	ON	2	HPCI Turbine Exhaust Press Trans (2H21-P414A)	2205		H-26021	087 RLR24
2E41-N055C	k	ON	ON	2	HPCI Turbine Exhaust Press Trans (2H21-P434)	2205		H-26021	087 RLR24
2E41-N055D	k	ON	ON	2	HPCI Turbine Exhaust Press Trans (2H21-P414A)	2205		H-26021	087 RLR24
2E41-N056B	k	ON	ON	2	HPCI Turbine Exhaust Press Trans (2H21-P414B)	2205		H-26021	087 RLR24
2E41-N056D	k	ON	ON	2	HPCI Turbine Exhaust Press Trans (2H21-P414B)	2205		H-26021	087 RLR24
2E41-N057A	k	ON	ON	2	HPCI Steam Line Press Trans (2H21-P016)	2205		H-26020	087 RGR24
2E41-N057B	k	ON	ON	2	HPCI Steam Line Press Trans (2H21-P036)	2205		H-26020	087 RGR24
2E41-N058A	k	ON	ON	2	HPCI Steam Line Press Trans (2H21-P016)	2205		H-26020	087 RGR24
2E41-N058B	k	ON	ON	2	HPCI Steam Line Press Trans (2H21-P036)	2205		H-26020	087 RGR24
2E41-N058C	k	ON	ON	2	HPCI Steam Line Press Trans (2H21-P016)	2205		H-26020	087 RGR24
2E41-N058D	k	ON	ON	2	HPCI Steam Line Press Trans (2H21-P036)	2205		H-26020	087 RGR24
2E41-N062B	k	ON	ON	2	HPCI Torus High Water Level Pressure Transmitter (Local)	2205		H-26020	117 RGR24
2E41-N062D	k	ON	ON	2	HPCI Torus High Water Level Pressure Transmitter (Local)	2205		H-26020	087 RGR24
2E41-N070A	k	ON	ON	2	HPCI Emer Area Cooler Stm Leak Det RTD	2205		H-26021	100 RGR25
2E41-N070B	k	ON	ON	2	HPCI Emer Area Cooler Stm Leak Det RTD	2205		H-26021	100 RGR25
2E41-N071A	k	ON	ON	2	HPCI Pipe Pen Room Stm Leak Det RTD	2205		H-26021	130 RJR20

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 9 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2E41-N071B	k	ON	ON	2	HPCI Pipe Pen Room Stm Leak Det RTD	2205		H-26021	130 RJR20
2E41-N074		O	VAR	2	HPCI Turbine Stop Valve Position Switch (Local) (Subcomponent)	2205		H-26021	087 RGR24
2E41-N650		O	VAR	2	HPCI Minimum Flow Valve Control MTU (Subcomponent)	0024		H-26020	2H11-P926
2E41-N651		O	VAR	2	HPCI Minimum Flow Valve Control MTU (Subcomponent)	0024		H-26020	2H11-P926
2E41-N653	k	O	VAR	2	HPCI Pump Suction MTU	0024		H-26021	2H11-P926
2E41-N655A	k	O	VAR	2	HPCI Turbine Exhaust MTU	0024		H-26021	2H11-P925
2E41-N655B	k	O	VAR	2	HPCI Turbine Exhaust MTU	0024		H-26021	2H11-P926
2E41-N655C	k	O	VAR	2	HPCI Turbine Exhaust MTU	0024		H-26021	2H11-P925
2E41-N655D	k	O	VAR	2	HPCI Turbine Exhaust MTU	0024		H-26021	2H11-P926
2E41-N656B	k	O	VAR	2	HPCI Turbine Exhaust MTU	0024		H-26021	2H11-P926
2E41-N656D	k	O	VAR	2	HPCI Turbine Exhaust MTU	0024		H-26021	2H11-P926
2E41-N657A	k	O	VAR	2	HPCI Steam Line MTU	0024		H-26020	2H11-P925
2E41-N657B	k	O	VAR	2	HPCI Steam Line MTU	0024		H-26020	2H11-P926
2E41-N658A	k	O	VAR	2	HPCI Steam Line MTU	0024		H-26020	2H11-P925
2E41-N658B	k	O	VAR	2	HPCI Steam Line MTU	0024		H-26020	2H11-P926
2E41-N658C	k	O	VAR	2	HPCI Steam Line MTU	0024		H-26020	2H11-P925
2E41-N658D	k	O	VAR	2	HPCI Steam Line MTU	0024		H-26020	2H11-P926
2E41-N660A	k	O	VAR	2	HPCI Steam Line STU	0024		H-26020	2H11-P925
2E41-N660B	k	O	VAR	2	HPCI Steam Line STU	0024		H-26020	2H11-P926
2E41-N662B	k	O	VAR	2	HPCI Torus High Water Level MTU	0024		H-26020	2H11-P928
2E41-N662D	k	O	VAR	2	HPCI Torus High Water Level MTU	0024		H-26020	2H11-P928
2E41-N670A	k	O	VAR	2	HPCI Emer Area Cooler Stm Leak Det MTU	0024		H-26021	2H11-P927
2E41-N670B	k	O	VAR	2	HPCI Emer Area Cooler Stm Leak Det MTU	0024		H-26021	2H11-P928
2E41-N671A	k	O	VAR	2	HPCI Pipe Pen Room Steam Leak Det MTU	0024		H-26021	2H11-P927
2E41-N671B	k	O	VAR	2	HPCI Pipe Pen Room Steam Leak Det MTU	0024		H-26021	2H11-P928
2E41-R612		ON	ON	2	HPCI Pump Discharge Flow Controller (Subcomponent)	0024		H-26020	2H11-P601
2E51-C001		OFF	ON	1 3	RCIC Pump	2203	H-24618	H-26024	091 RBR15
2E51-C002		OFF	ON	1 3	RCIC Turbine (Subcomponent)	2203	H-24618	H-26024	090 RBR16
2E51-C002-1		OFF	VAR	1 3	RCIC Barometric Condenser Condensate Pump	2203	H-26096	H-26024	087RCR15
2E51-F003		O	O	1 3	RCIC Pump Suction from Suppression Pool Inboard Isolation Valve (AOV)	2203	H-24622	H-26023	089 RAR18
2E51-F007		O	VAR	1 3	RCIC Steam Supply Inboard Isolation Valve (MOV)	2201		H-26023	142 AZ185
2E51-F008		O	VAR	1 3	RCIC Steam Supply Outboard Isolation Valve (MOV)	2205	H-24623	H-26023	142 RBR19
2E51-F010		O	VAR	1 3	RCIC Pump Suction Valve from CST (MOV)	2203	H-24618	H-26023	101 RBR15
2E51-F012		O	O	1 3	RCIC Pump Outboard Discharge Valve (MOV)	2203	H-24622	H-26023	123 RB19
2E51-F013		C	O	1 3	RCIC Pump Inboard Discharge Valve (MOV)	2203	H-24622	H-26023	123 RBR19
2E51-F019		C	VAR	1 3	RCIC Pump Minimum Flow Bypass Valve to Suppression Pool (MOV)	2203	H-24618	H-26023	095 RBR15
2E51-F022		C	C	1 3	RCIC Pump Test Bypass Valve to CST (MOV)	2203	H-24622	H-26023	123 RAR19
2E51-F029		C	VAR	1 3	RCIC Pump Suction from Suppression Pool Valve (MOV)	2203	H-24618	H-26023	102 RAR15

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 10 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path		Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2E51-F031		C	VAR	1	3	RCIC Pump Suction from Suppression Pool Outboard Isolation Valve (MOV)	2203	H-24618	H-26023	102 RAR15
2E51-F045		C	O	1	3	RCIC Turbine Steam Supply Valve (MOV)	2203	H-24618	H-26024	092 RAR15
2E51-F046		C	O	1	3	RCIC Barometric Condenser and Lube Oil Cooler Cooling Water Supply Valve (MOV)	2203	H-24618	H-26024	091 RAR15
2E51-F104		O	O	1	3	RCIC Turbine Exhaust Vacuum Breaker Isolation Valve (MOV)	2203	H-24622	H-26023	122 RBR18
2E51-F105		O	O	1	3	RCIC Turbine Exhaust Vacuum Breaker Isolation Valve (MOV)	2203	H-24622	H-26023	122 RBR19
2E51-F523		O	VAR	1		RCIC Turbine Governing Valve (HOV) (Subcomponent)	2203		H-26024	087 RAR14
2E51-F523		O	O		3	RCIC Turbine Governing Valve (HOV) (Subcomponent)	2203		H-26024	087 RAR14
2E51-F524		O	O	1		RCIC Turbine Trip and Throttle Valve (MOV)	2203		H-26024	087 RAR14
2E51-F524		O	VAR		3	RCIC Turbine Trip and Throttle Valve (MOV)	2203		H-26024	087 RAR14
2E51-K065		ON	ON	1		RCIC EGM Power Supply (Subcomponent)	0024			2H11-P621
2E51-K600		ON	ON	1		RCIC Pump Discharge Flow Loop Power Supply (Subcomponent)	0024		H-26023	2H11-P613
2E51-K603		ON	ON	1		RCIC Instrument Power Inverter (Subcomponent)	0024		H-26023	2H11-P613
2E51-M602A	k	OFF	OFF	1		RCIC Torus Area Stm Leak Det Timer	0024		H-26024	2H11-P614
2E51-M602B	k	OFF	OFF	1		RCIC Torus Area Stm Leak Det Timer	0024		H-26024	2H11-P614
2E51-M603A	k	OFF	OFF		2	HPCI Torus Area Stm Leak Det Timer	0024		H-26024	2H11-P614
2E51-M603B	k	OFF	OFF		2	HPCI Torus Area Stm Leak Det Timer	0024		H-26024	2H11-P614
2E51-N003		ON	ON	1	3	RCIC Pump Discharge Flow Transmitter (2H21-P417A) (Subcomponent)	2203	H-24618	H-26023	087 RAR14
2E51-N050		ON	ON	1		RCIC Pump Discharge Pressure Transmitter (2H21-P417B) (Subcomponent)	2203	H-24618	H-26023	087 RAR14
2E51-N051		ON	ON	1		RCIC Pump Discharge Flow Differential Pressure Transmitter (2H21-P417A) (Subcomponent)	2203	H-24618	H-26023	087 RAR14
2E51-N056A	k	ON	ON	1		RCIC Turbine Exhaust Gage Pressure Trans (2H21-P417B)	2203		H-26024	087 RAR14
2E51-N056C	k	ON	ON	1		RCIC Turbine Exhaust Gage Pressure Trans (2H21-P417B)	2203		H-26024	087 RAR14
2E51-N057A	k	ON	ON	1		RCIC Steam Line Press Trans (2H21-P435)	2203		H-26023	130 RFR16
2E51-N057B	k	ON	ON	1		RCIC Steam Line Press Trans (2H21-P038)	2203		H-26023	087 RAR14
2E51-N058A	k	ON	ON	1		RCIC Steam Line Press Trans (2H21-P435)	2203		H-26023	130 RFR16
2E51-N058B	k	ON	ON	1		RCIC Steam Line Press Trans (2H21-P038)	2203		H-26023	087 RAR14
2E51-N058C	k	ON	ON	1		RCIC Steam Line Press Trans (2H21-P435)	2203		H-26023	130 RFR16
2E51-N058D	k	ON	ON	1		RCIC Steam Line Press Trans (2H21-P038)	2203		H-26023	087 RAR14
2E51-N061A	k	ON	ON	1		RCIC Equip Room RTD (Local)	2203		H-260234	087 RAR16
2E51-N061B	k	ON	ON	1		RCIC Equip Room RTD (Local)	2203		H-260234	087 RA R16
2E51-N063A	k	ON	ON	1		RCIC Torus RTD (Local)	2203		H-26024	090 RBR14
2E51-N063B	k	ON	ON	1		RCIC Torus RTD (Local)	2203		H-26024	090 RBR14
2E51-N063C	k	ON	ON		2	HPCI Torus RTD (Local)	2203		H-26024	090 RBR14
2E51-N063D	k	ON	ON		2	HPCI Torus RTD (Local)	2203		H-26024	090 RBR14
2E51-N064A	k	ON	ON	1		RCIC Torus RTD (Local)	2203		H-26024	118 RAR19
2E51-N064B	k	ON	ON	1		RCIC Torus RTD (Local)	2203		H-26024	118 RAR19
2E51-N064C	k	ON	ON		2	HPCI Torus RTD (Local)	2203		H-26024	118 RAR19
2E51-N064D	k	ON	ON		2	HPCI Torus RTD (Local)	2203		H-26024	118 RAR19
2E51-N066A	k	ON	ON	1		RCIC Torus RTD (Local)	2203		H-26024	087 RAR19
2E51-N066B	k	ON	ON	1		RCIC Torus RTD (Local)	2203		H-26024	087 RLR19

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 11 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2E51-N066C	k	ON	ON	2	HPCI Torus RTD (Local)	2203		H-26024	087 RFR14
2E51-N066D	k	ON	ON	2	HPCI Torus RTD (Local)	2205		H-26024	117 RFR24
2E51-N083	k	ON	ON	1	RCIC Pump Suction Diff Press Xmtr	2203		H-26024	087 RAR14
2E51-N085A	k	ON	ON	1	RCIC Turbine Exhaust Diff Press Xmtr	2203		H-26024	087 RAR14
2E51-N085B	k	ON	ON	1	RCIC Turbine Exhaust Diff Press Xmtr	2203		H-26024	087 RAR14
2E51-N085C	k	ON	ON	1	RCIC Turbine Exhaust Diff Press Xmtr	2203		H-26024	087 RAR14
2E51-N085D	k	ON	ON	1	RCIC Turbine Exhaust Diff Press Xmtr	2203		H-26024	087 RAR14
2E51-N650		O	VAR	1	RCIC Pump Minimum Flow Valve Control MTU (Subcomponent)	0024		H-26023	2H11-P925
2E51-N651		O	VAR	1	RCIC Pump Minimum Flow Valve Control MTU (Subcomponent)	0024		H-26023	2H11-P925
2E51-N656A	k	O	VAR	1	RCIC Turbine Exhaust MTU	0024		H-26024	2H11-P925
2E51-N656C	k	O	VAR	1	RCIC Turbine Exhaust MTU	0024		H-26024	2H11-P925
2E51-N657A	k	O	VAR	1	RCIC Steam Line MTU	0024		H-26023	2H11-P925
2E51-N657B	k	O	VAR	1	RCIC Steam Line MTU	0024		H-26023	2H11-P926
2E51-N658A	k	O	VAR	1	RCIC Steam Line MTU	0024		H-26023	2H11-P925
2E51-N658B	k	O	VAR	1	RCIC Steam Line MTU	0024		H-26023	2H11-P926
2E51-N658C	k	O	VAR	1	RCIC Steam Line MTU	0024		H-26023	2H11-P925
2E51-N658D	k	O	VAR	1	RCIC Steam Line MTU	0024		H-26023	2H11-P926
2E51-N660A	k	O	VAR	1	RCIC Steam Line STU	0024		H-26023	2H11-P925
2E51-N660B	k	O	VAR	1	RCIC Steam Line STU	0024		H-26023	2H11-P926
2E51-N661A	k	O	VAR	1	RCIC Equip Room Amb Hi Temp MTU	0024		H-26024	2H11-P927
2E51-N661B	k	O	VAR	1	RCIC Equip Room Amb Hi Temp MTU	0024		H-26024	2H11-P928
2E51-N663A	k	O	VAR	1	RCIC Torus Amb Hi Temp MTU	0024		H-26024	2H11-P927
2E51-N663B	k	O	VAR	1	RCIC Torus Amb Hi Temp MTU	0024		H-26024	2H11-P928
2E51-N663C	k	O	VAR	2	HPCI Torus Amb Hi Temp MTU	0024		H-26024	2H11-P927
2E51-N663D	k	O	VAR	2	HPCI Torus Amb Hi Temp MTU	0024		H-26024	2H11-P928
2E51-N664A	k	O	VAR	1	RCIC Torus Amb Hi Temp MTU	0024		H-26024	2H11-P927
2E51-N664B	k	O	VAR	1	RCIC Torus Amb Hi Temp MTU	0024		H-26024	2H11-P928
2E51-N664C	k	O	VAR	2	HPCI Torus Amb Hi Temp MTU	0024		H-26024	2H11-P927
2E51-N664D	k	O	VAR	2	HPCI Torus Amb Hi Temp MTU	0024		H-26024	2H11-P928
2E51-N665A	k	O	VAR	1	RCIC Torus Amb Hi Temp MTU	0024		H-26024	2H11-P927
2E51-N665B	k	O	VAR	1	RCIC Torus Amb Hi Temp MTU	0024		H-26024	2H11-P928
2E51-N665C	k	O	VAR	2	HPCI Torus Amb Hi Temp MTU	0024		H-26024	2H11-P927
2E51-N665D	k	O	VAR	2	HPCI Torus Amb Hi Temp MTU	0024		H-26024	2H11-P928
2E51-N666A	k	O	VAR	1	RCIC Torus Amb Hi Temp MTU	0024		H-26024	2H11-P927
2E51-N666B	k	O	VAR	1	RCIC Torus Amb Hi Temp MTU	0024		H-26024	2H11-P928
2E51-N666C	k	O	VAR	2	HPCI Torus Amb Hi Temp MTU	0024		H-26024	2H11-P927
2E51-N666D	k	O	VAR	2	HPCI Torus Amb Hi Temp MTU	0024		H-26024	2H11-P928
2E51-N683	k	O	VAR	1	RCIC Pump Suction MTU	0024		H-26024	2H11-P925
2E51-N684	k	O	VAR	1	RCIC Pump Suction STU	0024		H-26024	2H11-P925

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 12 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2E51-N685A	k	O	VAR	1	RCIC Turbine Exhaust MTU	0024		H-260243	2H11-P925
2E51-N685B	k	O	VAR	1	RCIC Turbine Exhaust MTU	0024		H-260243	2H11-P926
2E51-N685C	k	O	VAR	1	RCIC Turbine Exhaust MTU	0024		H-260243	2H11-P925
2E51-N685D	k	O	VAR	1	RCIC Turbine Exhaust MTU	0024		H-260243	2H11-P926
2E51-N756		O	VAR	1 3	RCIC Barometric Condenser Level Switch High (Local) (Subcomponent)	2203		H-26024	087 RAR14
2E51-R612		ON	ON	1	RCIC Pump Discharge Flow Indicating Controller (Subcomponent)	0024		H-26023	2H11-P602
2G31-F033		C	C	H	RWCU to Main Condenser Flow Control Valve (AOV)	2205	H-24629	H-26036	158 RFR23
2G31-F034		C	C	H	RWCU to Main Condenser Isolation Valve (MOV)	2205	H-24629	H-26036	158 RER23
2G31-F035		C	C	H	RWCU to Radwaste Isolation Valve (MOV)	2205	H-24629	H-26036	158 RER23
2N71-F012	g	O	O	1 2 3	Circulating Water Make-up Valve (MOV)	2605	H-24640	H-21026	YARD
2N71-F013	g	C	C	1 2 3	Circulating Water Blowdown Valve (MOV)	2607	H-24639	H-21026	YARD
2P11-A100		F	F	1 2 3	Condensate Storage Tank	2603		H-26020	YARD
2P11-D003		F	F	1 2 3	CST Level Gauge	2603		NA	YARD
2P41-C001A		VAR	ON	1 3	Plant Service Water Pump 2A	0501	H-24633	H-21033	INTAKE
2P41-C001B		VAR	ON	2 3	Plant Service Water Pump 2B	0501	H-24633	H-21033	INTAKE
2P41-F035B		C	O	2	HPCI Pump Room Cooler Inlet Valve (AOV) (Subcomponent)	2205	H-24621	H-26051	106 RGR25
2P41-F036B		C	O	2 3	RHR & CS Pump Room Cooler Inlet Valve (AOV) (Subcomponent)	2205	H-24621	H-26051	112 RLR23
2P41-F039A		C	O	1	RHR & CS Pump Room Cooler Inlet Valve (AOV) (Subcomponent)	2203	H-24618	H-26050	121 RLR15
2P41-F040A		C	O	1 3	RCIC Pump Room Cooler Inlet Valve (AOV) (Subcomponent)	2203	H-24618	H-26050	104 RAR14
2P41-F066		O	O	1 3	Division 1 PSW to RCIC Room Cooler & Drywell Chillers Isolation Valve (AOV)	2203	H-24622	H-26050	123 RLR19
2P41-F310	g	C	C	2 3	Radwaste Dilution Isolation Valve (MOV)	0501	H-24630	H-21033	INTAKE
2P41-F312A	g	O	O	1 3	Division 1 Plant Service Water to Diesel 2A (MOV)	2601	H-24639	H-21033	YARD
2P41-F312B	g	O	O	2 3	Division 2 Plant Service Water to Diesel 2C (MOV)	2602	H-24639	H-21033	YARD
2P41-F315A	g	O	O	1 3	Reactor Building Division 1 Header Isolation Valve (MOV)	2601	H-24639	H-21033	YARD
2P41-F315B	g	O	O	2 3	Reactor Building Division 2 Header Isolation Valve (MOV)	2602	H-24639	H-21033	YARD
2P41-F316A		O	C	1 3	Turbine Building Division 1 Header Isolation Valve (MOV)	2601	H-24639	H-21033	YARD
2P41-F316B		O	C	2 3	Turbine Building Division 2 Header Isolation Valve (MOV)	2602	H-24639	H-21033	YARD
2P41-F339A		C	O	1 3	Diesel Generator 2A Outlet Isolation Valve (AOV)	2403	H-24634	H-21033	130 A1
2P41-F339B		C	O	2 3	Diesel Generator 2C Outlet Isolation Valve (AOV)	2407	H-24634	H-21033	130 B1
2P41-K601A		ON	ON	1	Power Supply for 2P41-N303A (Subcomponent)	0024		H-21033	2H11-P656
2P41-K601B		ON	ON	2	Power Supply for 2P41-N303B (Subcomponent)	0024		H-21033	2H11-P656
2P41-N303A		ON	ON	1	PSW Division 1 Header Discharge Pressure Transmitter (Local) (Subcomponent)	0501	H-24630	H-21033	INTAKE
2P41-N303B		ON	ON	2	PSW Division 2 Header Discharge Pressure Transmitter (Local) (Subcomponent)	0501	H-24630	H-21033	INTAKE
2P41-N304A		C	C	1 3	Plant Service Water Strainer A Diff Pressure Switch (Subcomponent)	0501	H-24630	H-21033	INTAKE
2P41-N304B		C	C	2 3	Plant Service Water Strainer B Diff Pressure Switch (Subcomponent)	0501	H-24630	H-21033	INTAKE

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 13 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2P41-R601A		ON	ON	1	PSW Division 1 Header Discharge Pressure Indicator	0024	H-24613	H-21033	2H11-P650
2P41-R601B		ON	ON	2	PSW Division 2 Header Discharge Pressure Indicator	0024	H-24613	H-21033	2H11-P650
2P70-A002A	a	F	F	2	Emergency Nitrogen Hookup Station Bottle	2205		H-26066	130 RBR23
2P70-A002B	a	F	F	2	Emergency Nitrogen Hookup Station Bottle	2205		H-26066	130 RBR23
2P70-A002C	a	F	F	2	Emergency Nitrogen Hookup Station Bottle	2205		H-26066	130 RBR23
2P70-F001A		VAR	VAR	1 3	Drywell Pneumatic System Nitrogen Supply Valve (AOV)	2203	H-24627	H-26066	161 RBR17
2P70-F001B		VAR	VAR	2	Drywell Pneumatic System Nitrogen Supply Valve (SV)	2203	H-24627	H-26066	165 RBR17
2P70-F004		O	O	1 3	Division 2 Drywell Pneumatic System High Flow Inboard Isolation Valve (SV)	2203	H-24627	H-26066	167 RBR18
2P70-F005		O	O	1 3	Division 2 Drywell Pneumatic System High Flow Outboard Isolation Valve (SV)	2203	H-24627	H-26066	167 RBR18
2P70-F066		O	O	2	Division 1 Drywell Pneumatic System High Flow Inboard Isolation Valve (SV)	2205		H-26066	131 RBR22
2P70-F067		O	O	2	Division 1 Drywell Pneumatic System High Flow Outboard Isolation Valve (SV)	2205		H-26066	131 RBR16
2P70-F084	a	C	O	2	Emergency Nitrogen Hookup Station Isolation Valve	2205	H-26999	H-26066	130 RBR21
2P70-F138A	a	C	O	2	Emergency Nitrogen Bottle 2P70-A002A Connection Valve	2205		H-26066	130 RBR23
2P70-F138B	a	C	O	2	Emergency Nitrogen Bottle 2P70-A002B Connection Valve	2205		H-26066	130 RBR23
2P70-F138C	a	C	O	2	Emergency Nitrogen Bottle 2P70-A002C Connection Valve	2205		H-26066	130 RBR23
2P70-F141	a	C	O	2	Emergency Nitrogen Bottles Isolation Valve	2205		H-26066	130 RBR23
2P70-K601A	k	ON	ON	1 2	Drywell Pneumatic System Air Supply Signal Converter	0024		H-26285	2H11-P605A
2P70-K601B	k	ON	ON	1 2	Drywell Pneumatic System Air Supply Signal Converter	0024		H-26286	2H11-P605B
2P70-K602A	k	O	O	1 2	Drywell Pneumatic System Air Supply Flow Switch	0024		H-26285	2H11-P605A
2P70-K602B	k	O	O	1 2	Drywell Pneumatic System Air Supply Flow Switch	0024		H-26286	2H11-P605B
2P70-N006A		O	VAR	1	Drywell Pneumatic System Nitrogen Supply PS (Subcomponent)	2203		H-26066	158 RBR16
2P70-N006B		O	VAR	2	Drywell Pneumatic System Nitrogen Supply PS (Subcomponent)	2203		H-26066	158 RBR16
2P70-N020A	k	ON	ON	1	Drywell Pneumatic System Air Supply FT	2205	H-24625	H-26066	136RBR23
2P70-N020B	k	ON	ON	2	Drywell Pneumatic System Air Supply FT	2205	H-24625	H-26066	138RFR23
2P70-N022A	k	ON	ON	1	Drywell Pneumatic System Air Supply FT	2203		H-26066	158RBR18
2P70-N022B	k	ON	ON	2	Drywell Pneumatic System Air Supply FT	2203		H-26066	158RBR18
2R22-S005		ON	ON	1 3	4160 V Station Service Switchgear 2E	2404	H-24635	NA	130 A2
2R22-S007		ON	ON	2 3	4160 V Station Service Switchgear 2G	2409	H-24635	NA	130 C2
2R22-S016		ON	ON	1 3	125/250 V dc Battery Switchgear 2A	2018	H-24608	NA	130 TEaT13
2R22-S017		ON	ON	2 3	125/250 V dc Battery Switchgear 2B	2020	H-24608	NA	130 TBT13
2R23-S003		ON	ON	1 3	600 V Station Service Switchgear 2C and Transformer	2016	H-24608	NA	130 TEaT14
2R23-S004		ON	ON	2 3	600 V Station Service Switchgear 2D and Transformer	2017	H-24608	NA	130 TCaT14
2R24-S009		ON	ON	1 3	600/208 V MCC 2A - Intake Structure	0501	H-24633	NA	INTAKE
2R24-S011		ON	ON	1 3	600 V MCC 2C ESS Division 1	2203	H-24623	NA	130 RFR14
2R24-S012	h	ON	ON	2 3	600 V MCC 2B ESS Division 2	2205	H-24625	NA	130 RFR24
2R24-S018A		ON	ON	1	600 V MCC 2E-A ESS Division 1	2203	H-24623	NA	130 RHR17
2R24-S018B		ON	ON	2 3	600 V MCC 2E-B ESS Division 2	2203	H-24623	NA	130 RJR17
2R24-S021		ON	ON	1 3	125/250 V dc MCC 2A ESS Division 1	2203	H-24623	NA	130 RBR14

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 14 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2R24-S022		ON	ON	2 3	125/250 V dc MCC 2B ESS Division 2	2205	H-24625	NA	130 RHR24
2R24-S025		ON	ON	1 3	600/208 V MCC 2A ESS Division 1	2404	H-24635	NA	130 B2
2R24-S027		ON	ON	2 3	600/208 V MCC 2C ESS Division 2	2409	H-24635	NA	130 C2
2R25-S001		ON	ON	1 3	125 V dc Cabinet 2A	2016		NA	130 TDaT14
2R25-S002		ON	ON	2 3	125 V dc Cabinet 2B	2014	H-24608	NA	130 TCaT13
2R25-S004		ON	ON	1 3	125 V dc Cabinet 2D	2404	H-24635	NA	130 B2
2R25-S006		ON	ON	2 3	125 V dc Cabinet 2F	2409	H-24635	NA	130 C2
2R25-S029		ON	ON	1 3	120/208 V ac Cabinet 2J	2404		NA	130 B2
2R25-S031		ON	ON	2 3	120/208 V ac Cabinet 2L	2409	H-24635	NA	130 C2
2R25-S036		ON	ON	1 3	120/208 V ac ESS Cabinet 2A	2021	H-24608	NA	130 TDaT13
2R25-S037		ON	ON	2 3	120/208 V ac ESS Cabinet 2B	2014	H-24608	NA	130 TCaT13
2R25-S064		ON	ON	1 3	120/208 V ac Cabinet 2A Instrument Bus	2015	H-24609	NA	130 TGT13
2R25-S065		ON	ON	2 3	120/208 V ac Cabinet 2B Instrument Bus	2013	H-24609	NA	130 TGT12
2R25-S101		ON	ON	3	120/208 V ESS Misc Power Panel	2203	H-24623	NA	130 RBR14
2R25-S129		ON	ON	1	125 V dc Distribution Cabinet 2D	2018		NA	130 TBaT13
2R25-S130		ON	ON	2	125 V dc Distribution Cabinet 2E	2021		NA	130 TDaT13
2R42-S001A		ON	ON	1 3	125/250 V Station Battery 2A (Subcomponent)	2004	H-24607	NA	112 TEaT14
2R42-S001B		ON	ON	2 3	125/250 V Station Battery 2B (Subcomponent)	2005	H-24606	NA	112 TDaT14
2R42-S002A		ON	ON	1 3	125 V Diesel System Battery 2A (Subcomponent)	2402		NA	130 B2
2R42-S002C		ON	ON	2 3	125 V Diesel System Battery 2C (Subcomponent)	2406	H-24634	NA	130 C2
2R42-S026		ON	ON	1 3	125 V Battery Charger 2A (Subcomponent)	2018	H-24608	NA	130 TFT13
2R42-S027		ON	ON	1 3	125 V Battery Charger 2B (Subcomponent)	2018	H-24606	NA	130 TFT13
2R42-S028		ON	ON	1 3	125 V Battery Charger 2C (Subcomponent)	2018	H-24606	NA	130 TFT13
2R42-S029		ON	ON	2 3	125 V Battery Charger 2D (Subcomponent)	2020	H-24608	NA	130 TBT13
2R42-S030		ON	ON	2 3	125 V Battery Charger 2E (Subcomponent)	2020	H-24608	NA	130 TBT13
2R42-S031		ON	ON	2 3	125 V Battery Charger 2F (Subcomponent)	2020	H-24608	NA	130 TBT13
2R42-S032A		ON	ON	1 3	125 V Battery Charger 2G (Subcomponent)	2404	H-24635	NA	130 B2
2R42-S032C		ON	ON	2 3	125 V Battery Charger 2J (Subcomponent)	2409	H-24635	NA	130 C2
2R43-F042A		O	C	1	Diesel Generator 2A Air Start Valve (SV) (Subcomponent)	2403		H-21074	130 A1
2R43-F044C		O	C	2	Diesel Generator 2C Air Start Valve (SV) (Subcomponent)	2407		H-21074	130 B1
2R43-F097C		C	O	2	Diesel Generator 2C Air Start Valve (Subcomponent)	2407		H-21074	130 B1
2R43-F098A	a	C	O	1 3	Diesel Generator 2A Manual Air Start Valve (Subcomponent)	2403		H-21074	130 A1
2R43-F098C	a	C	O	3	Diesel Generator 2C Manual Air Start Valve (Subcomponent)	2407		H-21074	130 B1
2R43-F099A	a	O	C	3	Diesel Generator 2A Manual Air Start Valve (Subcomponent)	2403		H-21074	130 A1
2R43-F099C	a	O	C	3	Diesel Generator 2C Manual Air Start Valve (Subcomponent)	2407		H-21074	130 B1
2R43-N001A		O	VAR	1 3	Diesel Generator 2A Day Tank Level Switch	2401	H-24634	H-21074	137 B1

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 15 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2R43-N003C		O	VAR	2 3	Diesel Generator 2C Day Tank Level Switch	2405	H-24634	H-21074	137 C1
2R43-N022A	k	O	O	1 3	Diesel Generator 2A Low Lube Oil Pressure Switch	2403		H-21074	130 A1
2R43-N022C	k	O	O	2 3	Diesel Generator 2C Low Lube Oil Pressure Switch	2407		H-21074	130 B1
2R43-N035A	k	O	O	1 3	Diesel Generator 2A Low Lube Oil Pressure Switch	2403		H-21074	130 A1
2R43-N035C	k	O	O	2 3	Diesel Generator 2C Low Lube Oil Pressure Switch	2407		H-21074	130 B1
2R43-S001A		OFF	ON	1 3	Diesel Generator 2A	2403	H-24634	H-21074	130 A1
2R43-S001C		OFF	ON	2 3	Diesel Generator 2C	2407	H-24634	H-21074	130 B1
2T41-B002B		OFF	ON	2 3	RHR & Core Spray Pump Room Cooler	2205	H-24621	H-26071	087 RLR24
2T41-B003A		OFF	ON	1	RHR & Core Spray Pump Room Cooler	2203	H-24618	H-26071	114 RLR14
2T41-B004A		OFF	ON	1 3	RCIC Pump Room Cooler	2203	H-24618	H-26071	087 RAR14
2T41-B005B		OFF	ON	2	HPCI Pump Room Cooler	2205	H-24621	H-26071	101 RGR25
2T47-K600		ON	ON	2	Temp Sig R/V Conv for 2T48-N009B&D to 2T47-R627 (Subcomponent)	0024		H-26084	2H11-P691
2T47-R626		ON	ON	1	Drywell Cooling System Multi-Point Temperature Recorder	0024	H-24613	H-26074	2H11-P657
2T47-R627		ON	ON	2	Drywell Cooling System Multi-Point Temperature Recorder	0024	H-24613	H-26074	2H11-P650
2T48-A001		F	F	1 2 3	Liquid Nitrogen Storage Tank	2604		H-26083	YARD
2T48-F026	g	O	O	1 2 3	Nitrogen Supply Unit 1/Unit 2 Cross-Tie Isolation Valve (MOV)	1203	H-24638	H-26083	140 RFR13
2T48-F027	g	O	O	1 2 3	Nitrogen Supply Unit 1/Unit 2 Cross-Tie Isolation Valve (MOV)	2203	H-24623	H-26083	146 RER14
2T48-F104		C	C	2	Torus and Drywell Normal Nitrogen Make-up Isolation Valve (AOV)	2205		H-26083	121 RBR21
2T48-F111	a,d	O	C	1 2 3	Nitrogen Inerting System Header Isolation Valve	2203		H-26083	130 RBR17
2T48-F112A		C	C	2	Drywell and Torus Nitrogen Make-up Valve (AOV)	2205	H-24619	H-26083	122 RER21
2T48-F113		C	C	1	Drywell Nitrogen Make-up Isolation Valve (AOV)	2205	H-24619	H-26083	123 RHR21
2T48-F115		C	C	1	Torus Drywell Nitrogen Make-up Isolation Valve (AOV)	2205	H-24619	H-26083	122 RER23
2T48-F118A		O	C	1	Drywell Normal Nitrogen Make-up Valve (AOV)	2205	H-24619	H-26083	121 RBR21
2T48-F118B		O	C	1	Torus Normal Nitrogen Make-up Valve (AOV)	2205	H-24619	H-26083	125 RFR23
2T48-K021A	k	ON	ON	2	Nitrogen Flow Control I/P Converter	2205	H-24619	H-26083	87 RER23
2T48-K070		ON	ON	3	Power Source for 2T48-N070 & 2T48-R070 (2H21-P173) (Subcomponent)	2203	H-24623	H-26084	130 RAR17
2T48-K621A		ON	ON	1	Current to Voltage Converter (Subcomponent)	0024		H-26084	2H11-P691
2T48-K621B		ON	ON	2	Current to Voltage Converter (Subcomponent)	0024		H-26084	2H11-P691
2T48-K622		ON	ON	1	Temp Sig R/V Conv for 2T48-N009A&C to 2T47-R626 (Subcomponent)	0024		H-26084	2H11-P605A
2T48-K627A	k	ON	ON	1 2	Drywell Pneumatic Air Supply Isolator	0024		H-26285	2H11-P605A
2T48-K627B	k	ON	ON	1 2	Drywell Pneumatic Air Supply Isolator	0024		H-26286	2H11-P605B
2T48-N009A		F	F	1	Torus Water Temperature Element (Local) (Subcomponent)	2203	H-24622	H-26084	090 RAR19
2T48-N009B		F	F	2	Torus Water Temperature Element (Local) (Subcomponent)	2205	H-24619	H-26084	093 RFR23
2T48-N009C		F	F	1	Torus Water Temperature Element (Local) (Subcomponent)	2203	H-24622	H-26084	100 RLR19
2T48-N009D		F	F	2	Torus Water Temperature Element (Local) (Subcomponent)	2203	H-24618	H-26084	093 RFR14
2T48-N010A		ON	ON	1	Wide-Range Torus Water Level Transmitter (Subcomponent)	2203	H-24616	H-26084	091 RBR14
2T48-N010B		ON	ON	2	Wide-Range Torus Water Level Transmitter (Subcomponent)	2205		H-26084	091 RBR24

[1] Notes are listed on page 17 of 17.
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[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 16 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
2T48-N070		ON	ON	3	Wide-Range Torus Water Level Transmitter (Subcomponent)	2205	H-26415	H-26084	087 RER24
2T48-N072		ON	ON	3	Torus Water Temperature Element (Local) (Subcomponent)	2203	H-26415	H-26084	087 RLR19
2T48-R070		ON	ON	3	Wide-Range Torus Water Level Indicator (2H21-P173)	2203	H-24623	H-26084	130 RAR17
2T48-R072		ON	ON	3	Torus Water Temperature Indicator (2H21-P173)	2203	H-24623	H-26084	130 RAR17
2T48-R613A	k	ON	ON	2	Nitrogen Makeup Flow Indicating Controller	0024		H-26083	164TCT11
2T48-R622A		ON	ON	1	Wide-Range Torus Water Level Indicator	0024	H-24613	H-26084	2H11-P657
2T48-R622B		ON	ON	2	Wide-Range Torus Water Level Indicator	0024	H-24613	H-26084	2H11-P654
2X41-C010A	j	OFF	ON	1 3	Diesel Generator Room 2A Fan	2403	H-24634	H-12619	130A1
2X41-C010A AFS	k	O	C	1 3	Diesel Generator Room 2A Fan Air Flow Switch	2403	H-24634	H-12619	130A1
2X41-C010B	j	OFF	ON	1 3	Diesel Generator Room 2A Fan	2403	H-24634	H-12619	130A1
2X41-C010B AFS	k	O	C	1 3	Diesel Generator Room 2A Fan Air Flow Switch	2403	H-24634	H-12619	130A1
2X41-C010C	j	OFF	ON	2 3	Diesel Generator Room 2C Fan	2407	H-24634	H-12619	130B1
2X41-C010C AFS	k	O	C	2 3	Diesel Generator Room 2C Fan Air Flow Switch	2403	H-24634	H-12619	130A1
2X41-C010D	j	OFF	ON	2 3	Diesel Generator Room 2C Fan	2407	H-24634	H-12619	130B1
2X41-C010D AFS	k	O	C	2 3	Diesel Generator Room 2C Fan Air Flow Switch	2403	H-24634	H-12619	130A1
2X41-C013A		C	O	1 3	Diesel Generator Room 2A Louver	2403	H-24634	H-12619	130A1
2X41-C013B		C	O	2 3	Diesel Generator Room 2C Louver	2407	H-24634	H-12619	130B1
2X41-N011A		O	C	1 3	Diesel Generator Room 2A Fan Thermostat (Subcomponent)	2403	H-24634	H-12619	130A1
2X41-N011B		O	C	2 3	Diesel Generator Room 2C Fan Thermostat (Subcomponent)	2407	H-24634	H-12619	130B1
2X41-N012A	k	O	C	1 3	Diesel Generator Room 2A Louver Thermostat	2403	H-24634	H-12619	130A1
2X41-N012B	k	O	C	2 3	Diesel Generator Room 2C Louver Thermostat	2407	H-24634	H-12619	130B1
2Y52-A001A		F	F	1 3	Diesel Generator 2A Fuel Oil Storage Tank	2610		H-21074	YARD
2Y52-A001C		F	F	2 3	Diesel Generator 2C Fuel Oil Storage Tank	2612		H-21074	YARD
2Y52-A101A		F	F	1 3	Diesel Generator 2A Fuel Oil Day Tank	2401		H-21074	130 B1
2Y52-A101C		F	F	2 3	Diesel Generator 2C Fuel Oil Day Tank	2405		H-21074	130 C1
2Y52-C001A		OFF	VAR	1 3	Diesel Generator 2A Fuel Oil Transfer Pump 2A1	2610	H-24640	H-21074	YARD
2Y52-C101C		OFF	VAR	2 3	Diesel Generator 2C Fuel Oil Transfer Pump 2C2	2612	H-24640	H-21074	YARD
1P41-F313C		C	C	2 3	Plant Service Water Strainer B Isolation Valve (MOV)	0501	H-24630	D-11001	INTAKE
1P41-F313D		C	C	1 3	Plant Service Water Strainer A Isolation Valve (MOV)	0501	H-24630	D-11001	INTAKE
1T48-F013A	g	C	C	1 2 3	Nitrogen Makeup to Unit 2 Inboard Isolation Valve (MOV)	1203		H-16000	140 RFR13
1X41-C009A	n	VAR	ON	see note n	Intake Structure Vent Fan 1A	0501	H-40159	H-12613	INTAKE
1X41-C009B	n	VAR	ON	see note n	Intake Structure Vent Fan 1B	0501	H-40159	H-12613	INTAKE
1X41-C009C	n	VAR	ON	see note n	Intake Structure Vent Fan 1C	0501	H-40159	H-12613	INTAKE
1X41-N002A	n	O	C	see note n	Intake Structure Vent Fan 1A Thermostat (Subcomponent)	0501	H-40159	H-12613	INTAKE

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

Table 4.A1-1 (Sheet 17 of 17)
Unit 2 Safe Shutdown Equipment List

MPL No.	Notes[1]	Normal[2] Mode	Required[2] SSD Mode	Path	Functional Description[3,4]	Fire Area	App. R Drawing	P&ID	Location
1X41-N002B	n	O	C	see note n	Intake Structure Vent Fan 1B Thermostat (Subcomponent)	0501	H-40159	H-12613	INTAKE
1X41-N002C	n	O	C	see note n	Intake Structure Vent Fan 1C Thermostat (Subcomponent)	0501	H-40159	H-12613	INTAKE

*NOTES:
(a) Mechanical equipment to be manually operated.
(b) For path 1, this component may require a manual action to realign the incoming control power to the alternate division 1 power source.
(c) To prevent HPCI runaway for Path 1, one of the following valves must close: 2E41-F001,F002, F003, F124, or F3052. See Part 4, Appendix 2 for HPCI runaway analysis.
(d) Required for path 1 in fire area 2205 only.
(e) Loop B of core spray only required for path 2 in the event of a spurious ADS accompanied by a loss of RHR Loop B.
(f) For Path 1 and 2, either valve 2E11-F008 or F009 must remain closed. See the High-Low boundary analysis in Part 4, Appendix 2 for a detailed circuit-equipment analysis of this component.
(g) This equipment has power removed during normal operation.
(h) 208 V side of MCC not required for shutdown.
(j) Only one fan is required for each Diesel Generator Room.
(k) This equipment performs no active safe shutdown function, but affects safe shutdown equipment through spurious actuation. It is not required for safe shutdown. This equipment will not be addressed elsewhere since spurious actuation has been analyzed under the individual circuit analyses for all affected safe shutdown equipment. For a list of affected safe shutdown equipment, see Table 4.A1-3.
(m) Loop A of core spray only required for path 1 in the event of a spurious ADS accompanied by a loss of RHR Loop A.
(n) Only one fan and one thermostat are required for any path shutdown. See Part 4, Appendix 2 for Intake Structure Ventilation Analysis.

[1] Notes are listed on page 17 of 17.
[2] Mode Abbreviations: O=Open, C=Closed, VAR=Various, F=Functional (Non-positional component)
[3] For primary component / subcomponent cross-reference, see Table 4.A1-2.
[4] For primary component / spurious actuation component cross-reference, see Table 4.A1-3. Also, see note k.

ATTACHMENT 1

SEISMIC WALKDOWN EQUIPMENT LISTS
UNIT 2 – SWEL 1
NO. SNCH082-RPT-02

Plant Hatch Unit 2 SWEL-1

Plant Hatch Unit 2 SWEL-2

SWEL Revision Date: October 24, 2012

Originator: print: Mike Steele signature: Mike Steele per Wesley A. Williams Date: 10/24/12

Reviewer: print: J. Derwood Tootle, Jr. signature: Derwood Tootle Date: 10/24/12

Ops Reviewer: print: CHRISTOPHER T. BURKE signature: [signature] Date: 10/24/12

Peer Reviewer: print: Melanie H. Brown signature: Melanie Brown Date: 10-24-12

Peer Reviewer: print: KENNEN L. WHITMORE signature: [signature] Date: 10-24-12

Peer Reviewer: print: ROBERT ASHWORTH signature: [signature] Date: 10/25/12

Peer Reviewer: print: Richard G. Starck II signature: Richard G. Starck II Date: 10/25/12

ATTACHMENT 1: SEISMIC WALKDOWN EQUIPMENT LISTS
HATCH UNIT 2 SWEL 1
NTTF RECOMMENDATION 2.3: SEISMIC WALKDOWNS

SNCH082-RPT-02

Folder #		MPL #	Description	Building	Elevation / Location	Drawing or Reference	Screen #3 (Use original/updated IPEEE/A-46 lists and Appendix E)					Screen #4												Risk Significance	Walkdown must be deferred? (i.e. outage)	Comments	PROTECTED TRAIN (from 2012 New Cycle Plan)				
							Reactor Reactivity Control	Reactor Coolant Pressure Control	Reactor Coolant Inventory Control	Decay Heat Removal (including the Ultimate Heat Sink)	Containment	Variety of Systems	Major new or replicant equipment	Variety of types of equipment (2) Classes from Appendix B)	Variety of environments			Equipment enhanced due to vulnerabilities (outliers) identified during the IPEEE program			Anchorage check required? (50% of Anchored Components in Column B)						9/1/12	9/8/12	9/15/12	9/22/12	9/29/12
New	Old														Harsh (Reactor Bldg)	Mild (Control, Diesel Gen Bldg)	Outdoors (Intake Structure, Yard Valve Pits)	Yes	No	If yes, verify by walkdown the "fix" was implemented. What is the date it was implemented?	Yes	No				B	A	A	B	B
2	2	2R24-S011	600 V MCC 2C ESS Division 1	REACTOR BLDG	130	H27279,H26098	X	X	X	X	X	2R24		1	RB 130'				X		X		yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling Outage (2R22 - February 11, 2013)		X	X		
5	5	2R24-S022	125/250V DC MCC 2B ESS DIV 2	REACTOR BLDG	130	H27281, H27024, H26098			X	X		2R24		1	RB 130'				X		X		yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling Outage (2R22 - February 11, 2013)	X			X	X
7	7	2R23-S003	600V STATION SERVICE SWGR 2C & XFMR	CONTROL BLDG	130	H23240, H23362, H23279	X	X	X		X	2R23		2,4		CB EL 130'			X		X		yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until this equipment can be de-energized for inspection. Every effort will be made to inspect this equipment during or before the 2R23 - February 9, 2015 refueling outage.		X	X		
8	8	2R23-S004	600V STATION SERVICE SWGR 2D & XFMR	CONTROL BLDG	130	H23362,H23240, H23368,H21002	X	X	X		X	2R23		2,4		CB EL 130'			X			X	yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until this equipment can be de-energized for inspection. Every effort will be made to inspect this equipment during or before the 2R23 - February 9, 2015 refueling outage.	X			X	X
9	9	2R22-S016	250V DC BATTERY SWGR 2A	CONTROL BLDG	130	H23390,H21019		X	X		X	2R22		2		CB EL 130'			X		X		yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until this equipment can be de-energized for inspection. Every effort will be made to inspect this equipment during or before the 2R23 - February 9, 2015 refueling outage.		X	X		
10	10	2R22-S005	4160V SWGR EMERGENCY BUS 2E	DIESEL BLDG	130	H13148		X	X		X	2R22	X	3		DGB EL 130'		X				X	yes	yes	Originally identified as IPEEE outlier - Inadequate anchorage & interaction concerns w/overhead lights. Additional anchors installed and light fixtures tied up per DCR 94-017 and DCR 90-10. Verify during walkdowns. Deferred until this equipment can be de-energized for inspection. Every effort will be made to inspect this equipment during or before the 2R23 - February 9, 2015 refueling outage.		X	X		
11	11	2R22-S007	4160V SWGR EMERGENCY BUS 2G	DIESEL BLDG	130	H23023,H23358		X	X		X	2R22	X	3		DGB EL 130'		X			X		yes	yes	Originally identified as IPEEE outlier - Inadequate load path. Installed additional anchors per DCR 94-017. Verify during walkdowns. Deferred until this equipment can be de-energized for inspection. Every effort will be made to inspect this equipment during or before the 2R23 - February 9, 2015 refueling outage.	X			X	X
12	12	2R11-S004	45KVA 600-120/208V PWR XFMR	DIESEL BLDG	130	H23025,H23315		X	X		X	2R22	X	4		DGB -EL 130'			X		X		yes				X	X		
13	14	2R11-S041	600-120/208 V ESSENTIAL XFMR	CONTROL BLDG	130	H23140,H23369, H21019	X	X	X	X	X	2R11		4		CB EL 130'			X		X		yes			X		X	X	
14	15	2S11-S009	4160/600V225KVA XFMR	DIESEL BLDG	130	H23052,H23828	X	X	X	X	X	2R11		4		DGB EL 130'			X		X		yes			X		X	X	
15	16	2S11-S012	4160/600V 75KVA XFMR	DIESEL BLDG	130	H23027,H27351	X	X	X	X	X	2S11		4		DGB EL 130'			X			X	yes			X		X	X	
16	17	2E41-C001	HPCI MAIN	REACTOR BLDG	87	H26021,H27271,			X			2E41		5	RB EL 87'				X		X		yes			X		X	X	
17	18	2E51-C001	RCIC PUMP	REACTOR BLDG	87	H26014,H26096			X			2E51		5	RB EL 87'				X		X		yes				X	X		
18	19	2E11-C002A	RHR PUMP 2A	REACTOR BLDG	87	H21039,H21033, H23028,H21102			X	X		2E11		5	RB EL 87'				X		X		yes				X	X		
19	20	2E21-C001B	CORE SPRAY PUMP 2B	REACTOR BLDG	87	H26051,H27267, H26096,H27658			X			2E11		5	RB EL 87'				X		X		yes			X		X	X	
20	21	2E41-C001A	SBLC INJECTION PUMP 2A	REACTOR BLDG	203	H26009,H27319, H26102,H27525	X					2E21		5	RB EL 203'				X		X		no		POSITIVE DISPLACEMENT PUMP		X	X		
21	22	2E41-C001B	SBLC INJECTION PUMP 2B	REACTOR BLDG	203	H26009,H27319, H26102,H27525	X					2C41		5	RB EL 203'				X		X		no		POSITIVE DISPLACEMENT PUMP	X			X	X
22	23	2E41-C002-3	HPCI TURB AUX OIL PUMP	REACTOR BLDG	87	H52165, H27670			X			2E41		5	RB EL 87'				X		X		yes				X	X		
23	24	2E11-C001A	RHRSW PUMP 1A	INTAKE	111	H21039, H21033, H23008, H21102				X	X	2E41	X	6			IS EL 111'		X		X		yes				X	X		
24	25	2E11-C001D	RHRSW PUMP 1D	INTAKE	111	H21039, H21033, H23008, H21102				X	X	2E11	X	6			IS EL 111'		X		X		yes			X			X	X
25	26	2P41-C001A	PSW PUMP 1A	INTAKE	111	H21033,H23027, H21102,H23698				X		2E11	X	6			IS EL 111'		X		X		yes				X	X		
26	27	2P41-C001B	PSW PUMP 1B	INTAKE	111	H21033,H23027, H21102,H23699				X		2P41	X	6			IS EL 111'		X			X	yes			X		X	X	
27	28	2P41-C002	PSW STANDBY PUMP 1B DIESEL	INTAKE	87	H21033,H23027, H21102,H23779	X	X	X	X	X	2P41	X	6			IS EL 111'		X			X	yes			X		X	X	
28	29	2P41-F042A	RBSWS 2T41B001A CNTRL AOV	REACTOR BLDG	87	H26051,H27271, H26233,H27756	X					2P41	X	7	RB EL 87'				X			X	yes			X		X		
29	30	2P41-F039A	RHR/CS R2T41-B003A CNTL VALVE	REACTOR BLDG	87	H26050,H27268, H26252,H27756			X	X	X	2P41		7	RB EL 87'				X			X	yes			X		X		
30	33	2P41-F035B	RBSWS 2T41B005B CNTL AOV	REACTOR BLDG	87	H26051,H27271, H26252,H27756		X	X			2P41		7	RB EL 87'				X			X	no			X		X	X	
31	33A	2T41-F004A	SPT FL PL TO REF FL AOV	REACTOR BLDG	203	H-26237, H-H26072					X	2T41		7	RB EL 203'				X			X	no				X		X	
32	33B	2T46-F003B	SBGT RF 18"1508 BF AOV	REACTOR BLDG	203	H26178, H-26078					X	2T46		7	RB EL 203'				X			X	no			X			X	X
33	36N	2P64-F059	RBCHW COIL INLET ISO AOV	REACTOR BLDG	180	H26153	X	X	X	X	X	2P64	X	7	DW EL 180'				X			X	no	yes	ACCESS 2R22 OUTAGE, 2/11/2013	X			X	X
34	37N	2P64-F029	RBCHW COIL INLET ISO AOV	REACTOR BLDG	135	H26153	X	X	X	X	X	2P64		7	DW EL 135'				X			X	no	yes	ACCESS 2R22 OUTAGE, 2/11/2013		X	X		
35	34	2E41-F004	HPCI PUMP SUCTION FROM CST (MOV)	REACTOR BLDG	87	H26020,H27271, H26128,H27664			X			2E41		8	RB EL 87'				X			X	yes				X	X		
36	37	2E41-F001	HPCI TURBINE STEAM SUPPLY VLV (MOV)	REACTOR BLDG	87	H26020,H27271, H26274,H27664			X			2E41	X (see comment)	8	RB EL 87'				X			X	yes		Changed to a larger motor		X	X		
37	39	2P41-F315A	PSW RX BLDG DIV 1 ISOL VLV A	YARD	YARD	H23033,H23096, H23595	X	X	X	X	X	2P41		8			YARD		X			X	yes				X	X		

ATTACHMENT 1: SEISMIC WALKDOWN EQUIPMENT LISTS
HATCH UNIT 2 SWEL 1
NTTF RECOMMENDATION 2.3: SEISMIC WALKDOWNS

SNCH082-RPT-02

Folder # New	Folder # Old	MPL #	Description	Building	Elevation / Location	Drawing or Reference	Screen #3 (Use original/updated IPEEE/A-46 lists and Appendix C) Reactor Reactivity Control	Reactor Coolant Pressure Control	Reactor Coolant Inventory Control	Decay Heat Removal (excluding the UHSwater Heat Sink)	Containment	Screen #4 Variety of Systems	Major new or replicated equipment	Variety of types of equipment (23 Classes from Appendix B) Class #	Variety of environments Harsh (Reactor Bldg)	AUX (Control, Diesel Gen Bldg)	Outdoors (Intake Structure, Yard Valve Pits)	Equipment enhanced due to vulnerabilities (outliers) identified during the IPEEE program Yes	No	If yes, verify by walkdown that "fix" was implemented. What is the date it was implemented?	Anchorage check required? (50% of Anchored Components in Column B) Yes	No	Risk Significance	Walkdown must be deferred? (i.e. outage)	Comments	PROTECTED TRAIN (From 2012 New Cycle Plan) 9/17/12 B	9/8/12 A	9/15/12 A	9/22/12 B	9/29/12 B
38	41	2R43-F042A	DIESEL AIR START SOLENOID VLV	DIESEL BLDG	130	H21074	X	X	X	X	X	2R43	X	8		DGB EL 130'			X			X	yes				X	X		
40	44	2E11-F004A	TORUS SUCTION VALVE (MOV)	REACTOR BLDG	87	H21615,H27267, H26108,H27647			X		X	2E41		8	RB EL 87'				X			X	yes				X	X		
41	49N	2E11-F060A	LOOP A ISO GATE VALVE	REACTOR BLDG	150	H26115			X	X	X	2E11		8	DW EL 150'				X			X	yes	yes	ACCESS 2R22 OUTAGE, 2/11/2013		X	X		
42	50N	2E11-F009	SHUTDOWN COOL INBD ISO	REACTOR BLDG	135	H26115			X	X	X	2E11		8	DW EL 135'				X			X	yes	yes	ACCESS 2R22 OUTAGE, 2/11/2013		X	X		
43	45	2X41-C010A	DG 2C ROOM FAN 2A	DIESEL BLDG	150	H23022,H23619, 23395	X	X	X	X	X	2E11		9		DGB EL 150'			X			X	yes				X	X		
44	47	2X41-C016A	BATTERY ROOM FAN	DIESEL BLDG	150	H23397	X	X	X	X		2X41		9		DGB EL 150'			X			X	no							
48	51	2E41-B001	HPCI LUBE OIL COOLER	REACTOR BLDG	87	H26021,			X			2E41		10	RB EL 87'				X			X	no				X	X		
49	52	2T41-B003B	RHR/CS PUMP ROOM COOLER B	REACTOR BLDG	87	H26071,H27284, H26229,H27758			X	X	X	2T41		10	RB EL 87'				X			X	yes			X			X	X
50	55	2T41-B003A	RHR/CS PUMP ROOM COOLER A	REACTOR BLDG	87	H26071,H27269, H26229,H27757			X	X	X	2T41		10	RB EL 87'				X			X	yes				X	X		
51	57	2T41-B005B	HPCI ROOM COOLER	REACTOR BLDG	87	H28072,H27272, H26243,H27759			X			2T41	X	10	RB EL 87'			X				X	yes		Originally identified as A-46 & IPEEE outlier - Overhead duct supports could potentially collapse Modified duct supports per SCH95-002 and DCP 94-017. Verify during inspection.	X			X	X
52	58	2T46-D001B	SBGT FILTER TRAIN	REACTOR BLDG	185	H26301, H26078					X	2T46		10	RB EL 185'				X			X	no			X			X	X
53	165N	2T47B007A	DW Cooling System Unit	REACTOR BLDG	179	H24675, H26301					X	1T47	X	10	DW EL 178'				X		X		no	yes			X	X		
54	166N	2T47B003A	DW Cooling System Unit	REACTOR BLDG	130	H26098					X	1T47	X	10	DW EL 130'				X		X		no	yes	ACCESS 2R22 OUTAGE, 2/11/2013		X	X		
55	167N	2T47B008B	DW Cooling System Unit	REACTOR BLDG	130	H26098					X	1T47	X	10	DW EL 130'				X		X		no	yes	ACCESS 2R22 OUTAGE, 2/11/2013	X			X	X
56	59	2P33-B001A	H2/02 ANALYZER SAMPLE CHILLER	REACTOR BLDG	87	H21214,H27752			X			2P33		11	RB EL 87'				X			X	no	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)		X	X		
57	60	2P33-B001B	H2/02 ANALYZER SAMPLE CHILLER	REACTOR BLDG	87	H26049			X			2P33		11	RB EL 87'				X			X	no	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)	X			X	X
58	61	2R43-C006A	DG 2A AIR COMPRESSOR	DIESEL BLDG	130	H21074,H23807	X	X	X	X	X	2R43		12		DGB EL 130'			X			X	yes				X	X		
59	62	2R43-C006C	DG 2C AIR COMPRESSOR	DIESEL BLDG	130	H21074,H23807	X	X	X	X	X	2R43		12		DGB EL 130'			X			X	yes		X			X	X
60	63	2R43-C005A	DG 2A AIR COMPRESSOR	DIESEL BLDG	130	H21074,H23807	X	X	X	X	X	2R43		12		DGB EL 130'			X			X	yes				X	X		
61	64	2R43-C005C	DG 2C AIR COMPRESSOR	DIESEL BLDG	130	H21074,	X	X	X		X	2R43		12		DGB EL 130'			X			X	yes		X			X	X
62	65	2C71-S001A	RPS MG SET A MOTOR GEN	CONTROL BLDG	130	H23240,H27601	X					2C71		13		CB EL 130			X			X	no			X				
63	66	2C71-S001B	RPS MG SET B MOTOR GEN	CONTROL BLDG	130	H27851	X					2C71		13		CB EL 130			X			X	no		X			X	X
64	67	2C71-P001	RPS POWER DISTRIBUTION PANEL	CONTROL BLDG	130	H23240,H27601	X					2C71		14		CB EL 130'			X		X		no	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)		X	X		
65	68	2R25-S001	125V DC DIV 2 CAB 2A	CONTROL BLDG	130	H23067,H23360, H23630,H23002	X		X	X	X	2R25		14		CB EL 130'			X			X	yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)		X	X		
66	69	2R25-S002	125V DC DIV 1 CAB 2B	CONTROL BLDG	130	H23067,H23360, H21274,H23630	X		X	X	X	2R25		14		CB EL 130'			X		X		yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)		X	X		
67	70	2R25-S004	125V DC CAB 2D	DIESEL BLDG	150	H23382,H23240, H23382,H21002		X	X	X		2R25		14		DGB EL 130'			X			X	yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)		X	X		
68	71	2R25-S005	125V DC CAB 2E	DIESEL BLDG	130	H23033,H23363, H23019,H23827		X	X	X		2R25		14		DGB EL 130'			X		X		yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)	X	X	X	X	X
69	72	2R25-S036	120/208V AC ESS CAB 2A	CONTROL BLDG	130	H23240,H21019, H27601	X					2R25		14		CB EL 130'			X			X	yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)		X	X		
70	73	2R25-S064	120/208V AC VITAL CAB 2A INSTR BUS	CONTROL BLDG	130	H23240,H23369	X	X	X	X	X	2R25		14		CB EL 130'			X		X		yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)		X	X		
71	74	2R25-S037	120/208V AC ESS CAB 2B	CONTROL BLDG	130	H23240,H23019, H27601	X					2R25		14		CB EL 130'			X			X	yes	yes	Inaccessible due to locked cabinet - energized and inservice. Deferred until next refueling outage (2R22 - February 11, 2013)	X			X	X
72	75	2R42-S001A	125/250V STATION BATTERY 2A	CONTROL BLDG	112	H21220,H21019, H23390		X	X		X	2R42	X	15		CB EL 112'			X		X		yes				X	X		
73	76	2R42-S001E	125/250V STATION BATTERY 2E	CONTROL BLDG	112	H21220,H23390		X	X		X	2R42	X	15		CB EL 112'			X		X		yes			X			X	X
74	77	2R42-S002A	125V DIESEL SYSTEM BATTERY 2A	DIESEL BLDG	130	H23022,H23371	X	X	X	X	X	2R42	X	15		DGB EL 130'			X		X		yes				X	X		
75	78	2R42-S002C	125V DIESEL SYSTEM BATTERY 2C	DIESEL BLDG	130	H23022,H23371	X	X	X	X	X	2R42	X	15		DGB EL 130'			X		X		yes				X	X		
76	79	2R42-S017A	BATTERY 2A 24/48V	CONTROL BLDG	112	H23235,H23406	X				X	2R42	X	15		CB EL 112'			X			X	no				X	X		
77	80	2R42-S017B	BATTERY 2B 24/48V	CONTROL BLDG	112	H21236,H23435	X				X	2R42	X	15		CB EL 112'			X			X	no		X			X	X	
78	81	2R42-S026	125V BATTERY CHARGER 2A	CONTROL BLDG	130	H23240,H21019, H23390		X	X		X	2R44		16		CB EL 130'			X		X		yes				X	X		
85	88	2R42-S052	BATTERY CHARGER 2B	CONTROL BLDG	130	H23241,H23180, H23406	X				X	2R42		16		CB EL 130'			X			X	no				X	X		
86	89	2R43-S001A	DIESEL GENERATOR 2A	DIESEL BLDG	130	H21074,H23022, H23406	X	X	X	X	X	2R43		17		DGB EL 130'			X		X		yes				X	X		
87	90	2R43-S001C	DIESEL GENERATOR 2C	DIESEL BLDG	130	H23022,H23371, H19021,H23411	X	X	X	X	X	2R43		17		DGB EL 130'			X		X		yes		X			X	X	
88	91	2H23-P434B	HPCI INSTR RACK	REACTOR BLDG	87	H26096,H24424			X			2H21		18	RB EL 87'				X		X		yes				X	X		
89	92	2H21-P434A	HPCI INSTR RACK	REACTOR BLDG	87	H26096,H24424			X			2H21		18	RB EL 87'				X		X		yes				X	X		
90	93	2H21-P434	HPCI INSTR RACK	REACTOR BLDG	87	H26096,H24424			X			2H21		18	RB EL 87'				X		X		yes				X	X		
91	94	2H21-P016	MAIN STEAM FLOW INST RACK	REACTOR BLDG	87	H27279,H26086, H24422			X		X	2H21		18	RB EL 87'				X		X		yes				X	X		
92	95	2H21-P035	HPCI SYS LOCAL RACK	REACTOR BLDG	130	H27283,H26088, H24425			X		X	2H21		18	RB EL 130'				X		X		yes				X	X		
93	96	2H21-P018	RHR INSTR RACK	REACTOR BLDG	87	H27287,H26086, H27644			X	X	X	2H21		18	RB EL 87'				X		X		yes				X	X		

ATTACHMENT 1: SEISMIC WALKDOWN EQUIPMENT LISTS
HATCH UNIT 2 SWEL 1
NTTF RECOMMENDATION 2.3: SEISMIC WALKDOWNS

Folder #		MPL #	Description	Building	Elevation / Location	Drawing or Reference	Screen #3 (Use original/updated IPEEE/A-46 lists and Appendix E)					Screen #4													Risk Significance	Walkdown must be deferred? (i.e. outage)	Comments	PROTECTED TRAIN (from 2012 New Cycle Plan)					
							Reactor Reactivity Control	Reactor Coolant Pressure Control	Reactor Coolant Inventory Control	Decay Heat Removal (including the Ultimate Heat Sink)	Containment	Variety of Systems	Major new or replcmnt equpmnt	Variety of types of equipment (21 Classes from Appendix B)	Variety of environments			Equipment enhanced due to vulnerabilities (outliers) identified during the IPEEE program			Anchorage check required? (50% of Anchored Components in Column B)							9/1/12	9/8/12	9/15/12	9/22/12	9/29/12
New	Old														Harsh (Reactor Bldg)	Mild (Control, Diesel Gen Bldg)	Outdoors (Intake Structure, Yard Valve Pits)	Yes	No	If yes, verify by walkdown the "fix" was implemented. What is the date it was implemented?	Yes	No				B	A	A	B	B
94	87	2H21-P021	RHR INSTR RACK	REACTOR BLDG	87	H27267,H26096, H27644			X	X	X	2H21		18	RB EL 87'				X			X	yes			X			X	X
95	98	2H21-P410	JET PUMP INSTR RACK	REACTOR BLDG	130	H26098,H24430	X					2H21		18	RB EL 130'				X			X	no			X			X	X
96	99	2H21-P404A	RX VESSEL INSTR RACK	REACTOR BLDG	158	H26100,H27731		X	X			2H21		18	RB EL 158'				X		X		yes				X	X			
97	100	2T48-N009A	TORUS WATER TEMP ELEMENT	REACTOR BLDG	87	H26064,H27272, H26415,H27778					X	2T48		19	RB EL 87'				X			X	no				X	X			
98	101	2T41-N019A	HPCI PUMP ROOM COOLER TE	REACTOR BLDG	87	H26071,H27271, H26243,H27234			X			2T41		19	RB EL 87'				X			X	no				X	X			
99	102	2T41-N020A	CS/RHR PUMP RM COOLER TE	REACTOR BLDG	87	H26071,H27269, H26229,H27234			X	X	X	2T41		19	RB EL 87'				X			X	no				X	X			
100	103	2T41-N021A	CS/RHR PUMP RM COOLER TE	REACTOR BLDG	87	H26071,H27268, H26229,H27234			X	X	X	2T41		19	RB EL 87'				X			X	no				X	X			
101	104	2T41-N022A	RCIC PUMP ROOM COOLER TE	REACTOR BLDG	87	H26071,H26230, H27234			X			2T41		19	RB EL 87'				X			X	no				X	X			
104	107	2H21-P173	SHUTDOWN INSTRUMENT PANEL	REACTOR BLDG	130	H27284,H26098, H27980	X	X	X	X	X	2H21		20	RB EL 130'				X		X		yes								
105	108	2H21-P202	DG 1C RELAY PANEL 1A	DIESEL BLDG	130	H23071,H23394, H13814	X	X	X	X	X	2H21		20		DGB EL 130'		X				X	yes		Originally identified as A-46 & IPEEE outlier - Potential impact with adjacent panel and MCC not bolted together. Panels were connected together per DCR 81-144. Verify during walkdowns.	X			X	X
106	109	2R43-P001C	DG 1C CONT PANEL	DIESEL BLDG	130	H25202,H21282, H13811	X	X	X	X	X	2R43		20		DGB EL 130'			X		X		yes			X			X	X
107	110	2C82-P001	REMOTE SHUTDOWN PANEL	REACTOR BLDG	130	H24623	X	X	X	X	X	2C82		20	RB EL 130'				X		X		yes			NA					
108	111	2R43-B001A	DIESEL 2A AIR COOLANT HEAT EXCHANGER	DIESEL BLDG	130	H21074,	X	X	X	X	X	2R43		21		DGB EL 130'			X			X	yes				X	X			
109	112	2R43-B002A	DG 2A LUBE OIL HEAT EXCH	DIESEL BLDG	130	H21074,	X	X	X	X	X	2R43		21		DGB EL 130'			X			X	yes				X	X			
110	112A	2E11-B001A	RHR HEAT EXCHANGER A	REACTOR BLDG	87	H23039,H26015, H26096				X	X	2E11		21	RB EL 87'				X			X	yes				X	X			
111	113	2E11-B001B	RHR HEAT EXCHANGER B	REACTOR BLDG	87	H21039,H26015, H26096				X	X	2E11		21	RB EL 87'				X			X	yes			X			X	X
112	114	2T48-A001	UNIT 2 LIQUID NITROGEN STORAGE TANK	YARD	YARD	H26081,H16147, H27779					X	2T48		21			YARD	X			X		yes		Originally identified as A-46 & IPEEE outlier - Wood roof structure could potentially fall on tank and attached piping. Roof structure was modified to prevent collapse per MMO 94-5028. Verify during walkdown.	NA					
113	115	2Y52-A101A/C	FUEL DAY TANK 1C	DIESEL BLDG	130	H11185	X	X	X	X	X	2R43		21		DGB EL 130'			X			X	yes								
114	116	2C41-A001	SBLC BORON SOLUTION TANK	REACTOR BLDG	203	H26009,H27319, H26102,H27525	X					2C41		21	RB EL 203'				X		X		no			NA					
115	117	2R43-A005A	DG 2A STARTING AIR RECEIVER	DIESEL BLDG	130	H11252	X	X	X	X	X	2R43		21		DGB EL 130'			X		X		yes				X	X			
116	118	2P70-A002B	EMER N2 BOTTLE	REACTOR BLDG	130	H26066,B28347		X				2P70	X	0	RB EL 130'				X		X		no								
117	119	2R24-S021	2A RX BLDG 250V DC MCC	REACTOR BLDG	130	H27028,H24623, H26098						2R24		1	RB EL 130'				X		X		yes	yes							
118	120	2R24-S018B	600VAC MCC 2E-B	REACTOR BLDG	130	H26098, H24623, H27027						2R24		1	RB EL 130'				X		X		yes	yes							
119	121	2R42-S032B	125V DC DG BATT CHGR 2H	DIESEL BLDG	130	H23029,H23071	X	X	X	X	X	2R42		16		DGB EL 130'			X			X	yes				X	X			
120	122	2H11-P602	REAC WTR CLNUP & RECIRC B	CONTROL BLDG	164	H24614	X			X	X	2H11		20		CB EL 164'		X	X		X		yes		Originally identified as IPEEE outlier - inadequate restraint for HVAC diffuser in ceiling, and potential interaction of nearby furniture. Restraints to be added to the HVAC diffuser and the nearby furniture removed or restrained per DCR 54017.	N/A					

Notes:
1) Drawings H-10018 and H-10196 list all system codes.
2) The small selection of Class 11 equipment is because of the limited number of Seismic Category I equipment in different environments
3) Selection of equipment was developed from the following
   a. Edwin I Hatch Nuclear Plant Individual Plant Examination for External Events
   b. Edwin I Hatch Nuclear Plant, Unit 2, Unresolved Safety Issue A-46 Summary Repor
   c. Edwin I Hatch Nuclear Plant Units 1 and 2 Safe Shutdown Analysis Report, Table 4.A1-1, Unit 2 Safe Shutdown Equipment Lis
4) Risk ranking was done using the at-power, internal events PRA model and identifying those components that, in the model, have a Risk Achievement Worth of 2.0 or greater, or a Risk Reduction Worth of 1.005 or greater. The importance ranking spreadsheet contained in calculation PRA-BC-H-10-008 was the actual document used as a source
5) Replaced or modified equipment was identified by senior engineer knowledgable with the equipment

Preparer	Date:
Reviewer	Date:
Reactor Operator Review	Date:
Peer Reviewer	Date:
Peer Reviewer	Date:
Peer Reviewer	Date:

ATTACHMENT 1

SEISMIC WALKDOWN EQUIPMENT LISTS

UNIT 2 – BASE LIST 2

NO. SNCH082-RPT-02

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
1		2	AN	2G41FPCA107		As Built	1	☑	2G41FPCA107	
2		2	AN	2G41FPCA108		As Built	1	☑	2G41FPCA108	
3		2	EQ	2G41A001A		As Built	1	☑	SKIMMER SURGE TANK	
4		2	EQ	2G41A001B		As Built	1	☑	SKIMMER SURGE TANK	
5		2	EQ	2G41A003		As Built	1	☑	PRECOAT TANK	
6		2	EQ	2G41A004		As Built	1	☑	SAMPLE SINK	
7		2	EQ	2G41B001		Modified Id	1	☑	FUEL POOL HEAT EXCHAN	
8		2	EQ	2G41C001		As Built	1	☑	FUEL POOL COOLING PUM	
9		2	EQ	2G41C002		As Built	1	☑	FUEL POOL HOLDING PUM	
10		2	EQ	2G41C004		As Built	1	☑	FUEL POOL PRECOAT PUM	
11		2	EQ	2G41D002		As Built	1	☑	FUEL POOL FILTER DEMIN	
12		2	EQ	2G41D003		As Built	1	☑	PRECOAT TANK AGITATOR	
13		2	EQ	2G41D004		As Built	1	☑	RESIN TRAP	
14		2	EQ	2G41D005		As Built	1	☑	BACKWASH AIR FILTER	
15		2	EQ	2G41D006		As Built	1	☑	MILLIPORE FILTER HOLDE	
16		2	EQ	2G41D007		As Built	1	☑	PRECOAT PMP SEAL WTR	
17		2	EQ	2G41D008		As Built	1	☑	RHR TO FUEL POOL STOR	
18		2	EQ	2G41D009		As Built	1	☑	FUEL POOL DEMIN BYPAS	
19		2	EQ	2G41D010		As Built	1	☑	FUEL POOL STORAGE TO	
20		2	EQ	2G41D011		As Built	1	☑	SUCTION STRAINER FOR C	
21		2	EQ	2G41F001		As Built	1	☑	6" 150# BUTTERFLY VALVE	
22		2	EQ	2G41F002A		As Built	1	☑	6" 150# BUTTERFLY VALVE	
23		2	EQ	2G41F002B		As Built	1	☑	6" 150# BUTTERFLY VALVE	
24		2	EQ	2G41F003		As Built	1	☑	6" 150# CHECK VALVE	
25		2	EQ	2G41F004		As Built	1	☑	6" 150# BUTTERFLY VALVE	
26		2	EQ	2G41F005A		As Built	1	☑	6" 150# CHECK VALVE	
27		2	EQ	2G41F005B		As Built	1	☑	6" 150# CHECK VALVE	
28		2	EQ	2G41F006A		As Built	1	☑	6" 150# BUTTERFLY VALVE	
29		2	EQ	2G41F006B		As Built	1	☑	6" 150# BUTTERFLY VALVE	
30		2	EQ	2G41F007A		As Built	1	☑	2" 1500# GLOBE VALVE	
31		2	EQ	2G41F007B		As Built	1	☑	2" 1500# GLOBE VALVE	
32		2	EQ	2G41F008		As Built	1	☑	6" 150# CHECK VALVE	
33		2	EQ	2G41F009		As Built	1	☑	6" 150# BUTTERFLY VALVE	
34		2	EQ	2G41F010		As Built	1	☑	2" 1500# GLOBE VALVE	
35		2	EQ	2G41F011		As Built	1	☑	2" 1500# GLOBE VALVE	
36		2	EQ	2G41F015		As Built	1	☑	3" 150# GATE VALVE	
37		2	EQ	2G41F016		As Built	1	☑	3" 150# FP GATE VALVE	
38		2	EQ	2G41F017		As Built	1	☑	6" 150# GATE VALVE	
39		2	EQ	2G41F019		As Built	1	☑	6" 150# BUTTERFLY VALVE	
40		2	EQ	2G41F020		As Built	1	☑	8" 1500# GLOBE VALVE	

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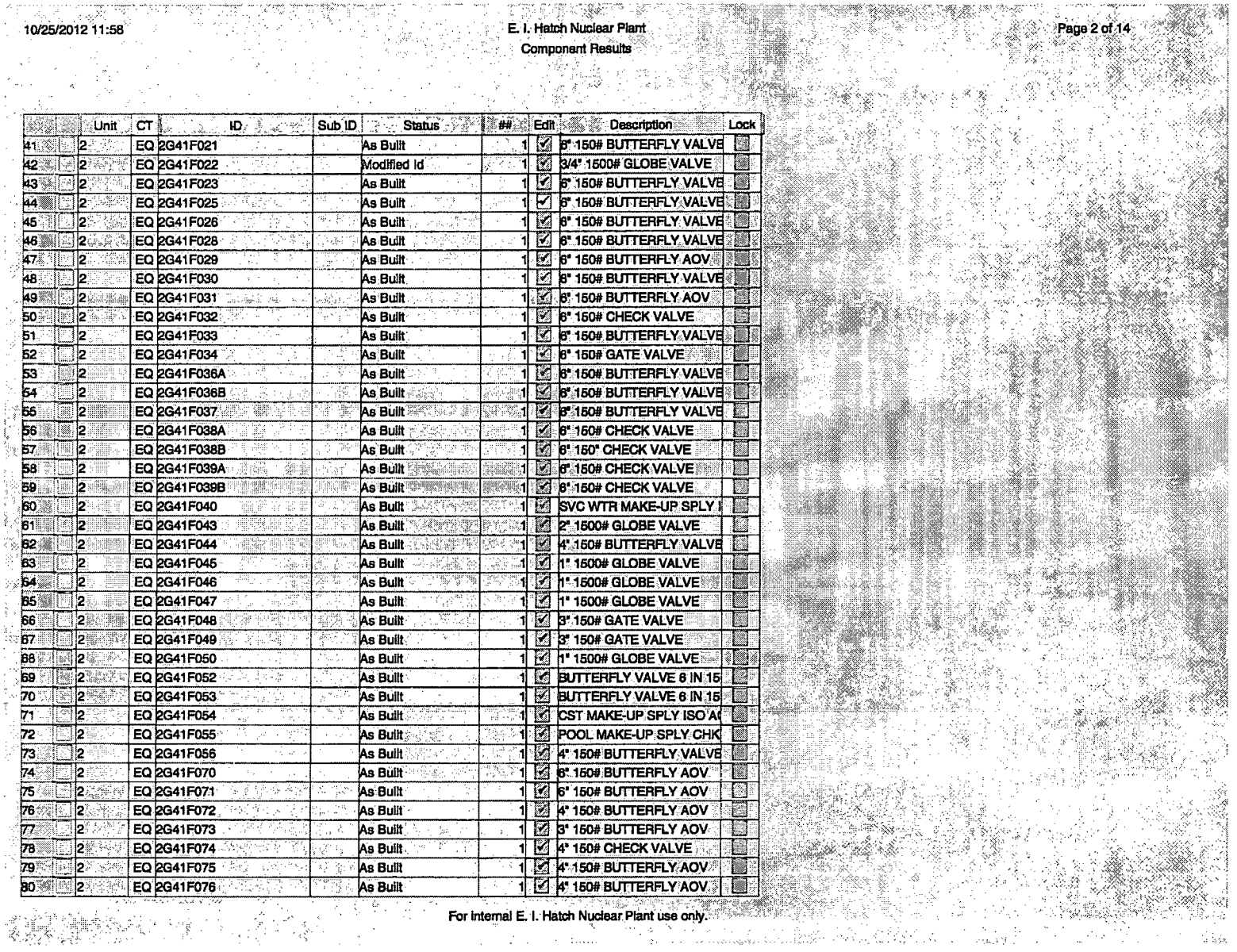

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
41		2	EQ	2G41F021		As Built	1	☑	6" 150# BUTTERFLY VALVE	
42		2	EQ	2G41F022		Modified Id	1	☑	3/4" 1500# GLOBE VALVE	
43		2	EQ	2G41F023		As Built	1	☑	6" 150# BUTTERFLY VALVE	
44		2	EQ	2G41F025		As Built	1	☑	6" 150# BUTTERFLY VALVE	
45		2	EQ	2G41F026		As Built	1	☑	6" 150# BUTTERFLY VALVE	
46		2	EQ	2G41F028		As Built	1	☑	6" 150# BUTTERFLY VALVE	
47		2	EQ	2G41F029		As Built	1	☑	6" 150# BUTTERFLY AOV	
48		2	EQ	2G41F030		As Built	1	☑	8" 150# BUTTERFLY VALVE	
49		2	EQ	2G41F031		As Built	1	☑	6" 150# BUTTERFLY AOV	
50		2	EQ	2G41F032		As Built	1	☑	6" 150# CHECK VALVE	
51		2	EQ	2G41F033		As Built	1	☑	6" 150# BUTTERFLY VALVE	
52		2	EQ	2G41F034		As Built	1	☑	6" 150# GATE VALVE	
53		2	EQ	2G41F036A		As Built	1	☑	6" 150# BUTTERFLY VALVE	
54		2	EQ	2G41F036B		As Built	1	☑	6" 150# BUTTERFLY VALVE	
55		2	EQ	2G41F037		As Built	1	☑	6" 150# BUTTERFLY VALVE	
56		2	EQ	2G41F038A		As Built	1	☑	6" 150# CHECK VALVE	
57		2	EQ	2G41F038B		As Built	1	☑	6" 150" CHECK VALVE	
58		2	EQ	2G41F039A		As Built	1	☑	6" 150# CHECK VALVE	
59		2	EQ	2G41F039B		As Built	1	☑	6" 150# CHECK VALVE	
60		2	EQ	2G41F040		As Built	1	☑	SVC WTR MAKE-UP SPLY I	
61		2	EQ	2G41F043		As Built	1	☑	2" 1500# GLOBE VALVE	
62		2	EQ	2G41F044		As Built	1	☑	4" 150# BUTTERFLY VALVE	
63		2	EQ	2G41F045		As Built	1	☑	1" 1500# GLOBE VALVE	
64		2	EQ	2G41F046		As Built	1	☑	1" 1500# GLOBE VALVE	
65		2	EQ	2G41F047		As Built	1	☑	1" 1500# GLOBE VALVE	
66		2	EQ	2G41F048		As Built	1	☑	3" 150# GATE VALVE	
67		2	EQ	2G41F049		As Built	1	☑	3" 150# GATE VALVE	
68		2	EQ	2G41F050		As Built	1	☑	1" 1500# GLOBE VALVE	
69		2	EQ	2G41F052		As Built	1	☑	BUTTERFLY VALVE 6 IN 15	
70		2	EQ	2G41F053		As Built	1	☑	BUTTERFLY VALVE 6 IN 15	
71		2	EQ	2G41F054		As Built	1	☑	CST MAKE-UP SPLY ISO A	
72		2	EQ	2G41F055		As Built	1	☑	POOL MAKE-UP SPLY CHK	
73		2	EQ	2G41F056		As Built	1	☑	4" 150# BUTTERFLY VALVE	
74		2	EQ	2G41F070		As Built	1	☑	8" 150# BUTTERFLY AOV	
75		2	EQ	2G41F071		As Built	1	☑	6" 150# BUTTERFLY AOV	
76		2	EQ	2G41F072		As Built	1	☑	4" 150# BUTTERFLY AOV	
77		2	EQ	2G41F073		As Built	1	☑	3" 150# BUTTERFLY AOV	
78		2	EQ	2G41F074		As Built	1	☑	4" 150# CHECK VALVE	
79		2	EQ	2G41F075		As Built	1	☑	4" 150# BUTTERFLY AOV	
80		2	EQ	2G41F076		As Built	1	☑	4" 150# BUTTERFLY AOV	

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
81		2	EQ	2G41F077		As Built	1	☑	4" 150# BUTTERFLY AOV	
82		2	EQ	2G41F078		As Built	1	☑	1" GATE VALVE	
83		2	EQ	2G41F079		As Built	1	☑	PLUG VALVE 1 IN AO	
84		2	EQ	2G41F080		As Built	1	☑	BALL VALVE 3 IN AO	
85		2	EQ	2G41F081		As Built	1	☑	DEMIN WTR RECYCLE TAN	
86		2	EQ	2G41F082		As Built	1	☑	BUTFLY VALVE 3 IN AO	
87		2	EQ	2G41F083		As Built	1	☑	1" 150# PLUG AOV	
88		2	EQ	2G41F084		As Built	1	☑	3" 150# BUTTERFLY AOV	
89		2	EQ	2G41F085		As Built	1	☑	3" GATE VALVE	
90		2	EQ	2G41F086		As Built	1	☑	3" CHECK VALVE	
91		2	EQ	2G41F087		As Built	1	☑	3" 150# BALL AOV	
92		2	EQ	2G41F088		As Built	1	☑	2" 150# CHECK VALVE	
93		2	EQ	2G41F089		As Built	1	☑	1" PLUG VALVE	
94		2	EQ	2G41F090		As Built	1	☑	1" GATE VALVE	
95		2	EQ	2G41F091		As Built	1	☑	1" GATE VALVE	
96		2	EQ	2G41F093		As Built	1	☑	1.5" PLUG VALVE	
97		2	EQ	2G41F094		As Built	1	☑	4" 150# BUTTERFLY AOV	
98		2	EQ	2G41F095		As Built	1	☑	1" GATE VALVE	
99		2	EQ	2G41F096		As Built	1	☑	1" GATE VALVE	
100		2	EQ	2G41F097		As Built	1	☑	1/2" NEEDLE VALVE	
101		2	EQ	2G41F098		As Built	1	☑	1/2" NEEDLE VALVE	
102		2	EQ	2G41F099		As Built	1	☑	3/4"1500# GLOBE VLV N-12	
103		2	EQ	2G41F100		As Built	1	☑	1/2" 1500# GLOBE VALVE	
104		2	EQ	2G41F211		As Built	1	☑	4" 150# BUTTERFLY VALVE	
105		2	EQ	2G41F212		As Built	1	☑	2" GATE VALVE	
106		2	EQ	2G41F213		As Built	1	☑	4" 150# CHECK VALVE	
107		2	EQ	2G41F214		As Built	1	☑	1/2" SOLENOID VALVE	
108		2	EQ	2G41F215		As Built	1	☑	1/2" GATE VALVE	
109		2	EQ	2G41F218		As Built	1	☑	PLUG VALVE 2.5" AOV	
110		2	EQ	2G41F220		As Built	1	☑	2" 600# GATE VALVE	
111		2	EQ	2G41F221		As Built	1	☑	8" 150# BUTTERFLY VALVE	
112		2	EQ	2G41F222		As Built	1	☑	8" 150# CHECK VALVE	
113		2	EQ	2G41F223		As Built	1	☑	1" 1500# GLOBE VALVE	
114		2	EQ	2G41F224		As Built	1	☑	1" 1500# GLOBE VALVE	
115		2	EQ	2G41F225		As Built	1	☑	1.5" 1500# GLOBE VALVE	
116		2	EQ	2G41F226		As Built	1	☑	1" 1500# GLOBE VALVE	
117		2	EQ	2G41F227		As Built	1	☑	1" 1500# GLOBE VALVE	
118		2	EQ	2G41F228		As Built	1	☑	2" 1500# GLOBE VALVE	
119		2	EQ	2G41F229		As Built	1	☑	1" 1500# GLOBE VALVE	
120		2	EQ	2G41F230		As Built	1	☑	1" 1500# GLOBE VALVE	

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
121		2	EQ	2G41F231		As Built	1	☑	PRESSURE REG VALVE	
122		2	EQ	2G41F232		As Built	1	☑	PRESSURE REG VALVE	
123		2	EQ	2G41F233		As Built	1	☑	PRESSURE REG VALVE	
124		2	EQ	2G41F234		As Built	1	☑	PRESSURE REG VALVE	
125		2	EQ	2G41F235		As Built	1	☑	1" 1500# GLOBE VALVE	
126		2	EQ	2G41F237		As Built	1	☑	1" 1500# GLOBE VALVE	
127		2	EQ	2G41F238		As Built	1	☑	1" 1500# GLOBE VALVE	
128		2	EQ	2G41F239		As Built	1	☑	1" 1500# GLOBE VALVE	
129		2	EQ	2G41F240A		As Built	1	☑	1/2" 600# GATE VALVE	
130		2	EQ	2G41F240B		As Built	1	☑	1/2" 600# GATE VALVE	
131		2	EQ	2G41F240C		As Built	1	☑	1/2" 600# GATE VALVE	
132		2	EQ	2G41F240D		As Built	1	☑	1/2" 600# GATE VALVE	
133		2	EQ	2G41F240E		As Built	1	☑	1/2" 600# GATE VALVE	
134		2	EQ	2G41F240F		As Built	1	☑	1/2" 600# GATE VALVE	
135		2	EQ	2G41F240G		As Built	1	☑	1/2" 600# GATE VALVE	
136		2	EQ	2G41F240H		As Built	1	☑	1/2" 600# GATE VALVE	
137		2	EQ	2G41F241A		As Built	1	☑	1/2" 600# GATE VALVE	
138		2	EQ	2G41F241B		As Built	1	☑	1/2" 600# GATE VALVE	
139		2	EQ	2G41F242A		As Built	1	☑	1/2" 600# GATE VALVE	
140		2	EQ	2G41F242B		As Built	1	☑	1/2" 600# GATE VALVE	
141		2	EQ	2G41F242C		As Built	1	☑	1/2" 600# GATE VALVE	
142		2	EQ	2G41F242D		As Built	1	☑	1/2" 600# GATE VALVE	
143		2	EQ	2G41F242E		As Built	1	☑	1/2" 600# GATE VALVE	
144		2	EQ	2G41F243		As Built	1	☑	1" 600# GATE VALVE NV-55	
145		2	EQ	2G41F244		As Built	1	☑	4" 150# CHECK VALVE	
146		2	EQ	2G41F260		As Built	1	☑	3/4" GLOBE VLV N367A NV4	
147		2	EQ	2G41F261		As Built	1	☑	3/4" GLOB (N387B) NV-47	
148		2	EQ	2G41F262		As Built	1	☑	1/2" GLOB (N381) NV-48	
149		2	EQ	2G41F263		As Built	1	☑	1/2" GLOB (N381) NV-48	
150		2	EQ	2G41F265		As Built	1	☑	1/2" GLOBE VALVE (N352)	
151		2	EQ	2G41F266		As Built	1	☑	1/2" GLOBE VALVE (N003)	
152		2	EQ	2G41F267		As Built	1	☑	1/2" GLOBE VALVE (N020)	
153		2	EQ	2G41F268		As Built	1	☑	1/2" GLOBE VALVE (N021)	
154		2	EQ	2G41F269		As Built	1	☑	1/2" GLB VLV N012 GV-739	
155		2	EQ	2G41F270		As Built	1	☑	1/2" GLOB (N012) GV-739	
156		2	EQ	2G41F271		As Built	1	☑	3/4" GLOB (R020) GV-737	
157		2	EQ	2G41F272		As Built	1	☑	3/4" GLOB (R022)	
158		2	EQ	2G41F273		As Built	1	☑	3/4" GLOB (N008) NV-47	
159		2	EQ	2G41F274		As Built	1	☑	3/4" GLOB (N008) NV-47	
160		2	EQ	2G41F275		As Built	1	☑	3/4" GLOB (R023) FV-737	

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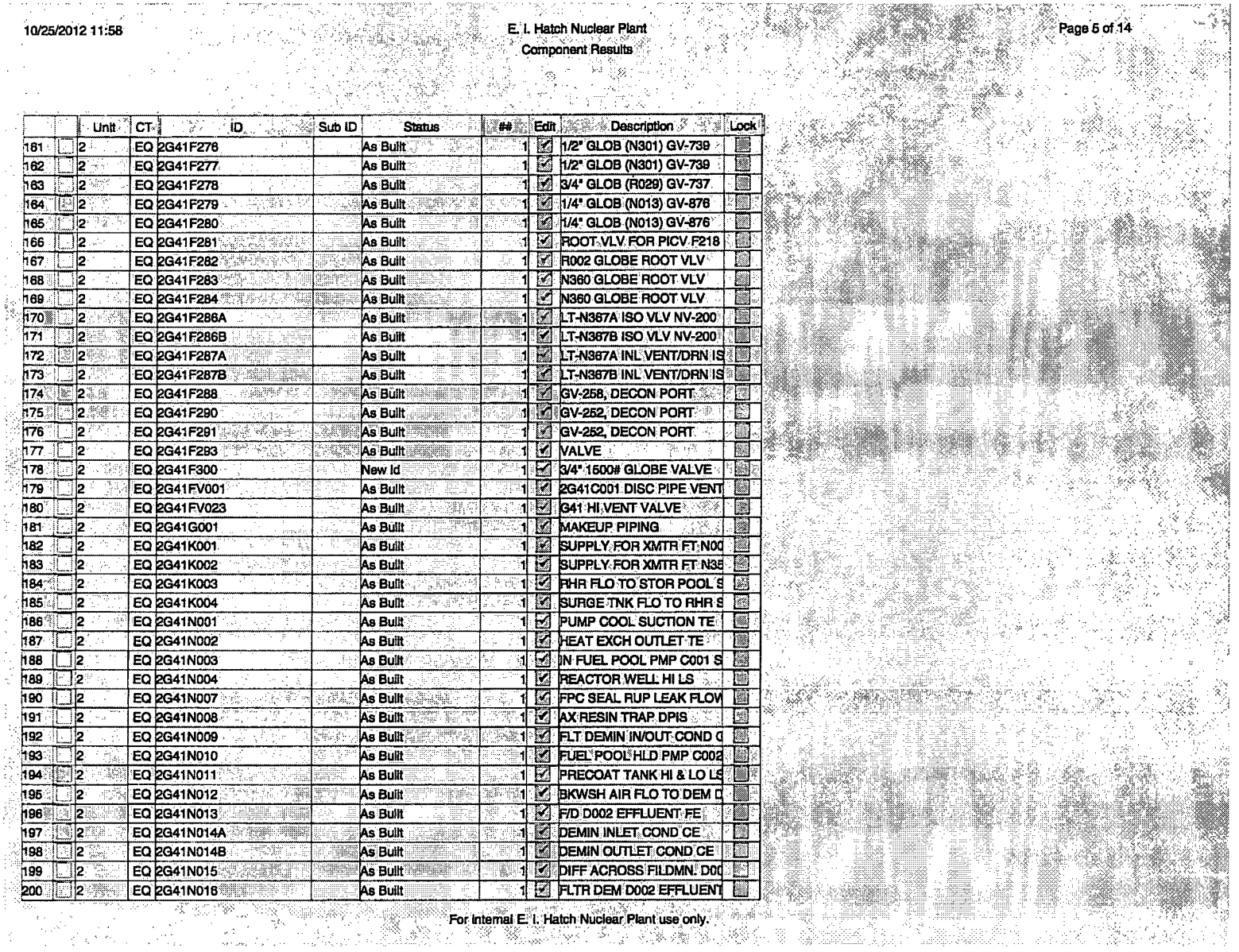

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
161		2	EQ	2G41F276		As Built	1	☑	1/2" GLOB (N301) GV-739	
162		2	EQ	2G41F277		As Built	1	☑	1/2" GLOB (N301) GV-739	
163		2	EQ	2G41F278		As Built	1	☑	3/4" GLOB (R029) GV-737	
164		2	EQ	2G41F279		As Built	1	☑	1/4" GLOB (N013) GV-876	
165		2	EQ	2G41F280		As Built	1	☑	1/4" GLOB (N013) GV-876	
166		2	EQ	2G41F281		As Built	1	☑	ROOT VLV FOR PICV F218	
167		2	EQ	2G41F282		As Built	1	☑	R002 GLOBE ROOT VLV	
168		2	EQ	2G41F283		As Built	1	☑	N360 GLOBE ROOT VLV	
169		2	EQ	2G41F284		As Built	1	☑	N360 GLOBE ROOT VLV	
170		2	EQ	2G41F286A		As Built	1	☑	LT-N367A ISO VLV NV-200	
171		2	EQ	2G41F286B		As Built	1	☑	LT-N367B ISO VLV NV-200	
172		2	EQ	2G41F287A		As Built	1	☑	LT-N367A INL VENT/DRN IS	
173		2	EQ	2G41F287B		As Built	1	☑	LT-N367B INL VENT/DRN IS	
174		2	EQ	2G41F288		As Built	1	☑	GV-258, DECON PORT	
175		2	EQ	2G41F290		As Built	1	☑	GV-252, DECON PORT	
176		2	EQ	2G41F291		As Built	1	☑	GV-252, DECON PORT	
177		2	EQ	2G41F293		As Built	1	☑	VALVE	
178		2	EQ	2G41F300		New Id	1	☑	3/4" 1500# GLOBE VALVE	
179		2	EQ	2G41FV001		As Built	1	☑	2G41C001 DISC PIPE VENT	
180		2	EQ	2G41FV023		As Built	1	☑	G41 HI VENT VALVE	
181		2	EQ	2G41G001		As Built	1	☑	MAKEUP PIPING	
182		2	EQ	2G41K001		As Built	1	☑	SUPPLY FOR XMTR FT N00	
183		2	EQ	2G41K002		As Built	1	☑	SUPPLY FOR XMTR FT N38	
184		2	EQ	2G41K003		As Built	1	☑	RHR FLO TO STOR POOL S	
185		2	EQ	2G41K004		As Built	1	☑	SURGE TNK FLO TO RHR S	
186		2	EQ	2G41N001		As Built	1	☑	PUMP COOL SUCTION TE	
187		2	EQ	2G41N002		As Built	1	☑	HEAT EXCH OUTLET TE	
188		2	EQ	2G41N003		As Built	1	☑	N FUEL POOL PMP C001 S	
189		2	EQ	2G41N004		As Built	1	☑	REACTOR WELL HI LS	
190		2	EQ	2G41N007		As Built	1	☑	FPC SEAL RUP LEAK FLOW	
191		2	EQ	2G41N008		As Built	1	☑	AX RESIN TRAP DPIS	
192		2	EQ	2G41N009		As Built	1	☑	FLT DEMIN IN/OUT COND C	
193		2	EQ	2G41N010		As Built	1	☑	FUEL POOL HLD PMP C002	
194		2	EQ	2G41N011		As Built	1	☑	PRECOAT TANK HI & LO LS	
195		2	EQ	2G41N012		As Built	1	☑	BKWSH AIR FLO TO DEM D	
196		2	EQ	2G41N013		As Built	1	☑	F/D D002 EFFLUENT FE	
197		2	EQ	2G41N014A		As Built	1	☑	DEMIN INLET COND CE	
198		2	EQ	2G41N014B		As Built	1	☑	DEMIN OUTLET COND CE	
199		2	EQ	2G41N015		As Built	1	☑	DIFF ACROSS FILDMN. D00	
200		2	EQ	2G41N016		As Built	1	☑	FLTR DEM D002 EFFLUENT	

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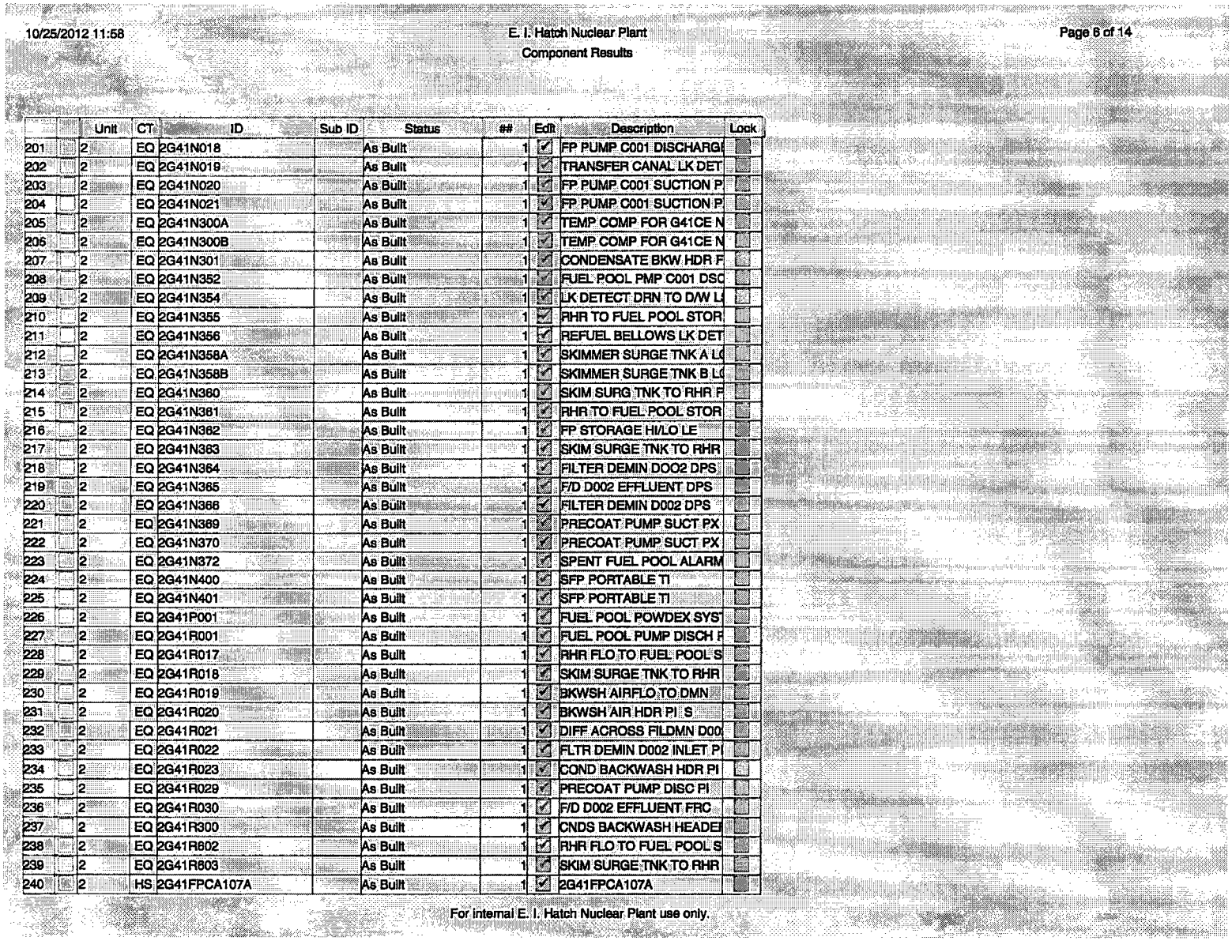

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
201		2	EQ	2G41N018		As Built	1	☑	FP PUMP C001 DISCHARG	
202		2	EQ	2G41N019		As Built	1	☑	TRANSFER CANAL LK DET	
203		2	EQ	2G41N020		As Built	1	☑	FP PUMP C001 SUCTION P	
204		2	EQ	2G41N021		As Built	1	☑	FP PUMP C001 SUCTION P	
205		2	EQ	2G41N300A		As Built	1	☑	TEMP COMP FOR G41CE N	
206		2	EQ	2G41N300B		As Built	1	☑	TEMP COMP FOR G41CE N	
207		2	EQ	2G41N301		As Built	1	☑	CONDENSATE BKW HDR F	
208		2	EQ	2G41N352		As Built	1	☑	FUEL POOL PMP C001 DSC	
209		2	EQ	2G41N354		As Built	1	☑	LK DETECT DRN TO D/W L	
210		2	EQ	2G41N355		As Built	1	☑	RHR TO FUEL POOL STOR	
211		2	EQ	2G41N356		As Built	1	☑	REFUEL BELLOWS LK DET	
212		2	EQ	2G41N358A		As Built	1	☑	SKIMMER SURGE TNK A L	
213		2	EQ	2G41N358B		As Built	1	☑	SKIMMER SURGE TNK B L	
214		2	EQ	2G41N360		As Built	1	☑	SKIM SURG TNK TO RHR F	
215		2	EQ	2G41N361		As Built	1	☑	RHR TO FUEL POOL STOR	
216		2	EQ	2G41N362		As Built	1	☑	FP STORAGE HI/LO LE	
217		2	EQ	2G41N363		As Built	1	☑	SKIM SURGE TNK TO RHR	
218		2	EQ	2G41N364		As Built	1	☑	FILTER DEMIN D002 DPS	
219		2	EQ	2G41N365		As Built	1	☑	F/D D002 EFFLUENT DPS	
220		2	EQ	2G41N366		As Built	1	☑	FILTER DEMIN D002 DPS	
221		2	EQ	2G41N369		As Built	1	☑	PRECOAT PUMP SUCT PX	
222		2	EQ	2G41N370		As Built	1	☑	PRECOAT PUMP SUCT PX	
223		2	EQ	2G41N372		As Built	1	☑	SPENT FUEL POOL ALARM	
224		2	EQ	2G41N400		As Built	1	☑	SFP PORTABLE TI	
225		2	EQ	2G41N401		As Built	1	☑	SFP PORTABLE TI	
226		2	EQ	2G41P001		As Built	1	☑	FUEL POOL POWDEX SYS	
227		2	EQ	2G41R001		As Built	1	☑	FUEL POOL PUMP DISCH F	
228		2	EQ	2G41R017		As Built	1	☑	RHR FLO TO FUEL POOL S	
229		2	EQ	2G41R018		As Built	1	☑	SKIM SURGE TNK TO RHR	
230		2	EQ	2G41R019		As Built	1	☑	BKWSH AIRFLO TO DMN	
231		2	EQ	2G41R020		As Built	1	☑	BKWSH AIR HDR PI S	
232		2	EQ	2G41R021		As Built	1	☑	DIFF ACROSS FILDMN D00	
233		2	EQ	2G41R022		As Built	1	☑	FLTR DEMIN D002 INLET PI	
234		2	EQ	2G41R023		As Built	1	☑	COND BACKWASH HDR PI	
235		2	EQ	2G41R029		As Built	1	☑	PRECOAT PUMP DISC PI	
236		2	EQ	2G41R030		As Built	1	☑	F/D D002 EFFLUENT FRC	
237		2	EQ	2G41R300		As Built	1	☑	CNDS BACKWASH HEADEI	
238		2	EQ	2G41R602		As Built	1	☑	RHR FLO TO FUEL POOL S	
239		2	EQ	2G41R603		As Built	1	☑	SKIM SURGE TNK TO RHR	
240		2	HS	2G41FPCA107A		As Built	1	☑	2G41FPCA107A	

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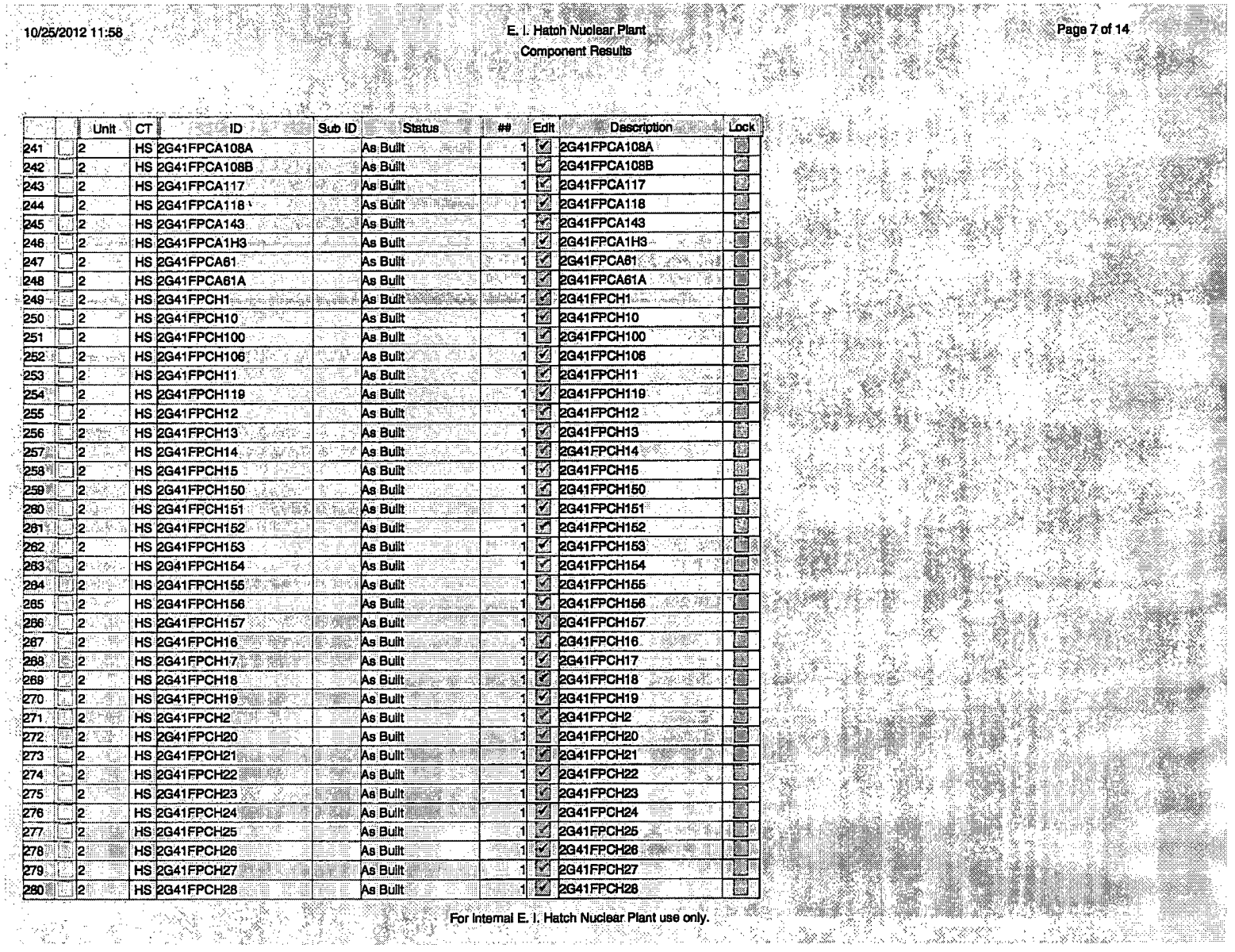

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
241		2	HS	2G41FPCA108A		As Built	1	☑	2G41FPCA108A	
242		2	HS	2G41FPCA108B		As Built	1	☑	2G41FPCA108B	
243		2	HS	2G41FPCA117		As Built	1	☑	2G41FPCA117	
244		2	HS	2G41FPCA118		As Built	1	☑	2G41FPCA118	
245		2	HS	2G41FPCA143		As Built	1	☑	2G41FPCA143	
246		2	HS	2G41FPCA1H3		As Built	1	☑	2G41FPCA1H3	
247		2	HS	2G41FPCA61		As Built	1	☑	2G41FPCA61	
248		2	HS	2G41FPCA61A		As Built	1	☑	2G41FPCA61A	
249		2	HS	2G41FPCH1		As Built	1	☑	2G41FPCH1	
250		2	HS	2G41FPCH10		As Built	1	☑	2G41FPCH10	
251		2	HS	2G41FPCH100		As Built	1	☑	2G41FPCH100	
252		2	HS	2G41FPCH106		As Built	1	☑	2G41FPCH106	
253		2	HS	2G41FPCH11		As Built	1	☑	2G41FPCH11	
254		2	HS	2G41FPCH119		As Built	1	☑	2G41FPCH119	
255		2	HS	2G41FPCH12		As Built	1	☑	2G41FPCH12	
256		2	HS	2G41FPCH13		As Built	1	☑	2G41FPCH13	
257		2	HS	2G41FPCH14		As Built	1	☑	2G41FPCH14	
258		2	HS	2G41FPCH15		As Built	1	☑	2G41FPCH15	
259		2	HS	2G41FPCH150		As Built	1	☑	2G41FPCH150	
260		2	HS	2G41FPCH151		As Built	1	☑	2G41FPCH151	
261		2	HS	2G41FPCH152		As Built	1	☑	2G41FPCH152	
262		2	HS	2G41FPCH153		As Built	1	☑	2G41FPCH153	
263		2	HS	2G41FPCH154		As Built	1	☑	2G41FPCH154	
264		2	HS	2G41FPCH155		As Built	1	☑	2G41FPCH155	
265		2	HS	2G41FPCH156		As Built	1	☑	2G41FPCH156	
266		2	HS	2G41FPCH157		As Built	1	☑	2G41FPCH157	
267		2	HS	2G41FPCH16		As Built	1	☑	2G41FPCH16	
268		2	HS	2G41FPCH17		As Built	1	☑	2G41FPCH17	
269		2	HS	2G41FPCH18		As Built	1	☑	2G41FPCH18	
270		2	HS	2G41FPCH19		As Built	1	☑	2G41FPCH19	
271		2	HS	2G41FPCH2		As Built	1	☑	2G41FPCH2	
272		2	HS	2G41FPCH20		As Built	1	☑	2G41FPCH20	
273		2	HS	2G41FPCH21		As Built	1	☑	2G41FPCH21	
274		2	HS	2G41FPCH22		As Built	1	☑	2G41FPCH22	
275		2	HS	2G41FPCH23		As Built	1	☑	2G41FPCH23	
276		2	HS	2G41FPCH24		As Built	1	☑	2G41FPCH24	
277		2	HS	2G41FPCH25		As Built	1	☑	2G41FPCH25	
278		2	HS	2G41FPCH26		As Built	1	☑	2G41FPCH26	
279		2	HS	2G41FPCH27		As Built	1	☑	2G41FPCH27	
280		2	HS	2G41FPCH28		As Built	1	☑	2G41FPCH28	

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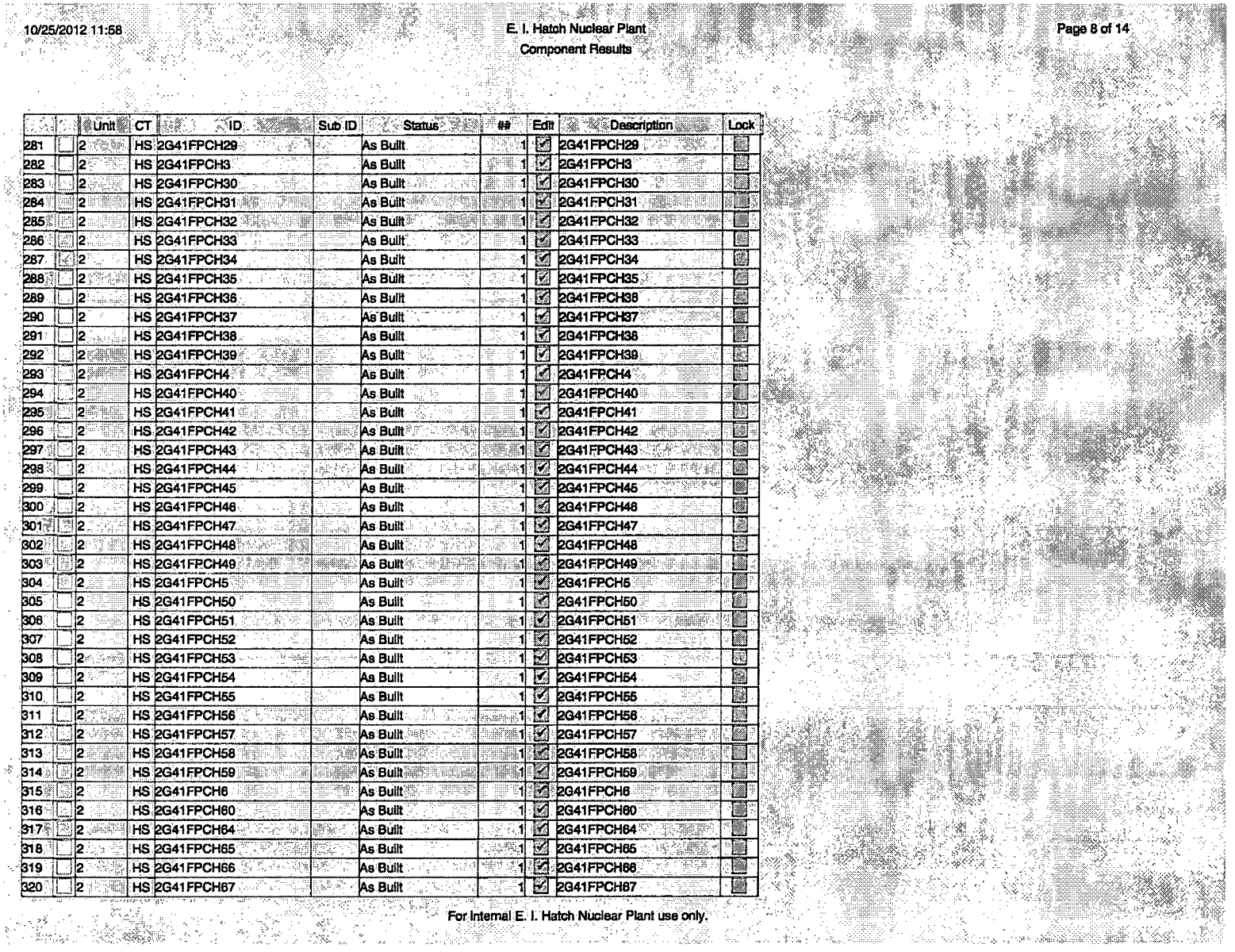

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
281		2	HS	2G41FPCH29		As Built	1	☑	2G41FPCH29	
282		2	HS	2G41FPCH3		As Built	1	☑	2G41FPCH3	
283		2	HS	2G41FPCH30		As Built	1	☑	2G41FPCH30	
284		2	HS	2G41FPCH31		As Built	1	☑	2G41FPCH31	
285		2	HS	2G41FPCH32		As Built	1	☑	2G41FPCH32	
286		2	HS	2G41FPCH33		As Built	1	☑	2G41FPCH33	
287		2	HS	2G41FPCH34		As Built	1	☑	2G41FPCH34	
288		2	HS	2G41FPCH35		As Built	1	☑	2G41FPCH35	
289		2	HS	2G41FPCH36		As Built	1	☑	2G41FPCH36	
290		2	HS	2G41FPCH37		As Built	1	☑	2G41FPCH37	
291		2	HS	2G41FPCH38		As Built	1	☑	2G41FPCH38	
292		2	HS	2G41FPCH39		As Built	1	☑	2G41FPCH39	
293		2	HS	2G41FPCH4		As Built	1	☑	2G41FPCH4	
294		2	HS	2G41FPCH40		As Built	1	☑	2G41FPCH40	
295		2	HS	2G41FPCH41		As Built	1	☑	2G41FPCH41	
296		2	HS	2G41FPCH42		As Built	1	☑	2G41FPCH42	
297		2	HS	2G41FPCH43		As Built	1	☑	2G41FPCH43	
298		2	HS	2G41FPCH44		As Built	1	☑	2G41FPCH44	
299		2	HS	2G41FPCH45		As Built	1	☑	2G41FPCH45	
300		2	HS	2G41FPCH46		As Built	1	☑	2G41FPCH46	
301		2	HS	2G41FPCH47		As Built	1	☑	2G41FPCH47	
302		2	HS	2G41FPCH48		As Built	1	☑	2G41FPCH48	
303		2	HS	2G41FPCH49		As Built	1	☑	2G41FPCH49	
304		2	HS	2G41FPCH5		As Built	1	☑	2G41FPCH5	
305		2	HS	2G41FPCH50		As Built	1	☑	2G41FPCH50	
306		2	HS	2G41FPCH51		As Built	1	☑	2G41FPCH51	
307		2	HS	2G41FPCH52		As Built	1	☑	2G41FPCH52	
308		2	HS	2G41FPCH53		As Built	1	☑	2G41FPCH53	
309		2	HS	2G41FPCH54		As Built	1	☑	2G41FPCH54	
310		2	HS	2G41FPCH55		As Built	1	☑	2G41FPCH55	
311		2	HS	2G41FPCH56		As Built	1	☑	2G41FPCH56	
312		2	HS	2G41FPCH57		As Built	1	☑	2G41FPCH57	
313		2	HS	2G41FPCH58		As Built	1	☑	2G41FPCH58	
314		2	HS	2G41FPCH59		As Built	1	☑	2G41FPCH59	
315		2	HS	2G41FPCH6		As Built	1	☑	2G41FPCH6	
316		2	HS	2G41FPCH60		As Built	1	☑	2G41FPCH60	
317		2	HS	2G41FPCH64		As Built	1	☑	2G41FPCH64	
318		2	HS	2G41FPCH65		As Built	1	☑	2G41FPCH65	
319		2	HS	2G41FPCH66		As Built	1	☑	2G41FPCH66	
320		2	HS	2G41FPCH67		As Built	1	☑	2G41FPCH67	

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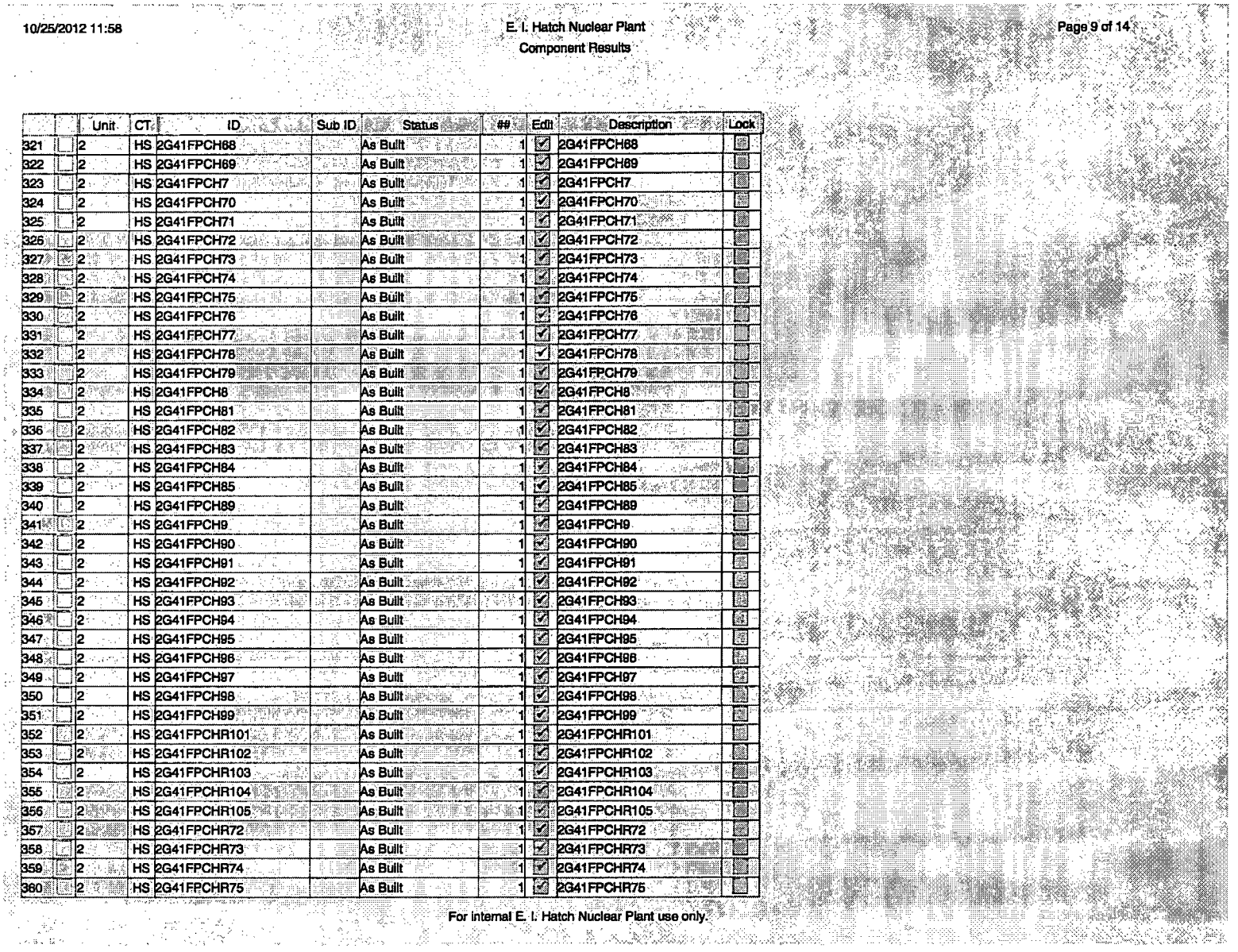

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
321		2	HS	2G41FPCH88		As Built	1	☑	2G41FPCH88	
322		2	HS	2G41FPCH89		As Built	1	☑	2G41FPCH89	
323		2	HS	2G41FPCH7		As Built	1	☑	2G41FPCH7	
324		2	HS	2G41FPCH70		As Built	1	☑	2G41FPCH70	
325		2	HS	2G41FPCH71		As Built	1	☑	2G41FPCH71	
326		2	HS	2G41FPCH72		As Built	1	☑	2G41FPCH72	
327		2	HS	2G41FPCH73		As Built	1	☑	2G41FPCH73	
328		2	HS	2G41FPCH74		As Built	1	☑	2G41FPCH74	
329		2	HS	2G41FPCH75		As Built	1	☑	2G41FPCH75	
330		2	HS	2G41FPCH76		As Built	1	☑	2G41FPCH76	
331		2	HS	2G41FPCH77		As Built	1	☑	2G41FPCH77	
332		2	HS	2G41FPCH78		As Built	1	☑	2G41FPCH78	
333		2	HS	2G41FPCH79		As Built	1	☑	2G41FPCH79	
334		2	HS	2G41FPCH8		As Built	1	☑	2G41FPCH8	
335		2	HS	2G41FPCH81		As Built	1	☑	2G41FPCH81	
336		2	HS	2G41FPCH82		As Built	1	☑	2G41FPCH82	
337		2	HS	2G41FPCH83		As Built	1	☑	2G41FPCH83	
338		2	HS	2G41FPCH84		As Built	1	☑	2G41FPCH84	
339		2	HS	2G41FPCH85		As Built	1	☑	2G41FPCH85	
340		2	HS	2G41FPCH89		As Built	1	☑	2G41FPCH89	
341		2	HS	2G41FPCH9		As Built	1	☑	2G41FPCH9	
342		2	HS	2G41FPCH90		As Built	1	☑	2G41FPCH90	
343		2	HS	2G41FPCH91		As Built	1	☑	2G41FPCH91	
344		2	HS	2G41FPCH92		As Built	1	☑	2G41FPCH92	
345		2	HS	2G41FPCH93		As Built	1	☑	2G41FPCH93	
346		2	HS	2G41FPCH94		As Built	1	☑	2G41FPCH94	
347		2	HS	2G41FPCH95		As Built	1	☑	2G41FPCH95	
348		2	HS	2G41FPCH96		As Built	1	☑	2G41FPCH96	
349		2	HS	2G41FPCH97		As Built	1	☑	2G41FPCH97	
350		2	HS	2G41FPCH98		As Built	1	☑	2G41FPCH98	
351		2	HS	2G41FPCH99		As Built	1	☑	2G41FPCH99	
352		2	HS	2G41FPCHR101		As Built	1	☑	2G41FPCHR101	
353		2	HS	2G41FPCHR102		As Built	1	☑	2G41FPCHR102	
354		2	HS	2G41FPCHR103		As Built	1	☑	2G41FPCHR103	
355		2	HS	2G41FPCHR104		As Built	1	☑	2G41FPCHR104	
356		2	HS	2G41FPCHR105		As Built	1	☑	2G41FPCHR105	
357		2	HS	2G41FPCHR72		As Built	1	☑	2G41FPCHR72	
358		2	HS	2G41FPCHR73		As Built	1	☑	2G41FPCHR73	
359		2	HS	2G41FPCHR74		As Built	1	☑	2G41FPCHR74	
360		2	HS	2G41FPCHR75		As Built	1	☑	2G41FPCHR75	

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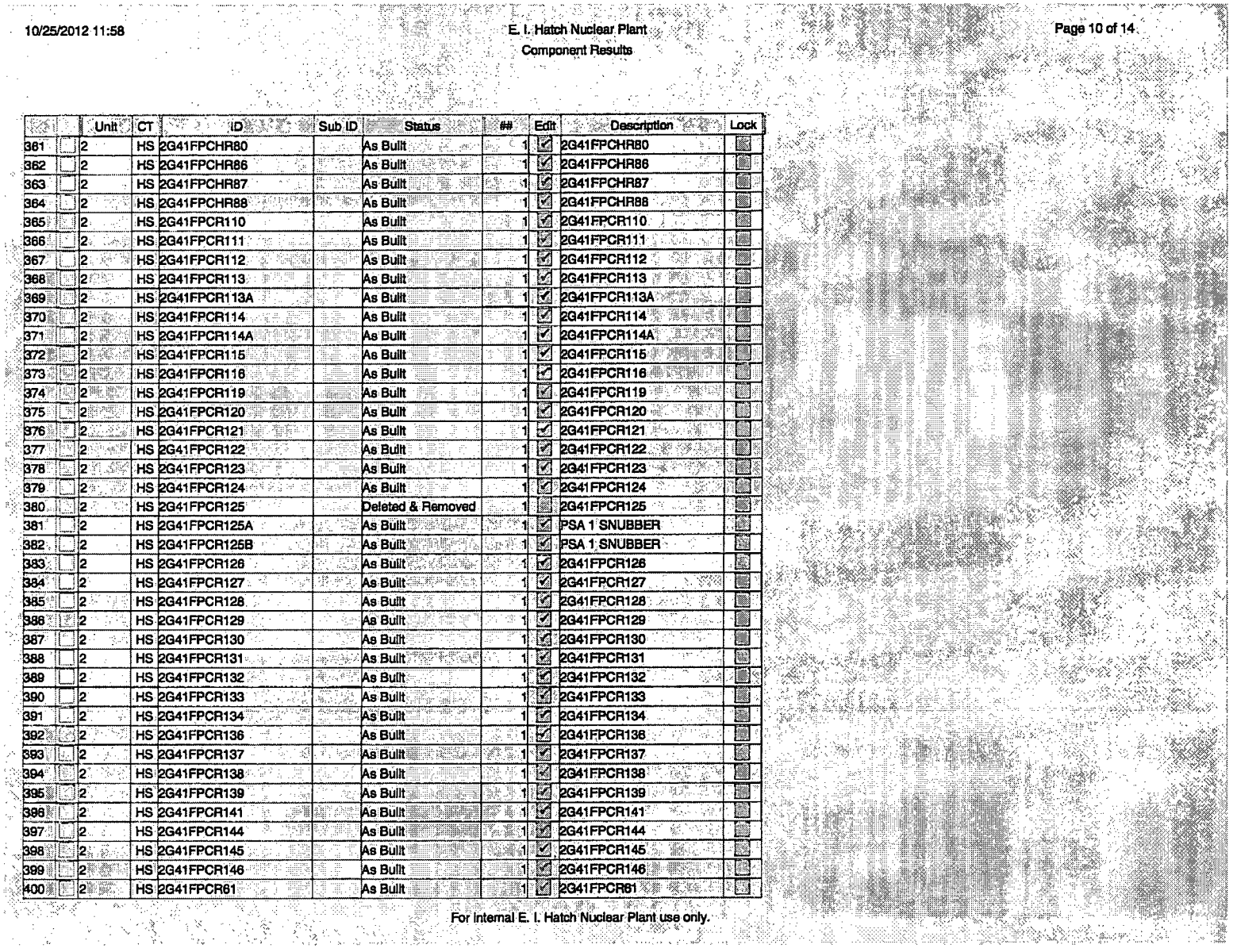

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
361		2	HS	2G41FPCHR80		As Built	1	☑	2G41FPCHR80	
362		2	HS	2G41FPCHR86		As Built	1	☑	2G41FPCHR86	
363		2	HS	2G41FPCHR87		As Built	1	☑	2G41FPCHR87	
364		2	HS	2G41FPCHR88		As Built	1	☑	2G41FPCHR88	
365		2	HS	2G41FPCR110		As Built	1	☑	2G41FPCR110	
366		2	HS	2G41FPCR111		As Built	1	☑	2G41FPCR111	
367		2	HS	2G41FPCR112		As Built	1	☑	2G41FPCR112	
368		2	HS	2G41FPCR113		As Built	1	☑	2G41FPCR113	
369		2	HS	2G41FPCR113A		As Built	1	☑	2G41FPCR113A	
370		2	HS	2G41FPCR114		As Built	1	☑	2G41FPCR114	
371		2	HS	2G41FPCR114A		As Built	1	☑	2G41FPCR114A	
372		2	HS	2G41FPCR115		As Built	1	☑	2G41FPCR115	
373		2	HS	2G41FPCR116		As Built	1	☑	2G41FPCR116	
374		2	HS	2G41FPCR119		As Built	1	☑	2G41FPCR119	
375		2	HS	2G41FPCR120		As Built	1	☑	2G41FPCR120	
376		2	HS	2G41FPCR121		As Built	1	☑	2G41FPCR121	
377		2	HS	2G41FPCR122		As Built	1	☑	2G41FPCR122	
378		2	HS	2G41FPCR123		As Built	1	☑	2G41FPCR123	
379		2	HS	2G41FPCR124		As Built	1	☑	2G41FPCR124	
380		2	HS	2G41FPCR125		Deleted & Removed	1	☐	2G41FPCR125	
381		2	HS	2G41FPCR125A		As Built	1	☑	PSA 1 SNUBBER	
382		2	HS	2G41FPCR125B		As Built	1	☑	PSA 1 SNUBBER	
383		2	HS	2G41FPCR126		As Built	1	☑	2G41FPCR126	
384		2	HS	2G41FPCR127		As Built	1	☑	2G41FPCR127	
385		2	HS	2G41FPCR128		As Built	1	☑	2G41FPCR128	
386		2	HS	2G41FPCR129		As Built	1	☑	2G41FPCR129	
387		2	HS	2G41FPCR130		As Built	1	☑	2G41FPCR130	
388		2	HS	2G41FPCR131		As Built	1	☑	2G41FPCR131	
389		2	HS	2G41FPCR132		As Built	1	☑	2G41FPCR132	
390		2	HS	2G41FPCR133		As Built	1	☑	2G41FPCR133	
391		2	HS	2G41FPCR134		As Built	1	☑	2G41FPCR134	
392		2	HS	2G41FPCR136		As Built	1	☑	2G41FPCR136	
393		2	HS	2G41FPCR137		As Built	1	☑	2G41FPCR137	
394		2	HS	2G41FPCR138		As Built	1	☑	2G41FPCR138	
395		2	HS	2G41FPCR139		As Built	1	☑	2G41FPCR139	
396		2	HS	2G41FPCR141		As Built	1	☑	2G41FPCR141	
397		2	HS	2G41FPCR144		As Built	1	☑	2G41FPCR144	
398		2	HS	2G41FPCR145		As Built	1	☑	2G41FPCR145	
399		2	HS	2G41FPCR146		As Built	1	☑	2G41FPCR146	
400		2	HS	2G41FPCR61		As Built	1	☑	2G41FPCR61	

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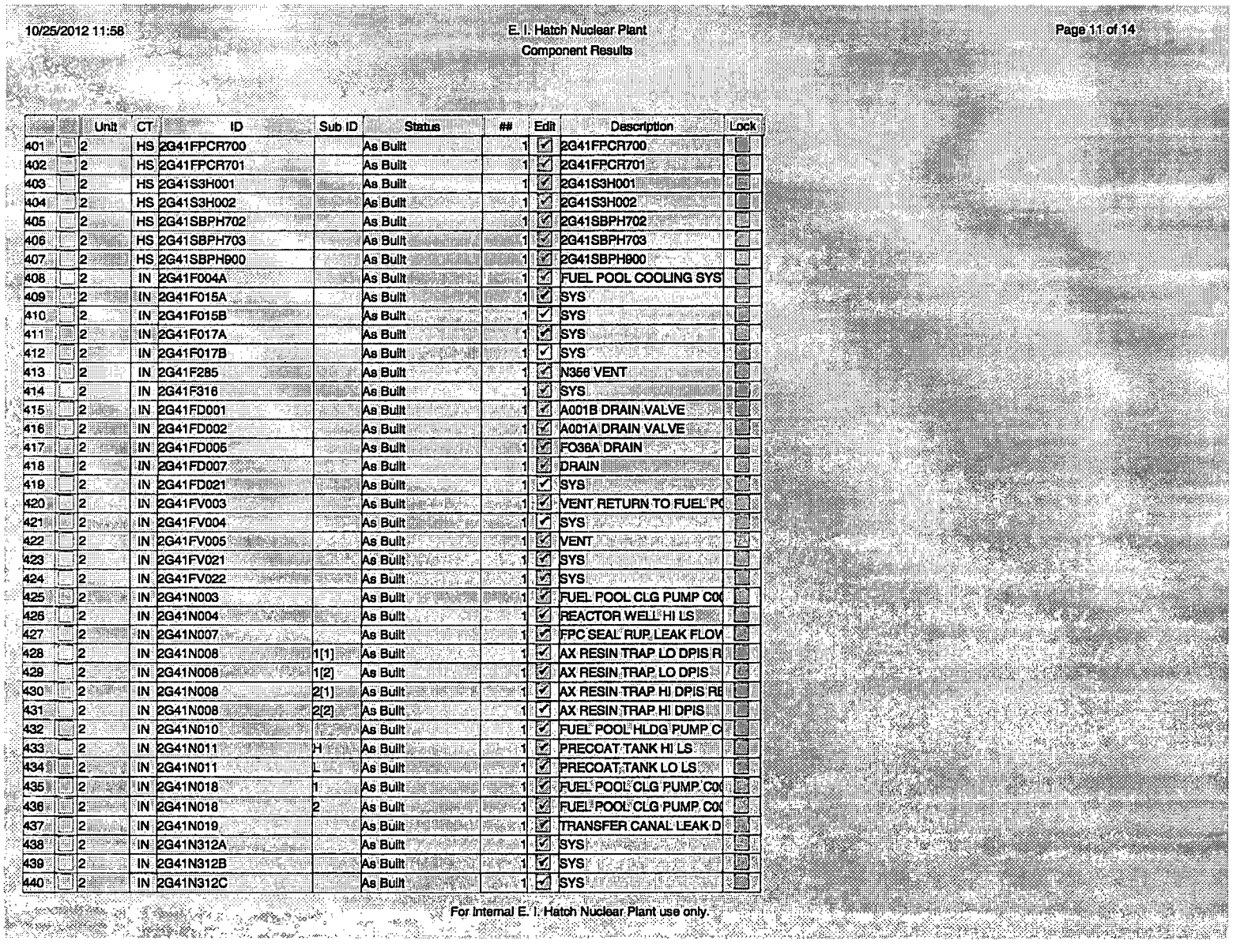

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
401		2	HS	2G41FPCR700		As Built	1	☑	2G41FPCR700	
402		2	HS	2G41FPCR701		As Built	1	☑	2G41FPCR701	
403		2	HS	2G41S3H001		As Built	1	☑	2G41S3H001	
404		2	HS	2G41S3H002		As Built	1	☑	2G41S3H002	
405		2	HS	2G41SBPH702		As Built	1	☑	2G41SBPH702	
406		2	HS	2G41SBPH703		As Built	1	☑	2G41SBPH703	
407		2	HS	2G41SBPH900		As Built	1	☑	2G41SBPH900	
408		2	IN	2G41F004A		As Built	1	☑	FUEL POOL COOLING SYS	
409		2	IN	2G41F015A		As Built	1	☑	SYS	
410		2	IN	2G41F015B		As Built	1	☑	SYS	
411		2	IN	2G41F017A		As Built	1	☑	SYS	
412		2	IN	2G41F017B		As Built	1	☑	SYS	
413		2	IN	2G41F285		As Built	1	☑	N356 VENT	
414		2	IN	2G41F316		As Built	1	☑	SYS	
415		2	IN	2G41FD001		As Built	1	☑	A001B DRAIN VALVE	
416		2	IN	2G41FD002		As Built	1	☑	A001A DRAIN VALVE	
417		2	IN	2G41FD005		As Built	1	☑	FO36A DRAIN	
418		2	IN	2G41FD007		As Built	1	☑	DRAIN	
419		2	IN	2G41FD021		As Built	1	☑	SYS	
420		2	IN	2G41FV003		As Built	1	☑	VENT RETURN TO FUEL PO	
421		2	IN	2G41FV004		As Built	1	☑	SYS	
422		2	IN	2G41FV005		As Built	1	☑	VENT	
423		2	IN	2G41FV021		As Built	1	☑	SYS	
424		2	IN	2G41FV022		As Built	1	☑	SYS	
425		2	IN	2G41N003		As Built	1	☑	FUEL POOL CLG PUMP C00	
426		2	IN	2G41N004		As Built	1	☑	REACTOR WELL HI LS	
427		2	IN	2G41N007		As Built	1	☑	FPC SEAL RUP LEAK FLOV	
428		2	IN	2G41N008	1[1]	As Built	1	☑	AX RESIN TRAP LO DPIS R	
429		2	IN	2G41N008	1[2]	As Built	1	☑	AX RESIN TRAP LO DPIS	
430		2	IN	2G41N008	2[1]	As Built	1	☑	AX RESIN TRAP HI DPIS RE	
431		2	IN	2G41N008	2[2]	As Built	1	☑	AX RESIN TRAP HI DPIS	
432		2	IN	2G41N010		As Built	1	☑	FUEL POOL HLDG PUMP C	
433		2	IN	2G41N011	H	As Built	1	☑	PRECOAT TANK HI LS	
434		2	IN	2G41N011	L	As Built	1	☑	PRECOAT TANK LO LS	
435		2	IN	2G41N018	1	As Built	1	☑	FUEL POOL CLG PUMP C00	
436		2	IN	2G41N018	2	As Built	1	☑	FUEL POOL CLG PUMP C00	
437		2	IN	2G41N019		As Built	1	☑	TRANSFER CANAL LEAK D	
438		2	IN	2G41N312A		As Built	1	☑	SYS	
439		2	IN	2G41N312B		As Built	1	☑	SYS	
440		2	IN	2G41N312C		As Built	1	☑	SYS	

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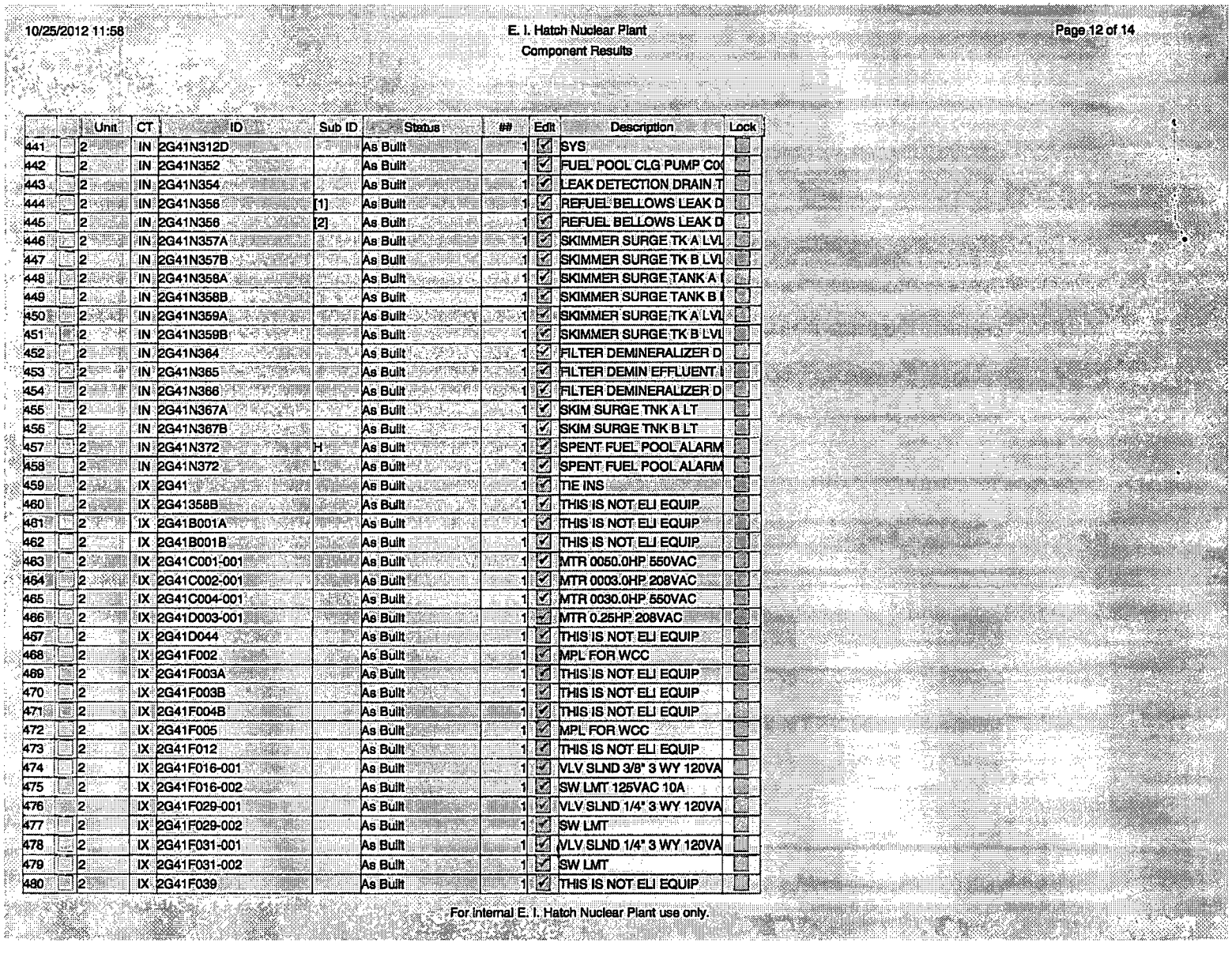

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
441		2	IN	2G41N312D		As Built	1	☑	SYS	
442		2	IN	2G41N352		As Built	1	☑	FUEL POOL CLG PUMP C0(	
443		2	IN	2G41N354		As Built	1	☑	LEAK DETECTION DRAIN T	
444		2	IN	2G41N356	[1]	As Built	1	☑	REFUEL BELLOWS LEAK D	
445		2	IN	2G41N356	[2]	As Built	1	☑	REFUEL BELLOWS LEAK D	
446		2	IN	2G41N357A		As Built	1	☑	SKIMMER SURGE TK A LVL	
447		2	IN	2G41N357B		As Built	1	☑	SKIMMER SURGE TK B LVL	
448		2	IN	2G41N358A		As Built	1	☑	SKIMMER SURGE TANK A I	
449		2	IN	2G41N358B		As Built	1	☑	SKIMMER SURGE TANK B I	
450		2	IN	2G41N359A		As Built	1	☑	SKIMMER SURGE TK A LVL	
451		2	IN	2G41N359B		As Built	1	☑	SKIMMER SURGE TK B LVL	
452		2	IN	2G41N364		As Built	1	☑	FILTER DEMINERALIZER D	
453		2	IN	2G41N365		As Built	1	☑	FILTER DEMIN EFFLUENT I	
454		2	IN	2G41N366		As Built	1	☑	FILTER DEMINERALIZER D	
455		2	IN	2G41N367A		As Built	1	☑	SKIM SURGE TNK A LT	
456		2	IN	2G41N367B		As Built	1	☑	SKIM SURGE TNK B LT	
457		2	IN	2G41N372	H	As Built	1	☑	SPENT FUEL POOL ALARM	
458		2	IN	2G41N372	L	As Built	1	☑	SPENT FUEL POOL ALARM	
459		2	IX	2G41		As Built	1	☑	TIE INS	
460		2	IX	2G41358B		As Built	1	☑	THIS IS NOT ELI EQUIP	
461		2	IX	2G41B001A		As Built	1	☑	THIS IS NOT ELI EQUIP	
462		2	IX	2G41B001B		As Built	1	☑	THIS IS NOT ELI EQUIP	
463		2	IX	2G41C001-001		As Built	1	☑	MTR 0050.0HP 550VAC	
464		2	IX	2G41C002-001		As Built	1	☑	MTR 0003.0HP 208VAC	
465		2	IX	2G41C004-001		As Built	1	☑	MTR 0030.0HP 550VAC	
466		2	IX	2G41D003-001		As Built	1	☑	MTR 0.25HP 208VAC	
467		2	IX	2G41D044		As Built	1	☑	THIS IS NOT ELI EQUIP	
468		2	IX	2G41F002		As Built	1	☑	MPL FOR WCC	
469		2	IX	2G41F003A		As Built	1	☑	THIS IS NOT ELI EQUIP	
470		2	IX	2G41F003B		As Built	1	☑	THIS IS NOT ELI EQUIP	
471		2	IX	2G41F004B		As Built	1	☑	THIS IS NOT ELI EQUIP	
472		2	IX	2G41F005		As Built	1	☑	MPL FOR WCC	
473		2	IX	2G41F012		As Built	1	☑	THIS IS NOT ELI EQUIP	
474		2	IX	2G41F016-001		As Built	1	☑	VLV SLND 3/8" 3 WY 120VA	
475		2	IX	2G41F016-002		As Built	1	☑	SW LMT 125VAC 10A	
476		2	IX	2G41F029-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
477		2	IX	2G41F029-002		As Built	1	☑	SW LMT	
478		2	IX	2G41F031-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
479		2	IX	2G41F031-002		As Built	1	☑	SW LMT	
480		2	IX	2G41F039		As Built	1	☑	THIS IS NOT ELI EQUIP	

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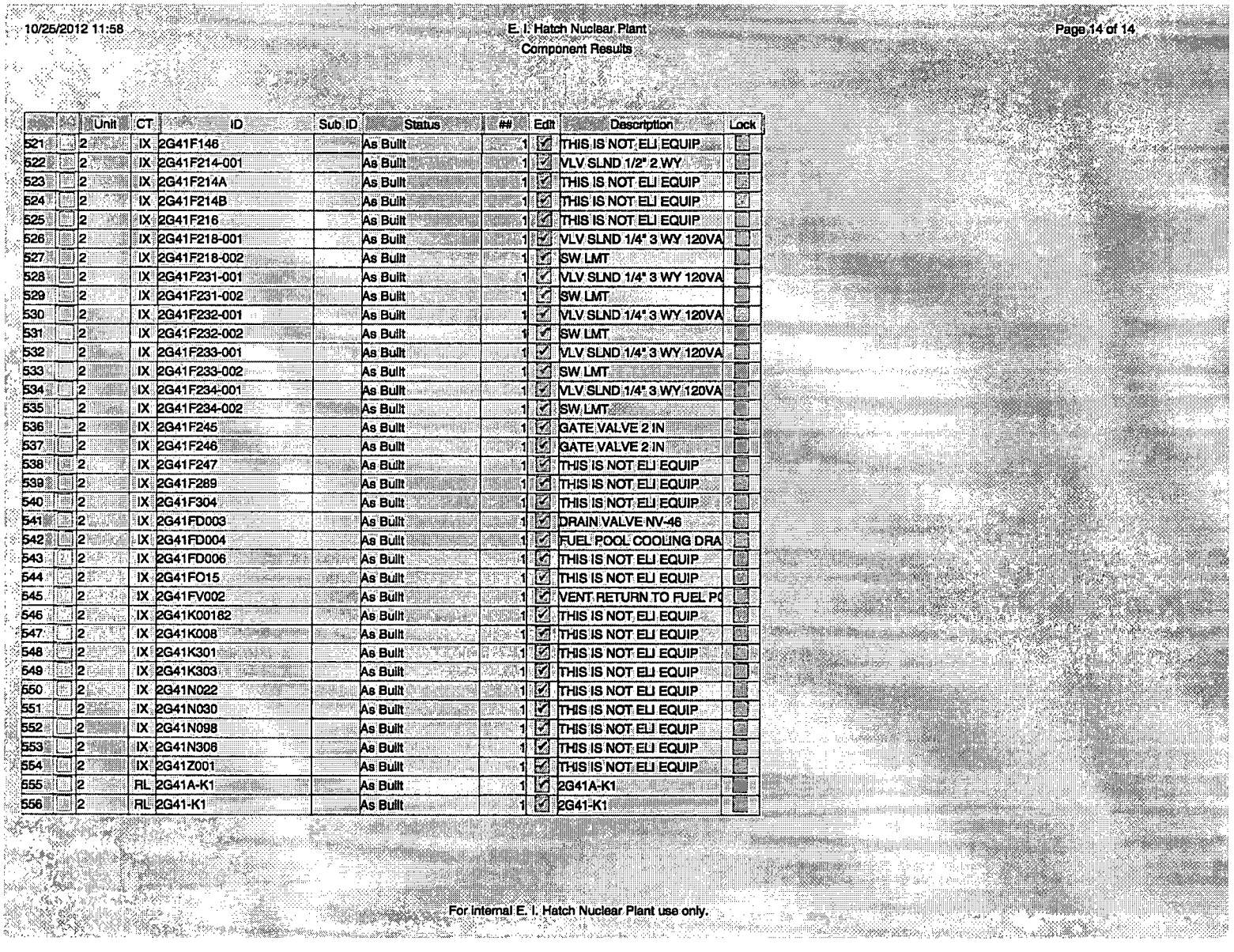
		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
481		2	IX	2G41F042A		As Built	1	☑	THIS IS NOT ELI EQUIP	
482		2	IX	2G41F042B		As Built	1	☑	THIS IS NOT ELI EQUIP	
483		2	IX	2G41F042C		As Built	1	☑	THIS IS NOT ELI EQUIP	
484		2	IX	2G41F042D		As Built	1	☑	THIS IS NOT ELI EQUIP	
485		2	IX	2G41F042E		As Built	1	☑	THIS IS NOT ELI EQUIP	
486		2	IX	2G41F054-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
487		2	IX	2G41F054-002		As Built	1	☑	SW LMT 125VAC 10A	
488		2	IX	2G41F064		As Built	1	☑	THIS IS NOT ELI EQUIP	
489		2	IX	2G41F066		As Built	1	☑	THIS IS NOT ELI EQUIP	
490		2	IX	2G41F067		As Built	1	☑	THIS IS NOT ELI EQUIP	
491		2	IX	2G41F070-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
492		2	IX	2G41F070-002		As Built	1	☑	SW LMT	
493		2	IX	2G41F071-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
494		2	IX	2G41F071-002		As Built	1	☑	SW LMT	
495		2	IX	2G41F072-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
496		2	IX	2G41F072-002		As Built	1	☑	SW LMT	
497		2	IX	2G41F073-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
498		2	IX	2G41F073-002		As Built	1	☑	SW LMT	
499		2	IX	2G41F075-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
500		2	IX	2G41F075-002		As Built	1	☑	SW LMT	
501		2	IX	2G41F076-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
502		2	IX	2G41F076-002		As Built	1	☑	SW LMT	
503		2	IX	2G41F077-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
504		2	IX	2G41F077-002		As Built	1	☑	SW LMT	
505		2	IX	2G41F079-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
506		2	IX	2G41F079-002		As Built	1	☑	SW LMT	
507		2	IX	2G41F080-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
508		2	IX	2G41F080-002		As Built	1	☑	SW LMT	
509		2	IX	2G41F081-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
510		2	IX	2G41F081-002		As Built	1	☑	SW LMT	
511		2	IX	2G41F082-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
512		2	IX	2G41F082-002		As Built	1	☑	SW LMT	
513		2	IX	2G41F083-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
514		2	IX	2G41F083-002		As Built	1	☑	SW LMT	
515		2	IX	2G41F084-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
516		2	IX	2G41F084-002		As Built	1	☑	SW LMT	
517		2	IX	2G41F087-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
518		2	IX	2G41F087-002		As Built	1	☑	SW LMT	
519		2	IX	2G41F094-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
520		2	IX	2G41F094-002		As Built	1	☑	SW LMT	



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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
521		2	IX	2G41F146		As Built	1	☑	THIS IS NOT ELI EQUIP	
522		2	IX	2G41F214-001		As Built	1	☑	VLV SLND 1/2" 2 WY	
523		2	IX	2G41F214A		As Built	1	☑	THIS IS NOT ELI EQUIP	
524		2	IX	2G41F214B		As Built	1	☑	THIS IS NOT ELI EQUIP	
525		2	IX	2G41F216		As Built	1	☑	THIS IS NOT ELI EQUIP	
526		2	IX	2G41F218-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
527		2	IX	2G41F218-002		As Built	1	☑	SW LMT	
528		2	IX	2G41F231-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
529		2	IX	2G41F231-002		As Built	1	☑	SW LMT	
530		2	IX	2G41F232-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
531		2	IX	2G41F232-002		As Built	1	☑	SW LMT	
532		2	IX	2G41F233-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
533		2	IX	2G41F233-002		As Built	1	☑	SW LMT	
534		2	IX	2G41F234-001		As Built	1	☑	VLV SLND 1/4" 3 WY 120VA	
535		2	IX	2G41F234-002		As Built	1	☑	SW LMT	
536		2	IX	2G41F245		As Built	1	☑	GATE VALVE 2 IN	
537		2	IX	2G41F246		As Built	1	☑	GATE VALVE 2 IN	
538		2	IX	2G41F247		As Built	1	☑	THIS IS NOT ELI EQUIP	
539		2	IX	2G41F289		As Built	1	☑	THIS IS NOT ELI EQUIP	
540		2	IX	2G41F304		As Built	1	☑	THIS IS NOT ELI EQUIP	
541		2	IX	2G41FD003		As Built	1	☑	DRAIN VALVE NV-46	
542		2	IX	2G41FD004		As Built	1	☑	FUEL POOL COOLING DRA	
543		2	IX	2G41FD006		As Built	1	☑	THIS IS NOT ELI EQUIP	
544		2	IX	2G41FO15		As Built	1	☑	THIS IS NOT ELI EQUIP	
545		2	IX	2G41FV002		As Built	1	☑	VENT RETURN TO FUEL PO	
546		2	IX	2G41K00182		As Built	1	☑	THIS IS NOT ELI EQUIP	
547		2	IX	2G41K008		As Built	1	☑	THIS IS NOT ELI EQUIP	
548		2	IX	2G41K301		As Built	1	☑	THIS IS NOT ELI EQUIP	
549		2	IX	2G41K303		As Built	1	☑	THIS IS NOT ELI EQUIP	
550		2	IX	2G41N022		As Built	1	☑	THIS IS NOT ELI EQUIP	
551		2	IX	2G41N030		As Built	1	☑	THIS IS NOT ELI EQUIP	
552		2	IX	2G41N098		As Built	1	☑	THIS IS NOT ELI EQUIP	
553		2	IX	2G41N306		As Built	1	☑	THIS IS NOT ELI EQUIP	
554		2	IX	2G41Z001		As Built	1	☑	THIS IS NOT ELI EQUIP	
555		2	RL	2G41A-K1		As Built	1	☑	2G41A-K1	
556		2	RL	2G41-K1		As Built	1	☑	2G41-K1	

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Component Results

		Unit	CT	ID	Sub ID	Status	##	Edit	Description	Lock
1		2	HS	2G71T201		As Built	1	☑	2G71T201	
2		2	HS	2G71T202		As Built	1	☑	2G71T202	
3		2	HS	2G71T203		As Built	1	☑	2G71T203	
4		2	HS	2G71T204		As Built	1	☑	2G71T204	
5		2	IN	2G71F034		As Built	1	☑	DHR 10" FP VALVE	
6		2	IN	2G71F053		As Built	1	☑	RHR S/U 3/4" 600# PPG VT	
7		2	IN	2G71F054		As Built	1	☑	RHR S/U 3/4" 600# PPG VT	
8		2	IN	2G71F073		As Built	1	☑	RHR FP ISO VALVE	
9		2	IX	2G71T104		As Built	1	☑	THIS IS NOT ELI EQUIP	

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ATTACHMENT 1

SEISMIC WALKDOWN EQUIPMENT LISTS
UNIT 2 – SWEL 2
NO. SNCH082-RPT-02

Plant Hatch Unit 2 SWEL-1

Plant Hatch Unit 2 SWEL-2

SWEL Revision Date: October 24, 2012

Originator: print: Mike Steele signature: Mike Steele per Wesley A. Williams Date: 10/24/12

Reviewer: print: J. Derwood Tootle, Jr. signature: Derwood Tootle Date: 10/24/12

Ops Reviewer: print: CHRISTOPHER I. BURKE signature: [signature] Date: 10/24/12

Peer Reviewer: print: Melanie H. Brown signature: Melanie Brown Date: 10-24-12

Peer Reviewer: print: KENNETH L. WHITMORE signature: [signature] Date: 10-24-12

Peer Reviewer: print: ROBERT ASHWORTH signature: [signature] Date: 10/25/12

Peer Reviewer: print: Richard G. Starck II signature: Richard G Starck II Date: 10/25/12

ATTACHMENT 1: SEISMIC WALKDOWN EQUIPMENT LISTS
HATCH UNIT 2 SWEL 2 SPENT FUEL POOL RELATED ITEMS
NTTF RECOMMENDATION 2.3: SEISMIC WALKDOWNS

SNCH082-RPT-02

	MPL #	Description	Building	Elevation / Location	Drawing or Reference	Screen #3								Screen #4	Risk Signficance	Walkdown must be deferred? (i.e. outage)	Comments
						Variety of Systems	Major new or replcmnt equpmnt	Variety of types of equipment (21 Classes from Appendix B)	Variety of environments			Anchorage check required? (50% of Column B)		Rapid Drain-Down			
								Class #	Submerged	Not Submerged	Other	Yes	No	Hydraulic lines connected to the SFP and the equipment connected to those lines			
1	2G41-F054	CST MAKE-UP SPLY ISO AOV	U2 RX	185RHR18	H-26121, H-26039	2G41		7		X		X			no		
2	1P52-A001	ESS AIR ACC	U2 RX	130RER05	H-16933, H-16252	1P52		21		X		X			no		
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Notes:
1) Drawings H-10018 and H-10196 list all system codes.

Preparer	Date:
Reviewer	Date:
Reactor Operator Review	Date:
Peer Reviewer	Date:
Peer Reviewer	Date:
Peer Reviewer	Date:

ATTACHMENT 2

UNIT 2 – PEER REVIEW CHECKLIST FOR SWEL 1 AND 2

NO. SNCH082-RPT-02

Peer Review Checklist for SWEL For Hatch Unit 2

Instructions for Completing Checklist

This peer review checklist may be used to document the review of the Seismic Walkdown Equipment List (SWEL) in accordance with Section 6: Peer Review. The space below each question in this checklist should be used to describe any findings identified during the peer review process and how the SWEL may have changed to address those findings. Additional space is provided at the end of this checklist for documenting other comments.

1. Were the five safety functions adequately represented in the SWEL 1 selection? Y☒ N☐

   SWEL 1 for Hatch Unit 2 meets the requirements of having 90 to 120 items and addresses all five safety functions. Many components provide safety functions for multiple systems, and/or are part of frontline support systems. All five safety functions discussed in EPRI Report 1025286 are well represented in the SWEL 1.

2. Does SWEL 1 include an appropriate representation of items having the following sample selection attributes:

   a. Various types of systems? Y☒ N☐
   Items included on the SWEL comprise a variety of systems such as Emergency Diesel Generators and Auxiliaries, Service Water System, Component Cooling Water System, Automatic Depressurization, Residual Heat Removal System, Vital A/C and D/C systems.

   b. Major new and replacement equipment? Y☒ N☐
   New and replacement components are identified in SWEL 1.

   c. Various types of equipment? Y☒ N☐
   SWEL 1 includes at least one example of each of the 21 classes of equipment. In general, the number of components in each class is proportional to the number of safety-related components of that class in the plant as a whole, except that the number of in-line valves is proportionally smaller than anchored equipment. Anchored equipment is more vulnerable to seismic loads.

   d. Various environments? Y☒ N☐
   The SWEL contains components in mild, harsh, and outdoor environments. The components are located in different buildings, rooms, and/or on different building elevations. The SWEL also includes components located inside primary containment.

   e. Equipment enhanced based on the findings of the IPEEE (or equivalent) program? Y☒ N☐
   The SWEL included equipment that had been modified as a result of the IPEEE program. Section 5 and Attachment 5 of the submittal report provides information on resolution of the IPEEE findings. The SWEL and individual component checklists provide information about the IPEEE modifications and verification of modification incorporation.

Peer Review Checklist for SWEL For Hatch Unit 2

f. Were risk insights considered in the development of SWEL 1? Y☒ N☐
SWEL 1 includes high risk components based on risk significance in the plant probabilistic risk assessment (PRA) models. Section 6 of the submittal report discusses the risk insights used for SWEL development.

3. For SWEL 2:

a. Were spent fuel pool related items considered, and if applicable included in SWEL 2? Y☒ N☐

SWEL 2 includes components associated with maintaining seals around the SFP gates, which are Seismic Category I components.

b. Was an appropriate justification documented for spent fuel pool related items not included in SWEL 2? Y☒ N☐

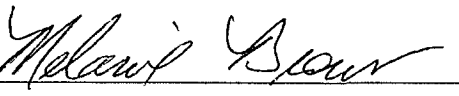
Section 6.2 of the submittal report provides the justification for excluding items on SWEL 2. There were no components identified that could contribute to rapid SFP drain down. Note that there were no new/replacement equipment in SWEL 2 because there have been no major modifications to the Spent Fuel Pool systems that would have affected equipment that meets the screening requirements to be included on SWEL 2. Equipment associated with cooling of the SFP is located in locked areas (due to radiation) and is not suitable for a Walkdown.

4. Provide any other comments related to the peer review of the SWELs.

The peer review team reviewed the initial SWEL 1 and SWEL 2 and provided comments and suggestions for enhancement of the SWELs. Comments included suggestions to include additional electrical components and more equipment mounted to the structure, since such equipment has shown more potential to be adversely impacted by seismic loads than in-line mounted components. In addition, comments were made suggesting that certain equipment classes contain more components and that explanations be provided for not including certain equipment (e. g. there are no safety-related or Seismic Category I components in that equipment class installed in the plant). The peer reviewers ensured that the SWELs met the requirements of EPRI Report 1025286. Changes deemed necessary during the walkdown due to inaccessibility were reviewed by the peer reviewers to ensure that the changes did not impact the level of compliance to the EPRI report. The final SWEL meets all requirements of EPRI Report 1025286.

5. Have all peer review comments been adequately addressed in the final SWEL? Y☒ N☐

Peer Reviewer #1: Robert Ashworth  Date: 11/06/2012

Peer Reviewer #2: Melanie Brown  Date: 11/06/2012

ATTACHMENT 3

UNIT 2 – SEISMIC WALKDOWN CHECKLISTS (SWCs)

NO. SNCH082-RPT-02

Note: A partial walkdown was performed for the following components. The checklists for these components are included in this attachment. These components are energized cabinets which could not be opened for inspection during the initial walkdown. Therefore, a second walkdown is planned and scheduled for these components as stated in Section 7 of the Report (SNCH082-RPT-02).

Partial Walkdown Performed				
#	Item No.	Description	Remaining Walkdown Scope / CR	Schedule for Completion
1	2R24-S011	600V MCC 2C ESS DIV 1	Internal of panel	2R22
2	2R24-S022	125/250V DC MCC 2B ESS DIV 2	Internal of panel	2R22
3	2P33-B001B	H2/02 ANALYZER SAMPLE CHILLER	Internal of panel	2R22

Status: Y☐ N☐ U☒

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R24-S011* Equip. Class[1] *1*

Equipment Description *600 V MCC 2C ESS Division 1*

Location: Bldg. *REACTOR* Floor El. *130* Room, Area *107A*

Manufacturer, Model, Etc. (optional but recommended) *Allis Chalmers*

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☒ N/A☐
   MCC is bolted to a base rail channel, which is welded to embedded steel on a concrete pad. See SEWS package dated 02/16/1994. MCC plates at south side were opened per work order SNC427039 to view welds. Welds located on inside of MCC of the south side were inaccessible and unable to be viewed. All other anchorage was determined to be consistent with anchorage configuration.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☒ N/A☐
   See response to question 2.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☒ N/A☐
   See response to question 2.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☐ N☐ U☒
   See response to question 2.
   This component has been inspected to the extent practical. However, to complete the inspection, the component must be opened. Due to personnel and plant safety issues, this action must be deferred until the component is accessible.

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☐ N☐ U☒

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R24-S011* Equip. Class[1] *1*

Equipment Description *600 V MCC 2C ESS Division 1*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

None.

Evaluated by: *Juan Vizcaya* Date: *09/07/2012*

Patrick Kelly *09/07/2012*

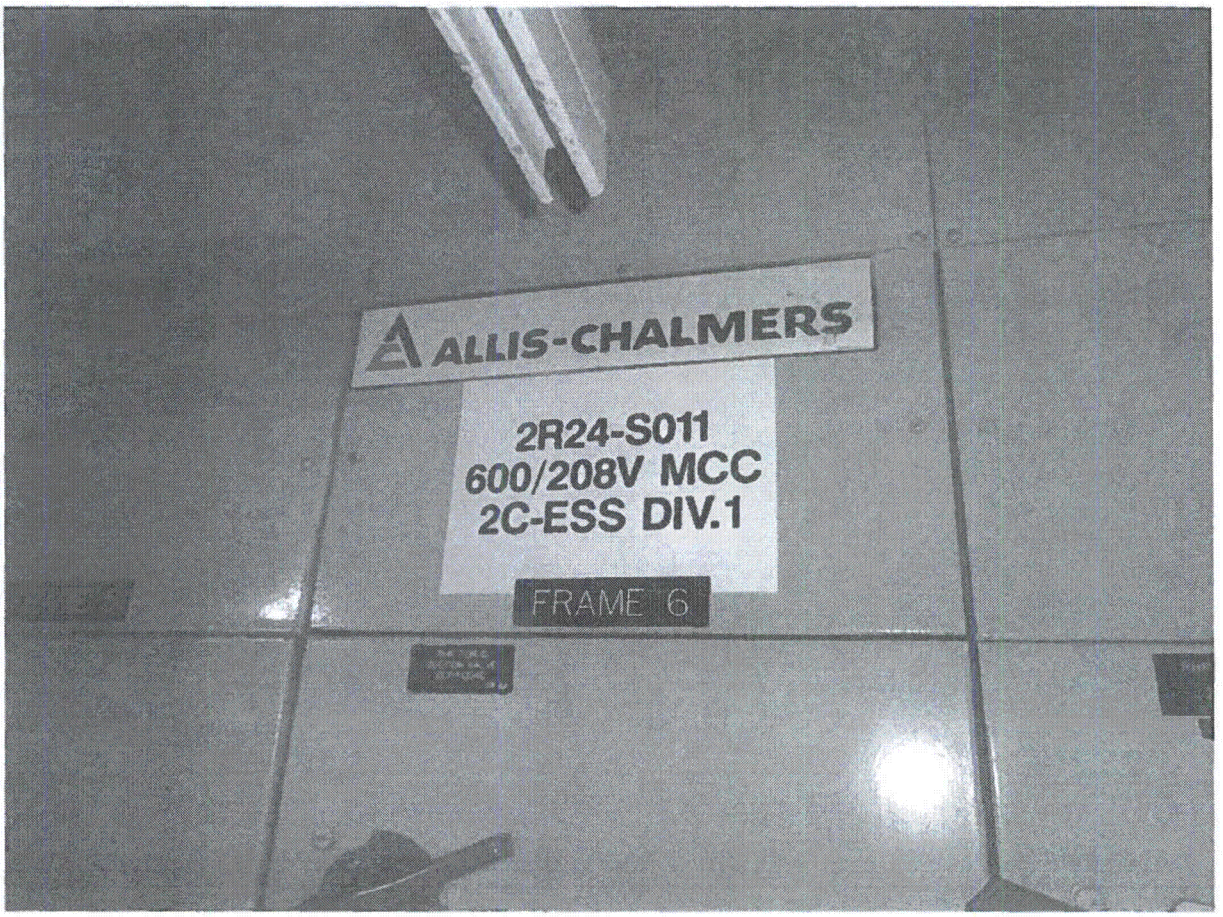
Status: Y☐ N☐ U☒

Seismic Walkdown Checklist (SWC)

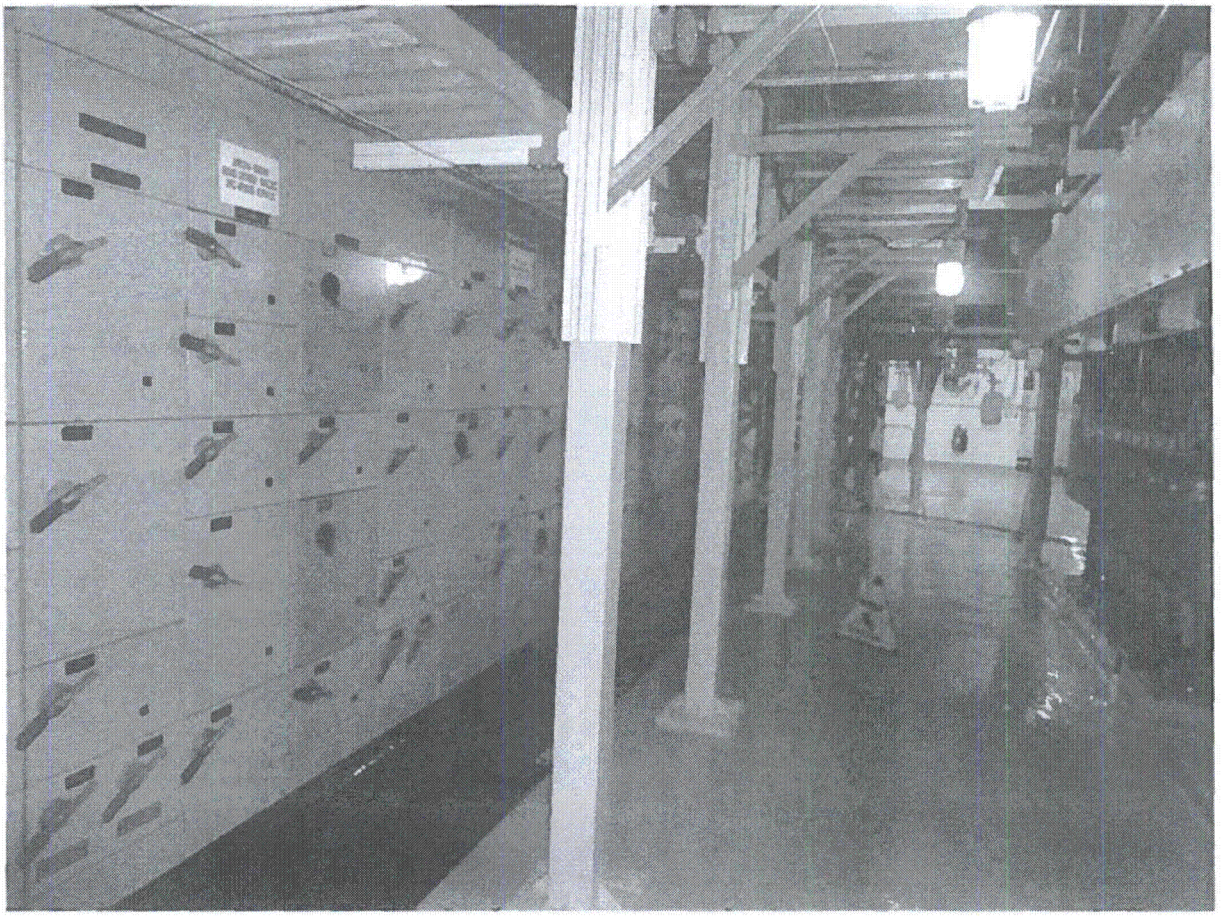
Equipment ID No. *2R24-S011* Equip. Class[1] *1*

Equipment Description *600 V MCC 2C ESS Division 1*

Photographs



1: Equipment MPL# (2R24-S011)



2: Equipment Elevation (2R24-S011)

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R24-S022* Equip. Class[1] *1*

Equipment Description *125/250V DC MCC 2B ESS DIV 2*

Location: Bldg. *REACTOR* Floor El. *130* Room, Area *R107A*

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   There is a bolted connection in frame 7 that is not fully tightened and slightly bent (see photograph 2). CR 516767 has been written to address to bent bolt. MCC base panels were opened to view anchorage per work order SNC427042.
   This MCC is composed of 10 frames which are bolted down in each corner, so there are 4 bolts for each frame in addition to the frames being bolted to each other. This bolt misalignment occurs on one of the bolts of Frame 7 which is an internal frame. As such, by engineering judgment it is determined that having one bolt out of the total 40 not properly tightened, the MCC would still be adequate to maintain its integrity during a seismic event.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Anchorage is consistent as detailed in calculation SCNH-11-058, version 1.0.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐
   See response to question 2.
   This component has been inspected to the extent practical. However, to complete the inspection, the component must be opened. Due to personnel and plant safety issues, this action must be deferred until the component is accessible.

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R24-S022* Equip. Class[1] *1*

Equipment Description *125/250V DC MCC 2B ESS DIV 2*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

See 2S11-S009 Seismic Walkdown Checklist for Area Walkby Checklist information.

Evaluated by: *Juan Vizcaya* Date: *09/10/2012*

Patrick Kelly *09/10/2012*

Status: Y☒ N☐ U☐

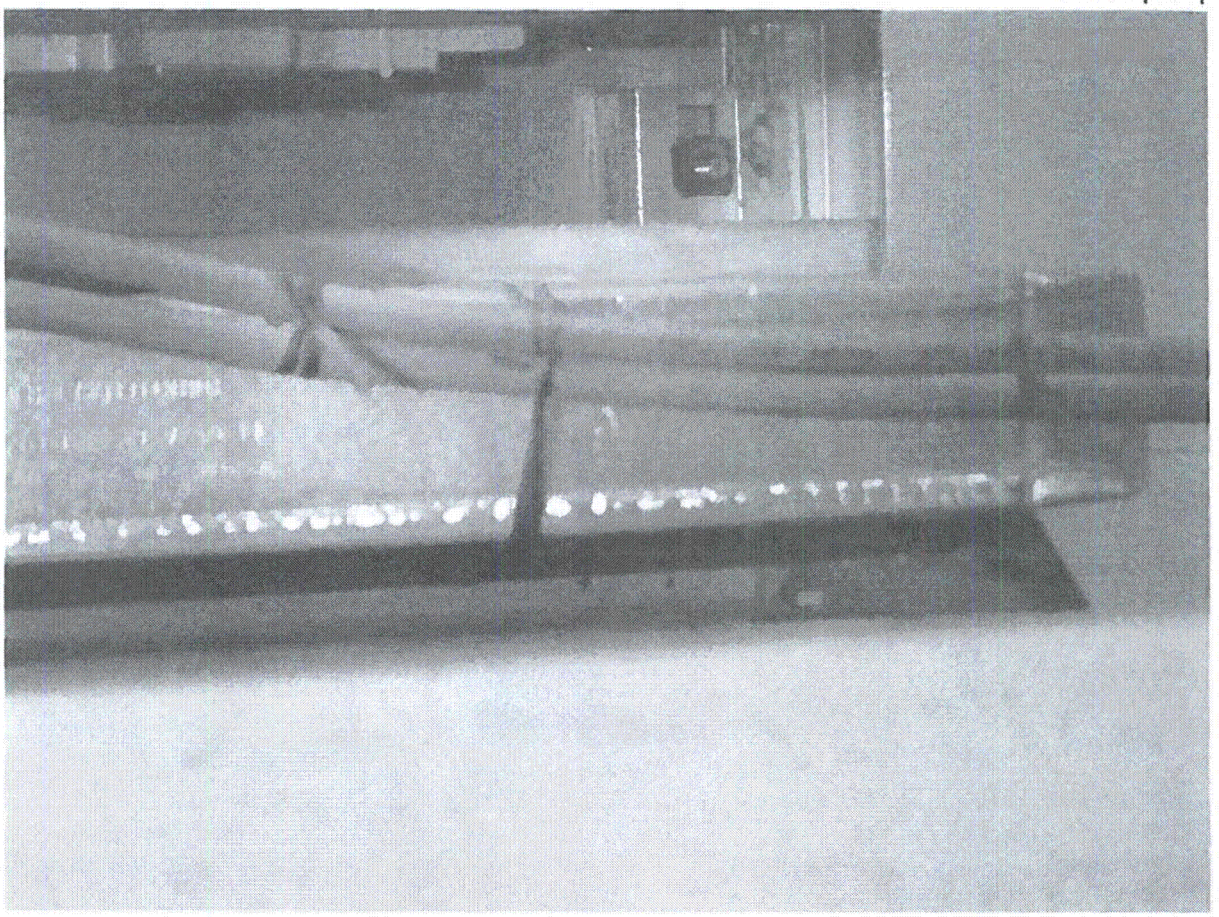
Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R24-S022* Equip. Class[1] *1*

Equipment Description *125/250V DC MCC 2B ESS DIV 2*

Photographs

1: Equipment MPL# (2R24-S022)



2: Slightly Bent Bolt at Base of MCC to Channel Connection (2R24-S022)

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R11-S004* Equip. Class[1] *3*

Equipment Description *45KVA 600-120/208V PWR XFMR*

Location: Bldg. *DIESEL* Floor El. *130* Room, Area *SWITCHGEAR ROOM 2E*

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Transformer is supported with anchor bolts on east side and three (3) - 3" long welds on the west side. Base rails exhibits slight bending on both sides (see photograph 3). This is not considered to a seismic concern as the gap at the bent location is small and the gaps are not present at weld or bolt locations.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Weld installation is not consistent with that designed in calculation SCNH-99-001, Rev. 0. There are three (3) welds that are approximately 3" long and spaced at 10" center to center of the ends welds. The calculation designs for two (2) welds, 3" long, and spaced at 12" center to center. The current installed configuration of welds increases the capacity of the anchorage compared to that designed. Therefore, the anchorage is judged to be seismically adequate.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐
   See response to questions 2 and 5.
   This component has been inspected to the extent practical. All visible anchors, hardware and surfaces were inspected. The anchorage for this item is visible without opening the component. To inspect the component further would require disassembly. Since the anchorage is visible, the inspection meets the requirements of the guidance document.

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R11-S004* Equip. Class[1] *3*

Equipment Description *45KVA 600-120/208V PWR XFMR*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Flex conduit 2E13740 is in contact with the top southeast corner of the transformer (see photograph 4). The conduit is flexible and the cables will not be damaged. This is not considered a seismic concern.

Comments (Additional pages may be added as necessary)

None.

Evaluated by: *Juan Vizcaya* Date: *09/24/2012*

Patrick Kelly *09/24/2012*

Sheet 3 of 6

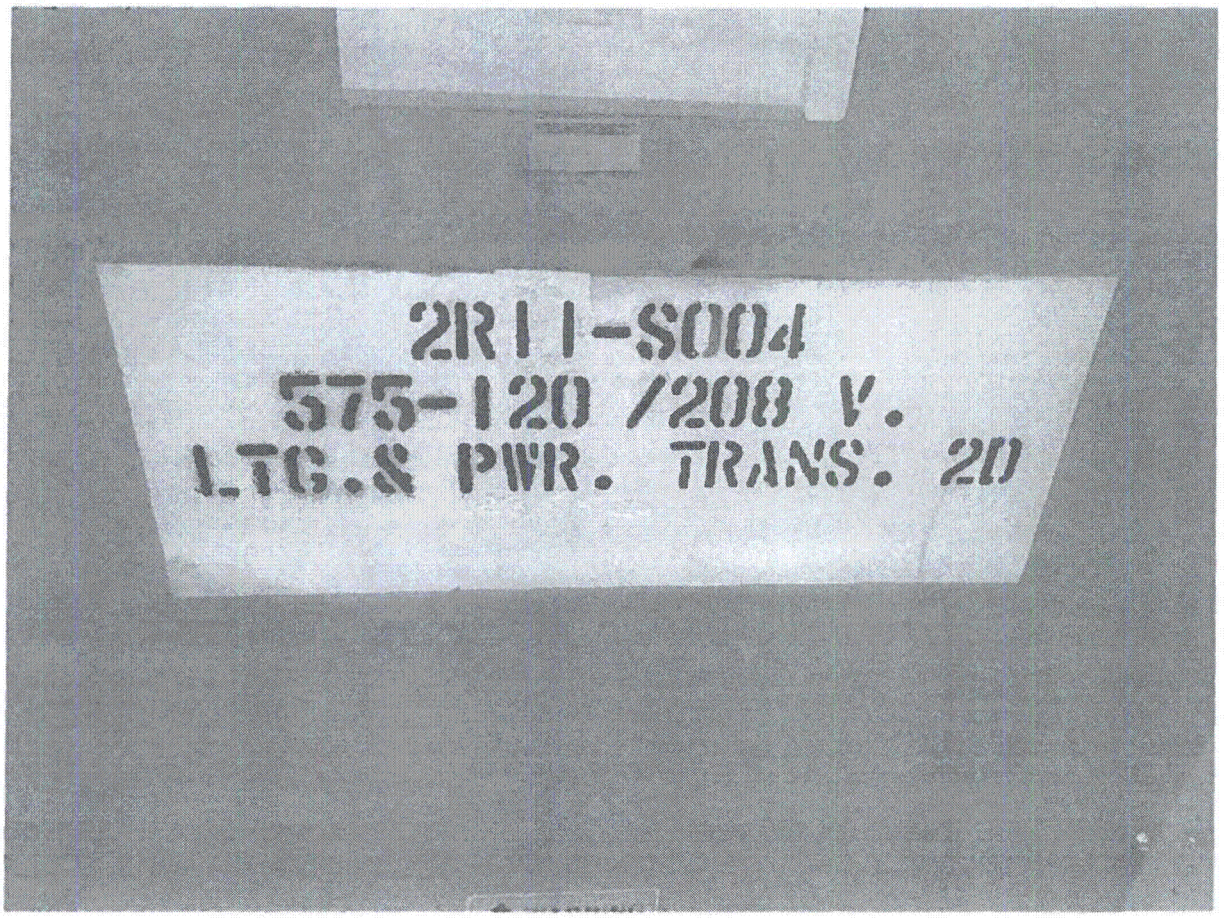
Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

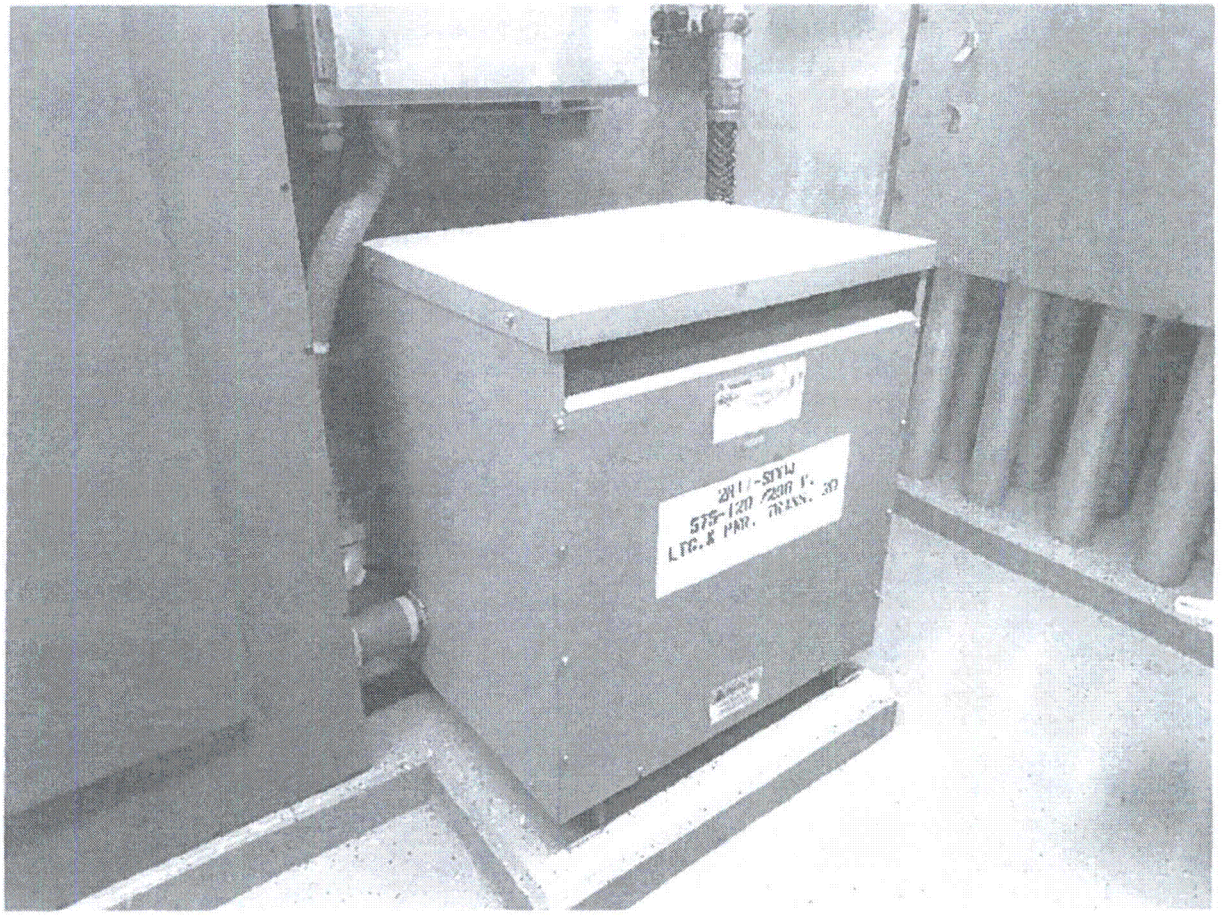
Equipment ID No. *2R11-S004* Equip. Class[1] *3*

Equipment Description *45KVA 600-120/208V PWR XFMR*

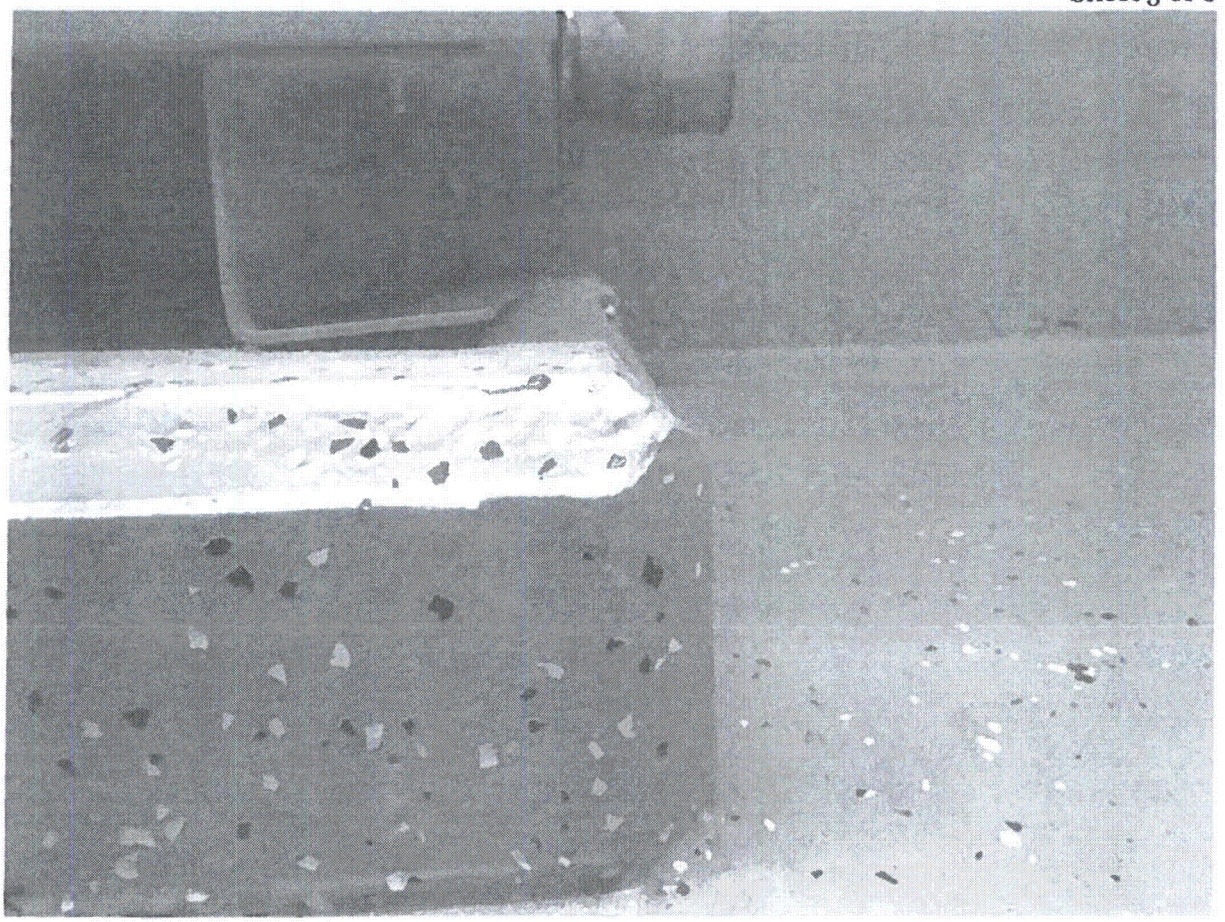
Photographs



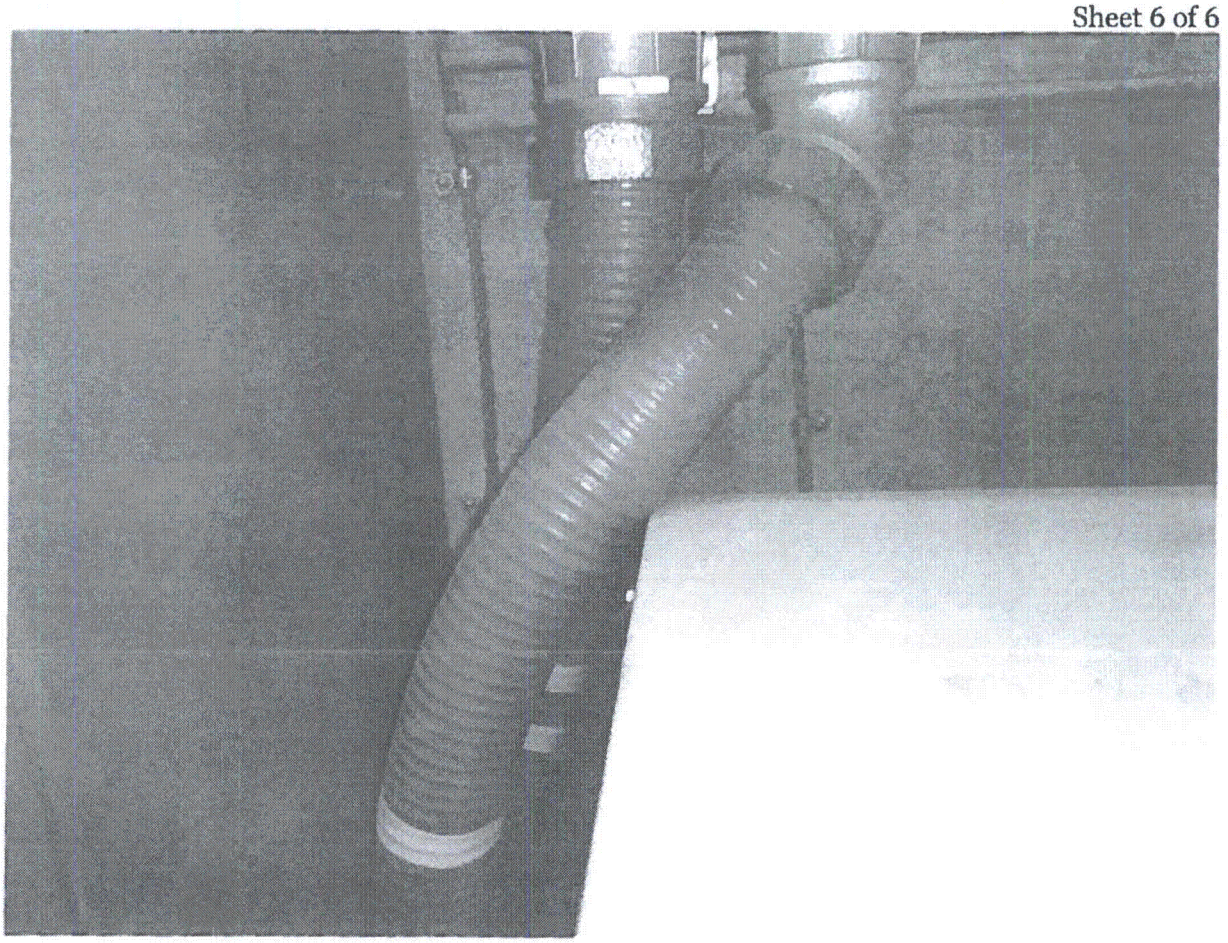
1: Equipment MPL# (2R11-S004)



2: Equipment Elevation (2R11-S004)



3: Bent Base Rail (2R11-S004)



4: Conduit 2E13740 in Contact with Transformer (2R11-S004)

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R11-S041* Equip. Class[1] *4*

Equipment Description *600-120/208 V Essential Transformer*

Location: Bldg. *CONTROL* Floor El. *130* Room, Area *2L48-C34*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   SEWS Package 2R11-S041 (dated 2-16-94)

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐
   This component has been inspected to the extent practical. All visible anchors, hardware and surfaces were inspected. The anchorage for this item is visible without opening the component. To inspect the component further would require disassembly. Since the anchorage is visible, the inspection meets the requirements of the guidance document.

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R11-S041* Equip. Class[1] *4*

Equipment Description *600-120/208 V Essential Transformer*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☒ N/A☐
   Masonry block walls in area verified as seismically qualified per Calculation SNC-85-084 Rev. 4.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

There are four holes in the front of the transformer case, two on either side, that do not have screws in them. From inspection, it is clear that the holes provide options for attachment of the front case. The front panel screws are all present and no screws are missing, so there is no potentially adverse seismic condition.

Evaluated by: *John McFarland* Date: *09/18/2012*

Jeff Horton *09/18/2012*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2R11-S041* Equip. Class[1] *4*

Equipment Description *600-120/208 V Essential Transformer*

Photographs

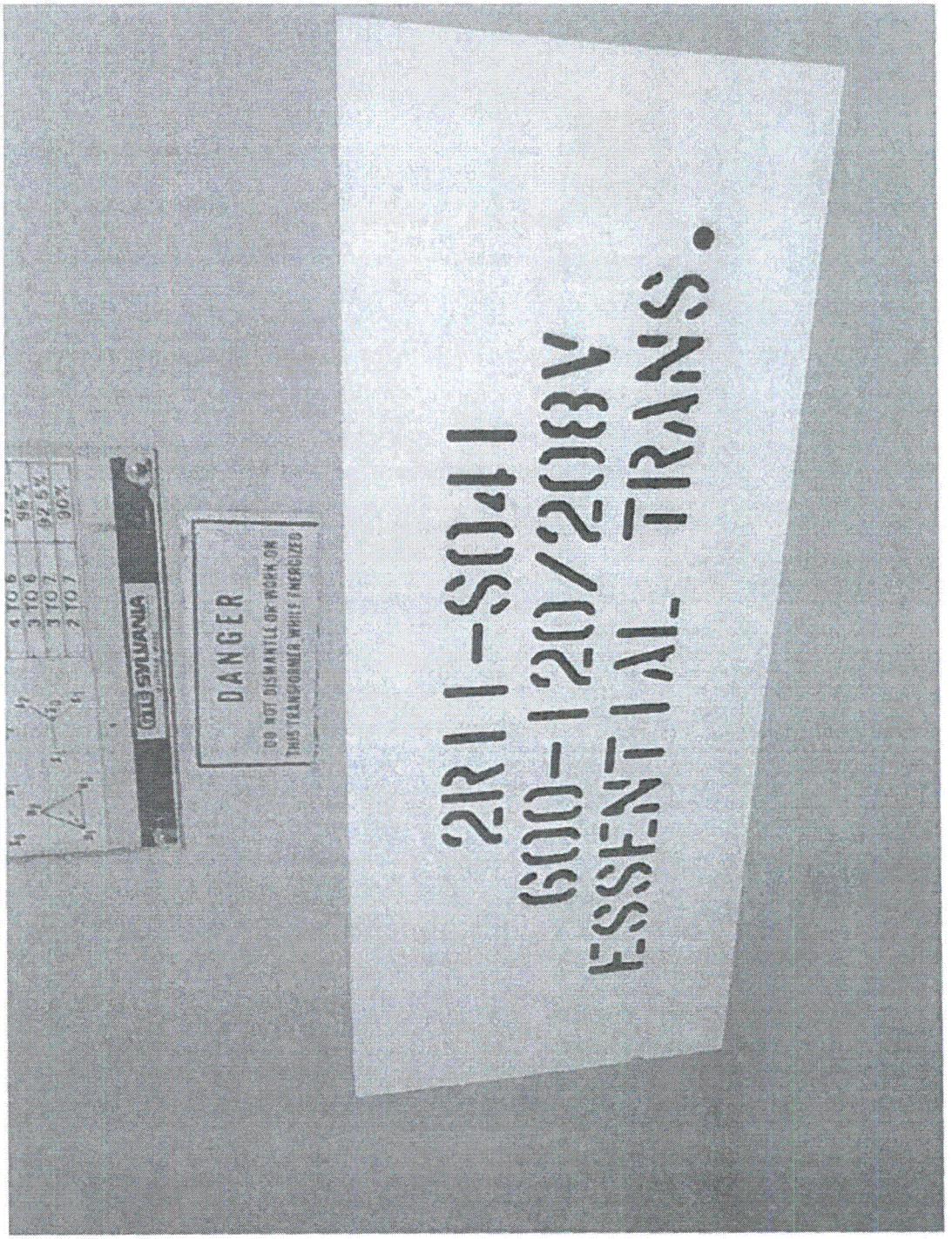


Figure 1 – Equipment ID No (2R11-S041)

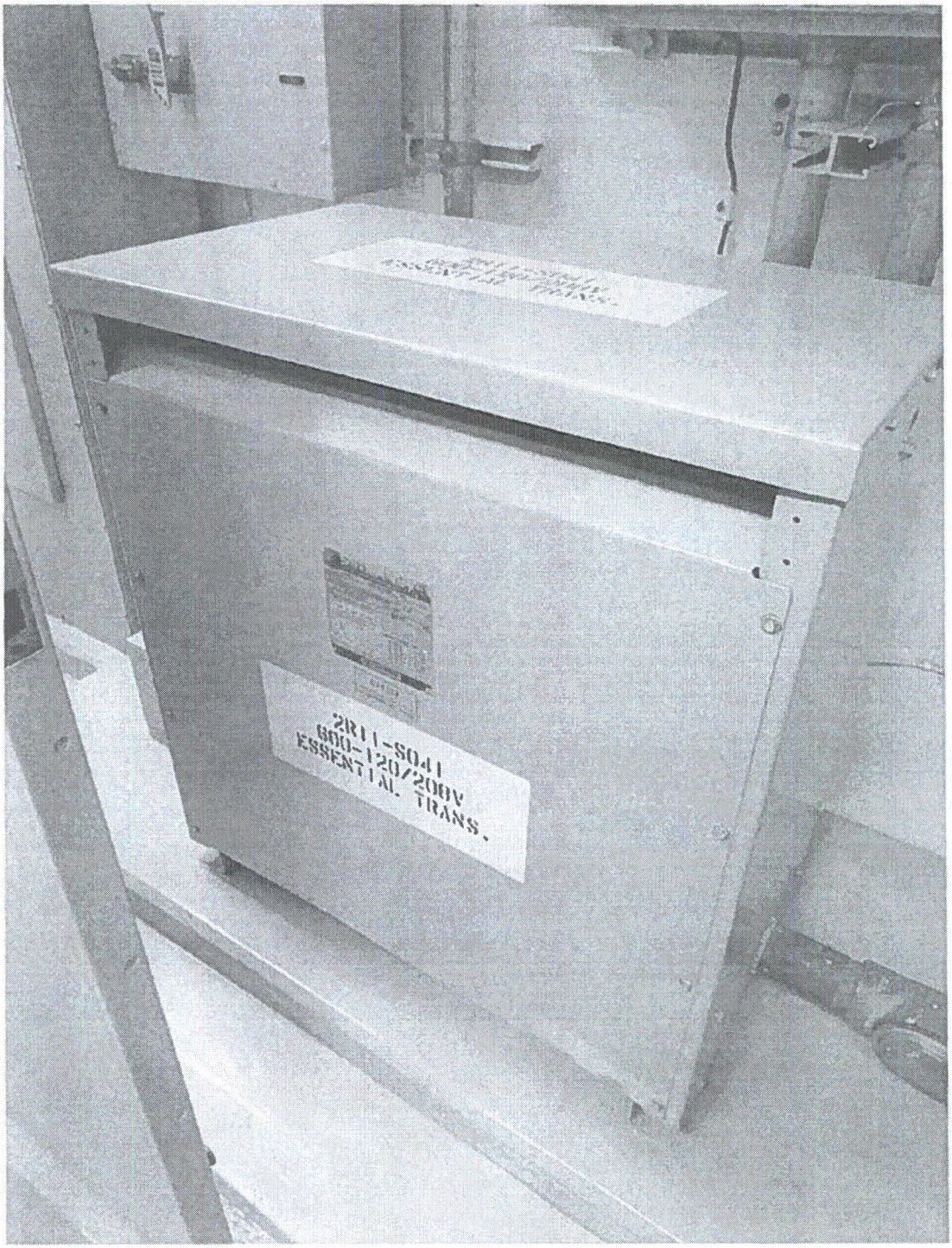


Figure 2 – Equipment Elevation (2R11-S041)

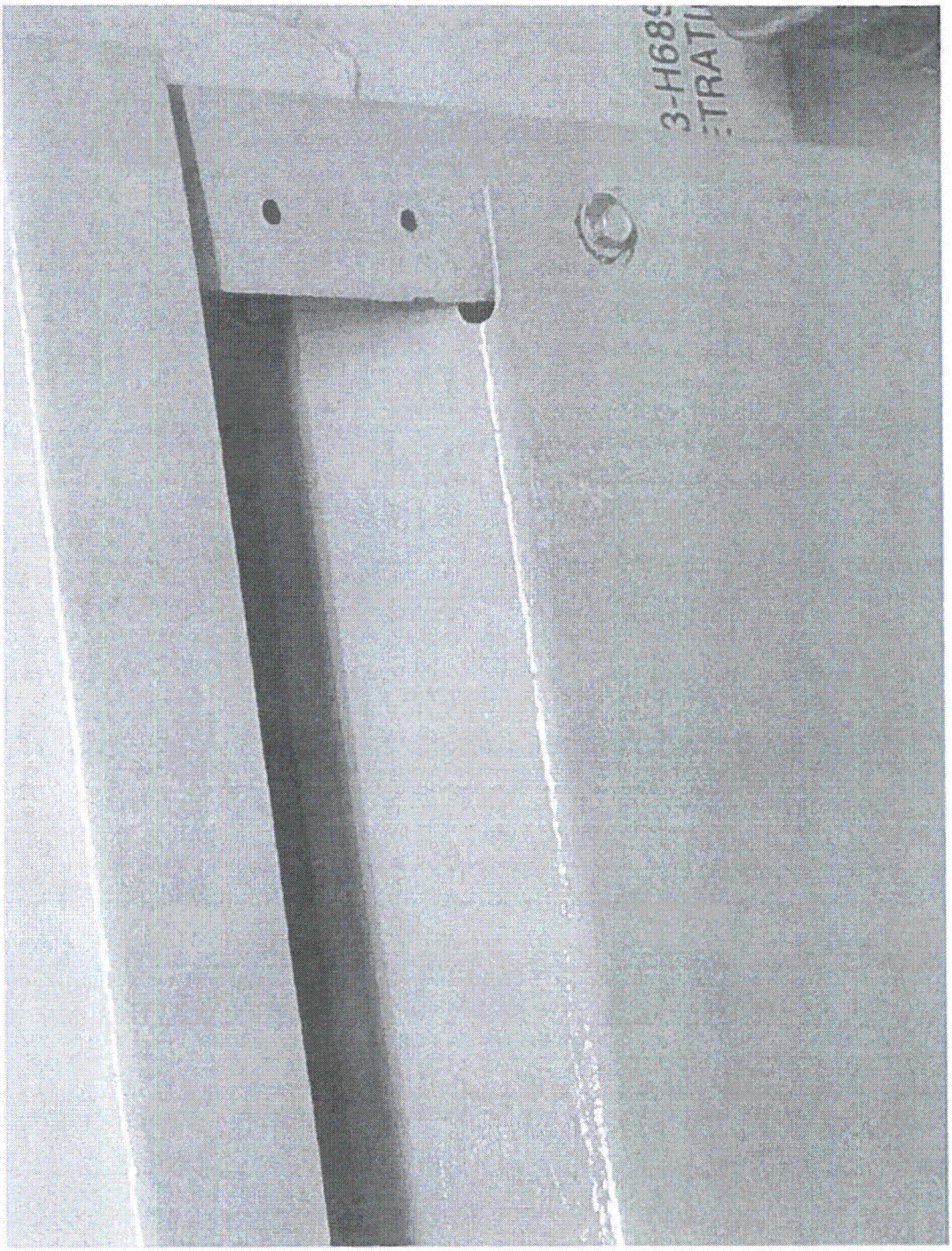


Figure 3 – Holes in Transformer Case (2R11-S041)

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2S11-S009* Equip. Class[1] *4*

Equipment Description *4160/600V225KVA XFMR*

Location: Bldg. *CONTROL* Floor El. *130* Room, Area *SWITCHGEAR ROOM 2F*

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Welded connection to embedded channel as recommended by calculation SNCH-90-048, Rev. 1.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   The anchorage configuration is consistent with calculation SNCH-90-048, Rev. 1.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐
   This component has been inspected to the extent practical. All visible anchors, hardware and surfaces were inspected. The anchorage for this item is visible without opening the component. To inspect the component further would require disassembly. Since the anchorage is visible, the inspection meets the requirements of the guidance document.

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2S11-S009* Equip. Class[1] *4*

Equipment Description *4160/600V225KVA XFMR*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   The 2 1/2" gap between transformer 2S11-S009 and the adjacent transformer 2R24-S048 is adequate.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

None.

Evaluated by: *Juan Vizcaya* Date: *09/12/2012*

Patrick Kelly *09/12/2012*

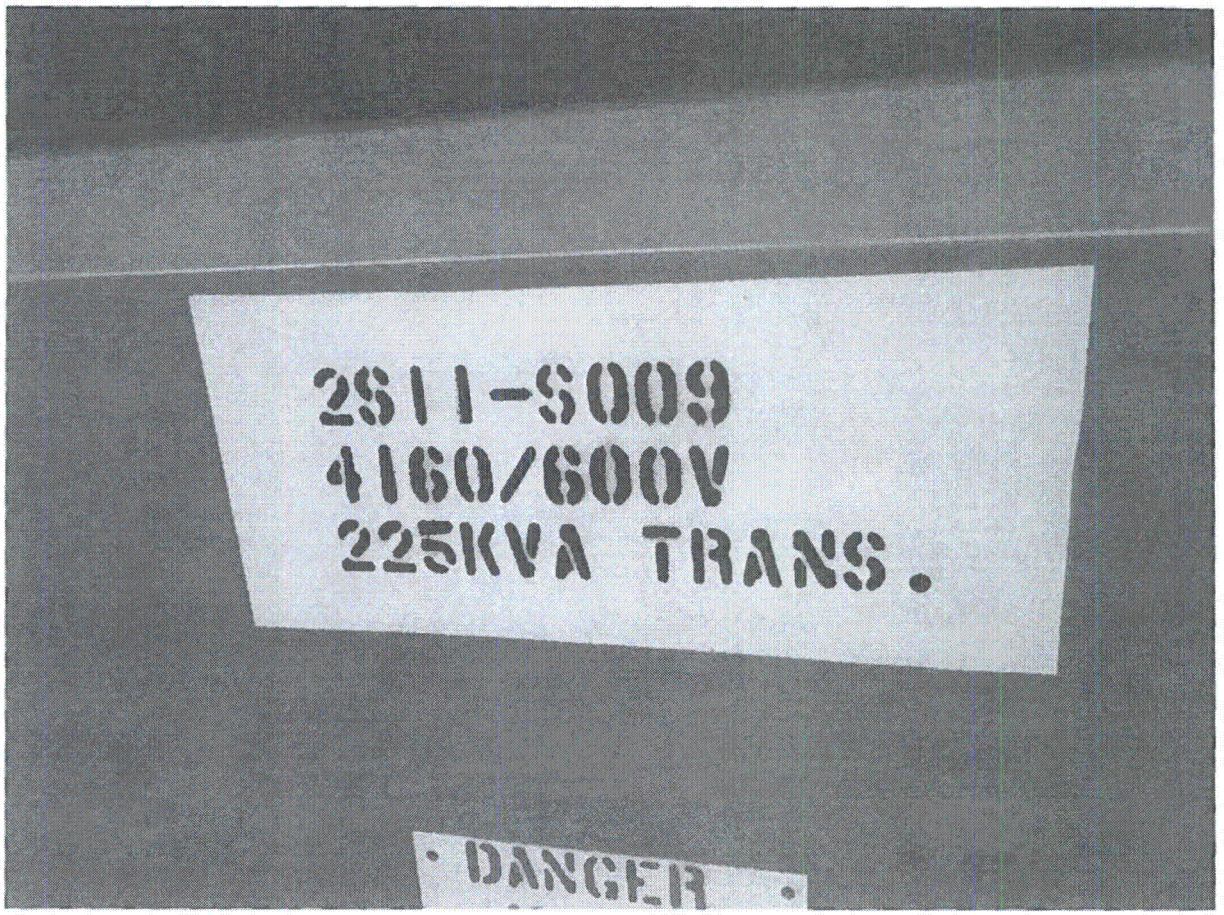
Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

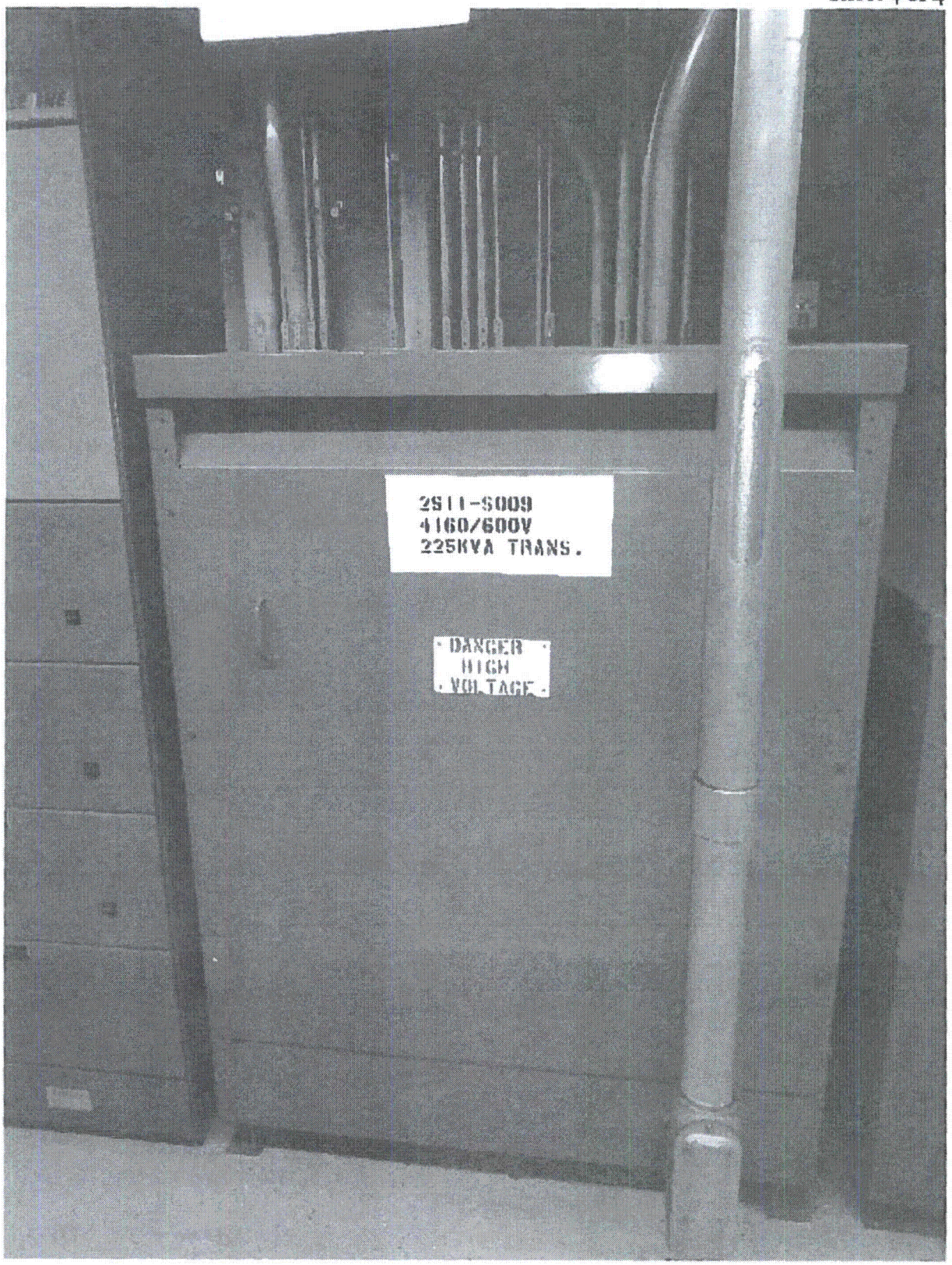
Equipment ID No. *2S11-S009* Equip. Class[1] *4*

Equipment Description *4160/600V225KVA XFMR*

Photographs



1: Equipment MPL # (2S11-S009)



2: Equipment Elevation (2S11-S009)

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2S11-S012* Equip. Class[1] *4*

Equipment Description *4160/600V 75KVA XFMR*

Location: Bldg. *DIESEL* Floor El. *130* Room, Area *SWITCHGEAR ROOM 2F*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Equipment's rail channels are welded at base.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐
   This component has been inspected to the extent practical. All visible anchors, hardware and surfaces were inspected. The anchorage for this item is visible without opening the component. To inspect the component further would require disassembly. Since the anchorage is visible, the inspection meets the requirements of the guidance document.

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2S11-S012* Equip. Class[1] *4*

Equipment Description *4160/600V 75KVA XFMR*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   The approximately 3 1/4 inch gap between this equipment and equipment 2S11-S009 is adequate.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

See 2S11-S009 Seismic Walkdown Checklist for Area Walkby Checklist information.

Evaluated by: *Juan Vizcaya* Date: *09/12/12*

Patrick Kelly *09/12/12*

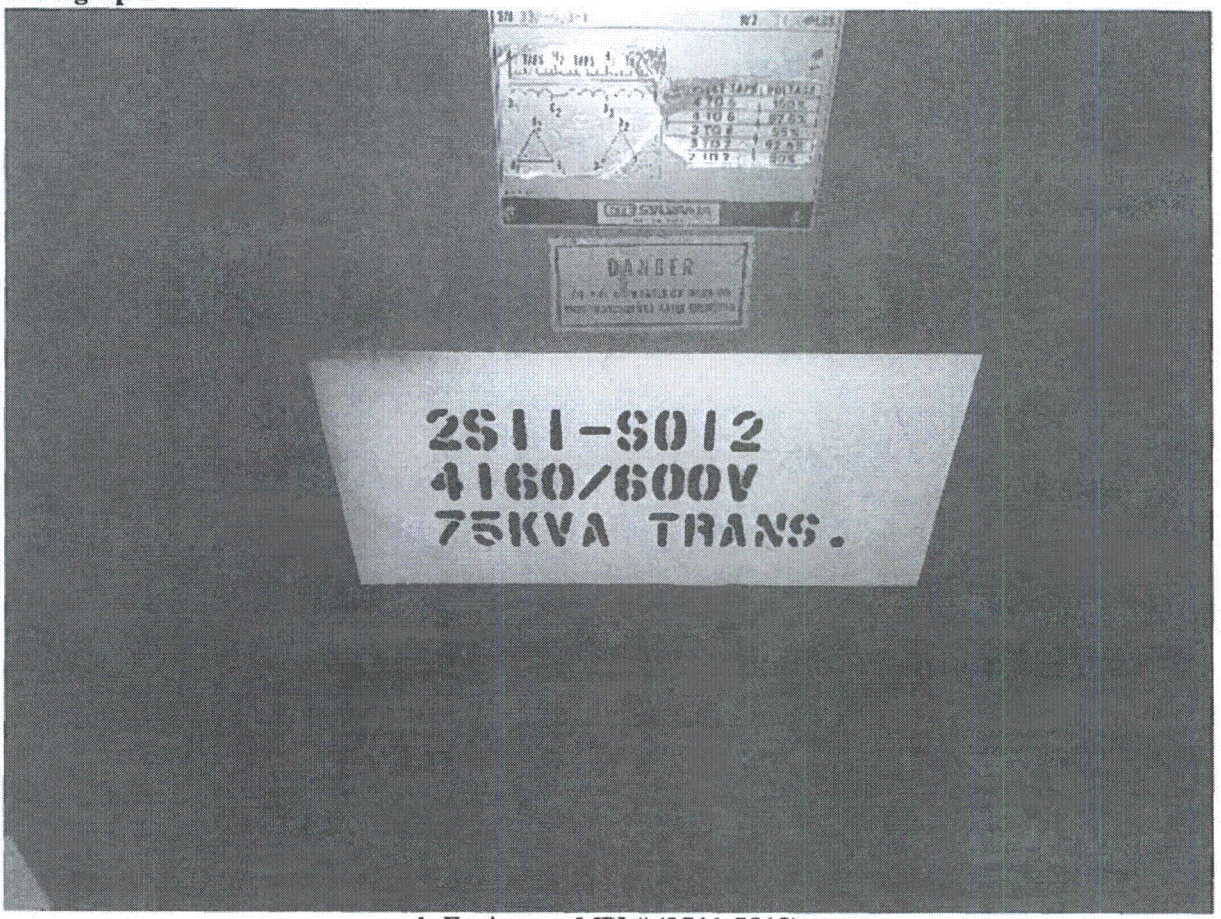
Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2S11-S012* Equip. Class[1] *4*

Equipment Description *4160/600V 75KVA XFMR*

Photographs



1: Equipment MPL# (2S11-S012)

2: Equipment Elevation (2S11-S012)

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E41-C001* Equip. Class[1] *5*

Equipment Description *HPCI Main*

Location: Bldg. *REACTOR* Floor El. *87* Room, Area *HPCI Room*

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) *Drawing 2F-1519 Rev. 0 (Byron Jackson Drawing)* Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E41-C001* Equip. Class[1] *5*

Equipment Description *HPCI Main*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

There is a roll of duct tape stuck to the top of a conduit support above 2E41-F025, adjacent to the pump. The roll of tape is very light and is not near any sensitive equipment. Therefore, there is no potentially adverse seismic condition.

Comments (Additional pages may be added as necessary)

None

Evaluated by: *John McFarland* Date: *09/11/2012*

Jeff Horton *09/11/2012*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E41-C001* Equip. Class[1] *5*

Equipment Description *HPCI Main*

Photographs

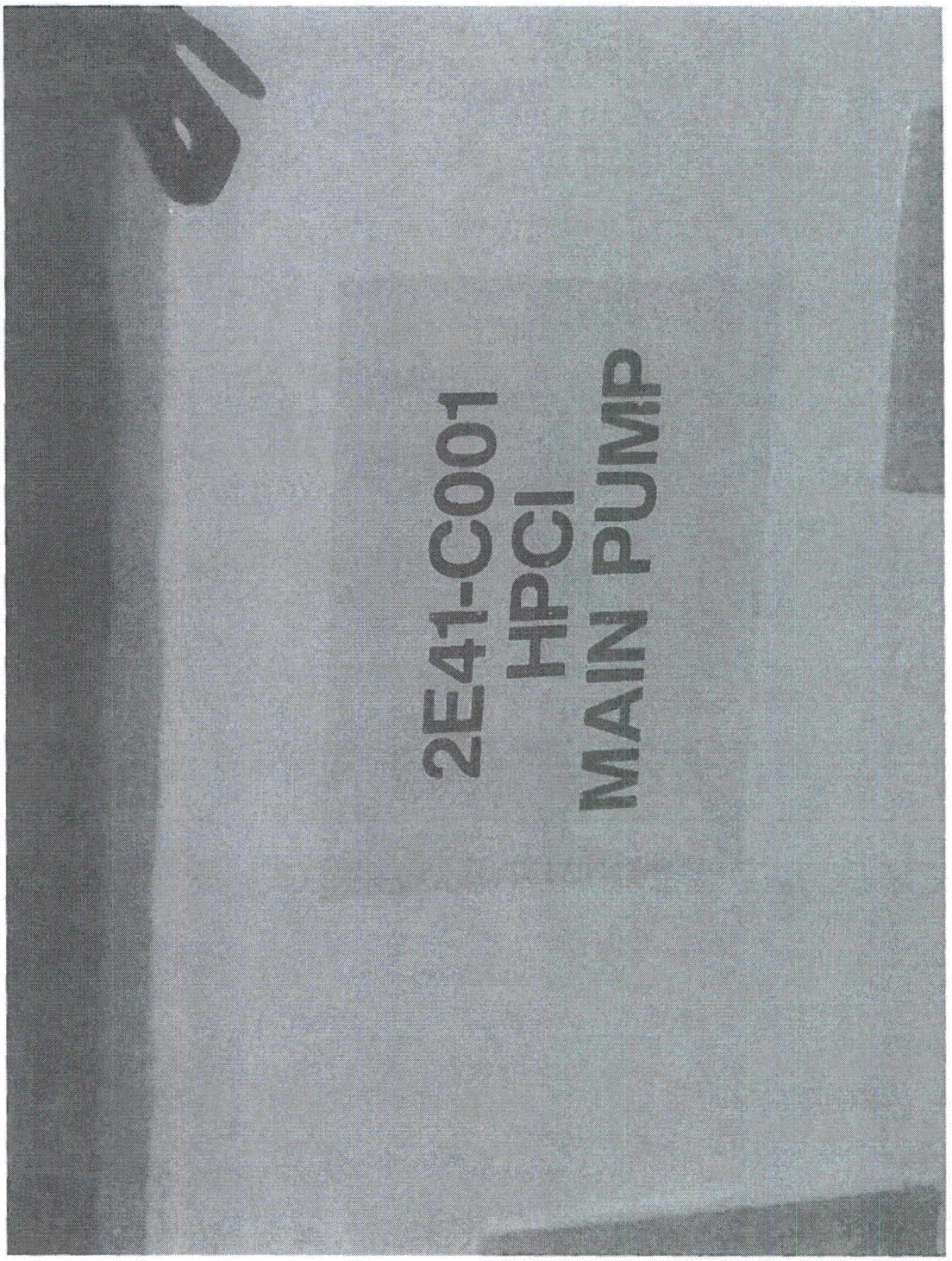


Figure 1 – Equipment ID No (2E41-C001)

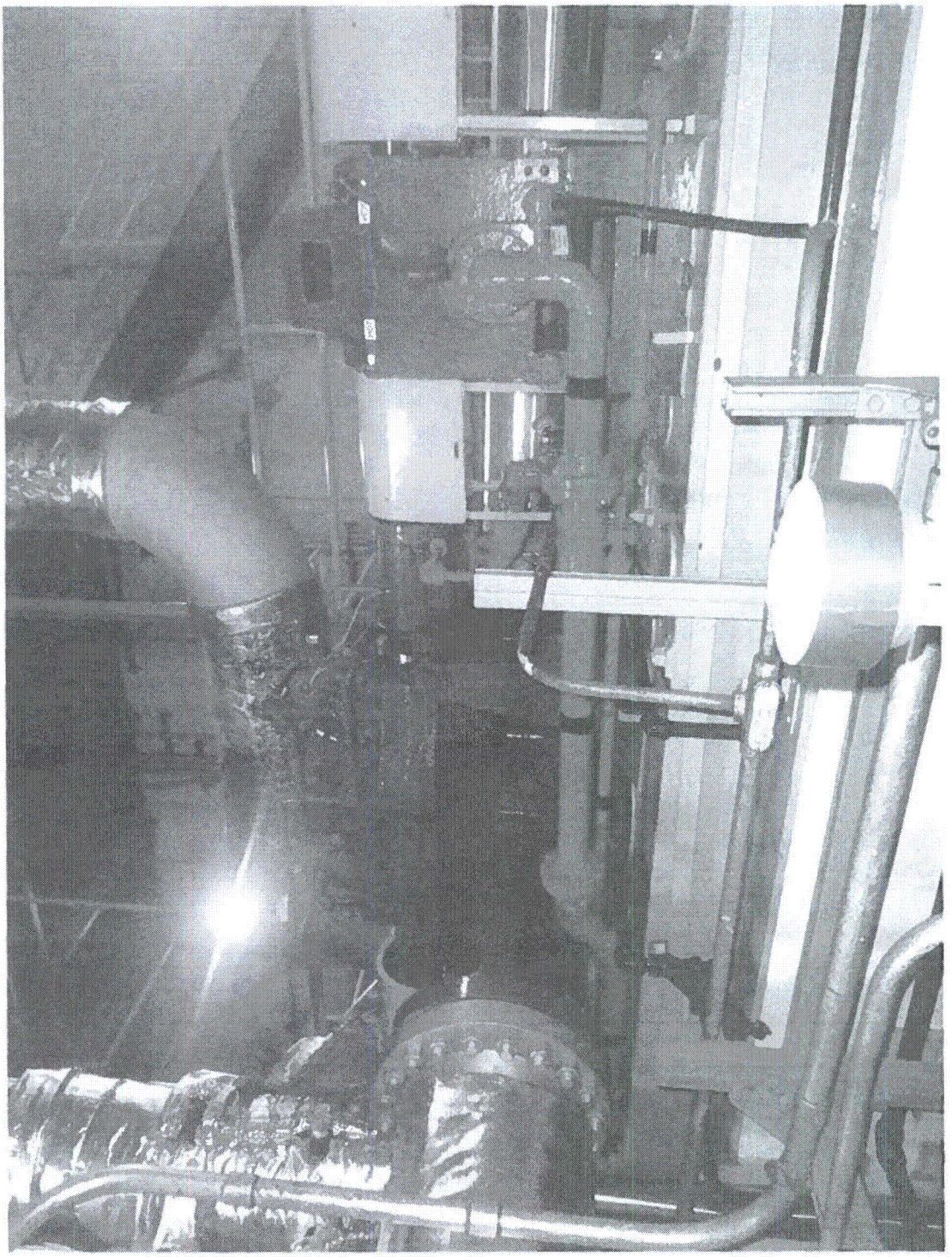


Figure 2 – Equipment Elevation (2E41-C001)

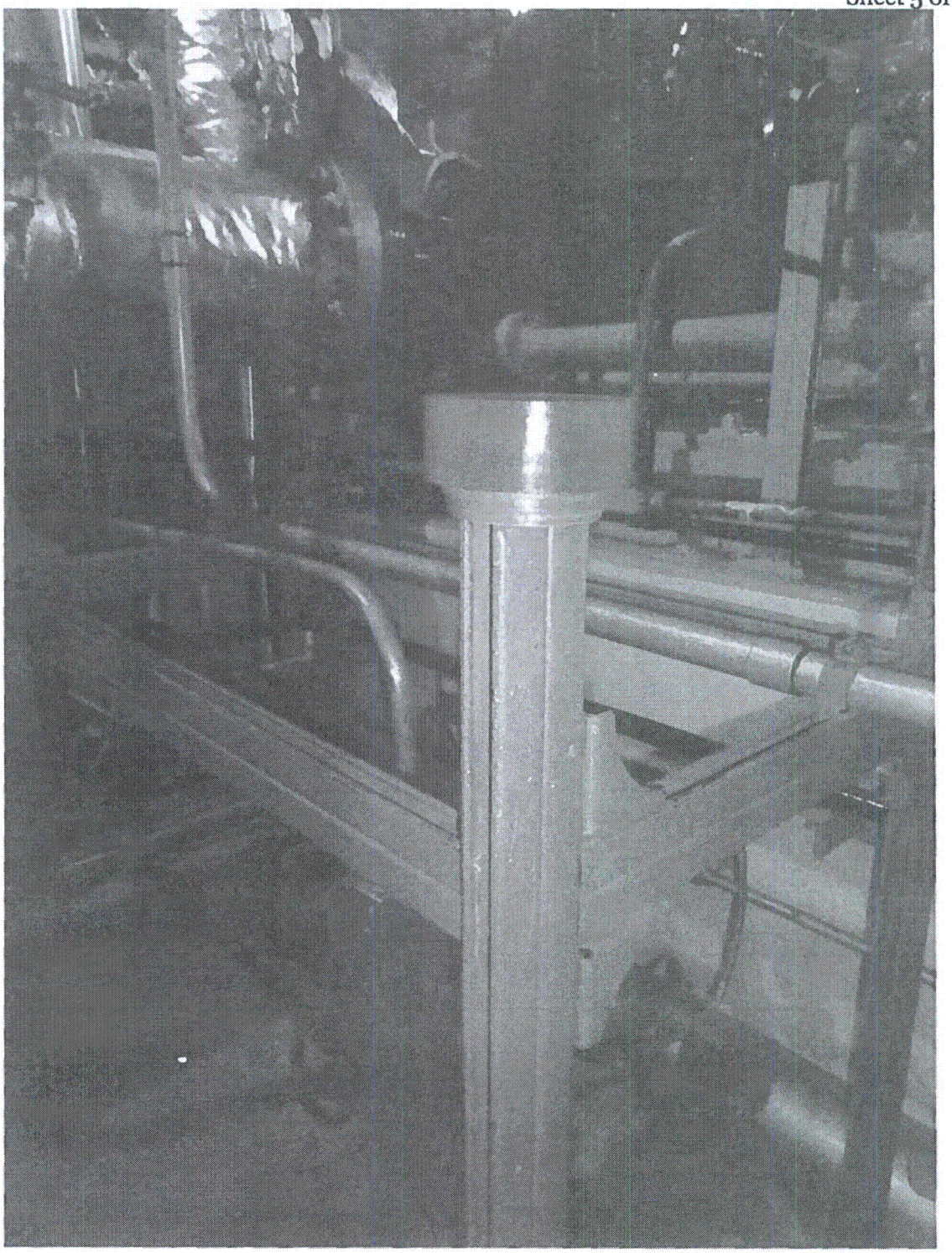


Figure 3 – Duct Tape on Conduit Support (2E41-C001)

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E51-C001* Equip. Class[1] *5*

Equipment Description *RCIC PUMP*

Location: Bldg. *REACTOR* Floor El. *87* Room, Area *NW Diagonal*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Anchorage was compared against Drawing H-25016 Rev. 7.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E51-C001* Equip. Class[1] *5*

Equipment Description *RCIC PUMP*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

None.

Evaluated by: *KURSAT KINALI* Date: *9/24/2012*

WESLEY WILLIAMS *9/24/2012*

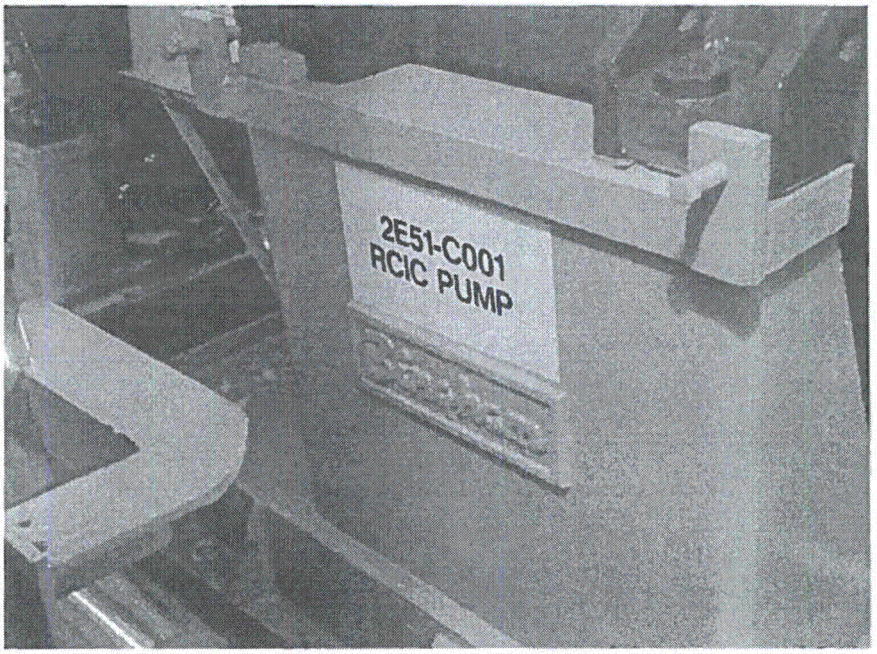
Status: Y☒ N☐ U☐

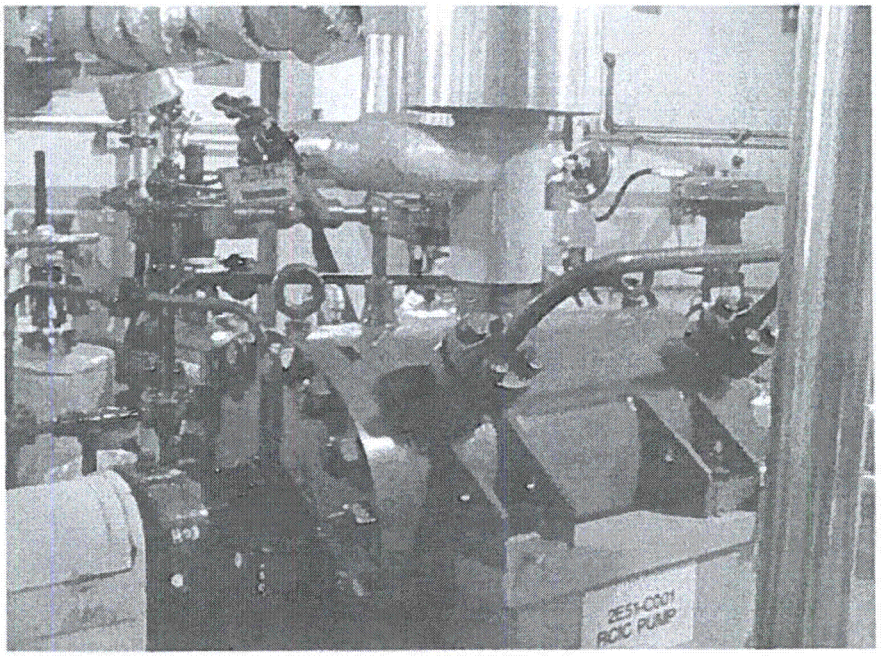
Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E51-C001* Equip. Class[1] *5*

Equipment Description *RCIC PUMP*

Photographs





Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E11-C002A* Equip. Class[1] *5*

Equipment Description *RHR Pump 2A*

Location: Bldg. *REACTOR* Floor El. *87* Room, Area *NE Diagonal*

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Drawing H25019 and Calculation SCNH-91-045 Rev. 1

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E11-C002A* Equip. Class[1] *5*

Equipment Description *RHR Pump 2A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
There are four holes drilled in the building steel that do not have bolts in them. They appear to be for a support that was later removed or never installed, so there are no missing bolts for nearby equipment. Therefore, there is no potentially adverse seismic condition.

Comments (Additional pages may be added as necessary)

See Component 2E11-F004A for Area Walk-by Checklist.
There is a small FME lanyard that was found lying on the floor next to the pump. The lanyard is very light and not near any sensitive equipment, so there is no potentially adverse seismic condition.

Evaluated by: *John McFarland* Date: *09/24/2012*

Jeff Horton *09/24/2012*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E11-C002A* Equip. Class[1] *5*

Equipment Description *RHR Pump 2A*

Photographs

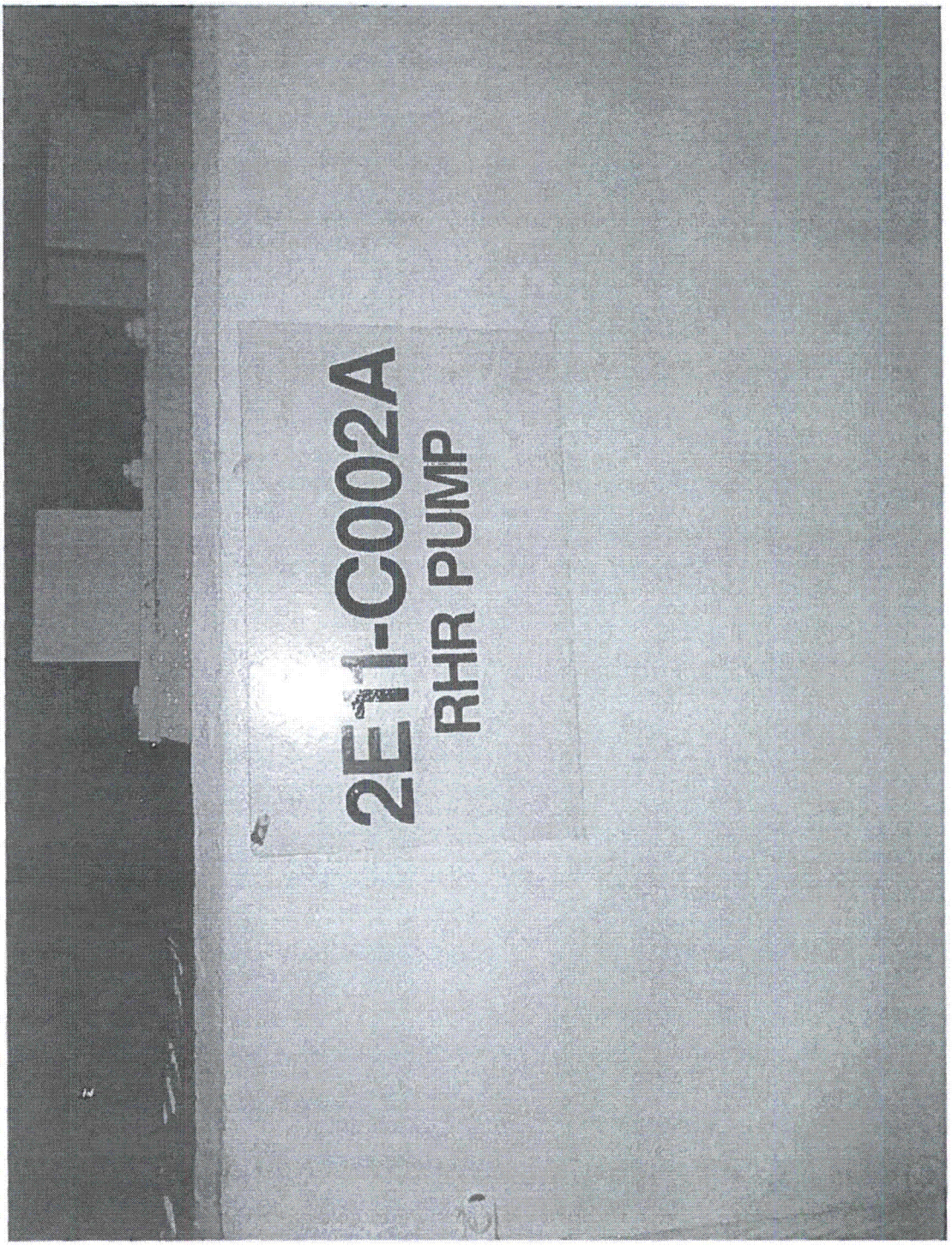


Figure 1 – Equipment ID No (2E11-C002A)

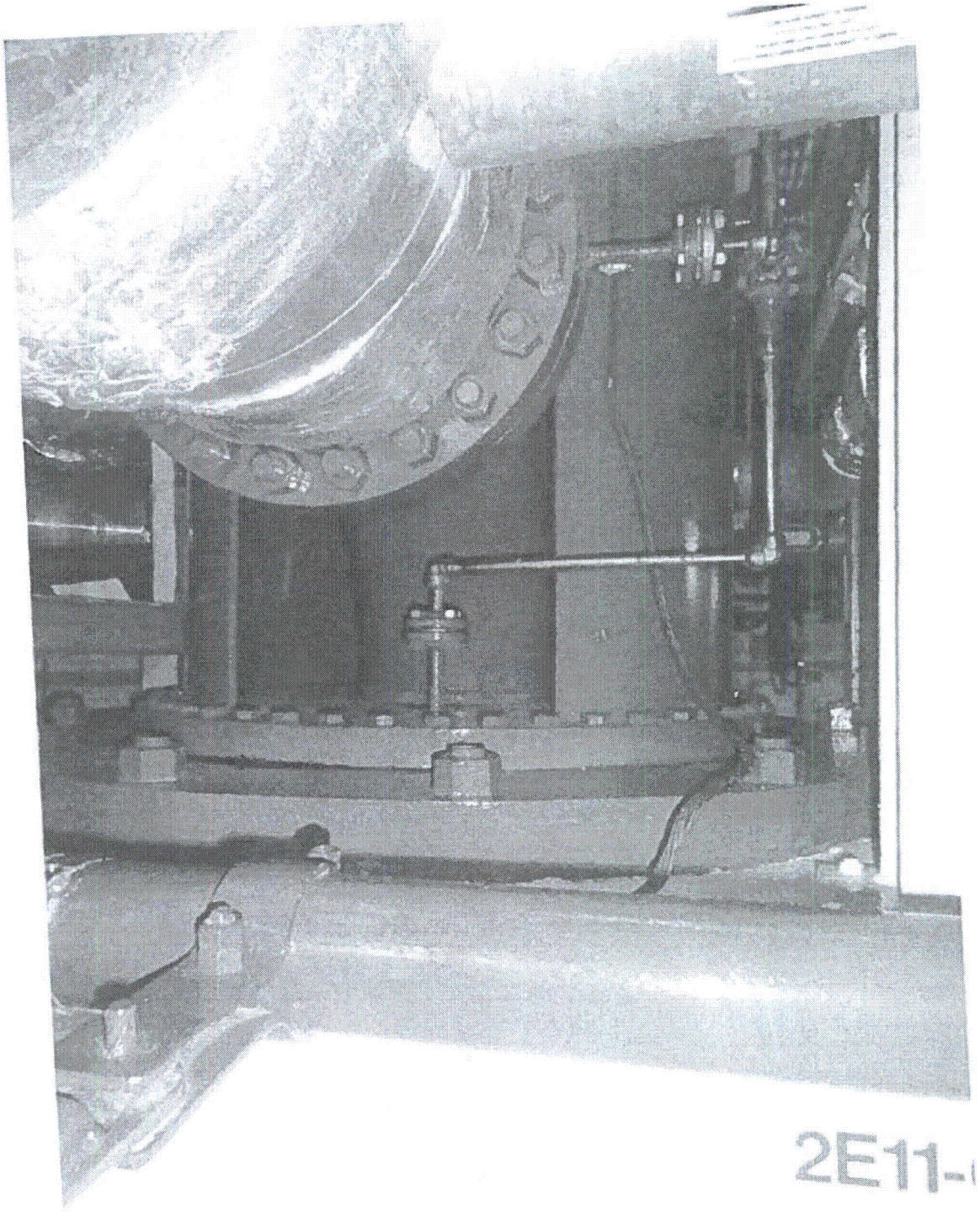


Figure 2 – Equipment Elevation (2E11-C002A)

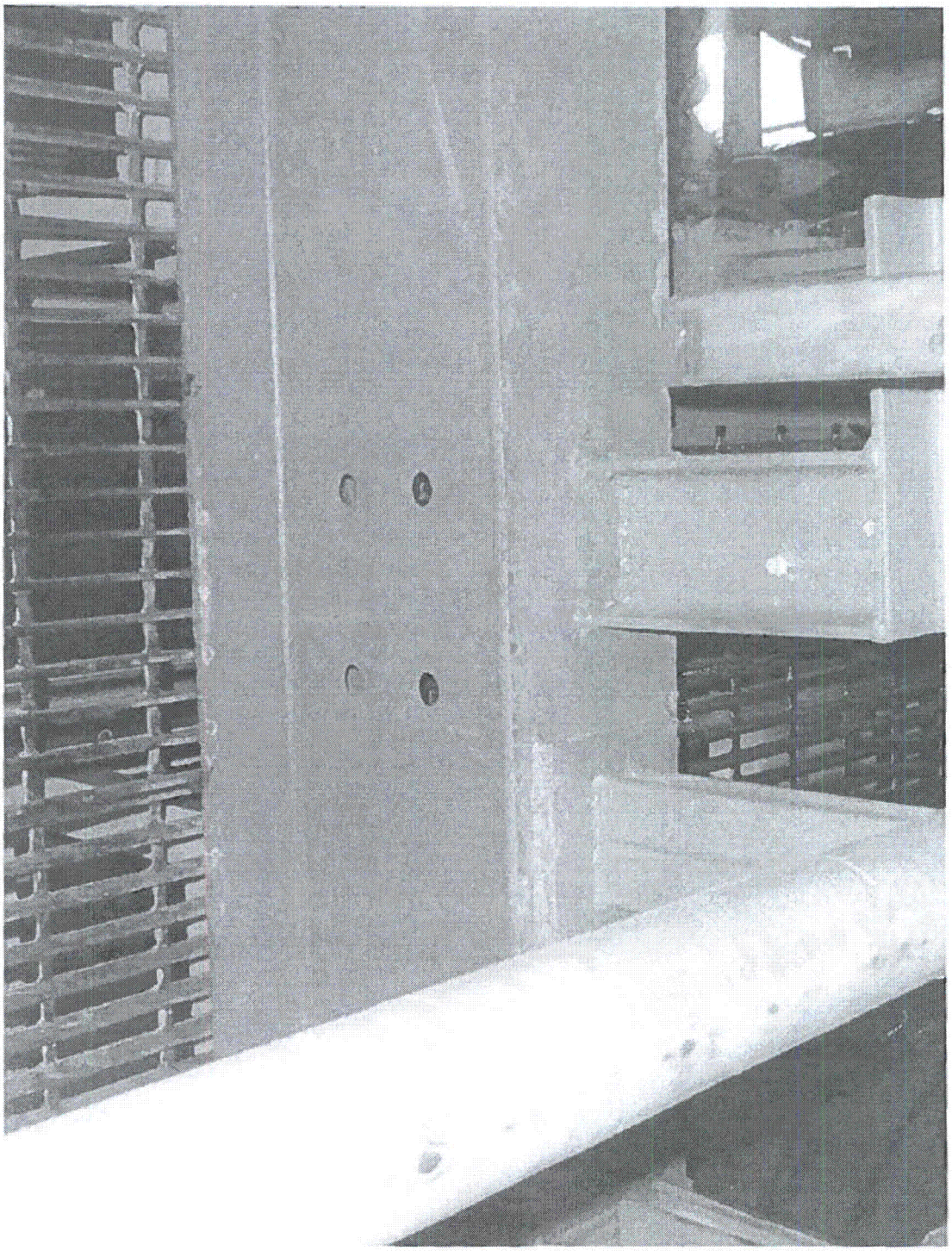


Figure 3 – Empty Holes in Building Steel (2E11-C002A)

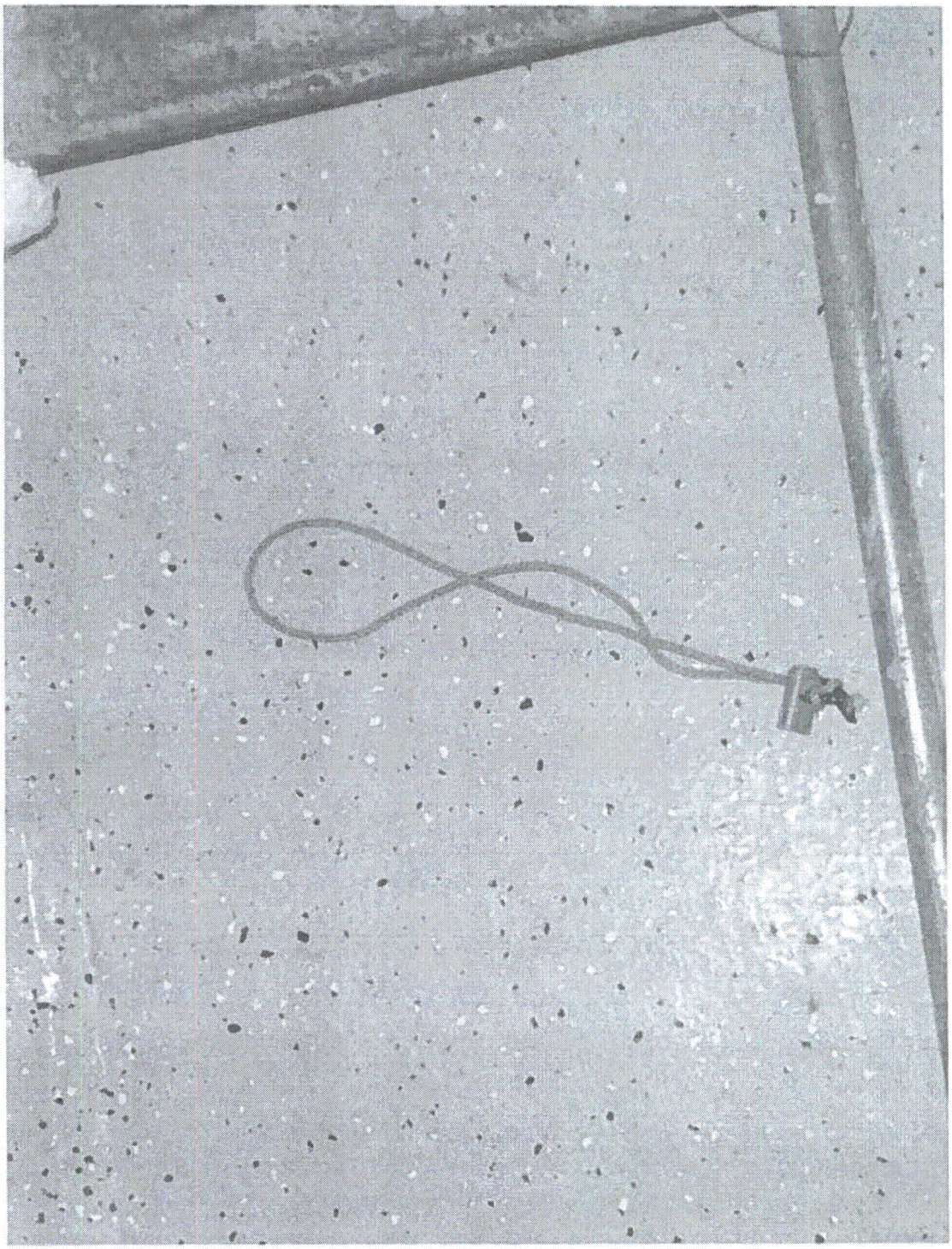


Figure 4 – Lanyard on Floor (2E11-C002A)

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E21-C001B* Equip. Class[1] *5*

Equipment Description *Core Spray Pump 2B*

Location: Bldg. *REACTOR* Floor El. *87* Room, Area *SE Diagonal*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Drawing H-25019 Rev. 5

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. 2E21-C001B Equip. Class[1] 5

Equipment Description Core Spray Pump 2B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

None

Evaluated by: John McFarland Date: 09/11/2012

Jeff Horton 09/11/2012

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2E21-C001B* Equip. Class[1] *5*

Equipment Description *Core Spray Pump 2B*

Photographs

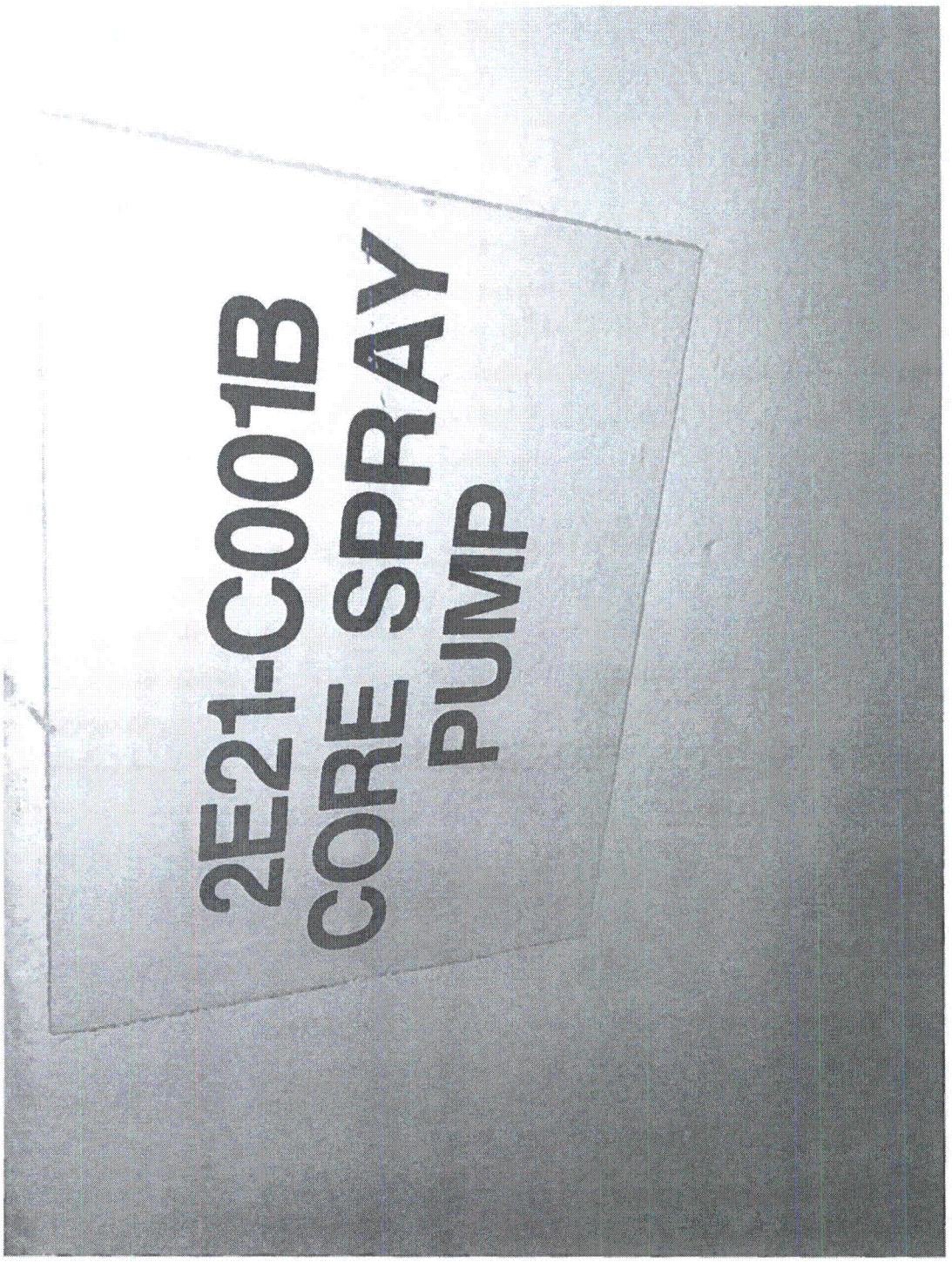


Figure 1 – Equipment ID No (2E21-C001B)

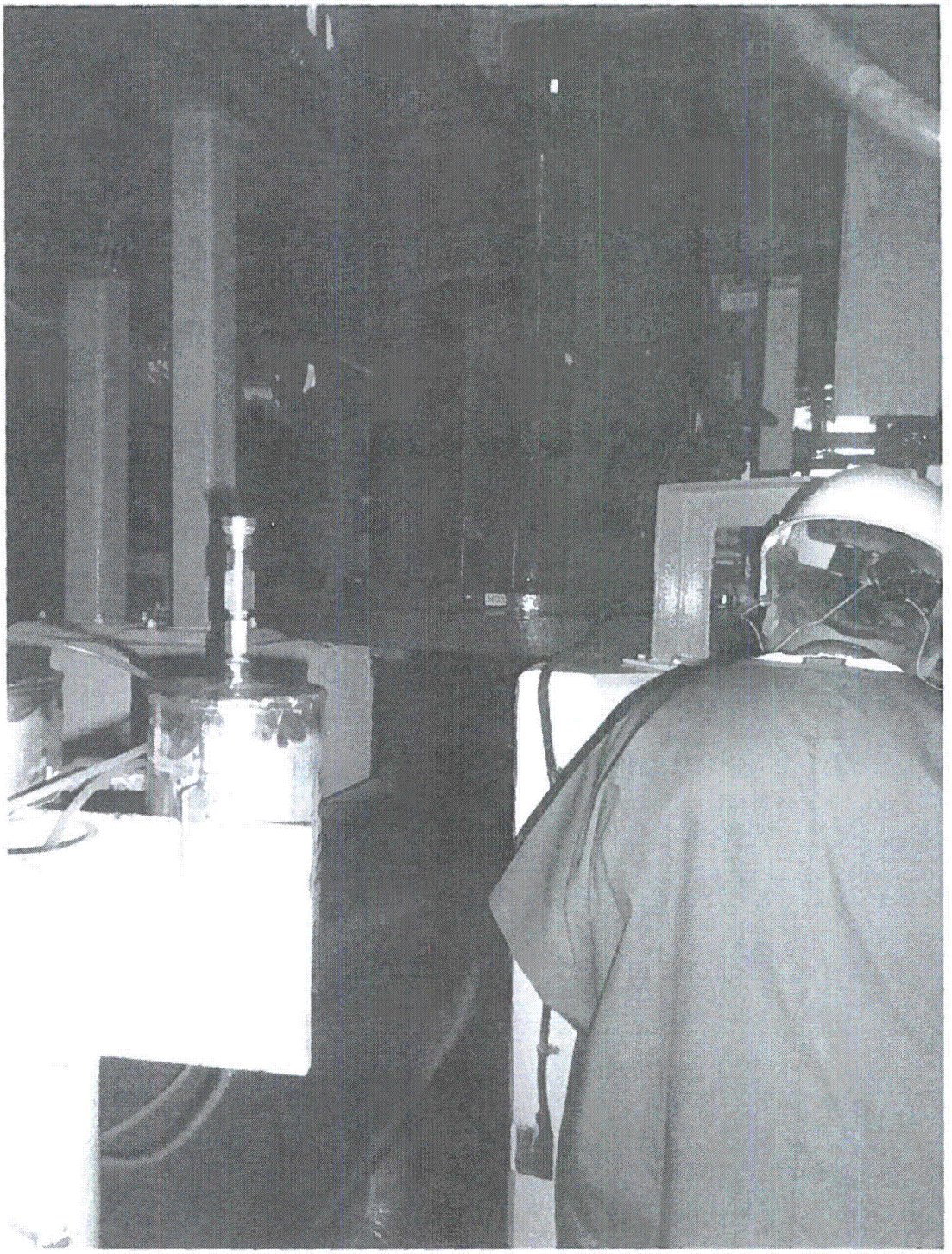


Figure 2 – Equipment Elevation (2E21-C001B)

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2C41-C001A* Equip. Class[1] *5*

Equipment Description *SBLC Injection Pump 2A*

Location: Bldg. *CONTROL* Floor El. *203* Room, Area *RH-R23*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Drawing H-25503 Rev. 4

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2C41-C001A* Equip. Class[1] *5*

Equipment Description *SBLC Injection Pump 2A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐
   There is a section of flex conduit between the injection pump and a conduit support with limited slack. The pump is rigidly attached to the floor and has a low center of gravity, and the conduit support is rigidly attached to the floor. Therefore, there will not be much differential movement between the two ends of the flex conduit. The existing slack is judge to be sufficient for the very small differential movement, so there is no potentially adverse seismic condition.

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
    There are several threaded holes in the pump frame that do not have anchor bolts. Based on a review of the frame and Drawing H-25503 Rev. 4, it is determined that the holes are for lifting lugs, and that no anchors are missing. Therefore, there is no potentially adverse seismic condition.

Comments (Additional pages may be added as necessary)

See Component 2C41-A001 for Area Walk-by Checklist.

Evaluated by: *John McFarland* Date: *09/25/2012*

Jeff Horton *09/25/2012*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *2C41-C001A* Equip. Class[1] *5*

Equipment Description *SBLC Injection Pump 2A*

Photographs

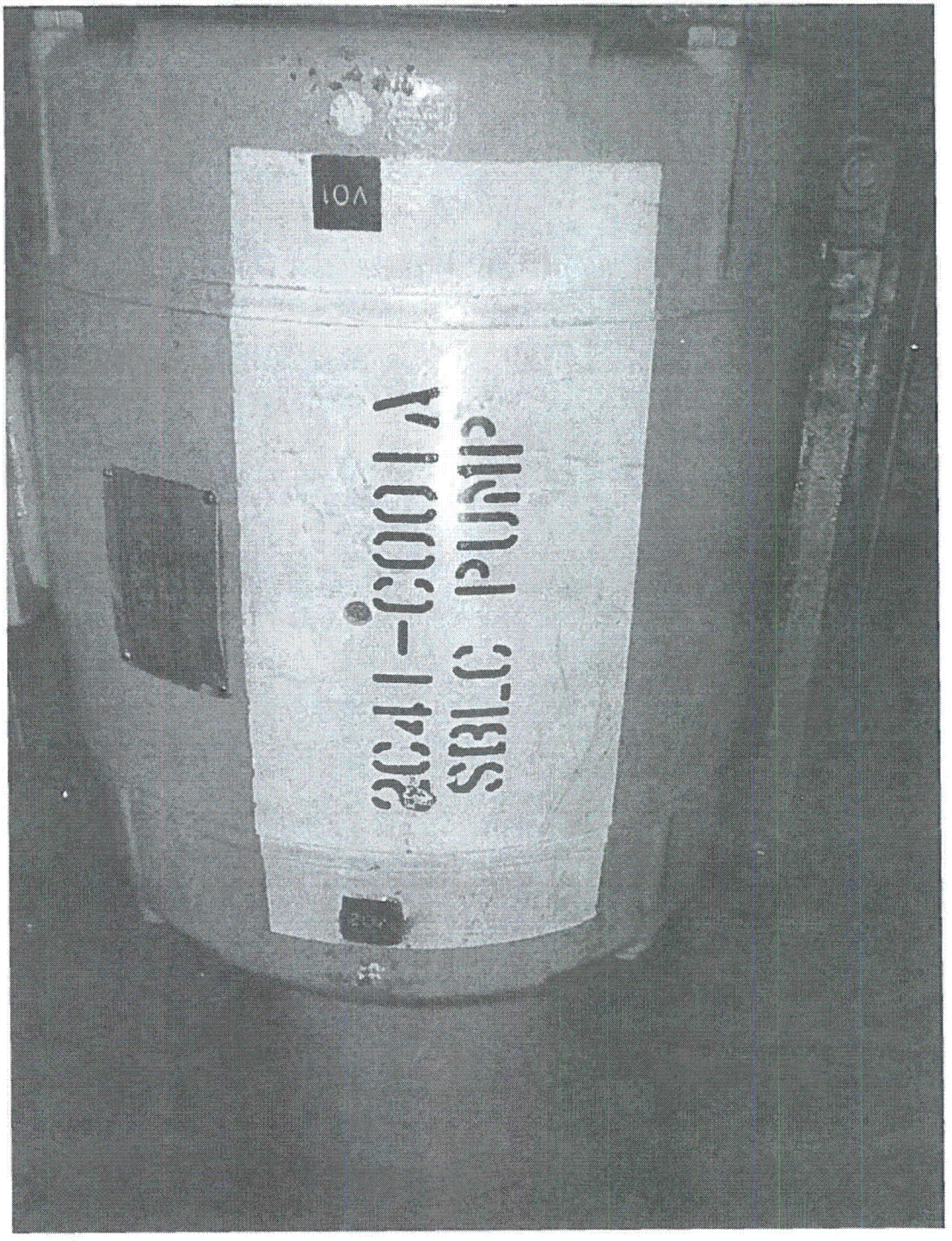


Figure 1 – Equipment ID No (2C41-C001A)

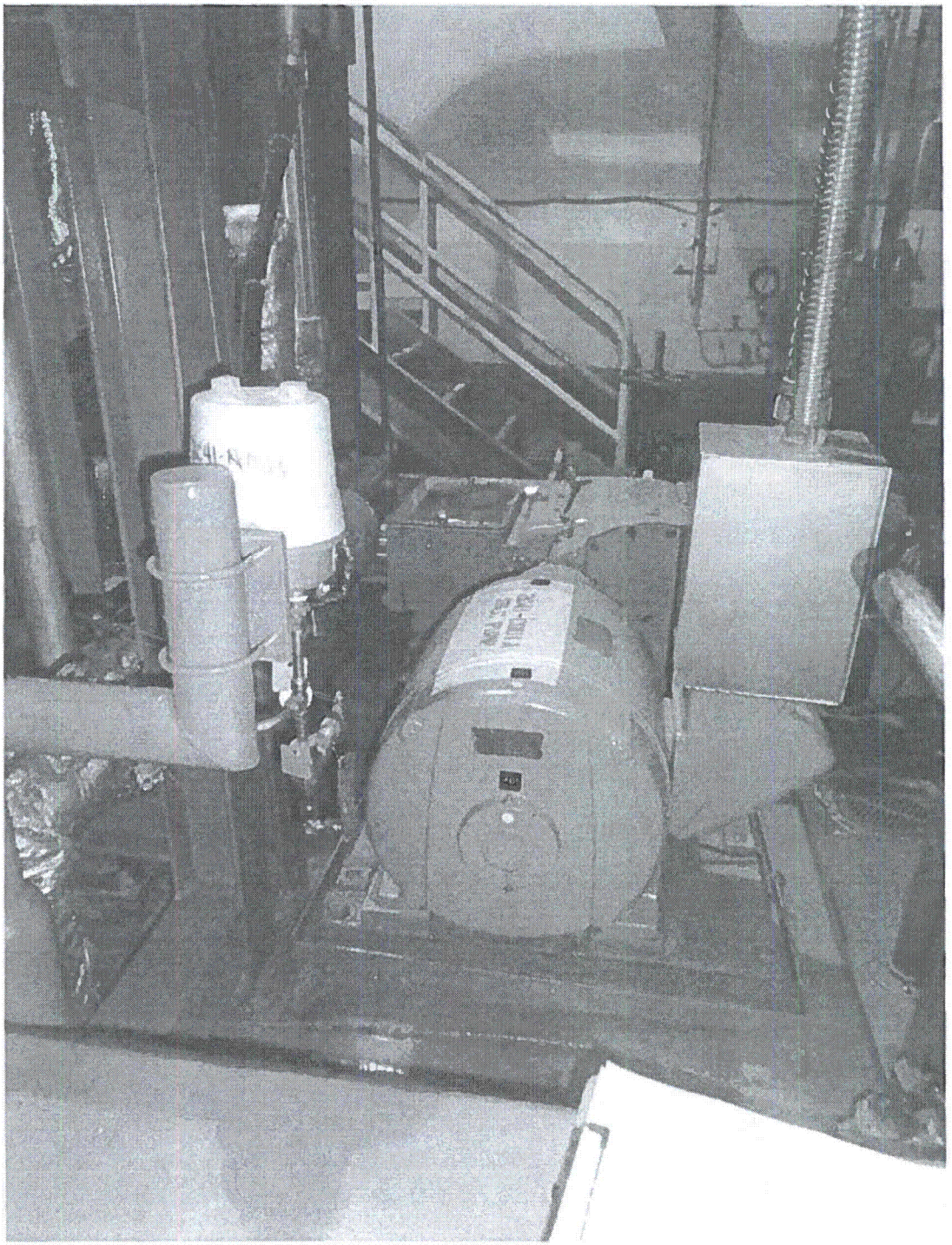


Figure 2 – Equipment Elevation (2C41-C001A)

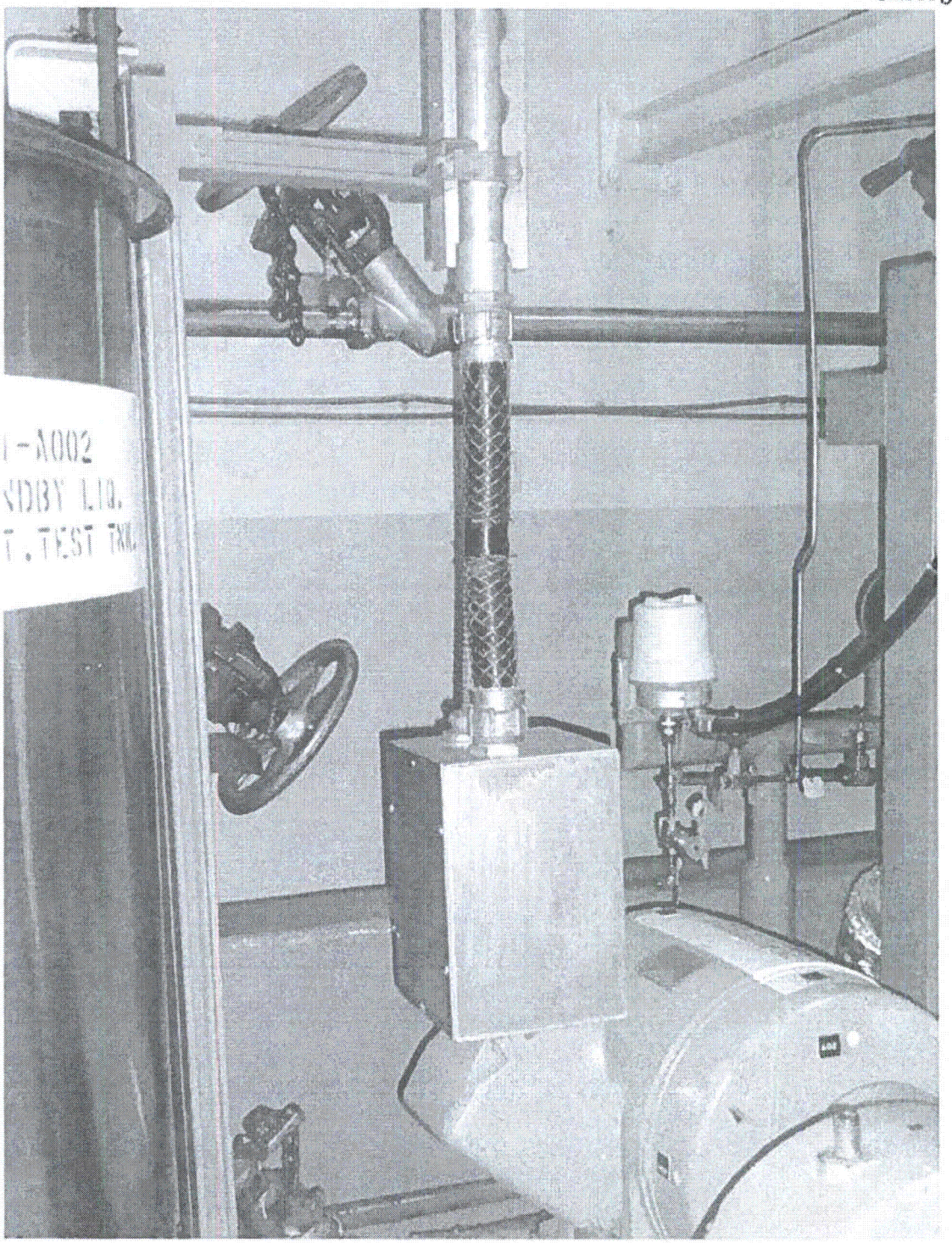


Figure 3 – Flex Conduit with Limited Slack (2C41-C001A)

Figure 4 – Holes for Lifting Lugs (2C41-C001A)